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Ford Motor Company

AREA C - COMPREHENSIVE SITE HISTORY AND INVESTIGATION REPORT II

Twin Cities Assembly Plant St. Paul, Minnesota

May 2017

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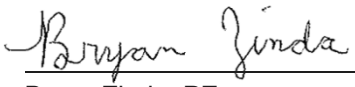

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ACRONYMS AND ABBREVIATIONS

µg/L	microgram(s) per liter
1,1-DCE	1,1-dichloroethene
Arcadis	Arcadis U.S., Inc.
Area C	a former waste disposal area at the Twin Cities Assembly Plant
BaP	benzo(a)pyrene
bgs	below ground surface
cis-1,2-DCE	*cis*-1,2-dichloroethene
cm/s	centimeters per second
CRA	Conestoga-Rovers & Associates
CY	cubic yards
DRO	diesel-range organics
ESA	environmental site assessment
EP	extraction procedure
eV	electron volt
Ford	Ford Motor Company
ft amsl	feet above mean sea level
ft/day	feet per day
GRO	gasoline-range organics
IDW	investigation-derived waste
MDH	Minnesota Department of Health
MPCA	Minnesota Pollution Control Agency
MVS	Mining Visualization System
NAPL	non aqueous phase liquid
PAH	polynuclear aromatic hydrocarbon
PBP	Petroleum Brownfields Program
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PID	photoionization detector
PPE	personal protective equipment

ppm	parts per million
PLP	Permanent List Priority
PRP	Petroleum Remediation Program
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
SLV	soil leaching value
sq ft	square feet
SRV	soil reference value
STS	Soil Testing Services of Minnesota, Inc.
SVOC	semivolatile organic compound
TAL	Target Analyte List
TCE	trichloroethene
TCAP	Twin Cities Assembly Plant
TCLP	toxicity characteristic leaching procedure
trans-1,2-DCE	*trans*-1,2-dichloroethene
USACE	United States Army Corps of Engineers
USCS	United Soil Classification System
USEPA	United States Environmental Protection Agency
VIC	Voluntary Investigation and Cleanup
VOC	volatile organic compound
WI	Wisconsin
WQS	MPCA water quality standard(s) for surface water

EXECUTIVE SUMMARY

This *Area C – Comprehensive Site History and Investigation Report II* was developed by Arcadis U.S., Inc. (Arcadis) on behalf of Ford Motor Company (Ford) for Area C, a former waste disposal area at the former Twin Cities Assembly Plant (Area C). The objective of this comprehensive report is to document the Area C regulatory history, investigation activities and corresponding analytical results that have been completed to date under the guidance of the Minnesota Pollution Control Agency (MPCA) Voluntary Investigation and Cleanup (VIC) Program and Petroleum Brownfields Program (PBP). In addition, this report also evaluates the potential exposure pathways and provides an overview of groundwater quality data in two aquifer units beneath Area C (unconsolidated overburden and St. Peter Sandstone).

Based on a review of available historical documents, between 1945 and 1966 Area C was a former disposal area for industrial waste such as construction rubble, paint products and wastes, and non-combustible plant waste. In addition, excavated materials from former Main Plant parcel disposal Areas A and B were deposited in 1966 and 1962, respectively. Ford ceased disposal of industrial waste at Area C in 1966. The United States Army Corps of Engineers (USACE) conducted rehabilitation activities at Lock and Dam No. 1 near “Ford Bridge” between 1978 and 1983. Construction rubble and soil from the rehabilitation was disposed on top of the industrial waste by Al Johnson Construction Company General Contractors. According to Conestoga-Rovers & Associates (CRA) reports dated between 1988 and 1990, additional earth fill and construction rubble (i.e., broken concrete and road excavation rubble) from a Mississippi River Boulevard construction project were also disposed of at Area C around 1988 and 1990. However, exact quantities and composition of the materials disposed over time in Area C are unknown.

The Site was brought to the attention of the MPCA in October 1980 through receipt of a complaint concerning historical waste disposal practices. Subsequent to MPCA’s receipt of the complaint, a hydrogeologic investigation was commissioned by Ford in 1981. The investigation included the installation of five groundwater monitoring wells and groundwater sample collection as well as surface water sample collection from the Mississippi River.

The Site was identified to the United States Environmental Protection Agency (USEPA) in June 1981 in response to a reporting requirement of the newly enacted *Comprehensive Environmental Response, Compensation, and Liability Act*, commonly known as Superfund. However, the Site was never a federal Superfund site. In 1983, the passage of the *Minnesota Environmental Response and Liability Act* created Minnesota’s state Superfund program. Ford’s Twin Cities Assembly Plant was one of 87 sites in Minnesota that appeared on the original (1984) state Superfund list, also known as the Permanent List of Priorities (PLP), The Twin Cities Assembly Plant was listed on the PLP due to the presence of three on-site historical waste disposal areas (Areas A, B, and C).

In 1987, a supplemental soil, groundwater, and surface water investigation was completed at Area C and included the installation of test pits and waste characterization sampling along the southern boundary of the Site. Groundwater samples were collected from the five monitoring wells previously installed and surface water samples were collected from two locations along the Mississippi River. Groundwater and surface water sampling continued at selected locations through June 1990.

Based on the 1989 and 1990 groundwater and surface water sampling results, Ford submitted a request to the MPCA that no further investigation be required. The Twin Cities Assembly Plant, including Area C, was subsequently delisted from the Minnesota State PLP on July 8, 1993.

After the completion of the Arcadis 2007 Phase I Environmental Site Assessment (ESA) and investigation of abutting Sand Tunnel 1A, two additional monitoring wells were installed within Area C in 2011. In addition, Arcadis observed exposed construction concrete, scrap metal, and four 55-gallon metal drums along the western and southern slopes of the Site, as well as soil erosion and slumping during site reconnaissance in April 2011, January 2012, February 2012, and November 2012. The four drums were removed by excavation and disposed off-Site at a licensed facility in April 2012. The historical data review and investigation activities through 2012 were reported and submitted to the MPCA in the 2014 *Area C – Comprehensive Site History and Investigation Report.*

Following flooding of the Mississippi River in June and early July of 2014, and at the request of the MPCA, the five existing permanent monitoring wells surrounding Area C were gauged on a weekly basis and sampled monthly, if accessible, for a period of three months following the peak flooding period. In October 2014, the MPCA requested Ford to conduct additional investigation work in Area C to improve delineation and characterization of the industrial waste and to evaluate potential exposure pathways.

Between 2015 and 2016, Arcadis conducted these additional investigation activities, which included the completion of soil borings and vertical sampling through Area C, surficial soil sampling along the northern, western, and southern slopes of Area C, test trenching along the south slope of Area C, monitoring well installation within and along the perimeter of Area C, and groundwater sampling of both existing and newly installed wells.

Analytical data collected during the investigation activities were compared to the following screening values, as applicable:

- MPCA Soil Reference Values (SRVs) for direct contact with soil
- MPCA Petroleum Remediation Program (PRP) Guidance Values for direct contact with petroleum impacted soil
- Minnesota Department of Health (MDH) Health-Based Guidance values for ingestion of groundwater
- MPCA Surface Water Quality Standards (WQS) for exposure to surface water (aquatic life and human health via recreational use).

Additionally, human and ecological receptor screening was conducted against constituents which may potentially be present in the buried industrial waste and cause adverse health effects. This screening included the following:

- Potential Soil/Waste Exposure Pathway for direct contact with impacts
- Potential Groundwater Exposure Pathway for ingestion of impacted groundwater
- Potential Surface Water Exposure Pathway for discharge of groundwater to surface water
- Potential Surface Water Exposure Pathway for soil to surface water
- Potential Soil Vapor Exposure Pathway

Historical and current groundwater, surface water and soil analytical data was used to delineate the extent of and to characterize the industrial waste as well as evaluate potential exposure pathways. The

ten soil borings completed vertically through the top of the paved portion of Area C and the five test trenches completed near the toe of the southern slope are sufficient to delineate the approximate extent of the industrial waste fill in each accessible direction. The 40 soil samples collected from the soil borings and the 20 samples collected from the test trenches are sufficient to characterize the variability of impacts present within the industrial waste fill, the overlying construction debris and the underlying floodplain sands. Investigation of the distribution and characteristics of the industrial waste fill present at Area C is considered complete.

The evaluation of the potential exposure pathways to impacts associated with Area C can be summarized as follows:

- Direct contact with industrial waste: Debris at or near the surface has been identified within the zero to four foot below ground surface (bgs) accessible zone and paint sludge was identified in Trenches 1, 2 and 3 at depths as shallow as 2.5 feet bgs. The presence of paint sludge and impacted soil within the accessible zone at concentrations exceeding industrial SRVs represents a potential exposure pathway with an unacceptable level of long-term risk.
- Direct contact with surficial soil fill: Current land use does not allow exposure to surficial soil via direct contact, however, this exposure pathway could be complete in the case of trespassers. Results of surficial soil sampling completed on the slopes of Area C detected concentrations of Benzo(a)pyrene (BaP) equivalents and diesel range organics (DRO) that exceeded their respective screening values. The presence of surficial soil with contaminant concentrations exceeding industrial SRVs represents a potential exposure pathway with an unacceptable level of long-term risk. Additionally, there is construction debris including concrete and chunks of metal at the surface of Area C that present a potential physical hazard to trespassers in the area.
- Ingestion of groundwater: This exposure pathway is not considered complete because Site groundwater is not currently used as a drinking water source, and it is highly unlikely to be used as a source in the future. Also, as documented in the 2007 Phase I Environmental Site Assessment by Arcadis, no public water supply wells were observed within a one-mile radius of the Site.
- Discharge of groundwater to surface water: An evaluation of the discharge of groundwater to surface water was completed in accordance with the *MPCA Surface Water Pathway Evaluation User's Guide.* Results of that evaluation did not identify any unacceptable risk to surface water based on the groundwater data collected at Area C to date.
- Inhalation of Soil Vapor: There are no permanent buildings designed for occupancy within 100 feet of Area C, therefore vapor intrusion is not a completed exposure pathway.

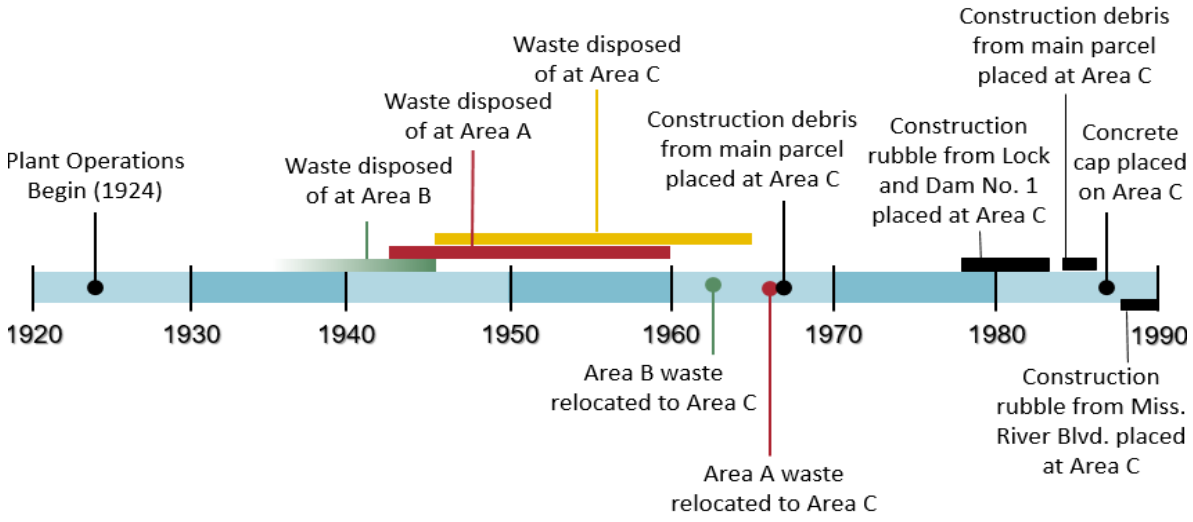
A Feasibility Study will be completed for Area C to evaluate remedial options for the potential exposure pathways identified above as having unacceptable long-term risk.

1 INTRODUCTION

This *Area C – Comprehensive Site History and Investigation Report II* was developed by Arcadis on behalf of Ford for Area C, a former waste disposal area at the Twin Cities Assembly Plant (Area C). This is a comprehensive report that summarizes all information pertaining to disposal of wastes at Area C of the Site; recaps the regulatory actions taken at the Site; and documents all investigation work related to soil, groundwater, and surface water that has been collected at Area C, including information collected during supplemental investigation activities conducted between 2014 and 2016. The purpose of the supplemental investigations was to provide groundwater elevation and quality data during flooding of the Mississippi River; to provide lateral and vertical delineation as well as characterization of the industrial waste at Area C; to evaluate potential exposure pathways, if any; and to provide an overview as well as current groundwater quality data in the two aquifer units at Area C (unconsolidated overburden and St. Peter Sandstone). This *Area C – Comprehensive Site History and Investigation Report II* has been completed in accordance with the MPCA VIC and PBP reporting guidelines.

2 AREA C DISPOSAL HISTORY

Area C is located on the river parcel of the Ford TCAP property (west of Mississippi River Boulevard), on top of fluvial deposits at the base of a bluff west of South Mississippi River Boulevard, and south of the steam plant (Figure 1). The sections below summarize the site history and historical disposal practices that occurred in Area C and on the main parcel located east of Mississippi River Boulevard as they relate to Area C. A timeline of disposal activities is shown below:



A more detailed summary of the disposal practices at each area are included in Sections 2.1 through 2.3 below.

2.1 Former Waste Disposal Areas A and B

Former Fill Areas A and B, illustrated on Figure 1.2 from the Conestoga-Rovers & Associates (CRA) *Remedial Investigation/Feasibility Study (RI/FS) Work Plan* dated February 15, 1991 (Appendix A), were historical waste disposal sites for industrial wastes generated on the main parcel (i.e., paint waste, paint sludge and other plant wastes).

Former Fill Area A was used as an industrial waste disposal site from 1943 until 1960 and was located at the south end of the former test track east of the main assembly plant on the main parcel. The exact dates and quantities of the disposal events are not known. Based on a file and aerial photo review, a railroad track expansion project required Area A and a portion of the former test track to be excavated. The excavated materials were deposited onto Area C in 1966.

Former Fill Area B was used for burning waste and burial of industrial waste during early plant operations until 1945, and was located approximately 800 feet south and east of the main assembly building on the main parcel. Buried waste included non-combustible materials such as scrap steel, bricks, concrete block and other solid materials. The exact dates and quantities of these burning and burial events are not known. Excavated materials from Area B were deposited onto Area C during construction of a parking lot expansion in 1962.

Between 2015 and 2016, Arcadis completed 12 test trenches through the overburden to delineate the lateral and vertical extent of impacted soil/residual waste associated with Former Fill Areas A and B both on the main parcel and to the south onto the adjacent Canadian Pacific property. Six of the 12 trenches were completed on-Site and six trenches were completed on the adjacent Canadian Pacific property. Analytical results and field observations from the trenching activities indicated the impacted soil is limited to the overburden material (brown silty/sandy clay) and does not extend vertically into the native blue-gray clay. The impacted soil is characterized by the presence of debris (e.g., brick, glass, concrete, cables, scrap metals [copper, aluminum, steel, iron], nails, and wiring), olfactory impacts (e.g., petroleum-like, solvent-like, or both), and elevated photoionization (PID) readings. In addition, based on analysis of soil samples collected during the trench investigation, impacted soil from within Former Fill Areas A and B contains concentrations of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals exceeding MPCA Tier I Residential and Tier II Industrial SRVs. Additional details pertaining to the investigation results were reported under separate cover in the *Comprehensive Phase II Site Investigation Report – Soil Addendum* (Arcadis 2016a).

The above industrial waste characterization information was used during delineation investigation activities in Area C.

2.2 Sand Tunnel 1A

During the initial Phase I ESA site walk in May 2007, Arcadis discovered storage drums buried under an accumulation of materials at the exit end of Sand Tunnel 1A (Feature 150). The base of Sand Tunnel 1A is located at an elevation of 711.0 feet above mean sea level (ft amsl). The ground surface above Sand Tunnel 1A is at an elevation of 772.9 feet amsl and the distance from the ground surface to the ceiling of the tunnel is approximately 56.7 feet. Due to health and safety conditions at the time of inspection, Arcadis could not determine the extent of the drum storage in Sand Tunnel 1A, but did observe black, rust, and turquoise staining on the floor and ceiling surrounding the open drums (Arcadis 2007a). The open drums were partially filled with solids and exhibited a paint-like odor.

The description of the materials placed in Area C is consistent with that found at the end of Sand Tunnel 1A. The material encountered at the terminus of the tunnel consisted of concrete, wood chunks and solidified paint sludge. A survey conducted in 2008 revealed that the end of Sand Tunnel 1A was directly below the northeast corner of Area C. Thus, it is believed that the conditions observed at the tunnel terminus is a result of disposal at Area C rather than a collapse of the tunnel (Arcadis 2009). A Remedial Action Plan for Sand Tunnel 1A was submitted to the MPCA on December 14, 2009 and approved on February 24, 2010. Because the presence of utility lines and standing water in the traffic tunnels limited vehicular access to Sand Tunnel 1A, removal of the waste in the tunnel was not possible. For this reason, the remedial action consisted of the installation of a barrier wall within the tunnel to isolate the impacted area from potential trespassers within the sand tunnel network. Arcadis completed remedial action on December 15, 2010. Additional details are provided in the *Response Action Implementation Report, 1A Tunnel Barrier Wall, Feature 150*, submitted to MPCA on January 11, 2011 (Arcadis 2011a).

2.3 Former Disposal Area C

From approximately 1945 to 1966, Area C was used as a disposal area for industrial waste, such as construction rubble, paint sludge, and old paints and solvents generated at the Site (CRA 1988, Ford 1982). An anonymous complaint dated October 1980 in MPCA's file states that during the 1950s "…waste solvents from the plant's painting baths were dumped over the steep bank overlooking the Mississippi River" and "solvents were dumped and waste in barrels was buried". Additionally, as noted above, excavated materials from Former Fill Areas A and B were deposited in Area C in 1966 and 1962, respectively. Drums containing industrial waste were also buried, as stated in a 1988 CRA report, although the number and contents are not known. However, the investigation noted above of Sand Tunnel 1A, which terminates within Area C, supported the presence of drums containing solids with a paint-like odor. In addition, historical records identify materials such as cardboard, wood, and scrap metal may have been placed in Area C. Batteries, used light ballasts, and capacitors were specifically excluded from the fill soil and were sent to an alternate off-site disposal facility (CRA 1988).

Disposal of industrial waste at the Site was discontinued in 1966, prior to enactment of applicable state and federal environmental regulations (i.e., MPCA in 1967, USEPA in 1970, Superfund in 1980).

After placement of the industrial waste described above, the following fill activities of non-industrial waste occurred over and around Area C:

- 1965 to 1966 - Ford placed an unknown volume of construction debris (concrete and soil) over the industrial waste materials at the Site.
- 1979-1981 - Al Johnson Construction Company General Contractors placed approximately 19,000 cubic yards (CY) of concrete, 10,000 CY of sandstone and approximately 18,000 CY of sand generated as part of the USACE Lock and Dam No. 1 rehabilitation project (near the "Ford Bridge"). The construction rubble was deposited between the Site and the Mississippi River (Appendix A). Overall, the USACE rehabilitation project lasted from 1978 through 1983.
- 1984 to 1986 - Ford placed an unknown volume of debris and excavated soil during construction of the Paint Building on the Main Assembly Plant parcel. The location of the Paint Building corresponds to the location of the former test track.
- 1985 to 1987 - The Site was covered with an 8-inch concrete cap to serve as a parking area for trailers. The paved area currently exists and is approximately 166,000 square feet (sq. ft), or 3.8 acres in size.
- 1988 to 1990 – Additional earth fill and construction rubble (i.e., broken concrete and road excavation rubble) from a Mississippi River Boulevard construction project were also disposed of at Area C around 1988 and 1990, according to CRA reports dated between 1988 and 1990.

3 AREA C GEOLOGY AND HYDROGEOLOGY

Historical figures and documents (CRA 1988, 1990b; Ford 1983) indicated the industrial waste fill is approximately 25 feet thick. However, delineation investigations conducted in 2015 and 2016, described in more detail below, determined the industrial waste fill to be approximately 35 to 40 feet thick at its maximum. Furthermore, test pits, boring logs (B-2, B-4, B-6, ASB-1001 through ASB-1010), and site reconnaissance confirmed that construction rubble, broken concrete, and soil were subsequently placed over and around the industrial waste fill, and range from approximately 40 to 60 feet thick.

The horizontal extent of the industrial waste fill in 2014 was extrapolated from figures included in CRA and Ford documentation to the MPCA (Appendix B). The extent of industrial waste fill as presented by CRA was based on the interpretation of Area C aerial photographs from 1945, 1956, 1958, and 1962 (CRA 1990). The Ford *Groundwater Monitoring Wells Survey* report (1982b) figure depicts a field drawing of a “filled area” and an “aged dump site” in reference to five monitoring wells present within the area at the time. Each report illustrates a different extent of industrial waste fill at Area C, as the aerial photography interpretation extends the length along the Area C access road to the south while the Ford field documentation extends further south, west, and north in comparison. Due to the discrepancy between the two reports, a delineation investigation was conducted in 2015 and 2016 (Arcadis 2015b). Based on those investigations as well as the historical extents, the approximate industrial waste terminus extent has been indicated on the Site layout map (Figure 2), translated onto cross-section figures, and incorporated within a three-dimensional model of the area. Additional details on the cross-sections and three-dimensional model are discussed in greater detail later in this report. The maximum terminus extent of industrial waste extends to approximately 340 feet west of the access road west of Mississippi River Road Boulevard (perpendicular of the access road).

3.1 Geology

Area C is located on a point bar east of the Mississippi River (Figure 2), between the river and South Mississippi River Boulevard. The general geology of Area C, based on information identified during historical and subsequent investigations, is described below. Data collected to date was used to develop representative geologic cross sections (Figures 3A, 3B, and 3C).

Area C contains construction rubble, broken concrete, fill soil, and industrial waste, as noted above. The fill soil consists predominately of clayey silt and clay (closer to the bluff) or sand and gravel (closer to the Mississippi River). This fill soil is approximately 40 to 60 feet thick and overlays the industrial waste. The industrial waste is up to 35 to 40 feet thick and includes pieces of metal, glass, brick, rubber, and plastic. The industrial waste was also indicated by petroleum-like and/or solvent-like olfactory impacts.

The materials described above are underlain by native sand and gravel (fluvial deposits) and then the St. Peter Sandstone. Bedrock was encountered at approximately 734 feet amsl (26 feet below grade) at soil boring B-6 (CRA 1998) and at approximately 695 feet amsl (37.5 feet below grade) at AMW-07. Both borings are near the bluff on the east side of the river parcel. The sandstone is composed of medium-grained, well-sorted and well-rounded quartzite. It is white to buff in color and is medium- to weakly-indurated (hardened). The elevation of the St. Peter Sandstone appears to decrease moving west towards the Mississippi River and was not encountered in borings installed to depths of 662 feet amsl (approximately 40 to 115 feet below grade). The Platteville Limestone overlies the St. Peter Sandstone

and is present in the river bluff located directly east of Area C but was not encountered in borings on the river parcel.

3.2 Hydrogeology

Groundwater elevation around Area C is approximately 686 to 691 feet amsl and groundwater flow is generally to the southwest towards the Mississippi River in the overburden and generally to the west towards the Mississippi River in the St. Peter Sandstone. Groundwater elevation and flow direction is influenced by the river stage and seasonal control of the river elevation at Lock Dam No. 1. This allows the potential for temporary reversal of flow direction during high water level events due to the direct connection between groundwater and the Mississippi River. A potentiometric surface map for the St. Peter Sandstone aquifer is included as Figure 4 and is based on monitoring wells in-place as of June 2016.

A hydraulic conductivity of $9x10^{-2}$ to $5x10^{-3}$ centimeters per second (cm/s) for the shallow aquifer in the vicinity of the Site was estimated by inputting the results of a grain size analysis of flood plain sediments performed by Soil Testing Services in January 1982, into Hazen's equation. Hazen's equation is an empirical formula for estimating hydraulic conductivity using the d_{10} value returned from a grain size analysis (CRA 1988). The d_{10} values from the grain size analyses ranged from 0.08 millimeters (mm) to 0.3 mm, and were used to calculate hydraulic conductivity:

$$K = A * (d_{10}{}^2)$$

Where:

K = hydraulic conductivity in cm/s,

A = empirical coefficient equal to 1.0, and

d_{10} = grain size (in millimeters [mm]) of the 10 percent retained (of a grain size analysis).

With a geometric mean hydraulic conductivity of $2x10^{-3}$ cm/s based on these grain size analyses, an average hydraulic gradient of 0.002 ft/ft, and a porosity of 30%, average groundwater velocity can be estimated at 0.1 to 1.7 feet per day (ft/day) using the following equation:

$$v = \frac{K * i}{n}$$

Where:

v = groundwater linear velocity in ft/day

K = hydraulic conductivity in cm/s

i = hydraulic gradient

n = porosity

Based on this average groundwater velocity, and the shortest distance through Area C (in direction of groundwater flow) of approximately 975 feet between the river and the edge of the bluff, the estimated groundwater travel time to the river would range from approximately 1.5 to 26 years between the east side of Area C (Sand Tunnel 1A) and the Mississippi River (river edge directly west).

The typical elevation of the Mississippi River is approximately 689 feet amsl, similar to the water table below Area C. Flood elevations for the Mississippi are 707 feet amsl (10-year), 714 feet amsl (50-year) and 717 feet amsl (100-year), or 18, 25, and 28 feet above the currently observed groundwater table elevation. Two major flooding events have been recorded for the Site and include:

- April 1965: The river elevation was 719.02 feet amsl (Appendix A), which was 30 feet above the currently observed groundwater table and two feet higher than the average 100-year flood elevation; the highest recorded elevation since plant operations commenced.
- June 2014: The river elevation was 703.90 feet amsl, or 15 feet above the current observed groundwater table and three feet below the average 10-year flood elevation.

3.3 Geologic Interpretation

The three cross-sections of the Site (Figures 3A, 3B and 3C) incorporate the interpretation of the vertical and horizontal extent of the industrial waste and construction debris fill. The cross sections also include the groundwater elevation based on the most recent gauging data in 2016 as well as floodwater elevations representative of 10-year, 50-year, and 100-year flood events. There is the potential for the river elevation to rise above the elevation of the bottom of the industrial waste during 10-, 50- and 100-year flood events. However, the potential for groundwater to come into contact with the lower portion of the industrial waste during these flood events is potentially mitigated by the relatively slower response of groundwater to match elevation fluctuations of surface water. Additionally, the portion of Area C where industrial waste has been reported (Section 2.3) is set back a minimum of 340feet from the nearest bank of the river and approximately 700 feet from the bank of the river in the direction of groundwater flow, which will further dampen any groundwater response to a flood stage fluctuation in river elevation.

In addition to the cross-sections, information collected from the site from as early as 1945 through investigations completed in 2016 were utilized to develop a three-dimensional representation of the surficial topography and underlying geological layers noted in Section 3.1. Flood water elevations representative of 10-year, 50-year, and 100-year flood events are also presented within the three-dimensional model. The layers within the model were created by developing a layer framework within Earth Volumetric Studio (EVS), a visualization software package developed by CTech Development Corporation. The convex hull gridding method and Kriging interpolation was utilized within EVS to develop the horizontal and vertical extent of each layer from defined discreet points. The discreet points across the area provide locations of known thickness of material layers for the gridding and interpolation process. These points were formulated from the following sources:

- Geological boring logs of historical and existing groundwater monitoring wells (B-1 through B-6, AMW-07, AMW-19 through AMW-26);
- Historical maps with the horizontal extent of the industrial waste fill developed from aerial images and field observations (Appendix B);
- Field observations noted during the digging of historical test pits (discussed further in Section 4.2);
- Field observations noted during the digging of supplemental test pits as well as borehole drilling in 2015 and 2016 (discussed further in Section 4.6);
- Aerial photography for the years 2010-2012; and

- Topography and site reconnaissance data (photographs and notes discussed further in Section 4.4.1.2).

A CD containing a working version of the three-dimensional model is presented in Appendix C.

4 INVESTIGATION AND REGULATORY HISTORY

The following is a brief summary of the soil and groundwater investigation activities that have taken place at Area C to date. All observations, soil analytical and groundwater analytical data from these investigations are included within the results discussion, tables, and figures of this *Area C – Comprehensive Site History and Investigation Report II*. The historical data provides background information and was used to help develop a scope of work for the more recent investigation. However, the evaluation presented in Section 9 of this report will focus primarily on the most recent comprehensive data set that was collected in accordance with current standard operating procedures.

4.1 Initial 1981 Investigation Summary

Area C was identified to the USEPA by Ford in 1981 during the Superfund notification process in response to a reporting requirement of the newly enacted *Comprehensive Environmental Response, Compensation, and Liability Act*, commonly known as Superfund. However, the Site was never a federal Superfund site. In 1981, in response to the MPCA's request for the installation of monitoring wells at the Site, Ford retained Soil Testing Services of Minnesota, Inc. (STS) to complete a hydrogeologic survey (Ford 1982). Following the survey and MPCA approval of the proposed monitoring well locations, STS completed soil borings and monitoring well installations in December 1981. Ford personnel subsequently completed two groundwater sampling events and collected surface water samples. Investigation activities and results were presented after each event in the March 3, 1982 *Groundwater Monitoring Well Survey* and February 11, 1983 report *Waste Disposal Site – Groundwater Investigation*.

Six soil borings (B-1 through B-6) were completed around and through the current limits of Area C (Figure 2). Borehole depths ranged from 19.5 to 51 feet below ground surface (ft bgs). Five of the borings (B-1 through B-5) were converted to 2-inch groundwater monitoring wells. The wells were sampled twice in 1982 (March and December) for VOCs and heavy metals (copper, cadmium, zinc, nickel, chromium, and lead). Additionally, surface water samples were collected in December 1982 from three locations and analyzed for VOCs and heavy metals (Ford 1983). The samples were collected along the east bank of the Mississippi River upstream and downstream of Area C and identified as:

- R1 - upstream of the Lock and Dam No. 1;
- R2 - near the TCAP southern property line; and
- R3 - approximately 200 yards south of the Ford TCAP property line.

Results of these investigations are discussed in Section 8 below.

In 1983, the passage of the *Minnesota Environmental Response and Liability Act* created Minnesota's state Superfund program. Later, Ford's Twin Cities Assembly Plant was moved to the original (1984) Minnesota state Superfund list, also known as the PLP, due to the presence of three on-site historical waste disposal areas (Areas A, B, and C). The Twin Cities Assembly Plant was one of 87 sites in Minnesota that appeared on the Minnesota PLP in 1984.

4.2 Supplemental 1987 Investigation

Subsequent to the deposit of construction debris between 1984 and 1986 as noted in Section 2.3 above, a supplemental investigation was completed by CRA from 1987 through 1990. The supplemental investigation included a file review and a hydrogeologic evaluation including additional groundwater and surface water sampling, installation of one additional groundwater monitoring well (B-6) the completion of test pits, a stadia survey, and waste characterization sampling. A final report of the investigation and results was submitted in the *Remedial Investigation/Alternatives Analysis Work Plan* dated February 11, 1991. In that report, Ford proposed additional field work for certain contaminated areas on the main parcel, but requested MPCA approval that no further investigation was necessary for Area C. This work plan was approved by the MPCA in a letter dated March 21, 1991. Subsequent to implementation of the work plan, the TCAP site, including Area C, was delisted from the Minnesota State PLP list on July 8, 1993.

Test Pit Investigation & Waste Characterization: A backhoe was used to complete 10 test pits along the southern boundary of Area C to a depth of nine feet bgs (Figure 2) in January 1988. Two of the test pits (TP-3 and TP-8) were observed to contain gray-black stained soil and a paint-like odor (CRA 1988). Samples of the stained soil were collected and sent to an off-site laboratory for waste characterization analysis. Specifically, test pit TP-3 soil was sampled for TCLP for VOCs and metals, flashpoint, reactive sulfide and pH. Test Pit TP-8 soil samples were analyzed by an extraction procedure (EP) toxicity leachate method for metals. The remaining eight test pits were not sampled as visual or olfactory indicators of contamination were not observed.

Stadia Survey: On February 16, 1988 monitoring locations B-1, B-2, and B-4 were surveyed due to the vertical extension of the wells in response to the expansion of the trailer storage area. Additionally, the northern and southern edges of the fill area were surveyed, although snowfall did not allow for the accurate location of the top of the fill area nor the test pits.

Results of these investigations are discussed in Section 8 below.

4.3 1989-1993 Monitoring Well Activities

In April 1989, due to the addition of construction debris associated with the Paint Building construction, monitoring wells B-1 through B-5 were inspected to confirm their integrity. All five monitoring wells were observed to be damaged, and repairs were completed at B-1, B-3 and B-5. Monitoring wells B-2 and B-4 could not be salvaged and were subsequently abandoned on May 31, 1989 (CRA 1990a). Copies of the well abandonment records are included in Appendix A. Following repair of the remaining three monitoring wells (B-1, B-3 and B-5), the top of casing and ground surface elevation at that time were resurveyed in September 1989.

Monitoring Well Installation and Sampling

1989 Sampling: Three groundwater sampling events were completed in June, August, and September 1989. Samples were collected from the repaired monitoring wells (B-1, B-3, and B-5) and submitted for laboratory analysis of halocarbon and aromatic VOCs and field-filtered metals (arsenic, barium, cadmium, copper, lead, mercury, nickel, selenium, silver, and zinc). Analysis of cis-1,2-dichloroethylene (cis-1,2-

DCE) and ethyl acetate was added for the August and September 1989 samples in accordance to the MPCA request (CRA 1990a).

Three surface water sampling events were completed concurrently with the groundwater sampling events in June, August, and September 1989. Samples were collected from the Mississippi River from two locations (upstream and downstream of Area C) and submitted for laboratory analysis of halocarbon and aromatic VOCs and field-filtered metals (arsenic, barium, cadmium, copper, lead, mercury, nickel, selenium, silver, and zinc). Analysis of cis-1,2-DCE and ethyl acetate was added for the August and September 1989 samples in accordance to the MPCA request (CRA 1990a).

1990 Monitoring Well Installation: On January 31, 1990, during a meeting with Ford to review the 1989 analytical results, the MPCA requested additional field work to be conducted at the Site. In response, an additional groundwater monitoring well (B-6) was installed to a depth of 47 feet below ground surface on the northwest side of Area C on April 9-10, 1990.

1990 Sampling: Two sampling events were completed in April and June 1990 (CRA 1990b) and included monitoring wells B-1, B-3, B-5, and B-6 and surface water samples from the Mississippi River (upstream and downstream of Area C). All four wells were sampled and sent for laboratory analysis of halocarbon and aromatic VOCs, the metals arsenic, selenium, and mercury via the Atomic Absorption Method, and barium, cadmium, chromium, copper, lead, nickel, silver, and zinc via USEPA Method 6010 (inductively coupled plasma analysis). Analysis of cis-1,2-DCE and ethyl acetate was also conducted per MPCA request in the letter dated April 25, 1989.

1993 Monitoring Well Abandonment: B-1, B-3, B-5 and B-6 were abandoned on November 19, 1993 (CRA 1994). Copies of the well abandonment records are included in Appendix A.

Results of these investigations are discussed in Section 8 below.

4.4 2010-2012 Investigation

In anticipation of plant closure, additional investigations were initiated by Arcadis in November 2010 after Area C was identified as a feature in the Arcadis 2007 Phase I Environmental Site Assessment (Arcadis 2007a). Between 2010 and 2012, activities completed at Area C included a Site reconnaissance to document recent conditions, drum removal, a topographic survey, surface water sampling, and groundwater monitoring well installation and sampling. Additional details on each of these activities are described below.

4.4.1 Site Reconnaissance

Ford and Arcadis conducted a Site reconnaissance of Area C in April 2011, and Arcadis conducted subsequent Site reconnaissance events in January, February, and November of 2012. Photographs of these Site reconnaissance events are included in Appendix D. During the Site reconnaissance events, Arcadis observed exposed scrap metal, concrete slabs with and without reinforcement steel bars, and erosion along the western slope base. The four- to eight-foot high erosion cut into the base of the western slope appeared to be the result of flooding events. The elevation of the top of the erosion cut is approximately equal to a 100-year flood (717 ft amsl). The southern slope of Area C did not appear to be as heavily eroded as the western slope, but did contain exposed concrete with and without reinforcement

steel bars; concrete-filled metal pipes; scrap metal beams, frames and support beams; asphalt, and used insulation. Arcadis also observed slumping along both the western and southern slopes, and what appeared to be a (now-exposed) geo-membrane barrier placed in an attempt to increase slope stability.

The surface parking lot on top of Area C was observed to be overall intact, with minor surficial cracking. There are precipitation run-off drains along both the southern edge of the concrete lot and northwestern quarter. These drains flow into the storm water retention pond to the north of Area C according to utility figures. The fence surrounding the storage parking lot is in good condition.

The fence line that separates the Site from Hidden Falls Regional Park is in disrepair. The fence has been cut open in two locations, and vegetation, tree growth, and soil erosion has damaged posts, the chain-link, and barbed-wire along the top of the fence. Soil eroding from the south slope of Area C has accumulated between Area C and the fence, resulting in the ground surface on the TCAP side of the fence being a few feet higher than on the park side of the fence. The missing portions of the fence are adjacent to walking paths in Hidden Falls Regional Park, and allow public access to the Site, as evident by a visible foot-pathway onto the Site from the park.

Site reconnaissance conducted in April 2011 and January 2012 also resulted in discovery of four exposed 55-gallon steel drums along the base of the western slope and on the southern slope. Details regarding the drum inspection and removal are provided below.

4.4.1.1 Removal of Drums

A visual inspection of Area C was performed by Ford and Arcadis in April 2011 to determine the pathway for equipment to use during the subsurface investigation, as described in more detail in Section 4.4.3 below. During the inspection, two drums were observed near land surface at the base of the southern and western slope in Area C during this initial visual inspection. One drum did not have a lid, was lying on its side, and appeared to have been partially filled with soil that washed in from the surrounding area. The second drum was empty and folded in half. Waste characterization samples of the soil in the drum were collected by MidAmerica Technical and Environmental Services, Inc. on November 11, 2011, under the supervision of Arcadis, and analyzed for VOCs, TCLP Resource Conservation and Recovery Act (RCRA) metals, mercury, polychlorinated biphenyls (PCBs) and SVOCs. Analytical results of the characterization samples indicated the contents of the drum were non-hazardous. The drums were removed from the Site by MidAmerica and disposed of at the Spruce Ridge Resource Management Facility located in Glencoe, Minnesota on February 3, 2012.

A subsequent visual investigation during the topographic survey conducted by Sunde Land Surveying, LLC, in January 2012 observed two additional drums near the top of the slope on the south side of Area C. One drum was in very poor condition and had been rusted through and broken into several pieces. The drum was empty with the exception of a small amount of soil that appeared to have washed into the drum. The second drum was approximately 75 percent full of a dried blue-gray material, which was believed to be solidified paint sludge. Characterization samples of the material remaining in the drums were collected by MidAmerica on February 3, 2012, under the supervision of Arcadis, and analyzed for VOCs, TCLP RCRA metals, mercury, PCBs and SVOCs. Analytical results of the characterization samples indicated the contents of the drum were non-hazardous. The drums were removed from the Site by MidAmerica and disposed of at the Spruce Ridge Resource Management Facility on April 11, 2012.

The locations, contents, analytical results, and dates of observance and removal of all four removed drums are illustrated on Figure 5. The analytical reports are included in Appendix E.

Results of these investigations were initially reported in the *Data Collected from Removal of Drums Located along Mississippi River* letter to the MPCA (Arcadis 2015a).

4.4.1.2 Topographic Survey and Observations

A topographic survey of Area C was completed in January 2012. The survey was centered on the paved portion of Area C and extended east to the asphalt access road, north to approximately the toe of the Area C slope, west to the Mississippi River and south to the property boundary of Hidden Falls Regional Park. The elevation contour lines generated from this survey are shown on Figure 2.

During the survey, scrap metal parts, metal cables, and concrete debris were observed at the ground surface in several locations, as illustrated on Figure 5. The scrap metal north and south of the concrete area contained scrap metal strips, sheets, springs/coils and cylinders, some partially buried and all heavily rusted. There was approximately 2 CYs of exposed scrap concrete on the floodplain, which appeared to be portions of barricades and pads. Additional scrap concrete was exposed along the erosion cut of the western slope. The scrap steel cable was approximately one-quarter inch to three-quarters inch thick.

Additional observations during the survey included a general overview of Area C. The industrial waste deposited in Area C between 1945 and 1966 appeared to be covered and surrounded by soil and construction debris and partially capped by an approximately 8-inch-thick concrete parking area with relatively few minor cracks. The construction debris fill deposited after 1966 that is not capped with concrete is vegetated with dense underbrush and trees on the slopes and floodplain. As indicated on Figure 2, the toe of the construction debris fill extends to approximately 50 feet to the river, and on average, is approximately 140 feet from the river. The footprint of Area C (including the construction debris) encompasses approximately 600,000 sq. ft, or approximately 14 acres. The footprint of the industrial waste disposal area, based on the delineation work completed during the recent investigation, is approximately 3.65 acres.

4.4.2 Surface Water Sampling

Surface water samples were collected from the Mississippi River in accordance with the *Groundwater Seep and Mississippi River Sampling Work Plan* (Arcadis 2008b) in order to evaluate surface water as a potential receptor. River water samples SW-01 (located upstream of the dam), SW-02 (located between the wastewater treatment plant and Area C), SW-03 (located downstream of Area C), and SW-04 (located downstream of the TCAP plant) were collected on November 4 and November 10, 2010. In addition to the river water samples, one sample was collected from the Hidden Falls outfall (Outfall-01) on November 4, 2010.

Samples were analyzed for VOCs, SVOCs, RCRA metals, gasoline range organics (GRO), diesel range organics (DRO) and hardness.

Results of this investigation was initially reported in *Technical Memorandum to Summarize the Seep and River Sampling Events* (Arcadis 2011b) and are discussed in Section 8 below.

4.4.3 Well Installation and Sampling

In accordance with the *Supplemental Phase II Exterior Work Plan* (Arcadis 2008a) approved by MPCA on March 15, 2010, Arcadis oversaw the installation of two additional monitoring wells (AMW-19 and AMW-20) in early November 2011 near the toe of the slope on the west side of Area C (Figure 2). After installation, these wells were sampled twice, on November 11, 2011 and January 17, 2012. Samples were analyzed for VOCs, SVOCs, dissolved Target Analyte List (TAL) metals, DRO, and GRO.

Results of these investigations were initially reported in the *Area C – Comprehensive Site History and Investigation Report* (Arcadis 2014a) and are discussed in Section 8 below.

4.5 2014 Groundwater Sampling

In June and early July of 2014, the Minneapolis/St. Paul area received several inches of rain over several weeks, which caused flooding of the Mississippi River near Area C. Following the flood event, the MPCA requested the permanent monitoring wells surrounding Area C (AMW-05, AMW-05B, AMW-07, AMW-19 and AMW-20) to be gauged weekly as well as sampled monthly for three consecutive months, if accessible. Monitoring wells AMW-19 and AMW-20 were initially inaccessible due to the flooding and thus were not gauged for two weeks nor sampled during the first month (July 2014). The remaining monitoring wells (AMW-05, AMW-05B, AMW-07) were gauged weekly and sampled monthly, with the exception of AMW-05 which was dry during the last month of sampling (September 2014). Accessible monitoring wells were sampled for VOCs and dissolved TAL metals. Monitoring well AMW-07 was also sampled for polynuclear aromatic hydrocarbons (PAHs) per MPCA request.

Results of these investigations were initially reported in the *Data Collected from Monitoring Wells Located along Mississippi River* letters to the MPCA (Arcadis 2014b, Arcadis 2014c, Arcadis 2014d) and are discussed in Section 8 below.

4.6 2015-2016 Investigations

Following MPCA review of the *Area C – Comprehensive Site History and Investigation Report* (Arcadis 2014a), the MPCA submitted an October 14, 2014 letter to Ford requesting additional investigation work at Area C to improve delineation and characterization of the industrial waste and to evaluate potential exposure pathways. An Area C Investigation Work Plan was developed and included vertical borings with soil and surficial soil sampling, test trenching, monitoring well installation and groundwater sampling (Arcadis 2015b).

Area C Work Plan Implementation: Arcadis installed 10 vertical soil borings as well as completed five test trenches to verify the lateral and vertical footprint of the industrial waste placed at Area C. The vertical soil borings were completed through the concrete which covers Area C within and along the perimeter of the estimated extent of industrial waste, based on historical sketches. The five test trenches were completed along the south slope of Area C near the estimated location of industrial waste, based on historical information. Soil samples from various intervals within the industrial waste (representing different areas of disposal) and from native soil below the industrial waste were collected for waste characterization consistent with the Work Plan. In addition, 31 surficial soil samples were collected along the north, west, and south slopes of Area C to evaluate the potential exposure to any current or future receptors. All soil

samples were collected consistent with the Area C Investigation Work Plan. MPCA staff was present for much of the drilling and trenching activities.

Arcadis installed eight new monitoring wells in the unconsolidated aquifer as part of the Area C Investigation Work Plan to improve the monitoring well network around Area C and to ensure that groundwater quality is adequately characterized (Arcadis 2015b). One well was installed through the concrete slab which covers Area C, approximately 70 feet beyond the terminus of the industrial waste. The other seven wells were installed around the northwest, west, and southern perimeters of Area C to provide monitoring well coverage in all accessible directions. Two of the monitoring wells are part of a nested pair and provide additional water quality characterization at the base of the unconsolidated aquifer (bedrock interface). The monitoring well installations were completed over two mobilizations in 2015 (September and December). All of the Area C monitoring wells (existing and newly installed in 2015) were sampled in March 2016 consistent with the Work Plan, including: VOCs, SVOCs, dissolved TAL metals and DRO. A second sampling event was completed in June 2016 as part of the Site-wide permanent monitoring well sampling event (described in more detail below) and included analysis of VOCs, SVOCs, dissolved TAL metals, DRO, GRO and cyanide.

Comprehensive Groundwater Sampling Event: In June 2016, 32 of the 35 permanent monitoring wells installed across the Ford site between June 2007 and January 2016 were sampled to provide a current and comprehensive picture of groundwater quality in accordance with the work plan (Arcadis 2016b). The wells proposed for sampling were selected based on previous analytical results, location and/or previous MPCA-approved work plans. The analytes that were collected from each well were determined based on the geologic interval in which the monitoring well was screened. One monitoring well within the St. Peter Sandstone was dry (AMW-05) and therefore could not be sampled. This report includes the discussion of a subset of the St. Peter Sandstone and the overburden Area C permanent monitoring wells only. A comprehensive discussion of the June 2016 groundwater sampling is included in the submitted *Comprehensive Phase II Site Investigation Report – Groundwater Addendum* (Arcadis 2016c).

The results of the 2015 and 2016 Area C investigations and a subset of the Site Wide groundwater investigation (relating to Area C) are discussed in Section 8 below.

5 GENERAL INVESTIGATION METHODOLOGY

This section provides a summary of the means and methods utilized during the 2007 to 2016 subsurface and surface water investigations completed by Arcadis. The means and methods utilized prior to 2007 by others are included in corresponding investigation reports included in Appendix A. Field logbook/documentation procedures and the field quality assurance program were implemented in accordance with the approved June 2007 Field Sampling Plan (Arcadis 2007b) and with MPCA-approved work plans. An addendum to Field Sampling Plan Section 3: Location and Sample Nomenclature was completed for the Area C investigations, and is included in Appendix F. Standard operating procedures used to complete this field work are included in Appendix G, when applicable. This section will also reference approved work plans when possible.

5.1 Utility Clearance

A full utility clearance was performed prior to initiating any subsurface work at the Site. Activities included but were not limited to:

- Notification of Gopher One Call to mark all public utility lines servicing the Site
- Utilizing a private utility locator in the areas identified for subsurface work
- Surficial inspection referencing available utility and historical operational maps for each proposed boring location, if available.

After removing any surficial debris (i.e., asphalt or concrete), a hand auger was used to 1) confirm the absence of utilities and 2) investigate the top 5 feet below ground surface if no utilities existed.

5.2 Soil Borings

Soil borings were advanced using multiple techniques: hand augers and direct-push, hollow-stem auger, and roto-sonic drill rigs were all used. Each boring was logged continuously by an Arcadis field geologist and screened using a PID with an 11.7 electron volt (eV) lamp. Soil boring logs were created in the field to identify material encountered for each borehole to total depth using the United Soil Classification System (USCS). Digitized soil boring logs are provided in Appendix H.

Two to five soil samples were collected at each borehole. As stipulated in the Area C Investigation Work Plan (Arcadis 2015b), soil samples were collected from the intervals containing indications of industrial waste, with the highest field indication of PID readings, and/or visual and/or olfactory evidence of impacts. If PID and/or visual and/or olfactory evidence of impacts were observed at multiple depth intervals that could provide useful assessment or delineation data, those intervals were sampled. If no PID/visual/olfactory evidence of impacts were observed, the 2-foot interval above the saturated zone or the lowermost interval of the soil boring (if the saturated zone was not encountered) was sampled. Borings were advanced until the target depth was reached or refusal due to bedrock was encountered. No soil samples were collected while installing groundwater monitoring wells AMW-19 and AMW-20 because there were no visual or PID indications of impacts during drilling. No soil samples were collected while installing groundwater monitoring wells AMW-21 through AMW-26 per the Area C Investigation Work Plan (Arcadis 2015b).

Soil samples were collected in laboratory-supplied containers and placed on ice pending shipment to the laboratory following standard chain-of-custody procedures. All samples were submitted to TestAmerica Laboratories in North Canton, Ohio for analysis of one or more of the following analytes:

- VOCs using USEPA Method 8260
- SVOCs using USEPA Method 8270
- GRO using the Wisconsin (WI) Modified Method
- DRO using the WI Modified Method
- TAL Metals using USEPA Method 6010
- PCBs using USEPA Method 8082
- TCLP VOCs using USEPA Method 8260 and 1311
- TCLP SVOCs using USEPA Method 8270 and 1311
- TCLP TAL Metals using USEPA Method 6010 and 1311

All TAL metals sample analyses included speciation for hexavalent and trivalent chromium. In addition to those analytical samples, each interval with indications of industrial waste were analyzed in the field using a petroleum sheen test (in accordance with MPCA Petroleum Remediation Program Guidance 4-04) and a solvent non-aqueous phase liquid (NAPL) test kit (e.g., Oil-in-Soil test kits) to identify petroleum or solvent based NAPLs. The field test results are included in Table 4 as well as the field book notes in Appendix I.

Additional details regarding the number of samples, bottles, preservation, etc. for each analytical method is included in Table 1. Upon completion, the borehole was sealed in accordance with MDH guidelines. The surface disturbance of each borehole was repaired to match surrounding materials.

5.3 Surficial Hand Auger Borings

A hand auger was used to collect a surficial soil sample from the upper one foot at each of the 31 surficial soil sample locations (Figure 2). At each of the sample locations, a picture of the area was taken and surficial debris (i.e., leaves, grass, organic matter, etc.) was removed prior to collecting the soil samples.

Soil samples were collected in laboratory supplied containers and placed on ice pending shipment to the laboratory following standard chain-of-custody procedures. All samples were submitted to TestAmerica Laboratories in North Canton, Ohio for analysis of one or more of the following analytes:

- VOCs using USEPA Method 8260
- SVOCs using USEPA Method 8270
- GRO using the WI Modified Method
- DRO using the WI Modified Method
- TAL Metals using USEPA Method 6010

Additional details regarding the number of samples, bottles, preservation, etc. for each analytical method is included in Table 1. Upon completion, the surface disturbance of each borehole was repaired to match surrounding materials.

5.4 Permanent Groundwater Monitoring Wells

5.4.1 Permanent Groundwater Monitoring Well Installation

Historical groundwater monitoring wells (prior to 2007) were installed according to procedures detailed in Appendix A. These six historical monitoring wells, which no longer exist, were installed within the Area C overburden and include B-1, B-2, B-3, B-4, B-5 and B-6.

Between 2007 and December 2015, 13 permanent groundwater monitoring wells were installed on the river parcel. Ten groundwater monitoring wells are screened within the unconsolidated overburden and three wells are completed in the St. Peter Sandstone aquifer. The groundwater monitoring wells were installed to evaluate groundwater quality within the river parcel footprint and Area C, as well as downgradient of Area C towards the Mississippi River (Figure 2).

Boreholes were drilled using either a nominal 4.25-inch inner diameter hollow-stem auger (overburden groundwater monitoring wells) or 6-inch roto-sonic drilling rig (bedrock groundwater monitoring wells). A dual casing methodology was used during roto-sonic drilling, where the inner casing is drilled past the outer casing, minimizing the potential for vertical migration of constituents. Soil samples and rock coring samples (if applicable) were collected continuously for wells installed in 2007 and 2015. Well construction and soil boring logs were prepared as described above, and each unconsolidated soil sample was screened in the field using a PID. Soil samples were not collected during the installation of overburden groundwater monitoring wells in 2011.

Groundwater monitoring wells were installed using various materials over the years in accordance with MDH requirements.

- Groundwater monitoring wells installed in the overburden at Area C in 2011 were constructed with 2-inch diameter, 10-foot long slotted Schedule 40 polyvinyl chloride (PVC) screen and black carbon steel riser.
- The groundwater monitoring well installed in the overburden within Area C in September 2015 (AMW-26) was constructed with 2-inch diameter, 10-foot long continuous stainless steel screen and black carbon steel riser.
- Groundwater monitoring wells installed in the overburden within Area C in December 2015 were constructed with 2-inch diameter, 10-foot long screens, either consisting of Schedule 40 PVC slotted screen and riser or continuous stainless steel screens and riser.
- St. Peter Sandstone groundwater monitoring wells (bedrock monitoring wells) were constructed with 2-inch diameter, 10-foot-long continuous stainless steel screens and black carbon steel riser.
- Surface completions were either flush-mount or stickup, depending on the location.

Each well had a filter sand pack extended to approximately 2 feet above the top of the screened interval. A 2-foot bentonite seal was placed over the sand pack and the remaining well annulus was sealed with cement grout to the surface. The wells were developed (bailing and surging techniques or air lifting) and permitted in accordance with MDH requirements. The well location, ground surface, and top-of-casing elevation for each well were surveyed to the Ramsey County coordinates and 1929 United States Geological Survey Vertical Datum.

A summary of the existing permanent groundwater monitoring well construction details is included in Table 2. Well construction logs are included in Appendix J. Copies of MDH well and boring records are included in Appendix K.

5.4.2 Permanent Groundwater Monitoring Well Sampling

Historical groundwater monitoring wells were sampled according to procedures detailed Appendix A.

Between 2007 and 2016, groundwater sampling procedures were as follows:

Each groundwater monitoring well was gauged prior to sampling. During each gauging event, static water levels were collected as well as depth to bottom measurements to determine casing integrity and siltation of the well screens. A summary of the permanent monitoring wells included in the discussion of this report and the corresponding groundwater elevations based on all gauging events (regardless if prior to a sampling event) is included in Table 3. In addition, a potentiometric surface map for the St. Peter aquifer based on monitoring wells in-place as of June 2016 is included as Figure 4.

Groundwater monitoring wells were sampled using the low-flow sampling method in accordance with the USEPA Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures (USEPA 1996a). Groundwater was purged using a peristaltic pump or a grundfos pump and dedicated tubing. If water levels exceeded approximately 25 feet below ground surface, monitoring wells were sampled using a dedicated bailer. Monitoring wells sampled with a dedicated bailer utilized the standard purge (three-well volume) technique rather than the low-flow method.

Water quality parameters (pH, temperature, specific conductivity, oxidation reduction potential, and dissolved oxygen) were collected during purging using a multi-parameter flow-through-cell and a separate turbidity meter. Once indicator parameters stabilized during low-flow groundwater sampling, or three well volumes were removed, samples were collected in laboratory-supplied containers and placed on ice pending shipment to the laboratory following standard chain-of-custody procedures. All samples were submitted to TestAmerica Laboratories in North Canton, Ohio of one or more of the following analytes:

- VOCs using USEPA Method 8260
- SVOCs using USEPA Method 8270
- PAHs using USEPA Method 8270
- DRO using the WI Modified Method
- GRO using the WI Modified Method
- Cyanide using USEPA Method 335.4
- Total and dissolved TAL Metals using USEPA Method 6010
- Total and dissolved RCRA Metals using USEPA Method 6010/ Method 7470

All groundwater samples analyzed for dissolved metals were field filtered using a 0.45-micron disposable filter prior to sample collection. Groundwater sampling logs are included in Appendix L.

5.5 Trenching

5.5.1 Field Screening

Soil excavated as part of the Area C investigation was screened in accordance with the Area C Investigation Work Plan (Arcadis 2015b). These excavations targeted delineation of industrial waste (e.g., glass, brick, metal, drums, paint sludge, elevated PID readings, visual staining) identified during historical test pit excavations. Individual trenches were extended down to the extent of the excavator limits (approximately 13 to 15 feet below ground surface), if possible. Two trenches (Trench 1 and Trench 3) hit refusal due to an asphalt cap and solidified paint sludge, respectively. Trenches were also extended laterally until no waste materials were observed in the trench for a minimum of 10 lateral feet. All excavated soil was screened using a PID with an 11.7eV lamp at a minimum frequency of once per 10 CYs of soil. The excavated soil was also continuously screened for the visual presence or olfactory indications of waste material. Excavated soil was handled as follows:

- If PID readings were less than 10 parts per million (ppm) and soil did not show any visual or olfactory indications of impacts or waste material:
    - The soil was stockpiled for use to be placed back in the excavation after trenching was complete, with no additional sampling requirements.
- If PID readings greater than 10 ppm and/or soil had any indications of visual or olfactory impacts or contained waste material:
    - Excavated soil was containerized for off-Site disposal in accordance with requirements of a Ford-approved and MPCA-permitted off-Site disposal facility. Excavated soil staged in roll-off containers were placed on and covered by polyethylene sheets within the roll-off container until removed from the Site.

5.5.2 Analytical Sampling

During excavation of each trench, soil analytical samples were collected at each test trench with evidence of industrial waste, with additional samples collected if the fill was of variable composition. For test trenches that did not exhibit evidence of industrial waste, a sample was collected from non-impacted soil. Samples were submitted for analysis of the following, per the Area C Investigation Work Plan:

- VOCs using USEPA Method 8260
- SVOCs using USEPA Method 8270
- GRO using the WI Modified Method
- DRO using the WI Modified Method
- TAL Metals using USEPA Method 6010
- TCLP VOCs using USEPA Method 8260 and 1311
- TCLP SVOCs using USEPA Method 8270 and 1311
- TCLP TAL Metals using USEPA Method 6010 and 1311

All TAL metals sample analyses included speciation for hexavalent and trivalent chromium. In addition to those analytical samples, intervals with indications of industrial waste were analyzed in the field using a petroleum sheen test (in accordance with MPCA Petroleum Remediation Program Guidance 4-04) and a

solvent NAPL test kit (e.g., Oil-in-Soil test kits) to identify petroleum or solvent based NAPLs. The field test results are included in Table 4 as well as the field book notes in Appendix I.

All soil samples collected for analysis were transferred to laboratory-supplied containers and placed on ice pending shipment to the laboratory following standard chain-of-custody procedures. Samples were submitted to TestAmerica Laboratories in North Canton, Ohio for analysis. Additional details regarding the number of samples, bottles, preservation, and holding time for each analytical method listed above is included in Table 1.

After each trench with identified waste was complete, Class 5 crushed concrete was used to backfill the excavations to grade. For trenches with no visual or olfactory indications of impacts or observed waste materials throughout the extent of the trench, the excavated soil was used to backfill the same trench to grade.

5.6 Surface Water Sampling

Surface water samples were collected directly from the Mississippi River. The sample depth within the river was approximately half the water column depth of the river at the time of sampling. Samples were collected from the river when its velocity was slow enough that Arcadis personnel could safely wade into the river to a depth of approximately four feet.

Immediately prior to sample collection, field parameters, including hardness, specific conductivity, temperature, pH, dissolved oxygen, and turbidity, were measured at each location using a field test kit for hardness and a multiparameter water-quality monitor for the remaining parameters.

Surface water samples were collected in laboratory supplied containers and placed on ice pending shipment to the laboratory following standard chain-of-custody procedures. All samples were submitted to TestAmerica Laboratories in North Canton, Ohio for analysis of the following:

- VOCs using USEPA Method 8260
- SVOCs using USEPA Method 8270
- RCRA metals (total) using USEPA Method 6010
- GRO using the WI Modified Method
- DRO using the WI Modified Method

Additional details regarding the number of samples, bottles, preservation, etc. for each analytical method is included in Table 1.

5.7 Decontamination Procedures

Drilling and sampling equipment (e.g., drill rig, drill casings, rods, sample barrel, hand augers, stainless steel spatulas) and equipment that could have potentially come into contact (directly or indirectly) with impacts were decontaminated on-site. Decontamination protocols were followed per the Field Sampling Plan between boreholes and before leaving the site at the end of the project.

Drilling and sampling equipment were disassembled and washed with a 2-percent solution of laboratory-grade detergent (e.g., Alconox) and city water. The equipment was scrubbed to remove any adhering particles and rinsed with distilled water. The clean equipment was then handled with clean disposable

gloves to avoid potential contamination. The 2 percent solution of laboratory-grade detergent and city water was changed daily, or more frequently after drilling at highly impacted locations.

Hand augers and stainless steel spatulas were rinsed with a solution of laboratory-grade detergent (e.g., Liquinox) and distilled water. The equipment was then scrubbed to remove any adhering particles and rinsed with distilled water. The clean equipment was then handled with clean disposable gloves to avoid potential contamination.

All decontamination water was containerized as investigation-derived waste (IDW) and disposed of as described in Section 5.8.2.

5.8 Investigation-derived Waste

IDW generated during the course of the subsurface investigations included soil cuttings, purge water, decontamination water, personal protective equipment (PPE) and disposable sampling equipment (i.e., filters, tubing, PVC). Waste Manifests for off-Site disposal are included in Appendix M.

5.8.1 Soil Boring IDW

Soil cuttings generated during the subsurface investigations were staged in 55-gallon drums, separated by location. Soil cuttings staged in 55-gallon drums were segregated in the field prior to disposal pursuant to not only the individual boring location but then also field screening results using the following segregation parameters:

- Zero to <100 ppm
- Greater than 100 ppm

In April 2014, waste characterization samples were collected from the 2013 to 2014-generated soil cuttings to develop a site-specific waste characterization profile for subsequent subsurface investigation soil cuttings IDW. The waste characterization samples consisted of composite samples collected from 12 of the 30 soil IDW 55-gallon drums. The site-specific waste characterization profile was used for off-site disposal of all non-hazardous soil cuttings generated between September and December 2015 during the monitoring well installations through and around Area C. The off-site disposal was facilitated through MPS Group and transported to the Spruce Ridge Facility in Glencoe, Minnesota.

For the soil cuttings generated during the June 2015 waste delineation soil borings, MPS Group developed all soil waste profiles, based on the characterization analytical results, and coordinated transportation and disposal of all non-hazardous and hazardous soil cuttings with the corresponding disposal facilities.

5.8.2 Purge Water and Decontamination Water IDW

Purge water and decontamination water generated during investigation activities when the assembly plant was operational were temporarily staged on-site within poly tanks or 55-gallon drums. The purge water and decontamination water was then characterized by Waste Management, Inc. and discharged to Ford's wastewater treatment system.

Following plant shutdown in December 2011, purge water and decontamination water were drummed for off-site disposal. One composite sample was collected for characterization from the 55-gallon drums. Laboratory analysis was utilized for offsite disposal and included one or more of the following:

- TCLP VOCs using USEPA Method 1311/8260
- TCLP RCRA Metals using USEPA Method 1311/6010
- Corrosivity using USEPA Method 9045
- Flashpoint using USEPA Method 1010
- pH using USEPA Method 9040C

A site-specific waste characterization profile was also generated for the purge and decontamination water IDW in 2014, and was used for off-site disposal between June 2014 and July 2015. The off-Site disposal was facilitated through Waste Management Inc. (2010-2014) and later MPS Group (2015-2016) and transported to the Spruce Ridge Facility.

5.8.3 PPE and Disposable Sampling Equipment IDW

PPE and disposable sampling equipment were placed in 55-gallon drums and disposed of off-Site after review of subsurface investigation results. A Site-specific waste characterization profile was also generated for the PPE and disposable sampling equipment in 2014 based on analytical results for the soil and purge water and decontamination water IDW. The off-Site disposal was facilitated through Waste Management Inc. (2010-2014) and later MPS Group (2015-2016) and transported to the Spruce Ridge Facility.

5.8.4 Trench IDW

Soil excavated on-Site was staged in lined roll-off containers and covered by polyethylene sheets. All containerized soil awaiting off-site disposal were sampled at the following frequency, which is consistent with MPCA PRP Guidance Document 4-04 Soil Sample Collection and Analysis Procedures (MPCA 2008):

Cubic Yards of Soil	Number of Grab Samples
Less than 50	1
51-500	2
501-1000	3
1001-2000	4
2001-4000	5
Each additional 2,000	One additional sample

The composite samples were utilized for characterization prior to offsite disposal and were analyzed per requirements of the Ford-approved and MPCA-permitted disposal facility. Laboratory analysis of the composite samples included the following:

- PCBs using USEPA Method 8082

- GRO using the WI Modified Method
- DRO using the WI Modified Method
- RCRA Metals using USEPA Method 6010
- TCLP VOCs using USEPA Method 8260 and 1311
- TCLP SVOCs using USEPA Method 8270 and 1311
- TCLP RCRA Metals using USEPA Method 6010 and 1311

MPS Group developed all soil waste profiles pertaining to Area C trench IDW, based on the analytical results, and coordinated transportation and disposal of all hazardous soil with the Heritage Thermal Services, Inc. in East Liverpool, Ohio disposal facility or Clean Harbors Environmental Services, Inc. in Kimball, Nebraska.

5.9 Surveying

All soil borings and groundwater monitoring wells were surveyed for X, Y, and Z (ground surface and top of casing, if applicable) coordinates referencing the National Geodetic Vertical Datum of 1929 and North American Datum of 1983 by Sunde Land Surveying, LLC, a professional Minnesota-certified land surveyor, at the completion of each investigation event.

Trench sampling and terminus locations were collected for X and Y coordinates referencing the World Geodetic System of 1984 using a mobile global positioning system unit and converted to NAD83 coordinates at the completion of each trench.

6 POTENTIAL HUMAN EXPOSURE PATHWAYS

A screening of potential exposures of human and ecological receptors to constituents in the buried industrial waste is presented below. This screening considers potential exposure pathways in the context of current land use scenarios, as well as Site-specific factors. Potential media of concern considered in the screening include soil, industrial waste, groundwater, surface water, and soil vapor. Site-specific risk calculations associated with potential exposure routes (i.e., ingestion, dermal contact, inhalation, etc.) are beyond the scope of this screening level evaluation, but potential routes are discussed below.

The current land use is undeveloped industrial with low frequency and short duration activity (primarily on the parking lot surface) and occasional trespassers along the river bank. The expected future land use ranges from continuation of the current use to limited recreational, which would be restricted through administrative and engineering controls under future redevelopment scenarios. Commercial and/or residential use are not currently contemplated for this Site.

6.1 Potential Soil/Waste Exposure Pathway

The highest concentrations of compounds exceeding MPCA SRVs and PRPs have been detected in samples associated with the industrial waste that was placed at Area C. The majority of industrial waste is covered with 40 to 60 feet of soil and construction debris and then capped at land surface by an approximately 8-inch-thick concrete parking area. The portion of the construction debris fill that is not capped with concrete lies along the northern, western and southern slopes of Area C and is vegetated with dense underbrush. The only location where industrial waste fill is near land surface and within the accessible zone is at the base of the southern slope, in the vicinity of Trenches 1, 2 and 3, where paint sludge was identified approximately 2.5 feet bgs. Exposure of industrial waste due to erosion and slumping of the northern and western slope is not a concern due to large distances between the slope face of the construction debris and the location of the industrial waste (approximately 250 lateral feet behind that slope face on the west side). Erosion at the base of the southern slope could uncover industrial waste that was identified in the vicinity of Trenches 1, 2 and 3. The presence of paint sludge at approximately 2.5 feet bgs at the southern toe of the Area C slope indicates direct exposure to the industrial waste fill is a potentially complete exposure pathway in a limited portion of the Site. This exposure pathway will be further evaluated in Section 9.

As noted above, the fill soil that is present on the northern, western and southern slopes of Area C and that is not covered by a concrete cap is non-native fill soil derived from various construction demolition projects. Exposure to these non-native surficial soils on the slopes of Area C could occur via trespassers that enter the property. Therefore, direct exposure to the surficial soil on the slopes of Area C is considered a completed exposure pathway that requires additional evaluation. An evaluation of this exposure pathway and a comparison of existing analytical results to applicable regulatory standards for direct contact with soil is included in Section 9.

6.2 Potential Groundwater Exposure Pathway

Groundwater samples collected from the upper-most saturated zone surrounding Area C contain compounds at concentrations above the generic Minnesota Department of Health Guidance Values for groundwater. However, Site groundwater is not currently used as a drinking water source, and it is highly unlikely to be used as a source in the future. Also, as documented in the Phase I ESA by Arcadis (Arcadis 2007a), no public water supply wells were observed within a one-mile radius of the Site. No current or future exposure to groundwater by human receptors is expected to occur so exposure to Site groundwater is not considered a potential exposure pathway and will not be evaluated further.

6.3 Potential Surface Water Exposure Pathway

The stretch of the Mississippi River adjacent to the Site is classified as a 2B, 3C, 4A, 5, and 6 water, which includes uses and receptors such as aquatic life, wildlife, recreation, industrial consumption, agricultural, navigation and aesthetics. This stretch of the river is not classified for domestic consumption. Potential releases of impacts associated with Area C to the surface water of the Mississippi River could occur through 1) discharge of groundwater to surface water, and 2) erosion of impacted soil. The potential for each of those discharge pathways to result in a completed exposure pathway is evaluated in additional detail below.

6.3.1 Discharge of Groundwater to Surface Water

During non-flood times, the water table below Area C is typically at an elevation of approximately 689 feet amsl, which is approximately six feet below the lowest observed point of the industrial waste. Based on the elevation of the industrial waste identified during the investigation activities described in Section 5.2 and Section 5.5, and the elevation of the surface water during flood events, there is the potential for groundwater in the unconsolidated sands and gravels below Area C to come into contact with portions of the industrial waste in Area C for short periods of time, should the water table below Area C rise to that extent. Groundwater flow direction in the saturated unconsolidated sands and gravels below Area C generally flows to the west towards the Mississippi River as described in Section 3.2. Based on that general understanding, impacts in this groundwater zone originating from Area C have the potential to discharge to surface water. Therefore, groundwater to surface water discharge is considered a complete exposure pathway that requires additional evaluation. An evaluation of this exposure pathway and a comparison of existing analytical results to applicable regulatory standards for surface water is included in Section 9.

6.3.2 Surficial Soil to Surface Water

Surface water contact with industrial waste or impacted fill soil at the surface of Area C could potentially occur during the course of flooding events when rising surface water expands the river inland along the western and southern slopes of Area C. The contact between flooding surface water and the outer slopes of Area C was observed during the 2014 flooding described in Section 4.5, which was slightly less than the average 10-year flood elevation. Contact between surface water and industrial waste or impacted surficial fill soil could occur if industrial waste or impacted surficial fill soil was present at or near the ground surface up to an elevation of at least the average 100-year flood event. Visual inspections of the

perimeter of Area C have not identified any industrial waste that is present at the land surface. Industrial waste that has been identified through soil borings or trenching activities at the toe of the southern slope of Area C has shown that the industrial waste is currently isolated from the land surface by anywhere from approximately 2.5 feet on the toe of the southern slope on the east side of Area C to greater than 400 feet on the western side of Area C. The industrial waste is isolated by a layer of soil, vegetation and construction debris. No industrial waste has been identified at the land surface of Area C, therefore, exposure of surface water to industrial waste is not considered a viable exposure pathway for impacts to surface water. Because contact between the surface water and surficial fill soil of Area C was observed during the 2014 flooding and is likely to occur again during a future flood event, exposure of surface water to impacted surficial fill soil is considered a potential exposure pathway for impacts to surface water.

6.4 Potential Soil Vapor Exposure Pathway

There are no permanent buildings designed for occupancy near Area C, therefore vapor intrusion is not considered to be a potential exposure pathway and will not be evaluated further. However, if future development scenarios for the Site include the presence of a building designed for occupancy, then evaluation of this pathway and potential risk of inhalation exposure would be required.

7 RISK-BASED SCREENING LEVELS

As part of the comprehensive review of Area C, all data collected at the Site was compared to applicable standards or risk-based screening values for the relevant exposure pathways identified in Section 6.0. Results of the investigation activities were compared to risk-based screening values developed and propagated by the MDH and MPCA. These risk-based levels are only a preliminary screening tool and are not intended to indicate areas of the Site where remediation may be required. Final remediation action levels will be included as part of a Response Action Plan. The risk-based values that will be included in the screening include:

- MPCA SRVs for direct contact with soil
- MPCA PRP Guidance Values for direct contact with petroleum impacted soil
- MDH Health-Based Guidance values for ingestion of groundwater
- MPCA WQS for exposure to surface water (aquatic life and human health via recreational use)

Each of these risk-based screening levels are discussed in more detail below.

7.1 Soil Reference Values

SRVs are a screening tool used to evaluate potential human health risks from direct soil exposure. SRVs were derived by the MPCA using the USEPA Superfund methodology. As stated above, SRVs are intended to be a screening tool to identify areas where direct exposure to soil may cause unacceptable risk to potential receptors. SRVs have been developed for two soil land use categories, residential/recreational and commercial/industrial. Soil analytical data included in Section 8 will be compared to industrial SRVs to match the current and expected long-term land-use for the Site. Residential SRVs are also included in the tables and figures.

7.2 Petroleum Remediation Program Guidance Values

The PRP has provided guidance values for preliminary screening of soil and groundwater impacted with GRO and DRO. The soil guidance value of 100 milligrams per kilogram for GRO and DRO is presented in the document titled Best Management Practices for the Off-Site Reuse of Unregulated Fill (MPCA 2012) and the guidance values for groundwater of 100 micrograms per liter (µg/L) for GRO and DRO was presented during personal communications with Petroleum Brownfields Program staff (Stacey Van Patten pers. com., October 30, 2015).

7.3 MDH Guidance Values for Groundwater

Guidance values for groundwater promulgated by the MDH and adopted by the MPCA include Health Risk Limits, Health Based Values and Risk Assessment Advice. This group of groundwater guidance values will collectively be referred to as MDH-derived values in the context of this report. MDH-derived values are relevant when considering direct exposure to groundwater through ingestion of drinking water. The St. Peter aquifer could potentially be used as a drinking water source; however, there are no water supply wells between the Site and the Mississippi River, nor are there likely to be any in the future. Since this exposure pathway is not relevant, MDH-derived values are generally not the appropriate risk-based

screening standards with which to compare the site groundwater analytical results; however, MDH-derived values are included in the groundwater analytical table and the groundwater figure for reference. The appropriate risk-based screening standards for groundwater are discussed in more detail below.

7.4 Surface Water Quality Standards

Water quality standards (WQSs) for surface water are established by the MPCA for protection of beneficial uses of state water resources. WQSs vary based on the classification (e.g., drinking water, aquatic life, recreation) for each surface water body. The stretch of the Mississippi River adjacent to the Site is classified as a 2B, 3C, 4A, 5, and 6 water. Class 2B (Aquatic Life and Recreation beneficial uses) has the strictest surface water standards of those classes and are therefore utilized as the screening standards for groundwater samples from units that discharge to the Mississippi River.

8 SUMMARY OF INVESTIGATION RESULTS

A complete list of the constituents that have been detected in historical soil samples (prior to 2007) from Area C are included in Table 5. A complete list of current soil analytical results (2015-2016) as compared MPCA SRVs is included in Table 4. A summary of soil analytical MPCA SRV exceedances for the soil boring, hand auger, and trench sample locations are included on Figures 6, 7, and 8, respectively. Cross sections of the five trenches are included in Figures 9a, 9b, 9c, 9d, and 9e, respectively. All soil and groundwater laboratory analytical reports are included in Appendix E

In addition, selected soil samples from the current borings and trenches were analyzed by the TCLP method to determine if the industrial waste is characteristically hazardous. A complete list of current soil analytical results for TCLP VOC, TCLP SVOC, and TCLP Metals compared to TCLP regulatory criteria is included in Table 6.

For the discussions of groundwater analytical results in the sections below, it should be noted that not all nine St. Peter Sandstone monitoring wells at the Ford site will be included, only those wells relevant to Area C. A monitoring well nest on the river parcel (AMW-05 and AMW-05B), located north of the steam plant, is side-gradient to groundwater flow through Area C. Six monitoring wells on the main parcel (AMW-03B; AMW-27 through AMW-31) are upgradient of groundwater flow through Area C. Monitoring well AMW-07, located on the river parcel between Area C and the steam plant, is in closest proximity to Area C and is considered representative of St. Peter Sandstone groundwater quality within Area C. Monitoring wells AMW-29 through AMW-31 are the closest upgradient wells (located along the west side of the main parcel) in relation to Area C. Therefore, discussion of St. Peter Sandstone monitoring wells will be focused on AMW-07, with additional discussion of AMW-05, AMW-05B, and AMW-29 through AMW-31 as needed to support evaluation of whether the groundwater quality in Area C is indicative of conditions originating from Area C or migration from the main parcel. Groundwater analytical results from permanent groundwater monitoring wells and surface water samples are included in Tables 7 and 8, respectively. A comprehensive summary of WQS exceedances for the groundwater and surface water samples are included on Figure 10.

For the discussions of investigation results in the sections below, contaminant classes are divided into the following: chlorinated VOCs, non-chlorinated VOCs, SVOCs, metals, PCBs, GRO/DRO, and cyanide. In addition, the discussions below reference sample locations within the industrial waste fill which include the following sample locations/intervals:

- ASB-1001 (39-42 feet bgs, 50-54 feet bgs, 65-70 feet bgs, 72-74 feet bgs)
- ASB-1002 (55-60 feet bgs, 60-64 feet bgs, 75-77 feet bgs)
- ASB-1004 (60-62 feet bgs)
- ASB-1006 (57-60 feet bgs and 65-67 feet bgs)
- ASB-1007 (62-65 feet bgs and 67-70 feet bgs)
- Trench-01
- Trench-02
- Trench-03

8.1 Chlorinated VOCs

For the purposes of this report, the term “chlorinated VOCs” refers to the following compounds:

- 1,1-Dichloroethane
- 1,1,2-Trichloroethane
- 1,1,1,2-Tetrachloroethane
- 1,1,1-Trichloroethane
- 1,2-Dichloroethane
- Chloroethane
- 1,1,2,2-Tetrachloroethane
- 1,1-Dichloroethene (1,1-DCE)
- *cis*-1,2-Dichloroethene (cis-1,2-DCE)
- Tetrachloroethene (PCE)
- *trans*-1,2-Dichloroethene (trans-1,2-DCE)
- Trichloroethene (TCE)
- Vinyl chloride

8.1.1 Chlorinated VOCs in Soils

A complete list of chlorinated VOC analytical results collected during the most recent round of investigations is included in Table 4. A complete list of historical chlorinated VOC analytical results in soil is included in Table 5. A complete list of current soil analytical results for TCLP VOCs as compared to TCLP regulatory criteria is included in Table 6. A summary of chlorinated VOC results in soil is included on Figures 6, 7, and 8.

Historical test pit TP-3 samples were analyzed using TCLP for VOCs, but no chlorinated VOCs were detected.

Two chlorinated VOCs were detected in Area C soils from current investigations: cis-1,2-DCE and TCE. Eighty-four soil samples were analyzed for VOCs with chlorinated VOCs detected in eight samples from four locations (ASB-1001, ASB-1002, ASB-1004, and ASB-1007). Two of those samples contained chlorinated VOCs at only trace concentrations (i.e., <1 mg/kg). Higher concentrations of chlorinated VOCs were present in the remaining six samples. Chlorinated VOCs were detected in both the industrial waste and the underlying native sand. Two of the six samples collected from within the industrial waste detected chlorinated VOCs at concentrations exceeding their respective industrial SRV. However, the two samples within the native sand which detected chlorinated VOCs were at trace concentrations and did not exceed any of their respective SRVs in soils.

The maximum concentration of cis-1,2-DCE detected was 32 mg/kg (ASB-1001_72-74). The maximum concentration of TCE detected was estimated at 30 mg/kg (ASB-1004_60-62). The laboratory reported an estimated TCE result due to the high concentrations of non-chlorinated VOCs in the sample, which resulted in higher method detection limit. Both detections were from within the industrial waste. See below for a summary of detections.

- ASB-1001 contained concentrations of cis-1,2-DCE in four of the five interval samples (0.053 mg/kg [**39-42** feet bgs], 5.7 mg/kg [**65-70** feet bgs], 32 mg/kg [**72-74** feet bgs], and 0.099 mg/kg [80-82 feet bgs]). ASB-1001 also contained a concentration of TCE in the shallowest sample interval (0.046 mg/kg [**39-42** feet bgs]). Only one detection of cis-1,2-DCE (32 mg/kg [**72-74** feet bgs]) exceeded its Tier II Industrial SRV (22 mg/kg). The cis-1,2-DCE detection in the sample collected below the industrial waste from within the native sand (80-82 feet bgs) did not exceed its respective SRV.
- ASB-1002 contained concentrations of cis-1,2-DCE in two of the five interval samples (7.6 mg/kg [**75-77** feet bgs] and 0.76 mg/kg [80-84 feet bgs]). These same two intervals also contained concentrations of TCE (7.8 mg/kg and 1.1 mg/kg, respectively). None of these detections exceeded their respective SRVs.
- ASB-1004 contained a concentration of cis-1,2-DCE in one of the five interval samples (20 mg/kg [**60-62** feet bgs]). This same interval also contained a concentration of TCE (30 mg/kg). Neither detection exceeded their respective Tier II Industrial SRV.
- ASB-1007 contained a concentration of cis-1,2-DCE in one of the four interval samples (23 mg/kg [**67-70** feet bgs]). This same interval also contained a concentration of TCE (11 mg/kg). Only the detection of cis-1,2-DCE exceeded its Tier II Industrial SRV.

The sample depths listed in bold typeface were collected from within the industrial waste.

No chlorinated VOCs were detected in any of the soil samples collected from the surficial hand auger or trench samples.

Fifty-three soil samples were analyzed for TCLP VOCs from the soil borings and trench investigations described in Section 4.6 above. Of the 53 samples analyzed, chlorinated VOCs were detected in six samples. TCE was the only chlorinated VOC detected. All of the concentrations were less than the TCLP regulatory criteria of 0.5 mg/L, indicating that the industrial waste is not hazardous with respect to chlorinated solvents. See below for a summary of detections.

- ASB-1001 contained a concentration of TCE in one of the five interval samples (0.024 mg/L [**72-74** feet bgs).
- ASB-1002 contained concentrations of TCE in two of the five interval samples (0.17 mg/L [**75-77** feet bgs] and estimated 0.0.24 mg/L [80-84 feet bgs]).
- ASB-1004 contained a concentration of TCE in two of the five interval samples (0.19 mg/kg [**60-62** feet bgs] and estimated 0.2 mg/L [83-85 feet bgs]).
- ASB-1007 contained a concentration of TCE in one of the four interval samples (0.1 mg/L [**67-70** feet bgs]).

The sample depths listed in bold typeface were collected from within the industrial waste.

8.1.2 Chlorinated VOCs in Water

A complete list of the chlorinated VOCs that have been detected in groundwater and surface water at the Site is included in Tables 7 and 8. A summary of chlorinated VOC results is included on Figure 10. The following chlorinated VOCs were detected in site groundwater and/or surface water, but did not exceed their respective WQSs:

- 1,1-DCE

- *cis*-1,2-DCE
- PCE
- trans-1,2-DCE
- TCE
- Vinyl chloride

Area C Overburden: The overburden aquifer in Area C discharges to the Mississippi River, and therefore analytical results are compared to the MPCA Class 2B WQSs.

1,1-DCE had been detected in two of the historical monitoring wells that were installed within Area C (B-1 and B-5). The maximum concentration of 1.5 µg/L was detected at well B-1 in June 1989. There is no MPCA Class 2B WQS for 1,1-DCE. 1,1-DCE has not been detected in any of the 10 current Area C overburden wells.

Cis-1,2-DCE has been detected in three of the six historical monitoring wells and four of the eight current monitoring wells (B-2, B-4, B-6, AMW-21, AMW-22, AMW-22B, and AMW-26). The maximum concentration detected between the three historical monitoring wells was 6.7 µg/L at B-4 in December 1982. The maximum concentration detected in the four current monitoring wells is 1.8 µg/L at AMW-26. There is no MPCA Class 2B WQS for cis-1,2-DCE.

Trans-1,2-DCE had been detected in one historical monitoring well (B-2) at a concentration of 15 µg/L and was an isolated occurrence in March 1982. There is no MPCA Class 2B WQS for trans-1,2-DCE. Trans-1,2-DCE has not been detected in any of the 10 current Area C overburden wells.

TCE had been detected in historical monitoring wells B-1, B-2, and B-6, although not consistently and at low concentrations. The maximum concentration of 5.0 µg/L was detected at well B-2 in March 1982. None of the four detections from the three wells exceed the MPCA Class 2B WQS of 120 µg/L. TCE has not been detected in any of the 10 current Area C overburden wells.

Vinyl chloride had been detected in historical monitoring well B-1 at a concentration of 5.2 µg/L in August 1989 only. This detection did not exceed the MPCA Class 2B WQS of 9.2 µg/L. Vinyl chloride has not been detected in any of the 10 current Area C overburden wells.

St. Peter Sandstone: The St. Peter Sandstone aquifer in Area C discharges to the Mississippi River, and therefore analytical results are compared to the MPCA Class 2B WQSs. As noted at the beginning of Section 8, the evaluation of St. Peter Sandstone aquifer water quality within Area C will be focused on AMW-07 with additional discussion of side-gradient monitoring wells (AMW-05 and AMW-05B) and upgradient monitoring wells (AMW-29 through AMW-31) as needed.

PCE was detected in AMW-07 once during the September 2014 sampling event at an estimated concentration of 0.31 µg/L; no PCE was detected in the previous seven or subsequent two groundwater samples collected from AMW-07. PCE has also been detected in side-gradient monitoring wells AMW-05 and AMW-05B and upgradient monitoring well AMW-30. PCE was detected in AMW-05 during the July and August 2014 sampling events at estimated concentrations of 0.39 µg/L and 0.32 µg/L, respectively. The detection of PCE in AMW-05B was an isolated detection in September 2008 and was detected at a concentration of 3.7 µg/L (AMW-05B). No PCE was detected in the previous three or subsequent five groundwater samples collected from AMW-05B. PCE was detected in AMW-30 during the March and June

2016 sampling events, although at trace concentrations (0.64 µg/L and 0.84 µg/L, respectively). None of the PCE detections exceeded the corresponding WQS of 8.9 µg/L.

TCE has been consistently detected in monitoring well AMW-07 at concentrations ranging from 0.43 µg/L to 2.9 µg/L which is below the WQS of 120 µg/L. TCE has been detected in side-gradient monitoring wells AMW-05 and AMW-05B as well. AMW-05, the shallower of the two nested wells, is often dry during sampling events; however, a temporarily higher water table after the June 2014 flood event allowed samples to be collected from this well in July and August 2014. TCE was detected during the two sampling events at 15 µg/L and 3.2 µg/L, respectively. Of the nine samples collected from AMW-05B, a trace concentration (<1 µg/L) of TCE was detected during two sampling events (August 2014 and June 2016). TCE was also detected during the three sampling events in 2016 at upgradient monitoring wells AMW-29 and AMW-30. TCE was detected at AMW-29 at concentrations between 7.1 µg/L and 11.4 µg/L, and at AMW-30 at concentrations between 22 µg/L and 34 µg/L.

The detections of PCE and TCE in both the side-gradient and the upgradient monitoring wells at concentrations similar to or greater than what has been detected at AMW-07 indicates the PCE and TCE are likely not associated with Area C. It is worth noting that high concentrations of PCE and/or TCE were discovered in soil in two discrete areas on the main parcel in locations upgradient of these wells, and are considered potential sources for the groundwater impacts described above. These two areas are former Worker Pit #1 (PCE 200 mg/kg, TCE 17 mg/kg) and a utility trench (TCE 3,100 mg/kg) (Arcadis 2016d). The contaminated soil in these two areas has been removed as part of response actions completed on the main parcel.

Surface Water: Eight surface water samples have been collected from the Mississippi River between 1982 and 2010 (Figure 2). 1,1-DCE is the only chlorinated VOC that was detected with a maximum concentration of 1.3 µg/L (upstream sample) in June 1989. In August 1989, 1,1-DCE was again detected but in the downstream sample location with a concentration of 1.1 µg/L. There is no MPCA Class 2B WQS for 1,1-DCE.

In summary, no chlorinated VOCs detected to-date in groundwater in the Area C overburden or St. Peter aquifer, which discharge to the Mississippi River, or in the surface water samples from the Mississippi River have exceeded the MPCA Class 2B WQSs.

8.2 Non-Chlorinated VOCs

Non-chlorinated VOCs refers to all VOCs on the USEPA Method 8260 reporting list except those compounds that are explicitly listed in Section 8.1.

8.2.1 Non-Chlorinated VOCs in Soil

A complete list of non-chlorinated VOC analytical results collected during the most recent round of investigations is included in Table 4. A complete list of historical non-chlorinated VOC analytical results is included in Table 5. A complete list of current soil analytical results for TCLP VOCs as compared to TCLP regulatory criteria is included in Table 6. A summary of non-chlorinated VOC results in soil is included on Figures 6, 7, and 8.

Historical test pit TP-3 samples were analyzed using TCLP for VOCs. Four non-chlorinated VOCs were detected (toluene, ethylbenzene, m-xylene and o & p-xylene) but did not exceed applicable USEPA TCLP or Tier II Industrial SRV criteria.

Soil concentrations of non-chlorinated VOCs exceeding their respective industrial SRVs were detected at the following locations from current investigations:

- Boring locations ASB-1001, ASB-1002, ASB-1004, ASB-1007 and ASB-1008
- Trenches 2 and 3

Eighty-four soil samples were analyzed for VOCs. Of the 84 samples analyzed, non-chlorinated VOCs were detected at concentrations exceeding their respective Tier II Industrial SRVs in 16 samples. Eleven of the 16 samples were from the five boring locations listed above and the remaining five were from samples collected from the two trenches. No surficial soil samples analyzed for non-chlorinated VOCs exceeded their respective Industrial SRVs.

Samples collected from within the industrial waste at four of the five boring locations (ASB-1001, ASB-1002, ASB-1004, and ASB-1007) as well as the two trenches, detected concentrations of the following non-chlorinated VOCs exceeding their respective Tier II Industrial SRVs: 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzene, ethylbenzene, isopropylbenzene, naphthalene, n-butylbenzene, n-propylbenzene, toluene, and total xylenes. The following constituents were also detected above their respective Tier II Industrial SRVs within the native sand below the industrial waste: 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

The remaining boring location (ASB-1008) is outside the industrial waste footprint and detected naphthalene at a concentration exceeding its respective Tier II Industrial SRV in the fill soil.

Fifty-three soil samples were analyzed for TCLP VOCs from the soil borings and trench investigations described in Section 4.6 above. Of the 53 samples analyzed, non-chlorinated VOCs were detected in 12 samples. Methyl ethyl ketone (2-butanone) and benzene were the only non-chlorinated VOCs detected. All of the concentrations were less than their respective TCLP regulatory criteria of 200 mg/L and 0.5 mg/L, respectively, indicating that the industrial waste is not hazardous with respect to non-chlorinated VOCs.

8.2.2 Non-Chlorinated VOCs in Water

A complete list of the non-chlorinated VOCs that have been detected in groundwater and surface water at the Site is included in Tables 7 and 8. A summary of non-chlorinated VOC results is included on Figure 10.

Area C Overburden: Non-chlorinated VOC detections at the historical monitoring well locations were isolated and at concentrations below their respective WQSs. Non-chlorinated VOC detections at nine of the 10 current monitoring wells have been isolated and at concentrations below their respective WQS. Ethylbenzene was detected at AMW-25 during both sampling events at concentrations exceeding the WQS of 68 µg/L (120 µg/L and 95 µg/L, respectively). However, ethylbenzene was not detected in the downgradient wells (AMW-24, AMW-23, AMW-23B and AMW-20). No other non-chlorinated VOCs were detected above their respective WQS in the Area C overburden.

St. Peter Sandstone: Non-chlorinated VOCs were detected sporadically in AMW-07 at concentrations below their respective WQSs. Isolated detections of non-chlorinated VOCs were also detected in side-gradient monitoring wells AMW-05 and AMW-05B and upgradient monitoring wells AMW-30 and AMW-31 at concentrations below their respective WQSs. Non-chlorinated VOCs were not detected in the remaining upgradient well (AMW-29).

Surface Water: Non-chlorinated VOC detections in the surface water samples have been isolated and at concentrations below their respective WQSs.

In summary, non-chlorinated VOCs do not appear to be a significant contaminant of concern in groundwater within the Area C overburden or St. Peter Sandstone aquifers at the Site. The WQS exceedances of ethylbenzene detected at AMW-25 within the Area C overburden were not detected in downgradient monitoring wells during the corresponding sampling events.

8.3 SVOCs

8.3.1 SVOCs in Soil

A complete list of SVOC analytical results collected during the most recent round of investigations is included in Table 4. A complete list of current soil analytical results for TCLP SVOCs as compared to TCLP regulatory criteria is included in Table 6. A summary of SVOC results in soil is included on Figures 6, 7, and 8. Soil concentrations of SVOCs exceeding their respective Tier II Industrial SRVs were detected at the following locations:

- Boring locations ASB-1001, ASB-1002, ASB-1003, ASB-1004, ASB-1006, ASB-1007, ASB-1008, ASB-1009, and ASB-1010
- Surficial locations HA-16, HA-27, and HA-31
- Trenches 1, 2, and 3.

Eighty-four soil samples were analyzed for SVOCs. Of the 84 samples analyzed, SVOCs were detected at concentrations exceeding their respective Tier II Industrial SRVs in 26 samples. Fourteen of the 26 samples were from the nine boring locations listed above, three were from surface sample locations, and the remaining nine samples were from the three trenches.

Samples collected from within the industrial waste at five of the nine boring locations (ASB-1001, ASB-1002, ASB-1004, ASB-1006, and ASB-1007) and three trenches detected concentrations exceeding their respective Tier II Industrial SRVs for the following constituents: 2-methylnaphthalene, naphthalene, and benzo(a)pyrene equivalents. Naphthalene was also detected above its respective Tier II Industrial SRV below the industrial waste within the native sand at ASB-1002.

Samples collected from fill soils outside of the industrial waste footprint at three boring locations (ASB-1008, ASB-1009, and ASB-1010) and the three surficial locations (HA-16, HA-27, and HA-31) detected concentrations exceeding their respective Tier II Industrial SRVs for naphthalene and benzo(a)pyrene equivalents. For the remaining boring location (ASB-1003) within the native sand below the fill soil, benzo(a)pyrene equivalents was the only constituent which exceeded its respective Tier II Industrial SRV.

Fifty-three soil samples were analyzed for TCLP SVOCs from the soil borings and trench investigations described in Section 4.6 above. Of the 53 samples analyzed, SVOCs were detected in 19 samples. 2-methylphenol, 3-methylphenol/4-methylphenol, pentachlorophenol, and pyridine were the only SVOCs detected. All of the concentrations were less than their respective TCLP regulatory criteria, if applicable, indicating that the industrial waste is not hazardous with respect to SVOCs.

8.3.2 SVOCs in Water

A complete list of the SVOCs that have been detected in groundwater at the Site is included in Table 7. A summary of SVOC results is included on Figure 10.

Area C Overburden: SVOCs were not analyzed during groundwater sampling events for the historical monitoring wells. The 10 current monitoring wells have been sampled twice for SVOCs. SVOCs have been detected at seven of the monitoring wells. The following SVOCs have been detected in overburden groundwater: anthracene, bis(2-ethylhexyl)phthalate, fluoranthene, and phenanthrene. Of the seven wells with detections, concentrations at five wells did not exceed their respective WQSs.

Anthracene and bis(2-ethylhexyl)phthalate were detected exceeding the WQS at AMW-21 in one sampling event (June 2016) at concentrations of 0.25 µg/L and 6.0 µg/L, respectively. AMW-22 and AMW-22B are downgradient of AMW-21, and did not detect either constituent during the same sampling event. Neither anthracene nor bis(2-ethylhexyl)phthalate were detected in AMW-21 during the preceding sampling event (March 2016).

Anthracene, bis(2-ethylhexyl)phthalate, fluoranthene and phenanthrene were detected exceeding the WQS at AMW-26 (1.3 µg/L, 2.3 µg/L, 4.1 µg/L, and 5.2 µg/L, respectively) during the March and/or June 2016 sampling event. However, AMW-19, AMW-20, AMW-23 and AMW-23B are downgradient of AMW-26 and did not detect any of the four constituents. No other SVOCs were detected above their respective WQSs in the Area C overburden.

St. Peter Sandstone: Only two of the six monitoring wells (AMW-07 and AMW-05B) have been sampled for SVOCs, with isolated and trace concentrations detected at AMW-07 only. AMW-07 detected anthracene in June 2016 (0.20 µg/L) and was above the WQS of 0.035 µg/L. Samples collected from AMW-07 before 2016 were non-detect. No other SVOCs have been detected above their respective WQS. Anthracene was frequently detected in samples collected from the industrial waste within Area C, although at concentrations below the Industrial SRV and in groundwater samples collected from the Area C overburden. Therefore, the exceedance of anthracene at AMW-07 in June 2016 is potentially associated with Area C.

Surface Water: SVOCs were not analyzed during the historical surface water sampling events. However, SVOC detections in the 2010 surface water samples were isolated and at concentrations below their respective WQSs.

In summary, SVOCs appear to be a contaminant of concern in the industrial waste and within limited portions of the surficial soil, overburden groundwater and St. Peter Sandstone aquifers. Groundwater samples from two Area C overburden wells (AMW-21 and AMW-26) and one St. Peter Sandstone well (AMW-07) exceed the WQS during the most recent sampling event (June 2016) for one or more of the following: anthracene, bis(2-ethylhexyl)phthalate, fluoranthene and phenanthrene. However, Area C overburden downgradient wells did not detect these same constituents at concentrations exceeding the

respective WQS. An evaluation of the interaction between groundwater in the St. Peter aquifer and the adjacent Mississippi River is included in Section 9 below.

8.4 Metals

8.4.1 Metals in Soil

A complete list of metal analytical results collected during the most recent round of investigations is included in Table 4. A complete list of historical metal analytical results is included in Table 5. A complete list of current soil analytical results for TCLP Metals as compared to TCLP regulatory standards is included in Table 6. A summary of metal results in soil is included on Figures 6, 7, and 8.

Based on email correspondence with the MPCA dated February 6, 2017, iron and vanadium concentrations were compared to their respective pending revised SRVs. Utilizing the pending revised SRVs eliminates false exceedances due to potential background concentrations. The iron and vanadium results included on Figures 6, 7, and 8 as well as Tables 4 and 5 (if applicable), illustrate the analytical results as compared to their respective pending revised SRVs.

One soil sample was collected from each of the historical test pits TP-3 and TP-8 and analyzed for TCLP metals, as noted in Section 4.2 above. Neither of the samples detected metals at concentrations exceeding USEPA TCLP levels.

Metal concentrations exceeding their respective Tier II Industrial SRVs were detected at the following locations:

- Boring locations ASB-1001, ASB-1002, ASB-1004, and ASB-1007
- Trenches 1, 2, and 3

Eighty-four soil samples were analyzed for metals as described in Section 4.6 above. Of the 84 samples analyzed, metals were detected at concentrations exceeding their respective industrial SRVs in 16 samples. Eight of the 16 samples were from the four boring locations listed above (ASB-1001, ASB-1002, ASB-1004, and ASB-1007) and the remaining eight were from the three trenches. All of the metals exceedances were associated with the industrial waste.

Constituents detected above their respective Tier II Industrial SRVs include: antimony, arsenic, barium, lead, and mercury.

Fifty-three soil samples were analyzed for TCLP metals from the soil borings and trench investigations described in Section 4.6 above. Twenty-three of the samples were collected from industrial waste, 17 samples were collected from fill soil and 13 samples were collected from native soil. Of the 53 samples analyzed, lead exceeded its TCLP regulatory criteria in 13 samples, with all but one associated with the industrial waste. One lead TCLP exceedance was associated with the fill soil (ASB-1005). No other metals exceeded their respective TCLP limit. The 13 samples that exceeded the lead TCLP regulatory criteria were collected from intervals with elevated PID readings and solvent-like odors, and indicate that these intervals of the industrial waste and fill soil are characteristically hazardous for lead.

8.4.2 Metals in Water

Dissolved metals are the preferred analytical method when discussing metals concentrations in groundwater. A complete list of the total and dissolved metals that have been detected at the Site in groundwater and surface water is included in Tables 7 and 8, respectively. A summary of dissolved metals results in groundwater is included on Figure 10.

Area C Overburden: The following dissolved metals had been detected in one or more of the historical monitoring wells at concentrations above their applicable WQSs: cadmium (2 to 20 µg/L), copper (14 to 30 µg/L), lead (7 to 60 µg/L), and zinc (174 to 260 µg/L).

Cadmium had been detected in four of the historical monitoring wells (B-1, B-2, B-3 and B-4) at concentrations exceeding the MPCA Class 2B WQS, with a maximum concentration of 20 µg/L at both B-1 and B-4 in March 1982. Cadmium was not detected in the five subsequent sampling events at B-1. Cadmium also exceeded criteria at both B-2 and B-3 as an isolated occurrence in December 1982. Cadmium was either not detected or was present at concentrations below criteria during the five subsequent sampling events at B-3. None of the other detections of cadmium exceeded WQS. Historical monitoring wells B-2 and B-4 were not sampled after 1982.

Copper had been detected in three of the historical monitoring wells (B-1, B-2, and B-3) at concentrations of 30 µg/L (March 1982), 20 µg/L (March 1982), and 20 µg/L (August 1989), respectively. These concentrations exceeded the MPCA Class 2B WQS. Each of the exceedances was an isolated event. No other copper detections exceeded MPCA Class 2B WQS in subsequent sampling event(s).

Lead had been detected in two of the historical monitoring wells (B-1 and B-4) at concentrations of 120 µg/L and 60 µg/L, respectively, in March 1982. Both concentrations exceeded the MPCA Class 2B WQS. Each of the exceedances was an isolated event in March 1982. No other lead detections exceeded MPCA Class 2B WQS in subsequent sampling event(s).

Zinc had been detected in one historical monitoring wells (B-5) at a concentration exceeding the MPCA Class 2B WQS in an isolated event. Zinc exceeded criteria at a concentration of 260 µg/L in September 1989. Historical monitoring well B-5 was not sampled after 1989.

Dissolved metals have been consistently detected at all 10 current overburden monitoring wells. The following metals were detected at concentrations exceeding the MPCA Class 2B WQS:

- Cobalt was detected at concentrations exceeding the MPCA Class 2B WQS of 2.8 µg/L at AMW-20 during two sampling events (November 2011 and January 2012) at concentrations of 9.9 µg/L and an estimated 6.4 µg/L, respectively, but did not exceed the standard during the other four sampling events. Cobalt was detected in most soil samples that were collected from the industrial waste, but was not detected above the Tier 2 Industrial SRVs. The presence of cobalt in the industrial waste indicates the waste is a potential source for the cobalt detected in groundwater. Cobalt will be included in additional evaluation for the potential impact to surface water included in Section 9.4
- Mercury was detected exceeding its MPCA Class 2B WQS of 0.0069 µg/L once during the March 2016 sampling event for the following locations: AMW-19, AMW-20, AMW-23B, and AMW-24. The concentrations ranged from an estimated 0.16 µg/L to 0.27 µg/L. Subsequent samples in June 2016 were non-detect. Mercury was detected sporadically in soil samples that were collected from the industrial waste and exceeded the Tier 2 Industrial SRV in one sample collected from ASB-1001. The

presence of mercury in the industrial waste indicates the waste is a potential source for the mercury detected in groundwater. Cobalt will be included in additional evaluation for the potential impact to surface water included in Section 9.4

- Thallium was the only dissolved metal to be detected exceeding its MPCA Class 2B WQS of 0.56 µg/L at least once for the following locations: AMW-19, AMW-20, AMW-21, AMW-22, AMW-23, AMW-24, AMW-25 and AMW-26. Concentrations ranged from an estimated 2.4 µg/L to 10 µg/L. Thallium was detected only at estimated concentrations in a few of the soil sampled collected from the industrial waste, which suggests the thallium detected in groundwater is likely not originating from the industrial waste, however, thallium will be retained as a potential contaminant of concern and will be included in additional evaluation for the potential impact to surface water included in Section 9.4

No other dissolved metal was detected at concentrations that exceeded applicable MPCA Class 2B WQSs.

St. Peter Sandstone: Dissolved metals aluminum and cobalt have each been detected in AMW-07 at concentrations above their applicable WQSs.

Aluminum was detected in AMW-07 above the WQS of 125 µg/L in samples collected in August 2014, September 2014, and June 2016, with a maximum concentration of 340 µg/L (June 2016). Upgradient wells AMW-29 and AMW-30 also detected aluminum at concentrations above the WQS for each sampling event in 2016 (February, March, and June), with a maximum concentration of 29,000 µg/L at AMW-30 (June 2016). The exceedances of dissolved aluminum in the upgradient monitoring wells indicate the exceedances at AMW-07 appear to be associated with possible migration from the main parcel. The concentration of aluminum detected in soil sampled collected from Area C were within the range of background values that can be expected to occur naturally, which is an additional line of evidence that aluminum detected in groundwater at AMW-07 is not originating from Area C.

Cobalt was detected in AMW-07 above its WQS of 5 µg/L in samples collected in August 2014, September 2014, March 2016, and June 2016, with a maximum concentration of 11 µg/L (June 2016). Side-gradient well AMW-05B also detected cobalt at concentrations above the WQS in August 2014, September 2014, and June 2016 with a maximum estimated concentration of 6.5 µg/L (June 2016). Upgradient wells AMW-29 and AMW-30 also detected cobalt at concentrations above the WQS for each sampling event in 2016 (February, March, and June), with a maximum concentration of 75 µg/L at AMW-29 (June 2016). The exceedances of dissolved cobalt in the side-gradient and upgradient monitoring wells indicate the exceedances at AMW-07 do not appear to be associated with Area C.

Overall, dissolved metals have been consistently detected at AMW-07, however, those compounds were also consistently detected at upgradient or sidegradient Area C wells at similar or higher concentrations.

Surface Water: Metal detections in the surface water samples have been isolated and at concentrations below their respective WQSs.

In summary, select metals appear to be a contaminant of concern in the industrial waste and in portions of the Area C overburden aquifer. An evaluation of the interaction between groundwater in the St. Peter aquifer and the adjacent Mississippi River is included in Section 9 below.

8.5 PCBs

8.5.1 PCBs in Soil

A complete list of PCB analytical results collected during the most recent round of investigations is included in Table 4. A summary of PCB results in soil is included on Figures 6, 7, and 8.

Seven soil samples have been analyzed for PCBs as described in Section 4.6 above. Of the seven samples analyzed, PCBs were detected in seven samples at concentrations ranging from 0.196 mg/kg to 13 mg/kg. PCBs exceeded its respective Tier II Industrial SRV in one sample. The location of this sample is within the industrial waste at Trench 3 as illustrated on Figures 8 and 9c.

8.5.2 PCBs in Water

A complete list of the PCBs that have been detected in groundwater at the Site is included in Table 7. A summary of PCB results in groundwater is included on Figure 10.

Area C Overburden: PCBs were not analyzed during groundwater sampling events for the historical monitoring wells. In accordance with the Area C Investigation Work Plan (Arcadis 2015b) and the Work Plan for Site-Wide Groundwater Sampling of Permanent Monitoring Wells (Arcadis 2016b), PCB samples have not been collected from the eight new monitoring wells screened in the Area C overburden.

St. Peter Sandstone: Each of the St. Peter monitoring wells have been sampled for PCBs during at least two sampling events with the exception of AMW-05, which was dry during most sampling events. PCBs have been detected at concentrations exceeding the WQSs of 0.000029 µg/L at AMW-07 and AMW-05B. Aroclor 1260 was detected at an estimated concentration of 0.059 µg/L at AMW-07 and Aroclor 1254 was detected at a concentration of 0.97 µg/L at AMW-05B in September 2008. No other detectable concentrations of PCBs were identified in either well, which indicates that the September 2008 detection was isolated in nature.

The detections of PCBs at concentrations exceeding their applicable WQSs in AMW-07 as well as side-gradient well AMW-05B during an isolated event in September 2008 indicate the exceedances do not appear to be associated with Area C.

In summary, PCBs do not appear to be a significant contaminant of concern in groundwater at the Site.

8.6 GRO/DRO

8.6.1 GRO/DRO in Soil

A complete list of GRO/DRO analytical results collected during the most recent round of investigations is included in Table 4. A summary of GRO/DRO results in soil is included on Figures 6, 7, and 8.

Both GRO and DRO were detected above the PRP Guidance Value of 100 mg/kg. Of these detections, concentrations exceeding the PRP Guidance Value were detected at the following locations:

- Boring locations ASB-1001, ASB-1002, ASB-1003, ASB-1004, ASB-1006, ASB-1007, ASB-1008, and ASB-1010

- Surficial locations HA-06, HA-16, HA-19, and HA-27 through HA-31
- Trenches 1, 2, and 3.

Eighty-four soil samples have been analyzed for GRO and/or DRO. GRO concentrations in the borings range from 2.8 to 21,000 mg/kg and DRO concentrations range from 6.3 to 37,000 mg/kg. GRO concentrations in the surficial samples collected from the slope of Area C range from non-detect to 7.9 mg/kg and DRO concentrations range from 120 to 2,300 mg/kg. GRO concentrations in the trenches range from non-detect to 19,000 mg/kg and DRO concentrations range from non-detect to 42,000 mg/kg.

Eight surficial soil samples (HA-06, HA-16, HA-19 and HA-27 through HA-31) contained DRO at concentrations above the PRP Guidance Values of 100 mg/kg. Concentrations in the soil samples generally varied from between 120 mg/kg up to 350 mg/kg, with the exception of HA-16, which detected DRO at 2,300 mg/kg. HA-06, HA-16 and HA-19 have adjacent samples where no DRO exceedances were detected, so these exceedances are considered to be discrete and not representative of large scale impacts in the surficial soil. The remaining soil sample locations (HA-27 through HA-31) were all collected from a vertical transect near the southeast corner of Area C. They are co-located with two of the samples where BaP equivalents exceeded industrial SRVs and may be representative of a pocket of impacted soil present near the surface of Area C.

8.6.2 GRO/DRO in Water

GRO and DRO concentrations were compared to MPCA-specified screening levels of 100 µg/L for both GRO and DRO for drinking water; however, there are no drinking water receptors and no WQS standards for GRO or DRO. A complete list of GRO and DRO detections in groundwater at the Site is included in Table 7. A summary of GRO/DRO results in groundwater are included on Figure 10.

Area C Overburden: GRO and DRO were not analyzed during groundwater sampling events for the historical monitoring wells. The current 10 monitoring wells have been sampled for GRO/DRO on at least two sampling events. GRO and DRO have both been detected in the Area C overburden with concentrations exceeding 100 µg/L.

GRO was detected in three of the ten wells (AMW-23, AMW-23B, and AMW-25) during the June 2016 sampling event, but only exceeded the screening level at AMW-25 with a concentration of 10,000 µg/L.

DRO has been detected in eight of the ten wells (AMW-19, AMW-20, AMW-21, AMW-22B, AMW-23, AMW-24, AMW-25, and AMW-26) between 2011 and 2016 with exceedances ranging from 110 µg/L to 11,000 µg/L. Concentrations of DRO detected in AMW-22B have been lower than detections in upgradient AMW-21. In addition, concentrations of DRO detected in AMW-19 and AMW-20 did not exceed the specified screening level in the most recent sampling event in June 2016, and both are downgradient of monitoring wells with DRO concentration exceedances. Specifically, AMW-19 is downgradient of AMW-26 while AMW-20 is downgradient of AMW-23, AMW-24, and AMW-25.

St. Peter Sandstone: GRO has not been detected in the St. Peter Sandstone within Area C whereas DRO has been detected at concentrations exceeding 100 µg/L.

GRO has been analyzed during four of the 10 sampling events at AMW-07 between 2007 and 2016 but was below detection limits in each sample.

DRO has been analyzed during five of the 10 sampling events at AMW-07. Concentrations range from 130 µg/L (March 2008 and June 2016) to 210 µg/L (September 2008). DRO was also detected at side-gradient well AMW-05B at a concentration exceeding the MPCA screening level (180 µg/L) in June 2016. Additionally, DRO has been detected at all three upgradient monitoring wells at concentrations exceeding the MPCA screening level, ranging from 180 µg/L to 2,600 µg/L. The two locations with the highest concentrations (AMW-29 and AMW-31) correspond with locations on the main parcel that have been previously identified as impacted with DRO in soil.

The detections of DRO at concentrations exceeding its applicable screening level in both side-gradient and upgradient monitoring wells indicate the exceedances at AMW-07 do not appear to be associated with Area C, but rather appear to be associated with migration from upgradient sources.

In summary, GRO and DRO appear to be detected across the Site. Of the 16 permanent monitoring wells that have been sampled to date for GRO and/or DRO, detections exceeded applicable criteria at 15 wells. As noted above, there are no drinking water receptors at the Site and there are no WQS standards for GRO or DRO because petroleum compounds are typically evaluated on a contaminant specific basis (e.g., benzene).

8.7 Cyanide

No cyanide sampling was completed in the soil during this Area C investigation.

8.7.1 Cyanide in Water

A complete list of cyanide detections in site groundwater is included in Table 7. A summary of cyanide results in groundwater is included on Figure 10.

Area C Overburden: Cyanide was not analyzed during groundwater sampling events for the historical monitoring wells. Cyanide was collected for one sampling event (June 2016) and detected in three of the 10 current monitoring wells (AMW-22, AMW-23, and AMW-24). Each of the detections exceeded the applicable WQS of 5.2 µg/L for free cyanide at concentrations of 15 µg/L, 14 µg/L, and 13 µg/L, respectively. AMW-20 is downgradient of AMW-23 and AMW-24 and did not detect cyanide during the same sampling event. There is no monitoring well down gradient of AMW-22.

St. Peter Sandstone: Cyanide was detected in AMW-07 at an estimated concentration of 5.9 µg/L in March 2008, which exceeded the MPCA Class 2B WQS for free cyanide. Cyanide was not detected in AMW-07 during subsequent sampling events completed in September 2008 and June 2016. Cyanide was detected on the main parcel at AMW-29 at an estimated concentration of 6.5 µg/L in a sample collected in June 2016. This concentration is also above the applicable WQS for free cyanide and is located upgradient of AMW-07, which did not detect cyanide during that time. No other St. Peter Sandstone monitoring wells detected cyanide.

The detections of free cyanide at concentrations exceeding its applicable screening level in an upgradient monitoring well indicate detections in AMW-07 appear to be associated with migration from the main parcel.

In summary, cyanide is a contaminant of concern in only limited areas of the Area C overburden. An evaluation of the interaction between groundwater in the St. Peter aquifer and the adjacent Mississippi River is included in Section 9 below.

9 DATA EVALUATION AND EXPOSURE PATHWAY ASSESSMENT

9.1 Direct Contact with Industrial Fill

As noted in Section 6.1 the vertical borings and test trenches completed within and on the southern boundary of Area C indicates the industrial waste is generally isolated from the north and west surface of Area C by a buffer of fill soil and construction debris. Industrial waste (paint sludge) was identified in Test Trenches 1, 2 and 3 (Figures 9a through 9c) within 2.5 feet of the ground surface on the southern toe of the Area C slope. The presence of industrial waste in that location does not present an immediate risk to potential receptors, however, the waste is present within the accessible zone which is defined as the soil horizon from zero to four feet bgs in the MPCA Property Use Guidance (MPCA 2016). As noted in Section 8, soil samples collected from this industrial waste exceeded industrial SRVs. Industrial waste within the accessible zone with contaminant concentrations exceeding industrial SRVs represents a potentially completed exposure pathway with an unacceptable level of long-term risk. A Feasibility Study for potential remedial actions to eliminate this completed exposure pathway will be completed.

9.2 Direct Contact with Surficial Fill Soil

Exposure to non-native surficial soils on the slopes of Area C could occur via trespassers that enter the property. To evaluate risk associated with this exposure pathway the results of the surficial soil sampling discussed in Section 8 were compared to SRVs. As discussed in Section 8, BaP equivalents at concentrations exceeding its Industrial SRVs was detected, at three locations (HA-16, HA-27, and HA-31) and DRO exceeding the PR Guidance Value was detected at eight locations (HA-06, HA-16, HA-19, and HA-27 through HA-31). Additionally, there is construction debris including concrete and chunks of metal at the surface of Area C that present a potential physical hazard to trespassers in the area.

Surficial soil with contaminant concentrations exceeding Industrial SRVs and PRP guidance values represents a potentially completed exposure pathway with an unacceptable level of long-term risk. A Feasibility Study for potential remedial actions to eliminate this completed exposure pathway will be completed.

9.3 Surficial Fill Soil to Surface Water

Exposure of surface water to impacted surficial fill soil at Area C could occur during flood events when surface water rises and comes into contact with the lower slopes of Area C. To evaluate risk associated with this exposure pathway results of surficial soil samples that were collected from below the 100-year flood elevation (717 ft amsl) were reviewed for analytical detections that may result in impacts to surface water. Three surficial soil samples (HA-22, HA-26 and HA-31) were collected from below the 100-year flood level. Only HA-31 was noted as having detections in excess of what was commonly detected at all locations (BaP equivalents and DRO). There are no surface water standards for either of those compounds that were detected at HA-31. Therefore, contact between surface water and impacted surficial soil is a potentially completed exposure pathway that does not appear to present an unacceptable risk.

9.4 Leaching Potential of Industrial Waste

As discussed in Section 8.6.2 and 8.6.3, the presence of industrial waste has been confirmed within Area C. The elevation of the industrial waste is variable, but was noted as deep as approximately 695 feet amsl. The typical elevation of the Mississippi River is approximately 689 feet amsl, which is below the bottom of the industrial waste, however, the river elevation during 10-, 50- and 100-year floods increases to 707 feet amsl, 714 feet amsl and 717 feet amsl, respectively. It is unlikely that the groundwater would rise at the same rate as surface water, rather there would likely be a delay in the timing of the rise in groundwater elevation and the total magnitude of the rise would be muted relative to the surface water.

The following soil samples collected from soil borings and test trenches (discussed in Section 8) were collected from elevations that would potentially be saturated during flooding events, assuming the rise in the water table below Area C mirrored the river elevation:

ASB-1001: **65-70, 72-74** and 80-82 feet bgs

ASB-1002: **55-60, 60-64, 75-77, 80-84** and 92-95 feet bgs

ASB-1003: 60-64, 70-74 feet bgs

ASB-1004**: 60-62, 69-70,** 79-80 and 83-85 feet bgs

ASB-1005: 78-80 feet bgs

ASB-1006: 52-54, **57-60, 65-67** and 78-80 feet bgs

ASB-1007: 62-65, **67-70** and 75-77 feet bgs

ASB-1008: 52-54 and 70-72 feet bgs

ASB-1009: 55-57, 62-65 and 70-72 feet bgs

ASB-1010: 55-57 and 70-73 feet bgs

Trench 1: **10 feet @ 4-5 feet bgs**, 10 feet @ 5-6 feet bgs, 15 feet @ 5-6 feet bgs

Trench 2: **0 feet @ 9-10 feet bgs**, **0 feet @ 12-13 feet bgs**, **8 feet @ 4-5 feet bgs**, **13 feet @ 6-7 feet bgs**, **15 feet @ 6-7 feet bgs**

Trench 3: **7 feet @ 3-4 feet bgs**, **10 feet @ 9-10 feet bgs**, **22 feet @ 2-3 feet bgs**

The sample depths listed in bold typeface were collected from within the industrial waste.

The concrete parking lot which caps much of the industrial waste and the vertical separation between the bottom of the waste and the water table limit the leaching potential of the industrial waste under typical river conditions. A limited number of SVOCs and dissolved metals have been detected in groundwater at concentrations exceeding the applicable WQS values. These compounds were also detected in the industrial waste samples in Area C, which suggest leaching of the compounds from the waste is a potential ongoing source to the groundwater, which may be increased if water levels beneath Area C increase as a result of a Mississippi River flooding event. The actual compounds and concentrations that have been detected in groundwater at Area C and a subsequent evaluation of the surface water exposure pathway is evaluated in additional detail below.

9.5 Discharge of Groundwater to Surface Water

The potential for groundwater to impact surface water at concentrations that would exceed applicable regulatory standards for surface water was evaluated in accordance with the tiered approach recommended in the *Surface Water Pathway Evaluation User's Guide* developed by the MPCA. A summary of the tiered evaluation is described in the following sections.

9.5.1 Tier 1 Site Evaluation

A Tier 1 evaluation is a simple comparison of groundwater analytical results to the most conservative standards that are applicable for a particular stream classification. The minimal data needs for a Tier 1 evaluation of the groundwater to surface water exposure pathway includes identification of a surface water body that received groundwater discharge (Mississippi River), a complete list of contaminants of potential concern (COPC), the highest concentration of each COPC just upgradient of the point where groundwater discharges to the surface water body, a detailed understanding of the geology, definition of the groundwater plume, and knowledge that the source has been removed, contained, or treated so that it will not affect plume stability in the future.

All the data required for a Tier 1 evaluation was available, so Table 8 of the *Surface Water Pathway Evaluation User's Guide* was used to evaluate the groundwater concentrations present at the Site. Groundwater results from monitoring wells AMW-19, AMW-20, AMW-22 and AMW-22B were selected as the monitoring points that were immediately upgradient of the discharge point to the Mississippi River. Appendix 3 of the *Surface Water Pathway Evaluation User's Guide* was used to obtain a conservative natural hardness value for screening hardness dependent metals. The highest historical analytical value that has been detected for each constituent at the four monitoring wells listed above was entered into Table 8 of the *Surface Water Pathway Evaluation User's Guide*. As discussed in Section 9.3, there is the potential for higher groundwater concentrations based on leaching of impacts from the industrial waste during flood events, however, those higher concentrations have not been observed in downgradient monitoring wells even during high frequency sampling that was completed after the most recent flood event (Section 4.6).

Results of the Tier 1 evaluation indicated seven metals (barium, cobalt, iron, manganese, mercury, thallium and vanadium) as well as cyanide exceeded the Tier 1 screening number. Only barium, cobalt and mercury were detected in soil samples collected from the industrial waste at elevated concentrations relative to non-waste samples, however, all compounds were retained for a Tier 2 evaluation. A copy of Table 8 from the *Surface Water Pathway Evaluation User's Guide* is included in Appendix N.

9.5.2 Tier 2 Site Evaluation

A Tier 2 evaluation is a more detailed evaluation of a water body using site-specific values to account for groundwater flux to the surface water body and dilution into the base stream flow. In addition to the minimal data needs for a Tier 1 evaluation, the minimal data needs for a Tier 2 evaluation include the groundwater flow direction and velocity, the plume stability, the minimum 7-day average flowrate measured over a ten-year period (7Q10 value) of the surface water receptor, and the plume width and thickness measured in feet.

The groundwater flow direction was assumed to be perpendicular to the Mississippi River in order to provide a conservative estimate of groundwater flux. A groundwater velocity of 1.7 ft/day for the area was taken from historical reports for the Site (CRA 1998). A 7Q10 value of 1,253 cubic feet per second was obtained from MPCA EAO staff. Documentation of the value is provided in Appendix O. A total plume width of 850 feet was used which would span the entire western boundary of Area C where it meets the Mississippi River. The plume thickness was assumed to be the entire saturated thickness of the unconsolidated floodplain material where the monitoring wells are installed, which is equal to approximately 19 feet, as shown on Figure 3A.

Each of those values was entered into Table 11 of the *Surface Water Pathway Evaluation User's Guide.* The downstream concentration of each compound that exceeded the Tier 1 evaluation was calculated using the following equation, which is built into Table 11.

$$Downstream\ Concentration = \frac{P_C * P_f + R_c * R_f}{P_f + R_f}$$

Where:

P_c = Maximum plume concentration in µg/L

P_f = Plume discharge in liters per day

R_c = Natural Mississippi River background concentration in µg/L

R_f = low flow 7Q10 of the Mississippi River in liters per day

Plume discharge in liters per day is calculated using the following equation:

$$Plume\ Discharge = h * w * v * 28.3$$

Where:

h = Vertical plume thickness in feet

w = Horizontal plume width in feet

v = Groundwater velocity in feet per day

The highest downstream concentration of each of the compounds that exceeded the Tier 1 screening value was calculated and compared to the MPCA Class 2B surface water criteria. Results are shown in the inset table below.

Compound	Potential Downstream Contribution from Area C (ug/L)	MPCA Class 2B Chronic Surface Water Standard or Screening Value (ug/L)
Barium	0.061	700
Cobalt	0.003	5
Iron	2.278	600
Manganese	0.709	800

Mercury (total)	0.00007	0.0069
Thallium	0.002	0.56
Vanadium	0.0002	132
Cyanide	0.004	5.2

After entering the surface water and mixing with the baseflow of the river, each of the compounds detected at Area C are well below the applicable surface water criteria and screening values. Therefore, based on the current and highest historical groundwater concentrations present at the monitoring locations immediately upgradient of the discharge point to the Mississippi River, discharge of groundwater to surface water is a completed exposure pathway that does not appear to present an unacceptable risk.

10 CONCLUSIONS

Historical groundwater, surface water and soil analytical data was supplemented with additional data for industrial waste, fill soil, native sand, surficial soil and groundwater and used to evaluate the environmental conditions present at Area C. Specifically, the data was used to delineate the extent of and to characterize the industrial waste, and to evaluate potential exposure pathways. With those objectives in mind, the following conclusions can be made.

- The ten soil borings completed on top of the paved portion of Area C and the five test trenches completed near the toe of the southern slope are sufficient to delineate the approximate extent of the industrial waste. The identified extent of waste appears to generally match the outline shown in the 1982 Twin Cities Assembly Facility Groundwater Monitoring Wells Survey (Ford 1982).
- The 40 soil samples collected from the soil borings and the 20 samples collected from the test trenches are sufficient to characterize the variability of impacts present within the industrial waste, the overlying fill soil, and the underlying native sands.
- The potential exposure pathways to impacts associated with Area C included:
    - Direct contact with industrial waste: Paint sludge with concentrations above industrial SRVs was identified within the accessible zone in Trenches 1, 2 and 3 at depths as shallow as 2.5 feet bgs, but the majority of the industrial waste appears to be covered by soil and construction debris placed after the industrial waste. The presence of industrial waste with contaminant concentrations exceeding industrial SRVs that is present within the accessible zone of zero to four feet bgs represents a completed exposure pathway with an unacceptable level of long-term risk.
    - Direct contact with surficial soil fill: Current land use does not allow exposure to surficial soil via direct contact, however, this exposure pathway could be complete in the case of trespassers. Results of surficial soil sampling completed on the slopes of Area C detected concentrations of BaP equivalents at three locations and DRO at 8 locations that exceeded their respective screening standards. The presence of surficial soil with contaminant concentrations exceeding industrial SRVs represents a completed exposure pathway with an unacceptable level of long-term risk. Additionally, there is construction debris including concrete and chunks of metal at the surface of Area C that present a potential physical hazard to trespassers in the area.
    - Ingestion of groundwater: This exposure pathway is not considered complete because Site groundwater is not currently used as a drinking water source, and it is highly unlikely to be used as a source in the future. Also, as documented in the Phase I ESA by Arcadis (Arcadis 2007a), no public water supply wells were observed within a one-mile radius of the Site.
    - Discharge of groundwater to surface water: Groundwater results from around Area C detected SVOCs, metals and cyanide at concentrations that sporadically exceed applicable surface water standards. Based on those results, the exposure pathway of discharge of groundwater to surface water is complete. An evaluation of the discharge of groundwater to surface water was completed in accordance with the *MPCA Surface Water Pathway Evaluation User's Guide.* Results of that evaluation did not identify any unacceptable risk to surface water based on the groundwater data collected at Area C to date.

- Erosion of surficial soil to surface water: One of the surface soil samples collected from below the 100-year flood level detected two compounds (DRO and BaP equivalents) at concentrations greater than what was typical of all surface soil samples. There are not surface water standards for DRO or BaP equivalents so this is considered a potentially complete exposure pathway with no unacceptable level of long-term risk.
- Inhalation of Soil Vapor: There are no permanent buildings designed for occupancy within 100 feet of Area C, therefore vapor intrusion is not a completed exposure pathway. However, if development scenarios for the Site include the presence of a building designed for occupancy within 100 feet of impacted soil or groundwater, then evaluation of this pathway and potential risk of inhalation exposure would be required.

11 RECOMMENDATIONS

Investigation of the distribution and characteristics of the industrial waste present at Area C is considered complete. A Feasibility Study will be completed to evaluate remedial options for Area C and for addressing the potential exposure pathways for industrial waste and surficial soil discussed above.

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TABLES

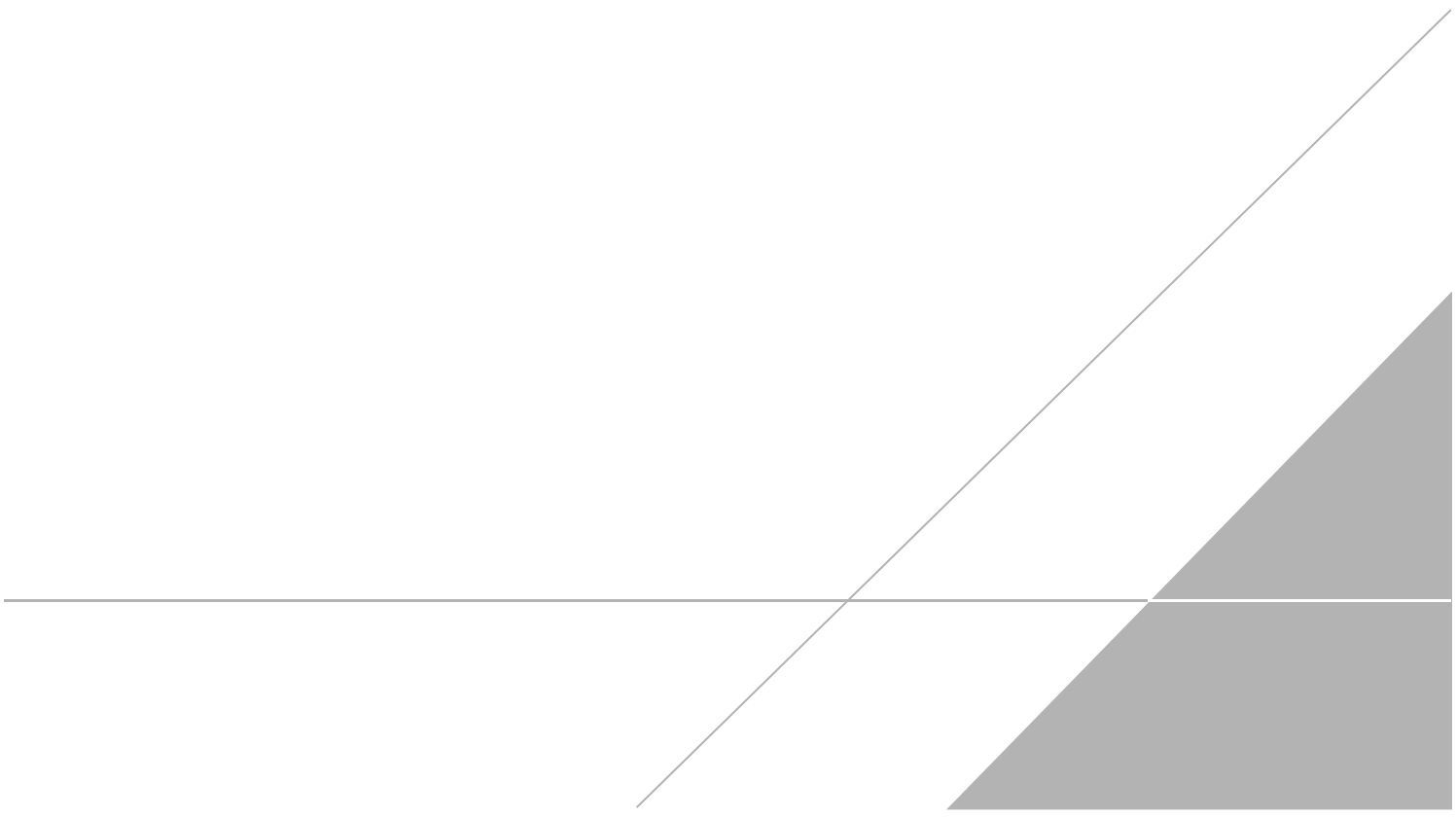

Table 1
Analytical Method Summary
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Analysis	Method	Soil				Water			
		Bottleware	Volume	Preservative	Hold Time	Bottleware	Volume	Preservative	Hold Time
VOCs	USEPA 8260	VOAs	2-40 mL	10 mL MeOH	21 days	VOAs	3-40 mL	HCl to pH < 2	14 days
SVOCs	USEPA 8270	amber glass (clear ok)	4 oz.	None	14 days	amber glass	2-1 L	None	7 days
Polynuclear Aromatic Hydrocarbons	USEPA 8270	amber glass (clear ok)	4 oz.	None	14 days	amber glass	2-1 L	None	7 days
Polychlorinated Biphenyls	USEPA 8082	amber glass (clear ok)	4 oz.	None	14 days	amber glass	2-1 L	None	7 days
DRO	USEPA Modified 8015/WI DRO	amber glass (clear ok)	2 oz. (25-30 g soil)	None	10 days	amber glass, wide mouth	2-1 L	HCl to pH < 2	7 days
GRO	USEPA Modified 8015/WI GRO	VOAs	1-40 mL	10 mL MeOH	14 days	VOAs	3-40 mL	HCl to pH < 2	14 days
Total Cyanide	USEPA 6010	amber glass (clear ok)	4 oz.	None	14 Days	plastic	1-250 mL	NaOH to pH>12	14 Days
RCRA/TAL Metals	USEPA 6010	amber glass (clear ok)	4 oz.	None	6 months	plastic	1-250 mL	HNO3 to pH<2	6 months
Corrosivity (pH)	USEPA 9045	amber glass (clear ok)	4 oz.	None	None Cited	plastic	1-250 mL	None	Field
Flashpoint	USEPA 1010	amber glass (clear ok)	4 oz.	None	28 Days	amber glass, narrow mouth	1-250 mL	None	28 Days
Moisture Content	ASTM D2216	clear glass	2 oz.	None	7 days	Not Applicable			
Paint Filter Liquids Test	USEPA 9095	amber glass (clear ok)	4 oz.	None	None Cited	Not Applicable			
TCLP VOCs	USEPA 1311/8260	clear glass	1-16 oz.	None	14 Days	amber glass	2-1 L	None	7 Days
TCLP SVOCs	USEPA 1311/8270	clear glass	1-16 oz.	None	14 Days	amber glass	2-1 L	None	7 Days
TCLP RCRA Metals	USEPA 1311/6010	clear glass	1-16 oz.	None	14 Days	amber glass	2-1 L	None	7 Days
TCLP Pesticides	USEPA 1311/8081	clear glass	1-16 oz.	None	14 Days	amber glass	2-1 L	None	7 Days
TCLP Herbicides	USEPA 1311/8151	clear glass	1-16 oz.	None	14 Days	amber glass	2-1 L	None	7 Days

Acronyms and Abbreviations:
ASTM = American Society for Testing and Materials
DRO = diesel-range organics
GRO = gasoline-range organics
HCl = hydrochloric acid
HNO3 = nitric acid
L = liter
mL = milliliter
MeOH = methanol
NaOH = sodium hydroxide
oz. = ounces
RCRA = Resource Conservation and Recovery Act
SVOC = semivolatile organic compound
TAL = Target Analyte List
TLCP = toxicity characteristic leaching procedure
VOAs = volatile organic analysis (container)
VOC = volatile organic compound
USEPA = United States Environmental Protection Agency
WI = Wisconsin

Table 2
Permanent Monitoring Well Construction Summary
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Well ID	Unique Well Number	Date Installed	Surface Elevation (ft amsl)	Top Of Casing Elevation (ft amsl)	Bottom of Well Elevation (ft amsl)	Screen Interval (Elev. - Elev.) (ft amsl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Well Diameter (inches)	Slot Size (inches)	Well Construction Materials (screen/riser)	Surface Completion Type	Screened Geology	Date Last Surveyed (Sunde Land Surveyors, LLC)
AMW-03B	751332	6/29/07	811.93	811.72	660.72	670.72 - 660.72	141	151	2	0.01	Stainless Steel/ Black Steel	Flush Mount	St. Peter Sandstone	7/25/07
AMW-05	751339	7/2/07	722.07	725.25	696.25	706.25 - 696.25	19	29	2	0.01	Stainless Steel/ Black Steel	Above Ground	St. Peter Sandstone	7/25/07
AMW-05B	756581	7/19/07	721.79	723.99	670.99	680.99 - 670.99	43	53	2	0.01	Stainless Steel/ Black Steel	Above Ground	St. Peter Sandstone	7/25/07
AMW-07	751338	7/4/07	733.71	733.48	688.48	698.48 - 688.48	35	45	2	0.01	Stainless Steel/ Black Steel	Flush Mount	St. Peter Sandstone	7/25/07
AMW-19	784743	11/3/11	705.6	707.84	681.29	691.29 - 681.29	14.3	24.3	2	0.01	Schedule 40 PVC/Black Carbon Steel	Above Ground	Overburden (Area C Floodplain)	11/3/11
AMW-20	784744	11/3/11	707.58	710.02	684.09	694.09 - 684.09	13.5	23.5	2	0.01	Schedule 40 PVC/Black Carbon Steel	Above Ground	Overburden (Area C Floodplain)	11/3/11
AMW-21	814811	12/8/15	737.04	739.40	681.04	691.04 - 681.04	46	56	2	0.01	Stainless Steel	Above Ground	Overburden (Area C)	3/30/16
AMW-22	814812	12/10/15	704.919	707.29	678.92	688.92 - 678.92	16	26	2	0.01	Schedule 40 PVC	Above Ground	Overburden (Area C Floodplain)	3/30/16
AMW-22B	814816	12/15/15	704.897	707.34	661.90	671.90 - 661.90	33	43	2	0.01	Stainless Steel	Above Ground	Overburden (Area C Floodplain)	3/30/16
AMW-23	814813	12/10/15	708.4	710.72	682.40	692.40 - 682.40	16	26	2	0.01	Schedule 40 PVC	Above Ground	Overburden (Area C Floodplain)	3/30/16
AMW-23B	814817	12/15/15	708.817	711.12	662.82	672.82 - 662.82	36	46	2	0.01	Stainless Steel	Above Ground	Overburden (Area C Floodplain)	3/30/16
AMW-24	814814	12/11/15	705.28	707.79	682.28	692.28 - 682.28	13	23	2	0.01	Schedule 40 PVC	Above Ground	Overburden (Area C Floodplain)	3/30/16
AMW-25	814815	12/11/15	703.185	705.73	681.19	691.19 - 681.19	12	22	2	0.01	Schedule 40 PVC	Above Ground	Overburden (Area C Floodplain)	3/30/16
AMW-26	812963	9/16/15	769.461	769.15	682.46	692.46 - 682.46	77	87	2	0.01	Stainless Steel/Black Carbon Steel	Flush Mount	Overburden (Area C)	3/30/16
AMW-27	812979	1/18/16	808.337	810.93	704.34	714.34 - 704.34	94	104	2	0.01	Stainless Steel	Above Ground	St. Peter Sandstone	3/30/16
AMW-28	812978	1/19/16	811.082	813.75	696.08	706.08 - 696.08	105	115	2	0.01	Stainless Steel	Above Ground	St. Peter Sandstone	3/30/16
AMW-29	812977	1/22/16	812.406	815.16	691.41	701.41 - 691.41	111	121	2	0.01	Stainless Steel	Above Ground	St. Peter Sandstone	3/30/16
AMW-30	812976	1/25/16	812.366	814.75	693.37	703.37 - 693.37	109	119	2	0.01	Stainless Steel	Above Ground	St. Peter Sandstone	3/30/16
AMW-31	812975	1/26/16	812.009	814.52	692.01	702.01 - 692.01	110	120	2	0.01	Stainless Steel	Above Ground	St. Peter Sandstone	3/30/16

Acronyms and Abbreviations:
AMW = Arcadis monitoring well
Elev. = elevation
ft amsl = feet above mean sea level
ft bgs = feet below ground surface
MW = monitoring well
PVC = polyvinyl chloride

Table 3
Summary of Permanent Monitoring Well Groundwater Elevations
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Well ID	AMW-03B			AMW-05			AMW-05B			AMW-07			AMW-19			AMW-20			AMW-21			AMW-22			AMW-22B			AMW-23		
Top of casing Elevation (ft amsl)	811.72			725.25			723.99			733.48			707.84			710.02			739.4			707.29			707.34			710.72		
Date	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)
7/16/2007	NR	100.86	710.86	NR	Dry	NA	NR	32.53	691.46	NR	42.82	690.66	NA			NA			NA			NA			NA			NA		
7/24/2007	NR	17:16	711	NR	NR	NA	NR	NR	NA	NR	21:50	690.57	NA			NA			NA			NA			NA			NA		
8/13/2007	NR	100.82	710.9	NR	Dry	NA	NR	32.83	691.16	NR	43.21	690.27	NA			NA			NA			NA			NA			NA		
12/18/2007	NR	100.66	711.06	NR	Dry	NA	NR	32.31	691.68	NR	42.63	690.85	NA			NA			NA			NA			NA			NA		
1/9/2008	NR	100.86	710.86	NR	Dry	NA	NR	32.43	691.56	NR	42.85	690.63	NA			NA			NA			NA			NA			NA		
3/11/2008	NR	100.67	711.05	NR	Dry	NA	NR	32.82	691.17	NR	43.23	690.25	NA			NA			NA			NA			NA			NA		
9/10/2008	NR	100.65	711.07	NR	Dry	NA	NR	32.49	691.5	NR	42.99	690.49	NA			NA			NA			NA			NA			NA		
9/30/2009	NR	100.54	711.18	NR	Dry	NA	NR	32.62	691.37	NR	43.04	690.44	NA			NA			NA			NA			NA			NA		
10/31/2011	11:05	99.67	712.05	9:32	Dry	NA	9:32	31.76	692.23	9:41	42.20	691.28	NR	NR	NA	NR	NR	NA	NA			NA			NA			NA		
11/11/2011	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	11:25	9:21	687.45	12:20	14:24	687.42	NA			NA			NA			NA		
01/17/2012	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	11:55	7:40	687.52	13:45	12:57	687.48	NA			NA			NA			NA		
06/26/2014	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NA			NA			NA			NA		
07/03/2014	NR	NR	NA	17:30	5:31	706.02	16:20	7:26	705.68	14:30	13:55	704.9	**	NR	NA	**	NR	NA	NA			NA			NA			NA		
7/10/2014	NR	NR	NA	14:38	3:07	703.12	14:39	8:09	702.65	14:29	12:57	700.94	14:50	6:00	697.59	14:53	13:40	697.45	NA			NA			NA			NA		
7/16/2014	NR	NR	NA	9:56	0:43	701.22	9:53	21:50	701.08	10:02	0:57	699.44	9:41	15:07	696.21	9:46	20:52	696.15	NA			NA			NA			NA		
7/21/2014	14:22	99.50	712.22	16:04	25.73	699.52	16:01	24.65	699.34	15:55	35.60	697.88	16:13	14.34	693.5	16:19	16.70	693.32	NA			NA			NA			NA		
7/24/2014	NR	NR	NA	13:10	19:55	698.42	13:00	17:16	698.27	13:18	13:55	696.9	12:25	19:12	692.04	12:40	3:21	691.88	NA			NA			NA			NA		
7/30/2014	NR	NR	NA	11:19	12:57	696.71	11:14	7:26	696.68	11:23	1:12	695.43	11:39	15:50	690.18	11:44	20:24	690.17	NA			NA			NA			NA		
8/6/2014	NR	NR	NA	8:04	22:19	695.32	8:02	14:24	695.39	7:57	6:43	694.2	8:30	14:52	689.22	8:38	21:21	689.13	NA			NA			NA			NA		
8/13/2014	NR	NR	NA	11:07	17:02	694.54	11:04	7:40	694.67	10:55	0:00	693.48	11:21	20:24	688.99	11:32	2:09	688.93	NA			NA			NA			NA		
8/20/2014	NR	NR	NA	13:40	Dry	NA	13:33	19:55	694.16	13:55	10:33	693.04	13:05	4:48	688.64	13:15	9:36	688.62	NA			NA			NA			NA		
8/27/2014	14:05	99.55	712.17	16:50	31.11	694.14	16:51	29.70	694.29	16:54	40.33	693.15	16:30	18.46	689.38	16:35	20.63	689.39	NA			NA			NA			NA		
9/3/2014	NR	NR	NA	NR	18:14	694.49	NR	8:09	694.65	NR	0:00	693.48	NR	10:19	689.41	NR	3:50	686.86	NA			NA			NA			NA		
9/10/2014	NR	NR	NA	8:55	15:36	695.6	9:00	3:21	695.85	9:10	18:57	694.69	8:40	6:00	692.59	8:30	12:00	692.52	NA			NA			NA			NA		
9/16/2014	NR	NR	NA	15:00	21:50	695.34	15:25	12:43	695.46	17:00	2:09	694.39	11:57	18:14	691.08	13:00	1:26	690.96	NA			NA			NA			NA		
9/25/2014	NR	NR	NA	16:00	Dry	NA	16:10	0:14	693.98	15:44	12:43	692.95	15:55	21:50	688.93	16:00	3:07	688.89	NA			NA			NA			NA		
10/16/2014	12:12	99.27	712.45	10:12	31.15	694.1	10:15	30.83	693.16	10:04	41.28	692.2	10:27	19.51	688.33	10:33	21.76	688.26	NA			NA			NA			NA		
12/3/2014	09:56	99.64	712.08	13:41	31.15	694.1	13:43	32.61	691.38	13:35	41.98	691.5	13:52	19.86	687.98	13:58	22.09	687.93	NA			NA			NA			NA		
2/5/2015	13:30	99.50	712.22	16:53	dry	NA	16:47	31.98	692.01	17:05	42.40	691.08	16:18	20.09	687.75	16:26	22.25	687.77	NA			NA			NA			NA		
4/30/2015	08:45	99.71	712.01	13:20	dry	NA	13:29	31.94	692.05	13:45	42.33	691.15	14:10	20.01	687.83	14:24	22.23	687.79	NA			NA			NA			NA		
5/27/2015	15:20	99.72	712	10:38	28.88	696.37	10:32	27.41	696.58	11:17	37.82	695.66	10:55	12.53	695.31	11:04	14.80	695.22	NA			NA			NA			NA		
06/17/2015 - 06/18/2015	11:00	99.61	712.11	08:14	30.15	695.1	08:25	28.83	695.16	08:38	39.29	694.19	07:40	16.70	691.14	07:51	18.95	691.07	NA			NA			NA			NA		
7/9/2015	12:42	99.63	712.09	10:15	Dry	NA	10:22	30.09	693.9	10:34	40.58	692.9	9:38	17.86	689.98	9:50	20.08	689.94	NA			NA			NA			NA		
8/4/2015	13:17	99.64	712.08	9:36	Dry	NA	9:41	31.02	692.97	9:55	41.46	692.02	9:12	19.50	688.34	8:59	21.72	688.3	NA			NA			NA			NA		
09/01/2015 - 09/02/2015	11:00	99.55	712.17	14:18	Dry	NA	14:26	31.52	692.47	14:39	41.96	691.52	13:49	19.62	688.22	13:53	21.81	688.21	NA			NA			NA			NA		
2/12/2016	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA
3/2/2016	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA
3/8/2016	NR	NR	NA	NR	NR	NA	NR	NR	NA	9:11	10:48	692.03	9:34	16:33	689.15	9:48	21:21	689.13	9:16	19:26	689.59	9:42	0:28	689.27	9:40	1:40	689.27	9:56	9:21	689.33
5/31/2016	15:19	99.48	712.24	16:42	30.95	694.3	16:47	29.54	694.45	16:53	40.16	693.32	17:30	17.01	690.83	17:37	19.19	690.83	17:00	48.31	691.09	17:22	16.27	691.02	17:16	16.28	691.06	17:46	20.02	690.7

Notes and Abbreviations
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Table 3
Summary of Permanent Monitoring Well Groundwater Elevations
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Well ID	AMW-23B			AMW-24			AMW-25			AMW-26			AMW-27			AMW-28			AMW-29			AMW-30			AMW-31			River Gauge STPM 5[1]		
Top of casing Elevation (ft amsl)	711.12			707.79			705.73			769.15			810.93			813.75			815.16			814.75			814.52			683.768		
Date	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Depth to Water (ft btoc)	GWE (ft amsl)	Time	Stage (ft)	River Elevation (ft amsl)
7/16/2007	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
7/24/2007	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
8/13/2007	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
12/18/2007	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
1/9/2008	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
3/11/2008	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
9/10/2008	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
9/30/2009	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
10/31/2011	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
11/11/2011	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
01/17/2012	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
06/26/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			NR	20.13	703.90
07/03/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			15:30	15.13	698.90
7/10/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			14:30	10.34	694.11
7/16/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			9:45	8.83	692.60
7/21/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
7/24/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			12:45	5.39	689.16
7/30/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			11:30	4.26	688.03
8/6/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			8:15	3.68	687.45
8/13/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			11:00	3.86	687.63
8/20/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			13:30	3.39	687.16
8/27/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			16:30	3.52	687.29
9/3/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			12:00	3.91	687.68
9/10/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			9:00	5.24	689.01
9/16/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			13:00	4.06	687.83
9/25/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			16:00	3.44	687.21
10/16/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
12/3/2014	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
2/5/2015	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
4/30/2015	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
5/27/2015	NA			NA			NA			NA			NA			NA			NA			NA			NA			13:47	7.32	691.09
06/17/2015 - 06/18/2015	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
7/9/2015	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
8/4/2015	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
09/01/2015 - 09/02/2015	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
2/12/2016	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	10:16	11:16	712.46	10:25	12:28	711.23	10:39	15:36	698.51	10:46	16:48	701.05	10:55	12:00	709.02	NA		
3/2/2016	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	14:53	5:31	712.7	12:55	7:12	710.45	9:30	11:02	698.7	8:45	12:28	701.23	11:10	20:24	709.67	NA		
3/8/2016	9:58	21:21	689.23	10:06	1:55	689.71	10:11	21:50	689.82	9:04	11:02	689.69	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NR	NR	NA	NA		
5/31/2016	17:42	20.48	690.64	17:58	16.85	690.94	17:52	14.66	691.07	17:09	78.15	691	14:37	98.24	712.69	12:05	102.32	711.43	13:20	115.33	699.83	13:44	112.45	702.3	13:57	103.92	710.6	17:45	5.15	688.92

Notes and Abbreviations
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Table 3
Summary of Permanent Monitoring Well Groundwater Elevations
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

General Notes:
All monitoring wells were surveyed by Sunde Land Surveying, LLC. Refer to Table 2 for dates surveyed.
** Well not gauged due to restricted access.
Footnotes:
1. Data acquired from the National Oceanic and Atmospheric Administration databased (http://water.weather.gov/ahps2/hydrograph.php?wfo=mpx&gage=STPM5).
Acronyms and Abbreviations:
amsl = above mean sea level.
AMW = Arcadis Monitoring Well
btoc = below top of casing
ft = feet
GWE = Groundwater Elevation
NA = not applicable
NR = not recorded

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1001 ASB-1001_39-42 (20150615) 6/15/2015 39-42 Industrial Waste	ASB-1001 ASB-1001_50-54 (20150615) 6/15/2015 50-54 Industrial Waste	ASB-1001 ASB-1001_65-70 (20150615) 6/15/2015 65-70 Industrial Waste	ASB-1001 ASB-1001_72-74 (20150615) 6/15/2015 72-74 Industrial Waste	ASB-1001 ASB-1001_80-82 (20150615) 6/15/2015 80-82 Native Sand	ASB-1002 ASB-1002_55-60 (20150616) 6/16/2015 55-60 Industrial Waste	ASB-1002 ASB-1002_60-64 (20150616) 6/16/2015 60-64 Industrial Waste	ASB-1002 ASB-1002_75-77 (20150616) 6/16/2015 75-77 Industrial Waste
VOCs													
1,1,1,2-Tetrachloroethane	mg/kg	31	51	0.406	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,1,1-Trichloroethane	mg/kg	140	472	55.740	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,1,2,2-Tetrachloroethane	mg/kg	3.5	6.5	0.012	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,1,2-trichloro-1,2,2-trifluoroethane	mg/kg	3745	5430	16884	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,1,2-Trichloroethane	mg/kg	9	14	0.014	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,1-Dichloroethane	mg/kg	34	55	0.407	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,1-Dichloroethene	mg/kg	20	60	1.394	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,1-Dichloropropene	mg/kg	NS	NS	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,2,3-Trichloropropane	mg/kg	NS	NS	0.267	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,2,4-Trichlorobenzene	mg/kg	200	985	0.226	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,2,4-Trimethylbenzene	mg/kg	8	25	*2.745*	0.31	***22***	***370***	***590***	*3.7*	***140***	***690***	***530***
1,2-Dibromo-3-chloropropane	mg/kg	NS	NS	NS	< 0.57 U	< 2.1 U	< 23 U	< 55 U	< 0.82 U	< 12 U	< 55 U	< 59
1,2-Dibromoethane	mg/kg	0.3	0.5	0.00001	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,2-Dichlorobenzene	mg/kg	26	75	*10.553*	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,2-Dichloroethane	mg/kg	4	6	0.004	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,2-Dichloropropane	mg/kg	4	6	0.024	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,3,5-Trimethylbenzene	mg/kg	3	10	*2.733*	0.084 J	***5.2***	***79***	***170***	1	***39***	***190***	***140***
1,3-Dichlorobenzene	mg/kg	26	200	10.431	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,3-Dichloropropane	mg/kg	NS	NS	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
1,4-Dichlorobenzene	mg/kg	30	50	0.174	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
2,2-Dichloropropane	mg/kg	NS	NS	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
2-Butanone (MEK)	mg/kg	5500	19000	8.754	< 1.1 U	< 4.1 U	< 46 U	< 110 U	< 1.6 U	< 24 U	< 110 U	< 120
2-Chlorotoluene	mg/kg	436	436	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
4-Chlorotoluene	mg/kg	NS	NS	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
4-Methyl-2-Pentanone	mg/kg	1700	9000	0.757	< 1.1 U	< 4.1 U	< 46 U	< 110 U	< 1.6 U	< 24 U	< 110 U	< 120
Acetone	mg/kg	340	1000	8.398	< 1.1 U	< 4.1 U	< 46 U	< 110 U	< 1.6 U	< 24 U	< 110 U	< 120
Allyl chloride	mg/kg	NS	NS	0.154	< 0.57 U	< 2.1 U	< 23 U	< 55 U	< 0.82 U	< 12 U	< 55 U	< 59
Benzene	mg/kg	6	10	*0.017*	*0.072 J*	< 1 U	*3.4 J*	***10 J***	*0.042 J*	*0.48 J*	*5 J*	***7.8 J***
Bromobenzene	mg/kg	NS	NS	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Bromochloromethane	mg/kg	NS	NS	0.277	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Bromodichloromethane	mg/kg	10	17	0.021	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Bromoform	mg/kg	370	650	0.134	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Bromomethane	mg/kg	0.7	2	0.036	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Carbon Disulfide	mg/kg	65	190	3.437	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Carbon Tetrachloride	mg/kg	0.3	0.9	0.008	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
CFC-11	mg/kg	67	195	35.006	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
CFC-12	mg/kg	16	50	36.658	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Chlorobenzene	mg/kg	11	32	1.180	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Chlorodibromomethane	mg/kg	12	20	0.034	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Chloroethane	mg/kg	1000	3000	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Chloroform	mg/kg	2.5	4	0.114	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Chloromethane	mg/kg	8	23	0.113	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
cis-1,2-Dichloroethene	mg/kg	8	22	*0.208*	0.053 J	< 1 U	*5.7 J*	***32***	0.099 J	< 5.9 U	< 27 U	*7.6 J*
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Cyclohexane	mg/kg	NS	NS	NS	< 0.57 U	< 2.1 U	16 J	45 J	< 0.82 U	3.4 J	23 J	34 J
Cymene (p-Isopropyltoluene)	mg/kg	NS	NS	NS	0.032 J	0.61 J	21	18 J	0.16 J	3.4 J	16 J	17 J
Dibromomethane	mg/kg	260	1860	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Dichloromethane	mg/kg	97	158	*0.017*	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Dichloromonofluoromethane	mg/kg	NS	NS	NS	< 0.57 U	< 2.1 U	< 23 U	< 55 U	< 0.82 U	< 12 U	< 55 U	< 59
Diethyl ether	mg/kg	NS	NS	0.512	< 0.57 U	< 2.1 U	< 23 U	< 55 U	< 0.82 U	< 12 U	< 55 U	< 59
Ethylbenzene	mg/kg	200	200	*1.048*	0.21 J	*8.3*	*130*	***320***	*1.4*	*22*	*150*	*170*
Hexachloro-1,3-butadiene	mg/kg	6	37	0.037	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Isopropylbenzene	mg/kg	30	87	*9.463*	< 0.29 U	0.53 J	*27*	*30*	0.19 J	5.6 J	***31***	*27 J*
Methyl Acetate	mg/kg	NS	NS	NS	0.19 J	< 2.1 U	< 23 U	14 J	< 0.82 U	< 12 U	< 55 U	< 59
Methyl N-Butyl Ketone (2-Hexanone)	mg/kg	NS	NS	NS	< 1.1 U	< 4.1 U	< 46 U	< 110 U	< 1.6 U	< 24 U	< 110 U	< 120
Methylcyclohexane	mg/kg	NS	NS	NS	0.053 J	0.61 J	63	130	0.92	13	73	95
Methyl-tert-butylether	mg/kg	NS	NS	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Naphthalene	mg/kg	10	28	*4.468*	0.26 J	***14***	***280***	***490***	3	***31***	***170***	***280***
N-Butylbenzene	mg/kg	30	92	NS	0.17 J	6	**61**	**90**	0.75	*22*	**98**	**110**
N-Propylbenzene	mg/kg	30	93	NS	< 0.29 U	1.2	**32**	**44**	0.28 J	6.3	**39**	**38**
sec-Butylbenzene	mg/kg	25	70	NS	0.1 J	0.76 J	12	14 J	0.11 J	2.2 J	11 J	14 J
Styrene (Monomer)	mg/kg	210	600	2.023	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1001 ASB-1001_39-42 (20150615) 6/15/2015 39-42 Industrial Waste	ASB-1001 ASB-1001_50-54 (20150615) 6/15/2015 50-54 Industrial Waste	ASB-1001 ASB-1001_65-70 (20150615) 6/15/2015 65-70 Industrial Waste	ASB-1001 ASB-1001_72-74 (20150615) 6/15/2015 72-74 Industrial Waste	ASB-1001 ASB-1001_80-82 (20150615) 6/15/2015 80-82 Native Sand	ASB-1002 ASB-1002_55-60 (20150616) 6/16/2015 55-60 Industrial Waste	ASB-1002 ASB-1002_60-64 (20150616) 6/16/2015 60-64 Industrial Waste	ASB-1002 ASB-1002_75-77 (20150616) 6/16/2015 75-77 Industrial Waste
tert-Butylbenzene		mg/kg	30	90	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Tetrachloroethene		mg/kg	72	131	0.042	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Tetrahydrofuran		mg/kg	NS	NS	0.244	< 1.1 U	< 4.1 U	< 46 U	< 110 U	< 1.6 U	< 24 U	< 110 U	< 120
Toluene		mg/kg	107	305	*2.459*	0.11 J	0.11 J	*32*	***160***	0.6	*2.5 J*	*31*	*96*
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
Trichloroethene		mg/kg	29	46	*0.002*	*0.046 J*	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	*7.8 J*
Vinyl chloride		mg/kg	0.8	2.2	0.001	< 0.29 U	< 1 U	< 12 U	< 28 U	< 0.41 U	< 5.9 U	< 27 U	< 29
m,p-Xylene		mg/kg	NS	NS	NS	0.66	24	**320**	**980**	4.3	**89**	**560**	**580**
o-Xylene		mg/kg	NS	NS	NS	0.11 J	5.4	**180**	**440**	2	37	**230**	**270**
Total Xylenes*		mg/kg	45	130	*5.415*	0.77 J	*29.4*	*500*	*1420*	*6.3*	*126*	*790*	*850*
SVOCs													
1,1-Biphenyl		mg/kg	NS	NS	62.161	0.023 J	0.025 J	2.8 J	22 J	0.07 J	0.8 J	1 J	2.1 J
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
2,4-Dichlorophenol		mg/kg	48	230	0.153	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
2,4-Dimethylphenol		mg/kg	390	1925	2.167	< 1.7 U	0.21 J	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	< 8 U	< 4.9 U	< 340 U	< 2000 U	< 4.8 U	< 96 U	< 100 U	< 380
2,4-Dinitrotoluene		mg/kg	50	355	0.013	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
2,6-Dinitrotoluene		mg/kg	25	175	0.013	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
2-Chloronaphthalene		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
2-Chlorophenol		mg/kg	NS	NS	0.520	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	< 8 U	< 4.9 U	< 340 U	< 2000 U	< 4.8 U	< 96 U	< 100 U	< 380
2-Methylnaphthalene		mg/kg	100	369	NS	0.078 J	0.7 J	52 J	**390 J**	1.2	9 J	14 J	50 J
2-Methylphenol		mg/kg	75	352	0.428	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
2-Nitroaniline		mg/kg	NS	NS	NS	< 8 U	< 4.9 U	< 340 U	< 2000 U	< 4.8 U	< 96 U	< 100 U	< 380
2-Nitrophenol		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	< 8 U	< 4.9 U	< 340 U	< 2000 U	< 4.8 U	< 96 U	< 100 U	< 380
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	< 2 U	< 1.2 U	< 86 U	< 490 U	< 1.2 U	< 24 U	< 25 U	< 95
3-Nitroaniline		mg/kg	NS	NS	NS	< 8 U	< 4.9 U	< 340 U	< 2000 U	< 4.8 U	< 96 U	< 100 U	< 380
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
4-Nitroaniline		mg/kg	NS	NS	NS	< 8 U	< 4.9 U	< 340 U	< 2000 U	< 4.8 U	< 96 U	< 100 U	< 380
4-Nitrophenol		mg/kg	NS	NS	NS	< 8 U	< 4.9 U	< 340 U	< 2000 U	< 4.8 U	< 96 U	< 100 U	< 380
Acenaphthene		mg/kg	1200	5260	*81.242*	0.071 J	0.075 J	5 J	45 J	0.15 J	2.8 J	0.86 J	1.7 J
Acenaphthylene		mg/kg	NS	NS	NS	0.02 J	< 1 U	2.9 J	29 J	0.075 J	0.3 J	< 21 U	< 78
Acetophenone		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Anthracene		mg/kg	7880	45400	1312.816	0.15 J	0.19 J	7.2 J	69 J	0.22 J	4.8 J	0.81 J	1.6 J
Atrazine		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Benzaldehyde		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Benzo(a)anthracene		mg/kg	NS	NS	NS	0.46 J	0.36 J	7.5 J	76 J	0.24 J	5.1 J	0.78 J	1.5 J
Benzo(a)pyrene		mg/kg	2	3	*1.410*	0.59 J	0.38 J	***4.3 J***	***56 J***	0.16 J	***4.5 J***	0.61 J	0.88 J
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	0.98 J	0.5 J	5.9 J	76 J	0.24 J	5.4 J	0.79 J	1.2 J
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	0.47 J	0.28 J	2.2 J	31 J	0.086 J	2.6 J	0.3 J	< 78
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	0.33 J	0.24 J	3.2 J	30 J	0.096 J	2.2 J	0.3 J	< 78
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	0.12 J	0.25 J	*43 J*	***580***	1.8	1.1 J	1.6 J	< 78
Butyl benzyl phthalate		mg/kg	580	3700	28.820	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Caprolactam		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Carbazole		mg/kg	700	1310	NS	< 1.7 U	< 1 U	< 71 U	37 J	0.1 J	< 20 U	< 21 U	< 78
Chrysene		mg/kg	NS	NS	NS	0.59 J	0.43 J	7 J	78 J	0.23 J	4.8 J	0.89 J	1.9 J
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	0.12 J	0.08 J	< 71 U	11 J	< 1 U	0.66 J	< 21 U	< 78
Dibenzofuran		mg/kg	104	810	NS	0.048 J	0.044 J	5.1 J	46 J	0.16 J	2.4 J	0.72 J	< 78
Diethyl phthalate		mg/kg	NS	NS	37.177	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Dimethyl phthalate		mg/kg	NS	NS	228.454	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	2 J	4.3 J	< 78
Di-n-octyl phthalate		mg/kg	520	3700	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Fluoranthene		mg/kg	1080	6800	666	0.96 J	0.78 J	19 J	220 J	0.63 J	14 J	2.4 J	4.3 J
Fluorene		mg/kg	850	4120	*110.524*	0.083 J	0.088 J	7.6 J	77 J	0.24 J	3.6 J	1.1 J	2.5 J
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Hexachlorobenzene		mg/kg	5	9	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1001 ASB-1001_39-42 (20150615) 6/15/2015 39-42 Industrial Waste	ASB-1001 ASB-1001_50-54 (20150615) 6/15/2015 50-54 Industrial Waste	ASB-1001 ASB-1001_65-70 (20150615) 6/15/2015 65-70 Industrial Waste	ASB-1001 ASB-1001_72-74 (20150615) 6/15/2015 72-74 Industrial Waste	ASB-1001 ASB-1001_80-82 (20150615) 6/15/2015 80-82 Native Sand	ASB-1002 ASB-1002_55-60 (20150616) 6/16/2015 55-60 Industrial Waste	ASB-1002 ASB-1002_60-64 (20150616) 6/16/2015 60-64 Industrial Waste	ASB-1002 ASB-1002_75-77 (20150616) 6/16/2015 75-77 Industrial Waste
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	< 8 U	< 4.9 U	< 340 U	< 2000 U	< 4.8 U	< 96 U	< 100 U	< 380
Hexachloroethane		mg/kg	NS	NS	0.010	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	0.38 J	0.24 J	3 J	30 J	0.087 J	2.5 J	0.62 J	< 78
Isophorone		mg/kg	NS	NS	0.461	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Naphthalene		mg/kg	10	28	*4.468*	0.27 J	2.6	***220***	***1200***	3.2	***41***	***71***	***220***
Nitrobenzene		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
p-Chloroaniline		mg/kg	NS	NS	NS	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	< 20 U	< 21 U	< 78
Pentachlorophenol		mg/kg	80	120	*0.023*	< 1.7 U	< 1 U	< 71 U	< 400 U	< 1 U	*2.4 J*	< 21 U	< 78
Phenanthrene		mg/kg	NS	NS	NS	0.58 J	0.65 J	33 J	340 J	1.1	16 J	4.1 J	7.7 J
Phenol		mg/kg	1500	20203	37.952	< 1.7 U	< 1 U	< 71 U	11 J	< 1 U	< 20 U	< 21 U	< 78
Pyrene		mg/kg	890	5800	*435.120*	1.2 J	0.81 J	15 J	160 J	0.52 J	11 J	2.1 J	3.8 J
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	0.878	0.563	**6.3**	**84.2**	0.229	**6.439**	0.868	1.169
PCBs													
Aroclor 1016		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	< 0.8
Aroclor 1221		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	< 0.8
Aroclor 1232		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	< 0.8
Aroclor 1242		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	< 0.8
Aroclor 1248		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	< 0.8
Aroclor 1254		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	< 0.8
Aroclor 1260		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	**2.9**
Polychlorinated biphenyls		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Aluminum		mg/kg	30000	100000	NS	7600	9500	2800	6100	2800	7100	5200	2400
Antimony		mg/kg	12	100	*5.412*	***370***	***130***	***130***	***140***	1.3	< 1.1 U	***28***	***240***
Arsenic		mg/kg	9	20	*5.82*	***27***	***17***	***11***	***60***	2.5	4.4	5.2	***21***
Barium		mg/kg	1100	18000	*1684*	***2300***	***2100***	**1200**	***4300***	72	120	***3700***	***5700***
Beryllium		mg/kg	55	230	2.72016	0.39 J	0.51	0.088 J	0.25 J	0.15 J	0.47 J	0.29 J	0.038 J
Cadmium		mg/kg	25	200	*8.808*	*11*	*11*	3.1 J	***120***	0.57	0.48	*16*	***120***
Calcium		mg/kg	NS	NS	NS	16000	15000	33000 J	52000	29000	13000	20000	44000
Chromium (Total)		mg/kg	NS	NS	NS	190	100	53	100	10	18	140	290
Chromium III		mg/kg	44000	100000	1000000040	36	21	52	100	9.9	18	140	290
Chromium VI		mg/kg	87	650	*36.2*	***220***	***160***	1.5 J	< 5.0 U	0.38 J	< 0.98 U	< 1.0 U	< 9.6
Cobalt		mg/kg	600	2600	*27.06*	*190*	*100*	6.3	18	3.9 J	10	21	*50*
Copper		mg/kg	100	9000	702	0.53 J	0.62 J	37	92	4.8	11	63	**180**
Iron		mg/kg	30000	100000	NS	38000	27000	25000	18000	11000	13000	15000	28000
Lead		mg/kg	300	700	*2700*	***13000***	***9100***	200	***2900***	14	40	**2000**	***8400***
Magnesium		mg/kg	NS	NS	NS	5300	5300	4200	7100	8500	5200	6900	11000 J
Manganese		mg/kg	3600	8100	*130.2*	*700*	*500*	*260*	*310*	*480*	*220*	*250*	*290*
Mercury		mg/kg	0.5	1.5	*3.291*	0.24	0.15	0.16	***4.2***	0.044 J	0.016 J	0.26	0.29
Nickel		mg/kg	560	2500	*176.2*	110	72	25	17	8.4	20	19	82
Potassium		mg/kg	NS	NS	NS	1800	3700	730	1800	560 J	3700	2100	370 J
Selenium		mg/kg	160	1300	*2.64*	2.3	2.4	1.1	*39*	< 0.58 U	< 0.57 U	*3.6*	*30*
Silver		mg/kg	160	1300	7.86	1.4	0.99	< 0.44 U	0.30 J	< 0.58 U	< 0.57 U	0.11 J	1.1
Sodium		mg/kg	NS	NS	NS	370 J	400 J	860	1600	520 J	170 J	560	1400
Thallium		mg/kg	3	21	0.8892	< 0.98 U	< 1.0 U	0.17 J	< 1.2 U	< 1.2 U	< 1.1 U	< 1.0 U	< 1.1
Vanadium		mg/kg	121	121	*4.0004*	*19*	*14*	*6.4*	*13*	*12*	*7.0*	*9.9*	*5.9*
Zinc		mg/kg	8700	75000	*3004*	1500	780	640	1300	27	54	1400	*5700*
TPH													
Diesel Range Organics**		mg/kg	100	100	NS	**950**	**770**	**7400**	**17000**	51	**7900**	**26000**	**24000**
Gasoline Range Organics**		mg/kg	100	100	NS	**140**	**850**	**4500**	**10000**	**130**	**1000**	**11000**	**21000**
Other Analtyical													
Percent Moisture		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Asbestos		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening													
Oil-in-Soil		NA	NA	NA	NA	Negative	Negative	Negative	Positive	NA	Negative	Negative	Negative
Petroleum Sheen Test		NA	NA	NA	NA	NA	Negative	Negative	Negative	Negative	Negative	Positive	Positive

Notes and Abbreviations on Page 37.

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St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1002 ASB-1002_80-84 (20150616) 6/16/2015 80-84 Native Sand	ASB-1002 ASB-1002_92-95 (20150616) 6/16/2015 92-95 Native Sand	ASB-1003 ASB-1003_60-64 (20150617) 6/17/2015 60-64 Fill Soil	ASB-1003 ASB-1003_70-74 (20150617) 6/17/2015 70-74 Native Sand	ASB-1004 ASB-1004_37-40(20150619) 6/19/2015 37-40 Fill Soil	ASB-1004 ASB-1004_60-62(20150619) 6/19/2015 60-62 Industrial Waste	ASB-1004 ASB-1004_69-70(20150619) 6/19/2015 69-70 Native Sand	ASB-1004 ASB-1004_79-80(20150619) 6/19/2015 79-80 Native Sand
VOCs													
1,1,1,2-Tetrachloroethane		mg/kg	31	51	0.406	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,1,1-Trichloroethane		mg/kg	140	472	55.740	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,1,2,2-Tetrachloroethane		mg/kg	3.5	6.5	0.012	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,1,2-trichloro-1,2,2-trifluoroethane		mg/kg	3745	5430	16884	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,1,2-Trichloroethane		mg/kg	9	14	0.014	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,1-Dichloroethane		mg/kg	34	55	0.407	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,1-Dichloroethene		mg/kg	20	60	1.394	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,1-Dichloropropene		mg/kg	NS	NS	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,2,3-Trichlorobenzene		mg/kg	NS	NS	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,2,3-Trichloropropane		mg/kg	NS	NS	0.267	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,2,4-Trichlorobenzene		mg/kg	200	985	0.226	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,2,4-Trimethylbenzene		mg/kg	8	25	*2.745*	***68***	0.082 J	0.014 J	0.046 J	< 0.35	***1600***	***140***	0.02 J
1,2-Dibromo-3-chloropropane		mg/kg	NS	NS	NS	< 4.6	< 0.25	< 0.32	< 0.32	< 0.69	< 230	< 13	< 0.56
1,2-Dibromoethane		mg/kg	0.3	0.5	0.00001	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,2-Dichlorobenzene		mg/kg	26	75	*10.553*	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,2-Dichloroethane		mg/kg	4	6	0.004	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,2-Dichloropropane		mg/kg	4	6	0.024	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,3,5-Trimethylbenzene		mg/kg	3	10	*2.733*	***20***	0.021 J	< 0.16	0.017 J	< 0.35	***480***	1.9 J	< 0.28
1,3-Dichlorobenzene		mg/kg	26	200	10.431	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,3-Dichloropropane		mg/kg	NS	NS	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
1,4-Dichlorobenzene		mg/kg	30	50	0.174	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
2,2-Dichloropropane		mg/kg	NS	NS	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
2-Butanone (MEK)		mg/kg	5500	19000	8.754	< 9.1	< 0.49	< 0.64	< 0.63	< 1.4	< 460	< 27	< 1.1
2-Chlorotoluene		mg/kg	436	436	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
4-Chlorotoluene		mg/kg	NS	NS	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
4-Methyl-2-Pentanone		mg/kg	1700	9000	0.757	< 9.1	< 0.49	< 0.64	< 0.63	< 1.4	< 460	< 27	< 1.1
Acetone		mg/kg	340	1000	8.398	< 9.1	< 0.49	< 0.64	< 0.63	< 1.4	< 460	< 27	< 1.1
Allyl chloride		mg/kg	NS	NS	0.154	< 4.6	< 0.25	< 0.32	< 0.32	< 0.69	< 230	< 13	< 0.56
Benzene		mg/kg	6	10	*0.017*	*0.57 J*	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Bromobenzene		mg/kg	NS	NS	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Bromochloromethane		mg/kg	NS	NS	0.277	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Bromodichloromethane		mg/kg	10	17	0.021	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Bromoform		mg/kg	370	650	0.134	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Bromomethane		mg/kg	0.7	2	0.036	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Carbon Disulfide		mg/kg	65	190	3.437	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Carbon Tetrachloride		mg/kg	0.3	0.9	0.008	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
CFC-11		mg/kg	67	195	35.006	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
CFC-12		mg/kg	16	50	36.658	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Chlorobenzene		mg/kg	11	32	1.180	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Chlorodibromomethane		mg/kg	12	20	0.034	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Chloroethane		mg/kg	1000	3000	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Chloroform		mg/kg	2.5	4	0.114	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Chloromethane		mg/kg	8	23	0.113	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
cis-1,2-Dichloroethene		mg/kg	8	22	*0.208*	*0.76 J*	< 0.12	< 0.16	< 0.16	< 0.35	***20 J***	< 6.7	< 0.28
cis-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Cyclohexane		mg/kg	NS	NS	NS	3.5 J	< 0.25	< 0.32	< 0.32	< 0.69	< 230	8 J	< 0.56
Cymene (p-Isopropyltoluene)		mg/kg	NS	NS	NS	3	< 0.12	< 0.16	< 0.16	< 0.35	21 J	4.7 J	< 0.28
Dibromomethane		mg/kg	260	1860	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Dichloromethane		mg/kg	97	158	*0.017*	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Dichloromonofluoromethane		mg/kg	NS	NS	NS	< 4.6	< 0.25	< 0.32	< 0.32	< 0.69	< 230	< 13	< 0.56
Diethyl ether		mg/kg	NS	NS	0.512	< 4.6	< 0.25	< 0.32	< 0.32	< 0.69	< 230	< 13	< 0.56
Ethylbenzene		mg/kg	200	200	*1.048*	*16*	< 0.12	< 0.16	< 0.16	< 0.35	***640***	*7.7*	< 0.28
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Isopropylbenzene		mg/kg	30	87	*9.463*	3.7	< 0.12	< 0.16	< 0.16	< 0.35	***39 J***	8	< 0.28
Methyl Acetate		mg/kg	NS	NS	NS	< 4.6	< 0.25	0.11 J	0.077 J	< 0.69	< 230	< 13	< 0.56
Methyl N-Butyl Ketone (2-Hexanone)		mg/kg	NS	NS	NS	< 9.1	< 0.49	< 0.64	< 0.63	< 1.4	< 460	< 27	< 1.1
Methylcyclohexane		mg/kg	NS	NS	NS	14	< 0.25	< 0.32	0.17 J	< 0.69	36 J	62	< 0.56
Methyl-tert-butylether		mg/kg	NS	NS	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Naphthalene		mg/kg	10	28	*4.468*	***26***	0.13	0.043 J	0.095 J	< 0.35	***210***	***26***	< 0.28
N-Butylbenzene		mg/kg	30	92	NS	12	0.02 J	< 0.16	< 0.16	< 0.35	**210**	**32**	< 0.28
N-Propylbenzene		mg/kg	30	93	NS	4.8	< 0.12	< 0.16	< 0.16	< 0.35	**97 J**	16	< 0.28
sec-Butylbenzene		mg/kg	25	70	NS	1.8 J	< 0.12	< 0.16	< 0.16	< 0.35	**26 J**	7.6	< 0.28
Styrene (Monomer)		mg/kg	210	600	2.023	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

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Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1002 ASB-1002_80-84 (20150616) 6/16/2015 80-84 Native Sand	ASB-1002 ASB-1002_92-95 (20150616) 6/16/2015 92-95 Native Sand	ASB-1003 ASB-1003_60-64 (20150617) 6/17/2015 60-64 Fill Soil	ASB-1003 ASB-1003_70-74 (20150617) 6/17/2015 70-74 Native Sand	ASB-1004 ASB-1004_37-40(20150619) 6/19/2015 37-40 Fill Soil	ASB-1004 ASB-1004_60-62(20150619) 6/19/2015 60-62 Industrial Waste	ASB-1004 ASB-1004_69-70(20150619) 6/19/2015 69-70 Native Sand	ASB-1004 ASB-1004_79-80(20150619) 6/19/2015 79-80 Native Sand
tert-Butylbenzene		mg/kg	30	90	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Tetrachloroethene		mg/kg	72	131	0.042	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Tetrahydrofuran		mg/kg	NS	NS	0.244	< 9.1	< 0.49	< 0.64	< 0.63	< 1.4	< 460	< 27	< 1.1
Toluene		mg/kg	107	305	*2.459*	*9.2*	< 0.12	< 0.16	< 0.16	< 0.35	***330***	0.32 J	< 0.28
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
Trichloroethene		mg/kg	29	46	*0.002*	*1.1 J*	< 0.12	< 0.16	< 0.16	< 0.35	***30 J***	< 6.7	< 0.28
Vinyl chloride		mg/kg	0.8	2.2	0.001	< 2.3	< 0.12	< 0.16	< 0.16	< 0.35	< 120	< 6.7	< 0.28
m,p-Xylene		mg/kg	NS	NS	NS	**63**	0.059 J	< 0.16	0.049 J	< 0.35	**1700**	7.7	0.029 J
o-Xylene		mg/kg	NS	NS	NS	27	0.026 J	< 0.16	0.048 J	< 0.35	**780**	0.64 J	< 0.28
Total Xylenes*		mg/kg	45	130	*5.415*	*90*	0.085 J	ND	0.097 J	ND	*2480*	*8.34 J*	0.029 J
SVOCs													
1,1-Biphenyl		mg/kg	NS	NS	62.161	1.1 J	< 0.37	< 0.42	0.12 J	< 0.4	0.41 J	0.23 J	< 0.38
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
2,4-Dichlorophenol		mg/kg	48	230	0.153	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
2,4-Dimethylphenol		mg/kg	390	1925	2.167	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	< 180	< 1.8	< 2	< 8.1	< 1.9	< 39	< 43	< 1.8
2,4-Dinitrotoluene		mg/kg	50	355	0.013	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
2,6-Dinitrotoluene		mg/kg	25	175	0.013	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
2-Chloronaphthalene		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
2-Chlorophenol		mg/kg	NS	NS	0.520	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	< 180	< 1.8	< 2	< 8.1	< 1.9	< 39	< 43	< 1.8
2-Methylnaphthalene		mg/kg	100	369	NS	16 J	< 0.37	0.031 J	0.85 J	< 0.4	6.8 J	16	< 0.38
2-Methylphenol		mg/kg	75	352	0.428	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
2-Nitroaniline		mg/kg	NS	NS	NS	< 180	< 1.8	< 2	< 8.1	< 1.9	< 39	< 43	< 1.8
2-Nitrophenol		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	< 180	< 1.8	< 2	< 8.1	< 1.9	< 39	< 43	< 1.8
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	< 44	< 0.45	< 0.51	< 2	< 0.49	0.63 J	< 11	< 0.46
3-Nitroaniline		mg/kg	NS	NS	NS	< 180	< 1.8	< 2	< 8.1	< 1.9	< 39	< 43	< 1.8
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
4-Nitroaniline		mg/kg	NS	NS	NS	< 180	< 1.8	< 2	< 8.1	< 1.9	< 39	< 43	< 1.8
4-Nitrophenol		mg/kg	NS	NS	NS	< 180	< 1.8	< 2	< 8.1	< 1.9	< 39	< 43	< 1.8
Acenaphthene		mg/kg	1200	5260	*81.242*	0.71 J	< 0.37	< 0.42	0.35 J	< 0.4	0.32 J	0.22 J	< 0.38
Acenaphthylene		mg/kg	NS	NS	NS	< 37	< 0.37	0.0069 J	0.4 J	< 0.4	< 7.9	< 8.8	< 0.38
Acetophenone		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	0.05 J	< 0.4	< 7.9	< 8.8	< 0.38
Anthracene		mg/kg	7880	45400	1312.816	0.55 J	< 0.37	0.0080 J	0.87 J	< 0.4	0.23 J	0.18 J	< 0.38
Atrazine		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
Benzaldehyde		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
Benzo(a)anthracene		mg/kg	NS	NS	NS	0.69 J	< 0.37	0.027 J	2.1	0.0062 J	0.38 J	0.24 J	< 0.38
Benzo(a)pyrene		mg/kg	2	3	*1.410*	< 37	< 0.37	0.031 J	***2.2***	0.0041 J	0.2 J	0.18 J	< 0.38
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	0.69 J	< 0.37	0.042 J	2.5	0.0068 J	0.38 J	0.25 J	< 0.38
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	< 37	< 0.37	0.028 J	1.2 J	< 0.4	0.12 J	0.13 J	< 0.38
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	< 37	< 0.37	0.02 J	0.77 J	< 0.4	0.16 J	0.11 J	< 0.38
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	< 37	< 0.37	< 0.42	< 1.7	< 0.4	7.7 J	7.4 J	< 0.38
Butyl benzyl phthalate		mg/kg	580	3700	28.820	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
Caprolactam		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	< 1.7	0.054 J	< 7.9	< 8.8	0.06 J
Carbazole		mg/kg	700	1310	NS	< 37	< 0.37	< 0.42	0.29 J	< 0.4	< 7.9	< 8.8	< 0.38
Chrysene		mg/kg	NS	NS	NS	0.78 J	< 0.37	0.04 J	2.2	0.0060 J	0.48 J	0.29 J	< 0.38
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	0.33 J	< 0.4	< 7.9	< 8.8	< 0.38
Dibenzofuran		mg/kg	104	810	NS	< 37	< 0.37	< 0.42	0.36 J	< 0.4	0.28 J	< 8.8	< 0.38
Diethyl phthalate		mg/kg	NS	NS	37.177	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	0.025 J
Dimethyl phthalate		mg/kg	NS	NS	228.454	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	12 J	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
Di-n-octyl phthalate		mg/kg	520	3700	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
Fluoranthene		mg/kg	1080	6800	666	2 J	< 0.37	0.052 J	3.9	0.014 J	1.2 J	0.69 J	< 0.38
Fluorene		mg/kg	850	4120	*110.524*	0.86 J	< 0.37	0.012 J	0.48 J	< 0.4	0.39 J	0.29 J	< 0.38
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
Hexachlorobenzene		mg/kg	5	9	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38

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Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1002 ASB-1002_80-84 (20150616) 6/16/2015 80-84 Native Sand	ASB-1002 ASB-1002_92-95 (20150616) 6/16/2015 92-95 Native Sand	ASB-1003 ASB-1003_60-64 (20150617) 6/17/2015 60-64 Fill Soil	ASB-1003 ASB-1003_70-74 (20150617) 6/17/2015 70-74 Native Sand	ASB-1004 ASB-1004_37-40(20150619) 6/19/2015 37-40 Fill Soil	ASB-1004 ASB-1004_60-62(20150619) 6/19/2015 60-62 Industrial Waste	ASB-1004 ASB-1004_69-70(20150619) 6/19/2015 69-70 Native Sand	ASB-1004 ASB-1004_79-80(20150619) 6/19/2015 79-80 Native Sand
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	< 180	< 1.8	< 2	< 8.1	< 1.9	< 39	< 43	< 1.8
Hexachloroethane		mg/kg	NS	NS	0.010	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	< 37	< 0.37	0.024 J	0.98 J	< 0.4	0.12 J	0.11 J	< 0.38
Isophorone		mg/kg	NS	NS	0.461	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	0.018 J
Naphthalene		mg/kg	10	28	*4.468*	***78***	0.011 J	0.0077 J	0.81 J	0.0044 J	***32***	*6.1 J*	< 0.38
Nitrobenzene		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
p-Chloroaniline		mg/kg	NS	NS	NS	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
Pentachlorophenol		mg/kg	80	120	*0.023*	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	< 0.38
Phenanthrene		mg/kg	NS	NS	NS	3.1 J	< 0.37	0.047 J	3.2	0.015 J	1.8 J	0.79 J	< 0.38
Phenol		mg/kg	1500	20203	37.952	< 37	< 0.37	< 0.42	< 1.7	< 0.4	< 7.9	< 8.8	0.019 J
Pyrene		mg/kg	890	5800	*435.120*	1.5 J	< 0.37	0.062 J	3.8	0.012 J	1 J	0.57 J	< 0.38
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	0.146	0	0.043	**3.042**	0.005	0.309	0.254	0
PCBs													
Aroclor 1016		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Aluminum		mg/kg	30000	100000	NS	3900	2800	11000	5300	9300	6100	710	1200
Antimony		mg/kg	12	100	*5.412*	4.0	< 0.94	< 0.94	< 1.1	< 1.1	***110***	4.6	< 0.81
Arsenic		mg/kg	9	20	*5.82*	2.5	4.0	*6.9*	4.1	4.3	***25***	1.4	1.2
Barium		mg/kg	1100	18000	*1684*	160	54	100	67	21 J	***4000***	820	18
Beryllium		mg/kg	55	230	2.72016	0.14 J	0.11 J	0.55	0.35 J	0.60	0.23 J	0.057 J	0.11 J
Cadmium		mg/kg	25	200	*8.808*	1.2	0.083 J	0.25	0.70	0.030 J	*21*	*12*	0.071 J
Calcium		mg/kg	NS	NS	NS	36000	58000	9000	8400	11000	29000	11000	19000
Chromium (Total)		mg/kg	NS	NS	NS	18	11	18	14	16	340	16	3.9
Chromium III		mg/kg	44000	100000	1000000040	18	11	18	14	16	340	16	3.9
Chromium VI		mg/kg	87	650	*36.2*	< 0.89	< 0.89	< 5.0	< 5.1	< 0.98	< 4.8	< 0.87	< 0.92
Cobalt		mg/kg	600	2600	*27.06*	5.5	4.4 J	8.7	7.0	12	26	1.9 J	2.2 J
Copper		mg/kg	100	9000	702	8.1	6.4	19	15	12	69	8.9	3.9
Iron		mg/kg	30000	100000	NS	13000	13000	16000	11000	13000	19000	3800	5200
Lead		mg/kg	300	700	*2700*	47	2.2	26	24	2.6	***6000***	230	2.4
Magnesium		mg/kg	NS	NS	NS	13000	19000	4400	3100	5000	5100	2900	7200
Manganese		mg/kg	3600	8100	*130.2*	*620*	*500*	*370*	*340*	*210*	*340*	66	*500*
Mercury		mg/kg	0.5	1.5	*3.291*	< 0.13	< 0.12	0.062 J	0.069 J	< 0.13	0.14	0.032 J	< 0.11
Nickel		mg/kg	560	2500	*176.2*	14	11	23	13	22	16	2.7 J	7.1
Potassium		mg/kg	NS	NS	NS	440 J	390 J	1300	710	5300	920	250 J	500
Selenium		mg/kg	160	1300	*2.64*	0.36 J	< 0.47	< 0.47	0.41 J	< 0.55	*4.5*	*2.7*	< 0.41
Silver		mg/kg	160	1300	7.86	< 0.48	< 0.47	0.084 J	0.65	< 0.55	0.39 J	< 0.39	< 0.41
Sodium		mg/kg	NS	NS	NS	140 J	120 J	820	320 J	95 J	840	84 J	57 J
Thallium		mg/kg	3	21	0.8892	< 0.96	< 0.94	< 0.94	< 1.1	< 1.1	< 1.1	< 0.79	< 0.81
Vanadium		mg/kg	121	121	*4.0004*	*19*	*13*	*30*	*19*	*6.7*	*8.0*	2.3 J	*5.4*
Zinc		mg/kg	8700	75000	*3004*	54	15	75	47	20	*5900*	130	7.2
TPH													
Diesel Range Organics**		mg/kg	100	100	NS	**2100**	6.3 J	**270**	**380**	4.1 J	**33000**	**3700**	5.2 J
Gasoline Range Organics**		mg/kg	100	100	NS	**3000**	**770 J**	6.8 J	9.4 J	< 13	**8700**	**9400**	< 120
Other Analtyical													
Percent Moisture		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Asbestos		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening													
Oil-in-Soil		NA	NA	NA	NA	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
Petroleum Sheen Test		NA	NA	NA	NA	Negative	Negative	Negative	Negative	Negative	Positive	Positive	Negative

Notes and Abbreviations on Page 37.

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
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St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1004 ASB-1004_83-85(20150619) 6/19/2015 83-85 Native Sand	ASB-1005 ASB-1005_12-14 (20150618) 6/18/2015 12-14 Fill Soil	ASB-1005 ASB-1005_37-40 (20150618) 6/18/2015 37-40 Fill Soil	ASB-1005 ASB-1005_46-50 (20150618) 6/18/2015 46-50 Fill Soil	ASB-1005 ASB-1005_78-80 (20150618) 6/18/2015 78-80 Native Sand	ASB-1006 ASB-1006_39-42(20150622) 6/22/2015 39-42 Fill Soil	ASB-1006 ASB-1006_52-54(20150622) 6/22/2015 52-54 Fill Soil	ASB-1006 ASB-1006_57-60(20150622) 6/22/2015 57-60 Industrial Waste
VOCs													
1,1,1,2-Tetrachloroethane		mg/kg	31	51	0.406	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,1,1-Trichloroethane		mg/kg	140	472	55.740	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,1,2,2-Tetrachloroethane		mg/kg	3.5	6.5	0.012	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,1,2-trichloro-1,2,2-trifluoroethane		mg/kg	3745	5430	16884	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,1,2-Trichloroethane		mg/kg	9	14	0.014	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,1-Dichloroethane		mg/kg	34	55	0.407	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,1-Dichloroethene		mg/kg	20	60	1.394	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,1-Dichloropropene		mg/kg	NS	NS	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,2,3-Trichlorobenzene		mg/kg	NS	NS	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,2,3-Trichloropropane		mg/kg	NS	NS	0.267	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,2,4-Trichlorobenzene		mg/kg	200	985	0.226	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,2,4-Trimethylbenzene		mg/kg	8	25	*2.745*	0.11 J	*4.5*	0.45	< 0.28	< 0.32	< 0.28	< 0.32	0.11 J
1,2-Dibromo-3-chloropropane		mg/kg	NS	NS	NS	< 0.57	< 0.64	< 0.57	< 0.55	< 0.64	< 0.56	< 0.65	< 0.77
1,2-Dibromoethane		mg/kg	0.3	0.5	0.00001	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,2-Dichlorobenzene		mg/kg	26	75	*10.553*	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,2-Dichloroethane		mg/kg	4	6	0.004	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,2-Dichloropropane		mg/kg	4	6	0.024	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,3,5-Trimethylbenzene		mg/kg	3	10	*2.733*	0.029 J	1.1	0.1 J	< 0.28	< 0.32	< 0.28	< 0.32	0.041 J
1,3-Dichlorobenzene		mg/kg	26	200	10.431	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,3-Dichloropropane		mg/kg	NS	NS	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
1,4-Dichlorobenzene		mg/kg	30	50	0.174	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
2,2-Dichloropropane		mg/kg	NS	NS	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
2-Butanone (MEK)		mg/kg	5500	19000	8.754	< 1.1	< 1.3	< 1.1	< 1.1	< 1.3	< 1.1	< 1.3	< 1.5
2-Chlorotoluene		mg/kg	436	436	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
4-Chlorotoluene		mg/kg	NS	NS	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
4-Methyl-2-Pentanone		mg/kg	1700	9000	0.757	< 1.1	< 1.3	< 1.1	< 1.1	< 1.3	< 1.1	< 1.3	< 1.5
Acetone		mg/kg	340	1000	8.398	< 1.1	< 1.3	< 1.1	< 1.1	< 1.3	< 1.1	0.31 J	< 1.5
Allyl chloride		mg/kg	NS	NS	0.154	< 0.57	< 0.64	< 0.57	< 0.55	< 0.64	< 0.56	< 0.65	< 0.77
Benzene		mg/kg	6	10	*0.017*	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	*0.033 J*
Bromobenzene		mg/kg	NS	NS	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Bromochloromethane		mg/kg	NS	NS	0.277	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Bromodichloromethane		mg/kg	10	17	0.021	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Bromoform		mg/kg	370	650	0.134	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Bromomethane		mg/kg	0.7	2	0.036	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Carbon Disulfide		mg/kg	65	190	3.437	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Carbon Tetrachloride		mg/kg	0.3	0.9	0.008	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
CFC-11		mg/kg	67	195	35.006	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
CFC-12		mg/kg	16	50	36.658	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Chlorobenzene		mg/kg	11	32	1.180	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Chlorodibromomethane		mg/kg	12	20	0.034	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Chloroethane		mg/kg	1000	3000	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Chloroform		mg/kg	2.5	4	0.114	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Chloromethane		mg/kg	8	23	0.113	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
cis-1,2-Dichloroethene		mg/kg	8	22	*0.208*	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
cis-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Cyclohexane		mg/kg	NS	NS	NS	< 0.57	< 0.64	< 0.57	< 0.55	< 0.64	< 0.56	< 0.65	< 0.77
Cymene (p-Isopropyltoluene)		mg/kg	NS	NS	NS	< 0.29	0.095 J	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	0.039 J
Dibromomethane		mg/kg	260	1860	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Dichloromethane		mg/kg	97	158	*0.017*	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Dichloromonofluoromethane		mg/kg	NS	NS	NS	< 0.57	< 0.64	< 0.57	< 0.55	< 0.64	< 0.56	< 0.65	< 0.77
Diethyl ether		mg/kg	NS	NS	0.512	< 0.57	< 0.64	< 0.57	< 0.55	< 0.64	< 0.56	< 0.65	< 0.77
Ethylbenzene		mg/kg	200	200	*1.048*	< 0.29	0.66	0.059 J	< 0.28	< 0.32	< 0.28	< 0.32	0.1 J
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Isopropylbenzene		mg/kg	30	87	*9.463*	< 0.29	0.12 J	0.2 J	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Methyl Acetate		mg/kg	NS	NS	NS	< 0.57	1.2	< 0.57	0.13 J	0.41 J	0.17 J	0.31 J	0.37 J
Methyl N-Butyl Ketone (2-Hexanone)		mg/kg	NS	NS	NS	< 1.1	< 1.3	< 1.1	< 1.1	< 1.3	< 1.1	< 1.3	< 1.5
Methylcyclohexane		mg/kg	NS	NS	NS	< 0.57	0.22 J	0.095 J	< 0.55	< 0.64	< 0.56	0.079 J	0.16 J
Methyl-tert-butylether		mg/kg	NS	NS	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Naphthalene		mg/kg	10	28	*4.468*	< 0.29	1.8	4.2	0.063 J	< 0.32	< 0.28	< 0.32	*8*
N-Butylbenzene		mg/kg	30	92	NS	< 0.29	1	0.9	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
N-Propylbenzene		mg/kg	30	93	NS	< 0.29	0.33	0.61	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
sec-Butylbenzene		mg/kg	25	70	NS	< 0.29	0.13 J	0.18 J	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Styrene (Monomer)		mg/kg	210	600	2.023	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38

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966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1004 ASB-1004_83-85(20150619) 6/19/2015 83-85 Native Sand	ASB-1005 ASB-1005_12-14 (20150618) 6/18/2015 12-14 Fill Soil	ASB-1005 ASB-1005_37-40 (20150618) 6/18/2015 37-40 Fill Soil	ASB-1005 ASB-1005_46-50 (20150618) 6/18/2015 46-50 Fill Soil	ASB-1005 ASB-1005_78-80 (20150618) 6/18/2015 78-80 Native Sand	ASB-1006 ASB-1006_39-42(20150622) 6/22/2015 39-42 Fill Soil	ASB-1006 ASB-1006_52-54(20150622) 6/22/2015 52-54 Fill Soil	ASB-1006 ASB-1006_57-60(20150622) 6/22/2015 57-60 Industrial Waste
tert-Butylbenzene		mg/kg	30	90	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Tetrachloroethene		mg/kg	72	131	0.042	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Tetrahydrofuran		mg/kg	NS	NS	0.244	< 1.1	< 1.3	< 1.1	< 1.1	< 1.3	< 1.1	< 1.3	< 1.5
Toluene		mg/kg	107	305	*2.459*	0.021 J	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	0.027 J
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Trichloroethene		mg/kg	29	46	*0.002*	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
Vinyl chloride		mg/kg	0.8	2.2	0.001	< 0.29	< 0.32	< 0.29	< 0.28	< 0.32	< 0.28	< 0.32	< 0.38
m,p-Xylene		mg/kg	NS	NS	NS	0.083 J	3	0.32	< 0.28	< 0.32	< 0.28	< 0.32	0.28 J
o-Xylene		mg/kg	NS	NS	NS	0.036 J	0.03 J	0.024 J	< 0.28	< 0.32	< 0.28	< 0.32	0.093 J
Total Xylenes*		mg/kg	45	130	*5.415*	0.119 J	3.03 J	0.344 J	ND	ND	ND	ND	0.373 J
SVOCs													
1,1-Biphenyl		mg/kg	NS	NS	62.161	0.087 J	< 1.7	0.0055 J	0.0060 J	< 0.39	< 0.38	< 0.41	1.8 J
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
2,4-Dichlorophenol		mg/kg	48	230	0.153	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
2,4-Dimethylphenol		mg/kg	390	1925	2.167	0.35 J	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	< 9.4	< 8.1	< 1.9	< 1.9	< 1.9	< 1.8	< 2	< 36
2,4-Dinitrotoluene		mg/kg	50	355	0.013	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
2,6-Dinitrotoluene		mg/kg	25	175	0.013	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
2-Chloronaphthalene		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
2-Chlorophenol		mg/kg	NS	NS	0.520	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	< 9.4	< 8.1	< 1.9	< 1.9	< 1.9	< 1.8	< 2	< 36
2-Methylnaphthalene		mg/kg	100	369	NS	1.6 J	0.3 J	0.17 J	0.039 J	< 0.39	0.0046 J	< 0.41	10
2-Methylphenol		mg/kg	75	352	0.428	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
2-Nitroaniline		mg/kg	NS	NS	NS	< 9.4	< 8.1	< 1.9	< 1.9	< 1.9	< 1.8	< 2	< 36
2-Nitrophenol		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	< 9.4	< 8.1	< 1.9	< 1.9	< 1.9	< 1.8	< 2	< 36
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	< 2.4	< 2	< 0.47	< 0.48	< 0.48	< 0.46	< 0.49	< 9.1
3-Nitroaniline		mg/kg	NS	NS	NS	< 9.4	< 8.1	< 1.9	< 1.9	< 1.9	< 1.8	< 2	< 36
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
4-Nitroaniline		mg/kg	NS	NS	NS	< 9.4	< 8.1	< 1.9	< 1.9	< 1.9	< 1.8	< 2	< 36
4-Nitrophenol		mg/kg	NS	NS	NS	< 9.4	< 8.1	< 1.9	< 1.9	< 1.9	< 1.8	< 2	< 36
Acenaphthene		mg/kg	1200	5260	*81.242*	0.36 J	0.06 J	0.0086 J	0.045 J	< 0.39	< 0.38	< 0.41	6.4 J
Acenaphthylene		mg/kg	NS	NS	NS	0.14 J	< 1.7	< 0.39	0.0087 J	< 0.39	< 0.38	< 0.41	1.5 J
Acetophenone		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Anthracene		mg/kg	7880	45400	1312.816	0.56 J	0.11 J	0.0063 J	0.11 J	0.0042 J	0.0060 J	< 0.41	7.2 J
Atrazine		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Benzaldehyde		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	0.015 J	0.035 J	< 0.38	< 0.41	< 7.5
Benzo(a)anthracene		mg/kg	NS	NS	NS	1 J	0.2 J	0.0093 J	0.31 J	< 0.39	0.014 J	< 0.41	8.6
Benzo(a)pyrene		mg/kg	2	3	*1.410*	0.75 J	0.19 J	0.011 J	0.27 J	0.0042 J	0.016 J	< 0.41	***5.2 J***
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	1 J	0.28 J	< 0.39	0.38 J	0.0089 J	0.023 J	< 0.41	8.2
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	0.3 J	0.084 J	< 0.39	0.13 J	< 0.39	0.015 J	< 0.41	1.4 J
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	0.49 J	0.11 J	< 0.39	0.16 J	< 0.39	0.0091 J	< 0.41	4.8 J
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	< 1.9	0.71 J	0.1 J	0.056 J	0.05 J	0.039 J	0.029 J	< 7.5
Butyl benzyl phthalate		mg/kg	580	3700	28.820	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Caprolactam		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Carbazole		mg/kg	700	1310	NS	0.32 J	< 1.7	< 0.39	0.056 J	< 0.39	< 0.38	< 0.41	6.8 J
Chrysene		mg/kg	NS	NS	NS	1 J	0.24 J	0.013 J	0.3 J	< 0.39	0.016 J	< 0.41	8.6
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	0.11 J	< 1.7	< 0.39	0.039 J	< 0.39	< 0.38	< 0.41	< 7.5
Dibenzofuran		mg/kg	104	810	NS	0.28 J	0.046 J	< 0.39	0.024 J	< 0.39	< 0.38	< 0.41	5.3 J
Diethyl phthalate		mg/kg	NS	NS	37.177	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Dimethyl phthalate		mg/kg	NS	NS	228.454	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Di-n-octyl phthalate		mg/kg	520	3700	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Fluoranthene		mg/kg	1080	6800	666	2.4	0.5 J	0.023 J	0.65	0.018 J	0.032 J	< 0.41	25
Fluorene		mg/kg	850	4120	*110.524*	0.55 J	0.081 J	0.0077 J	0.043 J	< 0.39	0.0044 J	< 0.41	9.2
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Hexachlorobenzene		mg/kg	5	9	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1004 ASB-1004_83-85(20150619) 6/19/2015 83-85 Native Sand	ASB-1005 ASB-1005_12-14 (20150618) 6/18/2015 12-14 Fill Soil	ASB-1005 ASB-1005_37-40 (20150618) 6/18/2015 37-40 Fill Soil	ASB-1005 ASB-1005_46-50 (20150618) 6/18/2015 46-50 Fill Soil	ASB-1005 ASB-1005_78-80 (20150618) 6/18/2015 78-80 Native Sand	ASB-1006 ASB-1006_39-42(20150622) 6/22/2015 39-42 Fill Soil	ASB-1006 ASB-1006_52-54(20150622) 6/22/2015 52-54 Fill Soil	ASB-1006 ASB-1006_57-60(20150622) 6/22/2015 57-60 Industrial Waste
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	< 9.4	< 8.1	< 1.9	< 1.9	< 1.9	< 1.8	< 2	< 36
Hexachloroethane		mg/kg	NS	NS	0.010	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	0.31 J	0.1 J	< 0.39	0.12 J	< 0.39	0.016 J	< 0.41	1.3 J
Isophorone		mg/kg	NS	NS	0.461	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Naphthalene		mg/kg	10	28	*4.468*	2.6	1.6 J	1.8	0.081 J	0.0071 J	0.0056 J	0.0071 J	***25***
Nitrobenzene		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
p-Chloroaniline		mg/kg	NS	NS	NS	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Pentachlorophenol		mg/kg	80	120	*0.023*	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Phenanthrene		mg/kg	NS	NS	NS	2.5	0.43 J	0.046 J	0.42	0.016 J	0.028 J	< 0.41	31
Phenol		mg/kg	1500	20203	37.952	< 1.9	< 1.7	< 0.39	< 0.39	< 0.39	< 0.38	< 0.41	< 7.5
Pyrene		mg/kg	890	5800	*435.120*	2	0.42 J	0.023 J	0.54	0.015 J	0.028 J	< 0.41	20
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	1.102	0.261	0.012	0.392	0.005	0.022	0.0000	**7.6**
PCBs													
Aroclor 1016		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Aluminum		mg/kg	30000	100000	NS	2500	6100	7700	4600	3500	5000	8900	5800
Antimony		mg/kg	12	100	*5.412*	1.2	2.4 J	< 0.96	< 1.0	< 0.94	< 1.1 J	< 1.0	1.5
Arsenic		mg/kg	9	20	*5.82*	1.8	5.0	3.9	3.2	1.9	4.1	4.9	3.6
Barium		mg/kg	1100	18000	*1684*	490	280 J	40	57	53	71	21	56
Beryllium		mg/kg	55	230	2.72016	0.15 J	0.42 J	0.52	0.32 J	0.20 J	0.30 J	0.58	0.32 J
Cadmium		mg/kg	25	200	*8.808*	1.9	0.24	0.027 J	0.19 J	0.11 J	0.096 J	< 0.20	0.13 J
Calcium		mg/kg	NS	NS	NS	26000	16000 J	9500	42000	14000	13000 J	7900	20000
Chromium (Total)		mg/kg	NS	NS	NS	15	15	13	9.6	10	13	15	13
Chromium III		mg/kg	44000	100000	1000000040	14	13	13	9.6	10	13	15	12
Chromium VI		mg/kg	87	650	*36.2*	0.79 J	1.3	< 0.94	< 4.8	< 4.7	< 4.5	< 0.98	0.33 J
Cobalt		mg/kg	600	2600	*27.06*	4.0 J	9.1	11	7.0	4.6 J	7.0	12	9.1
Copper		mg/kg	100	9000	702	6.5	15	17	12	6.1	12 J	14	12
Iron		mg/kg	30000	100000	NS	9200	12000	12000	11000	11000	12000	13000	13000
Lead		mg/kg	300	700	*2700*	81	63 J	17	18	3.9	6.8	2.7	80
Magnesium		mg/kg	NS	NS	NS	8400	5200 J	5400	13000	6100	4600	5400	4400
Manganese		mg/kg	3600	8100	*130.2*	*390*	*340*	*210*	*340*	*340*	*340*	*160*	*430*
Mercury		mg/kg	0.5	1.5	*3.291*	0.020 J	< 0.13	< 0.12	0.25	< 0.13	0.014 J	< 0.12	0.027 J
Nickel		mg/kg	560	2500	*176.2*	9.0	19	24	17	10	16	22	18
Potassium		mg/kg	NS	NS	NS	540	2500	4300	1100	360 J	1300	4900	1800
Selenium		mg/kg	160	1300	*2.64*	0.58	< 0.53	0.39 J	< 0.52	0.44 J	< 0.53	< 0.51	< 0.42
Silver		mg/kg	160	1300	7.86	< 0.42	< 0.53	< 0.48	< 0.52	< 0.47	< 0.53	< 0.51	< 0.42
Sodium		mg/kg	NS	NS	NS	170 J	140 J	110 J	170 J	560	90 J	82 J	91 J
Thallium		mg/kg	3	21	0.8892	< 0.83	< 1.1	< 0.96	< 1.0	< 0.94	< 1.1	< 1.0	< 0.84
Vanadium		mg/kg	121	121	*4.0004*	*12*	*11*	*4.8*	*13*	*15*	*14*	*6.2*	*15*
Zinc		mg/kg	8700	75000	*3004*	81	70	110	35	24	24	29	44
TPH													
Diesel Range Organics**		mg/kg	100	100	NS	18	78	9.2 J	27	13	9.4 J	< 20	**660**
Gasoline Range Organics**		mg/kg	100	100	NS	**430**	98	88	8.8 J	7.7 J	< 5.1	2.4 J	14
Other Analtyical													
Percent Moisture		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Asbestos		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening													
Oil-in-Soil		NA	NA	NA	NA	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
Petroleum Sheen Test		NA	NA	NA	NA	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative

Notes and Abbreviations on Page 37.

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1006 ASB-1006_65-67(20150622) 6/22/2015 65-67 Industrial Waste	ASB-1006 ASB-1006_78-80(20150622) 6/22/2015 78-80 Native Sand	ASB-1007 ASB-1007_22-25(20150623) 6/23/2015 22-25 Fill Soil	ASB-1007 ASB-1007_62-65(20150623) 6/23/2015 62-65 Industrial Waste	ASB-1007 ASB-1007_67-70(20150623) 6/23/2015 67-70 Industrial Waste	ASB-1007 ASB-1007_75-77(20150623) 6/23/2015 75-77 Native Sand	ASB-1008 ASB-1008_30-33(20150624) 6/24/2015 30-33 Fill Soil	ASB-1008 ASB-1008_52-54(20150624) 6/24/2015 52-54 Fill Soil
VOCs													
1,1,1,2-Tetrachloroethane		mg/kg	31	51	0.406	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,1,1-Trichloroethane		mg/kg	140	472	55.740	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,1,2,2-Tetrachloroethane		mg/kg	3.5	6.5	0.012	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,1,2-trichloro-1,2,2-trifluoroethane		mg/kg	3745	5430	16884	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,1,2-Trichloroethane		mg/kg	9	14	0.014	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,1-Dichloroethane		mg/kg	34	55	0.407	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,1-Dichloroethene		mg/kg	20	60	1.394	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,1-Dichloropropene		mg/kg	NS	NS	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,2,3-Trichlorobenzene		mg/kg	NS	NS	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,2,3-Trichloropropane		mg/kg	NS	NS	0.267	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,2,4-Trichlorobenzene		mg/kg	200	985	0.226	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,2,4-Trimethylbenzene		mg/kg	8	25	*2.745*	0.11 J	< 0.32	0.78 J	0.068 J	***1200***	< 0.31	1.3 J	< 0.27
1,2-Dibromo-3-chloropropane		mg/kg	NS	NS	NS	< 0.66	< 0.64	< 19	< 0.75	< 120	< 0.63	< 50	< 0.53
1,2-Dibromoethane		mg/kg	0.3	0.5	0.00001	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,2-Dichlorobenzene		mg/kg	26	75	*10.553*	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,2-Dichloroethane		mg/kg	4	6	0.004	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,2-Dichloropropane		mg/kg	4	6	0.024	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,3,5-Trimethylbenzene		mg/kg	3	10	*2.733*	< 0.33	< 0.32	< 9.6	0.024 J	***320***	< 0.31	< 25	< 0.27
1,3-Dichlorobenzene		mg/kg	26	200	10.431	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,3-Dichloropropane		mg/kg	NS	NS	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
1,4-Dichlorobenzene		mg/kg	30	50	0.174	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
2,2-Dichloropropane		mg/kg	NS	NS	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
2-Butanone (MEK)		mg/kg	5500	19000	8.754	< 1.3	< 1.3	< 38	< 1.5	< 240	< 1.3	< 100	< 1.1
2-Chlorotoluene		mg/kg	436	436	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
4-Chlorotoluene		mg/kg	NS	NS	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
4-Methyl-2-Pentanone		mg/kg	1700	9000	0.757	< 1.3	< 1.3	< 38	< 1.5	< 240	< 1.3	< 100	< 1.1
Acetone		mg/kg	340	1000	8.398	< 1.3	< 1.3	< 38	< 1.5	< 240	< 1.3	< 100	< 1.1
Allyl chloride		mg/kg	NS	NS	0.154	< 0.66	< 0.64	< 19	< 0.75	< 120	< 0.63	< 50	< 0.53
Benzene		mg/kg	6	10	*0.017*	*0.04 J*	< 0.32	< 9.6	< 0.38	***14 J***	< 0.31	< 25	< 0.27
Bromobenzene		mg/kg	NS	NS	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Bromochloromethane		mg/kg	NS	NS	0.277	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Bromodichloromethane		mg/kg	10	17	0.021	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Bromoform		mg/kg	370	650	0.134	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Bromomethane		mg/kg	0.7	2	0.036	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Carbon Disulfide		mg/kg	65	190	3.437	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Carbon Tetrachloride		mg/kg	0.3	0.9	0.008	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
CFC-11		mg/kg	67	195	35.006	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
CFC-12		mg/kg	16	50	36.658	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Chlorobenzene		mg/kg	11	32	1.180	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Chlorodibromomethane		mg/kg	12	20	0.034	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Chloroethane		mg/kg	1000	3000	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Chloroform		mg/kg	2.5	4	0.114	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Chloromethane		mg/kg	8	23	0.113	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
cis-1,2-Dichloroethene		mg/kg	8	22	*0.208*	< 0.33	< 0.32	< 9.6	< 0.38	***23 J***	< 0.31	< 25	< 0.27
cis-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Cyclohexane		mg/kg	NS	NS	NS	< 0.66	< 0.64	< 19	< 0.75	52 J	< 0.63	< 50	< 0.53
Cymene (p-Isopropyltoluene)		mg/kg	NS	NS	NS	< 0.33	< 0.32	< 9.6	< 0.38	36 J	< 0.31	< 25	< 0.27
Dibromomethane		mg/kg	260	1860	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Dichloromethane		mg/kg	97	158	*0.017*	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Dichloromonofluoromethane		mg/kg	NS	NS	NS	< 0.66	< 0.64	< 19	< 0.75	< 120	< 0.63	< 50	< 0.53
Diethyl ether		mg/kg	NS	NS	0.512	< 0.66	< 0.64	< 19	< 0.75	< 120	< 0.63	< 50	< 0.53
Ethylbenzene		mg/kg	200	200	*1.048*	0.058 J	< 0.32	< 9.6	0.089 J	***370***	< 0.31	< 25	< 0.27
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Isopropylbenzene		mg/kg	30	87	*9.463*	0.063 J	< 0.32	< 9.6	< 0.38	***68***	< 0.31	< 25	< 0.27
Methyl Acetate		mg/kg	NS	NS	NS	0.53 J	0.27 J	< 19	0.62 J	< 120	0.11 J	< 50	0.15 J
Methyl N-Butyl Ketone (2-Hexanone)		mg/kg	NS	NS	NS	< 1.3	< 1.3	< 38	< 1.5	< 240	< 1.3	< 100	< 1.1
Methylcyclohexane		mg/kg	NS	NS	NS	0.23 J	< 0.64	< 19	< 0.75	220	< 0.63	< 50	< 0.53
Methyl-tert-butylether		mg/kg	NS	NS	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Naphthalene		mg/kg	10	28	*4.468*	0.16 J	< 0.32	***180***	1.5	***520***	0.035 J	***390***	0.23 J
N-Butylbenzene		mg/kg	30	92	NS	0.069 J	< 0.32	< 9.6	< 0.38	**190**	< 0.31	< 25	< 0.27
N-Propylbenzene		mg/kg	30	93	NS	< 0.33	< 0.32	< 9.6	< 0.38	**73**	< 0.31	< 25	< 0.27
sec-Butylbenzene		mg/kg	25	70	NS	0.043 J	< 0.32	< 9.6	< 0.38	24 J	< 0.31	< 25	< 0.27
Styrene (Monomer)		mg/kg	210	600	2.023	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27

Table 4
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Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1006 ASB-1006_65-67(20150622) 6/22/2015 65-67 Industrial Waste	ASB-1006 ASB-1006_78-80(20150622) 6/22/2015 78-80 Native Sand	ASB-1007 ASB-1007_22-25(20150623) 6/23/2015 22-25 Fill Soil	ASB-1007 ASB-1007_62-65(20150623) 6/23/2015 62-65 Industrial Waste	ASB-1007 ASB-1007_67-70(20150623) 6/23/2015 67-70 Industrial Waste	ASB-1007 ASB-1007_75-77(20150623) 6/23/2015 75-77 Native Sand	ASB-1008 ASB-1008_30-33(20150624) 6/24/2015 30-33 Fill Soil	ASB-1008 ASB-1008_52-54(20150624) 6/24/2015 52-54 Fill Soil
tert-Butylbenzene		mg/kg	30	90	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Tetrachloroethene		mg/kg	72	131	0.042	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Tetrahydrofuran		mg/kg	NS	NS	0.244	< 1.3	< 1.3	< 38	< 1.5	< 240	< 1.3	< 100	< 1.1
Toluene		mg/kg	107	305	*2.459*	0.052 J	< 0.32	< 9.6	0.015 J	***230***	< 0.31	< 25	< 0.27
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
Trichloroethene		mg/kg	29	46	*0.002*	< 0.33	< 0.32	< 9.6	< 0.38	*11 J*	< 0.31	< 25	< 0.27
Vinyl chloride		mg/kg	0.8	2.2	0.001	< 0.33	< 0.32	< 9.6	< 0.38	< 60	< 0.31	< 25	< 0.27
m,p-Xylene		mg/kg	NS	NS	NS	0.35	< 0.32	< 9.6	0.33 J	**1300**	< 0.31	< 25	< 0.27
o-Xylene		mg/kg	NS	NS	NS	0.037 J	< 0.32	< 9.6	0.15 J	**600**	< 0.31	< 25	< 0.27
Total Xylenes*		mg/kg	45	130	*5.415*	0.387 J	ND	ND	0.48 J	*1900*	ND	ND	ND
SVOCs													
1,1-Biphenyl		mg/kg	NS	NS	62.161	0.072 J	< 0.4	18 J	0.08 J	8.9 J	< 0.37	25 J	0.074 J
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
2,4-Dichlorophenol		mg/kg	48	230	0.153	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
2,4-Dimethylphenol		mg/kg	390	1925	2.167	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	< 7.9	< 2	< 360	< 7.6	< 1200	< 1.8	< 1700	< 7.5
2,4-Dinitrotoluene		mg/kg	50	355	0.013	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
2,6-Dinitrotoluene		mg/kg	25	175	0.013	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
2-Chloronaphthalene		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
2-Chlorophenol		mg/kg	NS	NS	0.520	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	< 7.9	< 2	< 360	< 7.6	< 1200	< 1.8	< 1700	< 7.5
2-Methylnaphthalene		mg/kg	100	369	NS	0.41 J	0.0059 J	49 J	0.29 J	**190 J**	< 0.37	80 J	0.26 J
2-Methylphenol		mg/kg	75	352	0.428	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
2-Nitroaniline		mg/kg	NS	NS	NS	< 7.9	< 2	< 360	< 7.6	< 1200	< 1.8	< 1700	< 7.5
2-Nitrophenol		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	< 7.9	< 2	< 360	< 7.6	< 1200	< 1.8	< 1700	< 7.5
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	< 2	< 0.49	< 89	< 1.9	< 300	< 0.44	< 430	< 1.9
3-Nitroaniline		mg/kg	NS	NS	NS	< 7.9	< 2	< 360	< 7.6	< 1200	< 1.8	< 1700	< 7.5
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
4-Nitroaniline		mg/kg	NS	NS	NS	< 7.9	< 2	< 360	< 7.6	< 1200	< 1.8	< 1700	< 7.5
4-Nitrophenol		mg/kg	NS	NS	NS	< 7.9	< 2	< 360	< 7.6	< 1200	< 1.8	< 1700	< 7.5
Acenaphthene		mg/kg	1200	5260	*81.242*	0.44 J	< 0.4	*87*	0.45 J	7.7 J	< 0.37	*120 J*	0.44 J
Acenaphthylene		mg/kg	NS	NS	NS	0.35 J	0.0078 J	7.3 J	0.037 J	< 250	< 0.37	7.1 J	0.056 J
Acetophenone		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Anthracene		mg/kg	7880	45400	1312.816	0.82 J	0.014 J	180	1 J	4.9 J	< 0.37	220 J	0.96 J
Atrazine		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Benzaldehyde		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Benzo(a)anthracene		mg/kg	NS	NS	NS	1.9	0.049 J	190	1.2 J	5.6 J	0.0060 J	250 J	1.3 J
Benzo(a)pyrene		mg/kg	2	3	*1.410*	*1.6*	0.056 J	***140***	0.94 J	***8.7 J***	0.011 J	***200 J***	1.1 J
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	2.1	0.07 J	190	1.2 J	11 J	0.011 J	240 J	1.3 J
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	0.63 J	0.04 J	46 J	0.28 J	7.1 J	< 0.37	110 J	0.43 J
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	0.75 J	0.024 J	63 J	0.63 J	< 250	< 0.37	99 J	0.61 J
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	0.22 J	< 0.4	< 73	< 1.6	*33 J*	0.035 J	< 350	< 1.6
Butyl benzyl phthalate		mg/kg	580	3700	28.820	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Caprolactam		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Carbazole		mg/kg	700	1310	NS	0.2 J	< 0.4	70 J	0.44 J	< 250	< 0.37	100 J	0.39 J
Chrysene		mg/kg	NS	NS	NS	1.9	0.051 J	170	1.1 J	8.8 J	0.0060 J	240 J	1.2 J
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	0.23 J	< 0.4	14 J	0.12 J	< 250	< 0.37	34 J	0.12 J
Dibenzofuran		mg/kg	104	810	NS	0.18 J	< 0.4	97	0.51 J	5.4 J	< 0.37	**130 J**	0.5 J
Diethyl phthalate		mg/kg	NS	NS	37.177	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Dimethyl phthalate		mg/kg	NS	NS	228.454	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	< 1.6	< 0.4	< 73	< 1.6	< 250	0.017 J	< 350	< 1.6
Di-n-octyl phthalate		mg/kg	520	3700	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Fluoranthene		mg/kg	1080	6800	666	3.6	0.092 J	430	3.3	18 J	0.013 J	610	3.2
Fluorene		mg/kg	850	4120	*110.524*	0.41 J	< 0.4	*150*	0.84 J	7.5 J	< 0.37	*190 J*	0.82 J
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Hexachlorobenzene		mg/kg	5	9	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6

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Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1006 ASB-1006_65-67(20150622) 6/22/2015 65-67 Industrial Waste	ASB-1006 ASB-1006_78-80(20150622) 6/22/2015 78-80 Native Sand	ASB-1007 ASB-1007_22-25(20150623) 6/23/2015 22-25 Fill Soil	ASB-1007 ASB-1007_62-65(20150623) 6/23/2015 62-65 Industrial Waste	ASB-1007 ASB-1007_67-70(20150623) 6/23/2015 67-70 Industrial Waste	ASB-1007 ASB-1007_75-77(20150623) 6/23/2015 75-77 Native Sand	ASB-1008 ASB-1008_30-33(20150624) 6/24/2015 30-33 Fill Soil	ASB-1008 ASB-1008_52-54(20150624) 6/24/2015 52-54 Fill Soil
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	< 7.9	< 2	< 360	< 7.6	< 1200	< 1.8	< 1700	< 7.5
Hexachloroethane		mg/kg	NS	NS	0.010	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	0.58 J	0.04 J	47 J	0.27 J	< 250	< 0.37	100 J	0.42 J
Isophorone		mg/kg	NS	NS	0.461	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Naphthalene		mg/kg	10	28	*4.468*	0.56 J	0.0075 J	***150***	0.61 J	***830***	0.0049 J	***270 J***	0.5 J
Nitrobenzene		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
p-Chloroaniline		mg/kg	NS	NS	NS	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Pentachlorophenol		mg/kg	80	120	*0.023*	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Phenanthrene		mg/kg	NS	NS	NS	2.5	0.05 J	500	3.9	29 J	0.013 J	750	3.3
Phenol		mg/kg	1500	20203	37.952	< 1.6	< 0.4	< 73	< 1.6	< 250	< 0.37	< 350	< 1.6
Pyrene		mg/kg	890	5800	*435.120*	3.3	0.095 J	310	2.6	14 J	0.0095 J	*500*	2.5
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	**2.3**	0.075	**198.6**	1.35	**10.4**	0.0128	**290.4**	1.542
PCBs													
Aroclor 1016		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Aluminum		mg/kg	30000	100000	NS	2500	2600	4500	5700	2000	1400	4100	4400
Antimony		mg/kg	12	100	*5.412*	< 1.1	< 1.0	< 0.95	< 0.81	***510***	< 0.89	1.8	< 1.0
Arsenic		mg/kg	9	20	*5.82*	3.7	1.3	2.2	5.2	***18***	1.0	3.6	4.3
Barium		mg/kg	1100	18000	*1684*	72	34	43	45	***6900***	14 J	51	48
Beryllium		mg/kg	55	230	2.72016	0.14 J	0.11 J	0.21 J	0.43	0.058 J	0.075 J	0.22 J	0.25 J
Cadmium		mg/kg	25	200	*8.808*	1.4	0.040 J	0.15 J	0.12 J	***150***	< 0.18	0.16 J	0.10 J
Calcium		mg/kg	NS	NS	NS	11000	5400	20000	17000	14000	2500	33000	28000
Chromium (Total)		mg/kg	NS	NS	NS	12	8.5	9.1	15	430	4.8	11	14
Chromium III		mg/kg	44000	100000	1000000040	12	8.5	9.1	15	430	4.1	11	14
Chromium VI		mg/kg	87	650	*36.2*	< 5.0	< 0.97	< 0.89	< 0.94	< 9.1	0.75 J	< 0.86	< 0.94
Cobalt		mg/kg	600	2600	*27.06*	4.1 J	3.2 J	3.6 J	10	*35*	1.8 J	3.6 J	6.9
Copper		mg/kg	100	9000	702	14	4.5	9.0	14	**230**	1.8 J	11	14
Iron		mg/kg	30000	100000	NS	8000	7400	7800	21000	18000	4900	7500	14000
Lead		mg/kg	300	700	*2700*	48	6.7	33	14	***6500***	1.5	120	10
Magnesium		mg/kg	NS	NS	NS	3500	3300	4400	6000	2700	1600	6800	5400
Manganese		mg/kg	3600	8100	*130.2*	*270*	77	*250*	*310*	*200*	61	*330*	*420*
Mercury		mg/kg	0.5	1.5	*3.291*	0.25	0.087 J	< 0.13	0.021 J	0.36	< 0.11	0.039 J	0.022 J
Nickel		mg/kg	560	2500	*176.2*	10	12	10	20	32	4.1	9.6	17
Potassium		mg/kg	NS	NS	NS	360 J	340 J	500	2400	370 J	170 J	460	790
Selenium		mg/kg	160	1300	*2.64*	< 0.56	< 0.51	0.39 J	0.28 J	*34*	< 0.45	< 0.44	< 0.52
Silver		mg/kg	160	1300	7.86	1.5	< 0.51	0.081 J	< 0.41	0.68	< 0.45	< 0.44	0.51 J
Sodium		mg/kg	NS	NS	NS	99 J	90 J	220 J	100 J	1000	75 J	280 J	180 J
Thallium		mg/kg	3	21	0.8892	< 1.1	< 1.0	< 0.95	< 0.81	< 1.1	< 0.89	< 0.89	< 1.0
Vanadium		mg/kg	121	121	*4.0004*	*13*	*13*	*14*	*10*	*5.6*	*8.5*	*13*	*15*
Zinc		mg/kg	8700	75000	*3004*	49	21	33	28	*5300*	7.8	35	28
TPH													
Diesel Range Organics**		mg/kg	100	100	NS	**190**	16	**4200**	39	**37000**	**4100**	**13000**	7.5 J
Gasoline Range Organics**		mg/kg	100	100	NS	18	< 6.9	44 J	1.3 J	**8200**	2.8 J	**200 J**	< 12
Other Analtyical													
Percent Moisture		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Asbestos		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening													Negative
Oil-in-Soil		NA	NA	NA	NA	NA	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
Petroleum Sheen Test		NA	NA	NA	NA	Negative	Negative	Negative	Negative	Negative	Negative	Negative	

Notes and Abbreviations on Page 37.

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1008 ASB-1008_70-72(20150624) 6/24/2015 70-72 Native Sand	ASB-1009 ASB-1009_42-44(20150624) 6/24/2015 42-44 Fill Soil	ASB-1009 ASB-1009_55-57(20150624) 6/24/2015 55-57 Fill Soil	ASB-1009 ASB-1009_62-65(20150624) 6/24/2015 62-65 Fill Soil	ASB-1009 ASB-1009_70-72(20150625) 6/25/2015 70-72 Native Sand	ASB-1010 ASB-1010_38-40(20150625) 6/25/2015 38-40 Fill Soil	ASB-1010 ASB-1010_55-57(20150625) 6/25/2015 55-57 Fill Soil	ASB-1010 ASB-1010_70-73(20150625) 6/25/2015 70-73 Native Sand
VOCs													
1,1,1,2-Tetrachloroethane		mg/kg	31	51	0.406	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,1,1-Trichloroethane		mg/kg	140	472	55.740	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,1,2,2-Tetrachloroethane		mg/kg	3.5	6.5	0.012	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,1,2-trichloro-1,2,2-trifluoroethane		mg/kg	3745	5430	16884	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,1,2-Trichloroethane		mg/kg	9	14	0.014	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,1-Dichloroethane		mg/kg	34	55	0.407	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,1-Dichloroethene		mg/kg	20	60	1.394	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,1-Dichloropropene		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,2,3-Trichlorobenzene		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,2,3-Trichloropropane		mg/kg	NS	NS	0.267	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,2,4-Trichlorobenzene		mg/kg	200	985	0.226	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,2,4-Trimethylbenzene		mg/kg	8	25	*2.745*	< 0.37	< 0.31	0.032 J	0.039 J	0.025 J	0.041 J	< 0.27	0.033 J
1,2-Dibromo-3-chloropropane		mg/kg	NS	NS	NS	< 0.74	< 0.62	< 0.53	< 0.54	< 0.64	< 0.56	< 0.55	< 0.52
1,2-Dibromoethane		mg/kg	0.3	0.5	0.00001	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,2-Dichlorobenzene		mg/kg	26	75	*10.553*	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,2-Dichloroethane		mg/kg	4	6	0.004	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,2-Dichloropropane		mg/kg	4	6	0.024	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,3,5-Trimethylbenzene		mg/kg	3	10	*2.733*	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,3-Dichlorobenzene		mg/kg	26	200	10.431	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,3-Dichloropropane		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
1,4-Dichlorobenzene		mg/kg	30	50	0.174	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
2,2-Dichloropropane		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
2-Butanone (MEK)		mg/kg	5500	19000	8.754	< 1.5	< 1.2	< 1.1	< 1.1	< 1.3	< 1.1	< 1.1	< 1
2-Chlorotoluene		mg/kg	436	436	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
4-Chlorotoluene		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
4-Methyl-2-Pentanone		mg/kg	1700	9000	0.757	< 1.5	< 1.2	< 1.1	< 1.1	< 1.3	< 1.1	< 1.1	< 1
Acetone		mg/kg	340	1000	8.398	< 1.5	< 1.2	< 1.1	< 1.1	< 1.3	< 1.1	< 1.1	< 1
Allyl chloride		mg/kg	NS	NS	0.154	< 0.74	< 0.62	< 0.53	< 0.54	< 0.64	< 0.56	< 0.55	< 0.52
Benzene		mg/kg	6	10	*0.017*	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	0.014 J
Bromobenzene		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Bromochloromethane		mg/kg	NS	NS	0.277	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Bromodichloromethane		mg/kg	10	17	0.021	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Bromoform		mg/kg	370	650	0.134	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Bromomethane		mg/kg	0.7	2	0.036	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Carbon Disulfide		mg/kg	65	190	3.437	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Carbon Tetrachloride		mg/kg	0.3	0.9	0.008	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
CFC-11		mg/kg	67	195	35.006	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
CFC-12		mg/kg	16	50	36.658	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Chlorobenzene		mg/kg	11	32	1.180	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Chlorodibromomethane		mg/kg	12	20	0.034	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Chloroethane		mg/kg	1000	3000	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Chloroform		mg/kg	2.5	4	0.114	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Chloromethane		mg/kg	8	23	0.113	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
cis-1,2-Dichloroethene		mg/kg	8	22	*0.208*	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
cis-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Cyclohexane		mg/kg	NS	NS	NS	< 0.74	< 0.62	< 0.53	< 0.54	< 0.64	< 0.56	< 0.55	< 0.52
Cymene (p-Isopropyltoluene)		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Dibromomethane		mg/kg	260	1860	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Dichloromethane		mg/kg	97	158	*0.017*	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Dichloromonofluoromethane		mg/kg	NS	NS	NS	< 0.74	< 0.62	< 0.53	< 0.54	< 0.64	< 0.56	< 0.55	< 0.52
Diethyl ether		mg/kg	NS	NS	0.512	< 0.74	< 0.62	< 0.53	< 0.54	< 0.64	< 0.56	< 0.55	< 0.52
Ethylbenzene		mg/kg	200	200	*1.048*	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Isopropylbenzene		mg/kg	30	87	*9.463*	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Methyl Acetate		mg/kg	NS	NS	NS	0.34 J	0.11 J	1.3	1.3	0.097 J	0.091 J	< 0.55	0.098 J
Methyl N-Butyl Ketone (2-Hexanone)		mg/kg	NS	NS	NS	< 1.5	< 1.2	< 1.1	< 1.1	< 1.3	< 1.1	< 1.1	< 1
Methylcyclohexane		mg/kg	NS	NS	NS	< 0.74	< 0.62	< 0.53	< 0.54	< 0.64	< 0.56	< 0.55	< 0.52
Methyl-tert-butylether		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Naphthalene		mg/kg	10	28	*4.468*	< 0.37	< 0.31	0.056 J	< 0.27	< 0.32	0.091 J	< 0.27	0.34
N-Butylbenzene		mg/kg	30	92	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	0.041 J	< 0.27	< 0.26
N-Propylbenzene		mg/kg	30	93	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
sec-Butylbenzene		mg/kg	25	70	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Styrene (Monomer)		mg/kg	210	600	2.023	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1008 ASB-1008_70-72(20150624) 6/24/2015 70-72 Native Sand	ASB-1009 ASB-1009_42-44(20150624) 6/24/2015 42-44 Fill Soil	ASB-1009 ASB-1009_55-57(20150624) 6/24/2015 55-57 Fill Soil	ASB-1009 ASB-1009_62-65(20150624) 6/24/2015 62-65 Fill Soil	ASB-1009 ASB-1009_70-72(20150625) 6/25/2015 70-72 Native Sand	ASB-1010 ASB-1010_38-40(20150625) 6/25/2015 38-40 Fill Soil	ASB-1010 ASB-1010_55-57(20150625) 6/25/2015 55-57 Fill Soil	ASB-1010 ASB-1010_70-73(20150625) 6/25/2015 70-73 Native Sand
tert-Butylbenzene		mg/kg	30	90	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Tetrachloroethene		mg/kg	72	131	0.042	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Tetrahydrofuran		mg/kg	NS	NS	0.244	< 1.5	< 1.2	< 1.1	< 1.1	< 1.3	< 1.1	< 1.1	< 1
Toluene		mg/kg	107	305	*2.459*	0.018 J	< 0.31	0.017 J	< 0.27	0.026 J	< 0.28	< 0.27	0.06 J
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Trichloroethene		mg/kg	29	46	*0.002*	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
Vinyl chloride		mg/kg	0.8	2.2	0.001	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	< 0.26
m,p-Xylene		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	0.028 J	< 0.32	< 0.28	< 0.27	0.031 J
o-Xylene		mg/kg	NS	NS	NS	< 0.37	< 0.31	< 0.26	< 0.27	< 0.32	< 0.28	< 0.27	0.018 J
Total Xylenes*		mg/kg	45	130	*5.415*	ND	ND	ND	0.028 J	ND	ND	ND	0.049 J
SVOCs													
1,1-Biphenyl		mg/kg	NS	NS	62.161	< 0.39	< 2.8	0.02 J	< 0.36	< 0.38	0.021 J	< 0.39	0.084 J
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
2,4-Dichlorophenol		mg/kg	48	230	0.153	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
2,4-Dimethylphenol		mg/kg	390	1925	2.167	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	< 1.9	< 13	< 1.9	< 1.7	< 1.8	< 1.8	< 1.9	< 7.6
2,4-Dinitrotoluene		mg/kg	50	355	0.013	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
2,6-Dinitrotoluene		mg/kg	25	175	0.013	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
2-Chloronaphthalene		mg/kg	NS	NS	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
2-Chlorophenol		mg/kg	NS	NS	0.520	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	< 1.9	< 13	< 1.9	< 1.7	< 1.8	< 1.8	< 1.9	< 7.6
2-Methylnaphthalene		mg/kg	100	369	NS	< 0.39	0.16 J	0.061 J	0.033 J	< 0.38	0.34 J	< 0.39	0.34 J
2-Methylphenol		mg/kg	75	352	0.428	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
2-Nitroaniline		mg/kg	NS	NS	NS	< 1.9	< 13	< 1.9	< 1.7	< 1.8	< 1.8	< 1.9	< 7.6
2-Nitrophenol		mg/kg	NS	NS	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	< 1.9	< 13	< 1.9	< 1.7	< 1.8	< 1.8	< 1.9	< 7.6
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	< 0.47	< 3.4	0.041 J	< 0.44	< 0.46	< 0.44	< 0.47	< 1.9
3-Nitroaniline		mg/kg	NS	NS	NS	< 1.9	< 13	< 1.9	< 1.7	< 1.8	< 1.8	< 1.9	< 7.6
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
4-Nitroaniline		mg/kg	NS	NS	NS	< 1.9	< 13	< 1.9	< 1.7	< 1.8	< 1.8	< 1.9	< 7.6
4-Nitrophenol		mg/kg	NS	NS	NS	< 1.9	< 13	< 1.9	< 1.7	< 1.8	< 1.8	< 1.9	< 7.6
Acenaphthene		mg/kg	1200	5260	*81.242*	< 0.39	1.6 J	0.2 J	0.0035 J	0.0076 J	0.033 J	0.0026 J	0.55 J
Acenaphthylene		mg/kg	NS	NS	NS	< 0.39	< 2.8	0.029 J	0.0075 J	0.023 J	0.014 J	0.0069 J	0.28 J
Acetophenone		mg/kg	NS	NS	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Anthracene		mg/kg	7880	45400	1312.816	0.0052 J	2 J	0.26 J	0.0093 J	0.025 J	0.039 J	0.0079 J	1 J
Atrazine		mg/kg	NS	NS	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Benzaldehyde		mg/kg	NS	NS	NS	0.037 J	< 2.8	< 0.4	0.028 J	< 0.38	0.031 J	< 0.39	< 1.6
Benzo(a)anthracene		mg/kg	NS	NS	NS	0.016 J	3	0.46	0.027 J	0.1 J	0.08 J	0.02 J	2.4
Benzo(a)pyrene		mg/kg	2	3	*1.410*	0.014 J	***2.7 J***	0.35 J	0.035 J	0.096 J	0.082 J	0.025 J	***2.1***
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	0.019 J	3.6	0.47	0.048 J	0.092 J	0.13 J	0.033 J	2.5
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	0.011 J	0.9 J	0.15 J	0.034 J	0.066 J	0.037 J	0.062 J	1.4 J
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	0.0085 J	1.5 J	0.22 J	0.013 J	0.04 J	0.056 J	0.013 J	0.94 J
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	0.04 J	0.18 J	< 0.4	< 0.36	0.57	0.7	1.2	< 1.6
Butyl benzyl phthalate		mg/kg	580	3700	28.820	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Caprolactam		mg/kg	NS	NS	NS	0.055 J	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Carbazole		mg/kg	700	1310	NS	< 0.39	1.2 J	0.092 J	< 0.36	< 0.38	< 0.36	< 0.39	0.48 J
Chrysene		mg/kg	NS	NS	NS	0.016 J	3.1	0.48	0.039 J	0.1 J	0.13 J	0.034 J	2.4
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	< 0.39	0.28 J	0.051 J	< 0.36	0.015 J	< 0.36	< 0.39	0.34 J
Dibenzofuran		mg/kg	104	810	NS	< 0.39	0.57 J	0.13 J	0.0029 J	< 0.38	0.056 J	< 0.39	0.33 J
Diethyl phthalate		mg/kg	NS	NS	37.177	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Dimethyl phthalate		mg/kg	NS	NS	228.454	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	0.026 J	< 0.39	< 1.6
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Di-n-octyl phthalate		mg/kg	520	3700	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Fluoranthene		mg/kg	1080	6800	666	0.029 J	8.5	1.1	0.051 J	0.15 J	0.17 J	0.031 J	4.7
Fluorene		mg/kg	850	4120	*110.524*	< 0.39	1.2 J	0.19 J	0.0039 J	0.0056 J	0.031 J	< 0.39	0.59 J
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Hexachlorobenzene		mg/kg	5	9	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	ASB-1008 ASB-1008_70-72(20150624) 6/24/2015 70-72 Native Sand	ASB-1009 ASB-1009_42-44(20150624) 6/24/2015 42-44 Fill Soil	ASB-1009 ASB-1009_55-57(20150624) 6/24/2015 55-57 Fill Soil	ASB-1009 ASB-1009_62-65(20150624) 6/24/2015 62-65 Fill Soil	ASB-1009 ASB-1009_70-72(20150625) 6/25/2015 70-72 Native Sand	ASB-1010 ASB-1010_38-40(20150625) 6/25/2015 38-40 Fill Soil	ASB-1010 ASB-1010_55-57(20150625) 6/25/2015 55-57 Fill Soil	ASB-1010 ASB-1010_70-73(20150625) 6/25/2015 70-73 Native Sand
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	< 1.9	< 13	< 1.9	< 1.7	< 1.8	< 1.8	< 1.9	< 7.6
Hexachloroethane		mg/kg	NS	NS	0.010	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	0.0080 J	0.9 J	0.15 J	0.024 J	0.049 J	0.026 J	0.014 J	1.1 J
Isophorone		mg/kg	NS	NS	0.461	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Naphthalene		mg/kg	10	28	*4.468*	0.0066 J	0.13 J	0.03 J	0.022 J	< 0.38	0.13 J	< 0.39	0.58 J
Nitrobenzene		mg/kg	NS	NS	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
p-Chloroaniline		mg/kg	NS	NS	NS	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Pentachlorophenol		mg/kg	80	120	*0.023*	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Phenanthrene		mg/kg	NS	NS	NS	0.016 J	8.1	0.94	0.027 J	0.075 J	0.19 J	0.022 J	3.9
Phenol		mg/kg	1500	20203	37.952	< 0.39	< 2.8	< 0.4	< 0.36	< 0.38	< 0.36	< 0.39	< 1.6
Pyrene		mg/kg	890	5800	*435.120*	0.025 J	6.8	0.86	0.055 J	0.22 J	0.16 J	0.034 J	4.4
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	0.019	**3.788**	0.513	0.047	0.134	0.113	0.033	**3.01**
PCBs													
Aroclor 1016		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Aluminum		mg/kg	30000	100000	NS	3400	6100	6900	1000	2300	4200	8400	1900
Antimony		mg/kg	12	100	*5.412*	< 0.94	1.1	< 0.96	< 0.85	< 0.77	0.55 J	< 1.1	< 1.1
Arsenic		mg/kg	9	20	*5.82*	1.8	4.8	4.4	0.63 J	2.0	2.1	3.6	1.8
Barium		mg/kg	1100	18000	*1684*	55	50	51	13 J	34	35	28	26
Beryllium		mg/kg	55	230	2.72016	0.15 J	0.44 J	0.41 J	0.085 J	0.14 J	0.20 J	0.56	0.12 J
Cadmium		mg/kg	25	200	*8.808*	0.061 J	0.27	0.15 J	0.10 J	0.070 J	0.12 J	0.048 J	1.1
Calcium		mg/kg	NS	NS	NS	9500	34000	24000	13000	33000	47000	22000	7200
Chromium (Total)		mg/kg	NS	NS	NS	10	13	22	2.3	9.1	8.9	17	7.2
Chromium III		mg/kg	44000	100000	1000000040	10	9.7	9.0	0.90 J	3.6 J	3.7 J	11	2.8 J
Chromium VI		mg/kg	87	650	*36.2*	< 0.95	13	14	3.6	4.8	8.5	10	6.8
Cobalt		mg/kg	600	2600	*27.06*	4.2 J	13	22	2.3	9.1	8.4	17	7.2
Copper		mg/kg	100	9000	702	4.8	< 1.0	< 2.0	< 0.86	< 0.90	0.50 J	< 1.9	< 0.94
Iron		mg/kg	30000	100000	NS	9900	12000	15000	4000	9800	8100	15000	6000
Lead		mg/kg	300	700	*2700*	3.8	110	14	13	3.1	11	4.6	24
Magnesium		mg/kg	NS	NS	NS	4300	9700	10000	1200	13000	11000	5300	2300
Manganese		mg/kg	3600	8100	*130.2*	*250*	*380*	*320*	110	*390*	*260*	*280*	130
Mercury		mg/kg	0.5	1.5	*3.291*	0.023 J	0.018 J	< 0.13	< 0.13	< 0.10	< 0.12	< 0.10	0.079 J
Nickel		mg/kg	560	2500	*176.2*	9.1	23	21	2.7 J	9.8	9.4	20	7.1
Potassium		mg/kg	NS	NS	NS	380 J	2300	1600	280 J	260 J	750	4300	570
Selenium		mg/kg	160	1300	*2.64*	< 0.47	< 0.45	0.34 J	< 0.43	< 0.39	< 0.50	< 0.55	< 0.54
Silver		mg/kg	160	1300	7.86	< 0.47	< 0.45	< 0.48	< 0.43	< 0.39	< 0.50	< 0.55	0.18 J
Sodium		mg/kg	NS	NS	NS	100 J	120 J	170 J	61 J	93 J	300 J	380 J	140 J
Thallium		mg/kg	3	21	0.8892	< 0.94	< 0.90	< 0.96	0.11 J	< 0.77	< 1.0	< 1.1	< 1.1
Vanadium		mg/kg	121	121	*4.0004*	*15*	*11*	*18*	2.9 J	*10*	*16*	*9.0*	*8.4*
Zinc		mg/kg	8700	75000	*3004*	20	36	36	10	15	21	21	32
TPH													
Diesel Range Organics**		mg/kg	100	100	NS	3.9 J	8.0 J	13 J	60 J	11 J	**150 J**	25 J	44 J
Gasoline Range Organics**		mg/kg	100	100	NS	2.6 J	< 13	5.6 J	< 9.9	< 11	7.9 J	< 11	2.3 J
Other Analtyical													
Percent Moisture		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Asbestos		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening													
Oil-in-Soil		NA	NA	NA	NA	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
Petroleum Sheen Test		NA	NA	NA	NA	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative

Notes and Abbreviations on Page 37.

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	HA-01 HA-01_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-02 HA-02_0-0.5(20150624) 6/24/2015 0-0.5 Fill Soil	HA-03 HA-03_0-0.5(20150624) 6/24/2015 0-0.5 Fill Soil	HA-04 HA-04_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-05 HA-05_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-06 HA-06_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-07 HA-07_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-08 HA-08_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-09 HA-09_0-0.5(20150624) 6/24/2015 0-0.5 Fill Soil	HA-10 HA-10_0-1(20150624) 6/24/2015 0-1 Fill Soil
VOCs															
1,1,1,2-Tetrachloroethane		mg/kg	31	51	0.406	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,1,1-Trichloroethane		mg/kg	140	472	55.740	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,1,2,2-Tetrachloroethane		mg/kg	3.5	6.5	0.012	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,1,2-trichloro-1,2,2-trifluoroethane		mg/kg	3745	5430	16884	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,1,2-Trichloroethane		mg/kg	9	14	0.014	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,1-Dichloroethane		mg/kg	34	55	0.407	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,1-Dichloroethene		mg/kg	20	60	1.394	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,1-Dichloropropene		mg/kg	NS	NS	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,2,3-Trichlorobenzene		mg/kg	NS	NS	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,2,3-Trichloropropane		mg/kg	NS	NS	0.267	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,2,4-Trichlorobenzene		mg/kg	200	985	0.226	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,2,4-Trimethylbenzene		mg/kg	8	25	*2.745*	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,2-Dibromo-3-chloropropane		mg/kg	NS	NS	NS	< 0.65	< 0.7	< 0.59	< 0.61	< 0.56	< 0.6	< 0.68	< 0.59	< 0.63	< 0.65
1,2-Dibromoethane		mg/kg	0.3	0.5	0.00001	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,2-Dichlorobenzene		mg/kg	26	75	*10.553*	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,2-Dichloroethane		mg/kg	4	6	0.004	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,2-Dichloropropane		mg/kg	4	6	0.024	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,3,5-Trimethylbenzene		mg/kg	3	10	*2.733*	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,3-Dichlorobenzene		mg/kg	26	200	10.431	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,3-Dichloropropane		mg/kg	NS	NS	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
1,4-Dichlorobenzene		mg/kg	30	50	0.174	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
2,2-Dichloropropane		mg/kg	NS	NS	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
2-Butanone (MEK)		mg/kg	5500	19000	8.754	< 1.3	< 1.4	< 1.2	< 1.2	< 1.1	< 1.2	< 1.4	< 1.2	< 1.3	< 1.3
2-Chlorotoluene		mg/kg	436	436	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
4-Chlorotoluene		mg/kg	NS	NS	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
4-Methyl-2-Pentanone		mg/kg	1700	9000	0.757	< 1.3	< 1.4	< 1.2	< 1.2	< 1.1	< 1.2	< 1.4	< 1.2	< 1.3	< 1.3
Acetone		mg/kg	340	1000	8.398	< 1.3	< 1.4	< 1.2	< 1.2	< 1.1	< 1.2	< 1.4	0.39 J	0.36 J	< 1.3
Allyl chloride		mg/kg	NS	NS	0.154	< 0.65	< 0.7	< 0.59	< 0.61	< 0.56	< 0.6	< 0.68	< 0.59	< 0.63	< 0.65
Benzene		mg/kg	6	10	*0.017*	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Bromobenzene		mg/kg	NS	NS	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Bromochloromethane		mg/kg	NS	NS	0.277	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Bromodichloromethane		mg/kg	10	17	0.021	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Bromoform		mg/kg	370	650	0.134	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Bromomethane		mg/kg	0.7	2	0.036	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Carbon Disulfide		mg/kg	65	190	3.437	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Carbon Tetrachloride		mg/kg	0.3	0.9	0.008	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
CFC-11		mg/kg	67	195	35.006	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
CFC-12		mg/kg	16	50	36.658	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Chlorobenzene		mg/kg	11	32	1.180	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Chlorodibromomethane		mg/kg	12	20	0.034	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Chloroethane		mg/kg	1000	3000	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Chloroform		mg/kg	2.5	4	0.114	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Chloromethane		mg/kg	8	23	0.113	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
cis-1,2-Dichloroethene		mg/kg	8	22	*0.208*	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
cis-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Cyclohexane		mg/kg	NS	NS	NS	< 0.65	< 0.7	< 0.59	< 0.61	< 0.56	< 0.6	< 0.68	< 0.59	< 0.63	< 0.65
Cymene (p-Isopropyltoluene)		mg/kg	NS	NS	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Dibromomethane		mg/kg	260	1860	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Dichloromethane		mg/kg	97	158	*0.017*	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Dichloromonofluoromethane		mg/kg	NS	NS	NS	< 0.65	< 0.7	< 0.59	< 0.61	< 0.56	< 0.6	< 0.68	< 0.59	< 0.63	< 0.65
Diethyl ether		mg/kg	NS	NS	0.512	< 0.65	< 0.7	< 0.59	< 0.61	< 0.56	< 0.6	< 0.68	< 0.59	< 0.63	< 0.65
Ethylbenzene		mg/kg	200	200	*1.048*	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Isopropylbenzene		mg/kg	30	87	*9.463*	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Methyl Acetate		mg/kg	NS	NS	NS	0.17 J	0.27 J	0.13 J	0.17 J	0.093 J	0.17 J	0.18 J	0.21 J	0.2 J	0.63 J
Methyl N-Butyl Ketone (2-Hexanone)		mg/kg	NS	NS	NS	< 1.3	< 1.4	< 1.2	< 1.2	< 1.1	< 1.2	< 1.4	< 1.2	< 1.3	< 1.3
Methylcyclohexane		mg/kg	NS	NS	NS	< 0.65	< 0.7	< 0.59	< 0.61	< 0.56	< 0.6	< 0.68	< 0.59	< 0.63	< 0.65
Methyl-tert-butylether		mg/kg	NS	NS	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Naphthalene		mg/kg	10	28	*4.468*	< 0.33	0.041 J	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
N-Butylbenzene		mg/kg	30	92	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
N-Propylbenzene		mg/kg	30	93	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
sec-Butylbenzene		mg/kg	25	70	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Styrene (Monomer)		mg/kg	210	600	2.023	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	HA-01 HA-01_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-02 HA-02_0-0.5(20150624) 6/24/2015 0-0.5 Fill Soil	HA-03 HA-03_0-0.5(20150624) 6/24/2015 0-0.5 Fill Soil	HA-04 HA-04_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-05 HA-05_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-06 HA-06_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-07 HA-07_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-08 HA-08_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-09 HA-09_0-0.5(20150624) 6/24/2015 0-0.5 Fill Soil	HA-10 HA-10_0-1(20150624) 6/24/2015 0-1 Fill Soil
tert-Butylbenzene		mg/kg	30	90	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Tetrachloroethene		mg/kg	72	131	0.042	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Tetrahydrofuran		mg/kg	NS	NS	0.244	< 1.3	< 1.4	< 1.2	< 1.2	< 1.1	< 1.2	< 1.4	< 1.2	< 1.3	< 1.3
Toluene		mg/kg	107	305	*2.459*	< 0.33	< 0.35	0.014 J	< 0.31	< 0.28	0.013 J	< 0.34	< 0.29	< 0.31	< 0.33
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Trichloroethene		mg/kg	29	46	*0.002*	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Vinyl chloride		mg/kg	0.8	2.2	0.001	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
m,p-Xylene		mg/kg	NS	NS	NS	< 0.33	0.028 J	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
o-Xylene		mg/kg	NS	NS	NS	< 0.33	< 0.35	< 0.29	< 0.31	< 0.28	< 0.3	< 0.34	< 0.29	< 0.31	< 0.33
Total Xylenes*		mg/kg	45	130	*5.415*	ND	0.028 J	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs															
1,1-Biphenyl		mg/kg	NS	NS	62.161	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	0.015 J	< 0.38	< 0.39	< 0.43	< 0.4
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43 J	< 0.4
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43 J	< 0.4
2,4-Dichlorophenol		mg/kg	48	230	0.153	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43 J	< 0.4
2,4-Dimethylphenol		mg/kg	390	1925	2.167	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43 J	< 0.4
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	< 1.9	< 3.9	< 1.8	< 1.9	< 1.9	< 4.6	< 1.8	< 1.9	< 2.1 J	< 2
2,4-Dinitrotoluene		mg/kg	50	355	0.013	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
2,6-Dinitrotoluene		mg/kg	25	175	0.013	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
2-Chloronaphthalene		mg/kg	NS	NS	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
2-Chlorophenol		mg/kg	NS	NS	0.520	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43 J	< 0.4
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	< 1.9	< 3.9	< 1.8	< 1.9	< 1.9	< 4.6	< 1.8	< 1.9	< 2.1 J	< 2
2-Methylnaphthalene		mg/kg	100	369	NS	0.019 J	0.037 J	0.015 J	0.011 J	0.0072 J	0.13 J	0.0041 J	0.0080 J	0.0052 J	0.0063 J
2-Methylphenol		mg/kg	75	352	0.428	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43 J	< 0.4
2-Nitroaniline		mg/kg	NS	NS	NS	< 1.9	< 3.9	< 1.8	< 1.9	< 1.9	< 4.6	< 1.8	< 1.9	< 2.1	< 2
2-Nitrophenol		mg/kg	NS	NS	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43 J	< 0.4
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	< 1.9	< 3.9	< 1.8	< 1.9	< 1.9	< 4.6	< 1.8	< 1.9	< 2.1	< 2
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	< 0.48	< 0.98	< 0.45	< 0.47	< 0.46	< 1.2	< 0.46	< 0.47	< 0.52 J	< 0.49
3-Nitroaniline		mg/kg	NS	NS	NS	< 1.9	< 3.9	< 1.8	< 1.9	< 1.9	< 4.6	< 1.8	< 1.9	< 2.1	< 2
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43 J	< 0.4
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
4-Nitroaniline		mg/kg	NS	NS	NS	< 1.9	< 3.9	< 1.8	< 1.9	< 1.9	< 4.6	< 1.8	< 1.9	< 2.1	< 2
4-Nitrophenol		mg/kg	NS	NS	NS	< 1.9	< 3.9	< 1.8	< 1.9	< 1.9	< 4.6	< 1.8	< 1.9	< 2.1 J	< 2
Acenaphthene		mg/kg	1200	5260	*81.242*	0.032 J	0.17 J	0.024 J	0.022 J	0.012 J	0.12 J	< 0.38	0.011 J	0.0087 J	0.0055 J
Acenaphthylene		mg/kg	NS	NS	NS	0.024 J	0.016 J	0.1 J	< 0.39	0.031 J	0.095 J	0.0054 J	0.0082 J	0.0061 J	0.0078 J
Acetophenone		mg/kg	NS	NS	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	0.011 J	< 0.43	0.013 J
Anthracene		mg/kg	7880	45400	1312.816	0.083 J	0.28 J	0.077 J	0.04 J	0.042 J	0.25 J	0.0060 J	0.029 J	0.015 J	0.015 J
Atrazine		mg/kg	NS	NS	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
Benzaldehyde		mg/kg	NS	NS	NS	0.017 J	< 0.81	0.014 J	0.024 J	0.028 J	0.044 J	0.02 J	0.03 J	0.028 J	0.041 J
Benzo(a)anthracene		mg/kg	NS	NS	NS	0.31 J	0.91	0.48	0.098 J	0.17 J	0.94 J	0.03 J	0.13 J	0.062 J	0.072 J
Benzo(a)pyrene		mg/kg	2	3	*1.410*	0.29 J	0.79 J	0.47	0.098 J	0.14 J	0.94 J	0.032 J	0.13 J	0.06 J	0.07 J
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	0.4	1.2	0.73	0.14 J	0.25 J	1.5	0.052 J	0.17 J	0.091 J	0.11 J
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	0.12 J	0.55 J	0.36 J	0.05 J	0.076 J	0.55 J	0.02 J	0.074 J	0.034 J	0.048 J
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	0.17 J	0.4 J	0.29 J	0.053 J	0.079 J	0.38 J	0.014 J	0.073 J	0.036 J	0.04 J
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	0.077 J	0.056 J	0.091 J	0.085 J	0.027 J	0.063 J	0.061 J	0.053 J	0.034 J	0.039 J
Butyl benzyl phthalate		mg/kg	580	3700	28.820	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
Caprolactam		mg/kg	NS	NS	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
Carbazole		mg/kg	700	1310	NS	0.054 J	0.16 J	0.048 J	< 0.39	< 0.38	0.14 J	< 0.38	< 0.39	< 0.43	< 0.4
Chrysene		mg/kg	NS	NS	NS	0.37 J	1	0.6	0.11 J	0.19 J	1.1	0.039 J	0.15 J	0.077 J	0.086 J
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	0.032 J	0.17 J	0.092 J	0.014 J	0.025 J	0.13 J	< 0.38	0.021 J	< 0.43	0.013 J
Dibenzofuran		mg/kg	104	810	NS	0.023 J	0.078 J	0.021 J	0.014 J	0.0083 J	0.055 J	< 0.38	0.0086 J	< 0.43	< 0.4
Diethyl phthalate		mg/kg	NS	NS	37.177	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
Dimethyl phthalate		mg/kg	NS	NS	228.454	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	0.031 J	< 0.81	0.024 J	0.03 J	< 0.38	< 0.96	0.026 J	0.02 J	< 0.43	< 0.4
Di-n-octyl phthalate		mg/kg	520	3700	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
Fluoranthene		mg/kg	1080	6800	666	0.67	1.8	1.1	0.19 J	0.37 J	1.8	0.066 J	0.28 J	0.14 J	0.14 J
Fluorene		mg/kg	850	4120	*110.524*	0.035 J	0.15 J	0.028 J	0.023 J	0.015 J	0.12 J	< 0.38	0.0090 J	0.0076 J	0.0077 J
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
Hexachlorobenzene		mg/kg	5	9	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4

Table 4
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Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	HA-01 HA-01_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-02 HA-02_0-0.5(20150624) 6/24/2015 0-0.5 Fill Soil	HA-03 HA-03_0-0.5(20150624) 6/24/2015 0-0.5 Fill Soil	HA-04 HA-04_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-05 HA-05_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-06 HA-06_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-07 HA-07_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-08 HA-08_0-1(20150624) 6/24/2015 0-1 Fill Soil	HA-09 HA-09_0-0.5(20150624) 6/24/2015 0-0.5 Fill Soil	HA-10 HA-10_0-1(20150624) 6/24/2015 0-1 Fill Soil
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	< 1.9	< 3.9	< 1.8	< 1.9	< 1.9	< 4.6	< 1.8	< 1.9	< 2.1	< 2
Hexachloroethane		mg/kg	NS	NS	0.010	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	0.11 J	0.45 J	0.3 J	0.045 J	0.073 J	0.35 J	0.017 J	0.062 J	0.026 J	0.039 J
Isophorone		mg/kg	NS	NS	0.461	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
Naphthalene		mg/kg	10	28	*4.468*	0.022 J	0.04 J	0.017 J	0.016 J	0.0081 J	0.13 J	0.01 J	0.0086 J	0.0064 J	0.021 J
Nitrobenzene		mg/kg	NS	NS	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
p-Chloroaniline		mg/kg	NS	NS	NS	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43	< 0.4
Pentachlorophenol		mg/kg	80	120	*0.023*	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43 J	< 0.4
Phenanthrene		mg/kg	NS	NS	NS	0.39 J	1.2	0.48	0.15 J	0.2 J	0.93 J	0.031 J	0.13 J	0.072 J	0.072 J
Phenol		mg/kg	1500	20203	37.952	< 0.4	< 0.81	< 0.37	< 0.39	< 0.38	< 0.96	< 0.38	< 0.39	< 0.43 J	< 0.4
Pyrene		mg/kg	890	5800	*435.120*	0.56	1.5	0.91	0.16 J	0.31 J	1.5	0.055 J	0.23 J	0.11 J	0.12 J
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	0.411	1.191	0.708	0.141	0.213	1.341	0.044	0.187	0.082	0.104
PCBs															
Aroclor 1016		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals															
Aluminum		mg/kg	30000	100000	NS	9200	6600	3000	6400	4600	3800	3900	5400	6500	7500
Antimony		mg/kg	12	100	*5.412*	< 0.93	< 1.0	< 0.97 J	< 1.1	< 0.97	< 1.0	< 1.1	< 1.1	< 0.99	< 1.0
Arsenic		mg/kg	9	20	*5.82*	*6.8*	4.6	3.0	*6.0*	2.6	2.8	2.5	4.0	4.3	4.4
Barium		mg/kg	1100	18000	*1684*	100	45	40	170	50	39	34	46	39	55
Beryllium		mg/kg	55	230	2.72016	0.51	0.31 J	0.22 J	0.42 J	0.29 J	0.21 J	0.25 J	0.33 J	0.42 J	0.42 J
Cadmium		mg/kg	25	200	*8.808*	0.19	0.12 J	0.51	0.42	0.12 J	0.53	0.17 J	0.31	0.16 J	0.18 J
Calcium		mg/kg	NS	NS	NS	4800	23000	29000	16000	16000	17000	5300	37000	15000	19000
Chromium (Total)		mg/kg	NS	NS	NS	15	19	9.4	13	9.3	9.1	7.9	11	12	13
Chromium III		mg/kg	44000	100000	1000000040	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium VI		mg/kg	87	650	*36.2*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt		mg/kg	600	2600	*27.06*	8.4	11	4.0 J	8.0	5.7	4.2 J	5.0 J	8.4	8.5	7.1
Copper		mg/kg	100	9000	702	16	25	11 J	15	11	14	5.7	12	9.9	11
Iron		mg/kg	30000	100000	NS	14000	15000	8800	13000	9700	8900	6300	12000	12000	19000
Lead		mg/kg	300	700	*2700*	38	13	18 J	18	7.7	32	5.1	14	8.9	13
Magnesium		mg/kg	NS	NS	NS	2900	11000	10000 J	6100	6000	4900	2200	8800	5200	5800
Manganese		mg/kg	3600	8100	*130.2*	*550*	*410*	*400*	*1200*	*450*	*250*	*190*	*490*	*310*	*410*
Mercury		mg/kg	0.5	1.5	*3.291*	0.045 J	0.055 J	0.025 J	0.045 J	0.014 J	0.11	0.016 J	0.022 J	0.027 J	0.041 J
Nickel		mg/kg	560	2500	*176.2*	17	20	11	28	13	11	11	17	17	16
Potassium		mg/kg	NS	NS	NS	1100	1200	560	940	690	830	420 J	1900	2300	2200
Selenium		mg/kg	160	1300	*2.64*	0.82	0.43 J	< 0.48	0.58	0.39 J	< 0.50	0.41 J	< 0.53	0.39 J	< 0.50
Silver		mg/kg	160	1300	7.86	< 0.46	< 0.51	< 0.48	< 0.55	< 0.48	< 0.50	< 0.53	< 0.53	< 0.50	< 0.50
Sodium		mg/kg	NS	NS	NS	49 J	57 J	62 J	56 J	54 J	63 J	27 J	71 J	50 J	56 J
Thallium		mg/kg	3	21	0.8892	< 0.93	< 1.0	< 0.97	< 1.1	< 0.97	< 1.0	< 1.1	< 1.1	< 0.99	< 1.0
Vanadium		mg/kg	121	121	*4.0004*	*29*	*19*	*13*	*24*	*18*	*16*	*12*	*14*	*14*	*16*
Zinc		mg/kg	8700	75000	*3004*	70	52	46	88	28	40	32	49	35	38
TPH															
Diesel Range Organics**		mg/kg	100	100	NS	14	48	33	8.4 J	12	**220**	5.2 J	14	13	15
Gasoline Range Organics**		mg/kg	100	100	NS	< 13	< 12	2.6 J	< 12	< 12	< 12	< 12	< 12	< 13	< 12
Other Analtyical															
Percent Moisture		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Asbestos		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening															
Oil-in-Soil		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Petroleum Sheen Test		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 37.

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	HA-11 HA-11_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-12 HA-12_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-13 HA-13_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-14 HA-14_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-15 HA-15_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-16 HA-16_0-0.5(20150625) 6/25/2015 0-0.5 Fill Soil	HA-17 HA-17_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-18 HA-18_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-19 HA-19_0-0.5 (20150625) 6/25/2015 0-0.5 Fill Soil	HA-20 HA-20_0-1 (20150625) 6/25/2015 0-1 Fill Soil
VOCs															
1,1,1,2-Tetrachloroethane		mg/kg	31	51	0.406	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,1,1-Trichloroethane		mg/kg	140	472	55.740	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,1,2,2-Tetrachloroethane		mg/kg	3.5	6.5	0.012	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,1,2-trichloro-1,2,2-trifluoroethane		mg/kg	3745	5430	16884	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,1,2-Trichloroethane		mg/kg	9	14	0.014	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,1-Dichloroethane		mg/kg	34	55	0.407	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,1-Dichloroethene		mg/kg	20	60	1.394	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,1-Dichloropropene		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,2,3-Trichlorobenzene		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,2,3-Trichloropropane		mg/kg	NS	NS	0.267	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,2,4-Trichlorobenzene		mg/kg	200	985	0.226	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,2,4-Trimethylbenzene		mg/kg	8	25	*2.745*	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,2-Dibromo-3-chloropropane		mg/kg	NS	NS	NS	< 0.76	< 0.56	< 0.64	< 0.55	< 0.58	< 0.67	< 0.71	< 0.68	< 0.76	< 0.59
1,2-Dibromoethane		mg/kg	0.3	0.5	0.00001	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,2-Dichlorobenzene		mg/kg	26	75	*10.553*	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,2-Dichloroethane		mg/kg	4	6	0.004	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,2-Dichloropropane		mg/kg	4	6	0.024	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,3,5-Trimethylbenzene		mg/kg	3	10	*2.733*	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	0.02 J	< 0.36	< 0.34	< 0.38	< 0.3
1,3-Dichlorobenzene		mg/kg	26	200	10.431	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,3-Dichloropropane		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
1,4-Dichlorobenzene		mg/kg	30	50	0.174	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
2,2-Dichloropropane		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
2-Butanone (MEK)		mg/kg	5500	19000	8.754	< 1.5	< 1.1	< 1.3	< 1.1	< 1.2	< 1.3	< 1.4	< 1.4	< 1.5	< 1.2
2-Chlorotoluene		mg/kg	436	436	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
4-Chlorotoluene		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
4-Methyl-2-Pentanone		mg/kg	1700	9000	0.757	< 1.5	< 1.1	< 1.3	< 1.1	< 1.2	< 1.3	< 1.4	< 1.4	< 1.5	< 1.2
Acetone		mg/kg	340	1000	8.398	< 1.5	< 1.1	< 1.3	< 1.1	< 1.2	< 1.3	< 1.4	< 1.4	< 1.5	< 1.2
Allyl chloride		mg/kg	NS	NS	0.154	< 0.76	< 0.56	< 0.64	< 0.55	< 0.58	< 0.67	< 0.71	< 0.68	< 0.76	< 0.59
Benzene		mg/kg	6	10	*0.017*	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Bromobenzene		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Bromochloromethane		mg/kg	NS	NS	0.277	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Bromodichloromethane		mg/kg	10	17	0.021	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Bromoform		mg/kg	370	650	0.134	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Bromomethane		mg/kg	0.7	2	0.036	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Carbon Disulfide		mg/kg	65	190	3.437	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Carbon Tetrachloride		mg/kg	0.3	0.9	0.008	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
CFC-11		mg/kg	67	195	35.006	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
CFC-12		mg/kg	16	50	36.658	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Chlorobenzene		mg/kg	11	32	1.180	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Chlorodibromomethane		mg/kg	12	20	0.034	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Chloroethane		mg/kg	1000	3000	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Chloroform		mg/kg	2.5	4	0.114	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Chloromethane		mg/kg	8	23	0.113	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
cis-1,2-Dichloroethene		mg/kg	8	22	*0.208*	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
cis-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Cyclohexane		mg/kg	NS	NS	NS	< 0.76	< 0.56	< 0.64	< 0.55	< 0.58	< 0.67	< 0.71	< 0.68	< 0.76	< 0.59
Cymene (p-Isopropyltoluene)		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Dibromomethane		mg/kg	260	1860	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Dichloromethane		mg/kg	97	158	*0.017*	< 0.38	< 0.28	< 0.32	*0.24 J*	*0.28 J*	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Dichloromonofluoromethane		mg/kg	NS	NS	NS	< 0.76	< 0.56	< 0.64	< 0.55	< 0.58	< 0.67	< 0.71	< 0.68	< 0.76	< 0.59
Diethyl ether		mg/kg	NS	NS	0.512	< 0.76	< 0.56	< 0.64	< 0.55	< 0.58	< 0.67	< 0.71	< 0.68	< 0.76	< 0.59
Ethylbenzene		mg/kg	200	200	*1.048*	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	0.098 J	0.074 J	0.048 J	< 0.38	< 0.3
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Isopropylbenzene		mg/kg	30	87	*9.463*	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Methyl Acetate		mg/kg	NS	NS	NS	1.1	0.24 J	0.31 J	0.29 J	0.12 J	0.39 J	1	0.43 J	1.5	0.42 J
Methyl N-Butyl Ketone (2-Hexanone)		mg/kg	NS	NS	NS	< 1.5	< 1.1	< 1.3	< 1.1	< 1.2	< 1.3	< 1.4	< 1.4	< 1.5	< 1.2
Methylcyclohexane		mg/kg	NS	NS	NS	< 0.76	< 0.56	< 0.64	< 0.55	< 0.58	< 0.67	< 0.71	< 0.68	< 0.76	< 0.59
Methyl-tert-butylether		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Naphthalene		mg/kg	10	28	*4.468*	0.064 J	< 0.28	< 0.32	< 0.28	< 0.29	0.092 J	0.041 J	< 0.34	< 0.38	< 0.3
N-Butylbenzene		mg/kg	30	92	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
N-Propylbenzene		mg/kg	30	93	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
sec-Butylbenzene		mg/kg	25	70	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Styrene (Monomer)		mg/kg	210	600	2.023	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	HA-11 HA-11_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-12 HA-12_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-13 HA-13_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-14 HA-14_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-15 HA-15_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-16 HA-16_0-0.5(20150625) 6/25/2015 0-0.5 Fill Soil	HA-17 HA-17_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-18 HA-18_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-19 HA-19_0-0.5 (20150625) 6/25/2015 0-0.5 Fill Soil	HA-20 HA-20_0-1 (20150625) 6/25/2015 0-1 Fill Soil
tert-Butylbenzene		mg/kg	30	90	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Tetrachloroethene		mg/kg	72	131	0.042	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Tetrahydrofuran		mg/kg	NS	NS	0.244	< 1.5	< 1.1	< 1.3	< 1.1	< 1.2	< 1.3	< 1.4	< 1.4	< 1.5	< 1.2
Toluene		mg/kg	107	305	*2.459*	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Trichloroethene		mg/kg	29	46	*0.002*	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Vinyl chloride		mg/kg	0.8	2.2	0.001	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
m,p-Xylene		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	0.029 J	< 0.36	< 0.34	< 0.38	< 0.3
o-Xylene		mg/kg	NS	NS	NS	< 0.38	< 0.28	< 0.32	< 0.28	< 0.29	< 0.34	< 0.36	< 0.34	< 0.38	< 0.3
Total Xylenes*		mg/kg	45	130	*5.415*	ND	ND	ND	ND	ND	0.029 J	ND	ND	ND	ND
SVOCs															
1,1-Biphenyl		mg/kg	NS	NS	62.161	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
2,4-Dichlorophenol		mg/kg	48	230	0.153	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
2,4-Dimethylphenol		mg/kg	390	1925	2.167	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	< 2.4	< 1.8	< 4.7	< 1.9	< 1.9	< 35	< 2.2	< 2	< 4.3	< 2
2,4-Dinitrotoluene		mg/kg	50	355	0.013	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
2,6-Dinitrotoluene		mg/kg	25	175	0.013	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
2-Chloronaphthalene		mg/kg	NS	NS	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
2-Chlorophenol		mg/kg	NS	NS	0.520	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	< 2.4	< 1.8	< 4.7	< 1.9	< 1.9	< 35	< 2.2	< 2	< 4.3	< 2
2-Methylnaphthalene		mg/kg	100	369	NS	0.0084 J	< 0.37	0.015 J	0.0061 J	0.0042 J	0.15 J	0.011 J	0.0064 J	0.026 J	0.0065 J
2-Methylphenol		mg/kg	75	352	0.428	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	0.06 J	< 0.41
2-Nitroaniline		mg/kg	NS	NS	NS	< 2.4	< 1.8	< 4.7	< 1.9	< 1.9	< 35	< 2.2	< 2	< 4.3	< 2
2-Nitrophenol		mg/kg	NS	NS	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	< 2.4	< 1.8	< 4.7	< 1.9	< 1.9	< 35	< 2.2	< 2	< 4.3	< 2
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	< 0.59	< 0.45	< 1.2	< 0.47	< 0.47	< 8.9	< 0.54	< 0.49	< 1.1	< 0.5
3-Nitroaniline		mg/kg	NS	NS	NS	< 2.4	< 1.8	< 4.7	< 1.9	< 1.9	< 35	< 2.2	< 2	< 4.3	< 2
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
4-Nitroaniline		mg/kg	NS	NS	NS	< 2.4	< 1.8	< 4.7	< 1.9	< 1.9	< 35	< 2.2	< 2	< 4.3	< 2
4-Nitrophenol		mg/kg	NS	NS	NS	< 2.4	< 1.8	< 4.7	< 1.9	< 1.9	< 35	< 2.2	< 2	< 4.3	< 2
Acenaphthene		mg/kg	1200	5260	*81.242*	0.02 J	0.021 J	0.15 J	0.017 J	0.0098 J	1.1 J	0.029 J	0.0045 J	0.052 J	0.015 J
Acenaphthylene		mg/kg	NS	NS	NS	0.018 J	0.0066 J	0.029 J	0.0071 J	0.0041 J	1.1 J	0.078 J	0.013 J	0.02 J	0.0083 J
Acetophenone		mg/kg	NS	NS	NS	0.023 J	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	0.016 J	0.013 J	< 0.89	0.015 J
Anthracene		mg/kg	7880	45400	1312.816	0.055 J	0.067 J	0.34 J	0.034 J	0.012 J	4.2 J	0.16 J	0.018 J	0.085 J	0.028 J
Atrazine		mg/kg	NS	NS	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
Benzaldehyde		mg/kg	NS	NS	NS	0.12 J	0.024 J	0.059 J	0.035 J	0.019 J	< 7.3	0.091 J	0.041 J	0.12 J	0.034 J
Benzo(a)anthracene		mg/kg	NS	NS	NS	0.2 J	0.29 J	1.4	0.16 J	0.059 J	12	0.72	0.078 J	0.35 J	0.14 J
Benzo(a)pyrene		mg/kg	2	3	*1.410*	0.19 J	0.27 J	1.3	0.16 J	0.062 J	***11***	0.68	0.079 J	0.42 J	0.16 J
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	0.39 J	0.48	2.4	0.26 J	0.12 J	17	1.1	0.11 J	0.77 J	0.28 J
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	0.093 J	0.099 J	0.48 J	0.062 J	0.027 J	3.5 J	0.22 J	0.031 J	0.16 J	0.087 J
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	0.12 J	0.16 J	1.1	0.11 J	0.029 J	5.9 J	0.4 J	0.054 J	0.32 J	0.096 J
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	0.1 J	0.093 J
Butyl benzyl phthalate		mg/kg	580	3700	28.820	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	0.018 J
Caprolactam		mg/kg	NS	NS	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
Carbazole		mg/kg	700	1310	NS	< 0.49	0.076 J	0.45 J	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	0.04 J
Chrysene		mg/kg	NS	NS	NS	0.25 J	0.35 J	1.9	0.19 J	0.075 J	12	0.76	0.086 J	0.5 J	0.21 J
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	< 0.49	0.038 J	0.15 J	0.028 J	< 0.39	1.2 J	0.083 J	< 0.41	0.046 J	0.023 J
Dibenzofuran		mg/kg	104	810	NS	0.056 J	0.013 J	0.093 J	< 0.39	0.01 J	0.5 J	0.023 J	< 0.41	0.081 J	0.013 J
Diethyl phthalate		mg/kg	NS	NS	37.177	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
Dimethyl phthalate		mg/kg	NS	NS	228.454	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	0.036 J
Di-n-octyl phthalate		mg/kg	520	3700	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
Fluoranthene		mg/kg	1080	6800	666	0.4 J	0.76	3.9	0.34 J	0.11 J	23	1.3	0.13 J	0.63 J	0.37 J
Fluorene		mg/kg	850	4120	*110.524*	0.017 J	0.025 J	0.19 J	0.014 J	0.0092 J	1.3 J	0.027 J	0.0048 J	0.052 J	0.013 J
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
Hexachlorobenzene		mg/kg	5	9	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	HA-11 HA-11_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-12 HA-12_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-13 HA-13_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-14 HA-14_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-15 HA-15_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-16 HA-16_0-0.5(20150625) 6/25/2015 0-0.5 Fill Soil	HA-17 HA-17_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-18 HA-18_0-1(20150625) 6/25/2015 0-1 Fill Soil	HA-19 HA-19_0-0.5 (20150625) 6/25/2015 0-0.5 Fill Soil	HA-20 HA-20_0-1 (20150625) 6/25/2015 0-1 Fill Soil
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	< 2.4	< 1.8	< 4.7	< 1.9	< 1.9	< 35	< 2.2	< 2	< 4.3	< 2
Hexachloroethane		mg/kg	NS	NS	0.010	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	0.08 J	0.1 J	0.49 J	0.064 J	0.03 J	3.4 J	0.22 J	0.034 J	0.16 J	0.081 J
Isophorone		mg/kg	NS	NS	0.461	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
Naphthalene		mg/kg	10	28	*4.468*	< 0.49	< 0.37	0.027 J	< 0.39	< 0.39	0.19 J	0.017 J	0.0073 J	0.021 J	0.0080 J
Nitrobenzene		mg/kg	NS	NS	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
p-Chloroaniline		mg/kg	NS	NS	NS	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
Pentachlorophenol		mg/kg	80	120	*0.023*	< 0.49	< 0.37	< 0.98	< 0.39	< 0.39	< 7.3	< 0.45	< 0.41	< 0.89	< 0.41
Phenanthrene		mg/kg	NS	NS	NS	0.22 J	0.45	2.6	0.17 J	0.065 J	12	0.45	0.056 J	0.36 J	0.18 J
Phenol		mg/kg	1500	20203	37.952	0.031 J	0.015 J	0.1 J	< 0.39	0.011 J	< 7.3	0.033 J	< 0.41	0.022 J	< 0.41
Pyrene		mg/kg	890	5800	*435.120*	0.32 J	0.57	3.1	0.27 J	0.092 J	23	1.3	0.12 J	0.53 J	0.27 J
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	0.272	0.398	1.942	0.237	0.087	**15.623**	0.978	0.107	0.611	0.235
PCBs															
Aroclor 1016		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals															
Aluminum		mg/kg	30000	100000	NS	4500	5100	4200	6500	4500	5400	7000	8700	3800	9900
Antimony		mg/kg	12	100	*5.412*	< 1.2	< 1.1	0.97	1.1	< 0.86	< 0.78	0.73 J	1.3	< 1.2 J	< 1.1
Arsenic		mg/kg	9	20	*5.82*	3.1	2.2	3.2	*8.0*	1.8	3.3	3.7	4.5	3.3	4.8
Barium		mg/kg	1100	18000	*1684*	65	30	39	47	42	38	71	76	91	150
Beryllium		mg/kg	55	230	2.72016	0.24 J	0.26 J	0.26 J	0.35 J	0.19 J	0.26 J	0.35 J	0.46 J	0.23 J	0.58
Cadmium		mg/kg	25	200	*8.808*	0.33	0.32	0.88	0.23	0.12 J	0.48	0.32	0.32	0.41	0.39
Calcium		mg/kg	NS	NS	NS	31000	31000	24000	11000	6900	24000	18000	10000	41000	24000
Chromium (Total)		mg/kg	NS	NS	NS	12	11	12	14	8.4	12	13	15	13	16
Chromium III		mg/kg	44000	100000	1000000040	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium VI		mg/kg	87	650	*36.2*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt		mg/kg	600	2600	*27.06*	4.6 J	5.1 J	5.1	7.6	2.0 J	5.1	6.1	6.8	3.8 J	9.2
Copper		mg/kg	100	9000	702	17	15	16	13	6.0	12	17	14	22	18
Iron		mg/kg	30000	100000	NS	9100	10000	11000	13000	5000	10000	12000	14000	8600	16000
Lead		mg/kg	300	700	*2700*	19	11	71	62	6.2	17	28	27	27	23
Magnesium		mg/kg	NS	NS	NS	10000	13000	6700	4000	1600	5600	5300	4200	14000	7700
Manganese		mg/kg	3600	8100	*130.2*	*380*	*190*	*270*	*360*	*170*	*340*	*460*	*390*	*490*	*640*
Mercury		mg/kg	0.5	1.5	*3.291*	0.043 J	< 0.12	0.025 J	0.031 J	< 0.11	0.022 J	0.036 J	0.019 J	0.051 J	0.044 J
Nickel		mg/kg	560	2500	*176.2*	11	12	12	16	5.5	12	12	15	10	17
Potassium		mg/kg	NS	NS	NS	1300	1500	1200	1900	400 J	1200	1300	1900	1300	870
Selenium		mg/kg	160	1300	*2.64*	< 0.58	0.51 J	< 0.46	0.27 J	0.42 J	0.33 J	< 0.61	< 0.47	0.54 J	0.54 J
Silver		mg/kg	160	1300	7.86	< 0.58	< 0.53	< 0.46	< 0.40	< 0.43	< 0.39	< 0.61	< 0.47	< 0.58	< 0.55
Sodium		mg/kg	NS	NS	NS	75 J	94 J	62 J	58 J	38 J	96 J	59 J	54 J	99 J	110 J
Thallium		mg/kg	3	21	0.8892	< 1.2	< 1.1	< 0.93	< 0.80	< 0.86	< 0.78	< 1.2	< 0.95	< 1.2	< 1.1
Vanadium		mg/kg	121	121	*4.0004*	*15*	*13*	*14*	*16*	*11*	*16*	*20*	*21*	*13*	*28*
Zinc		mg/kg	8700	75000	*3004*	62	30	61	56	22	37	56	53	91	60
TPH															
Diesel Range Organics**		mg/kg	100	100	NS	48 J	15 J	67 J	8.6 J	7.9 J	**2300 J**	42 J	14 J	**120**	40
Gasoline Range Organics**		mg/kg	100	100	NS	< 17	< 11	< 12	< 11	< 12	< 11	< 14	< 12	< 15	< 12
Other Analtyical															
Percent Moisture		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Asbestos		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening															
Oil-in-Soil		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Petroleum Sheen Test		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 37.

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	HA-21 HA-21_0-1(20151217) 12/17/2015 0-1 Fill Soil	HA-22 HA-22_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-23 HA-23_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-24 HA-24_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-25 HA-25_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-26 HA-26_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-27 HA-27_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-28 HA-28_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-29 HA-29_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-30 HA-30_0-1 (20150625) 6/25/2015 0-1 Fill Soil
VOCs															
1,1,1,2-Tetrachloroethane	mg/kg	31	51	0.406	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,1,1-Trichloroethane	mg/kg	140	472	55.740	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,1,2,2-Tetrachloroethane	mg/kg	3.5	6.5	0.012	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,1,2-trichloro-1,2,2-trifluoroethane	mg/kg	3745	5430	16884	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,1,2-Trichloroethane	mg/kg	9	14	0.014	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,1-Dichloroethane	mg/kg	34	55	0.407	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,1-Dichloroethene	mg/kg	20	60	1.394	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,1-Dichloropropene	mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,2,3-Trichloropropane	mg/kg	NS	NS	0.267	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,2,4-Trichlorobenzene	mg/kg	200	985	0.226	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,2,4-Trimethylbenzene	mg/kg	8	25	*2.745*	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	0.026 J	0.019 J	< 0.3
1,2-Dibromo-3-chloropropane	mg/kg	NS	NS	NS	< 0.56 U	< 0.73	< 0.62	< 0.6	< 0.61	< 0.68	< 0.58	< 0.76	< 0.72	< 0.59
1,2-Dibromoethane	mg/kg	0.3	0.5	0.00001	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,2-Dichlorobenzene	mg/kg	26	75	*10.553*	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,2-Dichloroethane	mg/kg	4	6	0.004	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,2-Dichloropropane	mg/kg	4	6	0.024	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,3,5-Trimethylbenzene	mg/kg	3	10	*2.733*	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,3-Dichlorobenzene	mg/kg	26	200	10.431	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,3-Dichloropropane	mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
1,4-Dichlorobenzene	mg/kg	30	50	0.174	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
2,2-Dichloropropane	mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
2-Butanone (MEK)	mg/kg	5500	19000	8.754	< 1.1 U	< 1.5	< 1.2	< 1.2	< 1.2	< 1.4	< 1.2	< 1.5	< 1.4	< 1.2
2-Chlorotoluene	mg/kg	436	436	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
4-Chlorotoluene	mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
4-Methyl-2-Pentanone	mg/kg	1700	9000	0.757	< 1.1 U	< 1.5	< 1.2	< 1.2	< 1.2	< 1.4	< 1.2	< 1.5	< 1.4	< 1.2
Acetone	mg/kg	340	1000	8.398	< 1.1 U	< 1.5	< 1.2	< 1.2	< 1.2	< 1.4	< 1.2	< 1.5	< 1.4	< 1.2
Allyl chloride	mg/kg	NS	NS	0.154	< 0.56 U	< 0.73	< 0.62	< 0.6	< 0.61	< 0.68	< 0.58	< 0.76	< 0.72	< 0.59
Benzene	mg/kg	6	10	*0.017*	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Bromobenzene	mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Bromochloromethane	mg/kg	NS	NS	0.277	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Bromodichloromethane	mg/kg	10	17	0.021	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Bromoform	mg/kg	370	650	0.134	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Bromomethane	mg/kg	0.7	2	0.036	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Carbon Disulfide	mg/kg	65	190	3.437	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Carbon Tetrachloride	mg/kg	0.3	0.9	0.008	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
CFC-11	mg/kg	67	195	35.006	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
CFC-12	mg/kg	16	50	36.658	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Chlorobenzene	mg/kg	11	32	1.180	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Chlorodibromomethane	mg/kg	12	20	0.034	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Chloroethane	mg/kg	1000	3000	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Chloroform	mg/kg	2.5	4	0.114	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Chloromethane	mg/kg	8	23	0.113	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
cis-1,2-Dichloroethene	mg/kg	8	22	*0.208*	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Cyclohexane	mg/kg	NS	NS	NS	< 0.56 U	< 0.73	< 0.62	< 0.6	< 0.61	< 0.68	< 0.58	< 0.76	< 0.72	< 0.59
Cymene (p-Isopropyltoluene)	mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Dibromomethane	mg/kg	260	1860	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Dichloromethane	mg/kg	97	158	*0.017*	*0.25 J*	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Dichloromonofluoromethane	mg/kg	NS	NS	NS	< 0.56 U	< 0.73	< 0.62	< 0.6	< 0.61	< 0.68	< 0.58	< 0.76	< 0.72	< 0.59
Diethyl ether	mg/kg	NS	NS	0.512	< 0.56 U	< 0.73	< 0.62	< 0.6	< 0.61	< 0.68	< 0.58	< 0.76	< 0.72	< 0.59
Ethylbenzene	mg/kg	200	200	*1.048*	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Hexachloro-1,3-butadiene	mg/kg	6	37	0.037	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Isopropylbenzene	mg/kg	30	87	*9.463*	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Methyl Acetate	mg/kg	NS	NS	NS	0.13 J	0.88	0.3 J	1.1	0.27 J	0.31 J	0.31 J	0.3 J	0.33 J	0.33 J
Methyl N-Butyl Ketone (2-Hexanone)	mg/kg	NS	NS	NS	< 1.1 U	< 1.5	< 1.2	< 1.2	< 1.2	< 1.4	< 1.2	< 1.5	< 1.4	< 1.2
Methylcyclohexane	mg/kg	NS	NS	NS	< 0.56 U	< 0.73	< 0.62	< 0.6	< 0.61	< 0.68	< 0.58	0.068 J	< 0.72	< 0.59
Methyl-tert-butylether	mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Naphthalene	mg/kg	10	28	*4.468*	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	0.063 J	0.064 J	0.08 J	0.031 J
N-Butylbenzene	mg/kg	30	92	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
N-Propylbenzene	mg/kg	30	93	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
sec-Butylbenzene	mg/kg	25	70	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Styrene (Monomer)	mg/kg	210	600	2.023	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	HA-21 HA-21_0-1(20151217) 12/17/2015 0-1 Fill Soil	HA-22 HA-22_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-23 HA-23_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-24 HA-24_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-25 HA-25_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-26 HA-26_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-27 HA-27_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-28 HA-28_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-29 HA-29_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-30 HA-30_0-1 (20150625) 6/25/2015 0-1 Fill Soil
tert-Butylbenzene		mg/kg	30	90	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Tetrachloroethene		mg/kg	72	131	0.042	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Tetrahydrofuran		mg/kg	NS	NS	0.244	< 1.1 U	< 1.5	< 1.2	< 1.2	< 1.2	< 1.4	< 1.2	< 1.5	< 1.4	< 1.2
Toluene		mg/kg	107	305	*2.459*	< 0.28 U	< 0.36	0.018 J	< 0.3	< 0.31	< 0.34	< 0.29	0.022 J	< 0.36	< 0.3
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Trichloroethene		mg/kg	29	46	*0.002*	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Vinyl chloride		mg/kg	0.8	2.2	0.001	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
m,p-Xylene		mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
o-Xylene		mg/kg	NS	NS	NS	< 0.28 U	< 0.36	< 0.31	< 0.3	< 0.31	< 0.34	< 0.29	< 0.38	< 0.36	< 0.3
Total Xylenes*		mg/kg	45	130	*5.415*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs															
1,1-Biphenyl		mg/kg	NS	NS	62.161	< 0.42 U	< 0.47	0.018 J	< 0.41	< 0.41	< 0.42	< 2.5	0.035 J	< 0.82	0.023 J
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41 J	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41 J	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
2,4-Dichlorophenol		mg/kg	48	230	0.153	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41 J	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
2,4-Dimethylphenol		mg/kg	390	1925	2.167	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41 J	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	< 2 U	< 2.3 J	< 3.7	< 2	< 2 J	< 2	< 12	< 6.9	< 4	< 3.8
2,4-Dinitrotoluene		mg/kg	50	355	0.013	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
2,6-Dinitrotoluene		mg/kg	25	175	0.013	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
2-Chloronaphthalene		mg/kg	NS	NS	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
2-Chlorophenol		mg/kg	NS	NS	0.520	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41 J	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	< 2 U	< 2.3	< 3.7	< 2	< 2 J	< 2	< 12	< 6.9	< 4	< 3.8
2-Methylnaphthalene		mg/kg	100	369	NS	< 0.42 U	< 0.47	0.085 J	0.04 J	< 0.41	< 0.42	0.081 J	0.55 J	0.21 J	0.19 J
2-Methylphenol		mg/kg	75	352	0.428	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41 J	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
2-Nitroaniline		mg/kg	NS	NS	NS	< 2 U	< 2.3	< 3.7	< 2	< 2	< 2	< 12	< 6.9	< 4	< 3.8
2-Nitrophenol		mg/kg	NS	NS	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41 J	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	< 2 U	< 2.3	< 3.7	< 2	< 2	< 2	< 12	< 6.9	< 4	< 3.8
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	< 0.51 U	< 0.57	< 0.92	< 0.5	< 0.5 J	< 0.51	< 3.1	< 1.7	< 1	< 0.95
3-Nitroaniline		mg/kg	NS	NS	NS	< 2 U	< 2.3	< 3.7	< 2	< 2	< 2	< 12	< 6.9	< 4	< 3.8
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41 J	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
4-Nitroaniline		mg/kg	NS	NS	NS	< 2 U	< 2.3	< 3.7	< 2	< 2	< 2	< 12	< 6.9	< 4	< 3.8
4-Nitrophenol		mg/kg	NS	NS	NS	< 2 U	< 2.3	< 3.7	< 2	< 2 J	< 2	< 12	< 6.9	< 4	< 3.8
Acenaphthene		mg/kg	1200	5260	*81.242*	0.0097 J	< 0.47	0.25 J	0.0093 J	< 0.41	< 0.42	0.5 J	0.022 J	0.011 J	0.14 J
Acenaphthylene		mg/kg	NS	NS	NS	0.0057 J	< 0.47	0.031 J	0.0070 J	< 0.41	< 0.42	0.13 J	0.031 J	0.02 J	0.035 J
Acetophenone		mg/kg	NS	NS	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	0.055 J	< 0.82	0.023 J
Anthracene		mg/kg	7880	45400	1312.816	0.028 J	0.0080 J	0.53 J	0.037 J	0.0069 J	0.0050 J	0.74 J	0.057 J	0.026 J	0.32 J
Atrazine		mg/kg	NS	NS	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Benzaldehyde		mg/kg	NS	NS	NS	0.015 J	0.028 J	< 0.75	0.037 J	< 0.41	0.023 J	< 2.5	< 1.4	< 0.82	0.058 J
Benzo(a)anthracene		mg/kg	NS	NS	NS	0.16 J	0.048 J	0.94	0.27 J	0.054 J	0.029 J	3.4	0.22 J	0.086 J	0.61 J
Benzo(a)pyrene		mg/kg	2	3	*1.410*	0.2 J	0.05 J	0.77	0.27 J	0.05 J	0.033 J	***2.9***	0.2 J	0.099 J	0.53 J
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	0.3 J	0.095 J	1.1	0.5	0.071 J	0.052 J	4.3	0.27 J	0.14 J	0.77 J
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	0.13 J	0.026 J	0.46 J	0.14 J	0.028 J	0.021 J	1.9 J	0.11 J	0.094 J	0.19 J
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	0.11 J	0.023 J	0.33 J	0.22 J	0.041 J	0.026 J	1.6 J	0.15 J	0.05 J	0.28 J
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	< 0.42	0.06 J	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	0.053 J
Butyl benzyl phthalate		mg/kg	580	3700	28.820	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Caprolactam		mg/kg	NS	NS	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Carbazole		mg/kg	700	1310	NS	< 0.42 U	< 0.47	0.1 J	< 0.41	< 0.41	< 0.42	0.54 J	< 1.4	< 0.82	0.1 J
Chrysene		mg/kg	NS	NS	NS	0.26 J	0.064 J	0.91	0.3 J	0.061 J	0.037 J	4	0.28 J	0.13 J	0.67 J
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	0.039 J	< 0.47	0.12 J	< 0.41	< 0.41	< 0.42	0.6 J	< 1.4	< 0.82	0.064 J
Dibenzofuran		mg/kg	104	810	NS	< 0.42 U	< 0.47	0.13 J	0.018 J	< 0.41	< 0.42	0.2 J	0.12 J	0.024 J	0.11 J
Diethyl phthalate		mg/kg	NS	NS	37.177	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Dimethyl phthalate		mg/kg	NS	NS	228.454	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	< 0.42 U	0.03 J	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Di-n-octyl phthalate		mg/kg	520	3700	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Fluoranthene		mg/kg	1080	6800	666	0.44	0.11 J	2.1	0.43	0.089 J	0.06 J	6.2	0.4 J	0.15 J	1.4
Fluorene		mg/kg	850	4120	*110.524*	0.013 J	< 0.47	0.25 J	0.0087 J	< 0.41	< 0.42	0.4 J	0.028 J	< 0.82	0.19 J
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Hexachlorobenzene		mg/kg	5	9	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	HA-21 HA-21_0-1(20151217) 12/17/2015 0-1 Fill Soil	HA-22 HA-22_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-23 HA-23_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-24 HA-24_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-25 HA-25_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-26 HA-26_0-1 (20150624) 6/24/2015 0-1 Fill Soil	HA-27 HA-27_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-28 HA-28_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-29 HA-29_0-1 (20150625) 6/25/2015 0-1 Fill Soil	HA-30 HA-30_0-1 (20150625) 6/25/2015 0-1 Fill Soil
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	< 2 U	< 2.3 J	< 3.7	< 2	< 2	< 2	< 12	< 6.9	< 4	< 3.8
Hexachloroethane		mg/kg	NS	NS	0.010	< 0.42 U	< 0.47 J	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	0.12 J	0.024 J	0.39 J	0.11 J	0.028 J	0.021 J	1.6 J	0.059 J	0.053 J	0.18 J
Isophorone		mg/kg	NS	NS	0.461	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Naphthalene		mg/kg	10	28	*4.468*	< 0.42 U	< 0.47	0.038 J	0.024 J	< 0.41	< 0.42	0.11 J	0.3 J	0.048 J	0.078 J
Nitrobenzene		mg/kg	NS	NS	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
p-Chloroaniline		mg/kg	NS	NS	NS	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Pentachlorophenol		mg/kg	80	120	*0.023*	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41 J	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Phenanthrene		mg/kg	NS	NS	NS	0.21 J	0.047 J	1.7	0.14 J	0.025 J	0.029 J	3.4	0.35 J	0.14 J	1.2
Phenol		mg/kg	1500	20203	37.952	< 0.42 U	< 0.47	< 0.75	< 0.41	< 0.41 J	< 0.42	< 2.5	< 1.4	< 0.82	< 0.78
Pyrene		mg/kg	890	5800	*435.120*	0.37 J	0.09 J	1.7	0.54	0.091 J	0.057 J	5.4	0.4 J	0.19 J	1.2
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	0.2935	0.070	1.122	0.383	0.070	0.046	**4.367**	0.273	0.133	0.757
PCBs															
Aroclor 1016		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals															
Aluminum		mg/kg	30000	100000	NS	7000	8300	5700	8800	9000	8500	4700	5400	5400	4400
Antimony		mg/kg	12	100	*5.412*	< 0.94 J	< 1.2	< 0.86	< 0.87	< 0.95	1.9	0.73 J	< 0.93	< 1.1	< 0.89
Arsenic		mg/kg	9	20	*5.82*	2.7	4.0	3.2	4.6	2.3	3.6	4.2	4.2	3.9	2.8
Barium		mg/kg	1100	18000	*1684*	73	100	46	42	58	180	53	67	71	60
Beryllium		mg/kg	55	230	2.72016	0.33 J	0.44 J	0.32 J	0.50	0.34 J	0.36 J	0.29 J	0.38 J	0.40 J	0.32 J
Cadmium		mg/kg	25	200	*8.808*	0.31	0.27	0.24	0.22	0.080 J	1.5	0.31	0.33	0.34	0.41
Calcium		mg/kg	NS	NS	NS	25000	20000	39000	18000	2200	3400	31000	8600	11000	6800
Chromium (Total)		mg/kg	NS	NS	NS	13	12	12	16	21	19	11	11	10	9.3
Chromium III		mg/kg	44000	100000	1000000040	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium VI		mg/kg	87	650	*36.2*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt		mg/kg	600	2600	*27.06*	5.3	4.5 J	5.6	9.3	5.6	6.2	5.9	5.9	5.6	4.7
Copper		mg/kg	100	9000	702	13	13	11	16	14	21	15	13	13	12
Iron		mg/kg	30000	100000	NS	12000	12000	12000	16000	15000	15000	12000	11000	12000	9600
Lead		mg/kg	300	700	*2700*	18	18	13	18	6.4	110	55	28	27	21
Magnesium		mg/kg	NS	NS	NS	8200 J	5100	18000	6500	2200	2000	14000	3100	2800	2400
Manganese		mg/kg	3600	8100	*130.2*	*350*	*320*	*430*	*300*	*280*	*540*	*460*	*480*	*440*	*390*
Mercury		mg/kg	0.5	1.5	*3.291*	NA	0.054 J	< 0.10	0.021 J	< 0.11	0.031 J	0.040 J	0.040 J	0.031 J	0.038 J
Nickel		mg/kg	560	2500	*176.2*	16	12	14	22	15	16	17	15	15	12
Potassium		mg/kg	NS	NS	NS	580	930	1400	3400	840	1000	1300	940	900	870
Selenium		mg/kg	160	1300	*2.64*	< 0.47 U	0.47 J	< 0.43	0.34 J	0.43 J	0.63	< 0.52	0.41 J	< 0.54	< 0.44
Silver		mg/kg	160	1300	7.86	0.17 J	< 0.61	< 0.43	< 0.43	< 0.47	< 0.53	< 0.52	< 0.47	< 0.54	< 0.44
Sodium		mg/kg	NS	NS	NS	360 J	180 J	92 J	140 J	63 J	65 J	120 J	82 J	67 J	52 J
Thallium		mg/kg	3	21	0.8892	< 0.94 U	< 1.2	< 0.86	< 0.87	< 0.95	< 1.1	< 1.0	0.13 J	< 1.1	0.14 J
Vanadium		mg/kg	121	121	*4.0004*	*19*	*21*	*17*	*13*	*34*	*30*	*14*	*20*	*21*	*16*
Zinc		mg/kg	8700	75000	*3004*	56	48	37	49	33	100	65	65	70	67
TPH															
Diesel Range Organics**		mg/kg	100	100	NS	15	7.1 J	63 J	21 J	13 J	3.8 J	**160**	**340**	**350**	**160**
Gasoline Range Organics**		mg/kg	100	100	NS	< 12 U	< 14	< 12	< 13	< 13	< 14	< 13	< 11	< 14	< 12
Other Analtyical															
Percent Moisture		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Asbestos		%	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening															
Oil-in-Soil		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Petroleum Sheen Test		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 37.

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	HA-31 HA-31_0-1 (20150625) 6/25/2015 0-1 Fill Soil	AREA-C-TRENCH-1_010 AREA-C-TRENCH-1_010_4-5(20151215) 12/15/2015 4-5 Industrial Waste	AREA-C-TRENCH-1_010 AREA-C-TRENCH-1_010_4-5(20151217) 12/17/2015 4-5 Industrial Waste	AREA-C-TRENCH-1_010 AREA-C-TRENCH-1_010_5-6(20151215) 12/15/2015 5-6 Industrial Waste	AREA-C-TRENCH-1_015 AREA-C-TRENCH-1_015_5-6(20151215) 12/15/2015 5-6 Industrial Waste	AREA C-TRENCH-1 AREA C-TRENCH-1 (20160223) 2/23/2016 0 Industrial Waste
VOCs											
1,1,1,2-Tetrachloroethane		mg/kg	31	51	0.406	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,1,1-Trichloroethane		mg/kg	140	472	55.740	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,1,2,2-Tetrachloroethane		mg/kg	3.5	6.5	0.012	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,1,2-trichloro-1,2,2-trifluoroethane		mg/kg	3745	5430	16884	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,1,2-Trichloroethane		mg/kg	9	14	0.014	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,1-Dichloroethane		mg/kg	34	55	0.407	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,1-Dichloroethene		mg/kg	20	60	1.394	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,1-Dichloropropene		mg/kg	NS	NS	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,2,3-Trichlorobenzene		mg/kg	NS	NS	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,2,3-Trichloropropane		mg/kg	NS	NS	0.267	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,2,4-Trichlorobenzene		mg/kg	200	985	0.226	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,2,4-Trimethylbenzene		mg/kg	8	25	*2.745*	< 0.3	*14*	NA	< 0.31	< 0.31	NA
1,2-Dibromo-3-chloropropane		mg/kg	NS	NS	NS	< 0.6	< 1.5	NA	< 0.62	< 0.62	NA
1,2-Dibromoethane		mg/kg	0.3	0.5	0.00001	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,2-Dichlorobenzene		mg/kg	26	75	*10.553*	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,2-Dichloroethane		mg/kg	4	6	0.004	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,2-Dichloropropane		mg/kg	4	6	0.024	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,3,5-Trimethylbenzene		mg/kg	3	10	*2.733*	< 0.3	*7.5*	NA	< 0.31	< 0.31	NA
1,3-Dichlorobenzene		mg/kg	26	200	10.431	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,3-Dichloropropane		mg/kg	NS	NS	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
1,4-Dichlorobenzene		mg/kg	30	50	0.174	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
2,2-Dichloropropane		mg/kg	NS	NS	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
2-Butanone (MEK)		mg/kg	5500	19000	8.754	< 1.2	< 3	NA	< 1.2	< 1.2	NA
2-Chlorotoluene		mg/kg	436	436	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
4-Chlorotoluene		mg/kg	NS	NS	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
4-Methyl-2-Pentanone		mg/kg	1700	9000	0.757	< 1.2	< 3	NA	< 1.2	< 1.2	NA
Acetone		mg/kg	340	1000	8.398	< 1.2	< 3	NA	< 1.2	< 1.2	NA
Allyl chloride		mg/kg	NS	NS	0.154	< 0.6	< 1.5	NA	< 0.62	< 0.62	NA
Benzene		mg/kg	6	10	*0.017*	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Bromobenzene		mg/kg	NS	NS	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Bromochloromethane		mg/kg	NS	NS	0.277	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Bromodichloromethane		mg/kg	10	17	0.021	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Bromoform		mg/kg	370	650	0.134	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Bromomethane		mg/kg	0.7	2	0.036	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Carbon Disulfide		mg/kg	65	190	3.437	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Carbon Tetrachloride		mg/kg	0.3	0.9	0.008	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
CFC-11		mg/kg	67	195	35.006	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
CFC-12		mg/kg	16	50	36.658	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Chlorobenzene		mg/kg	11	32	1.180	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Chlorodibromomethane		mg/kg	12	20	0.034	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Chloroethane		mg/kg	1000	3000	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Chloroform		mg/kg	2.5	4	0.114	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Chloromethane		mg/kg	8	23	0.113	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
cis-1,2-Dichloroethene		mg/kg	8	22	*0.208*	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
cis-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Cyclohexane		mg/kg	NS	NS	NS	< 0.6	< 1.5	NA	< 0.62	< 0.62	NA
Cymene (p-Isopropyltoluene)		mg/kg	NS	NS	NS	< 0.3	0.33 J	NA	< 0.31	< 0.31	NA
Dibromomethane		mg/kg	260	1860	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Dichloromethane		mg/kg	97	158	*0.017*	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Dichloromonofluoromethane		mg/kg	NS	NS	NS	< 0.6	< 1.5	NA	< 0.62	< 0.62	NA
Diethyl ether		mg/kg	NS	NS	0.512	< 0.6	< 1.5	NA	< 0.62	< 0.62	NA
Ethylbenzene		mg/kg	200	200	*1.048*	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Isopropylbenzene		mg/kg	30	87	*9.463*	< 0.3	0.21 J	NA	< 0.31	< 0.31	NA
Methyl Acetate		mg/kg	NS	NS	NS	0.3 J	0.32 J	NA	< 0.62	< 0.62	NA
Methyl N-Butyl Ketone (2-Hexanone)		mg/kg	NS	NS	NS	< 1.2	< 3	NA	< 1.2	< 1.2	NA
Methylcyclohexane		mg/kg	NS	NS	NS	< 0.6	< 1.5	NA	< 0.62	< 0.62	NA
Methyl-tert-butylether		mg/kg	NS	NS	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Naphthalene		mg/kg	10	28	*4.468*	0.074 J	*14*	NA	< 0.31	0.032 J	NA
N-Butylbenzene		mg/kg	30	92	NS	< 0.3	6.7	NA	< 0.31	< 0.31	NA
N-Propylbenzene		mg/kg	30	93	NS	< 0.3	0.37 J	NA	< 0.31	< 0.31	NA
sec-Butylbenzene		mg/kg	25	70	NS	< 0.3	0.77	NA	< 0.31	< 0.31	NA
Styrene (Monomer)		mg/kg	210	600	2.023	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA

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tert-Butylbenzene		mg/kg	30	90	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Tetrachloroethene		mg/kg	72	131	0.042	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Tetrahydrofuran		mg/kg	NS	NS	0.244	< 1.2	< 3	NA	< 1.2	< 1.2	NA
Toluene		mg/kg	107	305	*2.459*	0.013 J	< 0.75	NA	< 0.31	< 0.31	NA
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Trichloroethene		mg/kg	29	46	*0.002*	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
Vinyl chloride		mg/kg	0.8	2.2	0.001	< 0.3	< 0.75	NA	< 0.31	< 0.31	NA
m,p-Xylene		mg/kg	NS	NS	NS	< 0.3	0.67 J	NA	< 0.31	< 0.31	NA
o-Xylene		mg/kg	NS	NS	NS	< 0.3	1.2	NA	< 0.31	< 0.31	NA
Total Xylenes*		mg/kg	45	130	*5.415*	ND	1.87 J	NA	ND	ND	NA
SVOCs											
1,1-Biphenyl		mg/kg	NS	NS	62.161	< 2.6	< 56	NA	0.0064 J	< 4	NA
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	< 2.6	< 56	NA	< 0.4	< 4	NA
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	< 2.6	< 56	NA	< 0.4	< 4	NA
2,4-Dichlorophenol		mg/kg	48	230	0.153	< 2.6	< 56	NA	< 0.4	< 4	NA
2,4-Dimethylphenol		mg/kg	390	1925	2.167	< 2.6	< 56	NA	< 0.4	< 4	NA
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	< 13	< 270	NA	< 2	< 19	NA
2,4-Dinitrotoluene		mg/kg	50	355	0.013	< 2.6	< 56	NA	< 0.4	< 4	NA
2,6-Dinitrotoluene		mg/kg	25	175	0.013	< 2.6	< 56	NA	< 0.4	< 4	NA
2-Chloronaphthalene		mg/kg	NS	NS	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
2-Chlorophenol		mg/kg	NS	NS	0.520	< 2.6	< 56	NA	< 0.4	< 4	NA
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	< 13	< 270	NA	< 2	< 19	NA
2-Methylnaphthalene		mg/kg	100	369	NS	0.14 J	1.9 J	NA	0.07 J	0.17 J	NA
2-Methylphenol		mg/kg	75	352	0.428	< 2.6	< 56	NA	< 0.4	< 4	NA
2-Nitroaniline		mg/kg	NS	NS	NS	< 13	< 270	NA	< 2	< 19	NA
2-Nitrophenol		mg/kg	NS	NS	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	< 13	< 270	NA	< 2	< 19	NA
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	< 3.2	< 68	NA	< 0.49	< 4.9	NA
3-Nitroaniline		mg/kg	NS	NS	NS	< 13	< 270	NA	< 2	< 19	NA
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
4-Nitroaniline		mg/kg	NS	NS	NS	< 13	< 270	NA	< 2	< 19	NA
4-Nitrophenol		mg/kg	NS	NS	NS	< 13	< 270	NA	< 2	< 19	NA
Acenaphthene		mg/kg	1200	5260	*81.242*	0.43 J	< 56	NA	0.034 J	0.58 J	NA
Acenaphthylene		mg/kg	NS	NS	NS	0.059 J	< 56	NA	0.016 J	0.093 J	NA
Acetophenone		mg/kg	NS	NS	NS	< 2.6	< 56	NA	0.022 J	< 4	NA
Anthracene		mg/kg	7880	45400	1312.816	0.7 J	< 56	NA	0.082 J	1.1 J	NA
Atrazine		mg/kg	NS	NS	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
Benzaldehyde		mg/kg	NS	NS	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
Benzo(a)anthracene		mg/kg	NS	NS	NS	3.4	< 56	NA	0.35 J	5	NA
Benzo(a)pyrene		mg/kg	2	3	*1.410*	***2.4 J***	< 56	NA	0.32 J	*3.9 J*	NA
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	3.9	< 56	NA	0.51	6.4	NA
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	1.4 J	< 56	NA	0.15 J	1.2 J	NA
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	1.5 J	< 56	NA	0.15 J	2.1 J	NA
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	< 2.6	< 56	NA	< 0.4	< 4	NA
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	0.21 J	*52 J*	NA	< 0.4	0.39 J	NA
Butyl benzyl phthalate		mg/kg	580	3700	28.820	< 2.6	< 56	NA	< 0.4	< 4	NA
Caprolactam		mg/kg	NS	NS	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
Carbazole		mg/kg	700	1310	NS	0.73 J	< 56	NA	0.05 J	0.88 J	NA
Chrysene		mg/kg	NS	NS	NS	3.8	< 56	NA	0.41	5.5	NA
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	0.48 J	< 56	NA	0.061 J	0.54 J	NA
Dibenzofuran		mg/kg	104	810	NS	0.18 J	< 56	NA	0.028 J	0.23 J	NA
Diethyl phthalate		mg/kg	NS	NS	37.177	< 2.6	< 56	NA	< 0.4	< 4	NA
Dimethyl phthalate		mg/kg	NS	NS	228.454	< 2.6	< 56	NA	< 0.4	< 4	NA
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	< 2.6	< 56	NA	0.026 J	< 4	NA
Di-n-octyl phthalate		mg/kg	520	3700	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
Fluoranthene		mg/kg	1080	6800	666	6.3	2.1 J	NA	0.66	9.3	NA
Fluorene		mg/kg	850	4120	*110.524*	0.34 J	< 56	NA	0.032 J	0.51 J	NA
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 2.6	< 56	NA	< 0.4	< 4	NA
Hexachlorobenzene		mg/kg	5	9	NS	< 2.6	< 56	NA	< 0.4	< 4	NA

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	HA-31 HA-31_0-1 (20150625) 6/25/2015 0-1 Fill Soil	AREA-C-TRENCH-1_010 AREA-C-TRENCH-1_010_4-5(20151215) 12/15/2015 4-5 Industrial Waste	AREA-C-TRENCH-1_010 AREA-C-TRENCH-1_010_4-5(20151217) 12/17/2015 4-5 Industrial Waste	AREA-C-TRENCH-1_010 AREA-C-TRENCH-1_010_5-6(20151215) 12/15/2015 5-6 Industrial Waste	AREA-C-TRENCH-1_015 AREA-C-TRENCH-1_015_5-6(20151215) 12/15/2015 5-6 Industrial Waste	AREA C-TRENCH-1 AREA C-TRENCH-1 (20160223) 2/23/2016 0 Industrial Waste
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	< 13	< 270	NA	< 2 J	< 19	NA
Hexachloroethane		mg/kg	NS	NS	0.010	< 2.6	< 56	NA	< 0.4	< 4	NA
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	1.2 J	< 56	NA	0.14 J	1.2 J	NA
Isophorone		mg/kg	NS	NS	0.461	< 2.6	< 56	NA	< 0.4	< 4	NA
Naphthalene		mg/kg	10	28	*4.468*	0.18 J	*9.1 J*	NA	0.051 J	0.22 J	NA
Nitrobenzene		mg/kg	NS	NS	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	< 2.6	< 56	NA	< 0.4	< 4	NA
p-Chloroaniline		mg/kg	NS	NS	NS	< 2.6	< 56	NA	< 0.4	< 4	NA
Pentachlorophenol		mg/kg	80	120	*0.023*	< 2.6	< 56	NA	< 0.4	< 4	NA
Phenanthrene		mg/kg	NS	NS	NS	3.4	2.2 J	NA	0.36 J	4.7	NA
Phenol		mg/kg	1500	20203	37.952	< 2.6	1.7 J	NA	< 0.4	< 4	NA
Pyrene		mg/kg	890	5800	*435.120*	5.2	2.9 J	NA	0.56	8	NA
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	**3.708**	< 0	NA	0.4734	5.7283	NA
PCBs											
Aroclor 1016		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0588
Aroclor 1221		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0588
Aroclor 1232		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0588
Aroclor 1242		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0588
Aroclor 1248		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0588
Aroclor 1254		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0588
Aroclor 1260		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0588
Polychlorinated biphenyls		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0588
Metals											
Aluminum		mg/kg	30000	100000	NS	4600	9900	NA	7600	3800	NA
Antimony		mg/kg	12	100	*5.412*	0.54 J	*43*	NA	0.98 J	0.77 J	NA
Arsenic		mg/kg	9	20	*5.82*	3.7	< 1.3	NA	5.1	3.1	NA
Barium		mg/kg	1100	18000	*1684*	180	1400	NA	180	150	NA
Beryllium		mg/kg	55	230	2.72016	0.26 J	< 0.64	NA	0.54	0.20 J	NA
Cadmium		mg/kg	25	200	*8.808*	0.51	1.5	NA	0.24	0.22	NA
Calcium		mg/kg	NS	NS	NS	12000	3200 J	NA	11000	16000	NA
Chromium (Total)		mg/kg	NS	NS	NS	13	1500	NA	15	12	NA
Chromium III		mg/kg	44000	100000	1000000040	NA	1900	NA	18	14	NA
Chromium VI		mg/kg	87	650	*36.2*	NA	*130*	NA	< 4.9	< 0.97	NA
Cobalt		mg/kg	600	2600	*27.06*	5.2	1.2 J	NA	7.3	5.1	NA
Copper		mg/kg	100	9000	702	16	150	NA	14	13	NA
Iron		mg/kg	30000	100000	NS	11000	4100	NA	15000	15000	NA
Lead		mg/kg	300	700	*2700*	71	*9500*	NA	20	73	NA
Magnesium		mg/kg	NS	NS	NS	4600	810	NA	4400	4300	NA
Manganese		mg/kg	3600	8100	*130.2*	*360*	73 J	NA	*430*	*250*	NA
Mercury		mg/kg	0.5	1.5	*3.291*	0.087 J	< 0.14	NA	0.046 J	0.053 J	NA
Nickel		mg/kg	560	2500	*176.2*	14	19	NA	17	12	NA
Potassium		mg/kg	NS	NS	NS	800	200 J	NA	900	740	NA
Selenium		mg/kg	160	1300	*2.64*	0.32 J	0.61 J	NA	0.58	< 0.50	NA
Silver		mg/kg	160	1300	7.86	< 0.48	0.11 J	NA	< 0.50	< 0.50	NA
Sodium		mg/kg	NS	NS	NS	73 J	500 J	NA	67 J	67 J	NA
Thallium		mg/kg	3	21	0.8892	< 0.95	< 1.3	NA	0.15 J	0.15 J	NA
Vanadium		mg/kg	121	121	*4.0004*	*16*	3.3 J	NA	*24*	*12*	NA
Zinc		mg/kg	8700	75000	*3004*	61	330	NA	46	37	NA
TPH											
Diesel Range Organics**		mg/kg	100	100	NS	**140**	6000	NA	71	53 J	NA
Gasoline Range Organics**		mg/kg	100	100	NS	< 12	42	NA	2.8 J	< 11	NA
Other Analtyical											
Percent Moisture		%	NS	NS	NS	NA	NA	NA	NA	NA	15.0
Asbestos		%	NS	NS	NS	NA	NA	< 1	NA	NA	NA
Field Screening											
Oil-in-Soil		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Petroleum Sheen Test		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 37.

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	AREA C-TRENCH-2_00 AREA C-TRENCH-2_00_9-10 (20160112) 1/12/2016 9-10 Industrial Waste	AREA C-TRENCH-2_00 AREA C-TRENCH-2_00_12-13 (20160112) 1/12/2016 12-13 Industrial Waste	AREA C-TRENCH-2_08 AREA C-TRENCH-2_08_4-5 (20160112) 1/12/2016 4-5 Industrial Waste	AREA C-TRENCH-2_013 AREA C-TRENCH-2_013_6-7 (20160112) 1/12/2016 6-7 Industrial Waste	AREA C-TRENCH-2_015 AREA C-TRENCH-2_015_6-7 (20160112) 1/12/2016 6-7 Industrial Waste	AREA C-TRENCH-2_015 AREA C-TRENCH-2_015_6-7 (20160223) 2/23/2016 6-7 Industrial Waste
VOCs											
1,1,1,2-Tetrachloroethane		mg/kg	31	51	0.406	< 0.26	< 1	< 39	< 320	< 160	NA
1,1,1-Trichloroethane		mg/kg	140	472	55.740	< 0.26	< 1	< 39	< 320	< 160	NA
1,1,2,2-Tetrachloroethane		mg/kg	3.5	6.5	0.012	< 0.26	< 1	< 39	< 320	< 160	NA
1,1,2-trichloro-1,2,2-trifluoroethane		mg/kg	3745	5430	16884	< 0.26	< 1	< 39	< 320	< 160	NA
1,1,2-Trichloroethane		mg/kg	9	14	0.014	< 0.26	< 1	< 39	< 320	< 160	NA
1,1-Dichloroethane		mg/kg	34	55	0.407	< 0.26	< 1	< 39	< 320	< 160	NA
1,1-Dichloroethene		mg/kg	20	60	1.394	< 0.26	< 1	< 39	< 320	< 160	NA
1,1-Dichloropropene		mg/kg	NS	NS	NS	< 0.26	< 1	< 39	< 320	< 160	NA
1,2,3-Trichlorobenzene		mg/kg	NS	NS	NS	< 0.26	< 1	< 39	< 320	< 160	NA
1,2,3-Trichloropropane		mg/kg	NS	NS	0.267	< 0.26	< 1	< 39	< 320	< 160	NA
1,2,4-Trichlorobenzene		mg/kg	200	985	0.226	< 0.26	< 1	< 39	< 320	< 160	NA
1,2,4-Trimethylbenzene		mg/kg	8	25	*2.745*	*3.9*	*13*	*570*	*1700*	*320*	NA
1,2-Dibromo-3-chloropropane		mg/kg	NS	NS	NS	< 0.53	< 2	< 78	< 640	< 320	NA
1,2-Dibromoethane		mg/kg	0.3	0.5	0.00001	< 0.26	< 1	< 39	< 320	< 160	NA
1,2-Dichlorobenzene		mg/kg	26	75	*10.553*	< 0.26	< 1	< 39	< 320	*12 J*	NA
1,2-Dichloroethane		mg/kg	4	6	0.004	< 0.26	< 1	< 39	< 320	< 160	NA
1,2-Dichloropropane		mg/kg	4	6	0.024	< 0.26	< 1	< 39	< 320	< 160	NA
1,3,5-Trimethylbenzene		mg/kg	3	10	*2.733*	0.079 J	*3.1*	*140*	*460*	*90 J*	NA
1,3-Dichlorobenzene		mg/kg	26	200	10.431	< 0.26	< 1	< 39	< 320	< 160	NA
1,3-Dichloropropane		mg/kg	NS	NS	NS	< 0.26	< 1	< 39	< 320	< 160	NA
1,4-Dichlorobenzene		mg/kg	30	50	0.174	< 0.26	< 1	< 39	< 320	< 160	NA
2,2-Dichloropropane		mg/kg	NS	NS	NS	< 0.26	< 1	< 39	< 320	< 160	NA
2-Butanone (MEK)		mg/kg	5500	19000	8.754	0.26 J	< 4.1	< 160	< 1300	< 640	NA
2-Chlorotoluene		mg/kg	436	436	NS	< 0.26	< 1	< 39	< 320	< 160	NA
4-Chlorotoluene		mg/kg	NS	NS	NS	< 0.26	< 1	< 39	< 320	< 160	NA
4-Methyl-2-Pentanone		mg/kg	1700	9000	0.757	< 1.1	< 4.1	< 160	< 1300	< 640	NA
Acetone		mg/kg	340	1000	8.398	< 1.1	< 4.1	< 160	< 1300	< 640	NA
Allyl chloride		mg/kg	NS	NS	0.154	< 0.53	< 2	< 78	< 640	< 320	NA
Benzene		mg/kg	6	10	*0.017*	*0.15 J*	*0.059 J*	< 39	< 320	*5.9 J*	NA
Bromobenzene		mg/kg	NS	NS	NS	< 0.26	< 1	< 39	< 320	< 160	NA
Bromochloromethane		mg/kg	NS	NS	0.277	< 0.26	< 1	< 39	< 320	< 160	NA
Bromodichloromethane		mg/kg	10	17	0.021	< 0.26	< 1	< 39	< 320	< 160	NA
Bromoform		mg/kg	370	650	0.134	< 0.26	< 1	< 39	< 320	< 160	NA
Bromomethane		mg/kg	0.7	2	0.036	< 0.26	< 1	< 39	< 320	< 160	NA
Carbon Disulfide		mg/kg	65	190	3.437	< 0.26	< 1	< 39	< 320	< 160	NA
Carbon Tetrachloride		mg/kg	0.3	0.9	0.008	< 0.26	< 1	< 39	< 320	< 160	NA
CFC-11		mg/kg	67	195	35.006	< 0.26	< 1	< 39	< 320	< 160	NA
CFC-12		mg/kg	16	50	36.658	< 0.26	< 1	< 39	< 320	< 160	NA
Chlorobenzene		mg/kg	11	32	1.180	< 0.26	< 1	< 39	< 320	< 160	NA
Chlorodibromomethane		mg/kg	12	20	0.034	< 0.26	< 1	< 39	< 320	< 160	NA
Chloroethane		mg/kg	1000	3000	NS	< 0.26	< 1	< 39	< 320	< 160	NA
Chloroform		mg/kg	2.5	4	0.114	< 0.26	< 1	< 39	< 320	< 160	NA
Chloromethane		mg/kg	8	23	0.113	< 0.26	< 1	< 39	< 320	< 160	NA
cis-1,2-Dichloroethene		mg/kg	8	22	*0.208*	< 0.26	< 1	< 39	< 320	< 160	NA
cis-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.26	< 1	< 39	< 320	< 160	NA
Cyclohexane		mg/kg	NS	NS	NS	0.37 J	< 2	< 78	43 J	28 J	NA
Cymene (p-Isopropyltoluene)		mg/kg	NS	NS	NS	0.075 J	0.27 J	13 J	< 320	< 160	NA
Dibromomethane		mg/kg	260	1860	NS	< 0.26	< 1	< 39	< 320	< 160	NA
Dichloromethane		mg/kg	97	158	*0.017*	< 0.26	< 1	< 39	< 320	< 160	NA
Dichloromonofluoromethane		mg/kg	NS	NS	NS	< 0.53	< 2	< 78	< 640	< 320	NA
Diethyl ether		mg/kg	NS	NS	0.512	< 0.53	< 2	< 78	< 640	< 320	NA
Ethylbenzene		mg/kg	200	200	*1.048*	0.34	*5.3*	*170*	*1200*	*1400*	NA
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 0.26	< 1	< 39	< 320	< 160	NA
Isopropylbenzene		mg/kg	30	87	*9.463*	0.24 J	0.39 J	*16 J*	*100 J*	*46 J*	NA
Methyl Acetate		mg/kg	NS	NS	NS	0.17 J	< 2	< 78	< 640	< 320	NA
Methyl N-Butyl Ketone (2-Hexanone)		mg/kg	NS	NS	NS	< 1.1	< 4.1	< 160	< 1300	< 640	NA
Methylcyclohexane		mg/kg	NS	NS	NS	1.6	0.91 J	12 J	210 J	230 J	NA
Methyl-tert-butylether		mg/kg	NS	NS	NS	< 0.26	< 1	< 39	< 320	< 160	NA
Naphthalene		mg/kg	10	28	*4.468*	1.2	*8.8*	*310*	*800*	*260*	NA
N-Butylbenzene		mg/kg	30	92	NS	0.28	3.7	170	320	150 J	NA
N-Propylbenzene		mg/kg	30	93	NS	0.6	1.2	52	290 J	63 J	NA
sec-Butylbenzene		mg/kg	25	70	NS	0.07 J	0.36 J	17 J	42 J	10 J	NA
Styrene (Monomer)		mg/kg	210	600	2.023	< 0.26	< 1	< 39	< 320	< 160	NA

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966 South Mississippi River Boulevard
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ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	AREA C-TRENCH-2_00 AREA C-TRENCH-2_00_9-10 (20160112) 1/12/2016 9-10 Industrial Waste	AREA C-TRENCH-2_00 AREA C-TRENCH-2_00_12-13 (20160112) 1/12/2016 12-13 Industrial Waste	AREA C-TRENCH-2_08 AREA C-TRENCH-2_08_4-5 (20160112) 1/12/2016 4-5 Industrial Waste	AREA C-TRENCH-2_013 AREA C-TRENCH-2_013_6-7 (20160112) 1/12/2016 6-7 Industrial Waste	AREA C-TRENCH-2_015 AREA C-TRENCH-2_015_6-7 (20160112) 1/12/2016 6-7 Industrial Waste	AREA C-TRENCH-2_015 AREA C-TRENCH-2_015_6-7 (20160223) 2/23/2016 6-7 Industrial Waste
tert-Butylbenzene		mg/kg	30	90	NS	< 0.26	< 1	< 39	< 320	< 160	NA
Tetrachloroethene		mg/kg	72	131	0.042	< 0.26	< 1	< 39	< 320	< 160	NA
Tetrahydrofuran		mg/kg	NS	NS	0.244	< 1.1	< 4.1	< 160	< 1300	< 640	NA
Toluene		mg/kg	107	305	*2.459*	0.043 J	2.2	*60*	*960*	*1500*	NA
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	< 0.26	< 1	< 39	< 320	< 160	NA
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	< 0.26	< 1	< 39	< 320	< 160	NA
Trichloroethene		mg/kg	29	46	*0.002*	< 0.26	< 1	< 39	< 320	< 160	NA
Vinyl chloride		mg/kg	0.8	2.2	0.001	< 0.26	< 1	< 39	< 320	< 160	NA
m,p-Xylene		mg/kg	NS	NS	NS	9.4	26	920	5500	5300	NA
o-Xylene		mg/kg	NS	NS	NS	0.22 J	8.4	350	2000	1900	NA
Total Xylenes*		mg/kg	45	130	*5.415*	*9.62 J*	*34.4*	*1270*	*7500*	*7200*	NA
SVOCs											
1,1-Biphenyl		mg/kg	NS	NS	62.161	0.15 J	< 37	< 790	8.1 J	< 22	NA
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	< 9.3	< 37	< 790	< 620	< 22	NA
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	< 9.3	< 37	< 790	< 620	< 22	NA
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	< 9.3	< 37	< 790	< 620	< 22	NA
2,4-Dichlorophenol		mg/kg	48	230	0.153	< 9.3	< 37	< 790	< 620	< 22	NA
2,4-Dimethylphenol		mg/kg	390	1925	2.167	< 9.3	< 37	< 790	< 620	< 22	NA
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	< 45	< 180	< 3900	< 3000	< 110	NA
2,4-Dinitrotoluene		mg/kg	50	355	0.013	< 9.3	< 37	< 790	< 620	< 22	NA
2,6-Dinitrotoluene		mg/kg	25	175	0.013	< 9.3	< 37	< 790	< 620	< 22	NA
2-Chloronaphthalene		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
2-Chlorophenol		mg/kg	NS	NS	0.520	< 9.3	< 37	< 790	< 620	< 22	NA
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	< 45	< 180	< 3900	< 3000	< 110	NA
2-Methylnaphthalene		mg/kg	100	369	NS	0.79 J	1.9 J	260 J	190 J	19 J	NA
2-Methylphenol		mg/kg	75	352	0.428	< 9.3	< 37	< 790	< 620	< 22	NA
2-Nitroaniline		mg/kg	NS	NS	NS	< 45	< 180	< 3900	< 3000	< 110	NA
2-Nitrophenol		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	< 45	< 180	< 3900	< 3000	< 110	NA
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	< 11	< 44	< 960	< 760	< 27	NA
3-Nitroaniline		mg/kg	NS	NS	NS	< 45	< 180	< 3900	< 3000	< 110	NA
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
4-Nitroaniline		mg/kg	NS	NS	NS	< 45	< 180	< 3900	< 3000	< 110	NA
4-Nitrophenol		mg/kg	NS	NS	NS	< 45	< 180	< 3900	< 3000	< 110	NA
Acenaphthene		mg/kg	1200	5260	*81.242*	2.2 J	5.1 J	< 790	7.8 J	0.24 J	NA
Acenaphthylene		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
Acetophenone		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
Anthracene		mg/kg	7880	45400	1312.816	3.1 J	11 J	< 790	9.7 J	0.27 J	NA
Atrazine		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
Benzaldehyde		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
Benzo(a)anthracene		mg/kg	NS	NS	NS	14	45	< 790	14 J	0.82 J	NA
Benzo(a)pyrene		mg/kg	2	3	*1.410*	*10*	*32 J*	< 790	*6.7 J*	0.56 J	NA
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	17	49	< 790	10 J	0.91 J	NA
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	5.6 J	17 J	< 790	< 620	0.38 J	NA
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	6.1 J	22 J	< 790	< 620	0.33 J	NA
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	< 9.3	< 37	< 790	< 620	< 22	NA
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	< 9.3	< 37	< 790	< 620	< 22	NA
Butyl benzyl phthalate		mg/kg	580	3700	28.820	< 9.3	< 37	< 790	< 620	< 22	NA
Caprolactam		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
Carbazole		mg/kg	700	1310	NS	4.1 J	9.8 J	< 790	< 620	< 22	NA
Chrysene		mg/kg	NS	NS	NS	17	54	< 790	14 J	0.86 J	NA
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	1.9 J	5.5 J	< 790	< 620	< 22	NA
Dibenzofuran		mg/kg	104	810	NS	1.1 J	2.5 J	< 790	< 620	< 22	NA
Diethyl phthalate		mg/kg	NS	NS	37.177	< 9.3	< 37	< 790	< 620	< 22	NA
Dimethyl phthalate		mg/kg	NS	NS	228.454	< 9.3	< 37	< 790	< 620	< 22	NA
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	< 9.3	< 37	< 790	< 620	< 22	NA
Di-n-octyl phthalate		mg/kg	520	3700	NS	< 9.3	< 37	< 790	< 620	< 22	NA
Fluoranthene		mg/kg	1080	6800	666	33	96	17 J	34 J	1.8 J	NA
Fluorene		mg/kg	850	4120	*110.524*	2.1 J	5.7 J	11 J	11 J	0.27 J	NA
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	< 9.3	< 37	< 790	< 620	< 22	NA
Hexachlorobenzene		mg/kg	5	9	NS	< 9.3	< 37	< 790	< 620	< 22	NA

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	AREA C-TRENCH-2_00 AREA C-TRENCH-2_00_9-10 (20160112) 1/12/2016 9-10 Industrial Waste	AREA C-TRENCH-2_00 AREA C-TRENCH-2_00_12-13 (20160112) 1/12/2016 12-13 Industrial Waste	AREA C-TRENCH-2_08 AREA C-TRENCH-2_08_4-5 (20160112) 1/12/2016 4-5 Industrial Waste	AREA C-TRENCH-2_013 AREA C-TRENCH-2_013_6-7 (20160112) 1/12/2016 6-7 Industrial Waste	AREA C-TRENCH-2_015 AREA C-TRENCH-2_015_6-7 (20160112) 1/12/2016 6-7 Industrial Waste	AREA C-TRENCH-2_015 AREA C-TRENCH-2_015_6-7 (20160223) 2/23/2016 6-7 Industrial Waste
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	< 45	< 180	< 3900	< 3000	< 110	NA
Hexachloroethane		mg/kg	NS	NS	0.010	< 9.3	< 37	< 790	< 620	< 22	NA
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	5.1 J	16 J	< 790	< 620	0.33 J	NA
Isophorone		mg/kg	NS	NS	0.461	< 9.3	< 37	< 790	< 620	< 22	NA
Naphthalene		mg/kg	10	28	*4.468*	1.7 J	*6.7 J*	*2200*	*1400*	*100*	NA
Nitrobenzene		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	< 9.3	< 37	< 790	< 620	< 22	NA
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	< 9.3	< 37	< 790	< 620	< 22	NA
p-Chloroaniline		mg/kg	NS	NS	NS	< 9.3	< 37	< 790	< 620	< 22	NA
Pentachlorophenol		mg/kg	80	120	*0.023*	< 9.3	< 37	< 790	< 620	< 22	NA
Phenanthrene		mg/kg	NS	NS	NS	21	53	29 J	53 J	1.6 J	NA
Phenol		mg/kg	1500	20203	37.952	< 9.3	< 37	< 790	< 620	< 22	NA
Pyrene		mg/kg	890	5800	*435.120*	23	73	13 J	25 J	1.4 J	NA
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	13.27	47.229	< 0	9.24	0.775	NA
PCBs											
Aroclor 1016		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0690
Aroclor 1221		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0690
Aroclor 1232		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0690
Aroclor 1242		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	0.0730
Aroclor 1248		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	< 0.0690
Aroclor 1254		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	0.627
Aroclor 1260		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	0.21
Polychlorinated biphenyls		mg/kg	1.2	8	NS	NA	NA	NA	NA	NA	0.91
Metals											
Aluminum		mg/kg	30000	100000	NS	3900	3000	6400	4500	2400	NA
Antimony		mg/kg	12	100	*5.412*	*8.0*	*54*	*170*	*1100*	*22 J*	NA
Arsenic		mg/kg	9	20	*5.82*	*14*	*17*	*33*	*120*	*12*	NA
Barium		mg/kg	1100	18000	*1684*	210	370	*15000*	*19000*	1600	NA
Beryllium		mg/kg	55	230	2.72016	0.25 J	0.17 J	0.13 J	0.11 J	0.14 J	NA
Cadmium		mg/kg	25	200	*8.808*	0.70	0.62	6.3	*14*	2.1	NA
Calcium		mg/kg	NS	NS	NS	30000	12000	6000	9000	18000 J	NA
Chromium (Total)		mg/kg	NS	NS	NS	17	26	2200	1400	59 J	NA
Chromium III		mg/kg	44000	100000	1000000040	17	26	2100	1400	57	NA
Chromium VI		mg/kg	87	650	*36.2*	< 0.91	< 0.89	*59*	23	2.0	NA
Cobalt		mg/kg	600	2600	*27.06*	5.2 J	4.5	6.6	4.3 J	4.1 J	NA
Copper		mg/kg	100	9000	702	24	30	300	240	29	NA
Iron		mg/kg	30000	100000	NS	15000	8700	18000	16000	11000	NA
Lead		mg/kg	300	700	*2700*	210	2500	*12000*	*28000*	2300	NA
Magnesium		mg/kg	NS	NS	NS	5000	3600	2700	2500	5400	NA
Manganese		mg/kg	3600	8100	*130.2*	*490*	*220*	*150*	*160*	*230 J*	NA
Mercury		mg/kg	0.5	1.5	*3.291*	0.10 J	0.073 J	0.47	0.45	0.11 J	NA
Nickel		mg/kg	560	2500	*176.2*	17	30	*280*	*270*	59	NA
Potassium		mg/kg	NS	NS	NS	550	430	370 J	640	460 J	NA
Selenium		mg/kg	160	1300	*2.64*	0.42 J	< 0.42	0.95	2.1	< 0.52	NA
Silver		mg/kg	160	1300	7.86	0.12 J	0.69	0.40 J	1.9	0.12 J	NA
Sodium		mg/kg	NS	NS	NS	760	320 J	570 J	1600	650	NA
Thallium		mg/kg	3	21	0.8892	0.30 J	< 0.84	0.34 J	< 0.93	< 1.0	NA
Vanadium		mg/kg	121	121	*4.0004*	*16*	*13*	*4.3 J*	*4.8*	*16*	NA
Zinc		mg/kg	8700	75000	*3004*	170	270	*6900*	*9400*	870	NA
TPH											
Diesel Range Organics**		mg/kg	100	100	NS	2300	1700	42000	38000	25000	NA
Gasoline Range Organics**		mg/kg	100	100	NS	45	550	2900	19000	16000	NA
Other Analtyical											
Percent Moisture		%	NS	NS	NS	NA	NA	NA	NA	NA	27.6
Asbestos		%	NS	NS	NS	NA	NA	NA	NA	NA	NA
Field Screening											
Oil-in-Soil		NA	NA	NA	NA	Negative	Negative	Negative	Negative	Positive	NA
Petroleum Sheen Test		NA	NA	NA	NA	Negative	Positive	Negative	Negative	Positive	NA

Notes and Abbreviations on Page 37.

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	AREA C-TRENCH-2 AREA C-TRENCH-2 (20160223) 2/23/2016 0 Industrial Waste	AREA C-TRENCH-3_07 AREA C-TRENCH-3_07_3-4(20160114) 1/14/2016 3-4 Industrial Waste	AREA C-TRENCH-3_010 AREA C-TRENCH-3_010_9-10(20160114) 1/14/2016 9-10 Industrial Waste	AREA C-TRENCH-3_010 AREA C-TRENCH-3_010_9-10 (20160223) 2/23/2016 9-10 Industrial Waste	AREA C-TRENCH-3_022 AREA C-TRENCH-3_022_2-3(20160114) 1/14/2016 2-3 Industrial Waste	AREA C-TRENCH-3_022 AREA C-TRENCH-3_022_2-3 (201600223) 2/23/2016 2-3 Industrial Waste
VOCs											
1,1,1,2-Tetrachloroethane		mg/kg	31	51	0.406	NA	< 87	< 92	NA	< 0.26	NA
1,1,1-Trichloroethane		mg/kg	140	472	55.740	NA	< 87	< 92	NA	< 0.26	NA
1,1,2,2-Tetrachloroethane		mg/kg	3.5	6.5	0.012	NA	< 87	< 92	NA	< 0.26	NA
1,1,2-trichloro-1,2,2-trifluoroethane		mg/kg	3745	5430	16884	NA	< 87	< 92	NA	< 0.26	NA
1,1,2-Trichloroethane		mg/kg	9	14	0.014	NA	< 87	< 92	NA	< 0.26	NA
1,1-Dichloroethane		mg/kg	34	55	0.407	NA	< 87	< 92	NA	< 0.26	NA
1,1-Dichloroethene		mg/kg	20	60	1.394	NA	< 87	< 92	NA	< 0.26	NA
1,1-Dichloropropene		mg/kg	NS	NS	NS	NA	< 87	< 92	NA	< 0.26	NA
1,2,3-Trichlorobenzene		mg/kg	NS	NS	NS	NA	< 87	< 92	NA	< 0.26	NA
1,2,3-Trichloropropane		mg/kg	NS	NS	0.267	NA	< 87	< 92	NA	< 0.26	NA
1,2,4-Trichlorobenzene		mg/kg	200	985	0.226	NA	< 87	< 92	NA	< 0.26	NA
1,2,4-Trimethylbenzene		mg/kg	8	25	*2.745*	NA	*920*	*1200*	NA	0.029 J	NA
1,2-Dibromo-3-chloropropane		mg/kg	NS	NS	NS	NA	< 170	< 180	NA	< 0.52	NA
1,2-Dibromoethane		mg/kg	0.3	0.5	0.00001	NA	< 87	< 92	NA	< 0.26	NA
1,2-Dichlorobenzene		mg/kg	26	75	*10.553*	NA	< 87	< 92	NA	< 0.26	NA
1,2-Dichloroethane		mg/kg	4	6	0.004	NA	< 87	< 92	NA	< 0.26	NA
1,2-Dichloropropane		mg/kg	4	6	0.024	NA	< 87	< 92	NA	< 0.26	NA
1,3,5-Trimethylbenzene		mg/kg	3	10	*2.733*	NA	*250*	*330*	NA	0.02 J	NA
1,3-Dichlorobenzene		mg/kg	26	200	10.431	NA	< 87	< 92	NA	< 0.26	NA
1,3-Dichloropropane		mg/kg	NS	NS	NS	NA	< 87	< 92	NA	< 0.26	NA
1,4-Dichlorobenzene		mg/kg	30	50	0.174	NA	< 87	< 92	NA	< 0.26	NA
2,2-Dichloropropane		mg/kg	NS	NS	NS	NA	< 87	< 92	NA	< 0.26	NA
2-Butanone (MEK)		mg/kg	5500	19000	8.754	NA	< 350	< 370	NA	< 1	NA
2-Chlorotoluene		mg/kg	436	436	NS	NA	< 87	< 92	NA	< 0.26	NA
4-Chlorotoluene		mg/kg	NS	NS	NS	NA	< 87	< 92	NA	< 0.26	NA
4-Methyl-2-Pentanone		mg/kg	1700	9000	0.757	NA	< 350	< 370	NA	< 1	NA
Acetone		mg/kg	340	1000	8.398	NA	< 350	< 370	NA	< 1	NA
Allyl chloride		mg/kg	NS	NS	0.154	NA	< 170	< 180	NA	< 0.52	NA
Benzene		mg/kg	6	10	*0.017*	NA	< 87	< 92	NA	< 0.26	NA
Bromobenzene		mg/kg	NS	NS	NS	NA	< 87	< 92	NA	< 0.26	NA
Bromochloromethane		mg/kg	NS	NS	0.277	NA	< 87	< 92	NA	< 0.26	NA
Bromodichloromethane		mg/kg	10	17	0.021	NA	< 87	< 92	NA	< 0.26	NA
Bromoform		mg/kg	370	650	0.134	NA	< 87	< 92	NA	< 0.26	NA
Bromomethane		mg/kg	0.7	2	0.036	NA	< 87	< 92	NA	< 0.26	NA
Carbon Disulfide		mg/kg	65	190	3.437	NA	< 87	< 92	NA	< 0.26	NA
Carbon Tetrachloride		mg/kg	0.3	0.9	0.008	NA	< 87	< 92	NA	< 0.26	NA
CFC-11		mg/kg	67	195	35.006	NA	< 87	< 92	NA	< 0.26	NA
CFC-12		mg/kg	16	50	36.658	NA	< 87	< 92	NA	< 0.26	NA
Chlorobenzene		mg/kg	11	32	1.180	NA	< 87	< 92	NA	< 0.26	NA
Chlorodibromomethane		mg/kg	12	20	0.034	NA	< 87	< 92	NA	< 0.26	NA
Chloroethane		mg/kg	1000	3000	NS	NA	< 87	< 92	NA	< 0.26	NA
Chloroform		mg/kg	2.5	4	0.114	NA	< 87	< 92	NA	< 0.26	NA
Chloromethane		mg/kg	8	23	0.113	NA	< 87	< 92	NA	< 0.26	NA
cis-1,2-Dichloroethene		mg/kg	8	22	*0.208*	NA	< 87	< 92	NA	< 0.26	NA
cis-1,3-Dichloropropene		mg/kg	NS	NS	NS	NA	< 87	< 92	NA	< 0.26	NA
Cyclohexane		mg/kg	NS	NS	NS	NA	< 170	< 180	NA	< 0.52	NA
Cymene (p-Isopropyltoluene)		mg/kg	NS	NS	NS	NA	21 J	26 J	NA	< 0.26	NA
Dibromomethane		mg/kg	260	1860	NS	NA	< 87	< 92	NA	< 0.26	NA
Dichloromethane		mg/kg	97	158	*0.017*	NA	< 87	< 92	NA	< 0.26	NA
Dichloromonofluoromethane		mg/kg	NS	NS	NS	NA	< 170	< 180	NA	< 0.52	NA
Diethyl ether		mg/kg	NS	NS	0.512	NA	< 170	< 180	NA	< 0.52	NA
Ethylbenzene		mg/kg	200	200	*1.048*	NA	*370*	*520*	NA	< 0.26	NA
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	NA	< 87	< 92	NA	< 0.26	NA
Isopropylbenzene		mg/kg	30	87	*9.463*	NA	*56 J*	*79 J*	NA	< 0.26	NA
Methyl Acetate		mg/kg	NS	NS	NS	NA	< 170	< 180	NA	< 0.52	NA
Methyl N-Butyl Ketone (2-Hexanone)		mg/kg	NS	NS	NS	NA	< 350	< 370	NA	< 1	NA
Methylcyclohexane		mg/kg	NS	NS	NS	NA	37 J	37 J	NA	< 0.52	NA
Methyl-tert-butylether		mg/kg	NS	NS	NS	NA	< 87	< 92	NA	< 0.26	NA
Naphthalene		mg/kg	10	28	*4.468*	NA	*640*	*820*	NA	0.36	NA
N-Butylbenzene		mg/kg	30	92	NS	NA	120	170	NA	0.023 J	NA
N-Propylbenzene		mg/kg	30	93	NS	NA	160	240	NA	< 0.26	NA
sec-Butylbenzene		mg/kg	25	70	NS	NA	29 J	38 J	NA	< 0.26	NA
Styrene (Monomer)		mg/kg	210	600	2.023	NA	< 87	< 92	NA	< 0.26	NA

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tert-Butylbenzene		mg/kg	30	90	NS	NA	< 87	< 92	NA	< 0.26	NA
Tetrachloroethene		mg/kg	72	131	0.042	NA	< 87	< 92	NA	< 0.26	NA
Tetrahydrofuran		mg/kg	NS	NS	0.244	NA	< 350	< 370	NA	< 1	NA
Toluene		mg/kg	107	305	*2.459*	NA	*190*	*230*	NA	< 0.26 J	NA
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	NA	< 87	< 92	NA	< 0.26	NA
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	NA	< 87	< 92	NA	< 0.26	NA
Trichloroethene		mg/kg	29	46	*0.002*	NA	< 87	< 92	NA	< 0.26	NA
Vinyl chloride		mg/kg	0.8	2.2	0.001	NA	< 87	< 92	NA	< 0.26	NA
m,p-Xylene		mg/kg	NS	NS	NS	NA	2000	2600	NA	0.036 J	NA
o-Xylene		mg/kg	NS	NS	NS	NA	1000	1200	NA	0.018 J	NA
Total Xylenes*		mg/kg	45	130	*5.415*	NA	*3000*	*3800*	NA	0.054 J	NA
SVOCs											
1,1-Biphenyl		mg/kg	NS	NS	62.161	NA	< 59	18 J	NA	0.49 J	NA
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	NA	< 59	< 620	NA	< 18	NA
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	NA	< 59	< 620	NA	< 18	NA
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	NA	< 59	< 620	NA	< 18	NA
2,4-Dichlorophenol		mg/kg	48	230	0.153	NA	< 59	< 620	NA	< 18	NA
2,4-Dimethylphenol		mg/kg	390	1925	2.167	NA	< 59	< 620	NA	< 18	NA
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	NA	< 280	< 3000	NA	< 88	NA
2,4-Dinitrotoluene		mg/kg	50	355	0.013	NA	< 59	< 620	NA	< 18	NA
2,6-Dinitrotoluene		mg/kg	25	175	0.013	NA	< 59	< 620	NA	< 18	NA
2-Chloronaphthalene		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
2-Chlorophenol		mg/kg	NS	NS	0.520	NA	< 59	< 620	NA	< 18	NA
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	NA	< 280	< 3000	NA	< 88	NA
2-Methylnaphthalene		mg/kg	100	369	NS	NA	5.9 J	180 J	NA	2.1 J	NA
2-Methylphenol		mg/kg	75	352	0.428	NA	< 59	< 620	NA	< 18	NA
2-Nitroaniline		mg/kg	NS	NS	NS	NA	< 280	< 3000	NA	< 88	NA
2-Nitrophenol		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	NA	< 280	< 3000	NA	< 88	NA
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	NA	< 71	< 750	NA	< 22	NA
3-Nitroaniline		mg/kg	NS	NS	NS	NA	< 280	< 3000	NA	< 88	NA
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
4-Nitroaniline		mg/kg	NS	NS	NS	NA	< 280	< 3000	NA	< 88	NA
4-Nitrophenol		mg/kg	NS	NS	NS	NA	< 280	< 3000	NA	< 88	NA
Acenaphthene		mg/kg	1200	5260	*81.242*	NA	< 59	76 J	NA	4.3 J	NA
Acenaphthylene		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	0.64 J	NA
Acetophenone		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
Anthracene		mg/kg	7880	45400	1312.816	NA	< 59	110 J	NA	9.7 J	NA
Atrazine		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
Benzaldehyde		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
Benzo(a)anthracene		mg/kg	NS	NS	NS	NA	< 59	120 J	NA	25	NA
Benzo(a)pyrene		mg/kg	2	3	*1.410*	NA	< 59	*110 J*	NA	*25*	NA
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	NA	< 59	130 J	NA	31	NA
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	NA	< 59	77 J	NA	16 J	NA
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	NA	< 59	57 J	NA	15 J	NA
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	NA	< 59	< 620	NA	< 18	NA
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	NA	< 59	< 620	NA	< 18	NA
Butyl benzyl phthalate		mg/kg	580	3700	28.820	NA	< 59	< 620	NA	< 18	NA
Caprolactam		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
Carbazole		mg/kg	700	1310	NS	NA	< 59	67 J	NA	4.7 J	NA
Chrysene		mg/kg	NS	NS	NS	NA	< 59	120 J	NA	27	NA
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	NA	< 59	17 J	NA	4.3 J	NA
Dibenzofuran		mg/kg	104	810	NS	NA	< 59	81 J	NA	3.1 J	NA
Diethyl phthalate		mg/kg	NS	NS	37.177	NA	< 59	< 620	NA	< 18	NA
Dimethyl phthalate		mg/kg	NS	NS	228.454	NA	< 59	< 620	NA	< 18	NA
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	NA	< 59	< 620	NA	< 18	NA
Di-n-octyl phthalate		mg/kg	520	3700	NS	NA	< 59	< 620	NA	< 18	NA
Fluoranthene		mg/kg	1080	6800	666	NA	< 59	390 J	NA	57	NA
Fluorene		mg/kg	850	4120	*110.524*	NA	< 59	100 J	NA	5.5 J	NA
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	NA	< 59	< 620	NA	< 18	NA
Hexachlorobenzene		mg/kg	5	9	NS	NA	< 59	< 620	NA	< 18	NA

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	AREA C-TRENCH-2 AREA C-TRENCH-2 (20160223) 2/23/2016 0 Industrial Waste	AREA C-TRENCH-3_07 AREA C-TRENCH-3_07_3-4(20160114) 1/14/2016 3-4 Industrial Waste	AREA C-TRENCH-3_010 AREA C-TRENCH-3_010_9-10(20160114) 1/14/2016 9-10 Industrial Waste	AREA C-TRENCH-3_010 AREA C-TRENCH-3_010_9-10 (20160223) 2/23/2016 9-10 Industrial Waste	AREA C-TRENCH-3_022 AREA C-TRENCH-3_022_2-3(20160114) 1/14/2016 2-3 Industrial Waste	AREA C-TRENCH-3_022 AREA C-TRENCH-3_022_2-3 (201600223) 2/23/2016 2-3 Industrial Waste
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	NA	< 280	< 3000	NA	< 88	NA
Hexachloroethane		mg/kg	NS	NS	0.010	NA	< 59	< 620	NA	< 18	NA
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	NA	< 59	63 J	NA	15 J	NA
Isophorone		mg/kg	NS	NS	0.461	NA	< 59	< 620	NA	< 18	NA
Naphthalene		mg/kg	10	28	*4.468*	NA	*68*	*1800*	NA	*5.4 J*	NA
Nitrobenzene		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	NA	< 59	< 620	NA	< 18	NA
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	NA	< 59	< 620	NA	< 18	NA
p-Chloroaniline		mg/kg	NS	NS	NS	NA	< 59	< 620	NA	< 18	NA
Pentachlorophenol		mg/kg	80	120	*0.023*	NA	< 59	< 620	NA	< 18	NA
Phenanthrene		mg/kg	NS	NS	NS	NA	0.87 J	540 J	NA	42	NA
Phenol		mg/kg	1500	20203	37.952	NA	< 59	< 620	NA	< 18	NA
Pyrene		mg/kg	890	5800	*435.120*	NA	< 59	280 J	NA	45	NA
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	NA	< 0	151.448	NA	34.785	NA
PCBs											
Aroclor 1016		mg/kg	1.2	8	NS	< 0.0605	NA	NA	< 0.117	NA	< 2.78
Aroclor 1221		mg/kg	1.2	8	NS	< 0.0605	NA	NA	< 0.117	NA	< 2.78
Aroclor 1232		mg/kg	1.2	8	NS	< 0.0605	NA	NA	< 0.117	NA	< 2.78
Aroclor 1242		mg/kg	1.2	8	NS	< 0.0605	NA	NA	0.191	NA	< 2.78
Aroclor 1248		mg/kg	1.2	8	NS	< 0.0605	NA	NA	< 0.117	NA	< 2.78
Aroclor 1254		mg/kg	1.2	8	NS	0.196	NA	NA	1.53	NA	13
Aroclor 1260		mg/kg	1.2	8	NS	0.567	NA	NA	< 0.117	NA	< 2.78
Polychlorinated biphenyls		mg/kg	1.2	8	NS	0.763	NA	NA	1.72	NA	13
Metals											
Aluminum		mg/kg	30000	100000	NS	NA	7800	5700	NA	4000	NA
Antimony		mg/kg	12	100	*5.412*	NA	*51*	*50*	NA	*37 J*	NA
Arsenic		mg/kg	9	20	*5.82*	NA	4.0	*6.8*	NA	*13*	NA
Barium		mg/kg	1100	18000	*1684*	NA	*10000*	*7200*	NA	480 J	NA
Beryllium		mg/kg	55	230	2.72016	NA	0.066 J	0.14 J	NA	0.20 J	NA
Cadmium		mg/kg	25	200	*8.808*	NA	2.8	7.6	NA	1.3	NA
Calcium		mg/kg	NS	NS	NS	NA	3700	8300	NA	37000	NA
Chromium (Total)		mg/kg	NS	NS	NS	NA	1200	1800	NA	22	NA
Chromium III		mg/kg	44000	100000	1000000040	NA	1200	1700	NA	20	NA
Chromium VI		mg/kg	87	650	*36.2*	NA	21	*140*	NA	1.8	NA
Cobalt		mg/kg	600	2600	*27.06*	NA	2.8 J	3.3 J	NA	5.7	NA
Copper		mg/kg	100	9000	702	NA	350	200	NA	470	NA
Iron		mg/kg	30000	100000	NS	NA	10000	25000	NA	12000	NA
Lead		mg/kg	300	700	*2700*	NA	*5500*	*4400*	NA	1600	NA
Magnesium		mg/kg	NS	NS	NS	NA	1800	2900	NA	5900 J	NA
Manganese		mg/kg	3600	8100	*130.2*	NA	75	*160*	NA	*310*	NA
Mercury		mg/kg	0.5	1.5	*3.291*	NA	0.024 J	0.022 J	NA	0.081 J	NA
Nickel		mg/kg	560	2500	*176.2*	NA	110	170	NA	57	NA
Potassium		mg/kg	NS	NS	NS	NA	300 J	690	NA	760	NA
Selenium		mg/kg	160	1300	*2.64*	NA	< 0.53	0.96	NA	< 0.49	NA
Silver		mg/kg	160	1300	7.86	NA	0.21 J	0.20 J	NA	0.11 J	NA
Sodium		mg/kg	NS	NS	NS	NA	1700	540 J	NA	160 J	NA
Thallium		mg/kg	3	21	0.8892	NA	< 1.1	0.38 J	NA	< 0.97	NA
Vanadium		mg/kg	121	121	*4.0004*	NA	1.8 J	*5.6*	NA	*13*	NA
Zinc		mg/kg	8700	75000	*3004*	NA	*4100*	*12000*	NA	880	NA
TPH											
Diesel Range Organics**		mg/kg	100	100	NS	NA	6500	35000	NA	1900	NA
Gasoline Range Organics**		mg/kg	100	100	NS	NA	1800	13000	NA	< 12	NA
Other Analtyical											
Percent Moisture		%	NS	NS	NS	17.3	NA	NA	14.8	NA	10.0
Asbestos		%	NS	NS	NS	NA	NA	NA	NA	NA	NA
Field Screening											
Oil-in-Soil		NA	NA	NA	NA	NA	Negative	Negative	NA	Negative	NA
Petroleum Sheen Test		NA	NA	NA	NA	NA	Negative	Negative	NA	Negative	NA

Notes and Abbreviations on Page 37.

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	AREA C-TRENCH-3 AREA C-TRENCH-3 (20160223) 2/23/2016 0 Industrial Waste	AREAC-TRENCH-4_015 AREAC-TRENCH-4_015_7-8(20151217) 12/17/2015 7-8 Fill Soil	AREA C-TRENCH-5_00 AREA C-TRENCH-5_00_3-4 (20151216) 12/16/2015 3-4 Fill Soil
VOCs								
1,1,1,2-Tetrachloroethane		mg/kg	31	51	0.406	NA	< 0.31 U	< 0.32
1,1,1-Trichloroethane		mg/kg	140	472	55.740	NA	< 0.31 U	< 0.32
1,1,2,2-Tetrachloroethane		mg/kg	3.5	6.5	0.012	NA	< 0.31 U	< 0.32
1,1,2-trichloro-1,2,2-trifluoroethane		mg/kg	3745	5430	16884	NA	< 0.31 U	< 0.32
1,1,2-Trichloroethane		mg/kg	9	14	0.014	NA	< 0.31 U	< 0.32
1,1-Dichloroethane		mg/kg	34	55	0.407	NA	< 0.31 U	< 0.32
1,1-Dichloroethene		mg/kg	20	60	1.394	NA	< 0.31 U	< 0.32
1,1-Dichloropropene		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
1,2,3-Trichlorobenzene		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
1,2,3-Trichloropropane		mg/kg	NS	NS	0.267	NA	< 0.31 U	< 0.32
1,2,4-Trichlorobenzene		mg/kg	200	985	0.226	NA	< 0.31 U	< 0.32
1,2,4-Trimethylbenzene		mg/kg	8	25	*2.745*	NA	< 0.31 U	< 0.32
1,2-Dibromo-3-chloropropane		mg/kg	NS	NS	NS	NA	< 0.61 U	< 0.63
1,2-Dibromoethane		mg/kg	0.3	0.5	0.00001	NA	< 0.31 U	< 0.32
1,2-Dichlorobenzene		mg/kg	26	75	*10.553*	NA	< 0.31 U	< 0.32
1,2-Dichloroethane		mg/kg	4	6	0.004	NA	< 0.31 U	< 0.32
1,2-Dichloropropane		mg/kg	4	6	0.024	NA	< 0.31 U	< 0.32
1,3,5-Trimethylbenzene		mg/kg	3	10	*2.733*	NA	< 0.31 U	< 0.32
1,3-Dichlorobenzene		mg/kg	26	200	10.431	NA	< 0.31 U	< 0.32
1,3-Dichloropropane		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
1,4-Dichlorobenzene		mg/kg	30	50	0.174	NA	< 0.31 U	< 0.32
2,2-Dichloropropane		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
2-Butanone (MEK)		mg/kg	5500	19000	8.754	NA	< 1.2 U	< 1.3
2-Chlorotoluene		mg/kg	436	436	NS	NA	< 0.31 U	< 0.32
4-Chlorotoluene		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
4-Methyl-2-Pentanone		mg/kg	1700	9000	0.757	NA	< 1.2 U	< 1.3
Acetone		mg/kg	340	1000	8.398	NA	< 1.2 U	< 1.3
Allyl chloride		mg/kg	NS	NS	0.154	NA	< 0.61 U	< 0.63
Benzene		mg/kg	6	10	*0.017*	NA	< 0.31 U	< 0.32
Bromobenzene		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
Bromochloromethane		mg/kg	NS	NS	0.277	NA	< 0.31 U	< 0.32
Bromodichloromethane		mg/kg	10	17	0.021	NA	< 0.31 U	< 0.32
Bromoform		mg/kg	370	650	0.134	NA	< 0.31 U	< 0.32
Bromomethane		mg/kg	0.7	2	0.036	NA	< 0.31 U	< 0.32
Carbon Disulfide		mg/kg	65	190	3.437	NA	< 0.31 U	< 0.32
Carbon Tetrachloride		mg/kg	0.3	0.9	0.008	NA	< 0.31 U	< 0.32
CFC-11		mg/kg	67	195	35.006	NA	< 0.31 U	< 0.32
CFC-12		mg/kg	16	50	36.658	NA	< 0.31 U	< 0.32
Chlorobenzene		mg/kg	11	32	1.180	NA	< 0.31 U	< 0.32
Chlorodibromomethane		mg/kg	12	20	0.034	NA	< 0.31 U	< 0.32
Chloroethane		mg/kg	1000	3000	NS	NA	< 0.31 U	< 0.32
Chloroform		mg/kg	2.5	4	0.114	NA	< 0.31 U	< 0.32
Chloromethane		mg/kg	8	23	0.113	NA	< 0.31 U	< 0.32
cis-1,2-Dichloroethene		mg/kg	8	22	*0.208*	NA	< 0.31 U	< 0.32
cis-1,3-Dichloropropene		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
Cyclohexane		mg/kg	NS	NS	NS	NA	< 0.61 U	< 0.63
Cymene (p-Isopropyltoluene)		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
Dibromomethane		mg/kg	260	1860	NS	NA	< 0.31 U	< 0.32
Dichloromethane		mg/kg	97	158	*0.017*	NA	*0.28 J*	*0.29 J*
Dichloromonofluoromethane		mg/kg	NS	NS	NS	NA	< 0.61 U	< 0.63
Diethyl ether		mg/kg	NS	NS	0.512	NA	< 0.61 U	< 0.63
Ethylbenzene		mg/kg	200	200	*1.048*	NA	< 0.31 U	< 0.32
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	NA	< 0.31 U	< 0.32
Isopropylbenzene		mg/kg	30	87	*9.463*	NA	< 0.31 U	< 0.32
Methyl Acetate		mg/kg	NS	NS	NS	NA	< 0.61 U	< 0.63
Methyl N-Butyl Ketone (2-Hexanone)		mg/kg	NS	NS	NS	NA	< 1.2 U	< 1.3
Methylcyclohexane		mg/kg	NS	NS	NS	NA	< 0.61 U	< 0.63
Methyl-tert-butylether		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
Naphthalene		mg/kg	10	28	*4.468*	NA	< 0.31 U	0.093 J
N-Butylbenzene		mg/kg	30	92	NS	NA	< 0.31 U	< 0.32
N-Propylbenzene		mg/kg	30	93	NS	NA	< 0.31 U	< 0.32
sec-Butylbenzene		mg/kg	25	70	NS	NA	< 0.31 U	< 0.32
Styrene (Monomer)		mg/kg	210	600	2.023	NA	< 0.31 U	< 0.32

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Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	AREA C-TRENCH-3 AREA C-TRENCH-3 (20160223) 2/23/2016 0 Industrial Waste	AREAC-TRENCH-4_015 AREAC-TRENCH-4_015_7-8(20151217) 12/17/2015 7-8 Fill Soil	AREA C-TRENCH-5_00 AREA C-TRENCH-5_00_3-4 (20151216) 12/16/2015 3-4 Fill Soil
tert-Butylbenzene		mg/kg	30	90	NS	NA	< 0.31 U	< 0.32
Tetrachloroethene		mg/kg	72	131	0.042	NA	< 0.31 U	< 0.32
Tetrahydrofuran		mg/kg	NS	NS	0.244	NA	< 1.2 U	< 1.3
Toluene		mg/kg	107	305	*2.459*	NA	< 0.31 U	0.013 J
trans-1,2-Dichloroethene		mg/kg	11	33	0.416	NA	< 0.31 U	< 0.32
trans-1,3-Dichloropropene		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
Trichloroethene		mg/kg	29	46	*0.002*	NA	< 0.31 U	< 0.32
Vinyl chloride		mg/kg	0.8	2.2	0.001	NA	< 0.31 U	< 0.32
m,p-Xylene		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
o-Xylene		mg/kg	NS	NS	NS	NA	< 0.31 U	< 0.32
Total Xylenes*		mg/kg	45	130	*5.415*	NA	ND	ND
SVOCs								
1,1-Biphenyl		mg/kg	NS	NS	62.161	NA	< 0.42 U	< 0.41
2,2-Oxybis(1-Chloropropane)		mg/kg	NS	NS	1.598	NA	< 0.42 U	< 0.41
2,4,5-Trichlorophenol		mg/kg	1920	10600	NS	NA	< 0.42 U	< 0.41
2,4,6-Trichlorophenol		mg/kg	595	1060	0.420	NA	< 0.42 U	< 0.41
2,4-Dichlorophenol		mg/kg	48	230	0.153	NA	< 0.42 U	< 0.41
2,4-Dimethylphenol		mg/kg	390	1925	2.167	NA	< 0.42 U	< 0.41
2,4-Dinitrophenol		mg/kg	NS	NS	0.020	NA	< 2 U	< 2 J
2,4-Dinitrotoluene		mg/kg	50	355	0.013	NA	< 0.42 U	< 0.41
2,6-Dinitrotoluene		mg/kg	25	175	0.013	NA	< 0.42 U	< 0.41
2-Chloronaphthalene		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
2-Chlorophenol		mg/kg	NS	NS	0.520	NA	< 0.42 U	< 0.41
2-Methyl-4,6-dinitrophenol		mg/kg	NS	NS	NS	NA	< 2 U	< 2 J
2-Methylnaphthalene		mg/kg	100	369	NS	NA	< 0.42 U	< 0.41
2-Methylphenol		mg/kg	75	352	0.428	NA	< 0.42 U	< 0.41
2-Nitroaniline		mg/kg	NS	NS	NS	NA	< 2 U	< 2
2-Nitrophenol		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
3,3-Dichlorobenzidine		mg/kg	25	50	0.104	NA	< 2 U	< 2
3-Methylphenol, 4-Methylphenol		mg/kg	NS	NS	NS	NA	< 0.51 U	< 0.49
3-Nitroaniline		mg/kg	NS	NS	NS	NA	< 2 U	< 2
4-Bromophenyl phenyl ether		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
4-Chloro-3-Methylphenol		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
4-Chlorophenyl phenyl ether		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
4-Nitroaniline		mg/kg	NS	NS	NS	NA	< 2 U	< 2
4-Nitrophenol		mg/kg	NS	NS	NS	NA	< 2 U	< 2
Acenaphthene		mg/kg	1200	5260	*81.242*	NA	< 0.42 U	< 0.41
Acenaphthylene		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
Acetophenone		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
Anthracene		mg/kg	7880	45400	1312.816	NA	< 0.42 U	< 0.41
Atrazine		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
Benzaldehyde		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
Benzo(a)anthracene		mg/kg	NS	NS	NS	NA	< 0.42 U	0.0071 J
Benzo(a)pyrene		mg/kg	2	3	*1.410*	NA	< 0.42 U	0.0066 J
Benzo(b)fluoranthene		mg/kg	NS	NS	NS	NA	< 0.42 U	0.012 J
Benzo(g,h,i)perylene		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
Benzo(k)fluoranthene		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
bis(2-Chloroethoxy)methane		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
bis(2-Chloroethyl)ether		mg/kg	2.5	5	0.001	NA	< 0.42 U	< 0.41
bis(2-Ethylhexyl)phthalate		mg/kg	570	2100	*28.716*	NA	< 0.42	0.033 J
Butyl benzyl phthalate		mg/kg	580	3700	28.820	NA	< 0.42 U	< 0.41
Caprolactam		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
Carbazole		mg/kg	700	1310	NS	NA	< 0.42 U	< 0.41
Chrysene		mg/kg	NS	NS	NS	NA	< 0.42 U	0.0085 J
Dibenzo(a,h)anthracene		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
Dibenzofuran		mg/kg	104	810	NS	NA	< 0.42 U	< 0.41
Diethyl phthalate		mg/kg	NS	NS	37.177	NA	< 0.42 U	< 0.41
Dimethyl phthalate		mg/kg	NS	NS	228.454	NA	< 0.42 U	< 0.41
Di-n-butyl phthalate		mg/kg	2440	16300	33.796	NA	< 0.42 U	< 0.41
Di-n-octyl phthalate		mg/kg	520	3700	NS	NA	< 0.42 U	< 0.41
Fluoranthene		mg/kg	1080	6800	666	NA	0.0082 J	0.015 J
Fluorene		mg/kg	850	4120	*110.524*	NA	< 0.42 U	< 0.41
Hexachloro-1,3-butadiene		mg/kg	6	37	0.037	NA	< 0.42 U	< 0.41
Hexachlorobenzene		mg/kg	5	9	NS	NA	< 0.42 U	< 0.41

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	Tier 1 Residential SRVs	Tier 2 Industrial SRVs	Soil Leaching Values	AREA C-TRENCH-3 AREA C-TRENCH-3 (20160223) 2/23/2016 0 Industrial Waste	AREAC-TRENCH-4_015 AREAC-TRENCH-4_015_7-8(20151217) 12/17/2015 7-8 Fill Soil	AREA C-TRENCH-5_00 AREA C-TRENCH-5_00_3-4 (20151216) 12/16/2015 3-4 Fill Soil
Hexachlorocyclopentadiene		mg/kg	2	6	3.099	NA	< 2 U	< 2 J
Hexachloroethane		mg/kg	NS	NS	0.010	NA	< 0.42 U	< 0.41
Indeno(1,2,3-cd)pyrene		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
Isophorone		mg/kg	NS	NS	0.461	NA	< 0.42 U	< 0.41
Naphthalene		mg/kg	10	28	*4.468*	NA	< 0.42 U	< 0.41
Nitrobenzene		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
n-Nitrosodi-n-propylamine		mg/kg	0.7	1.2	NS	NA	< 0.42 U	< 0.41
N-nitrosodiphenylamine		mg/kg	1950	3720	7.510	NA	< 0.42 U	< 0.41
p-Chloroaniline		mg/kg	NS	NS	NS	NA	< 0.42 U	< 0.41
Pentachlorophenol		mg/kg	80	120	*0.023*	NA	< 0.42 U	< 0.41
Phenanthrene		mg/kg	NS	NS	NS	NA	0.0052 J	0.012 J
Phenol		mg/kg	1500	20203	37.952	NA	< 0.42 U	< 0.41
Pyrene		mg/kg	890	5800	*435.120*	NA	0.0071 J	0.016 J
Benzo(a)pyrene (BaP) Equivalents		mg/kg	2	3	NS	NA	< 0	0.0086
PCBs								
Aroclor 1016		mg/kg	1.2	8	NS	< 0.0589	NA	NA
Aroclor 1221		mg/kg	1.2	8	NS	< 0.0589	NA	NA
Aroclor 1232		mg/kg	1.2	8	NS	< 0.0589	NA	NA
Aroclor 1242		mg/kg	1.2	8	NS	< 0.0589	NA	NA
Aroclor 1248		mg/kg	1.2	8	NS	< 0.0589	NA	NA
Aroclor 1254		mg/kg	1.2	8	NS	0.427	NA	NA
Aroclor 1260		mg/kg	1.2	8	NS	< 0.0589	NA	NA
Polychlorinated biphenyls		mg/kg	1.2	8	NS	0.427	NA	NA
Metals								
Aluminum		mg/kg	30000	100000	NS	NA	9400	7800
Antimony		mg/kg	12	100	*5.412*	NA	< 1.1 J	< 0.95 J
Arsenic		mg/kg	9	20	*5.82*	NA	*7.2*	4.6
Barium		mg/kg	1100	18000	*1684*	NA	35	40
Beryllium		mg/kg	55	230	2.72016	NA	0.60	0.47
Cadmium		mg/kg	25	200	*8.808*	NA	0.079 J	0.057 J
Calcium		mg/kg	NS	NS	NS	NA	18000 J	21000
Chromium (Total)		mg/kg	NS	NS	NS	NA	16	14
Chromium III		mg/kg	44000	100000	1000000040	NA	NA	17
Chromium VI		mg/kg	87	650	*36.2*	NA	NA	< 0.99
Cobalt		mg/kg	600	2600	*27.06*	NA	12	12
Copper		mg/kg	100	9000	702	NA	7.9	12
Iron		mg/kg	30000	100000	NS	NA	19000	13000
Lead		mg/kg	300	700	*2700*	NA	4.1	5.8
Magnesium		mg/kg	NS	NS	NS	NA	6100 F	5800
Manganese		mg/kg	3600	8100	*130.2*	NA	*270*	*350*
Mercury		mg/kg	0.5	1.5	*3.291*	NA	< 0.13 U	< 0.12
Nickel		mg/kg	560	2500	*176.2*	NA	25	24
Potassium		mg/kg	NS	NS	NS	NA	3900	3100
Selenium		mg/kg	160	1300	*2.64*	NA	< 0.55 U	< 0.47
Silver		mg/kg	160	1300	7.86	NA	0.11 J	< 0.47
Sodium		mg/kg	NS	NS	NS	NA	510 J	< 470
Thallium		mg/kg	3	21	0.8892	NA	< 1.1 U	< 0.95
Vanadium		mg/kg	121	121	*4.0004*	NA	*14*	*12*
Zinc		mg/kg	8700	75000	*3004*	NA	27	24
TPH								
Diesel Range Organics**		mg/kg	100	100	NS	NA	< 10	12
Gasoline Range Organics**		mg/kg	100	100	NS	NA	2.6 J	< 12
Other Analtyical								
Percent Moisture		%	NS	NS	NS	15.1	NA	NA
Asbestos		%	NS	NS	NS	NA	NA	NA
Field Screening								
Oil-in-Soil		NA	NA	NA	NA	NA	NA	NA
Petroleum Sheen Test		NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 37.

Table 4
Summary of Current Soil Analytical and Field Screening Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

General Notes:

*	= criteria for total xylenes used, reported data is for the sum of the "m- and p-xylenes" and "o-xylenes" data results
**	= values for gasoline- and diesel-range organics are guidance values provided by the Petroleum Brownfields Program
Shade	Result value is above the MPCA Tier I Residential SRV
Shade	Result value is above the MPCA Tier II Industrial SRV

Italics = Result is above the MPCA SLV
< = not detected above reporting detection limit

Acronyms and Abbreviatiosn:

ASB = Arcadis soil boring
HA = hand auger
J = estimated result
mg/kg = milligrams per kilogram
MPCA = Minnesota Pollution Control Agency
NA = not analyzed
ND = not detected
NS = no standard
PCB = polychlorinated biphenyl
SLV = soil leaching value
SRV = soil reference value
SVOC = semi-volatile organic compound
TPH = total petroleum hydrocarbon
VOC = volatile organic compound

Table 5
Summary of Historical Detected Constituents in Soil Samples
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Compound	Test Pit 3 [1]			Test Pit 8 [2]			
	Unit	TCLP Criteria	(TP3) 1/88	Unit	EPA/Minnesota EP Toxicity Leachate Criteria	Tier 2 Industrial SRV	(TP8) 1/88
VOCs							
Toluene	ug/L	NS	180	mg/kg	NA	305	ND
Ethylbenzene	ug/L	NS	85	mg/kg	NA	200	ND
M-xylene	ug/L	NS	2,600	mg/kg	NA	130*	ND
O&P xylene	ug/L	NS	3,700	mg/kg	NA	130*	ND
Metals							
Arsenic	mg/L	5	0.01	mg/L	5	20	ND
Barium	mg/L	100	1.5	mg/L	100	18000	0.2
Copper	mg/L	NS	0.02	mg/L	NS	9000	ND
Lead	mg/L	5	0.3	mg/L	5	700	ND
Zinc	mg/L	NS	0.92	mg/L	NS	75000	0.03
Other							
Flashpoint	ºF	NA	140	ºF	NA	NA	>200
Reactive sulfide	mg/kg	NA	ND	mg/kg	NA	NA	61
pH	SU	NA	7.6	SU	NA	NA	7.9

Acronyms and Abbreviations:
° F = degrees Fahrenheit
EP = extraction procedure
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
NA = not analyzed
ND = not detected at or above method detection limit
NS = no standard
SRV = Soil Reference Value
SU = standard units
TCLP = Toxicity Characteristics Leaching Procedure
VOCs = volatile organic compounds

Footnotes:
* Indicates the SRV value for Total Xylenes used. No individual criteria for m-xylenes or o&p-xylenes.
1. TP-3 sample analyzed using TCLP.
2. TP-8 sample was analyzed using EP Toxicity Leachate Procedure for metals and Method 8260 for Total VOCs.

Table 6
Summary of TCLP Soil Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	USEPA TCLP Guidance	ASB-1001 ASB-1001_39-42 (20150615) 6/15/2015 39-42 Industrial Waste	ASB-1001 ASB-1001_50-54 (20150615) 6/15/2015 50-54 Industrial Waste	ASB-1001 ASB-1001_65-70 (20150615) 6/15/2015 65-70 Industrial Waste	ASB-1001 ASB-1001_72-74 (20150615) 6/15/2015 72-74 Industrial Waste	ASB-1001 ASB-1001_80-82 (20150615) 6/15/2015 80-82 Native Sand	ASB-1002 ASB-1002_55-60 (20150616) 6/16/2015 55-60 Industrial Waste	ASB-1002 ASB-1002_60-64 (20150616) 6/16/2015 60-64 Industrial Waste	ASB-1002 ASB-1002_75-77 (20150616) 6/16/2015 75-77 Industrial Waste
TCLP VOCs											
1,1-Dichloroethene		mg/l	0.7	< 0.05 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025
1,2-Dichloroethane		mg/l	0.5	< 0.05 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025
2-Butanone (MEK)		mg/l	200	< 0.5 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	0.14 J
Benzene		mg/l	0.5	< 0.05 U	< 0.025 U	0.11	0.36	< 0.025 U	0.067	0.089	0.27
Carbon Tetrachloride		mg/l	0.5	< 0.05 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025
Chlorobenzene		mg/l	100	< 0.05 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025
Chloroform		mg/l	6	< 0.05 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025
Tetrachloroethene		mg/l	0.7	< 0.05 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025
Trichloroethene		mg/l	0.5	< 0.05 U	< 0.025 U	< 0.025 U	0.024 J	< 0.025 U	< 0.025 U	< 0.025 U	0.17
Vinyl chloride		mg/l	0.2	< 0.05 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025
TCLP SVOCs											
1,4-Dichlorobenzene		mg/l	7.5	< 0.0040 U	< 0.0040 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.0040 U	< 0.0080 U	< 0.010
2,4,5-Trichlorophenol		mg/l	400	< 0.0040 U	< 0.0040 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.0040 U	< 0.0080 U	< 0.010
2,4,6-Trichlorophenol		mg/l	2	< 0.0040 U	< 0.0040 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.0040 U	< 0.0080 U	< 0.010
2,4-Dinitrotoluene		mg/l	0.13	< 0.0040 U	< 0.0040 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.0040 U	< 0.0080 U	< 0.010
2-Methylphenol		mg/l	NS	< 0.0040 U	0.00091 J	0.027	0.075	< 0.010 U	0.0083	0.017	0.055
3-Methylphenol, 4-Methylphenol		mg/l	200	< 0.0040 U	0.0011 J	0.049	0.18	< 0.010 U	0.018	0.034	0.12
Hexachloro-1,3-butadiene		mg/l	0.5	< 0.0040 U	< 0.0040 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.0040 U	< 0.0080 U	< 0.010
Hexachlorobenzene		mg/l	0.13	< 0.00080 U	< 0.00080 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.00080 U	< 0.0016 U	< 0.0020
Hexachloroethane		mg/l	3	< 0.0040 U	< 0.0040 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.0040 U	< 0.0080 U	< 0.010
Nitrobenzene		mg/l	2	< 0.0040 U	< 0.0040 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.0040 U	< 0.0080 U	< 0.010
Pentachlorophenol		mg/l	100	< 0.0040 U	< 0.0040 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.0040 U	< 0.0080 U	< 0.010
Pyridine		mg/l	5	< 0.0040 U	< 0.0040 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.0040 U	< 0.0080 U	< 0.010
TCLP Metals											
Aluminum		mg/l	NS	0.53	0.21	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	0.082 J	< 0.20
Antimony		mg/l	NS	0.21 J	0.10 J	0.60	0.50	0.0059 J	0.016 J	0.16 J	0.091 J
Arsenic		mg/l	5	< 0.50 U	< 0.50 U	< 0.50	0.022 J	< 0.50	< 0.50	< 0.50	< 0.50
Barium		mg/l	100	7.4 J	6.8 J	0.65 J	1.3 J	1.2 J	1.1 J	1.2 J	0.29 J
Beryllium		mg/l	NS	0.00020 J	< 0.0050 U	< 0.0050 U	< 0.0050 U	< 0.0050 U	< 0.0050 U	0.00018 J	< 0.0050
Cadmium		mg/l	1	0.10	0.082 J	0.00064 J	0.0097 J	0.00046 J	0.0022 J	0.0087 J	0.014 J
Calcium		mg/l	NS	320	360	650	680	580	430	240	180
Chromium		mg/l	5	0.0073 J	0.0063 J	< 0.50	< 0.50	< 0.50	< 0.50	0.0062 J	< 0.50
Cobalt		mg/l	NS	0.18	0.11	0.054	0.080	0.013 J	0.074	0.16	0.14
Copper		mg/l	NS	< 1.0 U	< 1.0 U	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Iron		mg/l	NS	2.3	2.5	0.21	0.44	0.053 J	0.52	5.9	3.4
Lead		mg/l	5	**8.4**	**8.9**	0.026 J	0.97	< 0.50 U	0.60	**8.3**	**19**
Magnesium		mg/l	NS	28	31	19	18	14	41	22	15
Manganese		mg/l	NS	8.9	7.4	1.6	2.1	7.2	5.6	3.0	0.63
Mercury		mg/l	0.2	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020
Nickel		mg/l	NS	0.30	0.23	0.14	0.073	0.052	0.076	0.086	0.032 J
Potassium		mg/l	NS	11	13	15	14	< 5.0	12	9.8	< 5.0
Selenium		mg/l	1	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25
Silver		mg/l	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50
Thallium		mg/l	NS	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0
Vanadium		mg/l	NS	0.0042 J	< 0.050 U	< 0.050 U	0.0053 J	< 0.050 U	0.0028 J	0.0030 J	< 0.050
Zinc		mg/l	NS	6.8	4.4	1.8	3.4	< 1.0	1.6	6.3	4.3
Other											
Percent Moisture		%	NS	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 8.

Table 6
Summary of TCLP Soil Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

ARCADIS Design & Consultancy for natural and built assets

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	USEPA TCLP Guidance	ASB-1002 ASB-1002_80-84 (20150616) 6/16/2015 80-84 Native Sand	ASB-1002 ASB-1002_92-95 (20150616) 6/16/2015 92-95 Native Sand	ASB-1003 ASB-1003_60-64 (20150617) 6/17/2015 60-64 Fill Soil	ASB-1003 ASB-1003_70-74 (20150617) 6/17/2015 70-74 Native Sand	ASB-1004 ASB-1004_37-40(20150619) 6/19/2015 37-40 Fill Soil	ASB-1004 ASB-1004_60-62(20150619) 6/19/2015 60-62 Industrial Waste	ASB-1004 ASB-1004_69-70(20150619) 6/19/2015 69-70 Native Sand	ASB-1004 ASB-1004_79-80(20150619) 6/19/2015 79-80 Native Sand	ASB-1004 ASB-1004_83-85(20150619) 6/19/2015 83-85 Native Sand
TCLP VOCs												
1,1-Dichloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
1,2-Dichloroethane		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
2-Butanone (MEK)		mg/l	200	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Benzene		mg/l	0.5	0.012 J	< 0.025	< 0.025	< 0.025	< 0.025	0.03	< 0.025	< 0.025	< 0.025
Carbon Tetrachloride		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Chlorobenzene		mg/l	100	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Chloroform		mg/l	6	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Tetrachloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Trichloroethene		mg/l	0.5	0.024 J	< 0.025	< 0.025	< 0.025	< 0.025	0.19	< 0.025	< 0.025	0.02 J
Vinyl chloride		mg/l	0.2	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
TCLP SVOCs												
1,4-Dichlorobenzene		mg/l	7.5	< 0.010	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.016	< 0.0040	< 0.0040	< 0.0040
2,4,5-Trichlorophenol		mg/l	400	< 0.010	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.016	< 0.0040	< 0.0040	< 0.0040
2,4,6-Trichlorophenol		mg/l	2	< 0.010	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.016	< 0.0040	< 0.0040	< 0.0040
2,4-Dinitrotoluene		mg/l	0.13	< 0.010	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.016	< 0.0040	< 0.0040	< 0.0040
2-Methylphenol		mg/l	NS	0.014	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.022	< 0.0040	< 0.0040	< 0.0040
3-Methylphenol, 4-Methylphenol		mg/l	200	0.031	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.065	< 0.0040	< 0.0040	< 0.0040
Hexachloro-1,3-butadiene		mg/l	0.5	< 0.010	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.016	< 0.0040	< 0.0040	< 0.0040
Hexachlorobenzene		mg/l	0.13	< 0.0020	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.0032	< 0.00080	< 0.00080	< 0.00080
Hexachloroethane		mg/l	3	< 0.010	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.016	< 0.0040	< 0.0040	< 0.0040
Nitrobenzene		mg/l	2	< 0.010	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.016	< 0.0040	< 0.0040	< 0.0040
Pentachlorophenol		mg/l	100	< 0.010	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.016	< 0.0040	< 0.0040	< 0.0040
Pyridine		mg/l	5	< 0.010	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.016	< 0.0040	< 0.0040	< 0.0040
TCLP Metals												
Aluminum		mg/l	NS	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	1.1	< 0.20	< 0.20	< 0.20
Antimony		mg/l	NS	0.093 J	< 0.30	< 0.30	< 0.30	< 0.30	1.9	0.0029 J	< 0.30	< 0.30
Arsenic		mg/l	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.12 J	< 0.50	< 0.50	< 0.50
Barium		mg/l	100	1.3 J	0.84 J	1.0 J	0.63 J	0.46 J	0.76 J	2.0 J	0.58 J	2.1 J
Beryllium		mg/l	NS	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.00027 J	< 0.0050	< 0.0050	< 0.0050
Cadmium		mg/l	1	0.0024 J	0.00034 J	0.0015 J	0.0056 J	0.00054 J	0.053 J	0.00085 J	0.00025 J	0.00014 J
Calcium		mg/l	NS	570	590	240	280	400	380	400	550	590
Chromium		mg/l	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.014 J	< 0.50	< 0.50	< 0.50
Cobalt		mg/l	NS	0.053	0.0063 J	0.029 J	0.015 J	0.059	0.25	0.021 J	0.026 J	0.028 J
Copper		mg/l	NS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.070 J	< 1.0	< 1.0	< 1.0
Iron		mg/l	NS	< 0.10	< 0.10	0.65	< 0.10	0.32	35	0.81	< 0.10	< 0.10
Lead		mg/l	5	0.71	< 0.50	< 0.50	< 0.50	< 0.50	**250**	< 0.50	< 0.50	< 0.50
Magnesium		mg/l	NS	13	21	40	26	89	17	33	24	19
Manganese		mg/l	NS	3.1	4.4	13	8.2	8.2	3.4	1.3	7.5	3.8
Mercury		mg/l	0.2	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Nickel		mg/l	NS	0.026 J	0.014 J	0.032 J	0.021 J	0.070	0.12	0.033 J	0.090	0.044
Potassium		mg/l	NS	< 5.0	< 5.0	< 5.0	< 5.0	13	3.3 J	2.9 J	2.9 J	5.6
Selenium		mg/l	1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.0068 J	< 0.25	< 0.25	< 0.25
Silver		mg/l	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thallium		mg/l	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Vanadium		mg/l	NS	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Zinc		mg/l	NS	1.2	< 1.0	< 1.0	0.27 J	0.16 J	25	0.40 J	0.20 J	0.17 J
Other												
Percent Moisture		%	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 8.

Table 6
Summary of TCLP Soil Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	USEPA TCLP Guidance	ASB-1005 ASB-1005_12-14 (20150618) 6/18/2015 12-14 Fill Soil	ASB-1005 ASB-1005_37-40 (20150618) 6/18/2015 37-40 Fill Soil	ASB-1005 ASB-1005_46-50 (20150618) 6/18/2015 46-50 Fill Soil	ASB-1005 ASB-1005_78-80 (20150618) 6/18/2015 78-80 Native Sand	ASB-1006 ASB-1006_39-42(20150622) 6/22/2015 39-42 Fill Soil	ASB-1006 ASB-1006_52-54(20150622) 6/22/2015 52-54 Fill Soil	ASB-1006 ASB-1006_57-60(20150622) 6/22/2015 57-60 Industrial Waste	ASB-1006 ASB-1006_65-67(20150622) 6/22/2015 65-67 Industrial Waste	ASB-1006 ASB-1006_78-80(20150622) 6/22/2015 78-80 Native Sand
TCLP VOCs												
1,1-Dichloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
1,2-Dichloroethane		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
2-Butanone (MEK)		mg/l	200	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Benzene		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Carbon Tetrachloride		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Chlorobenzene		mg/l	100	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Chloroform		mg/l	6	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Tetrachloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Trichloroethene		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Vinyl chloride		mg/l	0.2	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
TCLP SVOCs												
1,4-Dichlorobenzene		mg/l	7.5	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2,4,5-Trichlorophenol		mg/l	400	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2,4,6-Trichlorophenol		mg/l	2	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2,4-Dinitrotoluene		mg/l	0.13	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2-Methylphenol		mg/l	NS	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
3-Methylphenol, 4-Methylphenol		mg/l	200	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Hexachloro-1,3-butadiene		mg/l	0.5	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Hexachlorobenzene		mg/l	0.13	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080
Hexachloroethane		mg/l	3	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Nitrobenzene		mg/l	2	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Pentachlorophenol		mg/l	100	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Pyridine		mg/l	5	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
TCLP Metals												
Aluminum		mg/l	NS	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Antimony		mg/l	NS	0.075 J	0.42	< 0.30	< 0.30	< 0.30	< 0.30	0.0060 J	< 0.30	< 0.30
Arsenic		mg/l	5	0.015 J	0.032 J	0.014 J	0.012 J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Barium		mg/l	100	2.6 J	1.4 J	1.0 J	1.2 J	0.45 J	0.20 J	0.95 J	0.64 J	0.33 J
Beryllium		mg/l	NS	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Cadmium		mg/l	1	0.0032 J	0.010 J	0.0010 J	0.0010 J	0.00056 J	0.00073 J	0.0012 J	0.024 J	0.00036 J
Calcium		mg/l	NS	330	290	460	230	420	290	470	250	540
Chromium		mg/l	5	0.0034 J	0.0029 J	0.0036 J	0.0038 J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cobalt		mg/l	NS	0.097	0.042 J	0.034 J	0.034 J	0.055	0.074	0.032 J	0.016 J	0.010 J
Copper		mg/l	NS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.0021 J	< 1.0	0.0041 J	< 1.0
Iron		mg/l	NS	1.1	1.5	0.12	1.1	0.098 J	0.38	0.060 J	0.17	0.027 J
Lead		mg/l	5	3.0	**36**	0.052 J	0.050 J	< 0.50	0.14 J	0.084 J	0.033 J	< 0.50
Magnesium		mg/l	NS	34	32	39	73	57	76	20	27	16
Manganese		mg/l	NS	4.5	3.3	6.9	8.3	5.4	3.3	4.8	4.6	2.4
Mercury		mg/l	0.2	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Nickel		mg/l	NS	0.097	0.17	0.041	0.042	0.057	0.081	0.049	0.036 J	0.025 J
Potassium		mg/l	NS	11	12	7.8	2.6 J	14	12	12	2.7 J	2.7 J
Selenium		mg/l	1	0.0060 J	0.0068 J	< 0.25	0.0042 J	< 0.25	0.0042 J	< 0.25	< 0.25	< 0.25
Silver		mg/l	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thallium		mg/l	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Vanadium		mg/l	NS	0.0029 J	< 0.050	< 0.050	0.0036 J	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Zinc		mg/l	NS	1.2	3.5	0.17 J	0.040 J	0.12 J	0.18 J	0.18 J	0.33 J	0.021 J
Other												
Percent Moisture		%	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 8.

Table 6
Summary of TCLP Soil Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	USEPA TCLP Guidance	ASB-1007 ASB-1007_22-25(20150623) 6/23/2015 22-25 Fill Soil	ASB-1007 ASB-1007_62-65(20150623) 6/23/2015 62-65 Industrial Waste	ASB-1007 ASB-1007_67-70(20150623) 6/23/2015 67-70 Industrial Waste	ASB-1007 ASB-1007_75-77(20150623) 6/23/2015 75-77 Native Sand	ASB-1008 ASB-1008_30-33(20150624) 6/24/2015 30-33 Fill Soil	ASB-1008 ASB-1008_52-54(20150624) 6/24/2015 52-54 Fill Soil	ASB-1008 ASB-1008_70-72(20150624) 6/24/2015 70-72 Native Sand	ASB-1009 ASB-1009_42-44(20150624) 6/24/2015 42-44 Fill Soil	ASB-1009 ASB-1009_55-57(20150624) 6/24/2015 55-57 Fill Soil
TCLP VOCs												
1,1-Dichloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
1,2-Dichloroethane		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
2-Butanone (MEK)		mg/l	200	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Benzene		mg/l	0.5	< 0.025	< 0.025	0.18	< 0.025	0.023 J	< 0.025	< 0.025	< 0.025	< 0.025
Carbon Tetrachloride		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Chlorobenzene		mg/l	100	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Chloroform		mg/l	6	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Tetrachloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Trichloroethene		mg/l	0.5	< 0.025	< 0.025	0.1	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Vinyl chloride		mg/l	0.2	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
TCLP SVOCs												
1,4-Dichlorobenzene		mg/l	7.5	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2,4,5-Trichlorophenol		mg/l	400	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2,4,6-Trichlorophenol		mg/l	2	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2,4-Dinitrotoluene		mg/l	0.13	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2-Methylphenol		mg/l	NS	0.0015 J	< 0.0040	0.085	< 0.0040	0.0070	< 0.0040	< 0.0040	< 0.0040	< 0.0040
3-Methylphenol, 4-Methylphenol		mg/l	200	0.0035 J	< 0.0040	0.18	< 0.0040	0.023	< 0.0040	< 0.0040	< 0.0040	0.0013 J
Hexachloro-1,3-butadiene		mg/l	0.5	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Hexachlorobenzene		mg/l	0.13	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080
Hexachloroethane		mg/l	3	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Nitrobenzene		mg/l	2	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Pentachlorophenol		mg/l	100	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Pyridine		mg/l	5	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
TCLP Metals												
Aluminum		mg/l	NS	< 0.20	< 0.20	0.075 J	< 0.20	< 0.20	0.24	< 0.20	< 0.20	< 0.20
Antimony		mg/l	NS	< 0.30	< 0.30	0.45	< 0.30	0.050 J	< 0.30	< 0.30	0.11 J	0.0046 J
Arsenic		mg/l	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Barium		mg/l	100	0.57 J	0.66 J	0.68 J	0.31 J	0.48 J	0.93 J	0.79 J	0.87 J	0.67 J
Beryllium		mg/l	NS	< 0.0050	< 0.0050	< 0.0050	0.00021 J	< 0.0050	< 0.0050	< 0.0050	0.00022 J	0.00018 J
Cadmium		mg/l	1	0.00055 J	0.00038 J	0.044 J	0.00046 J	0.00031 J	0.00064 J	0.00083 J	0.0023 J	0.00053 J
Calcium		mg/l	NS	570	610	160	83	670	630	210	520	590
Chromium		mg/l	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cobalt		mg/l	NS	0.013 J	0.023 J	0.28	0.014 J	0.0076 J	0.022 J	0.023 J	0.032 J	0.013 J
Copper		mg/l	NS	< 1.0	< 1.0	0.0078 J	< 1.0	< 1.0	< 1.0	0.0020 J	0.0043 J	0.0027 J
Iron		mg/l	NS	0.10	0.022 J	13	6.4	< 0.10	0.27	3.0	< 0.10	< 0.10
Lead		mg/l	5	0.0026 J	< 0.50	**32**	0.021 J	0.029 J	< 0.50	< 0.50	0.89	< 0.50
Magnesium		mg/l	NS	10	24	5.3	40	12	21	45	23	22
Manganese		mg/l	NS	4.3	2.6	1.0	1.4	5.5	7.0	8.1	4.3	4.1
Mercury		mg/l	0.2	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Nickel		mg/l	NS	0.026 J	0.050	0.071	0.024 J	0.019 J	0.036 J	0.034 J	0.053	< 0.040
Potassium		mg/l	NS	5.8	8.4	4.0 J	2.5 J	7.0	4.3 J	4.1 J	6.7	9.0
Selenium		mg/l	1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.0053 J	0.0061 J
Silver		mg/l	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thallium		mg/l	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Vanadium		mg/l	NS	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Zinc		mg/l	NS	0.034 J	0.015 J	11	0.030 J	0.11 J	0.045 J	0.031 J	0.13 J	0.014 J
Other												
Percent Moisture		%	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 8.

Table 6
Summary of TCLP Soil Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	USEPA TCLP Guidance	ASB-1009 ASB-1009_62-65(20150624) 6/24/2015 62-65 Fill Soil	ASB-1009 ASB-1009_70-72(20150625) 6/25/2015 70-72 Native Sand	ASB-1010 ASB-1010_38-40(20150625) 6/25/2015 38-40 Fill Soil	ASB-1010 ASB-1010_55-57(20150625) 6/25/2015 55-57 Fill Soil	ASB-1010 ASB-1010_70-73(20150625) 6/25/2015 70-73 Native Sand	AREA-C-TRENCH-1_010 AREA-C-TRENCH-1_010_4-5(20151215) 12/15/2015 4-5 Industrial Waste	AREA-C-TRENCH-1_010 AREA-C-TRENCH-1_010_5-6(20151215) 12/15/2015 5-6 Industrial Waste
TCLP VOCs										
1,1-Dichloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
1,2-Dichloroethane		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
2-Butanone (MEK)		mg/l	200	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Benzene		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Carbon Tetrachloride		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Chlorobenzene		mg/l	100	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Chloroform		mg/l	6	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Tetrachloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Trichloroethene		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Vinyl chloride		mg/l	0.2	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
TCLP SVOCs										
1,4-Dichlorobenzene		mg/l	7.5	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2,4,5-Trichlorophenol		mg/l	400	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2,4,6-Trichlorophenol		mg/l	2	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2,4-Dinitrotoluene		mg/l	0.13	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
2-Methylphenol		mg/l	NS	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0038 J	< 0.0040
3-Methylphenol, 4-Methylphenol		mg/l	200	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0092	< 0.0040
Hexachloro-1,3-butadiene		mg/l	0.5	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Hexachlorobenzene		mg/l	0.13	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080	< 0.00080
Hexachloroethane		mg/l	3	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Nitrobenzene		mg/l	2	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Pentachlorophenol		mg/l	100	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.016	< 0.016
Pyridine		mg/l	5	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
TCLP Metals										
Aluminum		mg/l	NS	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.26	< 0.20
Antimony		mg/l	NS	0.0062 J	< 0.30	0.011 J	< 0.30	0.0029 J	0.063 J	< 0.30
Arsenic		mg/l	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Barium		mg/l	100	0.29 J	0.94 J	0.27 J	0.57 J	0.53 J	1.9 J	1.2 J
Beryllium		mg/l	NS	0.00024 J	0.00021 J	0.00016 J	< 0.0050	0.00022 J	< 0.0050	< 0.0050
Cadmium		mg/l	1	0.00052 J	0.00029 J	0.00029 J	0.00049 J	0.017 J	0.0024 J	0.0012 J
Calcium		mg/l	NS	630	470	560	480	220	110	500
Chromium		mg/l	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.15 J	< 0.50
Cobalt		mg/l	NS	0.0028 J	0.0063 J	< 0.050	0.031 J	0.018 J	0.017 J	0.0052 J
Copper		mg/l	NS	0.0043 J	0.0034 J	0.0023 J	0.063 J	0.014 J	< 1.0	< 1.0
Iron		mg/l	NS	< 0.10	< 0.10	< 0.10	< 0.10	0.53	0.10	< 0.10
Lead		mg/l	5	0.0038 J	0.0029 J	< 0.50	< 0.50	0.070 J	3.4	< 0.50
Magnesium		mg/l	NS	9.4	15	13	33	36	7.3	63
Manganese		mg/l	NS	1.1	3.7	0.028	6.0	2.5	1.1	2.7
Mercury		mg/l	0.2	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Nickel		mg/l	NS	< 0.040	< 0.040	< 0.040	0.037 J	0.036 J	0.11	0.013 J
Potassium		mg/l	NS	8.1	2.8 J	14	7.6	14	5.3	7.7
Selenium		mg/l	1	< 0.25	< 0.25	0.0069 J	< 0.25	0.0057 J	< 0.25	< 0.25
Silver		mg/l	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thallium		mg/l	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Vanadium		mg/l	NS	0.0039 J	< 0.050	0.019 J	< 0.050	< 0.050	0.0026 J	< 0.050
Zinc		mg/l	NS	0.0099 J	0.036 J	< 1.0	0.15 J	0.27 J	1.5	0.058 J
Other										
Percent Moisture		%	NS	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 8.

Table 6
Summary of TCLP Soil Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	USEPA TCLP Guidance	AREA-C-TRENCH-1_015 AREA-C-TRENCH-1_015_5-6(20151215) 12/15/2015 5-6 Industrial Waste	AREA C-TRENCH-2_00 AREA C-TRENCH-2_00_9-10 (20160112) 1/12/2016 9-10 Industrial Waste	AREA C-TRENCH-2_00 AREA C-TRENCH-2_00_12-13 (20160112) 1/12/2016 12-13 Industrial Waste	AREA C-TRENCH-2_08 AREA C-TRENCH-2_08_4-5 (20160112) 1/12/2016 4-5 Industrial Waste	AREA C-TRENCH-2_013 AREA C-TRENCH-2_013_6-7 (20160112) 1/12/2016 6-7 Industrial Waste	AREA C-TRENCH-2_015 AREA C-TRENCH-2_015_6-7 (20160112) 1/12/2016 6-7 Industrial Waste
TCLP VOCs									
1,1-Dichloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
1,2-Dichloroethane		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
2-Butanone (MEK)		mg/l	200	< 0.25	< 0.25	< 0.25	< 0.25	0.062 J	< 0.25
Benzene		mg/l	0.5	< 0.025	< 0.025	< 0.025	0.0096 J	0.054	0.11
Carbon Tetrachloride		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Chlorobenzene		mg/l	100	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Chloroform		mg/l	6	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Tetrachloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Trichloroethene		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Vinyl chloride		mg/l	0.2	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
TCLP SVOCs									
1,4-Dichlorobenzene		mg/l	7.5	< 0.0040	< 0.0040	< 0.0040	< 0.010	< 0.016	< 0.016
2,4,5-Trichlorophenol		mg/l	400	< 0.0040	< 0.0040	< 0.0040	< 0.010	< 0.016	< 0.016
2,4,6-Trichlorophenol		mg/l	2	< 0.0040	< 0.0040	< 0.0040	< 0.010	< 0.016	< 0.016
2,4-Dinitrotoluene		mg/l	0.13	< 0.0040	< 0.0040	< 0.0040	< 0.010	< 0.016	< 0.016
2-Methylphenol		mg/l	NS	< 0.0040	< 0.0040	< 0.0040	0.032	0.041	0.050
3-Methylphenol, 4-Methylphenol		mg/l	200	< 0.0040	< 0.0040	0.0053	0.063	0.16	0.17
Hexachloro-1,3-butadiene		mg/l	0.5	< 0.0040	< 0.0040	< 0.0040	< 0.010	< 0.016	< 0.016
Hexachlorobenzene		mg/l	0.13	< 0.00080	< 0.00080	< 0.00080	< 0.0020	< 0.0032	< 0.0032
Hexachloroethane		mg/l	3	< 0.0040	< 0.0040	< 0.0040	< 0.010	< 0.016	< 0.016
Nitrobenzene		mg/l	2	< 0.0040	< 0.0040	< 0.0040	< 0.010	< 0.016	< 0.016
Pentachlorophenol		mg/l	100	< 0.016	< 0.016	< 0.016	< 0.040	< 0.064	< 0.064
Pyridine		mg/l	5	< 0.0040	< 0.0040	< 0.0040	< 0.010	< 0.016	< 0.016
TCLP Metals									
Aluminum		mg/l	NS	< 0.20	0.059 J	0.18 J	1.9	0.32	0.62
Antimony		mg/l	NS	0.0052 J	0.033 J	0.63	1.4	0.66	0.17 J
Arsenic		mg/l	5	< 0.50	0.017 J	0.045 J	0.036 J	< 0.50	0.033 J
Barium		mg/l	100	1.6 J	1.2 J	0.90 J	1.4 J	3.6 J	1.1 J
Beryllium		mg/l	NS	< 0.0050	< 0.0050	0.00027 J	0.00018 J	< 0.0050	0.00014 J
Cadmium		mg/l	1	0.0026 J	0.0031 J	0.0098 J	0.019 J	0.0075 J	0.0065 J
Calcium		mg/l	NS	520	540	440	74	410	470
Chromium		mg/l	5	< 0.50	< 0.50	< 0.50	0.026 J	0.011 J	< 0.50
Cobalt		mg/l	NS	0.0026 J	0.062	0.041 J	0.023 J	0.012 J	0.028 J
Copper		mg/l	NS	< 1.0	< 1.0	0.028 J	0.075 J	< 1.0	< 1.0
Iron		mg/l	NS	0.018 J	0.31	0.72	9.9	7.4	8.6
Lead		mg/l	5	0.027 J	0.12 J	**76**	**100**	**34**	**6.4**
Magnesium		mg/l	NS	74	23	12	4.8 J	6.6	8.0
Manganese		mg/l	NS	2.1	8.2	3.7	2.0	2.6	4.1
Mercury		mg/l	0.2	< 0.0020	0.00020 J	< 0.0020	0.00014 J	0.00015 J	0.00033 J
Nickel		mg/l	NS	0.025 J	0.11	0.34	1.4	0.62	0.91
Potassium		mg/l	NS	9.5	5.0	4.5 J	< 5.0	3.2 J	5.1
Selenium		mg/l	1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.0048 J
Silver		mg/l	5	< 0.50	0.0017 J	< 0.50	< 0.50	< 0.50	< 0.50
Thallium		mg/l	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Vanadium		mg/l	NS	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Zinc		mg/l	NS	0.051 J	0.41 J	2.9	15	23	13
Other									
Percent Moisture		%	NS	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 8.

Table 6
Summary of TCLP Soil Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Depth Interval Geology	Units	USEPA TCLP Guidance	AREA C-TRENCH-3_07 AREA C-TRENCH-3_07_3-4(20160114) 1/14/2016 3-4 Industrial Waste	AREA C-TRENCH-3_010 AREA C-TRENCH-3_010_9-10(20160114) 1/14/2016 9-10 Industrial Waste	AREA C-TRENCH-3_022 AREA C-TRENCH-3_022_2-3(20160114) 1/14/2016 2-3 Industrial Waste	AREAC-TRENCH-4_015 AREAC-TRENCH-4_015_7-8(20151217) 12/17/2015 7-8 Fill Soil	AREA C-TRENCH-5_00 AREA C-TRENCH-5_00_3-4 (20151216) 12/16/2015 3-4 Fill Soil
TCLP VOCs								
1,1-Dichloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025 U	< 0.025
1,2-Dichloroethane		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025 U	< 0.025
2-Butanone (MEK)		mg/l	200	< 0.25	< 0.25	< 0.25	< 0.25 U	< 0.25
Benzene		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025 U	< 0.025
Carbon Tetrachloride		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025 U	< 0.025
Chlorobenzene		mg/l	100	< 0.025	< 0.025	< 0.025	< 0.025 U	< 0.025
Chloroform		mg/l	6	< 0.025	< 0.025	< 0.025	< 0.025 U	< 0.025
Tetrachloroethene		mg/l	0.7	< 0.025	< 0.025	< 0.025	< 0.025 U	< 0.025
Trichloroethene		mg/l	0.5	< 0.025	< 0.025	< 0.025	< 0.025 U	< 0.025
Vinyl chloride		mg/l	0.2	< 0.025	< 0.025	< 0.025	< 0.025 U	< 0.025
TCLP SVOCs								
1,4-Dichlorobenzene		mg/l	7.5	< 0.0040	< 0.0080	< 0.0040	< 0.0040 U	< 0.0040
2,4,5-Trichlorophenol		mg/l	400	< 0.0040	< 0.0080	< 0.0040	< 0.0040 U	< 0.0040
2,4,6-Trichlorophenol		mg/l	2	< 0.0040	< 0.0080	< 0.0040	< 0.0040 U	< 0.0040
2,4-Dinitrotoluene		mg/l	0.13	< 0.0040	< 0.0080	< 0.0040	< 0.0040 U	< 0.0040
2-Methylphenol		mg/l	NS	< 0.0040 J	0.063	< 0.0040	< 0.0040 U	< 0.0040
3-Methylphenol, 4-Methylphenol		mg/l	200	< 0.0040 J	0.23	< 0.0040	< 0.0040 U	< 0.0040
Hexachloro-1,3-butadiene		mg/l	0.5	< 0.0040	< 0.0080	< 0.0040	< 0.0040 U	< 0.0040
Hexachlorobenzene		mg/l	0.13	< 0.00080	< 0.0016	< 0.00080	< 0.00080 U	< 0.00080
Hexachloroethane		mg/l	3	< 0.0040	< 0.0080	< 0.0040	< 0.0040 U	< 0.0040
Nitrobenzene		mg/l	2	< 0.0040	< 0.0080	< 0.0040	< 0.0040 U	< 0.0040
Pentachlorophenol		mg/l	100	< 0.016	0.0021 J	< 0.016	< 0.016 U	< 0.016
Pyridine		mg/l	5	< 0.0040	0.0020 J	0.0012 J	< 0.0040 U	< 0.0040
TCLP Metals								
Aluminum		mg/l	NS	0.20	0.48	0.061 J	< 0.20 U	< 0.20
Antimony		mg/l	NS	0.028 J	0.29 J	0.29 J	< 0.30 U	< 0.30
Arsenic		mg/l	5	< 0.50 J	< 0.50 J	< 0.50 J	0.0059 J	0.0063 J
Barium		mg/l	100	2.5 J	2.0 J	0.76 J	0.35 J	0.36 J
Beryllium		mg/l	NS	< 0.0050	< 0.0050	< 0.0050	< 0.0050 U	< 0.0050
Cadmium		mg/l	1	0.046 J	0.0051 J	0.027 J	0.00039 J	0.00078 J
Calcium		mg/l	NS	140	150	530	490	400
Chromium		mg/l	5	< 0.50 J	0.044 J	< 0.50 J	0.0073 J	0.0072 J
Cobalt		mg/l	NS	0.026 J	0.023 J	0.018 J	0.029 J	0.057
Copper		mg/l	NS	0.11 J	< 1.0 J	2.9	0.0039 J	0.0046 J
Iron		mg/l	NS	0.19	4.9	< 0.10	0.086 J	0.029 J
Lead		mg/l	5	3.7	**9.9**	**17**	< 0.50	< 0.50
Magnesium		mg/l	NS	17	5.7	15	45	79
Manganese		mg/l	NS	1.8	1.8	3.7	3.4	3.8
Mercury		mg/l	0.2	< 0.0020	< 0.0020	< 0.0020	< 0.0020 U	< 0.0020
Nickel		mg/l	NS	0.17	0.73	0.27	0.051	0.065
Potassium		mg/l	NS	3.5 J	5.4	5.5	6.7	7.3
Selenium		mg/l	1	< 0.25	< 0.25	< 0.25	< 0.25 U	< 0.25
Silver		mg/l	5	< 0.50	< 0.50	< 0.50	< 0.50 U	< 0.50
Thallium		mg/l	NS	< 2.0	< 2.0	< 2.0	< 2.0 U	< 2.0
Vanadium		mg/l	NS	< 0.050	< 0.050	< 0.050	< 0.050 U	< 0.050
Zinc		mg/l	NS	4.3	48	18	0.047 J	0.027 J
Other								
Percent Moisture		%	NS	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 8.

Table 6
Summary of TCLP Soil Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

General Notes:

Shade Value is above the USEPA TCLP Guidance criteria

Acronyms and Abbreviatiosn:

< = not deteced above reporting detection limit
ASB = Arcadis soil boring
J = estimated result
mg/l = milligrams per liter
MPCA = Minnesota Pollution Control Agency
NA = not analyzed
NS = no standard
SVOCs = semi-volatile compounds
TCLP = toxicity characteristic leaching procedure
U = analyzed but not detected
USEPA = United States Environmental Protection Agency
VOCs = volatile organic compounds

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	B-1 / B-1 / 3/3/1982 / Overburden (Area C)	B-1 / B-1 / 12/1/1982 / Overburden (Area C)	B-1 / B-1 / 6/1/1989 / Overburden (Area C)	B-1 / B-1 / 8/1/1989 / Overburden (Area C)	B-1 / B-1 / 9/1/1989 / Overburden (Area C)	B-1 / B-1 / 4/1/1990 / Overburden (Area C)	B-1 / B-1 / 6/1/1990 / Overburden (Area C)	B-2 / B-2 / 3/3/1982 / Overburden (Area C)	B-2 / B-2 / 12/1/1982 / Overburden (Area C)
				CS	MS	FAV										
VOCs																
1,1,1,2-Tetrachloroethane		70	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,1-Trichloroethane		9000	2009 HRL	329	2957	5913	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-Tetrachloroethane		2	1993/94 HRL	13	1127	2253	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2-trichloro-1,2,2-trifluoroethane		200000	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2-Trichloroethane		3	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-Dichloroethane		100	2009 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-Dichloroethene		200	2011 HRL	NS	NS	NS	µg/l	NR	NR	1.5	ND R	ND	ND	ND	NR	NR
1,1-Dichloropropene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,3-Trichlorobenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,3-Trichloropropane		0.003	2013 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene		4	2013 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trimethylbenzene		100	2010 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromo-3-chloropropane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane		0.004	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dichlorobenzene		600	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dichloroethane		1	2013 HRL	190	45050	90100	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dichloropropane		5	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3,5-Trimethylbenzene		100	2009 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3-Dichlorobenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3-Dichloropropane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,4-Dichlorobenzene		10	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
2,2-Dichloropropane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone (MEK)		4000	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
4-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
4-Methyl-2-Pentanone		300	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acetone		4000	2011 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Allyl chloride		30	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzene		2	2009 HRL	114	4487	8974	µg/l	NR	<1	NR	NR	NR	NR	NR	NR	<1
Bromobenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Bromochloromethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Bromodichloromethane		6	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Bromoform		40	1993/94 HRL	466	2900	5800	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Bromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon Disulfide		700	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon Tetrachloride		1	2013 HRL	5.9	1750	3500	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
CFC-11		2000	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	ND	ND(R)	ND	ND	ND	NR	NR
CFC-12		700	2011 HRL	NS	NS	NS	µg/l	NR	NR	ND	14 J	ND	ND	ND	NR	NR
Chlorobenzene		100	1993/94 HRL	20	423	846	µg/l	NR	ND	NR	NR	NR	NR	NR	NR	ND
Chlorodibromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloroethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloroform		30	2009 HRL	155	1392	2784	µg/l	NR	NR	ND	ND	ND	ND	ND	NR	NR
Chloromethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
cis-1,2-Dichloroethene		6	2014 HBV	NS	NS	NS	µg/l	<2	ND	ND	ND	ND	ND	ND	15	22
cis-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cyclohexane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cymene (p-Isopropyltoluene)		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dibromomethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dichloromethane		5	2009 HRL/MCL	1940	13875	27749	µg/l	NR	NR	ND	ND R	ND	ND	ND	NR	NR
Dichloromonofluoromethane		30	2015 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Diethyl ether		200	2010 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	B-1 / B-1 / 3/3/1982 / Overburden (Area C)	B-1 / B-1 / 12/1/1982 / Overburden (Area C)	B-1 / B-1 / 6/1/1989 / Overburden (Area C)	B-1 / B-1 / 8/1/1989 / Overburden (Area C)	B-1 / B-1 / 9/1/1989 / Overburden (Area C)	B-1 / B-1 / 4/1/1990 / Overburden (Area C)	B-1 / B-1 / 6/1/1990 / Overburden (Area C)	B-2 / B-2 / 3/3/1982 / Overburden (Area C)	B-2 / B-2 / 12/1/1982 / Overburden (Area C)
				CS	MS	FAV										
Ethylbenzene		50	2011 HRL	68	1859	3717	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Isopropylbenzene		300	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl Acetate		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl N-Butyl Ketone (2-Hexanone)		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylcyclohexane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl-tert-butylether		60	2013 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Naphthalene		70	2013 HRL	81	409	818	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
N-Butylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
N-Propylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
sec-Butylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Styrene (Monomer)		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
tert-Butylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene		4	2014 HBV	8.9	428	857	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrahydrofuran		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Toluene		200	2011 HRL	253	1352	2703	µg/l	1	2.1	NR	NR	NR	NR	NR	1	<1
trans-1,2-Dichloroethene		40	2013 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	15	NR
trans-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Trichloroethene		0.4	2015 HRL	120	6988	13976	µg/l	4	NR	ND	ND R	2.1	ND	ND	5	NR
Vinyl chloride		0.2	2009 HRL	9.2	NS	NS	µg/l	NR	NR	ND	5.2 J	ND	ND	ND	NR	NR
m,p-Xylene		300	2011 HRL	NS	NS	NS	µg/l	NR	<1	NR	NR	NR	NR	NR	NR	<1
o-Xylene		300	2011 HRL	NS	NS	NS	µg/l	NR	<1	NR	NR	NR	NR	NR	NR	<1
Total Xylenes*		300	2011 HRL	166	1407	2814	µg/l	NR	<1	NR	NR	NR	NR	NR	NR	<1
SVOCs																
1,1-Biphenyl		300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Oxybis(1-Chloropropane)		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol		30	1993/94 HRL	2	102	203	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol		20	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol		10	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		8	2013 RAA	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine		0.8	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol, 4-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol		3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene		400	1993/94 HRL	20	56	112	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	B-1 / B-1 / 3/3/1982 / Overburden (Area C)	B-1 / B-1 / 12/1/1982 / Overburden (Area C)	B-1 / B-1 / 6/1/1989 / Overburden (Area C)	B-1 / B-1 / 8/1/1989 / Overburden (Area C)	B-1 / B-1 / 9/1/1989 / Overburden (Area C)	B-1 / B-1 / 4/1/1990 / Overburden (Area C)	B-1 / B-1 / 6/1/1990 / Overburden (Area C)	B-2 / B-2 / 3/3/1982 / Overburden (Area C)	B-2 / B-2 / 12/1/1982 / Overburden (Area C)
				CS	MS	FAV										
Acetophenone		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene		2000	1993/94 HRL	0.035	0.32	0.63	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine		3	2009 HRL/MCL	10	323	645	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene		0.06	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether		0.3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate		6	2009 HRL/MCL	2.1	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate		100	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate		6000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate		70000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate		20	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate		NS	NS	30	825	1650	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene		300	1993/94 HRL	1.9	3.5	6.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene		300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene		0.2	1993/94 HRL	0.00024	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene		70	2013 HRL	81	409	818	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodi-n-propylamine		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-nitrosodiphenylamine		70	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Chloroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol		0.3	2013 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene		NS	NS	3.6	32	64	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol		4000	1993/94 HRL	123	2214	4428	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene		200	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene (BaP) Equivalents		0.06	2012 HBV[1]	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals																
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		100	1993/94 HRL	11	16	32	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt		30	1995 HBV	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 7
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Ford Motor Company - Twin Cities Assembly Plant
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Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	B-1 / B-1 / 3/3/1982 / Overburden (Area C)	B-1 / B-1 / 12/1/1982 / Overburden (Area C)	B-1 / B-1 / 6/1/1989 / Overburden (Area C)	B-1 / B-1 / 8/1/1989 / Overburden (Area C)	B-1 / B-1 / 9/1/1989 / Overburden (Area C)	B-1 / B-1 / 4/1/1990 / Overburden (Area C)	B-1 / B-1 / 6/1/1990 / Overburden (Area C)	B-2 / B-2 / 3/3/1982 / Overburden (Area C)	B-2 / B-2 / 12/1/1982 / Overburden (Area C)
				CS	MS	FAV										
Copper		1000	1995 HBV	14	31	62	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals				.												
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	ND	ND	ND	ND	60	NA	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	20	3	ND	ND	ND	ND	ND	<10**	3
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		100	NS	11	16	32	µg/l	<50**	<50**	ND	ND	ND	ND	ND	<50**	<50**
Cobalt		30	NS	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper		1000	NS	14	31	62	µg/l	30	<5	ND	10	ND	ND	ND	20	<5
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	120	5	ND	ND	ND	ND	ND	<50**	5
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	2012 RAA	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	70	60	ND	ND	ND	ND	ND	40	<20
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	60	<50	ND	ND	ND	ND	ND	40	<5
PCBs																
Aroclor 1016		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated Biphenyls		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH																
Diesel Range Organics		100	MPCA PBP				µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline Range Organics		100	MPCA PBP				µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other																
Cyanide, Free		100	1993/94 HRL	5.2	22	45	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

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				CS	MS	FAV										
VOCs																
1,1,1,2-Tetrachloroethane		70	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,1-Trichloroethane		9000	2009 HRL	329	2957	5913	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-Tetrachloroethane		2	1993/94 HRL	13	1127	2253	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2-trichloro-1,2,2-trifluoroethane		200000	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2-Trichloroethane		3	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-Dichloroethane		100	2009 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-Dichloroethene		200	2011 HRL	NS	NS	NS	µg/l	NR	NR	ND	ND	ND	ND	ND	NR	NR
1,1-Dichloropropene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,3-Trichlorobenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,3-Trichloropropane		0.003	2013 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene		4	2013 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trimethylbenzene		100	2010 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromo-3-chloropropane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane		0.004	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dichlorobenzene		600	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dichloroethane		1	2013 HRL	190	45050	90100	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dichloropropane		5	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3,5-Trimethylbenzene		100	2009 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3-Dichlorobenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3-Dichloropropane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,4-Dichlorobenzene		10	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
2,2-Dichloropropane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone (MEK)		4000	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
4-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
4-Methyl-2-Pentanone		300	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acetone		4000	2011 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Allyl chloride		30	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzene		2	2009 HRL	114	4487	8974	µg/l	NR	<1	NR	NR	NR	NR	NR	NR	<1
Bromobenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Bromochloromethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Bromodichloromethane		6	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Bromoform		40	1993/94 HRL	466	2900	5800	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Bromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon Disulfide		700	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon Tetrachloride		1	2013 HRL	5.9	1750	3500	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
CFC-11		2000	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	ND	ND	ND	ND	ND	NR	NR
CFC-12		700	2011 HRL	NS	NS	NS	µg/l	NR	NR	ND	ND	ND	ND	ND	NR	NR
Chlorobenzene		100	1993/94 HRL	20	423	846	µg/l	NR	<1	NR	NR	NR	NR	NR	NR	<1
Chlorodibromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloroethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloroform		30	2009 HRL	155	1392	2784	µg/l	NR	NR	ND	ND	ND	ND	ND	NR	NR
Chloromethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
cis-1,2-Dichloroethene		6	2014 HBV	NS	NS	NS	µg/l	<2	<2	ND	ND	ND	ND	ND	<2	6.7
cis-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cyclohexane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cymene (p-Isopropyltoluene)		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dibromomethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dichloromethane		5	2009 HRL/MCL	1940	13875	27749	µg/l	NR	NR	ND	ND	ND	ND	ND	NR	NR
Dichloromonofluoromethane		30	2015 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Diethyl ether		200	2010 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR

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Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	B-3 / B-3 / 3/3/1982 / Overburden (Area C)	B-3 / B-3 / 12/1/1982 / Overburden (Area C)	B-3 / B-3 / 6/1/1989 / Overburden (Area C)	B-3 / B-3 / 8/1/1989 / Overburden (Area C)	B-3 / B-3 / 9/1/1989 / Overburden (Area C)	B-3 / B-3 / 4/1/1990 / Overburden (Area C)	B-3 / B-3 / 6/1/1990 / Overburden (Area C)	B-4 / B-4 / 3/3/1982 / Overburden (Area C)	B-4 / B-4 / 12/1/1982 / Overburden (Area C)
				CS	MS	FAV										
Ethylbenzene		50	2011 HRL	68	1859	3717	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Isopropylbenzene		300	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl Acetate		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl N-Butyl Ketone (2-Hexanone)		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylcyclohexane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl-tert-butylether		60	2013 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Naphthalene		70	2013 HRL	81	409	818	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
N-Butylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
N-Propylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
sec-Butylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Styrene (Monomer)		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
tert-Butylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene		4	2014 HBV	8.9	428	857	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrahydrofuran		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Toluene		200	2011 HRL	253	1352	2703	µg/l	<1	<1	NR	NR	NR	NR	NR	1	<1
trans-1,2-Dichloroethene		40	2013 HRL	NS	NS	NS	µg/l	<2	NR	NR	NR	NR	NR	NR	<2	NR
trans-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	NR	NR	NR
Trichloroethene		0.4	2015 HRL	120	6988	13976	µg/l	<2	NR	ND	ND	ND	ND	ND	<2	NR
Vinyl chloride		0.2	2009 HRL	9.2	NS	NS	µg/l	NR	NR	ND	ND	ND	ND	ND	NR	NR
m,p-Xylene		300	2011 HRL	NS	NS	NS	µg/l	NR	<1	NR	NR	NR	NR	NR	NR	<1
o-Xylene		300	2011 HRL	NS	NS	NS	µg/l	NR	<1	NR	NR	NR	NR	NR	NR	<1
Total Xylenes*		300	2011 HRL	166	1407	2814	µg/l	NR	<1	NR	NR	NR	NR	NR	NR	<1
SVOCs																
1,1-Biphenyl		300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Oxybis(1-Chloropropane)		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol		30	1993/94 HRL	2	102	203	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol		20	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol		10	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		8	2013 RAA	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine		0.8	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol, 4-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol		3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene		400	1993/94 HRL	20	56	112	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
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Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	B-3 / B-3 / 3/3/1982 / Overburden (Area C)	B-3 / B-3 / 12/1/1982 / Overburden (Area C)	B-3 / B-3 / 6/1/1989 / Overburden (Area C)	B-3 / B-3 / 8/1/1989 / Overburden (Area C)	B-3 / B-3 / 9/1/1989 / Overburden (Area C)	B-3 / B-3 / 4/1/1990 / Overburden (Area C)	B-3 / B-3 / 6/1/1990 / Overburden (Area C)	B-4 / B-4 / 3/3/1982 / Overburden (Area C)	B-4 / B-4 / 12/1/1982 / Overburden (Area C)
				CS	MS	FAV										
Acetophenone		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene		2000	1993/94 HRL	0.035	0.32	0.63	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine		3	2009 HRL/MCL	10	323	645	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene		0.06	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether		0.3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate		6	2009 HRL/MCL	2.1	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate		100	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate		6000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate		70000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate		20	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate		NS	NS	30	825	1650	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene		300	1993/94 HRL	1.9	3.5	6.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene		300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene		0.2	1993/94 HRL	0.00024	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene		70	2013 HRL	81	409	818	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodi-n-propylamine		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-nitrosodiphenylamine		70	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Chloroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol		0.3	2013 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene		NS	NS	3.6	32	64	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol		4000	1993/94 HRL	123	2214	4428	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene		200	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene (BaP) Equivalents		0.06	2012 HBV[1]	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals																
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		100	1993/94 HRL	11	16	32	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt		30	1995 HBV	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

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				CS	MS	FAV										
Copper		1000	1995 HBV	14	31	62	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals				.												
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	300	ND	ND	200	180	NA	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	<10**	3	0.2	ND	ND	ND	ND	20	5
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		100	NS	11	16	32	µg/l	<50**	<50**	ND	ND	ND	ND	ND	<50**	<50**
Cobalt		30	NS	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper		1000	NS	14	31	62	µg/l	10	<5	ND	20	ND	10 U	ND	10	<5
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	<50**	4	ND	ND	ND	ND	ND	60	6
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	2012 RAA	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	20	<20	ND	50	ND	ND	ND	50	<20
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	<20	<5	30	ND	20	ND	ND	90	60
PCBs																
Aroclor 1016		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated Biphenyls		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH																
Diesel Range Organics		100	MPCA PBP				µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline Range Organics		100	MPCA PBP				µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other																
Cyanide, Free		100	1993/94 HRL	5.2	22	45	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 7
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Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	B-5 B-5 12/1/1982 Overburden (Area C)	B-5 B-5 6/1/1989 Overburden (Area C)	B-5 B-5 8/1/1989 Overburden (Area C)	B-5 B-5 9/1/1989 Overburden (Area C)	B-6 B-6 4/1/1990 Overburden (Area C)	B-6 B-6 6/1/1990 Overburden (Area C)	AMW-05 AMW-05 (20140703) 7/3/2014 St. Peter Sandstone	AMW-05 AMW-05 (20140807) 8/7/2014 St. Peter Sandstone	AMW-05B AMW-05B(20070724) 7/24/2007 St. Peter Sandstone
				CS	MS	FAV										
VOCs																
1,1,1,2-Tetrachloroethane		70	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane		9000	2009 HRL	329	2957	5913	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		2	1993/94 HRL	13	1127	2253	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane		200000	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane		3	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		100	2009 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		200	2011 HRL	NS	NS	NS	µg/l	NR	ND	0.8 J	ND	ND	ND	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane		0.003	2013 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene		4	2013 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene		100	2010 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 2.0	< 2.0	< 2.0
1,2-Dibromoethane		0.004	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene		600	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		1	2013 HRL	190	45050	90100	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		5	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		100	2009 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		10	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		4000	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 10	< 10	< 10
2-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
4-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
4-Methyl-2-Pentanone		300	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 10	< 10	< 5.0
Acetone		4000	2011 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 10	< 10	< 10
Allyl chloride		30	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 2.0	< 2.0	< 2.0
Benzene		2	2009 HRL	114	4487	8974	µg/l	<1	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Bromobenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Bromochloromethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Bromodichloromethane		6	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Bromoform		40	1993/94 HRL	466	2900	5800	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Bromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Carbon Disulfide		700	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride		1	2013 HRL	5.9	1750	3500	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
CFC-11		2000	1993/94 HRL	NS	NS	NS	µg/l	NR	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 1.0
CFC-12		700	2011 HRL	NS	NS	NS	µg/l	NR	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 1.0
Chlorobenzene		100	1993/94 HRL	20	423	846	µg/l	ND	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Chlorodibromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Chloroethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Chloroform		30	2009 HRL	155	1392	2784	µg/l	NR	ND	ND	ND	3.9	ND	< 1.0	< 1.0	< 1.0
Chloromethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	4.4	0.54 J
cis-1,2-Dichloroethene		6	2014 HBV	NS	NS	NS	µg/l	ND	ND	ND	ND	ND	5.5	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Cyclohexane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Cymene (p-Isopropyltoluene)		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Dibromomethane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Dichloromethane		5	2009 HRL/MCL	1940	13875	27749	µg/l	NR	ND	ND	ND	1.4 U	ND	< 1.0	< 1.0	< 1.0
Dichloromonofluoromethane		30	2015 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 2.0	< 2.0	< 1.0
Diethyl ether		200	2010 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 2.0	< 2.0	< 1.0

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Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	B-5 / B-5 / 12/1/1982 / Overburden (Area C)	B-5 / B-5 / 6/1/1989 / Overburden (Area C)	B-5 / B-5 / 8/1/1989 / Overburden (Area C)	B-5 / B-5 / 9/1/1989 / Overburden (Area C)	B-6 / B-6 / 4/1/1990 / Overburden (Area C)	B-6 / B-6 / 6/1/1990 / Overburden (Area C)	AMW-05 / AMW-05 (20140703) / 7/3/2014 / St. Peter Sandstone	AMW-05 / AMW-05 (20140807) / 8/7/2014 / St. Peter Sandstone	AMW-05B / AMW-05B(20070724) / 7/24/2007 / St. Peter Sandstone
				CS	MS	FAV										
Ethylbenzene		50	2011 HRL	68	1859	3717	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Isopropylbenzene		300	1993/94 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Methyl Acetate		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 10	< 10	< 10
Methylcyclohexane		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Methyl-tert-butylether		60	2013 RAA	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 2.0
Naphthalene		70	2013 HRL	81	409	818	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
N-Butylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
N-Propylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
sec-Butylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Styrene (Monomer)		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
tert-Butylbenzene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Tetrachloroethene		4	2014 HBV	8.9	428	857	µg/l	NR	NR	NR	NR	NR	NR	0.39 J	0.32 J	< 1.0
Tetrahydrofuran		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 5.0	< 5.0	< 5.0
Toluene		200	2011 HRL	253	1352	2703	µg/l	<1	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene		40	2013 HRL	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	NR	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Trichloroethene		0.4	2015 HRL	120	6988	13976	µg/l	NR	ND	ND	ND	ND	0.5	15	3.2	< 1.0
Vinyl chloride		0.2	2009 HRL	9.2	NS	NS	µg/l	NR	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 1.0
m,p-Xylene		300	2011 HRL	NS	NS	NS	µg/l	<1	NR	NR	NR	NR	NR	< 2.0	< 2.0	< 2.0
o-Xylene		300	2011 HRL	NS	NS	NS	µg/l	<1	NR	NR	NR	NR	NR	< 1.0	< 1.0	< 1.0
Total Xylenes*		300	2011 HRL	166	1407	2814	µg/l	<1	NR	NR	NR	NR	NR	ND	ND	ND
SVOCs																
1,1-Biphenyl		300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
1-Methylnaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Oxybis(1-Chloropropane)		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
2,4,5-Trichlorophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
2,4,6-Trichlorophenol		30	1993/94 HRL	2	102	203	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
2,4-Dichlorophenol		20	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
2,4-Dimethylphenol		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
2,4-Dinitrophenol		10	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 50
2,4-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
2,6-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
2-Chloronaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
2-Chlorophenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
2-Methyl-4,6-dinitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 50
2-Methylnaphthalene		8	2013 RAA	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
2-Methylphenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
2-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 50
2-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
3,3-Dichlorobenzidine		0.8	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 50
3-Methylphenol, 4-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 50
4-Bromophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
4-Chloro-3-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
4-Chlorophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
4-Methylphenol		3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
4-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 50
4-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 50
Acenaphthene		400	1993/94 HRL	20	56	112	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Acenaphthylene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10

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Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	B-5 B-5 12/1/1982 Overburden (Area C)	B-5 B-5 6/1/1989 Overburden (Area C)	B-5 B-5 8/1/1989 Overburden (Area C)	B-5 B-5 9/1/1989 Overburden (Area C)	B-6 B-6 4/1/1990 Overburden (Area C)	B-6 B-6 6/1/1990 Overburden (Area C)	AMW-05 AMW-05 (20140703) 7/3/2014 St. Peter Sandstone	AMW-05 AMW-05 (20140807) 8/7/2014 St. Peter Sandstone	AMW-05B AMW-05B(20070724) 7/24/2007 St. Peter Sandstone
				CS	MS	FAV										
Acetophenone		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Anthracene		2000	1993/94 HRL	0.035	0.32	0.63	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Atrazine		3	2009 HRL/MCL	10	323	645	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Benzaldehyde		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Benzo(a)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Benzo(a)pyrene		0.06	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Benzo(b)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Benzo(g,h,i)perylene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Benzo(k)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
bis(2-Chloroethoxy)methane		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
bis(2-Chloroethyl)ether		0.3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
bis(2-Ethylhexyl)phthalate		6	2009 HRL/MCL	2.1	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Butyl benzyl phthalate		100	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Caprolactam		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Carbazole		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Chrysene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Dibenzo(a,h)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Dibenzofuran		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Diethyl phthalate		6000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Dimethyl phthalate		70000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Di-n-butyl phthalate		20	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Di-n-octyl phthalate		NS	NS	30	825	1650	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Fluoranthene		300	1993/94 HRL	1.9	3.5	6.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Fluorene		300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Hexachlorobenzene		0.2	1993/94 HRL	0.00024	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Hexachlorocyclopentadiene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 50
Hexachloroethane		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Indeno(1,2,3-cd)pyrene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Isophorone		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Naphthalene		70	2013 HRL	81	409	818	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Nitrobenzene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
n-Nitrosodi-n-propylamine		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
N-nitrosodiphenylamine		70	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
p-Chloroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Pentachlorophenol		0.3	2013 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Phenanthrene		NS	NS	3.6	32	64	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Phenol		4000	1993/94 HRL	123	2214	4428	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Pyrene		200	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10
Benzo(a)pyrene (BaP) Equivalents		0.06	2012 HBV[1]	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	ND
Total Metals																
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 10.0
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	371
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	0.63 J
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		100	1993/94 HRL	11	16	32	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	54.6
Cobalt		30	1995 HBV	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	B-5 B-5 12/1/1982 Overburden (Area C)	B-5 B-5 6/1/1989 Overburden (Area C)	B-5 B-5 8/1/1989 Overburden (Area C)	B-5 B-5 9/1/1989 Overburden (Area C)	B-6 B-6 4/1/1990 Overburden (Area C)	B-6 B-6 6/1/1990 Overburden (Area C)	AMW-05 AMW-05 (20140703) 7/3/2014 St. Peter Sandstone	AMW-05 AMW-05 (20140807) 8/7/2014 St. Peter Sandstone	AMW-05B AMW-05B(20070724) 7/24/2007 St. Peter Sandstone
				CS	MS	FAV										
Copper		1000	1995 HBV	14	31	62	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	77.6
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 5.0
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	2.4 J
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals				.												
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	< 200	< 200	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	< 10	< 10	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA	NA	NA	NA	< 10	< 10	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	ND	ND	ND	ND	73	150 J	73 J	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	0.62 J	< 5.0	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	1	0.4	ND	0.2	ND	ND	< 5.0	< 5.0	NA
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	280000	130000	NA
Chromium		100	NS	11	16	32	µg/l	<50**	2	ND	ND	ND	ND	< 10	< 10	NA
Cobalt		30	NS	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	< 7.0	2.7 J	NA
Copper		1000	NS	14	31	62	µg/l	<5	ND	ND	ND	ND	ND	< 25	< 25	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	810	< 100	NA
Lead		15	No Basis[2]	7	173	346	µg/l	3	ND	ND	ND	ND	ND	< 3.0	< 3.0	NA
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	97000	53000	NA
Manganese		100	2012 RAA	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	180	64	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	<20	80	50	ND	ND	ND	110	31 J	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	11000	7200	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA	NA	NA	NA	11	< 5.0	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA	NA	NA	NA	< 10	< 10	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	89000	120000	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	< 10	< 10	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	< 7.0	< 7.0	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	<5	70	ND	260	ND	7 U	< 50	< 50	NA
PCBs																
Aroclor 1016		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20
Aroclor 1221		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20
Aroclor 1232		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20
Aroclor 1242		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20
Aroclor 1248		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20
Aroclor 1254		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20
Aroclor 1260		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20
Polychlorinated Biphenyls		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH																
Diesel Range Organics		100	MPCA PBP				µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline Range Organics		100	MPCA PBP				µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other																
Cyanide, Free		100	1993/94 HRL	5.2	22	45	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-05B / AMW-05B(12172007) / 12/17/2007 / St. Peter Sandstone	AMW-05B / AMW-05B(20080311) / 3/11/2008 / St. Peter Sandstone	AMW-05B / AMW-05B(20080910) / 9/10/2008 / St. Peter Sandstone	AMW-05B / AMW-05B(20091006) / 10/6/2009 / St. Peter Sandstone	AMW-05B / AMW-05B (20140703) / 7/3/2014 / St. Peter Sandstone	AMW-05B / AMW-05B (20140806) / 8/6/2014 / St. Peter Sandstone	AMW-05B / AMW-05 (20140916) / 9/16/2014 / St. Peter Sandstone	AMW-05B / AMW-05B (20160609) / 6/9/2016 / St. Peter Sandstone	AMW-07 / AMW-07(20070717) / 7/17/2007 / St. Peter Sandstone
				CS	MS	FAV										
VOCs																
1,1,1,2-Tetrachloroethane		70	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane		9000	2009 HRL	329	2957	5913	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		2	1993/94 HRL	13	1127	2253	µg/l	< 1	< 1.0	< 1.0 J	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane		200000	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane		3	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		100	2009 RAA	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		200	2011 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	0.17 J	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane		0.003	2013 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene		4	2013 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene		100	2010 RAA	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane		NS	NS	NS	NS	NS	µg/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,2-Dibromoethane		0.004	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene		600	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		1	2013 HRL	190	45050	90100	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		5	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		100	2009 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		10	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		4000	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Methyl-2-Pentanone		300	1993/94 HRL	NS	NS	NS	µg/l	< 5	< 5.0	< 5.0	< 5.0 J	< 10	< 10	< 10	< 10	< 5.0
Acetone		4000	2011 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Allyl chloride		30	1993/94 HRL	NS	NS	NS	µg/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Benzene		2	2009 HRL	114	4487	8974	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane		6	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		40	1993/94 HRL	466	2900	5800	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide		700	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	0.95 J	0.31 J	< 1.0	0.18 J	0.37 J	< 1.0	< 1.0
Carbon Tetrachloride		1	2013 HRL	5.9	1750	3500	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11		2000	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12		700	2011 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene		100	1993/94 HRL	20	423	846	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		30	2009 HRL	155	1392	2784	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.35 J
Chloromethane		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	0.46 J	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene		6	2014 HBV	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0 J	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cymene (p-Isopropyltoluene)		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane		5	2009 HRL/MCL	1940	13875	27749	µg/l	< 1	< 1.0	0.72 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromonofluoromethane		30	2015 RAA	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0
Diethyl ether		200	2010 RAA	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0

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Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-05B AMW-05B(12172007) 12/17/2007 St. Peter Sandstone	AMW-05B AMW-05B(20080311) 3/11/2008 St. Peter Sandstone	AMW-05B AMW-05B(20080910) 9/10/2008 St. Peter Sandstone	AMW-05B AMW-05B(20091006) 10/6/2009 St. Peter Sandstone	AMW-05B AMW-05B (20140703) 7/3/2014 St. Peter Sandstone	AMW-05B AMW-05B (20140806) 8/6/2014 St. Peter Sandstone	AMW-05B AMW-05 (20140916) 9/16/2014 St. Peter Sandstone	AMW-05B AMW-05B (20160609) 6/9/2016 St. Peter Sandstone	AMW-07 AMW-07(20070717) 7/17/2007 St. Peter Sandstone
				CS	MS	FAV										
Ethylbenzene		50	2011 HRL	68	1859	3717	µg/l	< 1	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	0.52 J	< 1.0	< 1.0	< 1.0
Isopropylbenzene		300	1993/94 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10 J	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)		NS	NS	NS	NS	NS	µg/l	< 10	< 10 J	< 10	< 10 J	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl-tert-butylether		60	2013 RAA	NS	NS	NS	µg/l	< 2	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0
Naphthalene		70	2013 HRL	81	409	818	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Propylbenzene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene		4	2014 HBV	8.9	428	857	µg/l	< 1	< 1.0	3.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrahydrofuran		NS	NS	NS	NS	NS	µg/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene		200	2011 HRL	253	1352	2703	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene		40	2013 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene		0.4	2015 HRL	120	6988	13976	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	0.36 J	< 1.0	0.91 J	2.9
Vinyl chloride		0.2	2009 HRL	9.2	NS	NS	µg/l	< 1 J	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
o-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes*		300	2011 HRL	166	1407	2814	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs																
1,1-Biphenyl		300	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
1-Methylnaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Oxybis(1-Chloropropane)		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
2,4,5-Trichlorophenol		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
2,4,6-Trichlorophenol		30	1993/94 HRL	2	102	203	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
2,4-Dichlorophenol		20	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
2,4-Dimethylphenol		100	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
2,4-Dinitrophenol		10	1993/94 HRL	NS	NS	NS	µg/l	< 50	< 50	< 50	NA	NA	NA	NA	NA	< 50
2,4-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
2,6-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
2-Chloronaphthalene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
2-Chlorophenol		30	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
2-Methyl-4,6-dinitrophenol		NS	NS	NS	NS	NS	µg/l	< 50	< 50	< 50	NA	NA	NA	NA	NA	< 50
2-Methylnaphthalene		8	2013 RAA	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
2-Methylphenol		30	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
2-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 50	< 50	< 50	NA	NA	NA	NA	NA	< 50
2-Nitrophenol		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
3,3-Dichlorobenzidine		0.8	1993/94 HRL	NS	NS	NS	µg/l	< 50	< 50	< 50	NA	NA	NA	NA	NA	< 50
3-Methylphenol, 4-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 50	< 50	< 50	NA	NA	NA	NA	NA	< 50
4-Bromophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
4-Chloro-3-Methylphenol		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
4-Chlorophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
4-Methylphenol		3	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
4-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 50	< 50	< 50	NA	NA	NA	NA	NA	< 50
4-Nitrophenol		NS	NS	NS	NS	NS	µg/l	< 50	< 50	< 50	NA	NA	NA	NA	NA	< 50
Acenaphthene		400	1993/94 HRL	20	56	112	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Acenaphthylene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10

Notes and Abbreviations on Page 45.

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966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-05B AMW-05B(12172007) 12/17/2007 St. Peter Sandstone	AMW-05B AMW-05B(20080311) 3/11/2008 St. Peter Sandstone	AMW-05B AMW-05B(20080910) 9/10/2008 St. Peter Sandstone	AMW-05B AMW-05B(20091006) 10/6/2009 St. Peter Sandstone	AMW-05B AMW-05B (20140703) 7/3/2014 St. Peter Sandstone	AMW-05B AMW-05B (20140806) 8/6/2014 St. Peter Sandstone	AMW-05B AMW-05 (20140916) 9/16/2014 St. Peter Sandstone	AMW-05B AMW-05B (20160609) 6/9/2016 St. Peter Sandstone	AMW-07 AMW-07(20070717) 7/17/2007 St. Peter Sandstone
				CS	MS	FAV										
Acetophenone		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Anthracene		2000	1993/94 HRL	0.035	0.32	0.63	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Atrazine		3	2009 HRL/MCL	10	323	645	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Benzaldehyde		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Benzo(a)anthracene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Benzo(a)pyrene		0.06	2012 HBV	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	0.79 J
Benzo(b)fluoranthene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	0.78 J
Benzo(g,h,i)perylene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Benzo(k)fluoranthene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
bis(2-Chloroethoxy)methane		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
bis(2-Chloroethyl)ether		0.3	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
bis(2-Ethylhexyl)phthalate		6	2009 HRL/MCL	2.1	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Butyl benzyl phthalate		100	2012 HBV	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Caprolactam		NS	NS	NS	NS	NS	µg/l	< 10 J	< 10	< 10	NA	NA	NA	NA	NA	< 10
Carbazole		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Chrysene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Dibenzo(a,h)anthracene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Dibenzofuran		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Diethyl phthalate		6000	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Dimethyl phthalate		70000	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Di-n-butyl phthalate		20	2012 HBV	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Di-n-octyl phthalate		NS	NS	30	825	1650	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Fluoranthene		300	1993/94 HRL	1.9	3.5	6.9	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	0.84 J
Fluorene		300	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Hexachlorobenzene		0.2	1993/94 HRL	0.00024	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Hexachlorocyclopentadiene		NS	NS	NS	NS	NS	µg/l	< 50	< 50	< 50 J	NA	NA	NA	NA	NA	< 50
Hexachloroethane		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Indeno(1,2,3-cd)pyrene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Isophorone		100	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Naphthalene		70	2013 HRL	81	409	818	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Nitrobenzene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
n-Nitrosodi-n-propylamine		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
N-nitrosodiphenylamine		70	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
p-Chloroaniline		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Pentachlorophenol		0.3	2013 HBV	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Phenanthrene		NS	NS	3.6	32	64	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	0.39 J
Phenol		4000	1993/94 HRL	123	2214	4428	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	< 10
Pyrene		200	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	NA	NA	NA	NA	NA	1.0 J
Benzo(a)pyrene (BaP) Equivalents		0.06	2012 HBV[1]	NS	NS	NS	µg/l	ND	ND	ND	NA	NA	NA	NA	NA	0.868
Total Metals																
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	< 10	NA	NA	NA	NA	NA	NA	NA	< 10.0
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	88.8 J	NA	NA	NA	NA	NA	NA	NA	142 J
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	< 5	NA	NA	NA	NA	NA	NA	NA	< 5.0
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		100	1993/94 HRL	11	16	32	µg/l	7.9 J	NA	NA	NA	NA	NA	NA	NA	19.3
Cobalt		30	1995 HBV	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

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				CS	MS	FAV										
Copper		1000	1995 HBV	14	31	62	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	< 9.3	NA	NA	NA	NA	NA	NA	NA	3.1
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	< 0.2	NA	NA	NA	NA	NA	NA	NA	< 0.20
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	< 5	NA	NA	NA	NA	NA	NA	NA	< 5.0
Silver		30	1993/94 HRL	1	6	11	µg/l	< 10	NA	NA	NA	NA	NA	NA	NA	< 10.0
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals				.												
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	< 200	< 200	< 200	< 200	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	< 10	< 10	< 10	< 10	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	< 10	< 10.0	< 10.0	NA	< 10	< 10	< 10	< 10	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	82.3 J	79.7 J	61.9 J	NA	70 J	54 J	59 J	55 J	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	< 5.0	< 5.0	< 5.0	< 5.0	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	< 5	< 5.0	< 5.0	NA	< 5.0	< 5.0	0.22 J	< 5.0	NA
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	250000	130000	120000	140000	NA
Chromium		100	NS	11	16	32	µg/l	4.2 J	3.4 J	< 10.0	NA	< 10	2.4 J	1.9 J	1.2 J	NA
Cobalt		30	NS	5	436	872	µg/l	NA	NA	NA	NA	< 7.0	6.3 J	6.3 J	6.5 J	NA
Copper		1000	NS	14	31	62	µg/l	NA	NA	NA	NA	< 25	< 25	< 25	< 25	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	300	6000	6800	7100	NA
Lead		15	No Basis[2]	7	173	346	µg/l	< 3	< 3.0	< 3.0	NA	< 3.0	< 3.0	< 3.0	< 3.0	NA
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	60000	40000	40000	44000	NA
Manganese		100	2012 RAA	NS	NS	NS	µg/l	NA	NA	NA	NA	25	190	190	200	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	< 0.2	< 0.20	< 0.20	NA	< 0.20	< 0.20	< 0.20	< 0.20	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	17 J	9.8 J	7.8 J	10 J	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	14000	2900 J	2700 J	3600 J	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	< 5	< 5.0	< 5.0	NA	< 5.0	< 5.0	< 5.0	< 15	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	< 10	< 10.0	< 10.0	NA	< 10	< 10	< 10	< 10	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	170000	23000	20000	39000	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	< 10	< 10	< 10	< 10	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	< 7.0	< 7.0	< 7.0	< 10	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	< 50	< 50	11 J	< 50	NA
PCBs																
Aroclor 1016		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.2	< 0.20	< 0.20	< 0.20	NA	NA	NA	< 0.19	< 0.20
Aroclor 1221		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.2	< 0.20	< 0.20	< 0.20	NA	NA	NA	< 0.19	< 0.20
Aroclor 1232		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.2	< 0.20	< 0.20	< 0.20	NA	NA	NA	< 0.19	< 0.20
Aroclor 1242		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.2	< 0.20	< 0.20	< 0.20	NA	NA	NA	< 0.19	< 0.20
Aroclor 1248		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.2	< 0.20	< 0.20	< 0.20	NA	NA	NA	< 0.19	< 0.20
Aroclor 1254		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.2	< 0.20	0.97	< 0.20	NA	NA	NA	< 0.19	< 0.20
Aroclor 1260		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.2	< 0.20	< 0.20	< 0.20	NA	NA	NA	< 0.19	< 0.20
Polychlorinated Biphenyls		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH																
Diesel Range Organics		100	MPCA PBP				µg/l	NA	< 100	< 100	NA	NA	NA	NA	180	NA
Gasoline Range Organics		100	MPCA PBP				µg/l	NA	< 100	< 100	NA	NA	NA	NA	< 100	NA
Other																
Cyanide, Free		100	1993/94 HRL	5.2	22	45	µg/l	NA	NA	NA	NA	NA	NA	NA	< 10	NA

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-07 AMW-07(20071220) 12/20/2007 St. Peter Sandstone	AMW-07 AMW-07(20080313) 3/13/2008 St. Peter Sandstone	AMW-07 AMW-07(20080313)R2 3/13/2008 St. Peter Sandstone	AMW-07 AWM-07(20080323) 3/13/2008 St. Peter Sandstone	AMW-07 AMW-07(20080915) 9/15/2008 St. Peter Sandstone	AMW-07 AMW-07(20080915) 9/15/2008 St. Peter Sandstone	AMW-07 AMW-07(20091006) 10/6/2009 St. Peter Sandstone	AMW-07 AMW-07 (20140703) 7/3/2014 St. Peter Sandstone	AMW-07 AMW-07 (20140807) 8/7/2014 St. Peter Sandstone
				CS	MS	FAV										
VOCs																
1,1,1,2-Tetrachloroethane		70	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane		9000	2009 HRL	329	2957	5913	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		2	1993/94 HRL	13	1127	2253	µg/l	< 1.0	< 1.0 J	NA	NA	NA	< 1.0	< 1.0 J	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane		200000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane		3	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		100	2009 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		200	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane		0.003	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene		4	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene		100	2010 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane		NS	NS	NS	NS	NS	µg/l	< 2.0	< 2.0	NA	NA	NA	< 2.0	< 2.0	< 2.0	< 2.0
1,2-Dibromoethane		0.004	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene		600	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		1	2013 HRL	190	45050	90100	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		5	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		100	2009 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		4000	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	< 10	< 10	< 10
2-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
4-Methyl-2-Pentanone		300	1993/94 HRL	NS	NS	NS	µg/l	< 5.0 J	< 5.0	NA	NA	NA	< 5.0	< 5.0 J	< 10	< 10
Acetone		4000	2011 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	< 10	< 10	< 10
Allyl chloride		30	1993/94 HRL	NS	NS	NS	µg/l	< 2.0	< 2.0	NA	NA	NA	< 2.0	< 2.0	< 2.0	< 2.0
Benzene		2	2009 HRL	114	4487	8974	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane		6	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		40	1993/94 HRL	466	2900	5800	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0 J	< 1.0	< 1.0	< 1.0
Carbon Disulfide		700	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride		1	2013 HRL	5.9	1750	3500	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11		2000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12		700	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0 J	< 1.0	< 1.0
Chlorobenzene		100	1993/94 HRL	20	423	846	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		30	2009 HRL	155	1392	2784	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	0.93 J
cis-1,2-Dichloroethene		6	2014 HBV	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0 J	< 1.0	< 1.0
Cyclohexane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Cymene (p-Isopropyltoluene)		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane		5	2009 HRL/MCL	1940	13875	27749	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromonofluoromethane		30	2015 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 2.0	< 2.0
Diethyl ether		200	2010 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 2.0	< 2.0

Notes and Abbreviations on Page 45.

Table 7
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Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-07 AMW-07(20071220) 12/20/2007 St. Peter Sandstone	AMW-07 AMW-07(20080313) 3/13/2008 St. Peter Sandstone	AMW-07 AMW-07(20080313)R2 3/13/2008 St. Peter Sandstone	AMW-07 AWM-07(20080323) 3/13/2008 St. Peter Sandstone	AMW-07 AMW-07(20080915) 9/15/2008 St. Peter Sandstone	AMW-07 AMW-07(20080915) 9/15/2008 St. Peter Sandstone	AMW-07 AMW-07(20091006) 10/6/2009 St. Peter Sandstone	AMW-07 AMW-07 (20140703) 7/3/2014 St. Peter Sandstone	AMW-07 AMW-07 (20140807) 8/7/2014 St. Peter Sandstone
				CS	MS	FAV										
Ethylbenzene		50	2011 HRL	68	1859	3717	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene		300	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	< 10	< 10	< 10
Methylcyclohexane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Methyl-tert-butylether		60	2013 RAA	NS	NS	NS	µg/l	< 2.0	< 2.0	NA	NA	NA	< 2.0	< 2.0	< 1.0	< 1.0
Naphthalene		70	2013 HRL	81	409	818	µg/l	< 1.0 J	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
N-Propylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0 J	< 1.0	< 1.0	< 1.0
tert-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene		4	2014 HBV	8.9	428	857	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Tetrahydrofuran		NS	NS	NS	NS	NS	µg/l	< 5.0	< 5.0	NA	NA	NA	< 5.0	< 5.0	< 5.0	< 5.0
Toluene		200	2011 HRL	253	1352	2703	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene		40	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene		0.4	2015 HRL	120	6988	13976	µg/l	2.7	2.9	NA	NA	NA	0.43 J	1.6	0.46 J	2.9
Vinyl chloride		0.2	2009 HRL	9.2	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 2.0	< 2.0	NA	NA	NA	< 2.0	< 2.0	< 2.0	< 2.0
o-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes*		300	2011 HRL	166	1407	2814	µg/l	ND	ND	NA	NA	NA	ND	ND	ND	ND
SVOCs																
1,1-Biphenyl		300	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
1-Methylnaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Oxybis(1-Chloropropane)		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
2,4,5-Trichlorophenol		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
2,4,6-Trichlorophenol		30	1993/94 HRL	2	102	203	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
2,4-Dichlorophenol		20	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
2,4-Dimethylphenol		100	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
2,4-Dinitrophenol		10	1993/94 HRL	NS	NS	NS	µg/l	< 50	< 50	NA	NA	NA	< 50	NA	NA	NA
2,4-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
2,6-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
2-Chloronaphthalene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
2-Chlorophenol		30	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
2-Methyl-4,6-dinitrophenol		NS	NS	NS	NS	NS	µg/l	< 50	< 50	NA	NA	NA	< 50	NA	NA	NA
2-Methylnaphthalene		8	2013 RAA	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
2-Methylphenol		30	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
2-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 50	< 50	NA	NA	NA	< 50	NA	NA	NA
2-Nitrophenol		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
3,3-Dichlorobenzidine		0.8	1993/94 HRL	NS	NS	NS	µg/l	< 50	< 50	NA	NA	NA	< 50	NA	NA	NA
3-Methylphenol, 4-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 50	< 50	NA	NA	NA	< 50	NA	NA	NA
4-Bromophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
4-Chloro-3-Methylphenol		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
4-Chlorophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
4-Methylphenol		3	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
4-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 50	< 50	NA	NA	NA	< 50	NA	NA	NA
4-Nitrophenol		NS	NS	NS	NS	NS	µg/l	< 50	< 50	NA	NA	NA	< 50	NA	NA	NA
Acenaphthene		400	1993/94 HRL	20	56	112	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Acenaphthylene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5

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St. Paul, Minnesota

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				CS	MS	FAV										
Acetophenone		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Anthracene		2000	1993/94 HRL	0.035	0.32	0.63	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Atrazine		3	2009 HRL/MCL	10	323	645	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Benzaldehyde		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Benzo(a)anthracene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 0.23	< 0.19
Benzo(a)pyrene		0.06	2012 HBV	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Benzo(b)fluoranthene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Benzo(g,h,i)perylene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Benzo(k)fluoranthene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
bis(2-Chloroethoxy)methane		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
bis(2-Chloroethyl)ether		0.3	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
bis(2-Ethylhexyl)phthalate		6	2009 HRL/MCL	2.1	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Butyl benzyl phthalate		100	2012 HBV	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Caprolactam		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Carbazole		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Chrysene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Dibenzo(a,h)anthracene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Dibenzofuran		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Diethyl phthalate		6000	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Dimethyl phthalate		70000	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Di-n-butyl phthalate		20	2012 HBV	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Di-n-octyl phthalate		NS	NS	30	825	1650	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Fluoranthene		300	1993/94 HRL	1.9	3.5	6.9	µg/l	< 10	< 10	NA	NA	NA	0.25 J	NA	< 11	< 9.5
Fluorene		300	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Hexachlorobenzene		0.2	1993/94 HRL	0.00024	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Hexachlorocyclopentadiene		NS	NS	NS	NS	NS	µg/l	< 50	< 50	NA	NA	NA	< 50	NA	NA	NA
Hexachloroethane		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Indeno(1,2,3-cd)pyrene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Isophorone		100	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Naphthalene		70	2013 HRL	81	409	818	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Nitrobenzene		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
n-Nitrosodi-n-propylamine		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
N-nitrosodiphenylamine		70	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
p-Chloroaniline		NS	NS	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Pentachlorophenol		0.3	2013 HBV	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Phenanthrene		NS	NS	3.6	32	64	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Phenol		4000	1993/94 HRL	123	2214	4428	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	NA	NA
Pyrene		200	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	NA	NA	NA	< 10	NA	< 11	< 9.5
Benzo(a)pyrene (BaP) Equivalents		0.06	2012 HBV[1]	NS	NS	NS	µg/l	ND	ND	NA	NA	NA	ND	NA	ND	ND
Total Metals																
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	4.9 J	NA	NA	NA	NA	NA	NA	NA	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	84.7 J	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	1.1 J	NA	NA	NA	NA	NA	NA	NA	NA
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		100	1993/94 HRL	11	16	32	µg/l	26.8	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt		30	1995 HBV	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-07 AMW-07(20071220) 12/20/2007 St. Peter Sandstone	AMW-07 AMW-07(20080313) 3/13/2008 St. Peter Sandstone	AMW-07 AMW-07(20080313)R2 3/13/2008 St. Peter Sandstone	AMW-07 AWM-07(20080323) 3/13/2008 St. Peter Sandstone	AMW-07 AMW-07(20080915) 9/15/2008 St. Peter Sandstone	AMW-07 AMW-07(20080915) 9/15/2008 St. Peter Sandstone	AMW-07 AMW-07(20091006) 10/6/2009 St. Peter Sandstone	AMW-07 AMW-07 (20140703) 7/3/2014 St. Peter Sandstone	AMW-07 AMW-07 (20140807) 8/7/2014 St. Peter Sandstone
				CS	MS	FAV										
Copper		1000	1995 HBV	14	31	62	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	6.4	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	< 0.20	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	< 5.0	NA	NA	NA	NA	NA	NA	NA	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	< 10.0	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals				.												
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	< 200	270
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	< 10	12
Arsenic		10	USEPA MCL	53	360	720	µg/l	< 10.0	< 10.0	NA	NA	NA	< 10.0	NA	< 10	< 10
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	49.4 J	26.0 J	NA	NA	NA	29.2 J	NA	32 J	32 J
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	< 5.0	0.67 J
Cadmium		0.5	2014 HBV	2	65	130	µg/l	1.3 J	0.85 J	NA	NA	NA	0.99 J	NA	< 5.0	< 5.0
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	67000	130000
Chromium		100	NS	11	16	32	µg/l	< 10.0	< 10.0	NA	NA	NA	< 10.0	NA	< 10	< 10
Cobalt		30	NS	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	< 7.0	9.6
Copper		1000	NS	14	31	62	µg/l	NA	NA	NA	NA	NA	NA	NA	< 25	< 25
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	3600	< 100
Lead		15	No Basis[2]	7	173	346	µg/l	< 3.0	< 3.0	NA	NA	NA	< 3.0	NA	< 3.0	< 3.0
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	35000	40000
Manganese		100	2012 RAA	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	180	110
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	< 0.20	< 0.20	NA	NA	NA	< 0.20	NA	< 0.20	< 0.20
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	NA	NA	NA	< 40	49
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	4800 J	9100
Selenium		30	1993/94 HRL	5	20	40	µg/l	< 5.0	< 5.0	NA	NA	NA	< 5.0	NA	< 5.0	< 5.0
Silver		30	1993/94 HRL	1	6	11	µg/l	< 10.0	< 10.0	NA	NA	NA	< 10.0	NA	< 10	< 10
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	24000	67000
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	< 10	< 10
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	< 7.0	< 7.0
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	NA	NA	NA	< 50	110
PCBs																
Aroclor 1016		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.20	< 0.20	NA	NA	NA	< 0.20	< 0.20	NA	NA
Aroclor 1221		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.20	< 0.20	NA	NA	NA	< 0.20	< 0.20	NA	NA
Aroclor 1232		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.20	< 0.20	NA	NA	NA	< 0.20	< 0.20	NA	NA
Aroclor 1242		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.20	< 0.20	NA	NA	NA	< 0.20	< 0.20	NA	NA
Aroclor 1248		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.20	< 0.20	NA	NA	NA	< 0.20	< 0.20	NA	NA
Aroclor 1254		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.20	< 0.20	NA	NA	NA	< 0.20	< 0.20	NA	NA
Aroclor 1260		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.20	< 0.20	NA	NA	NA	0.059 J	< 0.20	NA	NA
Polychlorinated Biphenyls		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH																
Diesel Range Organics		100	MPCA PBP				µg/l	NA	NA	130 J	NA	NA	210	NA	NA	NA
Gasoline Range Organics		100	MPCA PBP				µg/l	NA	< 100	NA	NA	NA	< 100	NA	NA	NA
Other																
Cyanide, Free		100	1993/94 HRL	5.2	22	45	µg/l	NA	NA	NA	5.9 J	< 10	NA	NA	NA	NA

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-07 AMW-07 (20140916) 9/16/2014 St. Peter Sandstone	AMW-07 AMW-07 (20160309) 3/9/2016 St. Peter Sandstone	AMW-07 DUP-03 (20160609) 6/9/2016 St. Peter Sandstone	AMW-07 AMW-07 (20160610) 6/10/2016 St. Peter Sandstone	AMW-29 AMW-29 (20160212) 2/12/2016 St. Peter Sandstone	AMW-29 AMW-29_20160303 3/3/2016 St. Peter Sandstone	AMW-29 AMW-29(20160603) 6/3/2016 St. Peter Sandstone	AMW-30 AMW-30 (20160211) 2/11/2016 St. Peter Sandstone	AMW-30 AMW-30_20160303 3/3/2016 St. Peter Sandstone
				CS	MS	FAV										
VOCs																
1,1,1,2-Tetrachloroethane		70	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane		9000	2009 HRL	329	2957	5913	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		2	1993/94 HRL	13	1127	2253	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane		200000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0
1,1,2-Trichloroethane		3	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		100	2009 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		200	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0
1,2,3-Trichloropropane		0.003	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene		4	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0
1,2,4-Trimethylbenzene		100	2010 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane		NS	NS	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 2.0	< 2.0	< 5.0	< 2.0
1,2-Dibromoethane		0.004	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene		600	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		1	2013 HRL	190	45050	90100	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		5	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		100	2009 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		4000	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 20.0	< 10	< 10	< 20.0	< 10
2-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Methyl-2-Pentanone		300	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 20.0	< 10	< 5.0	< 20.0	< 10
Acetone		4000	2011 HRL	NS	NS	NS	µg/l	< 10	< 10	1.0 J	< 10	< 20.0	< 10	< 10	< 20.0	< 10
Allyl chloride		30	1993/94 HRL	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 2.0	< 2.0	< 5.0	< 2.0
Benzene		2	2009 HRL	114	4487	8974	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane		6	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		40	1993/94 HRL	466	2900	5800	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0
Bromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0
Carbon Disulfide		700	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	NA	< 1.0
Carbon Tetrachloride		1	2013 HRL	5.9	1750	3500	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11		2000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12		700	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene		100	1993/94 HRL	20	423	846	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0
Chloroethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		30	2009 HRL	155	1392	2784	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	0.99 J
Chloromethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene		6	2014 HBV	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0
Cyclohexane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	NA	< 1.0
Cymene (p-Isopropyltoluene)		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane		5	2009 HRL/MCL	1940	13875	27749	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromonofluoromethane		30	2015 RAA	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0
Diethyl ether		200	2010 RAA	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-07 / AMW-07 (20140916) / 9/16/2014 / St. Peter Sandstone	AMW-07 / AMW-07 (20160309) / 3/9/2016 / St. Peter Sandstone	AMW-07 / DUP-03 (20160609) / 6/9/2016 / St. Peter Sandstone	AMW-07 / AMW-07 (20160610) / 6/10/2016 / St. Peter Sandstone	AMW-29 / AMW-29 (20160212) / 2/12/2016 / St. Peter Sandstone	AMW-29 / AMW-29_20160303 / 3/3/2016 / St. Peter Sandstone	AMW-29 / AMW-29(20160603) / 6/3/2016 / St. Peter Sandstone	AMW-30 / AMW-30 (20160211) / 2/11/2016 / St. Peter Sandstone	AMW-30 / AMW-30_20160303 / 3/3/2016 / St. Peter Sandstone
				CS	MS	FAV										
Ethylbenzene		50	2011 HRL	68	1859	3717	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0
Isopropylbenzene		300	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	NA	< 10	< 10	NA	< 10
Methyl N-Butyl Ketone (2-Hexanone)		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	NA	< 10	< 10	NA	< 10
Methylcyclohexane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	NA	< 1.0
Methyl-tert-butylether		60	2013 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0
Naphthalene		70	2013 HRL	81	409	818	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0
N-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Propylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0 J	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0
Styrene (Monomer)		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene		4	2014 HBV	8.9	428	857	µg/l	0.31 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.64 J
Tetrahydrofuran		NS	NS	NS	NS	NS	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene		200	2011 HRL	253	1352	2703	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene		40	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 20.0	< 1.0	< 1.0	< 20.0	< 1.0
Trichloroethene		0.4	2015 HRL	120	6988	13976	µg/l	2.3	2.3	0.79 J	1.9	11.4	7.1	9.1	24.5	22
Vinyl chloride		0.2	2009 HRL	9.2	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
o-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes*		300	2011 HRL	166	1407	2814	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs																
1,1-Biphenyl		300	1993/94 HRL	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
1-Methylnaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Oxybis(1-Chloropropane)		NS	NS	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol		NS	NS	NS	NS	NS	µg/l	NA	< 4.8	NA	< 4.9	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol		30	1993/94 HRL	2	102	203	µg/l	NA	< 4.8	NA	< 4.9	NA	NA	NA	NA	NA
2,4-Dichlorophenol		20	1993/94 HRL	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
2,4-Dimethylphenol		100	1993/94 HRL	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
2,4-Dinitrophenol		10	1993/94 HRL	NS	NS	NS	µg/l	NA	< 4.8	NA	< 4.9	NA	NA	NA	NA	NA
2,4-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	< 4.8	NA	< 4.9	NA	NA	NA	NA	NA
2,6-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	< 4.8	NA	< 4.9	NA	NA	NA	NA	NA
2-Chloronaphthalene		NS	NS	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
2-Chlorophenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol		NS	NS	NS	NS	NS	µg/l	NA	< 4.8	NA	< 4.9	NA	NA	NA	NA	NA
2-Methylnaphthalene		8	2013 RAA	NS	NS	NS	µg/l	< 10	< 0.19	NA	< 0.19	NA	NA	NA	NA	NA
2-Methylphenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
2-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
2-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine		0.8	1993/94 HRL	NS	NS	NS	µg/l	NA	< 4.8	NA	< 4.9	NA	NA	NA	NA	NA
3-Methylphenol, 4-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
3-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
4-Methylphenol		3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
4-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	< 4.8	NA	< 4.9	NA	NA	NA	NA	NA
Acenaphthene		400	1993/94 HRL	20	56	112	µg/l	< 10	< 0.19	NA	< 0.19	NA	NA	NA	NA	NA
Acenaphthylene		NS	NS	NS	NS	NS	µg/l	< 10	< 0.19	NA	< 0.19	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 45.

Table 7
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Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-07 / AMW-07 (20140916) / 9/16/2014 / St. Peter Sandstone	AMW-07 / AMW-07 (20160309) / 3/9/2016 / St. Peter Sandstone	AMW-07 / DUP-03 (20160609) / 6/9/2016 / St. Peter Sandstone	AMW-07 / AMW-07 (20160610) / 6/10/2016 / St. Peter Sandstone	AMW-29 / AMW-29 (20160212) / 2/12/2016 / St. Peter Sandstone	AMW-29 / AMW-29_20160303 / 3/3/2016 / St. Peter Sandstone	AMW-29 / AMW-29(20160603) / 6/3/2016 / St. Peter Sandstone	AMW-30 / AMW-30 (20160211) / 2/11/2016 / St. Peter Sandstone	AMW-30 / AMW-30_20160303 / 3/3/2016 / St. Peter Sandstone
				CS	MS	FAV										
Acetophenone		NS	NS	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
Anthracene		2000	1993/94 HRL	0.035	0.32	0.63	µg/l	< 10	< 0.19	NA	0.20	NA	NA	NA	NA	NA
Atrazine		3	2009 HRL/MCL	10	323	645	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
Benzaldehyde		NS	NS	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
Benzo(a)anthracene		NS	NS	NS	NS	NS	µg/l	< 0.20	0.28	NA	1.1	NA	NA	NA	NA	NA
Benzo(a)pyrene		0.06	2012 HBV	NS	NS	NS	µg/l	< 10	0.22	NA	0.99	NA	NA	NA	NA	NA
Benzo(b)fluoranthene		NS	NS	NS	NS	NS	µg/l	< 10	0.25	NA	1.2	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene		NS	NS	NS	NS	NS	µg/l	< 10	0.17 J	NA	0.68	NA	NA	NA	NA	NA
Benzo(k)fluoranthene		NS	NS	NS	NS	NS	µg/l	< 10	< 0.19	NA	0.58	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane		NS	NS	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether		0.3	1993/94 HRL	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate		6	2009 HRL/MCL	2.1	NS	NS	µg/l	NA	< 4.8	NA	< 4.9	NA	NA	NA	NA	NA
Butyl benzyl phthalate		100	2012 HBV	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
Caprolactam		NS	NS	NS	NS	NS	µg/l	NA	< 4.8	NA	0.37 J	NA	NA	NA	NA	NA
Carbazole		NS	NS	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
Chrysene		NS	NS	NS	NS	NS	µg/l	< 10	0.33	NA	1.2	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene		NS	NS	NS	NS	NS	µg/l	< 10	< 0.19	NA	< 0.19	NA	NA	NA	NA	NA
Dibenzofuran		NS	NS	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
Diethyl phthalate		6000	1993/94 HRL	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
Dimethyl phthalate		70000	1993/94 HRL	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
Di-n-butyl phthalate		20	2012 HBV	NS	NS	NS	µg/l	NA	< 4.8	NA	< 4.9	NA	NA	NA	NA	NA
Di-n-octyl phthalate		NS	NS	30	825	1650	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
Fluoranthene		300	1993/94 HRL	1.9	3.5	6.9	µg/l	< 10	1.6	NA	1.8	NA	NA	NA	NA	NA
Fluorene		300	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 0.19	NA	< 0.19	NA	NA	NA	NA	NA
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
Hexachlorobenzene		0.2	1993/94 HRL	0.00024	NS	NS	µg/l	NA	< 0.19	NA	< 0.19	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene		NS	NS	NS	NS	NS	µg/l	NA	< 9.6	NA	< 9.7	NA	NA	NA	NA	NA
Hexachloroethane		NS	NS	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene		NS	NS	NS	NS	NS	µg/l	< 10	0.15 J	NA	0.52	NA	NA	NA	NA	NA
Isophorone		100	1993/94 HRL	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
Naphthalene		70	2013 HRL	81	409	818	µg/l	< 10	< 0.19	NA	< 0.19	NA	NA	NA	NA	NA
Nitrobenzene		NS	NS	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
n-Nitrosodi-n-propylamine		NS	NS	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
N-nitrosodiphenylamine		70	1993/94 HRL	NS	NS	NS	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
p-Chloroaniline		NS	NS	NS	NS	NS	µg/l	NA	< 1.9	NA	< 1.9	NA	NA	NA	NA	NA
Pentachlorophenol		0.3	2013 HBV	NS	NS	NS	µg/l	NA	< 4.8	NA	< 4.9	NA	NA	NA	NA	NA
Phenanthrene		NS	NS	3.6	32	64	µg/l	< 10	0.18 J	NA	0.84	NA	NA	NA	NA	NA
Phenol		4000	1993/94 HRL	123	2214	4428	µg/l	NA	< 0.96	NA	< 0.97	NA	NA	NA	NA	NA
Pyrene		200	1993/94 HRL	NS	NS	NS	µg/l	< 10	0.39	NA	2.4	NA	NA	NA	NA	NA
Benzo(a)pyrene (BaP) Equivalents		0.06	2012 HBV[1]	NS	NS	NS	µg/l	ND	0.2913	NA	1.342	NA	NA	NA	NA	NA
Total Metals																
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		100	1993/94 HRL	11	16	32	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt		30	1995 HBV	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

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St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-07 AMW-07 (20140916) 9/16/2014 St. Peter Sandstone	AMW-07 AMW-07 (20160309) 3/9/2016 St. Peter Sandstone	AMW-07 DUP-03 (20160609) 6/9/2016 St. Peter Sandstone	AMW-07 AMW-07 (20160610) 6/10/2016 St. Peter Sandstone	AMW-29 AMW-29 (20160212) 2/12/2016 St. Peter Sandstone	AMW-29 AMW-29_20160303 3/3/2016 St. Peter Sandstone	AMW-29 AMW-29(20160603) 6/3/2016 St. Peter Sandstone	AMW-30 AMW-30 (20160211) 2/11/2016 St. Peter Sandstone	AMW-30 AMW-30_20160303 3/3/2016 St. Peter Sandstone
				CS	MS	FAV										
Copper		1000	1995 HBV	14	31	62	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals				.												
Aluminum		NS	NS	125	1072	2145	µg/l	270	120 J	< 200	340	14200	2900	13000	9500	4000
Antimony		6	1993/94 HRL	31	90	180	µg/l	< 10	< 10	< 10	< 10	< 20.0	< 10	< 10	< 20.0	< 10
Arsenic		10	USEPA MCL	53	360	720	µg/l	< 10	< 10	< 10	< 10	< 20.0	< 10	< 10	< 20.0	< 10
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	25 J	14 J	56 J	13 J	191	95 J	88 J	158	160 J
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	0.65 J	0.73 J	< 5.0	0.91 J	< 4.0	0.42 J	1.6 J	< 4.0	0.70 J
Cadmium		0.5	2014 HBV	2	65	130	µg/l	0.42 J	0.76 J	< 5.0	< 5.0	< 5.0	0.48 J	1.1 J	< 5.0	0.27 J
Calcium		NS	NS	NS	NS	NS	µg/l	120000	100000	140000	79000	76200	51000	61000	108000	130000
Chromium		100	NS	11	16	32	µg/l	1.7 J	1.5 J	1.3 J	2.3 J	< 10.0	3.9 J	1.2 J	< 10.0	6.0 J
Cobalt		30	NS	5	436	872	µg/l	7.7	6.8 J	6.5 J	11	67.0	70	75	50.6	49
Copper		1000	NS	14	31	62	µg/l	< 25	< 25	< 25	< 25	130	3.8 J	40	120	29
Iron		NS	NS	NS	NS	NS	µg/l	< 100	< 100	7100	46 J	3230	1000	1100	1410	1100
Lead		15	No Basis[2]	7	173	346	µg/l	< 3.0	< 3.0	< 3.0	< 3.0	< 12.0	3.1	< 3.0	< 12.0	< 3.0
Magnesium		NS	NS	NS	NS	NS	µg/l	41000	37000	44000	28000	22500	21000	26000	37000	42000
Manganese		100	2012 RAA	NS	NS	NS	µg/l	82	68	190	69	1400	1300	1400	802	1100
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	49	34 J	7.9 J	40	328	310	320	252	260
Potassium		NS	NS	NS	NS	NS	µg/l	7100	4200 J	3600 J	3700 J	5730	6000	5800	11600	12000
Selenium		30	1993/94 HRL	5	20	40	µg/l	< 5.0	< 5.0	< 15	< 15	< 20.0	< 5.0	< 15	< 20.0	< 5.0
Silver		30	1993/94 HRL	1	6	11	µg/l	< 10	< 10	< 10	< 10	< 10.0	< 10	< 10	< 10.0	< 10
Sodium		NS	NS	NS	NS	NS	µg/l	80000	22000	39000	12000	313000	120000	18000	222000	170000
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	< 10	< 10	< 10	< 10	< 40.0	< 10	< 10	< 40.0	2.5 J
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	< 7.0	< 7.0	< 10	< 10	7.6	4.1 J	< 10	< 5.0	< 7.0
Zinc		2000	1993/94 HRL	174	193	385	µg/l	100	98	< 50	97	396	180	380	133	79
PCBs																
Aroclor 1016		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	< 0.20	NA	< 0.48 R	NA	< 3.8	< 0.47	NA
Aroclor 1221		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	< 0.20	NA	< 0.48 R	NA	< 3.8	< 0.47	NA
Aroclor 1232		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	< 0.20	NA	< 0.48 R	NA	< 3.8	< 0.47	NA
Aroclor 1242		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	< 0.20	NA	< 0.48 R	NA	< 3.8	< 0.47	NA
Aroclor 1248		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	< 0.20	NA	< 0.48 R	NA	< 3.8	< 0.47	NA
Aroclor 1254		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	< 0.20	NA	< 0.48 R	NA	< 3.8	< 0.47	NA
Aroclor 1260		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	< 0.20	NA	< 0.48 R	NA	< 3.8	< 0.47	NA
Polychlorinated Biphenyls		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	< 0.48 R	NA	NA	< 0.47	NA
TPH																
Diesel Range Organics		100	MPCA PBP				µg/l	NA	< 95	130	< 95	1000	350	940	220	180
Gasoline Range Organics		100	MPCA PBP				µg/l	NA	NA	< 100	< 100	NA	NA	38 J	NA	NA
Other																
Cyanide, Free		100	1993/94 HRL	5.2	22	45	µg/l	NA	NA	< 10	< 10	< 23	NA	6.5 J	< 23	NA

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-30 AMW-30(20160602) 6/2/2016 St. Peter Sandstone	AMW-31 AMW-31 (20160212) 2/12/2016 St. Peter Sandstone	AMW-31 AMW-31_20160303 3/3/2016 St. Peter Sandstone	AMW-31 DUP-1_20160303 3/3/2016 St. Peter Sandstone	AMW-31 AMW-31(20160601) 6/1/2016 St. Peter Sandstone	AMW-19 AMW-19(20111111) 11/11/2011 Overburden (Area C)	AMW-19 AMW-19(20120117) 1/17/2012 Overburden (Area C)	AMW-19 AMW-19 (20140807) 8/7/2014 Overburden (Area C)	AMW-19 DUP-002 (20140807) 8/7/2014 Overburden (Area C)
				CS	MS	FAV										
VOCs																
1,1,1,2-Tetrachloroethane		70	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane		9000	2009 HRL	329	2957	5913	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		2	1993/94 HRL	13	1127	2253	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane		200000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane		3	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		100	2009 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		200	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane		0.003	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene		4	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene		100	2010 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane		NS	NS	NS	NS	NS	µg/l	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,2-Dibromoethane		0.004	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene		600	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		1	2013 HRL	190	45050	90100	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		5	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		100	2009 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		4000	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 20.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Methyl-2-Pentanone		300	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 20.0	< 10	< 10	< 10	< 5.0	< 10	< 10	< 10
Acetone		4000	2011 HRL	NS	NS	NS	µg/l	< 10	< 20.0	1.7 J	< 10	< 10	< 10	< 10	< 10	< 10
Allyl chloride		30	1993/94 HRL	NS	NS	NS	µg/l	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Benzene		2	2009 HRL	114	4487	8974	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane		6	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		40	1993/94 HRL	466	2900	5800	µg/l	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide		700	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride		1	2013 HRL	5.9	1750	3500	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11		2000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12		700	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene		100	1993/94 HRL	20	423	846	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		30	2009 HRL	155	1392	2784	µg/l	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.8	2.0
cis-1,2-Dichloroethene		6	2014 HBV	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane		NS	NS	NS	NS	NS	µg/l	< 1.0	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cymene (p-Isopropyltoluene)		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane		5	2009 HRL/MCL	1940	13875	27749	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromonofluoromethane		30	2015 RAA	NS	NS	NS	µg/l	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0
Diethyl ether		200	2010 RAA	NS	NS	NS	µg/l	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-30 AMW-30(20160602) 6/2/2016 St. Peter Sandstone	AMW-31 AMW-31 (20160212) 2/12/2016 St. Peter Sandstone	AMW-31 AMW-31_20160303 3/3/2016 St. Peter Sandstone	AMW-31 DUP-1_20160303 3/3/2016 St. Peter Sandstone	AMW-31 AMW-31(20160601) 6/1/2016 St. Peter Sandstone	AMW-19 AMW-19(20111111) 11/11/2011 Overburden (Area C)	AMW-19 AMW-19(20120117) 1/17/2012 Overburden (Area C)	AMW-19 AMW-19 (20140807) 8/7/2014 Overburden (Area C)	AMW-19 DUP-002 (20140807) 8/7/2014 Overburden (Area C)
				CS	MS	FAV										
Ethylbenzene		50	2011 HRL	68	1859	3717	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene		300	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate		NS	NS	NS	NS	NS	µg/l	< 10	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)		NS	NS	NS	NS	NS	µg/l	< 10	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane		NS	NS	NS	NS	NS	µg/l	< 1.0	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl-tert-butylether		60	2013 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 5.0	< 1.0	< 1.0
Naphthalene		70	2013 HRL	81	409	818	µg/l	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Propylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene		4	2014 HBV	8.9	428	857	µg/l	0.84 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrahydrofuran		NS	NS	NS	NS	NS	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene		200	2011 HRL	253	1352	2703	µg/l	< 1.0	< 1.0	0.46 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene		40	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 20.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene		0.4	2015 HRL	120	6988	13976	µg/l	34	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride		0.2	2009 HRL	9.2	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
o-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes*		300	2011 HRL	166	1407	2814	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs																
1,1-Biphenyl		300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Oxybis(1-Chloropropane)		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol		30	1993/94 HRL	2	102	203	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol		20	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol		10	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		8	2013 RAA	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 10	< 11	NA	NA
2-Methylphenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine		0.8	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol, 4-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol		3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene		400	1993/94 HRL	20	56	112	µg/l	NA	NA	NA	NA	NA	< 10	< 11	NA	NA
Acenaphthylene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 10	< 11	NA	NA

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Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-30 AMW-30(20160602) 6/2/2016 St. Peter Sandstone	AMW-31 AMW-31 (20160212) 2/12/2016 St. Peter Sandstone	AMW-31 AMW-31_20160303 3/3/2016 St. Peter Sandstone	AMW-31 DUP-1_20160303 3/3/2016 St. Peter Sandstone	AMW-31 AMW-31(20160601) 6/1/2016 St. Peter Sandstone	AMW-19 AMW-19(20111111) 11/11/2011 Overburden (Area C)	AMW-19 AMW-19(20120117) 1/17/2012 Overburden (Area C)	AMW-19 AMW-19 (20140807) 8/7/2014 Overburden (Area C)	AMW-19 DUP-002 (20140807) 8/7/2014 Overburden (Area C)
				CS	MS	FAV										
Acetophenone		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene		2000	1993/94 HRL	0.035	0.32	0.63	µg/l	NA	NA	NA	NA	NA	< 10	< 11	NA	NA
Atrazine		3	2009 HRL/MCL	10	323	645	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 0.21 J	< 0.22 J	NA	NA
Benzo(a)pyrene		0.06	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 10 J	< 11 J	NA	NA
Benzo(b)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 10 J	< 11 J	NA	NA
Benzo(g,h,i)perylene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 10 J	< 11 J	NA	NA
Benzo(k)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 10	< 11	NA	NA
bis(2-Chloroethoxy)methane		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether		0.3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate		6	2009 HRL/MCL	2.1	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate		100	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 10 J	< 11 J	NA	NA
Dibenzo(a,h)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 10 J	< 11 J	NA	NA
Dibenzofuran		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate		6000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate		70000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate		20	2012 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate		NS	NS	30	825	1650	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene		300	1993/94 HRL	1.9	3.5	6.9	µg/l	NA	NA	NA	NA	NA	< 10	< 11	NA	NA
Fluorene		300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 10	< 11	NA	NA
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene		0.2	1993/94 HRL	0.00024	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 10 J	< 11 J	NA	NA
Isophorone		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene		70	2013 HRL	81	409	818	µg/l	NA	NA	NA	NA	NA	< 10	< 11	NA	NA
Nitrobenzene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodi-n-propylamine		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-nitrosodiphenylamine		70	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Chloroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol		0.3	2013 HBV	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene		NS	NS	3.6	32	64	µg/l	NA	NA	NA	NA	NA	< 10	< 11	NA	NA
Phenol		4000	1993/94 HRL	123	2214	4428	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene		200	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	< 10	< 11	NA	NA
Benzo(a)pyrene (BaP) Equivalents		0.06	2012 HBV[1]	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	ND	ND	NA	NA
Total Metals																
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	< 200	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	< 10	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA	NA	< 10	NA	NA	NA	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	64 J	NA	NA	NA	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	< 5.0	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	NA	NA	NA	NA	< 5.0	NA	NA	NA	NA
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	65000	NA	NA	NA	NA
Chromium		100	1993/94 HRL	11	16	32	µg/l	NA	NA	NA	NA	< 10	NA	NA	NA	NA
Cobalt		30	1995 HBV	5	436	872	µg/l	NA	NA	NA	NA	< 7.0	NA	NA	NA	NA

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Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-30 AMW-30(20160602) 6/2/2016 St. Peter Sandstone	AMW-31 AMW-31 (20160212) 2/12/2016 St. Peter Sandstone	AMW-31 AMW-31_20160303 3/3/2016 St. Peter Sandstone	AMW-31 DUP-1_20160303 3/3/2016 St. Peter Sandstone	AMW-31 AMW-31(20160601) 6/1/2016 St. Peter Sandstone	AMW-19 AMW-19(20111111) 11/11/2011 Overburden (Area C)	AMW-19 AMW-19(20120117) 1/17/2012 Overburden (Area C)	AMW-19 AMW-19 (20140807) 8/7/2014 Overburden (Area C)	AMW-19 DUP-002 (20140807) 8/7/2014 Overburden (Area C)
				CS	MS	FAV										
Copper		1000	1995 HBV	14	31	62	µg/l	NA	NA	NA	NA	< 25	NA	NA	NA	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	1800	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	NA	NA	NA	NA	< 3.0	NA	NA	NA	NA
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	19000	NA	NA	NA	NA
Manganese		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	640	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA	NA	< 0.20	NA	NA	NA	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	1.9 J	NA	NA	NA	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	4300 J	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA	NA	< 15	NA	NA	NA	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA	NA	< 10	NA	NA	NA	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	120000	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	< 10	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	< 10	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	< 50	NA	NA	NA	NA
Dissolved Metals				.												
Aluminum		NS	NS	125	1072	2145	µg/l	29000	< 500	< 200	< 200	NA	< 200	< 200	< 200	< 200
Antimony		6	1993/94 HRL	31	90	180	µg/l	< 10	< 20.0	< 10	< 10	NA	2.9 J	< 10	< 10	2.2 J
Arsenic		10	USEPA MCL	53	360	720	µg/l	< 10	< 20.0	< 10	< 10	NA	< 10	< 10	3.7 J	< 10
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	54 J	35.3	31 J	33 J	NA	240	220	120 J	120 J
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	3.7 J	< 4.0	< 5.0	< 5.0	NA	< 5.0	< 5.0	< 5.0	< 5.0
Cadmium		0.5	2014 HBV	2	65	130	µg/l	1.0 J	< 5.0	< 5.0	< 5.0	NA	< 5.0	< 5.0	< 5.0	< 5.0
Calcium		NS	NS	NS	NS	NS	µg/l	120000	38900	49000	44000	NA	150000	150000	160000	160000
Chromium		100	NS	11	16	32	µg/l	8.6 J	< 10.0	1.3 J	0.73 J	NA	< 10	< 10	< 10	< 10
Cobalt		30	NS	5	436	872	µg/l	69	< 5.0	0.98 J	0.96 J	NA	4.9 J	3.1 J	< 7.0	< 7.0
Copper		1000	NS	14	31	62	µg/l	190	12.9	3.3 J	3.9 J	NA	< 25	< 25	< 25	< 25
Iron		NS	NS	NS	NS	NS	µg/l	3000	433	1100	470	NA	170	< 100	< 100	< 100
Lead		15	No Basis[2]	7	173	346	µg/l	< 3.0	< 12.0	< 3.0	< 3.0	NA	< 3.0	< 3.0	< 3.0	< 3.0
Magnesium		NS	NS	NS	NS	NS	µg/l	45000	11600	15000	13000	NA	41000	41000	42000	43000
Manganese		100	2012 RAA	NS	NS	NS	µg/l	1100	286	480	400	NA	2800	1700	110	110
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	< 0.20	< 0.20	< 0.20	< 0.20	NA	< 0.20	< 0.20	< 0.20	< 0.20
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	410	< 10.0	4.1 J	4.4 J	NA	3.4 J	< 40	< 40	< 40
Potassium		NS	NS	NS	NS	NS	µg/l	13000	11700	4600 J	4400 J	NA	4300 J	3900 J	2400 J	2500 J
Selenium		30	1993/94 HRL	5	20	40	µg/l	< 15	< 20.0	< 5.0	< 5.0	NA	< 5.0	< 5.0	< 5.0	< 5.0
Silver		30	1993/94 HRL	1	6	11	µg/l	< 10	< 10.0	< 10	< 10	NA	< 10	< 10	< 10	< 10
Sodium		NS	NS	NS	NS	NS	µg/l	30000	162000	140000	130000	NA	55000	51000	31000	32000
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	5.1 J	< 40.0	2.5 J	< 10	NA	< 10	9.7 J	< 10	< 10
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 5.0	< 7.0	< 7.0	NA	< 7.0	< 7.0	< 7.0	< 7.0
Zinc		2000	1993/94 HRL	174	193	385	µg/l	190	< 40.0	< 50	< 50	NA	< 50	< 50	< 50	< 50
PCBs																
Aroclor 1016		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.95	< 0.48 R	NA	NA	< 3.8	NA	NA	NA	NA
Aroclor 1221		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.95	< 0.48 R	NA	NA	< 3.8	NA	NA	NA	NA
Aroclor 1232		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.95	< 0.48 R	NA	NA	< 3.8	NA	NA	NA	NA
Aroclor 1242		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.95	< 0.48 R	NA	NA	< 3.8	NA	NA	NA	NA
Aroclor 1248		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.95	< 0.48 R	NA	NA	< 3.8	NA	NA	NA	NA
Aroclor 1254		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.95	< 0.48 R	NA	NA	< 3.8	NA	NA	NA	NA
Aroclor 1260		0.04	1993/94 HRL	0.000029	1	2	µg/l	< 0.95	< 0.48 R	NA	NA	< 3.8	NA	NA	NA	NA
Polychlorinated Biphenyls		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	< 0.48 R	NA	NA	NA	NA	NA	NA	NA
TPH																
Diesel Range Organics		100	MPCA PBP				µg/l	720	410	700	760	2600	260	< 100	NA	NA
Gasoline Range Organics		100	MPCA PBP				µg/l	54 J	NA	NA	NA	< 100	< 100	< 100	NA	NA
Other																
Cyanide, Free		100	1993/94 HRL	5.2	22	45	µg/l	< 10	< 23	NA	NA	< 10	NA	NA	NA	NA

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Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-19 / AMW-19 (20140916) / 9/16/2014 / Overburden (Area C)	AMW-19 / DUP-003 (20140916) / 9/16/2014 / Overburden (Area C)	AMW-19 / AMW-19 (20160309) / 3/9/2016 / Overburden (Area C)	AMW-19 / DUP-01 (20160309) / 3/9/2016 / Overburden (Area C)	AMW-19 / AMW-19 (20160609) / 6/9/2016 / Overburden (Area C)	AMW-20 / AMW-20(20111111) / 11/11/2011 / Overburden (Area C)	AMW-20 / DUP-01(20111111) / 11/11/2011 / Overburden (Area C)	AMW-20 / AMW-20(20120117) / 1/17/2012 / Overburden (Area C)	AMW-20 / DUP-02(20120117) / 1/17/2012 / Overburden (Area C)
				CS	MS	FAV										
VOCs																
1,1,1,2-Tetrachloroethane		70	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane		9000	2009 HRL	329	2957	5913	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		2	1993/94 HRL	13	1127	2253	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane		200000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane		3	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		100	2009 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		200	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane		0.003	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene		4	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene		100	2010 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane		NS	NS	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,2-Dibromoethane		0.004	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene		600	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		1	2013 HRL	190	45050	90100	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		5	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		100	2009 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		4000	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	0.88 J	< 10	< 10	< 10
2-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Methyl-2-Pentanone		300	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 10	< 10
Acetone		4000	2011 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	1.5 J	5.4 J	1.9 J	< 10	< 10
Allyl chloride		30	1993/94 HRL	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Benzene		2	2009 HRL	114	4487	8974	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.14 J	< 1.0	< 1.0	< 1.0
Bromobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane		6	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		40	1993/94 HRL	466	2900	5800	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide		700	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride		1	2013 HRL	5.9	1750	3500	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11		2000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12		700	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene		100	1993/94 HRL	20	423	846	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		30	2009 HRL	155	1392	2784	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane		NS	NS	NS	NS	NS	µg/l	5.6	5.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene		6	2014 HBV	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cymene (p-Isopropyltoluene)		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.45 J
Dibromomethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane		5	2009 HRL/MCL	1940	13875	27749	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromonofluoromethane		30	2015 RAA	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 2.0
Diethyl ether		200	2010 RAA	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 2.0

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent / Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters CS	Class 2B Waters MS	Class 2B Waters FAV	Units	AMW-19 AMW-19 (20140916) 9/16/2014 Overburden (Area C)	AMW-19 DUP-003 (20140916) 9/16/2014 Overburden (Area C)	AMW-19 AMW-19 (20160309) 3/9/2016 Overburden (Area C)	AMW-19 DUP-01 (20160309) 3/9/2016 Overburden (Area C)	AMW-19 AMW-19 (20160609) 6/9/2016 Overburden (Area C)	AMW-20 AMW-20(20111111) 11/11/2011 Overburden (Area C)	AMW-20 DUP-01(20111111) 11/11/2011 Overburden (Area C)	AMW-20 AMW-20(20120117) 1/17/2012 Overburden (Area C)	AMW-20 DUP-02(20120117) 1/17/2012 Overburden (Area C)
Ethylbenzene	50	2011 HRL	68	1859	3717	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachloro-1,3-butadiene	1	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	300	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.15 J	< 1.0	< 1.0	< 1.0
Methyl-tert-butylether	60	2013 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 5.0	< 5.0
Naphthalene	70	2013 HRL	81	409	818	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene	NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Propylbenzene	NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	4	2014 HBV	8.9	428	857	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrahydrofuran	NS	NS	NS	NS	NS	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.51 J	< 5.0	< 5.0	< 5.0
Toluene	200	2011 HRL	253	1352	2703	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.19 J	0.14 J	< 1.0	< 1.0
trans-1,2-Dichloroethene	40	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	0.4	2015 HRL	120	6988	13976	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	0.2	2009 HRL	9.2	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene	300	2011 HRL	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
o-Xylene	300	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes*	300	2011 HRL	166	1407	2814	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs															
1,1-Biphenyl	300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
1-Methylnaphthalene	NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Oxybis(1-Chloropropane)	NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
2,4,5-Trichlorophenol	NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
2,4,6-Trichlorophenol	30	1993/94 HRL	2	102	203	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
2,4-Dichlorophenol	20	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
2,4-Dimethylphenol	100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
2,4-Dinitrophenol	10	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
2,4-Dinitrotoluene	NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
2,6-Dinitrotoluene	NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
2-Chloronaphthalene	NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
2-Chlorophenol	30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol	NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
2-Methylnaphthalene	8	2013 RAA	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
2-Methylphenol	30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
2-Nitroaniline	NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
2-Nitrophenol	NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
3,3-Dichlorobenzidine	0.8	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
3-Methylphenol, 4-Methylphenol	NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
3-Nitroaniline	NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
4-Chloro-3-Methylphenol	NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
4-Methylphenol	3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
4-Nitrophenol	NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
Acenaphthene	400	1993/94 HRL	20	56	112	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Acenaphthylene	NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10

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Table 7
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Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-19 AMW-19 (20140916) 9/16/2014 Overburden (Area C)	AMW-19 DUP-003 (20140916) 9/16/2014 Overburden (Area C)	AMW-19 AMW-19 (20160309) 3/9/2016 Overburden (Area C)	AMW-19 DUP-01 (20160309) 3/9/2016 Overburden (Area C)	AMW-19 AMW-19 (20160609) 6/9/2016 Overburden (Area C)	AMW-20 AMW-20(20111111) 11/11/2011 Overburden (Area C)	AMW-20 DUP-01(20111111) 11/11/2011 Overburden (Area C)	AMW-20 AMW-20(20120117) 1/17/2012 Overburden (Area C)	AMW-20 DUP-02(20120117) 1/17/2012 Overburden (Area C)
				CS	MS	FAV										
Acetophenone		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
Anthracene		2000	1993/94 HRL	0.035	0.32	0.63	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Atrazine		3	2009 HRL/MCL	10	323	645	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
Benzaldehyde		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
Benzo(a)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 0.20	< 0.20	< 0.20	< 0.21
Benzo(a)pyrene		0.06	2012 HBV	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Benzo(b)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Benzo(g,h,i)perylene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Benzo(k)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
bis(2-Chloroethoxy)methane		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
bis(2-Chloroethyl)ether		0.3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate		6	2009 HRL/MCL	2.1	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
Butyl benzyl phthalate		100	2012 HBV	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
Caprolactam		NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
Carbazole		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
Chrysene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Dibenzo(a,h)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Dibenzofuran		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
Diethyl phthalate		6000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
Dimethyl phthalate		70000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
Di-n-butyl phthalate		20	2012 HBV	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
Di-n-octyl phthalate		NS	NS	30	825	1650	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
Fluoranthene		300	1993/94 HRL	1.9	3.5	6.9	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Fluorene		300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
Hexachlorobenzene		0.2	1993/94 HRL	0.00024	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	NA	NA	NA	NA
Hexachlorocyclopentadiene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 9.5	< 9.5	< 9.5	NA	NA	NA	NA
Hexachloroethane		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Isophorone		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
Naphthalene		70	2013 HRL	81	409	818	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Nitrobenzene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
n-Nitrosodi-n-propylamine		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
N-nitrosodiphenylamine		70	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
p-Chloroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	NA	NA	NA	NA
Pentachlorophenol		0.3	2013 HBV	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	NA	NA	NA	NA
Phenanthrene		NS	NS	3.6	32	64	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Phenol		4000	1993/94 HRL	123	2214	4428	µg/l	NA	NA	< 0.95	< 0.95	< 0.95	NA	NA	NA	NA
Pyrene		200	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 10	< 10	< 9.9	< 10
Benzo(a)pyrene (BaP) Equivalents		0.06	2012 HBV[1]	NS	NS	NS	µg/l	NA	NA	ND	ND	ND	ND	ND	ND	ND
Total Metals																
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		100	1993/94 HRL	11	16	32	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt		30	1995 HBV	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-19 AMW-19 (20140916) 9/16/2014 Overburden (Area C)	AMW-19 DUP-003 (20140916) 9/16/2014 Overburden (Area C)	AMW-19 AMW-19 (20160309) 3/9/2016 Overburden (Area C)	AMW-19 DUP-01 (20160309) 3/9/2016 Overburden (Area C)	AMW-19 AMW-19 (20160609) 6/9/2016 Overburden (Area C)	AMW-20 AMW-20(20111111) 11/11/2011 Overburden (Area C)	AMW-20 DUP-01(20111111) 11/11/2011 Overburden (Area C)	AMW-20 AMW-20(20120117) 1/17/2012 Overburden (Area C)	AMW-20 DUP-02(20120117) 1/17/2012 Overburden (Area C)
				CS	MS	FAV										
Copper		1000	1995 HBV	14	31	62	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals				.												
Aluminum		NS	NS	125	1072	2145	µg/l	< 200	< 200	< 200	NA	< 200	< 200	< 200	< 200	< 200
Antimony		6	1993/94 HRL	31	90	180	µg/l	< 10	< 10	< 10	NA	< 10	3.3 J	< 10	< 10	< 10
Arsenic		10	USEPA MCL	53	360	720	µg/l	< 10	2.9 J	< 10	NA	< 10	< 10	< 10	< 10	< 10
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	160 J	160 J	130 J	NA	120 J	200	200	160 J	160 J
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	< 5.0	< 5.0	< 5.0	NA	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Cadmium		0.5	2014 HBV	2	65	130	µg/l	0.32 J	0.24 J	0.50 J	NA	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Calcium		NS	NS	NS	NS	NS	µg/l	140000	140000	140000	NA	150000	180000	190000	180000	180000
Chromium		100	NS	11	16	32	µg/l	2.2 J	2.1 J	0.75 J	NA	0.74 J	< 10	< 10	< 10	< 10
Cobalt		30	NS	5	436	872	µg/l	0.79 J	< 7.0	< 7.0	NA	< 7.0	5.3 J	9.9	3.3 J	6.4 J
Copper		1000	NS	14	31	62	µg/l	< 25	< 25	< 25	NA	< 25	< 25	< 25	< 25	< 25
Iron		NS	NS	NS	NS	NS	µg/l	< 100	< 100	< 100	NA	25 J	< 100	< 100	550	700
Lead		15	No Basis[2]	7	173	346	µg/l	< 3.0	< 3.0	< 3.0	NA	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Magnesium		NS	NS	NS	NS	NS	µg/l	40000	40000	41000	NA	42000	49000	51000	48000	48000
Manganese		100	2012 RAA	NS	NS	NS	µg/l	180	180	45	NA	26	1800	1900	1700	1700
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	< 0.20	< 0.20	0.16 J	NA	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	3.1 J	3.2 J	< 40	NA	< 40	6.9 J	7.6 J	4.5 J	4.8 J
Potassium		NS	NS	NS	NS	NS	µg/l	2400 J	2400 J	3100 J	NA	1900 J	3500 J	3600 J	3300 J	3300 J
Selenium		30	1993/94 HRL	5	20	40	µg/l	< 5.0	< 5.0	< 5.0	NA	< 15	< 5.0	< 5.0	< 5.0	< 5.0
Silver		30	1993/94 HRL	1	6	11	µg/l	< 10	< 10	< 10	NA	< 10	< 10	< 10	< 10	< 10
Sodium		NS	NS	NS	NS	NS	µg/l	21000	21000	35000	NA	27000	66000	69000	58000	58000
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	2.4 J	< 10	< 10	NA	< 10	< 10	< 10	< 10	5.9 J
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	< 7.0	< 7.0	< 7.0	NA	< 10	0.64 J	< 7.0	< 7.0	< 7.0
Zinc		2000	1993/94 HRL	174	193	385	µg/l	13 J	11 J	< 50	NA	< 50	< 50	< 50	< 50	< 50
PCBs																
Aroclor 1016		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated Biphenyls		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH																
Diesel Range Organics		100	MPCA PBP				µg/l	NA	NA	81 J	100	< 95	630	280	460	1200
Gasoline Range Organics		100	MPCA PBP				µg/l	NA	NA	NA	NA	< 100	< 100	< 100	< 100	< 100
Other																
Cyanide, Free		100	1993/94 HRL	5.2	22	45	µg/l	NA	NA	NA	NA	< 10	NA	NA	NA	NA

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-20 / AMW-20 (20140807) / 8/7/2014 / Overburden (Area C)	AMW-20 / AMW-20 (20140916) / 9/16/2014 / Overburden (Area C)	AMW-20 / AMW-20 (20160308) / 3/8/2016 / Overburden (Area C)	AMW-20 / AMW-20 (20160608) / 6/8/2016 / Overburden (Area C)	AMW-21 / AMW-21 (20160309) / 3/9/2016 / Overburden (Area C)	AMW-21 / AMW-21 (20160610) / 6/10/2016 / Overburden (Area C)	AMW-22 / AMW-22 (20160309) / 3/9/2016 / Overburden (Area C)	AMW-22 / AMW-22 (20160609) / 6/9/2016 / Overburden (Area C)	AMW-22B / AMW-22B (20160309) / 3/9/2016 / Overburden (Area C)
				CS	MS	FAV										
VOCs																
1,1,1,2-Tetrachloroethane		70	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane		9000	2009 HRL	329	2957	5913	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		2	1993/94 HRL	13	1127	2253	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane		200000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane		3	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		100	2009 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		200	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane		0.003	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene		4	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene		100	2010 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane		NS	NS	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,2-Dibromoethane		0.004	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene		600	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		1	2013 HRL	190	45050	90100	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		5	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		100	2009 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		4000	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Methyl-2-Pentanone		300	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone		4000	2011 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	1.8 J	< 10	2.6 J	< 10	1.6 J	1.8 J
Allyl chloride		30	1993/94 HRL	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Benzene		2	2009 HRL	114	4487	8974	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane		6	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		40	1993/94 HRL	466	2900	5800	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide		700	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.56 J	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride		1	2013 HRL	5.9	1750	3500	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11		2000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12		700	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene		100	1993/94 HRL	20	423	846	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		30	2009 HRL	155	1392	2784	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane		NS	NS	NS	NS	NS	µg/l	4.6	2.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene		6	2014 HBV	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.27 J	1.6	0.95 J	1.1
cis-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cymene (p-Isopropyltoluene)		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane		5	2009 HRL/MCL	1940	13875	27749	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromonofluoromethane		30	2015 RAA	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Diethyl ether		200	2010 RAA	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Notes and Abbreviations on Page 45.

Table 7
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Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-20 / AMW-20 (20140807) / 8/7/2014 / Overburden (Area C)	AMW-20 / AMW-20 (20140916) / 9/16/2014 / Overburden (Area C)	AMW-20 / AMW-20 (20160308) / 3/8/2016 / Overburden (Area C)	AMW-20 / AMW-20 (20160608) / 6/8/2016 / Overburden (Area C)	AMW-21 / AMW-21 (20160309) / 3/9/2016 / Overburden (Area C)	AMW-21 / AMW-21 (20160610) / 6/10/2016 / Overburden (Area C)	AMW-22 / AMW-22 (20160309) / 3/9/2016 / Overburden (Area C)	AMW-22 / AMW-22 (20160609) / 6/9/2016 / Overburden (Area C)	AMW-22B / AMW-22B (20160309) / 3/9/2016 / Overburden (Area C)
				CS	MS	FAV										
Ethylbenzene		50	2011 HRL	68	1859	3717	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene		300	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl-tert-butylether		60	2013 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene		70	2013 HRL	81	409	818	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.46 J
N-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Propylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene		4	2014 HBV	8.9	428	857	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrahydrofuran		NS	NS	NS	NS	NS	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene		200	2011 HRL	253	1352	2703	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene		40	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene		0.4	2015 HRL	120	6988	13976	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride		0.2	2009 HRL	9.2	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
o-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes*		300	2011 HRL	166	1407	2814	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs																
1,1-Biphenyl		300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
1-Methylnaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Oxybis(1-Chloropropane)		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
2,4,5-Trichlorophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
2,4,6-Trichlorophenol		30	1993/94 HRL	2	102	203	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
2,4-Dichlorophenol		20	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
2,4-Dimethylphenol		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
2,4-Dinitrophenol		10	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
2,4-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
2,6-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
2-Chloronaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
2-Chlorophenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
2-Methyl-4,6-dinitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
2-Methylnaphthalene		8	2013 RAA	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
2-Methylphenol		30	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
2-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
2-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
3,3-Dichlorobenzidine		0.8	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
3-Methylphenol, 4-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
3-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
4-Bromophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
4-Chloro-3-Methylphenol		NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
4-Chlorophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
4-Methylphenol		3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
4-Nitrophenol		NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
Acenaphthene		400	1993/94 HRL	20	56	112	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Acenaphthylene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-20 / AMW-20 (20140807) / 8/7/2014 / Overburden (Area C)	AMW-20 / AMW-20 (20140916) / 9/16/2014 / Overburden (Area C)	AMW-20 / AMW-20 (20160308) / 3/8/2016 / Overburden (Area C)	AMW-20 / AMW-20 (20160608) / 6/8/2016 / Overburden (Area C)	AMW-21 / AMW-21 (20160309) / 3/9/2016 / Overburden (Area C)	AMW-21 / AMW-21 (20160610) / 6/10/2016 / Overburden (Area C)	AMW-22 / AMW-22 (20160309) / 3/9/2016 / Overburden (Area C)	AMW-22 / AMW-22 (20160609) / 6/9/2016 / Overburden (Area C)	AMW-22B / AMW-22B (20160309) / 3/9/2016 / Overburden (Area C)
				CS	MS	FAV										
Acetophenone		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
Anthracene		2000	1993/94 HRL	0.035	0.32	0.63	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	0.25	< 0.19	< 0.19	< 0.19
Atrazine		3	2009 HRL/MCL	10	323	645	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
Benzaldehyde		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
Benzo(a)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	0.71	< 0.19	< 0.19	< 0.19
Benzo(a)pyrene		0.06	2012 HBV	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	0.51	< 0.19	< 0.19	< 0.19
Benzo(b)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	0.68	< 0.19	< 0.19	< 0.19
Benzo(g,h,i)perylene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	0.40	< 0.19	< 0.19	< 0.19
Benzo(k)fluoranthene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	0.36	< 0.19	< 0.19	< 0.19
bis(2-Chloroethoxy)methane		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
bis(2-Chloroethyl)ether		0.3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
bis(2-Ethylhexyl)phthalate		6	2009 HRL/MCL	2.1	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	6.0	< 4.8	< 4.8	< 4.8
Butyl benzyl phthalate		100	2012 HBV	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Caprolactam		NS	NS	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8 J
Carbazole		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
Chrysene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	0.70	< 0.19	< 0.19	< 0.19
Dibenzo(a,h)anthracene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Dibenzofuran		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
Diethyl phthalate		6000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Dimethyl phthalate		70000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Di-n-butyl phthalate		20	2012 HBV	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
Di-n-octyl phthalate		NS	NS	30	825	1650	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Fluoranthene		300	1993/94 HRL	1.9	3.5	6.9	µg/l	NA	NA	< 0.19	< 0.19	1.3	1.2	< 0.19	< 0.19	< 0.19
Fluorene		300	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	0.12 J	< 0.19	< 0.19	< 0.19
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
Hexachlorobenzene		0.2	1993/94 HRL	0.00024	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Hexachlorocyclopentadiene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 9.5	< 9.6	< 9.5	< 9.6	< 9.6	< 9.5	< 9.6
Hexachloroethane		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
Indeno(1,2,3-cd)pyrene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	0.32	< 0.19	< 0.19	< 0.19
Isophorone		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	0.28 J	< 0.96	< 0.96	< 0.95	0.34 J
Naphthalene		70	2013 HRL	81	409	818	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Nitrobenzene		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
n-Nitrosodi-n-propylamine		NS	NS	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
N-nitrosodiphenylamine		70	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
p-Chloroaniline		NS	NS	NS	NS	NS	µg/l	NA	NA	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9 J
Pentachlorophenol		0.3	2013 HBV	NS	NS	NS	µg/l	NA	NA	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
Phenanthrene		NS	NS	3.6	32	64	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	0.68	< 0.19	< 0.19	< 0.19
Phenol		4000	1993/94 HRL	123	2214	4428	µg/l	NA	NA	< 0.95	< 0.96	< 0.95	< 0.96	< 0.96	< 0.95	< 0.96
Pyrene		200	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	< 0.19	< 0.19	< 0.19	1.4	< 0.19	< 0.19	< 0.19
Benzo(a)pyrene (BaP) Equivalents		0.06	2012 HBV[1]	NS	NS	NS	µg/l	NA	NA	ND	ND	ND	0.724	ND	ND	ND
Total Metals																
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		100	1993/94 HRL	11	16	32	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt		30	1995 HBV	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-20 AMW-20 (20140807) 8/7/2014 Overburden (Area C)	AMW-20 AMW-20 (20140916) 9/16/2014 Overburden (Area C)	AMW-20 AMW-20 (20160308) 3/8/2016 Overburden (Area C)	AMW-20 AMW-20 (20160608) 6/8/2016 Overburden (Area C)	AMW-21 AMW-21 (20160309) 3/9/2016 Overburden (Area C)	AMW-21 AMW-21 (20160610) 6/10/2016 Overburden (Area C)	AMW-22 AMW-22 (20160309) 3/9/2016 Overburden (Area C)	AMW-22 AMW-22 (20160609) 6/9/2016 Overburden (Area C)	AMW-22B AMW-22B (20160309) 3/9/2016 Overburden (Area C)
				CS	MS	FAV										
Copper		1000	1995 HBV	14	31	62	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals				.												
Aluminum		NS	NS	125	1072	2145	µg/l	< 200	< 200	< 200	< 200	48 J	< 200	< 200	< 200	< 200
Antimony		6	1993/94 HRL	31	90	180	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Arsenic		10	USEPA MCL	53	360	720	µg/l	< 10	< 10	< 10	< 10	< 10	5.1 J	7.2 J	9.7 J	< 10
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	160 J	160 J	130 J	110 J	43 J	36 J	170 J	180 J	140 J
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.13 J	< 5.0	< 5.0
Cadmium		0.5	2014 HBV	2	65	130	µg/l	< 5.0	0.20 J	0.52 J	< 5.0	< 5.0	< 5.0	0.41 J	< 5.0	0.37 J
Calcium		NS	NS	NS	NS	NS	µg/l	200000	180000	170000	160000	150000	140000	140000	140000	61000
Chromium		100	NS	11	16	32	µg/l	< 10	2.9 J	0.70 J	1.1 J	1.2 J	1.6 J	1.0 J	1.0 J	< 10
Cobalt		30	NS	5	436	872	µg/l	< 7.0	2.5 J	0.65 J	< 7.0	1.1 J	1.3 J	1.2 J	1.2 J	< 7.0
Copper		1000	NS	14	31	62	µg/l	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25
Iron		NS	NS	NS	NS	NS	µg/l	380	200	190	45 J	< 100	40 J	9000	8300	2400
Lead		15	No Basis[2]	7	173	346	µg/l	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Magnesium		NS	NS	NS	NS	NS	µg/l	55000	52000	46000	46000	44000	40000	39000	38000	27000
Manganese		100	2012 RAA	NS	NS	NS	µg/l	1400	870	380	520	2000	1700	1900	1900	120
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	< 0.20	< 0.20	0.27	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20 J
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	5.5 J	8.2 J	< 40	4.1 J	7.2 J	3.3 J	< 40	< 40	< 40
Potassium		NS	NS	NS	NS	NS	µg/l	3100 J	2700 J	2800 J	2500 J	5300	4500 J	4300 J	4000 J	16000
Selenium		30	1993/94 HRL	5	20	40	µg/l	< 5.0	< 5.0	< 5.0	< 15	< 5.0	< 15	< 5.0	< 15	< 5.0
Silver		30	1993/94 HRL	1	6	11	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Sodium		NS	NS	NS	NS	NS	µg/l	58000	56000	45000	44000	33000	28000	29000	31000	9600
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	< 10	< 10	< 10	2.7 J	9.3 J	6.4 J	< 10	8.8 J	< 10
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	< 7.0	< 7.0	< 7.0	< 10	< 7.0	< 10	< 7.0	< 10	< 7.0
Zinc		2000	1993/94 HRL	174	193	385	µg/l	< 50	10 J	< 50	< 50	< 50	< 50	< 50	< 50	< 50
PCBs																
Aroclor 1016		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated Biphenyls		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH																
Diesel Range Organics		100	MPCA PBP				µg/l	NA	NA	88 J	< 95	360	720	< 96	< 95	140
Gasoline Range Organics		100	MPCA PBP				µg/l	NA	NA	NA	< 100	NA	< 100	NA	< 100	NA
Other																
Cyanide, Free		100	1993/94 HRL	5.2	22	45	µg/l	NA	NA	NA	< 10	NA	< 10	NA	15	NA

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966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-22B AMW-22B (20160609) 6/9/2016 Overburden (Area C)	AMW-23 AMW-23 (20160308) 3/8/2016 Overburden (Area C)	AMW-23 AMW-23 (20160608) 6/8/2016 Overburden (Area C)	AMW-23 DUP-01 (20160608) 6/8/2016 Overburden (Area C)	AMW-23B AMW-23B (20160308) 3/8/2016 Overburden (Area C)	AMW-23B AMW-23B (20160608) 6/8/2016 Overburden (Area C)	AMW-24 AMW-24 (20160308) 3/8/2016 Overburden (Area C)	AMW-24 AMW-24 (20160608) 6/8/2016 Overburden (Area C)	AMW-25 AMW-25 (20160308) 3/8/2016 Overburden (Area C)
				CS	MS	FAV										
VOCs																
1,1,1,2-Tetrachloroethane		70	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,1,1-Trichloroethane		9000	2009 HRL	329	2957	5913	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,1,2,2-Tetrachloroethane		2	1993/94 HRL	13	1127	2253	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,1,2-trichloro-1,2,2-trifluoroethane		200000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,1,2-Trichloroethane		3	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,1-Dichloroethane		100	2009 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,1-Dichloroethene		200	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,1-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,2,3-Trichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,2,3-Trichloropropane		0.003	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,2,4-Trichlorobenzene		4	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,2,4-Trimethylbenzene		100	2010 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	330
1,2-Dibromo-3-chloropropane		NS	NS	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 27
1,2-Dibromoethane		0.004	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,2-Dichlorobenzene		600	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,2-Dichloroethane		1	2013 HRL	190	45050	90100	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,2-Dichloropropane		5	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,3,5-Trimethylbenzene		100	2009 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,3-Dichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,3-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
1,4-Dichlorobenzene		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
2,2-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
2-Butanone (MEK)		4000	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 130
2-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
4-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
4-Methyl-2-Pentanone		300	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 130
Acetone		4000	2011 HRL	NS	NS	NS	µg/l	1.2 J	< 10	2.1 J	2.0 J	< 10	< 10	0.95 J	< 10	< 130
Allyl chloride		30	1993/94 HRL	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 27
Benzene		2	2009 HRL	114	4487	8974	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Bromobenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Bromochloromethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Bromodichloromethane		6	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Bromoform		40	1993/94 HRL	466	2900	5800	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Bromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Carbon Disulfide		700	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Carbon Tetrachloride		1	2013 HRL	5.9	1750	3500	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
CFC-11		2000	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
CFC-12		700	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Chlorobenzene		100	1993/94 HRL	20	423	846	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Chlorodibromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Chloroethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Chloroform		30	2009 HRL	155	1392	2784	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Chloromethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
cis-1,2-Dichloroethene		6	2014 HBV	NS	NS	NS	µg/l	0.82 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
cis-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Cyclohexane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Cymene (p-Isopropyltoluene)		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Dibromomethane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Dichloromethane		5	2009 HRL/MCL	1940	13875	27749	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Dichloromonofluoromethane		30	2015 RAA	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 27
Diethyl ether		200	2010 RAA	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 27

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters CS	Class 2B Waters MS	Class 2B Waters FAV	Units	AMW-22B AMW-22B (20160609) 6/9/2016 Overburden (Area C)	AMW-23 AMW-23 (20160308) 3/8/2016 Overburden (Area C)	AMW-23 AMW-23 (20160608) 6/8/2016 Overburden (Area C)	AMW-23 DUP-01 (20160608) 6/8/2016 Overburden (Area C)	AMW-23B AMW-23B (20160308) 3/8/2016 Overburden (Area C)	AMW-23B AMW-23B (20160608) 6/8/2016 Overburden (Area C)	AMW-24 AMW-24 (20160308) 3/8/2016 Overburden (Area C)	AMW-24 AMW-24 (20160608) 6/8/2016 Overburden (Area C)	AMW-25 AMW-25 (20160308) 3/8/2016 Overburden (Area C)
Ethylbenzene		50	2011 HRL	68	1859	3717	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	120
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Isopropylbenzene		300	1993/94 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	13
Methyl Acetate		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 130
Methyl N-Butyl Ketone (2-Hexanone)		NS	NS	NS	NS	NS	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 130
Methylcyclohexane		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Methyl-tert-butylether		60	2013 RAA	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Naphthalene		70	2013 HRL	81	409	818	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.60 J	< 1.0	37
N-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	260
N-Propylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	42
sec-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	16
Styrene (Monomer)		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
tert-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Tetrachloroethene		4	2014 HBV	8.9	428	857	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Tetrahydrofuran		NS	NS	NS	NS	NS	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 67
Toluene		200	2011 HRL	253	1352	2703	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
trans-1,2-Dichloroethene		40	2013 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
trans-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Trichloroethene		0.4	2015 HRL	120	6988	13976	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Vinyl chloride		0.2	2009 HRL	9.2	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
m,p-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	170
o-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 13
Total Xylenes*		300	2011 HRL	166	1407	2814	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	170
SVOCs																
1,1-Biphenyl		300	1993/94 HRL	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
1-Methylnaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Oxybis(1-Chloropropane)		NS	NS	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
2,4,5-Trichlorophenol		NS	NS	NS	NS	NS	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	0.48 J	< 4.8	< 4.8
2,4,6-Trichlorophenol		30	1993/94 HRL	2	102	203	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
2,4-Dichlorophenol		20	1993/94 HRL	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	0.69 J	< 1.9	< 1.9
2,4-Dimethylphenol		100	1993/94 HRL	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
2,4-Dinitrophenol		10	1993/94 HRL	NS	NS	NS	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
2,4-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
2,6-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
2-Chloronaphthalene		NS	NS	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
2-Chlorophenol		30	1993/94 HRL	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
2-Methyl-4,6-dinitrophenol		NS	NS	NS	NS	NS	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
2-Methylnaphthalene		8	2013 RAA	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
2-Methylphenol		30	1993/94 HRL	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
2-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
2-Nitrophenol		NS	NS	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
3,3-Dichlorobenzidine		0.8	1993/94 HRL	NS	NS	NS	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
3-Methylphenol, 4-Methylphenol		NS	NS	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
3-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
4-Bromophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
4-Chloro-3-Methylphenol		NS	NS	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
4-Chlorophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
4-Methylphenol		3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
4-Nitrophenol		NS	NS	NS	NS	NS	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
Acenaphthene		400	1993/94 HRL	20	56	112	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Acenaphthylene		NS	NS	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-22B AMW-22B (20160609) 6/9/2016 Overburden (Area C)	AMW-23 AMW-23 (20160308) 3/8/2016 Overburden (Area C)	AMW-23 AMW-23 (20160608) 6/8/2016 Overburden (Area C)	AMW-23 DUP-01 (20160608) 6/8/2016 Overburden (Area C)	AMW-23B AMW-23B (20160308) 3/8/2016 Overburden (Area C)	AMW-23B AMW-23B (20160608) 6/8/2016 Overburden (Area C)	AMW-24 AMW-24 (20160308) 3/8/2016 Overburden (Area C)	AMW-24 AMW-24 (20160608) 6/8/2016 Overburden (Area C)	AMW-25 AMW-25 (20160308) 3/8/2016 Overburden (Area C)
				CS	MS	FAV										
Acetophenone		NS	NS	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
Anthracene		2000	1993/94 HRL	0.035	0.32	0.63	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Atrazine		3	2009 HRL/MCL	10	323	645	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
Benzaldehyde		NS	NS	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	10
Benzo(a)anthracene		NS	NS	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Benzo(a)pyrene		0.06	2012 HBV	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Benzo(b)fluoranthene		NS	NS	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Benzo(g,h,i)perylene		NS	NS	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Benzo(k)fluoranthene		NS	NS	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
bis(2-Chloroethoxy)methane		NS	NS	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
bis(2-Chloroethyl)ether		0.3	1993/94 HRL	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
bis(2-Ethylhexyl)phthalate		6	2009 HRL/MCL	2.1	NS	NS	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
Butyl benzyl phthalate		100	2012 HBV	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Caprolactam		NS	NS	NS	NS	NS	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	0.28 J	< 4.8
Carbazole		NS	NS	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
Chrysene		NS	NS	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Dibenzo(a,h)anthracene		NS	NS	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Dibenzofuran		NS	NS	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
Diethyl phthalate		6000	1993/94 HRL	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Dimethyl phthalate		70000	1993/94 HRL	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Di-n-butyl phthalate		20	2012 HBV	NS	NS	NS	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	1.7 J
Di-n-octyl phthalate		NS	NS	30	825	1650	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Fluoranthene		300	1993/94 HRL	1.9	3.5	6.9	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	1.5	< 0.19	< 0.19	< 0.19	< 0.19
Fluorene		300	1993/94 HRL	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
Hexachlorobenzene		0.2	1993/94 HRL	0.00024	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Hexachlorocyclopentadiene		NS	NS	NS	NS	NS	µg/l	< 9.5	< 9.5	< 9.5	< 9.5	< 9.5	< 9.5	< 9.5	< 9.5	< 9.5
Hexachloroethane		NS	NS	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
Indeno(1,2,3-cd)pyrene		NS	NS	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Isophorone		100	1993/94 HRL	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
Naphthalene		70	2013 HRL	81	409	818	µg/l	< 0.19	< 0.19	< 0.19	0.10 J	< 0.19	< 0.19	< 0.19	< 0.19	21
Nitrobenzene		NS	NS	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
n-Nitrosodi-n-propylamine		NS	NS	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
N-nitrosodiphenylamine		70	1993/94 HRL	NS	NS	NS	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
p-Chloroaniline		NS	NS	NS	NS	NS	µg/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Pentachlorophenol		0.3	2013 HBV	NS	NS	NS	µg/l	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
Phenanthrene		NS	NS	3.6	32	64	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Phenol		4000	1993/94 HRL	123	2214	4428	µg/l	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95
Pyrene		200	1993/94 HRL	NS	NS	NS	µg/l	< 0.19	< 0.19	< 0.19	< 0.19	0.15 J	< 0.19	< 0.19	< 0.19	< 0.19
Benzo(a)pyrene (BaP) Equivalents		0.06	2012 HBV[1]	NS	NS	NS	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Metals																
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		100	1993/94 HRL	11	16	32	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt		30	1995 HBV	5	436	872	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-22B AMW-22B (20160609) 6/9/2016 Overburden (Area C)	AMW-23 AMW-23 (20160308) 3/8/2016 Overburden (Area C)	AMW-23 AMW-23 (20160608) 6/8/2016 Overburden (Area C)	AMW-23 DUP-01 (20160608) 6/8/2016 Overburden (Area C)	AMW-23B AMW-23B (20160308) 3/8/2016 Overburden (Area C)	AMW-23B AMW-23B (20160608) 6/8/2016 Overburden (Area C)	AMW-24 AMW-24 (20160308) 3/8/2016 Overburden (Area C)	AMW-24 AMW-24 (20160608) 6/8/2016 Overburden (Area C)	AMW-25 AMW-25 (20160308) 3/8/2016 Overburden (Area C)
				CS	MS	FAV										
Copper		1000	1995 HBV	14	31	62	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals				.												
Aluminum		NS	NS	125	1072	2145	µg/l	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
Antimony		6	1993/94 HRL	31	90	180	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Arsenic		10	USEPA MCL	53	360	720	µg/l	< 10	< 10	< 10	< 10	2.9 J	3.7 J	< 10	4.2 J	< 10
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	160 J	110 J	140 J	150 J	180 J	180 J	110 J	100 J	250
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Cadmium		0.5	2014 HBV	2	65	130	µg/l	< 5.0	0.36 J	0.29 J	< 5.0	0.29 J	< 5.0	0.45 J	< 5.0	0.49 J
Calcium		NS	NS	NS	NS	NS	µg/l	74000	140000	130000	130000	80000	73000	200000	200000	210000
Chromium		100	NS	11	16	32	µg/l	1.1 J	0.84 J	1.0 J	0.69 J	0.60 J	0.77 J	0.81 J	1.0 J	1.2 J
Cobalt		30	NS	5	436	872	µg/l	< 7.0	2.5 J	1.8 J	1.9 J	< 7.0	< 7.0	2.7 J	2.3 J	< 7.0
Copper		1000	NS	14	31	62	µg/l	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25
Iron		NS	NS	NS	NS	NS	µg/l	3400	530	450	430	4000	5700	4200	1800	2400
Lead		15	No Basis[2]	7	173	346	µg/l	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Magnesium		NS	NS	NS	NS	NS	µg/l	29000	37000	35000	35000	27000	25000	50000	50000	65000
Manganese		100	2012 RAA	NS	NS	NS	µg/l	140	2500	2200	2200	210	220	2100	1700	1400
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	< 0.20	< 0.20	< 0.20	< 0.20	0.16 J	< 0.20	0.17 J	< 0.20	< 0.20
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	< 40	< 40	2.2 J	2.6 J	< 40	< 40	< 40	5.1 J	< 40
Potassium		NS	NS	NS	NS	NS	µg/l	2600 J	3700 J	3400 J	3300 J	1900 J	1800 J	7300	7000	4200 J
Selenium		30	1993/94 HRL	5	20	40	µg/l	< 15	< 5.0	< 15	< 15	< 5.0	< 15	< 5.0	< 15	< 5.0
Silver		30	1993/94 HRL	1	6	11	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Sodium		NS	NS	NS	NS	NS	µg/l	6100	43000	40000	40000	9000	8300	90000	92000	75000
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	< 10	< 10	10	9.5 J	< 10	< 10	< 10	8.5 J	< 10
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	< 10	< 7.0	< 10	< 10	< 7.0	< 10	< 7.0	< 10	< 7.0
Zinc		2000	1993/94 HRL	174	193	385	µg/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
PCBs																
Aroclor 1016		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated Biphenyls		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH																
Diesel Range Organics		100	MPCA PBP				µg/l	48 J	110	50 J	74 J	86 J	< 95	190	180	11000
Gasoline Range Organics		100	MPCA PBP				µg/l	< 100	NA	74 J	62 J	NA	45 J	NA	< 100	NA
Other																
Cyanide, Free		100	1993/94 HRL	5.2	22	45	µg/l	< 10	NA	14	13	NA	< 10	NA	13	NA

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-25 AMW-25 (20160608) 6/8/2016 Overburden (Area C)	AMW-26 AMW-26 (20160309) 3/9/2016 Overburden (Area C)	AMW-26 AMW-26 (20160610) 6/10/2016 Overburden (Area C)
				CS	MS	FAV				
VOCs										
1,1,1,2-Tetrachloroethane		70	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,1,1-Trichloroethane		9000	2009 HRL	329	2957	5913	µg/l	< 8.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		2	1993/94 HRL	13	1127	2253	µg/l	< 8.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane		200000	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,1,2-Trichloroethane		3	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,1-Dichloroethane		100	2009 RAA	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,1-Dichloroethene		200	2011 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,1-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,2,3-Trichloropropane		0.003	2013 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene		4	2013 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene		100	2010 RAA	NS	NS	NS	µg/l	250 J	0.45 J	< 1.0
1,2-Dibromo-3-chloropropane		NS	NS	NS	NS	NS	µg/l	< 16	< 2.0	< 2.0
1,2-Dibromoethane		0.004	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,2-Dichlorobenzene		600	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,2-Dichloroethane		1	2013 HRL	190	45050	90100	µg/l	< 8.0	< 1.0	< 1.0
1,2-Dichloropropane		5	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		100	2009 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,3-Dichlorobenzene		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,3-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
1,4-Dichlorobenzene		10	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
2,2-Dichloropropane		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
2-Butanone (MEK)		4000	1993/94 HRL	NS	NS	NS	µg/l	< 80	0.64 J	< 10
2-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
4-Chlorotoluene		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
4-Methyl-2-Pentanone		300	1993/94 HRL	NS	NS	NS	µg/l	< 80	< 10	< 10
Acetone		4000	2011 HRL	NS	NS	NS	µg/l	< 80	< 10	2.4 J
Allyl chloride		30	1993/94 HRL	NS	NS	NS	µg/l	< 16	< 2.0	< 2.0
Benzene		2	2009 HRL	114	4487	8974	µg/l	< 8.0	< 1.0	< 1.0
Bromobenzene		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Bromochloromethane		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Bromodichloromethane		6	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Bromoform		40	1993/94 HRL	466	2900	5800	µg/l	< 8.0	< 1.0	< 1.0
Bromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Carbon Disulfide		700	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	0.38 J	< 1.0
Carbon Tetrachloride		1	2013 HRL	5.9	1750	3500	µg/l	< 8.0	< 1.0	< 1.0
CFC-11		2000	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
CFC-12		700	2011 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Chlorobenzene		100	1993/94 HRL	20	423	846	µg/l	< 8.0	1.7	1.9
Chlorodibromomethane		10	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Chloroethane		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Chloroform		30	2009 HRL	155	1392	2784	µg/l	< 8.0	< 1.0	< 1.0
Chloromethane		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
cis-1,2-Dichloroethene		6	2014 HBV	NS	NS	NS	µg/l	< 8.0	1.8	1.5
cis-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Cyclohexane		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Cymene (p-Isopropyltoluene)		NS	NS	NS	NS	NS	µg/l	3.7 J	< 1.0	< 1.0
Dibromomethane		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Dichloromethane		5	2009 HRL/MCL	1940	13875	27749	µg/l	< 8.0	< 1.0	< 1.0
Dichloromonofluoromethane		30	2015 RAA	NS	NS	NS	µg/l	< 16	< 2.0	< 2.0
Diethyl ether		200	2010 RAA	NS	NS	NS	µg/l	< 16	< 2.0	< 2.0

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID / Sample ID / Sample Date / Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-25 / AMW-25 (20160608) / 6/8/2016 / Overburden (Area C)	AMW-26 / AMW-26 (20160309) / 3/9/2016 / Overburden (Area C)	AMW-26 / AMW-26 (20160610) / 6/10/2016 / Overburden (Area C)
				CS	MS	FAV				
Ethylbenzene		50	2011 HRL	68	1859	3717	µg/l	95	1.8	0.39 J
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Isopropylbenzene		300	1993/94 HRL	NS	NS	NS	µg/l	13	< 1.0	< 1.0
Methyl Acetate		NS	NS	NS	NS	NS	µg/l	< 80	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)		NS	NS	NS	NS	NS	µg/l	< 80	< 10	< 10
Methylcyclohexane		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Methyl-tert-butylether		60	2013 RAA	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Naphthalene		70	2013 HRL	81	409	818	µg/l	< 8.0	33	2.1
N-Butylbenzene		NS	NS	NS	NS	NS	µg/l	160	< 1.0	< 1.0
N-Propylbenzene		NS	NS	NS	NS	NS	µg/l	42	< 1.0	< 1.0
sec-Butylbenzene		NS	NS	NS	NS	NS	µg/l	14	< 1.0	< 1.0
Styrene (Monomer)		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
tert-Butylbenzene		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Tetrachloroethene		4	2014 HBV	8.9	428	857	µg/l	< 8.0	< 1.0	< 1.0
Tetrahydrofuran		NS	NS	NS	NS	NS	µg/l	< 40	< 5.0	< 5.0
Toluene		200	2011 HRL	253	1352	2703	µg/l	< 8.0	< 1.0	< 1.0
trans-1,2-Dichloroethene		40	2013 HRL	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
trans-1,3-Dichloropropene		NS	NS	NS	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
Trichloroethene		0.4	2015 HRL	120	6988	13976	µg/l	< 8.0	< 1.0	< 1.0
Vinyl chloride		0.2	2009 HRL	9.2	NS	NS	µg/l	< 8.0	< 1.0	< 1.0
m,p-Xylene		300	2011 HRL	NS	NS	NS	µg/l	110	1.3 J	< 2.0
o-Xylene		300	2011 HRL	NS	NS	NS	µg/l	< 8.0	0.43 J	< 1.0
Total Xylenes*		300	2011 HRL	166	1407	2814	µg/l	110	1.73	ND
SVOCs										
1,1-Biphenyl		300	1993/94 HRL	NS	NS	NS	µg/l	< 4.8	0.41 J	0.38 J
1-Methylnaphthalene		NS	NS	NS	NS	NS	µg/l	NA	NA	NA
2,2-Oxybis(1-Chloropropane)		NS	NS	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
2,4,5-Trichlorophenol		NS	NS	NS	NS	NS	µg/l	< 24	< 5.1	< 4.8
2,4,6-Trichlorophenol		30	1993/94 HRL	2	102	203	µg/l	< 24	< 5.1	< 4.8
2,4-Dichlorophenol		20	1993/94 HRL	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
2,4-Dimethylphenol		100	1993/94 HRL	NS	NS	NS	µg/l	< 9.6	0.76 J	< 1.9
2,4-Dinitrophenol		10	1993/94 HRL	NS	NS	NS	µg/l	< 24	< 5.1	< 4.8
2,4-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	< 24	< 5.1	< 4.8
2,6-Dinitrotoluene		NS	NS	NS	NS	NS	µg/l	< 24	< 5.1	< 4.8
2-Chloronaphthalene		NS	NS	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
2-Chlorophenol		30	1993/94 HRL	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
2-Methyl-4,6-dinitrophenol		NS	NS	NS	NS	NS	µg/l	< 24	< 5.1	< 4.8
2-Methylnaphthalene		8	2013 RAA	NS	NS	NS	µg/l	< 0.96	2.2	0.36
2-Methylphenol		30	1993/94 HRL	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
2-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
2-Nitrophenol		NS	NS	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
3,3-Dichlorobenzidine		0.8	1993/94 HRL	NS	NS	NS	µg/l	< 24	< 5.1	< 4.8
3-Methylphenol, 4-Methylphenol		NS	NS	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
3-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
4-Bromophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
4-Chloro-3-Methylphenol		NS	NS	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
4-Chlorophenyl phenyl ether		NS	NS	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
4-Methylphenol		3	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA
4-Nitroaniline		NS	NS	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
4-Nitrophenol		NS	NS	NS	NS	NS	µg/l	< 24	< 5.1	< 4.8
Acenaphthene		400	1993/94 HRL	20	56	112	µg/l	< 0.96	1.7	1.8
Acenaphthylene		NS	NS	NS	NS	NS	µg/l	< 0.96	0.16 J	0.21

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-25 AMW-25 (20160608) 6/8/2016 Overburden (Area C)	AMW-26 AMW-26 (20160309) 3/9/2016 Overburden (Area C)	AMW-26 AMW-26 (20160610) 6/10/2016 Overburden (Area C)
				CS	MS	FAV				
Acetophenone		NS	NS	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
Anthracene		2000	1993/94 HRL	0.035	0.32	0.63	µg/l	< 0.96	0.62	1.3
Atrazine		3	2009 HRL/MCL	10	323	645	µg/l	< 4.8	< 1.0	< 0.96
Benzaldehyde		NS	NS	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
Benzo(a)anthracene		NS	NS	NS	NS	NS	µg/l	< 0.96	0.42	1.6
Benzo(a)pyrene		0.06	2012 HBV	NS	NS	NS	µg/l	< 0.96	0.38	1.4
Benzo(b)fluoranthene		NS	NS	NS	NS	NS	µg/l	< 0.96	0.45	2.0
Benzo(g,h,i)perylene		NS	NS	NS	NS	NS	µg/l	< 0.96	0.31	0.91
Benzo(k)fluoranthene		NS	NS	NS	NS	NS	µg/l	< 0.96	0.17 J	0.51
bis(2-Chloroethoxy)methane		NS	NS	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
bis(2-Chloroethyl)ether		0.3	1993/94 HRL	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
bis(2-Ethylhexyl)phthalate		6	2009 HRL/MCL	2.1	NS	NS	µg/l	< 24	< 5.1	2.3 J
Butyl benzyl phthalate		100	2012 HBV	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
Caprolactam		NS	NS	NS	NS	NS	µg/l	< 24	< 5.1	< 4.8
Carbazole		NS	NS	NS	NS	NS	µg/l	< 4.8	2.8	1.5
Chrysene		NS	NS	NS	NS	NS	µg/l	< 0.96	0.45	1.5
Dibenzo(a,h)anthracene		NS	NS	NS	NS	NS	µg/l	< 0.96	< 0.20	< 0.19
Dibenzofuran		NS	NS	NS	NS	NS	µg/l	< 4.8	1.7	1.4
Diethyl phthalate		6000	1993/94 HRL	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
Dimethyl phthalate		70000	1993/94 HRL	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
Di-n-butyl phthalate		20	2012 HBV	NS	NS	NS	µg/l	< 24	1.9 J	< 4.8
Di-n-octyl phthalate		NS	NS	30	825	1650	µg/l	< 9.6	< 2.0	< 1.9
Fluoranthene		300	1993/94 HRL	1.9	3.5	6.9	µg/l	< 0.96	2.3	4.1
Fluorene		300	1993/94 HRL	NS	NS	NS	µg/l	< 0.96	2.2	2.3
Hexachloro-1,3-butadiene		1	1993/94 HRL	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
Hexachlorobenzene		0.2	1993/94 HRL	0.00024	NS	NS	µg/l	< 0.96	< 0.20	< 0.19
Hexachlorocyclopentadiene		NS	NS	NS	NS	NS	µg/l	< 48	< 10	< 9.6
Hexachloroethane		NS	NS	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
Indeno(1,2,3-cd)pyrene		NS	NS	NS	NS	NS	µg/l	< 0.96	0.23	0.75
Isophorone		100	1993/94 HRL	NS	NS	NS	µg/l	< 4.8	0.30 J	< 0.96
Naphthalene		70	2013 HRL	81	409	818	µg/l	3.8	16	1.3
Nitrobenzene		NS	NS	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
n-Nitrosodi-n-propylamine		NS	NS	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
N-nitrosodiphenylamine		70	1993/94 HRL	NS	NS	NS	µg/l	< 4.8	< 1.0	< 0.96
p-Chloroaniline		NS	NS	NS	NS	NS	µg/l	< 9.6	< 2.0	< 1.9
Pentachlorophenol		0.3	2013 HBV	NS	NS	NS	µg/l	< 24	< 5.1	< 4.8
Phenanthrene		NS	NS	3.6	32	64	µg/l	< 0.96	3.0	5.2
Phenol		4000	1993/94 HRL	123	2214	4428	µg/l	< 4.8	< 1.0	< 0.96
Pyrene		200	1993/94 HRL	NS	NS	NS	µg/l	< 0.96	0.87	3.6
Benzo(a)pyrene (BaP) Equivalents		0.06	2012 HBV[1]	NS	NS	NS	µg/l	ND	0.5115	1.901
Total Metals										
Aluminum		NS	NS	125	1072	2145	µg/l	NA	NA	NA
Antimony		6	1993/94 HRL	31	90	180	µg/l	NA	NA	NA
Arsenic		10	USEPA MCL	53	360	720	µg/l	NA	NA	NA
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA
Cadmium		0.5	2014 HBV	2	65	130	µg/l	NA	NA	NA
Calcium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA
Chromium		100	1993/94 HRL	11	16	32	µg/l	NA	NA	NA
Cobalt		30	1995 HBV	5	436	872	µg/l	NA	NA	NA

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Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
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St. Paul, Minnesota

Constituent	Location ID Sample ID Sample Date Screened Geology	MDH Derived Value	Basis	Class 2B Waters			Units	AMW-25 AMW-25 (20160608) 6/8/2016 Overburden (Area C)	AMW-26 AMW-26 (20160309) 3/9/2016 Overburden (Area C)	AMW-26 AMW-26 (20160610) 6/10/2016 Overburden (Area C)
				CS	MS	FAV				
Copper		1000	1995 HBV	14	31	62	µg/l	NA	NA	NA
Iron		NS	NS	NS	NS	NS	µg/l	NA	NA	NA
Lead		15	No Basis[2]	7	173	346	µg/l	NA	NA	NA
Magnesium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA
Manganese		100	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	NA	NA	NA
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	NA	NA	NA
Potassium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA
Selenium		30	1993/94 HRL	5	20	40	µg/l	NA	NA	NA
Silver		30	1993/94 HRL	1	6	11	µg/l	NA	NA	NA
Sodium		NS	NS	NS	NS	NS	µg/l	NA	NA	NA
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	NA	NA	NA
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	NA	NA	NA
Zinc		2000	1993/94 HRL	174	193	385	µg/l	NA	NA	NA
Dissolved Metals				.						
Aluminum		NS	NS	125	1072	2145	µg/l	< 200	< 200	< 200
Antimony		6	1993/94 HRL	31	90	180	µg/l	< 10	< 10	< 10
Arsenic		10	USEPA MCL	53	360	720	µg/l	8.2 J	11	12
Barium		2000	1993/94 HRL	NS	NS	NS	µg/l	200	210	200
Beryllium		0.08	1993/94 HRL	NS	NS	NS	µg/l	< 5.0	< 5.0	< 5.0
Cadmium		0.5	2014 HBV	2	65	130	µg/l	< 5.0	< 5.0	< 5.0
Calcium		NS	NS	NS	NS	NS	µg/l	220000	150000	150000
Chromium		100	NS	11	16	32	µg/l	1.6 J	1.2 J	1.6 J
Cobalt		30	NS	5	436	872	µg/l	0.95 J	1.3 J	1.1 J
Copper		1000	NS	14	31	62	µg/l	< 25	< 25	< 25
Iron		NS	NS	NS	NS	NS	µg/l	2600	4600	7600
Lead		15	No Basis[2]	7	173	346	µg/l	2.0 J	< 3.0	< 3.0
Magnesium		NS	NS	NS	NS	NS	µg/l	70000	43000	41000
Manganese		100	2012 RAA	NS	NS	NS	µg/l	1500	1700	2000
Mercury		NS	NS	0.0069	2.4	4.9	µg/l	< 0.20	< 0.20	< 0.20
Nickel		100	1993/94 HRL	259	2332	4664	µg/l	4.3 J	3.5 J	3.0 J
Potassium		NS	NS	NS	NS	NS	µg/l	4200 J	6800	5900
Selenium		30	1993/94 HRL	5	20	40	µg/l	< 15	< 5.0	< 15
Silver		30	1993/94 HRL	1	6	11	µg/l	< 10	< 10	< 10
Sodium		NS	NS	NS	NS	NS	µg/l	82000	57000	45000
Thallium		0.6	1993/94 HRL	0.56	64	128	µg/l	7.3 J	8.6 J	7.8 J
Vanadium		50	1993/94 HRL	NS	NS	NS	µg/l	4.4 J	< 7.0	< 10
Zinc		2000	1993/94 HRL	174	193	385	µg/l	< 50	< 50	< 50
PCBs										
Aroclor 1016		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA
Aroclor 1221		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA
Aroclor 1232		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA
Aroclor 1242		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA
Aroclor 1248		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA
Aroclor 1254		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA
Aroclor 1260		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA
Polychlorinated Biphenyls		0.04	1993/94 HRL	0.000029	1	2	µg/l	NA	NA	NA
TPH										
Diesel Range Organics		100	MPCA PBP				µg/l	11000	460	410
Gasoline Range Organics		100	MPCA PBP				µg/l	10000	NA	< 100
Other										
Cyanide, Free		100	1993/94 HRL	5.2	22	45	µg/l	< 10	NA	< 10

Notes and Abbreviations on Page 45.

Table 7
Summary of Groundwater Analytical Results
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

General Notes:
Results are reported in micrograms per liter (µg/l).
Results for St. Peter Sandstone and Area C overburden permanent wells are compared to MPCA Class 2B Surface Water criteria.
* = Criteria for Total Xylenes Used.
Footnotes:
1. See benzo(a)pyrene (BaP)-equivalents action levels.
2. Lead MDH health-based water guidance action level at tap.
Acronyms and Abbreviations:
Shade Value is above the MDH health-based water guidance or USEPA maximum contaminant level (MCL) (for arsenic)
Shade Value is above the MPCA Class 2B Surface Water criteria for St. Peter Sandstone and Area C overburden monitoring wells
< = not detected
AMW = Arcadis monitoring well
E = matrix interference
HBV = health-based value
HRL = health risk limit
J = estimated result
MDH = Minnesota Department of Health
MEK = methyl ethyl ketone
MPCA = Minnesota Pollution Control Agency
NA = not applicable/not analyzed
ND = not detected
NS = no standard
PCB = polychlorinated biphenyl
PBP = Petroleum Brownfields Program
R = rejected result
RAA = risk assessment advice
SVOC = semivolatile organic compound
TPH = total petroleum hydrocarbon
USEPA = United States Environmental Protection Agency
VOC = volatile compound

Table 8
Summary of Detected Constituents in Surface Water Samples
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID: / Sample ID: / Sample Date:	Unit	Class 2B Waters			Mississippi River R1 12/1/1982	Mississippi River R2 12/1/1982	Mississippi River R3 12/1/1982	Mississippi River Upstream 6/1/1989	Mississippi River Upstream 8/1/1989	Mississippi River Upstream 9/1/1989	Mississippi River Upstream 4/1/1990	Mississippi River Upstream 6/1/1990	Mississippi River Down Stream 6/1/1989	Mississippi River Down Stream 8/1/1989	Mississippi River Down Stream 9/1/1989
			CS	MS	FAV											
VOCs																
1,1-Dichloroethene		µg/L	NS	NS	NS	NR	NR	NR	1.3	ND	ND	ND	ND	ND	1.1 J	ND
2-Butanone (MEK)		µg/L	NS	NS	NS	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acetone		µg/L	NS	NS	NS	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloromethane		µg/L	NS	NS	NS	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride		µg/L	1940	13875	27749	NR	NR	NR	ND	ND	ND	1.3 J	1	1.3	ND	ND
Toluene		µg/L	253	1352	2703	3	<1	<1	NR	NR	NR	NR	NR	NR	NR	NR
Trichlorofluoromethane (CFC-11)		µg/L	NS	NS	NS	NR	NR	NR	ND	ND	ND	ND	ND	2.1 J	ND	ND
SVOCs																
bis(2-Ethylhexyl)phthalate		µg/L	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate		µg/L	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals																
Barium		µg/L	NS	NS	NS	NA	NA	NA	ND	ND	ND	ND	58	ND	ND	ND
Cadmium		µg/L	2*	65*	130*	<1	<1	NA	ND	0.5	ND	ND	ND	ND	0.8	ND
Chromium		µg/L	11*	16*	32*	<50	<50	<50	ND	ND	ND	ND	ND	ND	ND	ND
Copper		µg/L	14*	31*	62*	<5	<5	<5	ND	ND	ND	ND	ND	1	ND	ND
Lead		µg/L	7*	173*	346*	<2	<2	<2	ND	ND	1	ND	ND	ND	ND	1
Nickel		µg/L	259*	2332*	4664*	<20	<20	NA	ND	ND	ND	ND	ND	ND	ND	ND
Zinc		µg/L	174*	193*	385*	<50	<50	<51	ND	ND	ND	ND	9 U	ND	ND	ND
Other																
Diesel Range Organics		mg/L	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, as CaCO3		mg/L	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Acronyms and Abbreviations on page 3.

Table 8
Summary of Detected Constituents in Surface Water Samples
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Constituent	Location ID: / Sample ID: / Sample Date:	Unit	Class 2B Waters			Mississippi River Down Stream 4/1/1990	Mississippi River Down Stream 6/1/1990	OUTFALL-01 OUTFALL-01 (11/4/2010) 11/4/2010	SW-01 SW-01 (11/4/2010) 11/4/2010	SW-02 SW-02 (20101110) 11/10/2010	SW-03 SW-03 (20101110) 11/10/2010	SW-04 SW-04 (11/4/2010) 11/4/2010	Trip Blank TB-02 (20101104)TB 11/4/2010	Trip Blank TB-01 (20101110)TB 11/10/2010
			CS	MS	FAV									
VOCs														
1,1-Dichloroethene		µg/L	NS	NS	NS	ND	ND	NA	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)		µg/L	NS	NS	NS	NR	NR	<10	<10	<10	<10	<10	0.62 J	0.7 J
Acetone		µg/L	NS	NS	NS	NR	NR	<10	<10	<10	<10	<10	7.5 J	5 J
Chloromethane		µg/L	NS	NS	NS	NR	NR	<1	0.51J	0.32 J	0.37 J	0.31 J	<1	<1
Methylene chloride		µg/L	1940	13875	27749	ND	ND	NA	ND	ND	ND	ND	ND	ND
Toluene		µg/L	253	1352	2703	NR	NR	NA	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane (CFC-11)		µg/L	NS	NS	NS	ND	ND	NA	ND	ND	ND	ND	ND	ND
SVOCs														
bis(2-Ethylhexyl)phthalate		µg/L	NS	NS	NS	NA	NA	1.4 J	0.9 J	<10	<10	<11	NA	NA
Butyl benzyl phthalate		µg/L	NS	NS	NS	NA	NA	<10	<10	<10	<10	1 J	NA	NA
Metals														
Barium		µg/L	NS	NS	NS	ND	55	132 J	53.4 J	51.3 J	54 J	55 J	ND	ND
Cadmium		µg/L	2*	65*	130*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium		µg/L	11*	16*	32*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper		µg/L	14*	31*	62*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead		µg/L	7*	173*	346*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel		µg/L	259*	2332*	4664*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc		µg/L	174*	193*	385*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Other														
Diesel Range Organics		mg/L	NS	NS	NS	NA	NA	NA	<0.1	<0.1	<0.1	0.086 J	NA	NA
Hardness, as CaCO3		mg/L	NS	NS	NS	NA	NA	570	200	190	180	190	NA	NA

Acronyms and Abbreviations on page 3.

Table 8
Summary of Detected Constituents in Surface Water Samples
Ford Motor Company - Twin Cities Assembly Plant
966 South Mississippi River Boulevard
St. Paul, Minnesota

Acronyms and Abbreviations:

* = Standards vary with Total Hardness (TH). A hardness value of 180 mg/l was used to be conservative in calculating these values using MPCA published equations.

< + not detected

Shade Value is above the MPCA Class 2B Surface Water criteria

CS = chronic standard

Downstream = no map or description of location provided in historical reports

FAV = final acute value

J = estimated result

mg/L = milligrams per liter

MS = maximum standard

NR = not reported

NA= not analyzed

ND = not detected

NS = no standard

Outfall-01 = south of railroad access on south side of property, along the inside curve of Mississippi River Boulevard in Hidden Falls Park

R1 = Mississippi River upstream of Ford Power Plant

R2 = Mississippi River near southern property boundary

R3 = Mississippi River in park approximately 200 yds South of Ford property

SVOCs = semi-volatile organic compounds

SW-01 = upgradient of lock and dam approximately 270 feet

SW-02 = location shown on Figure 2

SW-03 = location shown on Figure 2

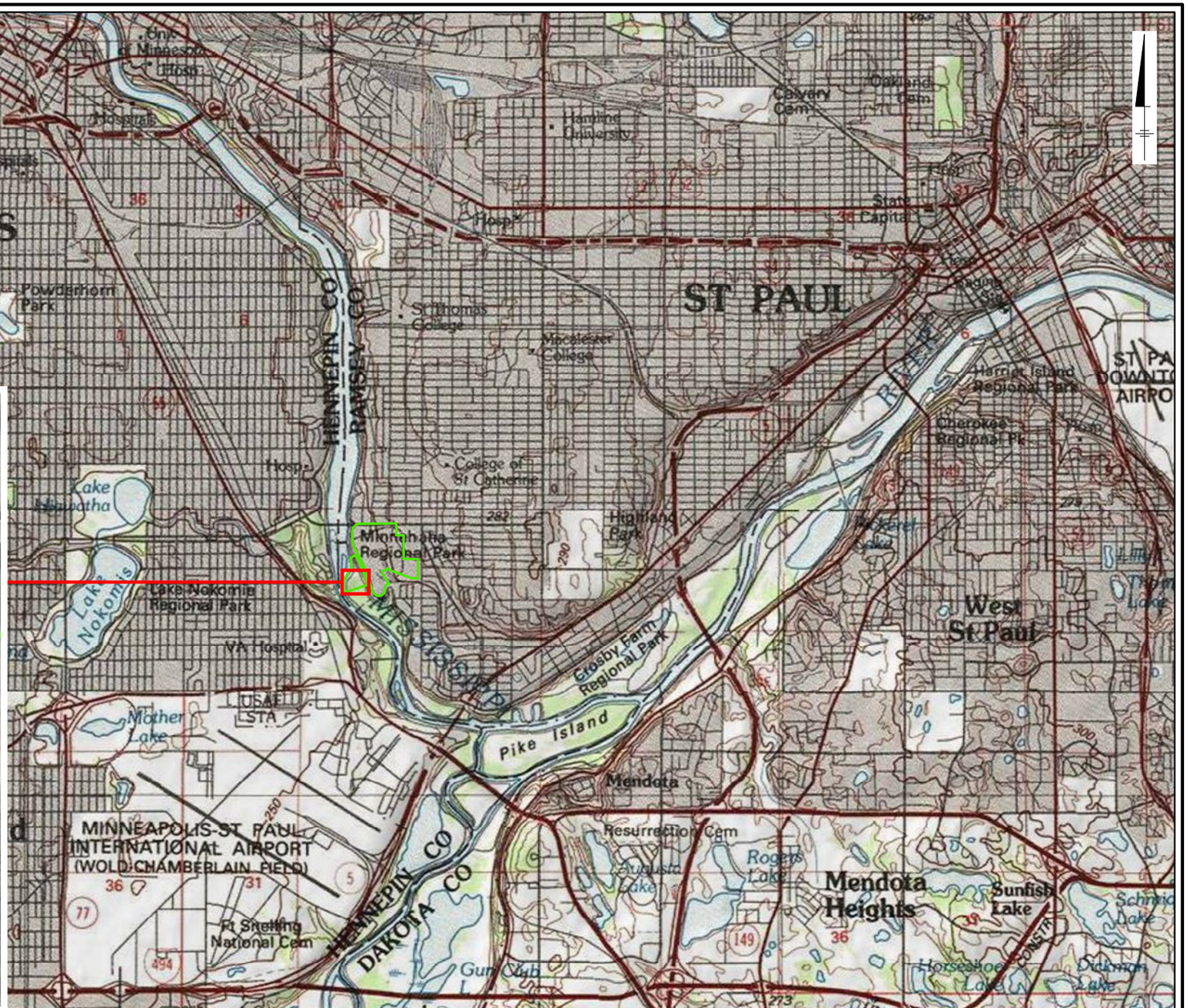
SW-04 = downgradient of southern boundary with Hidden Falls Park approximately 1600 feet

µg/L = micrograms per liter

Upstream = no map or description of location provided in historical reports

VOCs = volatile organic compounds

FIGURES



LEGEND:

Ford Property Boundary

NOTES:

Imagery Source: MnGeo WMS service, 2010 color 7-county
http://geoint.lmic.state.mn.us/cgi-bin/wms? Accessed 10/4/2016

Topographic Map Source:
© 2007 National Geographic Society

0 1 2
Miles

1 inch = 1 mile

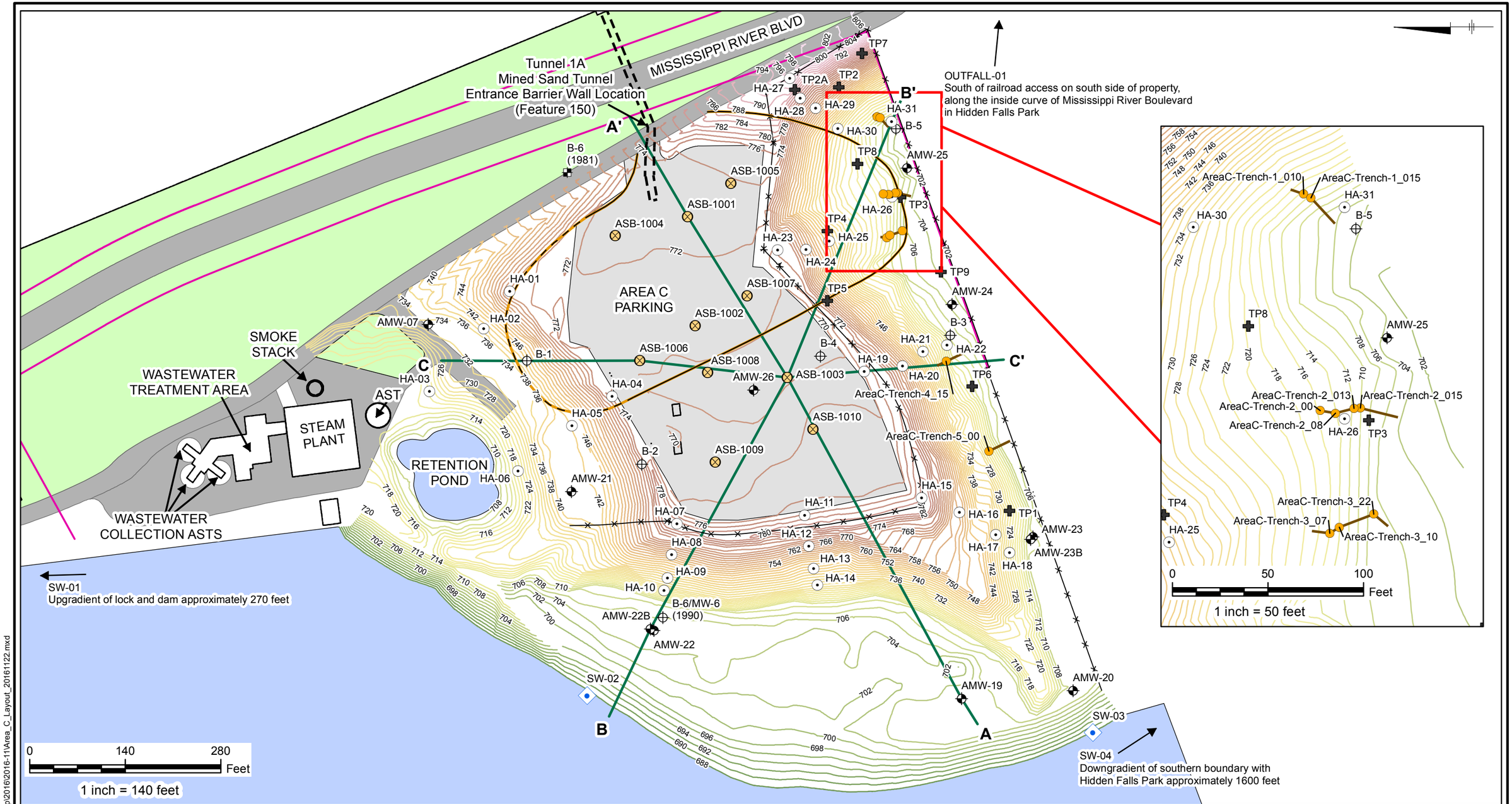
Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Site Location / Property Layout

ARCADIS

FIGURE
1

CITY: Minneapolis, MN DB: MGress PM: BZinda
Project MN000593
Document Path: Z:\GISPROJECTS_ENV\Ford Ranger\ArcMap\2016\2016-08\Fig1_Site_Location_Area_C_Topo_20160815.mxd



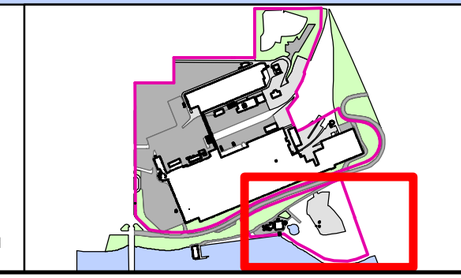
LEGEND:

- Trench Sample
- Existing Monitoring Well
- Soil Boring
- Surface Soil Sample
- Trench Location

Historic Locations

- Approximate Abandoned Monitoring Well
- Approximate Soil Boring
- Approximate Test Pit
- Mississippi River Sampling Location
- Elevation Contours (Feet Mean Sea Level)
- Cross Section Location
- Ford Property Boundary
- Fence
- Tunnel 1A
- Approximate Extent of Industrial Waste Fill (Dashed where Inferred)
- Buildings
- Asphalt
- Concrete
- Grass
- Mississippi River/Retention Pond

NOTES:
Topographic survey for Area C completed January 2012, Sunde Land Surveying



Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Site Layout Map

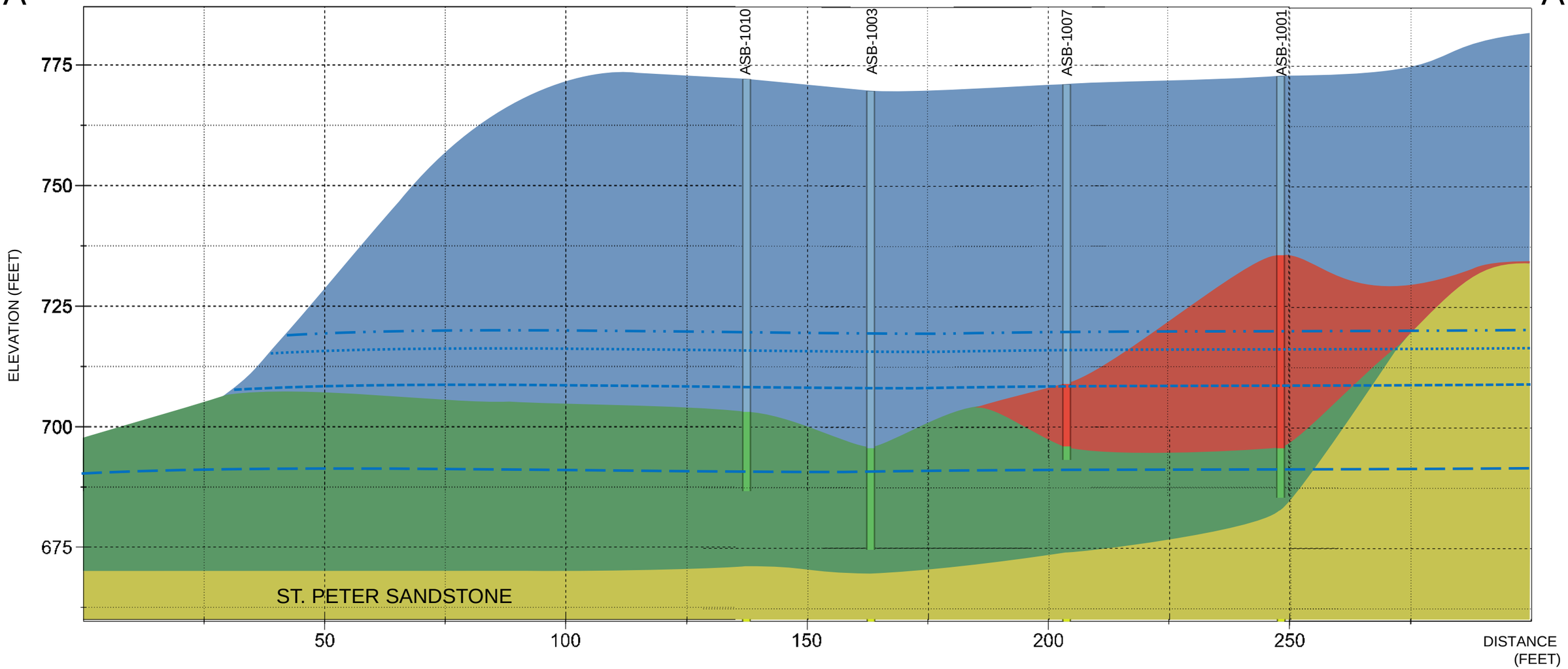
ARCADIS

FIGURE 2

CITY: MPLS, MN DB: MG LD: RO
FORD ST. PAUL
Path: Z:\GISProjects_ENV\Ford Ranger\ArcMap\2016\2016-11\Area_C_Layout_20161122.mxd

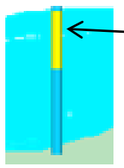
Southwest **Northeast**

A A’



GEOLOGY

- CONSTRUCTION DEBRIS FILL
- INDUSTRIAL WASTE FILL
- UNCONSOLIDATED/FLOODPLAIN
- SANDSTONE



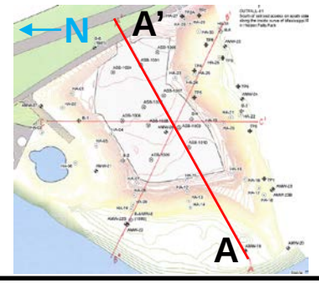
Borings shown are within 5 feet of transect line

Approximate Typical Mississippi River Elevation (689 feet amsl)

Approximate 10-Year Flood Elevation (707 feet amsl)

Approximate 50-Year Flood Elevation (714 feet amsl)

Approximate 100-Year Flood Elevation (717 feet amsl)



Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

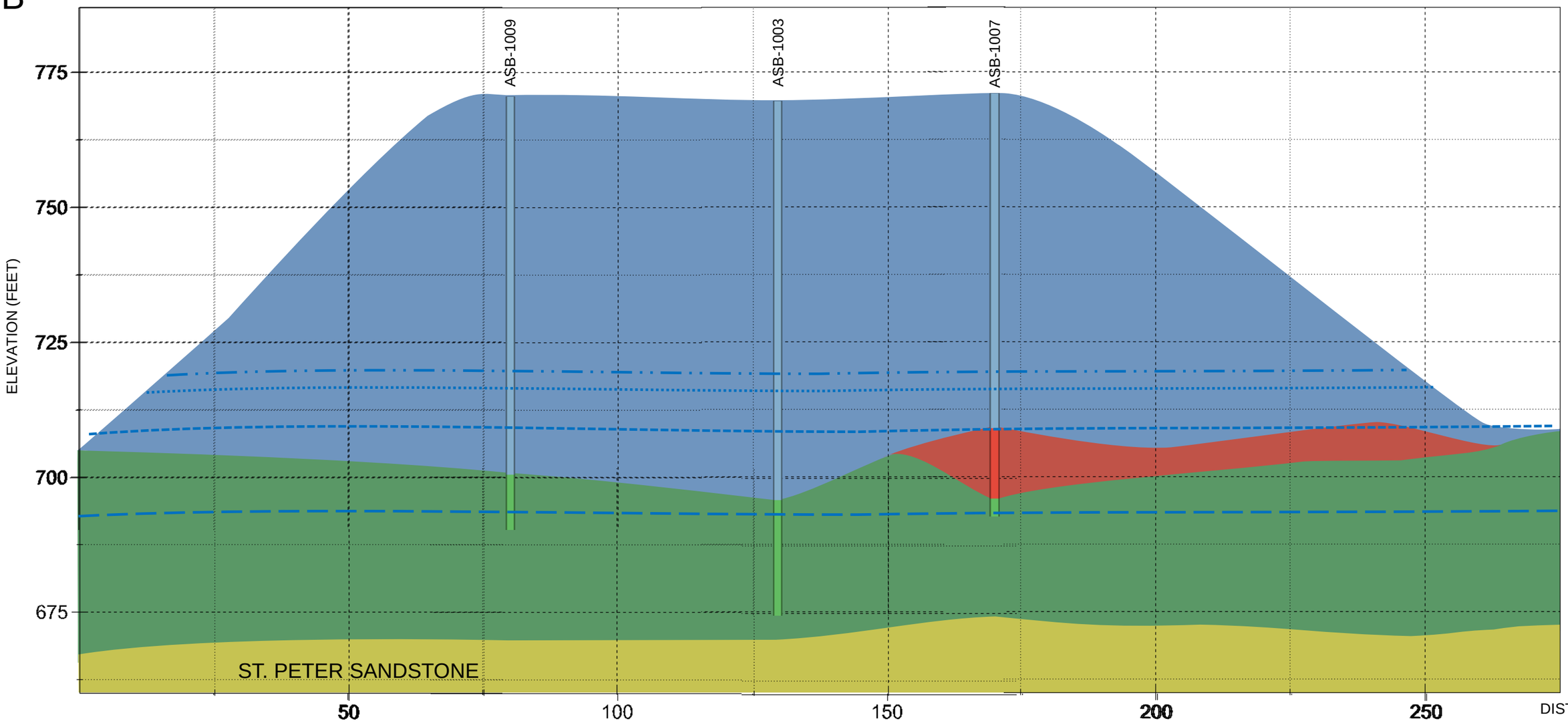
Cross Section A-A’
(Southwest – Northeast)

ARCADIS

FIGURE
3A

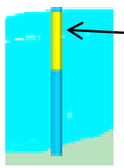
Northwest **Southeast**

B B’



GEOLOGY

- CONSTRUCTION DEBRIS FILL
- INDUSTRIAL WASTE FILL
- UNCONSOLIDATED/FLOODPLAIN
- SANDSTONE



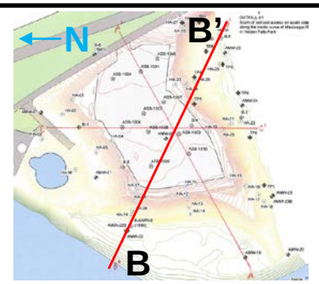
Borings shown are within 5 feet of transect line

Approximate Typical Mississippi River Elevation (689 feet amsl)

Approximate 10-Year Flood Elevation (707 feet amsl)

Approximate 50-Year Flood Elevation (714 feet amsl)

Approximate 100-Year Flood Elevation (717 feet amsl)



Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Cross Section B-B’
(Northwest – Southeast)

ARCADIS

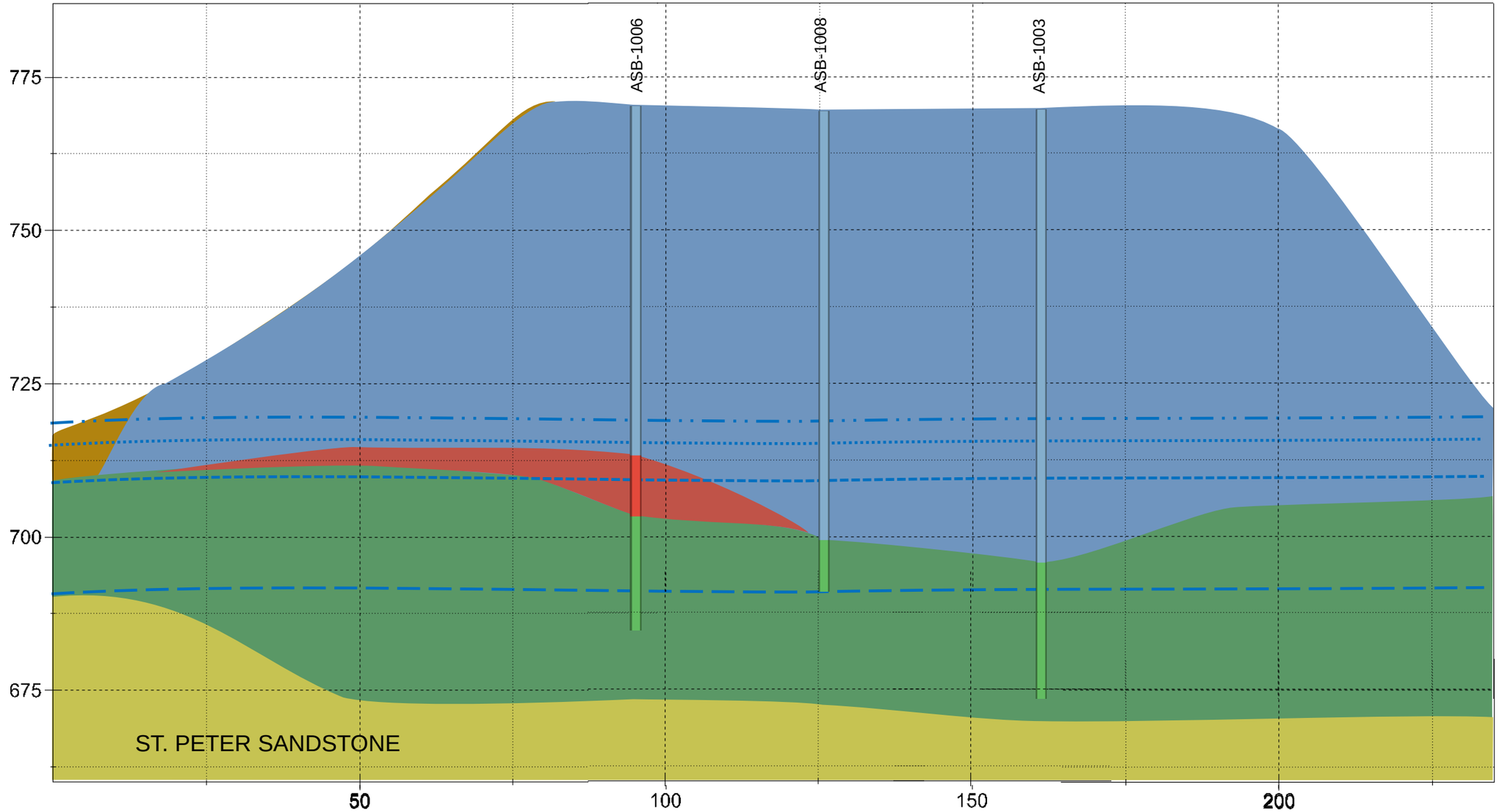
FIGURE 3B

North

South

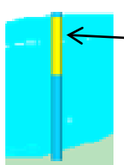
C

C’



GEOLOGY

- SAND & GRAVEL
- CONSTRUCTION DEBRIS FILL
- INDUSTRIAL WASTE FILL
- UNCONSOLIDATED/FLOODPLAIN
- SANDSTONE



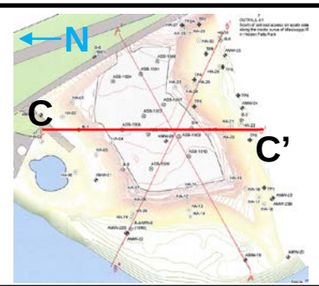
Borings shown are within 5 feet of transect line

Approximate Typical Mississippi River Elevation (689 feet amsl)

Approximate 10-Year Flood Elevation (707 feet amsl)

Approximate 50-Year Flood Elevation (714 feet amsl)

Approximate 100-Year Flood Elevation (717 feet amsl)



Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Cross Section C-C’ (North - South)

ARCADIS

FIGURE 3C

LEGEND:

Monitoring Wells

St. Peter Sandstone

Former Buildings

Ford Property Boundary

695 Groundwater Elevation

Groundwater Elevations (691.52)
(Feet above Mean Sea Level)

NOTES:

Groundwater elevations collected on May 31, 2016

*Mississippi River elevation from observed gage height detected at Mississippi River Gage at St. Paul [STPM 5])

Imagery Source: MnGeo WMS service, 2010 color 7-county http://geoint.lmic.state.mn.us/cgi-bin/wms?

0 400 800 Feet

1 inch = 400 feet

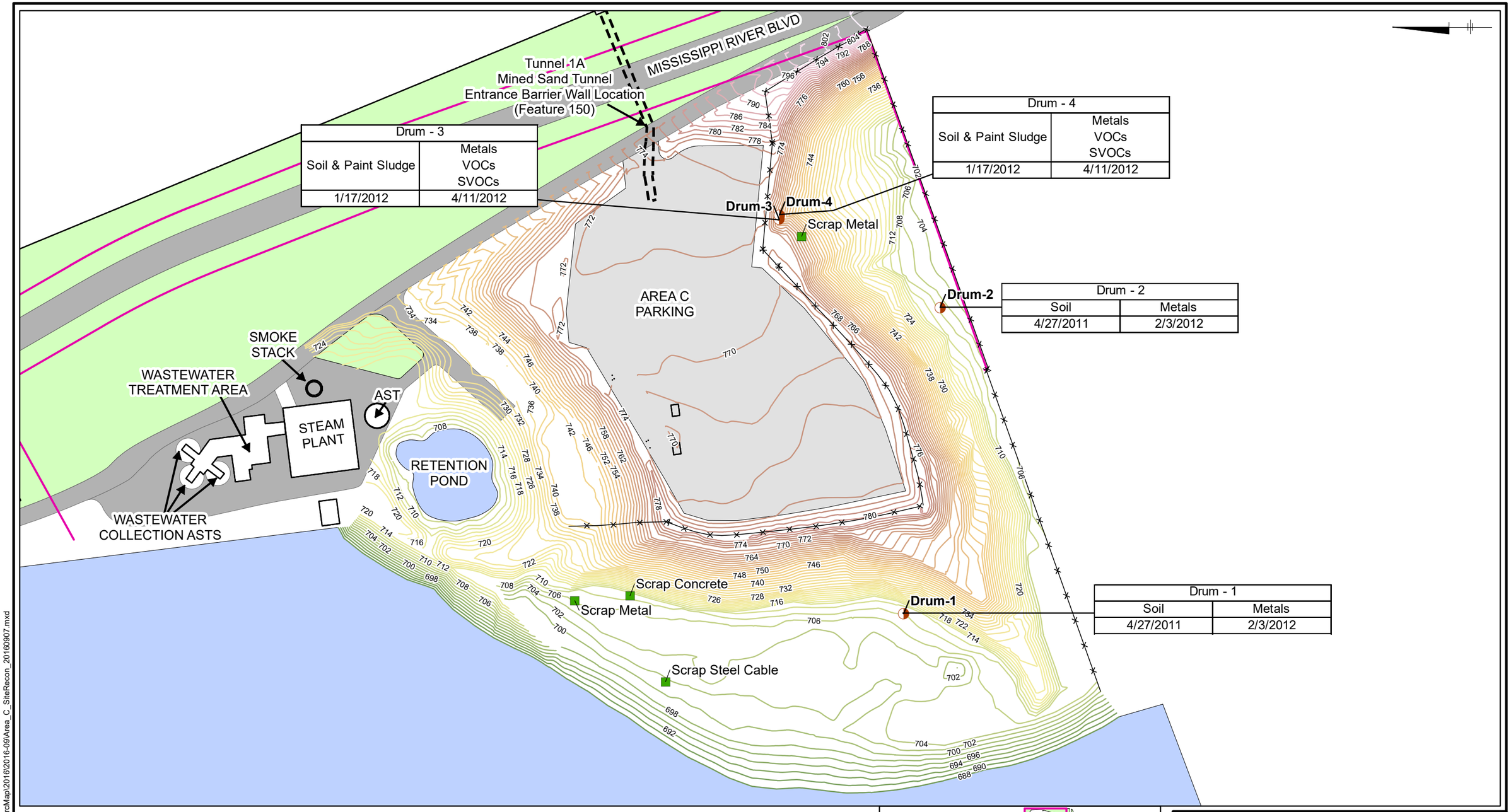
Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

St. Peter Sandstone Potentiometric Surface Map – June 2016

ARCADIS

FIGURE 4

CITY: Minneapolis, MN DB: MGress PM: Bryan Zinda
Project MN000593
Path: Z:\GISPROJECTS_ENV\Ford Ranger\ArcMap\2016\2016-09\StPeter_Sandstone_2016_Pot_Map_20160912.mxd



LEGEND:

- Former Drum Location
- Field Observation (2011-2012)
- Ford Property Boundary
- Fence
- Tunnel 1A
- Buildings
- Asphalt
- Concrete
- Grass
- Mississippi River/Retention Pond
- Elevation Contours (Feet Mean Sea Level)

Drum	
Content	Detected Constituents
Date Observed	Date Removed

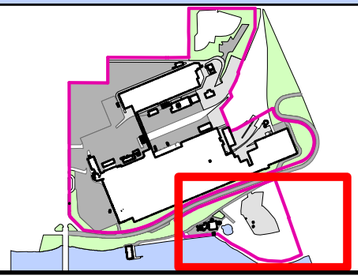
*All detected constituents were detected below Tier I Residential SRV standards.

0 140 280 Feet

1 inch = 140 feet

NOTES:

Topographic survey for Area C completed January 2012, Sunde Land Surveying



Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Site Reconnaissance (2011-2012)

ARCADIS

FIGURE 5

CITY: MPLS, MN DB: MG LD: RO
FORD ST. PAUL
Path: Z:\GISPROJECTS_ENV\Ford Ranger\ArcMap\2016\2016-09\Area_C_SiteRecon_20160907.mxd

	ASB-1004	ASB-1004	ASB-1004	ASB-1004	ASB-1004
	6/19/2015	6/19/2015	6/19/2015	6/19/2015	6/19/2015
	37-40	60-62	69-70	79-80	83-85
VOCs					
1,2,4-Trimethylbenzene	< 0.35	1600	140	0.02 J	0.11 J
1,3,5-Trimethylbenzene	< 0.35	480	1.9 J	< 0.28	0.029 J
cis-1,2-Dichloroethene	< 0.35	20 J	< 6.7	< 0.28	< 0.29
Ethylbenzene	< 0.35	640	7.7	< 0.28	< 0.29
Isopropylbenzene	< 0.35	39 J	8	< 0.28	< 0.29
Naphthalene	< 0.35	210	26	< 0.28	< 0.29
N-Butylbenzene	< 0.35	210	32	< 0.28	< 0.29
N-Propylbenzene	< 0.35	97 J	16	< 0.28	< 0.29
sec-Butylbenzene	< 0.35	26 J	7.6	< 0.28	< 0.29
Toluene	< 0.35	330	0.32 J	< 0.28	0.021 J
Trichloroethene	< 0.35	30 J	< 6.7	< 0.28	< 0.29
Total Xylenes*	ND	2480	8.34 J	0.029 J	0.119 J
SVOCs					
Naphthalene	0.0044 J	32	6.1 J	< 0.38	2.6
Metals					
Antimony	< 1.1	110	4.6	< 0.81	1.2
Arsenic	4.3	26	1.4	1.2	1.8
Barium	21 J	4000	820	18	490
Lead	2.6	6000	230	2.4	81
TPH					
Diesel Range Organics	4.1 J	33000	3700	5.2 J	18
Gasoline Range Organics	< 13	8700	9400	< 120	430

	ASB-1001	ASB-1001	ASB-1001	ASB-1001	ASB-1001
	6/15/2015	6/15/2015	6/15/2015	6/15/2015	6/15/2015
	39-42	50-54	65-70	72-74	80-82
VOCs					
1,2,4-Trimethylbenzene	0.31	22	370	590	3.7
1,3,5-Trimethylbenzene	0.084 J	5.2	79	170	1
Benzene	0.072 J	< 1 U	3.4 J	10 J	0.042 J
cis-1,2-Dichloroethene	0.053 J	< 1 U	5.7 J	32	0.099 J
Ethylbenzene	0.21 J	8.3	130	320	1.4
Naphthalene	0.26 J	14	260	490	3
N-Butylbenzene	0.17 J	6	61	90	0.75
N-Propylbenzene	< 0.29 U	1.2	32	44	0.28 J
Toluene	0.11 J	0.11 J	32	160	0.6
Total Xylenes*	0.77 J	29.4	500	1420	6.3
SVOCs					
2-Methylnaphthalene	0.078 J	0.7 J	52 J	390 J	1.2
bis(2-Ethylhexyl)phthalate	0.12 J	0.25 J	43 J	580	1.8
Naphthalene	0.27 J	2.6	220	1200	3.2
Benzo(a)pyrene (BaP) Equivalents	0.878	0.563	6.3	84.2	0.229
Metals					
Antimony	370	130	130	140	1.3
Arsenic	27	17	11	60	2.5
Barium	2300	2100	1200	4300	72
Cadmium	11	11	3.1 J	120	0.57
Chromium VI	220	160	1.5 J	< 5.0 U	0.38 J
Iron	38000	27000	25000	18000	11000
Lead	13000	9100	200	2900	14
Mercury	0.24	0.15	0.16	4.2	0.044 J
TPH					
Diesel Range Organics	950	770	7400	17000	51
Gasoline Range Organics	140	850	4500	10000	130

	ASB-1007	ASB-1007	ASB-1007	ASB-1007
	6/23/2015	6/23/2015	6/23/2015	6/23/2015
	22-25	62-65	67-70	75-77
VOCs				
1,2,4-Trimethylbenzene	0.78 J	0.068 J	1200	< 0.31
1,3,5-Trimethylbenzene	< 9.6	0.024 J	320	< 0.31
Benzene	< 9.6	< 0.38	14 J	< 0.31
cis-1,2-Dichloroethene	< 9.6	< 0.38	23 J	< 0.31
Ethylbenzene	< 9.6	0.089 J	370	< 0.31
Isopropylbenzene	< 9.6	< 0.38	68	< 0.31
Naphthalene	180	1.5	520	0.035 J
N-Butylbenzene	< 9.6	< 0.38	190	< 0.31
N-Propylbenzene	< 9.6	< 0.38	73	< 0.31
Toluene	< 9.6	0.015 J	230	< 0.31
Total Xylenes*	ND	0.48 J	1900	ND
SVOCs				
2-Methylnaphthalene	49 J	0.29 J	190 J	< 0.37
Naphthalene	150	0.61 J	830	0.0049 J
Benzo(a)pyrene (BaP) Equivalents	198.6	1.35	10.4	0.0128
Metals				
Antimony	< 0.95	< 0.81	510	< 0.89
Arsenic	2.2	5.2	18	1.0
Barium	43	45	6900	14 J
Cadmium	0.15 J	0.12 J	150	< 0.18
Copper	9.0	14	230	1.8 J
Lead	33	14	6500	1.5
TPH				
Diesel Range Organics	4200	39	37000	4100
Gasoline Range Organics	44 J	1.3 J	8200	2.8 J

	ASB-1002	ASB-1002	ASB-1002	ASB-1002	ASB-1002
	6/16/2015	6/16/2015	6/16/2015	6/16/2015	6/16/2015
	55-60	60-64	75-77	80-84	92-95
VOCs					
1,2,4-Trimethylbenzene	140	690	530	68	0.082 J
1,3,5-Trimethylbenzene	39	190	140	20	0.021 J
Benzene	0.48 J	5 J	7.8 J	0.57 J	< 0.12
Isopropylbenzene	5.6 J	31	27 J	3.7	< 0.12
Naphthalene	31	170	280	26	0.13
N-Butylbenzene	22	98	110	12	0.02 J
N-Propylbenzene	6.3	39	38	4.8	< 0.12
Total Xylenes*	126	790	850	90	0.085 J
SVOCs					
Naphthalene	41	71	220	78	0.011 J
Benzo(a)pyrene (BaP) Equivalents	6.439	0.868	1.169	0.146	ND
PCBs					
Aroclor 1260	NA	NA	2.9	NA	NA
Metals					
Antimony	< 1.1 U	28	240	4.0	< 0.94
Arsenic	4.4	5.2	21	2.5	4.0
Barium	120	3700	5700	160	54
Cadmium	0.48	16	120	1.2	0.083 J
Copper	11	63	180	8.1	6.4
Lead	40	2000	8400	47	2.2
TPH					
Diesel Range Organics	7900	26000	24000	2100	6.3 J
Gasoline Range Organics	1000	11000	21000	3000	770 J

	ASB-1003	ASB-1003
	6/17/2015	6/17/2015
	60-64	70-74
SVOCs		
Benzo(a)pyrene (BaP) Equivalents	0.043	3.042
TPH		
Diesel Range Organics	270	380

	ASB-1010	ASB-1010	ASB-1010
	6/25/2015	6/25/2015	6/25/2015
	38-40	55-57	70-73
SVOCs			
Benzo(a)pyrene (BaP) Equivalents	0.113	0.033	3.01
TPH			
Diesel Range Organics	150 J	25 J	44 J

	ASB-1006	ASB-1006	ASB-1006	ASB-1006	ASB-1006
	6/22/2015	6/22/2015	6/22/2015	6/22/2015	6/22/2015
	39-42	52-54	57-60	65-67	78-80
SVOCs					
Naphthalene	0.0056 J	0.0071 J	25	0.56 J	0.0075 J
Benzo(a)pyrene (BaP) Equivalents	0.022	ND	7.6	2.3	0.075
TPH					
Diesel Range Organics	9.4 J	< 20	660	190	16

	ASB-1008	ASB-1008	ASB-1008
	6/24/2015	6/24/2015	6/24/2015
	30-33	52-54	70-72
VOCs			
Naphthalene	390	0.23 J	< 0.37
SVOCs			
Dibenzofuran	130 J	0.5 J	< 0.39
Naphthalene	270 J	0.5 J	0.0066 J
Benzo(a)pyrene (BaP) Equivalents	290.4	1.542	0.019
TPH			
Diesel Range Organics	13000	7.5 J	3.9 J
Gasoline Range Organics	200 J	< 12	2.6 J

	ASB-1009	ASB-1009	ASB-1009	ASB-1009
	6/24/2015	6/24/2015	6/24/2015	6/25/2015
	42-44	55-57	62-65	70-72
SVOCs				
Benzo(a)pyrene (BaP) Equivalents	3.788	0.513	0.047	0.134

Constituent	Units	Tier I Residential SRVs	Tier II Industrial SRVs
VOCs			
1,2,4-Trimethylbenzene	mg/kg	8	25
1,3,5-Trimethylbenzene	mg/kg	3	10
Benzene	mg/kg	6	10
cis-1,2-Dichloroethene	mg/kg	8	22
Ethylbenzene	mg/kg	200	200
Isopropylbenzene	mg/kg	30	87
Naphthalene	mg/kg	10	28
N-Butylbenzene	mg/kg	30	92
N-Propylbenzene	mg/kg	30	93
sec-Butylbenzene	mg/kg	25	70
Toluene	mg/kg	107	305
Trichloroethene	mg/kg	29	46
Total Xylenes*	mg/kg	45	130
SVOCs			
2-Methylnaphthalene	mg/kg	100	369
bis(2-Ethylhexyl)phthalate	mg/kg	570	2100
Dibenzofuran	mg/kg	104	810
Naphthalene	mg/kg	10	28
Benzo(a)pyrene (BaP) Equivalents	mg/kg	2	3
PCBs			
Aroclor 1260	mg/kg	1.2	8
Metals			
Antimony	mg/kg	12	100
Arsenic	mg/kg	9	20
Barium	mg/kg	1100	18000
Cadmium	mg/kg	25	200
Chromium VI	mg/kg	87	650
Copper	mg/kg	100	9000
Iron	mg/kg	30000	100000
Lead	mg/kg	300	700
Mercury	mg/kg	0.5	1.5
TPH			
Diesel Range Organics**	mg/kg	100	100
Gasoline Range Organics**	mg/kg	100	100
TCLP Metals			
Lead	mg/l	NA	NA

* criteria for total xylenes used, reported data is for the sum of the "m- and p-xylenes" and o-xylenes data results

** values for gasoline- and diesel-range organics are guidance values provided by the Petroleum Brownfields Program

Shade result value is above the MPCA Tier I Residential SRV

Shade result value is above the MPCA Tier II Industrial SRV

0 200 400

SCALE IN FEET

LEGEND:

- Existing Monitoring Well
- Soil Boring
- Surface Soil Sample
- Mississippi River Sampling Location

Historic Locations

- Approximate Abandoned Monitoring Well
- Approximate Soil Boring
- Approximate Former Test Pit Location (1988)
- Approximate Extent of Industrial Waste Fill (Dashed where Inferred)
- Tunnel 1A
- Fence
- Ford Property Boundary
- Buildings
- Asphalt
- Concrete
- Grass
- Mississippi River/Retention Pond
- Elevation Contours (Feet Mean Sea Level)

Location ID (Boring)	
Sample Date	
Boring Depth Interval (ft bgs)	
Constituent	Result

NOTES:

1) mg/kg = milligrams per kilogram
2) mg/l = milligrams per liter
3) ft bgs = feet below ground surface
4) ASB = Arcadis soil boring
5) < = not detected above reporting detection limit
6) J = estimated result
7) ND = not detected
8) NA = not applicable
9) PCB = polychlorinated biphenyl
10) SRV = soil reference value
11) SVOC = semivolatile organic compound
12) TCLP = toxicity characteristic leaching procedure
13) TPH = total petroleum hydrocarbons
14) USEPA = United States Environmental Protection Agency
15) VOC = volatile organic compound
16) Sample intervals that are underlined and italicized indicate collected within the industrial waste fill
17) Topographic survey for Area C completed January 2012, Sunde Land Surveying

Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Soil Boring Analytical Results

ARCADIS

FIGURE 6

CITY: MPLS, MN DB: MG LD: RO
FORD ST. PAUL PATH: Z:\GIS\Projects_ENV\Ford Ranger\ArcMap\2017\2017-03\Area C Boring Samples D 20170316.mxd

HA-27
6/25/2015
0-1
SVOCs
Benzo(a)pyrene (BaP) Equivalents: 4.367
TPH
Diesel Range Organics: 160

HA-29
6/25/2015
0-1
TPH
Diesel Range Organics: 350

HA-30
6/25/2015
0-1
TPH
Diesel Range Organics: 160

HA-28
6/25/2015
0-1
TPH
Diesel Range Organics: 340

HA-31
6/25/2015
0-1
SVOCs
Benzo(a)pyrene (BaP) Equivalents: 3.708
TPH
Diesel Range Organics: 140

HA-19
6/25/2015
0-0.5
TPH
Diesel Range Organics: 120

HA-16
6/25/2015
0-0.5
SVOCs
Benzo(a)pyrene (BaP) Equivalents: 15.623
TPH
Diesel Range Organics: 2300 J

HA-06
6/24/2015
0-1
TPH
Diesel Range Organics: 220

MISSISSIPPI RIVER BLVD

WASTEWATER TREATMENT AREA

SMOKE STACK

AST

STEAM PLANT

RETENTION POND

WASTEWATER COLLECTION ASTS

AREA C PARKING

B-6 (1981)

B-6/MW-6 (1990)

HA-01, HA-02, HA-03, HA-04, HA-05, HA-06, HA-07, HA-08, HA-09, HA-10, HA-11, HA-12, HA-13, HA-14, HA-15, HA-16, HA-17, HA-18, HA-19, HA-20, HA-21, HA-22, HA-23, HA-24, HA-25, HA-26, HA-27, HA-28, HA-29, HA-30, HA-31

TP1, TP2, TP2A, TP3, TP4, TP5, TP6, TP7, TP8, TP9

B-1, B-2, B-3, B-4, B-5

ASB-1001, ASB-1002, ASB-1003, ASB-1004, ASB-1005, ASB-1006, ASB-1007, ASB-1008, ASB-1009, ASB-1010

AMW-07, AMW-19, AMW-20, AMW-21, AMW-22, AMW-22B, AMW-23, AMW-23B, AMW-24, AMW-25, AMW-26

SW-02, SW-03

0 200 400

SCALE IN FEET

Constituent	Units	Tier I Residential SRVs	Tier II Industrial SRVs
SVOCs			
Benzo(a)pyrene (BaP) Equivalents	mg/kg	2	3
TPH			
Diesel Range Organics	mg/kg	100	100
Shade	result value is above the MPCA Tier I Residential SRV		
Shade	result value is above the MPCA Tier II Industrial SRV		

LEGEND:

- Existing Monitoring Well
- Soil Boring
- Surface Soil Sample
- Mississippi River Sampling Location

Historic Locations

- Approximate Abandoned Monitoring Well
- Approximate Soil Boring
- Approximate Former Test Pit Location (1988)
- Approximate Extent of Industrial Waste Fill (Dashed where Inferred)
- Tunnel 1A
- Fence
- Ford Property Boundary
- Buildings
- Asphalt
- Concrete
- Grass
- Mississippi River/Retention Pond
- Elevation Contours (Feet Mean Sea Level)

Location ID (Boring)	
Sample Date	
Boring Depth Interval (ft bgs)	
Constituent	Result

NOTES:

1) mg/kg = milligrams per kilogram
2) ft bgs = feet below ground surface
3) HA = hand auger
4) J = Estimated result
5) SRV = Soil reference value
6) SVOC = Semi-volatile compound
7) TPH = Total petroleum hydrocarbon
8) Topographic survey for Area C completed January 2012, Sunde Land Surveying

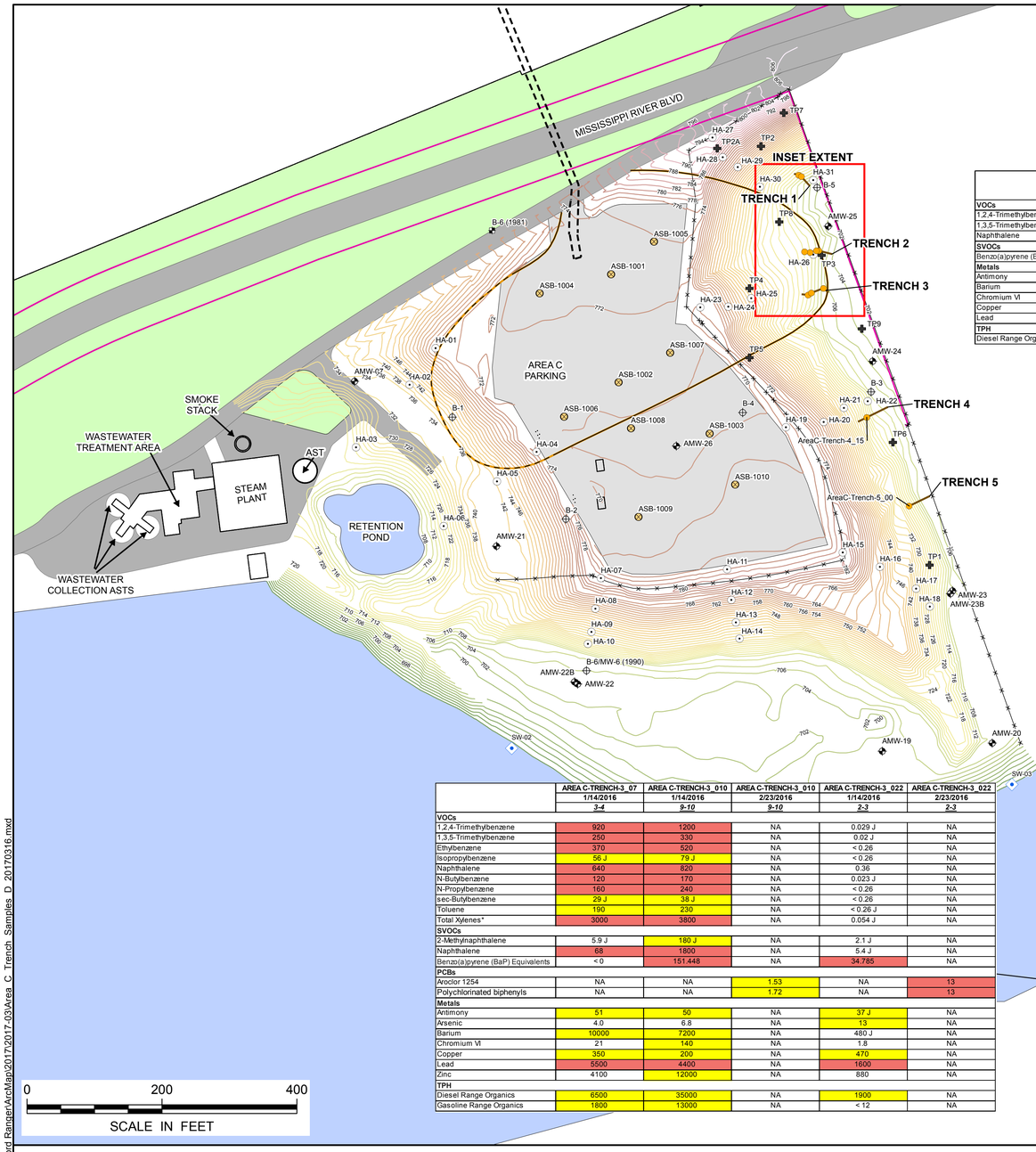
Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Surficial Sample Analytical Results

ARCADIS

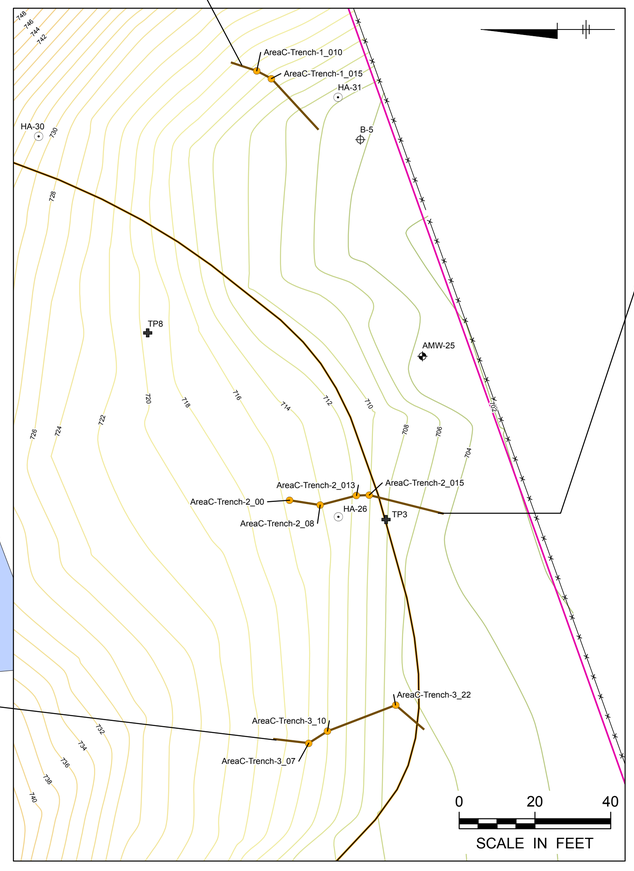
FIGURE 7

CITY: MPLS, MN DB: MG LD: RO
FORD ST. PAUL PATH: Z:\GIS\Projects_ENV\Ford Ranger\ArcMap\2017\2017-03\Area_C_Surficial_Samples_D_20170316.mxd



	AREA-C-TRENCH-1_010	AREA-C-TRENCH-1_010	AREA-C-TRENCH-1_015
	12/15/2015	12/15/2015	12/15/2015
	4-5	5-6	5-6
VOCs			
1,2,4-Trimethylbenzene	14	< 0.31	< 0.31
1,3,5-Trimethylbenzene	7.5	< 0.31	< 0.31
Naphthalene	14	< 0.31	0.032 J
SVOCs			
Benzo(a)pyrene (BaP) Equivalents	ND	0.4734	5.7283
Metals			
Antimony	43	0.98 J	0.77 J
Barium	1400	180	150
Chromium VI	130	< 4.9	< 0.97
Copper	150	14	13
Lead	9500	20	73
TPH			
Diesel Range Organics	6000	71	53 J

	AREA C-TRENCH-2_00	AREA C-TRENCH-2_00	AREA C-TRENCH-2_08	AREA C-TRENCH-2_013	AREA C-TRENCH-2_015
	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016
	9-10	*12-13*	*4-5*	*6-7*	*6-7*
VOCs					
1,2,4-Trimethylbenzene	3.9	13	570	1700	320
1,3,5-Trimethylbenzene	0.079 J	3.1	140	460	90 J
Ethylbenzene	0.34	5.3	170	1200	1400
Isopropylbenzene	0.24 J	0.39 J	16 J	100 J	46 J
Naphthalene	1.2	8.8	310	800	260
N-Butylbenzene	0.28	3.7	170	320	150 J
N-Propylbenzene	0.6	1.2	52	290 J	63 J
sec-Butylbenzene	0.07 J	0.36 J	17 J	42 J	10 J
Toluene	0.043 J	2.2	60	960	1500
Total Xylenes*	9.62 J	34.4	1270	7500	7200
SVOCs					
2-Methylnaphthalene	0.79 J	1.9 J	260 J	190 J	19 J
Naphthalene	1.7 J	6.7 J	2200	1400	100
Benzo(a)pyrene (BaP) Equivalents	13.27	47.229	< 0	9.24	0.775
Metals					
Antimony	8.0	54	170	1100	22 J
Arsenic	14	17	33	120	12
Barium	210	370	15000	19000	1600
Copper	24	30	300	240	29
Lead	210	2500	12000	28000	2300
Zinc	170	270	6900	9400	870
TPH					
Diesel Range Organics	2300	1700	42000	38000	25000
Gasoline Range Organics	45	550	2900	19000	16000



	AREA C-TRENCH-3_07	AREA C-TRENCH-3_010	AREA C-TRENCH-3_010	AREA C-TRENCH-3_022	AREA C-TRENCH-3_022
	1/14/2016	1/14/2016	2/23/2016	1/14/2016	2/23/2016
	3-4	*9-10*	*9-10*	*2-3*	*2-3*
VOCs					
1,2,4-Trimethylbenzene	920	1200	NA	0.029 J	NA
1,3,5-Trimethylbenzene	250	330	NA	0.02 J	NA
Ethylbenzene	370	520	NA	< 0.26	NA
Isopropylbenzene	56 J	79 J	NA	< 0.26	NA
Naphthalene	640	820	NA	0.36	NA
N-Butylbenzene	120	170	NA	0.023 J	NA
N-Propylbenzene	160	240	NA	< 0.26	NA
sec-Butylbenzene	29 J	38 J	NA	< 0.26	NA
Toluene	190	230	NA	< 0.26 J	NA
Total Xylenes*	3000	3800	NA	0.054 J	NA
SVOCs					
2-Methylnaphthalene	5.9 J	180 J	NA	2.1 J	NA
Naphthalene	68	1800	NA	5.4 J	NA
Benzo(a)pyrene (BaP) Equivalents	< 0	151.448	NA	34.785	NA
PCBs					
Aroclor 1254	NA	NA	1.53	NA	13
Polychlorinated biphenyls	NA	NA	1.72	NA	13
Metals					
Antimony	51	50	NA	37 J	NA
Arsenic	4.0	6.8	NA	13	NA
Barium	10000	7200	NA	480 J	NA
Chromium VI	21	140	NA	1.8	NA
Copper	350	200	NA	470	NA
Lead	5500	4400	NA	1600	NA
Zinc	4100	12000	NA	880	NA
TPH					
Diesel Range Organics	6500	35000	NA	1900	NA
Gasoline Range Organics	1800	13000	NA	< 12	NA

Constituent	Units	Tier I Residential SRVs	Tier II Industrial SRVs
VOCs			
1,2,4-Trimethylbenzene	mg/kg	8	25
1,3,5-Trimethylbenzene	mg/kg	3	10
Ethylbenzene	mg/kg	200	200
Isopropylbenzene	mg/kg	30	87
Naphthalene	mg/kg	10	28
N-Butylbenzene	mg/kg	30	92
N-Propylbenzene	mg/kg	30	93
sec-Butylbenzene	mg/kg	25	70
Toluene	mg/kg	107	305
Total Xylenes*	mg/kg	45	130
SVOCs			
2-Methylnaphthalene	mg/kg	100	369
Naphthalene	mg/kg	10	28
Benzo(a)pyrene (BaP) Equivalents	mg/kg	2	3
PCBs			
Aroclor 1254	mg/kg	1.2	8
Polychlorinated biphenyls	mg/kg	1.2	8
Metals			
Antimony	mg/kg	12	100
Arsenic	mg/kg	9	20
Barium	mg/kg	1100	18000
Chromium VI	mg/kg	87	650
Copper	mg/kg	100	9000
Lead	mg/kg	300	700
Zinc	mg/kg	8700	75000
TPH			
Diesel Range Organics**	mg/kg	100	100
Gasoline Range Organics**	mg/kg	100	100

* criteria for total xylenes used, reported data is for the sum of the "m- and p-xylenes" and o-xylenes data results

** values for gasoline- and diesel-range organics are guidance values Petroleum Brownfields Program

Shade result value is above the MPCA Tier I Residential SRV

Shade result value is above the MPCA Tier II Industrial SRV

LEGEND:

- Trench Sample
- Existing Monitoring Well
- Soil Boring
- Surface Soil Sample
- Trench Location
- Mississippi River Sampling Location

Historic Locations

- Approximate Abandoned Monitoring Well
- Approximate Soil Boring
- Approximate Former Test Pit Location (1988)
- Approximate Extent of Industrial Waste Fill (Dashed where Inferred)
- Tunnel 1A
- Fence
- Ford Property Boundary
- Buildings
- Asphalt
- Concrete
- Grass
- Mississippi River/Retention Pond
- Elevation Contours (Feet Mean Sea Level)

Location ID (Boring)	
Sample Date	
Boring Depth Interval (ft bgs)	
Constituent	Result

NOTES:
1) mg/kg = milligrams per kilogram
2) mg/l = milligrams per liter
3) ft bgs = feet below ground surface
4) < = not detected above reporting detection limit
5) J = estimated result
6) NA = not applicable/not analyzed
7) ND = not detected
8) NS = no standard
9) PCB = polychlorinated biphenyl
10) SRV = soil reference value
11) SVOC = semivolatile organic compound
12) TCLP = toxicity characteristic leaching procedure
13) TPH = total petroleum hydrocarbons
14) USEPA = United States Environmental Protection Agency
15) VOC = volatile organic compound
16) Sample intervals that are underlined and italicized indicate collected within the industrial waste fill
17) Topographic survey for Area C completed January 2012, Sunde Land Surveying

Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Trench Analytical Results

ARCADIS

FIGURE 8

CITY: MPLS, MN DB: MG LD: RO
FORD ST. PAUL PATH: Z:\GIS\Projects_ENV\Ford Ranger\ArcMap\2017\2017-03\Area_C_Trench_Samples_D_20170316.mxd

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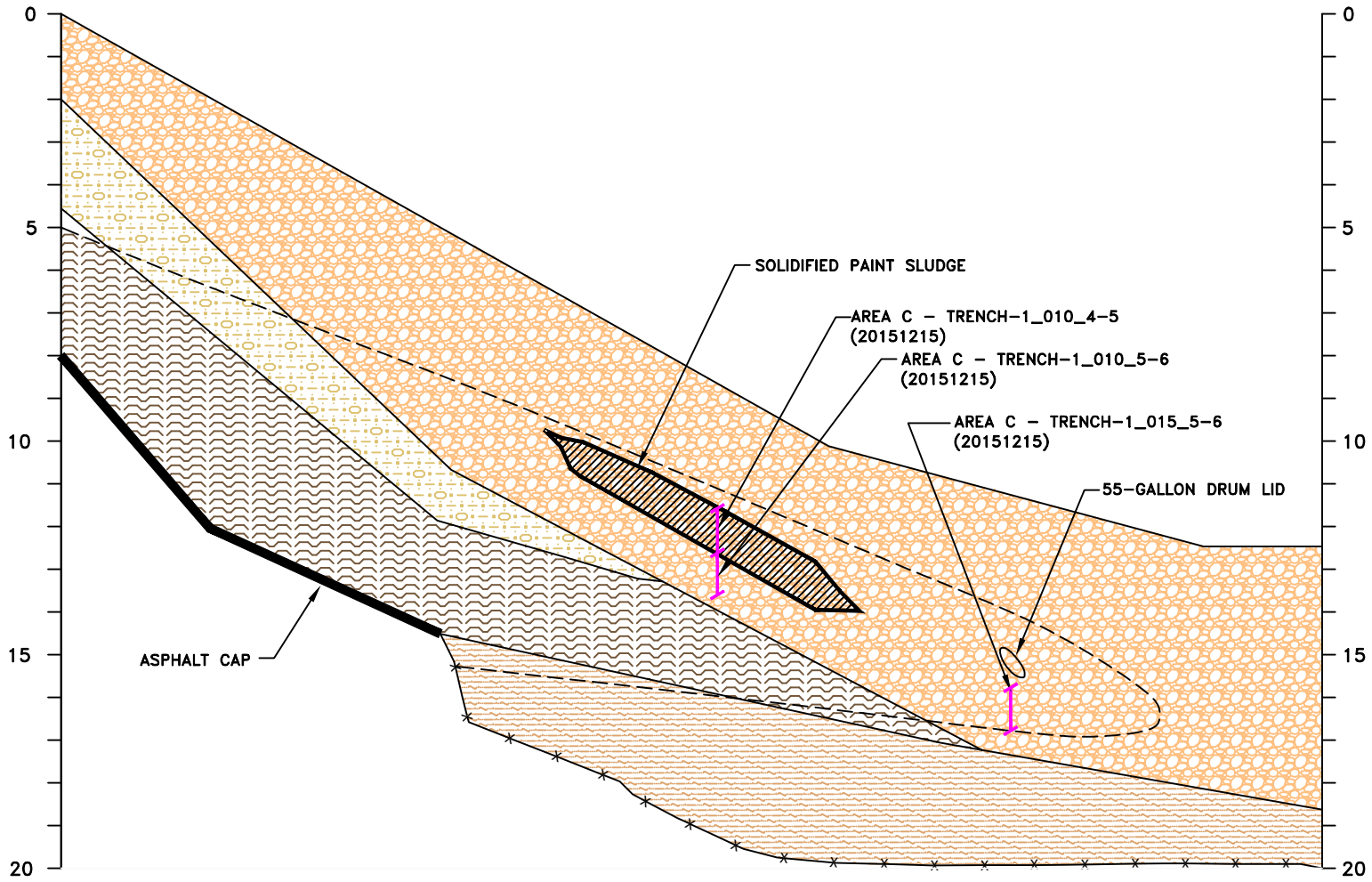

LEGEND

- SOLIDIFIED PAINT SLUDGE
- FILL, SANDY SILT WITH GRAVEL
- FILL, SILT WITH GRAVEL/SAND
- FILL, SILT WITH CLAY
- FILL, SILTY SAND
- DEBRIS BOUNDARY
- EXTENT OF EXCAVATOR (BOTTOM OF TRENCH)
- SAMPLE LOCATION

0 2' 4'
VERTICAL SCALE
0 1' 2' 3'
HORIZONTAL SCALE

NOTES:
1. DEBRIS CONSISTED OF SCRAP METAL, PAINT SLUDGE, 5–GALLON BUCKET REMNANTS, BRICKS AND CONCRETE.
2. ASPHALT CAP REMAINS IN TACT.

TWIN CITIES ASSEMBLY PLANT
FORD MOTOR COMPANY
ST. PAUL, MINNESOTA

CROSS SECTION - TRENCH 1

ARCADIS Design & Consultancy for natural and built assets

FIGURE
9a

CITY:(COLUMBUS, OH) DIV/GROUP:(IM/DV) DB:(R. SMITH) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Columbus-OH\ACT\MN000634 - FORD\0001\0003\MN000634-2016-CS.dwg LAYOUT: TRENCH 2 SAVED: 10/5/2016 2:31 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACAD.CTB PLOTTED: 10/27/2016 12:22 PM BY: SMITH, BOB
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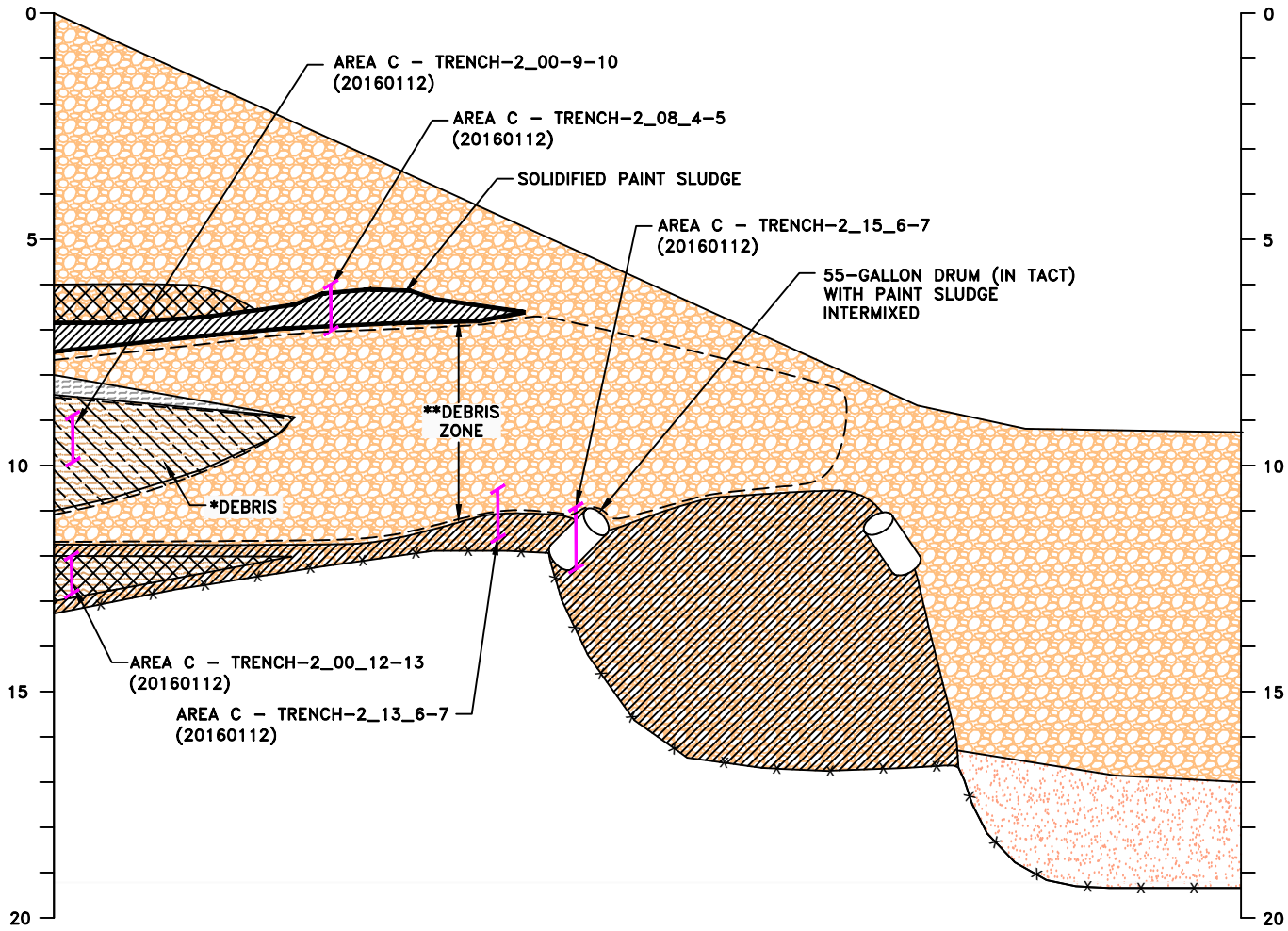
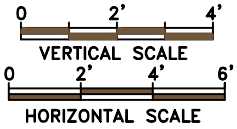


NOTE:
DEEPER SOLIDIFIED PAINT SLUDGE LAYER MORE MALLEABLE AND INTERMIXED WITH WOOD, CARDBOARD AND FIBROUS MATERIAL. THE DEEPER SOLIDIFIED PAINT SLUDGE WAS 6 FEET THICK AT THE MAXIMUM AND TERMINUS.



LEGEND

- SOLIDIFIED PAINT SLUDGE
- FILL, SANDY SILT WITH GRAVEL
- FILL, SILTY SAND
- FILL, CLAY
- INDICATES OLFACTORY IMPACTS (PETROLEUM – LIKE)
- INDICATES OLFACTORY IMPACTS (SOLVENT – LIKE)
- FLOODPLAIN SAND
- DEBRIS BOUNDARY
- EXTENT OF EXCAVATOR (BOTTOM OF TRENCH)
- SAMPLE LOCATION
- * SMALL DEBRIS ZONE AT START OF TRENCH CONSISTED OF WIRE REINFORCED, RUBBER INSULATED TUBING WITH PETROLEUM IMPACTS
- ** BROAD DEBRIS ZONE WITH CONCRETE, METAL SCRAPS, WOOD, PAINT SLUDGE, AND 55–GALLON DRUMS/LIDS

TWIN CITIES ASSEMBLY PLANT
FORD MOTOR COMPANY
ST. PAUL, MINNESOTA

CROSS SECTION TRENCH 2

ARCADIS Design & Consultancy for natural and built assets

FIGURE
9b

CITY:(COLUMBUS, OH) DIV/GROUP:(IM/DV) DB:(R. SMITH) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Columbus-OH\ACT\MN000634 - FORD\0001\0003\MN000634-2016-CS.dwg LAYOUT: TRENCH 3 SAVED: 10/5/2016 2:31 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACAD.CTB PLOTTED: 10/27/2016 12:23 PM BY: SMITH, BOB
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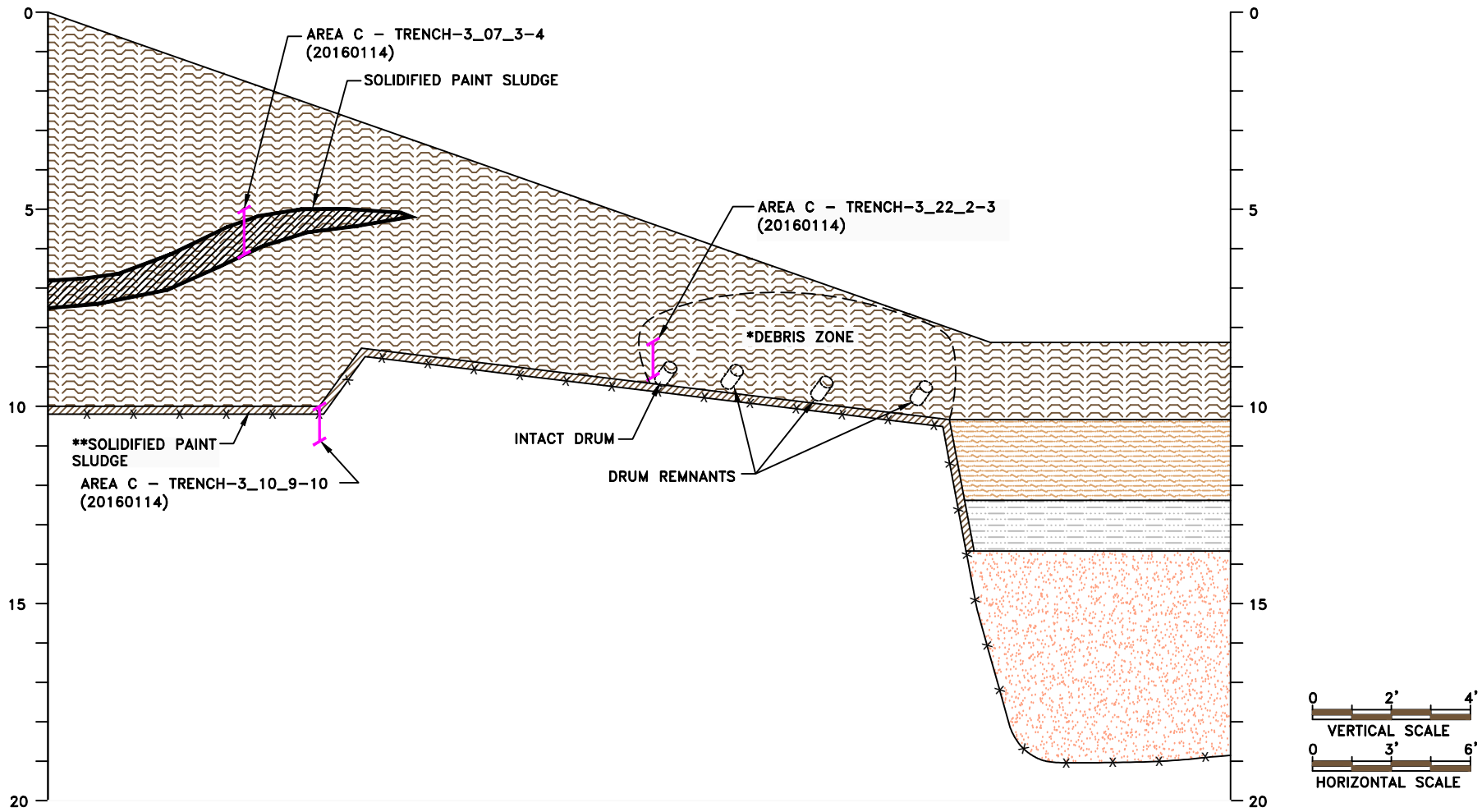

LEGEND

- SOLIDIFIED PAINT SLUDGE
- FILL, SILT WITH CLAY
- FILL, SILTY SAND
- FLOODPLAIN SILT
- FLOODPLAIN SAND
- SAMPLE LOCATION
- DEBRIS BOUNDARY
- EXTENT OF EXCAVATOR (BOTTOM OF TRENCH)

* HEAVY DEBRIS CONSISTING OF 55–GALLON DRUMS, 5–GALLON CAN REMNANTS, OVERLYING AND INTERMIXED WITH TOP OF PAINT SLUDGE LAYER

** SOLIDIFIED PAINT SLUDGE AT BASE OF TRENCH CONSISTED OF A HARDENED CRUST WITH MORE MALLEABLE PAINT SLUDGE BENEATH. EXCAVATOR UNABLE TO PENETRATE. WOOD AND CONCRETE DEBRIS ALSO ENCOUNTERED AT TOP OF LAYER

TWIN CITIES ASSEMBLY PLANT
FORD MOTOR COMPANY
ST. PAUL, MINNESOTA

CROSS SECTION TRENCH 3

ARCADIS Design & Consultancy for natural and built assets

FIGURE
9c

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
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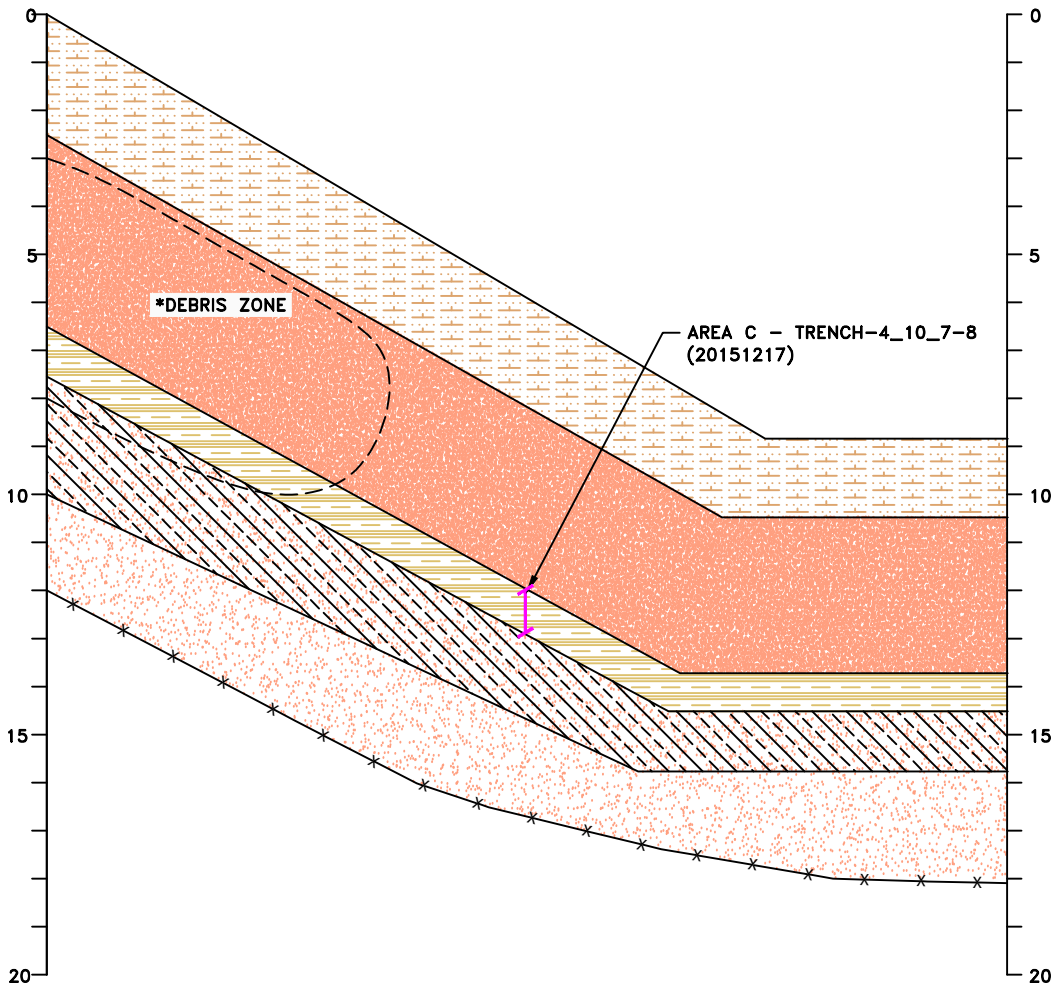

LEGEND

- FILL, CLAY
- FILL, SAND
- FILL, SILTY SAND WITH CLAY
- FLOODPLAIN SAND
- INDICATES OLFACTORY IMPACTS (PETROLEUM – LIKE)
- DEBRIS BOUNDARY
- EXTENT OF EXCAVATOR (BOTTOM OF TRENCH)
- SAMPLE LOCATION

* MINOR DEBRIS CONSISTING OF BRICKS, ASPHALT AND CONCRETE (3–8ft DEEP)

0 2' 4'
VERTICAL SCALE
0 2' 4'
HORIZONTAL SCALE

TWIN CITIES ASSEMBLY PLANT
FORD MOTOR COMPANY
ST. PAUL, MINNESOTA

CROSS SECTION - TRENCH 4

ARCADIS Design & Consultancy for natural and built assets

FIGURE
9d

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Columbus-OH\ACT\MN000634 - FORD\0001\0003\MN000634-2016-CS.dwg LAYOUT: TRENCH 5 SAVED: 10/4/2016 9:52 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACAD.CTB PLOTTED: 10/4/2016 9:52 AM BY: SMITH, BOB
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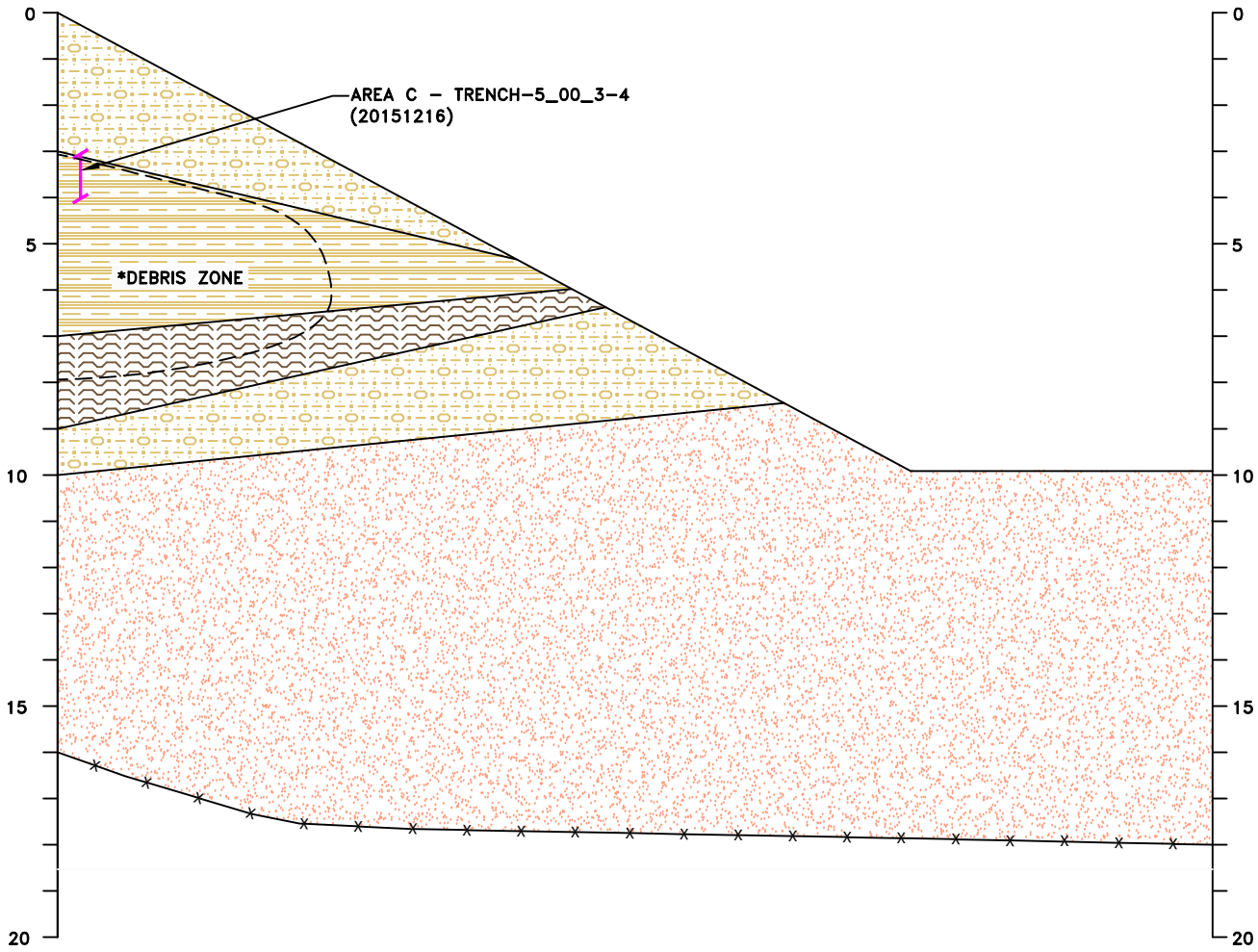
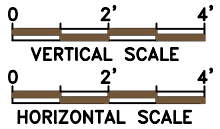




LEGEND

- FILL, SILT WITH GRAVEL/SAND
- FILL, SILT WITH CLAY
- FILL, CLAY
- FLOODPLAIN SAND
- DEBRIS BOUNDARY
- EXTENT OF EXCAVATOR (BOTTOM OF TRENCH)
- SAMPLE LOCATION
- * MINOR DEBRIS CONSISTING OF BRICKS AND CONCRETE (3–8ft DEEP)

TWIN CITIES ASSEMBLY PLANT
FORD MOTOR COMPANY
ST. PAUL, MINNESOTA

CROSS SECTION - TRENCH 5

ARCADIS Design & Consultancy for natural and built assets

FIGURE
9e

	AMW-07 7/17/2007	AMW-07 12/20/2007	AMW-07 3/13/2008	AMW-07 3/13/2008	AMW-07 9/15/2008	AMW-07 10/6/2009	AMW-07 7/3/2014	AMW-07 8/7/2014	AMW-07 9/16/2014	AMW-07 3/9/2016	AMW-07 DUP 6/9/2016	AMW-07 6/10/2016
VOCs												
Trichloroethene	**2.9**	**2.7**	**2.9**	NA	**0.43 J**	**1.6**	**0.46 J**	**2.9**	**2.3**	**2.3**	**0.79 J**	**1.9**
SVOCs												
Anthracene	< 10	< 10	< 10	NA	< 10	NA	< 11	< 9.5	< 10	< 0.19	NA	0.20
Benzo(a)pyrene (BaP) Equivalents	**0.868**	ND	ND	NA	ND	NA	ND	ND	ND	**0.2913**	NA	**1.342**
Dissolved Metals												
Aluminum	NA	NA	NA	NA	NA	NA	< 200	270	270	120 J	< 200	340
Antimony	NA	NA	NA	NA	NA	NA	< 10	**12**	< 10	< 10	< 10	< 10
Beryllium	NA	NA	NA	NA	NA	NA	< 5.0	**0.67 J**	**0.65 J**	**0.73 J**	< 5.0	**0.91 J**
Cadmium	NA	**1.3 J**	**0.85 J**	NA	**0.99 J**	NA	< 5.0	< 5.0	0.42 J	**0.76 J**	< 5.0	< 5.0
Cobalt	NA	NA	NA	NA	NA	NA	< 7.0	9.6	7.7	6.8 J	6.5 J	11
Manganese	NA	NA	NA	NA	NA	NA	**180**	**110**	82	68	**190**	69
PCBs												
Aroclor 1260	< 0.20	< 0.20	< 0.20	NA	**0.059 J**	< 0.20	NA	NA	NA	NA	< 0.20	NA
TPH												
Diesel Range Organics	NA	NA	**130 J**	NA	**210**	NA	NA	NA	NA	< 95	**130**	< 95
Other												
Cyanide, Free	NA	NA	NA	5.9 J	< 10	NA	NA	NA	NA	NA	< 10	< 10

	AMW-29 2/12/2016	AMW-29 3/3/2016	AMW-29 6/3/2016
VOCs			
Trichloroethene	**11.4**	**7.1**	**9.1**
Dissolved Metals			
Aluminum	14200	2900	13000
Beryllium	< 4.0	**0.42 J**	**1.6 J**
Cadmium	< 5.0	0.48 J	**1.1 J**
Cobalt	**67.0**	**70**	**75**
Copper	130	3.8 J	40
Manganese	**1400**	**1300**	**1400**
Nickel	**328**	**310**	**320**
Zinc	396	180	380
TPH			
Diesel Range Organics	**1000**	**350**	**940**
Other			
Cyanide, Free	< 23	NA	**6.5 J**

	AMW-30 2/11/2016	AMW-30 3/3/2016	AMW-30 6/2/2016
VOCs			
Trichloroethene	**24.5**	**22**	**34**
Dissolved Metals			
Aluminum	9500	4000	29000
Beryllium	< 4.0	**0.70 J**	**3.7 J**
Cadmium	< 5.0	0.27 J	**1.0 J**
Cobalt	**50.6**	**49**	**59**
Copper	120	29	190
Manganese	**802**	**1100**	**1100**
Nickel	**252**	**260**	**410**
Thallium	< 40.0	**2.5 J**	**5.1 J**
Zinc	133	79	190
TPH			
Diesel Range Organics	**220**	**180**	**720**

	B-1 3/3/1982	B-1 12/1/1982	B-1 8/1/1989
VOCs			
Vinyl chloride	NR	NR	**5.2 J**
Dissolved Metals			
Cadmium	**20**	**3**	ND
Copper	**30**	<5	10
Lead	**120**	5	ND

	B-5 12/1/1982	B-5 6/1/1989
Dissolved Metals		
Cadmium	1	0.2
Zinc	<5	**260**

	AMW-25 3/8/2016	AMW-25 6/8/2016
VOCs		
1,2,4-Trimethybenzene	**330**	**250 J**
Ethylbenzene	**120**	**95**
Total Xylenes*	**170**	110
Dissolved Metals		
Manganese	**1400**	**1500**
Thallium	< 10	**7.3 J**
TPH		
Diesel Range Organics	**11000**	**11000**
Gasoline Range Organics	NA	**10000**

	AMW-24 3/8/2016	AMW-24 6/8/2016
Dissolved Metals		
Manganese	**2100**	**1700**
Mercury	**0.17 J**	< 0.20
Thallium	< 10	**8.5 J**
TPH		
Diesel Range Organics	**190**	**180**
Other		
Cyanide, Free	NA	**13**

	B-4 3/3/1982	B-4 12/1/1982
Dissolved Metals		
Cadmium	**20**	**5**
Lead	**60**	6

	B-3 3/3/1982	B-3 12/1/1982	B-3 8/1/1989
Dissolved Metals			
Cadmium	<10	**3**	ND
Copper	10	<5	**20**

	AMW-26 3/9/2016	AMW-26 6/10/2016
SVOCs		
Anthracene	**0.62**	1.3
bis(2-Ethylhexyl)phthalate	< 5.1	**2.3 J**
Fluoranthene	**2.3**	**4.1**
Phenanthrene	3.0	**5.2**
Benzo(a)pyrene (BaP) Equivalents	**0.5115**	**1.901**
Dissolved Metals		
Arsenic	**11**	**12**
Manganese	**1700**	**2000**
Thallium	**8.6 J**	**7.8 J**
TPH		
Diesel Range Organics	**460**	**410**

	AMW-31 2/12/2016	AMW-31 3/3/2016	AMW-31 DUP 3/3/2016	AMW-31 6/1/2016
Dissolved Metals				
Manganese	**286**	**480**	**400**	**640**
Thallium	< 40.0	**2.5 J**	< 10	NA
TPH				
Diesel Range Organics	**410**	**700**	**760**	**2600**

	AMW-21 3/9/2016	AMW-21 6/10/2016
SVOCs		
Anthracene	< 0.19	0.25
bis(2-Ethylhexyl)phthalate	< 4.8	6.0
Benzo(a)pyrene (BaP) Equivalents	ND	**0.724**
Dissolved Metals		
Manganese	**2000**	**1700**
Thallium	**9.3 J**	**6.4 J**
TPH		
Diesel Range Organics	**360**	**720**

	B-2 3/3/1982	B-2 12/1/1982
Dissolved Metals		
Cadmium	<10	**3**
Copper	**20**	<5

	AMW-23 3/8/2016	AMW-23 6/8/2016
Dissolved Metals		
Manganese	**2500**	**2200**
Thallium	< 10	**10**
TPH		
Diesel Range Organics	**110**	50 J
Other		
Cyanide, Free	NA	**14**

	AMW-23B 3/8/2016	AMW-23B 6/8/2016
Dissolved Metals		
Manganese	**210**	**220**
Mercury	**0.16 J**	< 0.20

	AMW-05 7/3/2014	AMW-05 8/7/2014
VOCs		
Trichloroethene	**15**	**3.2**
Dissolved Metals		
Beryllium	**0.62 J**	< 5.0
Manganese	**180**	64
Nickel	**110**	31 J
Selenium	11	< 5.0

	AMW-05B 7/24/2007	AMW-05B 12/17/2007	AMW-05B 3/11/2008	AMW-05B 9/10/2008	AMW-05B 10/6/2009	AMW-05B 7/3/2014	AMW-05B 8/6/2014	AMW-05B 9/16/2014	AMW-05B 6/9/2016
VOCs									
Trichloroethene	< 1.0	< 1	< 1.0	< 1.0	< 1.0	< 1.0	0.36 J	< 1.0	**0.91 J**
Dissolved Metals									
Cobalt	NA	NA	NA	NA	NA	< 7.0	**6.3 J**	**6.3 J**	**6.5 J**
Manganese	NA	NA	NA	NA	NA	25	**190**	**190**	**200**
PCBs									
Aroclor 1254	< 0.20	< 0.2	< 0.20	**0.97**	< 0.20	NA	NA	NA	< 0.19
TPH									
Diesel Range Organics	NA	NA	< 100	< 100	NA	NA	NA	NA	**180**

	AMW-22B 3/9/2016	AMW-22B 6/9/2016
Dissolved Metals		
Manganese	**120**	**140**
TPH		
Diesel Range Organics	**140**	48 J

	AMW-22 3/9/2016	AMW-22 6/9/2016
Dissolved Metals		
Beryllium	**0.13 J**	< 5.0
Manganese	**1900**	**1900**
Thallium	< 10	**8.8 J**
Other		
Cyanide, Free	NA	**15**

	AMW-19 11/11/2011	AMW-19 1/17/2012	AMW-19 8/7/2014	AMW-19 9/16/2014	AMW-19 DUP 9/16/2014	AMW-19 3/9/2016	AMW-19 6/9/2016
Dissolved Metals							
Manganese	**2800**	**1700**	**110**	**180**	**180**	45	26
Mercury	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	**0.16 J**	< 0.20
Thallium	< 10	**9.7 J**	< 10	**2.4 J**	< 10	< 10	< 10
TPH							
Diesel Range Organics	**260**	< 100	NA	NA	NA	81 J	< 95

	AMW-20 11/11/2011	AMW-20 1/17/2012	AMW-20 DUP 1/17/2012	AMW-20 8/7/2014	AMW-20 9/16/2014	AMW-20 3/8/2016	AMW-20 6/8/2016
Dissolved Metals							
Cadmium	< 5.0	< 5.0	< 5.0	< 5.0	0.20 J	**0.52 J**	< 5.0
Cobalt	**5.3 J**	3.3 J	**6.4 J**	< 7.0	2.5 J	0.65 J	< 7.0
Manganese	**1800**	**1700**	**1700**	**1400**	**870**	**380**	520
Mercury	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	**0.27**	< 0.20
Thallium	< 10	< 10	**9.9 J**	< 10	< 10	< 10	**2.7 J**
TPH							
Diesel Range Organics	**630**	**460**	**1200**	NA	NA	88 J	< 95

Constituent	MDH Derived Value	Basis	Class 2B Waters CS	MS	FAV
VOCs					
1,2,4-Trimethylbenzene	100	2010 RAA	NS	NS	NS
Ethylbenzene	50	2011 HRL	68	1859	3717
Trichloroethene	0.4	2015 HRL	120	6988	13976
Vinyl chloride	0.2	2009 HRL	9.2	NS	NS
Total Xylenes*	300	2011 HRL	166	1407	2814
SVOCs					
Anthracene	2000	1993/94 HRL	0.035	0.32	0.63
bis(2-Ethylhexyl)phthalate	6	2009 HRL/MCL	2.1	NS	NS
Fluoranthene	300	1993/94 HRL	1.9	3.5	6.9
Phenanthrene	NS	NS	3.6	32	64
Benzo(a)pyrene (BaP) Equivalents	0.06	2012 HBV[1]	NS	NS	NS
Dissolved Metals					
Aluminum	NS	NS	125	1072	2145
Antimony	6	1993/94 HRL	31	90	180
Arsenic	10	USEPA MCL	53	360	720
Beryllium	0.08	1993/94 HRL	NS	NS	NS
Cadmium	0.5	2014 HBV	2	65	130
Cobalt	30	NS	5	436	872
Copper	1000	NS	14	31	62
Lead	15	No Basis[2]	7	173	346
Manganese	100	2012 RAA	NS	NS	NS
Mercury	NS	NS	0.0069	2.4	4.9
Nickel	100	1993/94 HRL	259	2332	4664
Selenium	30	1993/94 HRL	5	20	40
Thallium	0.6	1993/94 HRL	0.56	64	128
Zinc	2000	1993/94 HRL	174	193	385
PCBs					
Aroclor 1254	0.04	1993/94 HRL	0.000029	1	2
Aroclor 1260	0.04	1993/94 HRL	0.000029	1	2
Other					
Cyanide, Free	100	1993/94 HRL	5.2	22	45
TPH					
Diesel Range Organics	100	MPCA PBP			
Gasoline Range Organics	100	MPCA PBP			

* Criteria for Total Xylenes Used.
Shade: Value is above the MPCA PBP Guidance Value or above the MDH Derived Value.
Shade: Value is above the MPCA Class 2B Surface Water criteria for St. Peter Sandstone and Area C (Overburden) monitoring wells.

0 200 400
SCALE IN FEET

LEGEND:

- Existing Monitoring Well
- Soil Boring
- Surface Soil Sample
- Mississippi River Sampling Location

Historic Locations
- Approximate Abandoned Monitoring Well
- Approximate Soil Boring
- Approximate Former Test Pit Location (1988)

- Approximate Extent of Industrial Waste Fill (Dashed where Inferred)
- Tunnel 1A
- Fence
- Ford Property Boundary

- Buildings
- Asphalt
- Concrete
- Grass
- Mississippi River/Retention Pond

- Elevation Contours (Feet Mean Sea Level)

	Location ID
	Sample Date
Analyte	
Constituent	Result

NOTES:
1) Results are reported in micrograms per liter (µg/l)
2) [1] See benzo(a)pyrene (BaP)-equivalents action levels.
3) [2] Lead MDH Health Based Water Guidance Action Level at Tap.
4) < or ND = not detected
5) J = estimated result
6) NA = Not applicable/not analyzed
7) NR = not reported
8) NS = no standard
9) AMW = Arcadis monitoring well
10) HBV = health-based value
11) MPCA = Minnesota Pollution Control Agency
12) PCB = polychlorinated biphenyl
13) PBP = Petroleum Brownfields Program
14) RAA = risk assessment advice
15) SVOC = semivolatile organic compound
16) TPH = total petroleum hydrocarbon
17) USEPA = United States Environmental Protection Agency
18) VOC = volatile compound
19) Topographic survey for Area C completed January 2012, Sunde Land Surveying

Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Groundwater Analytical Results

ARCADIS

FIGURE 10

CITY: MPLS, MN DB: MG LD: RO
FORD ST. PAUL PATH: Z:\GIS\Projects_ENV\Ford Ranger\Arc\Map\2017\2017-03\Area_C_Groundwater_Samples_D_20170316.mxd

APPENDIX A

Historical Documentation and Reports

AL JOHNSON CONSTRUCTION CO.
General Contractors
1700 NORTHWESTERN FINANCIAL CENTER
MINNEAPOLIS, MINNESOTA 55431
Telephone : 612/831-8151

October 26, 1979

Mr. Dan Greenwald
Manufacturing Engineering Manager
Ford Motor Company Twin Cities Assembly Plant
966 South Mississippi River Blvd.
St. Paul, Minnesota 55116

Dear Mr. Greenwald:

Thank you for meeting with me on, 22 October 1979, to discuss the possibility of our disposing of waste material in the area south of your steam plant. The material would consist of broken concrete, sandstone, and possibly some clean sand which would be obtained from the Ford Lock site where we have the contract for the rehabilitation of the lock.

The total quantity of concrete and sandstone that we are proposing to dispose of on your property is 29,000 cu. yd. with the possibility of an additional 18,000 cu. yd. of sand if we cannot find another use for the sand. The estimated quantities and periods of disposal are as follows:

1,000 c.y. of Concrete	November 1979
9,000 c.y. of Concrete	December 1979
9,000 c.y. of Concrete	December 1980
10,000 c.y. of Sandstone	December 1980
18,000 c.y. of Sand	April - May 1981

Attached is a drawing of the proposed fill area. The area shown to be filled is what we thought would be the best use of the waste material in developing the area as a possible storage site for your trucks. We would be willing to fill the area in any other way you wished. We would propose to bury the existing trees in the fill. Sand would be placed on top of the fill to give a smooth surface on which you could build your parking area. In addition, we would offer to pay the Ford Motor Company $.25 for every cubic yard of material actually wasted in the proposed area.

With the time being very short on our need for a disposal site in 1979, we would appreciate your early consideration in this matter. Again, thank you for your time and effort.

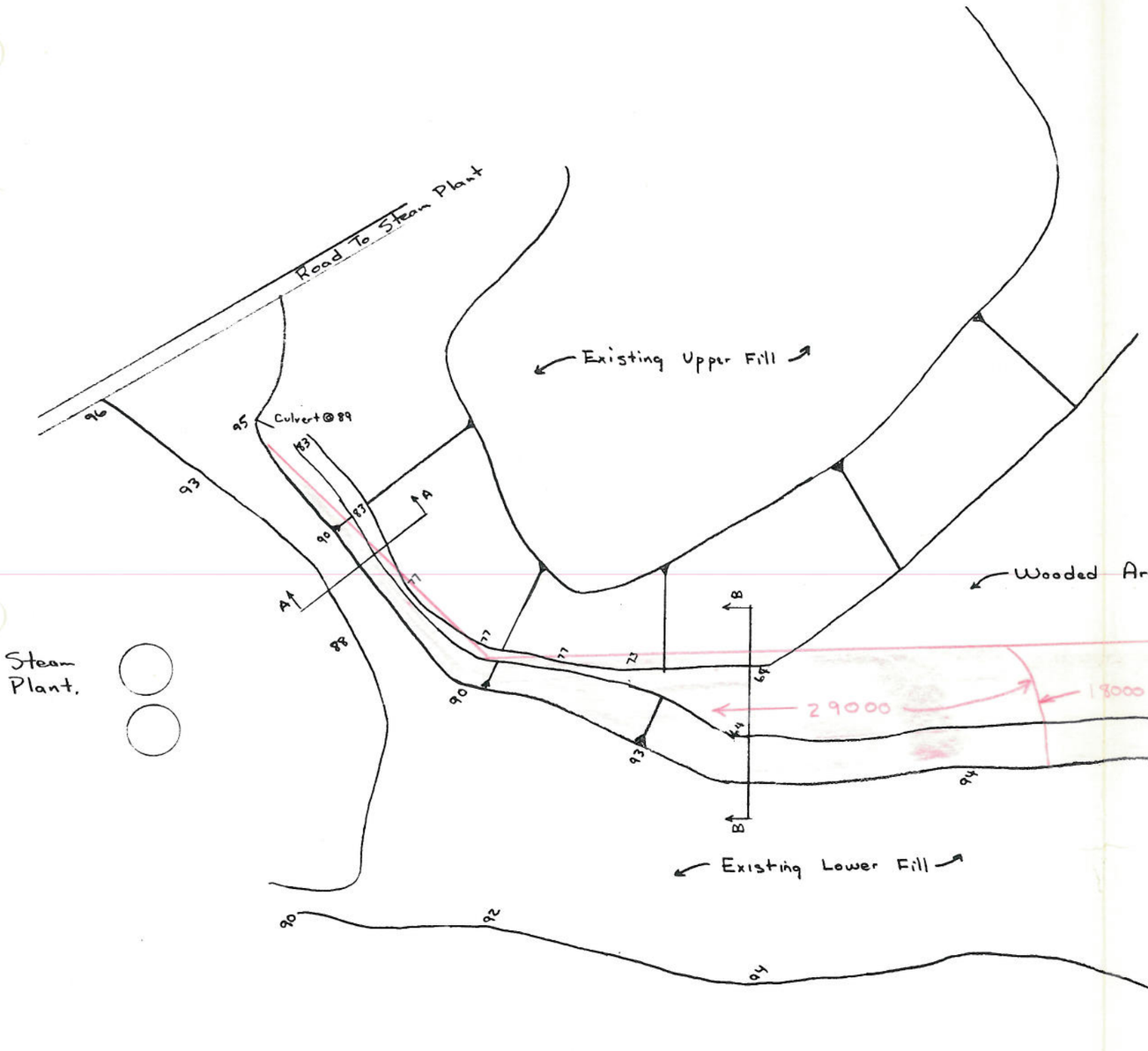
Very truly yours,

AL JOHNSON CONSTRUCTION CO.

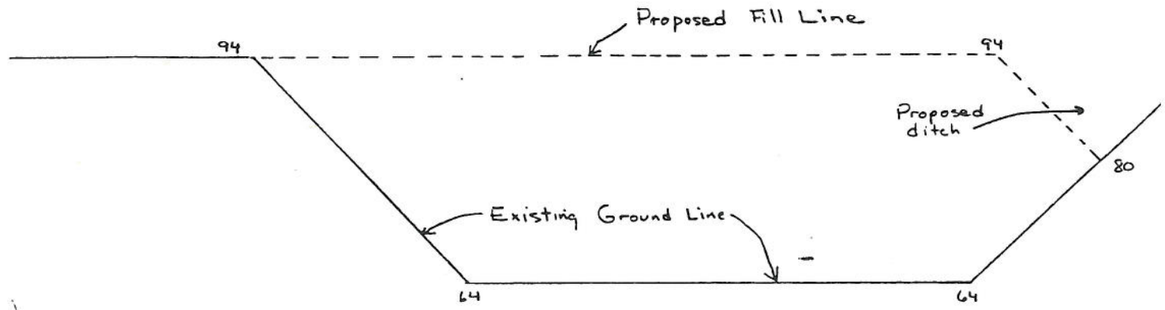
George W Barbato

George W. Barbato
Project Manager

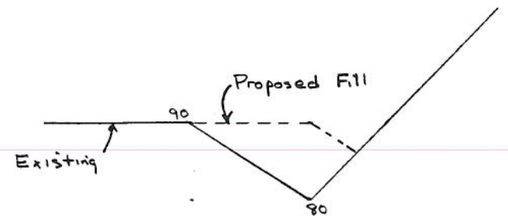
GWB:ck
Attachment



Plan of Proposed Fill Scale 1"= 100'



Section B-B scale 1"= 20'



Section A-A scale 1"= 20'

Proposed Waste Disposal Area at Ford Motor Company

Al Johnson Const
10/24/79

Twin Cities Assembly Facility
Groundwater Monitoring Wells Survey

March 3, 1982

MN-COMP 0043699

Stationary Source Environmental Control Office
Environmental and Safety Engineering Staff

RECEIVED
MAY 07 1982
MINN. POLLUTION
CONTROL AGENCY

Twin Cities Assembly Facility
Groundwater Monitoring Wells Survey

March 3, 1982

Conducted By

Ford Motor Company
Stationary Source Environmental Control Office
Survey and Evaluation

Survey Conducted by:

E. D. Chraszcz

T. J. Geyer

Prepared by:

E. D. Chraszcz

MN-COMP 0043700

Concur:

J. M. Reinke, Manager

Twin Cities Assembly Plant
Groundwater Monitoring Wells Survey
March 3, 1982

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MN-COMP 0043701

I. INTRODUCTION

As part of an investigation into potential groundwater contamination resulting from an old inactive disposal site at the Twin Cities Assembly Plant, the Minnesota Pollution Control Agency (MPCA) requested Ford Motor Company to install four (4) groundwater monitoring wells in the vicinity of the inactive site. Prior to installing the wells a hydrogeologic survey was conducted by Soil Testing Services of Minnesota, Inc. Based on the information contained in the survey, the well locations were selected and submitted to the MPCA. Following their approval Soil Testing Services installed the wells.

On March 3, 1982 representatives from Ford's Stationary Source Environmental Control Office (SSECO) conducted a sampling program of the groundwater in the wells. Mr. Douglas Day of the MPCA was present during the sampling to review the procedures used and to obtain split samples. The parameters selected for analysis were based on a joint agreement between Ford and the MPCA and included:

- USEPA volatile priority pollutants
- Xylenes
- Methylethylketone
- Methylisobutylketone
- pH
- Specific conductivity
- Dissolved heavy metals (Cd,Cr,Pb,Cu,Ni,Zn)

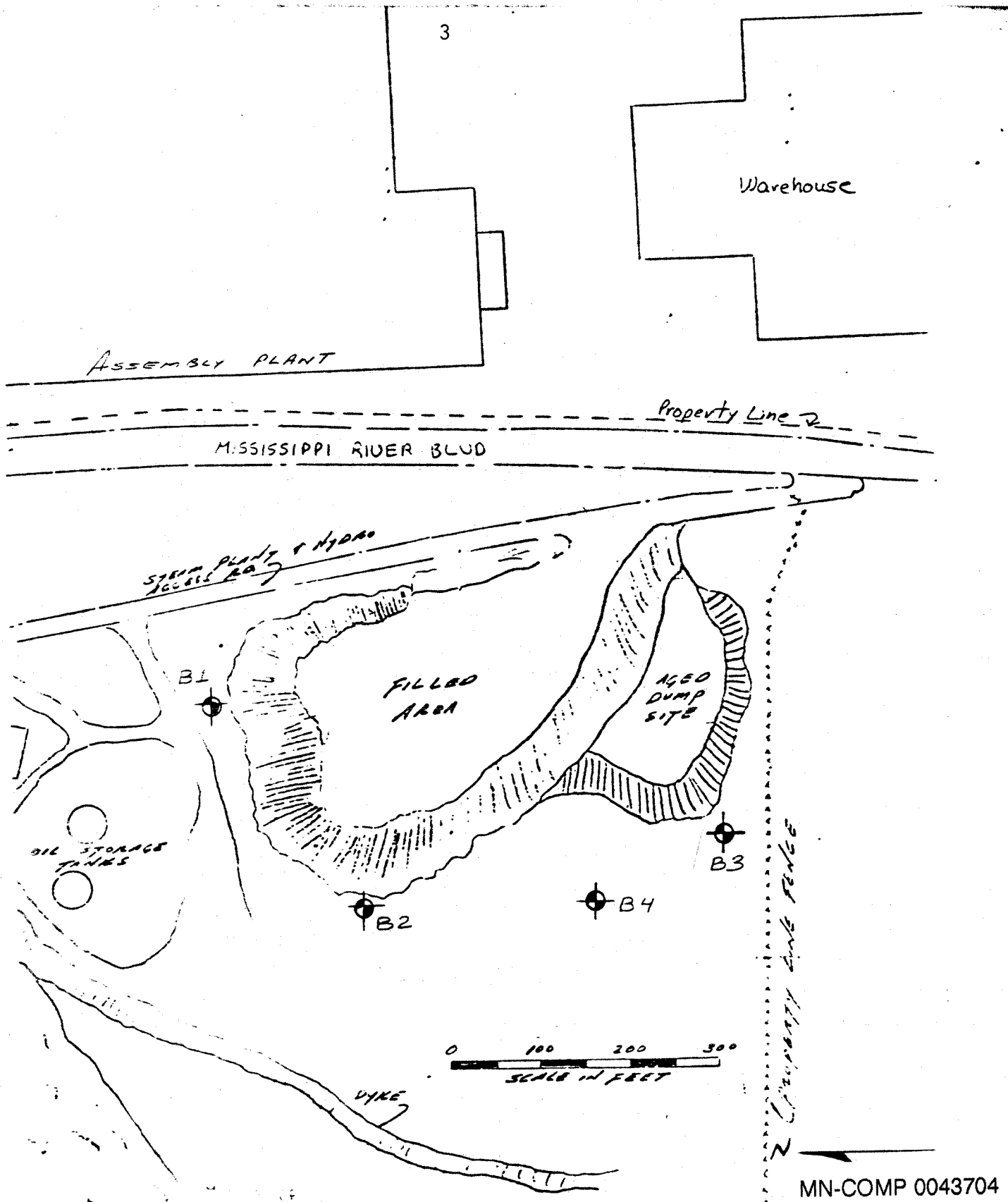
MN-COMP 0043702

II. SITE DESCRIPTION AND WELL LOCATIONS

The inactive disposal site is approximately 4 acres in size and is located west of the main assembly plant building between Mississippi River Boulevard and the Mississippi River. The site was used by the plant to dispose of construction rubble, paint sludges and old paints and solvents. It has not been used since 1965. The attached Figure 1 shows the location of the site and the approximate location of the 4 groundwater monitoring wells installed. The final locations of the wells were dictated somewhat by access to the rather rugged terrain found in the disposal site area, and the presence of underlying bedrock in certain locations which prohibited sampling the uppermost groundwater, directly connecting the Mississippi River.

Installation of the wells was completed in December of 1981. The well casings are 2" schedule 80 PVC pipe with the lower 10' of casing slotted and wrapped with Miarafi 140S fabric. The Miarafi acts as a filter to limit the amount of sediment entering the wells. Detailed information on the procedures used for installing the wells and the well boring logs can be obtained from the final report of Soil Testing Services of Minnesota dated February 26, 1982. The specifics of each are listed below:

MN-COMP 0043703



MN-COMP 0043704

FIGURE 1
TWIN CITIES ASSEMBLY
SITE AND WELL LOCATION

Well No.	Bottom of Casing Elevation (Ft.)	Casing Length from Grade (Ft.)
B-1	678.52	51.0
B-2	671.27	44.5
B-3	672.49	24.5
B-4	675.97	29.5

On the basis of the preliminary measurements obtained by Soil Testing Services following completion of the wells, the groundwater movement in the area is to the west northwest, toward the Mississippi River. On this basis, Well No. B-1 is anticipated to be an upgradient well, or at least unaffected by the disposal site, while Wells B-2, B-3, and B-4 are downgradient of the site.

III. SUMMARY

A summary of the results from the well samplings appears in Table 1. On the basis of static water level measurements, Well B-1 can be considered the upgradient or unaffected by the disposal site and Wells B-2, B-3 and B-4 downgradient of the disposal site.

As indicated by the data, metal concentrations in the groundwater from the downgradient wells are consistently low. Only trace levels of three organic compounds were detected in three of the wells; two of which were present in the upgradient well. These findings indicate no apparent contamination due to the inactive disposal site.

MN-COMP 0043706

Table 1

Twin Cities Assembly Plant
Groundwater Analysis Summary

		Well No.			
Dissolved Metals	Units	B1	B2	B3	B4
Copper	mg/l	0.03	0.02	0.01	0.01
Cadmium	mg/l	0.02	<0.01	<0.01	0.02
Zinc	mg/l	0.06	0.04	<0.02	0.09
Nickel	mg/l	0.07	0.04	0.02	0.05
Chromium	mg/l	<0.05	<0.05	<0.05	<0.05
Lead	mg/l	0.12	<0.05	<0.05	0.06
pH	Units	7.08	7.01	7.07	6.84
Specific Conductivity	Umhos/cm	985	1064	1666	1482
Temperature	^{o}F.	47	45	45	46
Organics					
1,2 Dichloroethylene	µg/l	<2	15	<2	<2
Trichloroethylene	µg/l	4	5	<2	<2
Toluene	µg/l	1	1	<1	1

MN-COMP 0043707

IV. RESULTS

Static water level measurements obtained prior to well clearing and sampling are tabulated below, together with measurements made by Soil Testing Services on January 5, 1982 following the well installations and developments:

Table 2

Groundwater Level Data

Well No.	Static Water Levels 1/5/82	3/3/82
B-1	688.62	688.35
B-2	688.11	687.71
B-3	688.65	688.27
B-4	688.53	688.05

The March data agrees fairly well with the previous data and tends to confirm the west to northwest groundwater movement. On this basis, Well B-1 is upgradient of the disposal site and the remaining three wells are downgradient.

The results of the dissolved metals analyses appear in Table 3. The final value represents the average of 7 consecutive readings made on each sample.

Table 4 contains the results of analyses for the volatile organic materials. Duplicate analysis showed excellent agreement; both field and well casing material blanks were satisfactory.

Specifications regarding the exact method of analysis with respect to metals and organics can be found in Appendix C together with the detection levels associated with each procedure.

MN-COMP 0043708

Table 3
Twin Cities Assembly Plant
Groundwater Monitoring Results
Dissolved Metals
March 3, 1982

	B1	B2	B3	B4
Lead	0.12	<.05	<.05	0.06
Chromium	<.05	<.05	<.05	<.05
Nickel	0.07	0.04	0.03	0.05
Zinc	0.06	0.04	<.02	0.09
Cadmium	0.02	<.01	<.01	0.02
Copper	0.03	0.02	0.01	0.01

All values are the average of seven measurements of the same sample. Units are mg/l.

TABLE 4
Twin Cities Assembly Plant
Groundwater Monitoring Results
Volatile Organics
March 3, 1982

	B1	B1 (Dup)	B2	B2 (Dup)	B3	B3 (Dup)	B4	B4 (Dup)
1,2 Dichloroethylene	-	-	13	17	-	-	-	-
Trichloroethylene	4	3	5	5	-	-	-	-
Toluene	1	2	1	1	-	-	1	1

Duplicate field blanks showed no detectable levels of volatile organics.

Well casing blanks showed 4 PPB Toluene and 6 PPB methylene chloride, however these are attributed to the laboratory atmosphere.

Only detectable quantities are reported.

MN-COMP 0043710

APPENDIX A

SAMPLING PROCEDURES

MN-COMP 0043711

APPENDIX A

SAMPLING PROCEDURES

Prior to sampling, static water level determinations were made. Based on the static and the measured depth of each well, the volumes of water in each well casing calculated. Each well was then cleared to remove three times the calculated water volume. Wells B-1 and B-2 were cleared by manual methods utilizing a stainless steel bailer. Wells B-3 and B-4 were not as deep and therefore could be cleared with a peristalic pump and tygon tubing suction line. Once clearing was completed, the static water level was again determined and the samples were withdrawn from the wells with a stainless steel bailer. Table 5 represents some of the pertinent well data as it relates to the monitoring survey.

In order to avoid either cross contamination or contamination from extraneous sources, the stainless steel bailer and attached stainless cable were subjected to a thorough cleaning before being immersed in a well. The bailer and cable were first rinsed with organic free water followed by a methanol rinse and finally a second rinse with organic free water.

The wells were sampled in the following order: Wells B-1, B-2, B-4, and B-3. Well B-1 was sampled first since it was considered the upgradient well. Water level recovery was rapid, therefore samples were collected immediately after well evacuation. Samples for volatile priority pollutants plus xylenes, methylethyl ketone, and methylisobutyl ketone were

MN-COMP 0043712

Table 5
Twih Cities Assembly Plant
Survey of Ground Water Monitoring Wells
March 3, 1982
Well Data

Well Number	Time Sampled	Elevation (Ft.)	Static Water Level (Ft.)	Casing Depth (Ft.)	Well Volume (liters)	Amount of Water Removed (liters)	Static After Bailing (ft.in.)
B1	12:00 Noon	730.52	42' 2"	53' 65"	6.2	19	41' 1"
B2	2:45 p.m.	718.96	26' 3"	46' 9"	11.1	33	31' 3"
B3	4:35 p.m.	704.85	16' 7"	27' 35"	5.8	18	16' 7"
B4	3:25 p.m.	708.63	20' 7"	30' 10"	5.6	17	20' 7.5"

MN-COMP 0043713

collected by transferring some of the sample from the bailer to a cleaned glass beaker, and subsequently filling individual volatile organic sampling vials. Care was taken to avoid both unnecessary agitation of the sample and air bubbles trapped in the sealed vial. Volatile samples were maintained at 4° C until analysis. A second portion of the sample was filtered through a 0.45 micron filter on site and the filtrate acidified to pH 2. This sample was analyzed for dissolved metals. pH, conductivity and temperature determinations which were performed on site.

APPENDIX B

Analytical Procedures

MN-COMP 0043715

APPENDIX B

Analytical Procedures

Temperature and specific conductivity were determined on site using a Horiba Model U-7 water analyzer. pH was measured on site using an Extech Model 631 digital meter.

Metal determinations were made using an Instrument Laboratory IL 151 atomic absorption spectrometer and EPA methodology. The detection limits listed below were calculated by determining the standard deviation from a series of seven measurements of the lowest standard for each metal analyzed. The standard deviations were then multiplied by two which results in confidence limits of approximately 95%.

Metals Detection Limits (mg/l)	
Copper	0.01
Cadmium	0.01
Zinc	0.02
Nickel	0.03
Chromium	0.05
Lead	0.05

MN-COMP 0043716

Volatile organic concentrations were measured utilizing a Hewlett Packard HP 5992 GC/MS, incorporating a thirty meter, fused Silica, thick coat, DB-5 capillary column. The GC/MS was used in conjunction with an Envirochem Unicon purge and trap device and a Hewlett Packard dual floppy disc data storage system. The detection limits listed below were determined by the lower peak area threshold limit, which is set by the analytical program used.

Priority Pollutant VOA Compound	Detection Limit(ppb)	Priority Pollutant VOA Compound	Detection Limit(ppb)
Purgeables A		Purgeables B	
Methylene Chloride	< 1	1,2 Dichloroethylene	< 2
1,1 Dichloroethylene	< 5	1,2 Dichloroethane	< 2
1,1 Dichloroethane	< 1	1,1,1 Trichloroethane	< 2
Chloroform	< 1	Bromodichloromethane	< 2
Carbon tetrachloride	< 5	trans 1,3 Dichloropropene	< 2
1,2 Dichloropropane	< 5	cis 1,3 Dichloropropene	< 2
Trichloroethylene	< 2	Benzene	< 1
1,1,2 Trichloroethane	< 5	Bromoform	< 5
Dibromochloromethane	< 5	1,1,2,2 Tetrachloroethane	< 2
Tetrachloroethylene	< 2	Toluene	< 1
Chlorobenzene	< 1	Ethyl Benzene	< 1

Priority Pollutant VOA Compound	Detection Limit(ppb)
Purgeables C	
Chloromethane	< 2
Dichlorodifluoromethane	< 5
Bromomethane	< 10
Vinyl Chloride	< 5
Chloroethane	< 5
Others	
Methyl Isobutyl Ketone	< 1
Methyl Ethyl Ketone	< 5
Xylenes	< 1

MN-COMP 0043717

APPENDIX C

FIELD DATA SHEETS

MN-COMP 0043718

~~GROUNDWATER MONITORING SAMPLING DATA SHEET~~

Plant Twin Cities Assembly
Date 3/3/82
Well # B-1

Reason for Sampling Required monitoring
Person Sampling EC, TG, RB.
Laboratory Handling
Analysis SSECO

I. Well Data USGS Coordinates

Casing Elevation 730.52
Casing Material PVC
Casing Depth 53 6½" (642.5)
Metal Guard Elevation None

Screen Material PVC
Casing Diameter 1 7/8
Static Water Level 42'2" (506')
Well Volume 6.2 Liters

Type of Well Verticle
Up- or Downgradient Upgradient

Location of Well North edge of bluff

II. Well Clearing Data

Device Used Stainless Steel Bailer
Material of Construction Stainless Steel
Volume of Water Removed 19 Liters

III Sampling Data

Significant Weather Conditions DRY & CLEAR
Barometric Pressure

	Sample Parameters	Sample Equipment	Container and Volume	Sample Preservative	Holding Time
1.					
2.	No Odor				
3.	Static after bailing 41'1"				
4.	Time of Sampling 12:00pm				
5.					
6.					

Field Data

Well volume = 136.5 x 3.14 x .879 x .01639 = 6.2 Liters x 3 = 18.5 Liters

Temp of sample 47°F
ph 7.08
Conductivity at 25°C 985 micromhos/cm

~~GROUNDWATER MONITORING SAMPLING DATA SHEET~~

Plant Twin Cities Assembly
Date 3/3/82
Well # B-2

Reason for Sampling Required monitoring
Person Sampling E.C., T.G., R.B.
Laboratory Handling
Analysis SSECO

I. Well Data USGS Coordinates

Casing Elevation 718.96
Casing Material PVC
Casing Depth 46'9" (561")
Metal Guard Elevation None

Screen Material PVC
Casing Diameter 1 7/8"
Static Water Level 31'3" (375")
Well Volume 8.4 Liters

Type of Well Verticle
Up- or Downgradient Downgradient

Location of Well Northwest edge of bluff

II. Well Clearing Data

Device Used Stainless Steel Bailer
Material of Construction Stainless
Volume of Water Removed 25 Liters

III. Sampling Data

Significant Weather Conditions Dry & Partly Clear
Barometric Pressure

	Sample Parameters	Sample Equipment	Container and Volume	Sample Preservative	Date Time
1.					
2.	Static After Sampling 31'3"				
3.	Time of Sampling 2:45 pm				
4.					
5.					
6.					

IV. Field Data

Well volume = 186" x 3.14 x .879 x .01639 = 8.4 Liters x 3 = 25 Liters

Initial Conductivity of diluted sample 551

Notes: Temp. of Sample 45°F
pH 7.01
* Conductivity At 25°C 1064 micromhos/cm

* Note: Conductivity exceeds meter capability therefore sample was diluted with Distilled water of 19 micromhos/cm. 551 - 19 x 2 = 1064

MN-COMP 0043720

~~GROUNDWATER MONITORING SAMPLING DATA SHEET~~

Plant Twin Cities Assembly
Date 3/3/82
Well # B-4

Reason for Sampling Required monitoring
Person Sampling E.C., T.H., R.B.
Laboratory Handling
Analysis SSECO

I. Well Data USGS Coordinates

Casing Elevation 708.63
Casing Material PVC
Casing Depth 30'10" (370")
Metal Guard Elevation None

Screen Material PVC
Casing Diameter 1 7/8
Static Water Level 20'7" (247")
Well Volume 5.6 Liters

Type of Well Verticle
Up- or Downgradient Downgradient

Location of Well Southwest edge of bluff

II. Well Clearing Data

Device Used Peristalic pump
Volume of Water Removed 17 Liters

Material of Construction Tygon

III. Sampling Data

Significant Weather Conditions Dry
Barometric Pressure

	Sample Parameters	Sample Equipment	Container and Volume	Sample Preservative	Holding Time
1.					
2.	No odor Sample silty				
3.	Static after bailing 20'7½"				
4.	Time of sampling 3:25pm				
5.					
6.					

IV. Field Data

Well volume = 123" x .01639 x 3.14 x .379 = 5.6 Liters x 3 = 16.7
Initial Conductivity of diluted sample 760

Notes: Temp of Sample 46°F
pH 6.84
* Conductivity at 25°C 1482 micromhos/cm

MN-COMP 0043721

* Note: Conductivity exceeds meter capability therefore the sample was diluted with distilled water of 19 micromhos/cm. 760 - 19 x 2 = 1482

~~GROUNDWATER MONITORING SAMPLING DATA SHEET~~

Plant Twin Cities Assembly
Date 3/3/82
Well # 6-3

Reason for Sampling Required monitoring
Person Sampling E.C., T.H., R.B
Laboratory Handling
Analysis SSECO

I. Well Data USGS Coordinates

Casing Elevation 704.85
Casing Material PVC
Casing Depth 27' 3½" (327.5)
Metal Guard Elevation None

Screen Material slotted PVC
Casing Diameter 1 7/8
Static Water Level 16' 7" (199)
Well Volume 5.8 Liters

Type of Well Verticle
Up- or Downgradient Downgradient

Location of Well South edge of bluff

II. Well Clearing Data

Device Used Peristalic Pump
Volume of Water Removed 18 Liters

Material of Construction Tygon

III. Sampling Data

Significant Weather Conditions Dry
Barometric Pressure

	Sample Parameters	Sample Equipment	Container and Volume	Sample Preservative	Holding Time
1.					
2.	No odor				
3.	Static after bailing 16' 7"				
4.	Time of sampling 4:35 pm				
5.					
6.					

IV. Field Data

Well volume = 128.5 x 3.14 x .879 x .01639 = 5.8 Liters x 3 = 17.4 Liters
Initial Conductivity of diluted sample 852

Notes: Temp of sample 45°F
pH 7.07
*Conductivity at 25°C 1666 micromhos/cm

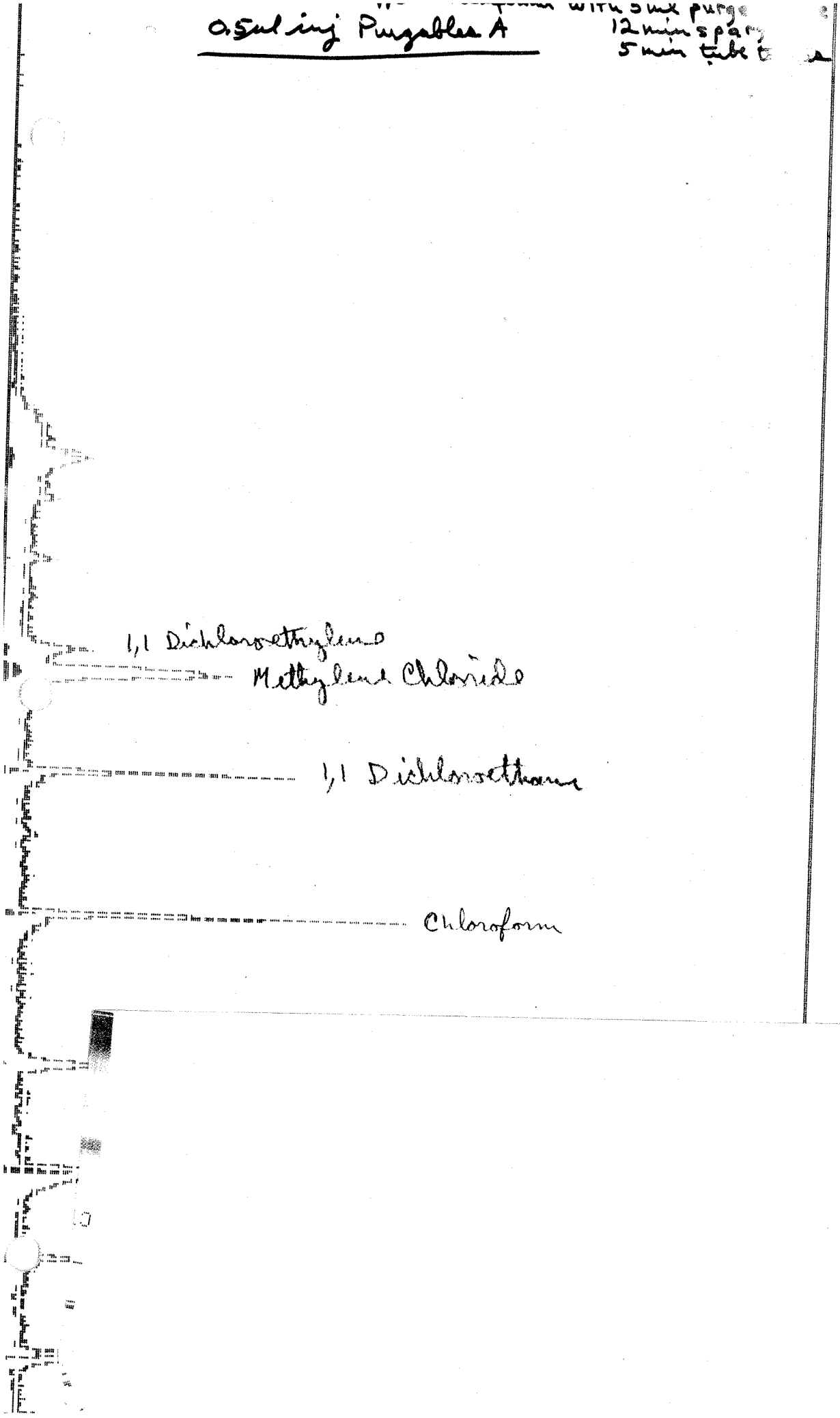
MN-COMP 0043722

* Note Conductivity exceeds meter capability therefore sample was diluted with distilled water of 19 micromhos/cm. 852 - 19 x 2 = 1666

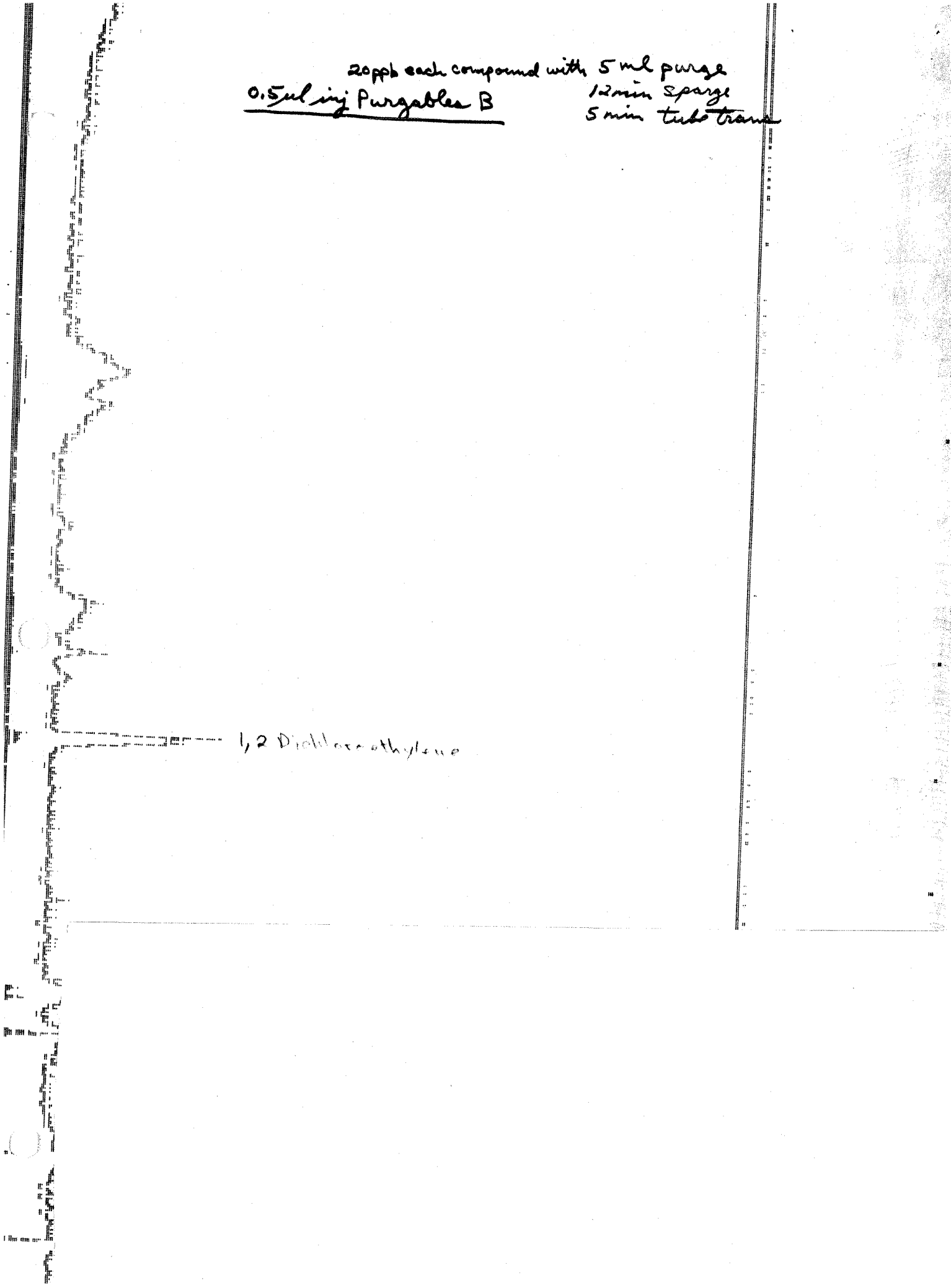
APPENDIX D

LABORATORY DATA SHEETS

MN-COMP 0043723


0.5ul inj Purgables A
with 5 ml purge
12 min spar
5 min tube t
1,1 Dichloroethylene
Methylene Chloride
1,1 Dichloroethane
Chloroform

20ppb each compound with 5 ml purge
0.5ul inj Purgables B 12 min Sparge
5 min tube trans



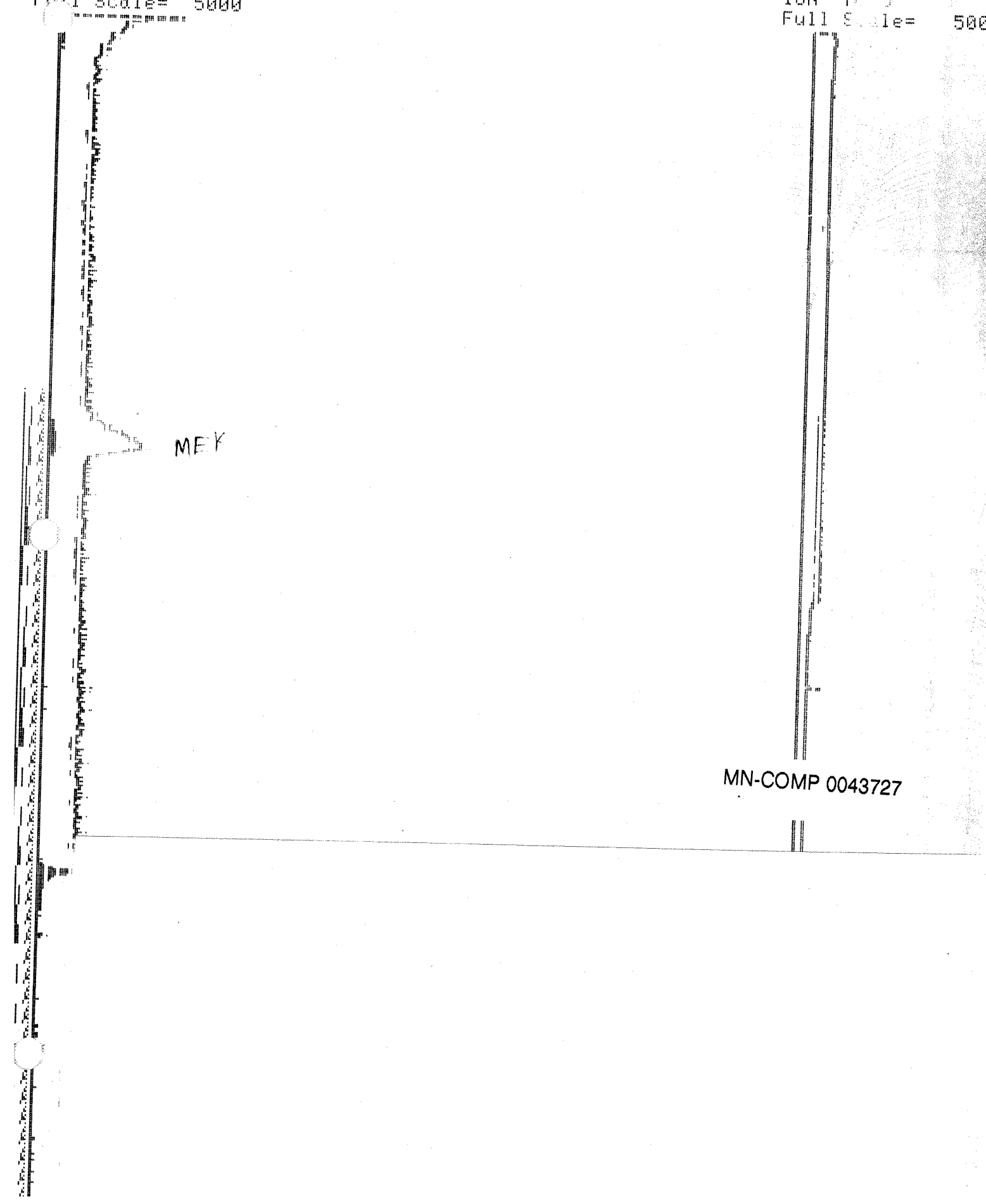
20 ppb each compound with 5 ml purge 12 min sparge
0.5 ml inj Purgables C w/surrogate spike 5 min tube trans.

— Dichlorodifluoromethane
— Chloromethane
— Vinyl Chloride
— Chloroethane

MN-COMP 0043726

SAMPLE IDENTIFICATION 0.2 ul inj MEK + MIBK Std in Methanol 5 purge
129 ppb & 128 ppb

TOTAL ABUNDANCE FROM 40 TO 250 amu
Full Scale= 5000



ION 7[illegible]
Full S[illegible]le= 500

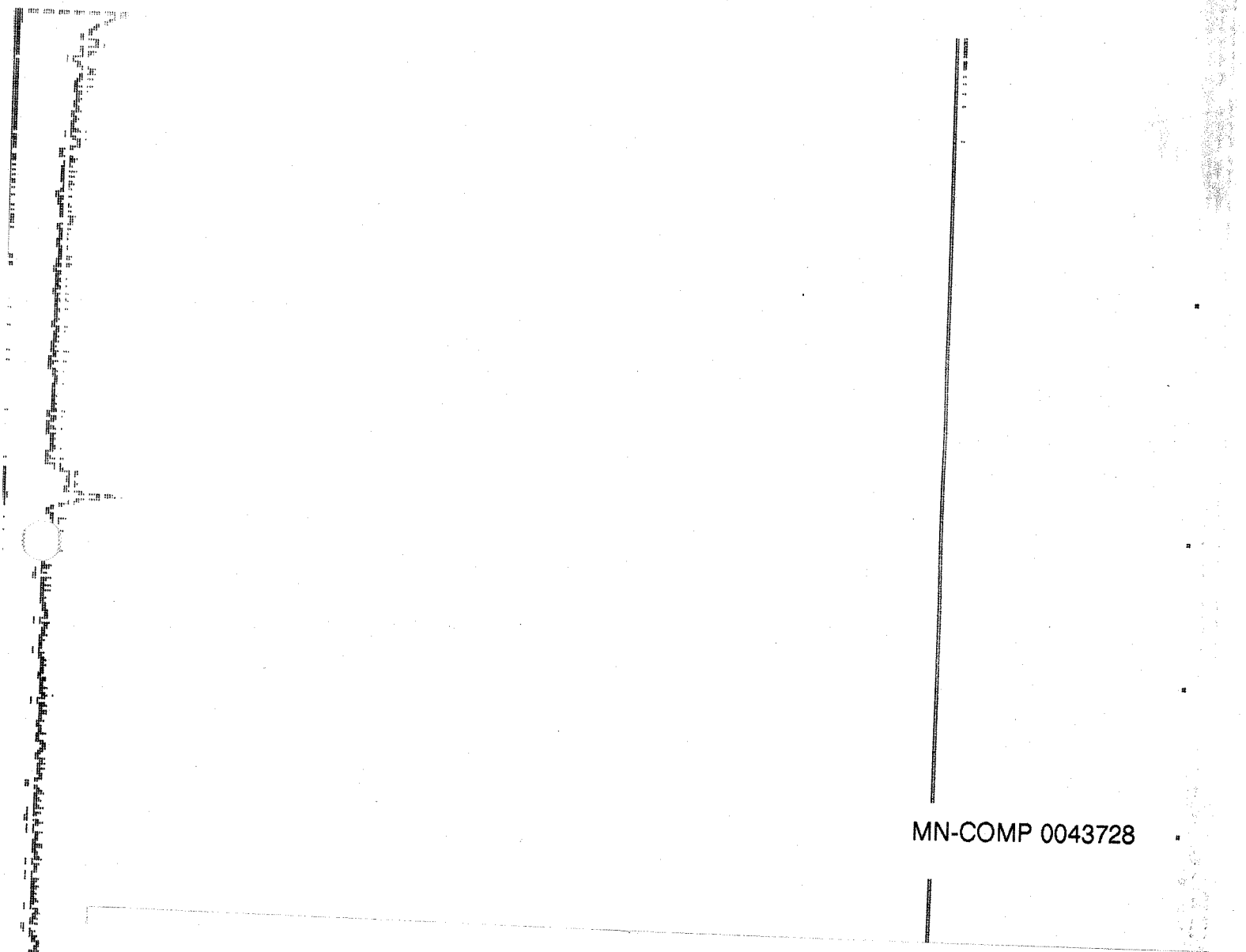
MN-COMP 0043727

[illegible] stripped spectra recorded in PEAKFINDE
gin run SAVING ALL SPECTRA.

5.0ml
MPLE IDENTIFICATION Twin Cities - Field Blank w/Surrogate Spike 5ml purge

TAL ABUNDANCE FROM 35 TO 250 amu
Il Scale= 5000

ION 51.1
Full Scale= 500

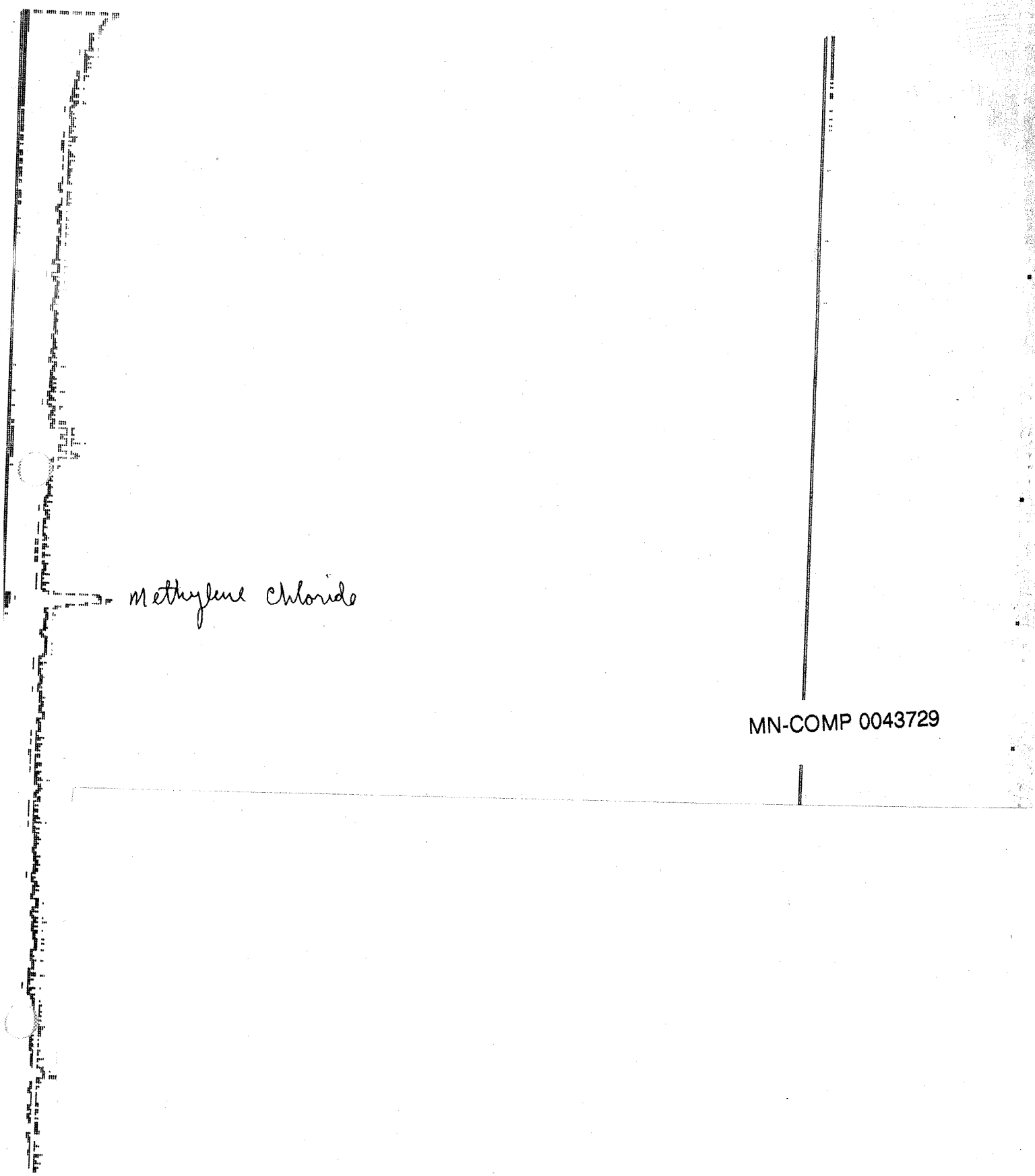


MN-COMP 0043728

AMPLE IDENTIFICATION 5.0ml Twin Cities VOA-PE ...sing Blank w/surrogate Spk 5ml purge

OTAL ABUNDANCE FROM 35 TO 250 amu
ull Scale= 5000

ION $1.1
Full Scale= 500

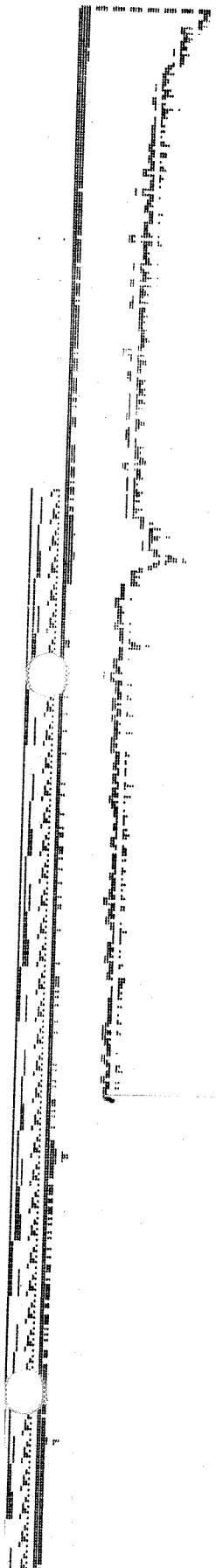


MN-COMP 0043729

SAMPLE IDENTIFICATION Twin Cities sampled B-1 w/Surrogate Sp 82 purge 5m

TOTAL ABUNDANCE FROM 35 TO 250 amu
Full Scale= 5000

ION 51.1
Full Scale= 500



MN-COMP 0043730

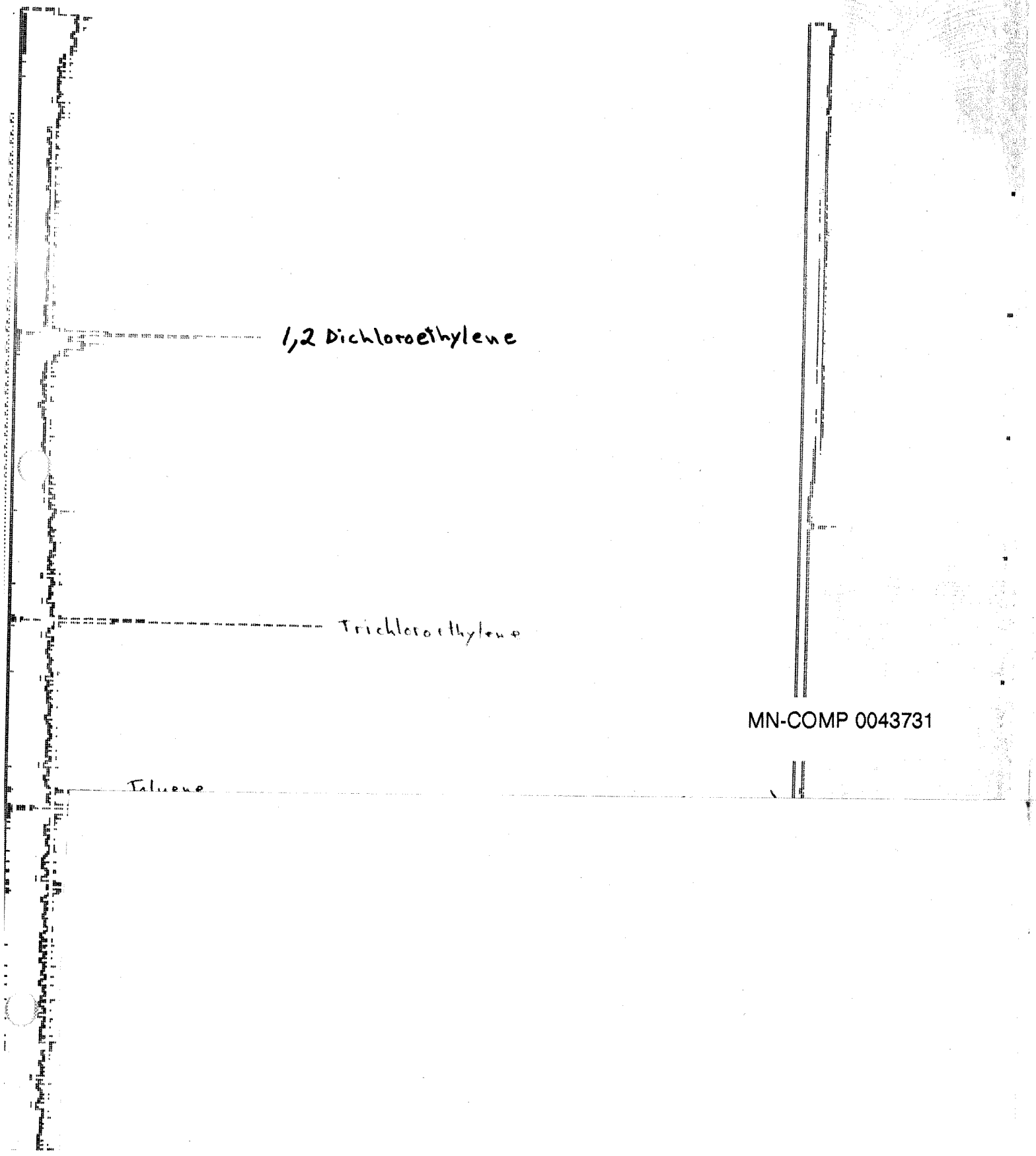
5ml purge

MPLE IDENTIFICATION Twin Cities Well B sampled 3-3-8

w/25ppb 1Chloro2Bromopropane (Surrogate Spik

TAL ABUNDANCE FROM 45 TO 250 amu
ull Scale= 5000

ION 78.0
Full Scale= 500



MN-COMP 0043731

...... seconds when saving all spe
Unstripped and stripped spectra recorded in PEAKFINDER mode
Begin run in PEAKFINDER MODE.

Duplicate

Smd purge

SAMPLE IDENTIFICATION 5.0ml Twin Cities B-3 w/25ppb 1chloro2fluoro propane

TOTAL ABUNDANCE FROM 45 TO 250 amu
Full Scale= 5000

ION 78.0
Full Scale= 500

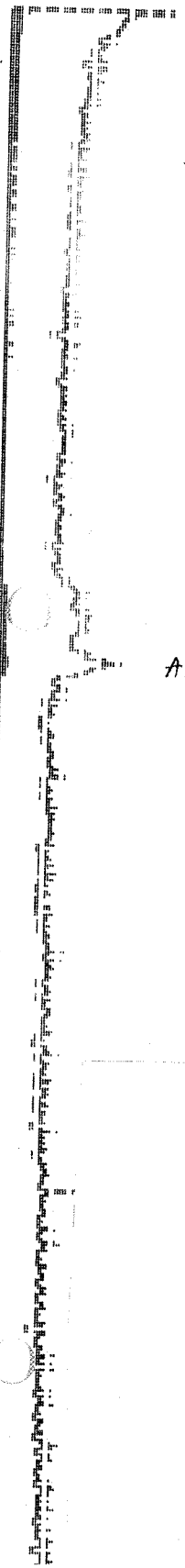
MN-COMP 0043732

nstripped and stripped spectra recorded in F saving all spectra.
egin run in PEAKFINDER MODE. INDER mode

AMPLE IDENTIFICATION 5.0 ml Twin Cities Well B-4 sampled 3-1-82 1/Surrogate Spike 5ml purg

OT ABUNDANCE FROM 35 TO 250 amu
ull Scale= 5000

ION 51.1
Full Scale= 500



Air Peak

MN-COMP 0043733

Book No. 2 TITLE Twin Cities Groundwater VOAs

n Page

Standardization VOA Std 3-12-82

- 1.5 gal each 1,2 Dichloroethylene, Trichloroethylene, Toluene + Xylenes in 100 mls Methanol
- 0.2 ul injected into 5.0 ml H_2O to be purged, giving concentrations and peak areas listed below.

Compound	Concentration in Methanol	(0.2 ul inj) Concentration in 5.0 ml H_2O purge	Major ions of interest ①	②	③	Peak Area under Ion ① curve
s 1,2 Dichloroethylene	1.265 mg/ml	50.6 ppb	95.90	60.95	98.0	2824
Trichloroethylene	1.4556 mg/ml	58.2 ppb	129.85	132.0	95.0	6274
Toluene	0.86694 mg/ml	34.7 ppb	91.05	92.0	65.0	9499
Xylenes (3 isomers)	0.8685 mg/ml	34.74 ppb	106	91.05	78.0	4120
loro 2 Bromopropane (Surrogate)	0.2 mg/ml	1.25 ul inj ~25 ppb	77	79	49	2121

nalytical Data - analyzed on 3/9/82

Compound		Well B-1 w/Surrogate	Well B-2 w/Surrogate	Well B-3	Well B-4 w/Surrogate
2 Dichloroethylene	PA	<100	711	<100	100
	Conc	<2 ppb	12.7 ppb	<2 ppb	<2 ppb
Trichloroethylene	PA	373	516	<100	<100
	Conc	3.5	4.8	<2	<2
Toluene	PA	390	216	<100	393
	Conc	1.4	0.8	<1	1.4
Xylenes (3 isomers)	PA	<100	<100	<100	<100
	Conc	<1	<1	<1	<1
ll other VOA compounds were not detected.					
loro 2 Bromopropane (Surrogate)	PA	2254	2073		2044
	Conc.	~27	~24		~24

See Supelco A+B+C Std Runs for comparison page 52

MN-COMP 0043734

tandardization and concentration calculations were done using i pry ion ① peak areas and known standard concentrations.

To Page No.

essed & Understood by me,	Date	Invented by	Date
		Recorded by T. Geyer	3-12-82

Data - Duplicate Runs for Samples plus Blanks

For standards values and tabulation see page 52, this bo
- Samples for Wells B-2 and B-3 were rerun on 3/17/82
Samples for Wells B-1, B-4, Field Blank + Casing Blank were run 4/12/8

Compounds		Duplicate well B-1 w/surrogate	Duplicate well B-2 w/surrogate	Duplicate well B-3 w/surrogate	Duplicate well B-4 w/surrogate	Field Blank No surrogate	Duplicate Field Blank (w/surrogate)	PVC Bla[illegible] casing w/surrogate	PVC Bl casin w/surrog
1,2 Dichloroethylene	PA	<100	940	<100	<100	<100	<100	<100	<100
	Conc	<2	17.1	<2	<2	<2	<2	<2	<2
Trichloroethylene	PA	307	609	<100	<100	<100	<100	<100	<100
	Conc	2.6	5.1	<2	<2	<2	<2	<2	<2
Toluene	PA	515	274	<100	257	<100	<100	931	97[illegible]
	conc	2.0	1.0	<1	1.0	<1	<1	3.7	3.[illegible]
Xylenes	PA	<100	<100	<100	<100	<100	<100	153	23[illegible]
	Conc	<1	<1	<1	<1	<1	<1	<1	<1
Chloro 2 Bromopropane (Surrogate)	PA	3103	4660	4588	3234	—	4528	3648	382
	Conc								

All other VOA compounds were Less than Detection Limit, see page 52
MEK and MIBK also less than Detection Limit " "
Except Methylene Chloride (see below)

Methylene Chloride	PA	<100	<100	<100	<100	<100	<100	667	75[illegible]
	Conc	<1	<1	<1	<1	<1	<1	6.0	6.[illegible]

MN-COMP 0043735

m Page No. Using thick coated DB-5 Fused silica capillary column and Tekmar purge + Trap system with 5 ml purge volume

Priority Pollutant VOA compound	Concentration of Standard (ug/l)	Standard Peak Area	Primary Ion of Interest	Peak Area Threshold	Detection Limit (ug/l)
Purgables A					
Methylene Chloride	20	2210	49	100	0.9 (<1)
1,1 Dichloroethylene		504	96		4.0 (<5)
,1 Dichloroethane		2114	63		0.9 (<1)
Chloroform		2122	83		0.9 (<1)
Carbon tetrachloride		883	117		2.3 (<5)
1,2 Dichloropropane		732	63		2.7 (<5)
Trichloroethylene		2390	129.95		1.4 (<2)
,1,2 Trichloroethane		505	99		4.0 (<5)
Dibromochloromethane		734	127		2.7 (<5)
Tetrachloroethylene		1251	165.8		1.6 (<2)
Chlorobenzene		3689	112		0.5 (<1)
Purgables B					
1,2 Dichloroethylene		1098	96		1.8 (<2)
1,2 Dichloroethane		1647	62		1.2 (<2)
1,1,1 Trichloroethane		1102	97		1.8 (<2)
Bromodichloromethane		1340	83		1.5 (<2)
rans 1,3 Dichloropropene		2959	75		0.7 (<1)
s 1,3 Dichloropropene		1303	75		1.5 (<2)
Benzene		4500	78		0.4 (<1)
Bromoform		491	173		4.1 (<5)
1,2,2 Tetrachloroethane		1215	83		1.6 (<2)
Toluene		5032	91.05		0.4 (<1)
Ethyl Benzene		5876	91.05		0.3 (<1)
Purgables C					
Chloromethane		1089	50		1.8 (<2)
Dichlorodifluoromethane		714	85		2.8 (<5)
Bromomethane		200	94		10.0 (<10)
Vinyl Chloride		897	62		2.2 (<5)
Chloroethane		896	64		2.2 (<5)
Others					
ethyl Isobutyl Ketone	128	3208	58		0.6 (<1)
2-Butyl Ethyl Ketone	129	426	72		4.7 (<5)
Xylenes	20	4968	91.05		0.4 (<1)

MN-COMP 0043736

Recorded by Tom Forever 4-15-82

Twin Cities Assembly Plant
Groundwater Monitoring Wells Survey

December 1, 1982

MN-COMP 0043737

Stationary Source Environmental Control Office
Environmental and Safety Engineering Staff

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Twin Cities Assembly Plant
Groundwater Monitoring Wells Survey

December 1, 1982

Conducted By

Ford Motor Company
Stationary Source Environmental Control Office
Survey and Evaluation

Survey Conducted By:

E. D. Chraszcz

T. J. Geyer

Prepared By:

E. D. Chraszcz

Concur:

J. M. Reinke, Manager

MN-COMP 0043738

RECEIVED
FEB 14 1983
MINN. POLLUTION
CONTROL AGENCY

Ford Motor Company
Environmental and Safety
Engineering Staff

One Parklane Boulevard
Dearborn, Michigan 48126

February 11, 1983

Mr. Douglass N. Day
Minnesota Pollution Control Agency
Regulatory Compliance Section
Solid and Hazardous Waste Division
1935 West County Road B2
Roseville, MN 55113

Subject: Twin Cities Assembly Plant
Waste Disposal Site--Groundwater Investigation

Dear Mr. Day:

Attached for your review is our final report covering the groundwater and Mississippi River samplings performed December 1, 1982 in the vicinity of the inactive waste disposal site at the Twin Cities Assembly Plant.

The results of groundwater elevation measurements confirm our earlier contention of a westerly groundwater flow to the Mississippi River. Accordingly, both Wells B1 and B5 can be considered upgradient wells, unaffected by the disposal site. The similarity of groundwater elevation with the Mississippi River also confirms a hydraulic connection between the two. Thus any contribution of the disposal site would undoubtedly flow into the River.

Dissolved metals in both the groundwaters and River were well below U.S. EPA Interim Drinking Water Standards. Only trace levels of five organics were detected in the groundwaters, three of which were also detected in the River upstream of the disposal site. 1,2 Dichloroethylene was detected in downgradient wells B2 and B4 at concentrations of 21 ugm/l and 8 ugm/l respectively, however none was detected in any River water samples.

In their February 26, 1982 Hydrogeologic Engineering Evaluation, Soils Testing Services estimated the groundwater flow past the disposal site to be approximately 15,000 gallons per day. Recent groundwater elevational data supports the hydraulic gradient used in their estimate. On this basis, and an estimated River flow of 6.5×10^9 gallons per day at this location, a groundwater dilution factor of 4.3×10^5 would be achieved. Thus the trace levels of 1,2 dichloroethylene detected could not present a problem to any potential user.

These findings, establish that the disposal site is not adversely affecting any water supplies and no further investigations of this site is warranted.

Very truly yours,

J.M. Reinke, Manager
Survey and Evaluation
Stationary Source Environmental
Control Office

jb
Attachment
cc: R.M.Major

MN-COMP 0043739

Twin Cities Assembly Plant
Groundwater Monitoring Wells Survey
December 1, 1982

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III.	Summary	4
IV.	Results	6

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MN-COMP 0043740

I. Introduction

As part of a continuing investigation into potential groundwater contamination resulting from an old inactive disposal site at the Twin Cities Plant, the Minnesota Pollution Control Agency (MPCA) requested Ford Motor Company to install an additional groundwater well (B5) to be monitored in conjunction with the four wells currently in place. The additional well location was approved by the MPCA prior to installation. In addition, samples and elevation data of the Mississippi River were also obtained for informational purposes.

On December 1, 1982 representatives from Ford's Stationary Source Environmental Control Office (SSECO) conducted a sampling program of the groundwater in the wells. Mr. Douglas Day of the MPCA was present during the sampling to review the procedures used and to obtain split samples. As in the first survey on March 3, 1982, the parameters selected for analysis were based on a joint agreement between Ford and the MPCA and included:

- USEPA volatile priority pollutants
- Xylenes
- Methylethylketone
- Methylisobutylketone
- pH
- Specific conductivity
- Dissolved heavy metals (Cd,Cr,Pb,Cn,Ni,Zn)

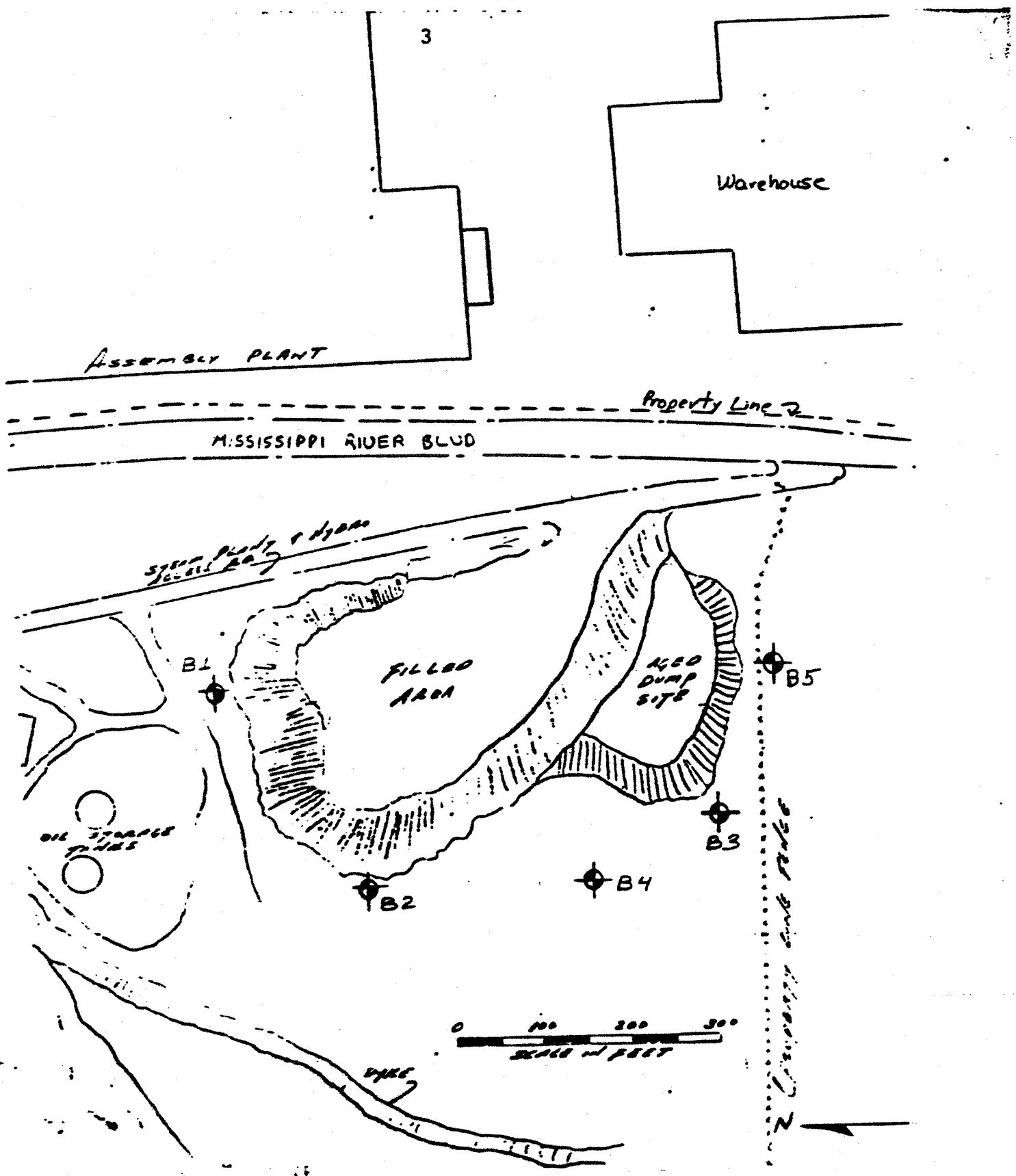
MN-COMP 0043741

II. Site Description and Well Locations

The disposal site was used by the plant to dispose of construction rubble, paint sludges and old paints and solvents. It has not been used since 1965. For a thorough description of the plant site, refer to the report dated March 3, 1982.

Figure 1 shows the location of the original 4 monitoring wells and the location of the recently installed 5th well. Well B5 was installed on November 30, 1982. The well casing is 2" schedule 80 PVC pipe with the lower 10' of casing slotted and wrapped with Miarafi 140S fabric. Detailed information on the procedures used for installing the well and the well boring log can be obtained from the report of Soil Testing Services of Minnesota dated December 14, 1982 contained in Appendix D.

MN-COMP 0043742



MN-COMP 0043743

FIGURE 1
TWIN CITIES ASSEMBLY PLANT
SITE AND WELL LOCATION

III. Summary

A summary of the results from the well and river sampling appears in Table I. On the basis of static water level measurements, Wells B1 and B5 should be considered upgradient wells. These wells appear to be unaffected by the disposal site while Wells B2, B3 and B4 are downgradient of the disposal site.

As indicated by the data, metals concentrations in the groundwater from the wells and the samples from the river are consistently low, significantly below USEPA Interim Drinking Water Standards. Only trace levels of five volatile organic compounds were detected in the wells, three of which were also detected in the river both upstream and downstream of the site.

MN-COMP 0043744

Table 1

Groundwater Analysis Summary
December 1, 1982

		Well					River		
Dissolved Metals		B1	B2	B3	B4	B5	R1[1]	R2[1]	R3[1]
Copper	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	0.003	0.003	0.003	0.005	<0.001	<0.001	0.001	
Zinc	mg/l	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05
Nickel	mg/l	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Chromium	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead	mg/l	0.005	0.005	0.004	0.006	0.003	<0.002	<0.002	<0.002
pH	Units	7.1	8.6	9.0	8.2	8.4	8.5	8.6	
Specific Conductivity	Umhos/cm	982	1210	1260	1580	942	377	380	
Temperature	°F.	47	51	52	53	51	34	33	
Volatile Organics Detected									
1,2-Dichloroethylene	µg/l	ND	22.0	<2	6.7	ND	ND	ND	ND
Benzene	µg/l	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/l	2.1	<1	<1	<1	<1	3	<1	<1
Chlorobenzene	µg/l	ND	ND	<1	<1	ND	ND	ND	ND
Xylene(3 isomers)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1

averaged from 2 samples

Note 1:

R1--Mississippi River upstream of Ford Power Plant.
R2--Mississippi River near southern property boundary.
R3--Mississippi River in park approx. 200 yds. south of Ford property.

MN-COMP M0043744.01

IV. Results

At the time of Well B5 installation, the PVC casings of all wells were resurveyed by Soil Testing Services. This information was used to determine if any settling of well casings had occurred. The survey was completed on December 1, 1982. Static head measurements taken on December 1, in conjunction with updated well elevations, now provide a clearer picture of groundwater flow direction. Listed below are both the new and original casing elevations.

Table 2

Well Casing Elevations

	January 1982	December 1982
Well B1	730.52	730.49
B2	718.96	718.75
B3	704.85	704.67
B4	708.63	708.48
B5		703.81
*BM-1		691.75
*BM-2		691.81
*Lath		698.57

*BM-1 In river approximately 20' from southern fence line.
*BM-2 In river approximately 50' north of BM-1.
*Lath On river bank near BM-2.

Additionally, three locations were established in and along the river to monitor river elevations. STS installed a lath on the river bank and two metal benchmark stakes in the river. The site plan in the attached STS report illustrates the location of the new benchmarks.

MN-COMP 0043745

IV. Results (Cont.)

Listed below are the static water levels as measured on December 1, 1982.

Table 3

Groundwater Level Data

Well No.	Static Water Levels 12/1/82
B1	691.85
B2	691.13
B3	691.42
B4	691.58
B5	691.96
River	
BM-1	691.42

Based on the groundwater elevations, the flow appears to be moving westerly toward the river as illustrated in Figure 2. This direction supports our original contention that Well B1 is an upgradient well and, in addition, confirms that Well B5 is likewise an upgradient well.

The river elevation was determined at 9:00 am on December 1, (691.21) and at 2:15 pm (691.42). Although the elevation increased by .21 the water level in Well B4 showed no appreciable change. There may be a delay, however, associated with correlating river and well elevations which could not be determined during this survey.

On December 1, 1982 SSECO collected samples of Mississippi River water in order to analytically compare river water to well water. Samples were collected upstream of the Ford powerplant and downstream near the southern boundary of Ford property and approximately 200 yards

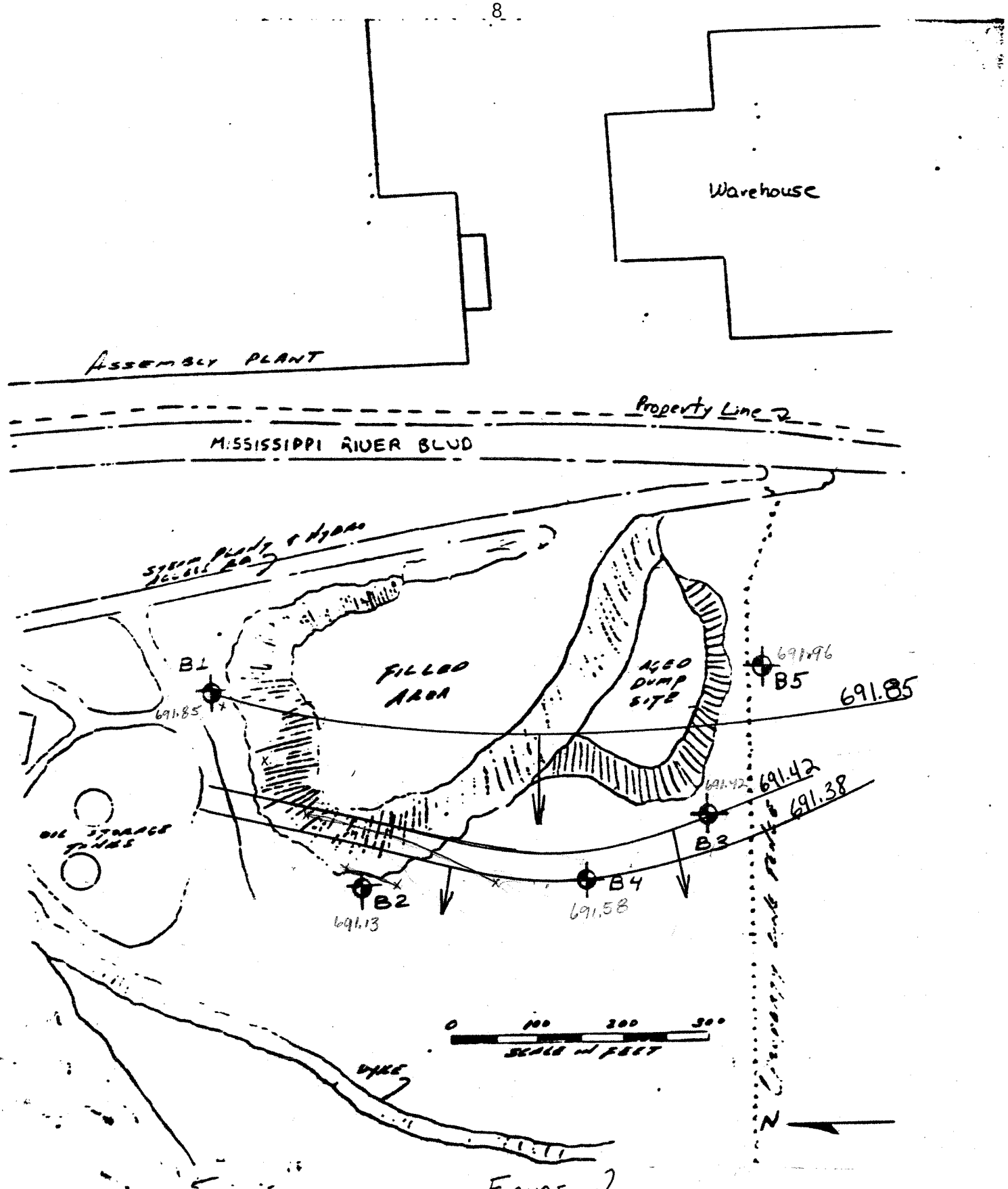


FIGURE 2
TWIN CITIES ASSEMBLY PLANT
GROUND WATER ELEVATIONS AND FLOW DIRECTION

MN-COMP 0043747

IV. Results (Cont.)

south of the property, in the park. The results are shown in Table 4. Only trace levels of these organics were detected. Dissolved metals were all below detectable levels.

Specifications regarding the exact method of analysis with respect to metals and organics can be found in Appendix B together with the detection levels associated with each procedure.

The results of the dissolved metals analyses appear in Table 5 .

Table 6 contains the results of analyses for the volatile organic compounds. As indicated, the samples were run in duplicate and the results show acceptable agreement.

MN-COMP 0043748

Table 4

Twin Cities Assembly Plant
River Sampling Results
December 1, 1982

	Units	River Upstream of Power Plant	River Downstream on Ford Property	River Downstream in Park
Dissolved Metals				
Copper	mg/l	<0.05	<0.05	<0.05
Cadmium	mg/l	<0.001	0.001	
Zinc	mg/l	<0.05	<0.05	<0.05
Nickel	mg/l	<0.02	<0.02	
Chromium	mg/l	<0.05	<0.05	<0.05
Lead	mg/l	<0.002	<0.002	<0.002
pH	units	8.5	8.6	
Specific Conductivity	umhos/cm	377	380	
Temperature	°F.	34	33	
Volatile Organics				
1,2-Dichloroethylene	ug/l	ND	ND	ND
Benzene	ug/l	<1	<1	<1
Toluene	ug/l	3.0	<1	<1
Chlorobenzene	ug/l	ND	ND	ND
Xylene	ug/l	<1	<1	<1

MN-COMP 0043749

Table 5

Twin Cities Assembly Plant
Groundwater Analysis Summary
Dissolved Metals Results

Dissolved Metals	Units	B1	B2	B3	B4	B5
Copper	mg/l	< 0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/l	0.003	0.003	0.003	0.005	<0.001
Zinc	mg/l	<0.05	<0.05	<0.05	0.06	<0.05
Nickel	mg/l	0.06	<0.02	<0.02	<0.02	<0.02
Chromium	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05
Lead	mg/l	<0.005	0.005	0.004	0.006	0.003
pH	Units	7.1	8.6	9.0	8.2	8.4
Specific Conductivity	Umhos/cm	982	1210	1260	1580	942
Temperature	^{o}F.	47	51	52	53	51

MN-COMP 0043750

Table 6

Twin Cities Assembly Plant
Groundwater Analysis Summary
Volatile Organic Results

	Units	B1	B1 Duplicate	B2	B2	B3	B3	B4	B4	B5	B5
1,2-Dichloroethylene	µg/l	ND	ND	21.3	22.6	ND	<2	8.1	5.3	ND	ND
Benzene	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/l	1.9	2.2	1.1	<1	<1	1.6	0.6	<0.1	0.6	0.5
Chlorobenzene	µg/l	ND	ND	ND	ND	<1	<1	<1	<1	ND	ND
Xylene (3 isomers)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

MN-COMP 0043751

Appendix A

Sampling Procedures

MN-COMP 0043752

Appendix A

Sampling Procedures

Prior to sampling, static water level determinations were made. Based on the static and the depth of each well, the volumes of water in each well casing was calculated. Each well was then cleared to remove three times the calculated water volume. Wells B1, B2 and B5 were cleared by manual methods utilizing a stainless steel bailer. Wells B3 and B4 were not as deep and therefore could be cleared with a peristalic pump and Tygon tubing suction line. Once clearing was completed, the static water level was again determined and the samples were withdrawn from the wells with a stainless steel bailer. Table 7 represents some of the pertinent well data as it relates to the monitoring survey.

In order to avoid either cross contamination or contamination from extraneous sources, the stainless steel bailer was subjected to a thorough cleaning before being immersed in a well. The bailer was first rinsed with organic free water followed by a methanol rinse and finally a second rinse with organic free water. Also, at each well a new section of braided nylon line was attached to the bailer for sampling purposes.

The wells were sampled in the following order: Wells B3, B4, B2, B1, and B5. Well B3 was sampled first since the first sampling indicated no detectable levels of trace organics. Samples for volatile priority pollutants plus xylenes, methylethyl ketone, and methylisobutyl ketone were collected by transferring some of the sample from the bailer to the individual volatile organic sampling vials. Care was taken to avoid

MN-COMP 0043753

Table 7

Twin Cities Assembly Plant
Survey of Groundwater Monitoring Wells
December 1, 1982
Well Data

Well Number	Time Sampled	Casing Top Elevation (ft)	Static Water Level (ft)	Casing Depth (ft)	Well Volume (liters)	Amount Water Removed (liters)	Static After Bailing (ft)
B1	12:05 pm	730.49	38'7-3/4"	53'6½"	8	24	38'7"
B2	11:45 am	718.75	27'7-7/16"	46'9"	10	30	27'6-3/4"
B3	10:55 am	704.67	13'3"	27'3½"	7.6	23	13'2-5/8"
B4	11:20 am	708.48	17'1¼"	30'10"	7.4	22	17'1"
B5	12:40 pm	703.81	11'10¼"	24'8"	6.9	21	11'11"

MN-COMP 0043754

Appendix A (Cont.)

both unnecessary agitation of the sample and air bubbles trapped in the sealed vial. Volatile samples were maintained at $4^{o}C$. until analysis. A second portion of the sample was filtered through a 0.45 micron filter on site and the filtrate acidified to pH2. This sample was analyzed for dissolved metals. PH, conductivity and temperature determinations were performed on site.

MN-COMP 0043755

Appendix B

Analytical Procedures

Temperature, pH and specific conductivity were determined on site using a Horiba Model U-7 water analyzer. Metals determinations were made using an Instrument Laboratory (IL) 151 atomic absorption spectrometer. Additionally, a Model 453 IL graphite furnace was employed for the determination of lead. Listed below are the detection limits:

Metals Detection Limits (mg/l)

Copper	0.05
Lead	0.002
Cadmium	0.001
Zinc	0.05
Nickel	0.02
Chromium	0.05

The low detection limits for nickel and cadmium were achieved on the flame unit by concentrating the sample by a factor of 10.

MN-COMP 0043757

Appendix B (Cont.)

Volatile organic concentrations were measured utilizing a Hewlett Packard HP 5992 GC/MS, incorporating a thirty meter, fused Silica, thick coat, DB-5 capillary column. The GC/MS was used in conjunction with an Envirochem Unicon purge and trap device and a Hewlett Packard dual floppy disc data storage system. The detection limits listed below were determined by the lower peak area threshold limit, which is set by the analytical program used.

Priority Pollutant VOA Compound	Detection Limit(ppb)	Priority Pollutant VOA Compound	Detection Limit(ppb)
Purgeables A		Purgeables B	
Methylene Chloride	< 1	1,2 Dichloroethylene	< 2
1,1 Dichloroethylene	< 5	1,2 Dichloroethane	< 2
1,1 Dichloroethane	< 1	1,1,1 Trichloroethane	< 2
Chloroform	< 1	Bromodichloromethane	< 2
Carbon tetrachloride	< 5	trans 1,3 Dichloropropene	< 2
1,2 Dichloropropane	< 5	cis 1,3 Dichloropropene	< 2
Trichloroethylene	< 2	Benzene	< 1
1,1,2 Trichloroethane	< 5	Bromoform	< 5
Dibromochloromethane	< 5	1,1,2,2 Tetrachloroethane	< 2
Tetrachloroethylene	< 2	Toluene	< 1
Chlorobenzene	< 1	Ethyl Benzene	< 1

Priority Pollutant VOA Compound	Detection Limit(ppb)
Purgeables C	
Chloromethane	< 2
Dichlorodifluoromethane	< 5
Bromomethane	< 10
Vinyl Chloride	< 5
Chloroethane	< 5
Others	
Methyl Isobutyl Ketone	< 1
Methyl Ethyl Ketone	< 5
Xylenes	< 1

MN-COMP 0043758

Appendix C

Field Data Sheets

MN-COMP 0043759

GROUNDWATER MONITORING SAMPLING DATA SHEET

Plant Twin Cities
Date 12-1-82
Well # B-1

Reason for Sampling Required monitoring
Person Sampling E.C., T.G.
Laboratory Handling
Analysis SSECO

I. Well Data USGS Coordinates

Casing Elevation 730.49
Casing Material PVC
Casing Depth 53'6½" (642.5")
Metal Gaurd Elevation None

Screen Material PVC
Casing Diameter 1 7/8"
Static Water Level 38' 7¾" (463.75")
Well Volume 8 Liters

Type of Well Verticle
Location of Well North edge of bluff

Up- or Downgradient

II. Well Clearing Data

Device Used stainkss steel bailer
Material of Construction stainkss steel
Volume of Water Removed 24 Liters

III. Sampling Data

Significant Weather Conditions
Barometric Pressure

Sample Parameters	Sample Equipment	Container and Volume	Sample Preservative	Holding Time
VOA		VOA vials	Cool to 4°C	14 days
Diss Metals		250ml plastic	HNO_3	6 mos

IV. Field Data

Well Volume (3.14 x .01639 x r^2 x h) 3.14x.01639x.879x178.75 = 8 Liters
Analytical Results: Temperature 47°F Ph 7.08 Conductivity 982 micromhos/cm

Notes: static before sampling 38'7" Time of sampling 12:05pm

GROUNDWATER MONITORING SAMPLING DATA SHEET

Plant Twin Cities
Date 12-1-82
Well # B-2

Reason for Sampling Required monitoring
Person Sampling E.C., T.G.
Laboratory Handling
Analysis SSECO

I. Well Data USGS Coordinates

Casing Elevation 718.75
Casing Material PVC
Casing Depth 46'9" (561")
Metal Gaurd Elevation None

Screen Material PVC
Casing Diameter 1 7/8
Static Water Level 27'7 7/16" (331.44")
Well Volume 10 Liters

Type of Well Verticle
Location of Well Northwest edge of bluff

Up- or Downgradient

II. Well Clearing Data

Device Used Stainless steel bailer
Material of Construction stainless steel
Volume of Water Removed 30 Liters

III. Sampling Data

Significant Weather Conditions
Barometric Pressure

Sample Parameters	Sample Equipment	Container and Volume	Sample Preservative	Holding Time
VOA		VOA vials	Cool to 4°	14 days
Diss. metals		250 ml plastic	HNO_3	6 mos

IV. Field Data

Well Volume (3.14 x .01639 x r^2 x h) 3.14 x .01639 x .879 x 229.56 = 10 Liters
Analytical Results: Temperature 51°F Ph 8.6 Conductivity 1210 microhms/cm

Notes: Static before sampling 27'6 3/4" Time of sampling 11:45 am

GROUNDWATER MONITORING SAMPLING DATA SHEET

Plant Twin Cities
Date 12-1-82
Well # B-3

Reason for Sampling Required monitoring
Person Sampling E.C., T.G
Laboratory Handling
Analysis SSECO

I. Well Data USGS Coordinates

Casing Elevation 704.67
Casing Material PVC
Casing Depth 27'3½" (327.5")
Metal Gaurd Elevation None

Screen Material PVC
Casing Diameter 1 7/8"
Static Water Level 13'3" (159")
Well Volume 7.6 Liters

Type of Well Verticle
Location of Well South edge of bluff

Up- or Downgradient

II. Well Clearing Data

Device Used Peristalic Pump
Material of Construction Silicon tubing
Volume of Water Removed 23 Liters

III. Sampling Data

Significant Weather Conditions
Barometric Pressure

Sample Parameters	Sample Equipment	Container and Volume	Sample Preservative	Holding Time
VOA		VOA VIALS	Cool to 4°C	14 days
Diss Metals		250ml PLASTIC	HNO_3	6 mos

IV. Field Data

Well Volume (3.14 x .01639 x r^2 x h) 3.14 x .01639 x .879 x 168.5 = 7.6 Liters
Analytical Results: Temperature 52°F Ph 9.0 Conductivity 1260 micromhos/cm

Notes: Static before sampling 13'2 7/8" Time of sampling 10:55 AM

GROUNDWATER MONITORING SAMPLING DATA SHEET

Plant Twin Cities
Date 12-1-82
Well # B-4

Reason for Sampling Required monitoring
Person Sampling E.C., T.G.
Laboratory Handling
Analysis SSECO

I. Well Data USGS Coordinates

Casing Elevation 708.48
Casing Material PVC
Casing Depth 30'10" (370")
Metal Gaurd Elevation None

Screen Material PVC
Casing Diameter 1 7/8"
Static Water Level 17'1¼" (205.25")
Well Volume 7.4 Liters

Type of Well Verticle
Location of Well Southwest edge of bluff

Up- or Downgradient

II. Well Clearing Data

Device Used Peristalic Pump
Material of Construction Silicon Tubing
Volume of Water Removed 22 Liters

III. Sampling Data

Significant Weather Conditions
Barometric Pressure

Sample Parameters	Sample Equipment	Container and Volume	Sample Preservative	Holding Time
VOA		VOA vials	Cool to 4°C	14 days
Diss. Metals		250 ml plastic	HNO_3	6 mos

IV. Field Data

Well Volume (3.14 x .01639 x r^2 x h) 3.14 x .01639 x .879 x 164.75 = 7.4 Liters
Analytical Results: Temperature 53°F Ph 8.2 Conductivity 1580 micromhos/cm

Notes: Static before sampling 17'1" Time of sampling 11:20 am

GROUNDWATER MONITORING SAMPLING DATA SHEET

Plant Twin Cities
Date 12-1-82
Well # B-5

Reason for Sampling Required monitoring
Person Sampling E.C., T.G
Laboratory Handling
Analysis SSECO

I. Well Data USGS Coordinates

Casing Elevation 703.81
Casing Material PVC
Casing Depth 24'8" (296")
Metal Gaurd Elevation None

Screen Material PVC
Casing Diameter 1 7/8"
Static Water Level 11'10¼" (142.25")
Well Volume 6.9 Liters

Type of Well Verticle
Location of Well South edge of bluff off ~~property~~

Up- or Downgradient

II. Well Clearing Data

Device Used Stainless Steel bailer
Material of Construction Stainless steel
Volume of Water Removed 21 Liters

III. Sampling Data

Significant Weather Conditions
Barometric Pressure

Sample Parameters	Sample Equipment	Container and Volume	Sample Preservative	Holding Time
VOA		VOA vials	cool to 4°C	14 days
Diss metals		250 ml plastic	HNO_3	6 mos

IV. Field Data

Well Volume (3.14 x .01639 x r^2 x h) 3.14 x .01639 x .879 x 153.75 = 6.9 Liters
Analytical Results: Temperature 51°F Ph 8.4 Conductivity 942 micromhos/cm

Notes: Static before sampling 11'11" Time of sampling 12:40 pm

Appendix D

STS Consultants Well Drilling Report

STS Consultants Ltd.
2405 Annapolis Lane
Minneapolis, Minnesota 55441
(612) 559-1900

December 14, 1982

Mr. David Cloutier
Ford Motor Company
Twin Cities Assembly Plant
966 S. Mississippi River Blvd.
St. Paul, Minnesota 55101

STS Job No. 92776-B

RE: Installation of Monitoring Well B-5A at the Twin Cities Assembly Plant's Steam Plant.

Dear Mr. Cloutier:

In accordance with your Purchase Order No. 763889 dated October 25, 1982, we have completed the soil boring and monitoring well installation at location B-5A. We have also resurveyed the top of the 2 inch ID Schedule 80 PVC monitoring wells at locations B-1, B-2, B-3 and B-4. In addition, we have established three vertical control points near the bank of the Mississippi River west of the disposal site.

Three copies of this letter have been sent to the above address and carbon copies have been sent to the personnel designated below. The letter is accompanied by the Log of Boring No. B-5A, the Monitoring Well Construction Diagram for location B-5A, a site plan showing the new well location and new vertical control points along the bank of the Mississippi River, and a summary of the elevation survey completed November 30, 1982.

If we can be of further assistance to you, please do not hesitate to contact us.

Yours very truly,

STS CONSULTANTS, LTD.

Harvey A. Gullicks

Harvey A. Gullicks, P.E.
Project Engineer

James H. Overtoom

James H. Overtoom, P.E.
Principal Engineer

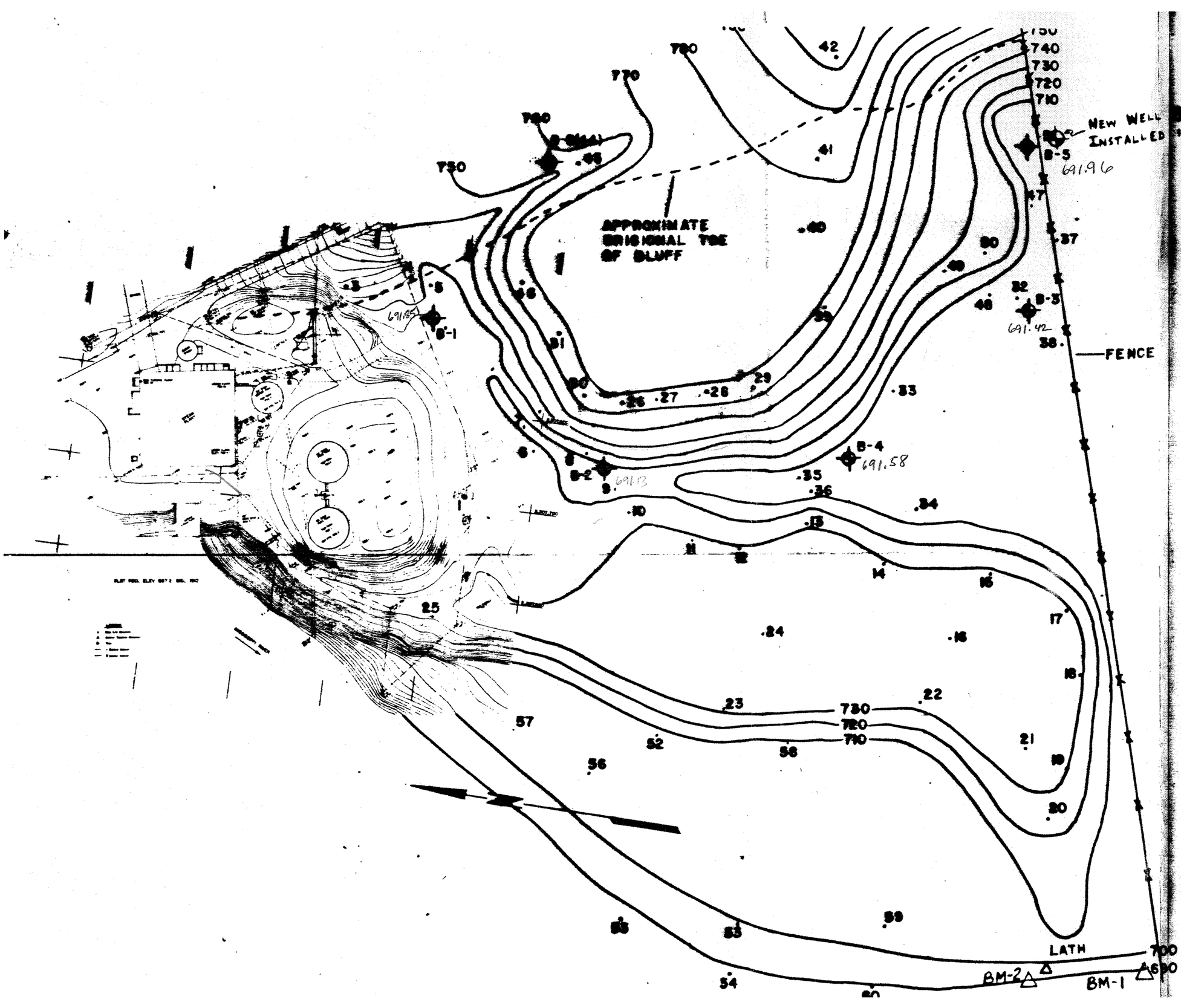
HAG/aec

Enclosures: Site Plan
Boring Log B-5A
Well Construction Diagram B-5A
Elevation Survey Results
General Notes
Unified Soil Classification System
ASTM Specification D-1586

cc: Mr. Jim Reinke, Manager - Survey and Evaluation
Stationary Source Environmental Control Office
Ford Motor Company - Suite 628
Parkland Towers West
Dearborn, Michigan 48126

Mr. A. M. Twilley
Ford Motor Company
Body and Assembly General Office
P. O. Box 1586 - Room C-280
Dearborn, Michigan 48121

Mr. Nick Eliades
Ford Motor Company
Body and Assembly General Office
P. O. Box 1586
Dearborn, Michigan 48121



SCALE IN FEET
0 50 100 150 200 250

LEGEND

- SOIL BORING
- GROUND SURFACE CONTOUR
- SOIL BORING AND MONITORING WELL INSTALLATION
- △ BENCHMARK ESTABLISHED AT MISSISSIPPI RIVER 11/30/82

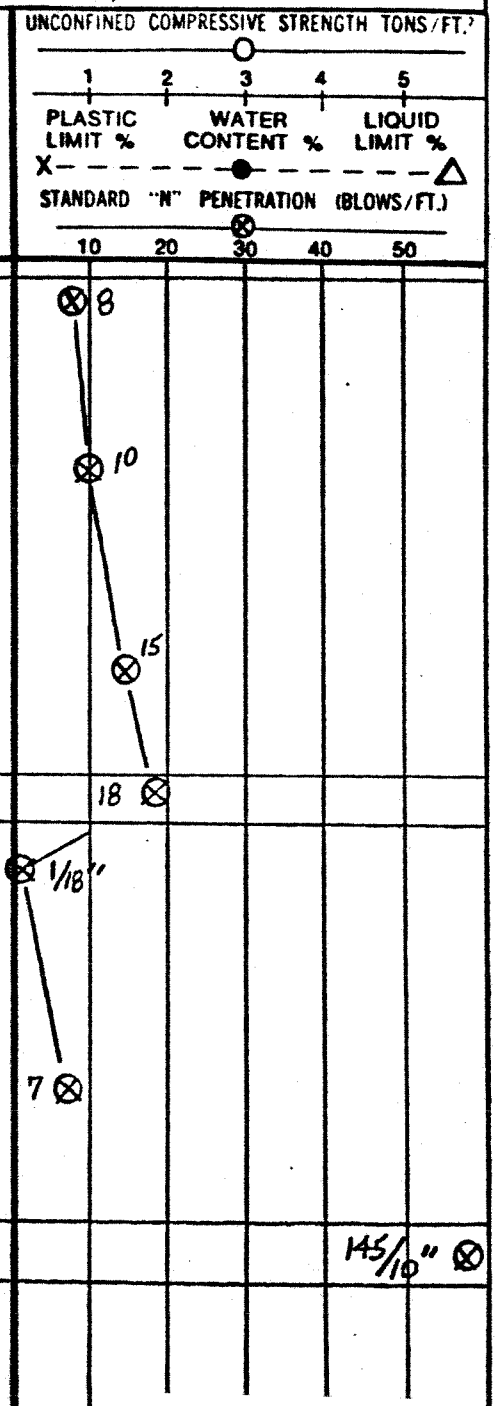
SITE PLAN
FORD MOTOR COMPANY
TWIN CITIES ASSEMBLY PLANT
DATE: 1-21-82
STS JOB NO. 92776
REVISED 12/13/82 MGD

MN-COMP 0043768

LOG OF BORING NO. B-5A

OWNER	ARCHITECT-ENGINEER
FORD MOTOR COMPANY, St. Paul, MN	
SITE Twin Cities Assembly Plant 966 S. Mississippi River Blvd.	PROJECT NAME Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST. RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3
				SURFACE ELEVATION 702	
	1	SS		Topsoil - silty sand - (OL)	
	1A	SS			
5.0'	2	SS		Fine to coarse sand, little to some gravel, trace to little cobbles, trace silt - brown - moist - medium dense - (SP)	
10.0'	3	SS			
	4	SS			
	4A	SS		Silty fine to coarse sand, some gravel and trace clay and cobbles - light brown to yellowish brown - wet to saturated - medium dense - (SM-SC)	
15.0'	5	SS			
20.0'	6	SS		Silty fine to medium sand, some gravel, little clay, trace cobbles - yellowish brown - saturated - loose to medium dense - (SC-ML) Note: With thin clean seams of fine sand - PROBABLE Weathered and Reworked ST. PETER SANDSTONE	
25.0' 25.4	7	SS		St. Peter Sandstone	
30.0'				End of boring at 25.4 ft. Boring augered to full depth using hollow stem augers. No wash water used while drilling. 2 inch ID PVC well installed (see attached diagram).	



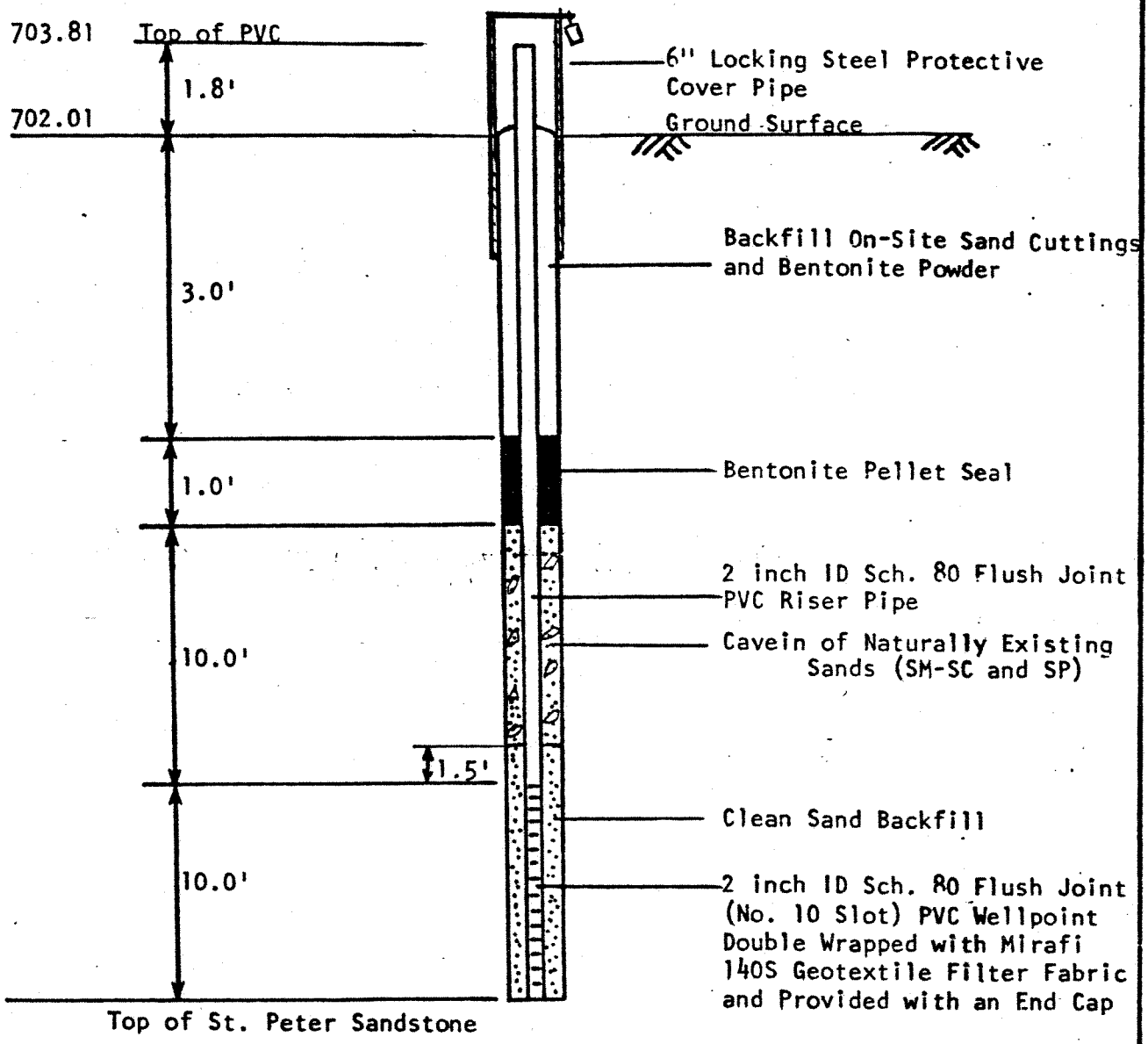
MN-COMP 0043769

WATER LEVEL OBSERVATIONS		
W.L.	13.5 ft. WS	
W.L.	B.C.R.	A.C.R.
W.L.		

STS CONSULTANTS, LTD.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/30/82		
BORING COMPLETED	11/30/82		
RIG	CME-75	FOREMAN	DW
DRAWN	HAG	APPROVED	HAG
JOB #	92776-B	SHEET	1 of 1

The stratification lines represent the approximate boundary



MN-COMP 0043770

CONSTRUCTION DIAGRAM

No Scale

FORD MOTOR COMPANY
Monitoring Well B-5A
Installed 11/30/82

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

HAG		92776-B	12/13/82

ELEVATION SURVEY
11/30/82
FORD MOTOR COMPANY
STS Job No. 92776-B

Station	Point of Reference	Elevation
B-1	Top of PVC Pipe	730.49*
B-2	Top of PVC Pipe	718.75*
B-3	Top of PVC Pipe	704.67
B-4	Top of PVC Pipe	708.48
B-5A (New Well)	Top of PVC Pipe	703.81
	Ground Surface	702.01
BM-1 South One at River	Top of Metal Tube	691.75
BM-2 North One at River	Top of Metal Tube	691.81
River Elevation on 11/30/82		691.35
Top of Lathe on Bank of River		698.57

Note: Starting point of survey B-1 top of PVC assumed to be 730.52 $\pm$ 0.1 ft. on 11/30/82 based on previous survey. All other elevations relative to B-1 top of PVC.

* Elevation after cutting off:

0.03 ft. at B-1
0.10 ft. at B-2

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GENERAL NOTES

DRILLING & SAMPLING SYMBOLS:

SS	:	Split Spoon - 1 3/8" I.D., 2" O.D. Unless otherwise noted	OS	:	Osterberg Sampler - 3" Shelby Tube
ST	:	Shelby Tube - 2: O.D., Unless otherwise noted	HS	:	Hollow Stem Auger
PA	:	Power Auger	WS	:	Wash Sample
DB	:	Diamond Bit - NX, BX, AX	FT	:	Fish Tail
AS	:	Auger Sample	RB	:	Rock Bit
JS	:	Jar Sample	BS	:	Bulk Sample
VS	:	Vane Shear	PM	:	Pressuremeter Test, In-Situ
			GS	:	Giddings Sampler

Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2 inch O.D. split spoon sampler, except where otherwise noted.

WATER LEVEL MEASUREMENT SYMBOLS:

WL	:	Water Level	WCI	:	Wet Cave In
WS	:	While Sampling	DCI	:	Dry Cave In
WD	:	While Drilling	BCR	:	Before Casing Removal
AB	:	After Boring	ACR	:	After Casing Removal

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable groundwater levels. In impervious soils, the accurate determination of ground water elevations may not be possible, even after several days of observations; additional evidence of ground water elevations must be sought.

GRADATION DESCRIPTION & TERMINOLOGY:

Coarse Grained or Granular Soils have more than 50% of their dry weight retained on a #200 sieve; they are described as: boulders, cobbles, gravel or sand. Fine Grained soils have less than 50% of their dry weight retained on a #200 sieve; they are described as: clays or clayey silts if they are cohesive and silts if they are non-cohesive. In addition to gradation, granular soils are defined on the basis of their relative in-place density and fine grained soils on the basis of their strength or consistency and their plasticity.

Major Component Of Sample	Size Range	Descriptive Term Of Components Also Present in Sample	Percent Of Dry Weight
Boulders	Over 8 in. (200 mm)	Trace	1 - 9
Cobbles	8 inches to 3 inches (200 mm to 75 mm)	Little	10 - 19
Gravel	3 inches to #4 sieve (75 mm to 4.76 mm)	Some	20 - 34
Sand	#4 to #200 sieve (4.76 mm to 0.074 mm)	And	35 - 50
Silt	Passing #200 sieve (0.074 mm to 0.005 mm)		
Clay	Smaller than 0.005 mm		

CONSISTENCY OF COHESIVE SOILS:

Unconfined Compressive Strength, Qu, tsf	Consistency
< 0.25	Very Soft
0.25 - 0.49	Soft
0.50 - 0.99	Medium (Firm)
1.00 - 1.99	Stiff
2.00 - 3.99	Very Stiff
4.00 - 8.00	Hard
> 8.00	Very Hard

RELATIVE DENSITY OF GRANULAR SOILS:

N - Blows per ft.	Relative Density
0 - 3	Very Loose
4 - 9	Loose
10 - 29	Medium Dense
30 - 49	Dense
50 - 80	Very Dense
80+	Extremely Dense

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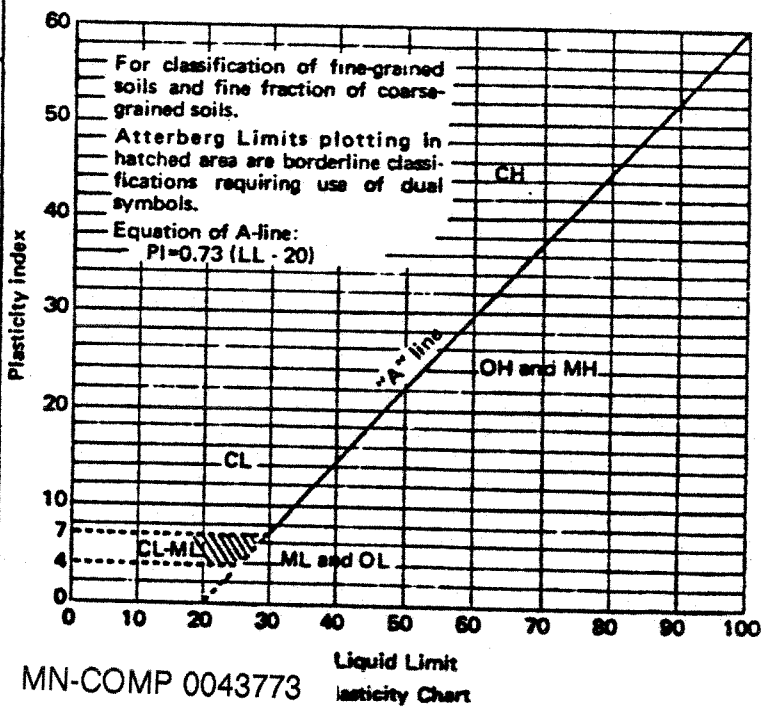
UNIFIED SOIL CLASSIFICATION SYSTEM

Major divisions			Group symbols	Typical names	Laboratory classification criteria
Coarse-grained soils (More than half of material is *larger* than No. 200 sieve size)	Gravels (More than half of coarse fraction larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	Not meeting all gradation requirements for GW
		Gravels with fines (Appreciable amount of fines)	GM d / u	Silty gravels, gravel-sand-silt mixtures	Atterberg limits below "A" line or P.I. less than 4 / Atterberg limits above "A" line with P.I. greater than 7 — Above "A" line with P.I. between 4 and 7 are *borderline* cases requiring use of dual symbols
			GC	Clayey gravels, gravel-sand-clay mixtures	
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3
			SP	Poorly graded sands, gravelly sands, little or no fines	Not meeting all gradation requirements for SW
		Sands with fines (Appreciable amount of fines)	SM d / u	Silty sands, sand-silt mixtures	Atterberg limits below "A" line or P.I. less than 4 / Atterberg limits above "A" line with P.I. greater than 7 — Limits plotting in hatched zone with P.I. between 4 and 7 are *borderline* cases requiring use of dual symbols.
			SC	Clayey sands, sand-clay mixtures	
Fine-grained soils (More than half of material is *smaller* than No. 200 sieve)	Silts and clays (Liquid limit less than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
			OL	Organic silts and organic silty clays of low plasticity	
	Silts and clays (Liquid limit greater than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
			CH	Inorganic clays of high plasticity, fat clays	
			OH	Organic clays of medium to high plasticity, organic silts	
Highly organic soils			Pt	Peat and other highly organic soils	

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:

Less than 5 per cent	GW, GP, SW, SP
More than 12 per cent	GM, GC, SM, SC
5 to 12 per cent	*Borderline* cases requiring dual symbols



MN-COMP 0043773

lasticity Chart

AMERICAN SOCIETY FOR TESTING AND MATERIALS

1916 Race St., Philadelphia, Pa. 19103

Reprinted from Copyrighted 1968 Book of ASTM Standards, Part 11

Standard Method for

PENETRATION TEST AND SPLIT-BARREL SAMPLING OF SOILS[1]

ASTM Designation: D 1586 – 67

This Standard of the American Society for Testing and Materials is issued under the fixed designation D 1586; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval.

1. Scope

1.1 This method describes a procedure for using a split-barrel sampler to obtain representative samples of soil for identification purposes and other laboratory tests, and to obtain a measure of the resistance of the soil to penetration of the sampler.

2. Apparatus

2.1 *Drilling Equipment*—Any drilling equipment shall be acceptable that provides a reasonably clean hole before insertion of the sampler to ensure that the penetration test is performed on undisturbed soil, and that will permit the driving of the sampler to obtain the sample and penetration record in accordance with the procedure described in 3. Procedure. To avoid "whips" under the blows of the hammer, it is recommended that the drill rod have a stiffness equal to or greater than the A-rod. An "A" rod is a hollow drill rod or "steel" having an outside diameter of 1⅝ in. or 41.2 mm and an inside diameter of 1⅛ in. or 28.5 mm, through which the rotary motion of drilling is transferred from the drilling motor to the cutting bit. A stiffer drill rod is suggested for holes deeper than 50 ft (15 m). The hole shall be limited in diameter to between 2¼ and 6 in. (57.2 and 152 mm).[2]

2.2 *Split-Barrel Sampler*—The sampler shall be constructed with the dimensions indicated in Fig. 1. The drive shoe shall be of hardened steel and shall be replaced or repaired when it becomes dented or distorted. The coupling head shall have four ½-in. (12.7-mm) (minimum diameter) vent ports and shall contain a ball check valve. If sizes other than the 2-in. (50.8-mm) sampler are permitted, the size shall be conspicuously noted on all penetration records.

2.3 *Drive Weight Assembly*—The assembly shall consist of a 140-lb (63.5-kg) weight, a driving head, and a guide permitting a free fall of 30 in. (0.76 m). Special precautions shall be taken to ensure that the energy of the falling weight is not reduced by friction between the drive weight and the guides.

2.4 *Accessory Equipment* — Labels, data sheets, sample jars, paraffin, and other necessary supplies should accompany the sampling equipment.

3. Procedure

3.1 Clear out the hole to sampling elevation using equipment that will ensure that the material to be sampled is not disturbed by the operation. In saturated sands and silts withdraw the drill bit slowly to prevent loosening of the soil around the hole. Maintain the water level in the hole at or above ground water level.

3.2 In no case shall a bottom-discharge bit be permitted. (Side-discharge bits are permissible.) The process of jetting through an open-tube sampler and then sampling when the desired depth is reached shall not be permitted. Where casing is used, it may not be driven below sampling elevation. Record any loss of circulation or excess pressure in drilling fluid during advancing of holes.

3.3 With the sampler resting on the bottom of the hole, drive the sampler with blows from the 140-lb (63.5-kg) hammer falling 30 in. (0.76 m) until either 18 in. (0.45 m) have been penetrated or 100 blows have been applied.

3.4 Repeat this operation at intervals not longer than 5 ft (1.5 m) in homogeneous strata and at every change of strata.

3.5 Record the number of blows required to effect each 6 in. (0.15 m) of penetration or fractions thereof. The first 6 in. (0.15 m) is considered to be a seating drive. The number of blows required for the second and third 6 in. (0.15 m) of penetration added is termed the penetration resistance, *N*. If the sampler is driven less than 18 in. (0.45 m), the penetration resistance is that for the last 1 ft (0.30 m) of penetration (if less than 1 ft (0.30 m) is penetrated, the logs shall state the number of blows and the fraction of 1 ft (0.30 m) penetrated).

3.6 Bring the sampler to the surface and open. Describe carefully typical

[1] Under the standardization procedure of the Society, this method is under the jurisdiction of the ASTM Committee D-18 on Soil and Rock for Engineering Purposes. A list of members may be found in the ASTM Year Book.

Current edition accepted Oct. 20, 1967. Originally issued 1958. Replaces D 1586 – 64 T.

[2] Hvorslev, M. J., *Surface Exploration and Sampling of Soils for Civil Engineering Purposes*, The Engineering Foundation, 345 East 47th St., New York, N. Y. 10017.

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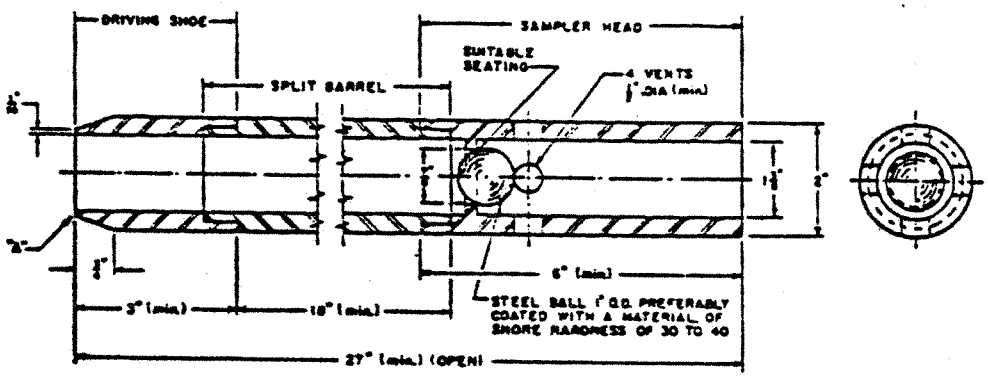

NOTE 1—Split barrel may be 1½ in. inside diameter provided it contains a liner of 16-gage wall thickness.

NOTE 2—Core retainers in the driving shoe to prevent loss of sample are permitted.

NOTE 3—The corners at *A* may be slightly rounded.

TABLE OF METRIC EQUIVALENTS

in.	mm	cm	in.	mm	cm
1/16 (16 gage)	1.5	...	2	...	5.08
½	12.7	...	3	...	7.62
¾	19.0	1.90	6	...	15.24
⅞	22.2	2.22	18	...	45.72
1⅜	34.9	3.49	27	...	68.58
1½	38.1	3.81			

FIG. 1—Standard Split Barrel Sampler Assembly

samples of soils recovered as to composition, structure, consistency, color, and condition; then put into jars without ramming. Seal them with wax or hermetically seal to prevent evaporation of the soil moisture. Affix labels to the jar or make notations on the covers (or both) bearing job designation, boring number, sample number, depth penetration record, and length of recovery. Protect samples against extreme temperature changes.

4. Report

4.1 Data obtained in borings shall be recorded in the field and shall include the following:

4.1.1 Name and location of job,

4.1.2 Date of boring—start, finish,

4.1.3 Boring number and coordinate, if available,

4.1.4 Surface elevation, if available,

4.1.5 Sample number and depth,

4.1.6 Method of advancing sampler, penetration and recovery lengths,

4.1.7 Type and size of sampler,

4.1.8 Description of soil,

4.1.9 Thickness of layer,

4.1.10 Depth to water surface; to loss of water; to artesian head; time at which reading was made,

4.1.11 Type and make of machine,

4.1.12 Size of casing, depth of cased hole,

4.1.13 Number of blows per 6 in. (0.15 m),

4.1.14 Names of crewmen, and

4.1.15 Weather, remarks.

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Ground Water
Protection Sect.

ASSESSMENT OF FILL AREAS

Ford Motor Company
Twin Cities Assembly Plant

PRINTED ON
OCT 25 1988

MN-COMP 0044279

October 1988
Ref. No. 2191

CONESTOGA-ROVERS & ASSOCIATES

Consulting Engineers

CONESTOGA-ROVERS & ASSOCIATES LIMITED
651 Colby Drive
Waterloo, Ontario, Canada N2V 1C2
(519) 884-0510

October 25, 1988

Reference No. 2191

Mr. Jerome Amber
FORD MOTOR COMPANY
15201 Century Drive
Dearborn, Michigan 48120

Dear Mr. Amber:

RE: Assessment of Fill Areas
Ford Motor Company
Twin Cities Assembly Plant

We have enclosed our report, "Assessment of Fill Areas, Ford Motor Company, Twin Cities Assembly Plant".

Should you have any questions, please do not hesitate to contact us.
Yours Truly,

CONESTOGA-ROVERS AND ASSOCIATES

Jon L. Christofferson

JLC/kk

cc: J. Kallaus
A. Van Norman

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OCT 25 88

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Land Quality Div.

LIST OF APPENDICES

APPENDIX A LOCATION OF SITES A AND B

APPENDIX B SOIL BORING LOGS

APPENDIX C MONITORING DATA FROM FORD REPORT DATED MARCH 3, 1988 (PAGES 6, 8 AND 9)

APPENDIX D MONITORING DATA FROM FORD REPORT DATED DECEMBER 1, 1982 (PAGES 5, 10, 11 AND 12)

APPENDIX E TEST PIT LOGS

APPENDIX F LABORATORY ANALYTICAL REPORTS

MN-COMP 0044281

1.0 INTRODUCTION

The Ford Motor Company, Twin Cities Assembly Plant (Plant) is located in St. Paul, Minnesota, at 966 South Mississippi River Boulevard. The Plant complex includes buildings on both sides of Mississippi River Boulevard. Buildings west of Mississippi River Boulevard are located below the river bluff on the river valley floor. Buildings east of Mississippi River Boulevard are located above the river bluff on the adjacent sand plains. The Plant location is presented on Figure 1.1.

The Plant was originally used to manufacture glass over 50 years ago. Since then the Plant has been expanded several times and is used to assemble motor vehicles. Presently the Plant is used to assemble pick-up trucks.

At different times during the Plant's history prior to 1970, paint sludges/wastes were deposited in a relatively small area on Plant property, west of Mississippi River Boulevard (Site C). This waste deposit was identified to U.S. EPA by Ford during the Superfund notification process. A hydrogeologic investigation was commissioned by Ford in 1981. Since that investigation was completed,

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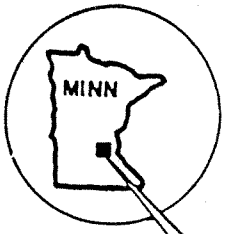

KEY MAP

MN-COMP 0044283

FIGURE 1.1
LOCATION PLAN
Ford Motor Company

CRA

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additional earth fill has been placed over part of the waste fill. The area is now used as a parking lot for tractor trailer truck units. Excavated materials from two other sites (Sites A and B) were subsequently moved to Site C. The locations of the fill Sites are also presented on Figure 1.1 and presented in more detail on Figure 1.2.

In an effort to address environmental issues that may be associated with past waste handling and disposal practices, Ford Motor Company (Ford) hired Conestoga-Rovers & Associates (CRA) to conduct an assessment of the wastes deposited at these sites. This assessment consisted of a file review, hydrogeologic evaluation, test hole excavation (test pits), stadia survey and waste characterization sampling. From these tasks an assessment and evaluation of site conditions was conducted. The results of these efforts are provided in the following sections of this report.

MN-COMP 0044284

2.0 BACKGROUND

At different times during the Plant's history, construction rubble and paint sludges/wastes were deposited in a relatively small area (Site C - approximately four acres in size) on Plant property west of Mississippi River Boulevard between the Boulevard and the Mississippi River. The majority of this material was deposited during the years 1950 through 1965. This practice was discontinued in 1965. During the years 1965 and 1966, construction debris was deposited in large quantities on top of this fill at Site C. The United States Corps of Engineers also deposited additional rubble between the Ford disposal Site and the river during reconstruction of the Lock and Dam No. 1 near the "Ford Bridge".

This Site C waste deposit was identified to the USEPA by Ford during the Superfund notification process. A hydrogeologic investigation was commissioned by Ford in 1981. Since the investigation was completed, additional fill has been placed over part of the Site C waste fill. Earth fill and construction rubble continue to be being brought to Site C including broken concrete and road excavation rubble from the construction of Mississippi River Boulevard. A major portion of the top of the fill has been paved with 8 inches of concrete and is now being used as a parking lot for

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tractor-trailer truck units. The remaining top area of Site C is being used as a snow dump during winter months for snow removed from area streets and parking lots.

Excavated materials from Site A and Site B areas were subsequently moved to Site C. Information regarding this process was noted during CRA's file review and is discussed in the section that follows.

MN-COMP 0044288

3.0 FILE REVIEW

A file review was conducted to compile information related to the Plant's pre-1965 waste generation, disposal practices, investigations and activities on or near the Plant facilities. Plant files were reviewed on November 17, 1987. The Minnesota Pollution Control Agency (MPCA) files were reviewed on December 4, 1987. The majority of the information and correspondence in the Plant files is dated between and including the years 1980 and 1984. The information in the MPCA files is for the most part duplication of the Ford files with the addition of internal MPCA memos and reports.

It was noted that MPCA's files contain a separate file of all the groundwater monitoring data to date that has been submitted by Ford.

The file review indicates for Site C that cardboard, wood and scrap metal may also be present in the waste deposit. Batteries, used light ballasts and capacitors were specifically excluded from the fill material and were sent to alternate off-site disposal. Undated copies of photographs show exposed drums and what appears to be paint sludge at various locations.

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Two additional waste deposits are identified in the file. The first area (noted in a October 6, 1982 letter from Ford to MPCA in the files as Site A) was located at the south end of a former test track east of the assembly plant. Paint sludges/wastes were deposited in this area from around 1943 until 1960. Quantities were not reported. This area was excavated in 1966 during a railroad car loading "tri-level" expansion. Sludge and "eastern materials"* were deposited in the Site C area.

The second area (noted in a October 6, 1982 letter from Ford to MPCA in the file as Site B) was located approximately 800 feet south and east of the main assembly building. It was reported that the area was used for burning waste and burial of factory waste during early plant operations up until 1945. Exact operational dates and quantities were not reported. The area was excavated as part of a paved parking lot expansion in 1962. Excavated materials were placed in the fill area "at the steam plant" now called Site C.

The October 6, 1982 letter from Ford to MPCA, noted above, is provided as Appendix A.

MN-COMP 0044291

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* A typographical error is suspected and "earthen materials" probably describes the excavated material.

In addition to the fill areas presently under review by CRA, a smaller waste deposit below the river bluff north of the steam plant was exavated and removed to a hazardous waste landfill (Wayne Disposal Inc., Bellville, Michigan) in July 1983 during construction of the wastewater treatment plant. Approximately 77 cubic yards was excavated and shipped. All waste observed as well as visibaly contaminated soils were removed. Analytical results of testing conducted by Ford confirmed that the waste did not exhibit hazardous waste characteristics. This effort was the subject of Ford's Amended Superfund Notification to USEPA dated August 16, 1983.

Aerial photographs from both files were used to prepare a plan illustrating the progression of fill at Site C from the access road westward. The limit of fill in 1945, 1956, 1958 and 1962 is illustrated on the Site Plan (enclosed). Filling with paint sludges/waste ceased in 1965. The limit of the paint sludges/wastes is expected to be close to the 1962 limit. Substantial filling with demolition rubble and excavation soil has occurred since 1965. The present limit of fill is also presented on the Site Plan. The paint sludges/wastes are buried beneath approximately 30 feet of rubble including large blocks of reinforced concrete. Total fill thickness throughout the area is approximately 60 feet. The fill thickness was estimated by constructing a cross section from topographic survey data and borehole logs. This information will be presented in Section 4.0.

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Due to the relocation of the materials from Site A and B to Site C, the discussions dealing with hydrogeologic conditions and field activities in Sections 4.0 and 5.0 respectively, deal primarily with Site C.

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4.0 PRELIMINARY HYDROGEOLOGIC EVALUATION

4.1 GEOLOGY

Site C is located on a point bar adjacent to the Mississippi River (see Site Plan). A point bar is a fluvial deposit, usually sand and gravel, located on the inward bend of a river channel. Behind Site C is a river bluff which consists of bedrock overlain by unconsolidated sediments.

Geologic description of Site C is based on soil borings performed by Soil Testing Services (STS) in 1981*. Soil boring logs are presented in Appendix B. Their locations are illustrated on the Site Plan.

At Site C, the first bedrock unit encountered is the St. Peter Sandstone. The St. Peter Sandstone is encountered at soil boring B5 at an approximate elevation of 683 feet AMSL. The St. Peter Sandstone is a white fine to medium grained quartz arenite. The sandstone has a maximum

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* Final Report, Hydrogeologic Engineering Evaluation, Ford Assembly Plant, St. Paul, Minnesota, Soil Testing Services of Minnesota, Inc. February 26, 1982.

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thickness of 150 feet. At the base of the St. Peter is a shale and siltstone unit that ranges in thickness from 5 to 50 feet (Guswa and others, 1982)*.

The Platteville Limestone, which overlies the St. Peter Sandstone, is present in the river bluffs. At the Site C, the Platteville Limestone is eroded away.

Overlying the St. Peter sandstone are consolidated sediments. At Site C, the sediment is described as an interbedded mixture of sand, silt and gravel with little clay. The sediment ranges in thickness from 25 feet to greater than 50 feet.

The sand and gravel deposit at Site C is overlain by artificial fill. The fill is composed of construction refuse, fire brick, slag and railroad ties intermixed with sand and gravel. Clean fill including construction rubble, broken concrete and soil continues to be placed west of Site C. In 1981, the Site C fill, as reported in the February 1982 STS report, ranged in thickness from 14 to 25 feet.

MN-COMP 0044296

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* Preliminary Evaluation of the Groundwater Flow Systems in the Twin Cities Metropolitan Area, Minnesota, U.S. Geological Survey Water Resources Investigation Report 82-44.

Based on the soil borings, a geologic cross section of the Site C area has been constructed. The location of the cross section is presented in Figure 4.1 and the cross section is presented in Figure 4.2. The cross section indicates a maximum fill thickness in excess of 60 feet.

4.2 HYDROGEOLOGY

Groundwater is encountered in the unconsolidated sand and gravel at an approximate elevation of 690 feet AMSL. Well construction details and groundwater elevations are summarized in Table 4.1. Well locations are presented on Figure 4.1 and the Site Plan.

Groundwater elevations measured by CRA are presented on Figure 4.1 and indicate that groundwater flows towards the Mississippi River in a northwesterly direction.

The groundwater elevation at well B4 is considered anomalous. The well casing has been broken at depth permitting infiltration through the casing. The broken parts will not fit back-together indicating possible horizontal displacement. Well B2 nas an obstruction in the well. The obstruction prohibits access to the water level by water measuring instruments.

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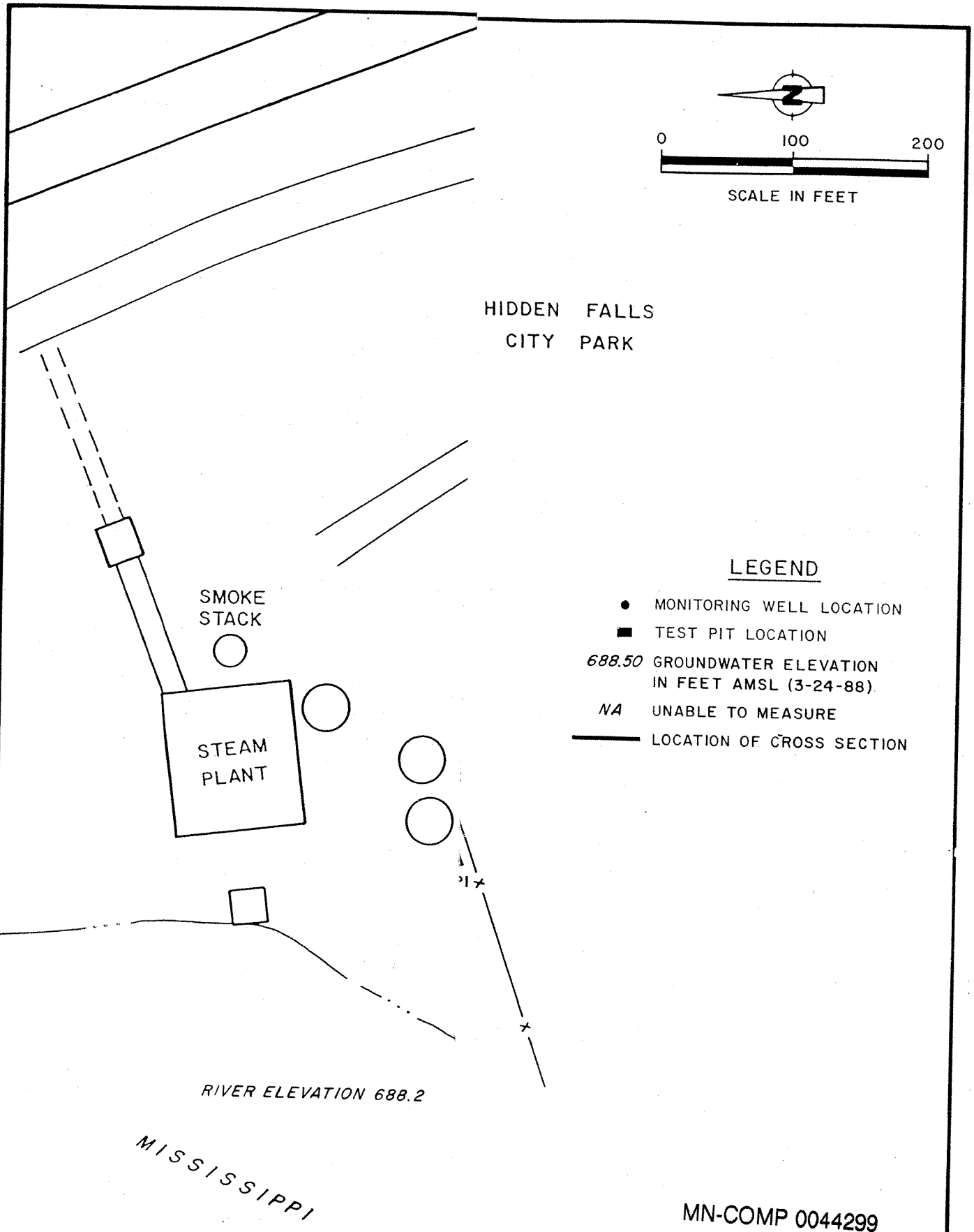

MN-COMP 0044299

figure 4.1
GROUNDWATER ELEVATIONS
Ford Motor Company

CRA

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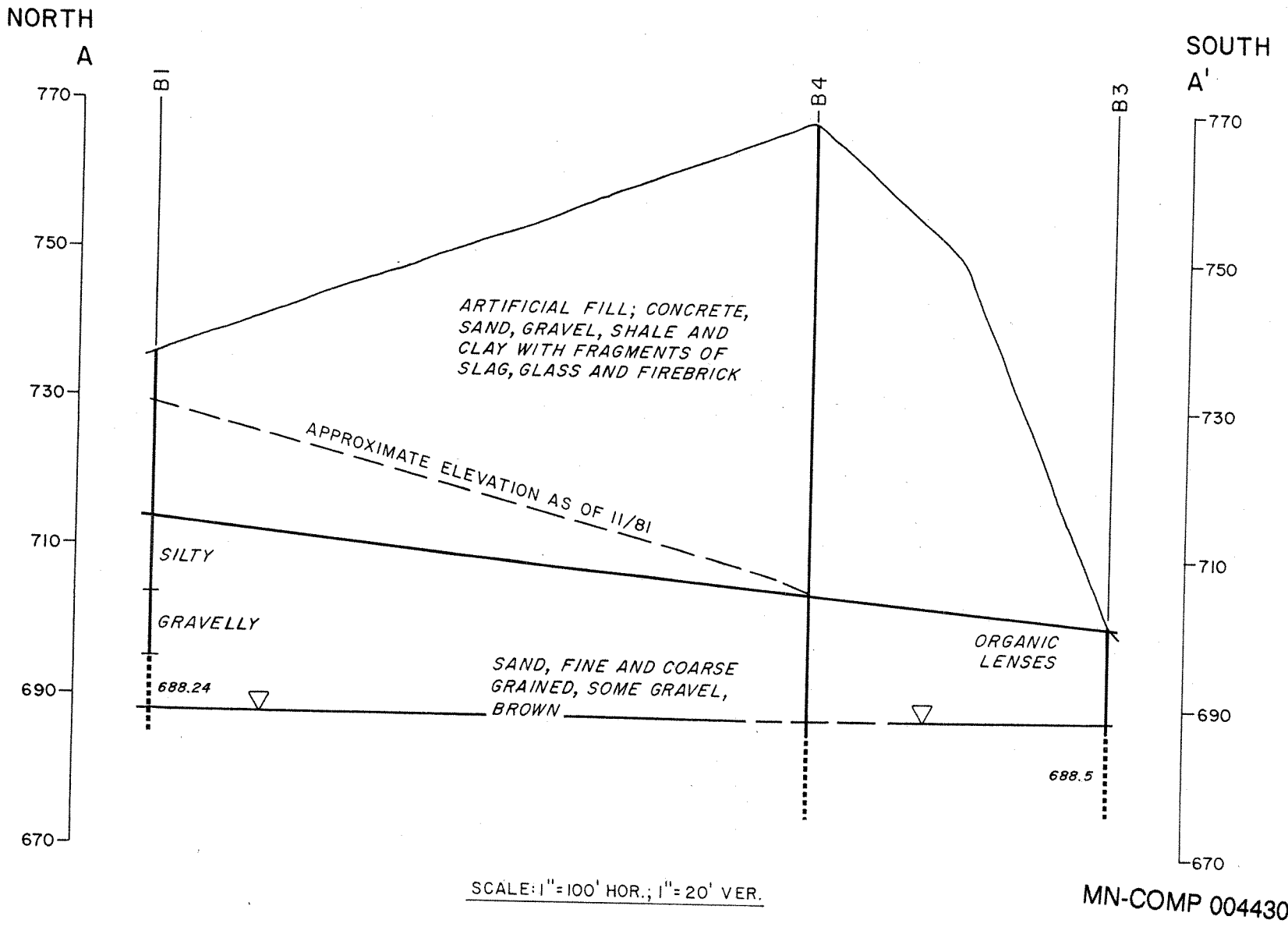

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GROUNDWATER ELEVATIONS TAKEN 3-24-88

figure 4.2
HYDROGEOLOGIC CROSS SECTION A-A'
Ford Motor Company

CRA

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TABLE 4.1

WELL CONSTRUCTION DETAILS AND GROUNDWATER ELEVATIONS

Well	Date Installed	Installed By	Material	Depth (ft. bgs)	Approximate Ground Elevation (ft. AMSL)	Top of Casing Elevation (ft. AMSL)	Mid Screen Elevation (ft. AMSL)	Water Level Elevations (3/24/88)
B1	12/31/81	STS	2" PVC	57.7	736.3	739.32*	683.6	688.24
B2	11/18/81	STS	2" PVC	98.7	770.0	773.17*	676.3	NA**
B3	11/17/81	STS	2" PVC	24.5	702.0	704.67	682.5	688.50
B4	11/19/81	STS	2" PVC	92.5	768.5	769.50*	681.0	714.05***
B5	11/30/82	STS	2" PVC	25.4	702.1	703.81	681.7	689.61

Notes:

* Resurveyed by CRA (2/16/88)
** Obstruction in well at 23.5' below top of casing
*** Anomolous, see text, Section 4

CONESTOGA-ROVERS & ASSOCIATES

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Groundwater is also encountered in the St. Peter Sandstone. The St. Peter aquifer is hydraulically connected to the overburden. The St. Peter aquifer has an average hydraulic conductivity of 2.3×10^{-3} ft/s and a transmissivity ranging from 18,000 to 45,000 gallons/day/foot (Walton and others, 1981)*. In the vicinity of the Site, the St. Peter is expected to discharge to the river and upward vertical gradients are expected to exist. Aqueous transport of any constituents in groundwater will be towards the river.

4.2.1 Site Hydraulic Conductivity

Grain size distribution curves are presented in the 1982 STS report. The grain size distribution can be used to estimate the permeability of the unconsolidated sand and gravel using Hazen's equation. Hazen's equation is an empirical formula that estimates permeability based on grain size distribution. Where:

$K = Ad_{10}^2$

K is the permeability in cm/s,

A is an empirical coefficient equal to 1.0 and

d_{10} is the grain size (in mm) of the 10 percent retained.

MN-COMP 0044302

* Engineering Geology of the St. Paul Energy Park and Vicinity, Minnesota Geology Survey, Reprint Series 44.

Estimated hydraulic conductivity values are presented in Table 4.2. The geometric mean hydraulic conductivity is 2×10^{-2} cm/sec. This is a relatively high hydraulic conductivity consistent with the sand and gravel soils.

Groundwater velocity can be estimated using the equation:

$$\bar{v} = \frac{Ki}{n}$$

where: $\bar{v}$ is the average groundwater linear velocity,

K is the hydraulic conductivity, (2×10^{-2} cm/sec)

i is the hydraulic gradient (0.002) and

n is the porosity (0.3).

The assumed porosity is 0.3, which is common for this type of sediment. The average hydraulic gradient is 0.002, based on groundwater elevations measured by CRA and presented on Figure 4.1.

By use of the above parameters, the average linear groundwater velocity is estimated to be 1.3×10^{-4} cm/sec, or 0.4 ft/day. In the approximately 40 years since materials have been deposited here, groundwater would have moved approximately one mile. The Mississippi River is within 200 feet of the present limit of fill, but was approixmately 800 feet away in 1945. In either case, groundwater from beneath Site C is entering the Mississippi River.

MN-COMP 0044303

TABLE 4.2

HAZEN'S PERMEABILITY

Borehole	Depth (ft. bgs)	d_{10} (mm)	K (cm/sec)
BH1	39.5 - 41	0.08	6×10^{-3}
BH2	19.5 - 21	0.25	6×10^{-2}
BH2	29.5 - 31	0.30	9×10^{-2}
BH2	34.5 - 36	0.075	5×10^{-3}
BH3	19.5 - 21	0.2	4×10^{-2}
BH5	10 - 11.5	0.08	6×10^{-3}
		Average =	2×10^{-2}

MN-COMP 0044304

4.2.2 Hydrology

Another factor in groundwater flow is the influence of the Mississippi River, which fluctuates seasonally. Upstream from the Site is Lock and Dam No. 1. Lock and Dam No. 1 is used for waterway traffic and not for flood control.

According to the U.S. Army Corps of Engineers, which operates the dam, the tail stream elevation ranges from 691 to 687 feet AMSL.

The tail stream flooding frequency at Lock and Dam No. 1 was investigated, since the Site is located on a flood plain. The frequency and tail stream elevation provided by the Corps of Engineers are:

Frequency	Elevations (ft. AMSL)
10 years	707
50 years	714
100 years	717
500 years	724

Based on ground level elevations, it should be expected that wells B3 and B5 would be submerged on an average frequency of once every ten years. Submergence could have a very significant effect on groundwater quality measured in these wells.

MN-COMP 0044305

The tail stream elevation during the flood that occurred during April of 1965 was 719.02.

4.3 GROUNDWATER QUALITY

Groundwater samples were collected from the on-site monitoring wells on March 3, 1982, and December 1, 1982 by representatives from Ford's Stationary Source Environmental Control Office (SSECO). The results of this monitoring conducted by Ford are presented in the reports titled "Twin Cities Assembly Facility Groundwater Monitoring Wells Survey" and dated March 3, 1982 and December 1, 1982. The tables from these reports that summarize the monitoring data are provided for reference in Appendix C (for March 1982) and Appendix D (for December 1982). The samples were analyzed for USEPA Volatile Priority Pollutants, xylenes, methyl ethyl ketone, methyl isobutyl ketone, pH, specific conductivity and dissolved heavy metals (Cd, Cr, Pb, Cu, Ni, Zn).

Dissolved metals concentrations were low and within the range of typical groundwater concentrations*. Three VOC parameters, 1,2-Dichloroethylene, Trichloroethylene

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* Handbook on the Toxicology of Metals Vol.2 Friberg, Nordberg and Vouk, Elseview Science Publishers, 1986.

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CONESTOGA-ROVERS & ASSOCIATES

and Toluene, were reported at low concentrations at three of the monitoring wells in place in March 1982. Total VOC at any individual location was less than 25 ug/L.

The same parameter list was monitored in December 1982. Dissolved metals were again typical of natural groundwater concentrations*. The concentration of 1,2-Dichloroethylene increased slightly in monitoring well B2, but the total VOC remained below 25 ug/L. Two additional VOC parameters, chlorobenzene and xylene, were reported at trace concentrations.

As expected, no measurable impact was defined upstream and downstream in the Mississippi River monitoring conducted by SSECO on December 1, 1982. Three VOC reported downstream of the Ford plant at trace concentrations were also reported at equal or higher concentrations upstream from the property.

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* Handbook on the Toxicology of Metals Vo.1.2 Friberg, Nordberg and Vouk, Elseview Science Publishers, 1986.

5.0 FIELD ACTIVITIES

5.1 TEST PITS

On December 4, 1987, CRA and its subcontractor mobilized a rubber tired backhoe at Site C along the river. An attempt was made to gain access to the low land areas south of the trailer storage pad. Several attempts were made to reach the bluff, but on each attempt the backhoe got stuck. One test pit (TP1), shown on the Site Plan, was successfully completed. No evidence of past disposal (i.e. visual or odor) was noted at this test pit location.

On January 19, 1988, a second attempt was made to access this area. A track mounted backhoe was used this time and mobility was not as difficult due to frozen conditions. A total of 10 test pits were excavated to an approximate depth of nine feet below ground surface.

The individual test pit logs are presented in Appendix E. The test pit locations are presented on the Site Plan.

Physical evidence of waste presence (i.e. odor or visual) was noted only at test pits TP3 and TP8. Test pit TP3 exibited soil with a gray/black color having a

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CONESTOGA-ROVERS & ASSOCIATES

paint like odor and test pit TP8 showed visual evidence of the same gray/black color as TP3, but without the odor. No evidence of waste presence was noted at the other test pits. The steep side slopes and 30 foot thickness of rubble fill over the pre-1965 materials prevented collection of a samples.

Table 5.1 provides a summary of the analytical results of detected parameters for leachate analysis from test pits TP3 and TP8. A copy of the laboratory report of analysis is presented in Appendix F. Leachate analysis of the sample from test pit TP3 was conducted by Toxicity Characteristic Leachate Procedure (TCLP). The leachate for sample TP8 was obtained by the Extraction Procedure (EP) Toxicity Leachate Method.

The sample from TP3 was collected from a sand seam that exhibited a strong paint waste like odor. The strong paint waste like odor suggests migration from the adjacent fill material. The flash point of a soil sample collected from TP3 was reported to be 140°F. The flash point for determining ignitability defined by RCRA regulations of less than 140°F does not apply since the waste is not a liquid.

MN-COMP 0044308

TABLE 5.1

SUMMARY OF DETECTED INORGANIC PARAMETERS
AND SAMPLE CHARACTERISTICS

	EPA/Minnesota EP Toxicity Leachate Criteria	Test Pit 3 (TP3)**	Test Pit 8 (TP8)**
Arsenic (ug/L)	5,000	10	ND
Barium (mg/L)	100	1.5	0.2
Cadmium (mg/L)	1.0	ND	ND
Copper (mg/L)	100*	0.02	ND
Lead (mg/L)	5.0	0.3	ND
Zinc (mg/L)	500*	0.92	0.03
Flash Point (^{o}F)	NA	140	>200
Sulfide, Reactive (mg/kg)	NA	ND	61
pH	NA	7.6	7.9

Notes:

NA - Not Applicable
ND - Not Detected
* - State of Michigan Leachate Criteria Only
** - TP-3 sample analyzed using TCLP whereas the TP-8 sample was analyzed using EP Toxicity Leachate Procedure

CONESTOGA-ROVERS & ASSOCIATES

A sample from TP8 was leached and analyzed for the EP Toxicity metals. All results were well within criteria values as indicated on Table 5.1. Thus, the material would not be considered a hazardous waste under USEPA or MPCA hazardous waste regulations.

Organic results reported above detection methods in the sample leachate for TP3 are presented on Table 5.2. The sample from Test Pit 3 was extracted by the TCLP method. The sample from Test Pit 8 was analyzed for total VOC and all results were reported as below method detection limits. Therefore, no results are tabulated.

5.2 SITE SURVEY

On February 16, 1988, a stadia survey was completed of the Site C area to reelevaluate three wells which were extended vertically during the expansion of the trailer storage area. Table 4.1 shows the new elevations for these three wells (B1, B2 and B4) as well as the old elevations for wells B3 and B5 which were not extended and, for the purpose of the survey, assumed to be correct.

A base line was surveyed from existing buildings along Mississippi River Boulevard through the trailer storage area. Measurements were taken both north and

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CONESTOGA-ROVERS & ASSOCIATES

TABLE 5.2

SUMMARY OF DETECTED ORGANIC PARAMETERS (ug/L)

	Test Pit 3 (TP3)*
Toluene	180
Ethyl Benzene	85
M-Xylene	2,600
O & P Xylene	3,700

Notes:

* - TP3 sample was analyzed using TCLP

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south of this line to plot the present edge of the fill area. The surveyed edge of fill is presented on the Site Plan (enclosed) and Figure 4.1.

Due to the large amount of snow that had been piled along the top of the fill and the high seasonal snowfall, it was not possible to survey the low land areas and the test pit locations, or to accurately locate the top of the fill area.

Top fill area/pavement elevation should be added to site plan

MN-COMP 0044312

6.0 SUMMARY

File review indicates that two small waste deposits identified as Sites A and B were excavated during plant expansions in 1966 and 1962 respectively and moved to the river bluff fill area (Site C). Appendix A presents a 1982 Ford letter to MPCA found during the file review, that includes a figure that indicates the approximate locations of these sites. This report has dealt primarily with Site C due to the relocation of the material from Sites A and B to Site C.

As indicated on the Site Plan (enclosed), original base grade elevations under the fill pile were on the order of 710 to 720 ft. AMSL. Presently, the maximum elevation of the fill area is over 770 feet AMSL indicating that there is up to 60 feet of fill material present. Near the steam plant access road, paint sludges/waste are present in the lower half of the fill area. Small areas of exposed paint sludges/wastes on the steep bank suggest that the paint sludges/wastes are on the order of 25 feet thick.

A foot print of the area containing paint sludges/wastes can be composited from the 1958 and 1962 limits of fill. Assuming that there is 25 feet of waste and related fill over this area, there is a volume of

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approximately 30,000 cubic yards of waste material believed to be non-hazardous industrial waste based on the analyses conducted.

The paint sludges/wastes are buried beneath approximately 30 feet of rubble fill including large blocks of reinforced concrete. Exposing the paint sludges/wastes and related material would require removal of a concrete parking lot and excavation of approximately 50,000 cubic yards of fill. Any such excavation would be difficult and costly due to the limited access to the Site, the need to use remote temporary fill storage, the numerous oversize pieces of concrete in the material and disruption to plant operations.

Existing 8 inch concrete pavment covers most of the waste fill and limits infiltration through this material. The low concentration of VOC in groundwater under the Site is not expected to produce a measurable effect in the Mississippi River.

MN-COMP 0044314

All of which is respectfully submitted,

CONESTOGA-ROVERS & ASSOCIATES

Alan Van Norman, P. Eng.

Donald H. Haycock, P. Eng.

MN-COMP 0044315

CONESTOGA-ROVERS & ASSOCIATES

APPENDIX A

LOCATION OF SITES A AND B

(From Ford Letter to MPCA Dated October 6, 1982)

MN-COMP 0044316

Circ: VHS/ABMH/JSA/HMS
JNT/KEM/EDC/TJG

bcc: D. Cloutier
P. Lewandowski
A. Twilley

DISPOSE of
(Black S...
RETAIN F...
(Red Sta...
Schedule N...

207

Ford Motor Company
Environmental and Safety
Engineering Staff

One Parklane Boulevard
Dearborn, Michigan 48126

October 6, 1982

Mr. Douglas N. Day
Minnesota Pollution Control Agency
Regulatory Compliance Section
Solid and Hazardous Waste Division
1935 West County Road B2
Roseville, MN 55113

Subject: [redacted] Cities Assembly Plant
[redacted] Waste Disposal Sites

Dear Mr. Day:

This letter is in response to your letter of August 19, 1982 and confirms our agreements reached during our meeting of September 23, 1982.

The two old disposal sites located near the main assembly building are shown on the attached map and are labeled "A" and "B" for clarification and subsequent reference. Site "A" was located at the southern end of an old test track located east of the assembly building. This site was excavated in 1966 and our inspection of the site during our meeting confirmed that approximately 15-20 feet of earth has been removed to bring the parking lot level (now covering the area) down to the assembly plant grade. This was visibly apparent due to the remaining section of higher level test track area. In view of this, you agreed that no further soil boring in this area would be required.

To the best of our knowledge Site "B" was located approximately 800 feet south and east of the old main assembly plant building. This location was noted on an old photograph, however, plant personnel have difficulty believing the site was so distant from the assembly operations. The area is presently used as a railroad yard. In an attempt to better define the exact location of the site, old aerial photographs have been obtained and will be examined to try and pinpoint the site. Following our review we will meet with you to discuss our findings and the need for soil borings in this area.

With respect to the disposal site located near the steam plant (Site "C"), we agreed to postpone any decision regarding the installation of an upgradient well until the additional work described below is

completed. This was based on the questionable value of a well at Location B6 (Former attempted boring location) and difficulty in boring into the St. Peter formation.

Ford agreed to install an additional monitoring well near old Boring B5, off plant property and within the City Park confines. The approximate location of the well is shown on the attached sketch of the disposal site. The well will be placed 10 feet into the water table and screened over the entire 10 feet. The well will be constructed of 2" PVC pipe as was used for the previously installed wells. Soil samples will be obtained during the boring.

Following the new well installation and development, all of the wells at the site will be re-surveyed to re-establish the casing top elevations. The wells will be measured for static water elevations and Mississippi River water elevations also obtained to determine its influence on the water table elevations. The wells, as well as the river, will be resampled and analyzed for dissolved heavy metals and volatile priority pollutants to obtain additional data on water quality.

Following this resampling and analyses we will meet with you to discuss further the need for additional investigation of this site and the necessity to install an upgradient well.

Our present schedule for this additional work is dependent upon obtaining your approval of the proposed location of the new well. Funding is being approved and we anticipate installing the well within two weeks of obtaining your concurrence with the well location. Samplings will be performed within two weeks of well completion and surveying and a report of our findings will be transmitted within four weeks of the sampling.

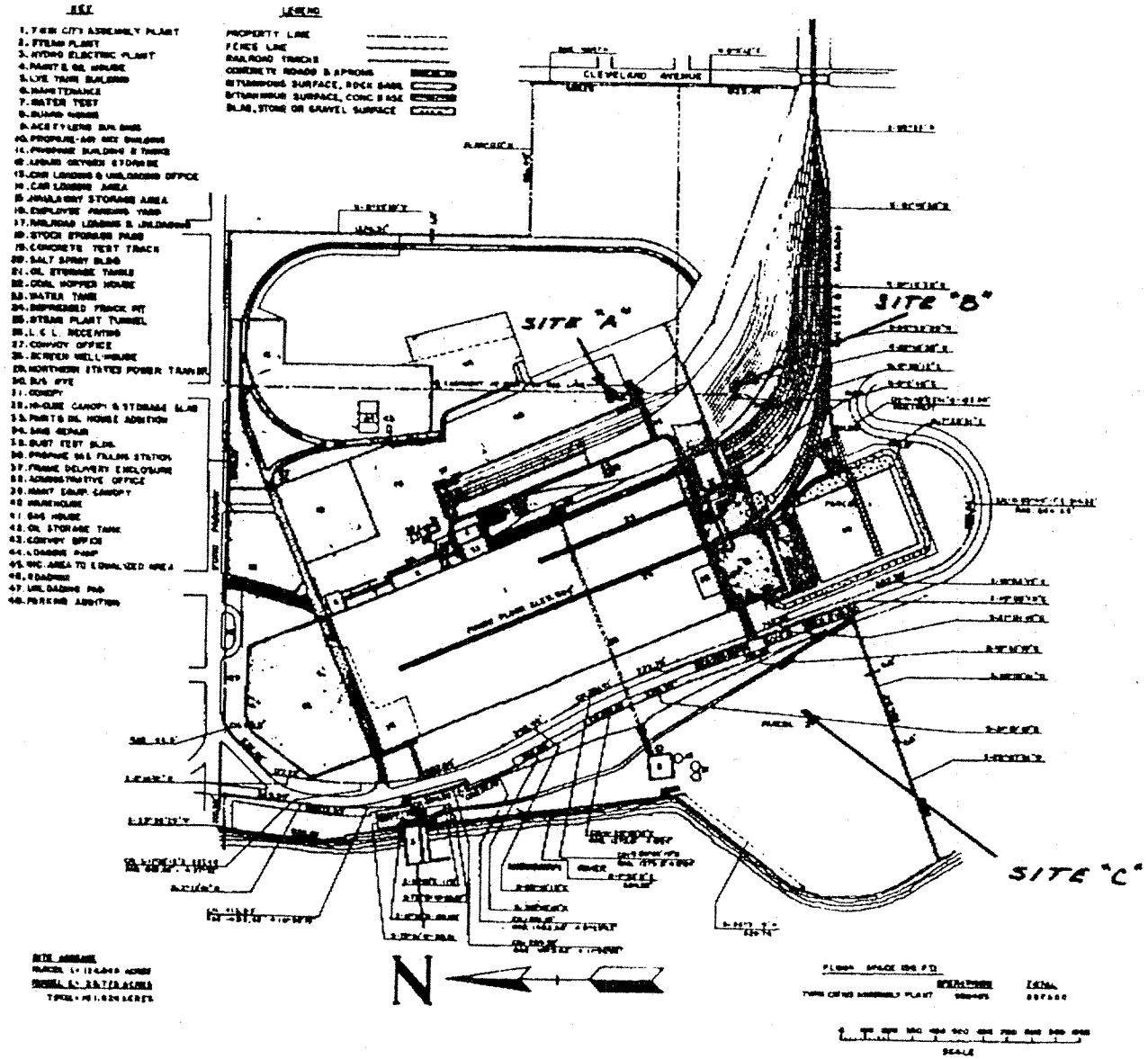
In addition, during the meeting, you agreed that Ford could remove some of the visible debris from the disposal site "C" in order to improve the appearance of the area. Any materials removed would be handled and disposed of in accordance with applicable regulations.

Kindly let me know as soon as possible of your decision regarding the well location. We would like to complete the sampling prior to the anticipated inclement weather your area is well noted for. If you have any questions please call me at 313/322-8852.

Very truly yours,

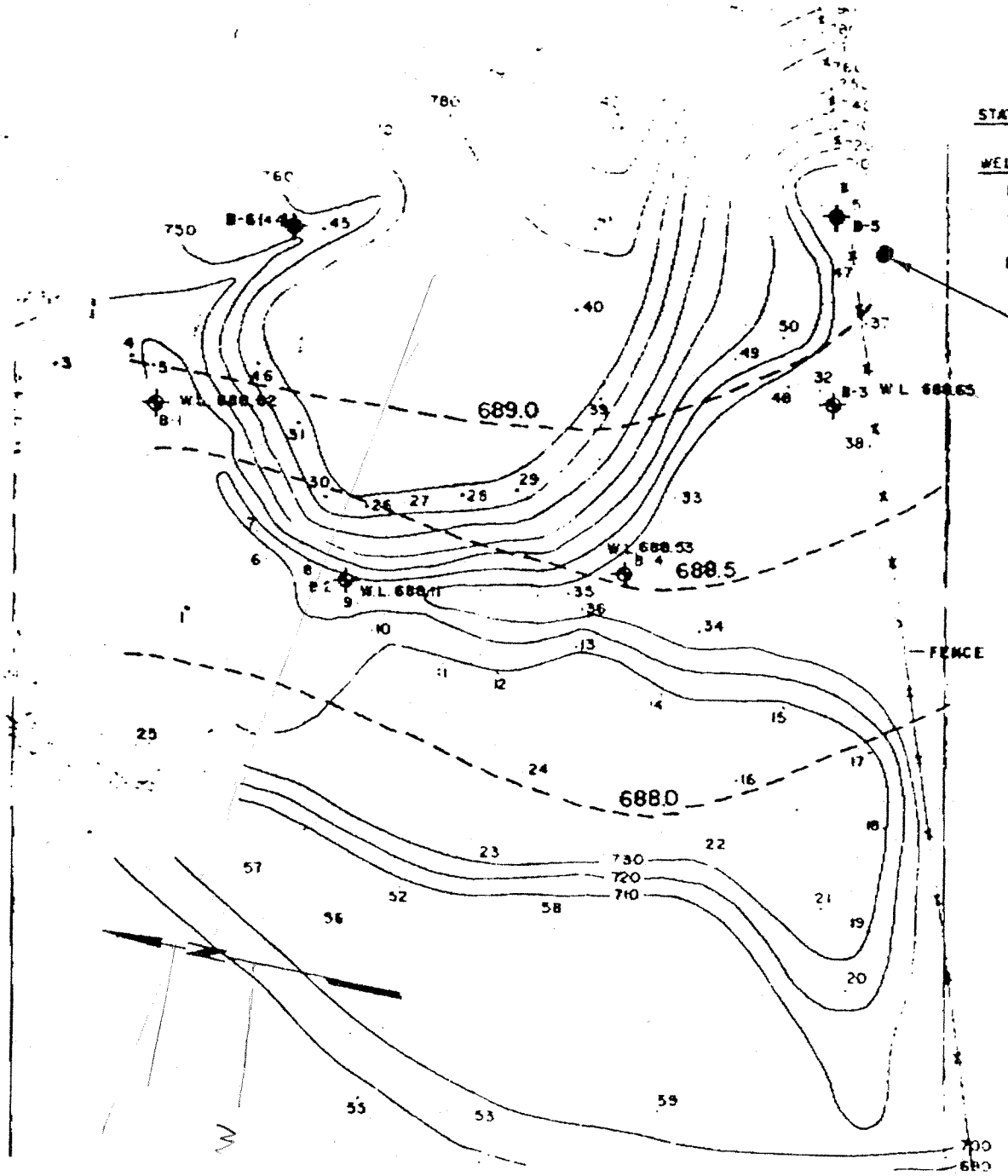
D. M. Reinke, Manager
Survey and Evaluation
Stationary Source Environmental
Control Office

Attachment
cc: R. M. Majors



TWIN CITIES ASSEMBLY PLANT

MN-COMP 0044319



STATIC WATER LEVEL DATA FOR 1-5-82

WELL NO	WATER LEVEL
B-1	688.62
B-2	688.11
B-3	688.65
B-4	688.53

PROPOSED NEW WELL

SCALE IN FEET

0 50 100 150 200 250

LEGEND

- SOIL BORING
- GROUND SURFACE CONTOUR
- WATER SURFACE CONTOUR
- SOIL BORING AND MONITORING WELL INSTALLATION

GROUND WATER CONTOUR MAP
FORD MOTOR COMPANY
TWIN CITIES ASSEMBLY PLANT
DATE: 1-22-82
STS JOB NO. 92776

MN-COMP 0044320

APPENDIX B

SOIL BORING LOGS

MN-COMP 0044321

LOG OF BORING NO. B-1

OWNER Ford Motor Company	ARCHITECT-ENGINEER
SITE Twin Cities Assembly Plant	PROJECT NAME Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST. RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. 3	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % / STANDARD "N" PENETRATION (BLOWS/FT.)
				SURFACE ELEVATION 729.52		
	1	SS		Fill; sand, gravel, silt, Decorah shale and clay, with fragments of slag, glass, firebrick, etc. - moist		42
	2	SS				11
5.0	3	SS				7
	4	SS				12
10.0	5	SS				13
15.0	6	SS				9
20.0	7	SS				50
25.0	8	SS		River deposits Thinly interbedded grayish brown sandy silts and very fine sands - (SM-ML) - moist		
30.0	9	SS		Continued		5

MN-COMP 0044322

WATER LEVEL OBSERVATIONS		
W.L.	42.0' W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	12/28/81	
BORING COMPLETED	12/31/81	
RIG CME-45	FOREMAN RM	
DRAWN DW	APPROVED RJK	
JOB # 92776	SHEET 1 of 2	

The stratification lines represent the approximate boundary [illegible] and the transition may be gradual.

LOG OF BORING NO. B-1

OWNER Ford Motor Company	ARCHITECT-ENGINEER
SITE Twin Cities Assembly Plant	PROJECT NAME Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST. RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % / STANDARD "N" PENETRATION (BLOWS/FT.)
30.0				SURFACE ELEVATION		
	9	SS		River deposits Thinly interbedded grayish brown sandy silts and very fine sands - (SM-ML) - moist		55
35.0	10	SS		Light brown very fine sand with little gravel, little silt - (SM)		30
40.0	11	SS		Grayish brown fine to coarse sand and gravel with little silt - (GM-SM) - moist to wet		64
45.0	12	SS		Light brown gravel, little sand, little silt - (GM) - saturated		32
50.0	13	SS		Light brown very fine sand, some silt, little gravel - (SM) - sat.		27
51.0				End of boring at 51.0 feet. 2" PVC well installed		

MN-COMP 0044323

WATER LEVEL OBSERVATIONS		
W.L.	42.0' W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	12/28/81		
BORING COMPLETED	12/31/81		
RIG	CME-45	FOREMAN	RM
DRAWN	DW	APPROVED	RJK
JOB #	92776	SHEET	2 of 2

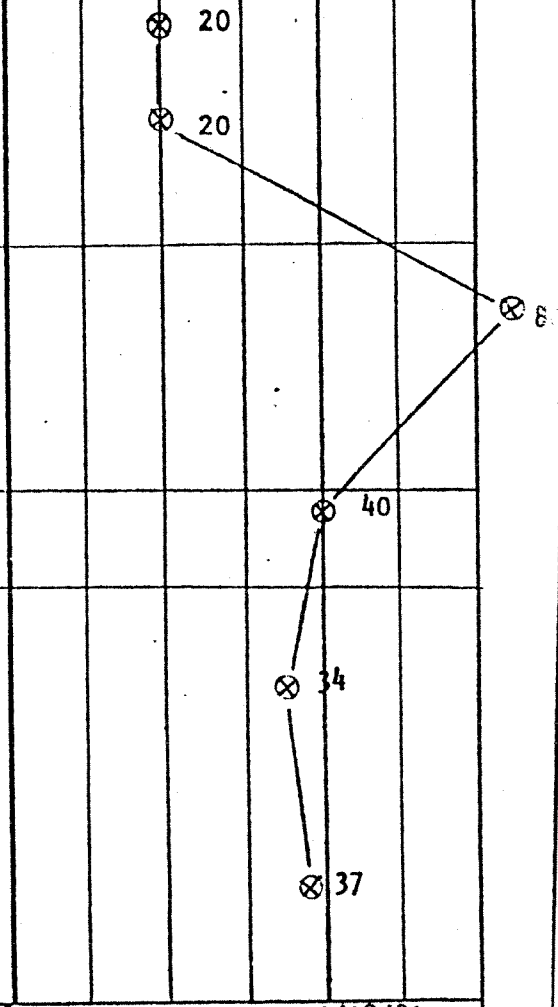
The stratification lines represent the approximate boundary

LOG OF BORING NO. 2

OWNER Ford Motor Company	ARCHITECT-ENGINEER
SITE Twin Cities Assembly Plant	PROJECT NAME Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST. RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. 3
				SURFACE ELEVATION 715.77'	
5.0				Boulders, cobble and concrete block from 0'-6.0' Removed with backhoe	
10.0	1	SS		Fill, dark brown gravel, slag, sand and clay, moist	
	2	SS			
15.0	3	SS		Dark brown fine to coarse sand, trace silt - (SP), moist	
20.0	4	SS		Light brown, very fine to medium sand, trace silt - (SP), wet	
25.0	5	SS		Light brown fine to coarse sand with some gravel, trace silt - (SW-SP), wet to saturated	
30.0	6	SS		Continued	

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²
1 2 3 4 5
PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT %
STANDARD "N" PENETRATION (BLOWS/FT.)
10 20 30 40 50



MN-COMP 0044324

WATER LEVEL OBSERVATIONS		
W.L.	29.5' W.S.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/18/81
BORING COMPLETED	11/18/81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB # 92776	SHEET 1 of 2

The stratification lines represent the approximate boundary

LOG OF BORING NO. 2

OWNER	ARCHITECT-ENGINEER
Ford Motor Company	
SITE	**PROJECT NAME**
Twin Cities Assembly Plant	Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5) PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % — STANDARD "N" PENETRATION (BLOWS/FT.) (10 20 30 40 50)
SURFACE ELEVATION ↴							
30.0					(SW-SP)		⊗ 37
35.0	7	SS			Brown, fine to coarse sand with little gravel, extremely dense - (SW), saturated		⊗ 2
40.0							
44.5					End of boring at 44.5 feet. 2 " PVC well installed		

MN-COMP 0044325

WATER LEVEL OBSERVATIONS		
W.L.	29.5' W.S.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/18/81		
BORING COMPLETED	11/18/81		
RIG	CME-45	FOREMAN	RM
DRAWN	DW	APPROVED	RJK
JOB #	92776	SHEET	2 of 2

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

LOG OF BORING NO. 3

OWNER	ARCHITECT-ENGINEER
Ford Motor Company	
SITE	**PROJECT NAME**
Twin Cities Assembly Plant	Ford Hydrogeologic Study

SURFACE ELEVATION 701.99

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST. RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % / STANDARD "N" PENETRATION (BLOWS/FT.)
	1	SS		Dark brown very fine sand, trace to some silt, trace to some organic - (SM-OL), moist		3
	2	SS				3
5.0						
	3	SS		Light brown, very fine sand, trace silt - (SP), moist		4
	4	SS				7
10.0						
	5	SS		Brown fine to medium sand, trace to little gravel - trace silt - (SP)- moist to wet		24
15.0	6	SS		Brown medium to coarse sand, with some gravel, trace silt - shell fragments - (SW) - saturated		29
20.0	7	SS		Gray fine to coarse sand, trace silt, some gravel and cobble - (SW) - saturated		28
25.0				End of boring at 24.5 ft. 2" PVC well installed		

MN-COMP 0044326

WATER LEVEL OBSERVATIONS		
W.L.	14.0' W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/17/81
BORING COMPLETED	11/17/81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB # 92776	SHEET 1 of 1

The stratification lines represent the approximate boundary

LOG OF BORING NO. 4

OWNER
Ford Motor Company

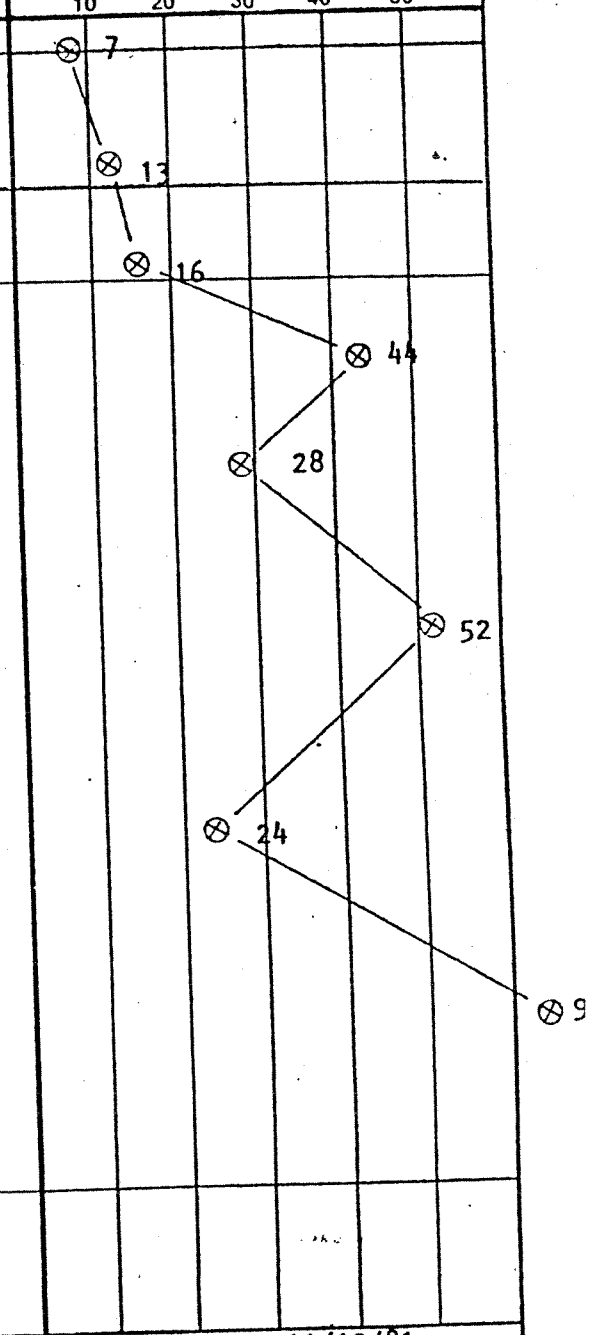
ARCHITECT-ENGINEER

SITE
Twin Cities Assembly Plant

PROJECT NAME
Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST. RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3
				SURFACE ELEVATION → 705.47'	
				Brown clay with some very fine *	
	1	SS		Brown very fine sand, trace silt (SP)	
	2	SS		Lenses of black organic silt (OL) - moist	
5.0	3	SS		Black fill - fine to medium sand with graveland slag, moist	
	4	SS			
10.0	5	SS			
15.0	6	SS		Brown fine to coarse sand with some gravel, trace silt - (SW-SP) - wet to saturated	
20.0	7	SS			
25.0	8	SS			
30.0				End of boring at 29.5 ft. 2" PVC well installed *sand (CL)- moist	

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²
1 2 3 4 5
PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %
STANDARD "N" PENETRATION (BLOWS/FT.)
10 20 30 40 50



MN-COMP 0044327

WATER LEVEL OBSERVATIONS

W.L.	19.5' W.S.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/19/81
BORING COMPLETED	11/19/81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB # 92776	SHEET 1 of 1

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

LOG OF BORING NO. 5

OWNER	ARCHITECT-ENGINEER
Ford Motor Company	
SITE	**PROJECT NAME**
Twin Cities Assembly Plant	Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. 3
					SURFACE ELEVATION → 701.5'	
	1	SS			Dark brown topsoil, organic silt with some coarse sand and gravel - *	
	2	SS			Brown medium to coarse sand, trace silt, some gravel - (SP) - moist	
5.0						
	3	SS			Gravel and cobble, some fine sand, trace silt - (GP), moist	
	4	SS			Dark brown very fine sand, trace to little silt - (SM-SP) - moist	
10.0					Dark brown silt with trace to little very fine sand, horizontal seams and lenses of black silt - ((ML) - moist	
	5	SS			Gray very fine to fine sand, with trace to little silt - (SP-SM) SOLVENT ODOR, moist	
					Black fine sand with some silt (SM) Strong Solvent Odor - wet to sat.	
15.0	6	SS			Gray gravel and cobble, little sand and little clay - (GC) - saturated	
	7	SS			Light brown gravel and cobble, trace sand and trace clay (GW-GC) - saturated	
20.0					End of boring at 19.5 feet. Boring grouted from bottom to ground surface.	

*(OL-GM)

MN-COMP 0044328

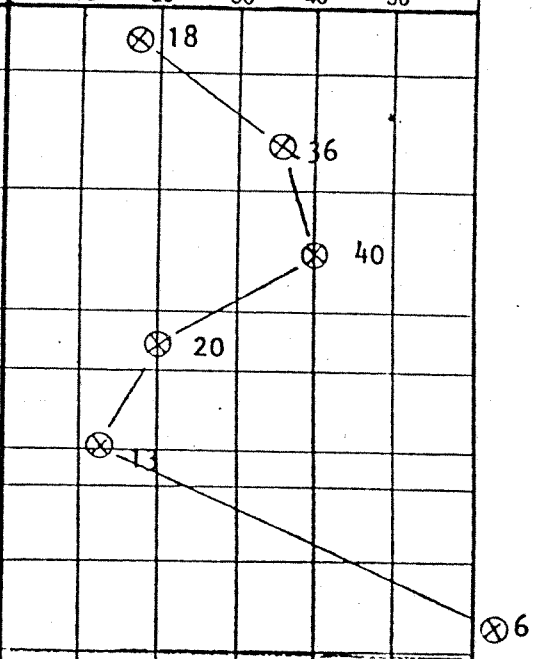
UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²

1 2 3 4 5

PLASTIC LIMIT % | WATER CONTENT % | LIQUID LIMIT %

STANDARD "N" PENETRATION (BLOWS/FT.)

10 20 30 40 50



WATER LEVEL OBSERVATIONS		
W.L.	14.0' W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11-20-81
BORING COMPLETED	11-20-81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB # 92776	SHEET 1 of 1

The stratification lines represent the approximate boundary

LOG OF BORING NO. B-6

OWNER	ARCHITECT-ENGINEER
Ford Motor Company	
SITE: Twin Cities Assembly Plant	PROJECT NAME: Ford Hydrogeologic Study

SURFACE ELEVATION 759.93'

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²
1 2 3 4 5
PLASTIC LIMIT % | WATER CONTENT % | LIQUID LIMIT %
STANDARD "N" PENETRATION (BLOWS/FT.)
10 20 30 40 50

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	N
	1	SS					6
	2	SS					21
5.0	3	RB					
10.0					Fill; rubble, cobble, gravel, sand and green shale (Decorah) clay - moist		
15.0							
20.0							
25.0					Boulder (Limestone)		
					White Sandstone St. Peter Formation		
30.0					MN-COMP 0044329 Continued		

WATER LEVEL OBSERVATIONS

W.L.	Dry	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/18/81
BORING COMPLETED	11/24/81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB # 92776	SHEET 1 of 2

The stratification lines represent the approximate boundary

LOG OF BORING NO. B-6

OWNER	ARCHITECT-ENGINEER
Ford Motor Company	
SITE Twin Cities Assembly Plant	**PROJECT NAME** Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5) · PLASTIC LIMIT % · WATER CONTENT % · LIQUID LIMIT % · STANDARD "N" PENETRATION (BLOWS/FT.) (10 20 30 40 50)
					SURFACE ELEVATION ↴		
30.0							
	3	RB			White Sandstone St. Peter Formation		
35.0					End of boring at 34.8 feet. Boring grouted from bottom to ground surface		

MN-COMP 0044330

WATER LEVEL OBSERVATIONS		
W.L.	Dry	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/18/81
BORING COMPLETED	11/24/81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB #92776	SHEET 2 of 2

The stratification lines represent the approximate boundary [illegible] and the transition may be gradual.

APPENDIX C

MONITORING DATA FROM FORD REPORT

DATED MARCH 3, 1982

(PAGES 6, 8 AND 9)

MN-COMP 0044331

Table 1

Twin Cities Assembly Plant
Groundwater Analysis Summary

from 3/3/82?

		Well No.				
Dissolved Metals	Units	B1	B2	B3	B4	RAL mg/l
Copper	mg/l	0.03	0.02	0.01	0.01	
Cadmium	mg/l	0.02	<0.01	<0.01	0.02	0.005
Zinc	mg/l	0.06	0.04	<0.02	0.09	
Nickel	mg/l	0.07	0.04	0.02	0.05	0.15
Chromium	mg/l	<0.05	<0.05	<0.05	<0.05	0.12
Lead	mg/l	0.12	<0.05	<0.05	0.06	0.02
pH	Units	7.08	7.01	7.07	6.84	
Specific Conductivity	Umhos/cm	985	1064	1666	1482	
Temperature	^{o}F.	47	45	45	46	
Organics						
1,2 Dichloroethylene	µg/l	<2	15	<2	<2	70
Trichloroethylene	µg/l	4	5	<2	<2	31 MCL 5
Toluene	µg/l	1	1	<1	1	2420

? check

Table 3
Twin Cities Assembly Plant
Groundwater Monitoring Results
Dissolved Metals
March 3, 1982

	B1	B2	B3	B4
Lead	0.12	<.05	<.05	0.06
Chromium	<.05	<.05	<.05	<.05
Nickel	0.07	0.04	0.03	0.05
Zinc	0.06	0.04	<.02	0.09
Cadmium	0.02	<.01	<.01	0.02
Copper	0.03	0.02	0.01	0.01

All values are the average of seven measurements of the same sample. Units are mg/l.

→ on previous page cancer is 0.02 mg/l

TABLE 4
Twin Cities Assembly Plant
Groundwater Monitoring Results
Volatile Organics
March 3, 1982

	B1	B1 (Dup)	B2	B2 (Dup)	B3	B3 (Dup)	B4	B4 (Dup)
1,2 Dichloroethylene	-	-	13	17	-	-	-	-
Trichloroethylene	4	3	5	5	-	-	-	-
Toluene	1	2	1	1	-	-	1	1

Duplicate field blanks showed no detectable levels of volatile organics.

Well casing blanks showed 4 PPB Toluene and 6 PPB methylene chloride, however these are attributed to the laboratory atmosphere.

Only detectable quantities are reported.

MN-COMP 0044334

APPENDIX D

MONITORING DATA FROM FORD REPORT

DATED DECEMBER 1, 1982

(PAGES 5, 10, 11 AND 12)

MN-COMP 0044335

Table 1

Groundwater Analysis Summary
December 1, 1982

Dissolved Metals		Well					River			
		B1	B2	B3	B4	B5	R1[1]	R2[1]	R3[1]	
Copper	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	RAL
Cadmium	mg/l	0.003	0.003	0.003	0.005	<0.001	<0.001	0.001		0.005
Zinc	mg/l	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	
Nickel	mg/l	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		0.15
Chromium	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12
Lead	mg/l	0.005	0.005	0.004	0.006	0.003	<0.002	<0.002	<0.002	0.02
pH	Units	7.1	8.6	9.0	8.2	8.4	8.5	8.6		
Specific Conductivity	Umhos/cm	982	1210	1260	1580	942	377	380		
Temperature	°F.	47	51	52	53	51	34	33		

Volatile Organics Detected		B1	2	3	4	5			
1,2-Dichloroethylene	µg/l	ND	22.0	<2	6.7	ND	ND	ND	ND
Benzene	µg/l	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/l	2.1	<1	<1	<1	<1	3	<1	<1
Chlorobenzene	µg/l	ND	ND	<1	<1	ND	ND	ND	ND
Xylene(3 isomers)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1

Note 1:

R1--Mississippi River upstream of Ford Power Plant.
R2--Mississippi River near southern property boundary.
R3--Mississippi River in park approx. 200 yds. south of Ford property.

MN-COMP 0044336

Twin Cities Assembly Plant
River Sampling Results
December 1, 1982

	Units	River Upstream of Power Plant	River Downstream on Ford Property	River Downstream in Park
Dissolved Metals				
Copper	mg/l	<0.05	<0.05	<0.05
Cadmium	mg/l	<0.001	0.001	
Zinc	mg/l	<0.05	<0.05	<0.05
Nickel	mg/l	<0.02	<0.02	
Chromium	mg/l	<0.05	<0.05	<0.05
Lead	mg/l	<0.002	<0.002	<0.002
pH	units	8.5	8.6	
Specific Conductivity	umhos/cm	377	380	
Temperature	°F.	34	33	
Volatile Organics				
1,2-Dichloroethylene	ug/l	ND	ND	ND
Benzene	ug/l	<1	<1	<1
Toluene	ug/l	3.0	<1	<1
Chlorobenzene	ug/l	ND	ND	ND
Xylene	ug/l	<1	<1	<1

10

MN-COMP 0044337

Table 5

Twin Cities Assembly Plant
Groundwater Analysis Summary
Dissolved Metals Results for 12/82 ?

Dissolved Metals	Units	B1	B2	B3	B4	B5
Copper	mg/l	3/82 < 0.05 .03	<0.05 .02	<0.05 .01	<0.05 .01	<0.05
Cadmium	mg/l	3/82 0.003 .02	0.003 <.01	0.003 <.01	0.005 .02	<0.001 ← ok. detection limit
Zinc	mg/l	3/82 <0.05 .06	<0.05 .04	<0.05 <.02	0.06 .09	<0.05
Nickel	mg/l	3/82 0.06 .07	<0.02 .04	<0.02 .02	<0.02 .05	<0.02
Chromium	mg/l	3/82 <0.05	<0.05	<0.05	<0.05	<0.05
Lead	mg/l	3/82 <0.005 0.12	0.005 <.05	0.004 <.05	0.006 .06	0.003
pH	Units	7.1	8.6	9.0	8.2	8.4
Specific Conductivity	Umhos/cm	982 935	1210 1064	1260 1666	1580 1482	942
Temperature	°F.	47	51	52	53	51

11

MN-COMP 0044338

is detection limit <.005 or <0.05

Compare to summary table 2pg previous

Table 6

Twin Cities Assembly Plant
Groundwater Analysis Summary for 12/82?
Volatile Organic Results

	Units	B1	B1 Duplicate	B2	B2	B3	B3	B4	B4	B5	B5
1,2-Dichloroethylene	µg/l	ND	ND	21.3	22.6	ND	<2	8.1	5.3	ND	ND
Benzene	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/l	1.9	2.2	1.1	<1	<1	1.6	0.6	<0.1	0.6	0.5
Chlorobenzene	µg/l	ND	ND	ND	ND	<1	<1	<1	<1	ND	ND
Xylene (3 isomers)	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

why < 1 on summary table if can detect concn below 1

vs 2.1 on summary table

vs <1 on summary

are not used in summary

avg used on summary

when is not of analytical?

12

MN-COMP 0044339

APPENDIX E

TEST PIT LOGS

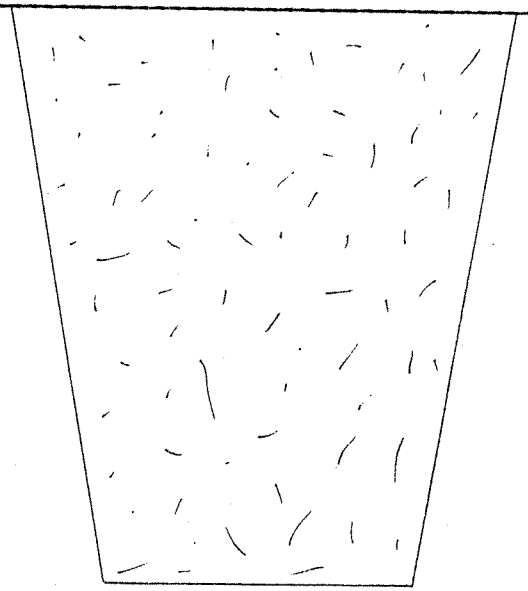
MN-COMP 0044340

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP1-87
DATE COMPLETED: 12/4/87
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(SP) SAND, fine to medium grained, trace silt, trace gravel, dry.		
2			
3			
4	Occasional seams of sandy silt (ML)		
5			
6			
7			
8			
9			
10	End of Test Pit at 9.0' BGS		
11	Hole backfilled		
12			
13			

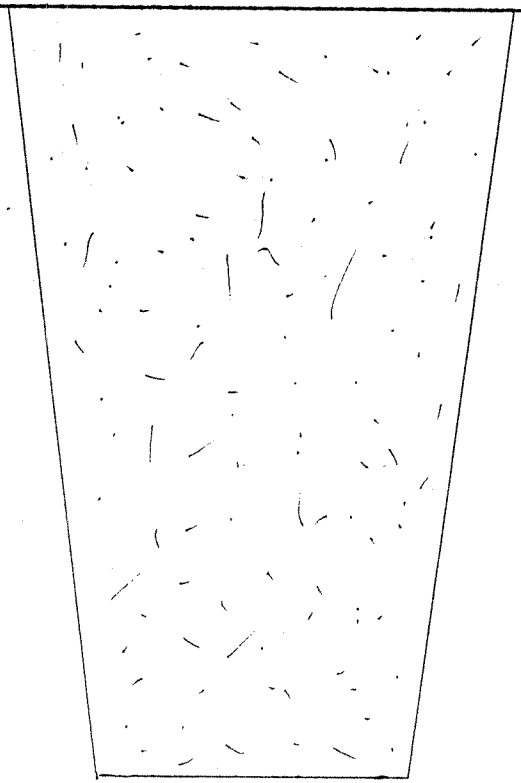


MN-COMP 0044341

- E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP2-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

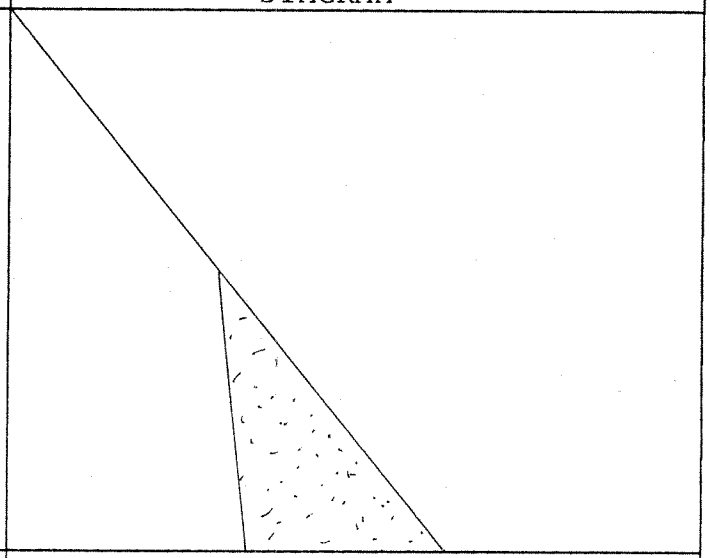
DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(SM) SAND, silty, some limestone, some well rounded gravel and cobbles		
2			
3			
4			
5			
6			
7			
8	Layered silt (ML) and clay (CL), brown to light brown		
9			
10			
11	(SP) SAND, very fine grained, brown to light brown		
12			
13	End of Test Pit at 12.0' BGS, Hole backfilled		

MN-COMP 0044342

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP2A - 88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

FT ABV. GRADE	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
7 6 5 4 3 2 1 0	(Test Pit dug into side of bluff) Building rubble: very large pieces of concrete (>3'Ø) glass, iron, lumber Grade		

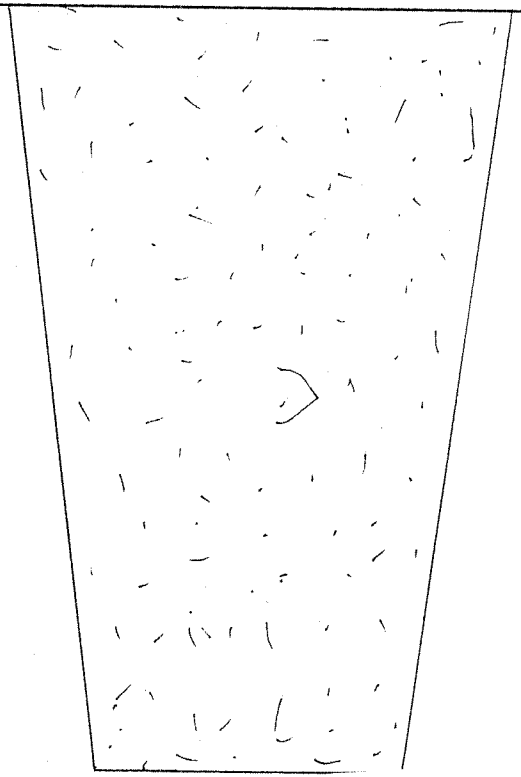
MN-COMP 0044343

TEST PIT LOG

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP3-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0		702.1	
1	(SM) SAND, some gravel, silty, brown to light brown		
2			
3	seam of black/gray silty sands (SM), very strong odor from 2.0' to 3.0' BGS (sample taken)		
4			
5			
6	clean silty sands (SM) from 3.0' to 4.5' BGS		
7			
8	(SM) SAND, gray, some odor as 2.0' to 3.0' BGS soil		
9			
10			
11			
12			
13	End of Test Pit at 12.0' BGS gray color and odor to 12.0 BGS Hole Backfilled	▽ 689.61	



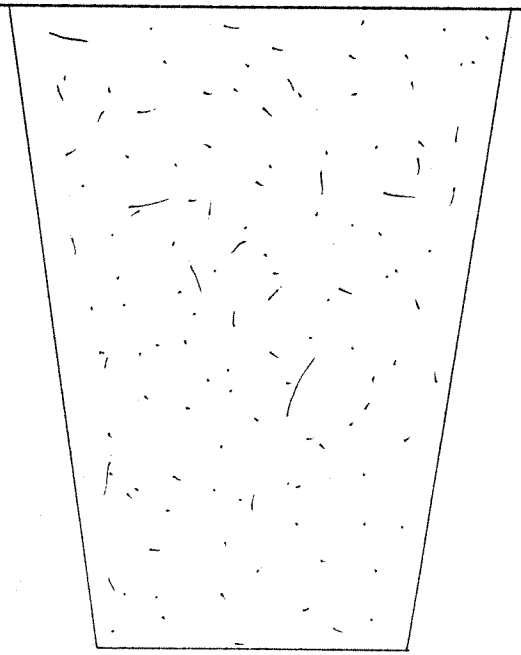
MN-COMP 0044344

TEST PIT LOG

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP4-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(SP) SAND, very fine grained, some silt, moist		
2			
3	occasional lenses of sandy silt (ML)		
4			
5			
6			
7			
8			
9			
10			
11	End of Test Pit at 10.0' BGS Hole Backfilled		
12			
13			



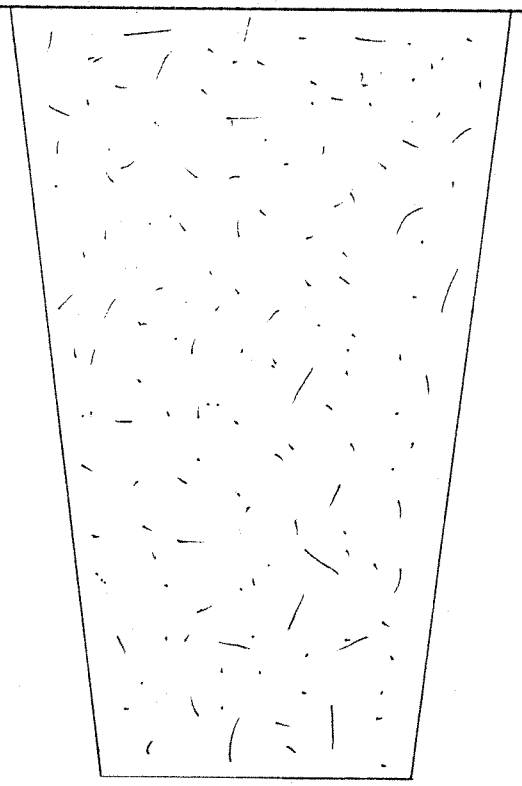
MN-COMP 0044345

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP5-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1			
2	(CL-ML) CLAY and SILT, sandy, gray to gray/blue, moist		
3			
4			
5			
6	(SP) SAND, fine to very fine grained, trace silt, trace gravel, light brown to brown		
7			
8			
9			
10			
11			
12			
13	End of Test Pit at 12.0' BGS Hole Backfilled		



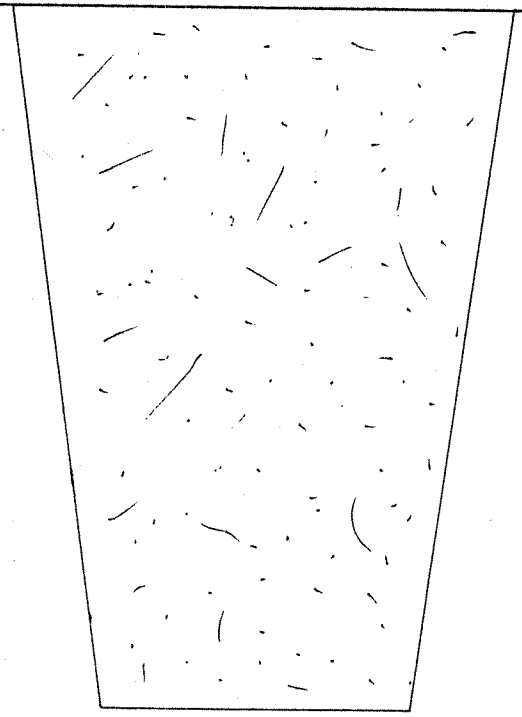
MN-COMP 0044346

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP6-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(ML) SILT, very sandy, occasional seams of yellow SM		
2			
3			
4			
5	(SW-GW) SAND and GRAVEL, fine to coarse grained, some large well rounded cobbles		
6			
7			
8			
9			
10			
11			
12	End of Test Pit at 11.0' BGS Hole Backfilled		
13			



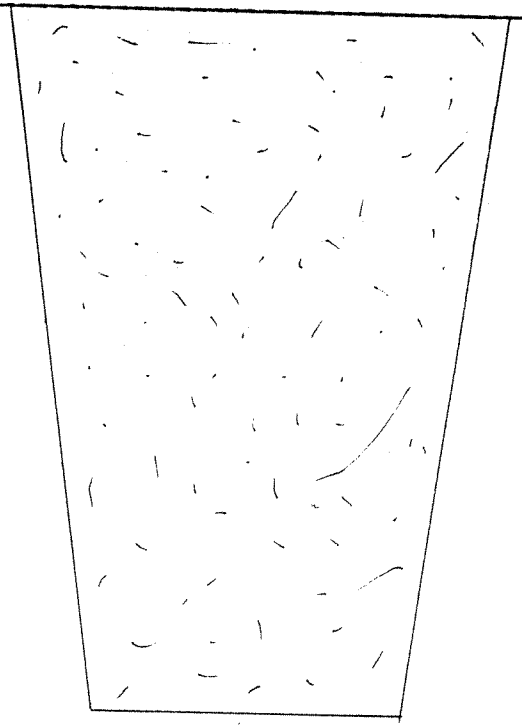
MN-COMP 0044347

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP7-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	Building rubble, concrete, railroad ties, timbers		
2			
3			
4			
5			
6			
7			
8			
9			
10	(SP) SAND, very loose St. Peter sand, yellow to white		
11	yellow to white		
12	End of Test Pit at 11.0' BGS Hole backfilled		
13			



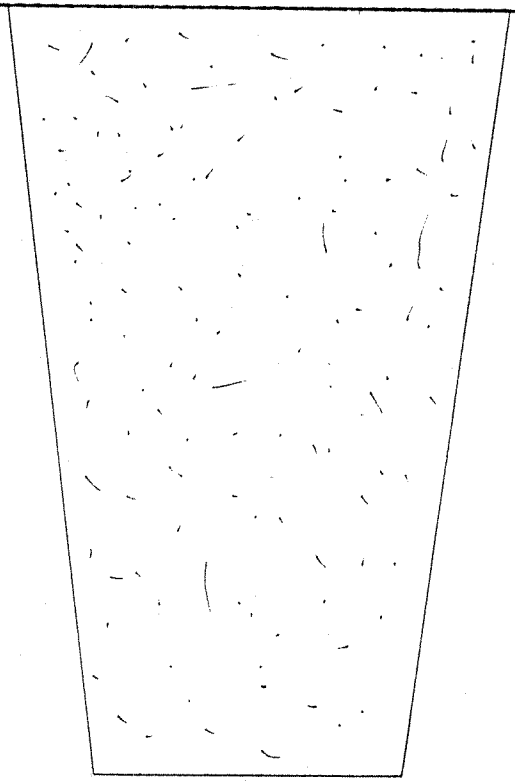
MN-COMP 0044348

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP8-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(GW) GRAVEL and COBBLES, very coarse grained, trace sand.		
2			
3			
4			
5			
6			
7			
8			
9	Small piece of metal at 9.5'		
10			
11	(SP) SAND, very fine grained, color change to gray/black (sample taken)		
12	End of Test Pit at 12.0' BGS		
13	Hole backfilled		



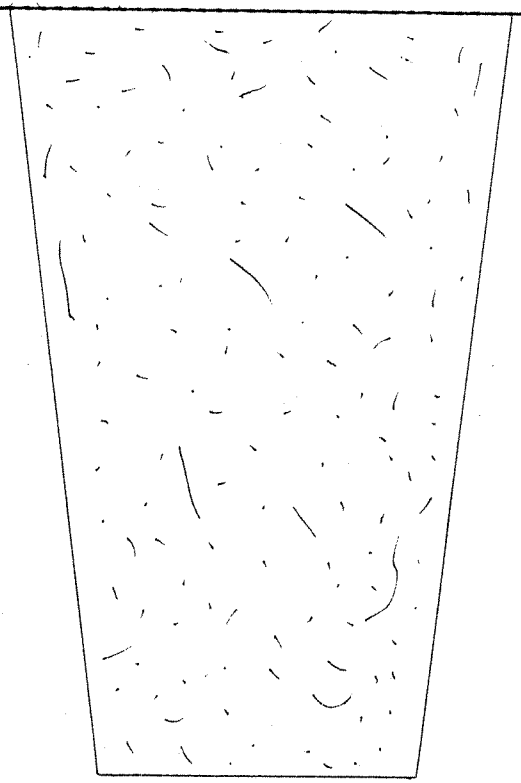
MN-COMP 0044349

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP9-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(SP) SAND, very fine grained, yellow/orange, trace silt.		
2			
3			
4	Occasional seams of fine gravel and coarse sand.		
5			
6			
7			
8			
9			
10			
11			
12	(SM) SAND, silty, gray, wet to saturated		
13	End of Test Pit at 12.0' BGS Hole backfilled		



MN-COMP 0044350

APPENDIX F

LABORATORY ANALYTICAL REPORTS

MN-COMP 0044351

pace laboratories, inc.

REPORT OF LABORATORY ANALYSIS

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa

#2191

March 22, 1988

Rec'd CRA

MAR 23 88

Mr. Steven Mockenhaupt
Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

Dear Mr. Mockenhaupt:

Enclosed is the report of laboratory analyses for samples received 01/22/88.

If you have any questions concerning this report, please feel free to contact Tom Halverson, Bill Scruton or me.

Sincerely,

Roger C. Splinter, Ph.D.
Director, Laboratory Services

Enclosures

MN-COMP 0044352

pace laboratories, inc.

REPORT OF LABORATORY ANALYSIS

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa

Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

March 22, 1988
PACE Project Number: 880122550

Attn: Mr. Steven Mockenhaupt

Project #2191

Date Sample(s) Collected: By Client
Date Sample(s) Received: 01/22/88

PACE Sample Number:

Parameter	Units	MDL	016700 TP-3 (1) Leachate	016710 TP-8 (2) Leachate
Arsenic	ug/L	2	10	ND
Barium	mg/L	0.2	1.5	0.2
Cadmium	mg/L	0.01	ND	ND
Chromium	mg/L	0.05	ND	ND
Copper	mg/L	0.01	0.02	ND
Lead	mg/L	0.1	0.3	ND
Mercury	ug/L	0.8	ND	ND
Selenium	ug/L	6	ND	ND
Silver	mg/L	0.04	ND	ND
Zinc	mg/L	0.01	0.92	0.03
Methanol	mg/L	5.0	ND	-
Ethanol	mg/L	5.0	ND	-
Iso-Propyl Alcohol	mg/L	5.0	ND	-
Ethyl Acetate	mg/L	5.0	ND	-
N-Butanol	mg/L	5.0	ND	-
Cyclohexane	mg/L	5.0	ND	-
Chloromethane	ug/L	1.0	ND(3)	-
Bromomethane	ug/L	1.5	ND(3)	-
Dichlorodifluoromethane	ug/L	1.5	ND(3)	-
Vinyl chloride	ug/L	1.5	ND(3)	-
Chloroethane	ug/L	1.0	ND(3)	-
Trichlorofluoromethane	ug/L	0.4	ND(3)	-
Allyl chloride	ug/L	4.0	ND(3)	-
1,1-Dichloroethylene	ug/L	0.3	ND(3)	-
Tetrahydrofuran	ug/L	15	ND(3)	-
1,1-Dichloroethane	ug/L	0.2	ND(3)	-

MDL Method Detection Limit
ND Not detected at or above the MDL.

MN-COMP 0044353

Mr. Steven Mockenhaupt
Page 2

March 22, 1988
PACE Project Number: 880122550

Parameter	Units	MDL	016700 TP-3 (1) Leachate	016710 TP-8 Leachate
PACE Sample Number:				
trans-1,2-Dichloroethylene	ug/L	0.3	ND(3)	-
cis-1,2-Dichloroethylene	ug/L	0.5	ND(3)	-
Ethyl ether	ug/L	0.3	ND(3)	-
Chloroform	ug/L	0.5	ND(3)	-
1,1,2-Trichlorotrifluoroethane	ug/L	0.7	ND(3)	-
Methyl ethyl ketone	ug/L	20	ND(3)	-
1,2-Dichloroethane	ug/L	0.2	ND(3)	-
Dibromomethane	ug/L	1.5	ND(3)	-
1,1,1-Trichloroethane	ug/L	0.5	ND(3)	-
Carbon tetrachloride	ug/L	0.3	ND(3)	-
Bromodichloromethane	ug/L	0.2	ND(3)	-
Dichloroacetonitrile	ug/L	1.0	ND(3)	-
2,3-Dichloro-1-propene	ug/L	0.5	ND(3)	-
1,2-Dichloropropane	ug/L	0.2	ND(3)	-
1,1-Dichloro-1-propene	ug/L	1.0	ND(3)	-
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND(3)	-
1,1,2-Trichloroethylene	ug/L	0.5	ND(3)	-
Benzene	ug/L	1.0	ND(3)	-
1,3-Dichloropropane	ug/L	0.6	ND(3)	-
Dibromochloromethane	ug/L	1.0	ND(3)	-
1,1,2-Trichloroethane	ug/L	1.0	ND(3)	-
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND(3)	-
1,2-Dibromoethane	ug/L	4.0	ND(3)	-
2-Chloroethylvinyl ether	ug/L	5.0	ND(3)	-
Bromoform	ug/L	1.0	ND(3)	-
1,1,1,2-Tetrachloroethane	ug/L	0.3	ND(3)	-
Methyl isobutyl ketone	ug/L	1.0	ND(3)	-
1,2,3-Trichloropropane	ug/L	4.0	ND(3)	-
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND(3)	-
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND(3)	-
Pentachloroethane	ug/L	2.0	ND (3)	-
Toluene	ug/L	1.0	180(3)	-
Chlorobenzene	ug/L	1.0	ND (3)	-
Ethyl benzene	ug/L	1.0	85 (3)	-

MDL Method Detection Limit

MN-COMP 0044354

pace laboratories, inc.

REPORT OF LABORATORY ANALYSIS

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa

March 22, 1988
PACE Project Number: 880122550

PACE Sample Number:			016700	016710
Parameter	Units	MDL	TP-3 (1) Leachate	TP-8 Leachate
Cumene	ug/L	1.0	ND (3)	-
m-Xylene	ug/L	1.0	2600(4)	-
p-Xylene	ug/L	1.0	3700(4)(5)	-
o-Xylene	ug/L	1.0	3700(4)(5)	-
1,3-Dichlorobenzene	ug/L	4.0	ND (3)	-
1,2-Dichlorobenzene	ug/L	4.0	ND (3)	-
1,4-Dichlorobenzene	ug/L	4.0	ND (3)	-
Dichlorofluoromethane	ug/L	1.0	ND (3)	-

MDL Method Detection Limit

MN-COMP 0044355

pace laboratories, inc.

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa

REPORT OF LABORATORY ANALYSIS

March 22, 1988
PACE Project Number: 880122550

PACE Sample Number: / Parameter	Units	MDL	016680 TP-3	016690 TP-8
Cyanide, Reactive	mg/kg	1.0	ND	ND
Flash Point	Degrees F	1	140	GT200
Sulfide, Reactive	mg/kg	14	ND	61
pH		0.1	7.6	7.9
Chloromethane	ug/kg	120	-	ND
Bromomethane	ug/kg	190	-	ND
Dichlorodifluoromethane	ug/kg	190	-	ND
Vinyl Chloride	ug/kg	190	-	ND
Chloroethane	ug/kg	120	-	ND
Methylene Chloride	ug/kg	120	-	ND
Acetone	ug/kg	5000	-	ND
Trichlorofluoromethane	ug/kg	50	-	ND
Allyl chloride	ug/kg	500	-	ND
1,1-Dichloroethylene	ug/kg	38	-	ND
Tetrahydrofuran	ug/kg	1800	-	ND
1,1-Dichloroethane	ug/kg	25	-	ND
Trans-1,2-Dichloroethylene	ug/kg	38	-	ND
cis-1,2-Dichloroethylene	ug/kg	62	-	ND
Ethyl ether	ug/kg	380	-	ND
Chloroform	ug/kg	62	-	ND
1,1,2-Trichlorotrifluoroethane	ug/kg	88	-	ND
Methyl ethyl ketone	ug/kg	5000	-	ND
1,2-Dichloroethane	ug/kg	25	-	ND
Dibromomethane	ug/kg	180	-	ND
1,1,1-Trichloroethane	ug/kg	62	-	ND
Carbon Tetrachloride	ug/kg	38	-	ND
Bromodichloromethane	ug/kg	25	-	ND
Dichloroacetonitrile	ug/kg	10000	-	ND
2,3-Dichloro-1-propene	ug/kg	62	-	ND
1,2-Dichloropropane	ug/kg	25	-	ND
1,1-Dichloro-1-propene	ug/kg	120	-	ND
cis-1,3-Dichloro-1-propene	ug/kg	62	-	ND
1,1,2-Trichloroethylene	ug/kg	62	-	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

MN-COMP 0044356

pace laboratories, inc.

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa

REPORT OF LABORATORY ANALYSIS

Mr. Steven Mockenhaupt
Page 5

March 22, 1988
PACE Project Number: 880122550

PACE Sample Number: / Parameter	Units	MDL	016680 TP-3	016690 TP-8
Benzene	ug/kg	120	-	ND
1,3-Dichloropropane	ug/kg	75	-	ND
Dibromochloromethane	ug/kg	120	-	ND
1,1,2-Trichloroethane	ug/kg	120	-	ND
Trans-1,3-Dichloro-1-propene	ug/kg	38	-	ND
1,2-Dibromoethane	ug/kg	500	-	ND
2-Chloroethylvinyl Ether	ug/kg	620	-	ND
Bromoform	ug/kg	120	-	ND
1,1,1,2-Tetrachloroethane	ug/kg	38	-	ND
Methyl isobutyl ketone	ug/kg	120	-	ND
1,2,3-Trichloropropane	ug/kg	500	-	ND
1,1,2,2-Tetrachloroethane	ug/kg	120	-	ND
1,1,2,2-Tetrachloroethylene	ug/kg	120	-	ND
Pentachloroethane	ug/kg	250	-	ND
Toluene	ug/kg	120	-	ND
Chlorobenzene	ug/kg	120	-	ND
Ethylbenzene	ug/kg	120	-	ND
Cumene	ug/kg	120	-	ND
m-Xylene	ug/kg	120	-	ND
p-Xylene	ug/kg	120	-	ND
o-Xylene	ug/kg	120	-	ND
1,3-Dichlorobenzene	ug/kg	500	-	ND
1,2-Dichlorobenzene	ug/kg	500	-	ND
1,4-Dichlorobenzene	ug/kg	500	-	ND
Dichlorofluoromethane	ug/kg	120	-	ND
Methanol	mg/kg	5.0	-	ND
Ethanol	mg/kg	5.0	-	ND
Iso-Propyl Alcohol	mg/kg	5.0	-	ND
Ethyl Acetate	mg/kg	5.0	-	ND
N-Butanol	mg/kg	5.0	-	ND
Cyclohexane	mg/kg	5.0	-	ND

ND Not detected at or above the MDL.
MDL Method Detection Limit

MN-COMP 0044357

pace laboratories, inc.

REPORT OF LABORATORY ANALYSIS

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa

March 22, 1988
PACE Project Number: 880122550

(1) All analysis performed on extract from Toxicity Characteristic Leach Procedure.
(2) All analyses were performed on the EP Toxicity Leachate.
(3) Sample diluted 1 to 50; MDL's must be multiplied by dilution factor.
(4) Sample diluted 1 to 200, MDL's must be multplied by dilution factor.
(5) These compounds co-elute. Compound calculated as o-xylene.

The data contained in this report were obtained using EPA or other approved methodologies. All analysis were performed by me or under my direct supervision.

Thomas L. Halverson
Inorganic Chemistry Manager

William H. Scruton
Organic Chemistry Manager

MN-COMP 0044358

pace laboratories, inc.

REPORT OF LABORATORY ANALYSIS

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa

Quality Control Data

Project # 2191
Project # 80122.550

Table 1

Summary of Accuracy Data (1)

Parameter	True Value	Observed Value	% Recovery	Mean % Recovery
Ethanol	8.8	8.8	100	NA(2)
Methylene Chloride	13.3	13.3	100	NA
Acetone	7.9	7.9	100	NA
Isopropyl Alcohol	8.0	8.0	100	NA
Methyl Ethyl Ketone	8.0	8.0	100	NA
Ethyl Acetate	9.0	9.0	100	NA
Cyclo hexane	9.5	9.5	100	NA
Methyl Isobutyl Ketone	8.0	8.0	100	NA
Toulene	8.7	8.7	100	NA
Xylenes	26.1	26.1	100	NA

(1) Data pertains to Continuing Calibration Check Standard.
(2) NA - Not available due to insufficient data.

MN-COMP 0044360

pace laboratories, inc.

REPORT OF LABORATORY ANALYSIS

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa

Quality Control Data

Project # 2191
PACE Project # 880122.550

Table 3

Summary of Precision Data

Parameter	Blank	Sample Result (D_1)	Duplicate Result (D_2)	Difference D_1-D_2	Date Analyzed
Flash Point		155	140	15	01/27/88
Barium	0.11	0.3	0.3	0	02/12/88

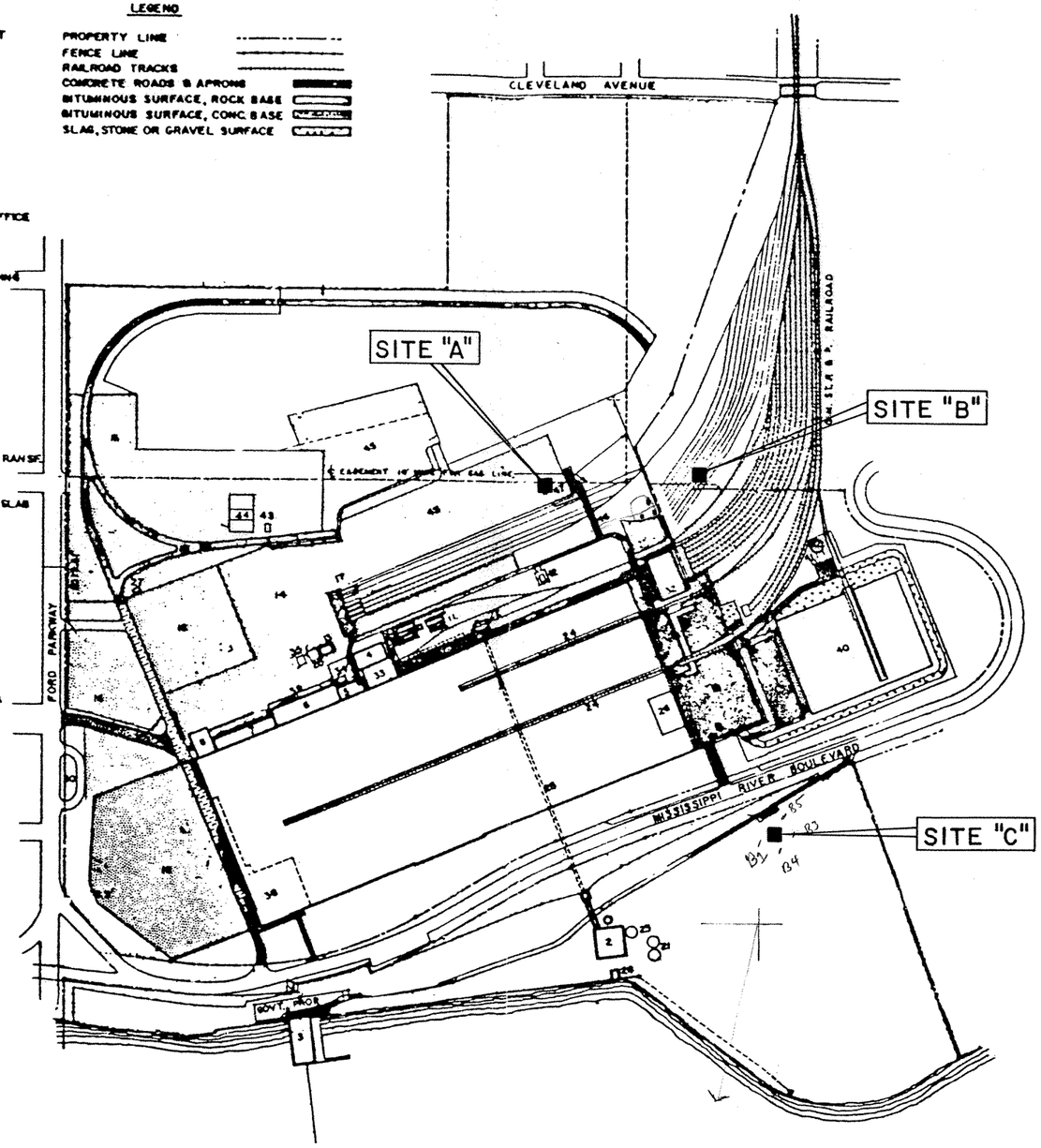
MN-COMP 0044362

KEY

1. TWIN CITY ASSEMBLY PLANT
2. STEAM PLANT
3. HYDRO ELECTRIC PLANT
4. PAINT & OIL HOUSE
5. LYE TANK BUILDING
6. MAINTENANCE
7. WATER TEST
8. GUARD HOUSE
9. ACETYLENE BUILDING
10. PROPANE-AIR MIX BUILDING
11. PROPANE BUILDING & TANKS
12. LIQUID OXYGEN STORAGE
13. CAR LOADING & UNLOADING OFFICE
14. CAR LOADING AREA
15. HAULAWAY STORAGE AREA
16. EMPLOYEE PARKING YARD
17. RAILROAD LOADING & UNLOADING
18. STOCK STORAGE PADS
19. CONCRETE TEST TRACK
20. SALT SPRAY BLDG.
21. OIL STORAGE TANKS
22. COAL HOPPER HOUSE
23. WATER TANK
24. DEPRESSED TRACK PIT
25. STEAM PLANT TUNNEL
26. L.C.L. RECEIVING
27. CONVOY OFFICE
28. SCREEN WELL HOUSE
29. NORTHERN STATES POWER TRANSF.
30. BUS WYE
31. CANOPY
32. HI-CUBE CANOPY & STORAGE SLAB
33. PAINT & OIL HOUSE ADDITION
34. SKID REPAIR
35. DUST TEST BLDG.
36. PROPANE GAS FILLING STATION
37. FRAME DELIVERY ENCLOSURE
38. ADMINISTRATIVE OFFICE
39. MAINT. EQUIP. CANOPY
40. WAREHOUSE.
41. GAS HOUSE
42. OIL STORAGE TANK
43. CONVOY OFFICE
44. LOADING RAMP
45. INC. AREA TO EQUALIZED AREA
46. ROADWAY
47. UNLOADING PAD
48. PARKING ADDITION

LEGEND

PROPERTY LINE
FENCE LINE
RAILROAD TRACKS
CONCRETE ROADS & APRONS
BITUMINOUS SURFACE, ROCK BASE
BITUMINOUS SURFACE, CONC. BASE
SLAG, STONE OR GRAVEL SURFACE



0 500 1000
SCALE IN FEET

Part of previous report-
RI/FS
Assessment of fill areas
CRA Oct. 1988

MN-COMP 0044285

figure 1.2
LOCATION OF FILL SITES
Ford Motor Company

CRA

2191-21/10/88-M

GROUNDWATER MONITORING REPORT AND EVALUATION

SITE C

FORD MOTOR COMPANY

ST. PAUL, MINNESOTA

DRAFT

PRINTED ON

JAN 11 1990

January 1990

2853

GROUNDWATER MONITORING REPORT AND EVALUATION

SITE C

FORD MOTOR COMPANY

ST. PAUL, MINNESOTA

DRAFT

PRINTED ON

JAN 1 1 1990

January 1990

2853

CRA
Consulting Engineers

CONESTOGA-ROVERS & ASSOCIATES LIMITED
651 Colby Drive
Waterloo, Ontario, Canada N2V 1C2
(519) 884-0510

January 11, 1990

Reference No. 2853

Mr. Jerome Amber
FORD MOTOR COMPANY
15201 Century Drive, Suite 608
Dearborn, Michigan 48120

Dear Mr. Amber:

RE: Groundwater Monitoring Report and Evaluation - Site C

Please find enclosed the subject draft report. The groundwater data contained in this report is currently undergoing QA/QC review. This review is expected to be completed within 10 days pending receipt of all necessary data for the analytical laboratory.

If additional monitoring is undertaken during 1990 at Site C, consideration should be given to installation of a well west of abandoned well B2 to essentially replace well B2. This well would need to be installed at the west toe of the fill rather than through the rubble of the fill to accomplish installation. This well is necessary, given the information generated by this investigation, to provide meaningful data to any future monitoring. A proposed well location is presented on the attached figure.

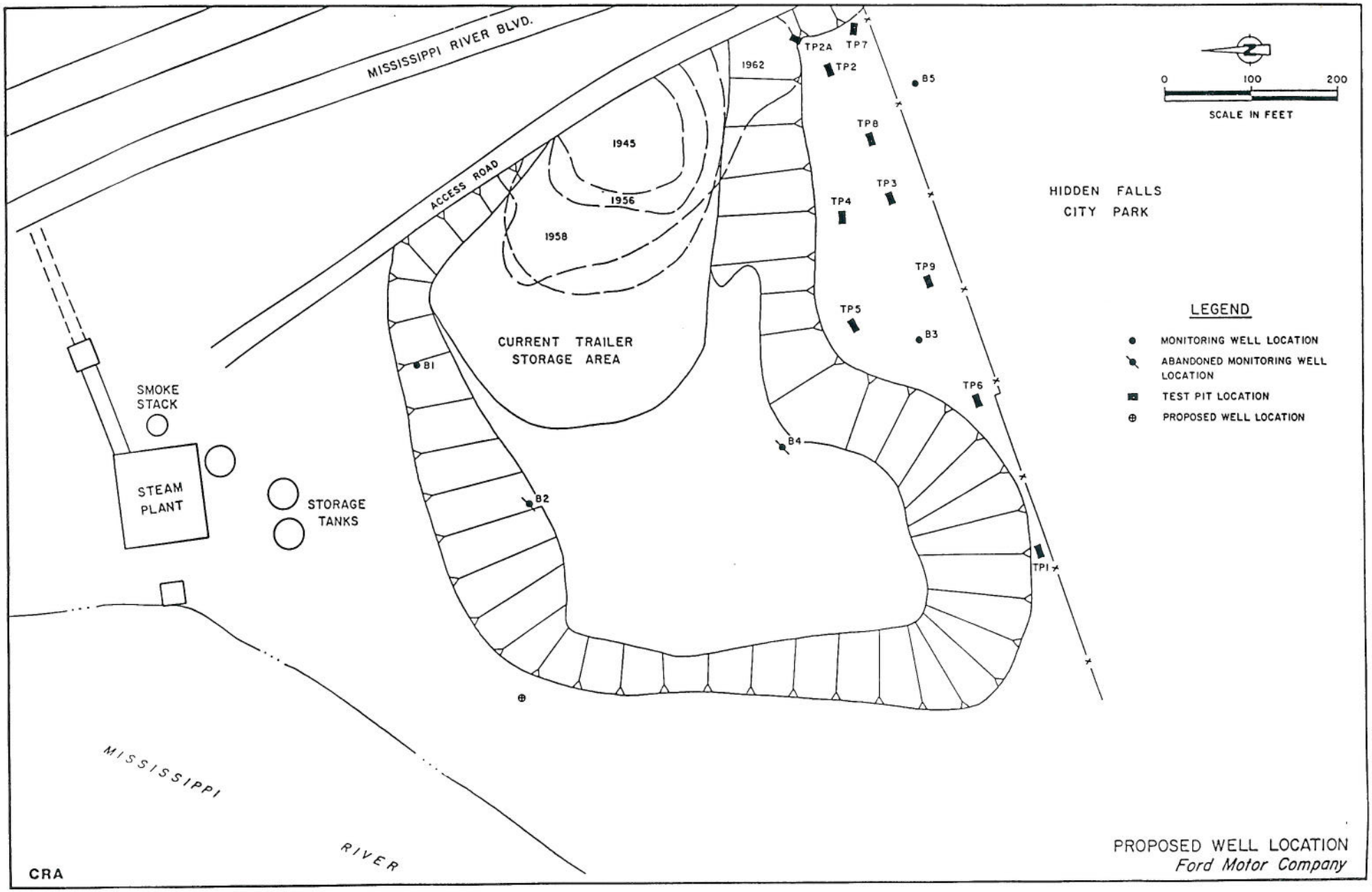
If you should have any questions, please do not hesitate to contact us.

Yours Very Truly,

CONESTOGA-ROVERS AND ASSOCIATES

Jon L. Christofferson

JLC/kk
Enc.
cc: Jim Gibson, Ford
John Kallaus, Ford
Don Rueh, Ford



2853-11/27/89-M

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TABLE 4.1	DETECTED COMPOUNDS	7

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FIGURE 1.2	LOCATION OF FILL SITES	1
FIGURE 3.1	GROUNDWATER CONTOURS (6/2/89)	5
FIGURE 3.2	GROUNDWATER CONTOURS (9/13/89)	5

LIST OF PLANS

PLAN 1	SITE PLAN	Enclosed

1.0 INTRODUCTION

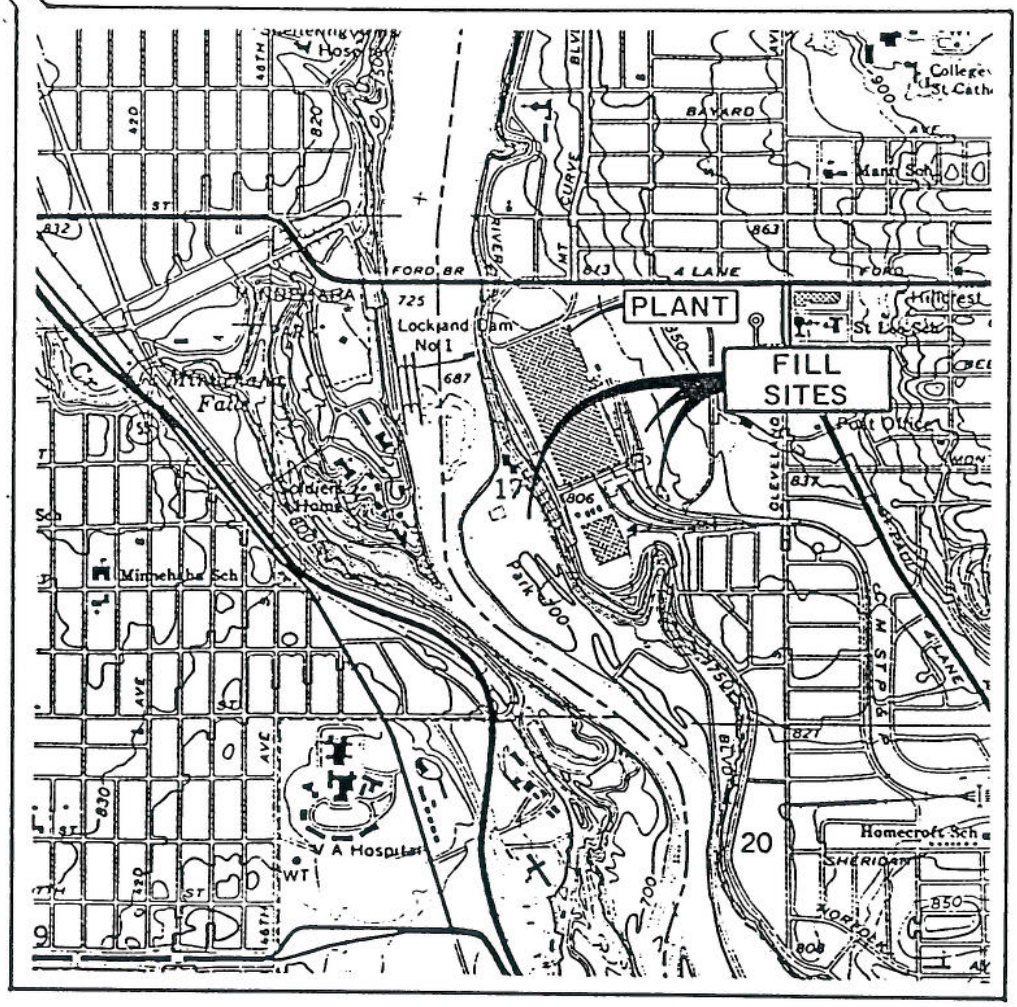
The Ford Motor Company, Twin Cities Assembly Plant (Plant) is located in St. Paul, Minnesota, at 966 South Mississippi River Boulevard. The Plant complex includes buildings on both sides of Mississippi River Boulevard. Buildings west of Mississippi River Boulevard are located above the river bluff on the adjacent sand plains. The Plant location is presented on Figure 1.1.

The Plant was originally used to manufacture glass over 50 years ago. Since then the Plant has been expanded several times and is used to assemble pick-up trucks.

At different times during the Plant's history prior to 1970, paint sludges/wastes were deposited in a relatively small area on Plant property, west of Mississippi River Boulevard (Site C). This waste deposit was identified to U.S. EPA by Ford during the Superfund notification process. A hydrogeologic investigation was commissioned by Ford in 1981. Since that investigation was completed, additional earth fill has been placed over part of the waste fill. The area is now used as a parking lot for tractor trailer truck units. Excavated materials from two other sites (Sites A and B) were subsequently moved to Site C. The locations of the fill Sites are also presented on Figure 1.1 and presented in more detail on Figure 1.2.

In an effort to address environmental issues that may be associated with past waste handling and disposal practices, Ford Motor Company (Ford) hired Conestoga-Rovers and Associates (CRA) to conduct an

KEY MAP



CITY OF ST. PAUL

FIGURE I.1
LOCATION PLAN
Ford Motor Company

CRA

2191 –22/09/87–1–D–0

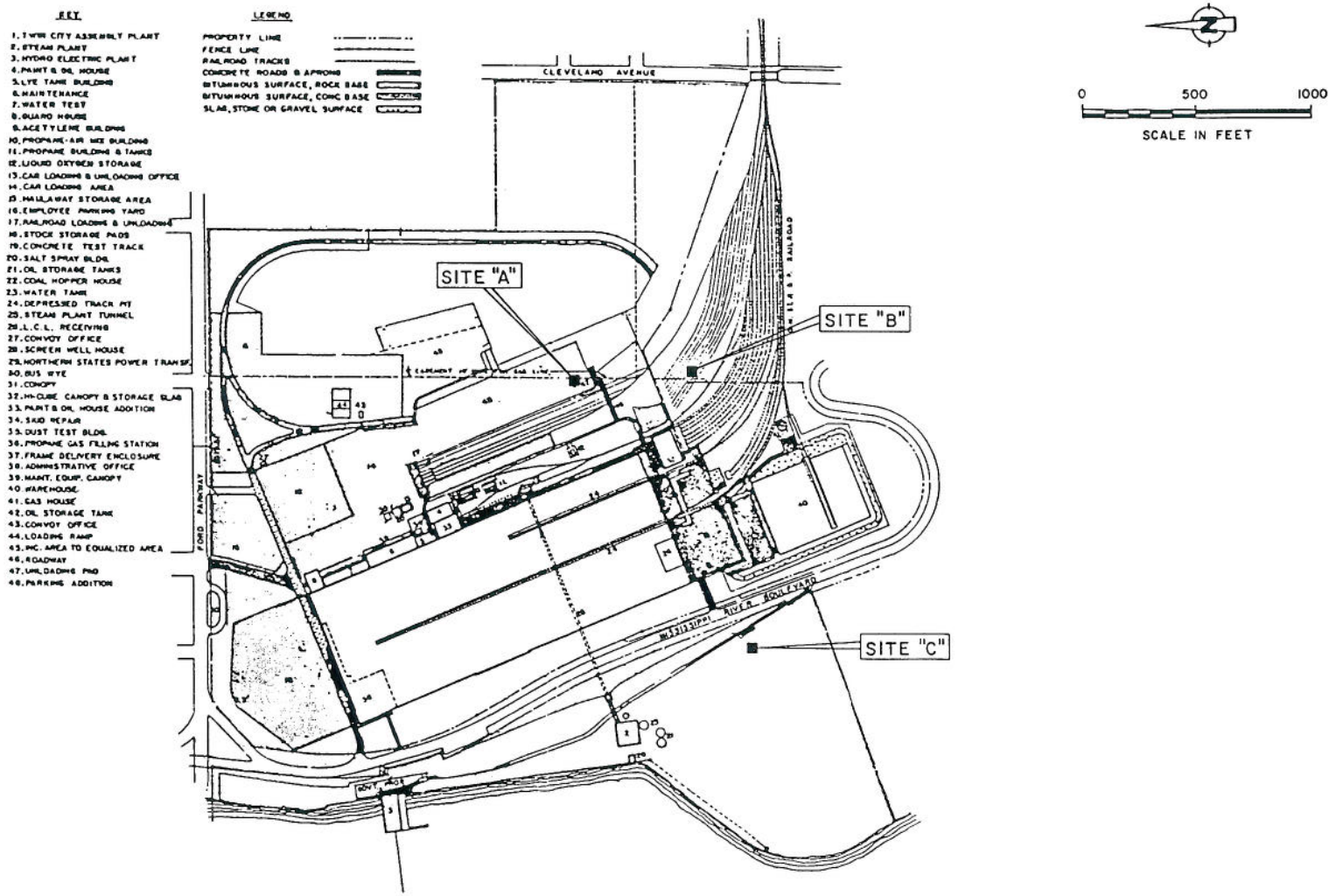


figure 1.2
LOCATION OF FILL SITES
Ford Motor Company

CRA

assessment of the wastes deposited at these sites. This assessment consisted of a file review, hydrogeologic evaluation, test hole excavation (test pits), stadia survey and waste characterization sampling. From these tasks an assessment and evaluation of the site conditions was conducted. The results of these efforts are presented in a report titled "Assessment of Fill Areas, Ford Motor Company, Twin Cities Assembly Plant", dated October 25, 1988 by CRA.

The October 1988 report was reviewed and commented on by the MPCA in a letter dated February 7, 1989. The MPCA accepted the report and requested additional work. A work plan was submitted to MPCA to address their comments and requests on March 10, 1989, and was subsequently approved by MPCA on April 25, 1989. The scope of this additional investigation consisted primarily of three rounds of groundwater monitoring conducted over 1989. In addition, site wells were inspected, repaired and, if necessary, abandoned. Site area land features were also updated by survey.

This report represents a summary of the work completed as part of the Site C monitoring and environmental investigation.

2.0 BACKGROUND

At different times during the Plant's history, construction rubble and paint sludges/wastes were deposited in a relatively small area (Site C - approximately four acres in size) on Plant property west of Mississippi River Boulevard between the Boulevard and the Mississippi River. The majority of this material was deposited during the years 1950 through 1965. This practice was discontinued in 1965. During the years 1965 and 1966, construction debris was deposited in large quantities on top of this fill at Site C. The United States Corps of Engineers also deposited additional rubble between the Ford disposal Site and the river during reconstruction of the Lock and Dam No. 1 near the "Ford Bridge".

This Site C waste deposit was identified to the USEPA by Ford during the Superfund notification process. A hydrogeologic investigation was commissioned by Ford in 1981. Since the investigation was completed, additional clean fill has been placed over part of the Site C waste fill. Earth fill and construction rubble including broken concrete and road excavation rubble from the construction of Mississippi River Boulevard continue to be brought to Site C. A major potion of the top of the fill has been paved with 8 inches of concrete and is now used as a parking lot for tractor-trailer truck units. The remaining top area of Site C is used as a snow dump during winter months for snow removed from local public streets and parking lots.

3.0 FIELD ACTIVITIES

3.1 WELL REPAIR AND ABANDONMENT

On April 25, 1989, a well inspection was conducted of the existing monitoring wells at Site C. Upon completion of this inspection it was determined by CRA that wells B1, B3 and B5 could be made functional again. Wells B2 and B4 were damaged beyond repair by the continual dumping and regrading of rubble and fill in these areas.

In June of 1989, GME Consultants Inc., repaired wells B1, B3 and B5 by installing locking protective casings, bumper posts and additional riser pipes where necessary. Wells B2 and B4 were abandoned in accordance with the Minnesota Department of Health (MDH) water well code. The wells were grouted with a neat cement grout and all retrievable material was removed. Well abandonment records and logs are presented in Appendix A.

3.2 SITE C SURVEY

Following the repairs to wells B1, B3 and B5, a Site survey was completed to establish new top of casing elevations on these wells and to further define the top of fill area.

Table 3.1 presents the new well elevation data. Plan 1 (enclosed) shows the new top of fill area. It should be noted that filling and earth moving activities are still going on in this area and this plan represents the top of fill area as surveyed in September 1989.

3.3 GROUNDWATER SAMPLING

Three (3) rounds of groundwater and surface water sampling were completed according to the approved work plan. The samples were submitted to Pace Laboratories Inc. for chemical analysis under chain-of-custody procedures. The monitoring wells were purged and sampled using a precleaned* bottom filling stainless steel bailer. A minimum of three well volumes were purged prior to sampling. In the event that a well bailed dry prior to the removal of three well volumes, the well was allowed to recharge prior to sampling. The surface water samples were taken by the "Grab Sampling" method. The locations are close to, but may not be exactly the same as those previous sampled by Ford during earlier monitoring.

3.4 GROUNDWATER FLOW DIRECTION

Groundwater elevation data was obtained on June 2, 1989 and September 13, 1989. Groundwater elevations and groundwater flow directions are presented on Figures 3.1 and 3.2.

*Cleaning sequence consisted of: methanol-hexane-methanol rinse, air drying and distilled water rinse.

TABLE 3.1

FORD SITE C
REVISED* MONITORING WELL DATA

Well #	Top of Casing Elevation	Ground Elevation	Bottom of Screen Elevation	Groundwater Elevations 6/2/89	Groundwater Elevations 9/13/89
B1	738.06	735.9	681.62	689.35	686.91
B3	704.18	702.9	679.68	689.36	687.76
B5	703.90	703.2	678.50	690.45	689.19

Note:

All elevations are feet above mean sea level (AMSL).
*As revised due to well repairs and modifications.

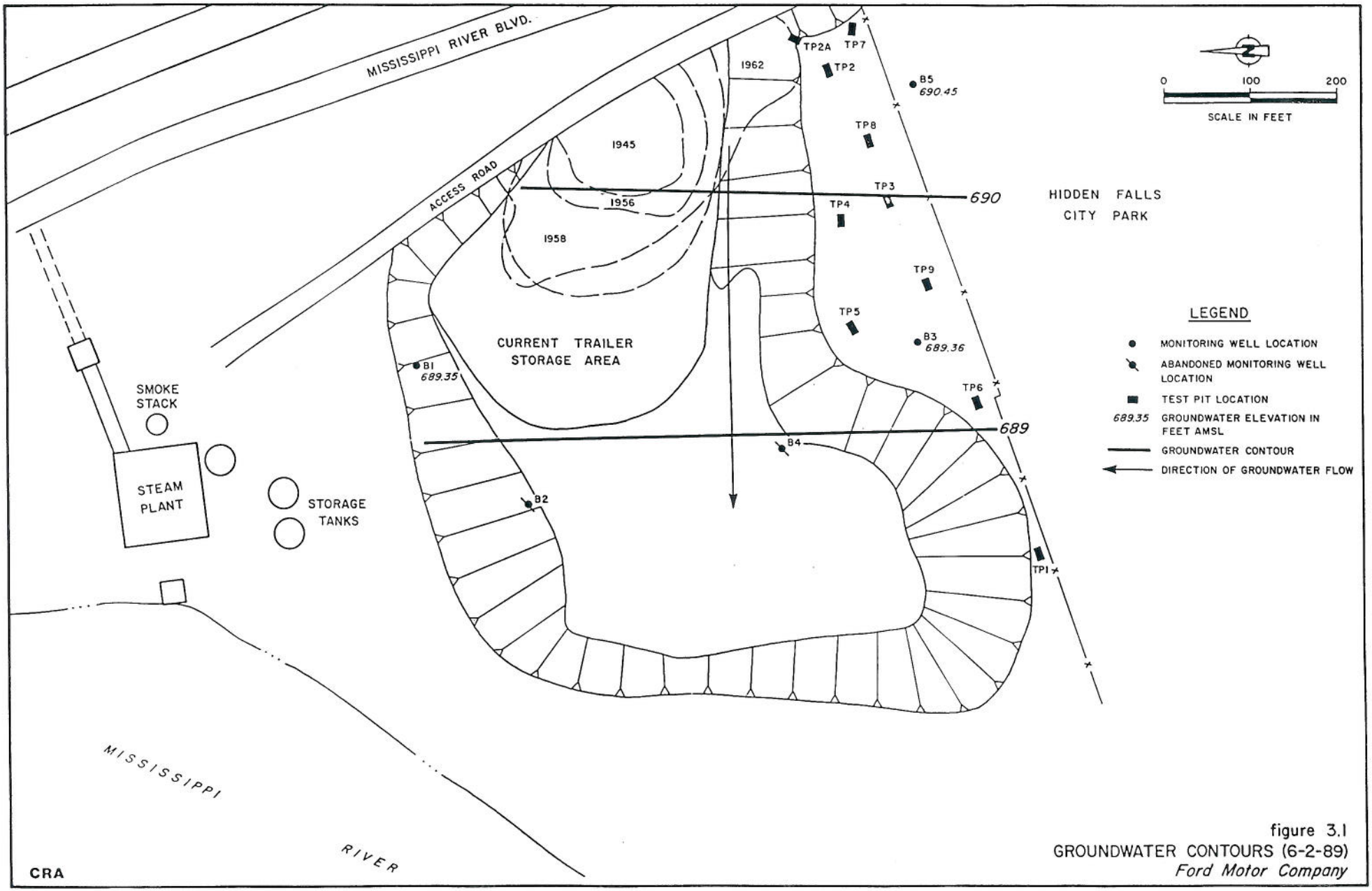


figure 3.1
GROUNDWATER CONTOURS (6-2-89)
Ford Motor Company

2853-11/27/89-M

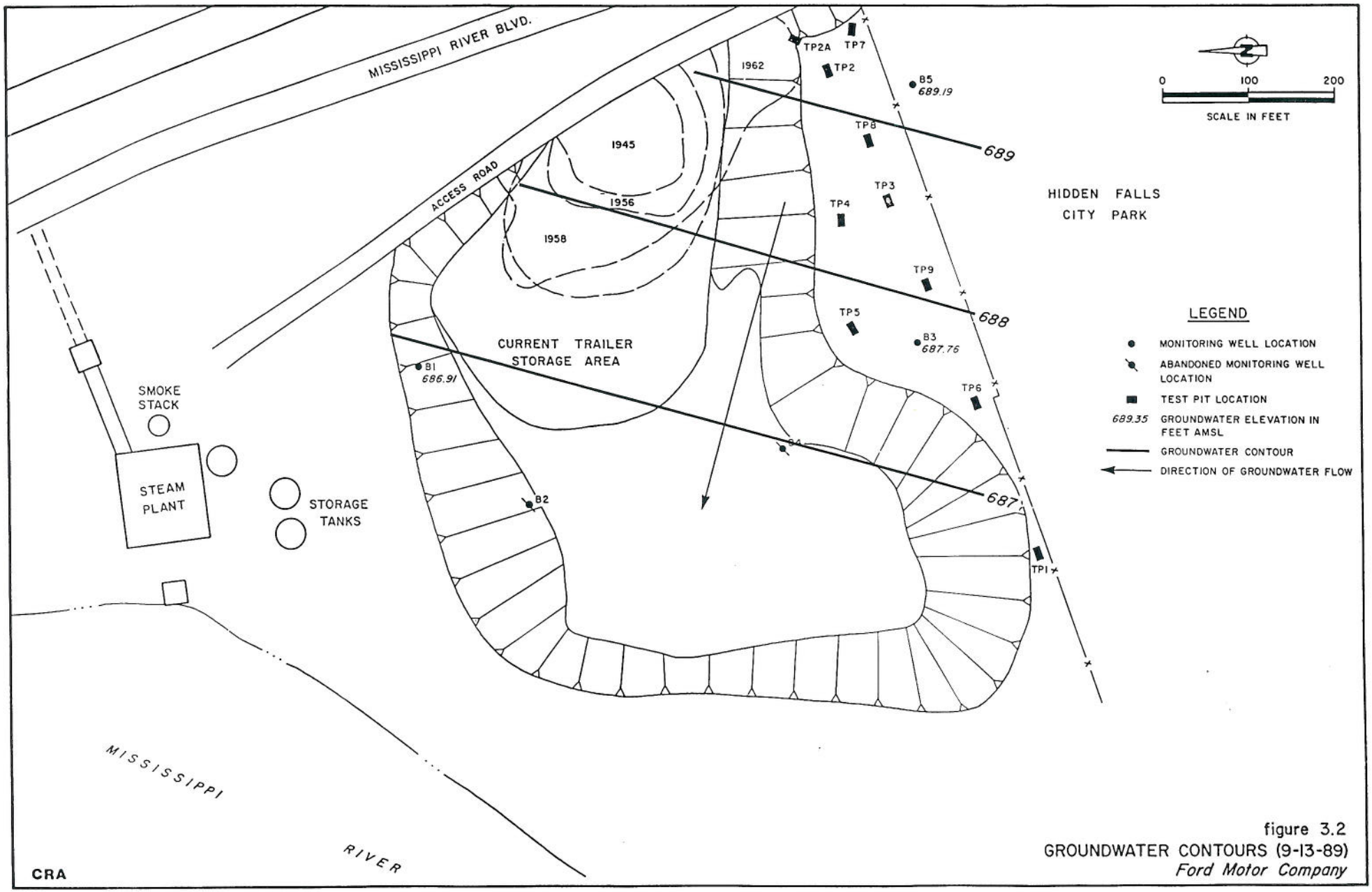


figure 3.2
GROUNDWATER CONTOURS (9-13-89)
Ford Motor Company

2853-11/27/89-M

Groundwater flow is predominantly to the west towards the Mississippi River. The river elevation may affect this flow direction to a minor degree. Water levels measured by CRA during 1988 had indicated a more northwesterly component of flow direction. Seasonal fluctuations in the river elevation also appear to change the gradients slightly as shown on Figures 3.1 and 3.2.

Groundwater elevations are measured in the existing monitoring wells which are screened in the fill and/or river deposits of sand and gravel. Thus, the groundwater flow directions represent a localized condition under the Site.

4.0 ANALYTICAL RESULTS

Results of the chemical analysis of groundwater and surface water are presented in Table 4.1. The analytical lab reports are presented in Appendix B. All water samples were analyzed for halocarbon and aromatic volatile organic compounds (VOC) by EPA methods 601 and 602. In addition to the 601/602 VOC parameters, the MPCA requested that cis-1,2-dichloroethylene and ethylacetate also be analyzed. This request was presented in their letter dated April 25, 1989. The following metals were also analyzed: Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver and Zinc.

TABLE 4.1

FORD SITE "C"
DETECTED COMPOUNDS

		B1			B3			B5			Mississippi River Up Stream			Mississippi River Down Stream		
Date:	MDL Range	6/89	8/89	9/89	6/89	8/89	9/89	6/89	8/89	9/89	6/89	8/89	9/89	6/89	8/89	9/89
Compound																
1,1-Dichloroethylene µg/L	0.3 µg/L	1.5	ND	ND	ND	0.5	ND	ND	0.8	ND	1.3	ND	ND	ND	1.1	ND
Methylene Chloride µg/L	1.0 µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND
Trichlorofluoromethane µg/L	0.4 µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND
Dichlorodifluoromethane µg/L	1.5 µg/L	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride µg/L	1.5 µg/L	ND	5.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene µg/L	0.5 µg/L	ND	ND	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium mg/L	0.0001 mg/L	ND	ND	ND	0.0002	ND	ND	0.0004	ND	0.0002	ND	0.0005	ND	ND	0.0008	ND
Lead mg/L	0.001 - 0.005 mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.001	ND	ND	0.001
Zinc mg/L	0.01 mg/L	ND	ND	ND	0.03	ND	0.02	0.07	ND	0.26	ND	ND	ND	ND	ND	ND
Copper mg/L	0.01 mg/L	ND	0.01	ND	ND	0.02	ND	ND	ND	ND	ND	ND	ND	0.001	ND	ND
Nickel mg/L	0.05 mg/L	ND	ND	ND	ND	0.05	ND	0.08	0.05	ND	ND	ND	ND	ND	ND	ND
Chromium mg/L	0.001 mg/L	ND	ND	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Barium mg/L	0.2 mg/L	ND	ND	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not detected at or above method detection limit.

5.0 EVALUATION

Site C is comprised of fill and rubble material deposited over naturally occurring sands and gravels which were deposited by the Mississippi River. Groundwater under Site C flows towards the river and is influenced to some extent by the river. The data gathered from the existing monitoring wells represents site conditions in the immediate area under Site C. It is not known at this time whether or not the "perched" water under Site C is hydraulically connected to the underlying St. Peter Sandstone aquifer. On a regional scale, the St. Peter Sandstone and the Mississippi River are hydraulically connected.

The monitoring well network (wells B1, B3 and B5) at Site C is sufficient to determine general groundwater flow direction under Site C. However, given the groundwater flow directions calculated on June 6, 1989, and September 13, 1989, there is a gap in the monitoring network due to the loss of B2 and B4.

Evaluation of the groundwater quality data for 1989 (as presented on Table 4.1) indicates the following:

- measured concentrations for all metals tested (cadmium, lead, zinc, copper, nickel, chromium and barium) were all relatively low and typically acceptable for groundwater;

- low concentrations of four VOC were measured during the monitoring. The results are inconsistent from location to location and are not repeated in successive monitoring events at any one location. These inconsistent results indicate that VOC release from the Site is relatively small.

APPENDIX A
WELL ABANDONMENT LOGS

#2853

GME CONSULTANTS, INC.
CONSULTING ENGINEERS
14000 21st Ave. No. / Minneapolis, MN 55447 / 612/559-1859

June 6, 1989

Mr. Steve Mockenhaupt
Conestoga-Rovers & Associates
382 West County Road D
St. Paul, Minnesota 55112

GME Project No. 2014

Re: Report for monitoring well abandonment and monitoring well surface protection at the Ford Plant in South St. Paul, Minnesota

Dear Mr. Mockenhaupt:

On March 3, 1989, we received authorization for the abandonment of existing monitoring wells, and the installation of surface protection at this site in Minneapolis, Minnesota. In accordance with your acceptance of our proposal, we have completed our services. This project was completed in compliance with our understanding of Minnesota Department of Health (MDH) regulations. Enclosed is our report including the MDH well abandonment logs, and a description of our services.

MONITORING WELL ABANDONMENT

Two existing monitoring wells (B-2 and B-4) were abandoned. Our drill crew retrieved as much down-hole 2 inch PVC riser pipe as possible by hand and with the Mobile B-24 rig. The wells were then grouted with neat cement to within two feet of the surface. Native soil was used to fill the remaining space in the boreholes.

You also requested that we upgrade the above ground protection for three existing monitoring wells at the site. Our drill crew installed three, 4 inch diameter by 8 foot long protective steel posts and one, 4 inch diameter by 5 foot long locking protective steel cap at B-1, B-3, and B-5. At B-5, the existing 2 inch PVC riser pipe was cut-off below grade and replaced with a new section. All the protective posts were cemented into place.

The monitoring well abandonment procedures and above ground protection installation were supervised by our Minnesota Licensed Water Well Driller in accordance with MDH regulations.

GENERAL QUALIFICATIONS

This report is a summary of the services performed at the Ford Plant site in South St. Paul, Minnesota. No warranty, either expressed or implied, is presented in this report with respect to the soil and groundwater conditions at this site.

We appreciate the opportunity to be of service to you for this project. If you have any questions regarding this report or if we may be of further assistance to you, please do not hesitate to contact us.

Sincerely,

GME CONSULTANTS, INC.

James G. Nordstog

James A. Nordstog
Director of Drilling Operations
Hydrogeologist

Thomas H Moore

Thomas H. Moore
Minnesota Licensed Water Well Driller

Enclosures: MDH Monitoring Well Abandonment Logs

JAN:WCK:jan

STATE OF MINNESOTA DEPARTMENT OF HEALTH

#2

ABANDONED WELL RECORD

MINNESOTA UNIQUE WELL NO. (leave blank if not known)

1. LOCATION OF WELL

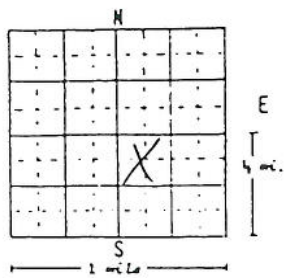
County Name: Ramsey

Township Name	Township Number	Range Number	Section No.	Fraction	4. WELL DEPTH (completed)	Date sealed
	28 (N) or S	23 E or (W)	17	NW-SE	44.5 ft.	5-31-89

Numerical Street Address and City of Well Location or Distance from Road Intersection

500' from Mississippi Blvd, St. Paul, Mn

Show exact location of well (in section grid with "X")



Sketch map of well location

Ford Plant enclosed site map

5. DRILLING METHOD (if known)

1 ☐ Cable tool 4 ☐ Reverse 7 ☐ Driven 10 ☐ Dug
2 ☐ Hollow Rod 5 ☐ Air 8 ☐ Bored 11 ☐ _____
3 ☐ Rotary 6 ☐ Jetted 9 ☒ Power Auger

6. OBSTRUCTIONS

Well obstructed ☐ Yes ☒ No
Obstructions removed ☐ Yes ☐ No If obstructions cannot be removed, contact MDH before sealing.

7. USE

1 ☐ Domestic 4 ☒ Monitoring 8 ☐ Heat Loop
2 ☐ Irrigation 5 ☐ Public 9 ☐ Industry
3 ☐ Test Well 6 ☐ Municipal 10 ☐ Commercial
7 ☐ Air Conditioning 11 ☐ _____

2. PROPERTY OWNER'S NAME

Ford Motor Company
966 S. Mississippi Blvd.
St. Paul, Mn

Mailing Address if different than property address indicated above

8. CASING(S)

1 ☐ Black 4 ☐ Threaded 7 ☒ _____
2 ☐ Galv. 5 ☐ Welded
3 ☒ Plastic 6 ☐ Stainless Steel Not Known

_____ in. to _____ ft.
_____ in. to _____ ft.

3. FORMATION LOG (If not known, indicate formation log from new well or nearby well.)

FORMATION LOG	COLOR	HARDNESS OF FORMATION	FROM	TO
cobbles, boulders			0	7
gravel, sand	brown		7	13
sand	brown		13	25
sand-gravel	brown		25	44

9. SCREEN

☒ Screened well from ____ ft. to Not Known ft. (If known)
☐ Open Hole from ____ ft. to ____ ft.

10. STATIC WATER LEVEL

29.5 ft. ☒ below ☐ above land surface Date Measured 11-18-81

11. WELLHEAD COMPLETION

1 ☐ Pitless Adapter 4 ☐ Found Buried N/A
2 ☐ Basement offset 5 ☐ _____
3 ☐ Well Pit

16. REMARKS, ELEVATION, SOURCE OF DATA - CASINGS REMOVED, CASINGS PERFORATED, ETC.

Enclosed site map.
Site mw #2

12. GROUTING INFORMATION

1 ☒ Neat Cement 2 ☐ Bentonite 3 ☒ cement

Grout material	from	to	ft. cu. yds
cement	0	2	
neat cement	2	44.5	

13. NEAREST SOURCES OF CONTAMINATION

____ feet _____ direction _____ type

Well disinfected before sealing? ☐ Yes

14. PUMP ☐ Removed ☐ Not Present N/A

Type: 1 ☐ Submersible 3 ☐ L.S. Turbine 5 ☐ Reciprocating
2 ☐ Jet 4 ☐ Centrifugal 6 ☐ _____

15. EXISTING WELLS (Please sketch locations of abandoned and active wells in remarks section or on back.)

Other unused well(s) on property? ☐ Yes ☐ No
Abandoned: ☒ Permanent ☐ Temporary ☐ Not sealed

17. WATER WELL CONTRACTORS CERTIFICATION

This well was sealed under my jurisdiction and this report is true to the best of my knowledge and belief.

GME Consultants, Inc
Licensee Business Name License No.

Address 14000 21st Ave N. Mpls. Mn

Signed _____ Date _____

Tom Moore Date 6-9-89
Name of Driller

OFFICIAL ABANDONED WELL RECORD (May be used for Property Transfer)

IMPORTANT: FILE WITH DEED

STATE OF MINNESOTA DEPARTMENT OF HEALTH

#4

ABANDONED WELL RECORD

MINNESOTA UNIQUE WELL NO. (leave blank if not known)

1. LOCATION OF WELL

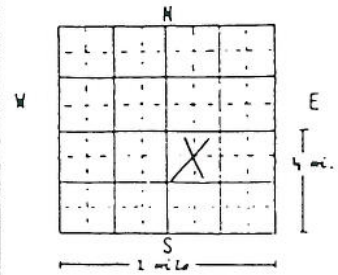
County Name: Ramsey

Township Name	Township Number	Range Number	Section No.	Fraction	4. WELL DEPTH (completed)	Date sealed
	28 N or S	23 E or W	17	NW - SE	29.5 ft.	5-31-89

Numerical Street Address and City of Well Location or Distance from Road Intersection

500' from Mississippi Blvd, St. Paul, Mn

Show exact location of well (in section grid with "X")



Sketch map of well location

Ford Plant
Enclosed site map

5. DRILLING METHOD (if known)

1 ☐ Cable tool 4 ☐ Reverse 7 ☐ Driven 10 ☐ Dug
2 ☐ Hollow Rod 5 ☐ Air 8 ☐ Bored 11 ☐ _____
3 ☐ Rotary 6 ☐ Jetted 9 ☒ Power Auger

6. OBSTRUCTIONS

Well obstructed ☐ Yes ☒ No
Obstructions removed ☐ Yes ☐ No If obstructions cannot be removed, contact MDH before sealing.

7. USE

1 ☐ Domestic 4 ☒ Monitoring 8 ☐ Heat Loop
2 ☐ Irrigation 5 ☐ Public 9 ☐ Industry
3 ☐ Test Well 6 ☐ Municipal 10 ☐ Commercial
7 ☐ Air Conditioning 11 ☐ _____

2. PROPERTY OWNER'S NAME

Ford Motor Company
966 S. Mississippi Blvd.
St. Paul, Mn

Mailing Address if different than property address indicated above

8. CASING(S)

1 ☐ Black 4 ☐ Threaded 7 ☐ _____
2 ☐ Galv. 5 ☐ Welded
3 ☒ Plastic 6 ☐ Stainless Steel Not Known
_____ in. to _____ ft.
_____ in. to _____ ft.

3. FORMATION LOG — If not known, indicate formation log from new well or nearby well.

FORMATION LOG	COLOR	HARDNESS OF FORMATION	FROM	TO
clay	brown		0	1
sand	brown		1	2
sand-fill	black		2	7
sand	brown		7	29

9. SCREEN

☐ Screened well from ____ ft. to Not. Known (If known)
☐ Open Hole from ____ ft. to ____ ft.

10. STATIC WATER LEVEL

19.5 ft. ☒ below ☐ above land surface Date Measured 11-19-81

11. WELLHEAD COMPLETION

1 ☐ Pitless Adapter 4 ☐ Found Buried
2 ☐ Basement offset 5 ☐ N/A
3 ☐ Well Pit

12. GROUTING INFORMATION

1 ☒ Neat Cement 2 ☐ Bentonite 3 ☐ _____
Grout material _____ from ____ to ____ ft. cu. yds ____
EOB to surface

13. NEAREST SOURCES OF CONTAMINATION

____ feet _____ direction _____ type
Well disinfected before sealing? ☐ Yes

14. PUMP ☐ Removed ☐ Not Present N/A

Type: 1 ☐ Submersible 3 ☐ L.S. Turbine 5 ☐ Reciprocating
2 ☐ Jet 4 ☐ Centrifugal 6 ☐ _____

15. EXISTING WELLS (Please sketch locations of abandoned and active wells in remarks section or on back.)

Other unused well(s) on property? ☒ Yes ☐ No
Abandoned: ☐ Permanent ☒ Temporary ☐ Not sealed

16. REMARKS, ELEVATION, SOURCE OF DATA - CASINGS REMOVED, CASINGS PERFORATED, ETC.

Enclosed site map.
Site MW #4

17. WATER WELL CONTRACTORS CERTIFICATION

This well was sealed under my jurisdiction and this report is true to the best of my knowledge and belief.

GME Consultants, Inc
Licensee Business Name License No.

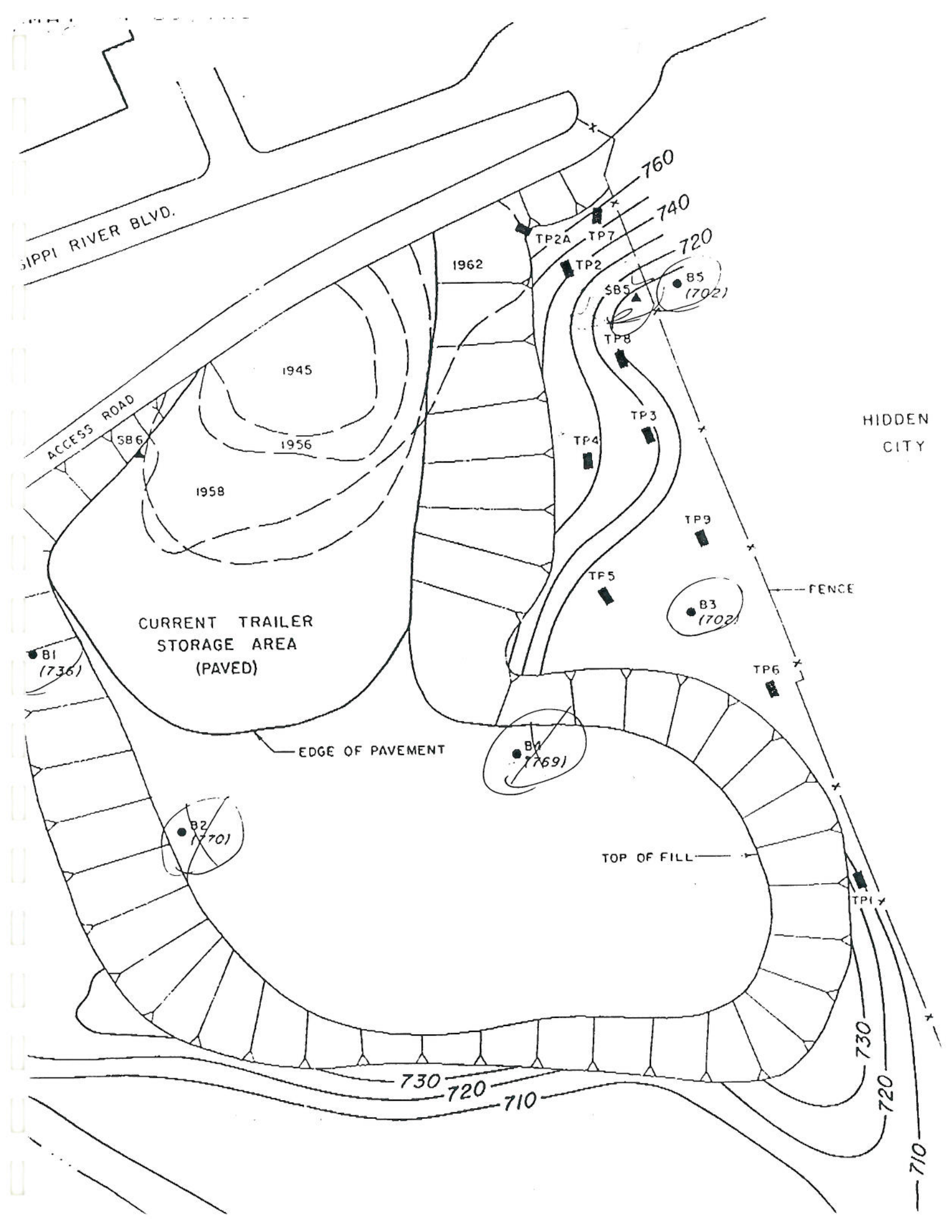
Address 14000 21st Ave N. Mpls, Mn

Signed _____ Date _____

Tom Moore Date 6-9-89
Name of Driller

OFFICIAL ABANDONED WELL RECORD (May be used for Property Transfer)

IMPORTANT: FILE WITH DEED


SIPPI RIVER BLVD.
ACCESS ROAD
586
1945
1956
1958
1962
760
740
720
730
710
TP2A
TP7
TP2
SB5
B5
(702)
TP8
TP3
TP4
TP9
TP5
B3
(702)
FENCE
HIDDEN
CITY
CURRENT TRAILER
STORAGE AREA
(PAVED)
B1
(736)
EDGE OF PAVEMENT
B4
(769)
TP6
B2
(770)
TOP OF FILL
TP1

APPENDIX B
LABORATORY REPORTS

pace laboratories, inc.

RE ORT OF LABORATORY ANALY

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California
Leawood, Kansas

MN. FILE COPY

#2853
Site C
June Winter

cc: Shawn Howe
for D-Base

August 09, 1989

Mr. Steven Mockenhaupt
Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

Dear Mr. Mockenhaupt:

Enclosed is the report of laboratory analyses for samples received 06/05/89.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Susan D Max PFO

Susan D. Max
Director, Sampling and Analytical Services

Enclosures

pace laboratories, inc.

REPORT OF LABORATORY ANALYSIS 16. 89

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California
Leawood, Kansas

Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

August 09, 1989
PACE Project Number: 890605523

Attn: Mr. Steven Mockenhaupt

#2853
Site C
June - Water

2853

Date Sample(s) Collected: 06/02/89
Date Sample(s) Received: 06/05/89

			B-5	B-3	Dupl. B-3
PACE Sample Number:			184870 W-60289-	184880 W-60289-	184890 W-60289-
Parameter	Units	MDL	JM-01	JM-02	JM-03
INORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Arsenic	mg/L	0.002	ND	ND	ND
Barium	mg/L	0.2	ND	0.3	0.4
Cadmium	mg/L	0.0001	0.0004	0.0002	0.0001
Chromium	mg/L	0.001	0.002	ND	ND
Copper	mg/L	0.01	ND	ND	ND
Lead	mg/L	0.001	ND	ND	ND
Mercury	mg/L	0.0002	ND	ND	ND
Nickel	mg/L	0.05	0.08	ND	ND
Selenium	mg/L	0.005	ND	ND	ND
Silver	mg/L	0.04	ND	ND	ND
Zinc	mg/L	0.01	0.07	0.03	0.04
ORGANIC ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
Chloromethane	ug/L	1.0	ND	ND	ND
Bromomethane	ug/L	1.5	ND	ND	ND
Dichlorodifluoromethane	ug/L	1.5	ND	ND	ND
Vinyl chloride	ug/L	1.5	ND	ND	ND
Chloroethane	ug/L	1.0	ND	ND	ND
Methylene chloride	ug/L	1.0	ND	ND	ND
Trichlorofluoromethane	ug/L	0.4	ND	ND	ND
1,1-Dichloroethylene	ug/L	0.3	ND	ND	ND
1,1-Dichloroethane	ug/L	0.2	ND	ND	ND
trans-1,2-Dichloroethylene	ug/L	0.3	ND	ND	ND
Chloroform	ug/L	0.5	ND	ND	ND

ND Not detected at or above the MDL.
MDL Method Detection Limit

pace laboratories, inc.

RE ORT OF LABORATORY ANALYS

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California
Leawood, Kansas

August 09, 1989
PACE Project Number: 890605523

PACE Sample Number:			B-5 184870 W-60289-	B-3 184880 W-60289-	B-3 (Dup) 184890 W-60289-
Parameter	Units	MDL	JM-01	JM-02	JM-03
ORGANIC ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
1,2-Dichloroethane	ug/L	0.2	ND	ND	ND
1,1,1-Trichloroethane	ug/L	0.5	ND	ND	ND
Carbon tetrachloride	ug/L	0.3	ND	ND	ND
Bromodichloromethane	ug/L	0.2	ND	ND	ND
1,2-Dichloropropane	ug/L	0.2	ND	ND	ND
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND	ND	ND
1,1,2-Trichloroethylene	ug/L	0.5	ND	ND	ND
Benzene	ug/L	1.0	ND	ND	ND
Dibromochloromethane	ug/L	1.0	ND	ND	ND
1,1,2-Trichloroethane	ug/L	1.0	ND	ND	ND
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND	ND	ND
2-Chloroethylvinyl ether	ug/L	5.0	ND	ND	ND
Bromoform	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	ND	ND
Toluene	ug/L	1.0	ND	ND	ND
Chlorobenzene	ug/L	1.0	ND	ND	ND
Ethyl benzene	ug/L	1.0	ND	ND	ND
1,3-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,2-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,4-Dichlorobenzene	ug/L	4.0	ND	ND	ND

ND Not detected at or above the MDL.
MDL Method Detection Limit

pace laboratories, inc.

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California
Leawood, Kansas

RE ORT OF LABORATORY ANALYS

Mr. Steven Mockenhaupt
Page 3

August 09, 1989
PACE Project Number: 890605523

PACE Sample Number:			Rinsate Blank 184900 W-60289-	B-1 184910 W-60289-	Miss. River Upstream Surface Water 184920 W-60289-
Parameter	Units	MDL	JM-05	JM-06	JM-07
INORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Arsenic	mg/L	0.002	ND	ND	ND
Barium	mg/L	0.2	ND	ND	ND
Cadmium	mg/L	0.0001	ND	ND	ND
Chromium	mg/L	0.001	ND	ND	ND
Copper	mg/L	0.01	ND	ND	ND
Lead	mg/L	0.001	ND	ND	ND
Mercury	mg/L	0.0002	OD	ND	ND
Nickel	mg/L	0.05	ND	ND	ND
Selenium	mg/L	0.005	ND	ND	ND
Silver	mg/L	0.04	ND	ND	ND
Zinc	mg/L	0.01	ND	ND	ND
ORGANIC ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
Chloromethane	ug/L	1.0	ND	ND	ND
Bromomethane	ug/L	1.5	ND	ND	ND
Dichlorodifluoromethane	ug/L	1.5	ND	ND	ND
Vinyl chloride	ug/L	1.5	ND	ND	ND
Chloroethane	ug/L	1.0	ND	ND	ND
Methylene chloride	ug/L	1.0	ND	ND	ND
Trichlorofluoromethane	ug/L	0.4	1.3	ND	ND
1,1-Dichloroethylene	ug/L	0.3	2.3	1.5	1.3
1,1-Dichloroethane	ug/L	0.2	ND	ND	ND
trans-1,2-Dichloroethylene	ug/L	0.3	ND	ND	ND
Chloroform	ug/L	0.5	ND	ND	ND
1,2-Dichloroethane	ug/L	0.2	ND	ND	ND
1,1,1-Trichloroethane	ug/L	0.5	2.7	ND	ND
Carbon tetrachloride	ug/L	0.3	ND	ND	ND
Bromodichloromethane	ug/L	0.2	ND	ND	ND
1,2-Dichloropropane	ug/L	0.2	ND	ND	ND

ND Not detected at or above the MDL.
MDL Method Detection Limit

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RE ORT OF LABORATORY ANALYS

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August 09, 1989
PACE Project Number: 890605523

PACE Sample Number:			Blank 184900 W-60289-JM-05	B-1 184910 W-60289-JM-06	River up 184920 W-60289-JM-07
Parameter	Units	MDL			
ORGANIC ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND	ND	ND
1,1,2-Trichloroethylene	ug/L	0.5	ND	ND	ND
Benzene	ug/L	1.0	ND	ND	ND
Dibromochloromethane	ug/L	1.0	ND	ND	ND
1,1,2-Trichloroethane	ug/L	1.0	ND	ND	ND
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND	ND	ND
2-Chloroethylvinyl ether	ug/L	5.0	ND	ND	ND
Bromoform	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	ND	ND
Toluene	ug/L	1.0	1.4	ND	ND
Chlorobenzene	ug/L	1.0	ND	ND	ND
Ethyl benzene	ug/L	1.0	ND	ND	ND
1,3-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,2-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,4-Dichlorobenzene	ug/L	4.0	ND	ND	ND

ND Not detected at or above the MDL.
MDL Method Detection Limit

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RE ORT OF LABORATORY ANALYS

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August 09, 1989
PACE Project Number: 890605523

Mississippi River Downstream Surface Water

PACE Sample Number:			184930 W-60289-
Parameter	Units	MDL	JM-08
INORGANIC ANALYSIS			
INDIVIDUAL PARAMETERS			
Arsenic	mg/L	0.002	ND
Barium	mg/L	0.2	ND
Cadmium	mg/L	0.0001	ND
Chromium	mg/L	0.001	ND
Copper	mg/L	0.01	ND
Lead	mg/L	0.001	0.001
Mercury	mg/L	0.0002	ND
Nickel	mg/L	0.05	ND
Selenium	mg/L	0.005	ND
Silver	mg/L	0.04	ND
Zinc	mg/L	0.01	ND
ORGANIC ANALYSIS			
PURGEABLE HALOCARBONS AND AROMATICS			
Chloromethane	ug/L	1.0	ND
Bromomethane	ug/L	1.5	ND
Dichlorodifluoromethane	ug/L	1.5	ND
Vinyl chloride	ug/L	1.5	ND
Chloroethane	ug/L	1.0	ND
Methylene chloride	ug/L	1.0	1.3
Trichlorofluoromethane	ug/L	0.4	2.1
1,1-Dichloroethylene	ug/L	0.3	ND
1,1-Dichloroethane	ug/L	0.2	ND
trans-1,2-Dichloroethylene	ug/L	0.3	ND
Chloroform	ug/L	0.5	ND
1,2-Dichloroethane	ug/L	0.2	ND
1,1,1-Trichloroethane	ug/L	0.5	ND
Carbon tetrachloride	ug/L	0.3	ND
Bromodichloromethane	ug/L	0.2	ND
1,2-Dichloropropane	ug/L	0.2	ND

ND Not detected at or above the MDL.
MDL Method Detection Limit

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RE ORT OF LABORATORY ANALYS

August 09, 1989
PACE Project Number: 890605523

River Down

PACE Sample Number:			184930 W-60289-
Parameter	Units	MDL	JM-08
ORGANIC ANALYSIS			
PURGEABLE HALOCARBONS AND AROMATICS			
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND
1,1,2-Trichloroethylene	ug/L	0.5	ND
Benzene	ug/L	1.0	ND
Dibromochloromethane	ug/L	1.0	ND
1,1,2-Trichloroethane	ug/L	1.0	ND
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND
2-Chloroethylvinyl ether	ug/L	5.0	ND
Bromoform	ug/L	1.0	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND
Toluene	ug/L	1.0	ND
Chlorobenzene	ug/L	1.0	ND
Ethyl benzene	ug/L	1.0	ND
1,3-Dichlorobenzene	ug/L	4.0	ND
1,2-Dichlorobenzene	ug/L	4.0	ND
1,4-Dichlorobenzene	ug/L	4.0	ND

ND Not detected at or above the MDL.
MDL Method Detection Limit

The data contained in this report were obtained using EPA or other approved methodologies. All analyses were performed by me or under my direct supervision.

Thomas L. Halverson
Inorganic Chemistry Manager

Dennis R. Seeger
Organic Chemistry Manager

pace laboratories, inc.

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RE ORT OF LABORATORY ANALYS

QUALITY CONTROL DATA

Client Name Conestoga Rovers & Associates PACE Project Number 890605.523

Project Name 2853

SUMMARY OF INORGANIC ACCURACY AND PRECISION DATA

Parameter	Date of Analysis	Mthd Blk	Check Std. % Rec	True Value	Matrix Spike	% Rec	Rep. A	Rep. B	A-B	Mean % Rec
Arsenic	6-20-89	ND	115	10.59	9.74	92	10.2	10.2	0	109
Barium	6-15-89	ND	101	2.66	2.72	102	NA	NA	-	103
Cadmium	6-16-89	ND	103	1.142	1.098	96	1.087	1.087	0	98
Chromium	6-15-89	ND	103	5.25	5.31	101	5.51	5.51	0	104
Copper	6-6-89	0.08	102	0.80	0.80	100	1.02	1.00	0.02	100
Lead	6-9-89	ND	114	10	9.73	97	NA	NA	-	100
Mercury	6-9-89	ND	97	5.00	4.90	98	4.37	4.31	0.06	97
Nickel	6-6-89	ND	98	1.01	0.995	99	NA	NA	-	98
Selenium	6-39-89	ND	108	25.0	27.9	112	27.9	26.9	1.0	95
Silver	6-8-89	ND	95	2.0	1.66	83	NA	NA	-	101
Zinc	6-6-89	0.11	98	1.6	1.57	98	NA	NA	-	99

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REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Client Name Conestoga Rovers & Associates PACE Project Number 890605.523

Project Name 2853 Sample Spiked 18605

Standard B

SUMMARY OF ORGANIC ACCURACY AND PRECISION DATA

Parameter EPA Methods 601, 602 MDH 465B Date of Analysis 6-8-89

Compound	MS % Rec	MSD % Rec	RPD	Accuracy Range	Precision Limit
Trichlorofluoromethane	89	88	0.60	83-120	30%
Dichlorofluoromethane	79	76	0.60	73-143	30%
trans-1,2-Dichloroethylene	93	88	5.52	72-139	30%
1,2-Dichloroethane	92	90	2.17	58-135	30%
1,1,1-Trichloroethane	100	91	9.42	87-132	30%
Bromodichloromethane	101	101	0	85-132	30%
2,3-Dichloropropene	98	90	8.51	70-123	30%
trans-1,3-Dichloropropene	105	100	4.82	54-145	30%
cis-1,3-Dichloropropene	78	76	2.56	64-138	30%
1,2-Dibromomethane	117	129	9.76	66-138	30%
Bromoform	88	87	0.60	62-136	30%
1,1,2,2-Tetrachloroethane	86	77	11.0	73-153	30%
Toluene	103	100	2.91	54-132	30%
Ethylbenzene	85	81	4.82	55-141	30%
m-Xylene	110	105	4.65	59-152	30%
o-Xylene	108	104	3.77	30-149	30%
1,2-Dichlorobenzene	106	104	1.90	40-142	30%

Comments: Method blank - no compounds of interest detected

NA Not Analyzed
ND Not Detected at or above the method detection limit

WPPLABFM191 pgl

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REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Client Name Conestoga Rovers & Associates PACE Project Number 890605523

Project Name 2853 Sample Spiked

Standard A

SUMMARY OF ORGANIC ACCURACY AND PRECISION DATA

Parameter EPA Methods 601, 602 MDH 465B Date of Analysis 6-9-89

Compound	MS % Rec	MSD % Rec	RPD	Accuracy Range	Precision Limit
Methylene Chloride	90	94	4.26	49-119	30%
1,1-Dichloroethylene	140	137	2.17	78-123	30%
1,1-Dichloroethane	119	113	5.17	78-122	30%
Chloroform	144	132	8.69	74-123	30%
Carbon Tetrachloride	138	132	4.44	79-139	30%
1,2-Dichloropropane	112	104	7.40	73-126	30%
1,1,2-Trichloroethylene	97	92	5.29	75-126	30%
Benzene	112	104	7.41	59-126	30%
Dibromochloromethane	115	103	11.0	86-121	30%
1,1,2-Trichloroethane	115	103	110	86-121	30%
2-Chloroethylvinyl ether	NA	NA	-	82-145	30%
Tetrachloroethylene	100	92	8.33	68-119	30%
Chlorobenzene	95	88	7.65	68-112	30%
1,3-Dichlorobenzene	99	91	8.42	65-146	30%
1,4-Dichlorobenzene	98	90	8.60	46-141	30%

Comments: Method blank - no compounds of interest detected

NA Not Analyzed
ND Not Detected at or above the method detection limit

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RE ORT OF LABORATORY ANALY[illegible]

QUALITY CONTROL DATA

Client Name Conestoga Rovers & Associates PACE Project Number 890605.523

Project Name 2853 Sample Spiked 18845

Standard B

SUMMARY OF ORGANIC ACCURACY AND PRECISION DATA

Parameter EPA Methods 601, 602 MDH 465B Date of Analysis 6-12-89

Compound	MS % Rec	MSD % Rec	RPD	Accuracy Range	Precision Limit
Trichlorofluoromethane	75	91	19	83-120	30%
Dichlorofluoromethane	NA	NA	-	73-143	30%
trans-1,2-Dichloroethylene	102	119	15	72-139	30%
1,2-Dichloroethane	80	80	0	58-135	30%
1,1,1-Trichloroethane	117	122	4.2	87-132	30%
Bromodichloromethane	102	124	19	85-132	30%
2,3-Dichloropropene	NA	NA	-	70-123	30%
trans-1,3-Dichloropropene	139	164	17	54-145	30%
cis-1,3-Dichloropropene	79	105	28	64-138	30%
1,2-Dibromomethane	NA	NA	-	66-138	30%
Bromoform	89	108	19	62-136	30%
1,1,2,2-Tetrachloroethane	99	117	17	73-153	30%
Toluene	83	86	3.6	54-132	30%
Ethylbenzene	88	91	3.4	55-141	30%
m-Xylene	84	88	4.7	59-152	30%
o-Xylene	NA	NA	-	30-149	30%
1,2-Dichlorobenzene	85	96	12	40-142	30%

Comments: Method blank - no compounds of interest detected

NA Not Analyzed
ND Not Detected at or above the method detection limit

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REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Client Name Conestoga Rovers & Associates PACE Project Number 890605523

Project Name 2853 Sample Spiked 19062

Standard A

SUMMARY OF ORGANIC ACCURACY AND PRECISION DATA

Parameter EPA Methods 601, 602 MDH 465B Date of Analysis 6-12-89

Compound	MS % Rec	MSD % Rec	RPD	Accuracy Range	Precision Limit
Methylene Chloride	95	104	9.01	49-119	30%
1,1-Dichloroethylene	100	103	2.90	78-123	30%
1,1-Dichloroethane	84	85	0.06	78-122	30%
Chloroform	88	91	3.35	74-123	30%
Carbon Tetrachloride	84	85	0.06	79-139	30%
1,2-Dichloropropane	86	87	0.60	73-126	30%
1,1,2-Trichloroethylene	90	89	0.60	75-126	30%
Benzene	103	101	0.20	59-126	30%
Dibromochloromethane	86	82	0.60	86-121	30%
1,1,2-Trichloroethane	86	87	0.60	86-121	30%
2-Chloroethylvinyl ether	203	210	3.38	82-145	30%
Tetrachloroethylene	90	89	0.10	68-119	30%
Chlorobenzene	87	90	3.38	68-112	30%
1,3-Dichlorobenzene	89	89	0	65-146	30%
1,4-Dichlorobenzene	85	83	2.38	46-141	30%

Comments: 1,1-Dichloroethylene detected at 1.2 ug/L - no other compounds detected

NA Not Analyzed
ND Not Detected at or above the method detection limit

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REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Client Name Conestoga Rovers & Associates PACE Project Number 890605.523

Project Name 2853 Sample Spiked

Standard B

SUMMARY OF ORGANIC ACCURACY AND PRECISION DATA

Parameter EPA Methods 601, 602 MDH 465B Date of Analysis 6-14-89

Compound	MS % Rec	MSD % Rec	RPD	Accuracy Range	Precision Limit
Trichlorofluoromethane	81	83	2.44	83-120	30%
Dichlorofluoromethane	73	75	2.70	73-143	30%
trans-1,2-Dichloroethylene	83	82	1.21	72-139	30%
1,2-Dichloroethane	80	81	1.24	58-135	30%
1,1,1-Trichloroethane	86	85	1.17	87-132	30%
Bromodichloromethane	89	89	0	85-132	30%
2,3-Dichloropropene	86	85	1.17	70-123	30%
trans-1,3-Dichloropropene	84	85	1.18	54-145	30%
cis-1,3-Dichloropropene	75	73	2.68	64-138	30%
1,2-Dibromomethane	99	100	1.00	66-138	30%
Bromoform	93	96	3.17	62-136	30%
1,1,2,2-Tetrachloroethane	77	76	1.31	73-153	30%
Toluene	99	87	12.9	54-132	30%
Ethylbenzene	82	71	14.4	55-141	30%
m-Xylene	105	92	13.2	59-152	30%
o-Xylene	104	94	10.1	30-149	30%
1,2-Dichlorobenzene	103	91	12.4	40-142	30%

Comments: Method blank - no compounds of interest detected

NA Not Analyzed
ND Not Detected at or above the method detection limit

WPPLABFM191 pgl

CRA Consulting Engineers
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive, Waterloo, Ontario Canada N2V 1C2

SHIPPED TO (Laboratory name): Pac Labs

CHAIN OF CUSTODY RECORD

PROJECT Nº: 2853

PROJECT NAME: Ford

SAMPLER'S SIGNATURE: (SIGN)

SEQ. Nº	SAMPLE Nº	DATE	TIME	SAMPLE LOCATOIN	SAMPLE TYPE	Nº OF CONTAINERS	REMARKS
	W-60289-JM-01	6-2-89	1848	Ford	Water	5	Analyze for:
	" -02		88	Site		5	Halocarbon &
	" -03		8			5	Aromatic Organics
	" -05		90			5	compound:
	" -06		91			5	using EPA
	" -07		92			5	methods 601
	" -08		93			5	& 602.
							Analyze For:
							Following Metals:
							As, Ba, Cd,
							Cr, Cu, Pb,
							Hg, Se, Ag,
							Zn, Ni.
				TOTAL NUMBER OF CONTAINERS			

ANTICIPATED CHEMICAL HAZARDS:

RELINQUISHED BY: 1 (SIGN)	DATE/TIME 6-5-89 1500	RECEIVED BY: 2 (SIGN)
RELINQUISHED BY: 2 (SIGN)	DATE/TIME	RECEIVED BY: 3 (SIGN)
RELINQUISHED BY: 3 (SIGN)	DATE/TIME	RECEIVED BY: 4 (SIGN)
ADDITIONAL SIGNATURE SHEET REQUIRED ☐		

METHOD OF SHIPMENT:	SHIPPED BY:	RECEIVED FOR LABORATORY BY: (SIGN)	DATE/TIME 6/8/89 1630
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:		COOLER OPENED BY: (SIGN)	DATE/TIME

WHITE – CRA OFFICE COPY
YELLOW – RECEIVING LABORATORY COPY
PINK – CRA LABORATORY COPY
GOLDEN ROD – SHIPPERS

Nº 5987

pace laboratories, inc.

PORT OF LABORATORY ANALYS

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Irvine, California

#2953

October 05, 1989 **MN. FILE COPY**

OCT 30 89

Site C
water
August 1989

Mr. Jon Michaels
Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

RE: PACE Project No. 890808.516

Dear Mr. Michaels:

Enclosed is the report of laboratory analyses for samples received August 08, 1989.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Susan D. Max
Director, Sampling and Analytical Services

Enclosures

pace laboratories, inc.

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Tampa, Florida
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Novato, California
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Irvine, California

PORT OF LABORATORY ANALYS

Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

October 05, 1989
PACE Project Number: 890808516

Attn: Mr. Jon Michaels

2853

B 1

Parameter	Units	MDL	279190 08/04/89 08/08/89 W-080489-JM-06	DATE ANALYZED
INORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Arsenic	mg/L	0.002	ND	08/25/89
Barium	mg/L	0.2	ND	08/09/89
Cadmium	mg/L	0.0001	ND	09/05/89
Chromium	mg/L	0.001	ND	08/22/89
Copper	mg/L	0.01	0.01	08/09/89
Lead	mg/L	0.005	ND	08/24/89
Mercury	mg/L	0.0002	ND	08/24/89
Nickel	mg/L	0.05	ND	08/14/89
Selenium	mg/L	0.010	ND	08/24/89
Silver	mg/L	0.04	ND	08/17/89
Zinc	mg/L	0.01	ND	08/24/89
ORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Ethyl acetate	ug/L	20	ND	09/01/89
PURGEABLE HALOCARBONS AND AROMATICS				
Chloromethane	ug/L	1.0	ND	09/01/89
Bromomethane	ug/L	1.5	ND	09/01/89
Dichlorodifluoromethane	ug/L	1.5	14 (1)	09/01/89
Vinyl chloride	ug/L	1.5	5.2 (1)	09/01/89
Chloroethane	ug/L	1.0	ND	09/01/89
Methylene chloride	ug/L	1.0	ND	09/01/89
Trichlorofluoromethane	ug/L	0.4	ND	09/01/89
1,1-Dichloroethylene	ug/L	0.3	ND	09/01/89

MDL Method Detection Limit
ND Not detected at or above the MDL.
(1) These compounds co-elute

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PORT OF LABORATORY ANALYS

October 05, 1989
PACE Project Number: 890808516

B-1

Parameter	Units	MDL	279190	DATE ANALYZED
PACE Sample Number:			279190	
Date Collected:			08/04/89	
Date Received:			08/08/89	
			W-080489-JM-06	
ORGANIC ANALYSIS				
PURGEABLE HALOCARBONS AND AROMATICS				
1,1-Dichloroethane	ug/L	0.2	ND	09/01/89
trans-1,2-Dichloroethylene	ug/L	0.3	ND	09/01/89
Chloroform	ug/L	0.5	ND	09/01/89
1,2-Dichloroethane	ug/L	0.2	ND	09/01/89
1,1,1-Trichloroethane	ug/L	0.5	ND	09/01/89
Carbon tetrachloride	ug/L	0.3	ND	09/01/89
Bromodichloromethane	ug/L	0.2	ND	09/01/89
1,2-Dichloropropane	ug/L	0.2	ND	09/01/89
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND	09/01/89
1,1,2-Trichloroethylene	ug/L	0.5	ND	09/01/89
Benzene	ug/L	1.0	ND	09/01/89
Dibromochloromethane	ug/L	1.0	ND	09/01/89
1,1,2-Trichloroethane	ug/L	1.0	ND	09/01/89
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND	09/01/89
2-Chloroethylvinyl ether	ug/L	5.0	ND	09/01/89
Bromoform	ug/L	1.0	ND	09/01/89
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	09/01/89
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	09/01/89
Toluene	ug/L	1.0	ND	09/01/89
Chlorobenzene	ug/L	1.0	ND	09/01/89
Ethyl benzene	ug/L	1.0	ND	09/01/89
1,3-Dichlorobenzene	ug/L	4.0	ND	09/01/89
1,2-Dichlorobenzene	ug/L	4.0	ND	09/01/89
1,4-Dichlorobenzene	ug/L	4.0	ND	09/01/89
cis-1,2-Dichloroethylene	ug/L	0.5	ND	09/01/89

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

October 05, 1989
PACE Project Number: 890808516

B-3

Parameter	Units	MDL	279200	DATE ANALYZED
PACE Sample Number:			279200	
Date Collected:			08/04/89	
Date Received:			08/08/89	
			W-080489-JM-07	
INORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Arsenic	mg/L	0.002	ND	08/25/89
Barium	mg/L	0.2	ND	08/09/89
Cadmium	mg/L	0.0001	ND	09/05/89
Chromium	mg/L	0.001	ND	08/22/89
Copper	mg/L	0.01	0.02	08/09/89
Lead	mg/L	0.005	ND	08/24/89
Mercury	mg/L	0.0002	ND	08/24/89
Nickel	mg/L	0.05	0.05	08/14/89
Selenium	mg/L	0.010	ND	08/24/89
Silver	mg/L	0.04	ND	08/17/89
Zinc	mg/L	0.01	ND	08/24/89
ORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Ethyl acetate	ug/L	120	ND	08/18/89
PURGEABLE HALOCARBONS AND AROMATICS				
Chloromethane	ug/L	1.0	ND	08/18/89
Bromomethane	ug/L	1.5	ND	08/18/89
Dichlorodifluoromethane	ug/L	1.5	ND	08/18/89
Vinyl chloride	ug/L	1.5	ND	08/18/89
Chloroethane	ug/L	1.0	ND	08/18/89
Methylene chloride	ug/L	1.0	ND	08/18/89
Trichlorofluoromethane	ug/L	0.4	ND	08/18/89
1,1-Dichloroethylene	ug/L	0.3	0.5	08/18/89
1,1-Dichloroethane	ug/L	0.2	ND	08/18/89
trans-1,2-Dichloroethylene	ug/L	0.3	ND	08/18/89
Chloroform	ug/L	0.5	ND	08/18/89

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

October 05, 1989
PACE Project Number: 890808516

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Parameter	Units	MDL	PACE Sample Number: 279200 Date Collected: 08/04/89 Date Received: 08/08/89 W-080489-JM-07	DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE HALOCARBONS AND AROMATICS				
1,2-Dichloroethane	ug/L	0.2	ND	08/18/89
1,1,1-Trichloroethane	ug/L	0.5	ND	08/18/89
Carbon tetrachloride	ug/L	0.3	ND	08/18/89
Bromodichloromethane	ug/L	0.2	ND	08/18/89
1,2-Dichloropropane	ug/L	0.2	ND	08/18/89
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND	08/18/89
1,1,2-Trichloroethylene	ug/L	0.5	ND	08/18/89
Benzene	ug/L	1.0	ND	08/18/89
Dibromochloromethane	ug/L	1.0	ND	08/18/89
1,1,2-Trichloroethane	ug/L	1.0	ND	08/18/89
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND	08/18/89
2-Chloroethylvinyl ether	ug/L	5.0	ND	08/18/89
Bromoform	ug/L	1.0	ND	08/18/89
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	08/18/89
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	08/18/89
Toluene	ug/L	1.0	ND	08/18/89
Chlorobenzene	ug/L	1.0	ND	08/18/89
Ethyl benzene	ug/L	1.0	ND	08/18/89
1,3-Dichlorobenzene	ug/L	4.0	ND	08/18/89
1,2-Dichlorobenzene	ug/L	4.0	ND	08/18/89
1,4-Dichlorobenzene	ug/L	4.0	ND	08/18/89
cis-1,2-Dichloroethylene	ug/L	0.5	ND	08/18/89

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

Mr. Jon Michaels
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October 05, 1989
PACE Project Number: 890808516

Parameter	Units	MDL	Miss. River upstream 279210	DATE ANALYZED
PACE Sample Number:			279210	
Date Collected:			08/04/89	
Date Received:			08/08/89	
			W-080489-JM-08	
INORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Arsenic	mg/L	0.002	ND	08/25/89
Barium	mg/L	0.2	ND	08/09/89
Cadmium	mg/L	0.0001	0.0005	09/05/89
Chromium	mg/L	0.001	ND	08/22/89
Copper	mg/L	0.01	ND	08/09/89
Lead	mg/L	0.005	ND	08/24/89
Mercury	mg/L	0.0002	ND	08/24/89
Nickel	mg/L	0.05	ND	08/14/89
Selenium	mg/L	0.010	ND	08/24/89
Silver	mg/L	0.04	ND	08/17/89
Zinc	mg/L	0.01	ND	08/24/89
ORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Ethyl acetate	ug/L	120	ND	08/18/89
PURGEABLE HALOCARBONS AND AROMATICS				
Chloromethane	ug/L	1.0	ND	08/18/89
Bromomethane	ug/L	1.5	ND	08/18/89
Dichlorodifluoromethane	ug/L	1.5	ND	08/18/89
Vinyl chloride	ug/L	1.5	ND	08/18/89
Chloroethane	ug/L	1.0	ND	08/18/89
Methylene chloride	ug/L	1.0	ND	08/18/89
Trichlorofluoromethane	ug/L	0.4	ND	08/18/89
1,1-Dichloroethylene	ug/L	0.3	ND	08/18/89
1,1-Dichloroethane	ug/L	0.2	ND	08/18/89
trans-1,2-Dichloroethylene	ug/L	0.3	ND	08/18/89
Chloroform	ug/L	0.5	ND	08/18/89

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

October 05, 1989
PACE Project Number: 890808516

Miss. River upstream

Parameter	Units	MDL	279210	DATE ANALYZED
PACE Sample Number:			279210	
Date Collected:			08/04/89	
Date Received:			08/08/89	
			W-080489-JM-08	
ORGANIC ANALYSIS				
PURGEABLE HALOCARBONS AND AROMATICS				
1,2-Dichloroethane	ug/L	0.2	ND	08/18/89
1,1,1-Trichloroethane	ug/L	0.5	ND	08/18/89
Carbon tetrachloride	ug/L	0.3	ND	08/18/89
Bromodichloromethane	ug/L	0.2	ND	08/18/89
1,2-Dichloropropane	ug/L	0.2	ND	08/18/89
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND	08/18/89
1,1,2-Trichloroethylene	ug/L	0.5	ND	08/18/89
Benzene	ug/L	1.0	ND	08/18/89
Dibromochloromethane	ug/L	1.0	ND	08/18/89
1,1,2-Trichloroethane	ug/L	1.0	ND	08/18/89
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND	08/18/89
2-Chloroethylvinyl ether	ug/L	5.0	ND	08/18/89
Bromoform	ug/L	1.0	ND	08/18/89
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	08/18/89
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	08/18/89
Toluene	ug/L	1.0	ND	08/18/89
Chlorobenzene	ug/L	1.0	ND	08/18/89
Ethyl benzene	ug/L	1.0	ND	08/18/89
1,3-Dichlorobenzene	ug/L	4.0	ND	08/18/89
1,2-Dichlorobenzene	ug/L	4.0	ND	08/18/89
1,4-Dichlorobenzene	ug/L	4.0	ND	08/18/89
cis-1,2-Dichloroethylene	ug/L	0.5	ND	08/18/89

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

October 05, 1989
PACE Project Number: 890808516

Miss River Downstream

Parameter	Units	MDL	279220	DATE ANALYZED
PACE Sample Number:			279220	
Date Collected:			08/04/89	
Date Received:			08/08/89	
			W-080489-JM-09	
INORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Arsenic	mg/L	0.002	ND	08/25/89
Barium	mg/L	0.2	ND	08/09/89
Cadmium	mg/L	0.0001	0.0008	09/05/89
Chromium	mg/L	0.001	ND	08/22/89
Copper	mg/L	0.01	ND	08/09/89
Lead	mg/L	0.005	ND	08/24/89
Mercury	mg/L	0.0002	ND	08/24/89
Nickel	mg/L	0.05	ND	08/14/89
Selenium	mg/L	0.010	ND	08/24/89
Silver	mg/L	0.04	ND	08/17/89
Zinc	mg/L	0.01	ND	08/24/89
ORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Ethyl acetate	ug/L	120	ND	08/18/89
PURGEABLE HALOCARBONS AND AROMATICS				
Chloromethane	ug/L	1.0	ND	08/18/89
Bromomethane	ug/L	1.5	ND	08/18/89
Dichlorodifluoromethane	ug/L	1.5	ND	08/18/89
Vinyl chloride	ug/L	1.5	ND	08/18/89
Chloroethane	ug/L	1.0	ND	08/18/89
Methylene chloride	ug/L	1.0	ND	08/18/89
Trichlorofluoromethane	ug/L	0.4	ND	08/18/89
1,1-Dichloroethylene	ug/L	0.3	1.1	08/18/89
1,1-Dichloroethane	ug/L	0.2	ND	08/18/89
trans-1,2-Dichloroethylene	ug/L	0.3	ND	08/18/89
Chloroform	ug/L	0.5	ND	08/18/89

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

October 05, 1989
PACE Project Number: 890808516

Miss River Down stream

Parameter	Units	MDL	279220 JM-09	DATE ANALYZED
PACE Sample Number:			279220	
Date Collected:			08/04/89	
Date Received:			08/08/89	
			W-080489-	
ORGANIC ANALYSIS				
PURGEABLE HALOCARBONS AND AROMATICS				
1,2-Dichloroethane	ug/L	0.2	ND	08/18/89
1,1,1-Trichloroethane	ug/L	0.5	ND	08/18/89
Carbon tetrachloride	ug/L	0.3	ND	08/18/89
Bromodichloromethane	ug/L	0.2	ND	08/18/89
1,2-Dichloropropane	ug/L	0.2	ND	08/18/89
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND	08/18/89
1,1,2-Trichloroethylene	ug/L	0.5	ND	08/18/89
Benzene	ug/L	1.0	ND	08/18/89
Dibromochloromethane	ug/L	1.0	ND	08/18/89
1,1,2-Trichloroethane	ug/L	1.0	ND	08/18/89
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND	08/18/89
2-Chloroethylvinyl ether	ug/L	5.0	ND	08/18/89
Bromoform	ug/L	1.0	ND	08/18/89
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	08/18/89
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	08/18/89
Toluene	ug/L	1.0	ND	08/18/89
Chlorobenzene	ug/L	1.0	ND	08/18/89
Ethyl benzene	ug/L	1.0	ND	08/18/89
1,3-Dichlorobenzene	ug/L	4.0	ND	08/18/89
1,2-Dichlorobenzene	ug/L	4.0	ND	08/18/89
1,4-Dichlorobenzene	ug/L	4.0	ND	08/18/89
cis-1,2-Dichloroethylene	ug/L	0.5	ND	08/18/89

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

Mr. Jon Michaels
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October 05, 1989
PACE Project Number: 890808516

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Parameter	Units	MDL	279230	DATE ANALYZED
PACE Sample Number:			279230	
Date Collected:			08/04/89	
Date Received:			08/08/89	
			W-080489-JM-10	
INORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Arsenic	mg/L	0.002	ND	08/25/89
Barium	mg/L	0.2	ND	08/09/89
Cadmium	mg/L	0.0001	ND	09/05/89
Chromium	mg/L	0.001	ND	08/22/89
Copper	mg/L	0.01	ND	08/09/89
Lead	mg/L	0.005	ND	08/24/89
Mercury	mg/L	0.0002	ND	08/24/89
Nickel	mg/L	0.05	0.05	08/14/89
Selenium	mg/L	0.010	ND	08/24/89
Silver	mg/L	0.04	ND	08/17/89
Zinc	mg/L	0.01	ND	08/24/89
ORGANIC ANALYSIS				
INDIVIDUAL PARAMETERS				
Ethyl acetate	ug/L	120	ND	08/18/89
PURGEABLE HALOCARBONS AND AROMATICS				
Chloromethane	ug/L	1.0	ND	08/18/89
Bromomethane	ug/L	1.5	ND	08/18/89
Dichlorodifluoromethane	ug/L	1.5	ND	08/18/89
Vinyl chloride	ug/L	1.5	ND	08/18/89
Chloroethane	ug/L	1.0	ND	08/18/89
Methylene chloride	ug/L	1.0	ND	08/18/89
Trichlorofluoromethane	ug/L	0.4	ND	08/18/89
1,1-Dichloroethylene	ug/L	0.3	0.8	08/18/89
1,1-Dichloroethane	ug/L	0.2	ND	08/18/89
trans-1,2-Dichloroethylene	ug/L	0.3	ND	08/18/89
Chloroform	ug/L	0.5	ND	08/18/89

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

Mr. Jon Michaels
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October 05, 1989
PACE Project Number: 890808516

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Parameter	Units	MDL	279230	DATE ANALYZED
PACE Sample Number:			279230	
Date Collected:			08/04/89	
Date Received:			08/08/89	
			W-080489-JM-10	
ORGANIC ANALYSIS				
PURGEABLE HALOCARBONS AND AROMATICS				
1,2-Dichloroethane	ug/L	0.2	ND	08/18/89
1,1,1-Trichloroethane	ug/L	0.5	ND	08/18/89
Carbon tetrachloride	ug/L	0.3	ND	08/18/89
Bromodichloromethane	ug/L	0.2	ND	08/18/89
1,2-Dichloropropane	ug/L	0.2	ND	08/18/89
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND	08/18/89
1,1,2-Trichloroethylene	ug/L	0.5	ND	08/18/89
Benzene	ug/L	1.0	ND	08/18/89
Dibromochloromethane	ug/L	1.0	ND	08/18/89
1,1,2-Trichloroethane	ug/L	1.0	ND	08/18/89
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND	08/18/89
2-Chloroethylvinyl ether	ug/L	5.0	ND	08/18/89
Bromoform	ug/L	1.0	ND	08/18/89
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	08/18/89
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	08/18/89
Toluene	ug/L	1.0	ND	08/18/89
Chlorobenzene	ug/L	1.0	ND	08/18/89
Ethyl benzene	ug/L	1.0	ND	08/18/89
1,3-Dichlorobenzene	ug/L	4.0	ND	08/18/89
1,2-Dichlorobenzene	ug/L	4.0	ND	08/18/89
1,4-Dichlorobenzene	ug/L	4.0	ND	08/18/89
cis-1,2-Dichloroethylene	ug/L	0.5	ND	08/18/89

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

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October 05, 1989
PACE Project Number: 890808516

The data contained in this report were obtained using EPA or other approved methodologies. All analyses were performed by me or under my direct supervision.

Scott Engelman for

Michael A. Radle
Inorganic Chemistry Manager

Susan D Max TLH

Susan D. Max
Organic Chemistry Manager

07 127

CRA Consulting Engineers
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive, Waterloo, Ontario Canada N2V 1C2

SHIPPED TO (Laboratory name): Pace Labs

CHAIN OF CUSTODY RECORD

PROJECT Nº: 2853

PROJECT NAME: Ford, Site C

SAMPLER'S SIGNATURE: [signature] (SIGN)

SEQ. Nº.	SAMPLE Nº.	DATE	TIME	SAMPLE LOCATOIN	SAMPLE TYPE	Nº OF CONTAINERS	REMARKS
W-	08048:JM	-06	2719		Water	5	Analyze For:
"	"	-07		20	↓	5	Organics
"	"	-08		21		5	Using EPA
"	"	-09		22		5	Methods
"	"	-10		23		5	601; 602
							(2) Cis-1,2-Dichloroethylene
							(3) Methylene Chloride
							(4) TCL Metals Following: As, Ba, Cd, Cr, Cu, Pb, Hg, Se, Ag, Zn, Ni.
				TOTAL NUMBER OF CONTAINERS			

ANTICIPATED CHEMICAL HAZARDS:

RELINQUISHED BY: 1 [signature] (SIGN)	DATE/TIME 8-8-89 13:45	RECEIVED BY: Pace Labs ② Ellen E. Brown (SIGN)
RELINQUISHED BY: 2 (SIGN)	DATE/TIME	RECEIVED BY: ③ (SIGN)
RELINQUISHED BY: 3 (SIGN)	DATE/TIME	RECEIVED BY: ④ (SIGN)
ADDITIONAL SIGNATURE SHEET REQUIRED ☐		

METHOD OF SHIPMENT:	SHIPPED BY:	RECEIVED FOR LABORATORY BY: (SIGN) [signature]	DATE/TIME 8/9/89 15:00
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:		COOLER OPENED BY: (SIGN)	DATE/TIME

WHITE – CRA OFFICE COPY
YELLOW – RECEIVING LABORATORY COPY
PINK – CRA LABORATORY COPY
GOLDEN ROD – SHIPPERS

Nº 005134

#2853

CONESTOGA-ROVERS & ASSOCIATES
382 West County Road D
St. Paul, Minnesota 55416

Rec'd CRA
NOV 10 89

ANALYTICAL REPORT SUBMISSION CHECK LIST

Date Samples Received 8-8-89

Date Report Sent to CRA _____

Method
- ☐ Overnight
- ☐ Regular Mail
- ☐ Fax
- ☐ Other _____

Items Included

1. ✓ Summary List of Samples Analyzed
2. ✓ Date of Sample Receipt
3. ✓ Date of Sample Extraction
4. ✓ Date of Sample Analysis
5. ✓ Method Blank Data for all Parameters
6. ✓ Matrix Spike Recoveries
7. ✓ Matrix Spike Duplicate Recoveries
8. ✓ QC Check Sample Data
9. NA Surrogate Spike Recoveries

All samples extracted and analyzed within specified holding times:

☐ Yes ☐ No

If no is checked please list CRA sample IDs of any samples that exceeded their holding times.

_____

_____

_____

_____

Lab _____ Check List Completed by _____

CRA USE ONLY

Date Received _____ Complete: ☐ Yes ☐ No

Received by _____ Copies to _____

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Client CRA By Date

Project 2853 Sheet No. 1 of 3

Subject Summary of Samples Analyzed Project No. 890808.576

ICE Sample Number	CRA Sample Number	Date of Collection	Date of Receipt	Date of Extraction	Analysis	Date of Analysis
27919	W-080489-JM-06	8-4-89	8-8-89	NA	Arsenic	8-25-89
				NA	Barium	8-9-89
				NA	Cadmium	9-5-89
				NA	Chromium	8-22-89
				NA	Copper	8-9-89
				NA	Lead	8-24-89
				NA	Mercury	8-24-89
				NA	Nickel	8-14-89
				NA	Selenium	8-24-89
				NA	Silver	8-17-89
				NA	Zinc	8-24-89
				NA	Ethyl Acetate	9-1-89
				NA	601/602	9-1-89
27920	W-080489-JM-07	8-4-89	8-8-89	NA	Arsenic	8-25-89
				NA	Barium	8-9-89
				NA	Cadmium	9-5-89
				NA	Chromium	8-22-89
				NA	Copper	8-9-89
				NA	Lead	8-24-89
				NA	Mercury	8-24-89
				NA	Nickel	8-14-89
				NA	Selenium	8-24-89
				NA	Silver	8-17-89
				NA	Zinc	8-24-89

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Client CRA By Date

Project 2853 Sheet No. 2 of 3

Subject Summary of Samples Analyzed Project No. 890808.516

ICE Sample Number	CRA Sample Number	Date of Collection	Date of Receipt	Date Of Extraction	Analysis	Date of Analysis
7920	W-080489-JM-07	8-4-89	8-8-89	NA	Ethyl Acetate	8-18-89
				NA	601/602	8-18-89
7921	W-080489-JM-08	8-4-89	8-8-89	NA	Arsenic	8-25-89
				NA	Barium	8-9-89
				NA	Cadmium	9-5-89
				NA	Chromium	8-22-89
				NA	Copper	8-9-89
				NA	Lead	8-24-89
				NA	Mercury	8-24-89
				NA	Nickel	8-14-89
				NA	Selenium	8-24-89
				NA	Silver	8-17-89
				NA	Zinc	8-24-89
				NA	Ethyl Acetate	8-18-89
				NA	601/602	8-18-89
7922	W-080489-JM-09	8-4-89	8-8-89	NA	Arsenic	8-25-89
				NA	Barium	8-9-89
				NA	Cadmium	9-5-89
				NA	Chromium	8-22-89
				NA	Copper	8-9-89
				NA	Lead	8-24-89
				NA	Mercury	8-24-89
				NA	Nickel	8-14-89
				NA	Selenium	8-24-89

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Client CRA By Date

Project 2853 Sheet No. 3 of 3

Subject Summary of Samples Analyzed Project No. 890808.516

PACE Sample Number	CRA Sample Number	Date of Collection	Date of Receipt	Date of Extraction	Analysis	Date of Analysis
27922	W-080489-JM-09	8-4-89	8-8-89	NA	Silver	8-17-89
				NA	Zinc	8-24-89
				NA	Ethyl Acetate	8-18-89
				NA	601/602	8-18-89
27923	W-080489-JM-10	8-4-89	8-8-89	NA	Arsenic	8-25-89
				NA	Barium	8-9-89
				NA	Cadmium	9-5-89
				NA	Chromium	8-22-89
				NA	Copper	8-9-89
				NA	Lead	8-24-89
				NA	Mercury	8-24-89
				NA	Nickel	8-14-89
				NA	Selenium	8-24-89
				NA	Silver	8-17-89
				NA	Zinc	8-24-89
				NA	Ethyl Acetate	8-18-89
				NA	601/602	8-18-89

Project Name CRA

SUMMARY OF INORGANIC ACCURACY AND PRECISION DATA

Parameter	Date of Analysis	Mthd Blk	Check Std. % Rec	Spiked Value	% Rec	Acc. Range	Sample A	Sample A Dup	RPD	RPD Range
Arsenic	8-25-89	<0.002	97	10.0	100	85-115	13.2	14.6	10	±30
PACE Sample#				30030			27392			
Barium	8-9-89	<0.2	92	5.45	100	85-115	4.3	4.6	7	30
PACE Sample#				27443			27391			
Cadmium	9-5-89	<0.0001	101	1.43	95	85-115	1.23	1.26	2	30
PACE Sample#				27922			28096			
Chromium	8-22-89	<0.001	106	5.1	85	85-115	5.3	5.2	2	30
PACE Sample#				28234			26032			
Copper	8-9-89	<0.01	92	1.014	97	85-115	0.97	0.98	1	30
PACE Sample#				27465			27334			
Lead	8-28-89	<0.005	97	NA	—	85-115	1.0	1.0	0	30
PACE Sample#							27928			
Mercury	8-27-89	<0.0002	100	2.0	99	85-115	ND	ND	—	
PACE Sample#				28836						
Nickel	8-14-89	<0.05	91	1.05	99	85-115	0.99	0.99	0	30
PACE Sample#				26964			27923			

NA Not Analyzed
ND Not Detected at or above the method detection limit

Project Name CRA

SUMMARY OF INORGANIC ACCURACY AND PRECISION DATA

Parameter	Date of Analysis	Mthd Blk	Check Std. % Rec	Spiked Value	% Rec	Acc. Range	Sample A	Sample A Dup	RPD	RPD Range
Selenium	8-25-89	<0.010	100	16	93	85-115	1	1	0	30
PACE Sample#				27920			27919			
Silver	8-17-89	<0.04	101	0.500	106	85-115	0.54	0.54	0	30
PACE Sample#				27446			26554			
Zinc	8-24-89	0.103	96	1.600	96	85-115	0.30	0.30	0	30
PACE Sample#				28075			27574			
PACE Sample#										
PACE Sample#										
PACE Sample#										
PACE Sample#										
PACE Sample#										

NA Not Analyzed
ND Not Detected at or above the method detection limit

JWN

DAILY MATRIX SPKIE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS: 601, 602, 465B
INSTRUMENT: t
STANDARD: A
SAMPLE SPIKED: 30189
SAMPLE MATRIX: WATER

FILE NUMBER:
PREPED BY:
DATE PREPED:
ANALYZED BY: WB
DATE ANALYZED 9-1-85

CLIENT NAME:
PROJECT NAME:
PROJECT NUMBER:

Compound	True Value	Sample Result	MS	% REC	MSD	% REC	RPD	Accuracy Limits	Precision Limit	Associated Samples
Chloromethane	20.0	ND	26.5	132	26.7	134 132	.75		30%	30189
Bromomethane			24.5	123	25.3	127	1.6		30%	30191
Vinyl Chloride			25.2	126	26.9	135	3.4		30%	27919
Chloroethane			21.3	107	24.0	120	5.7		30%	30198
Methylene Chloride			20.9	105	23.3	117	5.4	152 - 31	30%	30199
1,1-Dichloroethylene			22.1	111	24.0	120	3.9	132 - 40	30%	30188
1,1-Dichloroethane			21.6	108	23.7	119	4.8	126 - 61	30%	30200
Chloroform			22.8	114	25.5	128	5.8	122 - 67	30%	29484
Carbon Tetrachloride			21.5	108	23.2	116	3.6	136 - 59	30%	28171
1,2-Dichloropropane			21.0	106	22.5	113	3.2	127 - 63	30%	28172
1,1,2-Trichloroethylene			21.7	109	24.7	124 *	6.4	117 - 72	30%	28173
Benzene			19.2	96	20.5	103	3.5	120 - 79	30%	
Dibromochloro Methane	40.0		40.5	101	48.7	122	9.4	151 - 55	30%	

DAILY MATRIX SPKIE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS: 601, 602, 465B
INSTRUMENT: C
STANDARD: A
SAMPLE SPIKED: _____
SAMPLE MATRIX: _____

FILE NUMBER: _____
PREPED BY: _____
DATE PREPED: _____
ANALYZED BY: _____
DATE ANALYZED _____

CLIENT NAME: _____
PROJECT NAME: _____
PROJECT NUMBER: _____

Compound	True Value	Sample Result	MS	% REC	MSD	% REC	RPD	Accuracy Limits	Precision Limit	Associated Samples
1,1,2-Trichloroethane	40.0	ND	40.5	101	48.7	122	9.4	151 - 55	30%	
2-Chloroethylvinyl Ether	|	|	13.1	33*	16.2	81*	42*	145 - 82	30%	
Tetrachloroethylene	20.0	|	20.2	101	22.7	114	6.0	122 - 60	30%	
Chlorobenzene	|	|	19.1	96	20.7	104	4.0	141 - 32	30%	
1,3-Dichlorobenzene	|	|	15.3	77	17.7	89	7.2	150 - 46	30%	
1,4-Dichlorobenzene	|	|	13.9 (MD)	70*	13.7	69 (MD)*	.72	111 - 70	30%	
	|	|							

* Asterisked Value are outside QC limits.

RPD: VOAs _____ out of ____ outside of QC limits.
Recovery: VOAS _____ out of ____ outside of QC limits.
Blank: _____
Comments: * No Limits for This compd

QC Reviewed by: _____
DATE: _____

74HPPLAS

SUBSET ABBREVIATION: 601&602

FOR CLP USE ONLY? ☐

DATE COLLECTED: _____
DATE RECEIVED: _____
DATE ANALYZED: _____
ANALYST: _____
DATE EXTRACTED: _____
DATA REVIEWED BY: _____
ENTERED BY: _____

PROJECT NAME: _____
CLIENT NAME: _____
PROJECT NUMBER: _____
FILE NUMBER: _____
INSTR. ID: _____
MATRIX: _____

SAMPLE NAME: Method Blank
SAMPLE NO.: _____

PARAMETER NAME	ABBREV.	Other ____ ug/l MDL	Date 9/1 1011.5 m/s	Date 1011.	Results (Report)
CHLOROMETHANE	CHLORMETH	1.0			ND
BROMOMETHANE	BROMOMETH	1.5			
DICHLORODIFLUOROMETHANE (1)	FREON 12	1.5			
VINYL CHLORIDE (1)	VINYLCHLOR	1.5			
CHLOROETHANE	CHLOROETH	1.0	1.20		1.2
METHYLENE CHLORIDE	METCL	1.0			ND
TRICHLOROFLUOROMETHANE	FREON11	0.4			
1,1-DICHLOROETHYLENE	11DCEENE	0.3			
1,1-DICHLOROETHANE	11DCEANE	0.2			
TRANS-1,2-DICHLOROETHYLENE	TRANS12DCE	0.3			
CHLOROFORM	CHLORFORM	0.5			
1,2-DICHLOROETHANE	12DCEANE	0.2			
1,1,1-TRICHLOROETHANE	111TCEANE	0.5			
CARBON TETRACHLORIDE	CARBONTET	0.3			
BROMODICHLOROMETHANE	BDCMETHANE	0.2			
1,2-DICHLOROPROPANE	12DCPANE	0.2			
CIS-1,3-DICHLORO-1-PROPENE	CIS13DCP	0.5			
1,1,2-TRICHLOROETHYLENE	TCE	0.5			
BENZENE	BENZENE	1.0			
DIBROMOCHLOROMETHANE(2)	DBCMETHANE	1.0			
1,1,2-TRICHLOROETHANE(2)	112TCEANE	1.0			
TRANS-1,3-DICHLORO-1-PROPENE	TRANS13DCP	0.3			

Form 0220H

SUBSET ABBREVIATION: 6011602

SAMPLE NAME: _____

SAMPLE NO.: _____

PARAMETER NAME	ABBREV.	Other _____ ug/l MDL	Date Oil.	Date Oil.	Results (Report)
2-CHLOROETHYLVINYL ETHER	2CEVETHER	5.0			
BROMOFORM	BROMOFORM	1.0			
1,1,2,2-TETRACHLOROETHANE	1122TTEANE	1.0			
1,1,2,2-TETRACHLOROETHYLENE	1122TTEENE	1.0			
TOLUENE	TOLUENE	1.0			
CHLOROBENZENE	CHLOROBENZ	1.0			
ETHYLBENZENE	ETHYLBENZ	1.0			
1,3-DICHLOROBENZENE	13DCBENZ	4.0			
1,2-DICHLOROBENZENE	12DCBENZ	4.0			
1,4-DICHLOROBENZENE	14DCBENZ	4.0			

Footnote; 1 - These compounds co-elute
2 - These compounds co-elute

Form 0223W

SUBSET ABBREVIATION: 4658

FOR CLP USE ONLY? ☐

DATE COLLECTED: _____
DATE RECEIVED: _____
DATE ANALYZED: 9-1-89
ANALYST: ~~AHD~~ BH/SDS/WJB
DATE EXTRACTED: _____
DATA REVIEWED BY: _____
ENTERED BY: _____

PROJECT NAME: _____
CLIENT NAME: _____
PROJECT NUMBER: _____
FILE NUMBER: _____
INSTR. ID: C
MATRIX: WATER

SAMPLE NAME: CHECK STD A
SAMPLE NO.: _____

	PARAMETER NAME	ABBREV.	Other ug/l MDL	9-1-89 Date Oil.	Date Oil.	%REC Results (Recovery)
X	CHLOROMETHANE	CHLOROMETH	1.0			126
X	BROMOMETHANE	BROMOMETH	1.5			117
	DICHLORODIFLUOROMETHANE (1)	FREON 12	1.5			
X	VINYL CHLORIDE (1)	VINYLCHLOR	1.5			127
X	CHLOROETHANE	CHLOROETH	1.0			90
X	METHYLENE CHLORIDE	MECL	1.0			110
	ACETONE	ACETONE	40			
	TRICHLOROFLUOROMETHANE	FREON11	0.4			
	ALLYL CHLORIDE	ALLYL CHL	4.0			
X	1,1-DICHLOROETHYLENE	11DCEENE	0.3			106
	TETRAHYDROFURAN	THF	15			
X	1,1-DICHLOROETHANE	11DCEANE	0.2			102
	TRANS-1,2-DICHLOROETHYLENE (2)	TRANS12DCE	0.3			
	CIS-1,2-DICHLOROETHYLENE (2)	CIS12DCE	0.5			
	ETHYL ETHER	ETHYLETHER	0.3			
X	CHLOROFORM	CHLOROFORM	0.5			112
	1,1,2-TRICHLOROTRIFLUOROETHANE	FREON113	0.7			
	METHYL ETHYL KETONE	MEK	20			
	1,2-DICHLOROETHANE	12DCEANE	0.2			
	DIBROMOMETHANE	DIBROMOMETH	1.5			
	1,1,1-TRICHLOROETHANE	111TCEANE	0.5			
X	CARBON TETRACHLORIDE	CARBONTET	0.3			97

SUBSET ABBREVIATION: 4658

SAMPLE NAME: CHECK STD A

SAMPLE NO.:

PARAMETER NAME	ABBREV.	Other ug/l :MDL	9-1-89 Date Oil.	Date Oil.	% REC Results (Report)
BROMODICHLOROMETHANE	BDCMETHANE	0.2			
DICHLOROACETONITRILE	DCACETONIT	1.0			
2,3-DICHLORO-1-PROPENE	23DCPENE	0.5			
1,2-DICHLOROPROPANE	12DCPANE	0.2			98
1,1-DICHLORO-1-PROPENE	11DCPENE	1.0			
CIS-1,3-DICHLORO-1-PROPENE	CIS13DCP	0.5			
1,1,2-TRICHLOROETHYLENE	TCE	0.5			94
BENZENE	BENZENE	1.0			95
1,3-DICHLOROPROPANE	13DCPANE	0.5			
DIBROMOCHLOROMETHANE (3)	DBCMETHANE	1.0			97
1,1,2-TRICHLOROETHANE (3)	112TCEANE	1.0			97
TRANS-1,3-DICHLORO-1-PROPENE	TRANS13DCP	0.3			
1,2-DIBROMOETHANE	EDB	4.0			
2-CHLOROETHYLVINYL ETHER	2CEVETHER	5.0			69
BROMOFORM	BROMOFORM	1.0			
1,1,1,2-TETRACHLOROETHANE	1112TTEANE	0.3			
METHYL ISOBUTYL KETONE	MIBK	1.0			
1,2,3-TRICHLOROPROPANE	123TCPANE	4.0			
1,1,2,2,-TETRACHLOROETHANE	1122TTEANE	1.0			
1,1,2,2-TETRACHLOROETHYLENE	1122TTEENE	1.0			89
PENTACHLOROETHANE	PENTACEANE	2.0			
TOLUENE	TOLUENE	1.0			
CHLOROBENZENE	CLCROBENZ	1.0			86
ETHYLBENZENE	ETHYLBENZ	1.0			
CUMENE	CUMENE	1.0			
M-XYLENE	M-XYLENE	1.0			
P-XYLENE (4)	P-XYLENE	1.0			
O-XYLENE (4)	O-XYLENE	1.0			
1,3-DICHLOROBENZENE	13DCBENZ	4.0			74.5
1,2-DICHLOROBENZENE	12DCBENZ	4.0			
1,4-DICHLOROBENZENE	14DCBENZ	4.0			66
DICHLORODIFLUOROMETHANE	FREON2	1.0			

Footnote: 1 - These compounds co-elute 2 - These compounds co-elute
3 - These compounds co-elute 4 - These compounds co-elute

DAILY MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS : 601,602,465B
INSTRUMENT: D
STANDARD: A
SAMPLE SPIKED: 29532
SAMPLE MATRIX: Water

FILE NUMBER:
PREPPED BY: KF
DATE PREPPED: 9/1/89
ANALYZED BY: KF
DATE ANALYZED: 9/1/89

CLIENT NAME:
PROJECT NAME:
PROJECT NUMBER:

Compound	True Value	Method Blank	Check Std.	Sample Result	MS Conc.	MS % Rec.	MSD Conc.	MSD % Rec.	RPD	QC LIMITS* UCL	QC LIMITS* LCL	Assoc. Samples
Chloromethane	20.0	ND		ND	3.50	17.5	2.45	12.3	35.3			30140
Bromomethane					25.3	127	24.6	123	2.81			27733
Vinyl Chloride					20.91	115	20.5	103	11.1			27570
Chloroethane					23.6	118	22.4	112	5.22			27572
Methylene Chloride				↓	18.2	91.0	19.0	95.0	4.30			27574
1,1-Dichloroethylene				3.50	18.5	92.5	14.3	71.5	25.6			29383
1,1-Dichloroethane				ND	19.8	99.0	18.8	94.0	5.18			30330
Chloroform				0.712	18.0	90.0	19.1	95.5	5.93			29532
Carbon Tetrachloride				ND	19.7	98.5	18.5	92.5	6.28			30583
1,2-Dichloropropane				↓	17.3	86.5	17.8	89.0	2.84			30645
1,1,2-Trichloroethylene				4.71	20.0	100	16.2	81.0	21.0			30646
Benzene				ND	29.9	149	29.7	148	0.671			30647
Dibromochloro Methane	20				16.6	83	16.2	81.0	2.44			
1,1,2-Trichloroethane	20	↓			17.6	88.0	17.1	85.5	2.88			
2-Chloroethylvinyl Ether	20.0			↓	—	—	13.9	69.5	—			
Tetrachloroethylene				55.3*	9.33	46.7	16.4	82.0	54.9			
Chlorobenzene				ND	17.8	89.0	17.0	85.0	4.60			
1,3-Dichlorobenzene					19.2	96.0	17.7	88.5	8.13			
1,4-Dichlorobenzene	↓	↓		↓	19.3	96.5	18.2	91.0	5.87			

(Confirm...)

* Asterisked Values are outside QC limits.

RPD: VOAs ____ out of ____ outside of QC limits.
Recovery: VOAs ____ out of ____ outside of QC limits.

Comments: * Tetrachloroethylene was out because of high amount in sample

Form 0161X, page 1

QC Reviewed by:
DATE:

DAILY MATRIX SPKIE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS: 601, 602, 465B
INSTRUMENT: (C)
STANDARD: A
SAMPLE SPIKED: 27983
SAMPLE MATRIX: Water

FILE NUMBER:
PREPED BY: DAN
DATE PREPED: 5/11/89
ANALYZED BY: DAN
DATE ANALYZED 11/11/89

CLIENT NAME:
PROJECT NAME:
PROJECT NUMBER:

Compound	True Value	Sample Result	MS	% REC	MSD	% REC	RPD	Accuracy Limits	Precision Limit	Associated Samples
Chloromethane	20	ND	22.5	114	23.1	116	1.7		30%	27987
Bromomethane			24.0	120	24.4	122	1.7		30%	27986
Vinyl Chloride			22.2	111	22.4	112	0.9		30%	27988
Chloroethane			22.6	113	22.6	113	0		30%	27989
Methylene Chloride		2.66	20.8	104	20.5	103	1.0	152 - 31	30%	27990
1,1-Dichloroethylene		ND	22.2	111	22.8	114	2.7	132 - 40	30%	27558
1,1-Dichloroethane			21.6	108	22.1	111	2.7	126 - 61	30%	27559
Chloroform			20.6	103	21.2	106	2.9	122 - 67	30%	27560
Carbon Tetrachloride			21.0	105	22.0	110	4.4	136 - 59	30%	27561
1,2-Dichloropropane	20		20.6	103	20.9	105	1.9	127 - 63	30%	27563
1,1,2-Trichloroethylene	20		20.9	105	21.8	109	3.7	117 - 72	30%	
Benzene	20		19.7	99	21.8	109	9.6	120 - 79	30%	
Dibromochloro Methane	40		39.0	98	39.7	99	1.0	151 - 55	30%	

DAILY MATRIX SPKIE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS: 601, 602, 465B
INSTRUMENT: C
STANDARD: A
SAMPLE SPIKED: _____
SAMPLE MATRIX: _____

FILE NUMBER: _____
PREPED BY: _____
DATE PREPED: _____
ANALYZED BY: _____
DATE ANALYZED _____

CLIENT NAME: _____
PROJECT NAME: _____
PROJECT NUMBER: _____

Compound	True Value	Sample Result	MS	% REC	MSD	% REC	RPD	Accuracy Limits	Precision Limit	Associated Samples
1,1,2-Trichloroethane	40	NR	39.6	99	39.9	99	1.0	151 - 55	30%	
2-Chloroethylvinyl Ether	20	4.44	11.0	55	13.2	66	18	145 - 82	30%	
Tetrachloroethylene		NR	21.9	110	21.1	106	3.7	122 - 60	30%	
Chlorobenzene			17.4	87	18.2	91	4.5	141 - 32	30%	
1,3-Dichlorobenzene			17.8	89	16.2	81	9.4	150 - 46	30%	
1,4-Dichlorobenzene			16.1	81	14.9	75	7.7	111 - 70	30%	

* Asterisked Value are outside QC limits.
RPD: VOAs _____ out of _____ outside of QC limits.
Recovery: VOAS _____ out of _____ outside of QC limits.
Blank: _____
Comments: _____

QC Reviewed by: _____
DATE: _____

74HPPLAS

SUBSET ABBREVIATION: 4658

FOR CLP USE ONLY? ☐

DATE COLLECTED: _____
DATE RECEIVED: _____
DATE ANALYZED: 10-18-89
ANALYST: SPS/PNW
DATE EXTRACTED: _____
DATA REVIEWED BY: _____
ENTERED BY: _____

PROJECT NAME: _____
CLIENT NAME: _____
PROJECT NUMBER: _____
FILE NUMBER: _____
INSTR. ID: C
* MATRIX: ~~WATER~~ METHANOL

SAMPLE NAME: METHOD BLANK
SAMPLE NO.: _____

PARAMETER NAME	ABBREV.	Other ug/l MDL	Date Dil.	Date Dil.	Results (Report)
CHLOROMETHANE	CHLOROMETH	1.0	<MDL		
BROMOMETHANE	BROMOMETH	1.5			
DICHLORODIFLUOROMETHANE (1)	FREON 12	1.5			
VINYL CHLORIDE (1)	VINYLCHLOR	1.5			
CHLOROETHANE	CHLOROETH	1.0			
METHYLENE CHLORIDE	MECL	1.0			
ACETONE	ACETONE	40			
TRICHLOROFLUOROMETHANE	FREON11	0.4			
ALLYL CHLORIDE	ALLYL CHL	4.0			
1,1-DICHLOROETHYLENE	11DCEENE	0.3			
TETRAHYDROFURAN	THF	15			
1,1-DICHLOROETHANE	11DCEANE	0.2			
TRANS-1,2-DICHLOROETHYLENE (2)	TRANS12DCE	0.3			
CIS-1,2-DICHLOROETHYLENE (2)	CIS12DCE	0.5			
ETHYL ETHER	ETHYLETHER	0.3			
CHLOROFORM	CHLOROFORM	0.5			
1,1,2-TRICHLOROTRIFLUOROETHANE	FREON113	0.7			
METHYL ETHYL KETONE	MEK	20			
1,2-DICHLOROETHANE	12DCEANE	0.2			
DIBROMOMETHANE	DIBROMOMETH	1.5			
1,1,1-TRICHLOROETHANE	111TCEANE	0.5			
CARBON TETRACHLORIDE	CARBONTET	0.3			

SUBSET ABBREVIATION: 4658

SAMPLE NAME: METHOD BLANK

SAMPLE NO.:

PARAMETER NAME	ABBREV.	Other ug/l MDL	Date Oil.	Date Oil.	Results (Report)
BROMODICHLOROMETHANE	BDCMETHANE	0.2	< MDL		
DICHLOROACETONITRILE	DCACETONIT	1.0			
2,3-DICHLORO-1-PROPENE	23DCPENE	0.5			
1,2-DICHLOROPROPANE	12DCPANE	0.2			
1,1-DICHLORO-1-PROPENE	11DCPENE	1.0			
CIS-1,3-DICHLORO-1-PROPENE	CIS13DCP	0.5			
1,1,2-TRICHLOROETHYLENE	TCE	0.5			
BENZENE	BENZENE	1.0			
1,3-DICHLOROPROPANE	13DCPANE	0.5			
DIBROMOCHLOROMETHANE (3)	DBCMETHANE	1.0			
1,1,2-TRICHLOROETHANE (3)	112TCEANE	1.0			
TRANS-1,3-DICHLORO-1-PROPENE	TRANS13DCP	0.3			
1,2-DIBROMOETHANE	EDB	4.0			
2-CHLOROETHYLVINYL ETHER	2CEVETHER	5.0			
BROMOFORM	BROMOFORM	1.0			
1,1,1,2-TETRACHLOROETHANE	1112TTEANE	0.3			
METHYL ISOBUTYL KETONE	MIBK	1.0			
1,2,3-TRICHLOROPROPANE	123TCPANE	4.0			
1,1,2,2,-TETRACHLOROETHANE	1122TTEANE	1.0			
1,1,2,2-TETRACHLOROETHYLENE	1122TTEENE	1.0			
PENTACHLOROETHANE	PENTACEANE	2.0			
TOLUENE	TOLUENE	1.0			
CHLOROBENZENE	CHLOROBENZ	1.0			
ETHYLBENZENE	ETHYLBENZ	1.0			
CUMENE	CUMENE	1.0			
M-XYLENE	M-XYLENE	1.0			
P-XYLENE (4)	P-XYLENE	1.0			
O-XYLENE (4)	O-XYLENE	1.0			
1,3-DICHLOROBENZENE	13DCBENZ	4.0			
1,2-DICHLOROBENZENE	12DCBENZ	4.0			
1,4-DICHLOROBENZENE	14DCBENZ	4.0			
DICHLORODIFLUOROMETHANE	FREON12	1.0			

Footnote: 1 - These compounds co-elute 2 - These compounds co-elute
3 - These compounds co-elute 4 - These compounds co-elute

SUBSET ABBREVIATION: 4658

FOR CLP USE ONLY? ☐

DATE COLLECTED: _____
DATE RECEIVED: _____
DATE ANALYZED: 8-18-89
ANALYST: SD/PWW
DATE EXTRACTED: _____
DATA REVIEWED BY: _____
ENTERED BY: _____

PROJECT NAME: _____
CLIENT NAME: _____
PROJECT NUMBER: _____
FILE NUMBER: _____
INSTR. ID: C
MATRIX: WATER

SAMPLE NAME: CHECK STD A
SAMPLE NO.: _____
% REC

	PARAMETER NAME	ABBREV.	Other ug/l MDL	Date Dil.	Date Dil.	Results (Report)
X	CHLOROMETHANE	CHLOROMETH	1.0	105		
X	BROMOMETHANE	BROMOMETH	1.5	103		
	DICHLORODIFLUOROMETHANE (1)	FREON 12	1.5	~~102~~ DS		
X	VINYL CHLORIDE (1)	VINYLCHLOR	1.5	102		
X	CHLOROETHANE	CHLOROETH	1.0	102		
X	METHYLENE CHLORIDE	MECL	1.0	101		
	ACETONE	ACETONE	40			
	TRICHLOROFLUOROMETHANE	FREON11	0.4			
	ALLYL CHLORIDE	ALLYL CHL	4.0			
X	1,1-DICHLOROETHYLENE	11DCEENE	0.3	108		
	TETRAHYDROFURAN	THF	15			
X	1,1-DICHLOROETHANE	11DCEANE	0.2	106		
	TRANS-1,2-DICHLOROETHYLENE (2)	TRANS12DCE	0.3			
	CIS-1,2-DICHLOROETHYLENE (2)	CIS12DCE	0.5			
	ETHYL ETHER	ETHYLETHER	0.3			
X	CHLOROFORM	CHLOROFORM	0.5	103		
	1,1,2-TRICHLOROTRIFLUOROETHANE	FREON113	0.7			
	METHYL ETHYL KETONE	MEK	20			
	1,2-DICHLOROETHANE	12DCEANE	0.2			
	DIBROMOMETHANE	DIBROMOMETH	1.5			
	1,1,1-TRICHLOROETHANE	111TCEANE	0.5			
X	CARBON TETRACHLORIDE	CARBONTET	0.3	107		

SUBSET ABBREVIATION: 4658

SAMPLE NAME: CHECK STD A

SAMPLE NO.: _____

% REC

PARAMETER NAME	ABBREV.	Other ug/l MDL	Date Oil.	Date Oil.	Results (Report)
BROMODICHLOROMETHANE	BDCMETHANE	0.2			
DICHLOROACETONITRILE	DCACETONIT	1.0			
2,3-DICHLORO-1-PROPENE	23DCPENE	0.5			
X 1,2-DICHLOROPROPANE	12DCPANE	0.2	99		
1,1-DICHLORO-1-PROPENE	11DCPENE	1.0			
CIS-1,3-DICHLORO-1-PROPENE	CIS13DCP	0.5			
X 1,1,2-TRICHLOROETHYLENE	TCE	0.5	100		
BENZENE	BENZENE	1.0	99		
1,3-DICHLOROPROPANE	13DCPANE	0.5			
DIBROMOCHLOROMETHANE (3)	DBCMETHANE	1.0	96		
1,1,2-TRICHLOROETHANE (3)	112TCEANE	1.0			
TRANS-1,3-DICHLORO-1-PROPENE	TRANS13DCP	0.3			
1,2-DIBROMOETHANE	EDB	4.0			
2-CHLOROETHYLVINYL ETHER	2CEVETHER	5.0			
BROMOFORM	BROMOFORM	1.0			
1,1,1,2-TETRACHLOROETHANE	1112TTEANE	0.3			
METHYL ISOBUTYL KETONE	MIBK	1.0			
1,2,3-TRICHLOROPROPANE	123TCPANE	4.0			
1,1,2,2,-TETRACHLOROETHANE	1122TTEANE	1.0			
1,1,2,2-TETRACHLOROETHYLENE	1122TTEENE	1.0			
PENTACHLOROETHANE	PENTACEANE	2.0			
TOLUENE	TOLUENE	1.0			
CHLOROBENZENE	CHLOROBENZ	1.0			
ETHYLBENZENE	ETHYLBENZ	1.0			
CUMENE	CUMENE	1.0			
M-XYLENE	M-XYLENE	1.0			
P-XYLENE (4)	P-XYLENE	1.0			
O-XYLENE (4)	O-XYLENE	1.0			
1,3-DICHLOROBENZENE	13DCBENZ	4.0			
1,2-DICHLOROBENZENE	12DCBENZ	4.0			
1,4-DICHLOROBENZENE	14DCBENZ	4.0			
DICHLOROFLUOROMETHANE	FREON21	1.0			

Footnote: 1 - These compounds co-elute 2 - These compounds co-elute

DAILY MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS: 601/602/465B
INSTRUMENT:
STANDARD: B
SAMPLE SPIKED: 27591
SAMPLE MATRIX: WATER

FILE NUMBER:
PREPPED BY:
DATE PREPPED:
ANALYZED BY: AAR
DATE ANALYZED: 8-18-89

CLIENT NAME:
PROJECT NAME:
PROJECT NUMBER:

Compound	True Value	Method Blank	% Rec Check Std.	Sample Result	MS	% Rec.	Conc. MSD	% Rec.	RPD	QC LIMITS* UCL	QC LIMITS* LCL	Assoc. Samples
Dichlorodifluoromethane	20	ND	51	ND	15.3	77	15.1	~~6~~ 76	1.3			27448
Trichlorofluoromethane	20		NP		NP	—	NP	—				27547
Dichlorofluoromethane	20		138		23.9	120	22.9	~~120~~ 115	4.3			27367
Trans-1,2-Dichloroethylene	20		107		23.0	115	22.3	112	2.6			27449
1,2-Dichloroethane	20		83		18.4	92	18.3	92	0			27451
1,1,1-Trichloroethane	20		104		22.6	113	22.0	110	2.7			27453
Bromodichloromethane	20		100		21.5	108	21.4	107	0.9			27455
2,3-Dichloro-1-propene	20		98		21.3	107	21.0	105	1.9			27457
Trans-1,3-Dichloro-1-propene	14		~~68~~ 96		14.5	104	14.8	106	1.9			27459
cis-1,3-Dichloro-1-propene	26		85		24.0	92	24.0	92	0			27591
1,2-Dibromomethane	20		NP		NP	—	NP	—				27532
Bromoform	20		107		22.1	111	22.1	111	0			27536
1,1,2,2-Tetrachloroethane	20		55		23.5	118	23.1	116	1.7			27538
Toluene	20		108		22.8	114	22.8	114	0			27541
Ethyl Benzene	20		109		23.3	117	23.2	116	0.9			27548
m-Xylene	20		118		25.1	126	25.0	125	0.8			27550
o-Xylene	20		124		19.1	96	26.6	133	32			27554
1,2-Dichlorobenzene	20		102		20.1	101	21.7	109	7.6			26429

* Asterisked Values are outside QC limits.

Form 0161X, page 2

RPD: VOAs _____ out of _____ outside of QC limits.
Recovery: VOAs _____ out of _____ outside of QC limits.
Comments: NP - NOT ARE SENT

QC Reviewed by:
DATE:

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REPORT OF LABORATORY ANALYSIS

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Irvine, California
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November 16, 1989

Rec'd CRA
NOV 22 89

Site C
Water
September

Mr. Jon Michaels
Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

RE: PACE Project No. 890914.537
2853

Dear Mr. Michaels:

Enclosed is the report of laboratory analyses for samples received September 14, 1989.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Susan D Max TS

Susan D. Max
Director, Sampling and Analytical Services

Enclosures

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REPORT OF LABORATORY ANALYSIS

Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

November 16, 1989
PACE Project Number: 890914537

Attn: Mr. Jon Michaels

2853

Parameter	Units	MDL	B-1	B-3	Rinsate Blank
PACE Sample Number:			331220	331230	331240
Date Collected:			09/13/89	09/13/89	09/13/89
Date Received:			09/14/89	09/14/89	09/14/89
			W-091389-JM-01	W-091389-JM-02	W-091389-JM-03
INORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Arsenic	mg/L	0.002	ND	ND	ND
Barium	mg/L	0.2	ND	ND	ND
Cadmium	mg/L	0.0001	ND	ND	ND
Chromium	mg/L	0.001	ND	ND	ND
Copper	mg/L	0.01	ND	ND	ND
Lead	mg/L	0.001	ND	ND	ND
Mercury	mg/L	0.0002	ND	ND	ND
Nickel	mg/L	0.05	ND	ND	ND
Selenium	mg/L	0.005	ND	ND	ND
Silver	mg/L	0.04	ND	ND	ND
Zinc	mg/L	0.01	ND	0.02	ND
ORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Ethyl acetate	ug/L	250	ND	ND	ND
PURGEABLE HALOCARBONS AND AROMATICS					
Chloromethane	ug/L	1.0	ND	ND	ND
Bromomethane	ug/L	1.5	ND	ND	ND
Dichlorodifluoromethane	ug/L	1.5	ND	ND	ND
Vinyl chloride	ug/L	1.5	ND	ND	ND
Chloroethane	ug/L	1.0	ND	ND	ND
Methylene chloride	ug/L	1.0	ND	ND	ND
Trichlorofluoromethane	ug/L	0.4	ND	ND	ND
1,1-Dichloroethylene	ug/L	0.3	ND	ND	ND
1,1-Dichloroethane	ug/L	0.2	ND	ND	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

November 16, 1989
PACE Project Number: 890914537

2853

PACE Sample Number:			331220	331230	331240
Date Collected:			09/13/89	09/13/89	09/13/89
Date Received:			09/14/89	09/14/89	09/14/89
			W-091389-JM-01	W-091389-JM-02	W-091389-JM-03
Parameter	Units	MDL			
ORGANIC ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
trans-1,2-Dichloroethylene	ug/L	0.3	ND	ND	ND
Chloroform	ug/L	0.5	ND	ND	ND
1,2-Dichloroethane	ug/L	0.2	ND	ND	ND
1,1,1-Trichloroethane	ug/L	0.5	ND	ND	0.8
Carbon tetrachloride	ug/L	0.3	ND	ND	ND
Bromodichloromethane	ug/L	0.2	ND	ND	ND
1,2-Dichloropropane	ug/L	0.2	ND	ND	ND
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND	ND	ND
1,1,2-Trichloroethylene	ug/L	0.5	2.1	ND	ND
Benzene	ug/L	1.0	ND	ND	ND
Dibromochloromethane	ug/L	1.0	ND	ND	ND
1,1,2-Trichloroethane	ug/L	1.0	ND	ND	ND
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND	ND	ND
2-Chloroethylvinyl ether	ug/L	5.0	ND	ND	ND
Bromoform	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	ND	ND
Toluene	ug/L	1.0	ND	ND	ND
Chlorobenzene	ug/L	1.0	ND	ND	ND
Ethyl benzene	ug/L	1.0	ND	ND	ND
1,3-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,2-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,4-Dichlorobenzene	ug/L	4.0	ND	ND	ND
cis-1,2-Dichloroethylene	ug/L	0.5	ND	ND	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

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Mr. Jon Michaels
Page 3

November 16, 1989
PACE Project Number: 890914537

2853

PACE Sample Number:			331250	331260	331270
			B-5	Duplicate B-3	Miss. River upstream
Date Collected:			09/13/89	09/13/89	09/13/89
Date Received:			09/14/89	09/14/89	09/14/89
			W-091389-	W-091389-	W-091389-
Parameter	Units	MDL	JM-04	JM-05	JM-06
INORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Arsenic	mg/L	0.002	ND	ND	ND
Barium	mg/L	0.2	ND	ND	ND
Cadmium	mg/L	0.0001	0.0002	ND	ND
Chromium	mg/L	0.001	ND	ND	ND
Copper	mg/L	0.01	ND	ND	ND
Lead	mg/L	0.001	ND	ND	0.001
Mercury	mg/L	0.0002	ND	ND	ND
Nickel	mg/L	0.05	ND	ND	ND
Selenium	mg/L	0.005	ND	ND	ND
Silver	mg/L	0.04	ND	ND	ND
Zinc	mg/L	0.01	0.26	0.02	ND
ORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Ethyl acetate	ug/L	250	ND	ND	ND
PURGEABLE HALOCARBONS AND AROMATICS					
Chloromethane	ug/L	1.0	ND	ND	ND
Bromomethane	ug/L	1.5	ND	ND	ND
Dichlorodifluoromethane	ug/L	1.5	ND	ND	ND
Vinyl chloride	ug/L	1.5	ND	ND	ND
Chloroethane	ug/L	1.0	ND	ND	ND
Methylene chloride	ug/L	1.0	ND	ND	ND
Trichlorofluoromethane	ug/L	0.4	ND	ND	ND
1,1-Dichloroethylene	ug/L	0.3	ND	ND	ND
1,1-Dichloroethane	ug/L	0.2	ND	ND	ND
trans-1,2-Dichloroethylene	ug/L	0.3	ND	ND	ND
Chloroform	ug/L	0.5	ND	ND	ND
1,2-Dichloroethane	ug/L	0.2	ND	ND	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

November 16, 1989
PACE Project Number: 890914537

2853

PACE Sample Number:			331250	331260	331270
Date Collected:			09/13/89	09/13/89	09/13/89
Date Received:			09/14/89	09/14/89	09/14/89
			W-091389-	W-091389-	W-091389-
Parameter	Units	MDL	JM-04	JM-05	JM-06
ORGANIC ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
1,1,1-Trichloroethane	ug/L	0.5	ND	ND	ND
Carbon tetrachloride	ug/L	0.3	ND	ND	ND
Bromodichloromethane	ug/L	0.2	ND	ND	ND
1,2-Dichloropropane	ug/L	0.2	ND	ND	ND
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND	ND	ND
1,1,2-Trichloroethylene	ug/L	0.5	ND	ND	ND
Benzene	ug/L	1.0	ND	ND	ND
Dibromochloromethane	ug/L	1.0	ND	ND	ND
1,1,2-Trichloroethane	ug/L	1.0	ND	ND	ND
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND	ND	ND
2-Chloroethylvinyl ether	ug/L	5.0	ND	ND	ND
Bromoform	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	ND	ND
Toluene	ug/L	1.0	ND	ND	ND
Chlorobenzene	ug/L	1.0	ND	ND	ND
Ethyl benzene	ug/L	1.0	ND	ND	ND
1,3-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,2-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,4-Dichlorobenzene	ug/L	4.0	ND	ND	ND
cis-1,2-Dichloroethylene	ug/L	0.5	ND	ND	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

Mr. Jon Michaels
Page 5

November 16, 1989
PACE Project Number: 890914537

2853

Miss. River Downstream

Parameter	Units	MDL	
PACE Sample Number:			331280
Date Collected:			09/13/89
Date Received:			09/14/89
			W-091389-JM-07
INORGANIC ANALYSIS			
INDIVIDUAL PARAMETERS			
Arsenic	mg/L	0.002	ND
Barium	mg/L	0.2	ND
Cadmium	mg/L	0.0001	ND
Chromium	mg/L	0.001	ND
Copper	mg/L	0.01	ND
Lead	mg/L	0.001	0.001
Mercury	mg/L	0.0002	ND
Nickel	mg/L	0.05	ND
Selenium	mg/L	0.005	ND
Silver	mg/L	0.04	ND
Zinc	mg/L	0.01	ND
ORGANIC ANALYSIS			
INDIVIDUAL PARAMETERS			
Ethyl acetate	ug/L	250	ND
PURGEABLE HALOCARBONS AND AROMATICS			
Chloromethane	ug/L	1.0	ND
Bromomethane	ug/L	1.5	ND
Dichlorodifluoromethane	ug/L	1.5	ND
Vinyl chloride	ug/L	1.5	ND
Chloroethane	ug/L	1.0	ND
Methylene chloride	ug/L	1.0	ND
Trichlorofluoromethane	ug/L	0.4	ND
1,1-Dichloroethylene	ug/L	0.3	ND
1,1-Dichloroethane	ug/L	0.2	ND
trans-1,2-Dichloroethylene	ug/L	0.3	ND
Chloroform	ug/L	0.5	ND
1,2-Dichloroethane	ug/L	0.2	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

Mr. Jon Michaels
Page 6

November 16, 1989
PACE Project Number: 890914537

2853

PACE Sample Number:			331280
Date Collected:			09/13/89
Date Received:			09/14/89
			W-091389-JM-07
Parameter	Units	MDL	
ORGANIC ANALYSIS			
PURGEABLE HALOCARBONS AND AROMATICS			
1,1,1-Trichloroethane	ug/L	0.5	ND
Carbon tetrachloride	ug/L	0.3	ND
Bromodichloromethane	ug/L	0.2	ND
1,2-Dichloropropane	ug/L	0.2	ND
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND
1,1,2-Trichloroethylene	ug/L	0.5	ND
Benzene	ug/L	1.0	ND
Dibromochloromethane	ug/L	1.0	ND
1,1,2-Trichloroethane	ug/L	1.0	ND
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND
2-Chloroethylvinyl ether	ug/L	5.0	ND
Bromoform	ug/L	1.0	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND
Toluene	ug/L	1.0	ND
Chlorobenzene	ug/L	1.0	ND
Ethyl benzene	ug/L	1.0	ND
1,3-Dichlorobenzene	ug/L	4.0	ND
1,2-Dichlorobenzene	ug/L	4.0	ND
1,4-Dichlorobenzene	ug/L	4.0	ND
cis-1,2-Dichloroethylene	ug/L	0.5	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

Mr. Jon Michaels
Page 7

November 16, 1989
PACE Project
Number: 890914537

2853

The data contained in this report were obtained using EPA or other approved methodologies. All analyses were performed by me or under my direct supervision.

Michael A. Radle
Inorganic Chemistry Manager

Susan D. Max
Organic Chemistry Manager

CONESTOGA-ROVERS & ASSOCIATES
382 West County Road D
St. Paul, Minnesota 55416

ANALYTICAL REPORT SUBMISSION CHECK LIST

Date Samples Received 9-14-89

Date Report Sent to CRA _____

Method
- ☐ Overnight
- ☐ Regular Mail
- ☐ Fax
- ☐ Other _____

Items Included

1. ✓ Summary List of Samples Analyzed
2. ✓ Date of Sample Receipt
3. ✓ Date of Sample Extraction
4. ✓ Date of Sample Analysis
5. ✓ Method Blank Data for all Parameters
6. ✓ Matrix Spike Recoveries
7. ✓ Matrix Spike Duplicate Recoveries
8. ✓ QC Check Sample Data
9. NA Surrogate Spike Recoveries

All samples extracted and analyzed within specified holding times:

☐ Yes ☐ No

If no is checked please list CRA sample IDs of any samples that exceeded their holding times.

_____

_____

_____

_____

Lab _____ Check List Completed by _____

CRA USE ONLY

Date Received _____ Complete: ☐ Yes ☐ No

Received by _____ Copies to _____

pace laboratories, inc.

Client CRA By Date

Project 2853 Sheet No. 1 of 4

Subject Summary of Samples Analyzed Project No. 890914.53

PACE Sample Number	CRA Sample Number	Date of Collection	Date of Receipt	Date of Extraction	Analysis	Date of Analysis
33122	W-091389-JM-01	9-13-89	9-14-89	NA	Arsenic	10-4-89
				NA	Barium	9-22-89
				NA	Cadmium	9-20-89
				NA	Chromium	10-9-89
				NA	Copper	9-21-89
				NA	Lead	10-4-89
				NA	Mercury	9-28-89
				NA	Nickel	10-2-89
				NA	Selenium	10-2-89
				NA	Silver	10-5-89
				NA	Zinc	9-26-89
				NA	Ethyl acetate	9-27-89
				NA	601/602	9-27-89
33123	W-091389-JM-02	9-13-89	9-14-89	NA	Arsenic	10-4-89
				NA	Barium	9-22-89
				NA	Cadmium	9-20-89
				NA	Chromium	10-9-89
				NA	Copper	9-21-89
				NA	Lead	10-4-89
				NA	Mercury	9-28-89
				NA	Nickel	10-2-89
				NA	Selenium	10-2-89
				NA	Silver	10-5-89
				NA	Zinc	9-26-89

pace laboratories, inc.

Client CRA By Date

Project 2853 Sheet No. 2 of 4

Subject Summary of Samples Project No. 890914.537

Analyzed

CE Sample Number	CRA Sample Number	Date of Collection	Date of Receipt	Date of Extraction	Analysis	Date of Analysis
				NA	Ethyl acetate	9-26-89
					601/602	9-26-89
33124	W-091389-JM-03	9-13-89	9-14-89		Arsenic	10-4-89
					Barium	9-22-89
					Cadmium	9-20-89
					Chromium	10-9-89
					Copper	9-29-89
					Lead	10-4-89
					Mercury	9-28-89
					Nickel	10-2-89
					Selenium	10-2-89
					Silver	10-5-89
					Zinc	9-26-89
					Ethyl acetate	9-26-89
					601/602	9-26-89
33125	W-091389-JM-04	9-13-89	9-14-89		Arsenic	10-4-89
					Barium	9-22-89
					Cadmium	9-20-89
					Chromium	10-9-89
					Copper	9-21-89
					Lead	10-4-89
					Mercury	9-28-89
					Nickel	10-2-89
					Selenium	10-2-89

pace laboratories, inc.

Client CRA By Date

Project 2853 Sheet No. 3 of 4

Subject Summary of Samples Analyzed Project No. 89014.537

PACE Sample Number	CRA Sample Number	Date of Collection	Date of Receipt	Date of Extraction	Analysis	Date of Analysis
				NA	Silver	10-5-89
					Zinc	9-26-89
					Ethyl acetate	9-26-89
					601/602	9-26-89
33126	W-091389-JM-05	9-13-89	9-14-89		Arsenic	10-4-89
					Barium	9-22-89
					Cadmium	9-20-89
					Chromium	10-9-89
					Copper	9-21-89
					Lead	10-4-89
					Mercury	9-28-89
					Nickel	10-2-89
					Selenium	10-2-89
					Silver	10-5-89
					Zinc	9-26-89
					Ethyl acetate	9-26-89
					601/602	9-26-89
33127	W-091389-JM-06	9-13-89	9-14-89		Arsenic	10-4-89
					Barium	9-22-89
					Cadmium	9-20-89
					Chromium	10-9-89
					Copper	9-21-89
					Lead	10-4-89
					Mercury	9-28-89

pace laboratories, inc.

Client _____ By _____ Date _____

Project _____ Sheet No. 4 of 4

Subject _____ Project No. _____

ICE Sample Number	CRA Sample Number	Date of Collection	Date of Receipt	Date of Extraction	Analysis	Date of Analysis
				NA	Nickel	10-2-89
					Selenium	10-2-89
					Silver	10-5-89
					Zinc	9-26-89
					Ethyl acetate	9-26-89
					601/602	9-26-89
33128	W-091389-JM-07	9-13-89	9-14-89		Arsenic	10-4-89
					Barium	9-22-89
					Cadmium	9-20-89
					Chromium	10-9-89
					Copper	9-21-89
					Lead	10-4-89
					Mercury	9-28-89
					Nickel	10-2-89
					Selenium	10-2-89
					Silver	10-5-89
					Zinc	9-26-89
					Ethyl acetate	9-27-89
					601/602	9-27-89

Project Name CRA

SUMMARY OF INORGANIC ACCURACY AND PRECISION DATA

Parameter	Date of Analysis	Mthd Blk	Check Std. % Rec	Spiked Value	% Rec	Acc. Range	Sample A	Sample A Dup	RPD	RPD Range
Arsenic	10-4-89	<0.002	107	10.2	103	85-115	10.2	10.7	5	±30
PACE Sample#				36642			33126			
Barium	9-22-89	<0.2	96	5.06	92	85-115	4.7	4.8	2	30
PACE Sample#				33123			31986			
Cadmium	9-20-89	<0.0001	90	1.0	96	85-115	1.42	1.48	4	30
PACE Sample#				32849			33229			
Chromium	10-9-89	<0.001	112	5.0	98	85-115	8.3	8.0	4	30
PACE Sample#				36644			33126			
Copper	9-21-89	0.025	98	1.00	101	85-115	1.22	1.20	2	30
PACE Sample#				32991			32633			
	9-29-89	<0.01	97	1.00	97	85-115	1.6	1.6	0	30
PACE Sample#				35416			34279			
Lead	10-4-89	<0.001	99	10.8	106	85-115	8.6	8.5	1	30
PACE Sample#				33489			33229			
Mercury	9-28-89	<0.0002	99	5.00	112	85-115	4.03	4.80	17	30
PACE Sample#				35180			34253			

NA Not Analyzed
ND Not Detected at or above the method detection limit

Project Name CRA

SUMMARY OF INORGANIC ACCURACY AND PRECISION DATA

Parameter	Date of Analysis	Mthd Blk	Check Std. % Rec	Spiked Value	% Rec	Acc. Range	Sample A	Sample A Dup	RPD	RPD Range
Nickel	10-2-89	<0.05	100	1.60	94	85-115	0.97	0.97	0	30
PACE Sample#				35356			33494			
Selenium	10-2-89	<0.005	111	25.0	129	85-115	20.2	21.5	6	30
PACE Sample#				31937			36169			
Silver	10-5-89	<0.04	96	0.50	101	85-115	0.51	0.50	2	30
PACE Sample#				33229			33127			
Zinc	9-26-89	0.10	100	0.334	100	85-115	0.25	0.25	0	30
PACE Sample#				32991			33042			
PACE Sample#										
PACE Sample#										
PACE Sample#										
PACE Sample#										

NA Not Analyzed
ND Not Detected at or above the method detection limit

DAILY MATRIX SPKIE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS: 601/602/465B
INSTRUMENT: C
STANDARD: B
SAMPLE SPIKED: 32756
SAMPLE MATRIX: Water

FILE NUMBER:
PREPED BY: PNN
DATE PREPED: 9/26/09
ANALYZED BY: PNN
DATE ANALYZED 9/26/09

CLIENT NAME:
PROJECT NAME:
PROJECT NUMBER:

Compound	True Value	Sample Result	MS	% REC	MSD	% REC	RPD	Accuracy Limits	Precision Limit	Associated Samples
Dichlorodifluoromethane	20	NP	23.8	119	23.3	117			30%	32756
Trichlorofluoromethane			NA - in Std					124 - 46	30%	35171
Dichlorofluoromethane			23.3	117*	23.1	116*		102 - 48	30%	35172
Trans-1,2 Dichloroethylene			20.4	102	20.3	102		121 - 59	30%	32967
1,2-Dichloroethane			19.0	95	18.6	93		131 - 47	30%	33123
1,1,1-Trichloroethane		1.03	20.0	100	19.0	95		119 - 63	30%	33124
Bromodichloromethane		NP	20.1	101	18.6	93		116 - 73	30%	33125
2,3-Dichloro-1-propene	20		20.9	105	20.6	103		118 - 61	30%	33126
Trans-1,3-Dichloro-1-propene	14.4		14.6	101	12.6	88		114 - 65	30%	33127
cis-1,3-Dichloro-1-propene	25.6		29.6	116	28.8	113		124 - 46	30%	
1,2-Dibromomethane	20		22.8	114	21.8	109		135 - 75	30%	
Bromoform			20.4	102	20.3	102		127 - 64	30%	
1,1,2,2-Tetrachloroethane			20.0	100	19.4	97		124 - 42	30%	

10/4/09

DAILY MATRIX SPKIE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS: 601/602/465B
INSTRUMENT: C
STANDARD: B
SAMPLE SPIKED: _____
SAMPLE MATRIX: _____

FILE NUMBER: _____
PREPED BY: _____
DATE PREPED: _____
ANALYZED BY: _____
DATE ANALYZED _____

CLIENT NAME: _____
PROJECT NAME: _____
PROJECT NUMBER: _____

Compound	True Value	Sample Result	MS	% REC	MSD	% REC	RPD	Accuracy Limits	Precision Limit	Associated Samples
Toluene	20	NR	18.6	93	18.9	95		123 - 68	30%	
Ethyl Benzene	〃	〃	18.9	95	18.2	91		117 - 49	30%	
m-Xylene			19.4	97	18.5	93		126 - 69	30%	
o-Xylene			19.1	96	18.1	91		124 - 73	30%	
1,2-Dichlorobenzene			17.9	90	16.9	85		126 - 78	30%	

* Asterisked Value are outside QC limits.
RPD: VOAs _____ out of ____ outside of QC limits.
Recovery: VOAS _____ out of ____ outside of QC limits.
Blank: _____
* Comments: Dichlorofluoromethane is high in the spike due to new spike mix. JWN
Limits for Dichlorofluoromethane are based on old mix.

QC Reviewed by: JWN/SDM
DATE: 10-4-89

74HPPLAS

SUBSET ABBREVIATION: 4658

FOR CLP USE ONLY? [ ]

DATE COLLECTED: _____
DATE RECEIVED: _____
DATE ANALYZED: 9/26/89 PNN
ANALYST: _____
DATE EXTRACTED: _____
DATA REVIEWED BY: _____
ENTERED BY: _____

PROJECT NAME: _____
CLIENT NAME: _____
PROJECT NUMBER: _____
FILE NUMBER: _____
INSTR. ID: (C)
MATRIX: Water

SAMPLE NAME: _____
SAMPLE NO.: Method Blank (C)

PARAMETER NAME	ABBREV.	Other ug/l MDL	Date Dil. 5ml 9/28/89	Date Dil.	Results (Report)
CHLOROMETHANE	CHLOROMETH	1.0	U		U
BROMOMETHANE	BROMOMETH	1.5			
DICHLORODIFLUOROMETHANE (1)	FREON 12	1.5			
VINYL CHLORIDE (1)	VINYLCHLOR	1.5			
CHLOROETHANE	CHLOROETH	1.0			
METHYLENE CHLORIDE	MECL	1.0			
ACETONE	ACETONE	40			
TRICHLOROFLUOROMETHANE	FREON11	0.4			
ALLYL CHLORIDE	ALLYL CHL	4.0			
1,1-DICHLOROETHYLENE	11DCEENE	0.3			
TETRAHYDROFURAN	THF	15			
1,1-DICHLOROETHANE	11DCEANE	0.2			
TRANS-1,2-DICHLOROETHYLENE (2)	TRANS12DCE	0.3			
CIS-1,2-DICHLOROETHYLENE (2)	CIS12DCE	0.5			
ETHYL ETHER	ETHYLETHER	0.3			
CHLOROFORM	CHLOROFORM	0.5			
1,1,2-TRICHLOROTRIFLUOROETHANE	FREON113	0.7			
METHYL ETHYL KETONE	MEK	20			
1,2-DICHLOROETHANE	12DCEANE	0.2			
DIBROMOMETHANE	DIBROMOMETH	1.5			
1,1,1-TRICHLOROETHANE	111TCEANE	0.5			
CARBON TETRACHLORIDE	CARBONTET	0.3			

SUBSET ABBREVIATION: 4658

SAMPLE NAME: _____

SAMPLE NO.: _____

PARAMETER NAME	ABBREV.	Other ug/l :QL	Date 1011.	Date 1011.	Results (Report)
			N.P.		N.P.
BROMODICHLOROMETHANE	BDCMETHANE	0.2			
DICHLOROACETONITRILE	DCACETONIT	1.0			
2,3-DICHLORO-1-PROPENE	23DCPENE	0.5			
1,2-DICHLOROPROPANE	12DCPANE	0.2			
1,1-DICHLORO-1-PROPENE	11DCPENE	1.0			
CIS-1,3-DICHLORO-1-PROPENE	CIS13DCP	0.5			
1,1,2-TRICHLOROETHYLENE	TCE	0.5			
BENZENE	BENZENE	1.0			
1,3-DICHLOROPROPANE	13DCPANE	0.5			
DIBROMOCHLOROMETHANE (3)	DBCMETHANE	1.0			
1,1,2-TRICHLOROETHANE (3)	112TCEANE	1.0			
TRANS-1,3-DICHLORO-1-PROPENE	TRANS13DCP	0.3			
1,2-DIBROMOETHANE	EDB	4.0			
2-CHLOROETHYLVINYL ETHER	2CEVETHER	5.0			
BROMOFORM	BRMOFORM	1.0			
1,1,1,2-TETRACHLOROETHANE	1112TTEANE	0.3			
METHYL ISOBUTYL KETONE	MIBK	1.0			
1,2,3-TRICHLOROPROPANE	123TCPANE	4.0			
1,1,2,2,-TETRACHLOROETHANE	1122TTEANE	1.0			
1,1,2,2-TETRACHLOROETHYLENE	1122TTEENE	1.0			
PENTACHLOROETHANE	PENTACEANE	2.0			
TOLUENE	TOLUENE	1.0			
CHLOROBENZENE	CHLORBENZ	1.0			
ETHYLBENZENE	ETHYLBENZ	1.0			
CUMENE	CUMENE	1.0			
M-XYLENE	M-XYLENE	1.0			
P-XYLENE (4)	P-XYLENE	1.0			
O-XYLENE (4)	O-XYLENE	1.0			
1,3-DICHLOROBENZENE	13DCBENZ	4.0			
1,2-DICHLOROBENZENE	12DCBENZ	4.0			
1,4-DICHLOROBENZENE	14DCBENZ	4.0			
DICHLORODIFLUOROMETHANE	FREON2	1.0			

Footnote: 3 - These compounds co-elute
4 - These compounds co-elute

SUBSET ABBREVIATION: 465B

FOR CLP USE ONLY?

DATE COLLECTED:
DATE RECEIVED:
DATE ANALYZED: 9/26/09
ANALYST: PNN
DATE EXTRACTED:
DATA REVIEWED BY:
ENTERED BY:

PROJECT NAME:
CLIENT NAME:
PROJECT NUMBER:
FILE NUMBER:
INSTR. ID: (C)
MATRIX: water

SAMPLE NAME:
SAMPLE NO.: Check stand

PARAMETER NAME	ABBREV.	Other ug/l MDL	Date Dil. (C) 9/26/09 20 ppb	Date Dil.	Results (Report)
CHLOROMETHANE	CHLOROMETH	1.0			NP
BROMOMETHANE	BROMOMETH	1.5			
DICHLORODIFLUOROMETHANE (1)	FREON 12	1.5	25.1		25
VINYL CHLORIDE (1)	VINYLCHLOR	1.5			NP
CHLOROETHANE	CHLOROETH	1.0			
METHYLENE CHLORIDE	MECL	1.0			
ACETONE	ACETONE	40			
TRICHLOROFLUOROMETHANE	FREON11	0.4			
ALLYL CHLORIDE	ALLYL CHL	4.0			
1,1-DICHLOROETHYLENE	11DCEENE	0.3			
TETRAHYDROFURAN	THF	15			
1,1-DICHLOROETHANE	11DCEANE	0.2			
TRANS-1,2-DICHLOROETHYLENE (2)	TRANS12DCE	0.3	21.6		22
CIS-1,2-DICHLOROETHYLENE (2)	CIS12DCE	0.5			NP
ETHYL ETHER	ETHYLETHER	0.3			
CHLOROFORM	CHLOROFORM	0.5			
1,1,2-TRICHLOROTRIFLUOROETHANE	FREON113	0.7			
METHYL ETHYL KETONE	MEK	20			
1,2-DICHLOROETHANE	12DCEANE	0.2	20.1		20
DIBROMOMETHANE	DIBROMOMETH	1.5			NP
1,1,1-TRICHLOROETHANE	111TCEANE	0.5	20.9		21
CARBON TETRACHLORIDE	CARBONTET	0.3			NP

Form 0211W

SUBSET ABBREVIATION: 465B

SAMPLE NAME: _____

SAMPLE NO.: _____

PARAMETER NAME	ABBREV.	Other ____ ug/l MDL	Date Dil.	Date Dil.	Results (Report)
BROMODICHLOROMETHANE	BDCMETHANE	0.2	20.0		20
DICHLOROACETONITRILE	DCACETONIT	1.0			ND
2,3-DICHLORO-1-PROPENE	23DCPENE	0.5	20.5		21
1,2-DICHLOROPROPANE	12DCPANE	0.2			ND
1,1-DICHLORO-1-PROPENE	11DCPENE	1.0			/
CIS-1,3-DICHLORO-1-PROPENE	CIS13DCP	0.5	28.1		28
1,1,2-TRICHLOROETHYLENE	TCE	0.5			ND
BENZENE	BENZENE	1.0			/
1,3-DICHLOROPROPANE	13DCPANE	0.5			/
DIBROMOCHLOROMETHANE (3)	DBCMETHANE	1.0			/
1,1,2-TRICHLOROETHANE (3)	112TCEANE	1.0			/
TRANS-1,3-DICHLORO-1-PROPENE	TRANS13DCP	0.3	13.2		13
1,2-DIBROMOETHANE	EDB	4.0	21.8		22
2-CHLOROETHYLVINYL ETHER	2CEVETHER	5.0			ND
BROMOFORM	BROMOFORM	1.0	20.5		21
1,1,1,2-TETRACHLOROETHANE	1112TTEANE	0.3			ND
METHYL ISOBUTYL KETONE	MIBK	1.0			/
1,2,3-TRICHLOROPROPANE	123TCPANE	4.0			/
1,1,2,2,-TETRACHLOROETHANE	1122TTEANE	1.0			/
1,1,2,2-TETRACHLOROETHYLENE	1122TTEENE	1.0	18.6		19
PENTACHLOROETHANE	PENTACEANE	2.0			ND
TOLUENE	TOLUENE	1.0	18.0		18
CHLOROBENZENE	CHLOROBENZ	1.0			ND
ETHYLBENZENE	ETHYLBENZ	1.0	18.5		19
CUMENE	CUMENE	1.0			ND
M-XYLENE	M-XYLENE	1.0	17.3		17
P-XYLENE (4)	P-XYLENE	1.0	1NN ND ~~16.4~~		ND
O-XYLENE (4)	O-XYLENE	1.0	16.4		16
1,3-DICHLOROBENZENE	13DCBENZ	4.0			ND
1,2-DICHLOROBENZENE	12DCBENZ	4.0	15.4		15
1,4-DICHLOROBENZENE	14DCBENZ	4.0			ND
DICHLOROFLUOROMETHANE	FREON21	1.0	25.1		25

Footnote: 1 - These compounds co-elute
2 - These compounds co-elute
3 - These compounds co-elute
4 - These compounds co-elute

SUBSET ABBREVIATION: 4658

FOR CLP USE ONLY?

DATE COLLECTED:
DATE RECEIVED:
DATE ANALYZED: 9/27/89
ANALYST:
DATE EXTRACTED:
DATA REVIEWED BY:
ENTERED BY:

PROJECT NAME:
CLIENT NAME:
PROJECT NUMBER:
FILE NUMBER:
INSTR. ID: (C)
MATRIX: Water

SAMPLE NAME:
SAMPLE NO.: Method Blank

PARAMETER NAME	ABBREV.	Other ug/l MDL	Date (C) 9/27/89 Dilution	Date Dil.	Results (Report)
CHLOROMETHANE	CHLOROMETH	1.0	N/A		N/A
BROMOMETHANE	BROMOMETH	1.5			
DICHLORODIFLUOROMETHANE (1)	FREON 12	1.5			
VINYL CHLORIDE (1)	VINYLCHLOR	1.5			
CHLOROETHANE	CHLOROETH	1.0			
METHYLENE CHLORIDE	MECL	1.0			
ACETONE	ACETONE	40			
TRICHLOROFLUOROMETHANE	FREON11	0.4			
ALLYL CHLORIDE	ALLYL CHL	4.0			
1,1-DICHLOROETHYLENE	11DCEENE	0.3			
TETRAHYDROFURAN	THF	15			
1,1-DICHLOROETHANE	11DCEANE	0.2			
TRANS-1,2-DICHLOROETHYLENE (2)	TRANS12DCE	0.3			
CIS-1,2-DICHLOROETHYLENE (2)	CIS12DCE	0.5			
ETHYL ETHER	ETHYLETHER	0.3			
CHLOROFORM	CHLOROFORM	0.5			
1,1,2-TRICHLOROTRIFLUOROETHANE	FREON113	0.7			
METHYL ETHYL KETONE	MEK	20			
1,2-DICHLOROETHANE	12DCEANE	0.2			
DIBROMOMETHANE	DIBROMOMETH	1.5			
1,1,1-TRICHLOROETHANE	111TCEANE	0.5			
CARBON TETRACHLORIDE	CARBONTET	0.3			

DAILY MATRIX SPKIE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS: 601/602/465B
INSTRUMENT: C
STANDARD: B
SAMPLE SPIKED: _____
SAMPLE MATRIX: _____

FILE NUMBER: _____
PREPED BY: _____
DATE PREPED: _____
ANALYZED BY: _____
DATE ANALYZED _____

CLIENT NAME: _____
PROJECT NAME: _____
PROJECT NUMBER: _____

Compound	True Value	Sample Result	MS	% REC	MSD	% REC	RPD	Accuracy Limits	Precision Limit	Associated Samples
Toluene	20	ND	16.6	83	16.9	85	2.30	123 - 68	30%	
Ethyl Benzene			16.5	83	18.2	91	9.2	117 - 49	30%	
m-Xylene			16.5	83	17.1	86	3.55	126 - 69	30%	
o-Xylene			16.3	82	16.9	85	3.59	124 - 73	30%	
1,2-Dichlorobenzene			20.7	104	17.3	87	17.8	126 - 78	30%	

* Asterisked Value are outside QC limits.
RPD: VOAs _____ out of ____ outside of QC limits.
Recovery: VOAS _____ out of ____ outside of QC limits.
Blank: _____
Comments: _____

QC Reviewed by: JWN/SLH
DATE: 10-4-89

74HPPLAS

SUBSET ABBREVIATION: 4658

FOR CLP USE ONLY? [ ]

DATE COLLECTED: _____
DATE RECEIVED: _____
DATE ANALYZED: _____
ANALYST: _____
DATE EXTRACTED: _____
DATA REVIEWED BY: _____
ENTERED BY: _____

PROJECT NAME: _____
CLIENT NAME: _____
PROJECT NUMBER: _____
FILE NUMBER: _____
INSTR. ID: _____
MATRIX: _____

SAMPLE NAME: _____
SAMPLE NO.: Check standard

PARAMETER NAME	ABBREV.	Other ____ ug/l MDL	Date Dil. 9/27/09 20ppb	Date Dil.	Results (Report)
CHLOROMETHANE	CHLOROMETH	1.0			
BROMOMETHANE	BROMOMETH	1.5			
DICHLORODIFLUOROMETHANE (1)	FREON 12	1.5	24.1		24
VINYL CHLORIDE (1)	VINYLCHLOR	1.5			
CHLOROETHANE	CHLOROETH	1.0			
METHYLENE CHLORIDE	MECL	1.0			
ACETONE	ACETONE	40			
TRICHLOROFLUOROMETHANE	FREON11	0.4			
ALLYL CHLORIDE	ALLYL CHL	4.0			
1,1-DICHLOROETHYLENE	11DCEENE	0.3			
TETRAHYDROFURAN	THF	15			
1,1-DICHLOROETHANE	11DCEANE	0.2			
TRANS-1,2-DICHLOROETHYLENE (2)	TRANS12DCE	0.3	19.4		19
CIS-1,2-DICHLOROETHYLENE (2)	CIS12DCE	0.5			
ETHYL ETHER	ETHYLETHER	0.3			
CHLOROFORM	CHLOROFORM	0.5			
1,1,2-TRICHLOROTRIFLUOROETHANE	FREON113	0.7			
METHYL ETHYL KETONE	MEK	20			
1,2-DICHLOROETHANE	12DCEANE	0.2	17.2		17
DIBROMOMETHANE	DIBROMOMETH	1.5			
1,1,1-TRICHLOROETHANE	111TCEANE	0.5	19.3		19
CARBON TETRACHLORIDE	CARBONTET	0.3			

Form 0211W

SUBSET ABBREVIATION: 465B

SAMPLE NAME: _____

SAMPLE NO.: _____

PARAMETER NAME	ABBREV.	Other ____ ug/l MDL	Date Dil.	Date Dil.	Results (Report)
BROMODICHLOROMETHANE	BDCMETHANE	0.2	19.0		19
DICHLOROACETONITRILE	DCACETONIT	1.0			
2,3-DICHLORO-1-PROPENE	23DCPENE	0.5	20.1		20
1,2-DICHLOROPROPANE	12DCPANE	0.2			
1,1-DICHLORO-1-PROPENE	11DCPENE	1.0			
CIS-1,3-DICHLORO-1-PROPENE	CIS13DCP	0.5	27.6		28
1,1,2-TRICHLOROETHYLENE	TCE	0.5			
BENZENE	BENZENE	1.0			
1,3-DICHLOROPROPANE	13DCPANE	0.5			
DIBROMOCHLOROMETHANE (3)	DBCMETHANE	1.0			
1,1,2-TRICHLOROETHANE (3)	112TCEANE	1.0			
TRANS-1,3-DICHLORO-1-PROPENE	TRANS13DCP	0.3	13.6		14
1,2-DIBROMOETHANE	EDB	4.0	22.6		23
2-CHLOROETHYLVINYL ETHER	2CEYETHER	5.0			
BROMOFORM	BROMOFORM	1.0	19.6		20
1,1,1,2-TETRACHLOROETHANE	1112TTEANE	0.3			
METHYL ISOBUTYL KETONE	MIBK	1.0			
1,2,3-TRICHLOROPROPANE	123TCPANE	4.0			
1,1,2,2,-TETRACHLOROETHANE	1122TTEANE	1.0			
1,1,2,2-TETRACHLOROETHYLENE	1122TTEENE	1.0	15.9		16
PENTACHLOROETHANE	PENTACEANE	2.0			
TOLUENE	TOLUENE	1.0	16.85		17
CHLOROBENZENE	CHLOROBENZ	1.0			
ETHYLBENZENE	ETHYLBENZ	1.0	18.2		18
CUMENE	CUMENE	1.0			
M-XYLENE	M-XYLENE	1.0	17.1		17
P-XYLENE (4)	P-XYLENE	1.0			
O-XYLENE (4)	O-XYLENE	1.0	16.85		17
1,3-DICHLOROBENZENE	13DCBENZ	4.0			
1,2-DICHLOROBENZENE	12DCBENZ	4.0	17.3		17
1,4-DICHLOROBENZENE	14DCBENZ	4.0			
DICHLOROFLUOROMETHANE	FREON21	1.0	24.9		25

Footnote: 1 - These compounds co-elute
2 - These compounds co-elute
3 - These compounds co-elute
4 - These compounds co-elute

DAILY MATRIX SPKIE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS: 601/602/465B
INSTRUMENT: C
STANDARD: B
SAMPLE SPIKED:
SAMPLE MATRIX:

FILE NUMBER:
PREPED BY: pnw
DATE PREPED: 9/27/19
ANALYZED BY: pnw
DATE ANALYZED 9/27/19

CLIENT NAME:
PROJECT NAME:
PROJECT NUMBER:

Compound	True Value	Sample Result	MS	% REC	MSD	% REC	RPD	Accuracy Limits	Precision Limit	Associated Samples
Dichlorodifluoromethane	20	ND	20.4	102	534	27	146		30%	34034
Trichlorofluoromethane								124 - 46	30%	32969
Dichlorofluoromethane			21.6	* 108	22.6	* 113	4.52	102 - 48	30%	33122
Trans-1,2-Dichloroethylene			17.7	89	17.8	89	0	121 - 59	30%	33128
1,2-Dichloroethane			16.1	81	16.1	81	0	131 - 47	30%	33044
1,1,1-Trichloroethane			16.3	82	16.4	82	0	119 - 63	30%	34033
Bromodichloromethane			16.4	82	16.1	81	1.22	116 - 73	30%	34035
2,3-Dichloro-1-propene	20		16.8	84	16.8	84	0	118 - 61	30%	34036
Trans-1,3-Dichloro-1-propene	14.4		11.4	79	11.0	76	3.87	114 - 65	30%	32968
cis-1,3-Dichloro-1-propene	25.6		26.1	102	25.9	102	0	124 - 46	30%	
1,2-Dibromomethane	20		19.6	98	19.3	97	1.02	135 - 75	30%	
Bromoform			16.0	80	16.2	81	1.24	127 - 64	30%	
1,1,2,2-Tetrachloroethane			13.0	65	13.1	66	1.52	124 - 42	30%	

* ~~[illegible]~~ On the specific compd the accuracy limits are from [illegible]. The DCF was not made by Supelco mixture and therefore the ~~[illegible]~~ % recovery were low. [illegible] with the Supelco mixture [illegible] % recovery [illegible] 100%.

[illegible] 9/27/19

SUBSET ABBREVIATION: 4658

SAMPLE NAME: _____

SAMPLE NO.: _____

PARAMETER NAME	ABBREV.	Other ug/l MDL	Date 1011.	Date 1011.	Results (Report)
BROMODICHLOROMETHANE	BDCMETHANE	0.2	ND		ND
DICHLOROACETONITRILE	DCACETONIT	1.0			
2,3-DICHLORO-1-PROPENE	23DCPENE	0.5			
1,2-DICHLOROPROPANE	12DCPANE	0.2			
1,1-DICHLORO-1-PROPENE	11DCPENE	1.0			
CIS-1,3-DICHLORO-1-PROPENE	CIS13DCP	0.5			
1,1,2-TRICHLOROETHYLENE	TCE	0.5			
BENZENE	BENZENE	1.0			
1,3-DICHLOROPROPANE	13DCPANE	0.5			
DIBROMOCHLOROMETHANE (3)	DBCMETHANE	1.0			
1,1,2-TRICHLOROETHANE (3)	112TCEANE	1.0			
TRANS-1,3-DICHLORO-1-PROPENE	TRANS13DCP	0.3			
1,2-DIBROMOETHANE	EDB	4.0			
2-CHLOROETHYLVINYL ETHER	2CEVETHER	5.0			
BROMOFORM	BRMOFORM	1.0			
1,1,1,2-TETRACHLOROETHANE	1112TTEANE	0.3			
METHYL ISOBUTYL KETONE	MIBK	1.0			
1,2,3-TRICHLOROPROPANE	123TCPANE	4.0			
1,1,2,2,-TETRACHLOROETHANE	1122TTEANE	1.0			
1,1,2,2-TETRACHLOROETHYLENE	1122TTEENE	1.0			
PENTACHLOROETHANE	PENTACEANE	2.0			
TOLUENE	TOLUENE	1.0			
CHLOROBENZENE	CHLORBENZ	1.0			
ETHYLBENZENE	ETHYLBENZ	1.0			
CUMENE	CUMENE	1.0			
M-XYLENE	M-XYLENE	1.0			
P-XYLENE (4)	P-XYLENE	1.0			
O-XYLENE (4)	O-XYLENE	1.0			
1,3-DICHLOROBENZENE	13DCBENZ	4.0			
1,2-DICHLOROBENZENE	12DCBENZ	4.0			
1,4-DICHLOROBENZENE	14DCBENZ	4.0			
DICHLORODIFLUOROMETHANE	FREON12	1.0			

Footnote: 1 - These compounds co-elute 2 - These compounds co-elute

3 - These compounds co-elute 4 - These compounds co-elute

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MN-COMP 0044005

1.0 INTRODUCTION

The Ford Motor Company, Twin Cities Assembly Plant (Plant) is located in St. Paul, Minnesota, at 966 South Mississippi River Boulevard. The Plant complex includes buildings on both sides of Mississippi River Boulevard. The Plant location is presented on Figure 1.1.

A more detailed chronology of the Plant's history is outlined in a report entitled "Groundwater Monitoring Report and Evaluation - Site C" dated January 24, 1990.

MN-COMP 0044006

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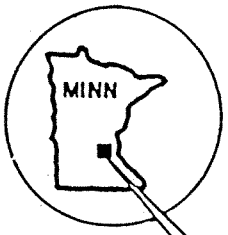

KEY MAP

CITY OF ST. PAUL

MN-COMP 0044007

FIGURE I.1
LOCATION PLAN
Ford Motor Company

CRA

2191 –22/09/87–1–D–0

2.0 BACKGROUND

The Site C waste disposal area was reported to the USEPA by Ford during the Superfund notification process. The location of Site C is provided on Figure 1.1. Several hydrogeologic investigations were completed. The most recent investigation was presented in the report titled "Groundwater Monitoring Report and Evaluation - Site C". This report was submitted to the Minnesota Pollution Control Agency (MPCA) on January 24, 1990.

On January 31, 1990, a meeting was held with the MPCA to discuss the results of this report. The MPCA requested additional field work to be completed at Site C. On March 2, 1990, a work plan for supplemental groundwater monitoring was submitted to the MPCA. This work plan included the installation of an additional monitoring well and two rounds of groundwater and surface water sampling.

This monitoring report summarizes the data and evaluation results from these field activities.

MN-COMP 0044008

3.0 FIELD ACTIVITIES

3.1 MONITORING WELL INSTALLATION

CRA contracted GME Consultants Inc. to install the new monitoring well (MW-6). Work commenced on April 9, 1990, and was completed on April 10, 1990. The location of the new monitoring well (MW6) is shown on Figures 3.1, 3.2 and 3.3.

A CME 55 drill rig, using 4-1/4-inch inside diameter, hollow stem augers advanced the well boring. Split spoon samples were collected continuously to the bottom of the boring.

The monitoring well was completed using the following materials:

- 10-foot, 2.0-inch diameter, .10 slot stainless steel screen;
- 40-foot, 2.0-inch, low carbon steel riser;
- #10 silica sand pack;
- Bentonite slurry seal;
- Bentonite (approximately 3 percent) cement grout;
- 4.0-inch diameter locking protective casing;
- three 4.0-inch steel protective posts.

MN-COMP 0044009

The monitoring well was installed inside the auger annulus by backing the augers form the boring while simultaneously installing the sand pack. The sand pack was installed from the bottom to approximately 8 feet

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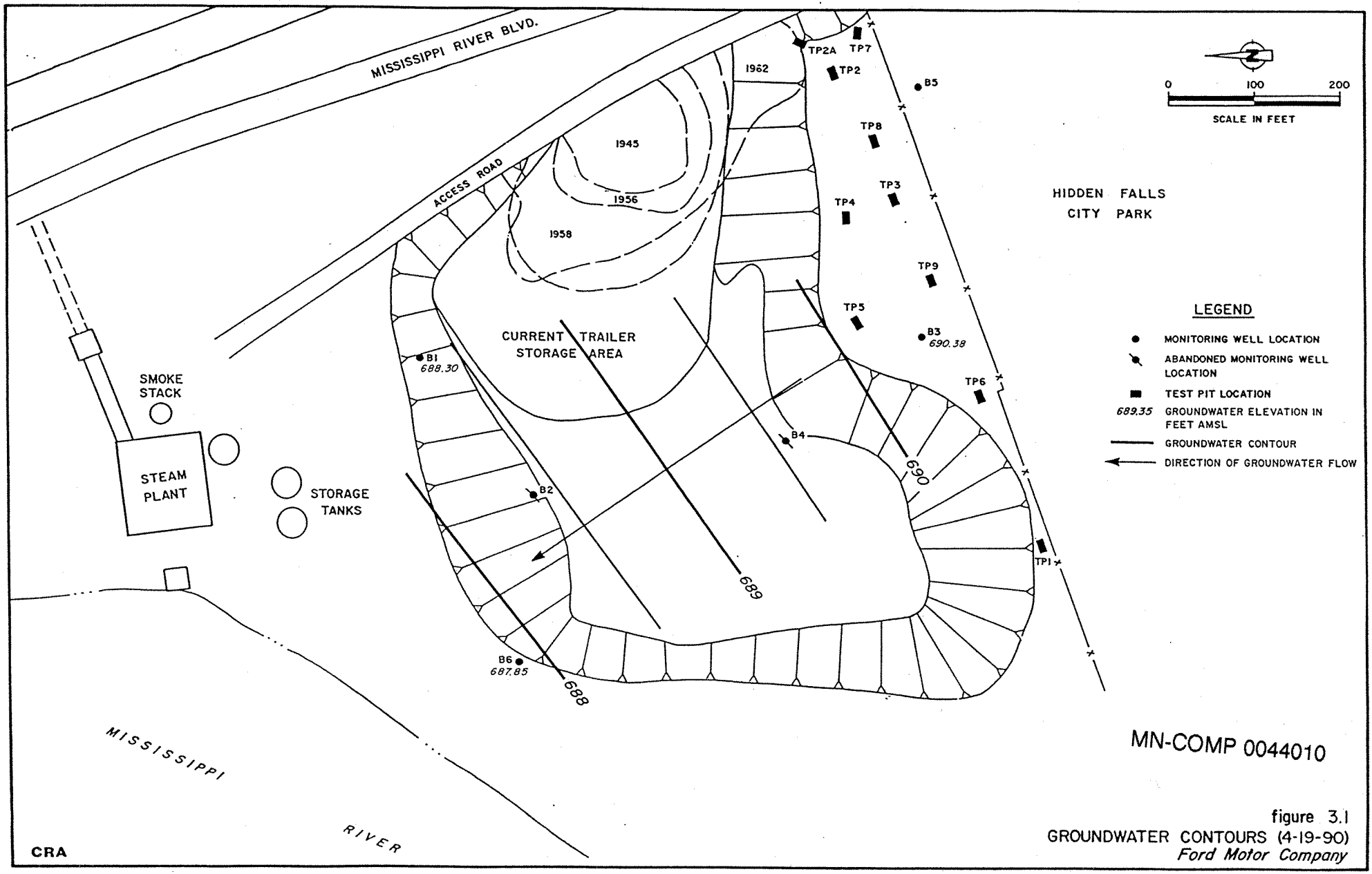
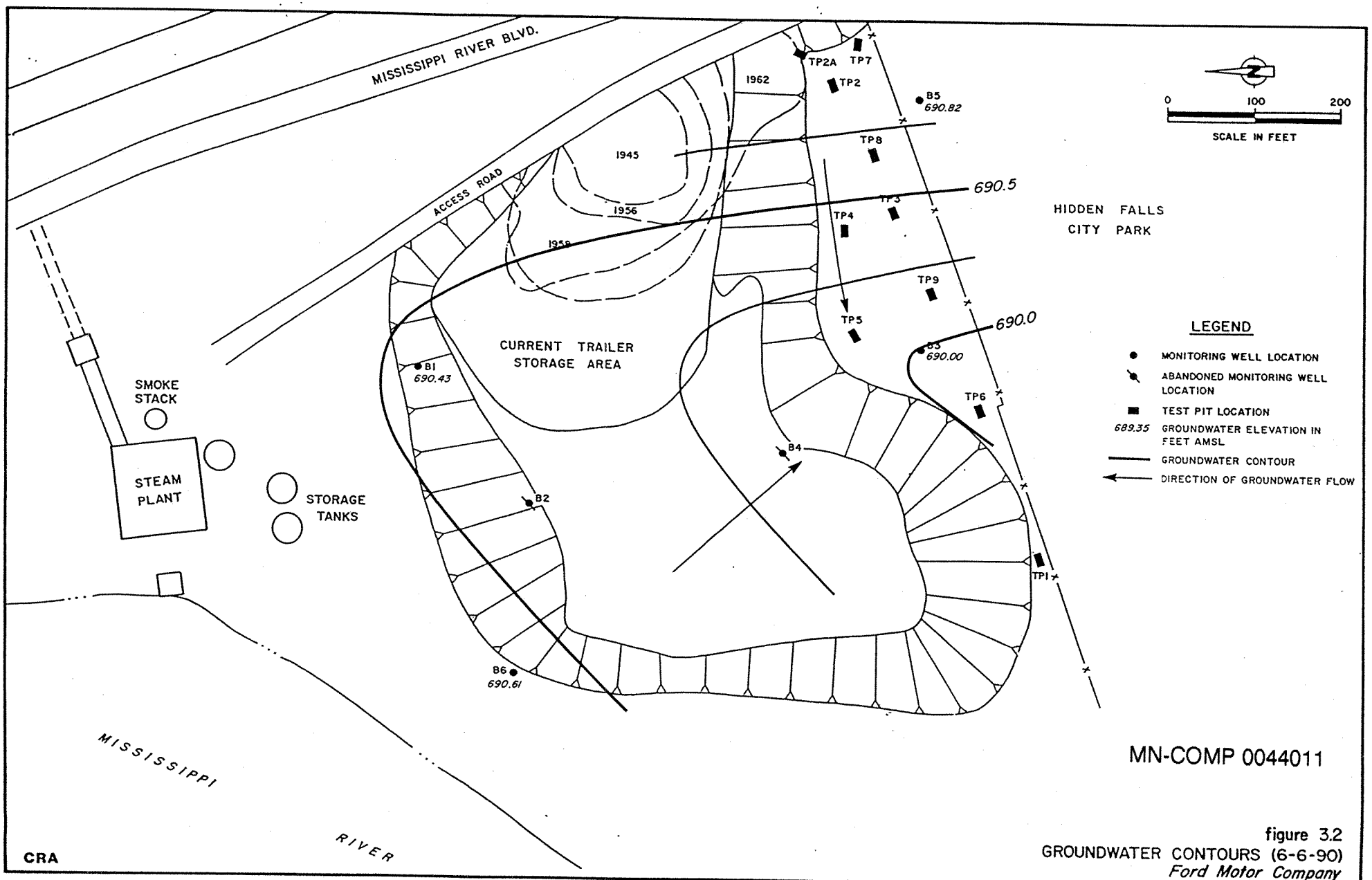


MN-COMP 0044010

figure 3.1
GROUNDWATER CONTOURS (4-19-90)
Ford Motor Company

2853-11/27/89-M



CRA

2853-11/27/89-M

figure 3.2
GROUNDWATER CONTOURS (6-6-90)
Ford Motor Company

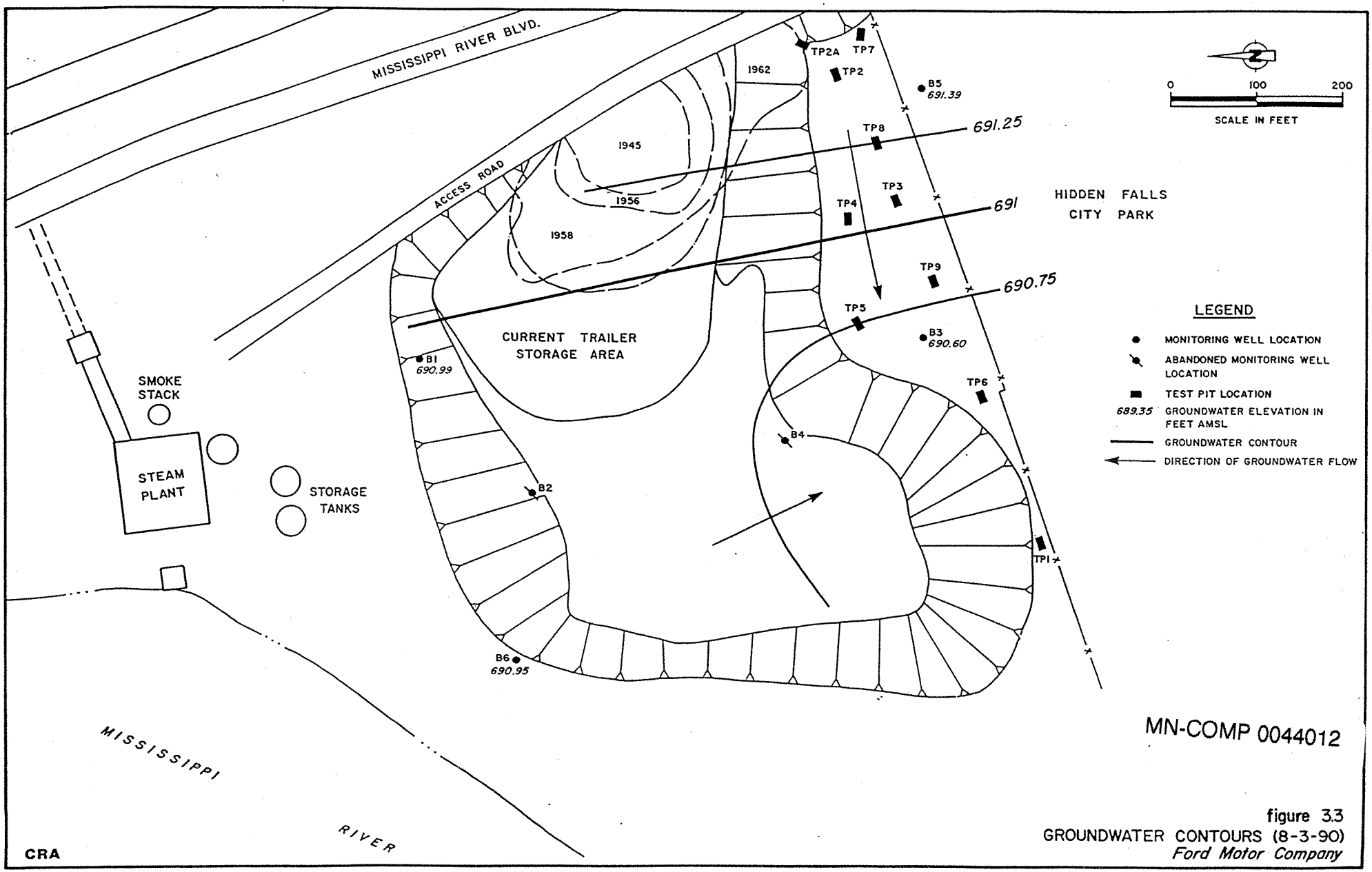


figure 3.3
GROUNDWATER CONTOURS (8-3-90)
Ford Motor Company

CRA

2853-11/27/89-M

above the top of the screen. Natural sand and gravel filled the annulus to approximately 26 feet BGS. A bentonite slurry seal approximately 3 feet thick was emplaced above the sand pack. The remaining auger annulus was backfilled by the tremie grout method using a mixture of bentonite and cement. Surface protection consisted of a 4.0-inch diameter locking protective casing and three steel bumper posts. The well completion log is presented in Appendix A.

The drill rig, augers, well materials and additional associated equipment were decontaminated using a high temperature, hot water steam rinse.

Well MW-6 was developed and stabilized following installation using a 2-inch stainless steel and teflon, bottom filling bailer. A minimum of five standing well volumes was purged. Field parameters of pH, conductivity and temperature were noted after each well volume. The well was considered stabilized after three consecutive volumes with readings of less than 5 percent variability were purged. In total, 44 well volumes were removed during development.

Table 3.1 presents the new well elevation data.

3.2 GROUNDWATER AND SURFACE WATER SAMPLING

Two (2) rounds of groundwater and surface water sampling were completed according to the approved work plan and the MPCA guidance manual "Procedures for Groundwater Monitoring; MPCA Guidelines"

MN-COMP 0044013

TABLE 3.1

FORD SITE C
REVISED* MONITORING WELL ELEVATION DATA

Well #	Top of Casing Elevation	Ground Elevation	Bottom of Screen Elevation	Groundwater Elevations 8/3/90	6/6/90	4/19/90	9/13/89	6/2/89	3/24/88(1)	12/1/82(2)	3/3/82(3)	1/5/82(3)
B1	738.06	735.9	681.62	690.99	690.43	688.30	686.91	689.35	688.24	691.85	688.35	688.62
B3	704.18	702.9	679.68	690.66	690.00	690.38	687.76	689.36	688.50	691.42	688.27	688.65
B5	703.90	703.2	678.50	691.39	690.82	-(4)	689.19	690.45	689.61	691.96	NI	NI
B6	730.85	728.4	681.90	690.95	690.61	687.85	NI	NI	NI	NI	NI	NI
Staff Gauge Lock & Dam #1	-	-	-	691.4	691.5	688.2						

Note:

All elevations are feet above mean sea level (AMSL).
*As revised due to well repairs and modifications.
(1) From report "Assessment of Fill Areas, Ford Motor Company, Twin Cities Assembly Plant," CRA, October 1988.
(2) From report "Twin Cities Assembly Facility, Groundwater Monitoring Wells Survey," Ford Motor Company, December 1, 1982.
(3) From report "Twin Cities Assembly Facility, Groundwater Monitoring Wells Survey," Ford Motor Company, March 3, 1982.
(4) This water level omitted by error on this date, therefore, an additional water level round taken 8/3/90.
NI Not Installed

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December 1986. The samples were submitted to Pace Laboratories Inc. for chemical analysis under chain-of-custody procedures. The monitoring wells were purged and sampled using a precleaned* bottom filling stainless steel bailer. A minimum of three well volumes were purged prior to each sampling.

The surface water samples were taken by the "Grab Sampling" method. On the two sampling events, samples were obtained from both an upstream and downstream locations. These surface water locations are the same as the 1989 surface water sampling locations.

3.3 GROUNDWATER FLOW DIRECTION

Groundwater elevation data was obtained on April 19, 1990, June 6, 1990, and August 3, 1990. Groundwater elevations and groundwater flow directions are presented on Figures 3.1, 3.2 and 3.3.

Groundwater flow is predominantly to the west towards the Mississippi River. Seasonal control of the river elevation may affect this flow direction to some degree. Water levels measured by CRA during 1988, also presented on Table 3.1, had indicated a more northwesterly component of flow direction. A similar westerly flow pattern was also provided by data presented by Ford in December 1982 as also indicated on Table 3.1. Early groundwater elevations by Ford do not include well B5, as it was not installed until later in

*Cleaning sequence consisted of: methanol-hexane-methanol rinse, air drying and distilled water rinse.

CONEST MN-COMP 0044015

1982. Only the 1990 data includes the new well B6. Seasonal fluctuations in the river elevation also appear to change the gradients as shown on Figures 3.1, 3.2 and 3.3.

Figures 3.2 and 3.3 show a flow direction to the south for the western edge of Site C. These flow directions indicated that the river was recharging this portion of Site C. The Army Corp of Engineers maintain a staff gauge in the lower pool of Lock and Dam #1. The elevations of the river were approximately 3 feet higher during the June and August water level rounds when compared to the river elevation in April. The change in river elevation explains why groundwater flow for June and August are different than the flow direction for April.

Groundwater elevations are measured in the existing monitoring wells which are screened in the fill and/or river deposits of sand and gravel. Thus, the groundwater flow directions represent a localized condition under Site C.

MN-COMP 0044016

4.0 ANALYTICAL RESULTS

Results of the chemical analysis of groundwater and surface water are presented in Table 4.1. The analytical lab reports and the data validation memorandums are presented in Appendix B. All water samples were analyzed for halocarbon and aromatic volatile organic compounds (VOC) by EPA methods 601 and 602. In addition to the 601/602 VOC parameters, the MPCA requested that *cis*-1,2-dichloroethylene and ethylacetate also be analyzed. This request was presented in MPCA's letter dated April 25, 1989. The following metals were also analyzed: arsenic, selenium and mercury by Atomic Absorption Method and barium, cadmium, chromium, copper, lead, silver, zinc and nickel by inductively coupled plasma analysis (EPA Method 6010).

MN-COMP 0044017

TABLE 4.1

FORD SITE "C"
DETECTED COMPOUNDS

	B1					B3					B5			B6	
	6/89	8/89	9/89	4/90	6/90	6/89	8/89	9/89	4/90	6/90	6/89	8/89	9/89	4/90	6/90
cis-1,2-Dichloroethylene µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5
1,1-Dichloroethylene µg/L	1.5	ND(R)	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8(J)	ND	ND	ND
Methylene Chloride µg/L	ND	ND(R)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4(U)	ND
Trichlorofluoromethane µg/L	ND	ND(R)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane µg/L	ND	14(J)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride µg/L	ND	5.2(J)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene µg/L	ND	ND(R)	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5
Chloroform µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9	ND
Cadmium mg/L	ND	ND	ND	ND	ND	0.0002	ND	ND	ND	ND	0.0004	ND	0.0002	ND	ND
Lead mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc mg/L	ND	ND	ND	ND	ND	0.03	ND	0.02	ND	ND	0.07	ND	0.26	ND	0.007(U)
Copper mg/L	ND	0.01	ND	ND	ND	ND	0.02	ND	0.01(U)	ND	ND	ND	ND	ND	ND
Nickel mg/L	ND	ND	ND	ND	ND	ND	0.05	ND	ND	ND	0.08	0.05	ND	ND	ND
Chromium mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002	ND	ND	ND	ND
Barium mg/L	ND	ND	ND	ND	0.06	0.3	ND	ND	0.2	0.18	ND	ND	ND	ND	0.073

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TABLE 4.1 (CONT'D)

FORD SITE "C"
DETECTED COMPOUNDS

	Mississippi River Up Stream					Mississippi River Down Stream				
	6/89	8/89	9/89	4/90	6/90	6/89	8/89	9/89	4/90	6/90
cis-1,2-Dichloroethylene µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene µg/L	1.3	ND	ND	ND	ND	ND	1.1(J)	ND	ND	ND
Methylene Chloride µg/L	ND	ND	ND	1.3(U)	1.0	1.3	ND	ND	ND	ND
Trichlorofluoromethane µg/L	ND	ND	ND	ND	ND	2.1(J)	ND	ND	ND	ND
Dichlorodifluoromethane µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium mg/L	ND	0.0005	ND	ND	ND	ND	0.0008	ND	ND	ND
Lead mg/L	ND	ND	0.001	ND	ND	ND	ND	0.001	ND	ND
Zinc mg/L	ND	ND	ND	ND	0.009(U)	ND	ND	ND	ND	ND
Copper mg/L	ND	ND	ND	ND	ND	0.001	ND	ND	ND	ND
Nickel mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium mg/L	ND	ND	ND	ND	0.058	ND	ND	ND	ND	0.055

MDL - Method Detection Limit
ND - Not detected at or above method detection limit.
(J) - Value estimated based on holding time exceedence.
(R) - Value unusable based on holding time exceedence.
(U) - Value qualified as non-detect based on method blank.

CONFIDENTIAL ROUX ASSOCIATES

MN-COMP 0044019

5.0 EVALUATION

The data gathered for the report on the existing monitoring well network at Site C indicate the following:

- A data quality assessment was conducted of the samples collected during the two sampling rounds. With minor exceptions, the data was found to be acceptable to assess analyte concentrations within groundwater and surface water at the Site (see footnotes to Table 4.1 and lab report validation, Appendix B).

- Groundwater flow direction under Site C flows predominantly west towards the Mississippi River.

- Groundwater chemical data gathered from this monitoring represents Site conditions in the immediate area under Site C.

- Chemical data from samples taken at the river indicate that Site C has had no impact on the river.

- Barium was the only analyte found above method detection limits in the river samples taken and was found at equal concentrations upstream and downstream of the Site.

- Results for June sampling for zinc and April sampling for copper were qualified as non-detect due to the presence of the analyte in the method blank.

MN-COMP 0044020

- Chemical data from the two rounds of sampling on wells B1, B3 and B6 indicate that wells B1 and B3 had no VOCs present during either sampling event.

- Well B6 had methylene chloride detected at 1.4 µg/*l* during the April sampling. This value was qualified as non-detect due to the presence of this analyte in the method blank.

- Chloroform was detected at well B6 during the April sampling event at a concentration of 3.9 µg/*l* but was not detected during the June event. Well B6 was downgradient of the Site during the April sampling event. Well B6 was not downgradient during the June sampling event, however, well B3 was. No VOCs were present in well B3 in either sampling event.

- During the June sampling, two analytes, *cis*-1,2-dichloroethylene and trichloroethylene, were detected at well B6 at concentrations of 5.5 and 0.5 µg/*l*, respectively. However, neither compound was detected during the earlier April event when B6 was more downgradient of the Site.

- The metals concentrations at all sampling locations are either not detected or at levels well below any concentrations of concern.

- The groundwater results from both 1989 and 1990 are inconsistent from location to location and are not repeated in successive monitoring events at any one location. These inconsistent results indicate that any VOC release

associated with the Site is insignificant. These results are similar in terms of their low levels to those found by Ford during 1982 monitoring at these wells.

- Review of all 1990 sampling data from both rounds indicates no analyte concentration at or near any applicable standards often used for comparison of water quality and purity (e.g. MCLs and RALs). All results for this supplemental 1990 monitoring were found well below RALs and MCLs.

- Based on site history and the prior results obtained, no further Site C monitoring is warranted.

MN-COMP 0044022

All of Which is Respectfully Submitted,

CONESTOGA-ROVERS & ASSOCIATES

Alan W. Van Norman, P. Eng.

Jon Christofferson

MN-COMP 0044023

APPENDIX A

WELL INSTRUMENTATION LOGS

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

(L-06)

PROJECT NAME: FORD SITE C
PROJECT NO.: 2853
CLIENT: FORD
LOCATION: ST. PAUL, MINNEAPOLIS

HOLE DESIGNATION: MW-6

DATE COMPLETED: APRIL 10, 1990
DRILLING METHOD: HSA
CRA SUPERVISOR: J. MICHELS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE N VALUE
0	ML(SILT)FILL, 10-40% clay, green, dry		CONCRETE SEAL			
2.5	ML(SILT)FILL, brick, red-brown, dry					
5.0				1SS		28
7.5			6" BOREHOLE	2SS		25
	GC(GRAVEL)FILL, coarse, dry	-8.0		3SS		22
10.0	CL(CLAY)FILL, 10-30% silt, 10-30% sand and coarse gravel, well graded	-10.0		4SS		40
12.5	No recovery		CEMENT/ BENTONITE GROUT	5SS		100
15.0				6SS		40
17.5			2" STEEL CASING	7SS		17
20.0				8SS		23
22.5				9SS		41
25.0				10SS		8
	SW(SAND), 20-50% gravel, brown, dry, ALLUVIUM and GC(GRAVEL), 20-50% sand	-26.0	BENTONITE PELLET SEAL	11SS		19
27.5				12SS		15
30.0	MN-COMP 0044025			13SS		18
32.5			SAND PACK			

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

GRAIN SIZE ANALYSIS ◯ WATER FOUND ▽ STATIC WATER LEVEL ▼

APPENDIX B

ANALYTICAL REPORTS AND VALIDATION

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

(L-06)

PROJECT NAME: FORD SITE C
PROJECT NO.: 2853
CLIENT: FORD
LOCATION: ST. PAUL, MINNEAPOLIS

HOLE DESIGNATION: MW-6

DATE COMPLETED: APRIL 10, 1990
DRILLING METHOD: HSA
CRA SUPERVISOR: J. MICHELS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE
0	ML(SILT)FILL, 10-40% clay, green, dry		CONCRETE SEAL			
2.5	ML(SILT)FILL, brick, red-brown, dry					
5.0				1SS		28
7.5			6" BOREHOLE	2SS		25
	GC(GRAVEL)FILL, coarse, dry	-8.0		3SS		22
10.0	CL(CLAY)FILL, 10-30% silt, 10-30% sand and coarse gravel, well graded	-10.0		4SS		40
12.5	No recovery		CEMENT/ BENTONITE GROUT	5SS		100
15.0				6SS		40
17.5			2" STEEL CASING	7SS		17
20.0				8SS		23
22.5				9SS		41
25.0				10SS		8
	SW(SAND), 20-50% gravel, brown, dry, ALLUVIUM and GC(GRAVEL), 20-50% sand	-26.0	BENTONITE PELLET SEAL	11SS		19
27.5				12SS		15
30.0				13SS		18
32.5			SAND PACK			

MN-COMP 0044025

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

GRAIN SIZE ANALYSIS ◯ WATER FOUND ▽ STATIC WATER LEVEL ▼

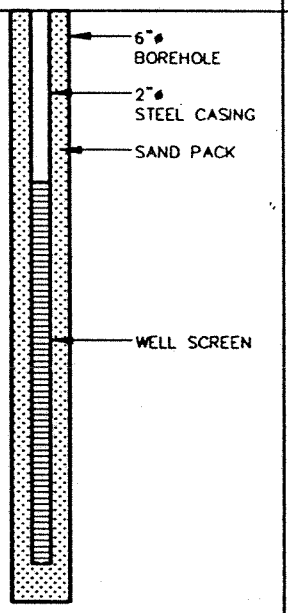
STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

(L-06)

PROJECT NAME: FORD SITE C
PROJECT NO.: 2853
CLIENT: FORD
LOCATION: ST. PAUL, MINNEAPOLIS

HOLE DESIGNATION: MW-6
(Page 2 of 2)
DATE COMPLETED: APRIL 10, 1990
DRILLING METHOD: HSA
CRA SUPERVISOR: J. MICHELS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE
35.0				14SS		14
37.5						
40.0				15SS		18
42.5	No recovery			16SS		25
45.0				AC		
47.5	END OF HOLE @ 48.0 FT. BGS	-48.0				
50.0						
52.5						
55.0						
57.5						
60.0						
62.5						
65.0						



SCREEN DETAILS:
Screened Interval:
37.0 to 47.0' BGS
Length -10.0'
Diameter -2.0"
Slot # 10
Material -Stainless Steel
Sand pack interval:
27.0 to 48.0' BGS
Material -Natural

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

GRAIN SIZE ANALYSIS ⬭ WATER FOUND ▽ STATIC WATER LEVEL ▼

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THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

MN. FILE COPY

May 14, 1990

MAY 17. 90

Mr. Jon Michaels
Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

RE: PACE Project No. 900419.524
2853 Ford Site C

Dear Mr. Michaels:

Enclosed is the report of laboratory analyses for samples received April 19, 1990.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Helen L.S. Addie
Project Manager

Enclosures

MN-COMP 0044028

1710 Douglas Drive North
Minneapolis, MN 55422
TEL: 612-544-5543
FAX: 612-525-3377

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THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

May 14, 1990
PACE Project Number: 900419524

Attn: Mr. Jon Michaels

2853 Ford Site C

Parameter	Units	MDL	B-6	Miss. R. Upstr.	Rinsate Blank
PACE Sample Number:			146860	146870	146880
Date Collected:			04/19/90	04/19/90	04/19/90
Date Received:			04/19/90	04/19/90	04/19/90
			W-011990-JM-01	W-011990-JM-02	W-011990-JM-03
SUBCONTRACT ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
Chloromethane	ug/L	1.0	ND	ND	ND
Bromomethane	ug/L	1.0	ND	ND	ND
Dichlorodifluoromethane	ug/L	1.0	ND	ND	ND
Vinyl chloride	ug/L	1.0	ND	ND	ND
Chloroethane	ug/L	1.0	ND	ND	ND
Methylene chloride	ug/L	1.0	1.4	1.3	1.1
Trichlorofluoromethane	ug/L	1.0	ND	ND	ND
1,1-Dichloroethylene	ug/L	1.0	ND	ND	ND
1,1-Dichloroethane	ug/L	1.0	ND	ND	ND
trans-1,2-Dichloroethylene	ug/L	1.0	ND	ND	ND
Chloroform	ug/L	1.0	3.9	ND	ND
1,2-Dichloroethane	ug/L	1.0	ND	ND	ND
1,1,1-Trichloroethane	ug/L	1.0	ND	ND	ND
Carbon tetrachloride	ug/L	1.0	ND	ND	ND
Bromodichloromethane	ug/L	1.0	ND	ND	ND
1,2-Dichloropropane	ug/L	1.0	ND	ND	ND
trans-1,3-Dichloro-1-propene	ug/L	1.0	ND	ND	ND
1,1,2-Trichloroethylene	ug/L	1.0	ND	ND	ND
Dibromochloromethane	ug/L	1.0	ND	ND	ND
1,1,2-Trichloroethane	ug/L	1.0	ND	ND	ND
cis-1,3-Dichloro-1-propene	ug/L	1.0	ND	ND	ND
2-Chloroethylvinyl ether	ug/L	1.0	ND	ND	ND
Bromoform	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	ND	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

MN-COMP 0044029

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REPORT OF LABORATORY ANALYSIS

Mr. Jon Michaels
Page 2

May 14, 1990
PACE Project Number: 900419524

2853 Ford Site C

PACE Sample Number:			146860	146870	146880
			B-6	Miss. R. Ur Str.	Rinsate Blank
Date Collected:			04/19/90	04/19/90	04/19/90
Date Received:			04/19/90	04/19/90	04/19/90
			W-011990-JM-01	W-011990-JM-02	W-011990-JM-03
Parameter	Units	MDL			
SUBCONTRACT ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
Benzene	ug/L	1.0	ND	ND	ND
Toluene	ug/L	1.0	ND	ND	ND
Chlorobenzene	ug/L	1.0	ND	ND	ND
Ethyl benzene	ug/L	1.0	ND	ND	ND
Xylenes	ug/L	1.0	ND	ND	ND
1,3-Dichlorobenzene	ug/L	1.0	ND	ND	ND
1,4-Dichlorobenzene	ug/L	1.0	ND	ND	ND
1,2-Dichlorobenzene	ug/L	1.0	ND	ND	ND
INORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Arsenic	mg/L	0.002	ND	ND	ND
Barium	mg/L	0.20	ND	ND	ND
Cadmium	mg/L	0.010	ND	ND	ND
Chromium	mg/L	0.1	ND	ND	ND
Copper	mg/L	0.010	ND	ND	ND
Lead	mg/L	0.10	ND	ND	ND
Mercury	mg/L	0.0002	ND	ND	ND
Nickel	mg/L	0.05	ND	ND	ND
Selenium	mg/L	0.005	ND	ND	ND
Silver	mg/L	0.04	ND	ND	ND
Zinc	mg/L	0.01	ND	ND	ND
ORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Ethyl acetate	ug/L	1	ND	ND	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

MN-COMP 0044030

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Mr. Jon Michaels
Page 3

May 14, 1990
PACE Project Number: 900419524

2853 Ford Site C

PACE Sample Number:			146890	146900	146910
Date Collected:			04/19/90	04/19/90	04/19/90
Date Received:			04/19/90	04/19/90	04/19/90
			W-011990-JM-04	W-011990-JM-05	W-011990-JM-06
Parameter	Units	MDL	B-1	B-1 Dupl.	B-3
SUBCONTRACT ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
Chloromethane	ug/L	1.0	ND	ND	ND
Bromomethane	ug/L	1.0	ND	ND	ND
Dichlorodifluoromethane	ug/L	1.0	ND	ND	ND
Vinyl chloride	ug/L	1.0	ND	ND	ND
Chloroethane	ug/L	1.0	ND	ND	ND
Methylene chloride	ug/L	1.0	ND	ND	ND
Trichlorofluoromethane	ug/L	1.0	ND	ND	ND
1,1-Dichloroethylene	ug/L	1.0	ND	ND	ND
1,1-Dichloroethane	ug/L	1.0	ND	ND	ND
trans-1,2-Dichloroethylene	ug/L	1.0	ND	ND	ND
Chloroform	ug/L	1.0	ND	ND	ND
1,2-Dichloroethane	ug/L	1.0	ND	ND	ND
1,1,1-Trichloroethane	ug/L	1.0	ND	ND	ND
Carbon tetrachloride	ug/L	1.0	ND	ND	ND
Bromodichloromethane	ug/L	1.0	ND	ND	ND
1,2-Dichloropropane	ug/L	1.0	ND	ND	ND
trans-1,3-Dichloro-1-propene	ug/L	1.0	ND	ND	ND
1,1,2-Trichloroethylene	ug/L	1.0	ND	ND	ND
Dibromochloromethane	ug/L	1.0	ND	ND	ND
1,1,2-Trichloroethane	ug/L	1.0	ND	ND	ND
cis-1,3-Dichloro-1-propene	ug/L	1.0	ND	ND	ND
2-Chloroethylvinyl ether	ug/L	1.0	ND	ND	ND
Bromoform	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	ND	ND
Benzene	ug/L	1.0	ND	ND	ND
Toluene	ug/L	1.0	ND	ND	ND
Chlorobenzene	ug/L	1.0	ND	ND	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

MN-COMP 0044031

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REPORT OF LABORATORY ANALYSIS

Mr. Jon Michaels
Page 4

May 14, 1990
PACE Project Number: 900419524

2853 Ford Site C

PACE Sample Number:			146890	146900	146910
Date Collected:			04/19/90	04/19/90	04/19/90
Date Received:			04/19/90	04/19/90	04/19/90
			W-011990-JM-04	W-011990-JM-05	W-011990-JM-06
Parameter	Units	MDL	B-1	B-1 Dup'l.	B-3
SUBCONTRACT ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
Ethyl benzene	ug/L	1.0	ND	ND	ND
Xylenes	ug/L	1.0	ND	ND	ND
1,3-Dichlorobenzene	ug/L	1.0	ND	ND	ND
1,4-Dichlorobenzene	ug/L	1.0	ND	ND	ND
1,2-Dichlorobenzene	ug/L	1.0	ND	ND	ND
INORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Arsenic	mg/L	0.002	ND	ND	ND
Barium	mg/L	0.20	ND	ND	0.2
Cadmium	mg/L	0.010	ND	ND	ND
Chromium	mg/L	0.1	ND	ND	ND
Copper	mg/L	0.010	ND	ND	0.01
Lead	mg/L	0.10	ND	ND	ND
Mercury	mg/L	0.0002	ND	ND	ND
Nickel	mg/L	0.05	ND	ND	ND
Selenium	mg/L	0.005	ND	ND	ND
Silver	mg/L	0.04	ND	ND	ND
Zinc	mg/L	0.01	ND	ND	ND
ORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Ethyl acetate	ug/L	1	ND	ND	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

MN-COMP 0044032

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Mr. Jon Michaels
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May 14, 1990
PACE Project Number: 900419524

2853 Ford Site C

Miss. R.
DN. STR.

PACE Sample Number:			146920
Date Collected:			04/19/90
Date Received:			04/19/90
			W-011990-JM-07
Parameter	Units	MDL	
SUBCONTRACT ANALYSIS			
PURGEABLE HALOCARBONS AND AROMATICS			
Chloromethane	ug/L	1.0	ND
Bromomethane	ug/L	1.0	ND
Dichlorodifluoromethane	ug/L	1.0	ND
Vinyl chloride	ug/L	1.0	ND
Chloroethane	ug/L	1.0	ND
Methylene chloride	ug/L	1.0	ND
Trichlorofluoromethane	ug/L	1.0	ND
1,1-Dichloroethylene	ug/L	1.0	ND
1,1-Dichloroethane	ug/L	1.0	ND
trans-1,2-Dichloroethylene	ug/L	1.0	ND
Chloroform	ug/L	1.0	ND
1,2-Dichloroethane	ug/L	1.0	ND
1,1,1-Trichloroethane	ug/L	1.0	ND
Carbon tetrachloride	ug/L	1.0	ND
Bromodichloromethane	ug/L	1.0	ND
1,2-Dichloropropane	ug/L	1.0	ND
trans-1,3-Dichloro-1-propene	ug/L	1.0	ND
1,1,2-Trichloroethylene	ug/L	1.0	ND
Dibromochloromethane	ug/L	1.0	ND
1,1,2-Trichloroethane	ug/L	1.0	ND
cis-1,3-Dichloro-1-propene	ug/L	1.0	ND
2-Chloroethylvinyl ether	ug/L	1.0	ND
Bromoform	ug/L	1.0	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND
Benzene	ug/L	1.0	ND
Toluene	ug/L	1.0	ND
Chlorobenzene	ug/L	1.0	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

MN-COMP 0044033

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THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. Jon Michaels
Page 6

May 14, 1990
PACE Project Number: 900419524

2853 Ford Site C

Miss. R. DN. Str.

PACE Sample Number:			146920
Date Collected:			04/19/90
Date Received:			04/19/90
			W-011990-JM-07
Parameter	Units	MDL	
SUBCONTRACT ANALYSIS			
PURGEABLE HALOCARBONS AND AROMATICS			
Ethyl benzene	ug/L	1.0	ND
Xylenes	ug/L	1.0	ND
1,3-Dichlorobenzene	ug/L	1.0	ND
1,4-Dichlorobenzene	ug/L	1.0	ND
1,2-Dichlorobenzene	ug/L	1.0	ND
INORGANIC ANALYSIS			
INDIVIDUAL PARAMETERS			
Arsenic	mg/L	0.002	ND
Barium	mg/L	0.20	ND
Cadmium	mg/L	0.010	ND
Chromium	mg/L	0.1	ND
Copper	mg/L	0.010	ND
Lead	mg/L	0.10	ND
Mercury	mg/L	0.0002	ND
Nickel	mg/L	0.05	ND
Selenium	mg/L	0.005	ND
Silver	mg/L	0.04	ND
Zinc	mg/L	0.01	ND
ORGANIC ANALYSIS			
INDIVIDUAL PARAMETERS			
Ethyl acetate	ug/L	1	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

MN-COMP 0044034

1710 Douglas Drive North
Minneapolis, MN 55422
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FAX: 612-525-3377

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THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. Jon Michaels
Page 7

May 14, 1990
PACE Project
Number: 900419524

2853 Ford Site C

The data contained in this report were obtained using EPA or other approved methodologies. All analyses were performed by me or under my supervision.

Starla Enger
Inorganic Chemistry Manager

Susan Sharahar for

Susan D. Max
Organic Chemistry Manager

MN-COMP 0044035

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1 LDA

REPORT OF LABORATORY ANALYSIS

Project # 900419.524
CRA
(QC is attached)

April 30, 1990

PACE INCORPORATED
1710 Douglas Drive North
Minneapolis, MN 55422

Re: Your samples received on 04/24/90

Enclosed are results of analysis performed upon your samples referenced above. If you have any questions or comments pertaining to this data package, please refer to Invoice #30487.

Yours truly,

Rodney T. Miller

Rodney T. Miller
Regional Director

enc

MN-COMP 0044036

Robinson Lane, RD 6
Wappingers Falls, NY 12590
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FAX: 914-227-6134

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##########
PACE LABS, INC.
##########
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA

PACE INC,/#10
1710 DOULAS DRIVE NORTH
MINNEAPOLIS, MN 55422

Date Received: 04/24/90
Date Reported: 04/27/90

INV# 30487
VOLATILE COMPOUNDS BY GC
METHODS 601 AND 602 & ETHYLACETATE

PACE Sample ID: PO-GW 0498 Customer Sample ID : 14686

		RESULTS		Q.C. BLANK & SPIKED BLANK			Q.C. MATRIX SPIKE PO-GW-0500			
CAS #	COMPOUNDS	SAMP. CONC. UG/L	MRL UG/L	BLANK UG/L	CONC. ADDED UG/L	% RECOVERY	UNSPIKED SAMPLE UG/L	CONC. ADDED UG/L	SPIKE % RECOVERY	SPIKE DUP. % RECOVERY
71432	BENZENE	ND	1.0	ND	----	----	ND	----	----	----
75274	BROMODICHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75252	BROMOFORM	ND	1.0	ND	----	----	ND	----	----	----
74839	BROMOMETHANE	ND	1.0	ND	----	----	ND	----	----	----
56235	CARBON TETRACHLORIDE	ND	1.0	ND	----	----	ND	----	----	----
108907	CHLOROBENZENE	ND	1.0	ND	50	91	ND	50	96	103
75003	CHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
110758	2-CHLOROETHYLVINYL ETHER	ND	1.0	ND	----	----	ND	----	----	----
67663	CHLOROFORM	3.9	1.0	ND	----	----	ND	----	----	----
74873	CHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
124481	DIBROMOCHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
95501	1,2-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	90	91
541731	1,3-DICHLOROBENZENE	ND	1.0	ND	----	----	ND	----	----	----
106467	1,4-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	93	91
75718	DICHLORODIFLUOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75353	1,1-DICHLOROETHANE	ND	1.0	ND	50	96	ND	50	102	100
107062	1,2-DICHLOROETHANE	ND	1.0	ND	50	99	ND	50	91	103
75354	1,1-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
156605	TRANS-1,2-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
78875	1,2-DICHLOROPROPANE	ND	1.0	ND	----	----	ND	----	----	----
10061015	CIS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
10061026	TRANS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
100414	ETHYLBENZENE	ND	1.0	ND	----	----	ND	----	----	----
75092	METHYLENE CHLORIDE	1.42	1.0	1.42	----	----	ND	----	----	----
79345	1,1,2,2-TETRACHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
127184	TETRACHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
108883	TOLUENE	ND	1.0	ND	50	96	ND	50	101	90
71556	1,1,1-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79005	1,1,2-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79016	TRICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
75694	TRICHLOROFLUOROMETHANE	ND	1.0	ND	----	----	ND			
75014	VINYL CHLORIDE	ND	1.0	ND	----	----	ND			
	TOTAL XYLENES	ND	1.0	ND	----	----	ND			
	ETHYLACETATE	ND	1	ND	----	----	ND	----	----	----

MN-COMP 0044037

N.D. = Not Detected

PACE LABS, INC.

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA

PACE INC,/#10
1710 DOULAS DRIVE NORTH
MINNEAPOLIS, MN 55422

Date Received: 04/24/90
Date Reported: 04/27/90

INV# 30487
VOLATILE COMPOUNDS BY GC
METHODS 601 AND 602 & ETHYLACETATE

PACE Sample ID: PO-GW 0499 Customer Sample ID : 14687

CAS #	COMPOUNDS	RESULTS SAMP. CONC. UG/L	RESULTS MRL UG/L	Q.C. BLANK & SPIKED BLANK BLANK UG/L	BLANK CONC. ADDED UG/L	BLANK % RECOVERY	Q.C. MATRIX SPIKE PO-GW-0500 UNSPIKED SAMPLE UG/L	MATRIX SPIKE CONC. ADDED UG/L	MATRIX SPIKE % RECOVERY	MATRIX SPIKE DUP. % RECOVERY
71432	BENZENE	ND	1.0	ND	----	----	ND	----	----	----
75274	BROMODICHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75252	BROMOFORM	ND	1.0	ND	----	----	ND	----	----	----
74839	BROMOMETHANE	ND	1.0	ND	----	----	ND	----	----	----
56235	CARBON TETRACHLORIDE	ND	1.0	ND	----	----	ND	----	----	----
108907	CHLOROBENZENE	ND	1.0	ND	50	91	ND	50	96	103
75003	CHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
110758	2-CHLOROETHYLVINYL ETHER	ND	1.0	ND	----	----	ND	----	----	----
67663	CHLOROFORM	ND	1.0	ND	----	----	ND	----	----	----
74873	CHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
124481	DIBROMOCHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
95501	1,2-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	90	91
541731	1,3-DICHLOROBENZENE	ND	1.0	ND	----	----	ND	----	----	----
106467	1,4-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	93	91
75718	DICHLORODIFLUOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75353	1,1-DICHLOROETHANE	ND	1.0	ND	50	96	ND	50	102	100
107062	1,2-DICHLOROETHANE	ND	1.0	ND	50	99	ND	50	91	103
75354	1,1-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
156605	TRANS-1,2-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
78875	1,2-DICHLOROPROPANE	ND	1.0	ND	----	----	ND	----	----	----
10061015	CIS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
10061026	TRANS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
100414	ETHYLBENZENE	ND	1.0	ND	----	----	ND	----	----	----
75092	METHYLENE CHLORIDE	1.3	1.0	1.42	----	----	ND	----	----	----
79345	1,1,2,2-TETRACHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
127184	TETRACHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
108883	TOLUENE	ND	1.0	ND	50	96	ND	50	101	90
71556	1,1,1-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79005	1,1,2-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79016	TRICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
75694	TRICHLOROFLUOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75014	VINYL CHLORIDE	ND	1.0	ND	----	----	ND	----	----	----
	TOTAL XYLENES	ND	1.0	ND	----	----	ND	----	----	----
	ETHYLACETATE	ND	1	ND	----	----	ND	----	----	----

MN-COMP 0044038

PACE LABS, INC.

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA

PACE INC,/#10
1710 DOULAS DRIVE NORTH
MINNEAPOLIS, MN 55422

Date Received: 04/24/90
Date Reported: 04/27/90

INV# 30487
VOLATILE COMPOUNDS BY GC
METHODS 601 AND 602 & ETHYLACETATE

PACE Sample ID: PO-GW 0500 Customer Sample ID : 14688

CAS #	COMPOUNDS	RESULTS SAMP. CONC. UG/L	RESULTS MRL UG/L	Q.C. BLANK & SPIKED BLANK BLANK UG/L	BLANK CONC. ADDED UG/L	BLANK % RECOVERY	Q.C. MATRIX SPIKE PO-GW-0500 UNSPIKED SAMPLE UG/L	MATRIX SPIKE CONC. ADDED UG/L	MATRIX SPIKE % RECOVERY	MATRIX SPIKE DUP. % RECOVERY
71432	BENZENE	ND	1.0	ND	----	----	ND	----	----	----
75274	BROMODICHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75252	BROMOFORM	ND	1.0	ND	----	----	ND	----	----	----
74839	BROMOMETHANE	ND	1.0	ND	----	----	ND	----	----	----
56235	CARBON TETRACHLORIDE	ND	1.0	ND	----	----	ND	----	----	----
108907	CHLOROBENZENE	ND	1.0	ND	50	91	ND	50	96	103
75003	CHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
110758	2-CHLOROETHYLVINYL ETHER	ND	1.0	ND	----	----	ND	----	----	----
67663	CHLOROFORM	ND	1.0	ND	----	----	ND	----	----	----
74873	CHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
124481	DIBROMOCHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
95501	1,2-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	90	91
541731	1,3-DICHLOROBENZENE	ND	1.0	ND	----	----	ND	----	----	----
106467	1,4-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	93	91
75718	DICHLORODIFLUOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75353	1,1-DICHLOROETHANE	ND	1.0	ND	50	96	ND	50	102	100
107062	1,2-DICHLOROETHANE	ND	1.0	ND	50	99	ND	50	91	103
75354	1,1-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
156605	TRANS-1,2-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
78875	1,2-DICHLOROPROPANE	ND	1.0	ND	----	----	ND	----	----	----
10061015	CIS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
10061026	TRANS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
100414	ETHYLBENZENE	ND	1.0	ND	----	----	ND	----	----	----
75092	METHYLENE CHLORIDE	1.1	1.0	1.42	----	----	ND	----	----	----
79345	1,1,2,2-TETRACHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
127184	TETRACHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
108883	TOLUENE	ND	1.0	ND	50	96	ND	50	101	90
71556	1,1,1-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79005	1,1,2-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79016	TRICHLOROETHENE	ND	1.0	ND	----	----	ND			
75694	TRICHLOROFLUOROMETHANE	ND	1.0	ND	----	----	ND			
75014	VINYL CHLORIDE	ND	1.0	ND	----	----	ND			
	TOTAL XYLENES	ND	1.0	ND	----	----	ND	----	----	----
	ETHYLACETATE	ND	1	ND			ND			

MN-COMP 0044039

[RESULTS TAKEN FROM DILUTED [illegible]LE]

PACE LABS, INC.

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA

PACE INC,/#10
1710 DOULAS DRIVE NORTH
MINNEAPOLIS, MN 55422

Date Received: 04/24/90
Date Reported: 04/27/90

INV# 30487
VOLATILE COMPOUNDS BY GC
METHODS 601 AND 602 & ETHYLACETATE

PACE Sample ID: PO-GW 0501 Customer Sample ID : 14689

PO-GW-0500

CAS #	COMPOUNDS	RESULTS SAMP. CONC. UG/L	RESULTS MRL UG/L	Q.C. BLANK & SPIKED BLANK BLANK UG/L	Q.C. BLANK & SPIKED BLANK CONC. ADDED UG/L	Q.C. BLANK & SPIKED BLANK % RECOVERY	Q.C. MATRIX SPIKE UNSPIKED SAMPLE UG/L	Q.C. MATRIX SPIKE CONC. ADDED UG/L	Q.C. MATRIX SPIKE SPIKE % RECOVERY	Q.C. MATRIX SPIKE SPIKE DUP. % RECOVERY
71432	BENZENE	ND	1.0	ND	----	----	ND	----	----	----
75274	BROMODICHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75252	BROMOFORM	ND	1.0	ND	----	----	ND	----	----	----
74839	BROMOMETHANE	ND	1.0	ND	----	----	ND	----	----	----
56235	CARBON TETRACHLORIDE	ND	1.0	ND	----	----	ND	----	----	----
108907	CHLOROBENZENE	ND	1.0	ND	50	91	ND	50	96	103
75003	CHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
110758	2-CHLOROETHYLVINYL ETHER	ND	1.0	ND	----	----	ND	----	----	----
67663	CHLOROFORM	ND	1.0	ND	----	----	ND	----	----	----
74873	CHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
124481	DIBROMOCHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
95501	1,2-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	90	91
541731	1,3-DICHLOROBENZENE	ND	1.0	ND	----	----	ND	----	----	----
106467	1,4-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	93	91
75718	DICHLORODIFLUOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75353	1,1-DICHLOROETHANE	ND	1.0	ND	50	96	ND	50	102	100
107062	1,2-DICHLOROETHANE	ND	1.0	ND	50	99	ND	50	91	103
75354	1,1-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
156605	TRANS-1,2-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
78875	1,2-DICHLOROPROPANE	ND	1.0	ND	----	----	ND	----	----	----
10061015	CIS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
10061026	TRANS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
100414	ETHYLBENZENE	ND	1.0	ND	----	----	ND	----	----	----
75092	METHYLENE CHLORIDE	ND	1.0	1.42	----	----	ND	----	----	----
79345	1,1,2,2-TETRACHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
127184	TETRACHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
108883	TOLUENE	ND	1.0	ND	50	96	ND	50	101	90
71556	1,1,1-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79005	1,1,2-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79016	TRICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
75694	TRICHLOROFLUOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75014	VINYL CHLORIDE	ND	1.0	ND	----	----	ND	----	----	----
	TOTAL XYLENES	ND	1.0	ND	----	----	ND			
	ETHYLACETATE	ND	1	ND	----	----	ND	----		

MN-COMP 0044040

N.D. = Not Detected

PACE LABS, INC.

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA

PACE INC,/#10
1710 DOULAS DRIVE NORTH
MINNEAPOLIS, MN 55422

Date Received: 04/24/90
Date Reported: 04/27/90

INV# 30487
VOLATILE COMPOUNDS BY GC
METHODS 601 AND 602 & ETHYLACETATE

PACE Sample ID: PO-GW 0502 Customer Sample ID : 14690

CAS #	COMPOUNDS	RESULTS SAMP. CONC. UG/L	RESULTS MRL UG/L	Q.C. BLANK & SPIKED BLANK BLANK UG/L	BLANK CONC. ADDED UG/L	BLANK % RECOVERY	Q.C. MATRIX SPIKE PO-GW-0500 UNSPIKED SAMPLE UG/L	MATRIX SPIKE CONC. ADDED UG/L	MATRIX SPIKE % RECOVERY	MATRIX SPIKE DUP. % RECOVERY
71432	BENZENE	ND	1.0	ND	----	----	ND	----	----	----
75274	BROMODICHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75252	BROMOFORM	ND	1.0	ND	----	----	ND	----	----	----
74839	BROMOMETHANE	ND	1.0	ND	----	----	ND	----	----	----
56235	CARBON TETRACHLORIDE	ND	1.0	ND	----	----	ND	----	----	----
108907	CHLOROBENZENE	ND	1.0	ND	50	91	ND	50	96	103
75003	CHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
110758	2-CHLOROETHYLVINYL ETHER	ND	1.0	ND	----	----	ND	----	----	----
67663	CHLOROFORM	ND	1.0	ND	----	----	ND	----	----	----
74873	CHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
124481	DIBROMOCHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
95501	1,2-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	90	91
541731	1,3-DICHLOROBENZENE	ND	1.0	ND	----	----	ND	----	----	----
106467	1,4-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	93	91
75718	DICHLORODIFLUOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75353	1,1-DICHLOROETHANE	ND	1.0	ND	50	96	ND	50	102	100
107062	1,2-DICHLOROETHANE	ND	1.0	ND	50	99	ND	50	91	103
75354	1,1-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
156605	TRANS-1,2-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
78875	1,2-DICHLOROPROPANE	ND	1.0	ND	----	----	ND	----	----	----
10061015	CIS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
10061026	TRANS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
100414	ETHYLBENZENE	ND	1.0	ND	----	----	ND	----	----	----
75092	METHYLENE CHLORIDE	ND	1.0	1.42	----	----	ND	----	----	----
79345	1,1,2,2-TETRACHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
127184	TETRACHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
108883	TOLUENE	ND	1.0	ND	50	96	ND	50	101	90
71556	1,1,1-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79005	1,1,2-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79016	TRICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
75694	TRICHLOROFLUOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75014	VINYL CHLORIDE	ND	1.0	ND	----	----	ND	----	----	----
	TOTAL XYLENES	ND	1.0	ND	----	----	ND			
	ETHYLACETATE	ND	1	ND	----	----	ND			

N.D. - Not Detected

MN-COMP 0044041

PACE LABS, INC.

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA

PACE INC,/#10
1710 DOULAS DRIVE NORTH
MINNEAPOLIS, MN 55422

Date Received: 04/24/90
Date Reported: 04/27/90

INV# 30487
VOLATILE COMPOUNDS BY GC
METHODS 601 AND 602 & ETHYLACETATE

PACE Sample ID: PO-GW 0503 Customer Sample ID : 14691

CAS #	COMPOUNDS	RESULTS SAMP. CONC. UG/L	RESULTS MRL UG/L	Q.C. BLANK & SPIKED BLANK BLANK UG/L	BLANK CONC. ADDED UG/L	BLANK % RECOVERY	Q.C. MATRIX SPIKE PO-GW-0500 UNSPIKED SAMPLE UG/L	MATRIX SPIKE CONC. ADDED UG/L	MATRIX SPIKE % RECOVERY	MATRIX SPIKE DUP. % RECOVERY
71432	BENZENE	ND	1.0	ND	----	----	ND	----	----	----
75274	BROMODICHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75252	BROMOFORM	ND	1.0	ND	----	----	ND	----	----	----
74839	BROMOMETHANE	ND	1.0	ND	----	----	ND	----	----	----
56235	CARBON TETRACHLORIDE	ND	1.0	ND	----	----	ND	----	----	----
108907	CHLORODBENZENE	ND	1.0	ND	50	91	ND	50	96	103
75003	CHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
110758	2-CHLOROETHYLVINYL ETHER	ND	1.0	ND	----	----	ND	----	----	----
67663	CHLOROFORM	ND	1.0	ND	----	----	ND	----	----	----
74873	CHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
124481	DIBROMOCHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
95501	1,2-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	90	91
541731	1,3-DICHLOROBENZENE	ND	1.0	ND	----	----	ND	----	----	----
106467	1,4-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	93	91
75718	DICHLORODIFLUOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75353	1,1-DICHLOROETHANE	ND	1.0	ND	50	96	ND	50	102	100
107062	1,2-DICHLOROETHANE	ND	1.0	ND	50	99	ND	50	91	103
75354	1,1-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
156605	TRANS-1,2-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
78875	1,2-DICHLOROPROPANE	ND	1.0	ND	----	----	ND	----	----	----
10061015	CIS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
10061026	TRANS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
100414	ETHYLBENZENE	ND	1.0	ND	----	----	ND	----	----	----
75092	METHYLENE CHLORIDE	ND	1.0	1.42	----	----	ND	----	----	----
79345	1,1,2,2-TETRACHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
127184	TETRACHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
108883	TOLUENE	ND	1.0	ND	50	96	ND	50	101	90
71556	1,1,1-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79005	1,1,2-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79016	TRICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
75694	TRICHLOROFLUOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75014	VINYL CHLORIDE	ND	1.0	ND	----	----	ND	----	----	----
	TOTAL XYLENES	ND	1.0	ND	----	----	ND			
	ETHYLACETATE	ND	1	ND	----	----	ND	----	----	----

MN-COMP 0044042

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PACE LABS, INC.
##########
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA

PACE INC,/#10
1710 DOULAS DRIVE NORTH
MINNEAPOLIS, MN 55422

Date Received: 04/24/90
Date Reported: 04/27/90

INV# 30487
VOLATILE COMPOUNDS BY GC
METHODS 601 AND 602 & ETHYLACETATE

PACE Sample ID: PO-GW 0504 Customer Sample ID : 14692

		RESULTS		Q.C. BLANK & SPIKED BLANK			Q.C. MATRIX SPIKE PO-GW-0500			
CAS #	COMPOUNDS	SAMP. CONC. UG/L	MRL UG/L	BLANK UG/L	CONC. ADDED UG/L	% RECOVERY	UNSPIKED SAMPLE UG/L	CONC. ADDED UG/L	SPIKE % RECOVERY	SPIKE DUP. % RECOVERY
71432	BENZENE	ND	1.0	ND	----	----	ND	----	----	----
75274	BROMODICHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75252	BROMOFORM	ND	1.0	ND	----	----	ND	----	----	----
74839	BROMOMETHANE	ND	1.0	ND	----	----	ND	----	----	----
56235	CARBON TETRACHLORIDE	ND	1.0	ND	----	----	ND	----	----	----
108907	CHLOROBENZENE	ND	1.0	ND	50	91	ND	50	96	103
75003	CHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
110758	2-CHLOROETHYLVINYL ETHER	ND	1.0	ND	----	----	ND	----	----	----
67663	CHLOROFORM	ND	1.0	ND	----	----	ND	----	----	----
74873	CHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
124481	DIBROMOCHLOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
95501	1,2-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	90	91
541731	1,3-DICHLOROBENZENE	ND	1.0	ND	----	----	ND	----	----	----
106467	1,4-DICHLOROBENZENE	ND	1.0	ND	50	90	ND	50	93	91
75718	DICHLORODIFLUOROMETHANE	ND	1.0	ND	----	----	ND	----	----	----
75353	1,1-DICHLOROETHANE	ND	1.0	ND	50	96	ND	50	102	100
107062	1,2-DICHLOROETHANE	ND	1.0	ND	50	99	ND	50	91	103
75354	1,1-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
156605	TRANS-1,2-DICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
78875	1,2-DICHLOROPROPANE	ND	1.0	ND	----	----	ND	----	----	----
10061015	CIS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
10061026	TRANS-1,3-DICHLOROPROPENE	ND	1.0	ND	----	----	ND	----	----	----
100414	ETHYLBENZENE	ND	1.0	ND	----	----	ND	----	----	----
75092	METHYLENE CHLORIDE	ND	1.0	1.42	----	----	ND	----	----	----
79345	1,1,2,2-TETRACHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
127184	TETRACHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
108883	TOLUENE	ND	1.0	ND	50	96	ND	50	101	90
71556	1,1,1-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79005	1,1,2-TRICHLOROETHANE	ND	1.0	ND	----	----	ND	----	----	----
79016	TRICHLOROETHENE	ND	1.0	ND	----	----	ND	----	----	----
75694	TRICHLOROFLUOROMETHANE	ND	1.0	ND	----	----	ND			
75014	VINYL CHLORIDE	ND	1.0	ND	----	----	ND			
	TOTAL XYLENES	ND	1.0	ND	----	----	ND			
	ETHYLACETATE	ND	1	ND	----	----	ND	----	----	----

MN-COMP 0044043

N.D. = Not Detected

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RAW DATA for
VOA 601 & 602
+ ETHYLACETATE

MN-COMP 0044044

NANCO LABORATORIES, INC.

Printed: 25-APR-1990 9:28:04

SAMPLE: STD 4/25
#6 in Method: CAPILLARY
Acquired: 25-APR-1990 7:11
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

Type: UNKN
Instrument: Instrument 1
Filename: V02151
Index: Disk

COLUMN: PID

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	15.201	94673	11549				
2	22.538	177672	20519	9.58	46.51	46.51	BENZENE
3	23.491	105923	13620	9.78	47.46	47.46	F2 BENZENE
4	24.638	91322	12247				
5	27.930	48264	7370				
6	29.088	174248	24550	11.35	55.10	55.10	TOLUENE
7	29.653	34796	5862				
8	31.360	72404	10260				
9	34.253	144576	26173	9.05	43.92	43.92	CL BENZENE
10	34.441	122377	21098	9.31	45.19	45.19	ETHYLBENZENE
11	34.719	392149	59241	10.30	50.02	50.02	XYLENE
12	36.281	249238	37697	9.97	48.40	48.40	XYLENE
13	42.560	243529	41113	11.15	54.14	54.14	1,3 CL2BENZENE
14	42.959	227902	41032	9.88	47.98	47.98	1,4 CL2BENZENE
15	44.344	195954	33098	9.63	46.76	46.76	1,2 CL2BENZENE
TOTAL		2375028	365430		485.48	485.48	

COLUMN: HALL

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	5.791	234231	12355	3.28	62.63	62.63	CL2 F2 METHANE
2	6.927	472621	31419	3.04	58.00	58.00	VINYL CHLORIDE
3	8.434	34241	2801	Invalid	Invalid	Invalid	BR METHANE
4	8.734	602152	33592	3.79	72.28	72.28	CL ETHANE
5	9.742	1012149	49611	3.84	73.32	73.32	CL3 F METHANE
6	12.219	1222294	71740	3.49	66.63	66.63	1,1 CL2 ETHENE
7	14.115	1731330	123848	3.49	66.52	66.52	METHYLENE CHLOR
8	15.278	1404721	122151	3.52	67.12	67.12	TR 1,2CL2ETHENE

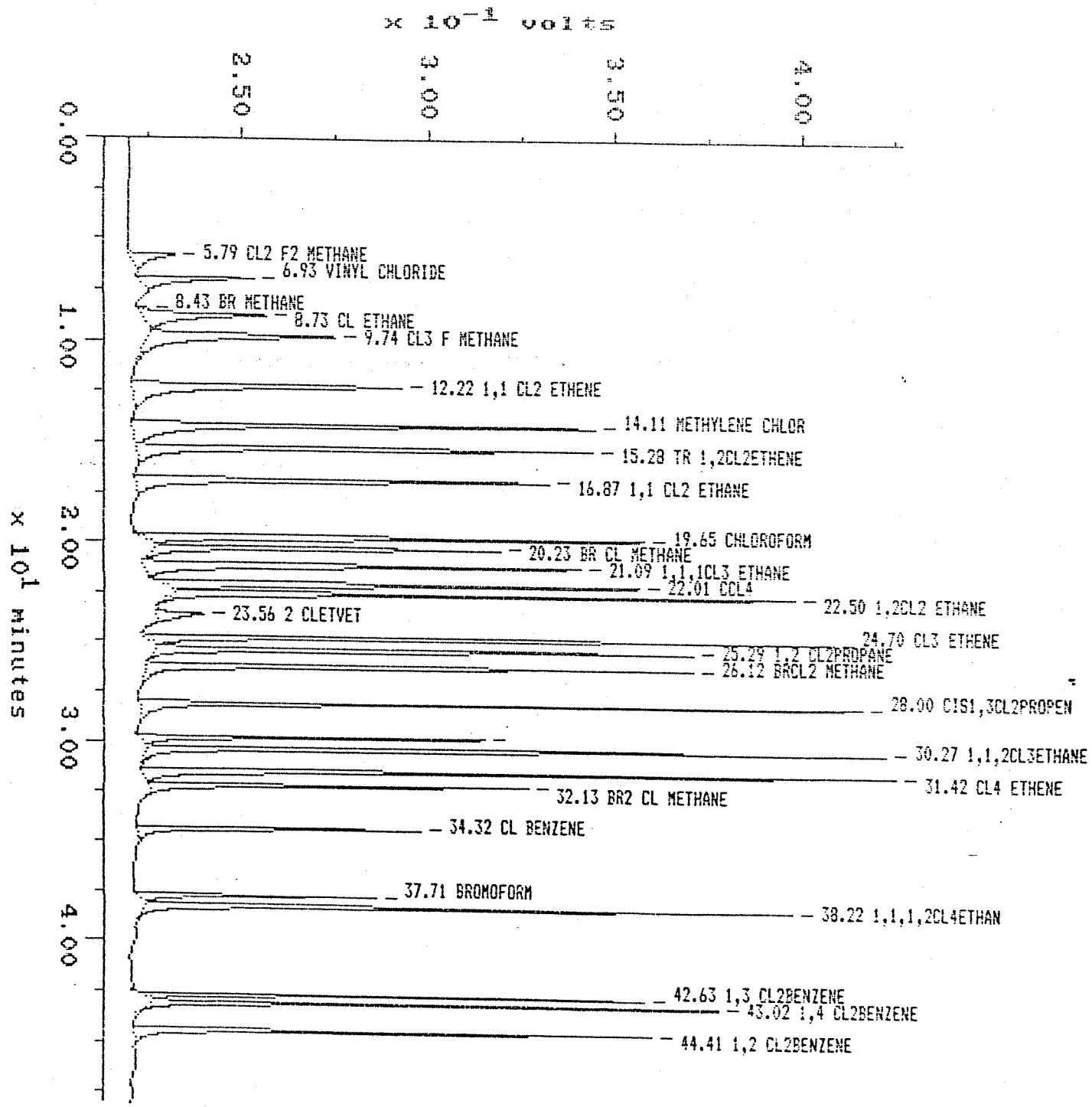
9	16.869	1431471	110804	3.40	64.88	64.88	1,1 CL2 ETHANE
10	19.651	1660493	134648	3.42	65.16	65.16	CHLOROFORM
11	20.233	950781	93299	4.58!!	87.38!!	87.38!!	BR CL METHANE
12	21.086	1617062	117061	3.60	68.63	68.63	1,1,1CL3 ETHANE
13	22.012	1541961	128174	3.82	72.86	72.86	CCL4
14	22.505	1517086	166535	3.40	64.78	64.78	1,2CL2 ETHANE
15	23.563	225349	13291	2.74	52.18	52.18	2 CLETVET
16	24.705	1718601	184249	3.57	68.00	68.00	CL3 ETHENE
17	25.292	1454922	143777	3.47	66.13	66.13	1,2 CL2PROPANE
18	26.123	1462636	146673	3.77	71.99	71.99	BRCL2 METHANE
19	27.997	1708111	194039	3.59	68.53	68.53	CIS1,3CL2PROPEN
20	29.726	749994	92341	3.98	75.88	75.88	TR1,3CL2PROPENE
21	30.274	1709749	198339	4.10	78.15	78.15	1,1,2CL3ETHANE
22	31.421	1774572	201906	3.70	70.56	70.56	CL4 ETHENE
23	32.125	912691	102052	3.49	66.61	66.61	BR2 CL METHANE
24	34.320	674124	76101	3.47	66.10	66.10	CL BENZENE
25	37.706	555357	64256	3.71	70.73	70.73	BROMOFORM
26	38.215	1442873	173763	3.32	63.28	63.28	1,1,1,2CL4ETHAN
27	42.627	987106	135283	3.40	64.81	64.81	1,3 CL2BENZENE
28	43.020	1151407	153128	3.56	67.98	67.98	1,4 CL2BENZENE
29	44.405	1133578	139220	3.47	66.12	66.12	1,2 CL2BENZENE
TOTAL		33093663	3216456		1907.26!!	1907.26!!	

!! Result calculation based on peak response more than 10% outside of calibration range.

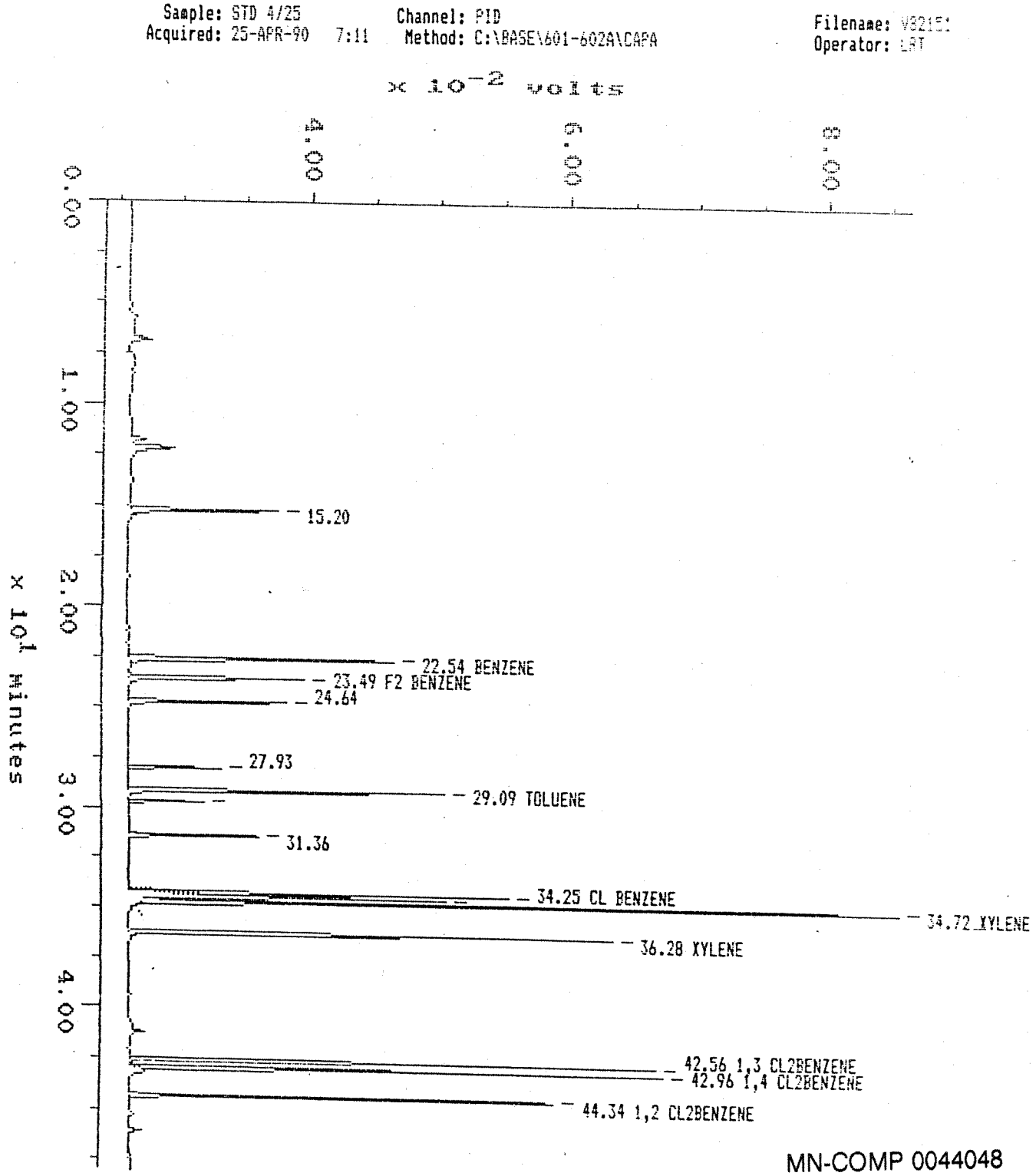
Sample: STD 4/25
Acquired: 25-APR-90 7:11

Channel: HALL
Method: C:\BASE\601-602A\CAPA

Filename: V82151
Operator: LRT



MN-COMP 0044047



MN-COMP 0044048

NANCO LABORATORIES, INC.

Printed: 25-APR-1990 13:32:14

SAMPLE: BLANK 4/25
#7 in Method: CAPILLARY
Acquired: 25-APR-1990 8:53
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

Type: UNKN
Instrument: Instrument 1
Filename: V82252
Index: Disk

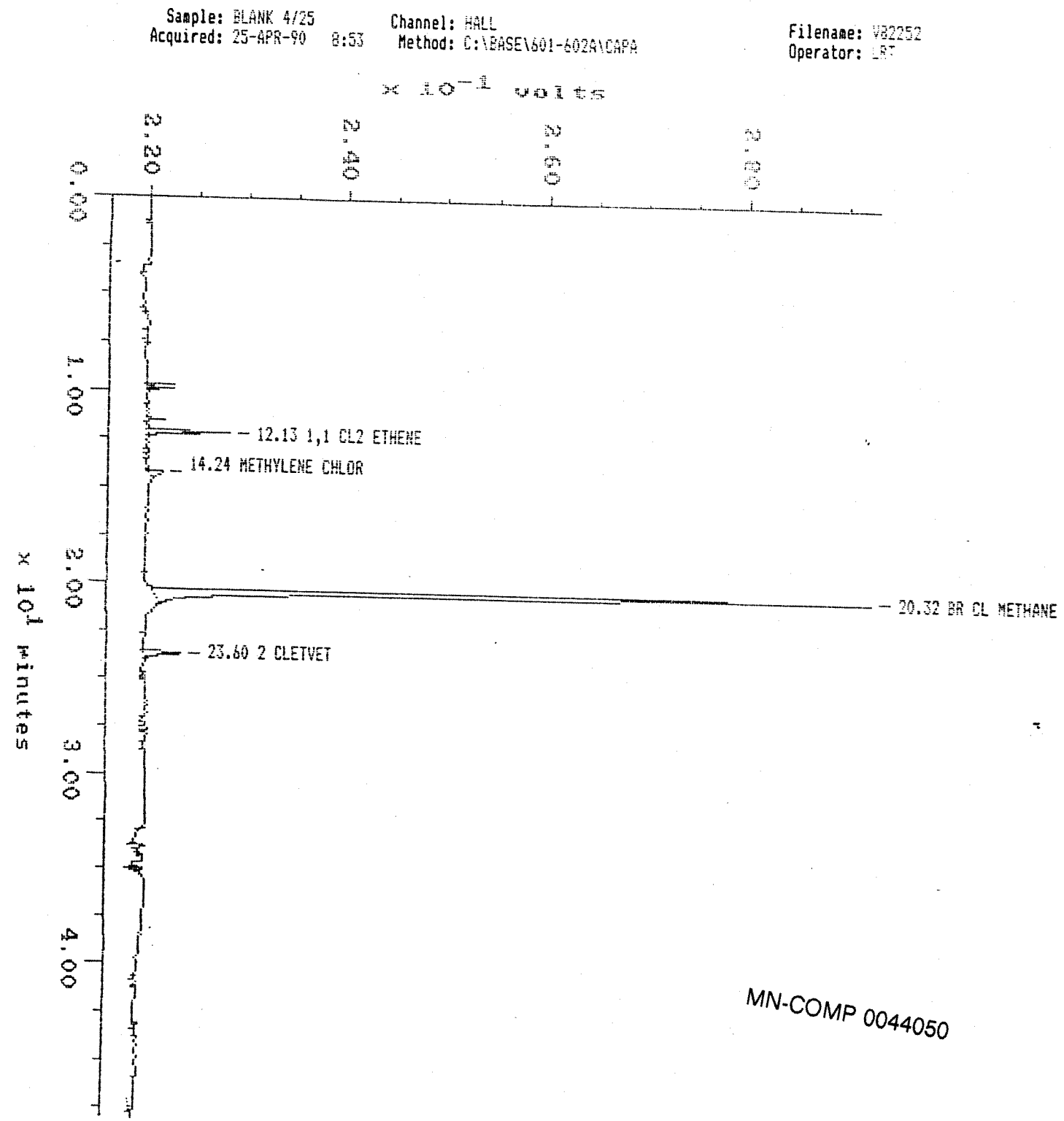
COLUMN: PID

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	23.535	94310	12191	100.00	42.26	42.26	F2 BENZENE
TOTAL		94310	12191		42.26	42.26	

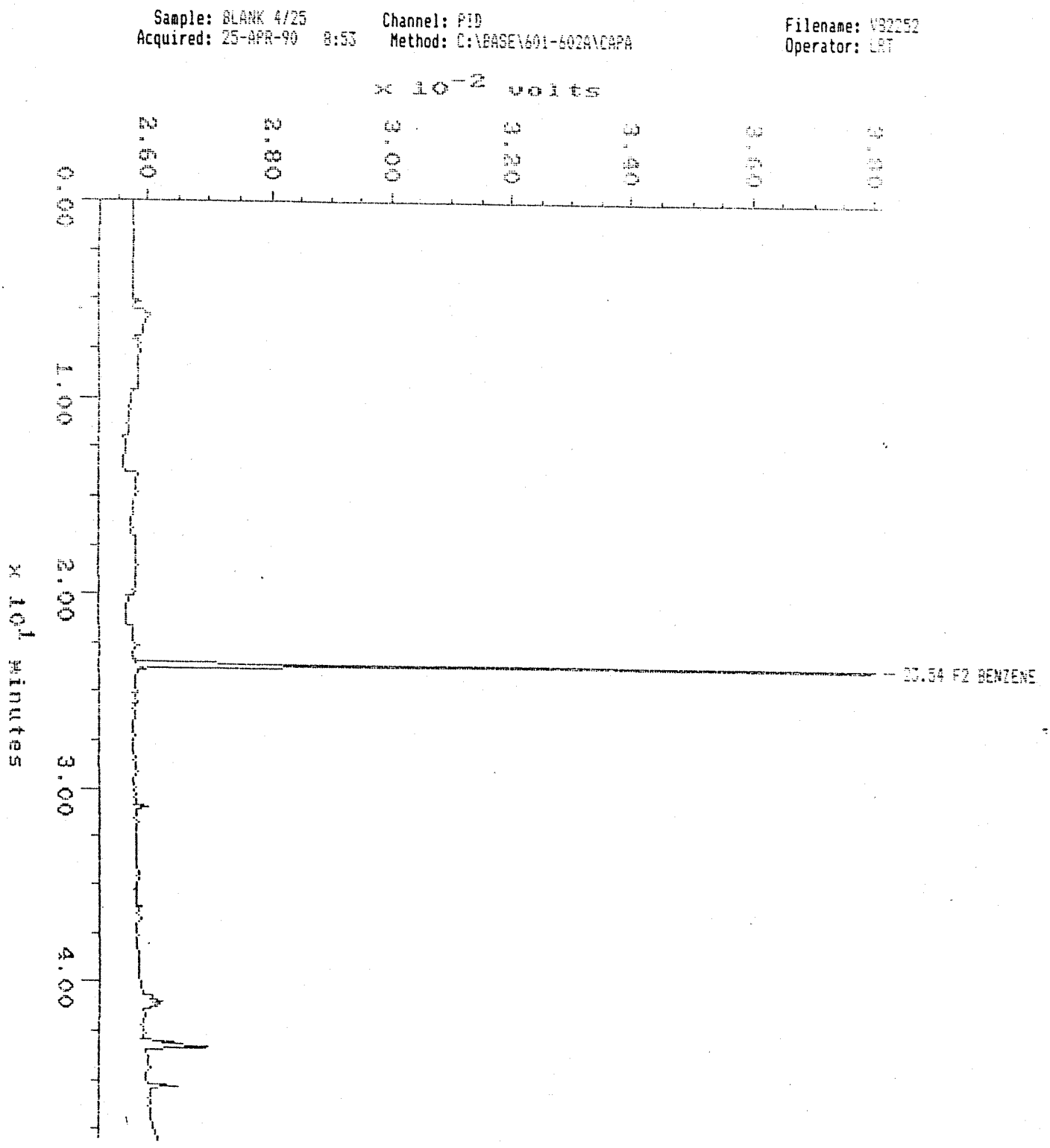
COLUMN: HALL

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	12.131	77883	8241	9.77	8.25	8.25	1,1 CL2 ETHENE
2	14.237	17397	1400	1.68	1.42	1.42	METHYLENE CHLOR
3	20.321	777918	71880	77.85!!	65.74!!	65.74!!	BR CL METHANE
4	23.602	39012	3651	10.70	9.03	9.03	2 CLETVET
TOTAL		912210	85171		84.45!!	84.45!!	

!! Result calculation based on peak response more than 10% outside of calibration range.



MN-COMP 0044050



MN-COMP 0044051

NANCO LABORATORIES, INC.

Printed: 26-APR-1990 13:24:39

SAMPLE: STD 4/26

#7 in Method: CAPILLARY
Acquired: 26-APR-1990 11:50
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

Type: UNKN
Instrument: Instrument 1
Filename: V82168
Index: Disk

COLUMN: PID

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	15.262	90726	11052				
2	22.649	156793	18199	8.94	40.56	40.56	BENZENE
3	23.591	87784	11295	8.67	39.34	39.34	F2 BENZENE
4	24.738	80511	10750				
5	28.019	41878	6401				
6	29.171	150976	21475	10.52	47.74	47.74	TOLUENE
7	29.737	31336	5267				
8	31.443	64622	9126				
9	34.353	127045	22999	8.32	37.75	37.75	CL BENZENE
10	34.541	108392	18622	8.62	39.11	39.11	ETHYLBENZENE
11	34.818	349421	51989	9.82	44.57	44.57	XYLENE
12	36.392	327879	49420	14.03	63.67	63.67	XYLENE
13	42.687	231531	39189	11.37	51.57	51.57	1,3 CL2BENZENE
14	43.086	216518	39234	10.05	45.58	45.58	1,4 CL2BENZENE
15	44.461	183871	31532	9.65	43.79	43.79	1,2 CL2BENZENE
TOTAL		2249282	346551		453.69	453.69	

COLUMN: HALL

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	5.835	239034	12842	3.21	63.91	63.91	CL2 F2 METHANE
2	6.977	476215	30111	3.07	61.04	61.04	VINYL CHLORIDE
3	8.490	29863	2489	Invalid	Invalid	Invalid	BR METHANE
4	8.795	588397	32808	3.67	72.98	72.98	CL ETHANE
5	9.825	1053666	50019	4.25	84.55	84.55	CL3 F METHANE
6	12.264	1195888	68690	3.42	68.00	68.00	1,1 CL2 ETHENE
7	14.176	1787736	130299	3.45	68.66	68.66	METHYLENE CHLOR
8	15.334	1512366	131410	3.86	76.80	76.80	TR 1,2CL2ETHENE

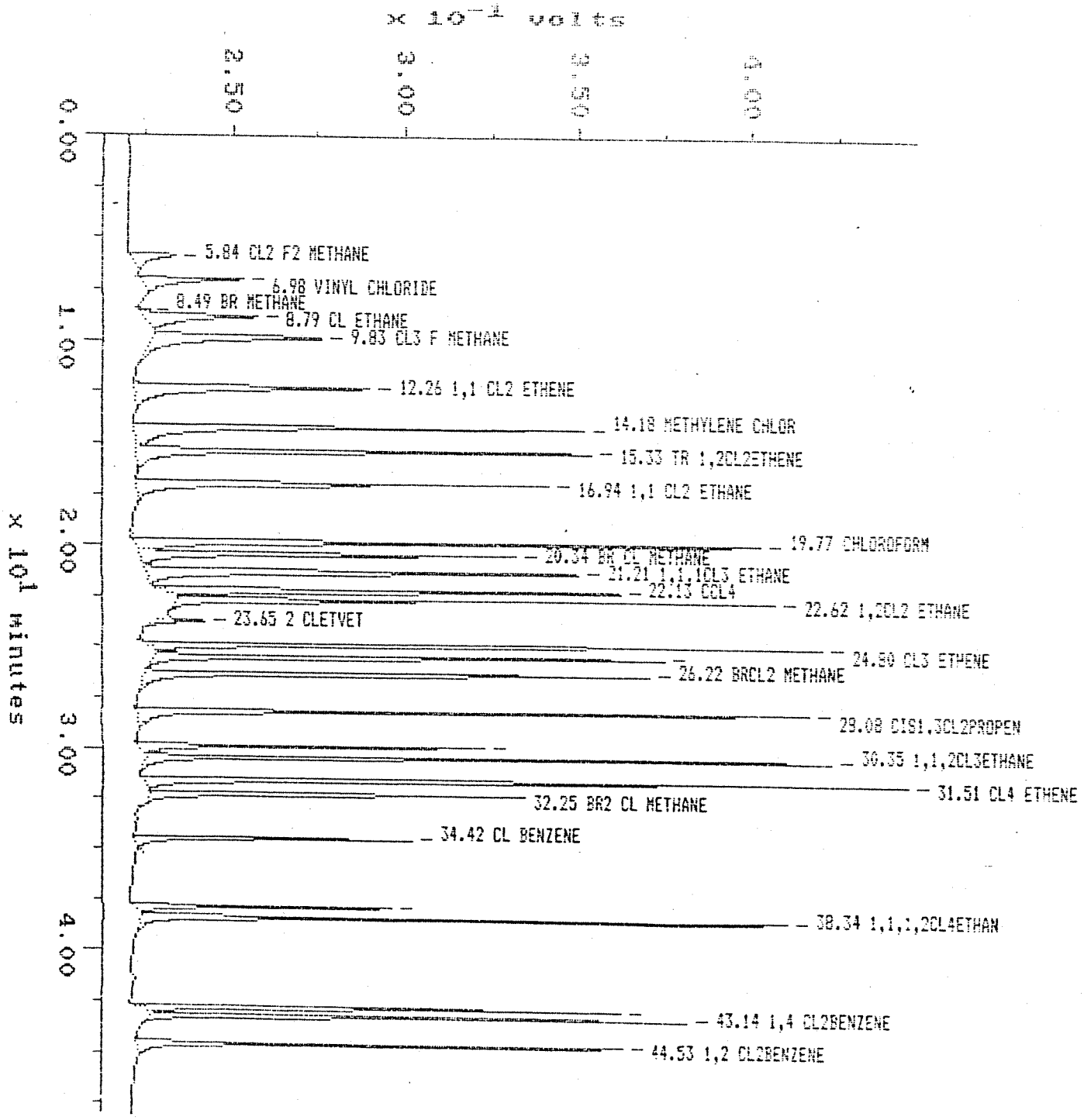
9	16.935	1526332	119200	3.37	79.90	79.90	1,1 CL2 ETHANE
10	19.767	1942270	181050	3.87	76.93	76.93	CHLOROFORM
11	20.343	1140138	108888	4.85!!	96.35!!	96.35!!	99 CL METHANE
12	21.208	1757312	125127	3.75	74.58	74.58	1,1,1CL3 ETHANE
13	22.128	1614990	132722	3.84	76.31	76.31	CCL4
14	22.616	1568910	173640	3.37	66.99	66.99	1,2CL2 ETHANE
15	23.646	131351	13052	1.53	30.42	30.42	2 CLETNET
16	24.805	1768880	195819	3.52	69.99	69.99	CL3 ETHENE
17	25.392	1459817	147573	3.34	66.35	66.35	1,2 CL2PROPANE
18	26.218	1477485	146520	3.66	72.72	72.72	BRCL2 METHANE
19	28.080	1733059	195090	3.50	69.53	69.53	CIS1,3CL2PROPEN
20	29.803	796047	99912	4.00	79.51	79.51	TR1,3CL2PROPENE
21	30.352	1747610	199053	4.00	79.60	79.60	1,1,2CL3ETHANE
22	31.510	1936655	221801	3.87	77.01	77.01	CL4 ETHENE
23	32.247	978626	83547	3.59	71.43	71.43	BR2 CL METHANE
24	34.419	694199	80439	3.42	68.00	68.00	CL BENZENE
25	37.833	630380	75096	3.91	77.68	77.68	BROMOFORM
26	38.337	1559027	187534	3.34	66.48	66.48	1,1,1,2CL4ETHAN
27	42.754	1030563	140007	3.40	67.66	67.66	1,3 CL2BENZENE
28	43.142	1144663	156250	3.40	67.59	67.59	1,4 CL2BENZENE
29	44.527	1134601	141320	3.33	66.18	66.18	1,2 CL2BENZENE
TOTAL		34656079	3382308		1988.14!!	1988.14!!	

!! Result calculation based on peak response more than 10% outside of calibration range.

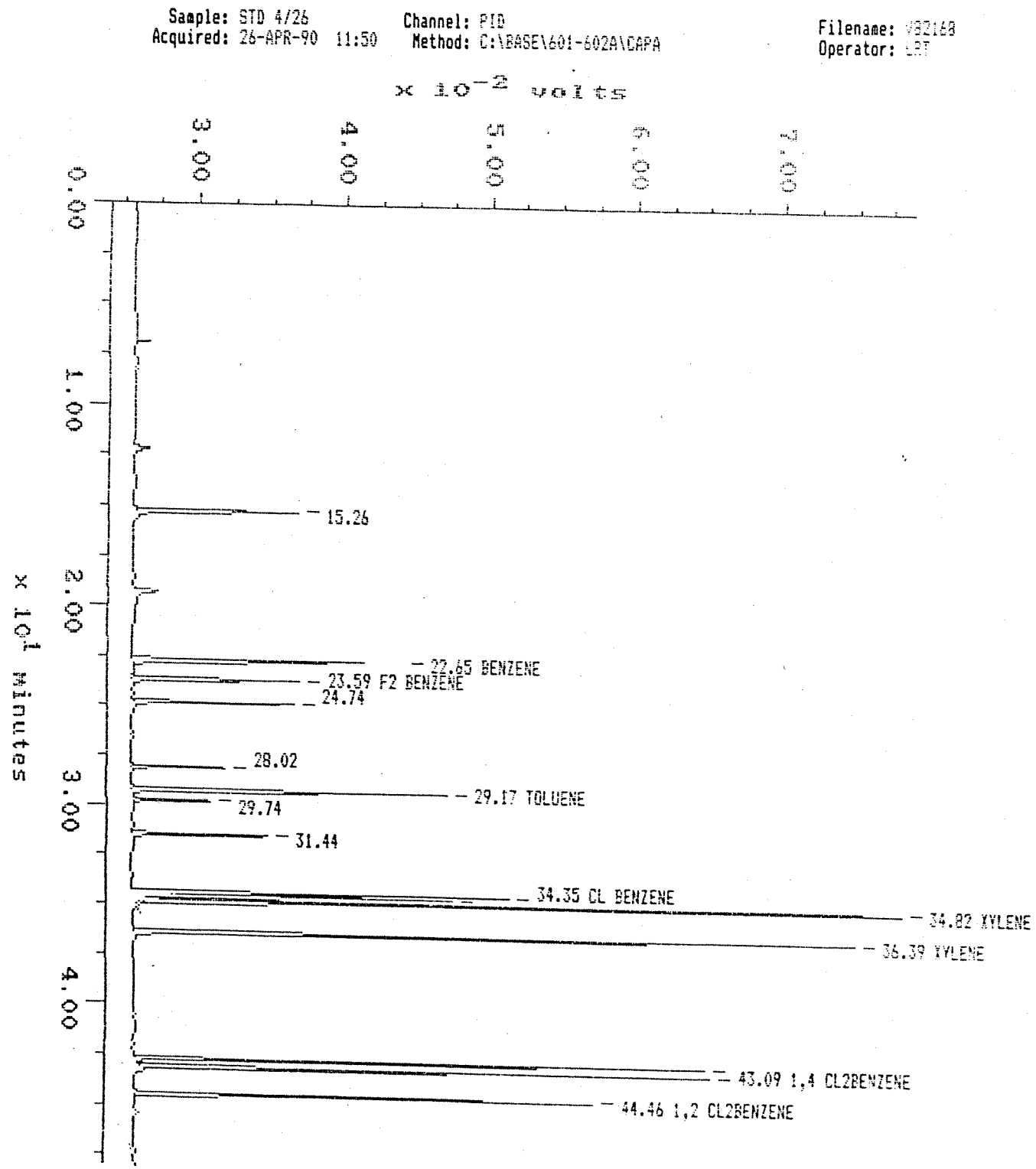
Sample: STD 4/26
Acquired: 26-APR-90 11:50

Channel: HALL
Method: C:\BASE\601-602A\DAPA

Filename: V82168
Operator: LRT



MN-COMP 0044054


Sample: STD 4/26
Acquired: 26-APR-90 11:50
Channel: PID
Method: C:\BASE\601-602A\CAPA
Filename: V82168
Operator: LRT
x 10⁻² volts
3.00
4.00
5.00
6.00
7.00
0.00
1.00
2.00
3.00
4.00
x 10¹ Minutes
15.26
22.65 BENZENE
23.59 F2 BENZENE
24.74
28.02
29.17 TOLUENE
29.74
31.44
34.35 CL BENZENE
34.82 XYLENE
36.39 XYLENE
43.09 1,4 CL2BENZENE
44.46 1,2 CL2BENZENE

NANCO LABORATORIES, INC.

Printed: 27-APR-1990 7:15:30

SAMPLE: GW 0500 MS 4/26
#8 in Method: CAPILLARY
Acquired: 26-APR-1990 14:16
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

Type: UNKN
Instrument: Instrument 1
Filename: V82170
Index: Disk

COLUMN: PID

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	15.240	128381	15073				
2	22.638	161318	18682	10.81	41.85	41.85	BENZENE
3	24.727	83349	11166				
4	28.013	36103	5509				
5	29.171	152296	21524	12.44	48.16	48.16	TOLUENE
6	31.449	64435	9138				
7	34.353	116159	21620	8.76	33.92	33.92	CL BENZENE
8	34.536	106935	18463	9.94	38.48	38.48	ETHYLBENZENE
9	34.813	342596	51438	11.29	43.70	43.70	XYLENE
10	36.392	259568	38861	13.02	50.41	50.41	XYLENE
11	42.693	217867	37055	12.56	48.64	48.64	1,3 CL2BENZENE
12	43.086	202233	36626	11.00	42.58	42.58	1,4 CL2BENZENE
13	44.472	166282	28482	10.20	39.48	39.48	1,2 CL2BENZENE
TOTAL		2037522	313636		387.20	387.20	

COLUMN: HALL

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	5.880	376948	20429	5.16	100.79	100.79	CL2 F2 METHANE
2	6.949	515851	45172	3.24	63.31	63.31	VINYL CHLORIDE
3	7.503	3066	294				
4	8.457	52880	4753	Invalid	Invalid	Invalid	BR METHANE
5	8.739	829983	45936	5.10	99.63	99.63	CL ETHANE
6	9.748	1303464	62803	4.82	94.20	94.20	CL3 F METHANE
7	12.219	1466361	91670	4.05	79.08	79.08	1,1 CL2 ETHENE
8	14.126	1868778	150602	3.67	71.74	71.74	METHYLENE CHLOR
9	15.306	1574937	140086	3.83	74.90	74.90	TR 1,2CL2ETHENE
10	16.919	1610987	126081	3.71	72.49	72.49	1,1 CL2 ETHANE

MN-COMP 0044056

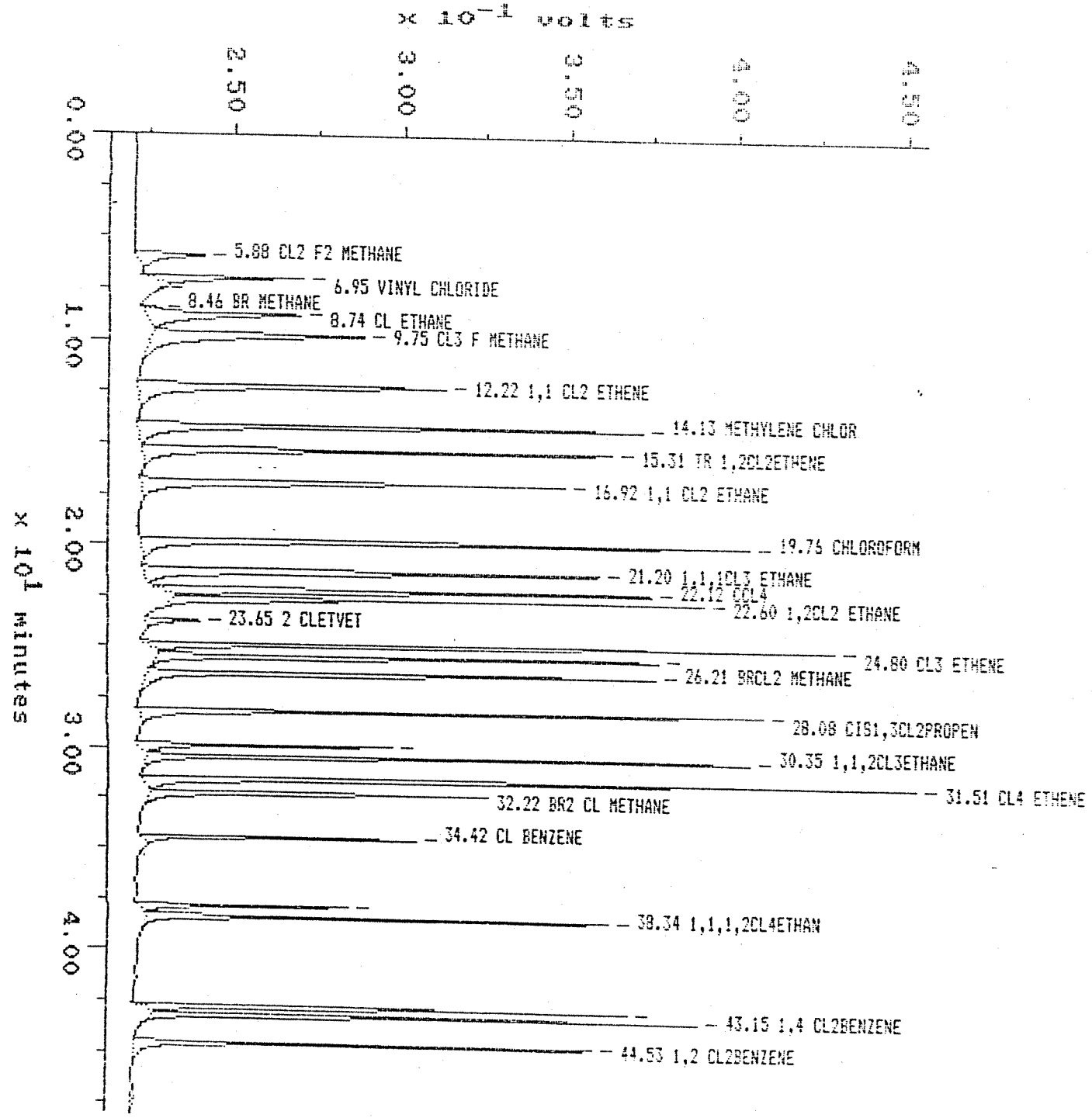
11	19.756	2060577	182108	4.09	79.93	79.93	CHLOROFORM
12	21.202	1913974	135579	4.16	81.23	81.23	1,1,1CL3 ETHANE
13	22.122	1724459	146246	4.17	81.48	81.48	CCL4
14	22.599	1423165	159233	3.11	60.77	60.77	1,2CL2 ETHANE
15	23.646	173482	15651	2.06	40.17	40.17	2 CLETVET
16	24.799	1878207	205232	3.80	74.32	74.32	CL2 ETHENE
17	25.381	1477301	149744	3.43	67.15	67.15	1,2 CL2PROPANE
18	26.212	1493133	151907	3.76	73.49	73.49	BRCL2 METHANE
19	28.080	1612730	186385	3.31	64.71	64.71	CIS1,3CL2PROPEN
20	29.803	625184	74844	3.38	66.06	66.06	TR1,3CL2PROPENE
21	30.352	1547177	180464	3.68	71.90	71.90	1,1,2CL3ETHANE
22	31.510	2039711	230439	4.15	81.10	81.10	CL4 ETHENE
23	32.225	910979	94593	3.40	66.49	66.49	BR2 CL METHANE
24	34.419	665200	81790	3.34	65.25	65.25	CL BENZENE
25	37.827	526610	62015	3.48	68.06	68.06	BROMOFORM
26	38.337	1145556	138559	2.60	50.92	50.92	1,1,1,2CL4ETHAN
27	42.760	1046532	145844	3.51	68.71	68.71	1,3 CL2BENZENE
28	43.147	1186115	163671	3.58	70.03	70.03	1,4 CL2BENZENE
29	44.533	1147803	137423	3.42	66.94	66.94	1,2 CL2BENZENE
TOTAL		34201151	3329552		1954.83	1954.83	

MN-COMP 0044057

Sample: GW 0500 MS 4/26
Acquired: 26-APR-90 14:16

Channel: HALL
Method: C:\BASE\601-602A\CAPA

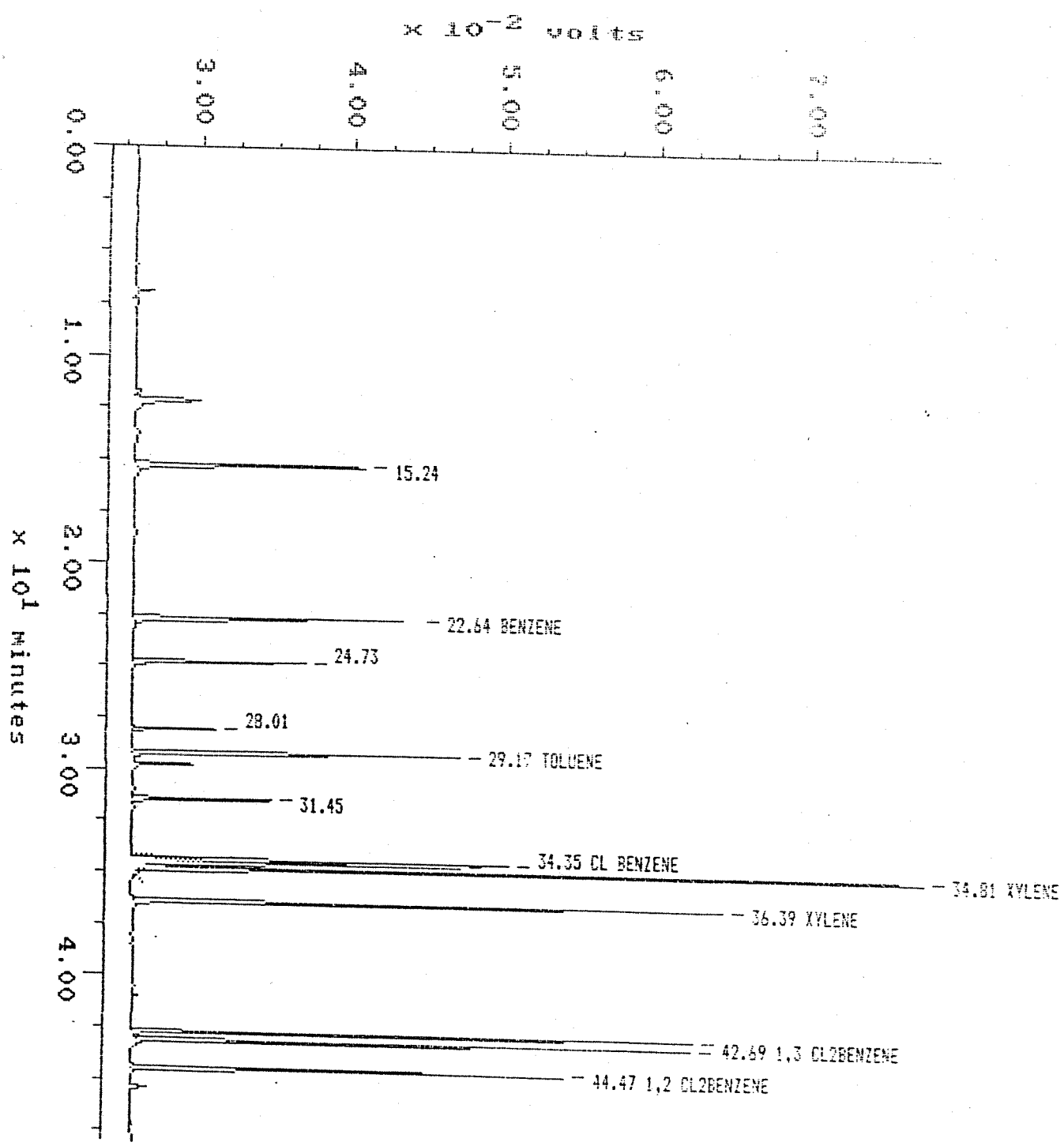
Filename: V82170
Operator: LRT



MN-COMP 0044058

Sample: GW 0500 MS 4/26 Channel: PID
Acquired: 26-APR-90 14:16 Method: C:\BASE\601-602A\CAPA

Filename: V82170
Operator: LRT



MN-COMP 0044059

NANCO LABORATORIES, INC.

Printed: 27-APR-1990 7:17:07

SAMPLE: GW 0500 MSD
#9 in Method: CAPILLARY
Acquired: 26-APR-1990 15:47
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

Type: UNKN
Instrument: Instrument 1
Filename: VB2171
Index: Disk

COLUMN: PID

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	15.245	81970	9867				
2	22.627	139550	16219	9.96	35.64	35.64	BENZENE
3	24.716	70540	9466				
4	28.013	38328	5829				
5	29.171	136202	19352	12.03	43.07	43.07	TOLUENE
6	31.443	55383	7806				
7	34.347	107344	20034	8.61	30.82	30.82	CL BENZENE
8	34.530	94853	16347	9.28	33.23	33.23	ETHYLBENZENE
9	34.813	308835	46575	11.00	39.39	39.39	XYLENE
10	36.392	247562	37545	13.43	48.08	48.08	XYLENE
11	42.693	206269	35467	12.89	46.15	46.15	1,3 DCLBENZENE
12	43.086	197854	35970	11.64	41.65	41.65	1,4 DCLBENZENE
13	44.466	168020	28489	11.15	39.90	39.90	1,2 DCLBENZENE
TOTAL		1852710	288967		357.95	357.95	

COLUMN: HALL

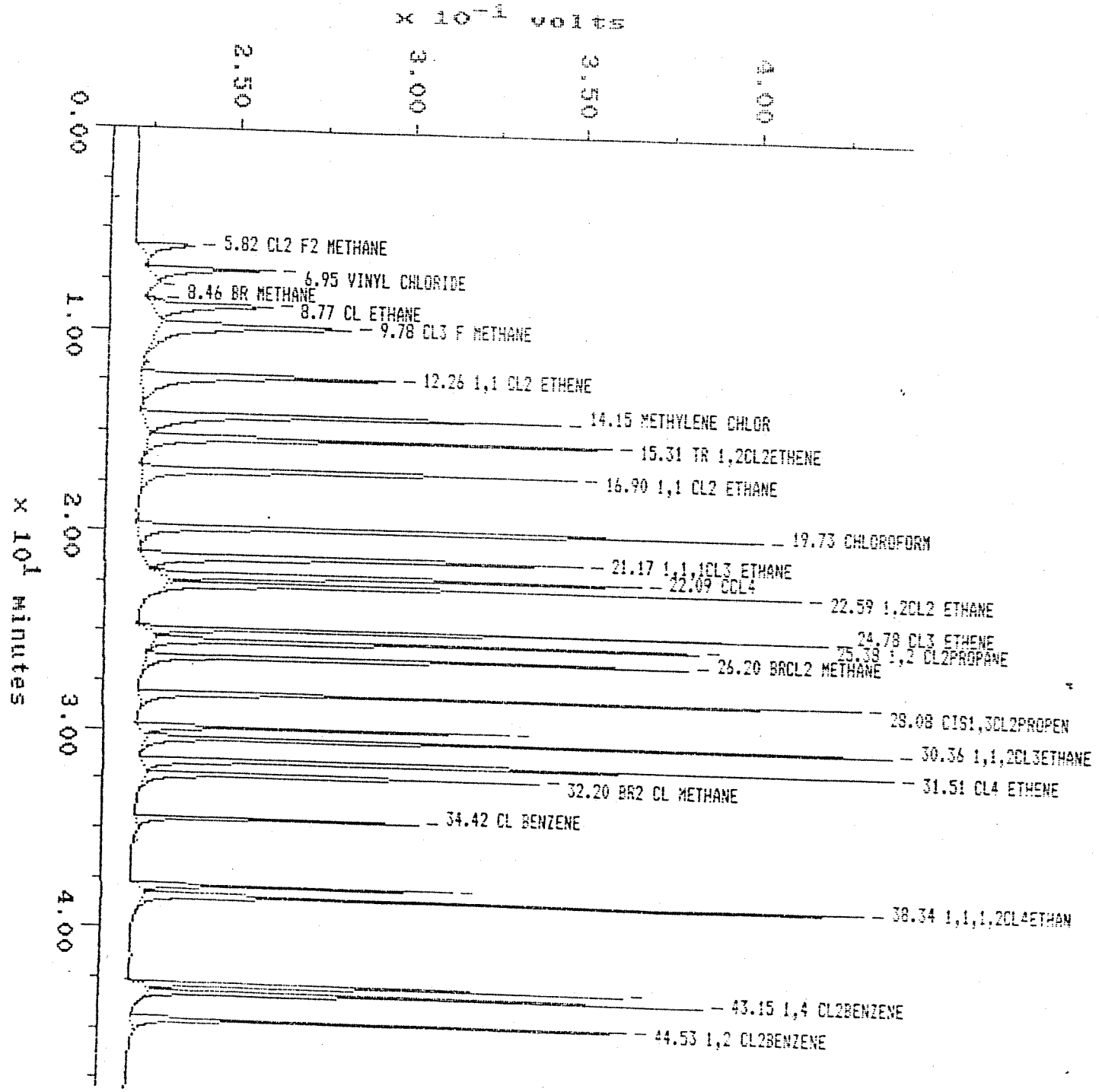
PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	5.819	271597	16203	3.78	72.62	72.62	DCL2 F2 METHANE
2	6.955	535442	36726	3.42	65.71	65.71	VINYL CHLORIDE
3	7.819	4091	253				
4	8.462	45649	3892	Invalid	Invalid	Invalid	BR METHANE
5	8.772	632701	34624	3.95	75.95	75.95	CL ETHANE
6	9.781	1163953	55021	4.38	84.20	84.20	DCL3 F METHANE
7	12.258	1342103	72622	3.79	72.74	72.74	1,1 DCL2 ETHENE
8	14.153	1759619	120587	3.52	67.59	67.59	METHYLENE CHLOR
9	15.306	1489391	133168	3.70	70.99	70.99	TR 1,2DCL2ETHENE
10	16.902	1578865	125457	3.70	71.13	71.13	1,1 DCL2 ETHANE

11	19.728	1990570	179654	4.03	77.35	77.35	CHLOROFORM
12	21.169	1769760	126826	3.91	75.11	75.11	1,1,1CL3 ETHANE
13	22.089	1663998	138649	4.09	78.62	78.62	CCL4
14	22.588	1622664	182086	3.61	69.29	69.29	1,2CL2 ETHANE
15	24.782	1735246	197046	3.57	68.66	68.66	CL3 ETHENE
16	25.375	1537592	157228	3.64	69.89	69.89	1,2 CL2PROPANE
17	26.201	1538362	157068	3.94	75.71	75.71	BRCL2 METHANE
18	28.080	1817605	207931	3.80	72.93	72.93	CIS1,3CL2PROPEN
19	29.803	845924	106421	4.34	83.44	83.44	TR1,3CL2PROPENE
20	30.357	1854470	214443	4.36	83.71	83.71	1,1,2CL3ETHANE
21	31.510	1872678	216256	3.88	74.46	74.46	CL4 ETHENE
22	32.203	1063357	114025	4.04	77.61	77.61	BR2 CL METHANE
23	34.419	717225	81816	3.65	70.19	70.19	CL BENZENE
24	37.822	739336	91368	4.57	87.79	87.79	BROMOFORM
25	38.337	1696585	207912	3.84	73.82	73.82	1,1,1,2CL4ETHAN
26	42.748	1017328	140885	3.48	66.79	66.79	1,3 CL2BENZENE
27	43.147	1150867	160434	3.54	67.95	67.95	1,4 CL2BENZENE
28	44.533	1145392	143356	3.49	66.80	66.80	1,2 CL2BENZENE
TOTAL		34602369	3421957		1921.06	1921.06	

Sample: GW 0500 MSD
Acquired: 26-APR-90 15:47

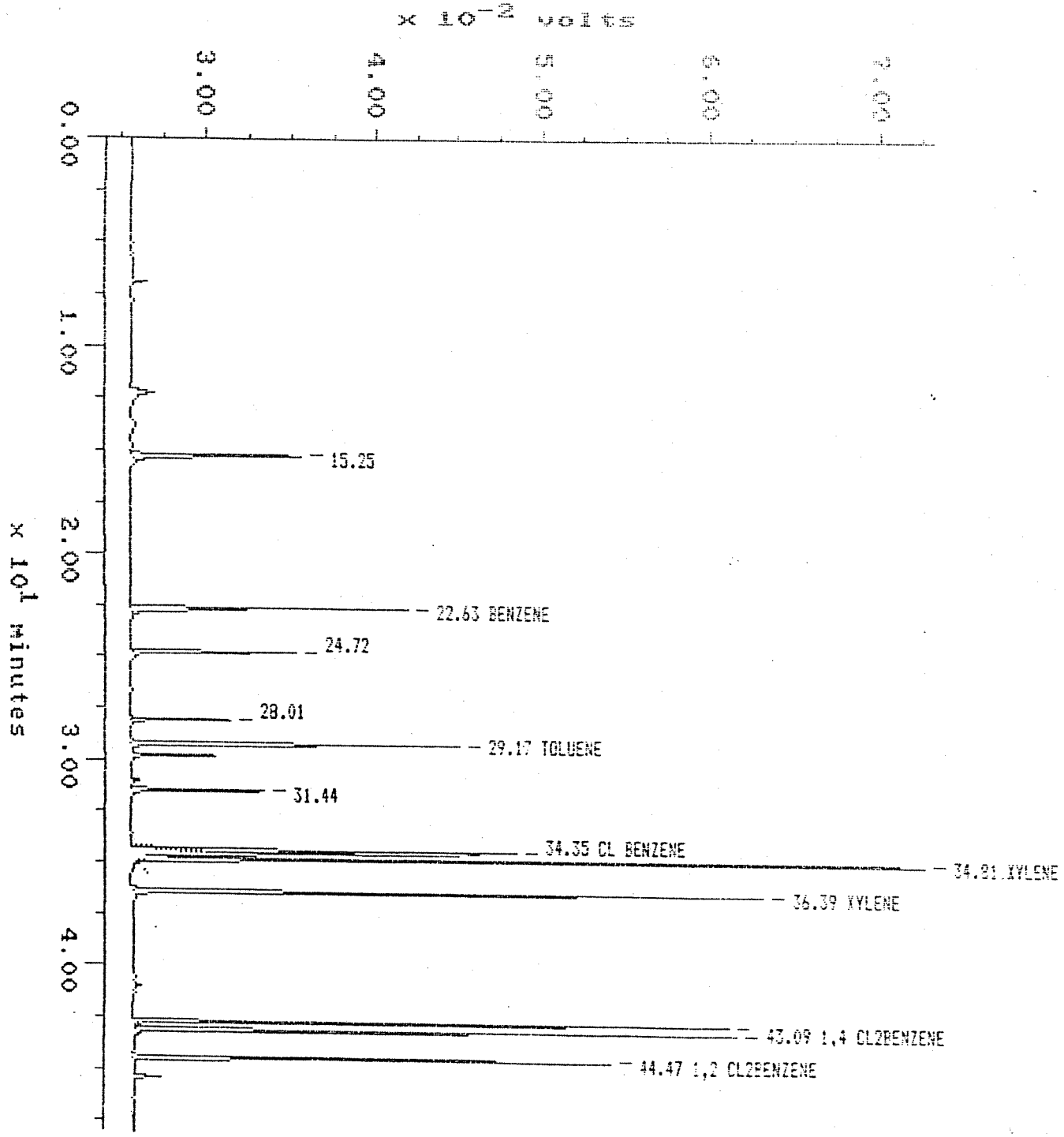
Channel: HALL
Method: C:\BASE\601-602A\CAPA

Filename: V82171
Operator: LRT



MN-COMP 0044062

Sample: GW 0500 MSD Channel: PID Filename: V82171
Acquired: 26-APR-90 15:47 Method: C:\BASE\601-602A\CAPA Operator: LRT



MN-COMP 0044063

NANCO LABORATORIES, INC.

Printed: 27-APR-1990 11:49:49

SAMPLE: BLANK MS

#7 in Method: CAPILLARY
Acquired: 27-APR-1990 7:20
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

Type: UNKN
Instrument: Instrument 1
Filename: V82178
Index: Disk

COLUMN: PID

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	15.317	76491	9497				
2	22.677	147286	16980	9.58	37.85	37.85	BENZENE
3	23.613	87869	11292	9.96	39.37	39.37	F2 BENZENE
4	24.755	76208	10360				
5	28.035	40830	6235				
6	29.188	145527	20357	11.64	46.02	46.02	TOLUENE
7	29.753	29990	5090				
8	31.466	59873	8433				
9	34.353	110394	20543	8.07	31.89	31.89	CL BENZENE
10	34.536	97448	16874	8.69	34.36	34.36	ETHYLBENZENE
11	34.807	314751	47475	10.16	40.15	40.15	XYLENE
12	36.381	201326	30146	9.89	39.10	39.10	XYLENE
13	42.671	205713	35351	11.65	46.03	46.03	1,3 CL2BENZENE
14	43.070	195198	34643	10.40	41.10	41.10	1,4 CL2BENZENE
15	44.455	165797	28251	9.96	39.36	39.36	1,2 CL2BENZENE
TOTAL		1954703	301526		395.22	395.22	

COLUMN: HALL

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	5.858	196452	10152	2.86	52.53	52.53	CL2 F2 METHANE
2	6.994	461094	28914	3.08	56.59	56.59	VINYL CHLORIDE
3	8.518	29183	2594	Invalid	Invalid	Invalid	BR METHANE
4	8.839	502405	26273	3.28	60.31	60.31	CL ETHANE
5	9.870	846478	48493	3.34	61.45	61.45	CL3 F METHANE
6	12.341	1195551	59437	3.55	65.27	65.27	1,1 CL2 ETHENE
7	14.231	1590599	114298	3.33	61.17	61.17	METHYLENE CHLOR
8	15.389	1348770	116625	3.51	64.57	64.57	TR 1,2CL2ETHENE

MN-COMP 0044064

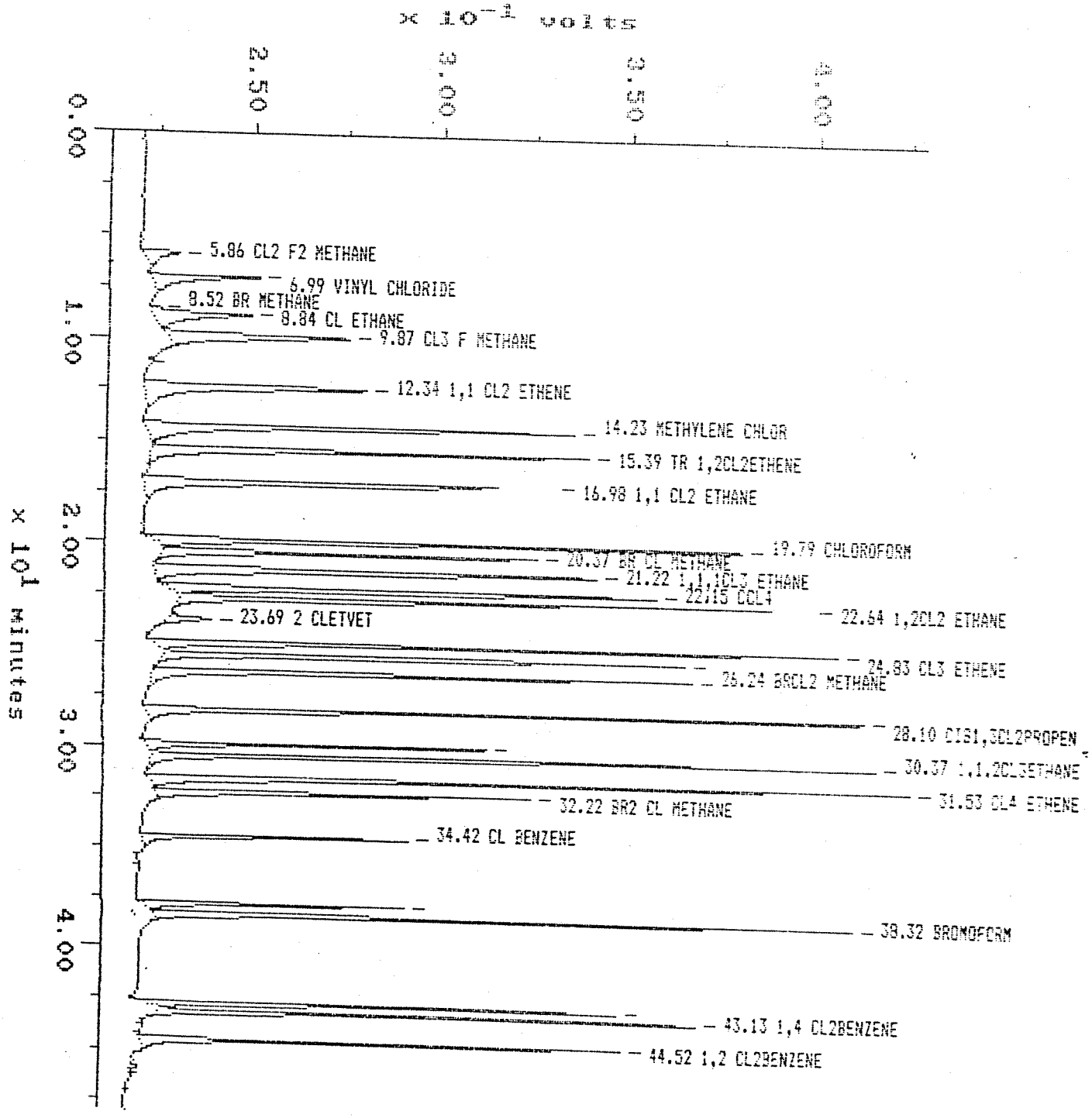
9	16.980	1412947	109174	3.49	64.09	64.09	1,1 DL2 ETHANE
10	19.789	1660982	158095	3.55	65.18	65.18	CHLORDFORM
11	20.371	963833	99890	4.82!!	88.58!!	99.58!!	BR CL METHANE
12	21.225	1638953	117828	3.79	69.56	69.56	1,1,1DL3 ETHANE
13	22.150	1550326	130279	3.99	73.25	73.25	CCL4
14	22.638	1495430	168087	3.48	63.85	63.85	1,2DL2 ETHANE
15	23.685	160222	12167	2.02	37.10	37.10	2 CLETVET
16	24.827	1661986	182430	3.58	65.76	65.76	CL3 ETHENE
17	25.414	1400050	139583	3.46	63.64	63.64	1,2 DL2PROPANE
18	26.240	1412879	144166	3.78	69.54	69.54	BRCL2 METHANE
19	28.102	1636756	191493	3.57	65.67	65.67	CIS1,3DL2PROPEN
20	29.820	736510	90947	4.07	74.82	74.82	TR1,3DL2PROPENE
21	30.374	1684267	192992	4.20	77.17	77.17	1,1,2DL3ETHANE
22	31.527	1776720	202763	3.84	70.65	70.65	CL4 ETHENE
23	32.219	900800	99835	3.58	65.75	65.75	BR2 CL METHANE
24	34.419	627492	71205	3.36	61.68	61.68	CL BENZENE
25	37.805	623526	70041				
26	38.321	1499516	187119	8.61!	158.30!	158.30!	BROMOFORM
27	42.737	918017	126240	3.28	60.27	60.27	1,3 DL2BENZENE
28	43.131	1040639	144706	3.35	61.46	61.46	1,4 DL2BENZENE
29	44.516	1014386	128932	3.23	59.28	59.28	1,2 DL2BENZENE
TOTAL		31986765	3174758		1837.47!!	1837.47!!	

!! Result calculation based on peak response more than 10% outside of calibration range.
! Result calculation based on peak response ratio outside of calibration range.

Sample: BLANK MS
Acquired: 27-APR-90 7:20

Channel: HALL
Method: C:\BASE\601-602A\CAPA

Filename: V82179
Operator: LST

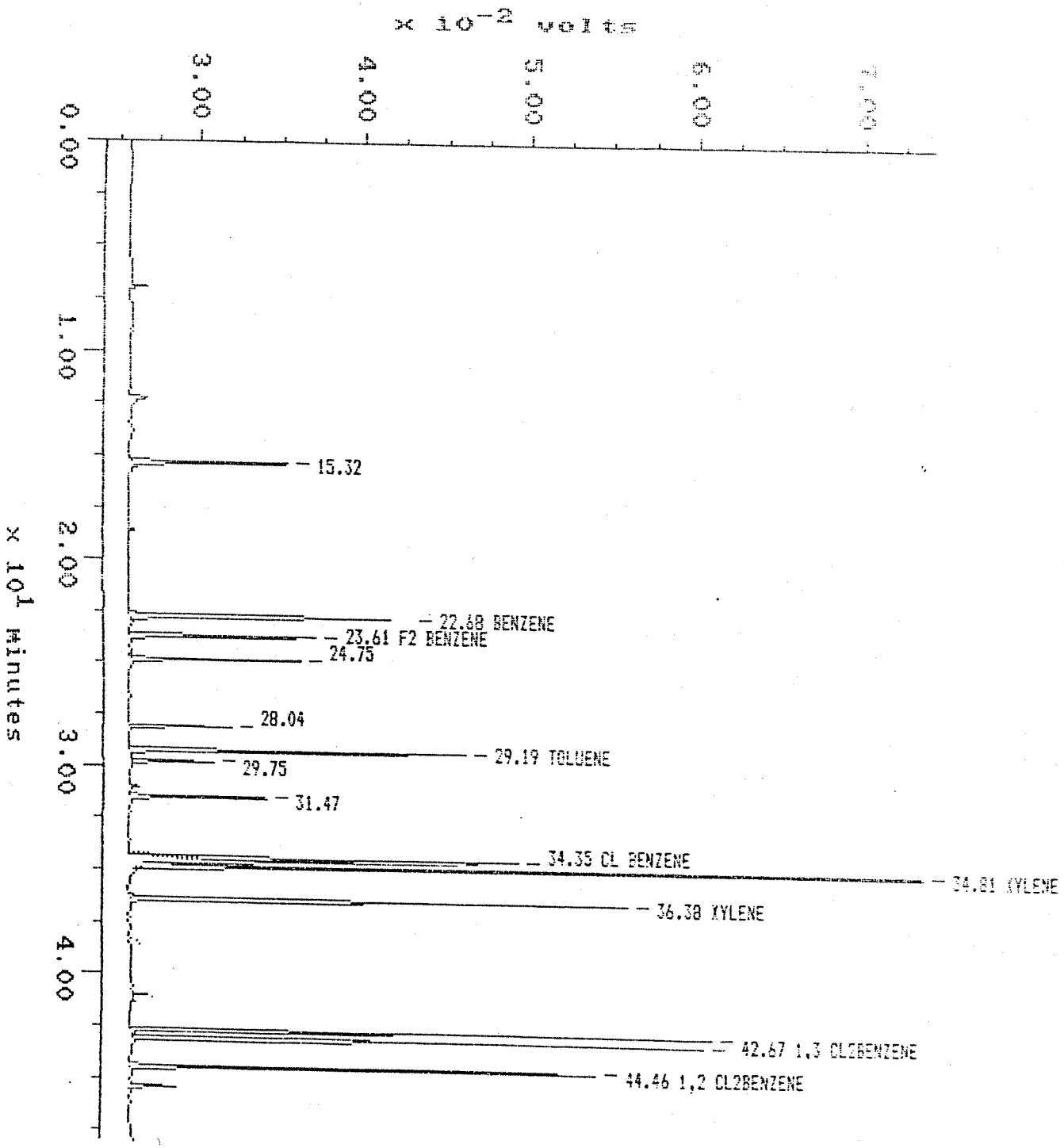


MN-COMP 0044066

Sample: BLANK MS
Acquired: 27-APR-90 7:20

Channel: PID
Method: C:\BASE\601-602A\CAPA

Filename: [illegible]
Operator: [illegible]



MN-COMP 0044067

NANCO LABORATORIES, INC.

Printed: 26-APR-1990 12:39:05

SAMPLE: GW 0498
#8 in Method: CAPILLARY
Acquired: 25-APR-1990 10:08
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

Type: UNKN
Instrument: Instrument 1
Filename: V82153
Index: Disk

COLUMN: PID

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	19.030	1995	234	0.53	0.26	0.26	ETHYL ACETATE
2	23.519	109833	14086	99.47	49.22	49.22	F2 BENZENE
TOTAL		111828	14320		49.48	49.48	

COLUMN: HALL

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	14.203	17210	1534	1.67	1.41	1.41	METHYLENE CHLOR
2	19.152	51518	4973				
3	19.424	2332	640	4.66	3.94	3.94	CHLOROFORM
4	20.271	765028	72316	83.11!!	70.31!!	70.31!!	BR CL METHANE
5	23.624	38589	3451	10.56	8.94	8.94	~~F CLETVET~~ CT 4/27
TOTAL		874676	82915		84.60!!	84.60!!	

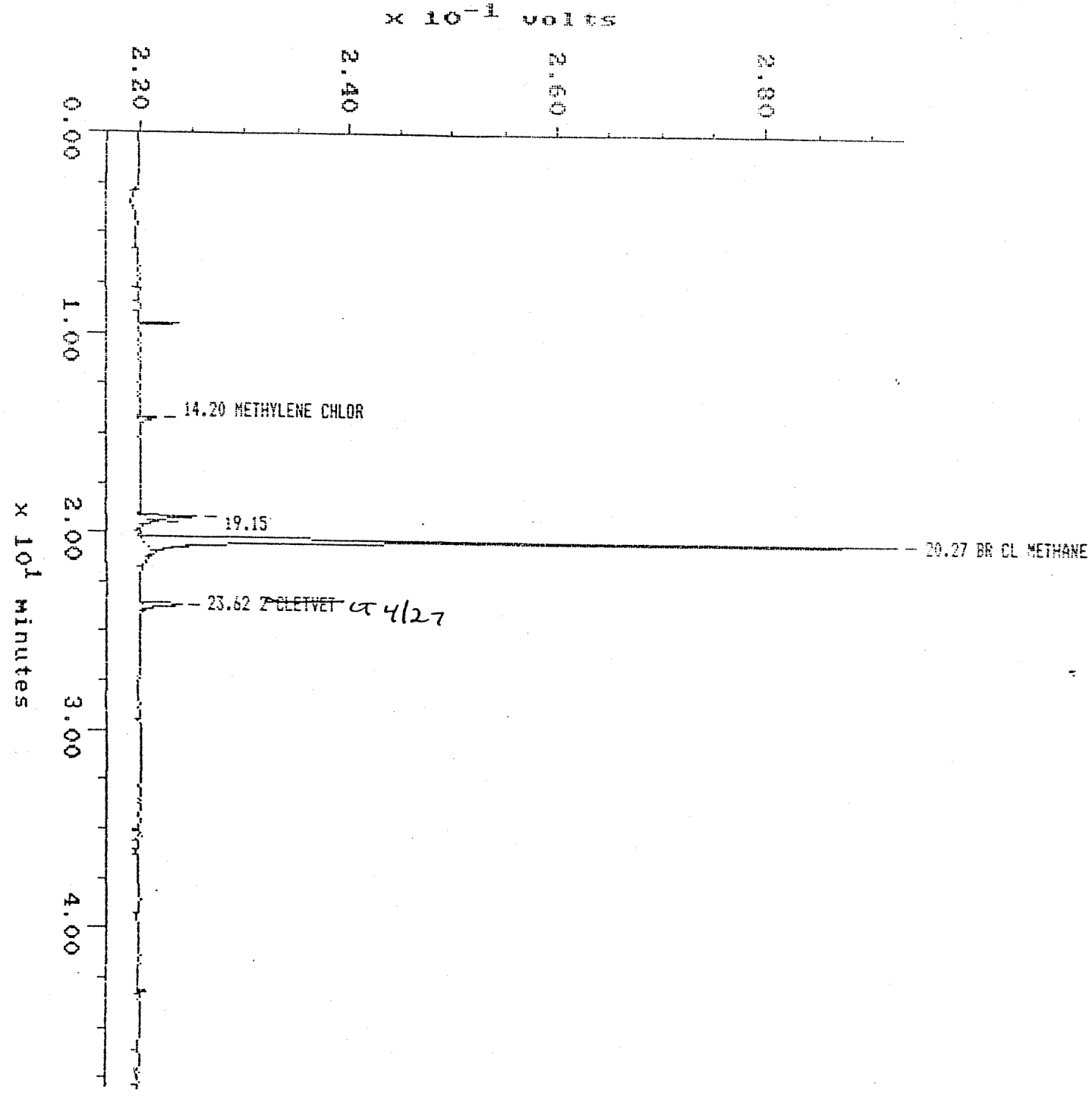
!! Result calculation based on peak response more than 10% outside of calibration range.

MN-COMP 0044068

Sample: BW 0498
Acquired: 25-APR-90 10:08

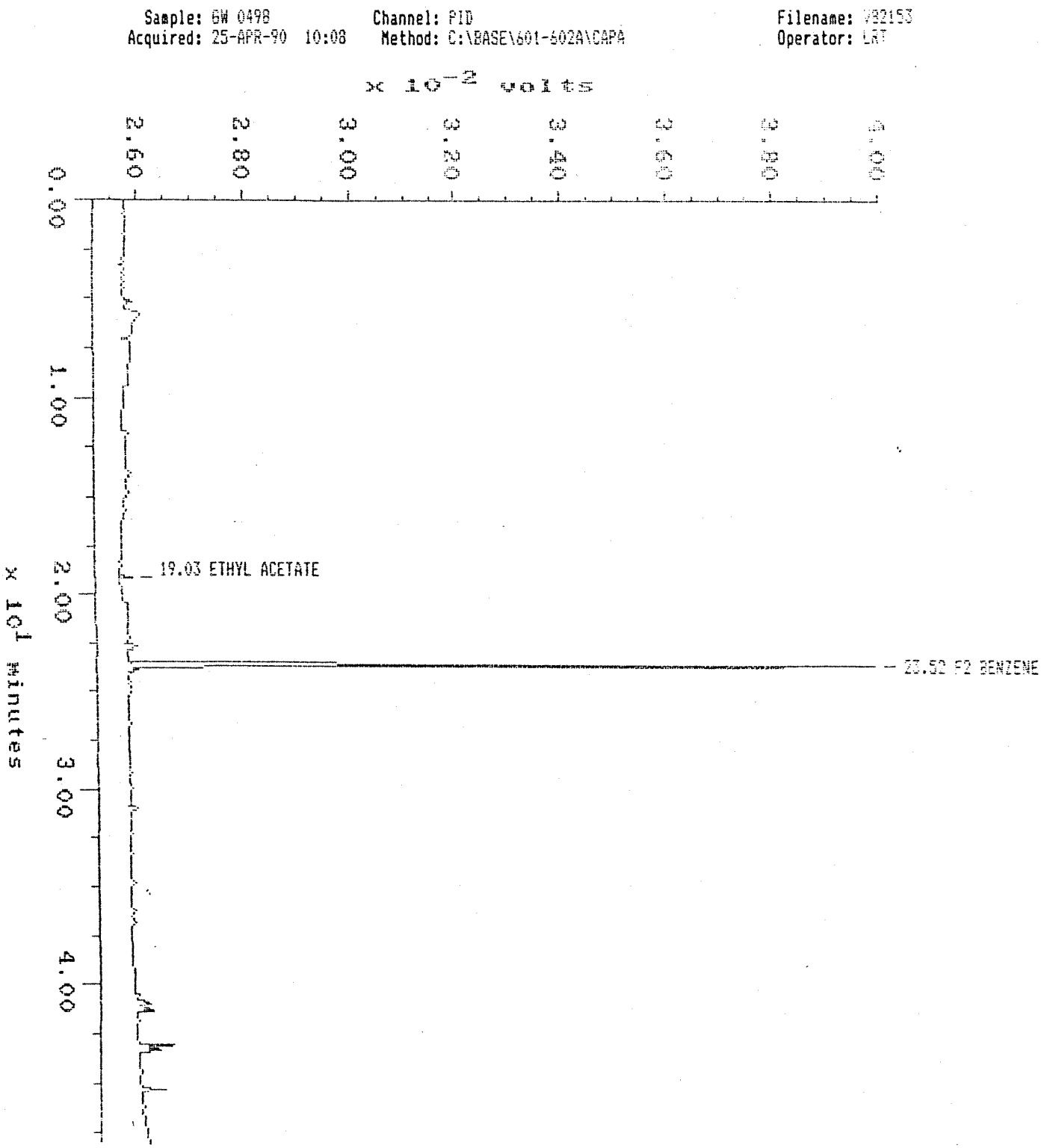
Channel: HALL
Method: C:\BASE\601-602A\CAPA

Filename: V82153
Operator: LRT



4/27

MN-COMP 0044069



MN-COMP 0044070

NANCO LABORATORIES, INC.

Printed: 25-APR-1990 13:35:08

SAMPLE: GW 0499

#9 in Method: CAPILLARY
Acquired: 25-APR-1990 11:12
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

Type: UNKN
Instrument: Instrument 1
Filename: V02154
Index: Disk

COLUMN: PID

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	23.541	100958	12932	100.00	45.24	45.24	FI BENZENE
TOTAL		100958	12932		45.24	45.24	

COLUMN: HALL

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	14.214	14565	1453	1.68	1.31	1.31	METHYLENE CHLOR
2	20.305	829181	79745	89.81!!	70.07!!	70.07!!	BR CL METHANE
3	23.613	28660	2813	8.51	6.64	6.64	~~O DICHLOR~~ 4/27
TOTAL		872407	84012		78.02!!	78.02!!	

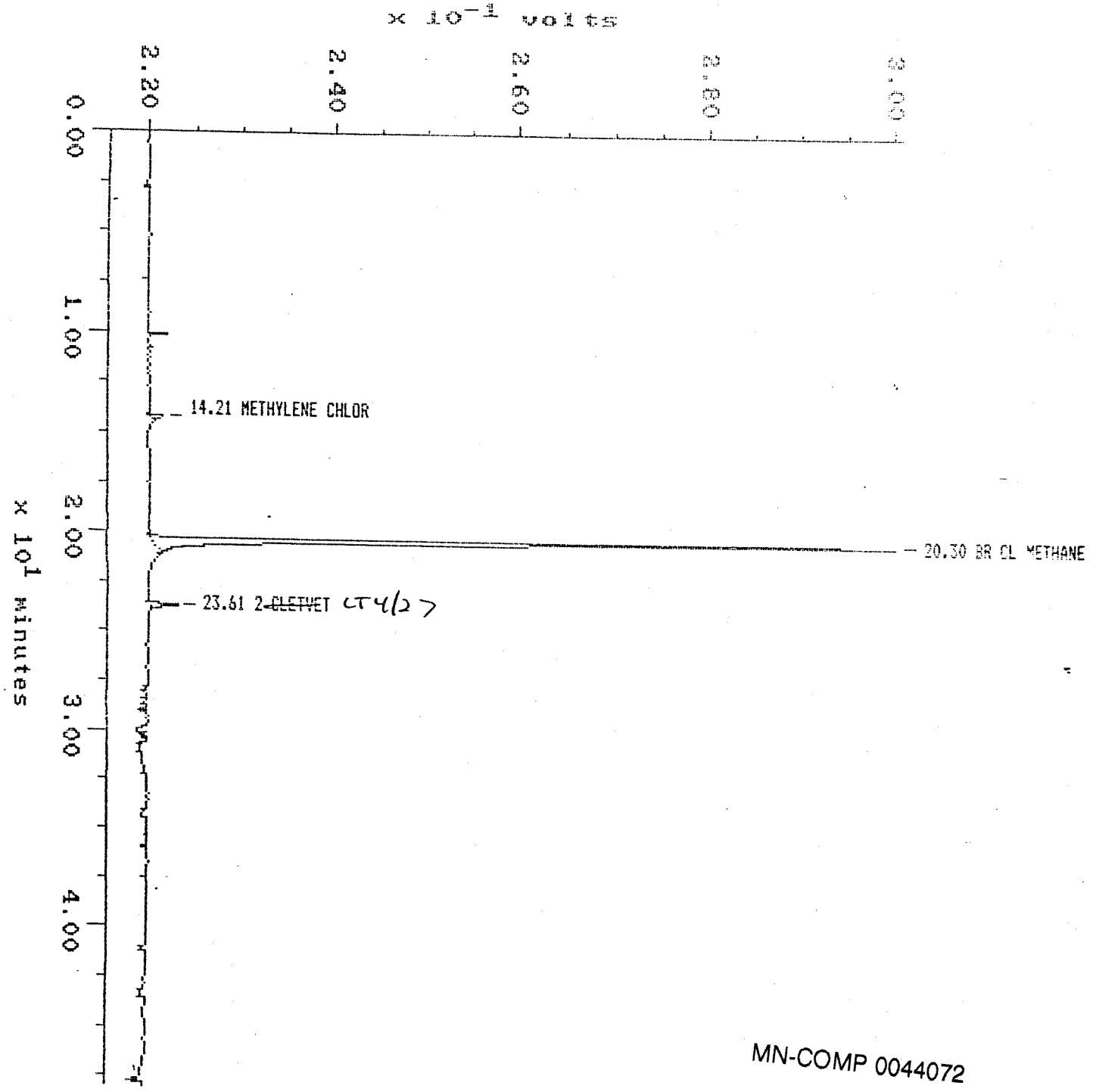
!! Result calculation based on peak response more than 10% outside of calibration range.

MN-COMP 0044071

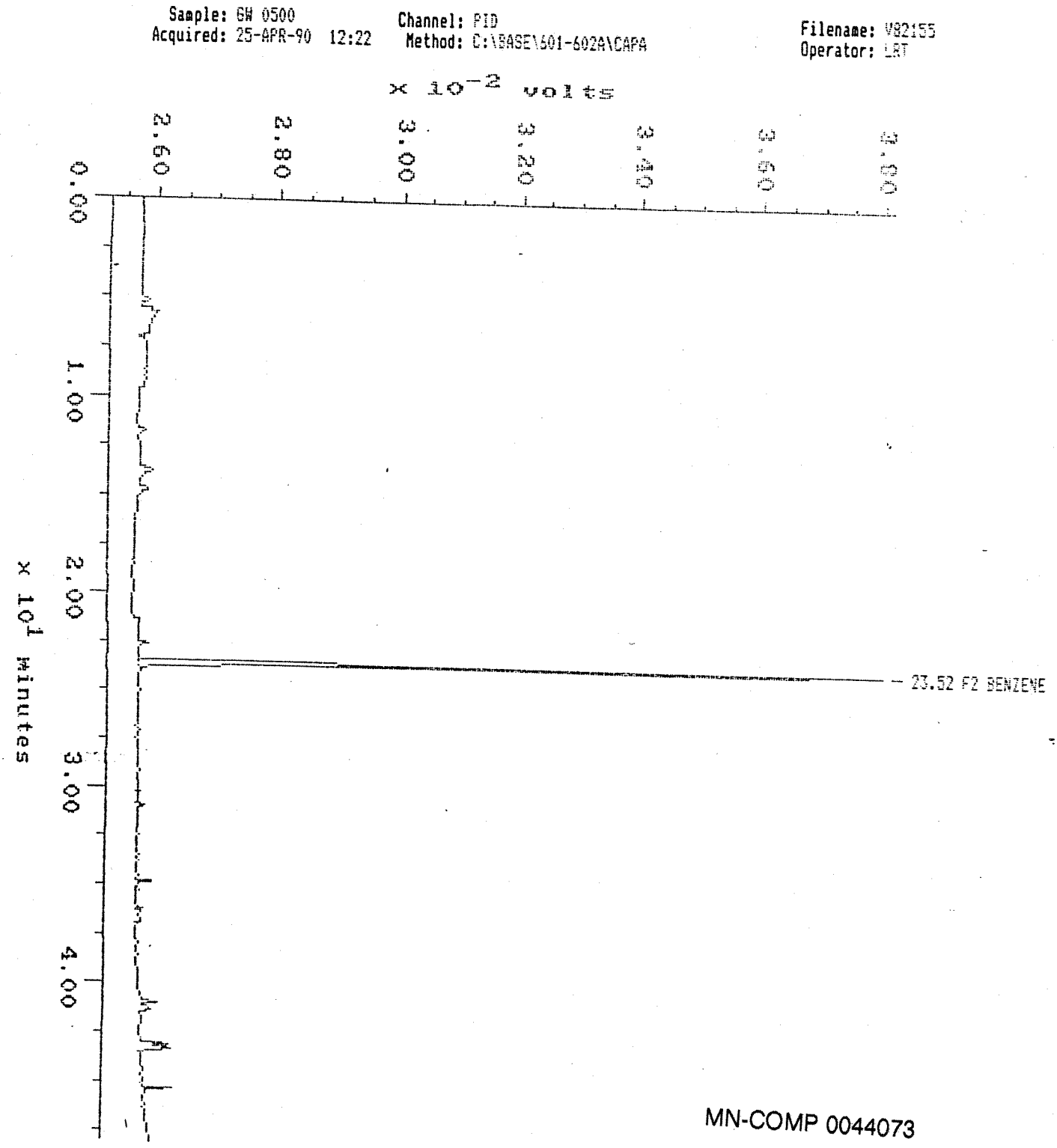
Sample: GW 0499
Acquired: 25-APR-90 11:12

Channel: HALL
Method: C:\BASE\601-602A\CAPA

Filename: V821S4
Operator: LRT



MN-COMP 0044072



MN-COMP 0044073

NANCO LABORATORIES, INC.

Printed: 26-APR-1990 8:18:49

SAMPLE: GW 0500

#10 in Method: CAPILLARY
Acquired: 25-APR-1990 12:22
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

Type: UNKN
Instrument: Instrument 1
Filename: V82155
Index: Disk

COLUMN: PID

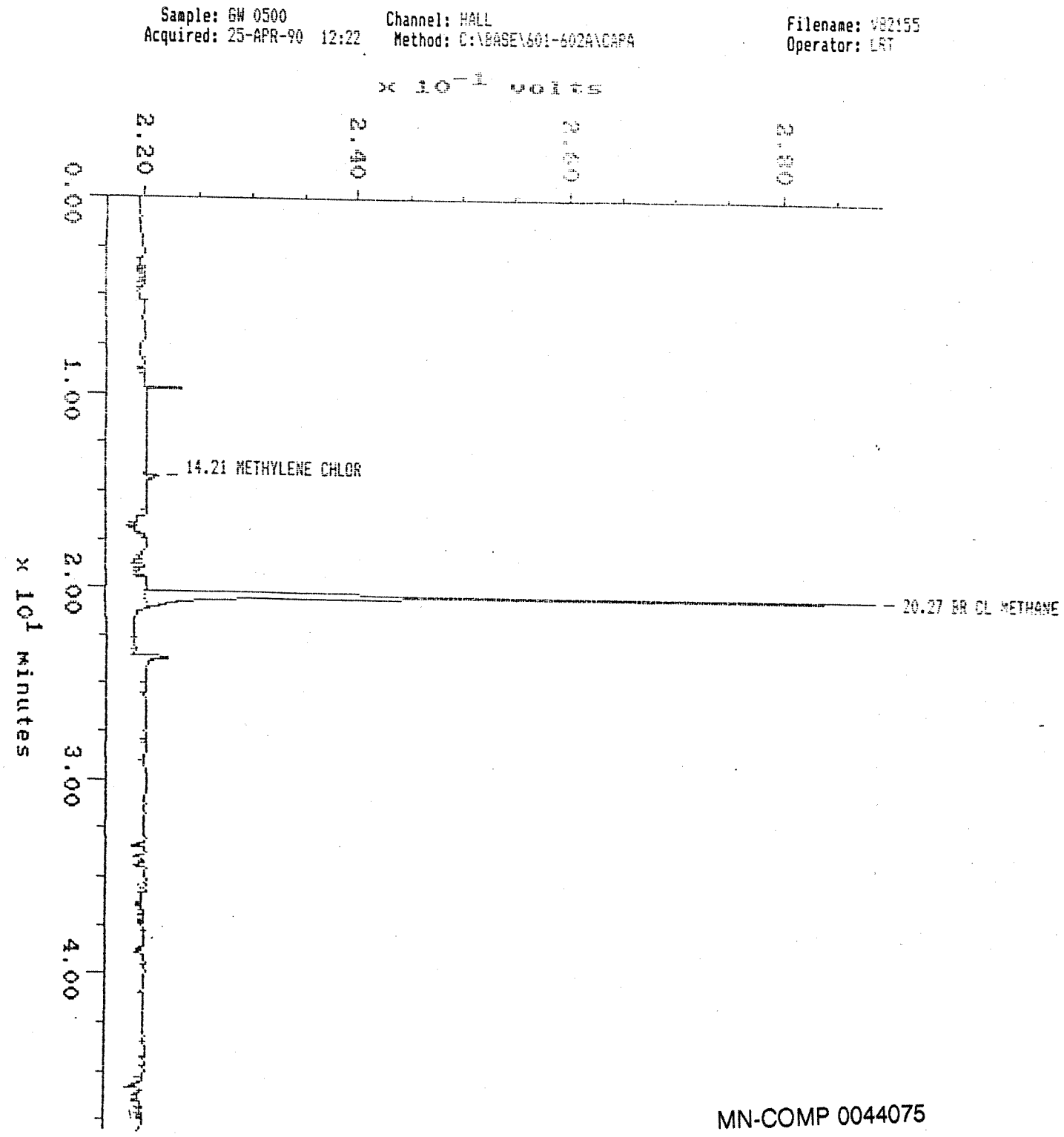
PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	23.519	97426	12311	100.00	43.66	43.66	P2 BENZENE
TOTAL		97426	12311		43.66	43.66	

COLUMN: HALL

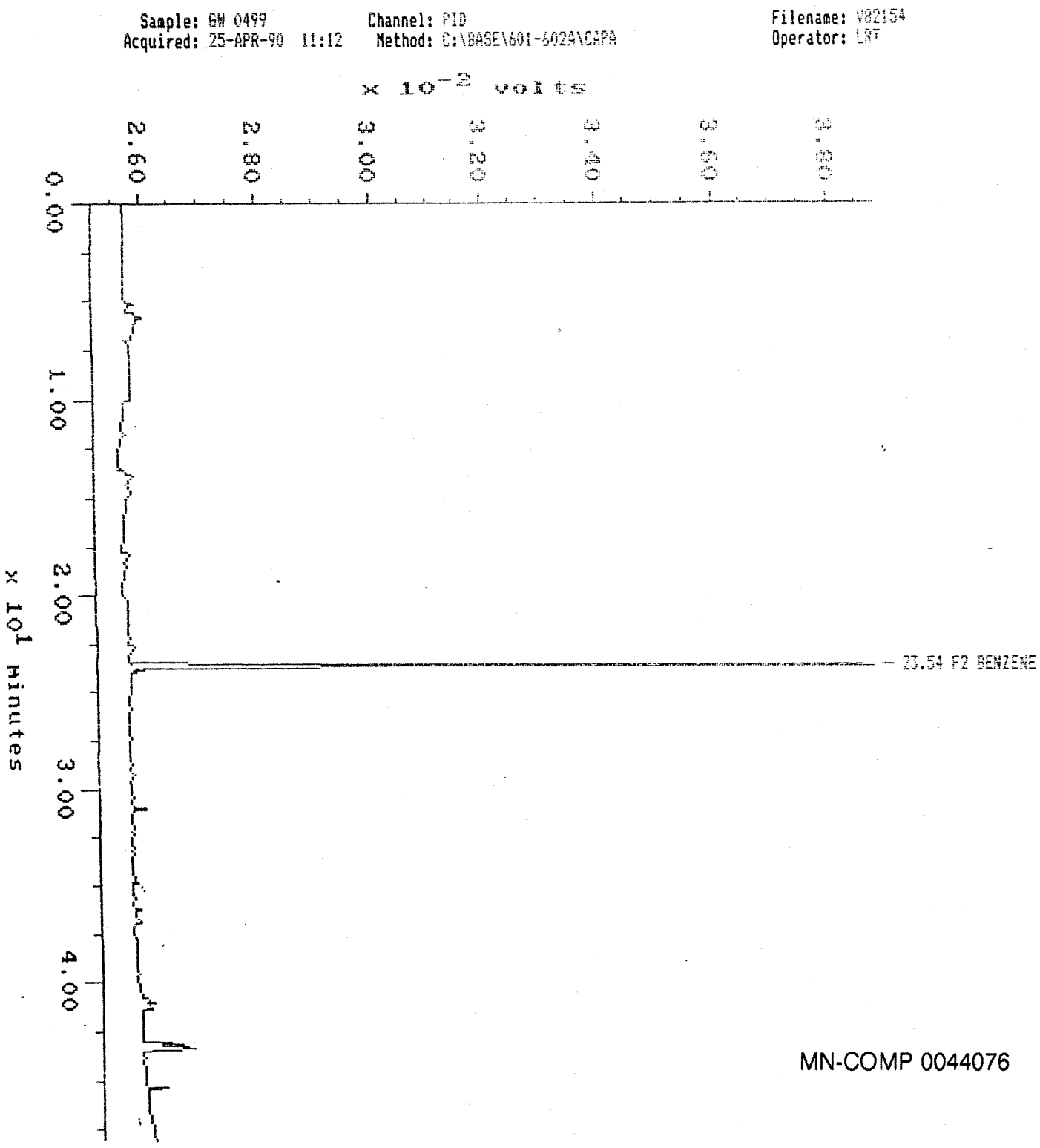
PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	14.214	8236	986	1.60	1.07	1.07	METHYLENE CHLOR
2	20.266	782168	68671	98.40!!	66.10!!	66.10!!	BR CL METHANE
TOTAL		790404	69656		67.17!!	67.17!!	

!! Result calculation based on peak response more than 10% outside of calibration range.

MN-COMP 0044074

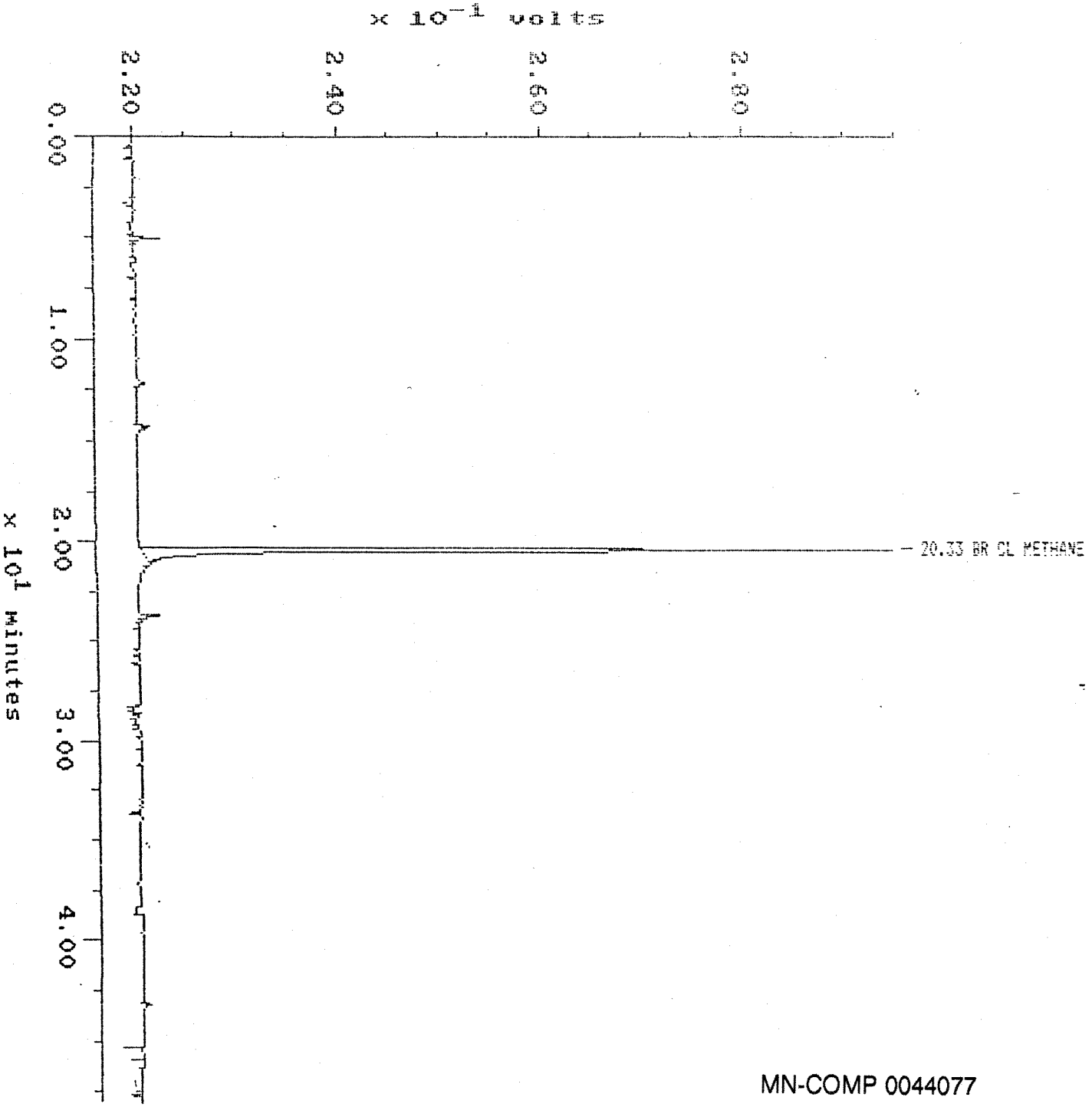


MN-COMP 0044075



MN-COMP 0044076

Sample: GW 0501 Channel: HALL Filename: V82156
Acquired: 25-APR-90 13:33 Method: C:\BASE\601-602A\CAPA Operator: LRT



MN-COMP 0044077

NANCO LABORATORIES, INC.

Printed: 26-APR-1990 8:20:13

SAMPLE: GW 0501

Type: UNKN
Instrument: Instrument 1
Filename: V82156
Index: Disk

#11 in Method: CAPILLARY
Acquired: 25-APR-1990 13:33
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

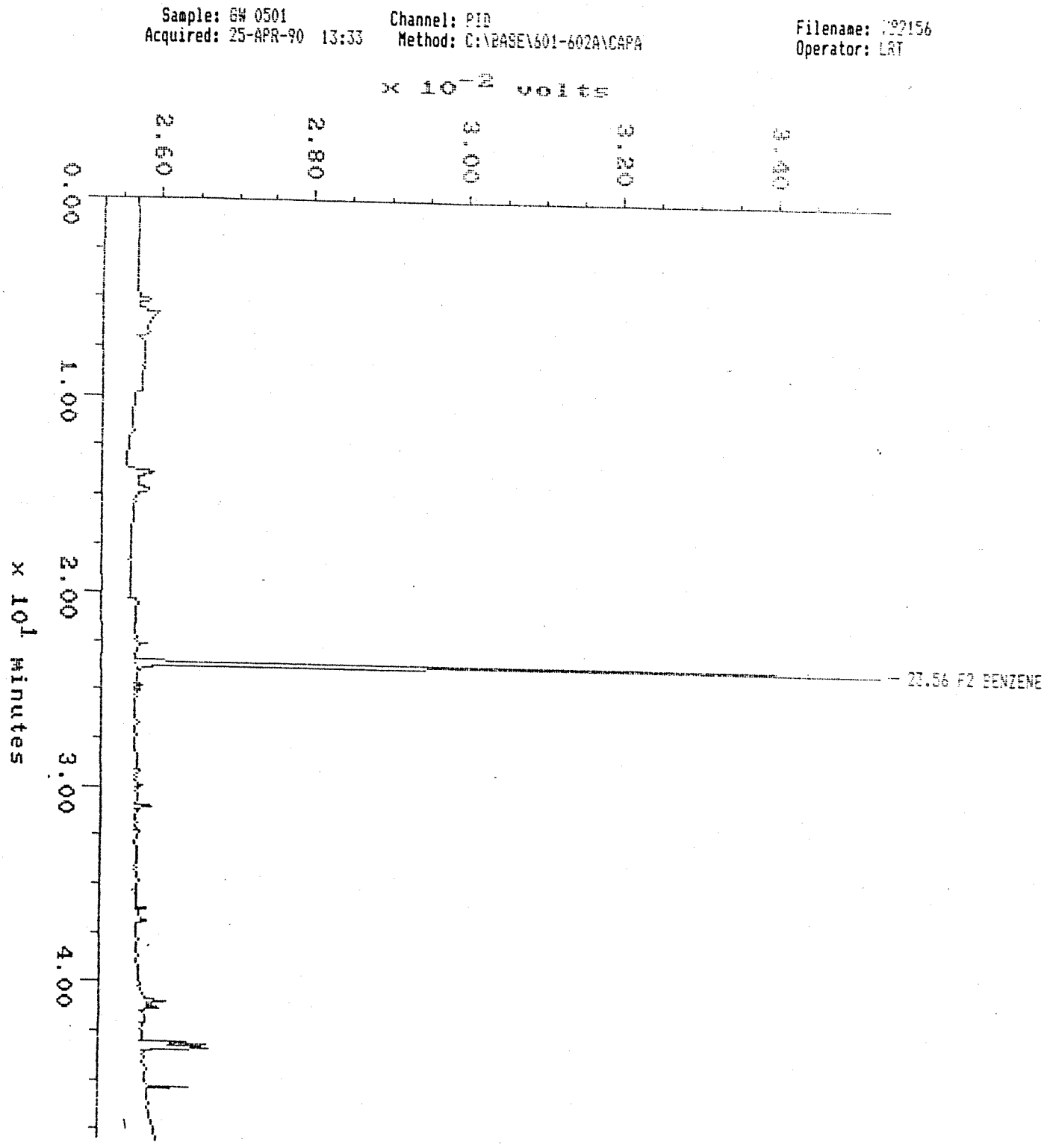
COLUMN: PID

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	23.563	76194	9663	100.00	34.14	34.14	F2 BENZENE
TOTAL		76194	9663		34.14	34.14	

COLUMN: HALL

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	20.327	728236	74173	100.00!!	61.54!!	61.54!!	BR CL METHANE
TOTAL		728236	74173		61.54!!	61.54!!	

!! Result calculation based on peak response more than 10% outside of calibration range.


Sample: GW 0501
Acquired: 25-APR-90 13:33
Channel: PID
Method: C:\BASE\601-602A\CAPA
Filename: P92156
Operator: LRT
x 10⁻² volts
2.60
2.80
3.00
3.20
0.00
1.00
2.00
3.00
4.00
x 10¹ minutes
22.56 P2 BENZENE

NANCO LABORATORIES, INC.

Printed: 25-APR-1990 16:21:43

SAMPLE: GW 0502
#12 in Method: CAPILLARY
Acquired: 25-APR-1990 15:10
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

Type: UNKN
Instrument: Instrument 1
Filename: V82157
Index: 6

COLUMN: PID

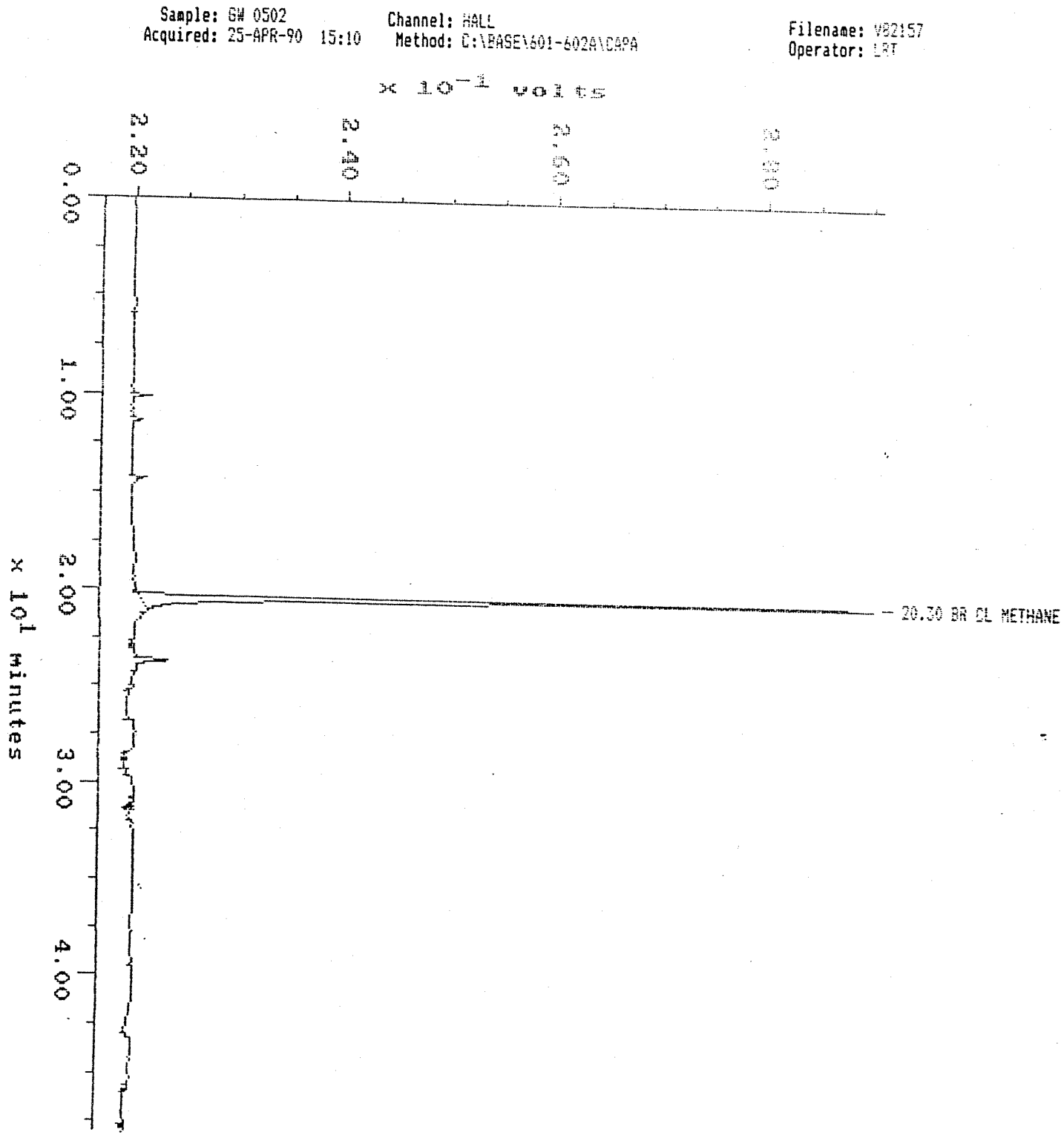
PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	23.535	101560	12955	100.00	45.51	45.51	F2 BENZENE
TOTAL		101560	12955		45.51	45.51	

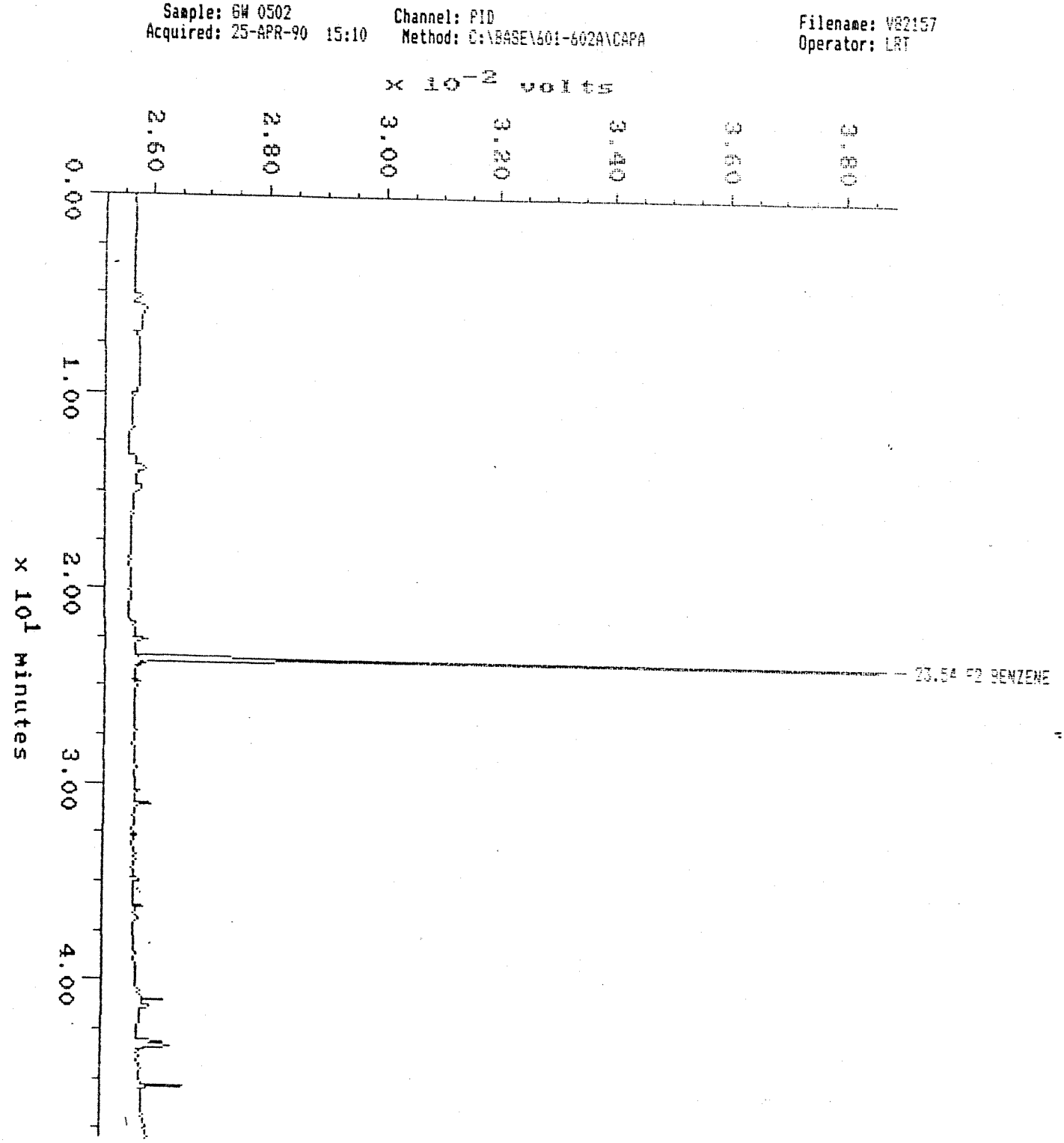
COLUMN: HALL

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	20.299	776033	69945	100.00!!	65.58!!	65.58!!	BR CL METHANE
TOTAL		776033	69945		65.58!!	65.58!!	

!! Result calculation based on peak response more than 10% outside of calibration range.

MN-COMP 0044080


Sample: GW 0502
Acquired: 25-APR-90 15:10
Channel: HALL
Method: C:\BASE\601-602A\CAPA
Filename: V02157
Operator: LRT
x 10⁻¹ volts
2.20
2.40
2.60
2.80
0.00
1.00
2.00
3.00
4.00
x 10¹ minutes
20.30 BR CL METHANE



MN-COMP 0044082

NANCO LABORATORIES, INC.

Printed: 25-APR-1990 17:52:07

SAMPLE: GW 0503
#13 in Method: CAPILLARY
Acquired: 25-APR-1990 16:19
Rate: 3.0 points/sec
Duration: 46.002 minutes
ul. Inj.: LAT

Type: UNKN
Instrument: Instrument 1
Filename: V92158
Index: 7

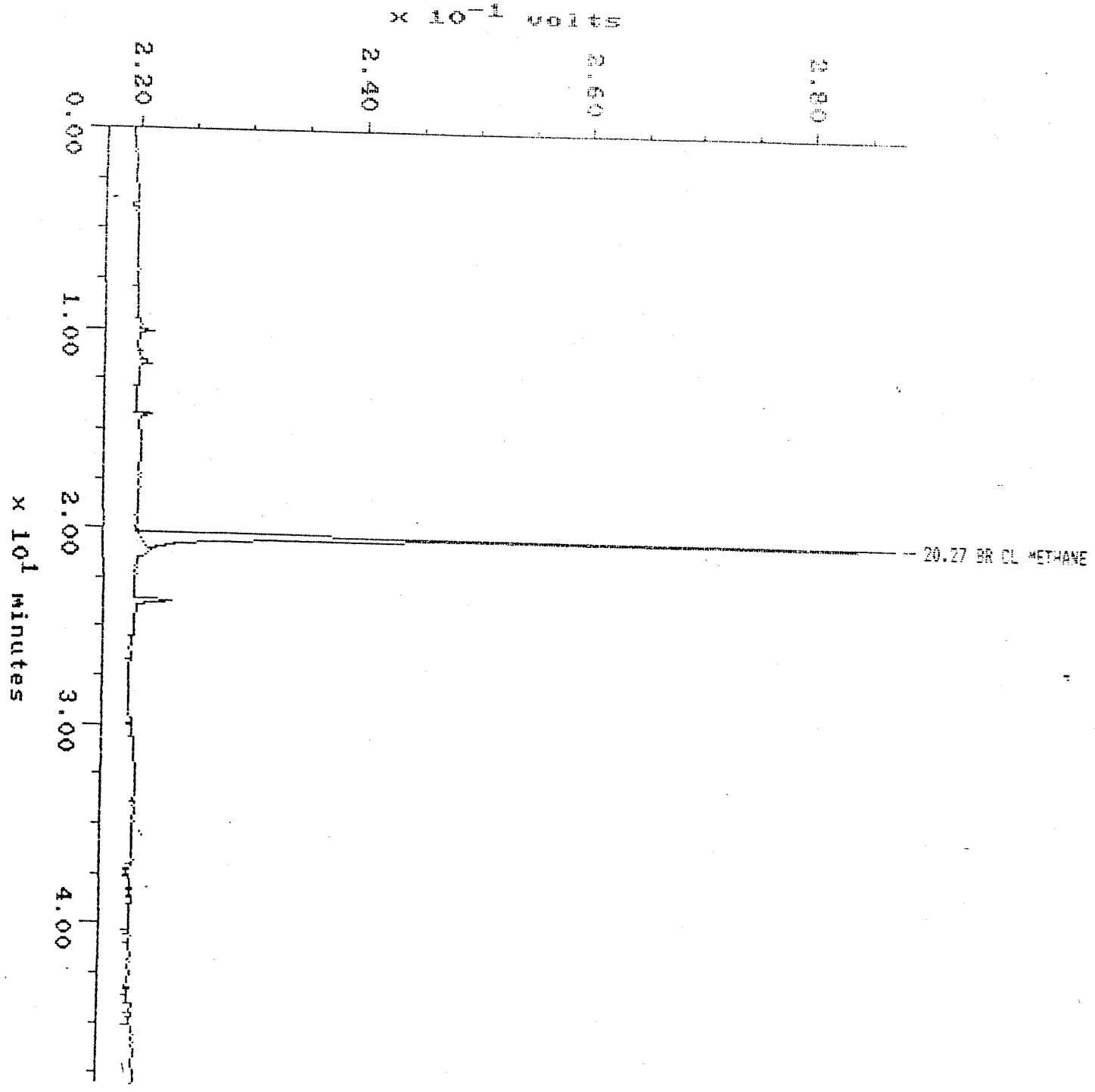
COLUMN: PID

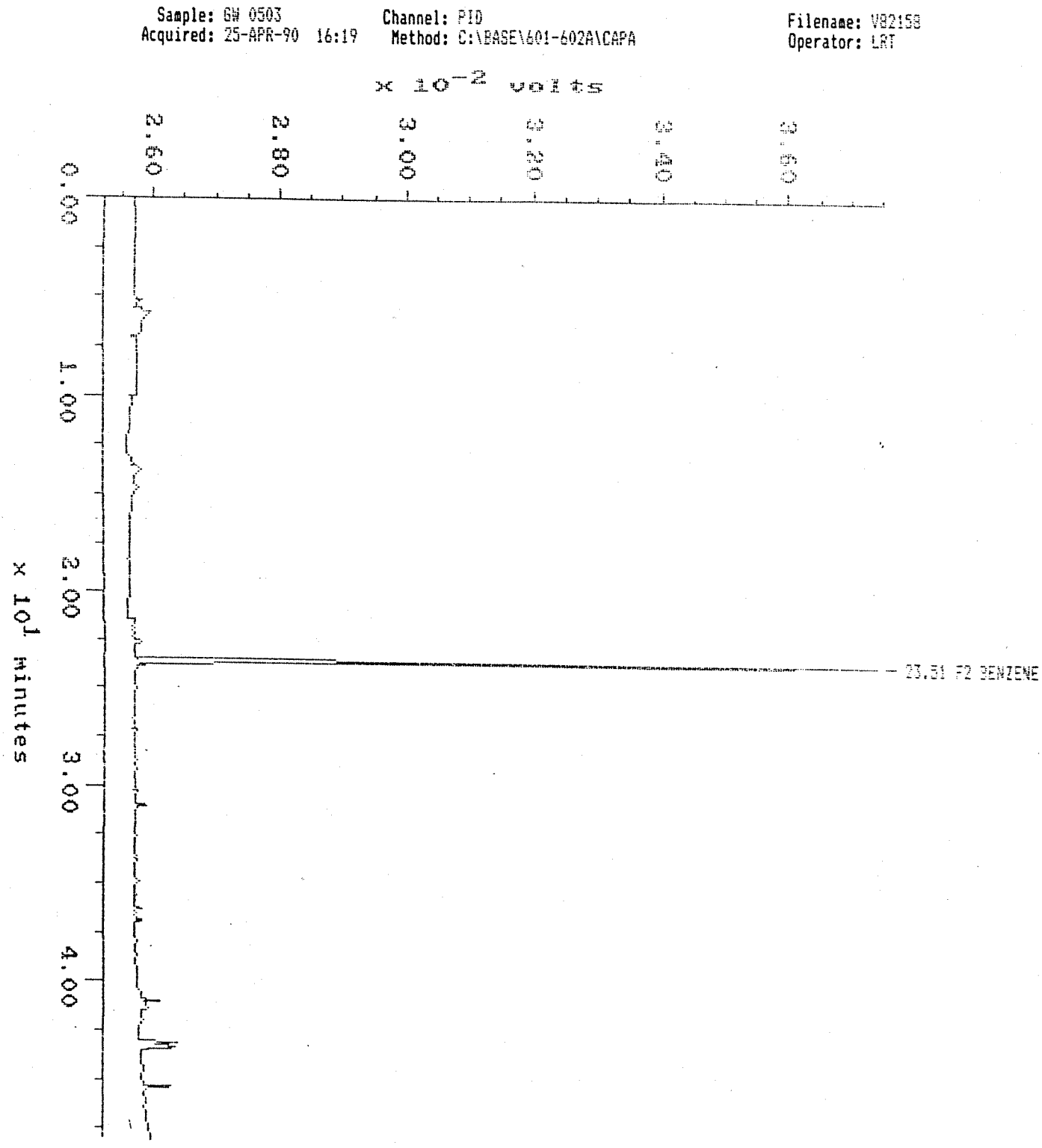
PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	23.513	90720	11662	100.00	40.65	40.65	P2 BENZENE
TOTAL		90720	11662		40.65	40.65	

COLUMN: HALL

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	20.271	770586	67211	100.00!!	65.12!!	65.12!!	BR CL METHANE
TOTAL		770586	67211		65.12!!	65.12!!	

!! Result calculation based on peak response more than 10% outside of calibration range.


Sample: GW 0503
Acquired: 25-APR-90 16:19
Channel: HALL
Method: C:\BASE\601-602A\CAPA
Filename: V0215B
Operator: LRT
x 10⁻¹ volts
2.20
2.40
2.60
2.80
0.00
1.00
2.00
3.00
4.00
x 10¹ minutes
20.27 BR CL METHANE


Sample: GW 0503
Acquired: 25-APR-90 16:19
Channel: PID
Method: C:\BASE\601-602A\CAPA
Filename: V82158
Operator: LRT
x 10⁻² volts
2.60
2.80
3.00
3.20
3.40
3.60
0.00
1.00
2.00
3.00
4.00
x 10¹ minutes
23.51 F2 BENZENE

NANCO LABORATORIES, INC.

Printed: 26-APR-1990 9:22:50

SAMPLE: GW 0504
#14 in Method: CAPILLARY
Acquired: 25-APR-1990 17:29
Rate: 3.0 points/sec
Duration: 48.002 minutes
ul. Inj.: LRT

Type: UNKN
Instrument: Instrument 1
Filename: V82159
Index: Disk

COLUMN: PID

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	23.513	88527	11125	100.00	39.67	39.67	P2 BENZENE
TOTAL		88527	11125		39.67	39.67	

COLUMN: HALL

PK#	Retention Time (minutes)	Peak Area	Peak Height	Amount Percent	Original Conc (PPB)	Solution Conc (PPB)	Component Name
1	20.266	771584	68927	100.00!!	65.20!!	65.20!!	BR CL METHANE
TOTAL		771584	68927		65.20!!	65.20!!	

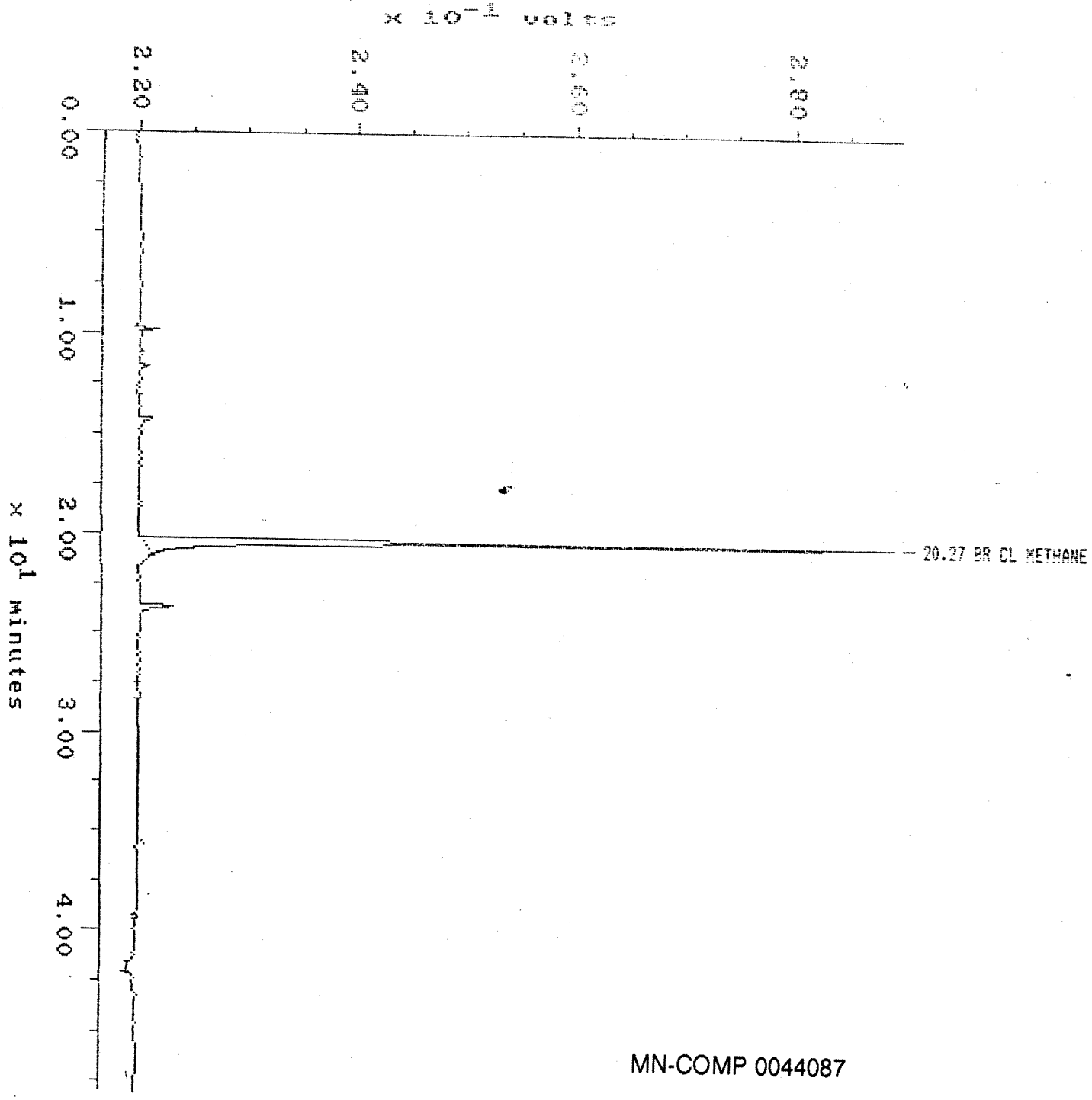
!! Result calculation based on peak response more than 10% outside of calibration range.

MN-COMP 0044086

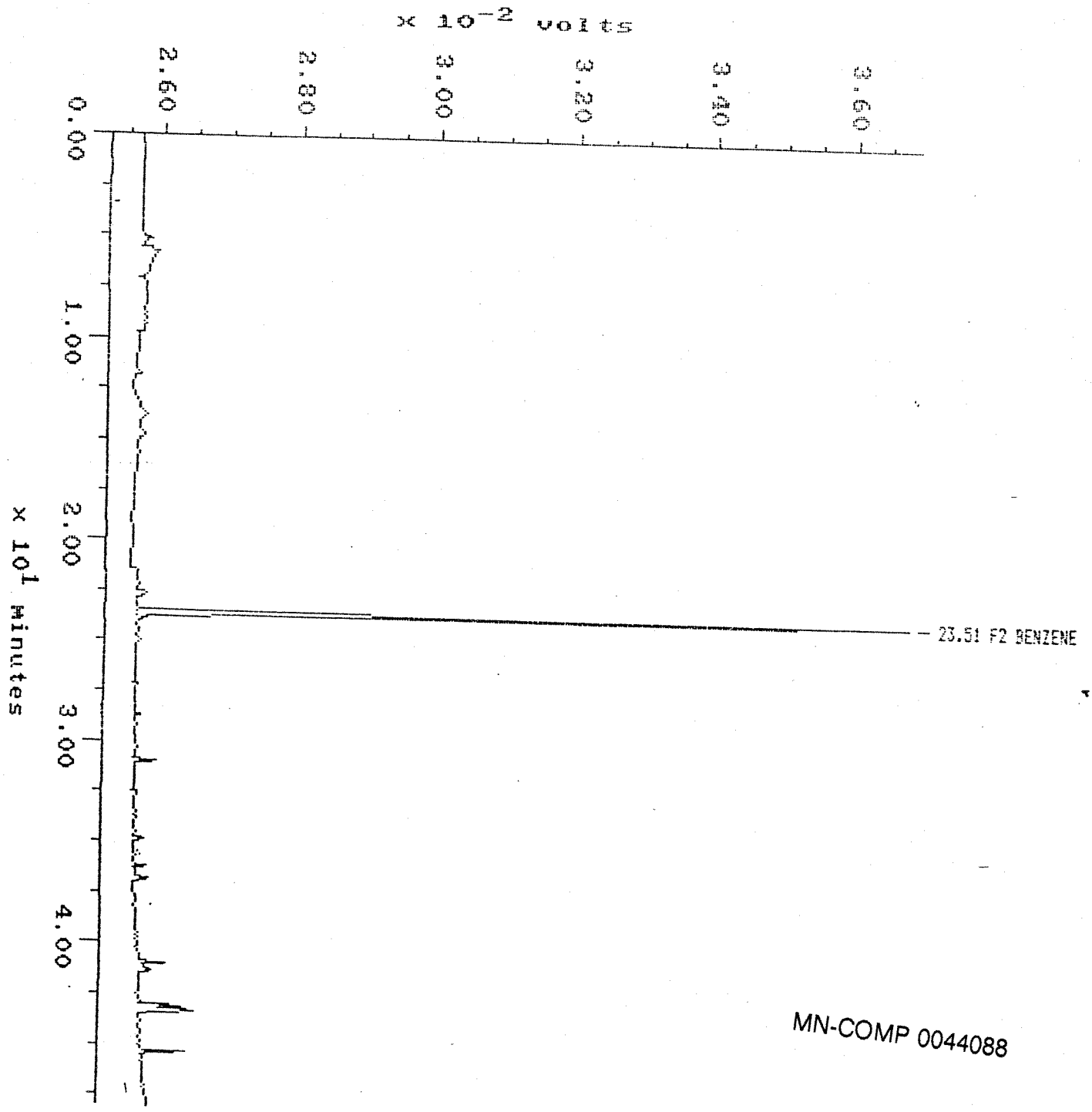
Sample: GW 0504
Acquired: 25-APR-90 17:29

Channel: HALL
Method: C:\BASE\601-602A\CAPA

Filename: V22159
Operator: LRT



MN-COMP 0044087



MN-COMP 0044088

Varian DS-15 AA-1275/1475 Report

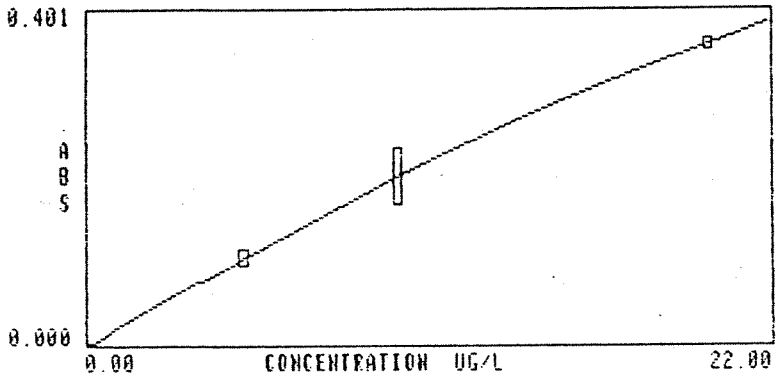
Pace Laboratory
1710 Douglas Drive Minneapolis,MN 55422
(612) 544-5543

Calculated: / / By:
Entered: 5/9/90 By: UMR
Reviewed: 5/10/90 By: Meg

OPERATOR LAURIE RYAN
DATE 05-09-90 09:35
BATCH As FURNACE #2

PROGRAM 1 As FURNACE

SAMPLE	CONC UG/L	%RSD	MEAN ABS	READINGS		
BLANK	0.00		-0.039	-0.040	-0.039	
STANDARD 1	5.00	2.6	0.105	0.107	0.103	
STANDARD 2	10.00	8.6	0.205	0.192	0.217	
STANDARD 3	20.00	1.5	0.365	0.369	0.361	



MDL=0.002 mg/L

EPA 378 6.20		6.75	109%	6.5	0.140	0.134	0.147	
2.00		1.43		23.5	0.030	0.035	0.025	
16760	ND	0.17	mg/L	99.9	0.003	0.007	0.000	
16760AWTV=10.0		9.67	97%	0.0	0.198	0.198	0.198	
16761	ND	0.17	mg/L	99.9	0.003	0.007	0.000	
16390 25X		OVER		2.3	0.752	0.765	0.740	Rerun at 125x 250x ~~5x or 10x~~
16390 25X AG		0.00		99.9	0.000	0.000	0.000	
16391 25X		OVER		2.8	1.025	1.046	1.004	Rerun at 200x or 500x
16391 25X AG		0.02		99.9	0.000	0.001	0.000	
16392 25X		OVER		2.3	0.884	0.870	0.899	Rerun at 125x or 250x
16392 25XAF		OVER		1.4	0.929	0.920	0.939	
16392 25X AG		0.02		99.9	0.000	0.002	-0.001	
16392 25XAFTV=10.0		8.97	90%	1.1	0.184	0.186	0.183	
10.0		9.02		2.6	0.185	0.189	0.182	
EPA 378 6.20		6.36	102%	4.8	0.132	0.128	0.137	
16393 25X	<2.5mg	-0.02		99.9	-0.000	-0.001	0.000	
16393 25X AG		-0.05		99.9	-0.001	-0.002	0.000	
14686	ND	0.57	mg/L	47.1	0.012	0.008	0.016	
14686AWTV=10.6		7.76	73%	3.9	0.160	0.165	0.156	

MN-COMP 0044089

SAMPLE		CONC UG/L	%RSD	MEAN ABS	READINGS		
14687	ND	0.38 mg/L	17.6	0.008	0.009	0.007	
14688	ND	0.10	99.9	0.002	0.004	0.000	
14689	ND	0.67	10.1	0.014	0.013	0.015	
14690	ND	0.29	70.7	0.006	0.009	0.003	
14691	ND	0.12	99.9	0.002	-0.001	0.006	
14691AW TV=10.1		6.986%	0.9	0.145	0.144	0.146	
~~14691AW~~ 14692	ND	0.33 mg/L	80.8	0.007	0.003	0.011	
~~14692~~ 14664 2x	ND	0.69 mg/L	4.8	0.014	0.015	0.014	MDL=0.004
10.0		8.29	7.4	0.171	0.180	0.162	
EPA 378 6.20		6.26 101%	4.8	0.130	0.126	0.135	
14866 2X	ND	0.05 mg/L	99.9	0.001	0.000	0.002	
14868 2X	ND	0.02	99.9	0.000	0.003	-0.002	
14870 2X	ND	-0.10	99.9	-0.002	0.000	-0.004	
14870 2XAW TV=10.0		8.46 85%	2.8	0.175	0.171	0.178	
14870 2XDAW		8.74 87%	5.4	0.180	0.187	0.173	
14874 2X	ND	0.12 mg/L	84.8	0.002	0.001	0.004	
14876 2X	ND	0.10	70.7	0.002	0.003	0.001	
14878 2X	ND	0.86	54.9	0.018	0.025	0.011	
14880 2X	ND	-0.12	28.2	-0.002	-0.002	-0.003	
14882 2X	ND	1.17	20.2	0.024	0.021	0.028	
14882 2XAW TV=11.2		10.72 96%	2.5	0.218	0.214	0.222	
14883 2X	ND	1.19 mg/L	16.9	0.025	0.022	0.028	
14885 2X	ND	0.90	14.8	0.019	0.021	0.017	
EPA 378 6.20		5.81 94%	5.2	0.121	0.117	0.126	
2.00		1.19	33.9	0.025	0.031	0.019	

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Hg-U

DATE ANALYZED: 4-27-90
ANALYZED BY: JZM
TIME: 07:55
CALCULATED BY: JZM
DATA REVIEWED BY: SWE
ENTERED BY: JZM
INSTRUMENT ID # 3

MDL 0.0002

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 10
ABS: 0.240
R FACTOR: Linear

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
BLK	N.D	ug/L					
std 10	10.00	↓					
std 7	6.93						
std 5	5.04						
std 3	3.06						
Std 1	1.00						
Std 0.2	0.25						
EPA	2.89	↓	WS 378	3.00		96	
12702	0.0114	mg/L					0.0115
15247	N.D	↓					
Solid BLK	N.D	↓					
66154	N.D	mg/kg	0.02				
15375	N.D	mg/L					
15377	N.D	↓	0.004				
15376	N.D	↓					
15503	N.D	↓		5.00	4.93	99	
				5.00	4.60	92	

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044091

FOR CLP USE ONLY? ☐

MIC ABSORPTION ELEMENT

ABBREVIATION Hg-U

DATE ANALYZED: 4-27-90
ANALYZED BY: JEM
TIME: 07:55
CALCULATED BY: JEM
DATA REVIEWED BY:
ENTERED BY: JEM
INSTRUMENT ID # 3

MDL 0.0002

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 10
ABS: 0.240
R FACTOR: Linreg

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
14281	N.D	mg/L	0.0004 Leachate	5.00	4.87	97	
14283	N.D			5.00	4.65	93	
14015	N.D			5.00	4.91	98	
15188	N.D						
15189	N.D						
14886	N.D						
14687	N.D			5.00	4.91	98	
				5.00	4.91	98	
14688	N.D						
14689	N.D						
Std 5	4.95	ug/L					
14690	N.D	mg/L					
14691	N.D						
14692	N.D						
14864	N.D						
14796	N.D		0.0004 Leachate	5.00	5.04	101	
14868	N.D						

A - Analytical spike or duplicate
M - Matrix spike or duplicate

14866 N.D

MN-COMP 0044092

FOR CLP USE ONLY? [ ]

MIC ABSORPTION ELEMENT

ABBREVIATION Hg-U

DATE ANALYZED: 4-27-90
ANALYZED BY: JEm
TIME: 07:55
CALCULATED BY: JEm
DATA REVIEWED BY:
ENTERED BY: JEM
INSTRUMENT ID # 3

MDL 0.002

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 10
ABS: 0.240
R FACTOR: Linear

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
14870	N.D	mg/L					
14874	N.D						
14876	N.D						
14879	N.D			5.00	5.04	101	
				5.00	5.04	101	
14880	N.D						
14882	N.D						
14883	N.D						
EPA	3.11		WS379	3.00		104	
14885	N.D						
14887	N.D						
14889	N.D						
14891	N.D			5.00	4.79	96	
				5.00	4.55	100	
14893	N.D						
14896 ~~14895~~	N.D						
14903	0.0003						
14940	N.D						
14894	N.D						

A - Analytical spike or duplicate
M - Matrix spike or duplicate

38 WPPLABFM pg 1

MN-COMP 0044093

.OMIC ABSORPTION ELEMENT

ABBREVIATION Hg-U

DATE ANALYZED: 4-27-90
ANALYZED BY: JSM
TIME: 07'55
CALCULATED BY: JSM
DATA REVIEWED BY:
ENTERED BY: JSM
INSTRUMENT ID # 3

FOR CLP USE ONLY? ☐

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 10
ABS: 0.240
R FACTOR: Linreg

MDL 0.0002

ample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
4942	N.D	mg/L		5.00	4.82	96	N.D
14944	N.D						
4946	N.D						
14947	N.D						
4949	N.D						
4951	N.D						
14675	N.D		Diss				
4677	N.D						
EPA	3.11	ug/L	WS 378 conc18	3.00		104	
4679	N.D	mg/L					
4681	N.D			5.00	5.04	101	
4792	N.D		0.0008 Leachate	5.00	5.00	101	
BLK Her	N.D	ug		5.00	4.43	89	
Hex BLK	N.D			5.00	4.87	97	
3324	<0.0076	mg/m3	IH	5.00	4.69	94	
3378	0.0128						

Analytical spike or duplicate
- Matrix spike or duplicate

FOR CLP USE ONLY? ☐

ABSORPTION ELEMENT

ABBREVIATION Hg-Y

DATE ANALYZED: 4-27-90
ANALYZED BY: JEM
TIME: 07:55
CALCULATED BY: JEM
DATA REVIEWED BY:
ENTERED BY: JEM
INSTRUMENT ID # 3

MDL 0.0002

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 10
ABS: 0.240
R FACTOR: Linear

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
15379	0.0431		IH Hg				
15380	0.0168						
15381	0.0223						
15382	0.0133						
std 5	4.95	ug/L					
15055	<0.0031						
EPA	2.89	ug/L	WS 378 conc B	3.00		96	
15056	0.0367		IH Hg				
15057	0.0534						
15058	0.0542						
15060	<0.25	ug					
EPA	2.98	ug/L	WS 378 conc A	3.00		100	
Solid BU	N.P	mg/Kg					
14156	N.P						
14157	N.P						
15383	<0.25	ug	IH Hg				

A – Analytical spike or duplicate
M – Matrix spike or duplicate

38 WPPLABFM pg 1

MIC ABSORPTION ELEMENT

ABBREVIATION Hg-4

DATE ANALYZED: 4-27-90
ANALYZED BY: JEM
TIME: 07:55
CALCULATED BY: JEM
DATA REVIEWED BY:
ENTERED BY: JEM
INSTRUMENT ID # 3

MDL 0.0002

FOR CLP USE ONLY?

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
13707	1.8	mg/Kg	0.09				
4475	N.D	↓	↓	2.00	2.01	102	
3412	0.17	↓		2.00	2.10	105	
4572	N.D	↓	↓				
BLK	N.D	ug/L					
std 10	10.36	↓					
std 5	4.95						
std 1	1.04						
PA	3.98	↓	WS 378	3.00		100	

Analytical spike or duplicate
Matrix spike or duplicate

MN-COMP 0044096

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Cr, Cr-N
Cr-D

DATE ANALYZED: 5-10-90
ANALYZED BY: MKG
TIME: 20:25
CALCULATED BY: Meg
DATA REVIEWED BY: [illegible]
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.1 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
0.100 std	0.101	mg/l	101.0%				
1.00 std	0.979		97.9%				
2.00 std	1.96		98.0%				
4.00 std	3.95		98.8%				
EPA 283	3.46		TV = 3.25 106.5%				
ICP Blank	0.023						
"	0.000		ND				
"	0.023						
Blank	0.036						
"	0.032		ND				
"	0.023						
13061	13	mg/kg	ICP MDL = 2.5				
13063	180	"	"	8.25	8.50	103.0	8.95 2.6
13412	24	"	"	1.95	1.97	101.0	1.97 0.0
14686	ND	mg/l					
14687	ND	"					

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044097

ANALYSIS:

FOR CLP USE ONLY? ☐

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Cr, Cr-N, Cr-D

DATE ANALYZED: 5-10-90
ANALYZED BY: MKG
TIME: 20:25
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.1

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
14688	ND	mg/l	ICP				
14689	ND						
14690	ND						
14691	ND						
14692	ND						
1.00 std	0.972		97.2%				
2.00 std	1.97		98.5%				
15966	ND		under RCRA 8	1.00	0.988	98.8	
14208 rev	14	mg/kg	recheck				
17766	ND	mg/l					
17463	ND						
17779	ND			1.02	1.15	112.7	1.19 1.78
16170	ND						
16171	ND						
16172	ND						
16173	ND						

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044098

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Cr, Cr-N, Cr-D

DATE ANALYZED: 5-10-90
ANALYZED BY: MKG
TIME: 20:25
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.1 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
16174	ND	mg/l					
16175	ND						
16176	ND						
16177	ND						
16178	ND						
0.100 std	0.109		109.0%				
1.00 std	0.990		99.0%				
2.00 std	2.00		100.0%				
4.00 std	4.00		100.0%				
EPA 283	3.50		TV = 3.25 107.8%				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044099

ANALYSIS:

FOR CLP USE ONLY? ☐

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Cr-D

DATE ANALYZED: 5-10-90
ANALYZED BY: MKG
TIME: 20:55
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.1 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
0.100 std	0.119	mg/l	119.0%				
1.00 std	0.977		97.7%				
2.00 std	2.01		100.5%				
4.00 std	4.04		101.0%				
EPA 283	3.48		TV = 3.25 107.1%				
17260	ND						
17262	ND						
17264	ND			1.00	1.09	109.0%	1.10 0.4%

A – Analytical spike or duplicate
M – Matrix spike or duplicate

MN-COMP 0044100

ANALYSIS:

FOR CLP USE ONLY? ☐

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Ag-N

DATE ANALYZED: 5-10-90
ANALYZED BY: MKG
TIME: 22:50
CALCULATED BY: Meg
DATA REVIEWED BY: JCR
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.04 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 2.0
ABS: 0.45
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
0.040 std	0.040	mg/l	100.0%				
0.500 std	0.482		96.4%				
1.00 std	.991		99.1%				
2.00 std	2.02		101.0%				
EPA 283	3.04		TV=3.00 101.3%				
ICP Blank	0.002		ND				
|	0.002		ND				
|	0.003		ND				
13061	ND	mg/kg	MDL=1.0				
13063	ND	|					
13412	ND	|		0.511	0.484	94.7	0.487 0.31
14686	ND	mg/l					
14687	ND						
14688	ND						
14689	ND						
14690	ND						

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044101

ANALYSIS:

FOR CLP USE ONLY? ☐

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Ag-N

DATE ANALYZED: 5-10-90
ANALYZED BY: MKG
TIME: 22:50
CALCULATED BY: MEG
DATA REVIEWED BY:
ENTERED BY: MEG
INSTRUMENT ID # 3

MDL 0.04 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
14691	ND	mg/l					
14692	ND						
159166	ND		logged under RCRA 8	0.502	0.480	95.6	
0.040 std	0.038		95.0%				
0.500 std	0.488		97.6%				
1.00 std	1.00		100.0%				
2.00 std	2.05		102.5%				
EPA 283	3.02		TV = 3.00 100.7%				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044102

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Cu, Cu-N, Cu-D (1)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 16:25
CALCULATED BY: Meg
DATA REVIEWED BY: Meg
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.01 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 4.0 mg/l
ABS: 0.70
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Spike Rec Found	Spike Rec % REC	Duplicate
0.010 std	0.011	mg/l	110%				
1.00 std	0.978		97.8%				
2.00 std	1.99		99.5%				
4.00 std	4.01		100.3%				
ERA 9973	0.117		TV = 0.121 96.7%				
ICP Blank	0.080						
ICP Blank	0.084		0.089				
ICP Blank	0.103						
Blank	0.039						
Blank	0.016		0.023				
Blank	0.015						
130061	18	mg/kg	ICP MDL = 0.25				
130063	11		ICP	1.43 ~~2.93~~	1.35	94.5 ~~55.6~~ 87.4	1.31 1.4 R
13412	8.8		ICP	1.35 ~~2.35~~	1.18	~~50.2~~	1.16 0.79
14686	ND	mg/l	ICP				
14687	ND						

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044103

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Cu, Cu-N, ~~Cu-D~~ (2)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 16:25
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.01 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
14688	ND	mg/l	ICP				
14689	ND						
14690	ND						
14691	0.01						
14692	ND						
17127	0.05						
17168	0.88						
17169	0.04						
17285	ND						
1.00 std	0.981		98.1%				
2.00 std	1.97		98.5%				
17286	0.10						
17287	0.10						
17288	7.0						
17293	0.14						
17475	ND						

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044104

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Cu, Cu-N, ~~Cu-D~~ (3)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 16:25
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.01 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
17477	ND	mg/l					
17479	ND	"					
17481	ND	"					
17519	11,000	mg/kg					
17520	18	mg/l					
17557	35	mg/kg		1.72	1.76	102.3	1.74 0.57%
0.010 std	0.010	mg/l	100.0%				
1.00 std	.984		98.4%				
2.00 std	2.00		100.0%				
4.00 std	3.97		99.2%				
ERA 993	0.116		TV = 0.121 95.9%				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044105

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Cu-D

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 16:55
(4) CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.01 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 4.00
ABS: 0.70
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
0.010 std	0.009	mg/l	90.0%				
1.00 std	0.983		98.3%				
2.00 std	1.99		99.5%				
4.00 std	4.01		100.2%				
ERA 9923	0.115		TV = 0.121 95.0%				
17760	ND						
17762	ND						
17764	ND			1.00	0.976	97.6	0.975 0.10R

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044106

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Zn, Zn-N ①

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 23:20
CALCULATED BY: Meg
DATA REVIEWED BY: Meg
ENTERED BY: Meg
INSTRUMENT ID # 3
0.10 mg/l digested
MDL 0.01 mg/l undigested

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
0.10 std	0.09	mg/l	90.0%				
5.00 std	4.90		98.0%				
10.0 std	9.86		98.6%				
20.0 std	20.0		100.0				
ERA 9923	0.27		TV = 0.28 96.4%				
ICP Blank	0.10						
ICP Blank	0.11		0.09				
ICP Blank	0.05						
Blank	0.06						
Blank	0.05		0.05				
Blank	0.03						
-13061	76	mg/kg	ICP MDL = 2.5				
-13063	150		ICP	9.97	10.41	104.4	10.21 0.97RP
+7519	260						
+7520	11	mg/l	MDL = 0.10				
+7557	65	mg/kg	MDL = 2.5				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044107

ANALYSIS:

FOR CLP USE ONLY? ☐

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Zn, Zn-N (2)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 23:20
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3
0.10 mg/l digested
MDL 0.01 mg/l digested

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
0.10 std	0.11	mg/l	110%				
5.00 std	4.94		98.8%				
10.0 std	9.87		98.7%				
20.0 std	20.5		102.5%				
ERA 9923	0.27		96.4%				
0.10 std	0.009	mg/l	90.0%				
0.250 std	0.246		98.4%				
0.500 std	0.502		100.4%				
1.00 std	0.996		99.6%				
ERA 9923	0.293		TV = 0.280 104.6%				
Blank ICP	0.062						
|	0.062		0.061				
	0.058						
13412	17	mg/kg	ICP MDL = 2.5	4.69	4.74	101.2	4.55 2.0R
16554	0.07	mg/l	MDL = 0.01				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044108

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Zn, Zn-N (3)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 23:20
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3
0.10 mg/l digested
MDL 0.01 mg/l digested

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
17281	0.08	mg/l	MDL = 0.01				
17282	0.03						
15207	0.25						
15457	0.26						
15458	0.01						
17127	0.13		MDL = 0.10				
17169	ND						
17293	0.95						
Blank	0.057		0.05				
Blank	0.043						
Blank	0.045						
0.250 std	0.245		98.0%				
0.500 std	0.498		99.6%				
14686	ND		ICP MDL = 0.01				
14687	ND						
14688	ND						

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044109

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Zn, Zn-N (4)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 23:20
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3
0.10 mg/l digested
MDL 0.01 mg/l digested

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
14689	ND	mg/l	ICP MDL=0.01				
14690	ND						
14691	ND			0.250	0.252	100.8	0.252 0.0RP
14692	ND						
0.010 std	0.011		110.0%				
0.250 std	0.251		100.4%				
0.500 std	0.507		101.4%				
1.00 std	1.011		101.1%				
ERA 9923	0.296		TV=0.280 105.7%				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044110

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Cd, Cd-N (1)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 15:30
CALCULATED BY: Meg
DATA REVIEWED BY: Jem
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.01 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 1.0
ABS: 0.67
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
0.010 std	0.010	mg/l	100.0%				
0.250 std	0.252		100.8%				
0.500 std	0.498		99.6%				
1.00 std	1.00		100.0%				
EPA 283	0.610		TV = 0.650 93.8%				
ICP Blank	0.011						
"	0.011		0.011				
"	0.010						
Blank	0.005						
"	0.002		ND				
"	0.002						
13061	ND	mg/kg	ICP MDL = 0.25				
13063	0.35	"	"	0.414	.396	95.5	.397 0.1
13412	1.0	"	"	0.441	0.407	91.5	0.393 1.8 R
14686	ND	mg/l	MDL = 0.01				
14687	ND	"	"				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044111

ANALYSIS:

FOR CLP USE ONLY? ☐

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Cd, Cd-N (2)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 15:30
CALCULATED BY: Meg
DATA REVIEWED BY: [illegible]
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.01

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
14688	ND	mg/l	ICP				
14689	ND						
14690	ND						
14691	ND						
14692	ND						
0.250 std	0.248		99.2%				
0.500 std	0.498		99.6%				
15966	ND		logged in under RCRA8	0.250	0.252	100.8	
14208 rev	2.8	mg/kg	MDL = 0.25				
17521	0.50	mg/kg					
17293	0.04	mg/l					
17519	3.1	mg/kg					
17520	0.04	mg/l					
17331	0.50	mg/kg					
17309	0.82			0.483	0.417	96.3	391 3.2R
17535	0.30						

A - Analytical spike or duplicate
M - Matrix spike or duplicate

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ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Cd, Cd-N (3)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 15:30
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.01

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
0.010 std	0.010	mg/l	100.0%				
0.250 std	0.249		99.6%				
0.500 std	0.498		99.6%				
1.00 std	1.00		100.0%				
EPA 283	0.611		TV = 0.650 94.0%				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044113

FOR CLP USE ONLY: ___

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Pb, Pb-N (1)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 20:30
CALCULATED BY: Meg
DATA REVIEWED BY: Rer
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.1 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 4.0
ABS: 0.12
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
0.100 std	0.090	mg/l	90.0%				
1.00 std	0.989		98.9%				
2.00 std	2.01		100.5%				
4.00 std	3.94		98.5%				
EPA 283	3.90		TV=4.00 97.5%				
Blank-ICP	0.049						
"	0.050		ND				
"	0.045						
Blank	0.049						
"	0.028		ND				
"	0.002						
13061	7.3	mg/kg	ICP MDL=2.5				
13063	15	"	"	4.61	4.19	90.8	4.12 0.08R
13412	7.9	"	"	4.32	3.62	83.8	3.47 2.1R
14686	ND	mg/l	MDL=0.1				
14687	ND	"	"				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044114

ANALYSIS

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Pb, Pb-N (2)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKB
TIME: 20:30
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.1

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
14688	ND	mg/l	ICP MDL = 0.1				
14689	ND						
14690	ND						
14691	ND						
14692	ND						
1.00 std	0.968		96.8%				
2.00 Std	2.03		101.5%				
159166	ND		logged under RCRA 8	1.03	1.03	100.0	1.07 1.9 RPD
17521	43	mg/kg	MDL = 2.5				
17531	13	mg/kg					
17532	63						
17570	9.4						
17572	11						
17573	12						
17574	42						
17575	5.5						

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044115

ANALYSIS:

FOR CLP USE ONLY? ☐

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Pb, Pb-N

(3)

DATE ANALYZED: 5-9-90
ANALYZED BY: MKG
TIME: 20:30
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.1 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
17576	26	mg/kg					
17577	26	"		5.05	4.56	90.3	4.82 2.8
1.00 std	1.00	mg/l	100.0%				
2.00 std	1.99		99.5%				
4.00 std	4.00		100.0%				
17468	2,500	mg/kg	MDL = 2.5				
17470	57	"	"				
17519	13,000	"					
17520	0.28	mg/l	MDL = 0.1				
17533	15	mg/kg	MDL = 2.5				
17534	11	"	"				
17535	4.2	"	"				
17536	13	"	"				
17537	6.3	"	"				
17557	6.0	"	"				
17558	12	"	"	4.46	3.91	86.2	4.04

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044116

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Pb, Pb-N (4)

DATE ANALYZED: 5-9-90
ANALYZED BY: MK6
TIME: 20:30
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.1 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
0.100 std	0.096	mg/l	96.0%				
1.00 std	0.980		98.0%				
2.00 std	2.00		100.0%				
4.00 std	4.02		100.5%				
EPA 283	3.95		TV=4.00 98.8%				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044117

ANALYSER:

FOR CLP USE ONLY? ☐

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Ni

DATE ANALYZED: 5-7-90
ANALYZED BY: TEM
TIME: 14:00
CALCULATED BY: Meg
DATA REVIEWED BY: Meg
ENTERED BY: Meg
INSTRUMENT ID #

MDL 0.05

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
17145	ND	mg/l					
17146	0.59						
17147	ND						
17148	0.46			1.23	1.25	101.6	1.22
17149	0.23						
17168	ND						
17285	ND						
17286	ND						
17287	ND						
17288	0.08						
14686	ND		entered under Ni-N				
14687	ND						
14688	ND						
14689	ND						
14690	ND			1.00	1.04	104.0	1.02
14691	ND						

A - Analytical spike or duplicate
M - Matrix spike or duplicate

14692 ND

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MN-COMP 0044118

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Ni

DATE ANALYZED: 5-7-90
ANALYZED BY: TEM
TIME: 14:00
CALCULATED BY: Meg
DATA REVIEWED BY: Meg
ENTERED BY: Meg
INSTRUMENT ID #

MDL 0.05

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
blank	0.012	mg/l	} 0.007=ND				
blank	0.008						
blank	ND						
16934	0.28						
13212	1.076	mg/kg	MDL= 1.3 mg/kg				
13213	15						
16390	5.15	ug	MDL= 2.5 ug				
16391	5.60						
16392	8.35						
16393	ND						
16758	0.82	mg/l					
16759	4.5						
16023	0.20			1.10	1.13	102.7	
16814	1.1			1.10	1.13	102.7	
16935	0.41						
17127	0.12						

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044119

4/26/90 mR 16:05

Entered 4/26/90 LmR

PROGRAM 2 Se Furnace #2

SAMPLE		CONC ug/L	%RSD	MEAN ABS	READINGS	
BLANK		0.0		0.000	-0.001	0.001
STANDARD 1		12.5	9.2	0.084	0.090	0.079
STANDARD 2		25.0	5.6	0.164	0.157	0.170
STANDARD 3		50.0	0.9	0.290	0.292	0.288
EPA 378 28.0		33.1 116%	3.7	0.209	0.215	0.204
5.00		4.4	7.1	0.029	0.031	0.028
13721	ND	-0.7 mg/L	15.7	-0.004	-0.004	-0.005
13721A TV=20.0		19.3 96%	2.2	0.128	0.126	0.130
13722	ND	-0.7 mg/L	99.9	-0.004	-0.001	-0.008
13723	ND	-0.7	0.0	-0.005	-0.005	-0.005
13724	ND	-0.2	99.9	-0.001	0.000	-0.003
13725	ND	1.2	99.9	0.008	0.002	0.014
13726	ND	-0.9	0.0	-0.006	-0.006	-0.006
13726A TV=20.0		12.7 64%	0.8	0.085	0.085	0.086
13727	ND	-1.2 mg/L	35.3	-0.008	-0.010	-0.006
14686	ND	-0.3	70.7	-0.002	-0.001	-0.003
14687	ND	-0.5	20.7	-0.003	-0.004	-0.003
25.0		22.3	2.8	0.147	0.144	0.150
EPA 378 28.0		29.2 104%	1.5	0.188	0.186	0.190
14688	ND	-0.8 mg/L	12.8	-0.005	-0.005	-0.006
14689	ND	-0.5	20.2	-0.003	-0.003	-0.004
14689A TV=20.0		12.1 60%	4.3	0.082	0.079	0.084
~~14689DA~~ 14690	ND	-0.7 mg/L	28.2	-0.005	-0.004	-0.006
14691	ND	-0.4	94.2	-0.003	-0.001	-0.005
14692	ND	-0.6	0.0	-0.004	-0.004	-0.004
14788	ND	0.2	99.9	0.001	-0.001	0.004
14789	ND	-0.7	0.0	-0.005	-0.005	-0.005
14839	ND	0.1	99.9	0.000	-0.002	0.003
14839A TV=20.0		15.4 77%	2.0	0.103	0.105	0.102
14840	ND	-0.4 mg/L	0.0	-0.003	-0.003	-0.003
14841	ND	0.0	99.9	0.000	0.000	0.000
14842	ND	-0.6	99.9	-0.004	0.000	-0.008
25.0		21.5	1.9	0.142	0.140	0.144
EPA 378 28.0		29.8 106%	1.4	0.191	0.189	0.193
14843	ND	-0.2 mg/L	99.9	-0.001	-0.003	0.000
14864		-0.9	23.5	-0.006	-0.005	-0.007
14864A TV=20.0		1.0	97.9	0.006	0.002	0.011
14864DA		0.1	99.9	0.001	-0.001	0.003
14866		-0.7	15.7	-0.004	-0.005	-0.004
14868		-0.4	47.1	-0.003	-0.004	-0.002
14870		-0.3	70.7	-0.002	-0.003	-0.001
14874		-0.4	99.9	-0.002	-0.005	0.000
14876		-0.4	99.9	-0.002	-0.005	0.000
14876A TV=20.0		1.3	24.9	0.009	0.007	0.010
14878		-0.4	47.1	-0.003	-0.004	-0.002
14880		-0.1	99.9	-0.001	0.000	-0.002
~~14684DA~~ 14684DA TV=20.0		12.1 60%	10.3	0.082	0.088	0.076
EPA 378 28.0		30.1	1.4	0.193	0.191	0.195
5.00		3.3	21.9	0.022	0.026	0.019

Rerun at 2x or 5x

MN-COMP 0044120

ANALYSIS: ,

FOR CLP USE ONLY? ☐

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Ba

DATE ANALYZED: 5-8-90
ANALYZED BY: TEM
TIME: 9:45
CALCULATED BY: Meg
DATA REVIEWED BY:
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.2 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
14687	ND	mg/l		5.00	5.10	102.0	5.19 0.87 RPD
14688	ND						
14689	ND						
14690	ND						
14691	0.2						
14692	ND			2.50	2.66	106.4	2.63 0.57 RPD
15966	ND		listed under subset RCRA-8	2.50	2.60	104.0	
0.2 std	0.23		115.0%				
2.5 std	2.58		103.2%				
5.0 std	5.16		103.2%				
10.0 std	10.24		102.4%				
EPA 686	10.18		101.8%				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044121

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Ba and Ba-N

DATE ANALYZED: 5-8-90
ANALYZED BY: TEM
TIME: 9:45
CALCULATED BY: Meg
DATA REVIEWED BY: Meg
ENTERED BY: Meg
INSTRUMENT ID # 3

MDL 0.2 mg/l

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.:
ABS:
R FACTOR:

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
0.2 std	0.21	mg/l	~~95.2%~~ 105.0%				
2.5 std	2.61		104.4 %				
5.0 std	5.04		100.8 %				
10.0 std	10.21		102.1%				
EPA 686	10.06		TV=10.00 100.6%				
Blank	ND						
Blank	ND						
Blank	ND						
15044	1.0						
Blank-ICP	ND						
Blank-ICP	ND						
Blank-ICP	ND						
13061	20	mg/kg	MDL= 5.0				
13063	100						
13412	27						
14686	ND	mg/l					

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044122

CRA Consulting Engineers
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive, Waterloo, Ontario Canada N2V 1C2

SHIPPED TO (Laboratory name): Pace Labs

CHAIN OF CUSTODY RECORD

PROJECT Nº: 2853

PROJECT NAME: Ford - Site C

SAMPLER'S SIGNATURE: Jon Michels (SIGN)

SEQ. Nº	SAMPLE Nº	DATE	TIME	SAMPLE LOCATOIN	SAMPLE TYPE	Nº OF CONTAINERS	REMARKS
W-	041990-JM-	-01	1468		Water	4	see Below:
4	11	-02	87			4	
4	4	-03	88			4	
11	11	-04	89			4	
11	11	-05	90			4	
11	11	-06	91			4	
11	4	-07	92			3	

Analyze For:

(1) VOC's Via EPA Methods 601; 602, + cis-1,2, dichloroethylene + ethylacetate.

(2) As, Se, Hg via EPA atomic Absorption methods.

(3) Ba, Cd, Cr, Cu, Pb, Ag, Zn, Ni via ICP analysis EPA method 6010.

* Call Jon Christofferson or Jon Michels for questions.

TOTAL NUMBER OF CONTAINERS: 27

ANTICIPATED CHEMICAL HAZARDS:

RELINQUISHED BY: [1] Jon Michels (SIGN)	DATE/TIME 4-19-90 1430	RECEIVED BY: [2] (SIGN)
RELINQUISHED BY: [2] (SIGN)	DATE/TIME	RECEIVED BY: [3] (SIGN)
RELINQUISHED BY: [3] (SIGN)	DATE/TIME	RECEIVED BY: [4] (SIGN)
ADDITIONAL SIGNATURE SHEET REQUIRED ☐		

METHOD OF SHIPMENT: Courrier (Pace)	SHIPPED BY:	RECEIVED FOR LABORATORY BY: (SIGN)	DATE/TIME
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:		COOLER OPENED BY: (SIGN)	DATE/TIME

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YELLOW – RECEIVING LABORATORY COPY
PINK – CRA LABORATORY COPY
GOLDEN ROD – SHIPPERS

MN-COMP 0044123

Nº 008930

MEMORANDUM

TO: Jon Christofferson

REFERENCE NO.: 2853

FROM: David Dempsey

DATE: June 7, 1990

RE: Data Quality Assessment and Validation for Seven Groundwater Samples Collected During the April 1990 Sampling Event at the Ford Site C Project Site

---

The following details a data quality assessment and validation for seven groundwater samples collected on April 19, 1990 at the Ford Site C Project Site. The samples were analyzed for site-specific parameters, namely, volatile organic compounds (VOC) and metals by Pace Laboratories, Inc. (Pace).[1] Quality assurance criteria were established by the analytical methods.[2]

Holding Time Periods

Holding time periods were established by the analytical methods and are summarized below:

VOC	-14 days from sample collection to completion of analysis
Metals	-6 months from sample collection to completion of analysis, except for mercury -28 days from sample collection to completion of analysis for mercury

As all samples met the above criteria, the data were found to be acceptable based upon the holding time periods.

Method Blank Samples

The potential for sample contamination through laboratory protocols was measured by means of method blank samples. The VOC method blank sample contained methylene chloride at a concentration of 1.42 µg/*l*. Methylene chloride data for samples

---

[1]Analytical methods were taken from 40 CFR Part 136 Appendix A and "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, revised March 1983 and are summarized below:

VOC	-601/602
Metals	-200 Series

[2]Application of quality assurance criteria was consistent with "Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses", February 1, 1988 and "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, July 1, 1988.

W-041990-JM-01, W-041990-JM-02 and W-041990-JM-03 were qualified as non-detect (U), as a result. Similarly, the metals method blank sample was found to contain analytes copper and zinc at concentrations of 0.023 mg/*l* and 0.05 mg/*l*, respectively. Sample W-041990-JM-06 had its copper datum qualified as non-detect (U), while no action upon the zinc data was required. Of interest was the fact that no method blank sample was reported for selenium. However, as all samples were reported to be free of selenium, no action upon the selenium data was necessary.

Surrogate Compounds Percent Recoveries (Surrogate Recoveries)

Individual sample performance for VOC analyses was to be monitored via surrogate recoveries. To date, no surrogate data have been received from Pace. Therefore, matrix spike/matrix spike duplicate data were solely used to judge the VOC data.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Percent Recoveries

Matrix efficacy was monitored by MS/MSD analyses. An in-house sample at Pace underwent MS/MSD analyses for VOC. Therefore, direct application of these data was not possible. The method was shown to have been precise as the percent recoveries were within control limits established by Pace.

Sample W-041990-JM-04 underwent a matrix spike analysis for the metal analyte selenium, while sample W-041990-JM-06 had matrix spike analyses performed for metal analytes arsenic and zinc. All remaining metal analytes had matrix spike analyses performed upon in-house samples. Arsenic and selenium percent recoveries fell below the control limits set by Pace; therefore, the results for all samples for these analytes were qualified as estimated (UJ). As the percent recoveries for the remaining metals were within limits, the methods were shown to be accurate.

Laboratory Duplicate Analyses

The level of analytical precision for metals analyses was measured through laboratory duplicate analyses. The duplicate analysis for barium was performed upon sample W-041990-JM-02, while in-house samples at Pace were used for the remaining analytes duplicate analyses. Only lead analyses were shown to have an unacceptable level of precision. Therefore, all lead data were qualified as estimated (UJ).

Rinsate Sample

Cleanliness of sampling equipment was checked by collection of rinsate sample W-041990-JM-03. The only analyte detected within the sample was methylene chloride. However, this methylene chloride datum was qualified as non-detect (U) based upon the method blank sample. Therefore, the sampling equipment was properly cleaned prior to collection of samples.

Field Duplicate Samples

Overall precision of this sampling event was monitored by collection of field duplicate samples W-041990-JM-04 and W-041990-JM-05. Both samples were found to be free of all target analytes, indicating that an acceptable level of precision was achieved.

Overall Assessment

Methylene chloride data for sample W-041990-JM-01, W-041990-JM-02 and W-041990-JM-03 were qualified as non-detect (U) based upon method blank sample data. Metals analytes arsenic, lead and selenium had all results qualified as estimated (UJ). The remaining data were found to be acceptable for the quanitative assessment of analytes within the groundwater at the project site.

cc: Bruce Clegg

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REPORT OF LABORATORY ANALYSIS

July 13, 1990

Waterloo File Copy

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Rec'd CRA

JUL 20 90

Mr. Jon Christofferson
Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

RE: PACE Project No. 900607.552
2853

Dear Mr. Christofferson:

Enclosed is the report of laboratory analyses for samples received June 07, 1990.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Helen L.S. Addie
Project Manager

Enclosures

MN-COMP 0044127

1710 Douglas Drive North
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REPORT OF LABORATORY ANALYSIS

Conestoga Rovers & Associates, Inc.
382 West County Road D
St. Paul, MN 55112

July 13, 1990
PACE Project
Number: 900607552

Attn: Mr. Jon Christofferson

2853

RB B3 B1

PACE Sample Number:			10 0219118	10 0219126	10 0219134
Date Collected:			06/06/90	06/06/90	06/06/90
Date Received:			06/07/90	06/07/90	06/07/90
			W-060690-	W-060690-	W-060690-
Parameter	Units	MDL	RF-01	RF-02	RF-03
INORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Arsenic	mg/L	0.002	ND	ND	ND
Barium	mg/L	0.006	ND	0.18	0.060
Cadmium	mg/L	0.006	ND	ND	ND
Chromium	mg/L	0.010	ND	ND	ND
Copper	mg/L	0.005	ND	ND	ND
Lead	mg/L	0.045	ND	ND	ND
Mercury	mg/L	0.0002	ND	ND	ND
Nickel	mg/L	0.021	ND	ND	ND
Selenium	mg/L	0.005	ND	ND	ND
Silver	mg/L	0.005	ND	ND	ND
Zinc	mg/L	0.006	0.024	0.019	ND
ORGANIC ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
Date Analyzed			06/14/90 F	06/14/90 F	06/14/90 F
Chloromethane	ug/L	1.0	ND	ND	ND
Bromomethane	ug/L	1.5	ND	ND	ND
Dichlorodifluoromethane	ug/L	1.5	ND	ND	ND
Vinyl chloride	ug/L	1.5	ND	ND	ND
Chloroethane	ug/L	1.0	ND	ND	ND
Methylene chloride	ug/L	1.0	ND	ND	ND
Trichlorofluoromethane	ug/L	0.4	ND	ND	ND
1,1-Dichloroethylene	ug/L	0.3	0.6	ND	ND
1,1-Dichloroethane	ug/L	0.2	ND	ND	ND
trans-1,2-Dichloroethylene	ug/L	0.3	ND	ND	ND
Chloroform	ug/L	0.5	ND	ND	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

Mr. Jon Christofferson
Page 2

July 13, 1990
PACE Project Number: 900607552

2853

PACE Sample Number:			10 0219118	10 0219126	10 0219134
Date Collected:			06/06/90	06/06/90	06/06/90
Date Received:			06/07/90	06/07/90	06/07/90
			W-060690-RF-01	W-060690-RF-02	W-060690-RF-03
Parameter	Units	MDL			
ORGANIC ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
1,2-Dichloroethane	ug/L	0.2	ND	ND	ND
1,1,1-Trichloroethane	ug/L	0.5	6.9	ND	ND
Carbon tetrachloride	ug/L	0.3	ND	ND	ND
Bromodichloromethane	ug/L	0.2	ND	ND	ND
1,2-Dichloropropane	ug/L	0.2	ND	ND	ND
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND	ND	ND
1,1,2-Trichloroethylene	ug/L	0.5	ND	ND	ND
Benzene	ug/L	1.0	ND	ND	ND
Dibromochloromethane	ug/L	1.0	ND	ND	ND
1,1,2-Trichloroethane	ug/L	1.0	ND	ND	ND
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND	ND	ND
2-Chloroethylvinyl ether	ug/L	5.0	ND	ND	ND
Bromoform	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	2.8	ND	ND
Toluene	ug/L	1.0	ND	ND	ND
Chlorobenzene	ug/L	1.0	ND	ND	ND
Ethyl benzene	ug/L	1.0	ND	ND	ND
1,3-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,2-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,4-Dichlorobenzene	ug/L	4.0	ND	ND	ND
cis-1,2-Dichloroethylene	ug/L	0.5	ND	ND	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

July 13, 1990
PACE Project
Number: 900607552

2853

B6 B6 Dup Upstream

PACE Sample Number:			10 0219142	10 0219150	10 0219169
Date Collected:			06/06/90	06/06/90	06/06/90
Date Received:			06/07/90	06/07/90	06/07/90
Parameter	Units	MDL	W-060690-RF-04	W-060690-RF-05	W-060690-RF-06
INORGANIC ANALYSIS					
INDIVIDUAL PARAMETERS					
Arsenic	mg/L	0.002	ND	ND	ND
Barium	mg/L	0.006	0.073	0.083	0.058
Cadmium	mg/L	0.006	ND	ND	ND
Chromium	mg/L	0.010	ND	ND	ND
Copper	mg/L	0.005	ND	ND	ND
Lead	mg/L	0.045	ND	ND	ND
Mercury	mg/L	0.0002	ND	ND	ND
Nickel	mg/L	0.021	ND	ND	ND
Selenium	mg/L	0.005	ND	ND	ND
Silver	mg/L	0.005	ND	ND	ND
Zinc	mg/L	0.006	0.007	0.006	0.009
ORGANIC ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
Date Analyzed			06/14/90 F	06/14/90 F	06/14/90 F
Chloromethane	ug/L	1.0	ND	ND	ND
Bromomethane	ug/L	1.5	ND	ND	ND
Dichlorodifluoromethane	ug/L	1.5	ND	ND	ND
Vinyl chloride	ug/L	1.5	ND	ND	ND
Chloroethane	ug/L	1.0	ND	ND	ND
Methylene chloride	ug/L	1.0	ND	ND	1.0
Trichlorofluoromethane	ug/L	0.4	ND	ND	ND
1,1-Dichloroethylene	ug/L	0.3	ND	ND	ND
1,1-Dichloroethane	ug/L	0.2	ND	ND	ND
trans-1,2-Dichloroethylene	ug/L	0.3	ND	ND	ND
Chloroform	ug/L	0.5	ND	ND	ND
1,2-Dichloroethane	ug/L	0.2	ND	ND	ND
1,1,1-Trichloroethane	ug/L	0.5	ND	ND	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

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July 13, 1990
PACE Project Number: 900607552

2853

PACE Sample Number:			10 0219142	10 0219150	10 0219169
Date Collected:			06/06/90	06/06/90	06/06/90
Date Received:			06/07/90	06/07/90	06/07/90
			W-060690-RF-04	W-060690-RF-05	W-060690-RF-06
Parameter	Units	MDL			
ORGANIC ANALYSIS					
PURGEABLE HALOCARBONS AND AROMATICS					
Carbon tetrachloride	ug/L	0.3	ND	ND	ND
Bromodichloromethane	ug/L	0.2	ND	ND	ND
1,2-Dichloropropane	ug/L	0.2	ND	ND	ND
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND	ND	ND
1,1,2-Trichloroethylene	ug/L	0.5	0.5	0.6	ND
Benzene	ug/L	1.0	ND	ND	ND
Dibromochloromethane	ug/L	1.0	ND	ND	ND
1,1,2-Trichloroethane	ug/L	1.0	ND	ND	ND
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND	ND	ND
2-Chloroethylvinyl ether	ug/L	5.0	ND	ND	ND
Bromoform	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	ND	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND	ND	ND
Toluene	ug/L	1.0	ND	ND	ND
Chlorobenzene	ug/L	1.0	ND	ND	ND
Ethyl benzene	ug/L	1.0	ND	ND	ND
1,3-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,2-Dichlorobenzene	ug/L	4.0	ND	ND	ND
1,4-Dichlorobenzene	ug/L	4.0	ND	ND	ND
cis-1,2-Dichloroethylene	ug/L	0.5	5.5	5.5	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

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Mr. Jon Christofferson
Page 5

July 13, 1990
PACE Project Number: 900607552

2853

PACE Sample Number:			10 Downstream 0219177
Date Collected:			06/06/90
Date Received:			06/07/90
			W-060690-RF-07
Parameter	Units	MDL	
INORGANIC ANALYSIS			
INDIVIDUAL PARAMETERS			
Arsenic	mg/L	0.002	ND
Barium	mg/L	0.006	0.055
Cadmium	mg/L	0.006	ND
Chromium	mg/L	0.010	ND
Copper	mg/L	0.005	ND
Lead	mg/L	0.045	ND
Mercury	mg/L	0.0002	ND
Nickel	mg/L	0.021	ND
Selenium	mg/L	0.005	ND
Silver	mg/L	0.005	ND
Zinc	mg/L	0.006	ND
ORGANIC ANALYSIS			
PURGEABLE HALOCARBONS AND AROMATICS			
Date Analyzed			06/14/90 F
Chloromethane	ug/L	1.0	ND
Bromomethane	ug/L	1.5	ND
Dichlorodifluoromethane	ug/L	1.5	ND
Vinyl chloride	ug/L	1.5	ND
Chloroethane	ug/L	1.0	ND
Methylene chloride	ug/L	1.0	ND
Trichlorofluoromethane	ug/L	0.4	ND
1,1-Dichloroethylene	ug/L	0.3	ND
1,1-Dichloroethane	ug/L	0.2	ND
trans-1,2-Dichloroethylene	ug/L	0.3	ND
Chloroform	ug/L	0.5	ND
1,2-Dichloroethane	ug/L	0.2	ND
1,1,1-Trichloroethane	ug/L	0.5	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

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REPORT OF LABORATORY ANALYSIS

Mr. Jon Christofferson
Page 6

July 13, 1990
PACE Project Number: 900607552

2853

PACE Sample Number:			10 0219177
Date Collected:			06/06/90
Date Received:			06/07/90
			W-060690-RF-07
Parameter	Units	MDL	
ORGANIC ANALYSIS			
PURGEABLE HALOCARBONS AND AROMATICS			
Carbon tetrachloride	ug/L	0.3	ND
Bromodichloromethane	ug/L	0.2	ND
1,2-Dichloropropane	ug/L	0.2	ND
cis-1,3-Dichloro-1-propene	ug/L	0.5	ND
1,1,2-Trichloroethylene	ug/L	0.5	ND
Benzene	ug/L	1.0	ND
Dibromochloromethane	ug/L	1.0	ND
1,1,2-Trichloroethane	ug/L	1.0	ND
trans-1,3-Dichloro-1-propene	ug/L	0.3	ND
2-Chloroethylvinyl ether	ug/L	5.0	ND
Bromoform	ug/L	1.0	ND
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND
1,1,2,2-Tetrachloroethylene	ug/L	1.0	ND
Toluene	ug/L	1.0	ND
Chlorobenzene	ug/L	1.0	ND
Ethyl benzene	ug/L	1.0	ND
1,3-Dichlorobenzene	ug/L	4.0	ND
1,2-Dichlorobenzene	ug/L	4.0	ND
1,4-Dichlorobenzene	ug/L	4.0	ND
cis-1,2-Dichloroethylene	ug/L	0.5	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

MN-COMP 0044133

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REPORT OF LABORATORY ANALYSIS

Mr. Jon Christofferson
Page 7

July 13, 1990
PACE Project
Number: 900607552

2853

The data contained in this report were obtained using EPA or other approved methodologies. All analyses were performed by me or under my supervision.

Starla Enger
Inorganic Chemistry Manager

Liesa A. Shanahan
Organic Chemistry Manager

MN-COMP 0044134

1710 Douglas Drive North
Minneapolis, MN 55422
TEL: 612-544-5543
FAX: 612-525-3377

Offices Serving: Minneapolis, Minnesota; Tampa, Florida; Iowa City, Iowa; San Francisco, California; Kansas City, Missouri; Los Angeles, California; Charlotte, North Carolina; Asheville, North Carolina; New York, New York; Pittsburgh, Pennsylvania

An Equal Opportunity Employer

CONESTOGA-ROVERS & ASSOCIATES
382 West County Road D
St. Paul, Minnesota 55416

ANALYTICAL REPORT SUBMISSION CHECK LIST

Date Samples Received 6/7/90 Method ☐ Overnight ☐ Regular Mail ☐ Fax ☐ Other _____

Date Report Sent to CRA _____

Items Included

1. ✓ Summary List of Samples Analyzed
2. ✓ Date of Sample Receipt
3. NA Date of Sample Extraction
4. ✓ Date of Sample Analysis
5. ✓ Method Blank Data for all Parameters
6. ✓ Matrix Spike Recoveries
7. ✓ Matrix Spike Duplicate Recoveries
8. ✓ QC Check Sample Data
9. ✓ Surrogate Spike Recoveries

All samples extracted and analyzed within specified holding times:

☑ Yes ☐ No

If no is checked please list CRA sample IDs of any samples that exceeded their holding times.

_____

_____

_____

_____

Lab _____ Check List Completed by MK6

CRA USE ONLY

Date Received _____ Complete: ☐ Yes ☐ No

Received by _____ Copies to _____

PACE LABORATORIES, INC.

SUBSET ABBREVIATION: 465C

SAMPLE NO: _____

PAGE 2

PARAMETER NAME	ABBREV	MDL	UNITS: ug/L	Calib Std	True Value	Method Blank
			DATE:		DATE:	
			DIL:		DIL:	
			INST:		INST:	FINAL RESULTS
Dichloroacetonitrile	DCACETONIT	1.0		80.6	80.0	ND
2,3-Dichloro-1-propene	23DCPENE	0.5		19.3	20.0	
1,2-Dichloropropane	12DCPANE	0.2		19.2		
1,1-Dichloro-1-propene	11DCPENE	1.0		17.9		
cis-1,3-Dichloro-1-propene	CIS13DCP	0.5		19.2		
1,1,2-Trichloroethylene	TCE	0.5		19.6		
Benzene	BENZENE	1.0		18.5		
1,3-Dichloropropane	13DCPANE	0.6		18.2		
Dibromochloromethane	DBCMETHANE	1.0		18.7		
1,1,2-Trichloroethane	112TCEANE	1.0		19.0		
trans-1,3-Dichloro-1-propene	TRANS13DCP	0.3		19.2		
1,2-Dibromoethane	EDB	4.0		18.7		
2-Chloroethylvinyl ether	2CEVETHER	5.0		—		
Bromoform	BROMOFORM	1.0		18.1		
1,1,1,2-Tetrachloroethane	1112TTEANE	0.3		17.8		
Methyl isobutyl ketone	MIBK	1.0		18.3		
1,2,3-Trichloropropane	123TCPANE	4.0		18.7		
1,1,2,2-Tetrachloroethane	1122TTEANE	1.0		18.2		
1,1,2,2-Tetrachloroethylene	1122TTEENE	1.0		19.5		
Pentachloroethane	PENTACEANE	2.0		18.1		
Toluene	TOLUENE	1.0		18.5		
Chlorobenzene	CHLOROBENZ	1.0		18.5		
Ethyl benzene	ETHYLBENZ	1.0		18.6		
Cumene	CUMENE	1.0		17.8		
m-Xylene	M-XYLENE	1.0		18.6		
p-Xylene	P-XYLENE	1.0		17.7		
o-Xylene	O-XYLENE	1.0		17.8		
1,3-Dichlorobenzene	13DCBENZ	4.0		19.8		
1,2-Dichlorobenzene	12DCBENZ	4.0		19.6		
1,4-Dichlorobenzene	14DCBENZ	4.0		19.8		
Dichlorofluoromethane	FREON21	1.0		17.9		

DRL
6/24/90

COMMENTS: CH_3Cl high - watch for trend.

MN-COMP 0044136

DATE: 08/22/89

DAILY MATRIX SPKIE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS: 601, 602, 465B
INSTRUMENT: F
STANDARD: A
SAMPLE SPIKED: 21699
SAMPLE MATRIX: WATER

FILE NUMBER:
PREPED BY:
DATE PREPED:
ANALYZED BY: LJH
DATE ANALYZED 6-14-90

CLIENT NAME:
PROJECT NAME:
PROJECT NUMBER:

Compound	True Value	Sample Result	MS	% REC	MSD	% REC	RPD	Accuracy Limits	Precision Limit	Associated Samples
Chloromethane	20.0	ND	38.7	194	31.5	158	20.4		30%	21699
Bromomethane			21.0	105	19.7	99	5.9		30%	21700
Vinyl Chloride			24.2	121	22.7	114	6.0		30%	21701
Chloroethane			27.1	136	26.2	131	3.7		30%	21702
Methylene Chloride			20.1	101	18.7	94	7.2	136 ± 33	30%	21703
1,1-Dichloroethylene			24.2	121	23.2	116	4.2	159 - 24	30%	21704
1,1-Dichloroethane			21.8	109	20.2	101	7.6	128 - 72	30%	21911
Chloroform			18.2	91	17.3	87	4.5	150 - 51	30%	21912
Carbon Tetrachloride			20.8	104	18.8	94	10.1	155 - 44	30%	21913
1,2-Dichloropropane			18.4	92	17.3	87	5.6	131 - 63	30%	21914
1,1,2-Trichloroethylene			17.2	86	15.7	79	8.5	128 - 61	30%	21915
Benzene			18.9	95	18.0	90	5.4	133 - 68	30%	21916
Dibromochloro Methane	↓	↓	16.6	83	15.2	76	8.8	133 - 64	30%	21917

MN-COMP 0044137

DAILY MATRIX SPKIE/MATRIX SPIKE DUPLICATE RECOVERY

ANALYSIS: 601, 602, 465B
INSTRUMENT: F
STANDARD: A
SAMPLE SPIKED: [illegible] 811699
SAMPLE MATRIX: [illegible] WATER

FILE NUMBER:
PREPED BY:
DATE PREPED:
ANALYZED BY: [illegible]
DATE ANALYZED: 1-14-90

CLIENT NAME:
PROJECT NAME:
PROJECT NUMBER:

Compound	True Value	Sample Result	MS	% REC	MSD	% REC	RPD	Accuracy Limits	Precision Limit	Associated Samples
1,1,2-Trichloroethane	20.0	ND	17.1	86	15.7	79	8.5		30%	
2-Chloroethylvinyl Ether	|	—	—	—	—	—	—		30%	
Tetrachloroethylene	|	ND	19.0	95	16.8	84	12.3	132 - 55	30%	
Chlorobenzene	|	|	18.1	91	15.9	80	12.9	119 - 58	30%	
1,3-Dichlorobenzene	|	|	17.9	90	15.5	78	14.3	117 - 57	30%	
1,4-Dichlorobenzene	↓	↓	17.6	88	15.1	76	14.6	116 - 57	30%	

* Asterisked Value are outside QC limits.

RPD: VOAs _____ out of ____ outside of QC limits.
Recovery: VOAS _____ out of ____ outside of QC limits.
Blank: _____
Comments: _____

QC Reviewed by: [illegible]
DATE: 1/24/90

74HPPLAS

MN-COMP 0044138

PACE LABORATORIES, INC.

SUBSET ABBREVIATION: 465C

SUBSET NAME: MDH VOLATILE ORGANICS-465C

DATE COLLECTED: _____ CLIENT NAME: _____

DATE RECEIVED: _____ PROJECT NUMBER: _____

MATRIX: _____ DATA REVIEWED BY: _____

DATE EXTRACTED/BY: _____ ENTERED BY: _____

INITIAL VOL: _____ SAMPLE NAME: 6-14-90-F

FINAL VOL: _____ SAMPLE NUMBER: Daily Calibration Check

ANALYZED BY: _____

PARAMETER NAME	ABBREV	MDL	UNITS:	Calib Stds DATE: 6-14-90 DIL: INST: (F)←(D)	True Value DATE: DIL: INST:	Met Bl FIN RESU
Date Analyzed	465C DA			6-14-90		6-1
Chloromethane	CHLOROMETH	1.0		44.3	20.0	ND
Bromomethane	BROMOMETH	1.5		20.3		
Dichlorodifluoromethane	FREON12	1.5		25.3		
Vinyl chloride	VINYLCHLOR	1.5		22.6		
Chloroethane	CHLOROETH	1.0		21.7		
Methylene chloride	MECL	1.0		18.7		
Acetone	ACETONE	40		184	200	
Trichlorofluoromethane	FREON11	0.4		19.2	20.0	
Allyl chloride	ALLYL CHL	4.0		17.9		
1,1-Dichloroethylene	11DCEENE	0.3		19.2		
Tetrahydrofuran	THF	15		187	200	
1,1-Dichloroethane	11DCEANE	0.2		19.4	20.0	
trans-1,2-Dichloroethylene	TRANS12DCE	0.3		19.5		
cis-1,2-Dichloroethylene	CIS12DCE	0.5		19.2		
Ethyl ether	ETHYLETHER	0.3		17.5		
Chloroform	CHLOROFORM	0.5		19.4		
1,1,2-Trichlorotrifluoroethane	FREON113	0.7		18.3		
Methyl ethyl ketone	MEK	20		77.2	80.0	
1,2-Dichloroethane	12DCEANE	0.2		18.9	20.0	
Dibromomethane	DIBROMETH	1.5		17.8		
1,1,1-Trichloroethane	111TCEANE	0.5		19.5		
Carbon tetrachloride	CARBONTET	0.3		19.1		
Bromodichloromethane	BDCMETHANE	0.2		19.6		

COMMENTS:

MN-COMP 0044139

DATE: 08/22/8

PACE LABORATORIES, INC.

SUBSET ABBREVIATION: 465C

PAGE 2

SAMPLE NO: _____

PARAMETER NAME	ABBREV	MDL	UNITS: ug/L DATE: DIL: INST:	Calib Std	True Value DATE: DIL: INST:	Method Blank FINAL RESULTS
Dichloroacetonitrile	DCACETONIT	1.0		80.6	80.0	ND
.3-Dichloro-1-propene	23DCPENE	0.5		19.3	20.0	
.2-Dichloropropane	12DCPANE	0.2		19.3		
1,1-Dichloro-1-propene	11DCPENE	1.0		17.9		
is-1,3-Dichloro-1-propene	CIS13DCP	0.5		19.2		
,1,2-Trichloroethylene	TCE	0.5		19.6		
Benzene	BENZENE	1.0		18.5		
3-Dichloropropane	13DCPANE	0.6		18.2		
bromochloromethane	DBCMETHANE	1.0		18.7		
.1,2-Trichloroethane	112TCEANE	1.0		19.0		
ans-1,3-Dichloro-1-propene	TRANS13DCP	0.3		19.2		
2-Dibromoethane	EDB	4.0		18.7		
-Chloroethylvinyl ether	2CEVETHER	5.0		—		
omoform	BROMOFORM	1.0		18.1		
.1,1,2-Tetrachloroethane	1112TTEANE	0.3		17.8		
ethyl isobutyl ketone	MIBK	1.0		18.3		
2,3-Trichloropropane	123TCPANE	4.0		18.7		
,1,2,2-Tetrachloroethane	1122TTEANE	1.0		18.2		
1,2,2-Tetrachloroethylene	1122TTEENE	1.0		19.5		
ıtachloroethane	PENTACEANE	2.0		18.1		
)luene	TOLUENE	1.0		18.5		
)lorobenzene	CHLOROBENZ	1.0		18.5		
yl benzene	ETHYLBENZ	1.0		18.6		
...ene	CUMENE	1.0		17.8		
ylene	M-XYLENE	1.0		18.6		
ylene	P-XYLENE	1.0		17.7		
Xylene	O-XYLENE	1.0		17.8		
-Dichlorobenzene	13DCBENZ	4.0		19.8		
-Dichlorobenzene	12DCBENZ	4.0		19.6		
-Dichlorobenzene	14DCBENZ	4.0		19.8		
hlorofluoromethane	FREON21	1.0		17.9		

DRS
6/24/90

AMENTS: CH_3Cl high - watch for trend.

DATE: 08/22/89

Surrogates

VOLATILE ORGANICS BY GC

INSTRUMENT: F

ANALYZED BY: LJH

STANDARD:

DATE ANALYZED: 6-14-90

SAMPLE MATRIX: WATER

	LAB SAMPLE NO.	FLUORO-BENZENE	#
01	DEXTRAS STD	9.5	
02	D 602 STD	10.0	
03	METHOD BLANK	10.1	
04	21911.8	10.1	
05	21912.6	9.9	
06	21913.4	9.8	
07	21914.2	10.1	
08	21915.0	9.6	
09	21916.9	9.3	
11	21917.7	9.5	
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Advisory QC Limits
± 20%

Sample = Fluorobenzene

MN-COMP 0044141

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogates diluted out

Project Name 900607552

SUMMARY OF INORGANIC ACCURACY AND PRECISION DATA

Parameter	Date of Analysis	Mthd Blk	Check Std. % Rec	Spiked Value	% Rec	Acc. Range	Sample A	Sample A Dup	RPD	RPD Range
Arsenic	6/12/90	0.0	102	7.83	78	85-115	NA	NA	—	—
PACE Sample#				21915						
Mercury	6/21/90	ND	68	4.70	94	85-115	4.70	3.79	21	±3
PACE Sample#				21913			21913			
Selenium	7/8/90	0.0	102	14.7	74	85-115	14.7	15.2	3.3	±3(
PACE Sample#				21916			21916			
Barium	7/11/90	ND	93	1.06	106	85-115	NA	NA	—	—
PACE Sample#				21917						
Cadmium	7/11/90	<0.006	92	1.05	105	85-115	NA	NA	—	—
PACE Sample#				21917						
Chromium	7/11/90	<0.010	96	1.06	106	85-115	NA	NA	—	—
PACE Sample#				21917						
Copper	7/11/90	<0.005	93	1.01	101	85-115	NA	NA	~~NA~~	—
PACE Sample#				21917						
Lead	7/11/90	<0.045	88	1.02	102	85-115	NA	NA	—	—
PACE Sample#				21917						

NA Not Analyzed
ND Not Detected at or above the method detection limit

Project Name _____

SUMMARY OF INORGANIC ACCURACY AND PRECISION DATA

Parameter	Date of Analysis	Mthd Blk	Check Std. % Rec	Spiked Value	% Rec	Acc. Range	Sample A	Sample A Dup	RPD	RPD Rang
Nickel	7/11/90	<0.021	88	1.01	101	85-115	NA	NA	—	—
PACE Sample#				21917						
Siver	7/11/90	<0.005	94	0.637	64	85-115	NA	NA	—	—
PACE Sample#				21917						
Zinc	7/11/90	0.022	94	1.04	104	85-115	NA	NA	—	—
PACE Sample#				21917						
PACE Sample#										
PACE Sample#										
PACE Sample#										
PACE Sample#										
PACE Sample#										

NA Not Analyzed
ND Not Detected at or above the method detection limit

CRA Consulting Engineers
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive, Waterloo, Ontario Canada N2V 1C2

SHIPPED TO (Laboratory name): PACE LABS

CHAIN OF CUSTODY RECORD

PROJECT Nº: 2853

PROJECT NAME: Ford

SAMPLER'S SIGNATURE: Robert Field, Jr (SIGN)

SEQ. Nº.	SAMPLE Nº.	DATE	TIME	SAMPLE LOCATOIN	SAMPLE TYPE	Nº OF CONTAINERS	~~REMARKS~~ SEE ANALYSIS BELOW
	W-060690-RF-		01	21911	WATER	4	601,602 VOC's; METALS
		-	02	12	WATER	4	601,602 VOC's; METALS
		-	03	13	WATER	4	601,602 VOC's; METALS
		-	04	14	WATER	4	601,602 VOC's; METALS
		-	05	15	WATER	4	601,602 VOC's; METALS
		-	06	16	WATER	3	601,602 VOC's; METALS
	↓	-	07	17	WATER	4	601,602 VOC's; METALS

NOTE: METALS SAMPLES W-060690-RF-01 THRU W-060690-RF-05 HAVE BEEN FIELD FILTERED. THE OTHER TWO SAMPLES (METALS) ARE NOT.

ANALYSIS:
1. VOC's EPA METHODS 601, 602 & CIS-1,2 DICHLOROETHYLENE & ETHYLACETATE. CIS1206 FIDACE
2. As, Se, Hg. VIA EPA ATOMIC ABSORPTION METHODS.
3. Ba, Be, Cr, Cu, Pb, Ag, Zn, Ni VIA ICP ANALYSIS. EPA METHOD 6010.
4. CALL JON CHRISTOFFERSON FOR QUESTIONS. 07891 2

TOTAL NUMBER OF CONTAINERS: 27

ANTICIPATED CHEMICAL HAZARDS:

RELINQUISHED BY: 1 Robert Field, Jr (SIGN)	DATE/TIME 6/7/90 | 12:00	RECEIVED BY: 2 (SIGN)
RELINQUISHED BY: 2 (SIGN)	DATE/TIME |	RECEIVED BY: 3 (SIGN)
RELINQUISHED BY: 3 (SIGN)	DATE/TIME |	RECEIVED BY: 4 (SIGN)
ADDITIONAL SIGNATURE SHEET REQUIRED ☐		

METHOD OF SHIPMENT: HAND DELIVERED	SHIPPED BY: R. FIELD	RECEIVED FOR LABORATORY BY: (SIGN)	DATE/TIME 6/7/90 4:15
CONDITION OF SEAL UPON RECEIPT: GENERAL CONDITION OF COOLER:		COOLER OPENED BY: (SIGN)	DATE/TIME |

WHITE – CRA OFFICE COPY
YELLOW – RECEIVING LABORATORY COPY
PINK – CRA LABORATORY COPY
GOLDEN ROD – SHIPPERS

MN-COMP 0044144

Nº 009000

Varian DS-15 AA-1275/1475 Report

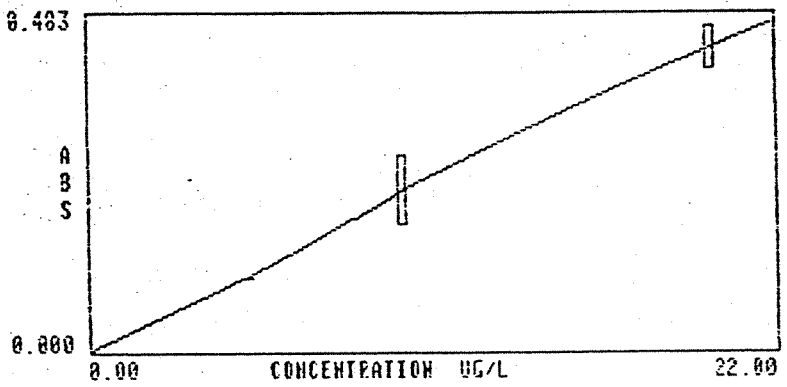
Pace Laboratory
1710 Douglas Drive Minneapolis,MN 55422
(612) 544-5543

Calculated: 6 / 13 / 90 By: LMR/P
Entered: 6 / 13 / 90 By: PAS
Reviewed: / / By:

OPERATOR PAS
DATE 06-12-90 07:00
BATCH As FURNACE #2

PROGRAM 1 As FURNACE

SAMPLE	CONC UG/L	%RSD	MEAN ABS	READINGS	
BLANK	0.00		-0.072	-0.078	-0.066
STANDARD 1	5.00	0.0	0.108	0.108	0.108
STANDARD 2	10.00	9.9	0.235	0.218	0.251
STANDARD 3	20.00	6.2	0.440	0.420	0.459



MDL = 0.002 mg/L

EPA287 TV5.0	5.09	102%	7.7	0.110	0.116	0.104
MDL 2.00PPB	1.64		17.9	0.035	0.040	0.031
21171-D	13.97		8.8	0.319	0.339	0.299
21171 AW-D	OVER		3.2	0.483	0.472	0.494
21172-D	9.98		2.4	0.234	0.230	0.238
21173-D	11.62		4.9	0.269	0.260	0.279
21174-D	-0.14		47.1	-0.003	-0.002	-0.004
PB 25X 5/31	-0.23		56.5	-0.005	-0.003	-0.007
20976 25X	12.53	mg/kg	1.4	0.289	0.292	0.286
20977 25X	3.17	↓84%	9.2	0.069	0.073	0.064
20977 25X AS TV=100	11.08	40%	3.2	0.258	0.252	0.264
20978 25X	OVER		1.0	0.675	0.680A	0.670A
20978 25XMS	OVER		26.7	0.563	0.669A	0.456A
20978 25XMSD	OVER		15.4	0.647	0.576A	0.717A
EPA287 TV5.0	4.07	81%	0.0	0.088	0.088	0.088
21866	0.07		99.9	0.001	0.003	0.000
21868	0.07		99.9	0.001	0.005	-0.002
21869	0.16		99.9	0.003	-0.003	0.010
21870	-0.30		76.1	-0.006	-0.010	-0.003
21870 AW TV=10.0	5.87	59%	2.7	0.128	0.136	0.121

Rerun 2x dilution low spk recovery

MDL = 1.3 mg/kg

7.8 = (12.53)(25)(5%)(1/1000)

2.0 = (3.17)(25)(5%)(1/1000)

13.2 = 100

MN-COMP 0044145

SAMPLE		CONC UG/L		%RSD	MEAN ABS	READINGS	
21870 DAW TV=10.0		5.60	56%	9.2	0.122	0.130	0.114
21911	ND	-0.14	mg/L	99.9	-0.003	-0.006	0.000
21912	ND	-0.25		38.5	-0.005	-0.004	-0.007
21913	ND	0.02		99.9	0.000	0.000	0.001
21914	ND	-0.39		41.5	-0.009	-0.011	-0.006
21915	ND	-0.30		54.3	-0.006	-0.009	-0.004
21915 AW TV=10.0		7.83	78%	0.7	0.177	0.178	0.176
21916	ND	0.39	mg/L	24.9	0.009	0.010	0.007
21917	ND	0.28		99.9	0.006	0.001	0.011
~~21267~~ EPA 287 TV=5.0		4.75	95%	4.8	0.102	0.106	0.099
21268		17.69		99.9	0.394	0.789A	0.000
21268 AW		-0.19		35.3	-0.004	-0.005	-0.003
~~21269~~ AW 21158		-0.30		99.9	-0.006	0.000	-0.013
22346	ND	-0.12	mg/L	99.9	-0.002	-0.006	0.001
22346 AW TV=10		8.58	86%	8.2	0.196	0.209	0.185
21786	ND	-0.05	mg/L	99.9	-0.001	0.000	-0.002
21787	ND	-0.35		9.4	-0.007	-0.008	-0.007
21787 AW TV=10		8.91	89%	2.0	0.205	0.202	0.208
~~10.0 PPB~~ 19617 5x		3.63		99.9	0.078	-0.005	0.162
~~EPA287 TV5.0~~ 19618 5x		4.65		99.9	0.100	-0.003	0.204
~~2.00 PPB~~ 19620 5x		1.55		99.9	0.033	-0.005	0.072
19620 5x AW TV=10		3.54		19.4	0.076	0.066	0.087
21171 Diss AW 2x TV=0		10.11		6.5	0.237	0.248	0.226
10.0 PPB		7.69		1.2	0.173	0.172	0.175
EPA 287 TV=5.0		3.63	73%	0.9	0.078	0.078	0.079

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Hg-U

DATE ANALYZED: 6-21-90
ANALYZED BY: CAT / JSM
TIME: 11.00
CALCULATED BY: CAT / JSM
DATA REVIEWED BY: MCG
ENTERED BY:
INSTRUMENT ID # 3

MDL 0.0002

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 10
ABS: 0.230
R FACTOR: Linear

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
BLK	N.D	ug/L					
Std 0.2	0.22						
Std 1.00	0.96						
Std 3.00	3.05						
Std 5.00	5.13						
Std 7.00	7.02						
Std 10.0	9.92						
EPA	1.35		EPA 955	2.02		65	
EPA	2.52		EPA 283	2.50		101	
19111	N.D.	mg/L	0.0008 Leachate	5.00	0	0	
19797	N.D			5.00	4.02	80	
19800	ND			5.00	4.83	97	
19803	ND			5.00	5.09	102	
19809	N.D			5.00	4.87	97	
19922	ND			5.00	5.00	100	
19923	ND			5.00	4.48	90	
				5.00	4.74	95	

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044147

ANALYSIS:

FOR CLP USE ONLY? ☐

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Hg-II

DATE ANALYZED: 6-21-90
ANALYZED BY: CAT/TEM
TIME: 11:00
CALCULATED BY: CAT/TEM
DATA REVIEWED BY:
ENTERED BY:
INSTRUMENT ID # 3

MDL 0.0002

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 10
ABS: 0.230
R FACTOR: Linreg

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
Std 5	<1.83	ug/L					
20230	ND	mg/L	0.0008 Leachate	5.00	<1.71	95	
20231	ND			5.00	4.79	96	
20232	ND			5.00	4.61	92	
20277	0.0009 ~~0.22~~			2.50	2.09	84	
22333	ND		0.0002				
22588	ND						
22898	ND			5.00	4.53	91	
~~23360~~ ~~22898~~	ND			5.00	4.92	98	
23362	ND						
23363	ND						
23364	ND						
23138	ND						
20823	ND						
EPA	1.53	ug/L	EPA 989	2.02		76	
20824	0.002	mg/L	0.0002				

A - Analytical spike or duplicate
M - Matrix spike or duplicate

MN-COMP 0044148

ANALYSIS:

FOR CLP USE ONLY? [ ]

ATOMIC ABSORPTION ELEMENT

ABBREVIATION Hg-U

DATE ANALYZED: 6-21-90
ANALYZED BY: CAT / TEM
TIME: 11:00
CALCULATED BY: CAT/TEM
DATA REVIEWED BY:
ENTERED BY:
INSTRUMENT ID # 3

CLIENT NAME:
PROJECT NUMBER:
PROJECT NAME.
FILE #:
DATE RECEIVED:
DATE COLLECTED:
HIGH STD. CONC.: 10
ABS: 0.230
R FACTOR: Linear

MDL 0.0002

Sample	Analysis Results	Units	Comments	Spike Rec True	Found	% REC	Duplicate
20825	0.0018	mg/L	0.0002	5.00	3.73	75	
std 5	<1.48	ug/L					
20826	0.0020	mg/L	0.0002				
20829	0.0007						
21911	ND						
21912	ND						
21913	ND			~~5.00~~ 5.00	~~4.70~~ 3.79	~~94~~ 76	
21914	ND						
21915	ND						
21916	ND						
21917	ND						
BLK	ND						
BLK	ND						
EPA	1.52	ug/L	EPA 989	2.02		75	

A - Analytical spike or duplicate
M - Matrix spike or duplicate

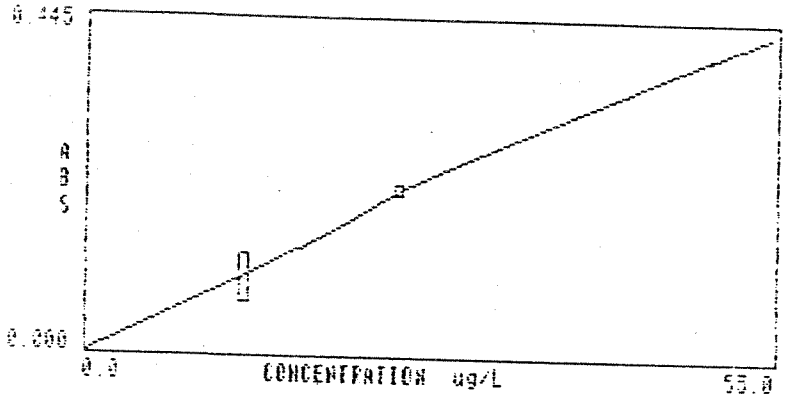
MN-COMP 0044149

LMR 7/8/90 12:50

Entered 7/9/90 LMR

PROGRAM 2 Sr Furnace #2

SAMPLE	CONC ug/L	%RSD	MEAN ABS	READINGS	
BLANK	0.0		0.002	0.004	0.000
STANDARD 1	12.5	7.5	0.102	0.097	0.108
STANDARD 2	25.0	1.5	0.222	0.219	0.224
STANDARD 3	50.0	0.0	0.405	0.405	0.405



MDL = 0.005 mg/L

EPA 378 28.0		28.7 %RSD	0.2	0.250	0.250	0.251	
5.00		4.7	1.8	0.039	0.039	0.038	
021209.5 50X	ND	-0.2 mg/L	99.9	-0.001	0.002	-0.005	MDL=0.25
021209.5AWTV=20.0		20.3 102%	6.0	0.175	0.167	0.182	
023361.7	ND	-0.5 mg/L	35.3	-0.004	-0.003	-0.005	
023362.5	ND	0.2	99.9	0.002	0.004	0.000	
023363.3	ND	0.1	99.9	0.000	0.000	0.001	
023364.1	ND	0.7	12.9	0.005	0.005	0.006	
021911.8	ND	0.5	35.3	0.004	0.005	0.003	
021911.8AWTV=20.0		23.4 118%	4.0	0.207	0.201	0.213	
021912.6	ND	-0.9 mg/L	40.4	-0.007	-0.005	-0.009	
021913.4	ND	-0.4	99.9	-0.003	-0.001	-0.007	
021914.2	ND	-1.3	20.2	-0.011	-0.012	-0.009	
25.0		23.3	3.6	0.205	0.199	0.210	
EPA 378 28.0		27.2 98%	2.9	0.240	0.235	0.245	
021915.0	ND	-1.5 mg/L	35.3	-0.012	-0.009	-0.015	
021916.9	ND	-0.7	47.1	-0.006	-0.004	-0.008	
021916.9AWTV=20.0		14.3 74%	8.1	0.122	0.129	0.115	
021916.9DAW		15.2 76%	16.7	0.127	0.142	0.113	
021917.7	ND	-0.5 mg/L	54.3	-0.007	-0.003	-0.012	
022435.9	ND	-1.0	41.5	-0.009	-0.011	-0.006	Rerun at 5x dil
022435.9AW		1.9	47.1	0.012	0.016	0.008	
021786.7	ND	-1.0 mg/L	0.0	-0.008	-0.008	-0.008	
021787.5	ND	-0.9	54.3	-0.006	-0.004	-0.009	
021787.5AWTV=20.0		10.8 54%	11.9	0.088	0.081	0.096	
022311.0		-0.2	99.9	-0.002	0.002	-0.006	
022311.0AWTV=20.0		6.1 30%	31.1	0.050	0.039	0.061	Rerun at 2x dil.
022313.7		-0.7	47.1	-0.006	-0.008	-0.004	
25.0		25.0	5.4	0.222	0.213	0.230	
EPA 378 28.0		24.7 88%	0.3	0.218	0.219	0.218	
025538.5		-0.4	54.5	-0.005	0.002	-0.012	

MN-COMP 0044150

SAMPLE	CONC ug/L	%RSD	MEAN ABS	READINGS		
025585.2AW TV=30.0	4.724Z	27.5	0.039	0.046	0.031	
024144.0 ND	-0.2 mg/L	99.9	-0.001	-0.003	0.000	
024144.0AW TV=30.0	21.7 1082	3.7	0.188	0.193	0.183	
PB 6/28	-0.5	47.1	-0.004	-0.003	-0.006	
023975.5	13.7	1.8	0.113	0.115	0.112	Rerun at 5x dil.
023975.5AW	16.4	4.6	0.138	0.142	0.133	16.4 - 13.7 = 2.7
023775.5DAW	16.8	14.0	0.141	0.155	0.127	16.8 - 13.7 = 3.1
25.0	21.9	1.1	0.190	0.188	0.191	
EPA 378 28.0	25.491Z	3.4	0.224	0.230	0.219	
5.00	3.7	4.7	0.030	0.031	0.029	

Meg
7-11-90
10:15
Val. dated 8/92

calc. entered Meg

INORGANIC DATA REPORT
(concentrations in mg/l or mg/kg)

SAMPLE ID	Ba	Cd	Cr	Cu	Pb	Ni	Ag	Zn				
1. 22046.7	DNR 0.086	0.007	0.031	0.12	0.085	ND	DNR ND	0.88				
2. 21911.8	ND	ND	ND	ND	ND	ND	ND	0.024				
3. 21912.6	0.18	ND	ND	ND	ND	ND	ND	0.019				
4. 21913.4	0.060	ND	ND	ND	ND	ND	ND	ND				
5. 21914.2	0.073	ND	ND	ND	ND	ND	ND	0.007				
6. 21915.0	0.083	ND	ND	ND	ND	ND	ND	0.006				
7. 21916.9	0.088	ND	ND	ND	ND	ND	ND	0.009				
8. 21917.7	0.055	ND	ND	ND	ND	ND	ND	ND				
9.												
10.												
11.												
12.												
13.												
14.												
15.												
16.												
17.												
18.												
19.												
20.												

BMQL = Below Method Quantitation Limit
MQL = Method Quantitation Limit
ND = Not Detected
mg/kg = ppm (parts-per-million)
ug/l = ppb (parts-per-billion)
< = Indicates concentration less than value detailed

MEMORANDUM

TO: Steve Mockenhaupt REFERENCE NO.: 2853

FROM: Dave Dempsey DD DATE: August 1, 1990

RE: Data Quality Assessment and Validation for Seven Groundwater Samples Collected during the June 1990 Sampling Event at the Ford Site C Site

---

The following details a data quality assessment and validation for seven groundwater samples collected on June 6, 1990, at the Ford Site C site. Samples were analyzed for volatile organic compounds (VOC) and metals by Pace Laboratories Inc. (Pace).[1] Quality assurance criteria were established by analytical methods.[2]

Holding Time Periods

Holding time periods are established in analytical methods and are summarized below:

VOC - 14 days from sample collection to completion of analysis

Metals- 6 months from sample collection to completion of analysis, except for mercury
- 28 days from sample collection to completion of mercury analysis

Reviewing analysis dates showed that all holding time periods were met.

Method Blank Sample

Laboratory contamination of samples was checked for with method blank samples. The VOC method blank sample contained no target analytes. However, zinc was detected at a concentration of 0.066 mg/l within metals method blank sample. Zinc data for samples W-060690-RF-01, W-060690-RF-02, W-060690-RF-04 through W-060690-RF-06 were qualified as non-detect (U).

Surrogate Compound Percent Recoveries

Individual sample results for VOC analyses were assessed using surrogate compound fluorobenzene recoveries. Examining the recoveries revealed that VOC Method 602 was in control. No surrogate compound was used to check the accuracy of Method 601. Hence, MS/MSD recoveries were used to assess Method 601 results.

---

[1]Analytical methods are taken from 40 CFR Part 136, Appendix A, and "Chemical Methods for Analysis of Water and Wastes", USEPA-600/4-79-020, Revised March 1983 and are summarized below:

VOC - 40 CFR 601/602
Metals - USEPA 200 Series

[2]Application of quality assurance criteria was consistent with "Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses", February 1, 1988, and "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses", July 1, 1988.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Percent Recoveries

Effects upon the data due to matrix interference were checked via MS/MSD analyses. Pace sample 21699 underwent VOC MS/MSD analyses. As all percent recoveries fell within limits, the level of precision was acceptable.

Sample W-060690-RF-07 underwent matrix spike analysis for target metals. The silver percent recovery was low. Therefore, silver data were qualified as estimated (UJ) for all samples.

Laboratory Duplicate Analyses

Precision for metals analyses was measured by means of duplicate analyses. Samples W-060690-RF-03 and W-060690-RF-06 had duplicate analyses for analytes mercury and selenium, respectively. Precision for both were acceptable. No other duplicate analyses were performed by Pace, therefore, field duplicate samples were used to assess precision.

Rinsate Sample

Cleanliness of sampling equipment was checked with rinsate sample W-060690-RF-01. Target VOC detected were 1,1,1-trichloroethane, tetrachloroethene and 1,1-dichloroethene. As all investigative samples were free of these analytes, no action upon the data was necessary.

Zinc was also detected within this sample. However, the zinc datum was qualified as non-detect (U) based upon the method blank sample.

Field Duplicate Samples

Precision was measured by collecting field duplicate samples W-060690-RF-04 and W-060690-RF-05. As both sets of data were within limits of agreement, the precision was acceptable.

Overall Assessment

Silver data were qualified as estimated (UJ) for all samples, while five samples had zinc data qualified as non-detect (U). Remaining data are acceptable to quantitatively assess target analyte concentrations.

cc: Bruce Clegg

REMEDIAL INVESTIGATION/ FEASIBILITY STUDY (RI/FS) WORK PLAN

Ford Motor Company
St. Paul, Minnesota

MN-COMP 0044562

PRINTED ON

FEB 15 1991

RECEIVED
FEB 15 91
CA, Gr
olid

MN-COMP 0044562.01

REMEDIAL INVESTIGATION/ FEASIBILITY STUDY (RI/FS) WORK PLAN

Ford Motor Company
St. Paul, Minnesota

MN-COMP 0044563

August 1990
(Revised February 1991)
Ref. No. 2853

CONESTOGA-ROVERS & ASSOCIATES

CRA
Consulting Engineers

CONESTOGA-ROVERS & ASSOCIATES LIMITED
651 Colby Drive
Waterloo, Ontario, Canada N2V 1C2
(519) 884-0510

February 15, 1991

Reference No. 2853

Mr. Jerome Amber
FORD MOTOR COMPANY
Suite 608
15201 Century Drive
Dearborn, Michigan 48120

Dear Mr. Amber:

RE: RI/FS Work Plan
Ford Motor Company
St. Paul, Minnesota

Please find enclose a revised copy of the subject report.

If you should have any questions, please do not hesitate to contact us.

Sincerely,

CONESTOGA-ROVERS AND ASSOCIATES

Jon L. Christofferson

JLC/kk
Enc.

MN-COMP 0044564

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MN-COMP 0044572

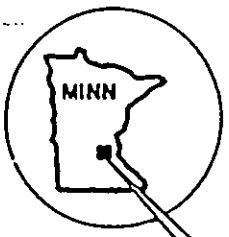
1.0 INTRODUCTION

The Ford Motor Company (Ford), Twin Cities Assembly Plant (Plant) is located in St. Paul, Minnesota, at 966 South Mississippi River Boulevard (Site). The Site complex includes buildings on both sides of Mississippi River Boulevard. Buildings east of Mississippi River Boulevard are located above the river bluff on the adjacent sand plains. The Site location is presented on Figure 1.1.

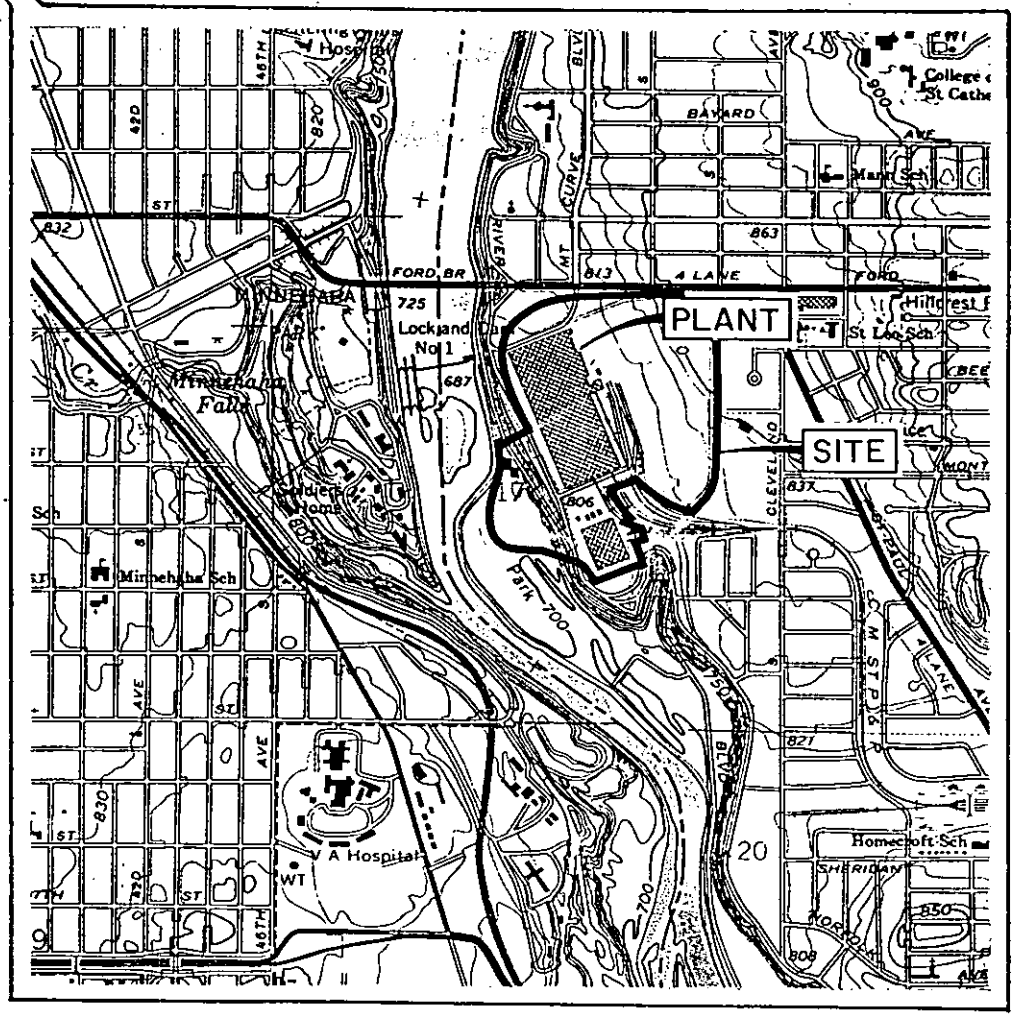
The Plant was originally used to manufacture glass over 50 years ago. Since then the Plant has been expanded several times and is used to assemble pick-up trucks.

At different times during the Plant's history prior to 1970, paint sludges/wastes were deposited in a relatively small area on Site property, west of Mississippi River Boulevard (Site C). This waste deposit was reported to U.S. EPA by Ford during the Superfund notification process. A hydrogeologic investigation was commissioned by Ford in 1981. Since that investigation was completed, additional earth fill has been placed over part of the waste fill. The area is now used as a parking lot for tractor trailer truck units. Excavated materials from two other sites (Sites A and B) were subsequently moved to Site C. The locations of the fill Sites are presented on Figure 1.2. The three fill sites (A, B and C) were subsequently consolidated by MPCA and listed (Class C) as the Ford Twin Cities Assembly Plant during 1983 - 1984 on the Minnesota Pollution Control Agency (MPCA) Permanent List of Priorities.

MN-COMP 0044573



KEY MAP



CITY OF ST.PAUL

MN-COMP 0044574

FIGURE 1.1
LOCATION PLAN
Ford Motor Company

CRA

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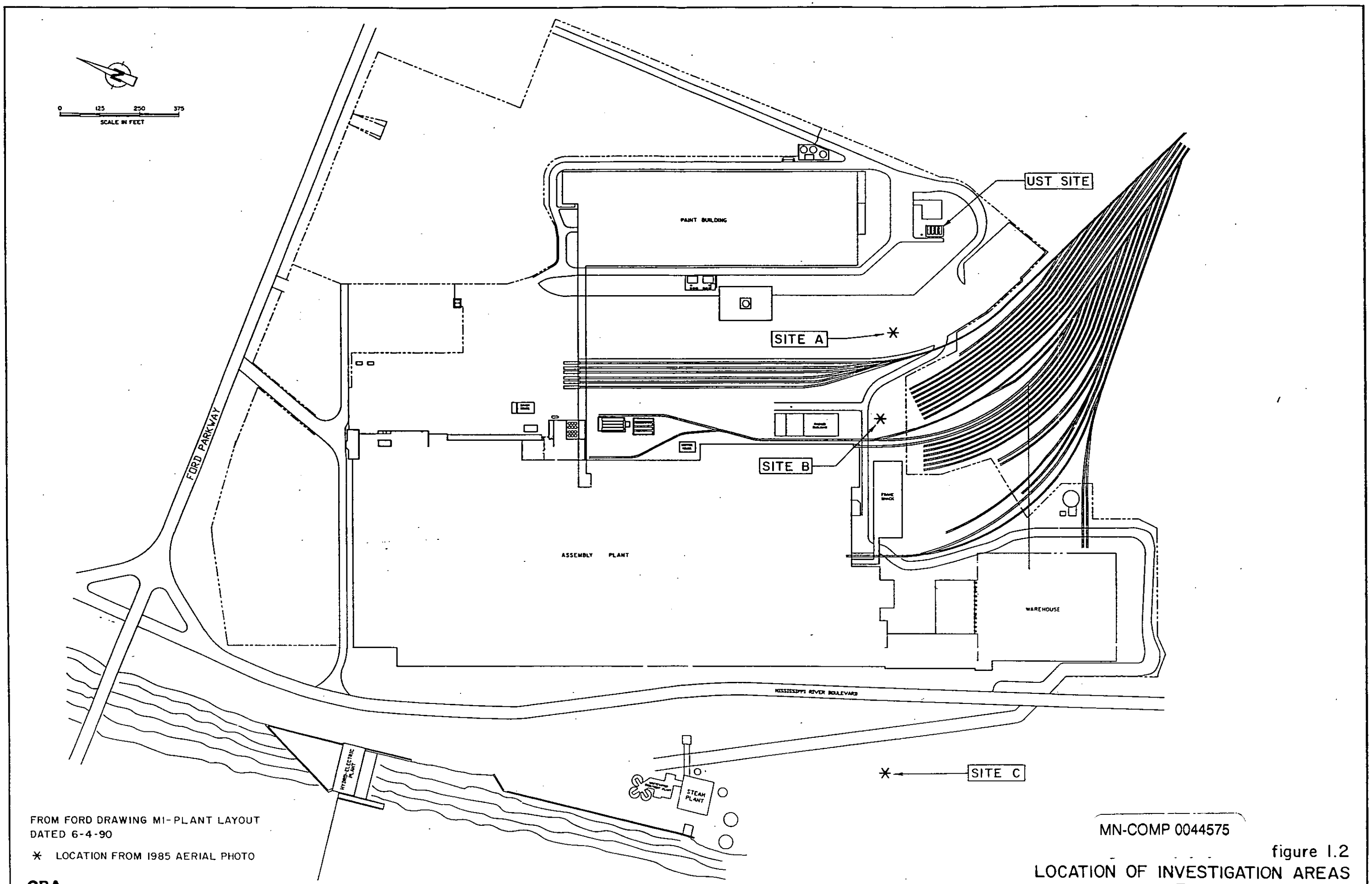

FROM FORD DRAWING MI-PLANT LAYOUT
DATED 6-4-90

* LOCATION FROM 1985 AERIAL PHOTO

CRA

MN-COMP 0044575

figure 1.2
LOCATION OF INVESTIGATION AREAS
Ford Motor Company

2853-17/08/90-M

To address environmental issues that may be associated with past waste handling and disposal practices, and to consolidate information related to past investigations, Ford hired Conestoga-Rovers and Associates (CRA) in 1987 to conduct an assessment of the wastes deposited at the Site. This assessment consisted of a file review, hydrogeologic evaluation, test hole excavation (test pits), stadia survey and waste characterization sampling. From these tasks an assessment and evaluation of the Site conditions was conducted and the results reported to MPCA during the fall of 1988.

Supplemental groundwater and surface water monitoring at Site C occurred during 1989 and 1990 at the request of MPCA.

During 1989, at the request of MPCA, a separate investigation was also conducted at the area designated Site B and subsequently reported to MPCA.

In order to formalize the investigation process, document the extensive work conducted to date and allow for a final decision regarding possible remedial action and/or delisting of the Site from the State's priority list, the MPCA notified Ford during April 1990 of its intention to issue a Request for Response Action (RFRA) for the Site. The RFRA requires Ford to plan and implement a Remedial Investigation and Feasibility Study (RI/FS) at the Site and report the results and recommendations to MPCA. The RFRA was issued on June 26, 1990.

MN-COMP 0044576

Since the issuance of the RFRA, MPCA requested Ford on August 13, 1990, to incorporate the scope of work of a separate underground storage tank (UST) investigation being conducted at the Site, under the direction of MPCA's Hazardous Waste Division, into the scope of work for the RI/FS.

The UST Site is an underground storage tank facility used for storage of waste (spent) solvents pending shipment off-site for recycling. The USTs received waste regulated by the Resource Conversation and Recovery Act (RCRA). Figure 1.2 presents the location of the UST Site. A work plan outlining a proposed investigation to determine the nature, extent and magnitude of the possible solvent release from the UST Site was presented to MPCA on April 6, 1990. MPCA now requests the UST Site investigation to be made part of the RI/FS scope of work.

This report provides the Work Plan for the RI/FS and is submitted in accordance with the RFRA Section IV B and C of Exhibit A (RI/FS Work Plan Submittal and Contents). The purpose of this report is to:

1. Collect and assemble all existing information and data from work conducted to date at the Site.

2. Provide a list of remedial technologies and treatment alternatives to be evaluated by the RI/FS.

MN-COMP 0044577

3. Provide a scope of field investigation work for the proposed RI/FS program.

4. Present a plan for project organization.

5. Provide a quality assurance and control plan in the RI/FS.

6. Present a plan for data management and retention of data and records.

7. Provide a summary of tasks to be conducted for a baseline risk assessment.

8. Provide a Site Security and Safety Plan.

9. Provide a plan to organize the flow of public information about the project.

10. Present a schedule for the RI/FS Work Plan tasks.

MN-COMP 0044578

2.0 BACKGROUND AND SITE HISTORY

2.1 GEOGRAPHIC SETTING

The Site covers an area of approximately 130 acres in the City of St. Paul. It is bordered by the Mississippi River and its gorge to the west, Ford Parkway to the north, Cleveland Avenue to the east and Hampshire Avenue/Mississippi River Boulevard to the south. The Site and plant location are presented on Figure 1.1.

Elevations at the Site range from 690 feet AMSL at the river to 850 feet AMSL on the east side of the property. The main assembly building is at an elevation of 830 feet. The existing topography was developed by a sequence of erosional and depositional events related to the post glacial drainage development of the Mississippi River.

2.2 GENERAL GEOLOGY

Flanking the present river gorge are "terrace features" which consist of level "shoulders" of alluvial sediment which are perched above the present gorge. The Site area exhibits two of these features, one at approximately 830 feet AMSL and one at approximately 850 feet AMSL. These terraces represent alluvial deposits formed during the earliest stages of the Mississippi River's development. Separating this area of alluvial terrace deposits from the

MN-COMP 0044579

river gorge bottom is a vertical bedrock bluff. More recent alluvial deposits fill the gorge. The terrace and gorge alluvial deposits consist of primarily medium to coarse grained sand and gravel.

The bedrock underlying the site, and lining the bluff consists of relatively flat lying limestone, shale and sandstone. Bedrock formations which outcrop on the Site are listed in descending order of age as follows: the Decorah Shale, Platteville Formation (mostly limestone and minor shale), Glenwood Shale and St. Peter Sandstone. The Decorah Shale is described as greenish gray, thin bedded and clay rich. Geologic maps of the Site area, supported by past work performed by CRA, indicate that the shale is partially to mostly eroded away towards the river bluff. Underlying the Decorah Shale is the Platteville Formation which is composed of thin to medium bedded limestone containing minor interbeds of shale. The Platteville is underlain by the Glenwood Shale, a greenish gray, clay rich formation. The St. Peter Formation is a well sorted, medium grained sandstone.

2.3 SITE DISPOSAL HISTORY

The Plant began operation over 50 years ago and was originally used to manufacture glass. Since then the Plant has been expanded several times and is presently used to assemble pick-up trucks.

A file review was conducted by CRA to compile information related to the Plant's pre-1965 waste generation, disposal practices, investigations

and activities on or near the Plant facilities. A summary of the file review information was presented in the report "Assessment of Fill Areas", October 1988, CRA. Plant files were reviewed on November 17, 1987. The MPCA files were reviewed on December 4, 1987. The majority of the information and correspondence in the Plant files is dated between and including the years 1980 and 1984. The information in the MPCA files is for the most part duplication of the Ford files with the addition of internal MPCA memos and reports.

Based on previous investigations and the RFRA, three areas at the plant have been identified as former fill sites. The sites have been designated as Site A, Site B and Site C and are shown on Figure 1.2.

During preparation of this work plan, aerial photographs were obtained and studied for the years 1945, 1956, 1958, 1962, 1983 and 1985. These photographs are enclosed under separate cover.

The aerial photograph for 1985 was utilized to summarize the extent of the past disposal at Sites A, B and C as could be determined from the study of the earlier aerial photographs. The areas delineated on the 1985 aerial photographs are based on observation of disturbed soil and vegetation on these earlier photographs and are, therefore, likely to be larger than the area used for actual disposal.

MN-COMP 0044581

Following are subsections which describe the waste disposal history at Sites A, B and C.

2.3.1 Site A Disposal History

Site A was located at the south end of a former test track east of the assembly plant. Figure 2.1 illustrates the location of Site A. Paint sludges/wastes were deposited in the area from 1943 to 1960. This area was excavated in 1966 during a railroad car loading "tri-level" expansion. Sludge and earthen materials were deposited in the fill area known as Site C.

2.3.2 Site B Disposal History

The Site B is located west of Site A and was used for burning and burial of plant waste during the early Plant operations until 1945. The area was excavated as part of a paved parking lot expansion in 1962. Figure 2.1 illustrates the location of Site B. The excavated materials were placed in the Site C fill area. Based on evaluation of the 1985 aerial photo, from which the maximum area of Site B ground disturbance has been delineated, a portion of the Site B area may now be Soo Line Railroad (Soo Line) property.

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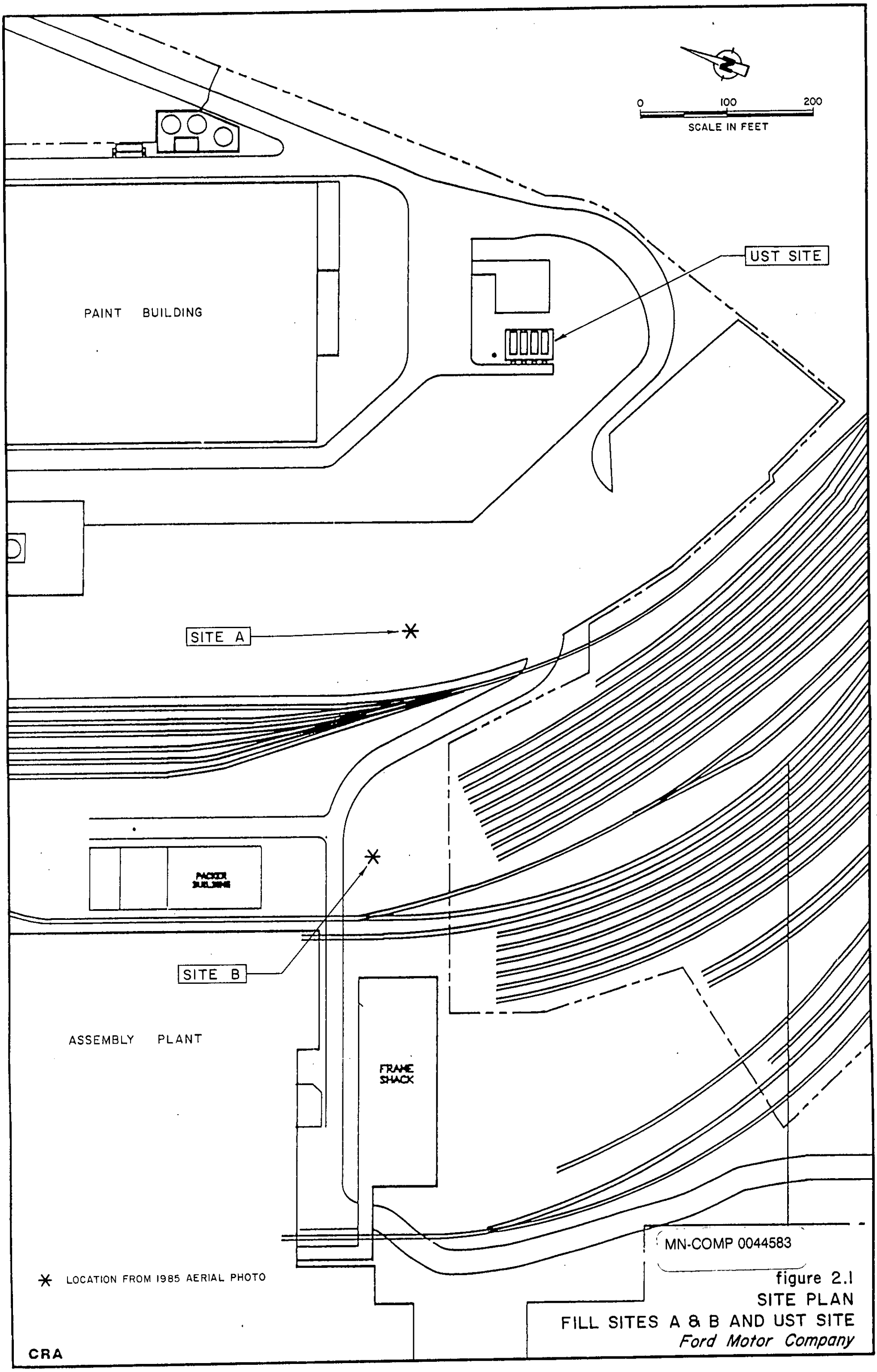

MN-COMP 0044583

figure 2.1
SITE PLAN
FILL SITES A & B AND UST SITE
Ford Motor Company

CRA

2853-17/08/90-M

2.3.3 Site C Disposal History

Site C is approximately 4 acres in size and is located on Ford property west of Mississippi River Boulevard between the Boulevard and the Mississippi River. Figure 2.2 illustrates the Site C fill area. At different times during the Plant's history, construction rubble and paint sludges/wastes were deposited in a relatively small area in Site C. The majority of this material was deposited during the years 1950 through 1965. This practice was discontinued in 1965. During the years 1965 and 1966, construction debris was deposited in large quantities on top of this fill at Site C. The United States Corps of Engineers also deposited additional rubble between Site C and the river during reconstruction of the Lock and Dam No. 1 near the "Ford Bridge" beginning in 1975.

The Site C waste deposit was identified to USEPA by Ford during the Superfund notification process. A hydrogeologic investigation was commissioned by Ford in 1981. Since that investigation was completed, additional clean fill was placed over part of the Site C waste fill. Earth fill and construction rubble, including broken concrete and road excavation rubble from the construction of Mississippi River Boulevard continue to be brought to Site C. A major portion of the top of the fill has been paved with 8 inches of concrete and is now used as a parking lot for tractor-trailer truck units. The remaining top area of Site C is used as a snow dump during winter months for snow removed from local public streets and parking lots.

The file review for Site C indicates that cardboard, wood and scrap metal may also be present in the waste deposit. Batteries, used light

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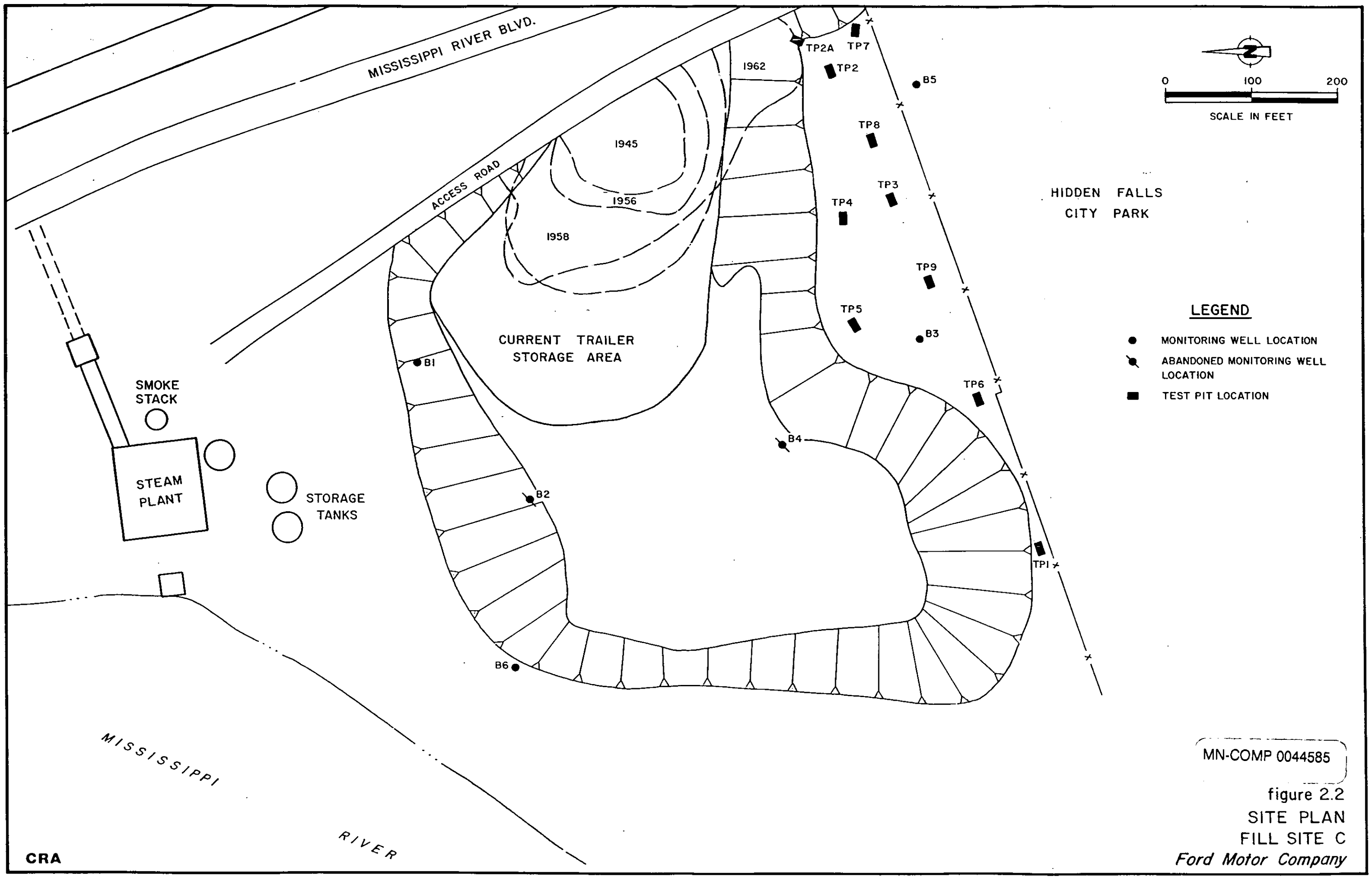

MN-COMP 0044585

figure 2.2
SITE PLAN
FILL SITE C
Ford Motor Company

2853-11/27/89-M

ballasts and capacitors were specifically excluded from the fill material and were sent to alternate off-site disposal. Undated copies of photographs show, at that time, exposed drums and what appears to be paint sludge at various locations. This area was the subject of a beautification/landscaping program conducted during the spring of 1990 (see Section 2.7, page 27 of 41).

Aerial photographs from the file search were used to prepare a plan illustrating the progression of fill at Site C from the access road westward. The limit of fill in 1945, 1956, 1958 and 1962 is illustrated in Figure 2.2. Filling with paint sludges/waste ceased in 1965. The limit of the paint sludges/wastes is expected to be close to the 1962 limit. Substantial filling with demolition rubble and excavation soil has occurred since 1965. The present limit of fill is also presented on Figure 2.2. The paint/sludges/wastes are buried beneath approximately 30 feet of rubble including large blocks of reinforced concrete. Total fill thickness throughout the area is approximately 60 feet. The fill thickness was estimated by constructing a cross section from topographic survey data and borehole logs.

In addition to the fill areas that are under review by CRA, a smaller waste deposit below the river bluff north of Site C and the steam plant was excavated and removed to a hazardous waste landfill (Wayne Disposal Inc., Bellville, Michigan) in July 1983 during construction of the wastewater treatment plant. Approximately 77 cubic yards were excavated and shipped. All waste observed, as well as visibly contaminated soils, were removed. Analytical results of testing conducted by Ford confirmed that the waste did not exhibit hazardous waste characteristics. This effort was the subject of Ford's Amended Superfund

Notification to USEPA dated August 16, 1983. Further information regarding the waste characterization was also provided to MPCA in a letter dated March 2, 1990, which is provided as Appendix A.

2.4 INVESTIGATIVE WORK COMPLETED TO DATE

Several investigations have been completed since identification of the disposal sites by Ford. These studies include hydrogeological investigations, disposal area assessments, status reports and groundwater monitoring reports. The major studies completed to date are:

1) Final Report, Hydrogeologic Engineering Evaluation, February 1982, STS;
2) Twin Cities Assembly Facility, Groundwater Monitoring Wells Survey, March 1982, Ford;
3) Twin Cities Assembly Facility, Groundwater Monitoring Wells Survey, December 1982, Ford;
4) Assessment of Fill Areas, October 1988, CRA;
5) Project Status, Ford New Site B, November 1989, CRA;
6) Groundwater Monitoring Report and Evaluation, Site C, January 1990, CRA;
7) Supplemental Groundwater Monitoring Report and Evaluation for 1990, Site C, August 1990, CRA.

MN-COMP 0044587

2.5 SITE A EVALUATION

Site A has been included in previous reports evaluating the Site history and past disposal practices. No environmental field assessment work has been performed at Site A.

2.6 SITE B EVALUATION

The MPCA's interest in Site B was prompted by a citizen's "complaint" dated July 25, 1984 (subject of an MPCA letter dated April 25, 1989). The "complaint" described a location that was related to excavation for construction of a water line during July 1984. Representatives of Ford, CRA and MPCA defined an area of investigation in May 1989. The location of the Site B area is shown on Figure 2.1.

Field work completed by CRA at Site B includes:

6/89	Drilled two boreholes. Screened soil with HNu or OVA
6/89	Four soil samples analyzed for VOCs and metals
8/89	Drilled three boreholes. Screened soil with HNu or OVA
8/89	Installed three monitoring wells (MW1, MW2, MW3)
8/89	Groundwater elevations
8/89	Three soil samples analyzed for VOCs and metals
8/89	Sampled three wells for VOCs and metals

MN-COMP 0044588

9/89 Groundwater elevations

8/90 Groundwater elevations

All field work was conducted in accordance with the MPCA approved investigation scope of work as described in a June 6, 1989, letter to the MPCA. This letter is contained in Appendix A.

Site B Field Procedures

Initially, two soil borings were proposed. Analytical results of the two initial borings confirmed the presence of VOC. Due to visual appearance and odor in these borings, three additional borings/wells were completed. Locations are presented on Figure 2.3.

All boreholes were advanced using a truck mounted drilling rig advancing 3-1/4 ID hollow stem augers. The augers were steam cleaned between each boring. Soil samples were collected at 2-1/2 foot intervals using a 2 foot long by 2 inch diameter split spoon sampling apparatus. Sampling was conducted in accordance with ASTM methods. Between each sample collection, the split spoons were cleaned using a sequential rinse of methanol, hexane and methanol, followed by a distilled water rinse.

Soil samples were described and classified according to the Unified Soil Classification System. Soil samples were stored in laboratory prepared, 40 ml glass vials and 500 ml glass bottles.

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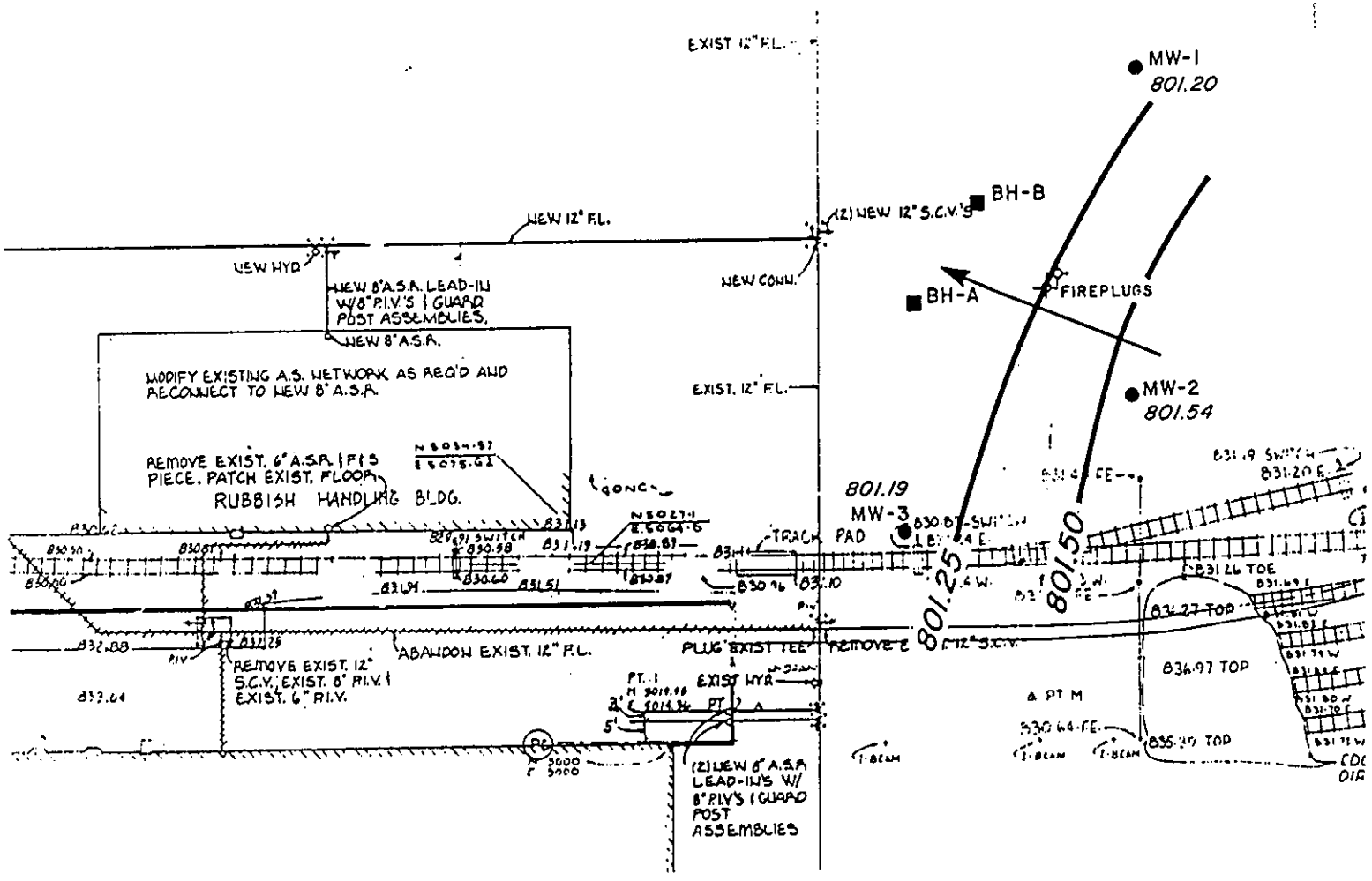


LEGEND

- ● MONITORING WELL LOCATION
- ■ BOREHOLE LOCATION
- 801.19 GROUNDWATER ELEVATION IN FEET AMSL
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

SCALE: 1" = 60'

MN-COMP 0044590

figure 2.3

GROUNDWATER CONTOURS (8-16-89)
SITE "B"
Ford Motor Company

CRA

2853-17/10/89-M

During sampling, both the containerized soils and auger openings were scanned with either an HNu photoionization meter or an OVA flame ionization meter.

From four of the borings, one sample from above the water table was prepared and submitted for chemical analysis. At boring A (BH A) one sample from above and one sample from below the water table was submitted. Samples were sent to Pace Laboratories of Minneapolis, Minnesota (Pace) using chain of custody procedures. Table 2.1 presents a summary of soil samples obtained and indicates those selected and submitted for analysis. A summary of the soil analytical results is presented as Table 2.2.

Monitoring Well Installations

Three monitoring wells were installed to approximately 12 feet below ground surface (BGS). Wells were constructed with:

- 2 foot long by 2 inch diameter stainless steel continuous (#10) slot screens.
- 2 inch diameter low carbon steel riser.
- A sand pack (#30) placed around and 2 feet above the screen.
- A 2 foot bentonite seal.
- Bentonite - cement backfill to the surface.
- Locking protective casing and bumper posts.

MN-COMP 0044591

TABLE 2.1

SUMMARY OF SOIL SAMPLES
SITE B

Location	Sample Inverval (ft. BGS)	Date	Analysis	OVA/Hnu Reading	Submitted to Lab
BH-A	0.5 - 2.5	6/18/89		BG	
	4.0 - 6.0	6/18/89	VOCs/Metals	40	X
	6.0 - 7.5	6/18/89	VOCs/Metals	40	X
BH-B	0.5 - 2.0	6/18/89		10	
	2.0 - 4.0	6/18/89		40	
	4.0 - 6.0	6/18/89	VOCs/Metals	45	X
	6.0 - 8.0	6/18/89		45	
	8.0 - 10.0	6/18/89	VOCs/Metals	150	X
MW-1	0.0 - 2.0	8/01/89		BG	
	2.0 - 4.0	8/01/89		150	
	4.0 - 6.0	8/01/89	VOCs/Metals	110	X
	6.0 - 8.0	8/01/89		175	
	9.0 - 11.0	8/01/89		180	
	11.0 - 12.0	8/01/89		110	
MW-2	0.0 - 2.0	8/02/89		BG	
	2.0 - 4.0	8/02/89	VOCs/Metals	BG	X
	4.0 - 6.0	8/02/89		BG	
	6.0 - 8.0	8/02/89		BG	
	8.0 - 10.0	8/02/89		200	
	10.0 - 12.0	8/02/89		200	
MW-3	2.0 - 4.0	8/02/89		BG	
	4.0 - 6.0	8/02/89	VOCs/Metals	BG	X
	6.0 - 8.0	8/02/89		BG	
	8.0 - 10.0	8/02/89		BG	
	10.0 - 12.0	8/02/89		BG	

Notes:

1. BG = Back Ground Value
2. VOCs were analyzed using EPA Methods 601 and 602.
3. Metals list includes: As, Ba, Cd, Cr, Cu, Pb, Hg, Se, Ag, Zn, Ni.

MN-COMP 0044592

TABLE 2.2

SUMMARY OF SOIL ANALYTICAL RESULTS
SITE B

Parameter	MDL	BHA 4-6 ft.	BHA 6-8 ft.	BHB 4-6 ft.	BHB 8-10 ft.	MW1 4-6 ft.	MW2 2-4 ft.	MW3 4-6 ft.
Inorganic Analysis (mg/kg)								
Arsenic	1.3-2.5	21	1.5	9.9	5.6	12	9.0	ND
Barium	5.0	870	39	580	120	380	180	36
Cadmium	0.25	7.5	0.7	56	0.72	3.3	0.70	0.28
Chromium	2.5	51	8.9	490	24	28	32	16
Copper	0.25	100	6.4	75	8.5	32	14	12
Lead	2.5	1,100	62	3,800	16	400	54	7.8
Mercury	0.02	0.19	0.22	0.82	ND	ND	ND	ND
Nickel	1.3	21	10	28	14	22	15	17
Selenium	3.1	ND	ND	8.9	ND	ND	ND	ND
Silver	4.0	ND	ND	ND	ND	ND	ND	ND
Zinc	2.5	770	44	3,500	53	460	73	18
Organic Analysis (µg/kg)(1)								
Ethylbenzene	600(2)	ND	ND	100,000(2)	20,000	ND	ND	ND
Xylenes, Total	600	ND	ND	ND	ND	980	ND	ND

Notes:

MDL = Method Detection Limit
ND = Not detected at or above MDL.
(1) = VOC analysis conducted for EPA 601 and 602 Method Lists, only detected compounds are listed.
(2) = This sample analyzed with MDL of 12,000 µg/kg rather than MDL indicated.

MN-COMP 0044593

CONESTOGA-ROVERS & ASSOCIATES

Borehole and monitoring well logs are contained in Appendix B.

Well Development and Sampling

Wells were developed using a bottom filling stainless steel bailer to surge and evacuate groundwater. A minimum of five well volumes were removed. Conductivity, pH and temperature were periodically noted.

Immediately following development, water samples were collected and submitted for chemical analysis to Pace.

The groundwater analytical results are presented as Table 2.3. Table 2.4 presents groundwater elevations and Figures 2.3 and 2.4 show the water table elevation contours for Site B.

Summary of Current Site B Evaluation

Geology

Site B is located approximately 1/4 mile east of the Mississippi River at an elevation of 830 feet AMSL. The river elevation is approximately 690 feet.

MN-COMP 0044594

TABLE 2.4

GROUNDWATER ELEVATIONS
FORD, SITE B, ST. PAUL, MINNESOTA

Well	Top of Casing Elevation (ft. AMSL)	Groundwater Elevations (ft. AMSL) 8/16/89	9/13/89
MW1	812.26	801.20	801.17
MW2	813.24	801.54	801.97
MW3	813.22	801.19	801.44

MN-COMP 0044595.01

TABLE 2.3

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
SITE B

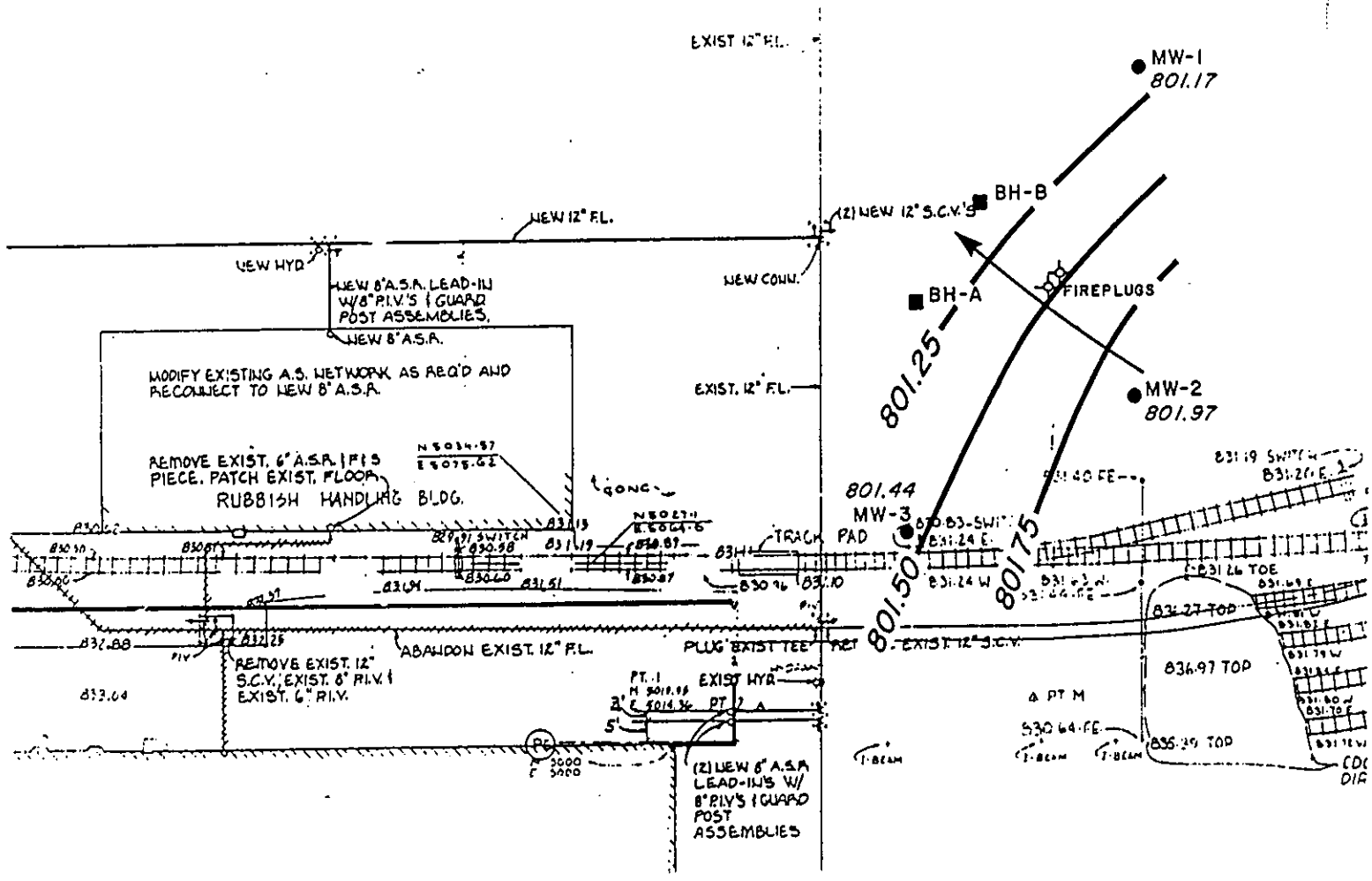
	MDL	Rinsate Blank	MW-1	MW-2	MW-2 (Dup.)	MW-3
Inorganic Analysis (mg/L)						
Arsenic	0.002	ND	ND	ND	ND	ND
Barium	0.2	ND	0.4	0.9	0.9	0.3
Cadmium	0.0001	ND	0.0003	0.0002	0.0001	0.0003
Chromium	0.001	ND	ND	ND	ND	ND
Copper	0.01	ND	ND	ND	ND	ND
Lead	0.005	ND	ND	ND	ND	ND
Mercury	0.0002	ND	ND	ND	ND	ND
Nickel	0.05	ND	ND	ND	ND	ND
Selenium	0.010	ND	ND	ND	ND	ND
Silver	0.04	ND	ND	ND	ND	ND
Zinc	0.01	ND	0.03	0.06	1.0	0.14
Organic Analysis (ug/L)*						
Methylene Chloride	5.0 - 50	ND	7.7	230	110	ND
1,1-Dichloroethylene	0.3 - 15	0.7	3.1	43	ND	0.4
Benzene	50.0	ND	ND	370	510	ND
Ethyl Benzene	50.0	ND	ND	3,000	64	ND
1,1,1-Trichloroethane	0.5	3.0	ND	ND	ND	ND

Notes:

MDL = Method Detection Limit
ND = Not detected at or above MDL.
* = VOC analysis conducted for EPA 601 and 602 Method Lists, only detected compounds are listed.

CONESTOGA-ROVERS & ASSOCIATES

MN-COMP 0044595



LEGEND

- ● MONITORING WELL LOCATION
- ■ BOREHOLE LOCATION
- *801.19* GROUNDWATER ELEVATION IN FEET AMSL
- GROUNDWATER CONTOUR
- ← GROUNDWATER FLOW DIRECTION

SCALE: 1" = 60'

MN-COMP 0044596

figure 2.4

GROUNDWATER CONTOURS (9-13-89)
SITE "B"
Ford Motor Company

CRA

2853-17/10/89-M

The Site is situated on a level "terrace" feature, a remnant feature of a large post glacial Mississippi River.

Surficial geologic materials on the terrace consist of natural sand, silt and gravel deposited by the post glacial Mississippi river and, where altered by cultural activity, nonnative, assorted fill material is found.

Bedrock exists at or near the ground surface and is exposed in a bluff along the river valley. The bedrock consists of interlayered sandstones, shales and limestones of Ordovician age. The upper four formations are of primary importance with respect to groundwater hydrology and are listed in descending order of age as follows: Decorah Shale, Platteville Formation, Glenwood Shale and the St. Peter Formation.

Five borings were advanced at Site B, four of which intercepted bedrock at approximately 12 feet BGS. The fifth boring was terminated at 7-1/2 feet where auger refusal occurred.

Surficial materials in all boreholes consisted of intermixed poorly sorted sand, silt, clay and non-native fill material.

Bedrock was interpreted to be the upper member of the Platteville formation. The upper Platteville is described as a tan and gray, medium bedded dolomitic limestone containing interbedded grayish green shale.

MN-COMP 0044597

Hydrogeology

Groundwater was intercepted in all borings at approximately 10 feet BGS. Monitoring wells were installed to a depth of 12 feet BGS, penetrating a zone of saturation approximately 2 feet thick.

Wells were not advanced past 12 feet, the depth at which bedrock was encountered.

The uppermost saturated zone occurs in the unconsolidated fill material lying above the bedrock. Saturation may or may not extend continuously into the underlying Platteville formation.

Groundwater flow is generally towards the north. The average hydraulic gradient is calculated at 0.01. This is considered a shallow gradient. Figures 2.3 and 2.4 show the groundwater flow direction.

Groundwater flow direction in a shallow water table is subject to frequent change primarily attributable to fluctuations during recharge from rain fall events. Flow direction may also be influenced by cultural features (i.e., storm sewers, extensive pavement, drainage tiles, etc.).

Based on these observations, groundwater flow direction at Site B may be subject to frequent change, for there is extensive pavement to the north of the wells and borings. Located to the south is an area that is unpaved, allowing rainfall to infiltrate and recharge the water table. In theory,

groundwater would "mound" in the unpaved area and flow towards the north, paved area. After a certain period, flow direction could change as the groundwater system stabilizes, reaching steady state conditions.

Although no boreholes and wells penetrate the Platteville Formation, some conclusions can be reached regarding hydrogeologic characteristics. Regionally, the Platteville, in conjunction with the underlying Glenwood shale, is considered a hydrogeologic confining unit.

CRA's geologist examined bedrock outcroppings of the Decorah shale, Platteville limestone, Glenwood shale and the St. Peter sandstone in the vicinity of the Site for the purpose of examining hydrogeologic characteristics of these formations. Of particular interest was the presence of groundwater seepage emanating from the Platteville formation along the river bluff face. This was observed in several locations and, most notably, several hundred feet south of Site B at Hidden Falls Park. The presence of seeps indicates that groundwater, which may be perched, exists in the Platteville above the Glenwood Shale confining unit. Underlying the Platteville-Glenwood confining unit is the St. Peter sandstone.

HNu/OVA Results

An HNu photoionization device and/or an OVA flame ionization device was used to scan soils for organic vapors in the five boreholes. The results are shown on Table 2.1.

Summarizing the above results, HNu/OVA readings were detected above background levels and below the water table in BH A, BH B and MW1. Readings above background were observed at and below the water table in MW2. No above background readings were detected at MW3.

Soil Chemical Analysis Results

Soil samples were analyzed for halocarbon and aromatic organic compounds (by SW846 Methods 8010/8020) and the inorganic compounds listed on Table 2.2. Table 2.2 presents all inorganic analytical results, however, only detected compounds have been summarized for organics. Based on these inorganic data, cadmium, lead and zinc levels appeared to be present above typical background soils.

Ethylbenzene and total xylene were found above method detection limits (MDLs) in soil taken from boring MW-1. Ethylbenzene was also found above MDLs at BH B.

Groundwater Chemical Analysis Results

Groundwater samples were analyzed for halocarbon and aromatic organic compounds (by EPA Method 601 and 602) and the inorganic compounds listed on Table 2.3. Table 2.3 presents all inorganic analytical results, however, only detected compounds have been summarized for organics. These

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groundwater results indicate that inorganics were found at levels near MDLs. Results reported for zinc showed poor reproducibility between the sample and duplicate taken for well MW-2.

Levels of VOCs in well MW-3 were not detected above MDL or were found below levels noted in the field rinsate blank (i.e. for 1,1,1-trichloroethene). Detected levels were primarily found in well MW-2 (methylene chloride, 1,1-dichloroethylene, benzene and ethyl benzene) and varied from the sample to the duplicate for this well. Due to the poor reproducibility of VOC results, these data should be qualified as non-quantitative data. However, these data were acceptable for qualitative purposes. Two VOCs (methylene chloride and 1,1-dichloroethylene) were found in well MW-1. Based on the flow direction indicated for the August and September 1989 water levels, well MW-2 is currently the most upgradient of the wells installed.

2.7 SITE C EVALUATION

The majority of the environmental assessment work completed to date at the Plant has related to the investigation of Site C due to the relocation of the materials from Sites A and B. The Site C waste deposit was identified to the USEPA by Ford during the Superfund notification process. The first investigation was commissioned by Ford in 1981. A chronological list of the field work performed at Site C follows:

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5/81	Drilled six boreholes, installed four monitoring wells (B1, B2, B3, B4)	STS
1/82	Groundwater elevations	STS
3/82	Sampled four wells for organics and metals	Ford
3/82	Groundwater elevations	Ford
12/82	Installed monitoring well (B5)	STS
12/82	Sampled five wells and three river locations for organics and metals	Ford
12/82	Groundwater elevations	Ford
1/88	Ten test pit excavations, analyzed two leachate samples	CRA
2/88	Stadia survey for mapping	CRA
3/88	Groundwater elevations	CRA
6/89	Sampled three wells and two river locations for organics and metals	CRA
6/89	Groundwater elevations	CRA
6/89	Abandoned two wells (B2, B4)	GME, CRA
8/89	Sampled three wells and two river locations for organics and metals	CRA
8/89	Groundwater elevations	CRA
9/89	Sampled three wells and two river locations for organics and metals	CRA
9/89	Groundwater elevations	CRA
4/90	Installed one well (B6)	GME, CRA
4/90	Sampled three wells and two river locations for organics and metals	CRA
4/90	Groundwater elevations	CRA
6/90	Sampled three wells and two river locations for organics and metals	CRA

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6/90	Groundwater elevations	CRA
8/90	Groundwater elevations	CRA

In June of 1989, GME Consultants Inc. upgraded surface protection on wells B1, B3 and B5 by installing locking protective casings, bumper posts and additional riser pipes where necessary. Wells B2 and B4 had been damaged beyond repair by the continual dumping and regrading of rubble. Therefore, wells B2 and B4 were abandoned in accordance with the Minnesota Department of Health (MDH) water well code. The wells were grouted with a neat cement grout and all retrievable material was removed. Well abandonment records and logs are presented in Appendix C.

Following the repairs to wells B1, B3 and B5, a Site survey was completed to establish new top of casing elevations on these wells and to further define the top of fill area.

In April 1990, CRA contracted GME Consultants Inc. to install monitoring well MW-6.

A CME 55 drill rig, using 4-1/4 inch inside diameter, hollow stem augers advanced the well boring. Split spoon samples were collected continuously to the bottom of the boring.

The monitoring well was completed using the following materials:

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- 10-foot, 2.0-inch diameter, .10 slot stainless steel screen;
- 40-foot, 2.0-inch, low carbon steel riser;
- #10 silica sand pack;
- bentonite slurry seal;
- bentonite (approximately 3 percent) cement grout;
- 4.0-inch diameter locking protective casing;
- three 4.0-inch steel protective posts.

The monitoring well was installed inside the auger annulus by backing the augers from the boring while simultaneously installing the sand pack. The sand pack was installed from the bottom to approximately 8 feet above the top of the screen. Natural sand and gravel filled the annulus to approximately 26 feet BGS. A bentonite slurry seal approximately 3 feet thick was placed above the sand pack. The remaining auger annulus was backfilled by the tremie grout method using a mixture of bentonite and cement. Surface protection consists of a 4-inch diameter locking protective casing and three steel bumper posts.

The drill rig, augers, well materials and additional associated equipment were decontaminated using a high temperature, hot water steam rinse.

Well MW-6 was developed and stabilized following installation using a 2-inch stainless steel and teflon, bottom filling bailer. A minimum of five standing well volumes was purged. The well was considered

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stabilized after three consecutive volumes with readings of less than 5 percent variability were purged. In total, 44 well volumes were removed during development.

Monitoring well logs for B1, B3, B5 and MW-6 are contained in Appendix B.

Site C monitoring wells have been sampled on seven occasions. Table 2.5 presents a summary of the detected compounds for all seven sampling rounds. Table 2.6 presents water level elevation data. Water table contours are shown on Figures 2.5 and 2.6.

Groundwater and surface water sampling conducted by CRA was completed according to the approved work plan (provided in Appendix A) and the MPCA guidance manual "Procedures for Groundwater Monitoring; MPCA Guidelines" December 1986. The samples were submitted to Pace Laboratories Inc. for chemical analysis under chain-of-custody procedures.

The surface water samples were taken by the "grab sampling" method. On all five sampling events conducted by CRA, samples were obtained from both upstream and downstream locations. The surface water locations are close to, but may not be exactly the same as those previously sampled by Ford during earlier, 1981 and 1982, monitoring.

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TABLE 2.5
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
FORD SITE "C"
DETECTED COMPOUNDS

	B1							B2		B3							B4	
	3/82	12/82	6/89	8/89	9/89	4/90	6/90	3/82	12/82	3/82	12/82	6/89	8/89	9/89	4/90	6/90	3/82	12/82
cis-1,2-Dichloroethylene µg/l	NA	NA	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	NA	NA
1,1-Dichloroethylene µg/l	ND	ND	1.5	ND(R)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride µg/l	ND	ND	ND	ND(R)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane µg/l	ND	ND	ND	ND(R)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane µg/l	ND	ND	ND	14(J)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride µg/l	ND	ND	ND	5.2(J)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene µg/l	4	ND	ND	ND(R)	2.1	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene µg/l	1	2.1	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	1	ND
Chlorobenzene µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene (Total) µg/l	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	NA	NA	NA	ND	NA	ND	ND
1,2-Dichloroethylene µg/l	ND	ND	ND	ND	ND	ND	ND	15	22.0	ND	ND	ND	ND	ND	ND	ND	ND	6.7
Cadmium mg/l	0.02	0.003	ND	ND	ND	ND	ND	ND	0.003	ND	0.003	0.0002	ND	ND	ND	ND	0.02	0.005
Lead mg/l	0.12	0.005	ND	ND	ND	ND	ND	0.12	0.005	0.05	0.004	ND	ND	ND	ND	ND	0.06	0.006
Zinc mg/l	0.06	ND	ND	ND	ND	ND	ND	0.04	ND	ND	ND	0.03	ND	0.02	ND	ND	0.09	0.06
Copper mg/l	0.03	ND	ND	0.01	ND	ND	ND	0.02	ND	0.01	ND	ND	0.02	ND	0.01(U)	ND	0.01	ND
Nickel mg/l	0.07	0.06	ND	ND	ND	ND	ND	0.04	ND	0.02	ND	ND	0.05	ND	ND	ND	0.05	ND
Chromium mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Barium mg/l	NA	NA	ND	ND	ND	ND	0.06	NA	NA	NA	NA	0.3	ND	ND	0.2	0.18	NA	NA

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TABLE 2.5
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
FORD SITE "C"
DETECTED COMPOUNDS

	B5				B6		Mississippi River Up Stream						Mississippi River Adjacent to Plant	Mississippi River Down Stream					
	12/82	6/89	8/89	9/89	4/90	6/90	12/82	6/89	8/89	9/89	4/90	6/90	12/82	12/82	6/89	8/89	9/89	4/90	6/90
cis-1,2-Dichloroethylene µg/l	NA	ND	ND	ND	ND	5.5	NA	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND
1,1-Dichloroethylene µg/l	ND	ND	0.8(J)	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	1.1(J)	ND	ND	ND
Methylene Chloride µg/l	ND	ND	ND	ND	1.4(U)	ND	ND	ND	ND	ND	1.3(U)	1.0	ND	ND	1.3	ND	ND	ND	ND
Trichlorofluoromethane µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1(J)	ND	ND	ND	ND
Dichlorodifluoromethane µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene µg/l	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform µg/l	ND	ND	ND	ND	3.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene µg/l	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND
Toluene µg/l	ND	ND	ND	ND	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND
Xylene (Total) µg/l	ND	NA	NA	NA	ND	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	ND	NA
1,2-Dichloroethylene µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND
Cadmium mg/l	ND	0.0004	ND	0.0002	ND	ND	ND	ND	0.0005	ND	ND	ND	0.001	NA	ND	0.0008	ND	ND	ND
Lead mg/l	0.003	ND	ND	ND	ND	ND	ND	ND	ND	0.001	ND	ND	ND	ND	ND	ND	0.001	ND	ND
Zinc mg/l	ND	0.07	ND	0.26	ND	0.007(U)	ND	ND	ND	ND	ND	0.009(U)	ND	ND	ND	ND	ND	ND	ND
Copper mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.001	ND	ND	ND	ND
Nickel mg/l	ND	0.08	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND
Chromium mg/l	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium mg/l	NA	ND	ND	ND	ND	0.073	NA	ND	ND	ND	ND	0.058	NA	NA	ND	ND	ND	ND	0.055

NA - Not analyzed.
ND - Not detected at or above method detection limit.
(J) - Value estimated based on holding time exceedence.
(R) - Value unusable based on holding time exceedence.
(U) - Value qualified as non-detect based on method blank.

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TABLE 2.6

FORD SITE C
REVISED* MONITORING WELL ELEVATION DATA

Well #	Top of Casing Elevation	Ground Elevation	Bottom of Screen Elevation	Groundwater Elevations 8/3/90	6/6/90	4/19/90	9/13/89	6/2/89	3/24/88(1)	12/1/82(2)	3/3/82(3)	1/5/82(3)
B1	738.06	735.9	681.62	690.99	690.43	688.30	686.91	689.35	688.24	691.85	688.35	688.62
B3	704.18	702.9	679.68	690.66	690.00	690.38	687.76	689.36	688.50	691.42	688.27	688.65
B5	703.90	703.2	678.50	691.39	690.82	-	689.19	690.45	689.61	691.96	NI	NI
B6	730.85	728.4	681.90	690.95	690.61	687.85	NI	NI	NI	NI	NI	NI
Staff Gauge Lock & Dam #1	-	-	-	691.4	691.5	688.2						

Note:

All elevations are feet above mean sea level (AMSL). **National Geodetic Vertical Datum, 1929 (NGVD)**

*As revised due to well repairs and modifications.

(1) From report "Assessment of Fill Areas, Ford Motor Company, Twin Cities Assembly Plant," CRA, October 1988.

(2) From report "Twin Cities Assembly Facility, Groundwater Monitoring Wells Survey," Ford Motor Company, December 1, 1982.

(3) From report "Twin Cities Assembly Facility, Groundwater Monitoring Wells Survey," Ford Motor Company, March 3, 1982.

NI Not Installed

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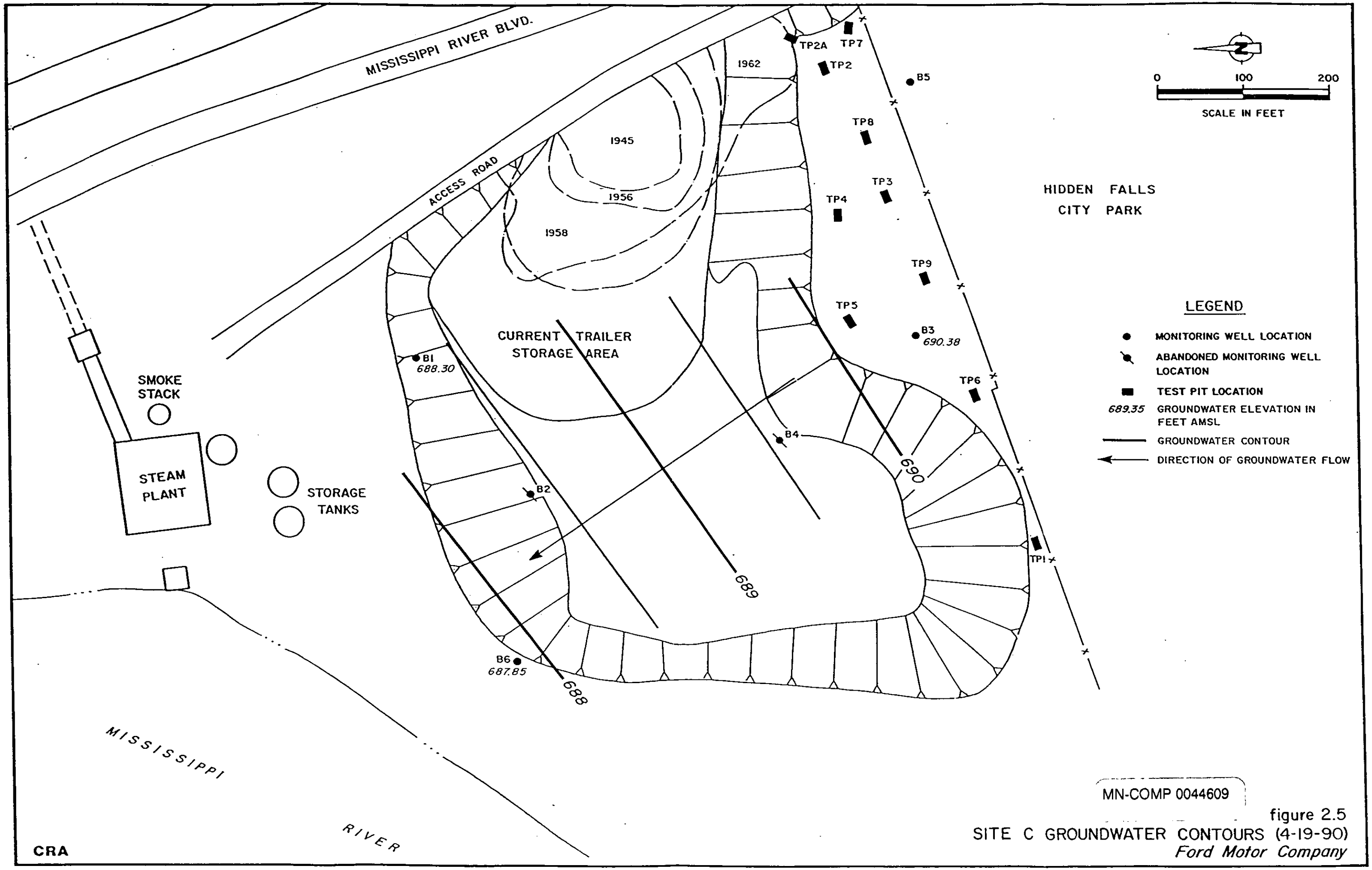
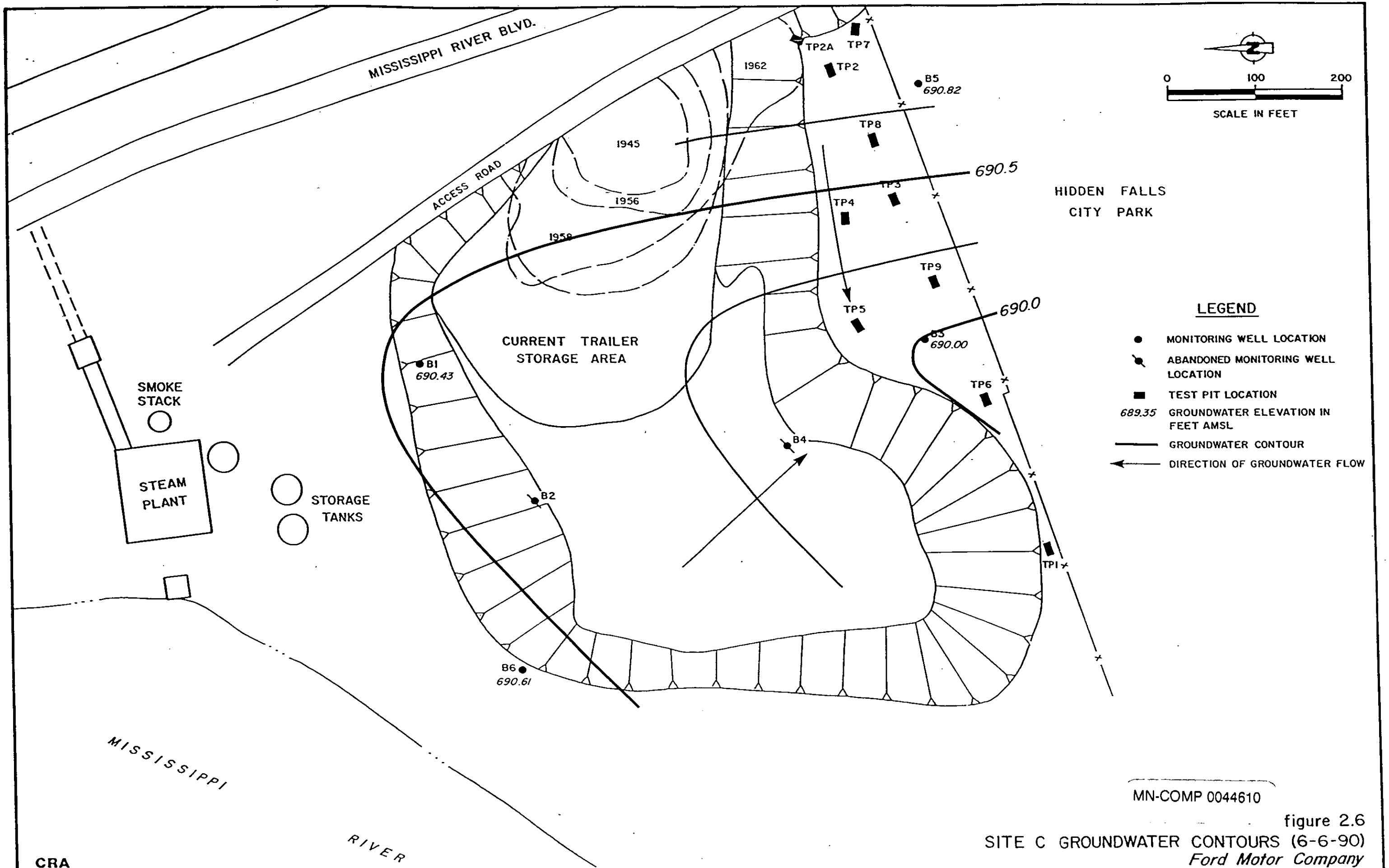


MN-COMP 0044609

figure 2.5
SITE C GROUNDWATER CONTOURS (4-19-90)
Ford Motor Company

2653-11/27/89-M



MN-COMP 0044610

figure 2.6
SITE C GROUNDWATER CONTOURS (6-6-90)
Ford Motor Company

2853-11/27/89-M

At the time of the June 1989 sampling event, the Site C area was inspected upstream and downstream for the presence of surface "seeps or springs", as suggested by MPCA's letter of April 25, 1989, to Ford. This inspection located no potential sampling locations of this type.

Groundwater Flow Direction

Groundwater flow is predominantly to the west towards the Mississippi River. Seasonal control of the river elevation may affect this flow direction to some degree. Water levels measured by CRA during 1988, also presented on Table 2.6, had indicated a more northwesterly component of flow direction. A similar westerly flow pattern was also provided by data presented by Ford in December 1982 as also indicated on Table 2.6. Early groundwater elevations by Ford do not include well B5, as it was not installed until later in 1982. Only the 1990 data includes the new well B6. Seasonal fluctuations in the river elevation also appear to change the gradients as shown on Figures 2.5 and 2.6.

Figure 2.6 shows a flow direction to the south for the western edge of Site C. This flow direction indicated that the river was recharging this portion of Site C. The Army Corp of Engineers maintains a staff gauge in the lower pool of Lock and Dam #1. The elevations of the river were approximately 3 feet higher during the June 1990 water level round when compared to the river elevation in April. The change in river elevations explains why groundwater flow for June is different than the flow direction for April.

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Groundwater elevations are measured in the existing monitoring wells which are screened in the fill and/or river deposits of sand and gravel. Thus, the groundwater flow directions represent a localized condition under Site C.

Site Hydraulic Conductivity

Grain size distribution curves are presented in the 1982 STS report. The grain size distribution can be used to estimate the permeability of the unconsolidated sand and gravel using Hazen's equation. Hazen's equation is an empirical formula that estimates permeability based on grain size distribution. Where:

$K = Ad_{10}^2$

K is the permeability in cm/s,

A is an empirical coefficient equal to 1.0 and

d_{10} is the grain size (in mm) of the 10 percent retained.

Estimated hydraulic conductivity values are presented in Table 2.7. The geometric mean hydraulic conductivity is 2×10^{-2} cm/sec. This is a relatively high hydraulic conductivity consistent with the sand and gravel soils.

Groundwater velocity can be estimated using the equation:

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TABLE 2.7

HAZEN'S PERMEABILITY
SITE C

Borehole	Depth (ft. bgs)	d_{10} (mm)	K (cm/sec)
BH1	39.5 - 41	0.08	6×10^{-3}
BH2	19.5 - 21	0.25	6×10^{-2}
BH2	29.5 - 31	0.30	9×10^{-2}
BH2	34.5 - 36	0.075	5×10^{-3}
BH3	19.5 - 21	0.2	4×10^{-2}
BH5	10 - 11.5	0.08	6×10^{-3}
			Average = 2×10^{-2}

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$$\bar{v} = \frac{Ki}{n}$$

where: $\bar{v}$ is the average groundwater linear velocity,

K is the hydraulic conductivity (2×10^{-2} cm/sec),

i is the hydraulic gradient (0.002) and

n is the porosity (0.3).

The assumed porosity of 0.3, which is common for this type of sediment. The average hydraulic gradient is 0.002.

By solving the equation, the average linear groundwater velocity is estimated to be 1.3×10^{-4} cm/sec, or 0.4 ft/day.

Analytical Parameters

All water samples were analyzed for halocarbon and aromatic volatile organic compounds (VOC) by EPA methods 601 and 602. In addition to the 601/602 VOC parameters, the MPCA requested that *cis*-1,2-dichloroethylene and ethylacetate also be analyzed. This request was presented in their letter dated April 25, 1989. The following metals were also analyzed: arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc.

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The two sampling rounds conducted by Ford in 1982 were analyzed for USEPA volatile priority pollutants plus xylenes, methyl ethyl ketone, methyl isobutyl ketone, cadmium, chromium, lead, nickel, copper and zinc.

Test Pit Investigation

Test pits were excavated at Site C as an investigative tool to define the extent and nature of possible waste disposal.

On December 4, 1987, CRA and its subcontractor mobilized a rubber tired backhoe at Site C along the river. An attempt was made to gain access to the low land areas south of the trailer storage pad. Several attempts were made to reach the bluff, but on each attempt the backhoe got stuck. One test pit (TP1), shown on the Site C Plan, was successfully completed. No evidence of past disposal (i.e. visual or odor) was noted at this test pit location.

On January 19, 1988, a second attempt was made to access this area. A track mounted backhoe was used this time and mobility was not as difficult due to frozen conditions. A total of 10 test pits were excavated to an approximate depth of nine feet below ground surface.

The individual test pit logs are presented in Appendix D. The test pit locations are presented on Figure 2.2 and the Site C Fill Area Site Plan which is provided under separate cover.

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Grab samples were obtained from the backhoe bucket as the excavation proceeded. Physical evidence of waste presence (i.e. odor or visual) was noted only at test pits TP3 and TP8. Test pit TP3 exhibited soil with a gray/black color having a paint-like odor and test pit TP8 showed visual evidence of the same gray/black color as TP3, but without the odor. The samples obtained from test pits TP3 and TP8 were the only samples that exhibited odor or color indicating the possible presence of paint sludge/waste. No evidence of waste presence was noted at the other test pits. The steep side slopes and 30 foot thickness of rubble fill over the pre-1965 materials prevented collection of a sample.

The sample from test pit TP8 exhibited a color change at depth, but no odor was noted. Consequently, this sample was analyzed for target metals common to paint sludge/waste. This analysis was conducted using the standard EPA approved Extraction Procedure (EP) toxicity leachate methodology.

The sample from test pit TP3 exhibited a paint sludge/waste-like odor. As the EP toxicity test is not applicable to aromatic compounds, the Toxicity Characteristic Leaching Procedure (TCLP) was selected as the test method. At the time of the investigation this method was typically utilized to :

1. to aid in waste characterization for disposal, –
2. as an accepted EPA method for delisting wastes,

3. in evaluating adherence to applicable EPA land disposal restrictions and
4. in determining the mobility of organics in soil media.

The TCLP method was recently adopted by EPA to replace the EP method.

Table 2.8 provides a summary of the analytical results of detected parameters for leachate analysis from test pits TP3 and TP8.

The sample from TP3 was collected from a sand seam that exhibited a strong paint waste-like odor. The strong paint waste-like odor suggests migration from the adjacent fill material. The flash point of a sample collected from TP3 was reported to be 140°F. The flash point for determining ignitability defined by RCRA regulations of less than 140°F does not apply since the waste is not a liquid.

A sample from TP8 was leached and analyzed for the EP Toxicity metals. All results were well within criteria values as indicated on Table 2.8. Thus, the material would not be considered a hazardous waste under USEPA or MPCA hazardous waste regulations.

Organic results reported above detection methods in the sample leachate for TP3 are presented in Table 2.9. The sample from Test Pit 3

TABLE 2.8

SUMMARY OF DETECTED INORGANIC PARAMETERS AND SAMPLE CHARACTERISTICS FROM TEST PITS - SITE C

	Leachate Criteria	Test Pit 3 (TP3)**	Test Pit 8 (TP8)**
Arsenic (µg/l)	5,000	10	ND
Barium (mg/l)	100	1.5	0.2
Cadmium (mg/l)	1.0	ND	ND
Copper (mg/l)	100*	0.02	ND
Lead (mg/l)	5.0	0.3	ND
Zinc (mg/l)	500*	0.92	0.03
Flash Point (°F)	NA	140	>200
Sulfide, Reactive (mg/kg)	NA	ND	61
pH	NA	7.6	7.9

Notes:

NA - Not Applicable
ND - Not Detected
* - State of Michigan Leachate Criteria Only
** - TP3 sample was analyzed using TCLP, whereas the TP8 sample was analyzed using EPA Toxicity Leachate Procedure

TABLE 2.9

SUMMARY OF DETECTED ORGANIC PARAMETERS (µg/l) FROM TEST PITS - SITE C

	Test Pit 3 (TP3)*
Toluene	180
Ethyl Benzene	85
M-Xylene	2,600
O & P Xylene	3,700

Note:

* - TP3 sample was analyzed using TCLP.

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was extracted by the TCLP method. The sample from Test Pit 8 was analyzed for total VOC and all results were reported as below method detection limits. Therefore, no results are tabulated.

Cleanup and Landscaping of the Site C Area

During the spring of 1990, aesthetic beautification and landscaping was completed on a portion of the south face of the Site C fill area. The work was performed after the completion of the above investigation and material characterization and in accordance with the proposed scope of work letter of March 2, 1990. An area was delineated by the landscaping contractor with input from Ford and the MPCA. Brush, several trees, empty drums, drum parts and miscellaneous rubble were cleared from the defined area and used as fill. Approximately 2,000 cubic yards of clay soil plus 500 cubic yards of topsoil was placed over the sloped face and then seeded for aesthetic and erosion control purposes.

Site C Evaluation Summary

Site C is comprised of fill and rubble material deposited over naturally occurring sands and gravels which were deposited by the Mississippi River. Groundwater under Site C flows towards the river and is influenced by the river. The data gathered from the existing monitoring wells represents site conditions in the immediate area under Site C.

Original base grade elevations under the fill pile were on the order of 710 to 720 feet AMSL. Presently, the maximum elevation of the fill area is over 770 feet AMSL, indicating that there is up to 60 feet of fill material present. Near the steam plant access road, paint sludges/waste are present in the lower half of the fill area. Small areas of exposed paint sludges/wastes on the steep bank suggest that the paint sludges/wastes are on the order of 25 feet thick.

A footprint of the area containing paint sludges/wastes can be composited from the 1958 and 1962 limits of fill. Assuming that there is 25 feet of waste and related fill over this area, there is a volume of approximately 30,000 cubic yards of waste material believed to be non-hazardous industrial waste based on the analyses conducted.

The paint sludges/wastes are buried beneath approximately 30 feet of rubble fill including large blocks of reinforced concrete. Exposing the paint sludges/wastes and related material would require removal of a concrete parking lot and excavation of approximately 50,000 cubic yards of fill. Any such excavation would be difficult and costly due to the limited access to the Site, the need to use remote temporary fill storage, the numerous oversize pieces of concrete in the material and disruption to plant operations.

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Existing 8 inch concrete pavement covers most of the waste fill and limits infiltration through this material. The low concentration of VOC in groundwater under the Site is not expected to produce a measurable effect in the Mississippi River.

The following summarizes the groundwater and chemical data evaluation for Site C:

- The monitoring well network (wells B1, B3, B5 and B6) at Site C is sufficient to determine that the groundwater flow direction under Site C flows predominantly west towards the Mississippi River.

- Groundwater chemical data gathered from this monitoring represents Site conditions in the immediate area under Site C.

- Chemical data from samples taken at the river indicate that Site C has had no impact on the river.

- Data quality assessments were conducted of the samples collected during the five sampling rounds conducted by CRA (1989/1990). With minor exceptions, the data was found to be acceptable to assess analyte concentrations within groundwater and surface water at the Site.

- Concentrations for the dissolved metals (cadmium, zinc, copper, nickel, chromium and barium) were either below method detection limits or were low and typically acceptable for naturally occurring groundwater.

- The groundwater results from 1989 and 1990 are inconsistent from location to location and are not repeated in successive monitoring events at any one location. These inconsistent results indicate that any VOC release associated with the Site is insignificant. These results are similar in terms of their low levels to those found by Ford during 1982 monitoring at these wells.

- The metals concentrations at all sampling locations are either not detected or at levels well below any concentration of concern.

- Barium was the only analyte found above method detection limits in the river samples taken during 1990 sampling and was found at equal concentrations upstream and downstream of the Site.

- Results for June 1990 sampling for zinc and April 1990 sampling for copper were qualified as non-detect due to the presence of the analyte in the method blank.

- Chemical data from the two rounds of sampling during 1990 on wells B1, B3 and B6 indicate that wells B1 and B3 had no VOCs present during either sampling event.

- Well B6 had methylene chloride detected at 1.4 µg/*l* during the April 1990 sampling. This value was qualified as non-detect due to the presence of this analyte in the method blank.

- Chloroform was detected at well B6 during the April 1990 sampling event at a concentration of 3.9 µg/*l* but was not detected during the June 1990 event. Well B6 was downgradient of the Site during the April sampling event. Well B6 was not downgradient during the June sampling event, however, well B3 was. No VOCs were present in well B3 in either sampling event.

- During the June 1990 sampling, two analytes, *cis*-1,2-dichloroethylene and trichloroetheylnee, were detected at well B6 at concentrations of 5.5 and 0.5 µg/*l*, respectively. However, neither compound was detected during the earlier April 1990 event when B6 was more downgradient of the Site.

- Review of all 1990 sampling data from both rounds indicates no analyte concentration at or near any applicable standards often used for comparison of water quality and purity (e.g. MCLs and RALs). All results for this supplemental 1990 monitoring were found well below RALs and MCLs.

2.8 UST SITE - BACKGROUND

Chronology

Prior to the 1970s, the UST Site was an open area located to the southeast of the former test track. Before the tanks were installed the UST Site was not used for waste handling or activities related to disposal. The location of the waste solvent tanks is shown on Figure 2.1. The more detailed UST Site Plan is enclosed under separate cover.

During the fall of 1984, Ford constructed the UST Site as part of its "Ranger" paint facility expansion, initially to store paints, resin and new solvent brought to the Ford Plant in bulk transport trucks. The double walled, corrosion protected, steel tanks were installed on 24 inch thick concrete pads. However, the UST facility was never used for this purpose and in 1987, Ford decided to utilize the facility to store waste or spent solvent. At that time it was decided that only two (2) of the four (4) tanks (the south two tanks) would be utilized. These tanks are designated as tanks #1 and #2. The fill lines were modified by reversing the check valve system and the installation of quick disconnect fittings for transport truck hook up. Tank #1 was put into use in 1987. Tank #2 was put into use in 1988. Both tanks are operated in conformance with 40 CFR 264, Subpart J.

Geotechnical Information and Construction Plans

Information was located in Ford's files and compiled to review available data for the UST Site area regarding:

- Site geology,
- excavation and filling that has occurred in the Site area,
- the physical construction of the area facilities,
- the location maps and types of utilities present,
- geotechnical soil boring logs,
- topographical maps and Site grading,
- construction drawings for UST Site facility,
- construction drawings for adjacent hazardous waste storage area.

For this purpose the following information was located and utilized.

Drawings Title or Item Description	Drawing #	Date
Partial Site Grading Plan	CE-2	1983 (revised 1985)
Topographical Survey Partial	TS-3	1983
Topographical Survey Partial	TS-4	1983
Solvent Tank Farm Layout	M-50	1983 (revised 1985)

Solvent Tank Farm Cathodic Protection	M-51	1983 (revised 1985)
Solvent Tank Farm Cathodic Protection	M-52	1983 (revised 1985)
Key Plan Sections	M-53	1984 (revised 1985)

This information is enclosed under a separate cover.

A geotechnical investigation was performed for the hazardous waste storage area in 1984. The report and borehole logs for the investigation are provided in Appendix F.

It should be noted that no information was located regarding the propane storage tank area.

Description of System

An illustration of the UST Site facility is presented on the UST Site Plan which is provided under separate cover. Further detail is provided by Ford Plans M-50, M-51, M-52 and CE-2. The facility consists of the following elements:

1. four tanks of double wall construction type, 10,000 gallon capacity each. Tanks are 8' 0" x 26' 7";
2. related fill, vent, vapor recovery and pump out pipe lines, an access pipe/manhole hatch is also provided, as well as related valves and gauges;
3. each tank was also coated with an asphalt-based coating prior to installation;

4. corrosion prevention is provided by cathodic protection on all tanks, lines and associate fittings;
5. check valves on pump out lines;
6. catch basins located at the pump out line access;
7. the size of the drain tile line is 4-inch, perforated pipe, sloped in the direction of sump;
8. vacuum test fittings;
9. tanks sit on a concrete pad of 48 feet x 30 feet and are anchored to the pad;
10. the concrete manhole sump is located at the north end of the drain tile system.

UST Site Geology and Hydrogeology

Geology

The UST Site is located approximately five-eighths of a mile east of the Mississippi River and is situated at an approximate elevation of 850 feet AMSL on a terrace which flanks the present river gorge. The UST Site area exhibits two of these terrace features, one at approximately 850 feet AMSL and one at approximately 830 feet AMSL. The river elevation is approximately 690 feet AMSL. The UST Site's position on the terrace is near the slope (terrace scarp) which separates the 850 foot terrace from the 830 foot terrace.

Boring logs were reviewed that were obtained during the construction of the present hazardous waste storage area located adjacent to the

UST Site. These logs revealed that the terrace alluvium consists of primarily medium to coarse grained sand and gravel. Bedrock was encountered between 4 and 6 feet BGS.

The bedrock at the UST Site consists of weathered Decorah Shale. Geologic maps of the Site area, supported by past work performed by CRA, indicate that the shale is partially to mostly eroded away just to the west of the UST Site. Underlying the Decorah Shale is the Platteville Formation which is underlain by the Glenwood Shale.

Based on a review of the UST construction plans and previously noted boring logs, it appears that the excavation which houses the tank farm is completed several feet into the Decorah shale. The bottom of the excavation lies at approximately 12 feet BGS which in effect has created a "basin" up to 6 feet in depth in the top of the shale unit. Hereafter this excavation will be referred to as the UST tank basin.

Figures 2.7 and 2.8 present a location of cross section and a geologic cross section, respectively, which represent the interrelationships of: the UST Site and tank basin, terrace features, surficial alluvium, Decorah Shale, Platteville Formation and Glenwood Shale.

Hydrogeology

The previously completed borings reveal that groundwater exists below the UST Site within the alluvial sediment, perched above the

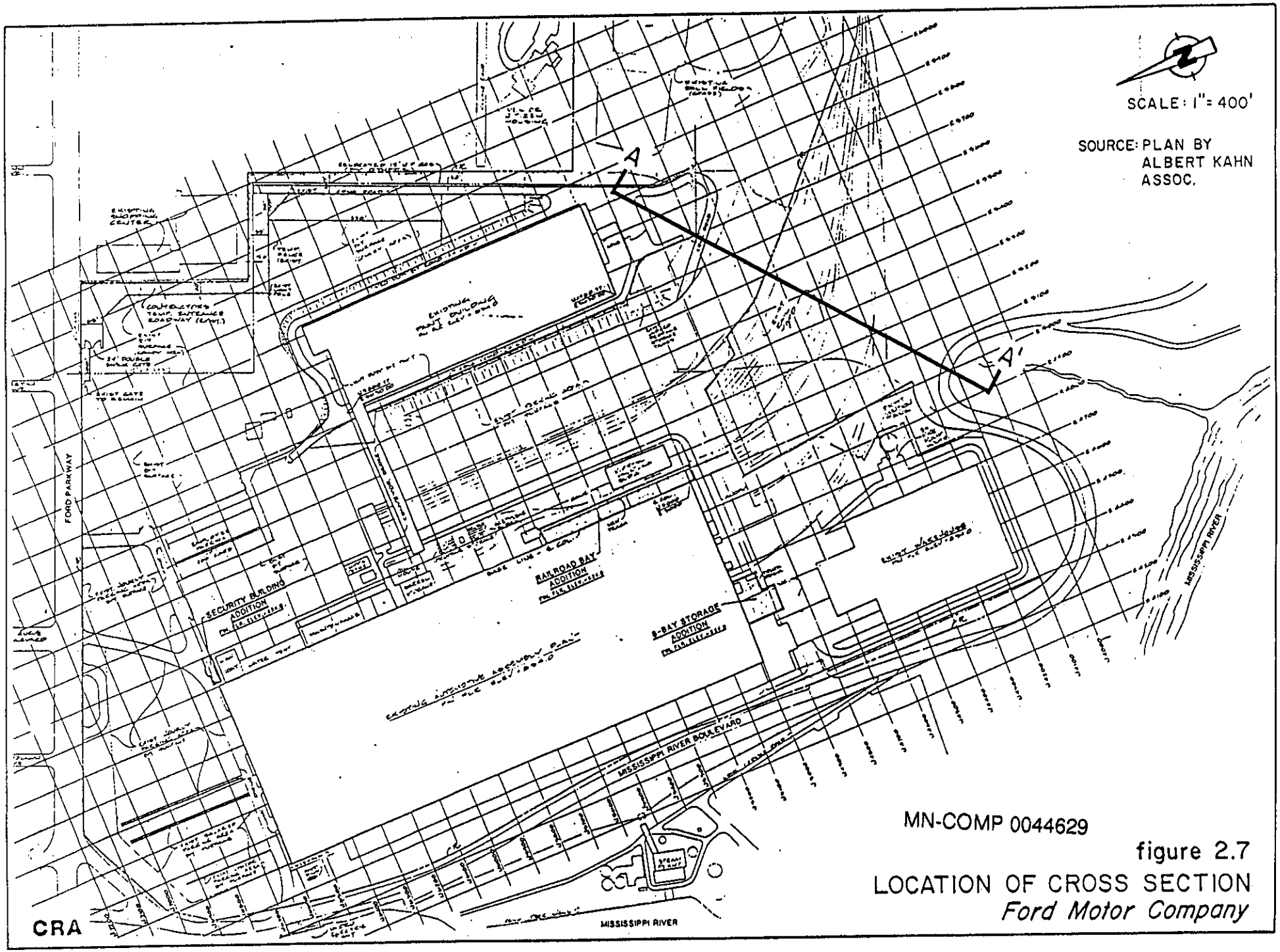

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figure 2.7

LOCATION OF CROSS SECTION

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2853-30/03/90-M

NORTHEAST

A

SOUTHWEST

A'

ELEVATION IN FEET AMSL

860

840

820

800

780

760

850 FOOT TERRACE

ALLUVIAL DEPOSITS

UST TANK BASIN

TERRACE SCARP (ALLUVIAL DEPOSITS)

830 FOOT TERRACE

ALLUVIAL DEPOSITS

RIVER BLUFF

DECORAH SHALE

PLATTEVILLE FORMATION

GLENWOOD SHALE

ST. PETER SANDSTONE

SOURCES: EXISTING BORING DATA
MINNESOTA GEOLOGIC SURVEY

SCALE: 1"=20' VER., 1"=100' HOR.

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figure 2.8

GENERALIZED GEOLOGIC CROSS SECTION A-A'

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2853-30/03/90-M

Decorah Shale. The alluvial sand and gravel, in general, will readily transmit groundwater. Hydrogeologic literature describes the Decorah Shale as a confining unit. Hydraulic conductivities within the Decorah are low. The underlying Platteville Formation contains groundwater within its fracture systems. This groundwater discharges at the bluff which lines the Mississippi River gorge.

Of particular importance is the relationship of the groundwater perched above the Decorah shale to the UST Site. Some basic assumptions can be made regarding groundwater flow. It is expected that the perched groundwater will flow horizontally along the Decorah Shale towards the lower terrace feature to the southwest. The volume of groundwater will fluctuate significantly in response to rainfall and recharge.

The UST Site could in itself impose an influence on perched groundwater occurrence. Surface runoff is presently draining into the UST tank basin. This will in effect recharge the aquifer on a very local level. There is presently a tile drainage system which directs the basin's water into a sump. It is hypothesized that groundwater could also flow horizontally, unimpeded, through the tank basin. Additionally, pumping in the sump could effect a drawdown in the shallow groundwater system.

Additional influences on UST Site groundwater characteristics may be affected by storm sewer lines and utility trenching.

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Waste Characterization

Solvent Waste Stored in Tanks

Since its initial use, the UST Site has been used only for waste solvent storage. The same types of solvents have always been stored in both the tanks. These spent solvents are primarily generated from auto body painting operations. The following provides a description of materials that when used become part of this waste stream.

Paint

Ford uses a variety of paints in the paint building operations including various colors of top coat paint and clear coat.

Solvent

Ford presently uses a variety of solvents in the painting/manufacturing operations. Some of these solvents are listed RCRA wastes when spent. The major solvent components are:

- xylene,
- toluene,
- methyl isobutyl ketone (MIBK),
- butanol,

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- Cellosolve 100 (Aromatic 100), a solvent blend,
- Cellosolve 150 (Aromatic 150), a solvent blend.

The waste solvent material stored at the UST Site has been tested periodically in order to characterize it for waste disposal and recycling. The waste solvent has been characterized as EPA waste number F005 under RCRA regulations. Appendix G provides a sample analysis for a first load of solvent shipped from the tanks. This analysis indicates the following characteristics:

- percent each solvent/organic
  45 percent xylene
  13.5 percent MIBK
  12.5 percent toluene
- waste density: 0.882

Metals analysis was not conducted on the sample.

The two waste streams stored in these tanks are recycled for reuse by Ford. A quantity of approximately 150,000 gallons is typically generated per year.

Soil Samples Taken During Investigative Excavation

On November 6, 1989, Ford excavated an area at the UST Site in an effort to determine whether a release may have occurred in the vicinity

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of these tanks. This followed an October 26, 1989, meeting with Minnesota Pollution Control Agency (MPCA) at which the possibility of a solvent release was discussed. Following this meeting, Ford hired a contractor to excavate the area near tanks #1 and #2. The MPCA was notified and was present for the work. The excavation proceeded to approximately 4 feet BGS at which point the very top west end of tank #1 was exposed, as was the access pump out and vapor vent piping. At this point, the odor level, apparently solvent vapors, was such that following consultation with the MPCA, Ford discontinued excavating. The hole was left open to the point that had been accomplished and the materials that had been excavated were placed on a plastic tarp and covered for storage until a determination was made as to whether further excavation would occur.

During excavation one sample was taken by Ford for laboratory analysis. This sample was obtained from the area near the top of tank #1. The sample was submitted by Ford to Pace Laboratories Inc. of Golden Valley, Minnesota (Pace), and analyzed for MDH List 465C of Volatile Organic Compounds (VOCs). No total metals analysis was conducted. Results were received by Ford and are provided as Appendix H. The results indicate concentrations above method detection limits for xylenes, ethylbenzene, toluene, methylene chloride and 1,1,2-trichlorotrifluoroethane (in order of concentration found from greatest to least).

Based on the observation of stained ground cover prior to excavation and the proximity to the pump stations used for transport truck tank unloading (see UST Site Plan), it is possible that the presence of solvent materials is likely due to transfer practices from the tank to the transport vehicle. The

tanks themselves are not believed to be a source of release as Ford has tested the intersitional zones of tanks #1 and #2 by volume and found no evidence of leakage. Daily recording of tank levels also indicates that no leakage has occurred.

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3.0 SUMMARY OF REMEDIATION TECHNOLOGIES

Table 3.1 summarizes technologies which will be considered and identifies the technologies which may be used in the development of remedial alternatives.

Based on information obtained during the RI, determination will be made as to the need for and type of treatability studies to be conducted. The studies will consider appropriate treatment technology for the Site from the list provided on Table 3.1.

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TABLE 3.1

SUMMARY OF REMEDIAL ACTION TECHNOLOGIES
FORD RI/FS WORK PLAN

Remedial Action Technology	Comments
A. *Soil Remediation*	
A.1 - Deed Restriction	Restricts future land use of area affected by contamination.
A.2 - Site Cap or Cover	Reduction of water infiltration, prevents direct contact and exposure of contaminants at the surface.
A.3 - Removal (excavation)	May be cost prohibitive but removes source of contamination.
A.4 - Consolidation	Permits consolidation of Site materials for other treatment options.
A.5 - Disposal in Industrial Waste/ Hazardous Waste (RCRA) Landfill (On-Site or Off-Site)	Secures waste and minimizes future migration of contaminants, may be restricted by Land Disposal Regulations.
A.6 - Soil Treatment	
- Incineration (On-Site or Off-Site)	Provides destruction of most organic wastes and can be conducted on or off Site. Would require additional handling of decontaminated soil/ash after incineration.
- Advanced Electric Reactor	Practical successes not demonstrated by the manufacturer.
- Bioremediation	Some compounds are not easily biodegradable. VOCs would be released to atmosphere.
- Fixation/Solidification	Limited to fixation of contaminated soil containing inorganics. Could be used to fix residual metals within incinerated soil.
- Soil Washing	Experimental technology. Difficult to maintain oxygen and nutrient levels in soil.
- Soil Vapor Extraction (low temperature soil desorption)	Removes volatile organic waste constituents and promotes biodegradation of non-volatiles.
- Vitrification	Cost prohibitive, not proven technology, will not immobilize VOCs.

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TABLE 3.1 (CONT'D)

SUMMARY OF REMEDIAL ACTION TECHNOLOGIES
FORD RI/FS WORK PLAN

Remedial Action Technology	Comments
B. *Groundwater Remediation*	
B.1 - Monitoring	Provides determination of ongoing nature, extent and trends.
B.2 - Deed Restriction	Restricts use of groundwater in area of contamination.
B.3 - Cap	Reduction of surface water infiltration potentially reduces long term mass loading to aquifer.
B.4 - Physical Containment	Provides physical barrier to prevent future migration of contaminants.
B.5 - Hydraulic Containment/Collection	
- Extraction Wells	Collects groundwater and mitigates future migration. Would reduce levels of contamination over time.
- Extraction Wells with Reinjection	Reinjection not normally allowed in Minnesota.
- Subsurface Drain	Collects groundwater and prevents future migration. Limited to depths of 40 feet or less.
B.6 Treatment	
- Biological	Difficult to implement and maintain on-Site. Off-Site treatment at Public Owned Treatment Works (POTW) suitable.
- Activated Carbon	Effective in treating large array of organic contaminants. Ineffective for some compounds such as acetone. May require pre or post treatment by other technology.
- Air Stripping	Effective in treating volatile compounds. May require additional polishing by other technology for surface water discharge.
- Aeration	Effective in removal of volatile compounds. Low maintenance where scaling a concern.

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TABLE 3.1 (CONT'D)

SUMMARY OF REMEDIAL ACTION TECHNOLOGIES
FORD RI/FS WORK PLAN

Remedial Action Technology		Comments
	- Oxidation	High cost of oxidizing agents when used alone. Not effective in treating VOCs without ultraviolet radiation.
	- Ion Exchange	Used to treat inorganic wastewater (i.e. metals).
	- Reverse Osmosis	Used to treat inorganic wastes (i.e. metals.).
	- Solar Evaporation	Would cause VOC releases to atmosphere. Ineffective when humid.
	- Spray Evaporation	Would cause VOC release to atmosphere. Ineffective when humid.
	- Discharge to POTW	Would be subject to POTW's operating permit. Site contaminants are readily treated by POTW.
	- Ultraviolet Oxidation	Capable of treating most organic compounds. Requires pretreatment for iron removal.
	- Biological/Activated Carbon	High cost. Normally applied when high level of organic contaminants present.
B.7	Treatment Groundwater Disposal	
	- Reinjection/Recharge	Not normally allowed in Minnesota.
	- Discharge to Surface Water	Would require NPDES permit and high efficiency treatment.
	- Discharge to POTW	Would be subject to POTW's operating permit.
	- Discharge to RCRA Facility	Logistics of transporting treated water not feasible.
B.8	Alternate Water Supply	Not expected to apply as area serviced by city water system.

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4.0 SITE INVESTIGATION PLAN

4.1 OBJECTIVES

The goal of this RI/FS is to gather the data necessary to characterize the nature and extent of potential residual contamination resulting from past activities at the Ford Site. The information compiled will be used to:

1) conduct a Baseline Risk Assessment to evaluate potential impact on public health and well being;

2) develop potential remedial alternatives for the Site, if needed;

3) determine what additional data is needed, if any, to fully characterize the site.

The specific tasks to achieve these objectives are:

1) to determine the nature and extent of potential residual soil contamination attributable to past Site activities;

2) to characterize Site geologic conditions;

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3) to characterize the Site hydrogeologic conditions including horizontal and vertical groundwater flow directions and velocities in both overburden and bedrock;

4) to determine the nature and extent of groundwater contamination in the Site overburden and bedrock, if any;

5) to determine if local surface water is impacted by past Site activities.

4.2 SITE AREA ORGANIZATION

As discussed previously in Section 2.0 (Site Background Information and Past History), four potential source areas have been identified at the Ford Site. Three of these areas, the UST Site, Site A and Site B are located in the main plant area and encompass the majority of the proposed field activities. The scope of field activities at Site C, located adjacent to the Mississippi River, involves the continued monitoring of chemical and hydrogeologic conditions using the existing monitoring well network. Figure 1.2 shows the locations of these potential source areas.

For organizational purposes, a discussion of the scope of work and field activities to be performed at each potential source area will be divided into three sections; the UST Site, Sites A and B (combined), and Site C. The segregation of these potential source areas into separate study units is based

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on differences in waste disposal history and hydrogeologic setting as outlined in Section 2 and the potential of differing remedial response actions at each source area site.

The following sections discuss the scope of work and field activities which will be performed at each study area.

4.3 UST SITE INVESTIGATION WORK PLAN

4.3.1 Overview of Scope of Work

Based on: the possible presence of waste solvent in the UST Site drain tile system as discussed in Section 2.8; the presence of solvent materials in the soil above tanks #1 and #2; the possible migration of solvent materials outside the UST tank basin, the following scope of work is proposed to investigate Site conditions involving soil and groundwater in the vicinity of the UST.

- Analysis of solvent waste stream in tanks #1 and #2 for metals and further VOC characterization;
- The use of soil gas sampling to investigate soil gas conditions;
- Sample soils for chemical analyses;
- Removal of the four USTs;
- The installation of three groundwater monitoring wells;

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- Water level monitoring;
- Groundwater sampling of the three new wells and the drain tile sump for metals and VOC.

This work is proposed to evaluate:

- groundwater flow direction,
- hydrogeologic properties,
- assess groundwater quality in the vicinity of the UST;
- assess soil conditions in the vicinity of the UST.

Ford will be removing the four USTs as part of a separate project to relocate the waste solvent storage facility and provide modifications prompted by new federal RCRA UST regulations. As part of this relocation project, Ford will be utilizing two of the four USTs at a new installation to be constructed at the location noted on Figure 4.1. To the extent possible, the sump and drain tile system will be left intact at the existing location to allow for their use in the UST site investigation. Table 4.1 summarizes the scope of field and related monitoring/analytical work proposed.

4.3.2 Soil Gas Survey

A soil gas survey will be conducted to determine soil gas organic vapor concentrations that may indicate the presence of VOC in the soil. Soil gas monitoring will be conducted at approximately 12 locations (i.e. final

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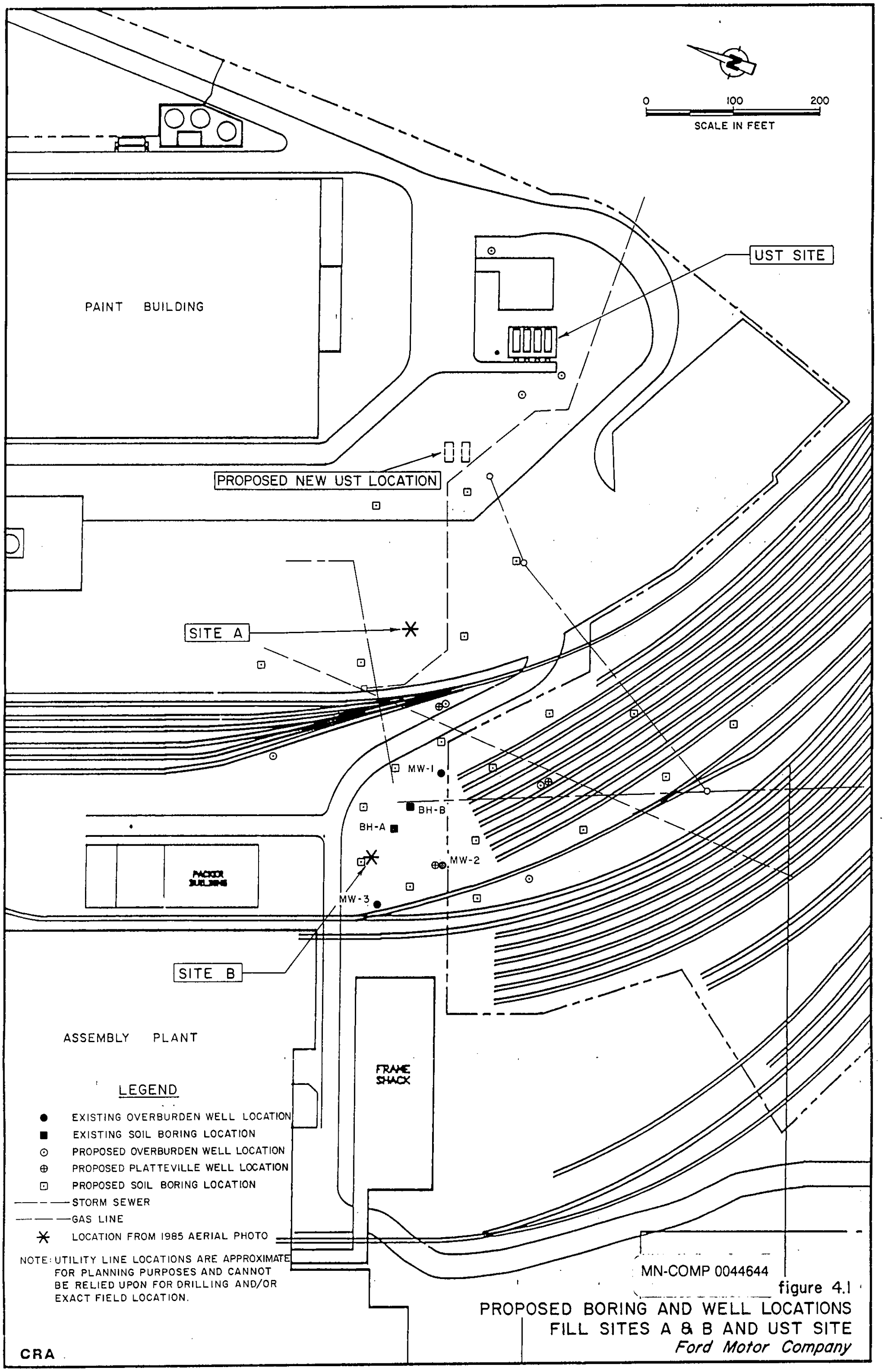

MN-COMP 0044644

figure 4.1

PROPOSED BORING AND WELL LOCATIONS
FILL SITES A & B AND UST SITE
Ford Motor Company

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2853-17/08/90-M

TABLE 4.1

SCOPE OF WORK
ANALYTICAL SUMMARY

Site/Location	Matrix	Field Parameters	Analytical Parameters	Number of Investigative Samples[1]	Quality Assurance Samples: Trip Blank[2]	Rinsate Blank	Field Duplicate	MS/MSD Sample[3]	Subtotal	Frequency[4]	Total
UST	Soil, Borings	Soil Gas	VOC	3	0	1	1	1	5	1	5
	Groundwater	Conductivity pH Temperature	VOC Metals	3 3	1 0	1 1	1 1	1 1	7 6	2 2	14 12
	Sump	-	VOC	1	1	0	0	0	2	2	4
	Water Discharge	Temperature pH	VOC Metals	1 1	1 0	0 0	1 1	1 1	4 3	2 2	8 6
A and B	Soil, Borings	Soil Gas	VOC	23	0	2	2	2	29	1	29
	Groundwater	Conductivity pH Temperature	VOC	10	1	1	1	1	14	2	28
	Surface Water	pH Temperature	VOC	3	1	0	1	1	6	2	12

[1]Exact number of investigative samples may vary fro the listed.
[2]Trip blank samples may be consolidated.
[3]Triple normal sample volume will be collected.
[4]Number of sampling events.

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quantity of samples will be determined in the field to obtain an adequate definition) within the unsaturated zone around the UST basin perimeter at a depth of approximately four feet using the following procedure:

1. an augered borehole will be drilled to a depth of approximately 3-1/2 feet into the ground at each test location;

2. a steel gas probe will be driven 1/2 foot through the bottom of the borehole such that the perforated portion of the probe is completely below the bottom of the borehole. A temporary bentonite seal will then be placed at the bottom of the borehole and around the probe;

3. a pump will then be used to draw a soil gas sample out of the probe and into a glass vessel. The flexible tubing leading to (i.e. out of) the glass vessel will than be clamped or valved off to trap the gas sample in the vessel;

4. the tygon tubing leading to the air pump will be removed from the pump and connected to the inlet of the HNu probe. The contents of the glass vessel will then be evaluated using an HNu-tpye photoionization detector with 11.7 EV probe calibrated to benzene to determine relative concentrations of gas present;

5. the borehole will then be backfilled with cuttings;

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6. as a quality assurance procedure, ambient air (background) readings will be taken prior to and after each sampling location.

Figure 4.1a presents a schematic of the equipment/method to be used for soil gas evaluation. Where feasible, soil gas monitoring will be conducted within the utility line excavations which radiate from the UST area. The hazard of drilling near the utility lines may, however, prohibit this work at these locations.

The proposed monitoring well location for the UST Site (see Sections 4.3.3 through 4.3.4) will also serve as soil gas sampling locations in order to correlate soil gas field data to laboratory analytical data and evaluate the effectiveness of the soil gas sampling.

4.3.3 Soil Borings/Sampling

Three soil borings will be conducted using hollow stem auger methods. These soil borings will then be completed as monitoring wells. Locations are presented on UST Site Plan and Figure 4.1, and may be modified in the field due to accessibility and the presence of utilities. The borehole will be advanced using a minimum 4-1/4 inch I.D. hollow stem auger. Continuous undisturbed soil samples will be taken by split barrel sampling to define the

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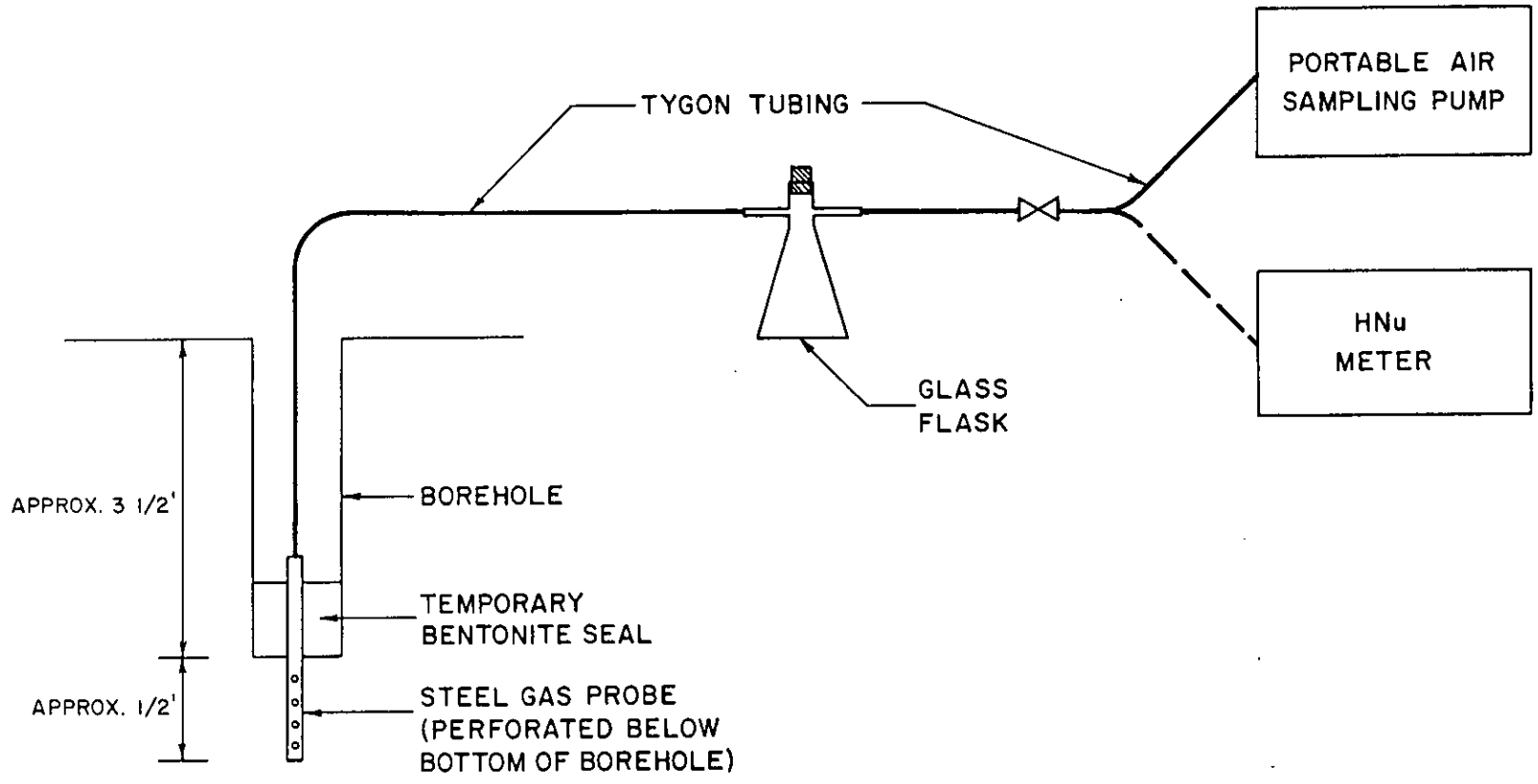

NOT TO SCALE

MN-COMP 0044648

figure 4.1a
SCHEMATIC OF
SOIL GAS EVALUATION
Ford Motor Company

CRA

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subsurface soil stratigraphy. All boreholes are expected to be extended a minimum of 2 feet into the water table; the water table is expected to be approximately four to eight feet below grade.

At each monitoring well boring location, continuous undisturbed soil samples will be collected. Sampling will be conducted in accordance with ASTM split barrel sampling methods and EPA SW846 chemical sampling methods. Soil sampling procedures are detailed in Section 6.2.1.

Soil samples will be sent under chain-of-custody procedures and submitted for analysis of VOCs (EPA Method 8010/8020). One sample per boring will be submitted for chemical analysis.

4.3.4 Monitoring Well Installation

Based on Site geologic and hydrogeologic conditions, three monitoring well locations have been selected. The proposed well locations are shown on Figure 4.1 and the UST Site Plan, which is enclosed under separate cover. As described previously, it is expected that groundwater flow direction will be generally towards the southwest. Monitoring wells MWT1 and MWT2 will be placed to intercept groundwater flow downgradient from the UST tank basin. The proposed well MWT3 is located northeast of the UST tank basin for

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two purposes: to ascertain background groundwater quality and to provide adequate spacing of wells to maximize the evaluation of groundwater flow conditions. These well installations will require a permit from MDH.

The monitoring wells will be constructed according to the procedure provided in Section 6.2.2.

Following installation, the three new wells would be surveyed to the common on-site reference datum (Nation Geodetic Vertical Datum of 1929, NGVD) to establish groundwater elevations.

4.3.5 Groundwater Elevations

Groundwater elevations will be measured to better define the groundwater flow direction under the UST Site. In addition, water levels will be obtained for the drain tile sump and existing monitoring wells placed west of the UST Site as part of the Site B area work. Further information will also be correlated regarding storm water drains in the immediate area to better evaluate their possible influence. Attempt will be made to establish water elevations within these storm sewers should water be present during times of non-precipitation. Storm sewer lines in the area are indicated on Figure 4.1. A minimum of two complete rounds of water levels will be taken and groundwater flow directions will be calculated.

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4.3.6 Groundwater Sampling

Two rounds of groundwater samples will be collected from the three new groundwater monitoring wells and the drain tile sump. Prior to sampling, each monitoring well will be developed and stabilized as per Section 6.2 and allowed to set for one week prior to sampling.

The groundwater monitoring wells will be developed using a precleaned[1] stainless steel bailer until a silt-free condition exists, or until a maximum of 10 well volumes has been removed. During development pH, specific conductivity and temperature will be recorded as per Section 6.2.

Wells will be sampled one week after well development. Prior to sample collection, the well will be bailed to remove a minimum of three well volumes, or until the well bails dry. The sample from the sump will be obtained as representative as possible by the use of a "coliwasa" column sample method. Samples will be sent under chain-of-custody procedures and analyzed for the following parameters: VOCs and metals as provided in Section 6.0.

Each sampling round will include one duplicate and one field blank sample as a quality control check.

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[1]Methanol/hexane/methanol followed by distilled water rinse.

4.3.7 Interim Response Action (IRA) Inspection and Sump Sampling Plan

The UST facility will be relocated as earlier noted. This new facility will be operated, maintained and inspected in accordance with applicable UST regulations. Given the more immediate need to address the inspection of the UST Site drain tile and sump, the following IRA is proposed.

4.3.7.1 Pumping Operations

It is proposed that a pump and discharge line be used to pump down the drain tile system. The discharge would be routed to the two filtering basins used for process water recycling/setting with a total capacity of 1.5 million gallons located beneath the paint building. A fiberglass pipeline to the building exists and will be utilized.

Hook up of the line would include use of a pump within the manhole and back flow prevention on the discharge line. A schematic of the discharge/pump out system is presented on the UST Plan.

In addition, diversion of storm water runoff will be evaluated to prohibit runoff from areas adjacent to the UST tank basin from flowing to the basin area.

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It is proposed that regardless of removal of the USTs, the flow to the sump should be sampled and analyzed every two months during the

RI to evaluate the water quality. This material is likely to contain the same constituents as the wastewater from paint spray booths. As a result, it is not necessary to evaluate water quality each time pumping is conducted. The sample for analysis will be drained from the discharge line via a sampling port (to be installed). To provide the most representative sample, a composite will be made by taking a sample at the beginning, middle and end of the pumping cycle. This will be done by manually operating the pump and observing the operation during the entire cycle. The collected sample will be analyzed for VOCs and metals as provided in Section 6.0. These pumping operations will be implemented for the period of the RI field work, after which they will be reevaluated. A key factor in this will be whether the sump and drain tile system are still present after the tank removal.

4.3.7.2 Sump Inspection

Assuming the sump and drain tile will be left in place, they will be inspected on a monthly basis and after significant precipitation events. The pumping system will be started to lower the liquid level in the manhole and drain tile system for inspection. The manhole area will then be visually inspected from surface level (without confined space entry) using a strong light. The inspection will help identify:

- sump water levels,
- presence of potential solvent waste in sump water,

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- sediment buildup in sump,
- evidence of pipe blockage.

A reference elevation at the lip of the manhole will be established to allow measurement of the water elevation with the manhole sump and the elevation of any sediment build up which may be present.

Inspections of the facility will be conducted on at least a monthly basis during the RI field work. After the RI field work, the frequency of inspection will be reassessed. The results of each inspection will be recorded on an inspection log sheet. Information on the log sheets will include the inspector's name and title, date and time of inspection, item of inspection, observations, the date and whether pumping occurred during inspection.

An inspection log will be kept with the RI/FS project files. Records of inspections will be kept under the terms of the records retention policy provided in Section 7.2.

4.3.8 Reporting

The final UST Site report will be included in the final RI report and present the following information:

1. Background of the Site,
2 Tank contents and history,

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3. Results of all sampling and monitoring conducted, including inspection logs completed to date,
4. Site map showing all sampling locations (i.e. borings, monitoring wells, etc.),
5. Technical information on geology and hydrogeology of the Site area,
6. Technical information on surface waters runoff of the area, if any,
7. Building information on structures near the Site area,
8. Information and locations of utilities in the area,
9. Information on any free product or vapors,
10. Interim control measures proposed underway and/or completed,
11. Technical discussion, conclusions and recommendations, and
12. All associated sampling and analytical protocols.

Following completion of the report, the need for additional interim response action will be assessed.

4.4 SITES A AND B INVESTIGATION

Due to the proximity, similar waste disposal history and anticipated similar hydrogeologic setting, Sites A and B will be investigated under simultaneous programs of work.

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4.4.1 Overview of Scope of Work

Based on the history of potential waste disposal at Sites A and B and the detection of contaminated soil and groundwater at Site B as outlined in Section 2.0, the following scope of work is proposed to characterize soil and groundwater chemical conditions and hydrogeologic conditions at Sites A and B:

1. installation of boreholes to obtain soil samples for chemical and hydrogeologic analysis;
2. installation of overburden monitoring wells in selected soil boreholes;
3. installation of bedrock monitoring wells, collecting bedrock core;
4. collection of groundwater chemical data from monitoring wells;
5. collection of hydrogeologic data from monitoring wells;
6. collection of chemical data from surface water.

The following subsections detail the field activities associated with the above tasks. Table 4.1 summarizes the scope of field and related monitoring/analytical work proposed. Site A is considered to be entirely on Ford property. The scope of work for the investigation of Site B is separated into two sections, one for work to be performed on Ford property and one for work to be performed on Soo Line property.

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Performance of the work proposed for the Soo Line property is contingent on Ford receiving access authorization from Soo Line. Ford will request MPCA assistance if efforts to obtain access are unsuccessful.

4.4.2 Soil Sample Collection

Soil samples will be collected to determine the extent and chemical characteristics of potentially contaminated soils and to obtain data for hydrogeologic interpretation. Samples will be collected for chemical analysis and geological classification continuously from the surface to the top of bedrock, expected to be from 10 to 15 feet BGS. One sample per boring will be submitted for chemical analysis. Details pertaining to the QA, analytical parameters, field protocols and field methods that will be used are described in Section 6.0 (QAPP).

Ford Property

A minimum of 13 boreholes will be advanced at Sites A and B on Ford property. Borehole depths are expected to be from 10 to 15 feet BGS. Figure 4.1 shows the locations of these boreholes. Two of the borings will be completed as monitoring wells.

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The objective of this soil sampling program is to delineate the extent of potentially contaminated soils. Borehole locations were chosen based on our review of past work and historical aerial photographs which show areas of disturbance.

The objectives for soil sample locations chosen at Site B were to further delineate the extent of previously encountered contamination in BH A, BH B and MW-1. The proposed borings will be advanced to delineate the areal extent of potential contamination. Soil boring locations chosen at Site A are intended to provide adequate coverage of the disturbed area as shown in the 1985 aerial photograph. Site A is considered to be entirely on Ford property.

Soo Line Property

A minimum of 10 boreholes will be advanced at Site B on Soo Line property. Borehole depths are expected to be from 10 to 15 feet BGS. Figure 4.1 shows the locations of these boreholes. Two of the borings will be completed as monitoring wells

The objective of the Soo Line soil sampling program is to delineate the extent of potentially contaminated soils. Borehole locations were chosen based on our review of past work and historical aerial photographs which show areas of disturbance.

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4.4.3 Overburden Monitoring Well Installations

4.4.3.1 Site A Wells

Three overburden monitoring wells will be installed at Site A on Ford property if soil contamination is discovered at Site A. The locations of these potential wells will be based on soil chemistry and geologic data obtained during the soils investigation phase of the Site A area. These monitoring wells will be placed to provide a thorough coverage of the Site A area shallow groundwater to intercept potentially impacted groundwater, if any, associated with contaminated soils.

Overburden monitoring well construction methods and field protocols are detailed in Section 6.2.2.

4.4.3.2 Site B Wells

Overburden monitoring wells will be installed to characterize the chemical and hydrogeologic conditions of the shallow groundwater underlying Site B.

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Monitoring well placement will be based on both available data gathered from past studies and additional data gathered during the soils investigation. Figure 4.1 shows the approximate locations of the proposed monitoring wells.

Ford Property - Site B Wells

Based on the chemical and hydrogeologic data available from the existing Site B monitoring wells (MW-1, MW-2 and MW-3), two overburden monitoring well locations, on Ford property, were selected . The objectives of these new well locations is to further delineate the location of potential groundwater contamination which may extend laterally to the east of MW-1 and downgradient to the north of MW-1 and MW-2. Additionally, these wells will provide added data points for hydrogeologic interpretation. These wells will be installed in the soil borings previously noted.

Soo Line Property - Site B Wells

A minimum of two overburden monitoring wells will be installed at Site B on Soo Line property. These wells will be installed in the previously completed borings as earlier noted. These wells are intended to delineate the source of potential groundwater contamination upgradient of MW-1 and MW-2. The locations of these wells and the locations of possible additional wells are contingent on the results of the borehole sampling program.

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4.4.4 Bedrock Monitoring Wells

Three bedrock monitoring wells will be installed at Site B to ascertain if groundwater contamination detected at Site B has migrated vertically into the bedrock, determine if a hydraulic connection exists between the overburden and bedrock and determine horizontal and vertical groundwater flow characteristics of the bedrock aquifer. Bedrock monitoring wells will be located adjacent to selected overburden monitoring wells (nested) to provide determination of vertical hydraulic gradients. Two bedrock wells will be installed on Ford property and one bedrock well will be installed on Soo Line property. Figure 4.1 shows the proposed locations of the bedrock monitoring wells.

Bedrock monitoring well locations were chosen based on the observation of impact to the overburden units at Site B. Well placement will maximize interpretation of hydrogeologic characteristics.

The bedrock immediately underlying the Sites A and B area consists of limestone of the Platteville Formation. Based on past field observations and available literature, groundwater is known to occur in fractures of the Platteville Formation. The thickness of the Platteville is estimated at 20 to 25 feet in the Site area.

Underlying the Platteville Formation is the Glenwood Shale which is approximately 4 to 6 feet thick. Literature sources state that this

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Formation is composed of clay rich, thin bedded shales which functions as a hydrogeologic confining unit. Underlying the Glenwood Shale is the St. Peter Sandstone.

Based on the above information, the proposed bedrock monitoring wells will be installed with the well screens set in the Platteville Formation. Drill holes will not extend beyond the contact with the Glenwood Shale. It is expected that the Glenwood Shale will provide an effective confining layer preventing vertical groundwater flow into the St. Peter Formation.

Bedrock monitoring wells will be installed to minimize potential cross contamination from the overburden aquifer to the bedrock aquifer. The following outline details the procedures and materials which will be used to install the bedrock monitoring wells:

1. A 10 inch diameter borehole will be advanced through the overburden, two feet into the top of the Platteville Formation;

2. A 6.0 inch diameter steel casing will be installed, sealed and grouted in the 10 inch boring. The casing will be allowed to set an adequate period of time, and then will be checked to ensure an adequate seal has been achieved. This check will be done by placing drilling water in the casing and observing that the water level is maintained;

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3. Using wet rotary methods, a core hole will be advanced using an nx sized barrel (approximately 2.0 inch inside diameter) to the top of the Glenwood Shale. All wet rotary methods will be conducted using potable city water.

4. The core hole will be reamed to a diameter of 6.0 inches using a tri-cone rotary bit and wet rotary methods.

5. The drill hole will be flushed clean using potable water.

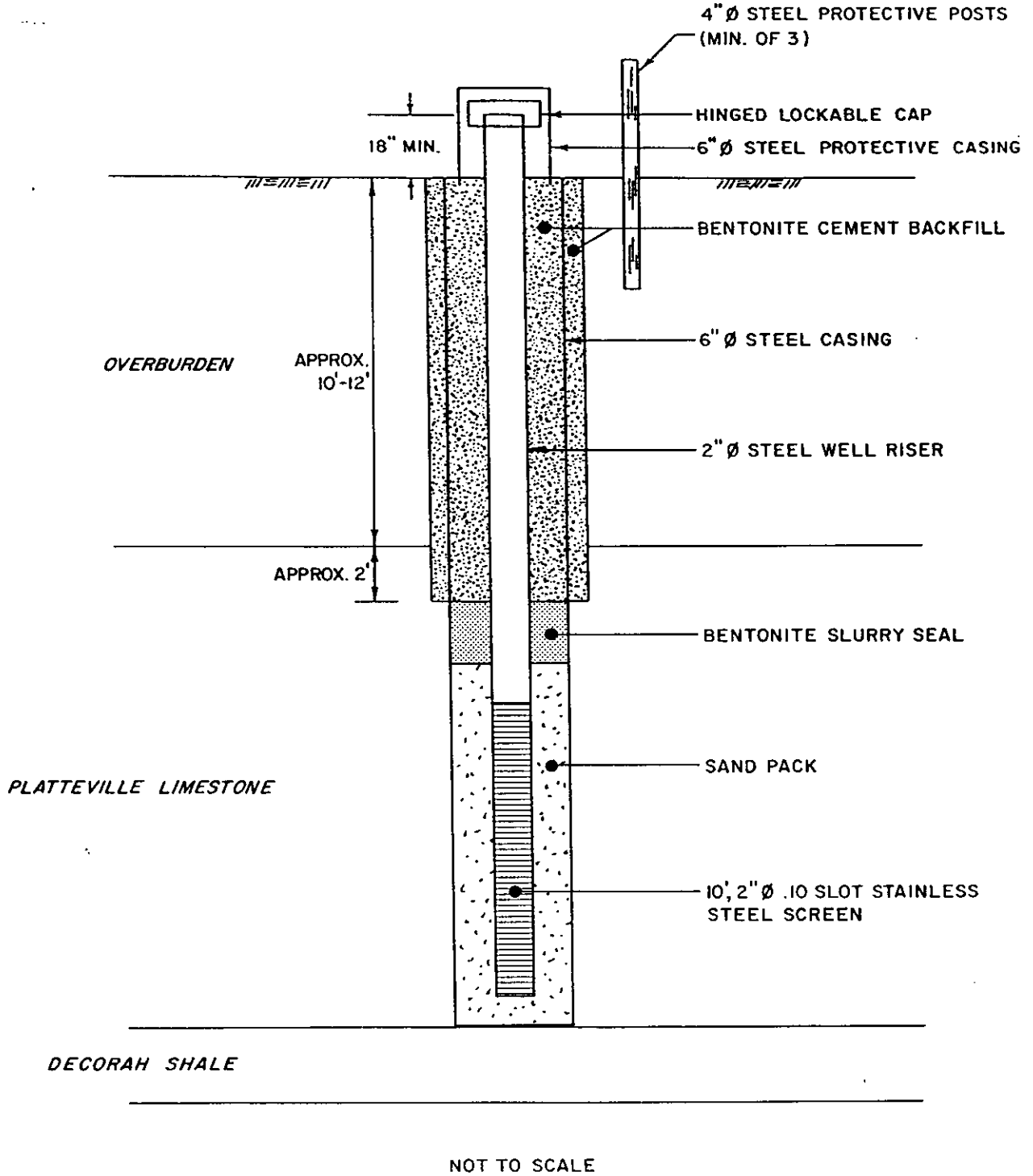
6. A two inch diameter well and surface protection will be installed using the same materials, methods and field protocols as described in Section 6.2.2.

7. All drilling equipment (i.e. rods, augers, drill rig, etc.) will be cleaned in accordance with the procedures outlined in Section 6.2.2.

Figure 4.2 details the bedrock monitoring well installations.

Bedrock monitoring wells will be installed in accordance with the MDH well code using a licensed well contractor.

Rock core will be cataloged and described by CRA's field geologist, paying particular attention to hydrogeologic properties of the bedrock.



NOT TO SCALE

MN-COMP 0044664

figure 4.2

TYPICAL BEDROCK MONITORING WELL INSTALLATION

Ford Motor Company

CRA

2853-8/02/90-M

All monitoring wells will be developed and stabilized as described in Section 6.2.2.

4.4.5 Groundwater Sampling

Following well development and stabilization, two rounds of groundwater samples will be collected from overburden and bedrock wells. Details pertaining to sampling procedures, analytical parameters, field procedures, sampling protocols, quality assurance and quality control are summarized in Section 6.0 (QAPP).

4.4.6 Hydrogeologic Data Collection

Hydrogeologic data will be collected from selected monitoring wells to provide a basis for determining groundwater flow direction in overburden and bedrock, horizontal and vertical hydraulic gradients, hydraulic conductivities, groundwater flow rates and groundwater recharge and discharge points. Monitoring well reference elevations will be surveyed to the NGVD datum to aid in hydrogeologic characterization.

The following hydrogeologic data collection is proposed:

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1. Water Level Elevations: Three rounds of water elevation data will be collected from all wells using an electric water level tape.

2. Single Well Response Tests: Single well response tests will be performed on selected monitoring wells to provide data for interpreting hydraulic conductivity. Rising and falling head tests will be conducted using a "slug" consisting of a solid PVC rod. The slug will be inserted into the monitoring well, resulting in a raising of the water level. Water level change versus time will be recorded using an electric water level tape as the water level column drops back to its static level (falling head test). Should the hydraulic response be too rapid to accurately monitor by electric water level tape, an electronic transducer and data logger will be used. Upon stabilization of the water level to static conditions, the slug will be removed, causing a lowering of the water level. Water level measurements versus time will again be noted as the water rises to its static position (rising head test). Response test data will be interpreted using the method of Papadopulos 1973, with the aid of a computer program, Graphical Well Analysis Package (GWAP).

4.4.7 Surface Water Sampling

Three surface water samples will be collected to aid in evaluating the potential impact of past Site disposal practices on local surface

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water. These samples will be taken in conjunction with the two proposed groundwater sampling events using the same analytical parameters as discussed in Section 6.0.

The locations of these sample points is illustrated on Figure 4.3. One surface water sample will be collected from Hidden Falls creek, directly from the storm sewer runoff (SW-2). This location will be used to evaluate if Site groundwater is discharging to the area storm sewer system. Two surface water samples will be collected from the Mississippi River, one located down gradient of the Site (SW-3) and one located up gradient of the Site (SW-1) to provide background chemical characterization.

Surface water sampling procedures, QA and field protocols are discussed in Section 6.0.

4.5 SITE C INVESTIGATION

4.5.1 Overview of Scope of Work

As detailed in Section 2.0, an investigation of Site C has been ongoing for approximately nine years. There are presently four monitoring wells installed at Site C, with a significant amount of chemical and hydrogeologic data collected from these wells, and from surface water. The summary of the evaluation of Site C is provided in Section 2.7.

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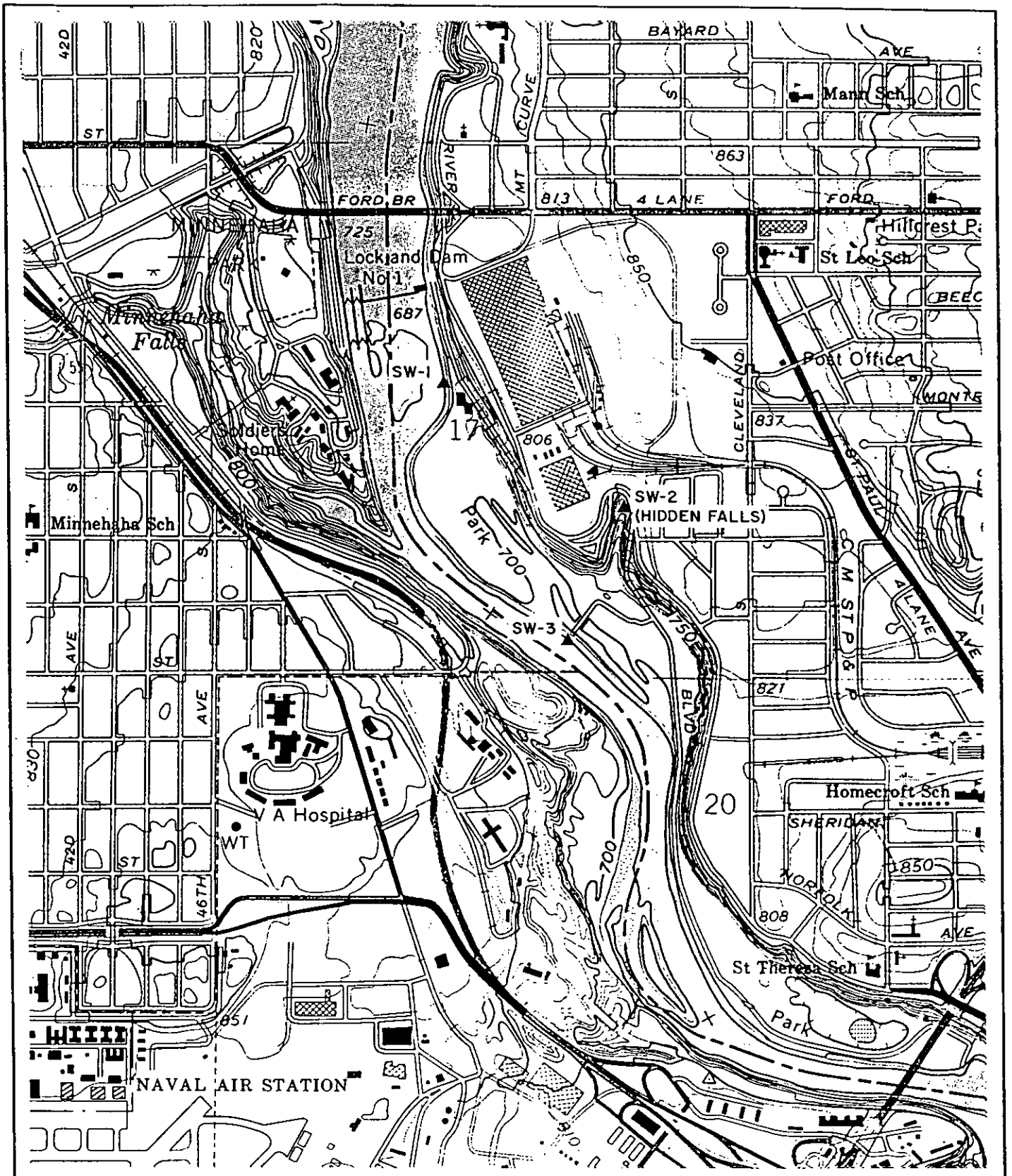

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SW-1 ▲ SURFACE WATER SAMPLE LOCATION

NOT TO SCALE

figure 4.3
SURFACE WATER
SAMPLE LOCATIONS
Ford Motor Company

CRA

2853-20/08/90-M

Based on the work completed to date, no further investigation is proposed for Site C.

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5.0 PROJECT ORGANIZATION AND RESPONSIBILITY

Conestoga-Rovers and Associates (CRA), as contractor to Ford, has overall responsibility for all phases of the RI/FS. CRA will perform or supervise all field investigations and, using information compiled from this program, perform a site and risk assessment. In addition, CRA will also develop, screen and evaluate remedial action alternatives. All reports based on RI/FS activities will be produced by CRA.

Pace Laboratories Inc., as analytical subcontractor to CRA, will perform all chemical analyses of samples collected for the RI.

Both firms will provide project management as appropriate to their responsibilities. CRA will provide administrative oversight and QA/QC for all deliverables. All final project deliverables will be issued by CRA.

Figure 5.1 presents the key staff organization for the project. A summary of each of the key person's responsibilities is presented below:

Jerome S. Amber - Technical Project Supervisor, Ford

- General overview of the project to ensure that the objectives are met
- Participation in negotiations with the MPCA
- Managerial guidance to CRA's Corporate Project Manager and Project Coordinator

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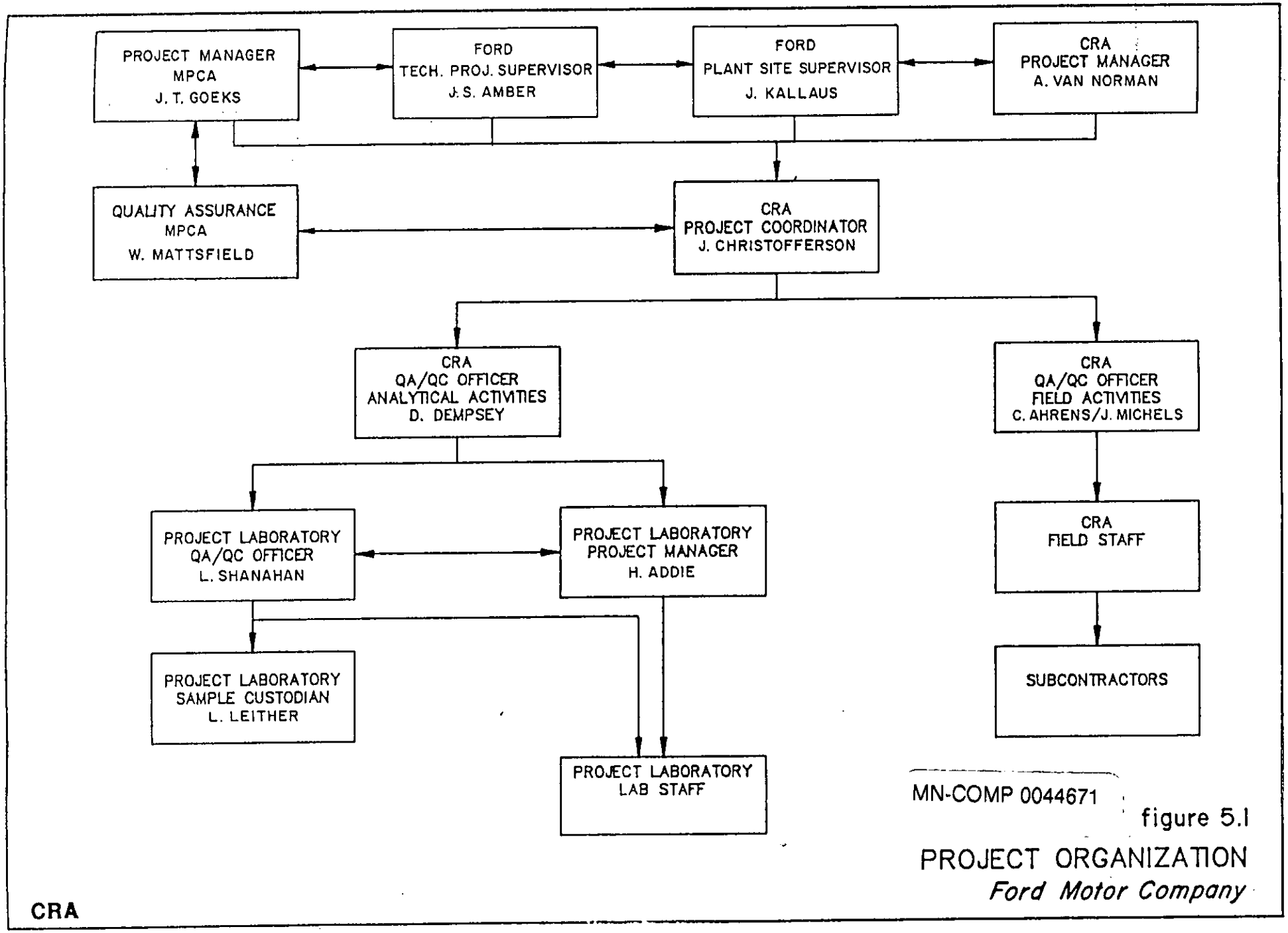

MN-COMP 0044671

figure 5.1

PROJECT ORGANIZATION

Ford Motor Company

CRA

2853-20/08/90-M

John Kallaus - Ford Site Supervisor, Ford

- Provides coordination with Plant personnel and operations
- Provides access to necessary Plant facilities
- Coordinates activities with Plant security

Alan Van Norman - Project Manager and Principal Engineer, CRA

- Provides overall project management
- Ensures all resources of CRA are available on an as-required basis
- Participation in technical negotiations with the MPCA and attendance at project meetings on an as-required basis
- Managerial and technical guidance to CRA staff
- Preparation and review of RI/FS report
- Approval of the QAPP

Jon Christofferson - Project Coordinator, CRA

- Day-to-day project management
- Managerial and technical guidance to CRA staff
- Participation in technical negotiations with the MPCA
- Preparation and review of RI/FS report
- Project file custodian

Dave Dempsey - Quality Assurance Officer - Analytical Activities, CRA

- Overview of laboratory activities
- Decides laboratory data corrective action
- Analytical data assessment and validation

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- Responsible for external performance and system audits
- Review of RI/FS report
- Approval of the QAPP

Chuck Ahrens/Jon Michels - Quality Assurance Officers - Field Activities/Field Supervisors, CRA

- Management of field activities and field QA/QC
- Data assessment
- Preparation and review of RI/FS report
- Technical representation of field activities
- Preparation of SOP for field activities

Helen Addie - Project Manager, Pace

- Ensures all resources of Pace are available on an as-required basis
- Overviews final analytical report
- Oversees all laboratory's activities
- Approval of the QAPP

Bill Scruton - Operations Manager, Pace

- Coordinate laboratory analyses
- Supervise in-house chain-of-custody
- Schedule sample analyses
- Oversee data review
- Oversee preparation of analytical reports
- Approve final analytical reports prior to submission to CRA

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Leisa Shanahan - Quality Assurance Officer, Pace - Laboratory Activities

- Overview laboratory quality assurance
- Overview QA/QC documentation
- Conduct detailed data review
- Decide laboratory corrective actions, if required
- Technical representation of laboratory QA procedures
- Approval of the QAPP

Lisa Leither - Sample Custodian, Pace

- Receive and inspect the incoming sample containers
- Record the condition of the incoming sample containers
- Sign appropriate documents
- Verify chain-of-custody and its correctness
- Notify laboratory manager and laboratory supervisor of sample receipt and inspection
- Assign a unique identification number and customer number and enter each into the sample receiving log
- With the help of the laboratory manager, initiate transfer of the samples to appropriate lab sections
- Control and monitor access/storage of samples and extracts

Primary responsibility for project quality rests with CRA's QA Officers. Ultimate responsibility for project quality rests with CRA's Project

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Manager. Independent quality assurance will be provided by the Laboratory Project Manager and QA Officer prior to release of all data to CRA.

5.1 MINNESOTA POLLUTION CONTROL AGENCY (MPCA)

The MPCA Project Manager will be responsible for the execution and direct management of all the technical and administrative aspects of this project. The MPCA Project Manager will also be responsible for providing approval of the work plan. J. Todd Goeks is the Project Manager for the MPCA.

The MPCA Quality Assurance Officer will be responsible for MPCA oversight of QA/QC activities and approval of the QAPP. The MPCA Quality Assurance Officer will be Wayne Mattsfield.

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6.0 QUALITY ASSURANCE PROJECT PLAN (QAPP)

6.1 QUALITY ASSURANCE (QA) OBJECTIVES FOR MEASUREMENT DATA

The overall QA objective is to develop and implement procedures for field sampling, chain-of-custody, laboratory analyses and reporting that will provide accurate data. Specific procedures to be used for sampling, chain-of-custody, calibration, laboratory analysis, reporting, quality control, audits, preventive maintenance and corrective actions are presented in other sections of this QAPP.

Data quality objectives (DQO) have been established in accordance with the U.S. EPA guidance document entitled "Data Quality Objectives for Remedial Response Activities", EPA/540/G-87/003, March 1987, to ensure that the database developed during the Site investigation meets the objectives and quality necessary for its intended use, namely risk assessments, determining contaminant distribution and evaluating remedial objectives.

DQO can be classified for measurement data by defining the level of analytical support assigned to each type of measurement data. For activities outlined in Table 4.1, all laboratory analyses will require level III analytical support.

DQO for field screening activities such as the determination of pH, specific conductance, temperature and VOC concentration (HNu) will require level I analytical support.

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6.0 QUALITY ASSURANCE PROJECT PLAN (QAPP)

6.1 QUALITY ASSURANCE (QA) OBJECTIVES FOR MEASUREMENT DATA

The overall QA objective is to develop and implement procedures for field sampling, chain-of-custody, laboratory analyses and reporting that will provide accurate data. Specific procedures to be used for sampling, chain-of-custody, calibration, laboratory analysis, reporting, quality control, audits, preventive maintenance and corrective actions are presented in other sections of this QAPP.

Data quality objectives (DQO) have been established in accordance with the U.S. EPA guidance document entitled "Data Quality Objectives for Remedial Response Activities", EPA/540/G-87/003, March 1987, to ensure that the database developed during the Site investigation meets the objectives and quality necessary for its intended use, namely risk assessments, determining contaminant distribution and evaluating remedial objectives.

DQO can be classified for measurement data by defining the level of analytical support assigned to each type of measurement data. In general, all laboratory analyses will require level III analytical support.

DQO for field screening activities such as the determination of pH, specific conductance, temperature and VOC concentration (HNu) will require level I analytical support.

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The use of the analytical support levels defined above will ensure that the overall objectives for the RI/FS will be completed.

6.1.1 Level of QA Effort

To assess the quality of data resulting from the field sampling program, field duplicate samples, rinsate samples, trip blank samples and matrix spike samples will be taken (where appropriate) and submitted to the analytical laboratory.

For all field samples collected, field duplicate samples will be collected at a frequency of 1 per 10 or fewer investigative samples per parameter set for each sample matrix or at least once per day, whichever is more frequent. Matrix spike/matrix spike duplicate (MS/MSD) samples will be analyzed at a minimum frequency of 1 in 20 for each analysis.

Rinsate blank samples will be submitted at a frequency of 1 per 10 or fewer well purging/sampling equipment cleanings or at least once per day of well purging/sampling equipment cleanings. Rinsate blanks shall be collected by routing deionized distilled water through decontaminated sampling equipment. For surface water samples, field blank samples will be collected at a frequency of 1 per 10 samples in place of rinsate samples.

Trip blank samples for VOC analyses (prepared by the laboratory and consisting of organic-free water) will be shipped by the

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laboratory with each shipment container of aqueous VOC sample vials. Trip blanks samples will be handled in a manner consistent with actual field sample handling and will be shipped back to the laboratory with the daily field samples. The trip blanks will provide a measure of potential cross contamination of samples during shipment and handling. It is noted that trip blanks will not be opened in the field.

The sampling and analysis program (the level of QA effort required for each matrix) is summarized on Table 6.1.

Blank samples will be analyzed to check procedural contamination and/or ambient conditions and/or sample container contamination at the Site that may cause sample contamination.

Upon examination of the results obtained by Pace, if any of the aforementioned blanks contain any analytes, the following procedure will be followed. First, determine if the contamination is real by examining the associated investigative samples and method blanks. If the contamination can be traced to an isolated source, e.g. a highly contaminated sample, the data are to remain unqualified. Otherwise, the data will be examined to determine the extent of contamination and all associated data will be qualified according to the data validation guidelines referenced in Section 6.6.

Field duplicate samples will be analyzed to check for sampling and analytical reproducibility. Field duplicate samples will be collected 1 for every 10 samples per matrix or at least once each day of sampling

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TABLE 6.1

SUMMARY OF QA SAMPLES FOR SAMPLES
COLLECTED DURING TWIN CITIES ASSEMBLY PLANT RI/FS
FORD MOTOR COMPANY

Matrix	Rinsate Sample	Field Duplicate Sample	MS/MSD Sample	Trip Blank Sample
Soil	1 for every 10 samples or at least once per day of sampling activities	1 for every 10 samples or at least once per day of sampling activities	1 for every 20 samples	
Groundwater	1 for every 10 samples or at least once per day of sampling activities	1 for every 10 samples or at least once per day of sampling activities	1 for every 20 samples	1 in every cooler containing aqueous VOC samples
Surface Water[1]	1 for every 10 samples or at least once per day of sampling activities	1 for every 10 samples or at least once per day of sampling activities	1 for every 20 samples	1 in every cooler containing aqueous VOC samples

Note:

1. For surface water, field blank samples will be collected in place of rinsate samples.

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activities for each matrix. Comparison of field duplicate samples will be based upon analytes, both non-detected and detected, and relative percent differences (RPD). The parameters which do not meet criteria may only be used for qualitative assessment. Professional judgement shall determine the RPD limits on a sample-to-sample basis.

6.1.2 Sensitivity, Precision and Accuracy of Analysis

The fundamental QA objective with respect to the accuracy, precision and sensitivity of analytical data is to achieve the QC acceptance criteria of each analytical protocol. The sensitivities required for these organic analyses will be at least the targeted detection limits listed on Tables 6.2 and 6.3. These tables present targeted detection limits for all target parameters. It should be noted that these limits are targeted detection limits. Lower method detection limits, if achieved by the laboratory, will be substituted for the targeted detection limits in the final report.

The analytical method precision (based upon relative percent difference) shall be determined from replicate analyses, and will meet criteria presented in Section 6.6.2.2.

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TABLE 6.2

PRACTICAL QUANTITATION LIMITS (PQLs) AND METHOD DETECTION LIMITS (MDLs) FOR VOC ANALYSES TWIN CITIES ASSEMBLY PLAN SITE RI/FS FORD MOTOR COMPANY[1]

	Water[1]		Soil[2]	
	PQL (µg/l)	MDL (µg/l)	PQL (µg/kg)	MDL (µg/kg)
Bromodichloromethane	1.0	0.2	125	25
Bromoform	2.0	1.0	250	120
Bromomethane	-	1.5	-	190
Carbon Tetrachloride	1.2	0.3	150	38
Chlorobenzene	2.5	1.0	312	120
Chloroethane	5.2	1.0	650	120
2-chloroethyl Vinyl Ether	10	5.0	1,200	620
Chloroform	0.5	0.5	62	62
Chloromethane	2.0	1.0	240	120
Dibromochloromethane	2.0	1.0	240	120
Dibromomethane	-	-	-	0.10
1,2-dichlorobenzene	10	4.0	1,200	500
1,3-dichlorobenzene	10	4.0	1,200	500
1,4-dichlorobenzene	10	4.0	1,200	500
Dichlorodifluoromethane[3]	-	1.5	-	190
1,1-dichloroethane	0.7	0.3	88	25
1,2-dichloroethane	0.3	0.2	38	25
1,1-dichloroethene	1.3	0.3	162	38
trans-1,2-dichloroethene	1.0	0.3	125	38
Methylene Chloride	-	1.0	-	120
1,2-dichloropropane	0.4	0.2	50	25
trans-1,3-dichloropropene	3.4	0.3	425	38
1,1,2,2-tetrachloroethane	2.0	1.0	240	120
Tetrachloroethene	2.0	1.0	240	120
1,1,1-trichloroethane	1.0	0.5	120	62
1,1,2-trichloroethane	2.0	1.0	240	120
Trichloroethene	1.2	0.5	150	62
Trichlorofluoromethane	-	0.4	-	50
Vinyl Chloride	1.8	1.5	225	190
Benzene	2.0	1.0	250	120
Ethyl Benzene	2.0	1.0	250	120
Toluene	2.0	1.0	250	120
Xylenes	-	1.0	-	120
Ethyl Acetate	-	0.01% (solvent scan)	-	0.01% (solvent scan)

Notes:

1. PQLs and MCLs are highly matrix depenent. Therefore, actual PQL and MDLs obtained may be considerably higher, depending on the sample matrix.
2. PQLs and MCLs are based on wet weight of sample.
3. Analyte demonstrated poor trap-and-purge efficiency.

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TABLE 6.3

PRACTICAL QUANTITATION LIMITS (PQLs) AND METHOD DETECTION LIMITS (MDLs) FOR TARGET METALS ANALYSES TWIN CITIES ASSEMBLY PLAN SITE RI/FS FORD MOTOR COMPANY[1]

	Water[1]		Soil[2]	
	PQL (µg/l)	MDL (µg/l)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	10	10	2	0.094
Barium	200	6.0	40	0.006
Cadmium	5	0.1	1	0.006
Chromium	10	10	2	0.01
Cobalt	50	16	10	0.016
Copper	25	5.0	5	0.005
Lead	5	1.0	1	0.045
Mercury	0.2	0.2	0.04	0.0002
Nickel	40	21	8	0.021
Selenium	5	3.3	1	0.081
Silver	10	5	2	0.005
Zinc	20	6.0	4	0.006

Notes:

1. PQLs and MDLs are highly matrix depenent. Therefore, actual PQL and MDL obtained may be considerably higher, depending on the sample matrix.
2. PQLs and MDLs are based on wet weight of sample.

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Accuracy for the analytical method will be determined by the matrix spike and check sample recoveries. Sections 6.6.2 summarize criteria that each spike recovery must meet.

6.1.3 Completeness, Representativeness and Comparability

It is expected that all analyses conducted in accordance with SW-846 methods will provide data meeting QC acceptance criteria for 80 percent of all samples tested. Any reasons for variances will be documented. The corrective actions taken if the completeness goals are not met are described in Section 6.11 of this work plan.

The sampling networks have been designed to provide data representative of Site conditions. During development of these networks, consideration was given to past disposal practices, existing data from past studies completed for the Site, remedial activities to date and physical setting. The extent to which existing and planned analytical data will be comparable depends on the similarity of sampling and analytical methods. The procedures used to obtain the planned analytical data are documented in this work plan. However, it may be necessary to verify similar documentation for previous analytical data to adequately establish comparability. Comparability of

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laboratory analyses will be ensured by the use of consistent units. Following completion of data collection, the existing database will be evaluated for representativeness.

6.2 FIELD PROTOCOLS

6.2.1 Soil Sample Collection

All soil samples will be obtained in accordance with ASTM D1586-84. The split spoon sampler will be attached to the drill rod and driven into the soil the full depth (24 inches). If the soil is loose, wet or in any way unconsolidated, clean basket retainers will be used to retain the soil in the split spoon. Between each sampling station, the split spoon will be cleaned with Alconox detergent and rinsed with deionized water.

All soil samples collected will be described and classified according to the Unified Soil Classification System. A record of all soil sampling will be recorded on borehole logs which will be maintained by the Site geologist.

Selected soil samples will be prepared in the following manner for chemical analyses.

MN-COMP 0044685

1. The sampling tool and all other instruments used in extracting the soil samples for chemical analyses will be precleaned using Alconox detergent. A new pair of disposable latex gloves will be used for each sample handled. Disposable gloves will be collected and contained for proper disposal.

2. Each soil sample for chemical analyses will be obtained and prepared in the following manner:

   a. Using a clean cutting tool (stainless steel knife), the soil sample will be extracted from the split spoon, attempting to ensure that a representative sample is collected. For VOC samples, the sample core will be transferred to sample jars without breaking apart the core, if possible. The remaining soil will be placed in the proper sampling bottles as outlined on Table 6.4.

3. Soil samples will be labeled noting the sampling location, depth, time and sampler's initials. A separate hard-cover field book will be maintained to document all soil samples and sampling events.

4. Samples will be placed on ice or cooler packs in laboratory supplied coolers after collection and labeling.

The criteria for selecting soil samples for chemical analysis are as follows:

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TABLE 6.4

SOIL AND GROUNDWATER CONTAINER, PRESERVATION, HOLDING TIME PERIODS AND SHIPPING REQUIREMENTS

Analysis	Containers	Preservation	Maximum Holding Times[1]	Volume of Sample	Shipping[2]	Normal Packaging[3]
Water						
VOCs	Two 40 ml volatile organic vials	HCl to pH<2 4°C	14 days	Fill completely, no air bubbles	Courier or staff	Bubble Pack
Metals	One 500 ml polyethylene	HNO_3 to pH<2 4°C	6 months (except mercury, 28 days)	Fill to shoulder of bottle	Courier or staff	Bubble Pack
Soil						
VOC	1 4 oz. glass jar	4°C	14 days	Fill completely	Courier or staff	Bubble Pack
Metals	1 4 oz. plastic jar	4°C	6 months (except mercury, 28 days)	Fill completely	Courier or staff	Bubble Pack

Notes:

1. The maximum sample holding time is calculated from the date of sample collection.
2. Samples will be picked up by Pace.
3. All samples shall be protected from light.

MN-COMP 0044687

During sampling, HNu headspace readings will be taken and recorded as an indication of possible VOC presence. Headspace readings will be collected as follows: a portion of the soil sample not already sealed in VOC jars (i.e. the metals sample) will be placed in a glass jar and the mouth of the jar will be sealed with aluminum foil. After a period of 15 to 20 minutes, an HNu photoionization probe will puncture the seal to detect any volatile gases that may be emitting from the soil.

If an HNu reading above site background levels is recorded from the soil sample, the sample will be prepared for possible analysis. A representative sample from each boring will be selected for chemical analysis after the HNu screening is complete. If HNu readings above background are not recorded, the soil sample collected from just above the groundwater table will be submitted for chemical analysis. A minimum of one soil sample per boring location will be submitted for chemical analysis.

6.2.2 Overburden Monitoring Well Installation Protocols

Overburden monitoring wells will be installed using a truck mounted drill rig advancing hollow stem augers with a minimum inside diameter of 4-1/4 inches. Overburden monitoring wells will be 2 inches in diameter. The following well materials will be used:

1. 2.0 feet or 5.0 feet of .10 slot stainless steel screen;
2. low carbon steel, flush threaded riser;

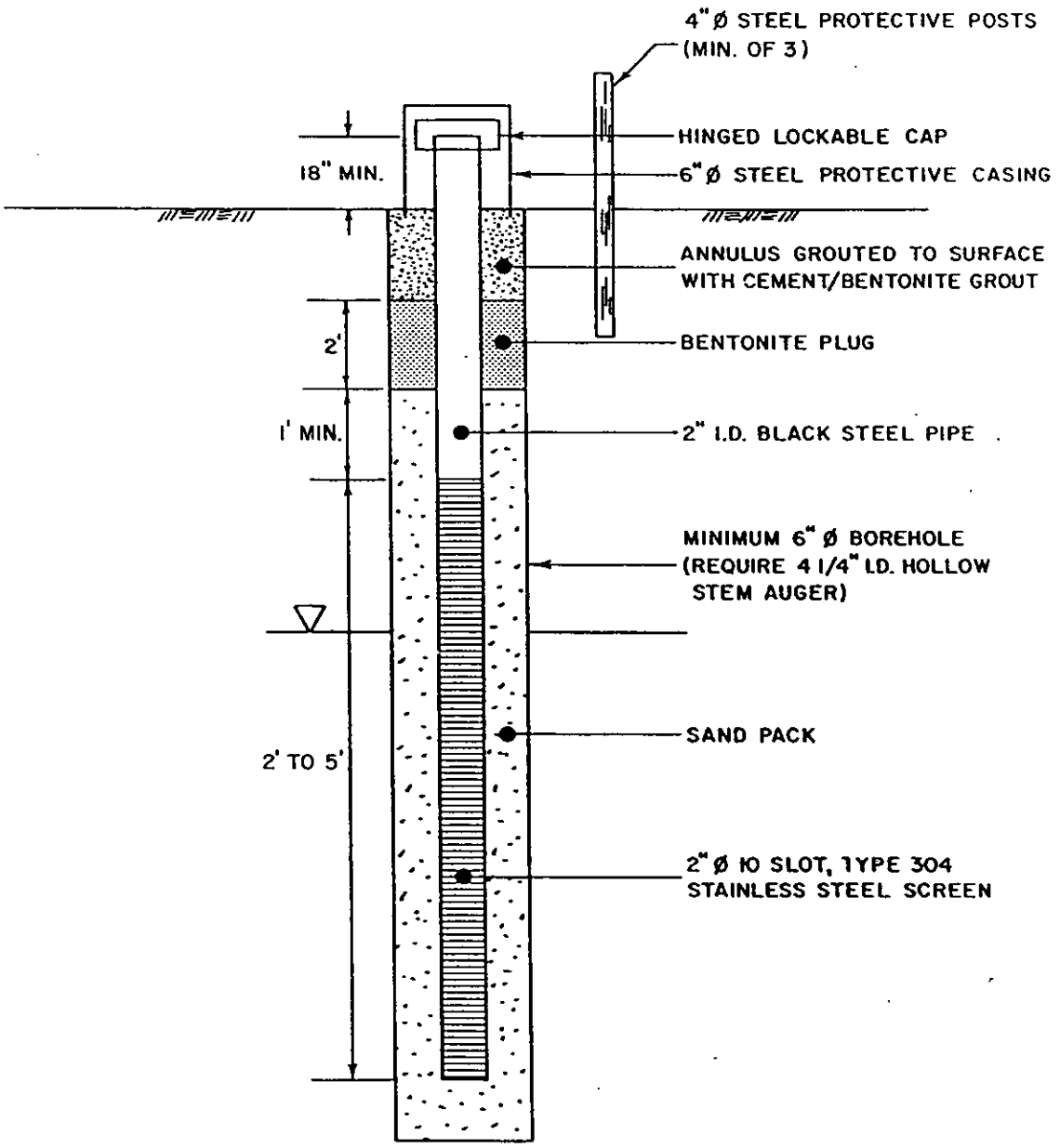
3. appropriate sized sand pack material installed a minimum of 1.0 feet above the top of the well screen;
4. a seal consisting of a minimum of 2.0 feet of bentonite slurry
5. bentonite (approximately 3 percent) cement backfill;
6. surface protection consisting of a locking steel protective post and three protective bumper posts.

The decision to use a 2 foot or 5 foot screen will be made in the field based on the depth of the borehole and the depth to the water table. As a provision for the possible presence of light NAPL, wherever possible, the screen will be installed so that the top of the screen is above the water table.

The monitoring well will be installed inside the auger annulus by backing the augers from the boring while simultaneously installing the sand pack. The sand pack will be installed from the bottom of the boring to approximately 1 foot above the top of the screen. A bentonite slurry seal approximately 2 feet thick will be emplaced above the sand pack. The remaining annulus will be backfilled by the tremie grout method using a mixture of bentonite and cement. Surface protection consisting of a 4 inch diameter locking protective casing and three steel posts will be installed.

Figure 6.1 illustrates typical overburden monitoring well construction details.

MN-COMP 0044689



NOT TO SCALE

MN-COMP 0044690

figure 6.1
TYPICAL OVERBURDEN MONITORING
WELL INSTALLATION
Ford Motor Company

CRA

2853-8/02/90-M

Monitoring Well Installation Protocols

Monitoring wells will comply with the Minnesota Department of Health Water Well Construction Code. The following provides a summary of aspects related to field quality assurance.

To eliminate cross-contamination between successive drilling locations, the installation of all monitoring well will be carried out according to the following protocol:

1. Prior to drilling in the initial and all subsequent boreholes, the drilling rig and all drilling equipment will be cleaned using a high pressure-low volume hot water wash and/or steam cleaned with alconox.

2. All drilling water will be obtained from the site potable water supply.

3. All well screens will be of the precleaned Johnson™ Environmental type. All riser pipe and screens will be "steam cleaned" prior to use.

6.2.3 Monitoring Well Development

Well development will be carried out according to the following protocol:

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1. Monitoring wells will be developed by the surge and bail method using a stainless steel bottom filling bailer. Prior to use, the bailer will be "precleaned" off site using the following solvent rinse sequence: methanol, hexane, methanol, air dry, deionized water.

2. Development will continue until sediment-free water is obtained and three successive readings of pH, temperature and conductivity are measured within the following ranges:

   pH - ±0.1 pH unit

   Temperature - ±0.5°C

   Conductivity - ±10 umhos/cm

3. The purged water will be discharged onto the ground surface.

4. Prior to the measurement of water levels, the measuring instrument will be cleaned with distilled water.

5. All cleaning fluids will be collected and contained for proper disposal.

6. Well development and stabilization records will be maintained. This includes recording readings of pH, temperature, conductivity and cumulative volume of water removed during development.

MN-COMP 0044692

6.2.4 Monitoring Well Sampling

All monitoring wells will be sampled according to the following protocols:

1. New disposable latex gloves will be used when sampling each well. Additional glove changes will be made for each sampling.

2. The sampling will measure and record the depth to water in each well to the nearest 0.01 foot using an electric tape. The bottom three feet of the measuring device will be cleaned by rinsing with deionized water.

3. Prior to sampling, each well will be purged using a precleaned, bottom filling, stainless steel or teflon bailer. A minimum of three times the standing water volume in the well will be removed, or until conductivity and pH readings in the purge water are stable. In the event that a well is purged dry prior to achieving three well volumes, groundwater will be permitted to recover to a level sufficient for sample collection. The time that the well was purged dry will be noted and well recovery will be monitored. Upon recovery, a precleaned bailer will be used for sample collection. Prior to use, each bailer will be cleaned as follows:

   a. Rinse with methanol/hexane/methanol;
   b. Allow to air dry.
   c. Triple rinse with distilled deionized water;

4. All waste groundwater will be discharged to the ground surface.

5. Field measurements of pH and conductivity (using a DspH-3 pH/3 RGE conductivity meter or equivalent) and temperature (using a YSI Model 33 SCT meter or equivalent) will be recorded prior to sample collection. Calibration of field instruments will be conducted as specified in Section 6.4.

6. After the required standing well water has been purged, water samples will be collected using a bottom filling, stainless steel or teflon bailer attached to a nylon rope. New nylon rope will be used for each monitoring well.

7. Containers for sample collection and preservation requirements are determined as required by the analytical parameters. Table 6.4 details the requisite sample containers and preservation techniques for chemical parameters. All sample bottles will be provided by the laboratory and will be prepared consistent with ICHEM 300 Series protocols. The sample bottles will be delivered to the Site in sealed containers.

8. The MS/MSD sample will be taken from a well where samples do not require consideration for turbidity. Samples will be collected from the well as outlined in (5) above, but in triple the normal volume. The analysis request sheets sent to the laboratory will indicate the sample that will undergo MS/MSD analyses.

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9. All disposable gloves and nylon ropes will be placed in DOT approved 55-gallon drums and stored on-site. All drummed waste will be disposed of in accordance with State and Federal regulations. All rinsings will be handled as discussed in item (3) above.

10. Samples will be labeled noting the well location, date, time and sampler's initials. A separate, hard-cover bound, field notebook will be maintained describing the sampling history (including: date and time of collection, sample handling and storage, preservation and labeling, field measurements, details pertaining to well purging and characteristics of each sample taken, and weather conditions).

11. Samples will be placed on ice or cooler pack in laboratory supplied coolers after collection and labeling.

6.2.5 Surface Water Sampling

The surface water samples will be collected in accordance with the following protocols:

1. New disposable latex gloves will be used when collecting the sample.

2. The sample will be collected by the grab sample method directly into the precleaned sample containers. The most downstream sample will be collected first and sampling will then progress upstream.

3. Containers for sample collection and preservation requirements will be the same as specified for groundwater samples (see Table 6.4).

4. Samples for MS/MSD analyses will be collected in triple the normal volume. The analysis request sheets sent to the contract laboratory will indicate the sample to undergo MS/MSD analyses.

5. Rinsate samples will not be collected since there will be no sampling tools used for collecting these samples. Therefore, field blank samples will be collected at a frequency of 1 per 10 samples, or at least one per day of sampling activities.

6. Samples will be labeled noting the sampling location, date, time and sampler's initials. A separate hard-cover field book will be maintained to document all samples and sampling events. Weather conditions at the time of sampling will be noted.

7. Samples will be placed on ice or cooler packs in laboratory supplied coolers after collection and labeling.

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6.3 SAMPLE CUSTODY AND DOCUMENT CONTROL

This section details the procedures and protocols which must be followed for the transport of samples.

6.3.1 Chain-of-Custody

A chain-of-custody will be maintained to document the transfer of sample containers. Each sample will be properly sealed. Sample container labels will include sample number, place of collection and date and time of collection. Samples will be placed in the shipping cooler immediately after collection.

Each cooler being shipped to Pace will contain a chain-of-custody form. The chain-of-custody form consists of four copies which are distributed to the shipper, the receiving laboratory, the CRA laboratory and the CRA office file. Each sample number of each sample shipped will be recorded on the sheet. The shipper will maintain his copy while the other three copies are enclosed in a waterproof envelope within the cooler with the samples. The container will then be sealed properly for shipment. The laboratory, upon receiving the samples, will complete the three remaining copies. The laboratory will maintain one copy for their records. One copy will be returned to CRA upon receipt of the samples by the laboratory. One copy will be returned to CRA with the data deliverables package.

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Upon receipt of the container at the laboratory, the container will be inspected by the designated sample custodian. The condition of the container will be noted on the chain-of-custody record sheet by the sample custodian. The sample custodian will document the date and time of receipt of the container and sign the form.

If damage or discrepancies are noticed, it will be recorded in the remarks column of the record sheet, dated and signed. Any damage or discrepancies will be reported to the laboratory supervisor who will inform the lab manager and QA officer. The lab QA officer will than notify the CRA QA Officer - Analytical Activities.

6.3.2 Sample Documentation in the Laboratory

The sample custodian will assign a unique number to each incoming sample for use in the laboratory. The unique number and customer number will then be entered into the sample receiving log. The laboratory date of receipt will also be noted.

Pace will be responsible for maintaining analytical log books and laboratory data, as well as sample (on hand) inventory for submittal to CRA on an "as required" basis. Samples will be maintained by the laboratory for a period of 30 days following CRA's receipt of the respective sample data under the conditions prescribed by the appropriate U.S. EPA methods for additional

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analyses, if necessary. Raw laboratory data files will be inventoried and maintained by Pace for a period of five years at which time CRA will advise Pace regarding the need for additional storage.

6.3.3 Storage of Samples

After the sample custodian has prepared the log book, the chain-of-custody will be checked to ensure that all samples are stored in the appropriate locations. All samples will be stored within an access controlled location and will be maintained at 4°C until completion of all analytical work or, as a minimum, for 30 days.

6.3.4 Sample Documentation - CRA

Project files for the entire project will be inventoried and maintained by CRA and will consist of the following:

- Project Plan
- Project Logbooks
- Field Data Records
- Sample Identification Documents
- Chain-of-Custody Records
- Correspondence
- Report Notes, Calculations, etc.

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- Data Packages,
- References, Literature
- Miscellaneous - photos, maps, drawings, etc.
- Final Report

The project file materials will be the responsibility of the evidentiary file custodian with respect to maintenance and document removal. Jon Christofferson will be the project file custodian.

6.4 CALIBRATION PROCEDURES AND FREQUENCY

The procedures indicated below will be performed for all samples delivered to Pace for analysis. Specific instructions relevant to a particular type of analysis are given in the pertinent analytical procedures for this project.

All quality control data and records produced from calibration will be retained by the laboratory and will be made available to CRA on an "as required" basis.

The following specific analytical quality control procedures are related to each analytical batch.

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Laboratory protocols and QA/QC procedures for Pace are provided in Appendix I.

6.4.1 Instrument Performance

Prior to initiating analysis, it is required to establish that a given instrument meets the specifications required.

6.4.1.1 Organic Analyses

Internal standards retention times must be within two percent of the initial standard. In addition, a laboratory prepared sample is analyzed with each batch of samples. Percent recovery for this sample is required to be within ten percent of actual analyte concentrations. If either criteria is not met, analysis of samples is halted until the problem is corrected.

6.4.2 Calibration

Prior to analysis, laboratory instruments will be calibrated using procedures for VOC and metals analyses specified by Pace (see Appendix I).

MN-COMP 0044701

6.4.2.1 Calibration of Gas Chromatograph

A five-point calibration curve is prepared by Pace each day analyses are performed. Calibration factors are calculated for each analyte and percent relative standard deviations (%RSD) are calculated. Each %RSD value must be less than 20, otherwise the calibration procedure must be repeated for any analyte that failed this criterion.

A calibration check is conducted after every ten samples. Calibration factors values from this sample must be within 15 percent of the initial calibration factor, based upon the relative percent difference. If this criterion is not met, analysis of samples will stop until the problem is corrected. This may result in generating a new five-point calibration curve.

6.4.2.2 Standard Curves for Inorganic Analysis

Standard curves used in metals analyses will be prepared as follows:

Standard curves derived from data consisting of one reagent blank and a minimum of three concentrations will be prepared for each inorganic analyte. The standard curve will be used with each subsequent analysis, provided the standard curve is verified by using at least one reagent blank and one standard at a level normally encountered or expected in such samples. If the results of the verification are not within ±10 percent of the original curve, a new

standard will be prepared and analyzed. If the results of the second verification are not within ±10 percent of the original standard curve, a reference standard will be used to determine if the discrepancy is with the standard or with the instrument. New standards will also be prepared on a quarterly basis at a minimum. All data used in drawing or describing the curve will be so indicated on the curve or its description. A record will be made of the verification.

6.4.2.3 Field Instrument Calibration

Calibrating field instruments will be done prior to the collecting each water sample if well purging data indicate a change (>±10 percent) in pH and/or conductivity from the last location sampled. However, calibration will be conducted at least daily during groundwater sampling. The field equipment will be maintained, calibrated and operated in a manner consistent with the manufacturer's guidelines and U.S. EPA standard methods. Since the majority of field measurements will be limited to pH, conductivity, temperature and depth (water level) the following procedures will be conducted, at a minimum:

1) pH
   - Calibrate daily against two buffer solutions within a pH of 2 of the anticipated water pH.

MN-COMP 0044703

A) Calibration of pH Meter

The pH meter will be calibrated with commercially obtained pH 7, 4 and 10 buffer solutions. The pH calibration will be temperature compensated and will be performed immediately before initiating a sampling event. Calibration checks will be performed with every sample collected. In the event that the result fails to be within 0.1 pH units, the meter must be recalibrated and all samples after the last calibration must be remeasured.

Calibration will be performed in accordance with the following procedure:

1) Rinse the probe in deionized water;
2) Insert probe in a fresh pH 7 buffer solution;
3) Slide battery compartment cover back to the first stop, exposing the adjustment potentiometers;
4) Adjust the "CAL" potentiometer such that the display reads 7.00;
5) Remove the probe; rinse in deionized water;
6) Insert probe in a fresh pH 4 or pH 10 buffer solution;
7) Adjust the slope potentiometer until the correct pH is displayed; and
8) Remove probe; rinse in deionized water.

2) Conductivity

- Check once per sampling event against a standard solution of potassium chloride and deionized water.

B) Calibration of the Specific Conductivity Meter

The specific conductivity meter is factory calibrated, but the calibration should be checked periodically and the probe thoroughly rinsed between samples. Calibrating the specific conductivity meter will be performed as follows:

1) Rinse probe in deionized water;
2) Wipe probe and allow to dry the conductivity displayed should be zero in air;
3) Adjust the zero potentiometer if necessary;
4) Immerse the probe in a solution of known conductivity;
5) Adjust the "SPAN" potentiometer such that the correct conductivity is displayed; and
6) Rinse probes thoroughly with deionized water and allow to dry.

3) HNu

HNu calibration checks will be done daily in the field prior to the commencement of field activities.

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C) Calibration Checks of the HNu

Calibration checks will be performed in accordance with the following procedures:

1) Connect the analyzer to the regulator and cylinder with a short piece (butt connection) of tubing. The calibration gas in the cylinder consists of a mixture of isobutylene and zero air. Isobutylene is non-toxic and safety to use in confined areas. There are no listed exposure levels at any concentration.

   It is important that the tubing be clean since contaminated tubing will affect the calibration reading. Do not use cylinder below about 30 psig as a reading below that level can deviate up to ten percent from the rated value.

   Safely discard the disposable cylinder when empty. Do not refill this cylinder.

2) With the SPAN setting and the function switch at the same positions as listed in the Application Data Sheet or Calibration Report, open the valve on the cylinder until a steady reading is obtained.

3) If the reading is the same as the recorded data, the analyzer calibration for the original species of interest is still correct.

MN-COMP 0044706

4) If the reading has changed, adjust the SPAN setting until the reading is the same.

5) Shut off the cylinder as soon as the reading is established.

6) Record and maintain this new SPAN setting.

6.5 ANALYTICAL PROCEDURES

This section presents the analytical methods which will be employed by Pace to complete all required analyses.

6.5.1 Overview

All soil, surface water and groundwater samples collected for chemical analyses will be analyzed using SW-846 methods. The methods for performing these analyses are presented on Table 6.5. The analyses of VOC and metals will be performed in a manner consistent with these analytical methods.

MN-COMP 0044707

TABLE 6.5

ANALYTICAL METHODS FOR ANALYSIS OF SOIL AND AQUEOUS SAMPLES[1]

Matrix	Analysis	Extraction	Method
Soil	VOC	5030	8010/8020
	Metals		6000/7000 Series
Water	VOC	5030	8010/8020
	Metals		6000/7000 Series

Note:

1. All methods are from "Test Methods for Evaluating Solid Waste", SW-846, third edition, September 1988.

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6.5.2 Identification

Identification of all target analytes will be accomplished with an authentic standard of the analyte. When authentic standards are not available identification will be considered tentative.

For gas chromatographic determinations of specific analytes, the relative retention time of the unknown will be compared with that of an authentic standard. Since a true identification using GC is not possible, an analytical run for compound confirmation will be performed using a column of a dissimilar phase, according to the specifications in the methods. Peaks must elute within daily retention time windows established for each indicator parameter to be declared a tentative or confirmed identification. Retention time windows are determined via a standard a study defined in each method. Results of the study are to be filed in the laboratory and available for inspection during a QC audit.

6.5.3 Quantification

The procedures for quantification of analytes are discussed in the appropriate specific analytical methods.

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6.5.4 Practical Quantitation Limits (PQLs)

The data used to conduct the RI/FS will have PQL detection limits that are consistent with the appropriate analytical methods. The PQLs for chemical analyses were previously presented on Tables 6.2 and 6.3. Specific detection limits are highly matrix dependent. The PQLs listed in these tables are provided for guidance and may not always be technically achievable.

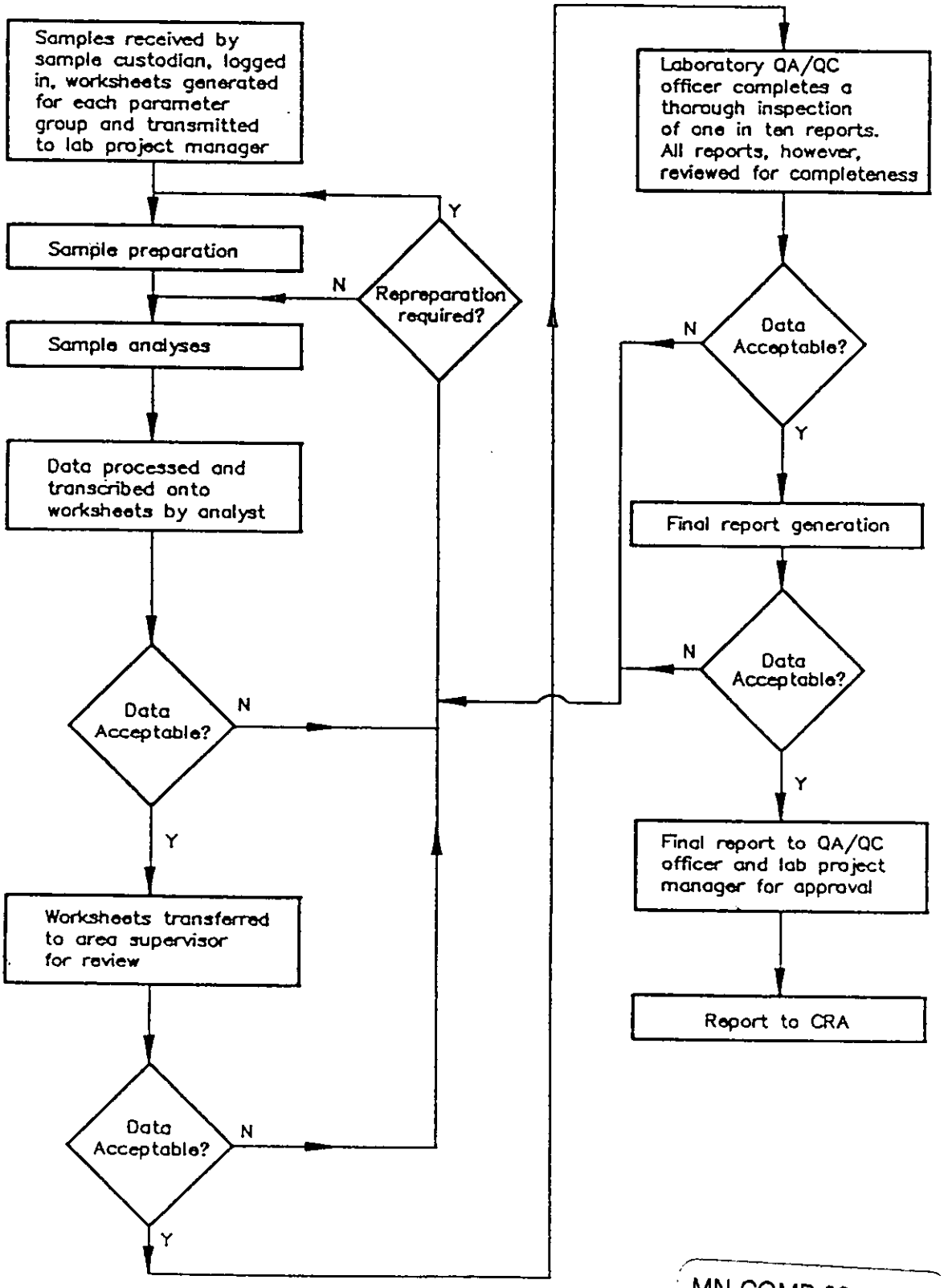
6.6 DATA REDUCTION, VALIDATION ASSESSMENT AND REPORTING

Pace will perform analytical data reduction and validation in-house under the direction of the laboratory QA officer. The laboratory QA officer will be responsible for assessing data quality and advising of any data which were related "preliminary" or "unacceptable" or other qualifications. Figure 6.2 illustrates the analytical data flow through the laboratory. Data reduction, validation and reporting by the laboratory will be conducted as detailed in the following. It should be noted, however, that "sign-off" will be required following completion of each step.

- Raw data produced and checked by the responsible analyst is turned over for independent review by another analyst.

- Area Supervisor reviews that data for attainment of quality control criteria presented in the referenced analytical methods.

MN-COMP 0044710



MN-COMP 0044711

figure 6.2

ANALYTICAL DATA FLOW

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2853-20/08/90-M

- Laboratory Operations Manager reviews that data and a report will be generated and sent to the laboratory quality assurance officer.

- Laboratory Quality Assurance Officer will complete a thorough inspection of all reports.

- Area Supervisor and QA officer will decide whether any sample reanalysis is required.

- Upon acceptance of the preliminary reports by the QA officer, final reports will be generated and signed by the laboratory manager.

The data package shall consist of the following:

- detailed case narrative,
- summary of analysis dates,
- method blank sample data,
- surrogate compound recoveries,
- MS/MSD recoveries,
- check sample recoveries,
- executed chain-of-custody forms.

CRA's QA Officer - Analytical Activities will conduct an evaluation of data reduction and reporting by the laboratory. These evaluations will consider the finished data sheets, rinsate data, field duplicate data, and recovery data for surrogate and matrix spikes. The material will be checked for legibility, completeness, correctness, and the presence of requisite dates, initials

MN-COMP 0044712

and signatures. The results of these checks will be assessed and reported to the project managers noting any discrepancies and their effect upon the acceptability of the data. All information garnered from QA/QC checks will be discussed in the final RI/FS Report.

Validation of the analytical data will be performed by the CRA QA Officer - Analytical Activities. Validation will be consistent with "Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses", February 1, 1988, and "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses", July 1, 1988. Assessment of analytical and field data will include checks for data consistency by looking for comparability of duplicate analyses, potential sample contamination as indicated by results of blank sample analyses, laboratory QA procedures, adherence to accuracy and precision criteria, transmittal errors, and anomalously high or low parameter values. The results of data validations will be reported to the project managers, noting any discrepancies and their effect upon acceptability of the data.

Raw data from field measurements and sample collection activities that are used in project reports will be appropriately identified and appended to the report. Where data have been reduced or summarized, the method of reduction will be documented in the report. In addition, field data will be audited for anomalously high or low values that may appear to be inconsistent with other data.

MN-COMP 0044713

6.7 INTERNAL QUALITY CONTROL CHECKS AND FREQUENCY

6.7.1 Field QC

Quality control procedures for field measurements will be limited to checking the reproducibility of the measurement in the field by obtaining multiple readings and by calibrating the instruments (where appropriate).

Quality control of field sampling will involve collecting field duplicates and rinsate blanks in accordance with the applicable procedures.

6.7.2 Laboratory QC

Specific procedures related to internal laboratory QC samples (namely, matrix spikes, surrogate spikes, blanks, check samples and matrix spike duplicates) are detailed in the following subsections.

6.7.2.1 Method Blank

A method blank will be analyzed by the laboratory at a frequency of one per twenty analyses or, in the event that an analytical round

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consists of less than twenty samples, one reagent blank will be analyzed. The reagent blank, an aliquot of analyte-free water or solvent, will be carried through the entire analytical procedure.

6.7.2.2 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

A MS/MSD sample will be analyzed at a minimum frequency of 1 in 20 for each method per matrix. Table 6.6 presents a summary of the compounds and acceptable criteria. Percent spike recoveries will be used to evaluate analytical accuracy while percent relative standard deviation or percent difference between the spike and matrix spike duplicate will be used to assess analytical precision.

6.7.2.3 Surrogate Compounds

Surrogate compounds are used in all VOC analyses. Every blank, standard and environmental sample, including MS/MSD samples, will be spiked with surrogate compounds prior to purging volatiles.

Surrogate compounds will be spiked into samples according to the appropriate analytical methods. Percent recoveries will fall within the control limits set by procedures specific in the method for analytes falling within the detection limits without dilution. Diluting samples to bring the analyte

TABLE 6.6

PERCENT RECOVERIES AND PRECISION CRITERIA FOR MS/MSD ANALYSES

Analysis	Parameter	% Recovery[1] Water	% Recovery[1] Soil
VOC	Trichloroethene	35-146 (20)	35-146 (50)
	Chlorobenzene	38-150 (20)	38-150 (50)
	Benzene	39-150 (20)	39-150 (50)
	1,1-dichloroethene	28-167 (20)	28-167 (50)
Metals		75-125 (20)	75-125 (50)

Note:

1. Values in parentheses are maximum RPD limits.

MN-COMP 0044716

concentration into the linear range of calibration may dilute the surrogates below the quantification limit; assessment of analytical quality in these cases will be based on the quality control embodied in the check and MS/MSD samples.

Table 6.7 presents a summary of the surrogate recovery control limits as stated within the analytical methods.

6.7.2.4 Check Samples

As prepared by Pace, each analytical batch will contain a check sample. The check sample will consist of an analyte-free water spiked with MS compounds. Check samples will be carried through all procedures, including extractions, by Pace. Percent recoveries for check samples will be within ten percent of actual analyte concentrations.

6.8 PERFORMANCE, SYSTEM AUDITS AND FREQUENCY

For the purpose of external evaluation, performance evaluation check samples from the U.S. EPA and various state agencies are analyzed periodically by Pace.

Internally, the evaluation of data from these samples is done on a continuing basis over the duration of a given project.

MN-COMP 0044717

TABLE 6.7

PERCENT RECOVERIES FOR VOC SURROGATE COMPOUND

Compound	% Recovery	
	Water	Soil
α,α,α-trifluorotoluene	80-120	-

MN-COMP 0044718

The CRA QA Officer - Analytical Activities may carry out performance and/or systems audits to insure that data of known and defensible quality are consistently produced during a program.

System audits are qualitative evaluations of all components of field and laboratory quality control measurement systems. They determine if the measurement systems are being used appropriately. The audits may be carried out before all systems are operational, during the program, or after the completion of the program. Such audits typically involve a comparison of the activities given in the QA/QC plan described herein, with activities actually scheduled or performed. A special type of system audit is the data management audit. This audit addresses only data collection and management activities.

The performance audit is a quantitative evaluation of the measurement system used for a monitoring program. It requires testing the measurement systems with samples of known composition or behavior to evaluate precision and accuracy. A performance/system audit may be carried out by or under the auspices of the MPCA, without the knowledge of the analyst during each sampling event for this program. The scheduling of performance evaluation (PE) audits will be at the discretion of the MPCA.

In addition, one external QA audit may be conducted by CRA prior to analysis of any investigatory samples. It should be noted, however, that any additional external QA audits will only be performed if deemed

MN-COMP 0044719

necessary by either the PRP or CRA project managers or the CRA QA officers. The project laboratory may also undergo PE audit(s) by the MPCA, if so requested.

6.9 PREVENTIVE MAINTENANCE

All analytical instruments to be used in this project will be serviced by Pace personnel at regularly scheduled intervals in accordance with the manufacturer's recommendations. Instruments may also be serviced at other times due to failure. Requisite servicing beyond the abilities of Pace personnel will be performed by the equipment manufacturer or their designated representative.

Daily checks of each instrument will be by the analyst who has been assigned responsibility for that instrument. This will include changing GC inlet liners, checking operation of data systems, checking for leaks, etc. Manufacturer's recommended procedures will be followed in every case.

The HNu, pH and conductivity meters will be calibrated in the field as described in Section 6.3.2.3. In addition, the following preventive maintenance measures will be taken in the field:

HNu - The HNu meter is sent annually to the manufacturer for recalibration and cleaning.

MN-COMP 0044720

pH, Conductivity - Keep probes clean and free of dirt by rinsing with deionized water.

- Keep deionized water around probes to prevent dehydration.

Water Level Tape - Clean probe and lower three feet of tape with pesticide grade isopropanol and deionized water to prevent hard water and iron build up.

6.10 SPECIFIC ROUTINE PROCEDURES USED TO ASSESS DATA PRECISION, ACCURACY AND COMPLETENESS

6.10.1 QA Measurement Quality Indicators

6.10.1.1 Precision

Precision will be assessed by comparing the analytical results between MS/MSD analyses and/or duplicate sample analyses.

MN-COMP 0044721

6.10.1.2 Accuracy

Accuracy will be assessed by comparing a set of analytical results to the accepted or "true" values that would be expected. In general, surrogate compound recoveries, MS/MSD analyses and check sample recoveries will be used to assess accuracy.

6.10.1.3 Outliers

Procedures discussed previously will be followed for documenting deviations. In the event a result deviates significantly from established control limits, this deviation will be noted and its effect on the quality of the remaining data assessed and documented.

6.11 CORRECTIVE ACTION

The need for corrective action may be identified by system or performance audits or by standard QC procedures. The essential steps in the corrective action system will be:

- Checking the predetermined limits for data acceptability beyond which corrective action is required;

MN-COMP 0044722

- Identifying and defining problems;

- Assigning responsibility for investigating the problem;

- Investigating and determining the cause of the problem;

- Determining corrective action to eliminate the problem (this may include reanalyses of resampling and analyses);

- Assigning and accepting responsibility for implementing the corrective action;

- Implementing the corrective action and evaluating the effectiveness;

- Verifying that the corrective action has eliminated the problem; and

- Documenting the corrective action taken.

For each measurement system, the CRA QA Officer - Analytical Activities will be responsible for initiating the corrective action and the laboratory supervisor will be responsible for implementing the corrective action. The corrective action taken will depend upon the QA/QC criteria that did not meet the necessary criteria, and may range form qualifying the data to resampling at the Site.

MN-COMP 0044723

6.12 QUALITY ASSURANCE REPORT TO MANAGEMENT

Management will receive reports on the performance of the measurement system and the data quality following each sampling round and at the conclusion of the report.

Minimally, these reports will include:

- Assessment of measurement and quality indicators, i.e. data accuracy, precision and completeness;
- Results of system audits; and
- QA problems and recommended solutions.

The CRA QA Officer - Analytical Activities will be responsible within the organizational structure for preparing these periodic reports. The final report for the project will also include a separate QA section which will summarize data quality information contained in the periodic QA/QC reports to management, and details and overall data assessment and validation in accordance with the data quality objectives outlined in this QAPP.

MN-COMP 0044724

7.0 DATA MANAGEMENT AND DOCUMENTATION

7.1 DATA MANAGEMENT PLAN

Sampling and analytical records will be generated in accordance with the quality assurance plan presented in Section 6. Data generated will be validated prior to inclusion into the database. D-Base and Lotus™ software will be used as appropriate for computer compilation, tabulation and assessment of data records.

Project reports will be submitted according to the schedule provided in Section 11.

DATA RECORD

Each data record entered into the database will include the following information:

1. sample location,
2. the date the sample was taken,
3. analyzed parameter,
4. field measurement raw data,
5. laboratory performing the analysis,
6. analytical method and
7. result of analysis (i.e. concentration).

MN-COMP 0044725

TABULAR DISPLAYS

Data may be tabulated in the following ways:

1. unsorted (raw) data,
2. summary of data of detected parameters and
3. sorting of data according to location, aquifer or constituent monitored.

GRAPHICAL DISPLAYS

Data may be displayed graphically in the following ways:

1. display of line graphs of concentration versus time for selected sampling locations noted in the data evaluation,
2. displays of the geographical extent of the contamination by use of isopleth maps as noted in the data evaluation and where otherwise appropriate, and
3. graphical displays of hydrogeologic data and interpretation as found appropriate.

7.2 DATA AND DOCUMENT AVAILABILITY AND RETENTION

Ford will allow MPCA staff and/or its authorized representatives to inspect and copy all sampling, testing, monitoring or other data transmitted to or generated by Ford pertaining to work undertaken under the RFRA program of work. Ford will allow duplicate/split samples to be

collected by MPCA and/or its authorized representatives of any samples collected by Ford pursuant to the work plan. Ford will maintain a central depository of the data, reports and other documents prepared pursuant the work plan. All data, reports and other documents will be preserved by Ford until Ford receives written approval from the MPCA to allow otherwise.

MN-COMP 0044727

8.0 RISK ASSESSMENT

A baseline risk assessment will be conducted for the Site. The risk assessment will provide an evaluation of the actual and potential threat to human health, welfare and the environment posed by the possible threatened releases of hazardous substances, pollutants or contaminants in the absence of any remedial action. The objectives of a baseline risk assessment shall be attained by identifying and characterizing the following:

1. An evaluation of the results of the Site investigation showing the actual and potential concentrations of hazardous substances, pollutants or contaminants present in relevant media (e.g. air, soil, groundwater, surface water, sediment and biota) at the conclusion of the RI and projected in the future. The evaluation is expected to focus on VOCs and metals at the Site.

2. Identification of the hazardous and toxicological properties and relevant human health and environmental standards criteria for the hazardous substances, pollutants or contaminants found in the Site investigation.

3. Environmental fate and transport mechanisms within specific environmental media such as physical, chemical and biological degradation processes and hydrogeological conditions.

4. Potential human and environmental receptors.

5. Potential exposure pathways and extent of actual or expected exposure.

6. Extent of expected impact or threat, and the likelihood of such impact or threat occurring (i.e. risk characterization).

7. Level(s) of uncertainty associated with the above items.

The risk assessment will be prepared using the U.S. EPA document "Risk Assessment and Guidance for Superfund", Interim Final, Volume 1 (December 1989) and Volume 2 (March 1989).

MN-COMP 0044729

9.0 SITE SECURITY AND SAFETY PLAN

9.1 SITE SECURITY

Current Site operations do not allow for public access to operating facilities. The following Site security control measures are in place:

1. The Ford Plant has its own 24-hour per day plant security guards.

2. The investigation sites, Site A, Site B and the UST area, are enclosed within the Plant's security fence. The fence is steel chain link 8 feet high.

3. The Site is watched by video cameras strategic location above the various Plant areas and all investigation sites.

4. The Site C area also is controlled by fencing and is watched by video camera.

5. All monitoring wells at the Site are completed with locking protective riser pipes and bumper posts as per the MDH Water Well Code.

6. All areas are patrolled by Ford security.

7. All Site and Plant visitors must sign in with Plant security before entering the Site. Visitors will be issued passes once access is approved.

MN-COMP 0044730

9.2 HEALTH AND SAFETY PLAN

Appendix J provides the health and safety plan for the Site operations, maintenance and monitoring activities covered by this RI. This plan is consistent with the requirement of:

1. OSHA requirement 29 CFR Part 1910.120, Hazardous Waste Operations and Emergency Response; Interim Final Rule, Federal Register, December 19, 1986.

2. OSHA requirements 29 CFR part 1910 (General Industry Standards) and 1926 (Construction Industry Standards).

3. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, NIOSGH/OSHA/USCG/EPA, DHHS (NIOSH) Publication Number 85-115, October 1985.

10.0 COMMUNITY RELATIONS PLAN

GENERAL

The overall goal of the Community Relations Plan (CRP) is to plan for an organized dissemination of information to the public regarding investigation, activities and results upon request. The Ford CRP therefore includes opportunities for comments and input by citizen, community and other groups.

Elements of the Community Relations Plan are:

1. Establishment of a communication process in conjunction with the MPCA project manager and MPCA's public information office.

2. Ford Plant Employee Relations personnel will be available for communication with persons who have expressed interest (interested persons) to receive as well as provide information.

3. Reliable information will be made available to interested persons who have requested to review the information.

COMMUNITY RELATIONS

The Ford Community Relations Plan Coordinator for this project will be Edward Lloyd - Employee Relations Manager.

The MPCA Coordinator will be J. Todd Goeks.

These Coordinators will keep up to date on all aspects of progress on the RI/FS.

Questions regarding the RI/FS that originate from the public should be first directed to the MPCA Coordinator.

In order to accomplish the CRP goals, Ford will conduct the following:

a. Create and maintain a mailing list of interested parties. Among the persons who shall be included on this list are the MPCA Public Information Officer assigned to this Site, the Mayor of the City of St. Paul, City Council Member Bob Long (representing the City Council of the City of St. Paul), the Chairperson of the St. Paul Parks and Recreation Board, the State Senator and State Representative whose districts include the Site, and any citizen or environmental groups that have expressed an interest.

MN-COMP 0044733

b. Provide written monthly progress reports to the MPCA as specified in Part II.C. (page R-3) of the RFRA. These progress reports will note, as appropriate in addition to all monthly activities, the status of:

- the Remedial Investigation,
- the Feasibility Study,
- the Record of Decision, and
- any interim remedy or response activity.

REPORTS AND DOCUMENTS

All project reports, progress reports, sampling results and documents will be made available to the MPCA by Ford according to the project schedule. Citizens groups and interested persons can make requests to review the content of these documents by contacting MPCA.

PUBLIC COMMENT

Copies of the project RI/FS report will be available through normal public access for review and comment at the MPCA St. Paul offices. Public comments made through the MPCA will be considered in the preparation of final reports, thus ensuring public input on final results.

PUBLIC INFORMATION

Information from the public should be transferred through the Coordinators to CRA for consideration in the RI/FS. Similarly, information provided by CRA should be through the Coordinators to the public as requested.

MN-COMP 0044735

11.0 REPORTING AND PROJECT SCHEDULE

11.1 MONTHLY SUMMARY/PROGRESS REPORT

A monthly summary/progress report noting activities conducted under the work plan and the RFRA will be prepared.

The report will provide information on the preceding month and be submitted by the 15th day of the following month.

11.2 RI FINAL REPORT

An RI Final Report will be prepared presenting the results and evaluation of data and information obtained by implementation of this work plan and in accordance with the procedures provided in this work plan.

The RI Final Report will provide a screening of possible remedial alternatives as presented in Section 3.0 of this work plan. It is proposed that this report be submitted according to the schedule presented in Section 11.3.

11.3 RI/FS SCHEDULE

Ford has provided notice of intent to comply with the RFRA and has retained a consultant. Portions of the work related to the RI have been ongoing prior to this work plan submittal.

Submittal of this RI/FS Work Plan is scheduled for August 31, 1990. Based on the RFRA, the following schedule for remaining RI Work Plan tasks is anticipated:

Implement Site Security and Safety Plan	Within 10 days of MPCA written approval of RI/FS Work Plan.
Conduct RI Work Contained in RI/FS Work Plan	Begin within 2 weeks of MPCA written approval of RI/FS Work Plan.
Submit RI Final Report	Within 150 days of MPCA written approval of RI/FS Work Plan. This differs from RFRA schedule, however, is necessary given the time needed to complete work plan tasks and prepare report after approval of work plan. Should the work plan not be approved by

MN-COMP 0044737

	September 30, 1990, weather delays may also occur and should be anticipated in project scheduling.
Submit Treatability Studies and Feasibility Study - Detailed Analysis Report (DAR)	Within 60 days of MPCA written approval of RI Final Report.

MN-COMP 0044738

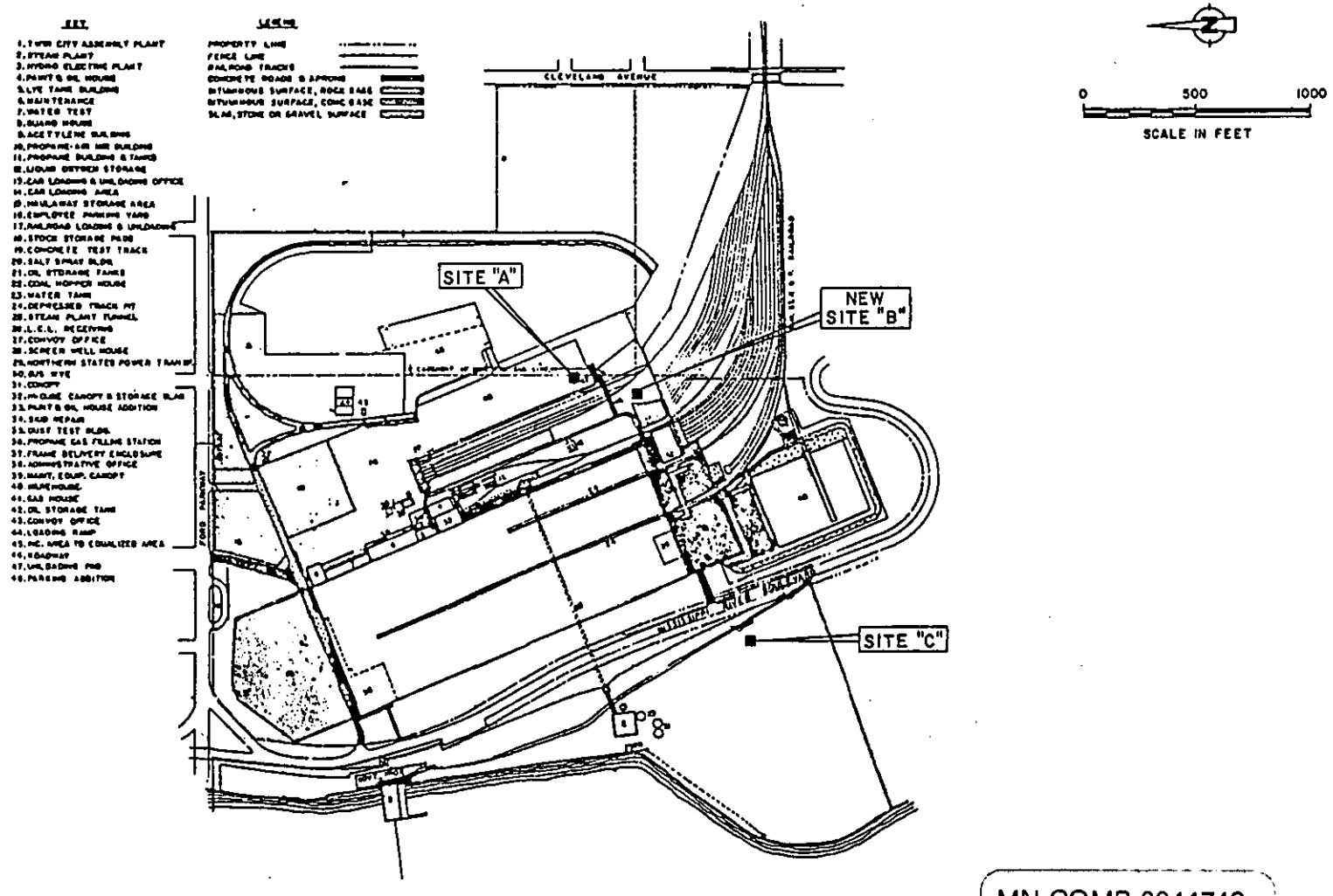
APPENDIX A

SCOPE OF WORK LETTERS

CRA TO MPCA

FORD SITES B AND C

MN-COMP 0044739

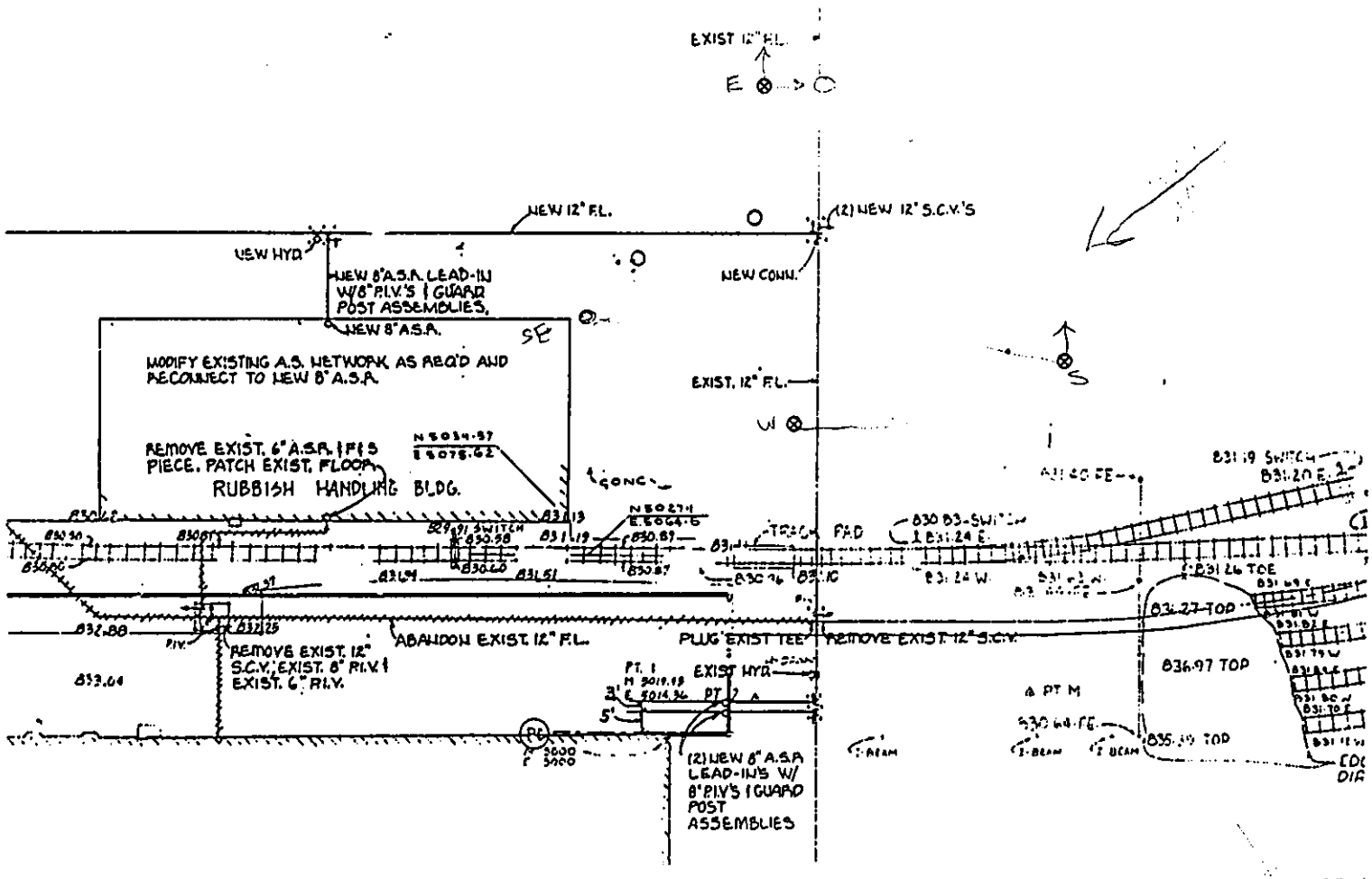


MN-COMP 0044742

figure 1
LOCATION OF FILL SITES
Ford Motor Company

CRA

2191-21/10/88-M



MN-COMP 0044743

LEGEND

- ○ PROPOSED BORING LOCATION
- ⊗ PROPOSED WELL/BORING LOCATION

SCALE: 1" = 60'

figure 2
SITE PLAN
NEW SITE "B"
Ford Motor Company

CRA

CRA
Consulting Engineers

CONESTOGA-ROVERS & ASSOCIATES LIMITED
651 Colby Drive
Waterloo, Ontario, Canada N2V 1C2
(519) 884-0510

March 2, 1990

Reference No. 2853

Mr. Todd Goeks
Site Response Section
MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, Minnesota 55155

Dear Mr. Goeks:

RE: Ford Motor Company
Twin Cities Assembly Plant
St. Paul, Minnesota

On behalf of Ford Motor Company (Ford) we are submitting the following information as a result of discussions that occurred at our recent January 31 meeting.

1. A Work Plan for supplemental monitoring at Site C (the fill area near the river) is enclosed to provide a summary of groundwater and surface water monitoring to be conducted by Ford. This monitoring would include the installation of one additional well with two subsequent rounds of monitoring.

2. Waste characterization information is enclosed to complete your files regarding the paint sludge material excavated during the wastewater treatment plant construction in July 1983. These copies of documents located in Ford's files include:

   - a copy of the laboratory report dated July 7, 1983, for analysis of the excavated material for EP Toxicity. By applying knowledge of the material and processes used, Ford determined that the waste was also non-reactive,non-corrosive and non-ignitable;

   - a copy of the manifests for the three shipments of the excavated material made on July 14 and 27, 1983. We understand from Ford that the waste was shipped and disposed of as a hazardous waste (Waste Classification Number D008) despite the fact that the material was found to be "non-EP Toxic" for lead;

   - a copy of a map that accompanied Ford's Amended Superfund Notification to U.S. EPA dated August 16, 1983, indicating the approximate area of excavation.

3. A portion of the south face of the Site C fill area is proposed for landscaping and aesthetic cleanup to remove empty drums and drum parts. Tasks related to this effort will be:

   - the landscaping contractor will be contracted by Ford and receive its primary directions from Ford;

MN-COMP 0044744

- Conestoga-Rovers and Associates (CRA) will assist in delineating the work area and will provide input to Ford on the area appropriate for further aesthetic cleanup and landscaping;

- Once the work area has been delineated, MPCA will be advised prior to work proceeding. As discussed at our meeting, MPCA will provide notification and coordination with other regulatory agencies;

- work will then proceed as weather permits. It is expected that work could begin as early as May 1, 1990;

- after brush and several trees have been cleared from the defined area, approximately 500 cubic yards of soil will be placed over the sloped face and then seeded for aesthetic and erosion control purposes.

Should you have any questions regarding this information, please contact Mr. Jerome Amber of Ford at telephone number (313) 322-4646 or me at CRA's local office, telephone number 639-0913.

Yours Very Truly,

CONESTOGA-ROVERS AND ASSOCIATES

Jon L. Christofferson

JLC/kk
Enc.
cc: J. Kallaus, Ford
J. Gibson, Ford
D. Rueh, Ford
J. Amber, Ford
A. Van Norman, CRA

ATTACHMENT 1
WORK PLAN
SUPPLEMENTAL GROUNDWATER MONITORING
SITE C
FORD TWIN CITIES ASSEMBLY PLANT
ST. PAUL, MINNESOTA

Task 1 - Installation of Additional Monitoring Well

- Install additional Monitoring Well B6 (see attached Figure 1 for proposed location).

- Well to be installed in accordance with Minnesota Department of Health Water Well Code. Well construction detail provided as attached Figure 2. To be two feet above the 100 year flood plain elevation of 707 feet AMSL (based on Army Corps of Engineers 100 year flood elevation for Lock and Dam #1 tail water) top of well casing would have to be at a minimum elevation of 709 AMSL. Because this may not be implementable, a variance to the Well Code and/or further discussions with MPCA may be required.

  Installation of Well B6 would be scheduled to be completed by March 30, 1990.

- Develop well prior to sampling.

Task 2 - Groundwater and Surface Water Sampling

- Water level round prior to sampling.

- Sample groundwater wells B1, B3 and B6.

- Sample surface location upstream and downstream of site utilized during 1989 monitoring.

- Each monitoring round to include on blank and one duplicate sample.

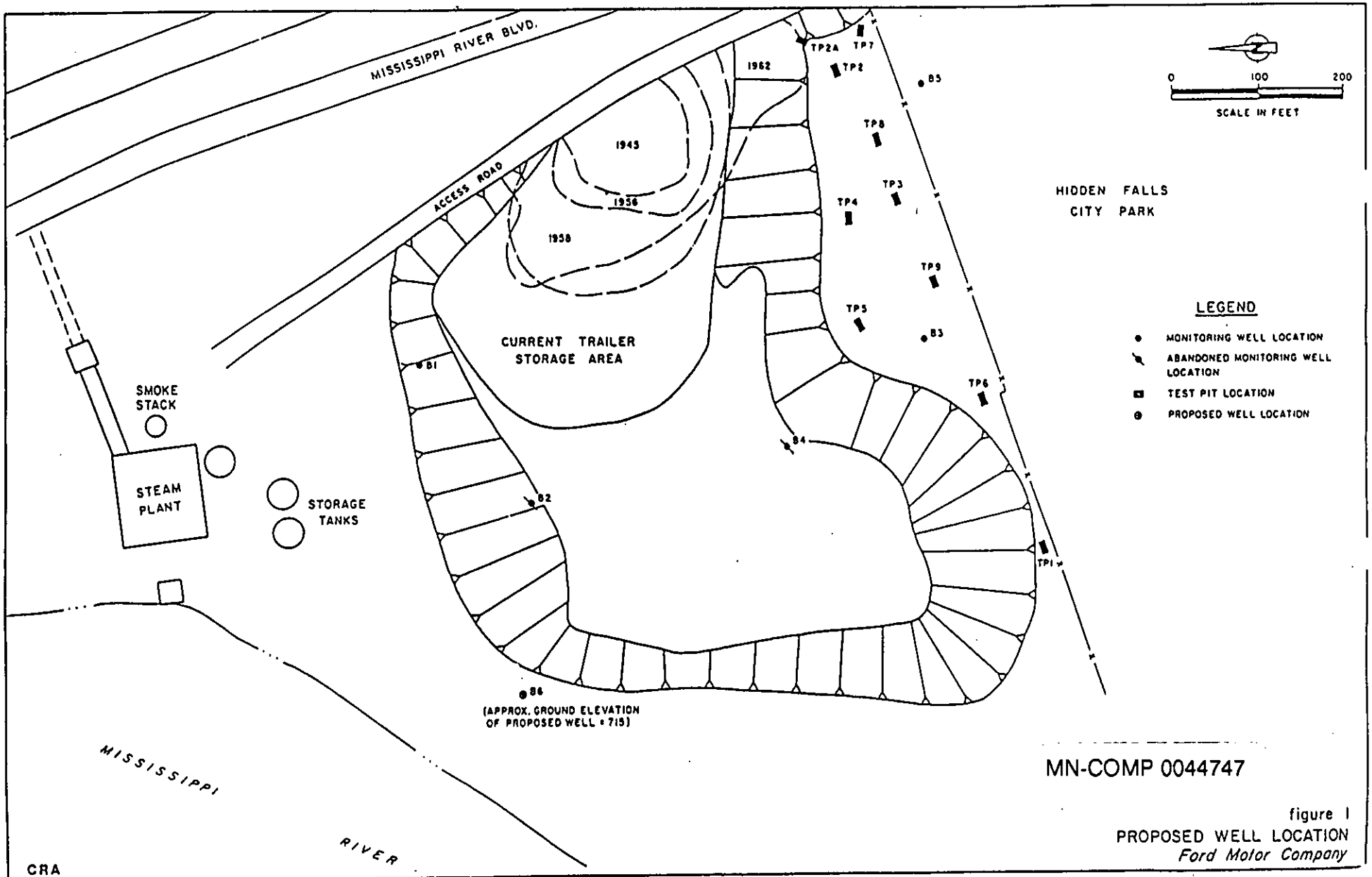
- Samples will be analyzed for Halocarbon and Aromatic Organic Compounds by EPA Method 601 and 602 plus cis-1,2-dichloroethylene and ethylacetate. Analysis will also be conducted for the following metals: Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Selenium, Silver, Zinc and Nickel. Groundwater samples will be field filtered prior to metals analysis. Surface water samples will not be filtered prior to analysis. Metals analysis for Barium, Cadmium, Chromium, Copper, Lead, Silver, Zinc and Nickel will be conducted using Inductively Coupled Plasma (ICP) analysis EPA Method 6010. Analysis for Arsenic, Selenium and Mercury will be conducted using EPA Atomic Absorption methods.

- Sampling rounds will be tentatively scheduled for early April and early June.

Task 3 - Data Monitoring Report

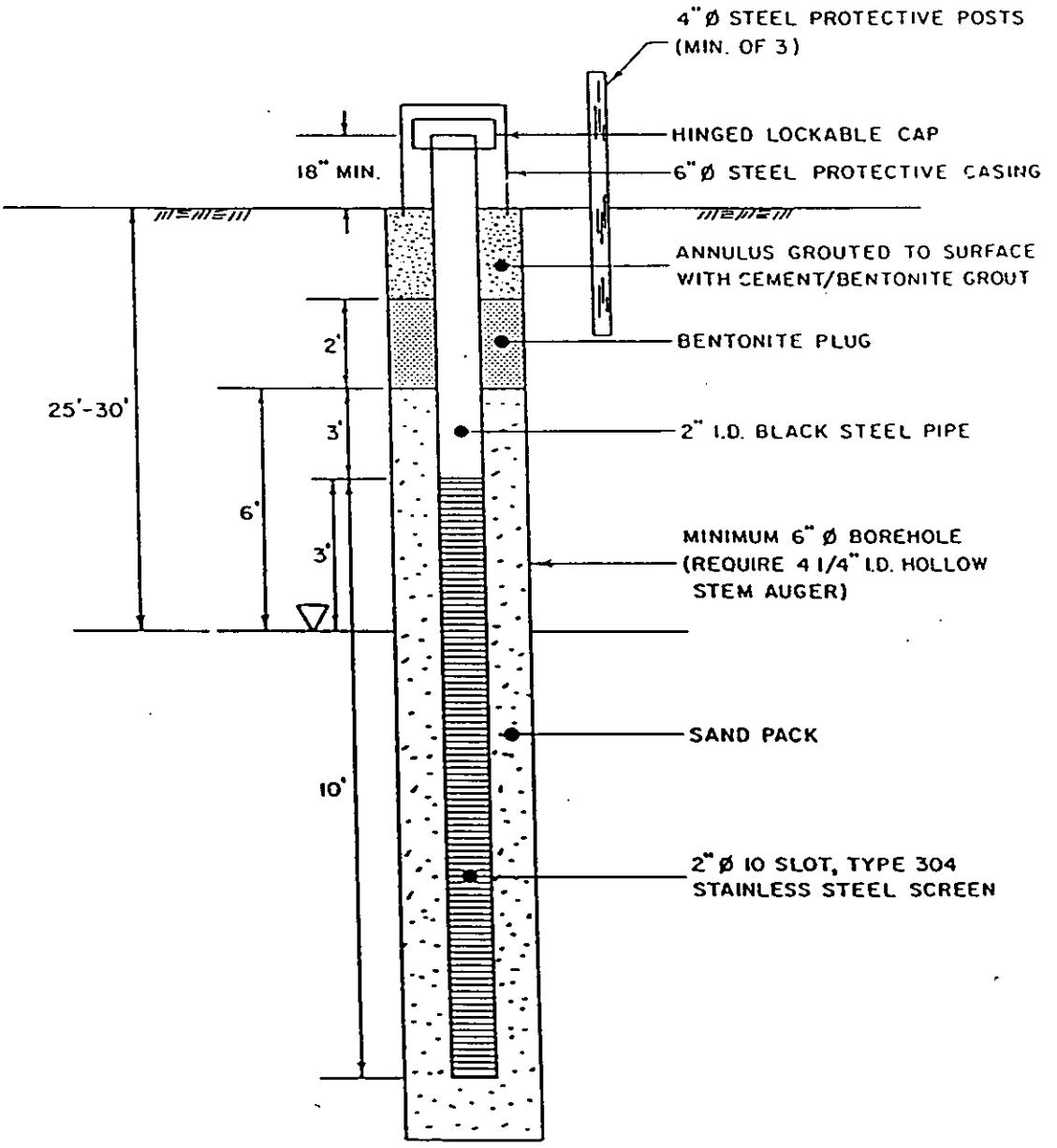
Following completion of the two rounds of sampling and receipt of analytical results, a report summarizing all data and results will be submitted to MPCA. The report will be scheduled for submittal by July 17, 1990.

MN-COMP 0044746



MN-COMP 0044747

figure 1
PROPOSED WELL LOCATION
Ford Motor Company



NOT TO SCALE

MN-COMP 0044748

figure 2
TYPICAL MONITORING
WELL INSTALLATION
Ford Motor Company

CRA

2853-8/02/90-M

ENVIRONMENTAL RESEARCH GROUP, INC.

135 State Street P.O. Box 70006 St. Paul, Minnesota 55107 (612) 293-9268

FEB 19 90

JULY 7, 1983

FORD MOTOR
ATTN: DAVE CLOUTIER
966 S. MISSISSIPPI RIVER BLVD.
SAINT PAUL, MN 55116

SAMPLE RECEIVED: 6/15/83

LAB REPORT NO. 9429

PURCHASE ORDER NO.
15 P083 167007

ANALYSIS	PAINT SLUDGE	UNITS
E.P. TOXICITY		
1. BARIUM	0.27	MG/L
2. CHROMIUM	0.0043	MG/L
3. MERCURY	<0.0002	MG/L
4. SILVER	0.0029	MG/L
5. ARSENIC	0.006	MG/L
6. CADMIUM	0.014	MG/L
7. LEAD	2.1	MG/L
8. SELENIUM	<0.001	MG/L

WILLIAM R. KRUEGER, BRANCH MANAGER

MN-COMP 0044749

STATE OF MICHIGAN

WASTE DISPOSAL MANIFEST

☑ Act 64 Waste (HAZARDOUS) ☐ Act 136 Waste ☐ Other

MI 0221753

IDENTIFICATION

Generator's Name: FORD MOTOR CO	Primary Transporter's Name: INLAND WATERS POLLUTION CONTROL	Treatment, Storage or Disposal Facility: WAYNE DISPOSAL
Site Address: 966 SO. MISSISSIPPI RIVER BLVD ST PAUL MINN 55116	Transporter's Address: 4544 WEBSTER ECORSE MICH 48229	Facility Address: 49350 N. SERVICE DR. BELLEVILLE MICH 48195
Phone Number: (612) 696-0699	Phone Number: (313) 383-6310	Phone Number: (313) 697-7830
Generator's Site EPA I.D. Number: MND006207773	Transporter's EPA I.D. Number: MID000820365	Facility Site EPA I.D. Number: MID048090633

If more than one Transporter is to be utilized, give the Name and EPA I.D. Number of each:

GENERATOR COMPLETES — WASTE INFORMATION

LOT NO.	U.S. D.O.T. Shipping Name (or common name if there is no D.O.T. shipping name).	D.O.T. Hazard Class	U.N./N.A. No.	Haz. Class Code	Container No.	Container Type	Form Solid	Form Liquid	Form Gas	Form Sludge	Total Weight or Volume	Units	Hazardous or Liquid Waste Number
1.	WASTE HAZARDOUS SOLID N.O.S.	ORMS	NA 9189	1.5		STEEL DOT	X				000026	YDS	D(
2.													
3.													
4.													
5.													
6.													

COMMENTS

Include Safety precautions and special handling instructions.

EXCAVATED WASTE ,PAINT SLUDGE AND SOIL. THIS WASTE IS NON EP TOXIC ,NON REACTIVE ,NON CORROSIVE AND NON IGNITABLE

MN-COMP 0044750

GENERATOR CERTIFICATION: I certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and U.S. EPA. I further certify that the information contained on the manifest is factual. I understand that the failure to accurately report all information requested by the manifest constitutes a violation of 1979 PA64 and/or 1969 PA136. I further understand that this manifest may be used in administrative and court proceedings.

Generator Signature: ① George H Hall — Date Shipped: MO. DAY 07 14 8

TRANSPORTER COMPLETES

HAULER'S CERTIFICATION: I certify acceptance of the above identified wastes for transportation. I further certify that I shall deliver the hazardous wastes, together with this manifest, only to the destination specified by the generator on this manifest. I understand that this manifest can be used in administrative and court proceedings.

Transporter Vehicle I.D. No. No. 1: H 830442

Subsequent Transporter Vehicle I.D. No's:

Transporter Signature: ② [signature] — Date(s) Received: [illegible]

Subsequent transporter(s) signature(s): ③

If the shipment cannot be delivered, describe the reasons for non-delivery.

TSDF COMPLETES

TSDF CERTIFICATION: I certify receipt at this facility of the above identified wastes and that this facility is licensed to accept those wastes. I also certify that the wastes were accompanied by a manifest properly certified by both the generator and hauler and that this facility is the destination indicated on the manifest. ~~I understand that this manifest can be used in administrative and court proceedings.~~

TSDF Signature: ④ [signature] — ☑ Accepted ☐ Rejected — Date Received: 07/18

Facility Site EPA I.D. Number: MID048090633

Describe any significant discrepancies between manifest and shipment. 11826340

Was a Surcharge Assessed? ☑ Yes ☐ No

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 800—292-4700 OR OUT-OF-STATE AT 517—373-7660 AND THE NATIONAL RESPONSE CENTE

...TOR 2ND COPY

WASTE DISPOSAL MANIFEST

☒ Act 64 Waste (HAZARDOUS) ☐ Act 136 Waste ☐ Other MI 0225449

IDENTIFICATION

Generator's Name: FORD MOTOR CO	Primary Transporter's Name: INLAND WATERS POLLUTION CONTROL	Treatment, Storage or Disposal Facility: WAYNE DISPOSAL
Site Address: 966 S MISSISSIPPI RIVER BLVD ST PAUL MINN 55116	Transporters Address: 4544 WEBSTER ECORSE MICH 48229	Facility Address: 49350 N. SERVICE DR. BELLEVILLE MICH 48195
Phone Number: (612) 696-0699	Phone Number: (313) 383-6310	Phone Number: (313) 697-7830
Generator's Site EPA I.D. Number: MND006207773	Transporter's EPA I.D. Number: MTD000820365	Facility Site EPA I.D. Number: MID048090633

If more than one Transporter is to be utilized, give the Name and EPA I.D. Number of each:

GENERATOR COMPLETES — WASTE INFORMATION

LOT NO.	U.S. D.O.T. Shipping Name (or common name if there is no D.O.T. shipping name).	D.O.T. Hazard Class	U.N./N.A. No.	Haz. Class Code	Container No.	Container Type	Form Solid	Form Liquid	Form Gas	Form Sludge	Total Weight or Volume	Units	Hazar or Li Wa Num
1.	WASTE HAZARDOUS SOLID N.O.S.	ORM-E	NA9189	15		stl box	x				20	YDS	D
2.													
3.													
4.													
5.													
6.													

COMMENTS

Include Safety precautions and special handling instructions.

EXCAVATED WASTE ,PAINT SLUDGE AND SOIL ,THIS WASTE IS NON TOXIC,NON REACTIVE,NON CORROSIVE AND NON IGNITABLE

GENERATOR CERTIFICATION: I certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and U.S. EPA. I further certify that the information contained on the manifest is factual. I understand that the failure to accurately report all information requested by the manifest constitutes a violation of 1979 PA64 and/or 1969 PA136. I further understand that this manifest may be used in administrative and court proceedings.

Generator Signature: MN-COMP 0044751 ① George H Hall — Date Chic MO. 07 27

HAULER'S CERTIFICATION: I certify acceptance of the above identified wastes for transportation. I further certify that I shall deliver the hazardous wastes, together with this manifest, only to the destination specified by the generator on this manifest. I understand that this manifest can be used in administrative and court proceedings.

Transporter Vehicle I.D. No. No. 1 666

Subsequent Transporter Vehicle I.D. No's

Transporter Signature: ② [signature] — Date(s) Rec 07 27

Subsequent transporter(s) signature(s): ③

If the shipment cannot be delivered, describe the reasons for non-delivery.

TSDF CERTIFICATION: I certify receipt at this facility of the above identified wastes and that this facility is licensed to accept those wastes. I also certify that the wastes were accompanied by a manifest properly certified by both the generator and hauler and that this facility is the destination indicated on the manifest. ~~I understand that this manifest can be used in administrative and court proceedings.~~

TSDF Signature: ④ [signature] — ☒ Accepted ☐ Rejected — Date Rece 07 28

Facility Site EPA I.D. Number: MID048090633

Describe any significant discrepancies between manifest and shipment. M826987

Was a Surcharge Assessed? ☐ Yes ☒ No

[redacted] ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMER[redacted] ALE[redacted] SYS[redacted]N MIC[redacted]N AT [redacted]92-47[redacted]OUT-[redacted]TE A[redacted]-373-[redacted]ND THE NATIONAL RESPONSE CEN

WASTE DISPOSAL MANIFEST

☒ Act 64 Waste (HAZARDOUS) ☐ Act 136 Waste ☐ Other MI U221154

IDENTIFICATION

Generator's Name	Primary Transporter's Name	Treatment, Storage or Disposal Facility
FORD MOTOR CO	INLAND WATER POLLUTION CONTROL	WAYNE DISPOSAL
Site Address 966 S. MISSISSIPPI RIVER BLVD ST PAUL MINN 55116	Transporters Address 4544 WEBSTER ECORSE MICH 48229	Facility Address 49350 N. SERVICE DR. BELLEVILLE MICH 48195
Phone Number (612) 696-0639	Phone Number (313) 383-6310	Phone Number (313) 697-7830
Generator's Site EPA I.D. Number MND006077733	Transporter's EPA I.D. Number MID000820366	Facility Site EPA I.D. Number MID048090633

If more than one Transporter is to be utilized, give the Name and EPA I.D. Number of each:

WASTE INFORMATION

LOT NO.	U.S. D.O.T. Shipping Name (or common name if there is no D.O.T. shipping name).	D.O.T. Hazard Class	U.N./N.A. No.	Haz. Class Code	Container No.	Container Type	Form: Solid	Form: Liquid	Form: Gas	Form: Sludge	Total Weight or Volume	Units	Haz. or I.W. Nu.
1.	WASTE HAZARDOUS SOLID N.O.S.	ORM-E	NA9189	15		stl box	X				010015	TDS	
2.													
3													
4.													
5.													
6.													

COMMENTS

Include Safety precautions and special handling instructions.

EXCAVATED WASTE ,PAINT SLUDGE AND SOIL. THIS WASTE IS NON TOXIC ,NON REACTIVE ,NON CORROSIVE AND NON IGNITABLE.

GENERATOR COMPLETES

GENERATOR CERTIFICATION: I certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and U.S. EPA. I further certify that the information contained on the manifest is factual. I understand that the failure to accurately report all information requested by the manifest constitutes a violation of 1979 PA64 and/or 1989 PA136. I further understand that this manifest may be used in administrative and court proceedings.

Generator Signature: MN-COMP 0044752 ① George H Hall — Date Shi... MO... 07 27

TRANSPORTER COMPLETES

HAULER'S CERTIFICATION: I certify acceptance of the above identified wastes for transportation. I further certify that I shall deliver the hazardous wastes, together with this manifest, only to the destination specified by the generator on this manifest. I understand that this manifest can be used in administrative and court proceedings.

Transporter Vehicle I.D. No. 1: 830193

Subsequent Transporter Vehicle I.D. No's:

Transporter Signature: ② Chuck Simpson — Date(s) Re... 07 27

Subsequent transporter(s) signature(s): ③

If the shipment cannot be delivered, describe the reasons for non-delivery.

TSDF COMPLETES

TSDF CERTIFICATION: I certify receipt at this facility of the above identified wastes and that this facility is licensed to accept those wastes. I also certify that the wastes were accompanied by a manifest properly certified by both the generator and hauler and that this facility is the destination indicated on the manifest. I understand that this manifest can be used in administrative and court proceedings.

TSDF Signature: ④ — ☐ Accepted ☐ Rejected — Date Rec... 07 28

Facility Site EPA I.D. Number: MID048090633

Was a Surcharge Assessed? ☐ Yes ☐ No

Describe any significant discrepancies between manifest and shipment. H826986

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 800—292-4706 OR OUT-OF STATE AT 517—373-7660 AND THE NATIONAL RESPONSE CE...

TRANSPORTER COPY

APPENDIX B

BORING AND WELL LOGS

FORD MOTOR COMPANY

MN-COMP 0044753

LOG OF BORING NO. B-1

OWNER: Ford Motor Company

ARCHITECT-ENGINEER:

SITE: Twin Cities Assembly Plant

PROJECT NAME: Ford Hydrogeologic Study

SURFACE ELEVATION: 729.52

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST. RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5) PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % — STANDARD "N" PENETRATION (BLOWS/FT.) (10 20 30 40 50)
	1	SS				42
	2	SS				11
5.0	3	SS				7
	4	SS				12
10.0	5	SS		Fill; sand, gravel, silt, Decorah shale and clay, with fragments of slag, glass, firebrick, etc. - moist		13
15.0	6	SS				9
20.0	7	SS				50
25.0	8	SS		River deposits Thinly interbedded grayish brown sandy silts and very fine sands - (SM-ML) - moist		
30.0	9	SS		Continued		

MN-COMP 0044754

WATER LEVEL OBSERVATIONS

W.L.	42.0' W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	12/28/81
BORING COMPLETED	12/31/81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB # 92776	SHEET 1 of 2

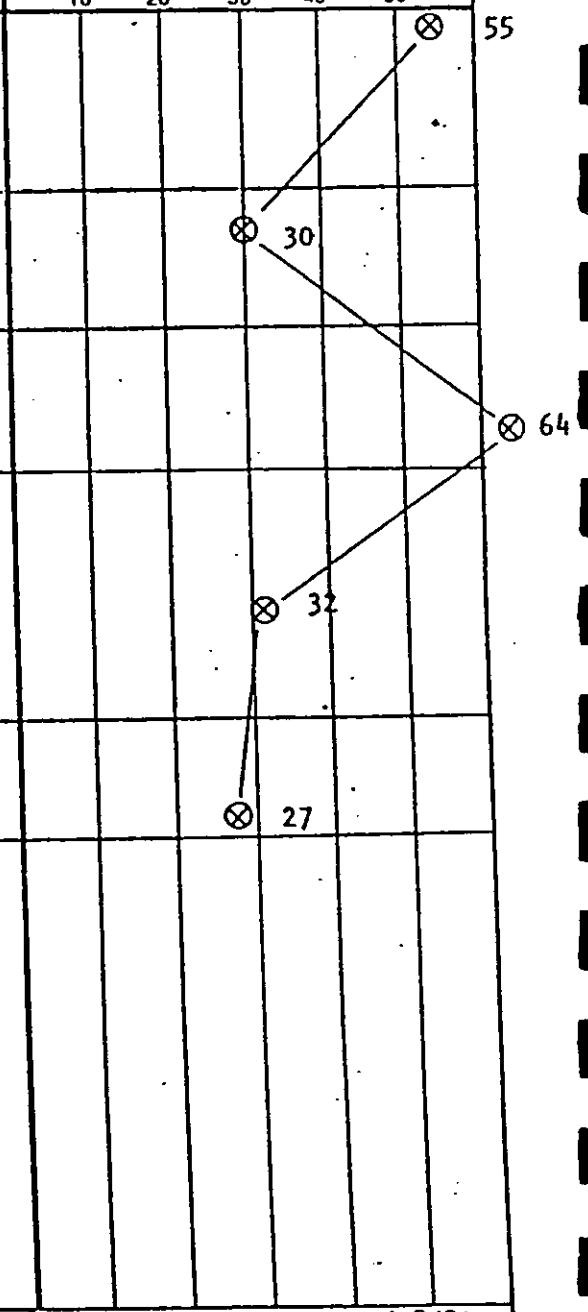
The stratification lines represent the approximate boundary

LOG OF BORING NO. B-1

OWNER Ford Motor Company	ARCHITECT-ENGINEER
SITE Twin Cities Assembly Plant	PROJECT NAME Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. 3
SURFACE ELEVATION 30.0						
	9	SS			River deposits Thinly interbedded grayish brown sandy silts and very fine sands - (SM-ML) - moist	
35.0	10	SS			Light brown very fine sand with little gravel, little silt - (SM)	
40.0	11	SS			Grayish brown fine to coarse sand and gravel with little silt - (GM-SM) - moist to wet	
45.0	12	SS			Light brown gravel, little sand, little silt - (GM) - saturated	
50.0	13	SS			Light brown very fine sand, some silt, little gravel - (SM) - sat.	
51.0					End of boring at 51.0 feet. 2" PVC well installed	

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²
1 2 3 4 5
PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %
STANDARD "N" PENETRATION (BLOWS/FT.)
10 20 30 40 50



MN-COMP 0044755

WATER LEVEL OBSERVATIONS		
W.L.	42.0' W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	12/28/81		
BORING COMPLETED	12/31/81		
RIG	CME-45	FOREMAN	RM
DRAWN	DW	APPROVED	RJK
JOB #	92776	SHEET	2 of 2

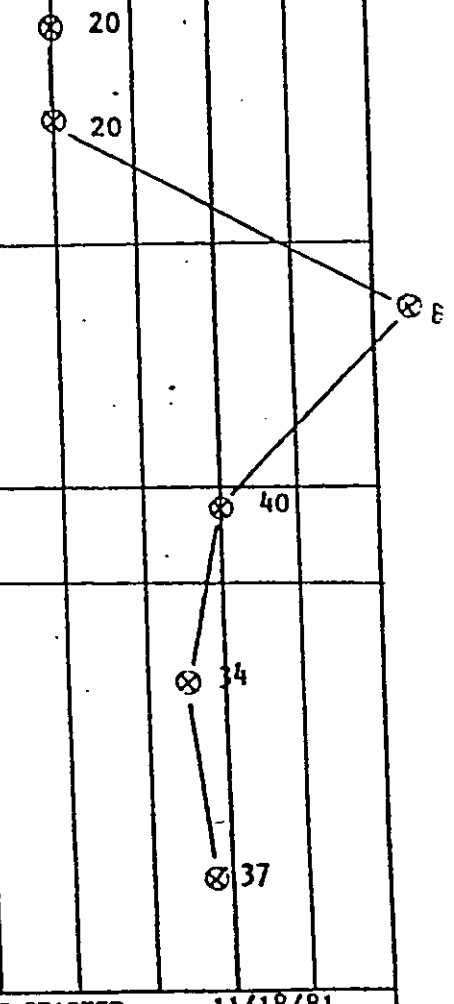
The stratification lines represent the approximate boundary

LOG OF BORING NO. 2

OWNER Ford Motor Company	ARCHITECT-ENGINEER
SITE Twin Cities Assembly Plant	PROJECT NAME Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3
					SURFACE ELEVATION 715.77'	
5.0					Boulders, cobble and concrete block from 0'-6.0' Removed with backhoe	
10.0	1	SS			Fill, dark brown gravel, slag, sand and clay, moist	
	2	SS				
15.0	3	SS			Dark brown fine to coarse sand, trace silt - (SP), moist	
20.0	4	SS			Light brown, very fine to medium sand, trace silt - (SP), wet	
25.0	5	SS			Light brown fine to coarse sand with some gravel, trace silt - (SW-SP), wet to saturated	
30.0	6	SS			Continued	

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²
1 2 3 4 5
PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %
STANDARD "N" PENETRATION (BLOWS/FT.)
10 20 30 40 50



MN-COMP 0044756

WATER LEVEL OBSERVATIONS		
W.L.	29.5' W.S.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/18/81
BORING COMPLETED	11/18/81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB # 92776	SHEET 1 of 2

The stratification lines represent the approximate boundary

LOG OF BORING NO. 2

OWNER Ford Motor Company	ARCHITECT-ENGINEER
SITE Twin Cities Assembly Plant	PROJECT NAME Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5) PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % — STANDARD "N" PENETRATION (BLOWS/FT.) (10 20 30 40 50)
30 0					SURFACE ELEVATION		
					(SW-SP)		⊗ 37
35.0	7	SS			Brown, fine to coarse sand with little gravel, extremely dense - (SW), saturated		⊗ 2
40.0							
44.5					End of boring at 44.5 feet. 2 " PVC well installed		

MN-COMP 0044757

WATER LEVEL OBSERVATIONS		
W.L.	29.5' W.S.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/18/81
BORING COMPLETED	11/18/81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB # 92776	SHEET 2 of 2

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

LOG OF BORING NO. 3

OWNER	ARCHITECT-ENGINEER
Ford Motor Company	
SITE	**PROJECT NAME**
Twin Cities Assembly Plant	Ford Hydrogeologic Study

SURFACE ELEVATION 701.99

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST. RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² / STANDARD "N" PENETRATION (BLOWS/FT.)
	1	SS		Dark brown very fine sand, trace to some silt, trace to some organic - (SM-OL), moist		3
	2	SS				3
5.0	3	SS		Light brown, very fine sand, trace silt - (SP), moist		4
	4	SS				7
10.0	5	SS		Brown fine to medium sand, trace to little gravel - trace silt - (SP)- moist to wet		24
15.0	6	SS		Brown medium to coarse sand, with some gravel, trace silt - shell fragments - (SW) - saturated		29
20.0	7	SS		Gray fine to coarse sand, trace silt, some gravel and cobble - (SW) - saturated		28
25.0				End of boring at 24.5 ft. 2" PVC well installed		

MN-COMP 0044758

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² — 1 2 3 4 5

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT %

STANDARD "N" PENETRATION (BLOWS/FT.) — 10 20 30 40 50

WATER LEVEL OBSERVATIONS		
W.L.	14.0' W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/17/81
BORING COMPLETED	11/17/81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB # 92776	SHEET 1 of 1

The stratification lines represent the approximate boundary

LOG OF BORING NO. 4

OWNER
Ford Motor Company

ARCHITECT-ENGINEER

SITE
Twin Cities Assembly Plant

PROJECT NAME
Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST. RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5) PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % — STANDARD "N" PENETRATION (BLOWS/FT.) (10 20 30 40 50)
				SURFACE ELEVATION 705.47'		
				Brown clay with some very fine *		
	1	SS		Brown very fine sand, trace silt (SP)		7
	2	SS		Lenses of black organic silt (OL) - moist		13
5.0	3	SS		Black fill - fine to medium sand with graveland slag, moist		16
	4	SS				44
10.0	5	SS				28
15.0	6	SS		Brown fine to coarse sand with some gravel, trace silt - (SW-SP) - wet to saturated		52
20.0	7	SS				24
25.0	8	SS				9
30.0				End of boring at 29.5 ft. 2" PVC well installed *sand (CL)- moist		

MN-COMP 0044759

WATER LEVEL OBSERVATIONS		
W.L.	19.5' W.S.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/19/81		
BORING COMPLETED	11/19/81		
RIG	CME-45	FOREMAN	RM
DRAWN	DW	APPROVED	RJK
JOB #	92776	SHEET	1 of 1

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

LOG OF BORING NO. 5

OWNER	ARCHITECT-ENGINEER
Ford Motor Company	
SITE	**PROJECT NAME**
Twin Cities Assembly Plant	Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3
					SURFACE ELEVATION 701.5'	
	1	SS			Dark brown topsoil, organic silt with some coarse sand and gravel - *	
	2	SS			Brown medium to coarse sand, trace silt, some gravel - (SP) - moist	
5.0	3	SS			Gravel and cobble, some fine sand, trace silt - (GP), moist	
	4	SS			Dark brown very fine sand, trace to little silt - (SM-SP) - moist	
10.0	5	SS			Dark brown silt with trace to little very fine sand, horizontal seams and lenses of black silt - ((ML) - moist	
					Gray very fine to fine sand, with trace to little silt - (SP-SM) SOLVENT ODOR, moist	
					Black fine sand with some silt (SM) Strong Solvent Odor - wet to sat.	
15.0	6	SS			Gray gravel and cobble, little sand and little clay - (GC) - saturated	
	7	SS			Light brown gravel and cobble, trace sand and trace clay (GW-GC) - saturated	
20.0					End of boring at 19.5 feet. Boring grouted from bottom to ground surface.	

*(OL-GM)

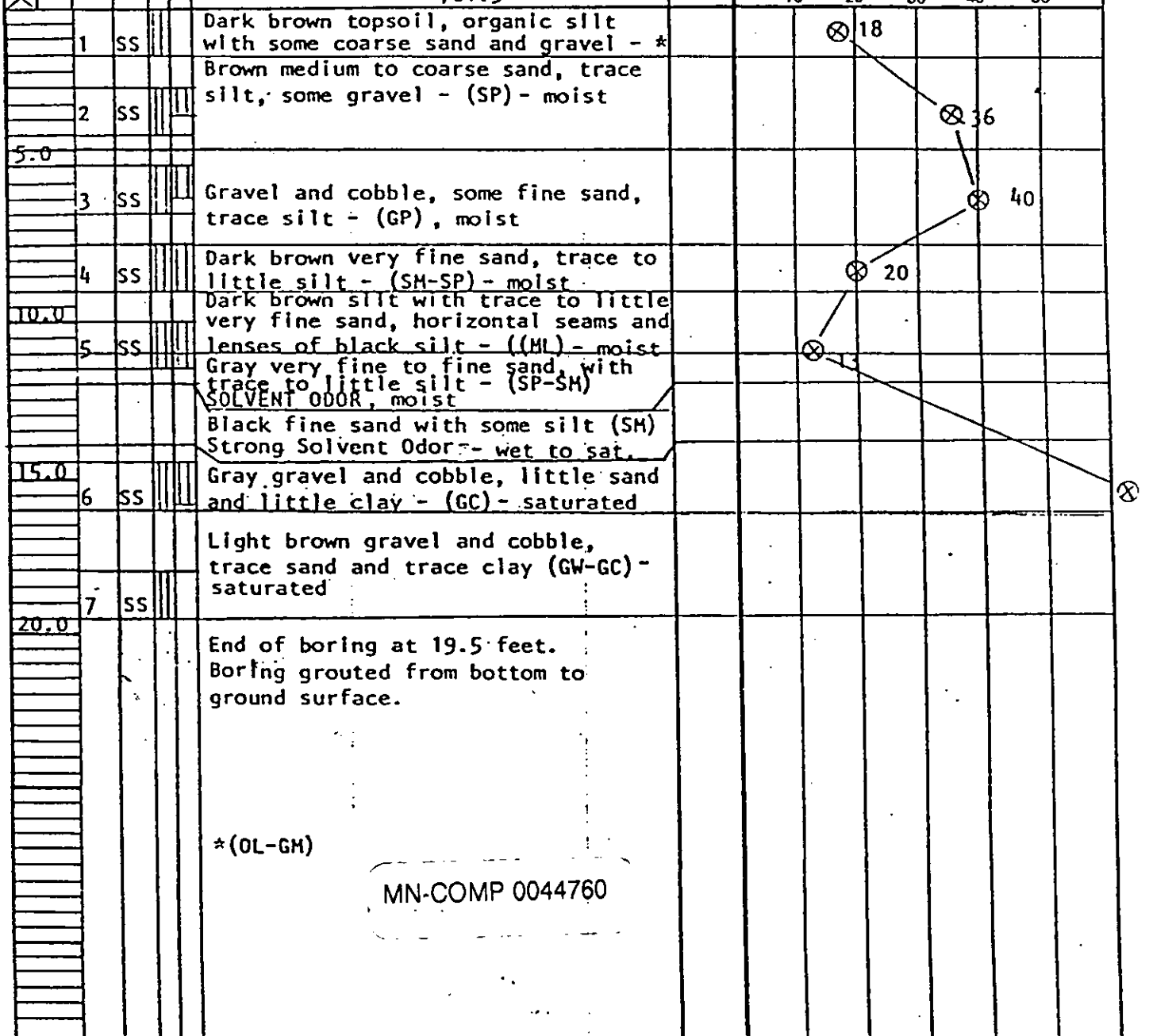
UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²

1 2 3 4 5

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT %

STANDARD "N" PENETRATION (BLOWS/FT.)

10 20 30 40 50



MN-COMP 0044760

WATER LEVEL OBSERVATIONS		
W.L.	14.0' W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11-20-81
BORING COMPLETED	11-20-81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB # 92776	SHEET 1 of 1

The stratification lines represent the approximate boundary

LOG OF BORING NO. B-6

OWNER Ford Motor Company	ARCHITECT-ENGINEER
SITE Twin Cities Assembly Plant	PROJECT NAME Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.3	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5) PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % — STANDARD "N" PENETRATION (BLOWS/FT.) (10 20 30 40 50)
					SURFACE ELEVATION → 759.93'		
	1	SS					6
	2	SS					21
5.0	3	RB					
10.0					Fill; rubble, cobble, gravel, sand and green shale (Decorah) clay - moist		
15.0							
20.0							
25.0					Boulder (Limestone)		
30.0					White Sandstone St. Peter Formation		

MN-COMP 0044761

Continued

WATER LEVEL OBSERVATIONS		
W.L.	Dry	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/18/81
BORING COMPLETED	11/24/81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB # 92776	SHEET 1 of 2

The stratification lines represent the approximate boundary

LOG OF BORING NO. B-6

OWNER Ford Motor Company	ARCHITECT-ENGINEER
SITE Twin Cities Assembly Plant	PROJECT NAME Ford Hydrogeologic Study

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. 3	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²
					SURFACE ELEVATION ↴		1 2 3 4 5 PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % STANDARD "N" PENETRATION (BLOWS/FT.) 10 20 30 40 50
30.0							
	3	RB			White Sandstone St. Peter Formation		
35.0					End of boring at 34.8 feet. Boring grouted from bottom to ground surface		

MN-COMP 0044762

WATER LEVEL OBSERVATIONS		
W.L.	Dry	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

BORING STARTED	11/18/81
BORING COMPLETED	11/24/81
RIG CME-45	FOREMAN RM
DRAWN DW	APPROVED RJK
JOB #92776	SHEET 2 of 2

The stratification lines represent the approximate boundary

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(L-06)

PROJECT NAME: FORD SITE C
PROJECT NO.: 2853
CLIENT: FORD
LOCATION: ST. PAUL, MINNEAPOLIS

HOLE DESIGNATION: MW-6

DATE COMPLETED: APRIL 10, 1990
DRILLING METHOD: HSA
CRA SUPERVISOR: J. MICHELS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE N VALUE
0	ML(SILT)FILL, 10-40% clay, green, dry		CONCRETE SEAL			
2.5						
	ML(SILT)FILL, brick, red-brown, dry					
5.0				1SS		28
			6"ø BOREHOLE	2SS		25
7.5						
	GC(GRAVEL)FILL, coarse, dry	-8.0		3SS		22
10.0		-10.0				
	CL(CLAY)FILL, 10-30% silt, 10-30% sand and coarse gravel, well graded			4SS		40
	No recovery					
12.5			CEMENT/ BENTONITE GROUT	5SS		100
15.0				6SS		40
			2"ø STEEL CASING	7SS		17
17.5						
				8SS		23
20.0						
				9SS		41
22.5						
				10SS		8
25.0			BENTONITE PELLET SEAL	11SS		19
	SW(SAND), 20-50% gravel, brown, dry, ALLUVIUM and GC(GRAVEL), 20-50% sand	-26.0				
27.5				12SS		15
				13SS		18
30.0			SAND PACK			
	MN-COMP 0044763					
32.5						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

GRAIN SIZE ANALYSIS ⬭ WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

(L-06)

PROJECT NAME: FORD SITE C
PROJECT NO.: 2853
CLIENT: FORD
LOCATION: ST. PAUL, MINNEAPOLIS

HOLE DESIGNATION: MW-6
(Page 2 of 2)
DATE COMPLETED: APRIL 10, 1990
DRILLING METHOD: HSA
CRA SUPERVISOR: J. MICHELS

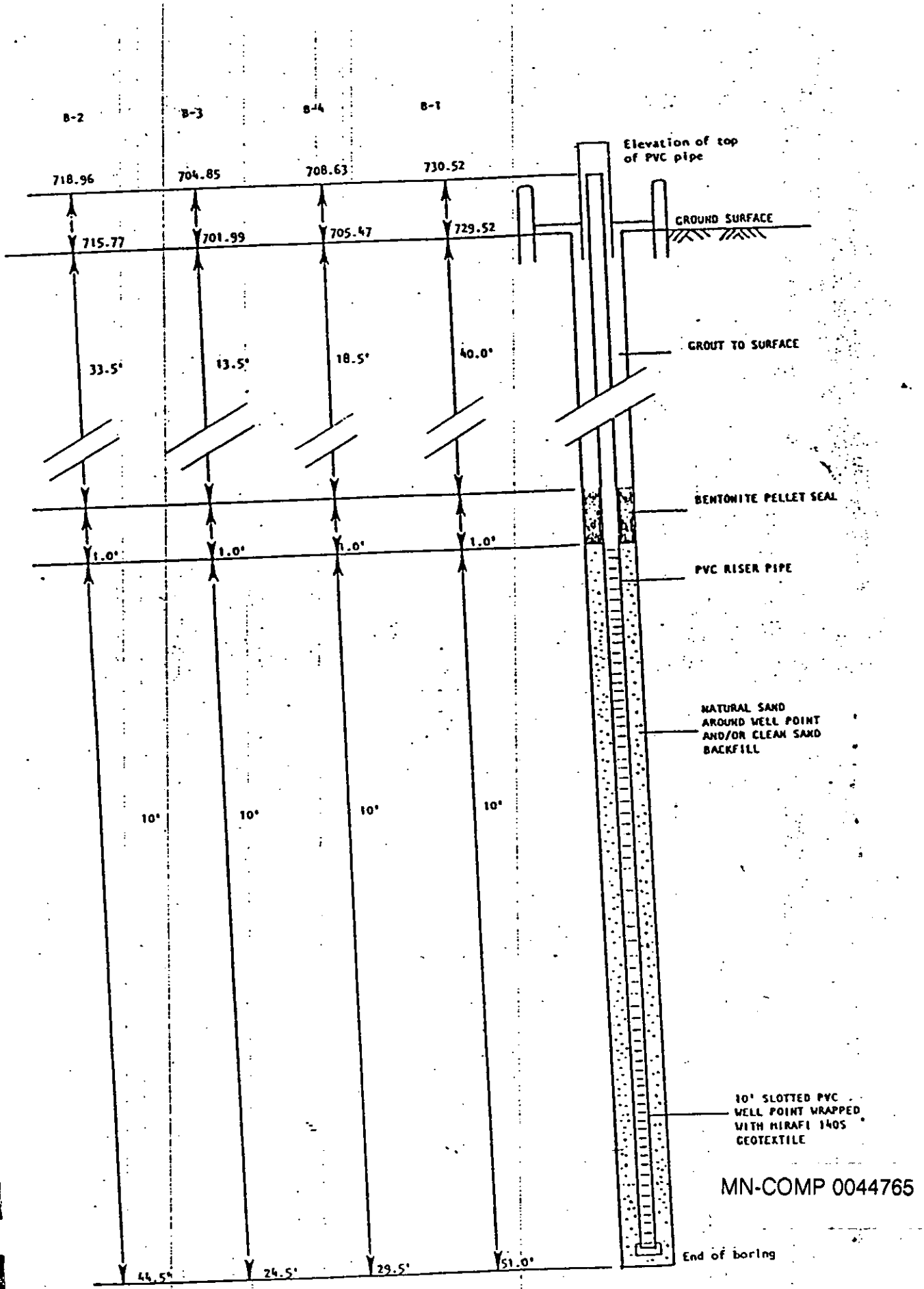
DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE VALUE
35.0	No recovery		6" ø BOREHOLE; 2" ø STEEL CASING; SAND PACK; WELL SCREEN	14SS		14
37.5				15SS		18
40.0						
42.5				16SS		25
45.0				AC		
47.5	END OF HOLE @ 48.0 FT. BGS	-48.0				
50.0						
52.5						
55.0						
57.5						
60.0						
62.5						
65.0						

SCREEN DETAILS:
Screened Interval:
37.0 to 47.0' BGS
Length -10.0'
Diameter -2.0"
Slot # 10
Material -Stainless Steel
Sand pack interval:
27.0 to 48.0' BGS
Material -Natural

MN-COMP 0044764

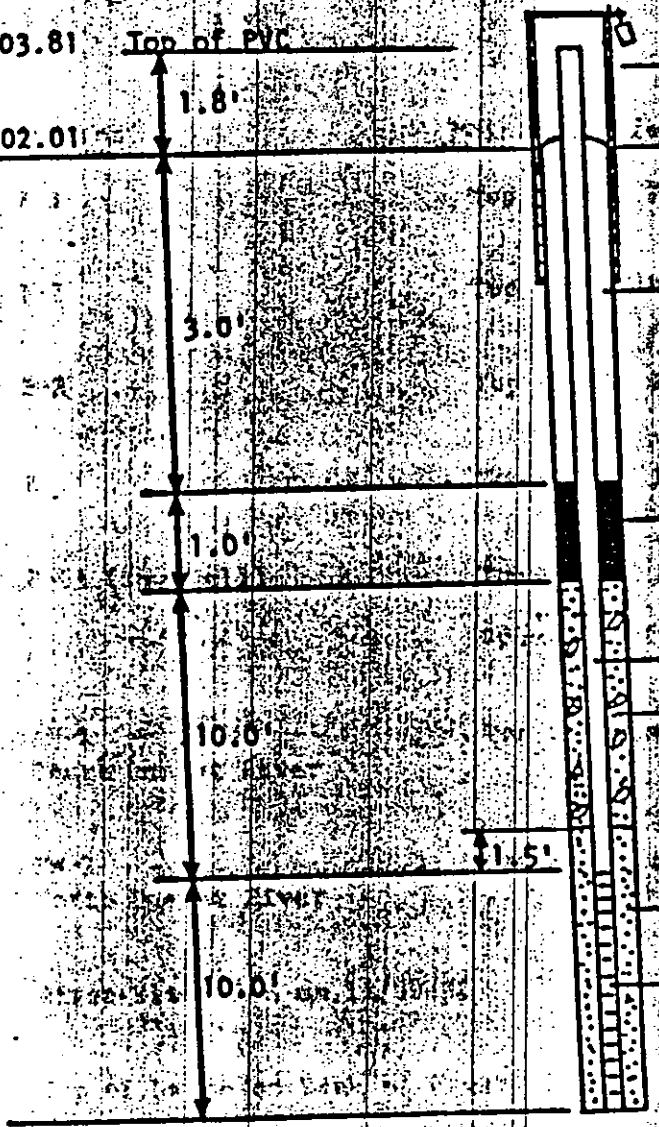
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

GRAIN SIZE ANALYSIS (oval) WATER FOUND ▽ STATIC WATER LEVEL ▼



MONITORING WELL CONSTRUCTION DIAGRAM
FORD MOTOR COMPANY
Twin Cities Assembly Plant
STS Job No. 92776

MN-COMP 0044765



6" Locking Steel Protective Cover Pipe

Ground Surface

Backfill On-Site Sand Cuttings and Bentonite Powder

Bentonite Pellet Seal

2 inch ID Sch. 80 Flush Joint PVC Riser Pipe

Cavein of Naturally Existing Sands (SM-SC and SP)

Clean Sand Backfill

2 inch ID Sch. 80 Flush Joint (No. 10 Slot) PVC Wellpoint Double Wrapped with Mirafi 140S Geotextile Filter Fabric and Provided with an End Cap

MN-COMP 0044766

CONSTRUCTION DIAGRAM

No Scale

FORD MOTOR COMPANY
Monitoring Well B-5A
Installed 11/30/82

SOIL TESTING SERVICES
OF MINNESOTA, INC.
2405 ANNAPOLIS LANE
MINNEAPOLIS, MINN. 55441

HAG		92776-B	12/13/82

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

(L-1)

PROJECT NAME: FORD SITE B
PROJECT NO.: 2853
CLIENT: FORD
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: MW-1
DATE COMPLETED: AUGUST 1, 1989
DRILLING METHOD: HSA
CRA SUPERVISOR: J. MICHELS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE
	REFERENCE POINT (Top of Riser)	812.26				
	GROUND SURFACE	809.9				
2.5	ML-CL(SILT/CLAY)FILL, trace grayvel, dark gray dry ML(SILT), some clay, trace sand, bluish gray moist, product odor		NEAT CEMENT	1SS		5
5.0	SP(SAND), medium grained, gray, moist, product odor	805.9	4.25"ø BOREHOLE	2SS		6
7.5	CL-ML(CLAY/SILT), some gravel, black organic material, gray, wet to saturated	803.9	BENTONITE PELLET SEAL	3SS		5
10.0			2"ø STEEL CASING	4SS		7
12.5	BEDROCK (Ordovician Platteville Formation): buff, sandy limestone	798.4 797.9	SAND PACK WELL SCREEN	5SS		24
15.0	END OF HOLE @ 12 FT. BGS NOTES: 1. HNu = 150 ppm 2. HNu over auger = 300; HNu off split-spoon = 110ppm 3. HNu = 180 ppm			6SS		70
17.5			SCREEN DETAILS: Screened Interval: 10.0' to 12.0' BGS Length - 2.0' Diameter - 2.0" Slot # 10 Material - Stainless Steel Sand pack interval: 7.0' to 12.0' BGS Material - #30 Sand			
20.0						
22.5						
25.0						
27.5						
30.0						
32.5						

MN-COMP 0044767

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

GRAIN SIZE ANALYSIS ◯ WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

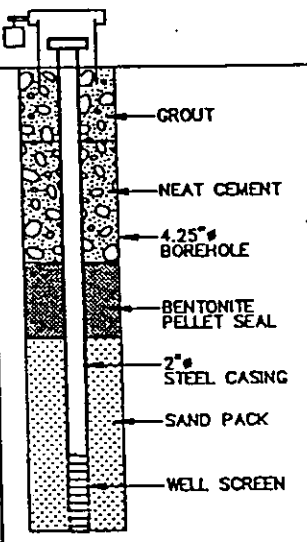
(L-2)

PROJECT NAME: FORD SITE B
PROJECT NO.: 2853
CLIENT: FORD
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: MW-2
DATE COMPLETED: AUGUST 2, 1989
DRILLING METHOD: HSA
CRA SUPERVISOR: J. MICHELS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION ft AMSL
	REFERENCE POINT (Top of Riser)	813.24
	GROUND SURFACE	810.4
2.5	SW-ML(SAND/SILT)FILL, some gravel, gray, dry	
5.0		
7.5		
10.0	OL-CL(SILT/CLAY), gravelly, gray and black, wet, product odor	802.4
12.5	BEDROCK (Ordovician Platteville Formation): buff, sandy limestone	798.4
15.0	END OF HOLE @ 12 FT. BGS NOTES: 2SS HNu = 200 ppm 3SS HNu = 200 ppm	
17.5		
20.0		
22.5		
25.0		
27.5		
30.0		
32.5		

MONITOR INSTALLATION



SCREEN DETAILS:
Screened Interval:
10.0' to 12.0' BGS
Length -2.0'
Diameter -2"
Slot # 10
Material - Stainless Steel
Sand pack interval:
7.0' to 12.0' BGS
Material - #30 Sand

SAMPLE NUMBER	STATE	'N' VALUE
1SS	X	5
2SS	X	7
3SS	X	6
4SS	X	11
5SS	X	15
6SS	X	70

MN-COMP 0044768

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

GRAIN SIZE ANALYSIS (○) WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

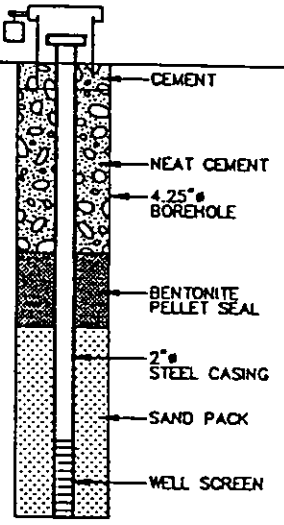
(L-3)

PROJECT NAME: FORD SITE B
PROJECT NO.: 2853
CLIENT: FORD
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: MW-3
DATE COMPLETED: AUGUST 2, 1989
DRILLING METHOD: HSA
CRA SUPERVISOR: J. MICHELS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION ft AMSL
	REFERENCE POINT (Top of Riser)	813.22
	GROUND SURFACE	810.2
	Concrete	809.7
2.5	SW(SAND)FILL, medium coarse, brown, moist	
5.0	ML(SILT), some sand, blue-green, moist	806.2
7.5	OL(SILT), sandy, black, moist to saturated	
10.0		
12.5	END OF HOLE @ 12 FT. BGS	798.2
15.0		
17.5		
20.0		
22.5		
25.0		
27.5		
30.0		
32.5	MN-COMP 0044769	

MONITOR INSTALLATION



SCREEN DETAILS:
Screened Interval:
10.0' to 12.0' BGS
Length - 2.0'
Diameter - 2"
Slot # 10
Material - Stainless Steel
Sand pack interval:
7.0' to 12.0' BGS
Material - #30 Sand

SAMPLE NUMBER	STATE	'N' VALUE
1SS		7
2SS		9
3SS		7
4SS		10
5SS		50

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

GRAIN SIZE ANALYSIS ⬭ WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

(L-4)

PROJECT NAME: FORD SITE B
PROJECT NO.: 2853
CLIENT: FORD
LOCATION: ST. PAUL, MINNEAPOLIS

HOLE DESIGNATION: BH-A
DATE COMPLETED: JUNE 19, 1989
DRILLING METHOD: HSA
CRA SUPERVISOR: J. MICHELS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE
	GROUND SURFACE	810.0				
	Concrete	809.5				
	SP(SAND)FILL, medium grained, tan, dry, product odor	809.0	4.25" ø BOREHOLE	1SS		7
2.5	ML(SILT), sandy, some clay, black and gray, moist, product odor		CEMENT/BENTONITE GROUT			
5.0				2SS		24
				3SS		52
7.5	END OF HOLE ⊙ 7.5 FT. BGS	802.5				
10.0						
12.5	Note: 1SS = OVA = 40 ppm					
15.0						
17.5						
20.0						
22.5						
25.0						
27.5						
30.0						
32.5						

MN-COMP 0044770

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

GRAIN SIZE ANALYSIS ◯ WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(L-5)

PROJECT NAME: FORD SITE B
PROJECT NO.: 2853
CLIENT: FORD
LOCATION: ST. PAUL, MINNEAPOLIS

HOLE DESIGNATION: BH-B
DATE COMPLETED: JUNE 19, 1989
DRILLING METHOD: HSA
CRA SUPERVISOR: J. MICHELS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE N VALUE
	GROUND SURFACE	810.0				
2.5	Concrete SW(SAND)FILL and CH(CLAY), intermixed sand, fine to coarse, tan, slightly moist clay, some sand, trace gravel, blue-gray, moist, strong, product odor	809.5	4.25" ø BOREHOLE CEMENT/ BENTONITE GROUT	1SS		10
5.0				2SS		24
7.5				3SS		5
10.0				4SS		13
12.5	END OF HOLE @ 11.5 FT. BGS	798.5		5SS		9
15.0	Notes: 1SS OVA = 10 ppm 2SS OVA = 40 ppm 3SS OVA = 45 ppm 4SS OVA = 40 ppm 5SS OVA = 150 ppm 6SS OVA = 100 ppm			6SS		100
17.5						
20.0						
22.5						
25.0						
27.5						
30.0						
32.5						

MN-COMP 0044771

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

GRAIN SIZE ANALYSIS (○) WATER FOUND ▽ STATIC WATER LEVEL ▼

APPENDIX C

WELL ABANDONMENT LOGS

FORD SITE C

MN-COMP 0044772

GME CONSULTANTS, INC.

CONSULTING ENGINEERS
14000 21st Ave. No. / Minneapolis, MN 55447 / 612/559-1859

June 6, 1989

Mr. Steve Mockenhaupt
Conestoga-Rovers & Associates
382 West County Road D
St. Paul, Minnesota 55112

GME Project No. 2014

Re: Report for monitoring well abandonment and monitoring well surface protection at the Ford Plant in South St. Paul, Minnesota

Dear Mr. Mockenhaupt:

On March 3, 1989, we received authorization for the abandonment of existing monitoring wells, and the installation of surface protection at this site in Minneapolis, Minnesota. In accordance with your acceptance of our proposal, we have completed our services. This project was completed in compliance with our understanding of Minnesota Department of Health (MDH) regulations. Enclosed is our report including the MDH well abandonment logs, and a description of our services.

MONITORING WELL ABANDONMENT

Two existing monitoring wells (B-2 and B-4) were abandoned. Our drill crew retrieved as much down-hole 2 inch PVC riser pipe as possible by hand and with the Mobile B-24 rig. The wells were then grouted with neat cement to within two feet of the surface. Native soil was used to fill the remaining space in the boreholes.

You also requested that we upgrade the above ground protection for three existing monitoring wells at the site. Our drill crew installed three, 4 inch diameter by 8 foot long protective steel posts and one, 4 inch diameter by 5 foot long locking protective steel cap at B-1, B-3, and B-5. At B-5, the existing 2 inch PVC riser pipe was cut-off below grade and replaced with a new section. All the protective posts were cemented into place.

MN-COMP 0044773

The monitoring well abandonment procedures and above ground protection installation were supervised by our Minnesota Licensed Water Well Driller in accordance with MDH regulations.

GENERAL QUALIFICATIONS

This report is a summary of the services performed at the Ford Plant site in South St. Paul, Minnesota. No warranty, either expressed or implied, is presented in this report with respect to the soil and groundwater conditions at this site.

We appreciate the opportunity to be of service to you for this project. If you have any questions regarding this report or if we may be of further assistance to you, please do not hesitate to contact us.

Sincerely,

GME CONSULTANTS, INC.

James A. Nordstog
Director of Drilling Operations
Hydrogeologist

Thomas H. Moore
Minnesota Licensed Water Well Driller

Enclosures: MDH Monitoring Well Abandonment Logs

JAN:WCK:jan

STATE OF MINNESOTA DEPARTMENT OF HEALTH

#2

ABANDONED WELL RECORD

MINNESOTA UNIQUE WELL NO. (leave blank if not known)

1. LOCATION OF WELL

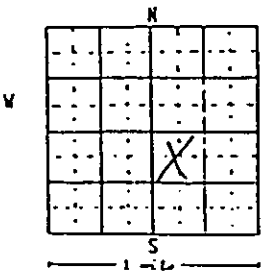
County Name: Ramsey

Township Name	Township Number (N or S)	Range Number (E or W)	Section No.	Fraction ¼ ¼ of ¼
	28 N	23 W	17	NW-SE

4. WELL DEPTH (completed): 44.5 ft. Date sealed: 5-31-89

Numerical Street Address and City of Well Location or Distance from Road Intersection:
500' from Mississippi Blvd, St. Paul, Mn

Show exact location of well (in section grid with "X")



Sketch map of well location

Ford Plant
enclosed site map

5. DRILLING METHOD (If known)
1 ☐ Cable tool 4 ☐ Reverse 7 ☐ Driven 10 ☐ Dug
2 ☐ Hollow Rod 5 ☐ Air 8 ☐ Bored 11 ☐ _____
3 ☐ Rotary 6 ☐ Jetted 9 ☒ Power Auger

6. OBSTRUCTIONS
Well obstructed ☐ Yes ☒ No
Obstructions removed ☐ Yes ☐ No If obstructions cannot be removed, contact MDH before sealing.

7. USE
1 ☐ Domestic 4 ☒ Monitoring 8 ☐ Heat Loop
2 ☐ Irrigation 5 ☐ Public 9 ☐ Industry
3 ☐ Test Well 6 ☐ Municipal 10 ☐ Commercial
7 ☐ Air Conditioning 11 ☐ _____

2. PROPERTY OWNER'S NAME
Ford Motor Company
966 S. Mississippi Blvd.
St. Paul, Mn

Mailing Address if different than property address indicated above

8. CASING(S)
1 ☐ Black 4 ☐ Threaded 7 ☒ _____
2 ☐ Galv. 5 ☐ Welded
3 ☒ Plastic 6 ☐ Stainless Steel Not Known
_____ in. to _____ ft.
_____ in. to _____ ft.

3. FORMATION LOG — If not known, indicate formation log from new well or nearby well.

FORMATION LOG	COLOR	HARDNESS OF FORMATION	FROM	TO
cobbles, boulders			0	7
gravel, sand	brown		7	13
sand	brown		13	25
sand-gravel	brown		25	44

9. SCREEN
☒ Screened well from ____ ft. to Not known ft. (If known)
☐ Open Hole from ____ ft. to ____ ft.

10. STATIC WATER LEVEL
29.5 ft. ☒ below ☐ above land surface Date Measured 11-18-81

11. WELLHEAD COMPLETION
1 ☐ Pitless Adapter 4 ☐ Found Buried N/A
2 ☐ Basement offset 5 ☐ _____
3 ☐ Well Pit

12. GROUTING INFORMATION
1 ☒ Neat Cement 2 ☐ Bentonite 3 ☒ cement
Grout material cement from 0 to 2 ft. cu. yds
neat cement 2 44.5

13. NEAREST SOURCES OF CONTAMINATION
____ feet _____ direction _____ type
Well disinfected before sealing? ☐ Yes

14. PUMP ☐ Removed ☐ Not Present N/A
Type: 1 ☐ Submersible 3 ☐ L.S. Turbine 5 ☐ Reciprocating
2 ☐ Jet 4 ☐ Centrifugal 6 ☐ _____

15. EXISTING WELLS (Please sketch locations of abandoned and active wells in remarks section or on back.)
Other unused well(s) on property? ☐ Yes ☐ No
Abandoned: ☒ Permanent ☐ Temporary ☐ Not sealed

16. REMARKS, ELEVATION, SOURCE OF DATA - CASINGS REMOVED, CASINGS PERFORATED, ETC.
Enclosed site map.
Site mw #2

MN-COMP 0044775

17. WATER WELL CONTRACTORS CERTIFICATION
This well was sealed under my jurisdiction and this report is true to the best of my knowledge and belief.
GME Consultants, Inc
Licensee Business Name License No.
Address 10000 21st Ave N. Mpls, Mn
Signed _____ Date
Tom Moore Date 6-9-89
Name of Driller

OFFICIAL ABANDONED WELL RECORD (May be used for Property Transfer)
IMPORTANT: FILE WITH DEED

STATE OF MINNESOTA DEPARTMENT OF HEALTH — #4

ABANDONED WELL RECORD

1. LOCATION OF WELL

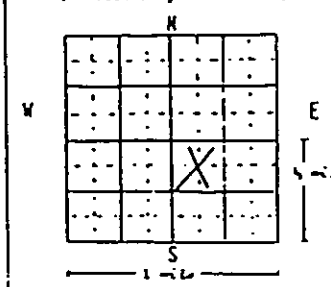
County Name: Ramsey

Township Name	Township Number	Range Number	Section No.	Fraction	4. WELL DEPTH (completed)	Date sealed
	28 (N or S)	23 (E or W)	17	NW-SE	29.5 ft.	5-31-89

MINNESOTA UNIQUE WELL NO. (leave blank if not known):

Numerical Street Address and City of Well Location or Distance from Road Intersection:
500' from Mississippi Blvd, St. Paul, Mn

Show exact location of well (in section grid with "X")



Sketch map of well location:
Ford Plant
Enclosed site map

2. PROPERTY OWNER'S NAME: Ford Motor Company
966 S. Mississippi Blvd.
St. Paul, Mn

Mailing Address if different than property address indicated above:

3. FORMATION LOG — If not known, indicate formation log from new well or nearby well.

FORMATION LOG	COLOR	HARDNESS OF FORMATION	FROM	TO
clay	brown		0	1
sand	brown		1	2
sand-fill	black		2	7
sand	brown		7	29

16. REMARKS, ELEVATION, SOURCE OF DATA - CASINGS REMOVED, CASINGS PERFORATED, ETC.
Enclosed site map.
Site MW #4

MN-COMP 0044776

5. DRILLING METHOD (if known)
1 ☐ Cable tool 4 ☐ Reverse 7 ☐ Driven 10 ☐ Dug
2 ☐ Hollow Rod 5 ☐ Air 8 ☐ Bored 11 ☐ _____
3 ☐ Rotary 6 ☐ Jetted 9 ☒ Power Auger

6. OBSTRUCTIONS
Well obstructed ☐ Yes ☒ No
Obstructions removed ☐ Yes ☐ No If obstructions cannot be removed, contact MDH before sealing.

7. USE
1 ☐ Domestic 4 ☒ Monitoring 8 ☐ Heat Loop
2 ☐ Irrigation 5 ☐ Public 9 ☐ Industry
3 ☐ Test Well 6 ☐ Municipal 10 ☐ Commercial
7 ☐ Air Conditioning 11 ☐ _____

8. CASING(S)
1 ☐ Black 4 ☐ Threaded 7 ☐ _____
2 ☐ Galv. 5 ☐ Welded
3 ☒ Plastic 6 ☐ Stainless Steel Not Known
_____ in. to _____ ft.
_____ in. to _____ ft.

9. SCREEN
☐ Screened well from ____ ft. to Not Known (if known)
☐ Open Hole from ____ ft. to ____ ft.

10. STATIC WATER LEVEL
19.5 ft. ☒ below ☐ above land surface Date Measured 11-19-81

11. WELLHEAD COMPLETION
1 ☐ Pitless Adapter 4 ☐ Found Buried
2 ☐ Basement offset 5 ☐ N/A
3 ☐ Well Pit

12. GROUTING INFORMATION
1 ☒ Neat Cement 2 ☐ Bentonite 3 ☐ _____
Grout material _____ from ____ to ____ ft. cu. yds ____
EOB to surface

13. NEAREST SOURCES OF CONTAMINATION
____ feet _____ direction _____ type
Well disinfected before sealing? ☐ Yes

14. PUMP ☐ Removed ☐ Not Present N/A
Type: 1 ☐ Submersible 3 ☐ L.S. Turbine 5 ☐ Reciprocating
2 ☐ Jet 4 ☐ Centrifugal 6 ☐ _____

15. EXISTING WELLS (Please sketch locations of abandoned and active wells in remarks section or on back.)
Other unused well(s) on property? ☒ Yes ☐ No
Abandoned: ☐ Permanent ☒ Temporary ☐ Not sealed

17. WATER WELL CONTRACTORS CERTIFICATION
This well was sealed under my jurisdiction and this report is true to the best of my knowledge and belief.
GME Consultants, Inc
Licensee Business Name License No.
Address 14000 21st Ave N. Mpls, Mn
Signed _____ Date _____
Tom Moore Date 6-9-89
Name of Driller

OFFICIAL ABANDONED WELL RECORD (May be used for Property Transfer)
IMPORTANT: FILE WITH DEED

APPENDIX D

TEST PIT LOGS

FORD SITE C

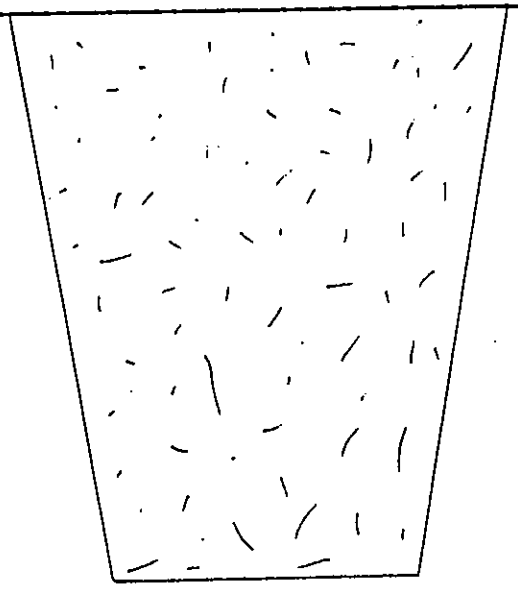
MN-COMP 0044777

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP1-87
DATE COMPLETED: 12/4/87
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(SP) SAND, fine to medium grained, trace silt, trace gravel, dry.		
2			
3			
4	Occasional seams of sandy silt (ML)		
5			
6			
7			
8			
9			
10	End of Test Pit at 9.0' BGS		
11	Hole backfilled		
12			
13			



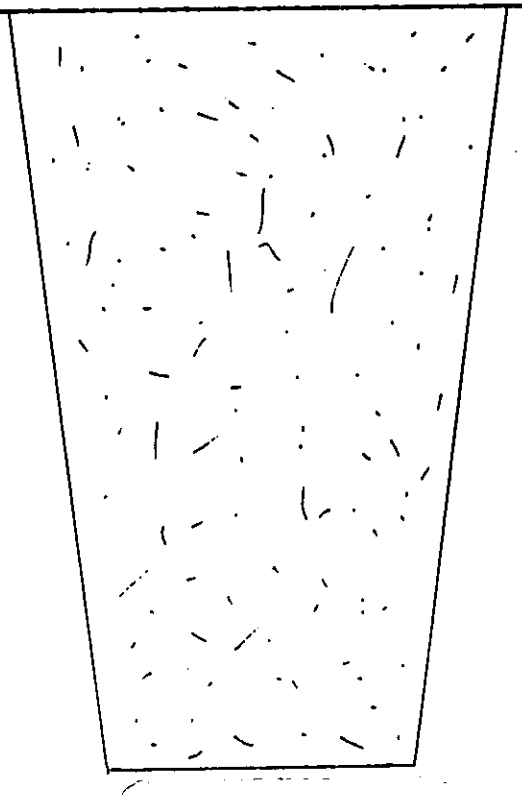
MN-COMP 0044778

TEST PIT LOG

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP2-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(SM) SAND, silty, some limestone, some well rounded gravel and cobbles		
2			
3			
4			
5			
6			
7			
8	Layered silt (ML) and clay (CL), brown to light brown		
9			
10			
11	(SP) SAND, very fine grained, brown to light brown		
12			
13	End of Test Pit at 12.0' BGS, Hole backfilled		

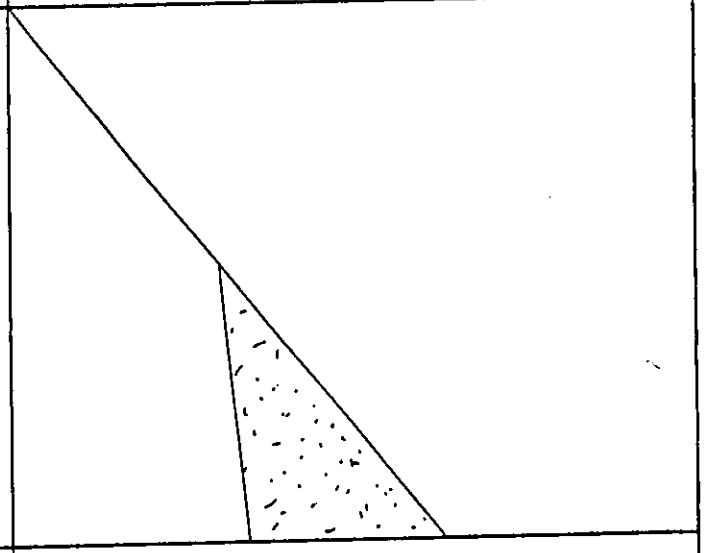


MN-COMP 0044779

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP2A - 88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

FT ABV. GRADE	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
7 6 5 4 3 2 1 0	(Test Pit dug into side of bluff) Building rubble: very large pieces of concrete (>3'Ø) glass, iron, lumber Grade		

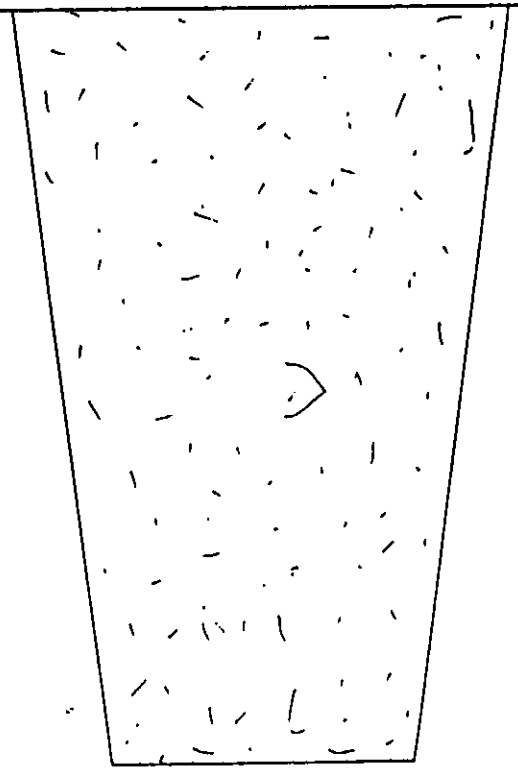
MN-COMP 0044780

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP3-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(SM) SAND, some gravel, silty, brown to light brown		
2			
3	seam of black/gray silty sands (SM), very strong odor from 2.0' to 3.0' BGS (sample taken)		
4			
5	clean silty sands (SM) from 3.0' to 4.5' BGS		
6			
7			
8	(SM) SAND, gray, some odor as 2.0' to 3.0' BGS soil		
9			
10			
11			
12			
13	End of Test Pit at 12.0' BGS gray color and odor to 12.0 BGS Hole Backfilled		



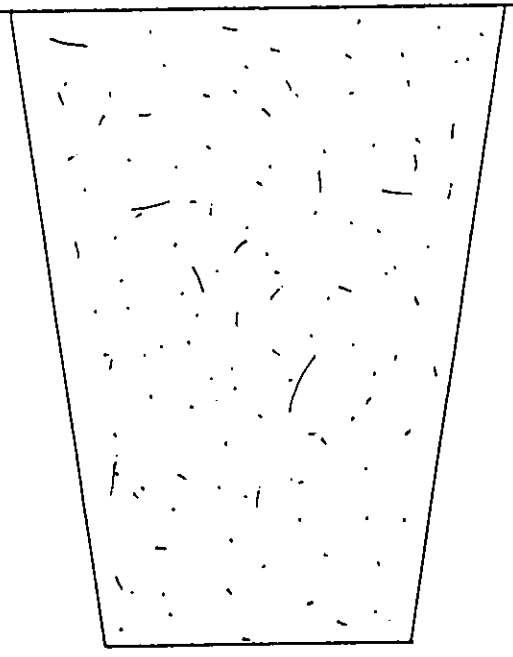
MN-COMP 0044781

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP4-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

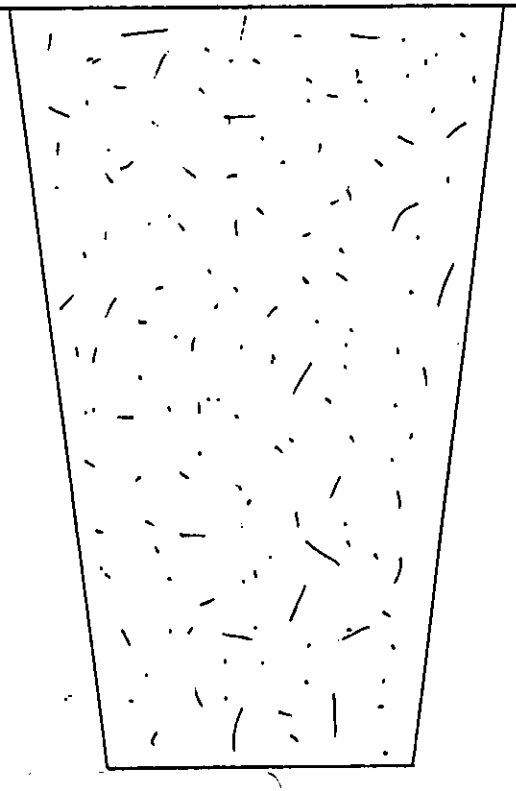
DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(SP) SAND, very fine grained, some silt, moist		
2			
3	occasional lenses of sandy silt (ML)		
4			
5			
6			
7			
8			
9			
10			
11	End of Test Pit at 10.0' BGS Hole Backfilled		
12			
13			



MN-COMP 0044782

T E S T P I T L O G

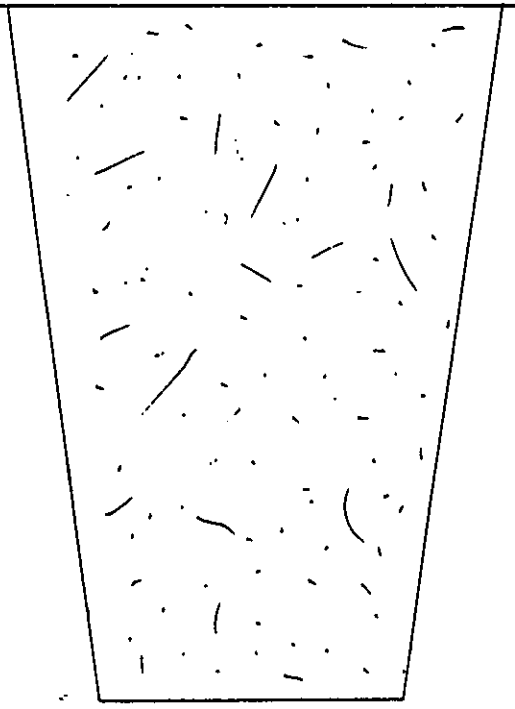
PROJECT NAME:	PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS	HOLE DESIGNATION:	TP5-88
PROJECT NO.:	2191	DATE COMPLETED:	1/19/88
CLIENT:	FORD MOTOR COMPANY	EXCAVATION METHOD:	BACKHOE - CAT 211 LC
LOCATION:	ST. PAUL, MINNESOTA	CRA SUPERVISOR:	S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(CL-ML) CLAY and SILT, sandy, gray to gray/blue, moist		
2			
3			
4			
5			
6	(SP) SAND, fine to very fine grained, trace silt, trace gravel, light brown to brown		
7			
8			
9			
10			
11			
12			
13	End of Test Pit at 12.0' BGS Hole Backfilled		

MN-COMP 0044783

TEST PIT LOG

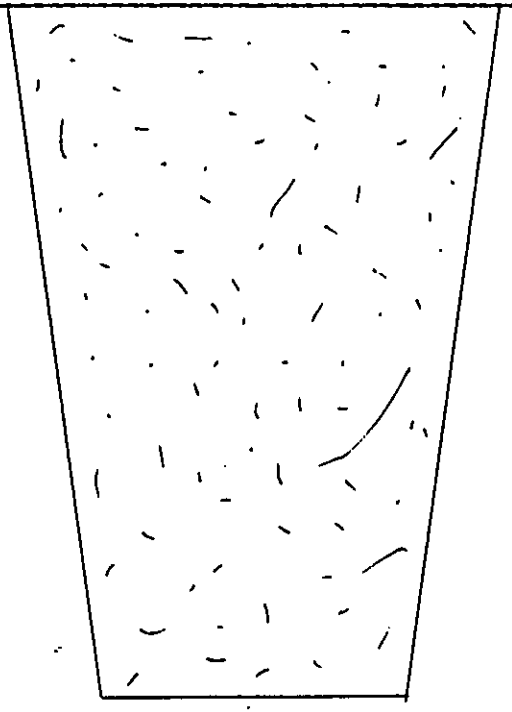
PROJECT NAME:	PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS	HOLE DESIGNATION:	TP6-88
PROJECT NO.:	2191	DATE COMPLETED:	1/19/88
CLIENT:	FORD MOTOR COMPANY	EXCAVATION METHOD:	BACKHOE - CAT 211 LC
LOCATION:	ST. PAUL, MINNESOTA	CRA SUPERVISOR:	S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(ML) SILT, very sandy, occasional seams of yellow SM		
2			
3			
4			
5	(SW-GW) SAND and GRAVEL, fine to coarse grained, some large well rounded cobbles		
6			
7			
8			
9			
10			
11			
12	End of Test Pit at 11.0' BGS Hole Backfilled		
13			

MN-COMP 0044784

T E S T P I T L O G

PROJECT NAME:	PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS	HOLE DESIGNATION:	TP7-88
PROJECT NO.:	2191	DATE COMPLETED:	1/19/88
CLIENT:	FORD MOTOR COMPANY	EXCAVATION METHOD:	BACKHOE - CAT 211 LC
LOCATION:	ST. PAUL, MINNESOTA	CRA SUPERVISOR:	S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	Building rubble, concrete, railroad ties, timbers		
2			
3			
4			
5			
6			
7			
8			
9			
10	(SP) SAND, very loose St. Peter sand, yellow to white yellow to white		
11			
12	End of Test Pit at 11.0' BGS Hole backfilled		
13			

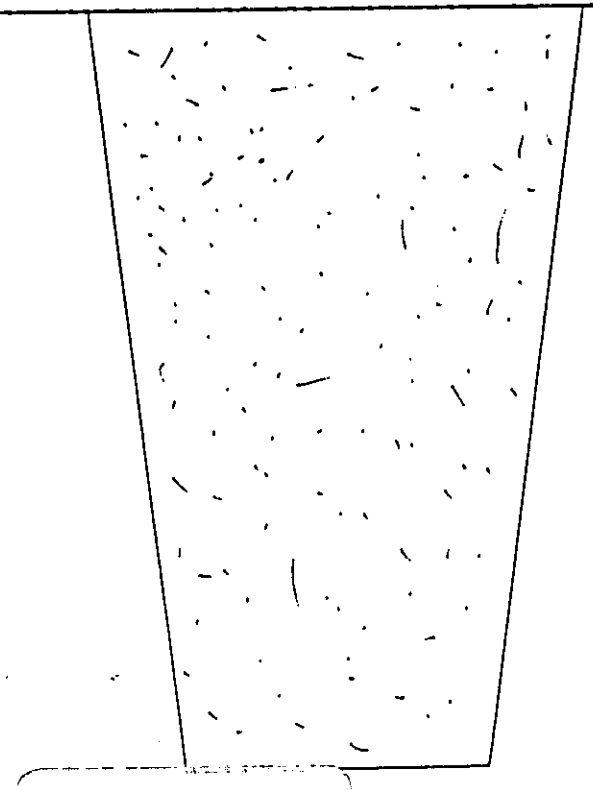
MN-COMP 0044785

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP8-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(GW) GRAVEL and COBBLES, very coarse grained, trace sand.		
2			
3			
4			
5			
6			
7			
8	Small piece of metal at 9.5'		
9			
10	(SP) SAND, very fine grained, color change to gray/black (sample taken)		
11			
12	End of Test Pit at 12.0' BGS Hole backfilled		
13			



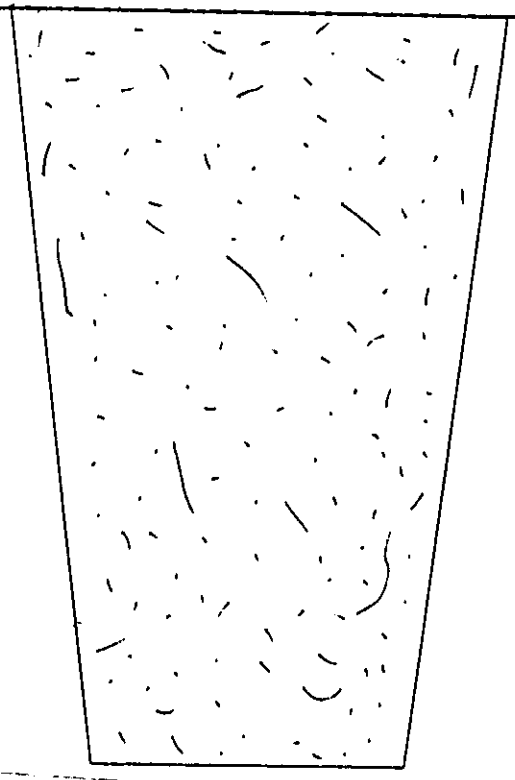
MN-COMP 0044786

T E S T P I T L O G

PROJECT NAME: PRELIMINARY ASSESSMENT OF WASTE DISPOSAL AREAS
PROJECT NO.: 2191
CLIENT: FORD MOTOR COMPANY
LOCATION: ST. PAUL, MINNESOTA

HOLE DESIGNATION: TP9-88
DATE COMPLETED: 1/19/88
EXCAVATION METHOD: BACKHOE - CAT 211 LC
CRA SUPERVISOR: S. MOCKENHAUPT

DEPTH ft BG	STRATIGRAPHY DESCRIPTION & REMARKS	ELEVATION ft AMSL	DIAGRAM
0			
1	(SP) SAND, very fine grained, yellow/orange, trace silt.		
2			
3			
4	Occasional seams of fine gravel and coarse sand.		
5			
6			
7			
8			
9			
10			
11			
12	(SM) SAND, silty, gray, wet to saturated		
13	End of Test Pit at 12.0' BGS Hole backfilled		



MN-COMP 0044787

APPENDIX E

DATA QUALITY ASSESSMENT
GROUNDWATER AND
SURFACE WATER SAMPLES
FORD SITE C

MN-COMP 0044788

MEMORANDUM

TO: Jon Christofferson REFERENCE NO.: 2853

FROM: David Dempsey DATE: June 7, 1990

RE: Data Quality Assessment and Validation for Seven Groundwater Samples Collected During the April 1990 Sampling Event at the Ford Site C Project Site

---

The following details a data quality assessment and validation for seven groundwater samples collected on April 19, 1990 at the Ford Site C Project Site. The samples were analyzed for site-specific parameters, namely, volatile organic compounds (VOC) and metals by Pace Laboratories, Inc. (Pace).[1] Quality assurance criteria were established by the analytical methods.[2]

Holding Time Periods

Holding time periods were established by the analytical methods and are summarized below:

VOC	-14 days from sample collection to completion of analysis
Metals	-6 months from sample collection to completion of analysis, except for mercury -28 days from sample collection to completion of analysis for mercury

As all samples met the above criteria, the data were found to be acceptable based upon the holding time periods.

Method Blank Samples

The potential for sample contamination through laboratory protocols was measured by means of method blank samples. The VOC method blank sample contained methylene chloride at a concentration of 1.42 µg/l. Methylene chloride data for samples

---

[1]Analytical methods were taken from 40 CFR Part 136 Appendix A and "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, revised March 1983 and are summarized below:

VOC	-601/602
Metals	-200 Series

[2]Application of quality assurance criteria was consistent with "Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses", February 1, 1988 and "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, July 1, 1988.

MN-COMP 0044789

W-041990-JM-01, W-041990-JM-02 and W-041990-JM-03 were qualified as non-detect (U), as a result. Similarly, the metals method blank sample was found to contain analytes copper and zinc at concentrations of 0.023 mg/l and 0.05 mg/l, respectively. Sample W-041990-JM-06 had its copper datum qualified as non-detect (U), while no action upon the zinc data was required. Of interest was the fact that no method blank sample was reported for selenium. However, as all samples were reported to be free of selenium, no action upon the selenium data was necessary.

Surrogate Compounds Percent Recoveries (Surrogate Recoveries)

Individual sample performance for VOC analyses was to be monitored via surrogate recoveries. To date, no surrogate data have been received from Pace. Therefore, matrix spike/matrix spike duplicate data were solely used to judge the VOC data.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Percent Recoveries

Matrix efficacy was monitored by MS/MSD analyses. An in-house sample at Pace underwent MS/MSD analyses for VOC. Therefore, direct application of these data was not possible. The method was shown to have been precise as the percent recoveries were within control limits established by Pace.

Sample W-041990-JM-04 underwent a matrix spike analysis for the metal analyte selenium, while sample W-041990-JM-06 had matrix spike analyses performed for metal analytes arsenic and zinc. All remaining metal analytes had matrix spike analyses performed upon in-house samples. Arsenic and selenium percent recoveries fell below the control limits set by Pace; therefore, the results for all samples for these analytes were qualified as estimated (UJ). As the percent recoveries for the remaining metals were within limits, the methods were shown to be accurate.

Laboratory Duplicate Analyses

The level of analytical precision for metals analyses was measured through laboratory duplicate analyses. The duplicate analysis for barium was performed upon sample W-041990-JM-02, while in-house samples at Pace were used for the remaining analytes duplicate analyses. Only lead analyses were shown to have an unacceptable level of precision. Therefore, all lead data were qualified as estimated (UJ).

Rinsate Sample

Cleanliness of sampling equipment was checked by collection of rinsate sample W-041990-JM-03. The only analyte detected within the sample was methylene chloride. However, this methylene chloride datum was qualified as non-detect (U) based upon the method blank sample. Therefore, the sampling equipment was properly cleaned prior to collection of samples.

Field Duplicate Samples

Overall precision of this sampling event was monitored by collection of field duplicate samples W-041990-JM-04 and W-041990-JM-05. Both samples were found to be free of all target analytes, indicating that an acceptable level of precision was achieved.

Overall Assessment

Methylene chloride data for sample W-041990-JM-01, W-041990-JM-02 and W-041990-JM-03 were qualified as non-detect (U) based upon method blank sample data. Metals analytes arsenic, lead and selenium had all results qualified as estimated (UJ). The remaining data were found to be acceptable for the quanitative assessment of analytes within the groundwater at the project site.

cc: Bruce Clegg

MEMORANDUM

TO: Steve Mockenhaupt REFERENCE NO.: 2853

FROM: Dave Dempsey DATE: August 1, 1990

RE: Data Quality Assessment and Validation for Seven Groundwater Samples Collected during the June 1990 Sampling Event at the Ford Site C Site

---

The following details a data quality assessment and validation for seven groundwater samples collected on June 6, 1990, at the Ford Site C site. Samples were analyzed for volatile organic compounds (VOC) and metals by Pace Laboratories Inc. (Pace).[1] Quality assurance criteria were established by analytical methods.[2]

Holding Time Periods

Holding time periods are established in analytical methods and are summarized below:

VOC - 14 days from sample collection to completion of analysis

Metals- 6 months from sample collection to completion of analysis, except for mercury
- 28 days from sample collection to completion of mercury analysis

Reviewing analysis dates showed that all holding time periods were met.

Method Blank Sample

Laboratory contamination of samples was checked for with method blank samples. The VOC method blank sample contained no target analytes. However, zinc was detected at a concentration of 0.066 mg/l within metals method blank sample. Zinc data for samples W-060690-RF-01, W-060690-RF-02, W-060690-RF-04 through W-060690-RF-06 were qualified as non-detect (U).

Surrogate Compound Percent Recoveries

Individual sample results for VOC analyses were assessed using surrogate compound fluorobenzene recoveries. Examining the recoveries revealed that VOC Method 602 was in control. No surrogate compound was used to check the accuracy of Method 601. Hence, MS/MSD recoveries were used to assess Method 601 results.

---

[1] Analytical methods are taken from 40 CFR Part 136, Appendix A, and "Chemical Methods for Analysis of Water and Wastes", USEPA-600/4-79-020, Revised March 1983 and are summarized below:

VOC - 40 CFR 601/602
Metals - USEPA 200 Series

[2] Application of quality assurance criteria was consistent with "Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses", February 1, 1988, and "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses", July 1, 1988.

MN-COMP 0044792

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Percent Recoveries

Effects upon the data due to matrix interference were checked via MS/MSD analyses. Pace sample 21699 underwent VOC MS/MSD analyses. As all percent recoveries fell within limits, the level of precision was acceptable.

Sample W-060690-RF-07 underwent matrix spike analysis for target metals. The silver percent recovery was low. Therefore, silver data were qualified as estimated (UJ) for all samples.

Laboratory Duplicate Analyses

Precision for metals analyses was measured by means of duplicate analyses. Samples W-060690-RF-03 and W-060690-RF-06 had duplicate analyses for analytes mercury and selenium, respectively. Precision for both were acceptable. No other duplicate analyses were performed by Pace, therefore, field duplicate samples were used to assess precision.

Rinsate Sample

Cleanliness of sampling equipment was checked with rinsate sample W-060690-RF-01. Target VOC detected were 1,1,1-trichloroethane, tetrachloroethene and 1,1-dichloroethene. As all investigative samples were free of these analytes, no action upon the data was necessary.

Zinc was also detected within this sample. However, the zinc datum was qualified as non-detect (U) based upon the method blank sample.

Field Duplicate Samples

Precision was measured by collecting field duplicate samples W-060690-RF-04 and W-060690-RF-05. As both sets of data were within limits of agreement, the precision was acceptable.

Overall Assessment

Silver data were qualified as estimated (UJ) for all samples, while five samples had zinc data qualified as non-detect (U). Remaining data are acceptable to quantitatively assess target analyte concentrations.

cc: Bruce Clegg

APPENDIX F

SOIL EXPLORATION REPORT AND LOGS, 1984

FORD UST SITE AREA

MN-COMP 0044794

SOIL EXPLORATION COMPANY

662 CROMWELL AVENUE
ST. PAUL, MN 55114
PHONE 612/645-6446

a sister corporation to TWIN CITY TESTING AND ENGINEERING LABORATORY INC.

October 29, 1984

Pope Associates, Inc.
533 St. Clair Avenue
St. Paul, MN 55102

Attn: Robert L. Pope

Gentlemen:

SUBJ: Subsurface Exploration Program
Proposed Hazardous Waste Building
Ford Motor Plant
St. Paul, Minnesota
#120-12734

We have conducted a subsurface exploration program and foundation review for the referenced project. We are transmitting eight copies of our report. This work was done in accordance with your verbal authorization on October 22, 1984.

About 50% of the soil samples will be held at this office for one month and will then be discarded unless we are notified to hold them for a longer period of time.

We trust that this report will provide you with the needed information. If questions arise concerning interpretation of the data, please contact us for review.

Very truly yours,

Wilfred A. Wahl

Wilfred A. Wahl, P.E.

WAW/rjr

Encs.

OFFICERS:
CHARLES W. BRITZIUS
chairman of the board
NORMAN E. HENNING
president
ROBERT F. WITTMAN
executive vice president
CLINTON R. EUE
secretary/treasurer

HOME OFFICE:
ST. PAUL, MN

OFFICES IN:
MANKATO, MN
ROCHESTER, MN
WAITE PARK, MN

MN-COMP 0044795

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF THE CLIENT.

REPORT OF SUBSURFACE EXPLORATION PROGRAM

PROPOSED HAZARDOUS WASTE BUILDING

FORD MOTOR PLANT

ST. PAUL, MINNESOTA

#120-12734

INTRODUCTION

We understand the proposed construction at this site will consist of a one-story, slab-on-grade structure. The building will be approximately 60' by 63' in plan dimensions.

In accordance with your verbal authorization on October 22, 1984, we have conducted a subsurface exploration program for the proposed construction. The scope of our work on this project is as follows:

1. Explore the subsurface soil and bedrock conditions by means of three test borings.
2. Provide recommendations for foundation support of the proposed building.
3. Provide recommendations for site preparation for support of the foundation.

Our work program for accomplishment of the above objectives included three soil test borings, a few laboratory tests and observation of the recovered soil samples.

MN-COMP 0044796

The purpose of this report is to describe our field operations, to present the results of our field and laboratory tests and to provide you with our engineering recommendations.

EXPLORATION PROGRAM RESULTS

Site Conditions

The building will be constructed south of the existing paint building. There is an existing storm sewer that runs in a north-south direction in about the center of the building. The site is relatively level with surface elevations at the boring locations varying from 95.2' to 95.9'.

Subsurface Conditions

The subsurface soil conditions encountered at the boring locations are shown on the attached boring logs. We wish to point out that the subsurface conditions at other times and locations on this site may differ from those found at our test locations. If different conditions are encountered during construction, it is necessary that you contact us so that our recommendations can be reviewed.

The test boring logs also indicate the probable geologic origin of the encountered soil.

It will be noted from the boring logs that shale was encountered at depths of from 3' to 6½' at the boring locations. The soil conditions overlying the shale were quite variable. Mixed alluvium consisting primarily of weathered

MN-COMP 0044797

limestone and some soil was encountered at boring 1. At boring 2, the soil consisted of sand with a little gravel, coarse alluvium. At boring 3, the overburden consists of fill.

The overlying soils generally are medium dense to very dense. The primary exception is the very loose sand encountered at a depth of about 5' at boring 2.

All of the borings terminated in shale. The shale is part of the Decorah Formation which is underlain with the Platteville Limestone Formation. Our geological data indicates the depth to the top of the Platteville Formation should be about 30' at this site. The shale contains lenses and thin layers of limestone. The borings were obstructed at depths varying from 8.6' to 15.7'. It is our opinion that the obstructions represents thin layers of limestone within the Decorah Formation rather than the underlying Platteville Formation. The N values in the shale vary from 13 to well over 100 blows per foot.

Water Levels

Water level measurements were made in the borings and the data is included on the logs. Ground water was encountered at borings 1 and 2 just above the underlying shale. Seasonal and yearly fluctuations of the ground water levels can be anticipated.

MN-COMP 0044798

ENGINEERING REVIEW

Project Information

The following data represents our understanding of the project. It comprises an important part of our engineering review. If, as the project develops, there are changes from the stated values, we request that you contact us for additional review.

We understand the proposed construction at this site will consist of a one-story, slab-on-grade structure. The building will be approximately 60' by 63' in plan dimensions. The building will be essentially a steel-frame metal clad building with concrete foundation walls supported on a concrete slab. The slab will be approximately 1' below existing grade. We anticipate the average loading under the slab, including live load, will be on the order of 500 to 600 psf (pounds per square foot).

Discussion

It is our opinion that the soils and underlying shale are capable of supporting the foundation loads with an adequate factor of safety against shear failure and with minimal settlement.

However, the shale is known to be expansive. No laboratory tests were conducted on samples from this site to further evaluate the expansive properties. However, based on previous tests on the Decorah Shale, the typical swell pressure would be on the order of 6 to 8 tons per square foot. Under very

MN-COMP 0044799

light loads, the percent swell is on the order of 3% to 4%. As a result, the swelling is most critical under the very light structures and especially under lightly loaded floor slabs.

For swelling to occur, the shale must come in contact with a source of water. At this particular site, ground water was encountered immediately above the shale at two of the boring locations. Therefore, it is quite probable that the upper portion of the shale has already undergone some swelling.

Therefore, supporting the lightly loaded structure on or immediately above the shale will entail some risk. However, the majority of the Ford Plant is supported on the shale. In many areas, the floor slab is only a short distance above the underlying shale. We understand that there have been no unusual problems with foundations or floor slabs in the existing plant due to swelling.

Therefore, based on this information, it is our opinion that the structure can be supported on a slab foundation above existing shale with only minimal risk of future excessive differential swelling.

Foundation Recommendations

Because of the wide variation in the composition of the soils (colluvium, alluvium and fill) immediately below the slab elevation, we suggest that the building area be subcut to a minimum depth of 18" below the bottom of

MN-COMP 0044800

the floor slab. Additional subcutting could be performed if localized fill is encountered extending to a greater depth. We then recommend placing a relatively clean, free-draining granular soil to the bottom of slab elevation. This fill should be compacted to a minimum of 95% of standard Proctor density. The slab can then be supported directly on the controlled fill at normal elevation. The excavation and compacted fill should extend beyond the edge of the slab a distance equal to the depth of compacted fill beneath the slab foundation.

Originally, it was planned to place a draintile system at the bottom of the granular fill. We recommend that no draintile be installed. We feel it is important to attempt to maintain the present moisture condition in the underlying shale, since a change in moisture content could cause a change in volume.

Site Observation

We recommend that the excavation be observed by a soil engineer before placing any newly compacted fill. We also recommend that density tests be taken in the fill as it is placed to document that proper compaction is being obtained.

FIELD EXPLORATION PROCEDURES

Three soil test borings were made on October 24, 1984. The borings were put down at the locations shown on the attached sketch. The locations were changed somewhat from the suggested locations because of material stored on

MN-COMP 0044801

the site and due to existing utilities. The surface elevations were referenced to the top of the hydrant where shown, taken as 100.0', an assumed elevation.

Soil Sampling

Soil sampling was performed in accordance with ASTM: D 1586-67. Using this procedure, a 2" O.D. split barrel sampler is driven into the soil by a 140 lb weight falling 30". After an initial set of 6", the number of blows required to drive the sampler an additional 12" is known as the penetration resistance or N value. The N value is an index of the relative density of cohesionless soils and the consistency of cohesive soils. Thin wall tube samples were obtained according to ASTM: D 1587-67 where indicated by appropriate symbol on the boring logs.

Soil Classification

As the samples were obtained in the field, they were visually and manually classified by the crew chief in accordance with ASTM: D 2487-83 and 2488. Representative portions of the samples were then returned to the laboratory for further examination and for verification of the field classification. In addition, selected samples were submitted to a program of laboratory tests. Logs of the borings indicating the depth and identification of the various strata, the N value, the laboratory test data, water level information and pertinent information regarding the method of maintaining and

MN-COMP 0044802

advancing the drill holes are attached. Charts illustrating the soil classification procedure, the descriptive terminology and symbols used on the boring logs are also attached.

EXPLORATION LIMITATIONS

The recommendations contained in this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted engineering practices at this time and location. Other than this, no warranty is implied or intended.

This report was prepared by: Wilfred A. Wahl
Wilfred A. Wahl, P.E.

This report was reviewed by: Richard S. Dutcher
Richard S. Dutcher, P.E.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the Laws of the State of Minnesota

Wilfred A. Wahl
WILFRED A. WAHL
Date 10-29-84 Reg. No. 6969

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Richard S. Dutcher
RICHARD S. DUTCHER
Date 10-29-84 Registration No. 8656

MN-COMP 0044803

Proofread by: M. Cousteau

LOG OF TEST BORING

JOB NO. 120-12734 VERTICAL SCALE 1" = 3' BORING NO. 1

PROJECT PROPOSED HAZARDOUS WASTE BUILDING - FORD MOTOR COMPANY - ST. PAUL, MINNESOTA

DEPTH IN FEET	DESCRIPTION OF MATERIAL (SURFACE ELEVATION 95.9')	GEOLOGIC ORIGIN	N	WL	SAMPLE NO.	SAMPLE TYPE	LABORATORY TESTS W	D	LL/PL	Qu
½	CLAYEY SAND W/A LITTLE (See#1)(SC)	MIXED*			1	SB				
	WEATHERED LIMESTONE W/SOME PIECES OF HARD LIMESTONE, a little silty sand and gravel, brown, moist to about 3' then wet, very dense (GM)	MIXED ALLUVIUM OR COLLUVIUM	34		2	SB				
			40	▼	3	SB				
4	SHALE, gray, contains a few lenses of limestone	DECORAH FORMATION	43		4	SB	18	* 111		
			100/0.3		5	SB				
9	Obstruction	*ALLUVIUM								
	#1 - GRAVEL, brownish gray, soft (SC)									
	*Estimated Dry Density									

MN-COMP 0044804

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	BAILED DEPTHS	WATER LEVEL
10-24	9:55	3½'	2'	3½'	to	3'
10-24	10:20	9'	9'	9'	to	None
10-24	10:25	9'	None	2'	to	None
					to	

START 10-24-84 COMPLETE 10-24-84

METHOD HSA 0-9' @ 10:20

CREW CHIEF White

LOG OF TEST BORING

JOB NO. 120-12734 VERTICAL SCALE 1" = 3' BORING NO. 2

PROJECT PROPOSED HAZARDOUS WASTE BUILDING - FORD MOTOR COMPANY - ST. PAUL, MINNESOTA

DEPTH IN FEET	DESCRIPTION OF MATERIAL (SURFACE ELEVATION 95.6')	GEOLOGIC ORIGIN	N	WL	SAMPLE NO	SAMPLE TYPE	LABORATORY TESTS W	D	LL/PL	Qu
	SAND W/A LITTLE GRAVEL, fine to medium grained, brown, moist, medium dense (SP)	COARSE ALLUVIUM	12		1	SB				
			12		2	SB				
4	SAND W/A LITTLE GRAVEL, medium grained, brown, moist to 5½' then waterbearing, very loose (SP)		1½	▼	3	SB				
6½	SHALE, gray, contains a few lenses of limestone	DECORAH FORMATION	100/0.9		4	SB				
			79		5	SB				
			100/0.4		6	SB				
			100/0.7		7	SB				
15.7	Obstruction									

MN-COMP 0044805

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	BAILED DEPTHS	WATER LEVEL
10-24	10:45	6½'	4½'		to	5½'
10-24	11:20	15.7'	14½'	15.7'	to	None
10-27	11:30	15.7'	None	9½'	to	None
					to	

START 10-24-84 COMPLETE 10-24-84

METHOD HSA 0-14½' @ 11:20

CREW CHIEF White

LOG OF TEST BORING

JOB NO. 120-12734 VERTICAL SCALE 1" = 3' BORING NO 3

PROJECT PROPOSED HAZARDOUS WASTE BUILDING - FORD MOTOR COMPANY - ST. PAUL, MINNESOTA

DEPTH IN FEET	DESCRIPTION OF MATERIAL (SURFACE ELEVATION 95.2')	GEOLOGIC ORIGIN	N	WL	SAMPLE NO	SAMPLE TYPE	LABORATORY TESTS W	D	LL/PL	Qu
	FILL, MIXTURE OF SAND, SILTY SAND AND CLAYEY SAND W/A LITTLE GRAVEL, a few pieces of blacktop, dark brown, black and gray	FILL	20		1	SB				
					2	SB				
3	SHALE, gray, contains a few lenses of limestone	DECORAH FORMATION	13		3	SB	32	90*		
					4	3T				
			37		5	SB	24	101*		
			100/0.7		6	SB				
8.6	Obstruction									
	*Estimated Dry Density									

MN-COMP 0044806

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	BAILED DEPTHS	WATER LEVEL
					to	
10-24	1:10	8.6'	8.6'	8.6'	to	None
10-24	1:20	8.6'	None	4½'	to	None
					to	

START 10-24-84 COMPLETE 10-24-84

METHOD HSA 0-8.6' @ 1:10

CREW CHIEF White

APPENDIX G

LABORATORY REPORT

SOLVENT SHIPMENT

SEPTEMBER 1989

FORD UST SITE

MN-COMP 0044807

Report:RCI300 AVGANICS RC INVENTORY 16-Jan-90 04:17 PM
SAMPLE LABORATORY REPORT FORM

Company : FORD MOTOR COMPANY
Location:
Customer Nr: F01445
Salesperson: Branch: R
Analyzed By: SS Date: 09/28/89
Approved By: SS

Lab Analysis Nr: A020502
Sales lab Nr:
Incoming Nr: I909484
Retain Lab Nr:
PCB Lab Nr: P909246
Lab Type: QCA
Part Nr: RW007400
Waste Master Nr: 00007421
Authorization Nr: 022814
Batch Nr:
Lot Nr:
Other Nr:

LABORATORY DATA

Waste Density: 0.883 pH: 7.10
Solvent Density: pH:
Total Distillate: 37/50 Solids: NR
% Yield: 50
% Chlorides: PCB (ppm):
Acid Acceptance:
APHA Color: Odor:
BTU/lb: BTU/Gal:
% Water by KF:
Flash Point (TCC Deg F):

Material Comments: AA
Recommend:
Label:
UN/NA Nr:
Dot Hazard Class:
EPA Waste Code Nr:
DOT PSN:

Comments:

*** Information contained is believed to be ***
*** correct to the best of our knowledge ***
*** and based on the sample supplied. ***

CHROMATOGRAPHIC ANALYSIS

	----ACTIVES----
0.5 %	Acetone
8.0 %	N-Butyl Acetate
0.0 %	Cyclohexanone
0.0 %	Ethyl Acetate
0.0 %	Glycol Ether EB
0.0 %	Glycol Ether EE
0.2 %	Glycol Ether EEAc
0.0 %	Glycol Ether EM
0.0 %	Glycol Ether EEP
0.0 %	Glycol Ether EP
0.0 %	Glycol Ether PM
0.5 %	Glycol Ether PMA
0.0 %	Isobutyl Acetate
0.0 %	Isopropyl Acetate
1.0 %	MEK
13.5 %	MIBK
0.0 %	N-Propyl Acetate
0.0 %	Tetrahydrofuran
	----ALCOHOLS----
4.5 %	N-Butanol
0.0 %	Ethanol
1.5 %	Isobutanol
1.0 %	Isopropanol
1.5 %	Methanol
0.5 %	N-Propanol
1.0 %	Water
0.0 %	Diacetone Alcohol
	----DILUENTS----
1.5 %	Heptane
0.0 %	Hexane
0.0 %	Mineral Spirits
3.5 %	100 Flash Naphtha
0.0 %	Stoddard Solvent
12.5 %	Toluene
2.0 %	VMP Naphtha
45.0 %	Xylene
	----CHLORINATEDS----
0.0 %	Methylene Chloride
0.0 %	Perchloroethylene
0.0 %	1,1,1-Trichloroethane
0.0 %	1,1,2-Trichloro-1,2,2-Trifluoroethane
0.0 %	Trichloroethylene
0.0 %	NOS
	--------MISC--------
0.0 %	
0.0 %	
0.0 %	
0.0 %	
0.0 %	
0.0 %	

MN-COMP 0044808

APPENDIX H

LABORATORY REPORT

SOIL EXCAVATION BY FORD

NOVEMBER 6, 1989

FORD UST SITE

MN-COMP 0044809

pace laboratories, inc.

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California
Leawood, Kansas
Irvine, California
Asheville, North Carolina
Charlotte, North Carolina
Wappingers Falls, New York

REPORT OF LABORATORY ANALYSIS

Ford Motor Company
966 s. Mississippi River Blvd.
St. Paul, MN 55116

March 29, 1990
PACE Project
Number: 891106516

Attn: Mr. John Rohlf

PACE Sample Number:			421540
Date Collected:			11/06/89
Date Received:			11/06/89
Parameter	Units	MDL	Solvent Recovery
ORGANIC ANALYSIS			
INDIVIDUAL PARAMETERS			
Moisture content	%	1.0	7.3
MDH VOLATILE ORGANICS SOIL EXTRACT-465C			
Date Analyzed			11/13/89
Chloromethane	ug/kg	240	ND
Bromomethane	ug/kg	380	ND
Dichlorodifluoromethane	ug/kg	380	ND
Vinyl chloride	ug/kg	380	ND
Chloroethane	ug/kg	240	ND
Methylene Chloride	ug/kg	240	260
Acetone	ug/kg	10000	ND
Trichlorofluoromethane	ug/kg	100	ND
Allyl chloride	ug/kg	1000	ND
1,1-Dichloroethylene	ug/kg	76	ND
Tetrahydrofuran	ug/kg	3600	ND
1,1-Dichloroethane	ug/kg	50	ND
trans-1,2-Dichloroethylene	ug/kg	76	ND
cis-1,2-Dichloroethylene	ug/kg	120	ND
Ethyl ether	ug/kg	76	ND
Chloroform	ug/kg	120	ND
1,1,2-Trichlorotrifluoroethane	ug/kg	180	190
Methyl ethyl ketone	ug/kg	5000	ND
1,2-Dichloroethane	ug/kg	50	ND
Dibromomethane	ug/kg	360	ND
1,1,1-Trichloroethane	ug/kg	120	ND
Carbon tetrachloride	ug/kg	76	ND

MDL Method Detection Limit
ND Not detected at or above the MDL.

MN-COMP 0044810

pace laboratories, inc.

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California
Leawood, Kansas
Irvine, California
Asheville, North Carolina
Charlotte, North Carolina
Wappingers Falls, New York

REPORT OF LABORATORY ANALYSIS

March 29, 1990
PACE Project
Number: 891106516

PACE Sample Number:			421540
Date Collected:			11/06/89
Date Received:			11/06/89
Parameter	Units	MDL	Solvent Recovery
ORGANIC ANALYSIS			
MDH VOLATILE ORGANICS SOIL EXTRACT-465C			
Bromodichloromethane	ug/kg	50	ND
Dichloroacetonitrile	ug/kg	20000	ND
2,3-Dichloro-1-propene	ug/kg	120	ND
1,2-Dichloropropane	ug/kg	50	ND
1,1-Dichloro-1-propene	ug/kg	240	ND
cis-1,3-Dichloro-1-propene	ug/kg	120	ND
1,1,2-Trichloroethylene	ug/kg	120	ND
Benzene	ug/kg	240	ND
1,3-Dichloropropane	ug/kg	150	ND
Dibromochloromethane	ug/kg	240	ND
1,1,2-Trichloroethane	ug/kg	240	ND
trans-1,3-Dichloro-1-propene	ug/kg	76	ND
1,2-Dibromoethane	ug/kg	1000	ND
2-Chloroethylvinyl ether	ug/kg	1200	ND
Bromoform	ug/kg	240	ND
1,1,1,2-Tetrachloroethane	ug/kg	76	ND
Methyl isobutyl ketone	ug/kg	240	ND
1,2,3-Trichloropropane	ug/kg	1000	ND
1,1,2,2-Tetrachloroethane	ug/kg	240	ND
1,1,2,2-Tetrachloroethylene	ug/kg	240	ND
Pentachloroethane	ug/kg	500	ND
Toluene	ug/kg	240	1300
Chlorobenzene	ug/kg	240	ND
Ethylbenzene	ug/kg	240	3300
Cumene	ug/kg	240	ND
m-Xylene	ug/kg	240	13000(1)
p-Xylene	ug/kg	240	14000(1)
o-Xylene	ug/kg	240	4500

MDL Method Detection Limit
ND Not detected at or above the MDL.
(1) These compounds co-elute

MN-COMP 0044811

pace laboratories, inc.

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California
Leawood, Kansas
Irvine, California
Asheville, North Carolina
Charlotte, North Carolina
Wappingers Falls, New York

REPORT OF LABORATORY ANALYSIS

March 29, 1990
PACE Project
Number: 891106516

PACE Sample Number:			421540
Date Collected:			11/06/89
Date Received:			11/06/89
			Solvent
Parameter	Units	MDL	Recovery
ORGANIC ANALYSIS			
MDH VOLATILE ORGANICS SOIL EXTRACT-465C			
1,3-Dichlorobenzene	ug/kg	1000	ND
1,2-Dichlorobenzene	ug/kg	1000	ND
1,4-Dichlorobenzene	ug/kg	1000	ND
Dichlorofluoromethane	ug/kg	240	ND

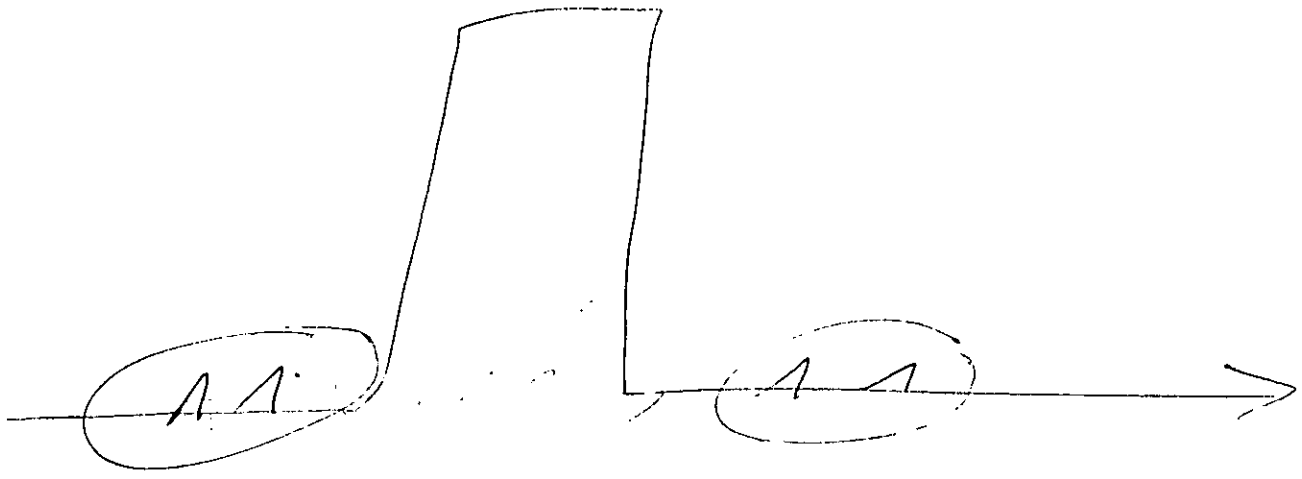
MDL Method Detection Limit
ND Not detected at or above the MDL.

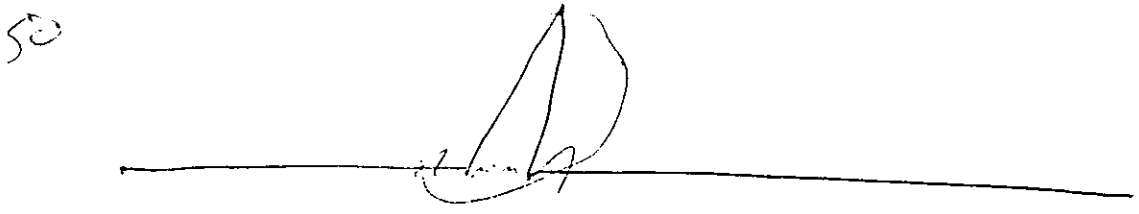
The analyses of soil samples were performed 'as received' and do not reflect analyses on a dry weight basis unless indicated.

The data contained in this report were obtained using EPA or other approved methodologies. All analyses were performed by me or under my supervision.

Susan D. Max
Organic Chemistry Manager

MN-COMP 0044812





APPENDIX I

LABORATORY QA/AC PLAN

PACE LABORATORIES INC.

MN-COMP 0044814

LABORATORY
QUALITY ASSURANCE
PLAN

PACE, Inc.

Submitted by:

_____

Approved by:

Roger C. Splinter, Ph.D.
Vice President

Rev. #0 - DATE: November 1, 1989
Rev. #1 - DATE: May 17, 1990

MN-COMP 0044815

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MN-COMP 0044817

III. INTRODUCTION, PROGRAM OBJECTIVES, AND STATEMENT OF POLICY

This Generic Quality Assurance (QA) Plan is written in compliance with the elements required in the U.S. EPA, "Guidelines and Specifications for Preparing Quality Assurance Program Plans." (QAMS-004 80, September 20, 1980). This document contains the required elements of a Quality Assurance Plan and is prepared in such a way that entire sections can be referenced in subsequent specific project plans. This Laboratory QA Manual defines the systems of quality control and quality assessment that constitute the comprehensive Quality Assurance Program at PACE, Inc. Quality Control consists of specific procedures applied to all phases of analysis from sample receipt through the final reporting of results. The purpose of quality control is to insure that quality goals are met under routine operating procedures. Quality assessment involves the continuous evaluation of data and monitoring of analytical processes for the purpose of insuring that the quality control systems are performing effectively.

PROGRAM OBJECTIVES

The major elements of the overall Quality Assurance Program are summarized below:

- Use of appropriate methodologies by technically competent, well-trained personnel with state-of-the-art instrumentation and equipment.
- Adherence to well-defined standard operating procedures with emphasis on good laboratory and measurement practices.
- Analysis and assessment of quality control samples including (but not limited to) matrix spike samples, duplicate samples, surrogate spikes, blanks, and independent laboratory control standards.
- Participation in external quality evaluation programs such as the EPA Water Pollution and Water Supply (WP & WS) Study Programs.
- Maintainance of accreditation by State, Federal, and other applicable agencies for work performed.
- Monitor internal and external compliance to procedures and to assess the performance of the analytical methods.

STATEMENT OF POLICY:

PACE, Inc. is committed to the policy of providing the highest quality product to its client. The validity and reliability of the information generated is maximized by the adherence to documented quality control procedures and quality assurance protocols. PACE emphasizes the application of sound quality assurance/quality control principles beginning with the initial planning of the project, through all the field and laboratory activities and ultimately to the generation of the final report. The principles of data quality objectives, representativeness, completeness, comparability, precision and accuracy are applied.

PACE is committed to providing the resources, including facilities, equipment and personnel, to ensure the adherence to rigorous QA/AC protocols. Individual Quality Assurance Project Plans are developed for monitoring analytical projects to conform with the established QA/QC protocols.

MN-COMP 0044819

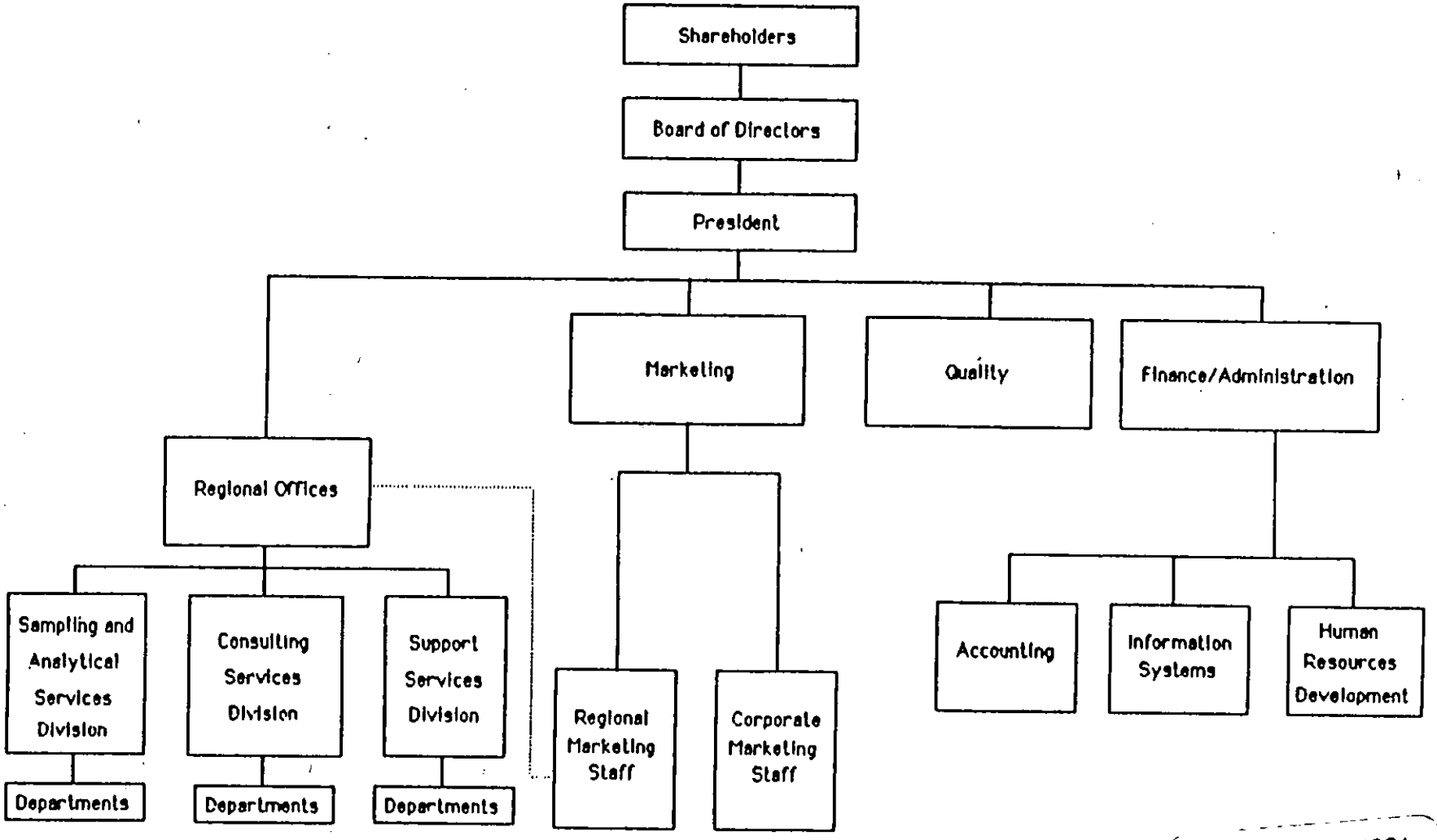
IV. LABORATORY ORGANIZATION AND RESPONSIBILITY

The organizational structures for PACE, Inc. are provided in Exhibits 1, 2, and 3.

Exhibit #1	Illustrates the PACE, Inc. Organizational Structure
Exhibit #2	Illustrates the PACE Corporate Structure with Regional Designation
Exhibit #3	Illustrates a Typical Regional Structure Showing the Quality Responsibilities

Job descriptions are provided within Quality Assurance Project Plans, as they are designed and developed to address specific projects.

PACE Organizational Sructure



MN-COMP 0044821

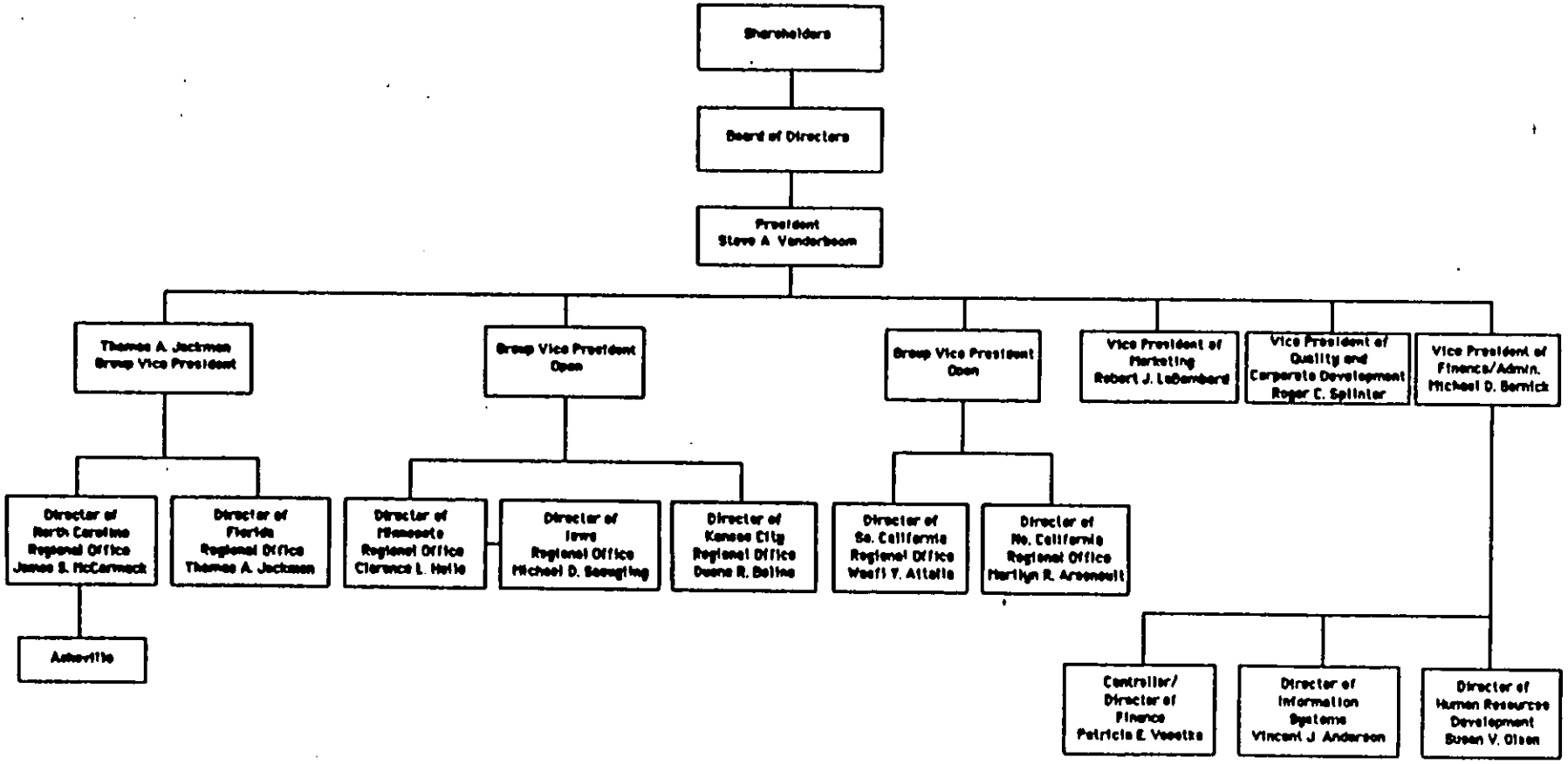
January 1990

EXHIBIT 2

pace laboratories inc.

Corporate Management Personnel
&
Regional Directors

1.1



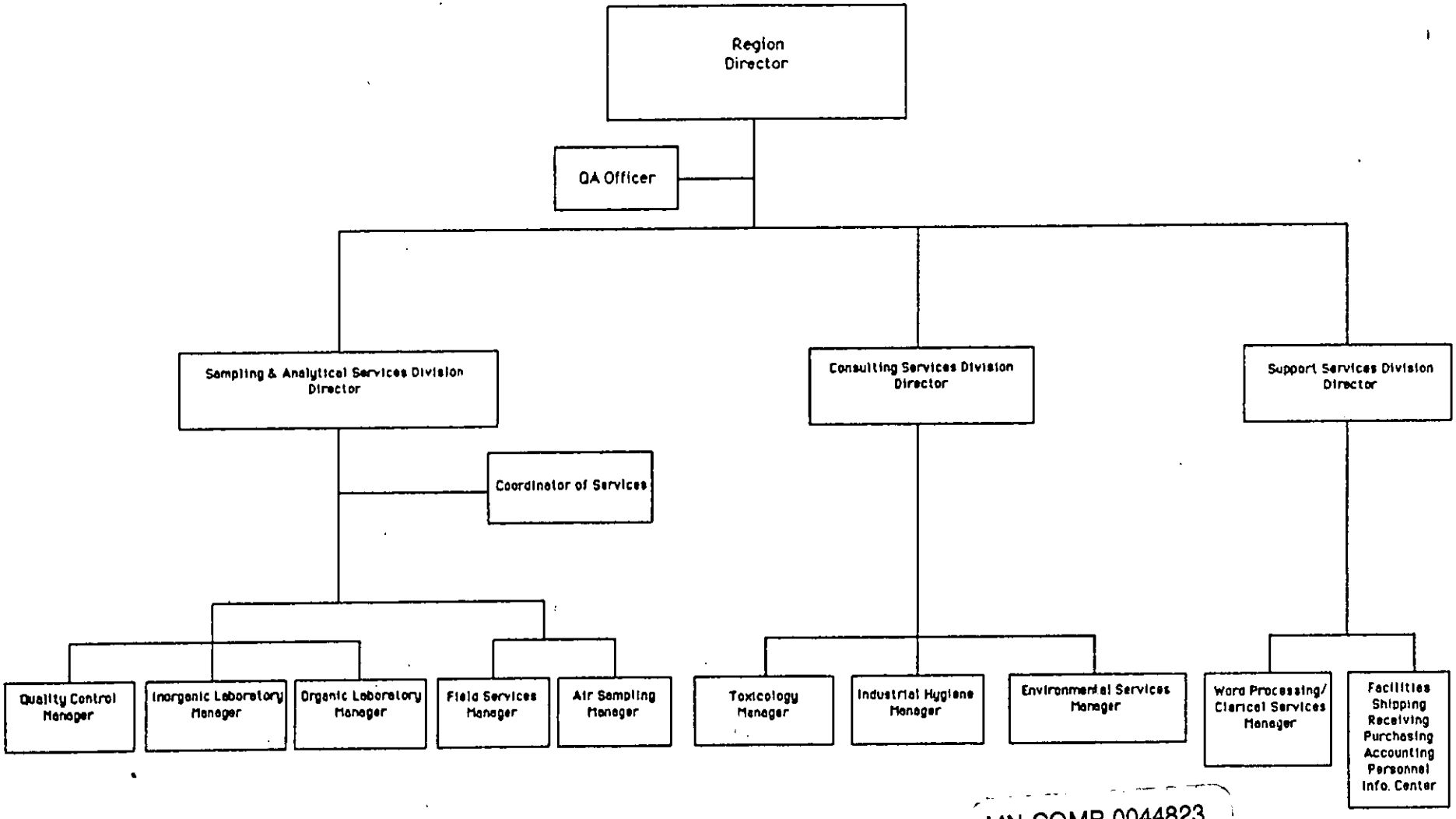
MN-COMP 0044822

January 1990

pace laboratories inc

3.

Region



MN-COMP 0044823

November 1989

V. QUALITY ASSURANCE/OBJECTIVES

A. INTRODUCTION

The purpose of the plan is to define procedures for the documentation, evaluation, validation, and reporting of data. The objective is to provide a uniform basis for sampling, sample handling, instrument maintenance and calibration, methods control, performance evaluation and analytical data generation and reporting. Specific procedures to be used for sampling, chain of custody, calibration of field instruments (pH, conductivity meters, etc.), laboratory analysis, reporting, internal quality control, audits, preventive maintenance, and corrective actions are described in specific sections of this plan. This section addresses the objectives of accuracy, precision, completeness, representative, and comparability.

The QA objectives for precision and accuracy are to achieve the QC acceptance criteria specified in the proposed analytical procedures. For the organic and inorganic procedures, the precision and accuracy guideline requirements are specified in the individual methods.

Field Blanks and duplicates are collected and analyzed to assess field sampling activities. The results check procedural contamination and/or ambient conditions at the site.

Due to the extensive number of organic parameters and potential matrices, the development of precision and accuracy objectives and control limits for every matrix is difficult. This is typically done with (1) matrix spike and matrix spike duplicate compounds which are added to selected samples before extraction and analysis, and/or (2) surrogate spike compounds which are added to every sample, before extraction and analysis. Although the surrogate and matrix spike analyses do not provide statistically valid statements about precision and accuracy for every compound in a sample, they do give the data reviewer enough information to make judgements about precision and accuracy on a sample-by-sample basis.

Inorganic precision and accuracy data are determined by using duplicate samples (precision), matrix spike and laboratory control samples (accuracy). The following procedure is used:

For a duplicate sample analysis, at least one duplicate sample is analyzed per sample matrix type (e.g. water, soil) and concentration (e.g. low, medium) per batch of samples or for each 20 samples received, whichever is more frequent, or as specified by state/project requirements. Samples identified as field blanks can NOT be used for duplicate samples analyses. If two analytical methods are used to obtain the reported values for the same element for a batch of samples (i.e., ICP, GFAA), duplicate samples will be run by each method. The relative percent difference (RPD) for each component is calculated for later use during data assessment.

Completeness is a measure of all information necessary for a valid scientific study. For completeness, it is expected that the methodology proposed for chemical characterization of the samples collected will provide data meeting QC acceptance criteria for at least 90% of all samples collected. Completeness may also be defined as a comparison of the number of tests successfully completed (with acceptable QC) to the number of tests requested.

Representativeness is a qualitative element that is related to the ability to collect a sample that reflects the characteristics of that part of the environment that is to be assessed. Sample representativeness is dependent on the sampling techniques used and is considered individually for each project. It is specifically addressed in each work plan.

Comparability is also considered during preparation of the work plan. The objective of comparability is to ensure that results of similar activities conducted by different parties are comparable. For example, the use of EPA-approved or other methods and procedures ensures comparability with data from previous or following studies.

MN-COMP 0044825

VI. SAMPLING PROCEDURES

PACE, Inc. receives samples collected by clients and also has the capability to perform sampling for clients. PACE prepares sample containers in accordance with EPA-issued guidelines for container and preservative requirements. Technical assistance from all supervisory and management staff is available to clients if needed.

A. BOTTLE PREPARATION PROCEDURES

The following is the procedure used for Sample Container Preparation:

1. Purpose

The purpose of this Standard Operating Procedure (SOP) is to provide clear, consistent methods for preparing containers for sample collection. Following this procedure will facilitate accurate and consistent analytical results.

2. Application

The policies and procedures contained in this SOP are applicable to the personnel in the container preparation area.

3. General Policies

a. Always use new bottles when preparing containers for sampling (exception: One gallon, amber glass bottles used for transporting deionized water can be re-used after proper cleaning). These may be commercially-obtained precleaned bottles.

b. Always wear disposable latex gloves when handling sample containers.

c. Several preparation procedures require the use of acids as a preservative or cleaning agent.

   1. Be extremely careful when working with acids.

   2. Always wear safety glasses and a laboratory coat.

d. Bottle labels will list the preservatives added and the analysis to be performed, minimizing the probability for error.

e. When shipping pre-preserved bottles containing corrosives or oxidizers, consult proper DOT regulations.

4. Procedures: Containers for Aqueous Samples

a. Volatile Organic (VOA) Sample Container Preparation

1. Vial cleaning procedures.

a. Wash an entire package of vials in one washing session. Never store open packages of vials.

b. Soak the vials in cleaning solution (one capful of Acationox detergent, American Scientific, per sink of hot tape water) for 5 minutes.

c. After soaking, thrice rinse each vial thoroughly with hot tap water.

d. Thrice rinse each vial thoroughly with carbon filtered, deionized water (CFDI).

e. Stack rinsed vials in a drying tray (metal tray lined with aluminum foil, dull side exposed).

f. Bake the vials at 103°C for a minimum of four hours.

g. Cover baked vials with aluminum foil such that the dull side of the foil is in contact with the vials and set trays on a lab bench to cool.

2. Septum and cap cleaning procedures.

a. Clean entire packages of caps and septums. Do not store open bags.

b. Clean caps and septums separately.

c. The same procedures used for vial cleaning are used for cap and septum cleaning. Follow B through D in Section 1.

d. Spread evenly and thinly in drying trays to facilitate drying.

e. Dry for one hour at 103°C. Extended periods of heat can damage caps and septums.

f. Place clean caps and septums into a 1500 mL glass container which has been cleaned.

MN-COMP 0044827

3. Assembling VOA vials.

   a. Place ten clean vials upright in a vial box with dividers. Recover drying trays with foil after vials have been removed.

   b. Add 4 drops of concentrated hydrochloric acid (HCL).

   c. Add (10 mg/40 ml) 0.008% sodium thiosulfate if chlorine is present (e.g. drinking water).

   d. Assemble a cap by inserting a septum in the cap such that the Teflon (white) side is exposed to the interior of the vial.

   e. Cap each vial tightly.

   f. Repeat assembly procedures until all vials are capped.

b. **Semi-Volatile Container Preparation**

1. Glass, amber jars (250, 500, and 1000 mL) with Teflon lined caps are used to hold samples for semi-volatile analysis.

2. Bottles and cap liners are rinsed with reagent grade acetone. (Acetone is a target compound for EPA 8240 and an HSL compound. If acetone interferes with the analyses, use of hexane and/or methanol may be an alternative, as specified in the method.)

   a. Acetone is highly flammable and acetone vapors are toxic.

   b. When using acetone, wear latex gloves, safety glasses and work in a vented hood.

   c. Pour a small amount of reagent grade acetone in the bottle to be rinsed.

   d. Cap the bottle with a Teflon lined cap.

   e. Shake the bottle making sure the acetone comes in contact with all sides of the bottle and the cap liner.

   f. Empty the bottle, invert it on a drying rack and allow it to air dry.

   g. Cap the bottle with a rinsed cap.

   h. Attach a blue dot to the top of the cap indicating the container has been acetone rinsed.

MN-COMP 0044828

c. **Preparation of Containers for Metals Analysis**

1. Polyethylene bottles (125, 250, 500, and 1000 mL) with plastic caps are used to hold water samples to be analyzed for metals.

2. Add a small amount of 1:1 nitric acid to a bottle.

3. Cap the bottle and shake vigorously, being certain the acid comes in contact with all interior surfaces.

4. Empty the container.

5. Rinse the bottle and cap thrice with deionized water.

6. Add the appropriate amount of 1:1 nitric acid, cap, and place a pink or red dot on the cap to indicate the container contains nitric acid preservative.

Container Size	Quantity 1:1 Nitric Acid
125 mL	1/4 mL
250 mL	3/8 mL
500 mL	3/4 mL
1000 mL	1 1/2 mL

d. **Nutrient Container Preparation**

1. Polyethylene bottles (250, 500, and 1000 mL) with plastic caps are used to hold water samples for nutrient analysis.

2. Add the appropriate amount of sulfuric acid, diluted 1:1 from concentrate with carbon filtered deionized water, to each container.

Container Size	Quantity 1:1 Sulfuric Acid
250 mL	3/8 mL
500 mL	3/4 mL
1000 mL	1 1/2 mL

3. Attach an orange dot sticker to the cap of each prepared container.

MN-COMP 0044829

e. **Cyanide Container Preparation**

1. Polyethylene containers (1000 mL) with plastic caps are used to hold samples for cyanide analysis.

2. Add one gram (8 to 10 pellets) or concentrated solution of sodium hydroxide and one gram of ascorbic acid to each container. If chlorine is present in the sample, use only ascorbic acid.

3. Attach a green dot sticker to the cap of each prepared container.

4. Cyanide containers have a short shelf life; do not prepare in large quantities. (See #6b)

f. **Phenol Container Preparation**

1. Clear glass, small mouth containers (1000 mL) with "poly seal" caps are used to hold samples for phenol analysis.

2. Add 1 1/2 mL of sulfuric acid, diluted 1:1 from concentrate with carbon-filtered deionized water, to each container.

3. Attach an orange dot sticker to the cap of each prepared container.

g. **Oil and Grease Container Preparation**

1. Clear glass, wide-mouth containers (1500 mL) with foil lined caps are used to hold samples for oil and grease analysis.

2. 1000 mL amber glass containers with Teflon lined caps are acceptable.

3. Add five mL of 1:1 sulfuric acid to each container.

4. Attach an orange dot sticker to the cap of each prepared container.

MN-COMP 0044830

h. **Sulfide Container Preparation**

1. Polyethylene bottles (250 mL) with plastic caps are used to hold samples for sulfide analysis.

2. Add 0.5 mL of zinc acetate and NaOH (to pH greater than 9) to each container.

3. Attach a white dot sticker to the lid of each prepared container.

i. **Total Organic Carbon (TOC) Container Preparation**

1. Polyethylene bottles (250 mL) with plastic caps are used to hold samples for TOC analyses.

2. Add 0.25 mL of 1:1 sulfuric acid.

3. Attach an orange dot sticker to each prepared container.

j. **Radiological Containers Preparation**

1. Polyethylene bottles (one gallon) with wax coated, paper lined caps are used to hold samples for radiological analysis.

2. Add five mL of 1:1 nitric acid to each other.

3. Attach a pink dot sticker to the cap of each prepared container.

k. **CFDI Water Container Preparation**

1. One gallon, small mouth, amber glass bottles with Teflon lined caps are used to transport CFDI water.

2. These containers can be reused after appropriate cleaning.

3. Wash the bottle in hot tap water and Acationox detergent (American Scientific Products one cap of detergent per sink of water).

4. Thrice rinse the bottle with hot tap water.

5. Thrice rinse with CFDI water.

6. Bake the bottle at 103° until dry (at least four hours).

7. Remove the bottle from the oven, cover the mouth with foil, and let cool.

8. Cap the bottle with a new, Teflon lined cap.

1. **Other Container Preparation**

1. Polyethylene bottles (125, 250, 500, and 1000 mL) with plastic caps are used to hold samples for general chemistry analysis.

2. Clear glass bottles (125, 500, and 1000 mL) with foil lined caps are used to hold samples with high oil content to be analyzed for general chemistry parameters.

3. Amber glass, small neck bottles (500 mL) with Teflon-lined caps are used to hold samples for total organic halide (TOX) analysis.

5. **Procedure: Containers for Soil Samples**

a. **Volatile Organic Analysis Sample Container Preparation for Soil Samples**

1. Wide-mouth, amber glass vials (65 mL) with Teflon-lined caps are used to hold samples for volatile organic analysis.

2. The same preparations procedure is used as is used in preparation of VOA containers for aqueous samples except no preservative is added to the containers. (See #4a)

b. **Semi-Volatile Container Preparation**

1. Wide-mouth, amber glass jars (250, 500, and 1000 mL) with Teflon-lined caps are used to hold samples for semi-volatile analysis.

2. Preparation procedures are identified as those used in preparation of semi-volatile containers for aqueous samples. (See #4b)

c. **Inorganic Container Preparation**

1. Polyethylene bottles (125, 250, 500, and 1000 mL) with plastic caps are used to hold samples for inorganic analysis.

2. If the samples contain a large quantity of oil, clear glass jars (125, 500, and 1000 mL) with foil lined caps are used instead of the polyethylene bottles.

3. Container preparation procedures are identified as those used in preparation of general containers for aqueous samples.

6. Sample Container Quality Control and Lot Assignment

a. Bottles of a given type, prepared in one session, constitute a lot.

b. Lot sizes will vary, depending on the demand for a given bottle type.

1. A lot should be large enough to meet one week's demand for the given bottle type. Containers for samples to be analyzed for cyanide and VOA are exceptions.

2. Due to an extremely short shelf life, cyanide containers should be prepared in lot sizes required for approximately 2 days demand and prepared as necessary.

3. Due to spatial limitations, VOA vials should be prepared daily.

c. When a lot is prepared, it is assigned an eight character lot code.

1. The first two characters indicate the bottle type.

GN: General Unpreserved
MU: Metals Unfiltered
NT: Nutrients
CN: Cyanide
PH: Phenol
OG: Oil and Grease
SD: Sulfide
GV: GC VOA Water
GC: GC VOA Solid
GL: GC Q-Amber
GS: GC Sm Amber
GM: GC Misc. Refrigerated
HW: Hazardous Waste
OC: Total Organic Carbon
OX: Total Organic Halides
RA: Radiological

A complete listing of codes can be found in Section I of the LDMS User's Manual

2. The next three digits indicate the bottle size.

125: 125 mL
250: 250 mL
500: 500 mL
000: 1000 mL and one gallon

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3. The last three digits are the lot number. They are assigned in sequential order.

4. When the lot code is assigned, it is listed on the Lot Log Sheet (Exhibit 4).

5. The person who prepared the containers initials the Lot Sheet next to the lot code.

One container per lot is used to hold a deionized water blank. This blank is analyzed to determine the level of contamination in the lot.

- The appropriate analyses are performed for the given container type.
- Use carbon-filtered, deionized water for all blanks.
- Fill all containers, except VOA's, up to the neck of the bottle.
- Fill VOA's such that no bubbles are trapped when the vial is capped.
- Label each blank with the following information:

  Client: PACE, QC

  Sample description: (Lot Code)
  Date Collected:
  Collected by: (Initials)
  Time Collected:
  Analysis: (As indicated for the bottle type)
  Preservative: (Check appropriate preparation)

6. Complete a Chain-of-Custody form to accompany the samples. Client, sample description, time sampled, preservative, analysis: as listed on the bottle label.

   Report to: (Name of container preparation person)

   Project Name: Container QA

   Requested Due Date: Priority 2

   Matrix: H_2O

   Route samples and Chain-of-Custody to Sample Check-in.

EXHIBIT 4

LOT LOG SHEET

LOT #	INIT.	LOCATION				LOT #	INIT.	LOCATION			
		OUT	SHELF	TIER 1	TIER 2			OUT	SHELF	TIER 1	TIER 2

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7. Sample Analysis Data Entry Form Tracking for Bottle Prep QC

Forms will be kept in an Outstanding QC file.

a. When a Report of Laboratory Analysis is received for the project, the Sample Analysis Data Entry Form is moved to the Complete QC file.

b. A copy of the Report of Laboratory Analysis is then routed to QC Data Entry and data are entered into the appropriate data base.

c. The data are reviewed by the supervisor of the Bottle Preparation Area and signed off as being certified "clean" if the following criteria are met. After subtraction of the daily DI water blank, all laboratory contaminants shall be less than 2 times the detection limit. If this criterion is not met, the bottles are re-cleaned and another blank analyzed.

The following are guidelines for the addition of sample preservatives to containers. Check the list of analyses to be performed and determine the types and sizes of containers needed and required.

Add the appropriate preservative to its designated container under a hood. Pack the bottles into a cooler with blue ice for the client.

PREPARING ACID PRESERVATIVES

All acid preservatives are prepared using a concentration of 1:1 acid to water. Reagent grade acids are used when making the 1:1 concentrations.

COMMON ANALYSES PRESERVATIVES

Analysis	Bottle Type	Preservative	pH	Approx. Amount
Metals	1 liter plastic	1:1 HNO_3	2.0	1.5 mL
EPA 602/8020	2 XVOA vials	1:1 HCl	2.0	3 drops
Cyanide	1 liter plastic	NaOH tablets	12.0	4-5 tabs
Sulfide	500 mL plastic	Zn acetate, NaOH	9.0	2 mL Zn acetate 2 tabs NaOH
Ammonia	1 liter plastic/ glass	1:1 H_2SO_4	2.0	1.5 mL
Phenolics	1 liter amber glass	1:1 H_2SO_4	2.0	1.5 mL

Sample containers, preservatives, and holding times for representative analytical groups are listed in Table 1. Refer to 40CFR 136 for complete information and details.

pace laboratories, inc.

Inorganic Analytical Guide

TABLE 1

Common Non-Metals Analysis

Parameter	Typical Method(s)	Comparable SW-846 Method(s), If Applicable	Sample Container/ Preservative*	Preferred Volume (ml)*	EPA Holding Time*
Acidity	EPA 305.1		P, G/4°C	100	14 Days
Alkalinity	EPA 310.1/310.2		P, G/4°C	100	14 Days
Bacteria, Total Coliform	Standard Method 909A	9131/9132	WK/4°C	100	6 Hours
Bacteria, Fecal Coliform	Standard Method 909C		WK/4°C	100	6 Hours
Bacteria, Total Plate	Standard Method 907		WK/4°C	100	48 Hours
BOD, 5 Day	EPA 405.1		P, G/4°C	500	48 Hours
BOD, 5 Day Carbonaceous	EPA 405.1		P, G/4°C	500	48 Hours
Boron	EPA 212.3		HNO_3< 2	100	6 Months
Bromide	EPA 320.1		P, G	200	28 Days
COD	EPA 410.1/410.2		P, G/4°C, H_2SO_4	250	28 Days
Color	EPA 110.3		P, G/4°C	250	48 Hours
Chloride	EPA 325.2/325.3	9251/9252	P, G	100	28 Days
Chlorine, Residual	EPA 330.1		P, G	500	Immed.
Cyanide, Total	EPA 335.2	9010	P, G/4°C, NaOH pH > 12	500	14 Days
Fluoride, Total	Standard Method 413A		P	500	28 Days
Fluoride, Electrode	EPA 340.2		P	200	28 Days
Fluoride, (SPADNS)	EPA 340.1		P	500	28 Days
Grease & Oil	EPA 413.1	9070/9071	G/4°C, H_2SO_4	1500	28 Days
Hardness, Total ($CaCO_3$)	EPA 130.2		P, G/4°C	250	6 Months
Ion Chromatography (Including common anions such as: Br^-, Cl^-, F^-, NO_2^-, NO_3^-, $PO_4^{\equiv}$, $SO_4^{=}$, SO_3^-, & others)	EPA 300		P, G/4°C	100	28 Days
Nitrogen, Ammonia	EPA 350.1/350.2		P, G/4°C, H_2SO_4	500	28 Days
Nitrogen, Kjeldahl	EPA 351.2/351.3		P, G/4°C, H_2SO_4	1000	28 Days
Nitrogen, Nitrate	EPA 353.2	9200	P, G/4°C	100	48 Hours
Nitrogen, Nitrite	EPA 353.2		P, G/4°C	100	48 Hours
Nitrogen, Nitrate & Nitrite	EPA 353.2		P, G/4°C, H_2SO_4	100	28 Days
Nitrogen, Organic	EPA 351.3		P, G/4°C, H_2SO_4	100	28 Days
Odor	EPA 140.1		G/4°C	1000	24 Hours
Oxygen, Dissolved	EPA 360.1		G - Bottle & Top	500	Immed.
pH	EPA 150.1	9040/9041/9045	P, G/4°C	100	Immed.
Phenol	EPA 420.1	9065	G/4°C, H_2SO_4	1000	28 Days
Phosphorus, Total	EPA 365.1/365.2		P, G/4°C, H_2SO_4	100	28 Days
Phosphorus, Ortho	EPA 365.1/365.2		P, G/Filter	100	48 Hours
Silica, Dissolved	EPA 370.1		P/4°C	100	28 Days
Solids, Total	EPA 160.3		P, G/4°C	100	7 Days
Solids, Total Volatile	EPA 160.4		P, G/4°C	100	7 Days
Solids, Total Dissolved	EPA 160.1		P, G/4°C	100	7 Days
Solids, Total Suspended	EPA 160.2		P, G/4°C	100	7 Days
Solids, Suspended Volatile	Standard Method 209A		P, G/4°C	100	7 Days
Solids, Settleable	EPA 160.5		P, G/4°C	1 Gal.	48 Hours
Specific Conductance	EPA 120.1	9050	P, G/4°C	100	28 Days
Sulfate	EPA 375.4	9036/9038	P, G/4°C	100	28 Days
Sulfide, Total	EPA 376.1	9030	P, G/4°C, NaOH pH > 9, Zn acetate	500	7 Days
Sulfite	EPA 377.1		P, G	500	Immed.
Surfactants	EPA 425.1		P, G/4°C	250	48 Hours
Total Organic Carbon	EPA 415.1	9060	P, G/4°C HCl pH < 2	100	28 Days
Total Organic Halogen	EPA 450.1	9020/9021	GA/4°C	500	14 Days
Turbidity	EPA 180.1		P, G/4°C	100	48 Hours

Sample Containers
P Plastic, polyethylene bottle with a polypropylene cap
G Glass
WK Whirl-Pak®
GA Glass, amber bottle with a Teflon® lined cap

Preservatives
H_2SO_4 Sulfuric Acid
HNO_3 Nitric Acid
NaOH Sodium Hydroxide

*Sample container, preferred volume and holding time are for water matrix. Consult laboratory for solid matrix sampling recommendations.

NOTE:
The methods shown are those commonly employed in performing environmental analyses. It is not intended to be inclusive of all possible EPA analytical methods or to indicate that any laboratory routinely provides the methods or parameters shown.

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TABLE 1 (CONT.)

Common Metals Analysis

Solid
Sample Container: Plastic or glass
Preservative: 4°C
Preferred Volume: 100 grams
EPA Holding Time: 6 Months

Water
Sample Container: Plastic or glass
Preservative: HNO_3 pH < 2
Preferred Volume: 100 ml
EPA Holding Time: 6 Months

	FLAME**		FURNACE	
Parameter	EPA or Standard Method	SW-846 Method	EPA or Standard Method	SW-846 Method
Aluminum	202.1	7020	202.2	NA
Antimony	204.1	7040	204.2	7041
Arsenic	206.3**	7060	206.2	7061
Barium	208.1	7080	208.2	NA
Beryllium	210.1	7090	210.2	7091
Cadmium	213.1	7130	213.2	7131
Calcium	215.1	7140	NA	NA
Chromium, Total	218.1	7190	218.2	7191
Chromium, Hexavalent	Standard Method 312B	7195-7198	218.5	NA
Cobalt	219.1	7200	219.2	7201
Copper	220.1	7210	220.2	NA
Gold	231.1	NA	231.2	NA
Iron, Total	236.1	7380	236.2	NA
Lead	239.1	7420	239.2	7421
Lithium	Standard Method 317B	NA	NA	NA
Magnesium	242.1	7450	NA	NA
Manganese	243.1	7460	243.2	NA
Mercury (Cold Vapor)	245.1	7470/7471	NA	NA
Molybdenum	246.1	7480	246.2	7481
Nickel	249.1	7520	249.2	NA
Potassium	258.1	7610	NA	NA
Selenium	270.3**	7740	270.2	7741
Silicon	Standard Method 303C	NA	NA	NA
Silver	272.1	7760	272.2	NA
Sodium	273.1	7770	NA	NA
Strontium	Standard Method 303A	NA	NA	NA
Tellurium	Standard Method 303A	NA	Standard Method 304	NA
Thallium	279.1	7840	279.2	7841
Tin	282.1	7870	282.2	NA
Titanium	283.1	NA	283.2	NA
Vanadium	286.1	7910	286.2	7911
Zinc	289.1	7950	289.2	NA

Metals by Inductively Coupled Plasma (ICP): Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Si, Ag, Na, Tl, V, Zn: EPA ICP Method 200.7 or SW-846 Method 6010

**Flame A.A. or Hydride

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Organic Analytical Guide

TABLE 1 (CONT.)

Water and Wastewater Analysis

EPA Method	Parameter	Technique	Sample Preparation	Sample Container/ Preservative	Preferred Volume (ml)	EPA Holding Time
601	Purgeable Halocarbons	GC-HALL	P&T	VOA/4°C	40	14 Days
602	Purgeable Aromatics	GC-PID	P&T	VOA/4°C	40	14 Days
603	Acrolein and Acrylonitrile	GC-FID	P&T	VOA/4°C, pH Adjusted	40	14 Days
604	Phenols	GC-FID	EXT	GA/4°C	1000	7/40 Days
605	Benzidines	HPLC-Electrochem	EXT	GA/4°C	1000	7/40 Days
606	Phthalate Esters	GC-ECD	EXT	GA/4°C	1000	7/40 Days
607	Nitrosamines	GC-NPD	EXT	GA/4°C	1000	7/40 Days
608	Organochlorine Pesticides and PCB's	GC-ECD	EXT	GA/4°C	1000	7/40 Days
609	Nitroaromatics and Isophorone	GC-FID + ECD	EXT	GA/4°C	1000	7/40 Days
610	Polynuclear Aromatic Hydrocarbons	HPLC-UV/Fluor or GC-FID	EXT	GA/4°C	1000	7/40 Days
611	Haloethers	GC-HALL	EXT	GA/4°C	1000	7/40 Days
612	Chlorinated Hydrocarbons	GC-ECD	EXT	GA/4°C	1000	7/40 Days
613	2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin	GC/MS	EXT	GA/4°C	1000	7/40 Days
614	Organophosphonate Pesticides	GC-FPD or NPD	EXT	GA/4°C	1000	7/40 Days
615	Chlorinated Herbicides	GC-ECD or Hall	EXT	GA/4°C	1000	7/40 Days
624	Purgeables	GCMS	P&T	VOA/4°C	40	14 Days
625	Base/Neutrals, Acids and Pesticides	GC/MS	EXT	GA/4°C	1000	7/40 Days

Solid Waste Analysis

EPA Method	Parameter	Technique	Sample Preparation	Sample Container/ Preservative	Preferred Volume	EPA Holding Time
8010	Purgeables Halogenated Volatile Organics	GC-HALL	5030	VOA/4°C	*	14 Days
8015	Purgeables Non-Halogenated Volatile Organics	GC-FID	5030	VOA/4°C	*	14 Days
8020	Aromatic Volatile Organics	GC-PID	5030	VOA/4°C	*	14 Days
8030	Acrolein, Acrylonitrile, Acetonitrile	GC-FID	5030	VOA/4°C	*	14 Days
8040	Phenols	GC-FID	3550	GA/4°C	*	14 Days or 7/40 Days**
8060	Phthalate Esters	GC-ECD	3550	GA/4°C	*	14 Days or 7/40 Days**
8080	Organochlorine Pesticides and PCB's	GC-ECD	3550	GA/4°C	*	14 Days or 7/40 Days**
8090	Nitroaromatics and Cyclic Ketones	GC-FID or ECD	3550	GA/4°C	*	14 Days or 7/40 Days**
8100	Polynuclear Aromatic Hydrocarbons	GC-FID	3550	GA/4°C	*	14 Days or 7/40 Days**
8120	Chlorinated Hydrocarbons	GC-ECD	3550	GA/4°C	*	14 Days or 7/40 Days**
8140	Organophosphorous Pesticides	GC-FPD or NPD	3550	GA/4°C	*	14 Days or 7/40 Days**
8150	Chlorinated Herbicides	GC-ECD or HALL	3550	GA/4°C	*	14 Days or 7/40 Days**
8240	Volatile Organics	GC/MS	5030	VOA/4°C	*	14 Days
8250	Semi-Volatile Organics	GC/MS	3550	GA/4°C	*	14 Days or 7/40 Days**

Technique

Instruments:
- GC — Gas Chromatograph
- GC/MS — Gas Chromatograph-Mass Spectrometer
- HPLC — High Performance Liquid Chromatograph

Detectors:
- ECD — Electron Capture
- Fluor — Fluorescence
- FID — Flame Ionization
- FPD — Flame Photometric
- HALL — Electrolytic Conductivity
- NPD — Nitrogen Phosphorous
- PID — Photoionization
- UV — Ultraviolet

Sample Preparation Method Used:
- EXT — Extraction Methods that could be used include 3510, 3520, 3540 and 3550.
- P&T — Purge and Trap
- 3510 — Separatory Funnel Extraction of Liquid Samples
- 3520 — Continuous Liquid-Liquid Extraction
- 3540 — Soxhlet Extraction of Solid Samples
- 3550 — Sonication Extraction of Solid Samples
- 5030 — Purge and Trap, Direct Injection of Liquid Samples, Solid Samples Mixed then Injected.

Sample Container/Preferred Volume:
- GA — Glass Amber Bottle with Teflon Lined Cap
- VOA — Volatile Organic Analysis; 40 ml Amber Glass Vial with Teflon Septum
- * — Contact Laboratory for recommendation

EPA/Holding Time:
- 7/40 — 7 Days for Extraction and 40 Days for Analysis
- ** — Depends upon Sample Matrix

NOTE:
The methods shown are those commonly employed in performing environmental analyses. It is not intended to be inclusive of all possible EPA analytical methods or to indicate that any laboratory routinely provides the methods or parameters shown.

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B. SAMPLING PROCEDURE FOR GROUNDWATER AND SURFACE WATER

Groundwater and surface water sampling techniques employed by PACE are in accordance with the EPA Regional IV Standard Operating Procedures and Quality Assurance Manual, and the PACE Field Services SOP Manual.

Trained field sampling crews are dispatched to the site for sample collection and deliver collected samples to the laboratory.

For groundwater sampling, the water level within the well is determined prior to sampling using an electronic water level meter, then recorded on the field log data sheet with all additional pertinent information (Exhibit 5). The volume of water in the casing is calculated and three to five times that volume is purged from the well. In all cases, the well is purged until the conductivity, temperature, and pH have all stabilized.

Samples from monitoring wells are taken with a precleaned Teflon or stainless steel bailer. Bailers are precleaned by washing first with detergent, then rinsed with tap water, triple rinsed with deionized water, and baked to dryness. Precleaned bailers are used between each sampling point.

All samples collected for metals analysis are preserved with nitric acid. The bailer to be used for sampling is used for purging two inch diameter wells and a gas-driven centrifugal pump is used when larger volumes of water need to be removed (static water levels of less than 25 feet). Wells with static water levels greater than 25 feet and casing diameters greater than 3 inches are purged using a submersible pump.

Quality Control Protocols:

A. All Quality Control (QC) procedures are as specifically required by the method, state, or project requirements.

B. The USEPA requires as a minimum one matrix spike, one duplicate or MSD, one blank, per set of samples of similar matrix with a maximum of 20 samples per set. This is a recommended minimum frequency for QC, unless stated otherwise by method, state or project requirements. A client may also request more frequent QC in which case it will be necessary to collect additional samples.

EXHIBIT 5

FIELD LOG DATA SHEET
PACE, Inc.
WELL SAMPLING

Client:_____ Project:_____ Project #:_____

Sample Site:_____

Well Identification and Description: (Locked_____ Not Locked_____) Key#:_____

ID inches_____PVC:_____Steel:_____Stainless Steel:_____Other:_____Labeled:_____

Total Well Depth (from top of casing)_____meters_____feet Elevation:_____feet

Static Water Level (from top of casing) Before Prepumping:_____meters_____feet

Static Water Level (from top of casing) At Time of Sampling:_____meters _____feet

Static Water Elevation:_____feet Water Column:_____feet One Casing Volume_____gal

Date Prepumped:_____Time Prepumped:_____Volume Prepumped:_____gal

Prepumping Method Used:_____ Pump Rate:_____gpm

Date Sampled:_____Time Sampled:_____Sampling Equipment Used:_____

Sample Temperature:_____°C Sample pH:_____Sample Specific Conductance:_____umho/cm2

Field Measurements Temperature Corrected: Yes___No___Metals Filtered in Field: Yes___No__

Weather Conditions:_____

Observations:_____

_____

Sample Description:_____

Name and Affiliation of Sampler(s)_____

Name and Affiliation of Inspector(s) Present:_____

STABILIZATION TEST

Time	pH	Specific Conductance (umhos/cm2)	Temp. (°C)	Cumulative Volume Removed (gallons)

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C. SAMPLING PROCEDURES FOR SOILS AND SEDIMENTS

Soil and sediments are collected according to procedures in the latest edition of Test Methods for Evaluating Solid Waste, EPA-SW-846.

Soil sampling is designed to determine the depth and range of contamination from spillage or the leaching effects of rain on materials stored above ground. If borings are required, the depth and placement of the borings are planned by the project manager/subcontractor and client, using the suspected range of contamination as a guide.

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VII. SAMPLE CUSTODY

A. SAMPLE RECEIPT

Sample shipments are received at the sample receiving area. Sample custodians verify the number of shipping containers received against the numbers listed on the shipping manifest/chain-of-custody. Any damage to the shipping containers or other discrepancy observed is noted on the chain-of-custody before signing it. A copy is kept for future reference.

The external chain-of-custody must be signed by the carrier for relinquishment of samples and signed by sample custodian personnel for sample receipt. The actual chain-of-custody may be supplied by PACE, (Exhibit 6), or may be the client's own form. The chain-of-custody remains in the project file at all times.

B. SAMPLE VERIFICATION

Upon arrival of a sample shipment, sample control personnel perform sample inspection. PACE's Sample I.D. and Condition Sheet (Exhibit 7) serves as a check-off list of procedures to follow and as documentation of the following:

1. Presence/absence of custody seals or tapes of the shipping containers and the condition of the seals (i.e., intact, broken).

2. Presence/absence of chain-of-custody; (if present, is it complete?)

3. Presence/absence of sample tags; (if present, are they removable?)

4. Agreement/non-agreement between the sample tags, chain-of-custody, and any client documentation.

5. Condition of the samples when received, including:

   - Cold or ambient
   - Intact, broken/leaking
   - Headspace in VOA vials
   - Sample holding time (has it been exceeded)?
   - Sample pH (less than 2 if acid preserved)

If discrepancies are found, the PACE project manager is contacted immediately (verbally and by using the Discrepancy Report Form) (Exhibit 8). If the project manager is not available, the QC manager is contacted for further directions. A copy of a Discrepancy Report Form is attached to the project data package.

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EXHIBIT 6

pace laboratories, inc.

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CHAIN-OF-CUSTODY RECORD
Analytical Request

Client

Address

Phone

Report To:

Bill To:

P.O. # / Billing Reference

Project Name / No.

Pace Client No.

Pace Project Manager

Pace Project No.

*Requested Due Date:

Sampled By (PRINT):

Sampler Signature

Date Sampled

ITEM NO.	SAMPLE DESCRIPTION	PH	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA			ANALYSES REQUEST	REMARKS
1														
2														
3														
4														
5														
6														
7														
8														

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT / DATE	RETURNED / DATE	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME

Additional Comments

MN-COMP 0044844

SAMPLE I.D. AND CONDITION FORM

Client: _____
Project No.: _____
Date Received: _____

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Complete checklist (A) during sample receipt. If any items are marked "NO," complete section (B) of this form. Otherwise, go to record samples.

			YES	NO
(A)	1.	Are there custody seals or tapes on the shipping container?	___	___
	2.	Are custody seals on the shipping container intact?	___	___
	3.	Is there a completed Chain-Of-Custody (C-O-C)?	___	___
	4.	Do the numbers of samples received and the sample matrices agree with C-O-C?	___	___
	5.	Are there tags attached to each sample?	___	___
	6.	Are sample tags, sample containers and C-O-C all in agreement?	___	___
	7.	Is the C-O-C complete with requested analyses?	___	___
	8.	Are the samples preserved correctly?	___	___
	9.	Is there enough sample to do all analyses?	___	___
	10.	Do the samples have the proper temperature?	___	___
	11.	Are the sample containers intact (e.g., not broken, leaking)?	___	___
	12.	Are VOA vials head-space free?	___	___
	13.	Are all samples within the holding times for requested analyses?	___	___
	14.	Is pH recorded for non-VOA's?	___	___

(B) Explain "NO" item here: _____

_____

_____

Send a copy of this form to Project Manager with Discrepancy Report Form. Copy of both forms remain in the QC file.

Custodian Signature: _____

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EXHIBIT 8

PACE, INC.
DISCREPANCY REPORT FORM

Urgency Level: 1(_____) Requires immediate attention
2(_____) Requires attention today
3(_____) Requires attention this week

Initiator: _____ Client: _____
Date: _____
Project # _____

Sample(s) # _____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

Discrepancy (if more space needed, use the back of this form): _____

_____

_____

To QC Manager: _____ Date: _____

Client Notified? YES ( ) NO ( ) Date & Time: _____

Project Manager Notified? YES ( ) NO ( ) Date & Time: _____

QC Response: _____

_____

_____

Project Manager Response: _____

_____

_____

Cause and Resolution (proposed or carried out): Completed by: _____

_____

_____

_____

Manager's Initials:

PM Signature: _____ Date: _____

QC Signature: _____ Date: _____

cc: Project File

MN-COMP 0044846

C. SAMPLE LOG-IN

1. General Policies

a. Upon completing sample receipt/custody procedures, all sample and analysis data must be complete and documented on the chain-of-custody or accompanying forms for input into the Lab Data Management System (LDMS).

Sample and analysis data must include:

1. Client name and contact
2. Client number
3. PACE project number
4. PACE project manager
5. Sample descriptions
6. Due date
7. List of analyses requested

b. Sample and requested analyses data are input into the LDMS.

c. All samples received are logged into the LDMS on the day of receipt.

d. A Sample and Analysis Data Entry Form (SADEF) is generated immediately by the LDMS.

Distribution of SADEF:

- To the PACE Project Manager with a photocopy of the chain-of-custody. (Include a copy of the Discrepancy Report is applicable).
- To the QC project file with the original chain-of-custody.
- Photocopy to the Organic or Inorganic Department Manager as it applies for RUSH samples.
- To the client.

e. SADEF is to be reviewed against the chain-of-custody.

f. Sample containers are labeled with the corresponding sample number and the stamped date of receipt.

g. Samples are ready for storage.

MN-COMP 0044847

2. **When Samples Are Received With No Paperwork**

a. If delivered by a client: Client is asked if previous arrangements were made for analysis (and with whom). The client completes a chain-of-custody and/or request for analysis, relinquishes samples to sample custodian personnel, and is given a copy of the C-O-C.

b. If received by courier or shipping:

1st: Routine Client File is checked
2nd: Anticipate Sample Alert File is checked
3rd: Sampling Kit Request File is checked
4th: PACE key client contact is consulted
5th: QC department manager is consulted to determine the designated PACE project manager
6th: Information is requested from the PACE project manager.

c. If analysis information can not be determined on the day of sample receipt, sample data entry personnel proceed to assign sample numbers and put samples on hold. Follow-up with project manager occurs until the analyses are determined and samples can be properly logged in.

3. **Responsibilities for Sample Log In**

a. Quality Control Manager/Sample Management Officer

- Has the overall responsibility for ensuring that this procedure is implemented for all samples received into the laboratory.
- Has overall responsibility for ensuring that samples are logged in correctly (given that appropriate information has been supplied).

b. Sample Custodian

- Has the primary responsibility of ensuring that sample information is input into the LDMS as described in the SOP.
- Has the responsibility to make recommendations to the QC manager for revising the SOP.

D. SAMPLE STORAGE

1. General Procedures

Samples for analysis are properly stored in the lab according to container type, preservative, and type of security required by the project.

Samples are stored immediately upon receipt to prevent sample degradation.

2. Refrigerated Storage Area Maintenance

All refrigerated storage areas are maintained at 4°C + 2°C. The temperature is monitored and recorded daily. If the temperature fails outside the limit of 2° to 6°C, corrective action is to be taken as follows and appropriately documented.

a. Temperature is monitored at 30 minute intervals with the refrigerator door closed.

b. QC Manager is notified if the problem persists longer than one hour.

c. Samples are relocated to a proper storage environment if temperature cannot be maintained after corrective actions are implemented.

3. Routine Sample Storage

a. General Samples

Samples within each project are stored in sample number order. Waters and soils are generally stored on labeled separate shelves.

4. Specific Procedures

a. Volatiles

Samples within a project are stored in numerical order in vial containers. The holders are then stored where space permits in one of the designated volatile organic refrigerated storage areas.

b. Semi-Volatiles

Samples within a project are stored in numerical order in a designated, refrigerated storage area.

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c. Hazardous Materials

Pure product or potentially heavily contaminated samples are tagged as "hazardous" and stored within a secured area, separate from other samples. This area is used only for hazardous samples and is labeled per OHSA requirements.

d. Special Projects

- Volatiles

  Samples within a project are stored in sample number order in vial containers. The holders are then stored as space permits in the Special Project VOA refrigerated storage area.

e. Asbestos

No refrigeration required. Samples are taken to asbestos lab for storage.

5. Responsibilities for Sample Storage

a. QC Department Manager/Sample Management Officer has direct responsibility for ensuring that the SOP is followed, samples are stored properly upon receipt, and refrigerated storage area temperatures are maintained.

b. Sample custodians are responsible for storing all samples upon receipt into the appropriate storage area, maintaining high level security for those samples under custody, and for keeping a current custody sample inventory.

c. Analytical personnel have the responsibility of daily sample storage area maintenance, disposal of old samples, and providing space for incoming samples in routine storage areas.

d. Assigned individuals are responsible for maintaining and documenting: (a) refrigerated storage area temperatures, and (b) corrective actions.

See temperature log (Exhibit 9).

Exhibit 9

TEMPERATURE LOG FORM

Storage Area No. _____

Date	Temperature	Initials	Corrective Action/Comments

Note: Temperature must be $4^{o}C \pm 2^{o}C$. If temperature is outside the limit of 2° to 6° continue to monitor at 30 minute intervals (door must remain closed). If no correction within one hour, notify the QC Manager.

MN-COMP 0044851

F. SAMPLE/DATA ACCESS AND INTERNAL CHAIN-OF-CUSTODY

1. General Policies and Procedures

PACE has implemented standard operating procedures to assure the integrity of samples and data so that they are not degraded or disclosed to unauthorized personnel. In order to ensure that this policy is maintained, the laboratory facilities are under controlled access. Only employees are allowed into the laboratory facilities; visitors must register at the front desk.

Samples are removed from their proper location by the analyst and returned to the storage area immediately after the required sample quantity has been taken. This minimizes unnecessary time spent searching for samples and helps prevent matrix degradation from prolonged exposure to room temperature. Most samples are retained in storage in their original locations for approximately two months. Preserved metals samples and hazardous waste samples are stored up to six months. After the final report is sent and clients are allowed adequate time to review the results, the samples are properly discarded or returned to the client.

PACE normally completes the sample analysis within 15 working days after receipt. Holding times may require faster turnaround times.

Upon client request, additional and more rigorous chain-of-custody protocols for samples and data can be implemented. For samples involving a high degree of confidentiality or potential litigation, PACE, Inc. has developed extensive sample and data handling protocols to assure the scientific and legal defensibility of the report submitted. These protocols include those specified by the USEPA Contract Laboratory Program.

Analysts and technicians follow strict internal chain-of-custody procedures to further ensure the validity of all data. All samples are signed out in a sample custody log book when they are removed for analysis. The sample ID, date, time, analyst, and lab of analysis is recorded in the sample custody log (Exhibit 10). Samples are signed back in noting date, time, and storage location, upon return.

Exhibit 10

CHAIN-OF-CUSTODY
LAB CONTROL FORM

Contract/Project No.: _____
Date Received: _____
Received by: _____
Time: _____
Witness: _____
Stored in: _____

Samples No(s). _____
_____
_____
_____
_____
_____

Date & Time Removed	Sample Nos. Removed	Name	Witness	Time Returned	Name	Witness

REMINDER: Samples must be returned at the end of the shift.

MN-COMP 0044853

2. Responsibilities for SOP Compliance

a. The QC manager has the overall responsibility for ensuring that the SOP is implemented and followed.

b. The sample custodian personnel have the responsibility for ensuring that the SOP is properly followed, and to notify the QC manager of problems.

c. All employees checking out samples are required to follow procedures.

G. EXCESS SAMPLE DISPOSITION

Samples not totally consumed during the analyses are returned to the client. It is the project manager's responsibility to ensure that proper disposal has taken place. If the sample is water or wastewater and is considered non-hazardous by the project manager, it may then (by request) be properly disposed of at PACE facilities and not returned to the client.

1. Notification of Sample Return

The project manager and client receive written notification at the time of project initiation in the following manner:

a. The project proposal states the following paragraph in its Conditions and Terms Statement:

PACE, Inc. Standard Operating Procedures is to return all samples of hazardous materials or wastes to the client at project completion, and PACE, Inc. reserves the right to return or dispose of all samples at our discretion.

This is a standard form used by PACE's Marketing Department.

b. The Sample and Analysis Data Entry Form states the following sentence:

- PACE, Inc. reserves the right to return all samples at our discretion.
- This form is printed out by the LDMS at sample check-in.

c. The Sample and Analysis Data Entry Form cover letter will state the following paragraph:

1. PACE, Inc. Standard Operating Procedure is to return all samples of hazardous materials or wastes to the client at project completion. PACE, Inc. reserves the right to return or dispose of all samples at our discretion. (Exhibit 11)

2. This is a pre-printed cover letter that accompanies the Sample and Analysis Data Entry Form.

d. The Sample and Analysis Data Entry Form and cover letter is sent to the project manager and to the client by the sample custodian personnel.

2. **Sample Return and Disposal**

Upon completion of laboratory analysis and/or the project, the LDMS automatically prints a report, invoice and sample disposition form. This form is part of the report package and is routed to the project manager.

a. The Sample Disposition Form (Exhibit 12) contains the following information:

1. Client name, address, and contact
2. PACE project number
3. Client project identification number
4. PACE sample identification number
5. PACE project manager name

MN-COMP 0044855

Exhibit 11

pace® laboratories, inc.
PROFESSIONAL ANALYTICAL CHEMISTRY & ENGINEERING

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California
Leawood, Kansas
Irvine, California
Asheboro, North Carolina

1710 Douglas Drive North □ Minneapolis, MN 55422 □ Phone (612) 544-5543 □ FAX (612) 544-3974

November 1, 1989

Dear Valued Client:

A new policy has been implemented in the Sample Receiving Department of PACE Laboratories, Inc. We hope that this policy will be helpful to you.

Upon receipt of samples into the laboratory, the Sample Custodian completes a Sample and Analysis Data Entry Form. This form is designed to accommodate a short description of the samples received (sample name and/or sample reference), the type of container, and a list of the analyses requested to be performed on each sample. A copy of this form will be sent to the client (submitter).

Enclosed is a copy of the Sample and Analysis Data Entry Form relevant to the samples we recently received from you. Please compare the information on the form to assure that it is consistent with your request. If there is any inconsistency or if you have any questions on your project, please call the PACE Contact indicated on Sample and Analysis Data Entry Form. The PACE Contact has primary responsibility for monitoring the progress of your project through the laboratory.

It is also part of PACE Laboratories, Inc. Standard Operating Procedure to return all samples pertaining to the information attached that are hazardous materials or hazardous wastes to the client at project completion. PACE Laboratories, Inc. reserves the right to return or dispose of all samples at our discretion.

We have implemented this procedure to better serve our clients, and would appreciate any comments you may have.

Sincerely,

MN-COMP 0044856

Vice President, Corporate Quality

Exhibit 12

SAMPLE DISPOSITION FORM

_____

_____

_____

_____

_____

Date removed: _____
Initials: _____

Date shipped: _____
Initials: _____

RE: Client Project ID: _____

PACE Project No.: _____

Sample ID _____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

Dear_____:

All requested analyses of the samples for the above referenced project have been completed. Enclosed are the remaining portions of the samples which are being returned to you for final disposition.

If you have any questions, please call me.

Sincerely,

_____
Project Manager

MN-COMP 0044857

3. Procedure for Use of the Sample Disposition Form

a. The project manager separates the sample disposition form from the report package, signs the form, and routes it to the sample custodian. If the sample is water or wastewater and non-hazardous, the project manager may wish to properly dispose of the waste.

- If the project requires, the project manager may hold the form for an acceptable amount of time before return or disposal.

- It is important that this form be used and not discarded. It is part of the internal chain-of-custody and is filed with the project report.

- The project manager will use action codes such as:

  1 = Return to client 2 = In house disposal
  C = Clean D = Dirty

  As a general rule, soil samples will be returned and water samples will be disposed of in-house. Water samples which are highly contaminated will be returned. Preserved samples, VOA's, and extracted/tainted samples will not be returned to the client. Therefore, it is necessary to note clean or dirty to facilitate handling. If a sample has an extremely high level of contamination, note the contaminant.

  For In-House Sample Disposal

  All preserved - Clean - Neutralize/sink
  Dirty - Toxic waste

  Un-preserved water - Clean - Sink
  Dirty - Toxic waste

  Soil/Sludge - Clean - Trash
  Dirty - Toxic waste

  All VOA's - Clean - Neutralize/sink
  Dirty - Toxic waste

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All Extracted/Tainted Samples

CAM Extracts - Clean - Neutralize/sink
Dirty - Acid metals waste

Other Extracts - Toxic waste

Liquid/Unknown Misc. - Project manager specify

- Project manager will complete the sample disposition form and route it back to invoicing.
- The invoicing department will put completed sample disposition form in sample control mailbox.

b. Upon receipt of the Sample Disposition Form by the sample custodian personnel, the custodian personnel will remove the samples from storage using the information provided on the form.

- If the Sample Disposition Form indicates "Dump," the sample custodian personnel will remove them from storage and place them at a sample disposal station for proper disposal. The process of disposal is performed by the sample custodian personnel or appropriate laboratory staff. The Sample Disposition Form is signed and dated by the sample custodian personnel, then routed to the file clerk for filing with other project information.
- If the samples are to be returned, the sample custodian removes the sample or samples from storage, initials and dates the Sample Disposition Form. The samples, the Sample Disposition Form, and a copy of the client's chain-of-custody are then delivered to the shipping clerk by the sample custodian for return to the client.

c. Upon receipt of the samples and Sample Disposition Form, the shipping clerk signs and dates the form.

The Sample Disposition Form is copied and the original form with the samples is returned to the client, along with a copy of the client's chain-of-custody. A copy of the Sample Disposition Form and the original chain-of-custody is routed to the file clerk for filing with other project information (QC file).

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- The shipping clerk labels the box with an appropriate hazard label and ships the samples back to the client using UPS or any other requested manner for shipment. (Note: It is important for proper packaging to prevent breakage during shipment.)

- All shipping costs will be charged against the appropriate project number.

d. Upon receipt of Sample Disposition Form, the file clerk files it with other project related information.

4. Hazardous Material/Waste Sample Disposition Option

The preferred method for disposition of excess hazardous material/waste samples is to return the excess sample to the client. It may not be feasible to return samples in all cases or the client may require PACE to dispose of excess samples. PACE will dispose of excess hazardous samples when required and will charge a disposal fee to recover costs for management and disposal.

Procedure for Disposal Option for Excess Hazardous Material/Waste Samples:

a. The project manager informs the client that excess sample disposal will require an additional charge.

b. When analyses are complete, the project manager indicates disposal as the option on the Sample Disposition Form and completes and attaches Hazardous Material/Waste Disposal Option Form (Exhibit 13). An entry is to be made in all fields of this form as it will determine the basis for lab packing and disposal.

c. The project manager routes the Disposal Option Form to sample check-in.

d. The project manager is responsible for billing the client for disposal.

e. The sample custodian is responsible for maintaining a file of Disposal Option Forms for all samples awaiting disposal. Hazardous material/waste samples are stored in safe manner, segregated by compatibility groups as indicated by the hazardous waste disposal SOP.

EXHIBIT 13

HAZARDOUS MATERIAL/WASTE SAMPLE
DISPOSAL OPTION FORM

Client _____ Client Project ID _____

Contact _____ PACE Project # _____

Address _____ Project Manager _____

_____ Report Sent Date _____

Phone # _____ Pull Sample Date _____

_____

Sample #	Matrix	Location	Disposal Method	Charge

Remarks: 1=Return to Client C=Clean
2=In House Disposal D=Dirty

Removed from Refrigerator (initial/date) _____
Returned to Client (initial/date) _____
Disposed of Samples (initial/date) _____

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f. The Quality Control Manager is responsible for reviewing accumulated samples awaiting disposal and initiating the disposal process when warranted. The Field Services, Inorganic, Organic, and Environmental Services Departments cooperate and participate in the disposal process. (For compatibility and compositing, see the Hazardous Waste Disposal SOP.)

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VIII. CALIBRATION PROCEDURES AND FREQUENCY

Most measurements taken in the laboratory are based upon comparison to reference standards as analyzed by the standard method. The standard results are utilized to generate calibration curves or calibration factors. The results of the sample analysis are then quantified.

All instruments are calibrated using standard solutions of known concentrations. The standards are prepared from certified reference materials and are generally traceable back to NIST. Refer to Section XI for additional information.

Continuous calibration is verified by analysis of calibration standards or laboratory control samples from different sources at regular intervals. Recalibration is performed at specified time intervals or when indicated by the continuous verification procedure or as required by the method. Typical acceptance criteria for some common organic analyses are summarized in Table 2.

Forms to document initial and continuing calibration have been developed (Exhibits 14 and 15).

Refer to Section IX for additional calibration information and frequency as specified in the specific analytical methods.

MN-COMP 0044863

TABLE 2 CALIBRATION AND QC ACCEPTANCE CRITERIA[a] FOR HALOGENATED VOLATILE ORGANICS

Parameter	Range for Q (ug/L)	Limit for s (ug/L)	Range for X (ug/L)	Range P, P_s (%)
Bromodichloromethane	15.2-24.8	4.3	10.7-32.0	42-172
Bromoform	14.7-25.3	4.7	5.0-29.3	13-159
Bromomethane	11.7-28.3	7.6	3.4-24.5	D-144
Carbon tetrachloride	13.7-26.3	5.6	11.8-25.3	43-143
Chlorobenzene	14.4-25.6	5.0	10.2-27.4	38-150
Chloroethane	15.4-24.6	4.4	11.3-25.2	46-137
2-Chloroethylvinyl ether	12.0-28.0	8.3	4.5-35.5	14-186
Chloroform	15.0-25.0	4.5	12.4-24.0	49-133
Chloromethane	11.9-28.1	7.4	D-34.9	D-193
Dibromochloromethane	13.1-26.9	6.3	7.9-35.1	24-191
1,2-Dichlorobenzene	14.0-26.0	5.5	1.7-38.9	D-208
1,3-Dichlorobenzene	9.9-30.1	9.1	6.2-32.6	7-187
1,4-Dichlorobenzene	13.9-26.1	5.5	11.5-25.5	42-143
1,1-Dichloroethane	16.8-23.2	3.2	11.2-24.6	47-132
1,2-Dichloroethane	14.3-25.7	5.2	13.0-26.5	51-147
1,1-Dichloroethene	12.6-27.4	6.6	10.2-27.3	28-167
trans-1,2-Dichloroethene	12.8-27.2	6.4	11.4-27.1	38-155
1,2-Dichloropropane	14.8-25.2	5.2	10.1-29.9	44-156
cis-1,3-Dichloropropene	12.8-27.2	7.3	6.2-33.8	22-178
trans-1,3-Dichloropropene	12.8-27.2	7.3	6.2-33.8	22-178
Methylene chloride	15.5-24.5	4.0	7.0-27.6	25-162
1,1,2,2-Tetrachloroethane	9.8-30.2	9.2	6.6-31.8	8-184
Tetrachloroethene	14.0-26.0	5.4	8.1-29.6	26-162
1,1,1-Trichloroethane	14.2-25.8	4.9	10.8-24.8	41-138
1,1,2-Trichloroethane	15.7-24.3	3.9	9.6-25.4	39-136
Trichloroethene	15.4-24.6	4.2	9.2-26.6	35-146
Trichlorofluoromethane	13.3-26.7	6.0	7.4-28.1	21-156
Vinyl chloride	13.7-26.3	5.7	8.2-29.9	28-163

Q = Concentration measured in QC check sample, in ug/L.

s = Standard deviation of four recovery measurements, in ug/L.

X = Average recovery for four recovery measurements, in ug/L.

P, P_s = Percent recovery measured.

D = Detected; result must be greater than zero.

[a]Criteria from 40 CFR Part 136 for Method 601 and were calculated assuming a QC check sample concentration of 20 ug/L.

MN-COMP 0044864

TABLE 2. CALIBRATION AND QC ACCEPTANCE CRITERIA[a] FOR AROMATIC VOLATILE ORGANICS

Parameter	Range for Q (ug/L)	Limit for s (ug/L)	Range for $\bar{X}$ (ug/L)	Range P, P_s (%)
Benzene	15.4-24.6	4.1	10.0-27.9	39-150
Chlorobenzene	16.1-23.9	3.5	12.7-25.4	55-135
1,2-Dichlorobenzene	13.6-26.4	5.8	10.6-27.6	37-154
1,3-Dichlorobenzene	14.5-25.5	5.0	12.8-25.5	50-141
1,4-Dichlorobenzene	13.9-26.1	5.5	11.6-25.5	42-143
Ethylbenzene	12.6-27.4	6.7	10.0-28.2	32-160
Toluene	15.5-24.5	4.0	11.2-27.7	46-148

Q = Concentration measured in QC check sample, in ug/L.

s = Standard deviation of four recovery measurements, in ug/L.

$\bar{X}$ = Average recovery for four recovery measurements, in ug/L.

P, P_s = Percent recovery measured.

[a]Criteria are from 40 CFR Part 136 for Method 602 and were calculated assuming a QC check sample concentration of 20 ug/L. These criteria are based directly upon the method performance data in Table 4. Where necessary, the limits for recovery have been broadened to assure applicability of the limits to concentrations below those used to develop Table 1.

MN-COMP 0044865

TABLE 2. QC ACCEPTANCE CRITERIA[a] FOR ORGANOCHLORINE PESTICIDES & PCB's

Parameter	Test conc. (ug/L)	Limit for s (ug/L)	Range for $\bar{X}$ (ug/L)	Range P, P_s (%)
Aldrin	2.0	0.42	1.08-2.24	42-122
α-BHC	2.0	0.48	.98-2.44	37-134
β-BHC	2.0	0.64	0.78-2.60	17-147
δ-BHC	2.0	0.72	1.01-2.37	19-140
γ-BHC	2.0	0.46	0.86-2.32	32-127
Chlordane	50	10.0	27.6-54.3	45-119
4,4'-DDD	10	2.8	4.8-12.6	31-141
4,4'-DDE	2.0	0.55	1.08-2.60	30-145
4,4'-DDT	10	3.6	4.6-13.7	25-160
Dieldrin	2.0	0.76	1.15-2.49	36-146
Endosulfan I	2.0	0.49	1.14-2.82	45-153
Endosulfan II	10	6.1	2.2-17.1	D-202
Endosulfan Sulfate	10	2.7	3.8-13.2	26-144
Endrin	10	3.7	5.1-12.6	30-147
Heptachlor	2.0	0.40	0.86-2.00	34-111
Heptachlor epoxide	2.0	0.41	1.13-2.63	37-142
Toxaphene	50	12.7	27.8-55.6	41-126
PCB-1016	50	10.0	30.5-51.5	50-114
PCB-1221	50	24.4	22.1-75.2	15-178
PCB-1232	50	17.9	14.0-98.5	10-215
PCB-1242	50	12.2	24.8-69.6	39-150
PCB-1248	50	15.9	29.0-70.2	38-158
PCB-1254	50	13.8	22.2-57.9	29-131
PCB-1260	50	10.4	18.7-54.9	8-127

s = Standard deviation of four recovery measurements, in ug/L.

$\bar{X}$ = Average recovery for four recovery measurements, in ug/L.

P, P_s = Percent recovery measured.

D = Detected; result must be greater than zero.

[a]Criteria from 40 CFR Part 136 for Method 608. These criteria are based directly upon the method performance data in Table 4. Where necessary, the limits for recovery have been broadened to assure applicability of the limits to concentrations below those used to develop Table 4.

MN-COMP 0044866

TABLE 2. CALIBRATION AND QC ACCEPTANCE CRITERIA[a] FOR GC/MS VOLATILE ORGANICS

Parameter	Range for Q (ug/L)	Limit for s (ug/L)	Range for $\bar{X}$ (ug/L)	Range P, P_s (%)
Benzene	12.8-27.2	6.9	15.2-26.0	37-151
Bromodichloromethane	13.1-26.9	6.4	10.1-28.0	35-155
Bromoform	14.2-25.8	5.4	11.4-31.1	45-169
Bromomethane	2.8-37.2	17.9	D-41.2	D-242
Carbon tetrachloride	14.6-25.4	5.2	17.2-23.5	70-140
Chlorobenzene	13.2-26.8	6.3	16.4-27.4	37-160
2-Chloroethylvinyl ether	D-44.8	25.9	D-50.4	D-305
Chloroform	13.5-26.5	6.1	13.7-24.2	51-138
Chloromethane	D-40.8	19.8	D-45.9	D-273
Dibromochloromethane	13.5-26.5	6.1	13.8-26.6	53-149
1,2-Dichlorobenzene	12.6-27.4	7.1	11.8-34.7	18-190
1,3-Dichlorobenzene	14.6-25.4	5.5	17.0-28.8	59-156
1,4-Dichlorobenzene	12.6-27.4	7.1	11.8-34.7	18-190
1,1-Dichloroethane	14.5-25.5	5.1	14.2-28.4	59-155
1,2-Dichloroethane	13.6-26.4	6.0	14.3-27.4	49-155
1,1-Dichloroethene	10.1-29.9	9.1	3.7-42.3	D-234
trans-1,2-Dichloroethene	13.9-26.1	5.7	13.6-28.4	54-156
1,2-Dichloropropane	6.8-33.2	13.8	3.8-36.2	D-210
cis-1,3-Dichloropropene	4.8-35.2	15.8	1.0-39.0	D-227
trans-1,3-Dichloropropene	10.0-30.0	10.4	7.6-32.4	17-183
Ethyl benzene	11.8-28.2	7.5	17.4-26.7	37-162
Methylene chloride	12.1-27.9	7.4	D-41.0	D-221
1,1,2,2-Tetrachloroethane	12.1-27.9	7.4	13.5-27.2	46-157
Tetrachloroethene	14.7-25.3	5.0	17.0-26.6	64-148
Toluene	14.9-25.1	4.8	16.6-26.7	47-150
1,1,1-Trichloroethane	15.0-25.0	4.6	13.7-30.1	52-162
1,1,2-Trichloroethane	14.2-25.8	5.5	14.3-27.1	52-150
Trichloroethene	13.3-26.7	6.6	18.5-27.6	71-157
Trichlorofluoromethane	9.6-30.4	10.0	8.9-31.5	17-181
Vinyl chloride	0.8-39.2	20.0	D-43.5	D-251

Q = Concentration measured in QC check sample, in ug/L.
s = Standard deviation of four recovery measurements, in ug/L.
$\bar{X}$ = Average recovery for four recovery measurements, in ug/L.
P, P_s = Percent recovery measured.
D = Detected; result must be greater than zero.

[a]Criteria from 40 CFR Part 136 for Method 624 and were calculated assuming a QC check sample concentration of 20 ug/L. These criteria are based directly upon the method performance data in Table 7. Where necessary, the limits for recovery have been broadened to assure applicability of the limits to concentrations below those used to develop Table 7.

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TABLE 2. QC ACCEPTANCE CRITERIA[a] FOR GC/MS SEMIVOLATILE ORGANICS

Parameter	Test conc. (ug/L)	Limit for s (ug/L)	Range for X (ug/L)	Range P_s, P_s (%)
Acenaphthene	100	27.6	60.1-132.3	47-145
Acenaphthylene	100	40.2	53.5-126.0	33-145
Aldrin	100	39.0	7.2-152.2	D-166
Anthracene	100	32.0	43.4-118.0	27.133
Benzo(a)anthracene	100	27.6	41.8-133.0	33-143
Benzo(b)fluoranthene	100	38.8	42.0-140.4	24-159
Benzo(k)fluoranthene	100	32.3	25.2-145.7	11-162
Benzo(a)pyrene	100	39.0	31.7-148.0	17-163
Benzo(ghi)perylene	100	58.9	D-195.0	D-219
Benzyl butyl phthalate	100	23.4	D-139.9	D-152
β-BHC	100	31.5	41.5-130.6	24-149
δ-BHC	100	21.6	D-100.0	D-110
Bis(2-chloroethyl)ether	100	55.0	42.9-126.0	12-158
Bis(2-chloroethoxy)methane	100	34.5	49.2-164.7	33-184
Bis(2-chloroisopropyl)ether	100	46.3	62.8-138.6	36-166
Bis(2-ethylhexyl)phthalate	100	41.1	28.9-136.8	8-158
4-Bromophenyl phenyl ether	100	23.0	64.9-114.4	53-127
2-Chloronaphthalene	100	13.0	64.5-113.5	60-118
4-Chlorophenyl phenyl ether	100	33.4	38.4-144.7	25-158
Chrysene	100	48.3	44.1-139.9	17-168
4,4'-DDD	100	31.0	D-134.5	D-145
4,4'-DDE	100	32.0	19.2-119.7	4-136
4,4'-DDT	100	61.6	D-170.6	D-203
Dibenzo(a,h)anthracene	100	70.0	D-199.7	D-227
Di-n-butyl phthalate	100	16.7	8.4-111.0	1-118
1,2-Dichlorobenzene	100	30.9	48.6-112.0	32-129
1,3-Dichlorobenzene	100	41.7	16.7-153.9	D-172
1,4-Dichlorobenzene	100	32.1	37.3-105.7	20-124
3,3'-Dichlorobenzidine	100	71.4	8.2-212.5	D-262
Dieldrin	100	30.7	44.3-119.3	29-136
Diethyl phthalate	100	26.5	D-100.0	D-114
Dimethyl phthalate	100	23.2	D-100.0	D-112
2,4-Dinitrotoluene	100	21.8	47.5-126.9	39-139
2,6-Dinitrotoluene	100	29.6	68.1-136.7	50-158
Di-n-octylphthalate	100	31.4	18.6-131.8	4-146
Endosulfan sulfate	100	16.7	D-103.5	D-107
Endrin aldehyde	100	32.5	D-188.8	D-209
Fluoranthene	100	32.8	42.9-121.3	26-137
Fluorene	100	20.7	71.6-108.4	59-121
Heptachlor	100	37.2	D-172.2	D-192
Heptachlor epoxide	100	54.7	70.9-109.4	26.155
Hexachlorobenzene	100	24.9	7.8-141.5	D-152
Hexachlorobutadiene	100	26.3	37.8-102.2	24-116
Hexachloroethane	100	24.5	55.2-100.0	40-113

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TABLE 2. QC ACCEPTANCE CRITERIA[a] FOR GC/MS SEMIVOLATILE ORGANICS (CONT.)

Parameter	Test conc. (ug/L)	Limit for s (ug/L)	Range for $\bar{X}$ (ug/L)	Range p, p_s (%)
Indeno(1,2,3-cd)pyrene	100	44.6	D-150.9	D-171
Isophorone	100	63.3	46.6-180.2	21-196
Naphthalene	100	30.1	35.6-119.6	21-133
Nitrobenzene	100	39.3	54.3-157.6	35-180
N-Nitrosodi-n-propylamine	100	55.4	13.6-197.9	D-230
PCB-1260	100	54.2	19.3-121.0	D-164
Phenanthrene	100	20.6	65.2-108.7	54-120
Pyrene	100	25.2	69.6-100.0	52-115
1,2,4-Trichlorobenzene	100	28.1	57.3-129.2	44-142
4-Chloro-3-methylphenol	100	37.2	40.8-127.9	22-147
2-Chlorophenol	100	28.7	36.2-120.4	23-134
2,4-Chlorophenol	100	26.4	52.5-121.7	39-135
2,4-Dimethylphenol	100	26.1	41.8-109.0	32-119
2,4-Dinitrophenol	100	49.8	D-172.9	D-191
2-Methyl-4,6-dinitrophenol	100	93.2	53.0-100.0	D-181
2-Nitrophenol	100	35.2	45.0-166.7	29-182
4-Nitrophenol	100	47.2	13.0-106.5	D-132
Pentachlorophenol	100	48.9	38.1-151.8	14-176
Phenol	100	22.6	16.6-100.0	5-112
2,4,6-Trichlorophenol	100	31.7	52.4-129.2	37-144

s = Standard deviation of four recovery measurements, in ug/L.

$\bar{X}$ = Average recovery for four recovery measurements, in ug/L.

p, p_s = Percent recovery measured.

D = Detected; result must be greater than zero.

[a]Criteria from 40 CFR Part 136 for Method 625. These criteria are based directly on the method performance data in Table 7. Where necessary, the limits for recovery have been broadened to assure applicability of the limits to concentrations below those used to develop Table 7.

MN-COMP 0044869

INITIAL CALIBRATION DATA

EXTRACTABLE 8080/608 COMPOUNDS

EXHIBIT 14

CALIBRATION DATE: COLUMN ID:

INSTRUMENT ID: DETECTOR ID:

MAXIMUM % RSD IS 20%

Standard ID	/	/	/		
Compound	CF 20	CF 40	CF 60	$\overline{CF}$	%RSD
Alpha-BHC					
Beta- BHC					
Lindane					
Delta- BHC					
Heptachlor					
Aldrin					
Heptachlor Epoxide					
Endosulfan I					
DDE/Dieldrin					
Endrin					
Endosulfan II					
4,4'-DDD					
Endrin Aldehyde					
4,4'-DDT					
Endosulfan Sylfate					

CF=CALIBRATION FACTOR= $\frac{\text{Total ng of Standard}}{\text{Area}}$

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$\overline{CF}$ = AVERAGE CALIBRATION FACTOR = CF/n

%RSD = RELATIVE STANDARD DEVIATION = $\frac{\text{(Standard Dev.) (100)}}{\overline{CF}}$

CONTINUING CALIBRATION CHECK
Semi-Volatile Compounds
EXHIBIT 15

CASE NO:_____ CALIBRATION DATE:_____

LABORATORY NAME: PACE LABORATORIES TIME:_____

CONTRACT/PROJECT NO._____ ANALYST:_____

INSTRUMENT I.D.:_____ INITIAL CALIBRATION DATE:___

MAXIMUM %D FOR CCC IS 10%

COMPOUND	CF	CF	%D	CCC
Alpha-BHC				
* Beta-BHC				
Lindane				
Delta-BHC				
Heptachlor				
* Aldrin				
Heptachlor Epoxide				
* Endosulfan I				
DDF/Dieldrin				
* Endrinion				
Endosulfan II				
4,4'-DDD				
Endrin Aldehyde				
4,4'-DDT				
Endosulfan Sulfate				
Aroclor 1016				
Aroclor 1221				
Aroclor 1232				
Aroclor 1242				
Aroclor 1248				
Aroclor 1254				
Aroclor 1260e				
Chlordane				
Toxaphene				
Methoxychor				
DBC				

CF -Calibration Factor from daily standard at ug/L
CF-Average Calibration Factor from initial calibration Form VI
%D-Percent Difference
CCC-Calibration Check Compounds

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IX. ANALYTICAL PROCEDURES

Analytical methods employed at PACE can be EPA methodologies from the Federal Register and SW 846 (References 2 and 3) or approved equivalent methods. When there is no approved EPA method, industrial methods are used. A list of analytical methods utilized at PACE is as follows:

A. LIST OR ANALYTICAL METHODS

1. Organic Analyses

Parameter	Method	DW	WW Method	SW 846	Spec.
Purgeable Halocarbons	GC	502.1/502.2	601	8010	
Non-Halogenated Volatile Organics	GC			8015	
Purgeable Aromatics and Unsaturated Organics	GC	503.1/502.2	602	8020	
Acrolein & Acrylonitrile	GC		603	8030	
Phenols	GC	515.1	604	8040	
Benzidines	HPLC		605		
Phthalate Esters	GC		606	8060	
Nitrosamines	GC		607		
Organochlorine Pesticides and PCBs	GC	508/505/508A 507/515.1	608/608.1 608.2	8080	CA Mod 8080 MN. 570A
Nitroaromatics and Isophorone	GC		609	8090	
Polynuclear Aromatic Hydrocarbons	HPLC/GC	502.2/503.1	610	8310/ 8100	
Haloethers	GC		611		
Alachlor, Atrazine, Chlordane, Hepatchlor, Heptachlor Epoxide, Lindane, Methoxychlor, Toxaphene, and PCBs (as Aroclors)	GC	505/507	645		MN 570A

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Parameter	Method	DW	WW Method	SW 846	Spec.
Chlorinated Hydrocarbons	GC		612	8120	
2, 3, 7, 8 - TCDD	GC/MS		613		
Volatile Organics					(MN)465C
Base/Neutrals & Acids	GC/MS	525 (NCA)	625	8250/8270	
Organophosphorus Pesticides	GC	507	614/622	8140/ 8220	(MN)570A (CA)AB1803
Chlorinated Herbicides	GC	515.1	615/608.1/ 608.2	8150	(MN)574A (CA)509B
EDB and DBCP	GC	504			(CA) DOHS
Volatile Organic Compounds	GC/MS	524.2/524.1	624	8240	
Carbamates & Urea & Pesticides	HPLC	531.1	632		(CA)AB1803 (MN)572A
Fuel Hydrocarbons & BTEX	GC		602	8020	(CA) Mod. 8015
Alachlor, Atrazine	GC	507/505	619/645		(CA)AB1803 (MN)570A
Chlordane, Heptachlor, Heptachlor Expoxide, Lindane; Methoxychlor	GC	508/505	608/617	8080	
Aldicarb; Aldicarb sulfone; Aldicarb sulfoxide; Carbofuran	GC	531.1			(CA)AB1803

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2. INORGANIC ANALYSES

Parameter	Method	Standard Methods 15th Ed.	EPA Methods 1983	ASTM	SW 846
A. Non Metals					
Acidity	Potentiometric Titration	402	305.1	D1067-82	
Alkalinity	Potentiometric Titration	403	310.1	D1067-82	
Bacteria,					
Total Coliform	Membrane Filter	909A			9132
Fecal Coliform	Membrane Filter	908C			
Fecal Strept.	Membrane Filter	910A			
Total Plate Count	Agar Medium	907			
Biochemical Oxygen Demand, 5-Day	Winkler Electrode	507 507	405.1		
Boron	Curcumin 405-A	404A	212.3		
	ICP		200.7		6010
Chemical Oxygen Demand	Dichromate Reflux (High)	508A	410.1	D1252-83	
	Dichromate Reflux (Low)	508A	410.2	D1252-83	
Chloride	Mercuric Nitrate	407B	325.3	D512-81	9252
	Auto. Ferricyanide	407D	325.2		9251
	Titration	407A			
Chlorine, Residual	Amperometric Titration	408C	330.1 330.5	D1253-76	
	Colorimetric	408E			
Color	Visual Comparison	204A	110.2		
Cyanide, Total	Pyridine-Barbitutic Acid, Colorimetric	412D	335.2	D2036-82	9010
Amenable	Chlorination-Colorimetric	412F	335.1	D2036-82	9010

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Parameter	Method	Standard Methods 15th Ed.	EPA Methods 1983	ASTM	SW 846
Flouride, Total	Distillation-Electrode	413A/B	340.2	D1179-80	
Flouride, Diss.	Electrode	413B	340.2	D1179-80	
Hardness, Total	EDTA Titration Calculation	314B	130.2	D1126-80	
Hardness, Calcium	EDTA Titration	303A	242.1	D511-84	
Nitrogen,					
Ammonia	Distillation Titration	417D	350.2		
	Potentiometric		350.3		
Kjeldahl	Digestion Distillation	420B	351.3	D3590-84	
Nitrate	Automated Cadmium	418F	353.2	D3867-85	9200
	Brucine Sulfate		352.1	D091-71	
Nitrite	Automated Cadmium	418F	353.2	D3867-85	
	Colorimetric	419			
Organic	Kjeldahl-NH_3	420A	351.3	D3590-84	
	Kjeldahl-Potentiometric		351.4		
Oil & Grease	Soxhlet	503C			
	Partition-Gravimetric	503A	413.1		9070/ 9071
Oxygen	Winkler	421B	360.2	D888-81	
Dissolved	Electrode	421F	360.1		
pH (Hydrogen Ion)	Electrode	423	150.1	D1293-84	9040
Phenol	Distillation-Extraction Colorimetric		420.1	D1783-80	9066
Phosphorus,	Persulfate Digestion-	424C/F	365.2	D515-82	
Total	Ascorbic Acid Reduc.				
Ortho	Ascorbic Acid Reduc.	424F	365.2	D515.82	
Silica,	Molybdosilicate	425C	370.1	D859-80	
Dissolved	ICP		200.7		
Solids					
Total	Gravimetric	209A	160.3		
Total Volatile	Gravimetric	209D	160.4		
Suspended	Gravimetric	209C	160.2		
Suspended Volatile	Gravimetric	209D	160.4		
Total Dissolved	Gravimetric	209B	160.1		
Settleable	Gravimetric	209E	160.5		

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Parameter	Method	Standard Methods 15th Ed.	EPA Methods 1983	ASTM	SW 846
Specific Conductance	Meter	205	120.1	D1125.82	9040
Sulfate	Ion Chromatography	426C	375.4	D516-82	
	Automated Methyl Thymol Blue		375.2		9036
Sulfide	Colorimetric	427C	376.2		9030
	Titration	427D	376.1		
Sulfite	Titration	428A	377.1	D1339-84	
Surfactants (MBAS)	Methylene Blue	512B	425.1	D2330-82	
Turbidity	Meter	214A	180.1	D1889-18	

Parameter	Method	Standard Methods 15th Ed.	EPA Methods 1979	SW 846
B. Metals				
Aluminum	AA-Direct Aspiration	303C	202.1	7020
	AA-Furnace	304	202.2	
	ICP-AES		200.7	6010
Antimony	AA-Direct Aspiration	303A	204.1	7040
	AA-Furnace	304	204.2	7041
	ICP-AES		200.7	6010
Arsenic	AA-Gaseous Hydride	303E	206.3	7061
	AA-Furnace	304	206.2	7060
	ICP-AES		200.7	6010

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Parameter	Method	Standard Methods 15th Ed.	EPA Methods 1983	SW 846
Barium	AA-Direct Aspiration	303C	208.1	7080
	AA-Furnace	304	208.2	7081
	ICP-AES		200.7	6010
Beryllium	AA-Direct Aspiration	303C	210.1	7090
	AA-Furnace	304	210.2	7091
	ICP-AES		200.7	6010
Cadmium	AA-Direct Aspiration	303A	213.1	7130
	AA-Furnace	304	213.2	7131
	ICP-AES		200.7	6010
Calcium	AA-Direct Aspiration	303A	215.1	7140
	AA-Furnace	311C	215.2	
	ICP-AES		200.7	6010
Chromium, Total	AA-Direct Aspiration	303A	218.1	7190
Hexavalent	AA-Furance	304	218.2	7191
	ICP AES		200.7	6010
	Colorimetric	312B		7196
	MIBK Extraction			7197
Cobalt	AA-Direct Aspiration	303A	219.1	7200
	AA-Furnace	304	219.2	7201
	ICP-AES		200.7	6010
Copper	AA-Direct Aspiration	303A	220.1	7210
	AA-Furnace	304	220.2	7211
	ICP-AES		200.7	6010
Iron	AA-Direct Aspiration	303B	236.1	7380
	AA-Furnace	304	236.2	7381
	ICP-AES		200.7	6010
Lead	AA-Direct Aspiration	303A	239.1	7240
	AA-Furnace	304	239.2	7241
	ICP-AES		200.7	6010

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Parameter	Method	Standard Methods 15th Ed.	EPA Methods 1983	SW 846
Lithium	AA-Direct Aspiration	317B		
Magnesium	AA-Direct Aspiration	303A	242.1	7450
	ICP AES		200.7	6010
Manganese	AA-Direct Aspiration	303A	243.1	7460
	AA-Furnace	304	243.2	7461
	ICP AES		200.7	6010
Mercury	AA-Cold Vapor	303F	245.1	7470 or 7471
Molybdenum	AA-Direct Aspiration	303C	246.1	7480
	AA-Furnace	304	246.2	7481
Nickel	AA-Direct Aspiration	303A	249.1	7520
	AA-Furnace	304	249.2	
	ICP AES		200.7	6010
Potassium	AA-Direct Aspiration	303A	258.1	7610
Selenium	AA-Gaseous Hydride	303E	270.3	7740
	AA-Furnace	304	270.2	7741
	ICP AES		200.7	6010
Silver	AA-Direct Aspiration	303A	272.1	7760
	AA-Furnace	304	272.2	7761
	ICP AES		200.7	6010
Sodium	AA-Direct Aspiration	303A	273.1	7770
	ICP AES		200.7	6010
Strontium	AA-Direct Aspiration	303A		7780
Thallium	AA-Direct Aspiration	303A	279.1	7840
	AA-Furnace	304	279.2	7841
	ICP AES		200.7	6010
Tin	AA-Direct Aspiration	303A	282.1	7870
	AA-Furnace	304	282.2	

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Parameter	Method	Standard Methods 15th Ed.	EPA Methods 1983	SW 846
Titanium	AA-Direct Aspiration	303C	283.1	
	AA-Furnace	304	283.2	
Vanadium	AA-Direct Aspiration	303C	286.1	7910
	AA-Furnace	304	286.2	7911
	ICP AES		200.7	6010
Zinc	AA-Direct Aspiration	303A	289.1	7950
	AA-Furnace	304	289.2	7951
	ICP AES		200.7	6010

3. WASTES & OIL ANALYSIS

Parameter	Method	Standard Methods 15th Ed.	ASTM	SW 846
% Ash	Gravimetric	209F		
% Chlorine	Bomb Calorimeter		D808-81	
Density	Gravimetric	213E		
Flash Point Closed Cup	Tag		D93-80	1010
Free Liquids	Paint Filter			9095
Heat of Combustion	Bomb Calorimeter		D240-76	
Leach Test. EP Toxicity	Extraction			1310
ASTM Water	Extraction		D3987-85	
% Sulfur	Bomb Calorimeter		D129-64	

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Parameter	Method	Standard Methods 15th Ed.	ASTM
Viscosity	Saybolt		D88-81
% Water	Distillation		D95-83

Parameter	Method	Standard Methods 15th Ed.	EPA Methods 1982	SW 846
Sulfide,Total	Titration			9030
Reactive	Titration		261.23	Chap. 7 7.3.4.2
pH	Electrode			9040
Specific Conductance	Meter			9050
Specific Gravity	Mass Displacement	213E		
Cyanide, Total	Pyridine-Barbituitic Acid Colorimetic			9010
Amenable	Chlorination-Colorimetric			9010
Cyanide, Reactive	Pyridine-Barbitutic Acid Colorimetric		261.23	Chap. 7 7.3.3.2
TCLP			40CFR268	

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4. **List of Sample Preparation Methods**

3510	Separatory Funnel Liquid - Extraction
3520	Continuous Liquid - Extraction
3540	Soxhlet Extraction
3550	Sonication Extraction
3580	Waste Dilution
5080	Purge and Trap
3005	Acid Digestion of Waters for Total Recoverable or Dissolved Metals for Analysis by Flame AA or ICP
3010	Acid Digestion of Aqueous Samples and Extracts for Total Metals for Analysis by Flame AA or ICP
3020	Acid Digestion of Aqueous Samples and Extracts for Total Metals by Furnace AA
3050	Acid Digestion of Sediments, Soils, and Sludges

Method numbers refer to EPA Methods except:

1. S.M. = Standard Methods for the Examination of Water and Wastewater
2. USATHAMA = U.S. Army Toxic and Hazardous Materials Agency
3. NIOSH = Manual of Analytical Methods
4. Hach, Chevron, Calgon = Industrial Methods

B. **GAS CHROMATOGRAPHY PROCEDURES**

1. **Calibration and Calibration Verification**

All GC methods are calibrated by external calibration procedures using three to five standard concentrations, depending upon the method. A new calibration is performed at least once per month or as needed on routine analyses. Methods not utilized on a daily basis are calibrated before each run.

2. **Laboratory Control Sample (LCS)**

An EPA check sample is analyzed at least once per week, and when a new initial calibration is performed.

3. **Matrix Spike**

Performed at a minimum of every 20 samples or as required by either state or project-specific requirements.

4. **Surrogate Spike**

Surrogates are added to and analyzed for in every sample for methods 601, 602, 8010, 8020, 608, 8080, 8015, 615, 8150.

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5. **Duplicate Sample Analysis**

Performed at a minimum of every 20 samples or as specified by state/project requirements. Many samples contain non-detectable amounts of the parameters to be measured, therefore, the matrix spike is duplicated. (Matrix Spike Duplicate)

6. **Blank Analysis**

The reagent/method blank must have no contaminants greater than the detection limit of the method. In the case of volatile organic analysis, common laboratory solvents may be present at a concentration of less than 5 times the MDL. Blank subtraction is normally not allowed by contract/project protocols, unless specified by terms of the contract/project.

7. **Other**

Method 608/8080 are also subject to the following QC criteria:

a. Combined breakdown of endrin and DDT may not exceed 20%. This is monitored through the daily analysis of an LCS containing these compounds.

b. Two LCS (each containing 1/2 the compounds of the method) are alternately analyzed after every tenth sample.

C. **GAS CHROMATOGRAPHY/MASS SPECTROMETRY PROCEDURES**

1. **Calibration and Continuing Calibration**

An internal three point calibration is performed when indicated by the continuing calibration. One check standard is analyzed at the beginning of each 12-hour shift to verify calibration. The acceptance limit for the check standard is 25% RSD. Recalibration is necessary from once per week to once per month. Fresh calibration standards must be prepared weekly.

2. **Validation of Mass Spectrometer**

The mass spectrometers are tuned at the start of each run period and at 12-hour intervals. The tuning procedure utilizes the EPA recommended compounds 4-bromofluorobenzene (BFB) for 624/8240 and decafluorotriphenyl phosphine (DFTPP) for 625/8270.

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3. **Internal Standards**

All sample results are quantified using the internal standard technique described in EPA methods 624, 8240, 625, 8270. Three (VOA) or six (BNA) internal standard compounds are added to each sample immediately before analysis. The internal standard nearest the retention time of the analyte of interest is used in the quantitation of the analyte.

4. **Laboratory Control Sample**

An EPA check sample is analyzed at a minimum once every month. A standard is run every 12 hour shift.

5. **Matrix Spike and Matrix Spike Duplicate**

Performed at a minimum of every 20 samples or as specified by state/project requirements. This is the same procedure as the GC section.

6. **Surrogate Spikes**

Surrogate spiking compounds are added to and analyzed for, with every sample. A surrogate is a volatile sample prior to purging and prior to extracting a semi-volatile sample.

7. **Reagent/Method Blank**

VOA - one per 12-hour per shift
BNA - one per batch of samples extracted

Common laboratory solvents present in the blank at a concentration less than 5 times the MDL will be footnoted on the analysis report. Common solvents at greater concentrations or the presence of any contaminant not considered a common laboratory solvent at a concentration greater than the MDL indicates the need to re-extract/re-analyze the blank and associated samples.

D. **METALS PROCEDURES**

1. **Calibration and Calibration Verification**

All instruments are calibrated at the start of each run. The graphite furnace requires 4 point calibration. The Flame AA and ICP methods utilize a minimum of 3 points. Cold vapor analysis of mercury requires a 5 point calibration. Recalibration is performed after 50 samples, or more often if indicated by the laboratory control sample.

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2. Laboratory Control Sample

Performed at a minimum of every 20 samples, or as specified by state/project requirements.

3. Matrix Spike

Performed at a minimum of every 20 samples, or as specified by state/project requirements.

4. Duplicate Samples

Performed at a minimum of every 20 samples, or as specified by state/project requirements.

5. Blank Analysis

a. Method Blank

If the concentration of the blank exceeds the MDL, all samples associated with the blank are redigested and reanalyzed concurrent with a new blank. Samples with a concentration greater than 10 times the blank are reported, without blank value correction.

b. Reagent Blank

Any reagent blank result greater than the MDL terminates the analysis until corrective action resolves the problem. For ICP metals, a negative blank value greater than two times the MDL also requires corrective action. In rare cases, if all corrective action fails to resolve the problem and the blank value still hovers at 1-3 times the MDL, the analyst may run the samples, report all values greater than 10 times the blank value, and correct the sample values less than that amount for the blank value.

E. GENERAL CHEMISTRY PROCEDURES

1. Calibration and Verification

All instruments are calibrated daily with 3-6 point curves, depending upon instrument requirements. The calibration is continuously verified throughout the run, with either a calibration standard or laboratory control standard inserted after every 10th sample.

2. Laboratory Control Sample

A laboratory control sample is analyzed at least once during each batch of samples.

3. Matrix Spike and Duplicate Samples

Performed at a minimum of every 20 samples, or as specified by state/project requirements.

F. RECORD KEEPING AND REVIEW

All records and data are stored in safe places such as metal cabinets or hard cover bound books.

The extractions section utilizes method-specific bound books to record all data pertaining to sample extraction and preparation. A copy of the extraction benchsheet is transferred to GC or GC/MS with each extracted sample (Exhibit 16 and 17).

The organic and inorganic departments utilize benchsheets, maintained by analysts; specific for injection data and instrument maintenance. Spectras and chromatograms are filed by acquisition date.

The individual analysts and technicians are responsible for maintaining accurate, legible records and logs in accordance with standard operating procedures. The supervisors are responsible for ensuring adherence to procedures.

Secondary review of all records and logs is performed periodically by someone other than the person generating the document, preferably the department supervisor. Evidence of secondary review is provided on the document as initials and review date by the secondary person.

See Section X for magnetic media storage.

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Exhibit 16

PROJECT #

GC-MS EXTRACTABLES

BATCH #

Sample Location	Sample Number	Date/Time of Extraction	Initial Volume	Surrogate	Spike	Final Volume	Date of Conc.	% Emulsion	Comments	Extract Location

EXTRACTION METHOD

- Separatory Funnel ☐
- Continuous Liq/Liq ☐
- Soxhlet ☐
- Sonication ☐
- Other: _____ ☐

Spike #

Dup. Spike #

QUALITY CONTROL INFORMATION

Surrogate:

Spike:

ROUTING

Person Who:	Initial
Extracted	
Concentrated	
Supervisor	
GC/MS	

MN-COMP 0044886

WPPWGJ5

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Exhibit 17

PROJECT #

GC EXTRACTION

BATCH #

Location	Sample Number	Weight of Sample	Date & Time of Extraction	Final Volume	Date of Conc.	% Emulsion	Comments	Extraction Location	Column	NCLSON File	% Recovery	Date & Time

EXTRACTION METHOD

- Separatory Funnel ☐
- Continuous Liq/Liq ☐
- Soxhlet ☐
- Sonication ☐
- Other: _____ ☐

Spike #

Dup. Spike #

QUALITY CONTROL INFORMATION

Surrogate:

Spike:

ROUTING

Person Who:	Initial
Extracted	
Concentrated	
Supervisor	
GC/MS	

MN-COMP 0044887

G. ACCEPTANCE LIMITS AND CONTROL CHARTS

Acceptance criteria for quality control samples and instrument calibration/verification are summarized in Table 3.

TABLE #3

ACCEPTANCE CRITERIA FOR QUALITY CONTROL SAMPLES & INSTRUMENT CALIBRATION

	MATRIX SPIKE % RECOVERY	SURROGATE SPIKE % RECOVERY	RPD DUPLICATE SAMPLES	INITIAL CALIBRATION LINEARITY	CALIBRATION VERIFICATION	LCS/EPA QC SAMPLE
GC	Within calculated control limits*	Within calculated control limits	≤ maximum RPD acceptance limit	RSD ≤ 20%	± 15% of true value or initial response	±15% of true value or EPA limit
MS	Within calculated control limits*	Within calculated control limits	≤ maximum RPD acceptance limit	RSD ≤ 30%	± 30% of initial average RF	± 15% of true value or EPA limit
GENERAL CHEMISTRY	Within calculated control limits*	N/A	0-67 on samples < 10x MDL 0-20 on samples > 10x MDL MDL = Method Detection Limit	Correlation coefficient ≥ .995	± 10% of true value	± 15% of true value or EPA limit
METALS	Within calculated control limits*	N/A	0-67 on samples < 10x MDL 0-20 on samples > 10x MDL MDL = Method Detection Limit	Correlation coefficient of: ≥ .995 ≥ .995 :AA ≥ .995 :Cold Vapor	± 10% of true value	± 15% of true value or EPA limit

* Establishment and Utilization of Acceptance Limits

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X. DATA REDUCTION, VALIDATION AND REPORTING

Final results are entered into the LDMS system by the analyst, independently validated, and reviewed by the department supervisor for verification (Exhibit 18).

Result verification sheets are attached to the QC files and reviewed by the QC manager. After QC file review by the QC manager, the department manager verifies the completeness and the validity of the report. When all required analyses on all of the samples in a project are complete, entered and verified, a report is generated. The report goes to the project manager for review. Each project is assigned to a project manager after samples are received at PACE. The project manager is responsible for tracking sample progress while in-house and ensuring timely analysis.

When the data re complete, the project manager reviews the final report according to these criteria:

- Reasonableness of data, i.e., whether the various sample analyses results make sense when compared to each other. Analyses such as BOD, COD, amount of organic contamination, general mineral balances, volatile organics measured by different methods, pH and electrical conductivity, and other analytical interrelationships are compared. Data on samples within the same project number are compared and if descriptive information about the samples is available, then it may be concluded that the results are reasonable in comparison to each other.

The report requires the signature of the project manager and the department manager. Client questions about the final report may be directed to these individuals or the Client Services manager when appropriate.

- Data Storage

  Data and reports are archived onto computer tape and written in documents for either off-site storage within a secured building, or within a locked storage cabinet.

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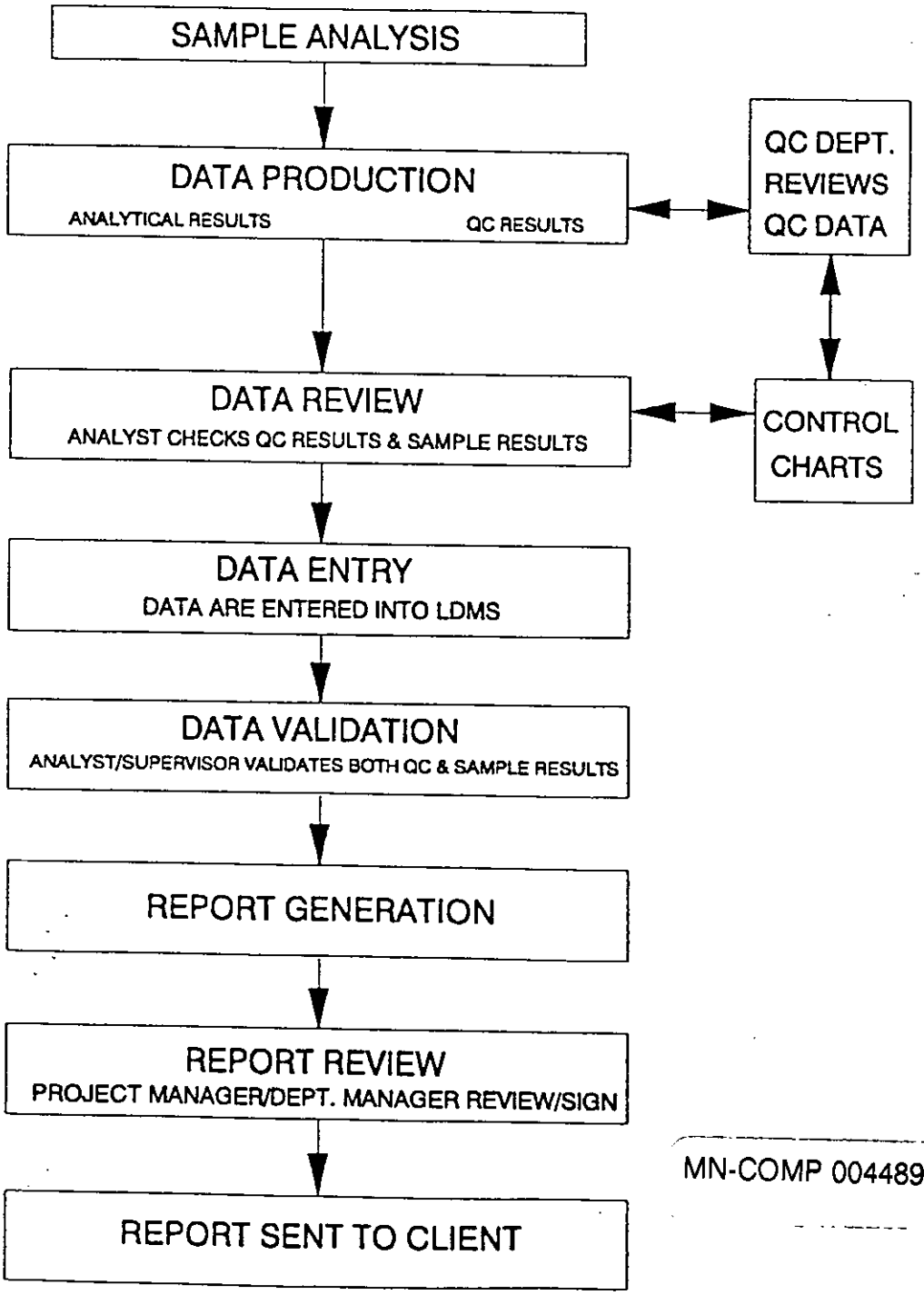
EXHIBIT 18

LABORATORY DATA FLOW CHART



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XI. INTERNAL QUALITY CONTROL

The Quality Assurance Plan is a document that reflects the actual operating and quality control programs in use at PACE. The reliability and credibility of analytical results is established by inclusion of a program of randomly scheduled replicate analyses, analysis of standard of spiked samples, and the cooperative analysis of split samples by several laboratories. These quality control checks are an integral part of the sampling and analytical plan.

Quality assurance, as practiced at PACE, consists of general quality control and assessment procedures that are adapted to the specific operating conditions within each section. The general elements of quality control are outlined below.

A. BLANK ANALYSIS

Reagent/Method Blanks: A reagent blank consists of laboratory pure water and any reagents added to a sample during analysis only, or straight solvent. A method blank is a water or soil blank which undergoes all of the preparation procedures applied to a sample (i.e., extraction, digestion).

It is standard policy throughout the laboratory to prepare and analyze a reagent or method blank (whichever is appropriate) with each sample batch. Separate water and soil method blanks are prepared for mixed matrix batches.

Reagent blanks may also be inserted at regular intervals on large (20 samples) batches, or after highly concentrated samples to check for carryover/contamination. For methods utilizing surrogate compounds, the surrogates are added to all blanks and are subject to meeting acceptance criteria.

A trip blank is submitted for analysis with most samples analyzed for volatile organic compounds. A field blank or procedure blank may also be submitted at the discretion of the client. Field, procedure, and trip blanks are analyzed upon request of the client. Reagent blanks are run daily on each instrument to check the contaminant level (Exhibit 19).

METHOD BLANK SUMMARY FORM

METHOD:

EXHIBIT 19

INST. ID: _

Y	M	D	CONTAMINANT/ PPB	CORRECTION	S.R.	COMMENT
		1				
		2				
		3				
		4				
		5				
		6				
		7				
		8				
		9				
		10				
		11				
		12				
		13				
		14				
		15				
		16				
		17				
		18				
		19				
		20				
		21				
		22				
		23				
		24				
		25				
		26				
		27				
		28				
		29				
		30				
		31				

RE= REEXTRACTED

S.R.= PERCENT SURROGATE RECOVERY

ND= NOT DETECTED

P.Q.C.= PASS Q.C.

MN-COMP 0044893

B. MATRIX SPIKE AND SURROGATE ADDITIONS

Accuracy and matrix biases are monitored using spiked samples and where possible, surrogate additions. It is standard policy throughout the laboratory to prepare and analyze at least one matrix spike for each batch of 20 samples, for each matrix type within the batch, or as specified by state/project requirements.

Surrogate spiking compounds (if available), are added to and analyzed for, with every sample. A measured amount of spike/surrogate concentration is added to the sample before extraction of preparation. Surrogate spiking is utilized for GC and GC/MS analyses only.

C. DUPLICATE SAMPLE ANALYSIS

Precision is assessed by result comparison of a sample prepared and analyzed in duplicate. It is standard policy throughout the laboratory to prepare and analyze at least one duplicate sample for each batch of 20 samples and matrix type within the batch, or as specified by state/project requirements.

D. STANDARDS

The term standard shall apply to any analyte solution of known concentration which is traceable to a certified reference material. This includes calibration standards, spiking solutions, and laboratory control samples. Claims of traceability establishes the accuracy of measurements. Therefore, maintaining standard traceability is critical to the achievement of known and defensible data quality.

To establish traceability, all purchased reference materials (neat and stock solutions) are recorded into section-specific standard log books when received.

All entries and PACE standard labels contain a unique PACE ID number, date received, date opened, and expiration date. Log book entries also include the manufacturer's lot number, certified purity, and storage location. Subsequent preparations of stock, intermediate, and working solutions are also recorded in the standard log books. These entries must include all discrete measurements made during a preparation, parent materials, solvent used, and a PACE ID number.

Exhibit 20 illustrates a standard log book entry. Standard Operating Procedure for standards preparation contains further instructions for assigning unique ID numbers, proper syringe technique, shelf life of standards, and good laboratory practices.

Labeling: The standard vial should have a reference label (covered with cellophane tape) with the following information:

1 - Standard
2 - Name of Standard
3 - Prep. Date
4 - Prep. Personnel Initials
5 - Solvent

Certified reference standards from the EPA Repository are used for calibration or laboratory control standards in many organic analyses. Reference standards may also be purchased from approved commercial vendors. Currently approved vendors for organic reference standards are Ultra-Scientific, Supelco, Chem-Service, Inc., and Aldrich Chemical Company, Inc. Inorganic standards are purchased from major scientific supply companies (Fisher, American Scientific, and VWR). Certificates of analyses are requested with each purchase.

E. METHOD DETECTION LIMIT

The method detection limit (MDL) is defined as the minimum substance concentration that can be identified, measured and reported with 99% confidence that the analyte concentration is greater than zero. In general, the protocol described in Appendix B to 40CFR 136 (Federal Register, Vol. 49, No. 209, 10/26/84) is used to establish MDL's.

For GC/MS analyses and organochlorine pesticides by GC/EDC, the MDL has been determined according to EPA Contract Required Detection Limits (CRDL) as established for the Contract Laboratory Program. The MDL's for other organic analyses are set according to industry standards, client requirements, and instrument/method limitations. The MDL is validated using prepared standard solutions analyzed at detection limit concentrations.

The metals analyses MDL's correspond to instrument detection limits, and are established in the following manner: A standard solution of analyte in laboratory pure water with a concentration of 3-5 times the estimated instrument detection limit is analyzed seven consecutive times. The MDL is set at 3 times the standard deviation of the seven consecutive measurements.

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EXHIBIT 20

NEAT STANDARDS:

NAME: Acephate — CODE: Acephate-1

OTHER NAMES: Methamidophos

BRAND: Chem Service — WARNING: POISON

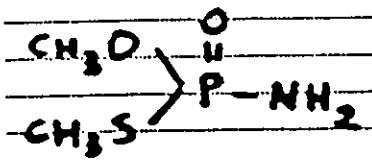
CAT. NO: PS-738

LOT NO: 30-13 — LOCATION: Fr. # 2

PURITY: 98% — Rack # 1

EXP. DATE: 9-90 — position # 23

RECEIV. DATE:



Solvent used: Acetone

Source:

Purity:

Lot #:

GC Extraction

DILUTIONS:

code: Acephate-D1

STOCK SOLUTIONS AND STANDARDS

STD #	CONC. (PPM)	SOLVENT	PREP. DATE	LOCATION
# 502	2,000 ppm	Acetone	3-1-89	Fr. #1, Rack # 5
# 503	D.W. 80 ppm	Hexane	3-2-89	Fr. #1, Rack #7
# 503A	40 ppm	"	"	"
# 503B	60 ppm	"	"	"
# 503C	100 ppm	"	"	"

GC Extraction

For general (wet) chemistry methods, the MDL is established using a calibration standard analyzed at doubled dilutions until it becomes impossible to distinguish an instrument response for the analyte. The MDL is set at the lowest observable standard concentration.

F. CONTROL CHARTS

Control charts monitor daily variations in precision and accuracy of routine analysis and detect variation trends. QC charts are constructed from performance data of the complete analytical method. Control chart construction requires initial data to establish the mean and range of measurements. Currently, spikes, spike duplicates, RPD's and external check sample values are charted.

G. LABORATORY CONTROL SAMPLES

EPA quality control check samples are analyzed at least once per week, and when new calibrations are performed. They provide a means of assessing the accuracy and precision of a measurement system's performance. Parameters of interest that initially fall outside of QC acceptance criteria are compared against a prepared EPA QC check sample. If laboratory performance for the parameter is found to be out of control, then necessary corrective actions are implemented.

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XII. PERFORMANCE AND SYSTEM AUDITS

A. PACE's INTERNAL SYSTEM AUDITS

1. All records, logs, and data files are routinely audited for completeness, accuracy, and adherence to standard operating procedures by an on-site auditing team. Audit team members generally include Corporate Vice-Presidents and Regional Directors. Several random project files are evaluated quarterly for compliance to procedure throughout the analytical process (i.e., from sample receipt through the final report). Supervisors, QC managers, and lab analysts routinely check all records for the same criteria.

2. System Audits:

   PACE is audited as required by regulatory agencies to maintain laboratory certifications, and by various commercial clients with laboratory auditing programs. These audits include audits by USEPA, USATHAMA, AIHA, and other appropriate federal, state and private agencies.

3. Performance Audits:

   a. USEPA Performance Evaluation Studies - PACE participates in the EPA semi-annual drinking water (WS Series) and semi-annual wastewater (WP Series) performance evaluation studies (four studies per year).

   b. PACE participates in various client sponsored performance evaluations by analyzing QC samples prepared and submitted by commercial clients in conjunction with their own QA program.

   c. Several government proficiency samples are analyzed annually to maintain various laboratory certifications (Exhibit 21).

   d. PACE regional offices are provided blind QC check samples quarterly.

4. Total Quality System Audit:

   The Corporate Quality Office performs a yearly on-site audit at each regional facility. Examples of the forms used as shown in Exhibit 22.

pace. laboratories, inc.

CONTRACTS AND CERTIFICATIONS

- ✔ U.S. Environmental Protection Agency Contract Laboratory (CLP) - 3 Facilities
  MN, KS, NY
- ✔ U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) Certification
  MN
- ✔ Department of Energy Hazardous Waste Remedial Action Program (HAZWRAP) Certification
  NY
- ✔ American Industrial Hygiene Association (AIHA) Laboratory Accreditation - 2 Facilities
  MN, NC
- ✔ Contracted as an Analytical Support Laboratory for Minnesota Superfund Projects
  MN
- ✔ Accreditation in the National Voluntary Laboratory Accreditation Program (NVLAP) for Bulk Asbestos Analysis
  MN, NCA, FL
- ✔ Successfully Audited by the Missouri River Division of the U.S. Army Corps of Engineers
  NCA, FL
- ✔ Successful Participation in the National Institute for Occupational Safety and Health (NIOSH) Proficiency in Analytical Testing (PAT) Program
  MN
- ✔ Alabama Drinking Water Certification
  FL
- ✔ California Air Resources Board Certification for Emissions Monitoring
  NCA, MN
- ✔ California Drinking Water Certification
  NCA
- ✔ California Hazardous and Toxic Waste Certification - 3 Facilities
  NCA, SCA, MN
- ✔ California Pesticide Analysis Certification
  NCA
- ✔ Connecticut Laboratory Certification
  NY
- ✔ Florida Drinking Water Certification - 3 Facilities
  FLA, MN, NY (pending)
- ✔ Florida Environmental Laboratory Certification - with Approved Generic Quality Assurance Plan
  FL, MN, NY (pending)
- ✔ Iowa Drinking Water Certification
  IA, FL
- ✔ Kansas Drinking Water Certification
  KS, MN
- ✔ Kansas Solid & Hazardous Waste Certification
  KS, MN
- ✔ Minnesota Drinking Water Certification for Microbiological Analysis
  MN
- ✔ New Jersey Dept. of Environmental Protection Contract Laboratory for Environmental Analysis
  NY
- ✔ New Jersey Laboratory Certification
  NY
- ✔ New York Drinking Water Analysis Certification - 2 Facilities
  MN, NY
- ✔ New York Environmental Laboratory Certification - 2 Facilities
  MN, NY

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- ✔ North Carolina Drinking Water Certification
  NC, FL
- ✔ North Carolina Wastewater Certification
  NC, FL
- ✔ North Carolina Biological Toxicity Certification
  NC
- ✔ South Carolina Laboratory Certification - 2 Facilities
  NC, FL
- ✔ Tennessee Drinking Water Certification
  NC
- ✔ Virginia Drinking Water Certification
  NC
- ✔ Virginia Wastewater Certification
  NC
- ✔ Wisconsin Drinking Water Certification
  MN
- ✔ Wisconsin Environmental Laboratory Certification
  MN

EXHIBIT 22

RATING SCALE: (Doc. 349 - 27-31)

THE FOLLOWING SCALE MAY BE USED FOR ANY APPLICABLE AREA

1) UNSATISFACTORY Performance below acceptable level. Expected results have not been achieved.	2) PROVISIONAL Some requirements satisfied but needs improvement in several areas.	3) FULLY ADEQUATE All requirements met. Satisfied all standards and achieved expected results.	4) SUPERIOR Results above job standards. Achieved more than expected results.	5) DISTINGUISHED Results far in excess of standards extraordinary and exceptional results.

SECTION	RESULTS/STANDARDS OF PERFORMANCE	RATING 1	2	3	4	5	YES	NO	COMMENTS/RECOMMENDATIONS
Quality Control	SOP's:								
	1. Quality Control Manager aware of and familiar with Standard Operating Procedures for the company.								
	2. Documented Standard Operating Procedures for the Quality Control department.								
	3. Standard Operating Procedures for program areas on file in the Quality Control office.								
	4. Documented procedures for all Quality Control activities are displayed in the appropriate area.								
	5. Standard Operating Procedures updated regularly for analytical areas.								
	6. Analytical procedures updated regularly.								

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SECTION	RESULTS/STANDARDS OF PERFORMANCE	RATING 1	2	3	4	5	YES	NO	COMMENTS/RECOMMENDATIONS
Quality Control (Cont.)	7. Analytical procedures are dated and initialed by QC Manager and Department Supervisor at time of update.								
	8. Procedure sections are updated rather than replacement of entire document.								
	Staff:								
	1. Defined roles for the Quality Control Manager, adherence to job description.								
	2. Defined roles for staff in the Quality Control department.								
	3. Staffing is adequate and staff assignments are documented.								
	Administrative:								
	1. Regularly scheduled meetings with Quality Control staff. Agenda for meetings are documented.								

SECTION	RESULTS/STANDARDS OF PERFORMANCE	RATING 1	2	3	4	5	YES	NO	COMMENTS/RECOMMENDATIONS
Quality Control (Cont.)	2. Regularly scheduled meetings with Analytical Department staff/managers. Agenda for meetings are documented.								
	3. Regularly scheduled meetings with Sampling and Analytical Services Division Director. Meeting agenda documented								
	<u>Control Charts/Corrective Actions</u>: 1. Quality Control charts available in Quality Control area for all analytical procedures.								
	2. Control chart acceptance limits are based upon current data. - Specify "current" date range of control charts/last update - Specify frequency of acceptance limits updating								
	3. Preventative maintenance records for all instruments present in Quality Control.								

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SECTION	RESULTS/STANDARDS OF PERFORMANCE	RATING 1	2	3	4	5	YES	NO	COMMENTS/RECOMMENDATIONS
Quality Control (Cont.)	4. Provision of quality control charts are in on a timely manner to analytical threats.								
	5. Record of corrective action taken when out-of-control situations are noted.								
	QC Samples: 1. Records of performance evaluations on blind PE samples in-house kept in Quality Control area.								
	2. Records of performance on quality control samples (MS, MSD, LCS, surrogates, & blanks) are available in Quality Control department.								
	3. Record of standard traceability to NIST present in the Quality Control area.								
	4. Standards are labeled with purchase date, date opened, expiration date, analyst initials.								

SECTION	RESULTS/STANDARDS OF PERFORMANCE	RATING 1	2	3	4	5	YES	NO	COMMENTS/RECOMMENDATIONS
Quality Control (Cont.)	<u>Sample Check-In</u>: 1. Chain-of-custody records kept on file when necessary, in the Quality Control area.								
	2. Sample check-in documentation present in sample check-in area.								

MN-COMP 0044905

B. TRAINING AND TECHNICAL REVIEW

PACE considers competent, well-trained personnel to be a key to successful production of valid and reliable data. An extensive training and technical review program is in place at PACE, Inc. It includes:

1. Training Plans

The type and schedule of training required for each new or transferred employee is determined individually. A training plan is established to reflect individual and general training needs.

2. Training Classes

All sections conduct regularly scheduled training sessions specific to their needs.

Audio/visual training programs and open learning texts are available for use by all personnel.

Other laboratory QA and general training classes are offered periodically.

3. Technical Review Program

All employees are subject to technical reviews with their supervisor. The technical review assesses an individual's training progress and technical development and provides an opportunity to redirect the training plan accordingly to comprehensively cover further developmental needs. The schedule for technical reviews is:

a. New hire or transfer to new position/responsibilities: 6 months, 1 year.

b. After 1 year in same position/responsibilities: annually.

4. Support Programs

Attendance at outside seminars, classes, etc., is highly encouraged. PACE participates in many of these throughout the year. In-house seminars are presented by employees for employee bi-monthly meetings. Various topics are covered, including regulatory items and information from attendance at outside seminars. The PACE in-house library contains current periodicals and journals pertinent to the environmental industry and analytical chemistry, in addition to reference books, text books, and regulatory publications.

XIII. PREVENTIVE MAINTENANCE

PACE maintains service contracts for most major analytical equipment including all chromatography instruments, balances, atomic absorption, and inductively coupled plasma instruments. All instruments and equipment receive routine preventive maintenance, which is recorded in instrument specific maintenance logs. Routine maintenance insures that all equipment is operating under optimum conditions, reducing the possibility of instrument malfunction (consequently affecting sample results). An example of an instrument maintenance log is included (Exhibit 23).

MN-COMP 0044907

EXHIBIT 23

INSTRUMENT MAINTENANCE LOGBOOK FORM

INSTRUMENT I.D.:

DATE	MAINTENANCE ACTIVITY	NAME

XIV ASSESSMENT OF PRECISION, ACCURACY, COMPLETENESS REPRESENTATIVENESS, AND COMPARABILITY

The Quality Control Program at PACE uses precision and accuracy data to determine the acceptability of analytical results. Precision refers to result reproductibility and accuracy measures the degree of difference between observed and true values. One of every 20 analyses performed at PACE is run in duplicate (precision). Also, one of every 20 samples is spiked with a synthetic standard to assist in evaluating the accuracy of the method. Once 20 sets of precision or accuracy data have been obtained, a quality control chart is prepared. The Shewhart technique is the statistical method used to construct the charts. These quality control charts provide a quick visual means for monitoring the daily performance of the laboratory. Exhibits 24 and 25 contain examples of accuracy and precision charts along with their corresponding data sheets (Exhibits 26 and 27).

A. ACCURACY

The actual test result is compared to the theoretical result of 100% recovery and the percent recovery is calculated.

$$\% \text{ Recovery} = \frac{\text{Spiked Sample Result} - \text{Sample Result}}{\text{Spike Quantity}} \times 100$$

The percent recovery must fall within specific control limits for the results to be accepted and subsequent data validated. (See Table 2)

B. PRECISION

The results of the duplicate analyses are computed and the absolute relative percent difference (RPD) is calculated.

$$\text{RPD} = \frac{|\text{Sample Result} - \text{Duplicate Result}|}{\text{Average Result}} \times 100$$

The RPD must fall within set control limits for the results to be accepted and subsequent data validated. A one-sided distribution with zero as a target value is typical, given absolute value requirements (CLP).

C. WARNING LIMITS

Warning limits represent the 95% confidence interval and are equal to the mean value for the control sample, plus or minus two standard deviations ($\pm$ 2S). Exceeding these limits is a warning that the analytical system may be approaching an out-of-control situation, and should be inspected for possible sources of error before continuing the analysis. Analysts will inform the QC manager or the supervisor of such problems.

EXHIBIT 24

SURROGATE % RECOVERY CHART

Matrix: Soil

Sample I.D #	71669	71673	71670	71671	71619	71710	71711	71712	71713	71715	71714	71721	71815	71816	71821	71670	71856	71668	71829	71824	71822	71669 SD	71669 SP	71856 SP
	95	101	96	91	85	108	105	102	103	106	81	101	98	95	94	96	97	90	115	95	103	87	89	97

130
125
120
115
110
105
100
95
90
85
80
75
70
65

UCL
UWL
LWL
LCL

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WL = 73-81
CL = 121-113

INSTRUMENT:

METHOD: 5030/8015 ANALYTE: Fluorobenzene

Date: 4/3-4/5

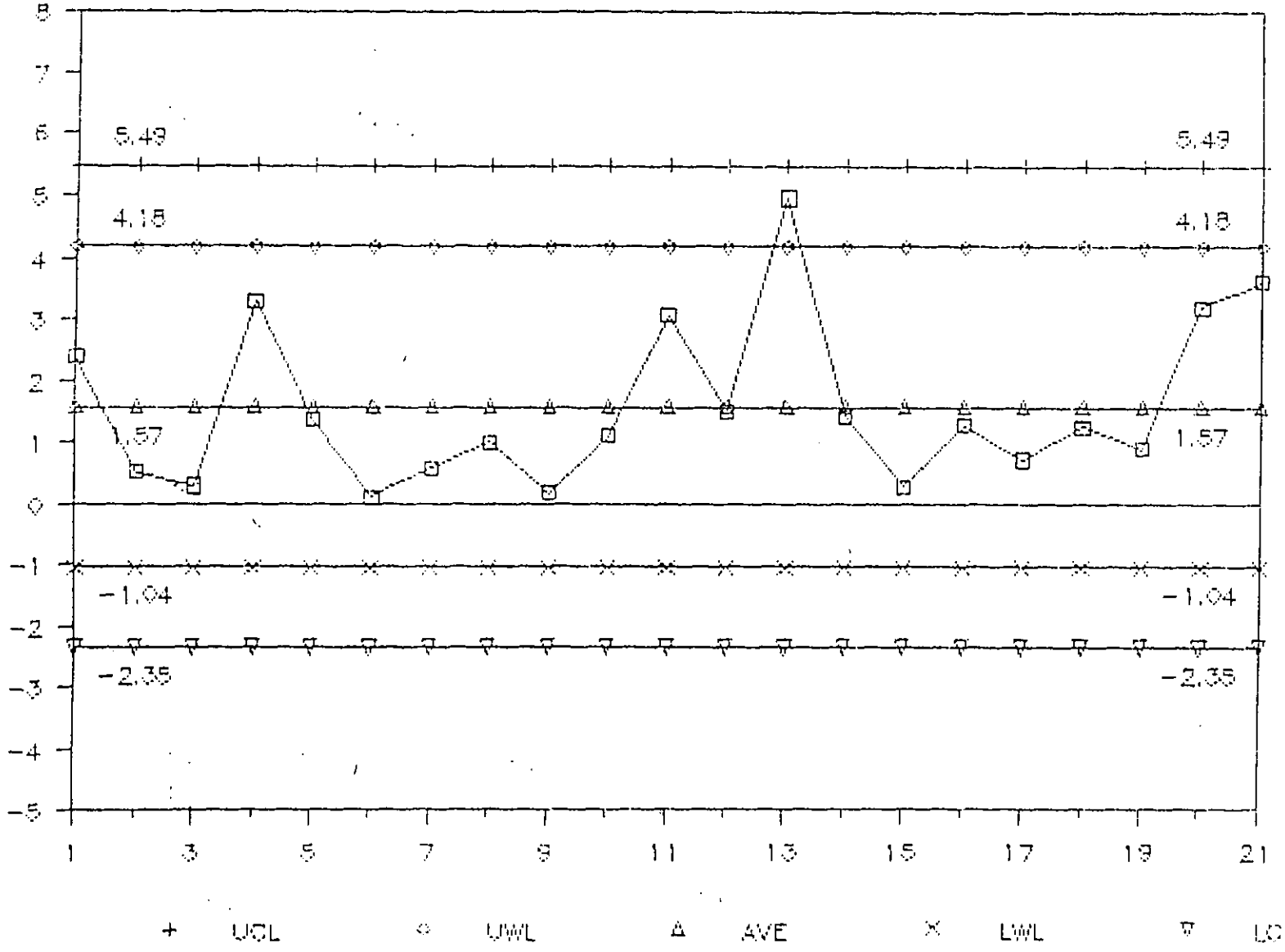
Average Recovery = 97%

J Standard = 24

EXHIBIT 25

PACE PRECISION CHART

CHLORIDE IN WATER



MN-COMP 0044911

EXHIBIT 26

ANALYSIS:

RAW DATA SHEET

CLIENT NAME: _____ DATE ANALYZED _____

PROJECT NAME: _____ ANALYZED BY: _____

FILE #: _____ TIME: _____

DATE COLLECTED: _____ DATA REVIEWED BY: _____

DATE RECEIVED: _____ ENTERED BY: _____

SAMPLE #	ANALYSIS			SAMPLE VOL (mls) A	RESULT OF DIL SAMPLE B
	RESULTS	UNITS	COMMENTS		

A = SAMPLE VOLUME USED (mls)

B = RESULT OF DILUTED SAMPLE

EXHIBIT 27
SPIKE SUMMARY FORM

Soil Matrix TPH/BTX

Date			Benzene					Toluene					O-Xylene					TPH-L				
Y	M	D	S	SD	$\bar{P}$	R	$\bar{R}$	S	SD	$\bar{P}$	R	$\bar{R}$	S	SD	$\bar{P}$	R	$\bar{R}$	S	SD	$\bar{P}$	R	$\bar{R}$
98	4	1																				
		2																				
		3																				
		4	87	89		2		91	91		0		93	95		2		114	89		25	
		5	101	101		0		100	111		10		102	104		2		120	100		18	
		6	94	85		10		83	81		2		85	96		12		96	98		2	
		7																				
		8																				
		9																				
		10	92	101		9		120	100		18		94	92		2		75	77		3	
		11																				
		12																				
		13																				
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S = Spike Recovery SD = Spike Dup. Recovery $\bar{P}$ = Average Recovery

R = Relative Deviation $\bar{R}$ = Average Relative Deviation S_p = Stand. Deviation

MN-COMP 0044913

D. CONTROL LIMITS

Control limits represent the 99% confidence interval and are equal to the mean value of the control sample, plus or minus three standard deviations (±3S). Exceeding these limits indicates that the analytical system is out-of-control. The QC manager or the supervisor shall be informed and corrective action shall be taken.

1. Method of Setting Limits

Control limits are established via statistical analysis, using QC sample results. Limits are determined for a parameter of each method as analyzed on a specific instrument.

The mean value (P) and the standard deviation (S) for each data set is calculated and the limits are set as:

Warning (WL) = P + 2S = 95% Confidence limit
Control (CL) = P + 3S = 99% Confidence limit

Where $P = \frac{X1 + X2 + X3.... Xn}{n}$ x = Sample result

and $S = \sqrt{\frac{\Sigma(X - P)^2}{n-1}}$ n = Total # of results in set
P = mean value

The minimum number of results to be used for statistical calculation (n) is 15-20. Limits will generally be calculated from a data point set every thirty days, depending on the method. Updated limits are issued at the beginning of every month.

2. Utilization of Acceptance Limits

QC sample results must fall within the established warning limits (P ± 2S) for each parameter.

Results that fall outside of warning limits, but remain within the control limits (P ± 3S), are considered suspect. These results must be carefully examined for possible sources of error in the analysis, or justified as a matrix bias effect. All such results are recorded in a Discrepancy Report form/Corrective Action form (See Section XV).

Any three consecutive results outside of warning limits but within control limits is an out-of-control event which shall be documented and corrected.

Results that fall outside of control limits (P ± 3S) must be documented and corrective action taken.

E. COMPLETENESS

Data completeness can be quantified during data assessment. It is expected that laboratories should provide data, meeting QC acceptance criteria, for 90% or more of the requested determinations. It is incumbent for planners to identify any sample types, such as control or background locations, which require 100% completeness.

F. REPRESENTATIVENESS

Representativeness is a qualitative element that is related to the ability to collect a sample that reflects the characteristics of that part of the environment that is to be assessed. Sample representativeness is dependent on the sampling techniques used and is considered individually for each project. It is specifically addressed in each work plan.

G. COMPARABILITY

Comparability is also considered during preparation of the work plan. The objective of comparability is to ensure that results of similar activities conducted by different parties are comparable. For example, the use of EPA-approved, etc., methods and procedures ensure comparability with other data from previous or following studies.

MN-COMP 0044915

XV. CORRECTIVE ACTION

If, as a result of audits or QC sample analyses, methods systems prove to be unsatisfactory, corrective action shall be implemented. The project manager, department manager, Quality Control manager, supervisor, and analyst may be involved in the corrective action. If previously reported data are affected by a situation requiring correction or if the corrective action impacts a project budget or schedule, the action will directly involve the project manager (and Quality Control manager).

For immediate or long-term corrective actions, steps comprising a closed-loop corrective action system are as follows:

1. Define the problem.

2. Assign responsibilities for problem investigation.

3. Investigate and determine the cause of the problem.

   a. Check all calculations

   b. Re-analyze the sample

   c. Verify the integrity of the spiking solution, laboratory control sample, or calibration standard.

   d. Check instrument and operating conditions to preclude the possibility of malfunctions or operator error.

4. Determine the corrective action(s) necessary to eliminate the problem.

5. Assign and accept responsibilities for implementing the corrective action.

6. Establish the effectiveness of the corrective action and implement the correction.

7. Verify and document that the corrective action has eliminated the problem (Exhibit #28).

   Depending upon the nature of a problem, the corrective action implemented may be formal or informal. In either case, occurrence of the problem, the corrective action employed, and verification that the problem has been eliminated must be documented.

   In addition, if the corrective action mandates the preparation of a new standard or calibration solution(s), a comparison study between the new solution versus the old solution will be performed. The results are supplied with the weekly QC submittal as verification of problem elimination.

EXHIBIT 28

CORRECTIVE ACTION

INSTRUMENT _____
MONTH/YEAR _____

DATE	PROBLEM	ACTION	INITIAL

MN-COMP 0044917

XVI. QUALITY ASSURANCE REPORTS TO MANAGEMENT

A. OBJECTIVE

This section describes the methods used by PACE to store and retrieve quality assurance records and issue of appropriate reports.

B. REQUIREMENTS

Comprehensive records shall be maintained to provide evidence of the quality assurance activities. All charted QC values which indicate an out-of-control situation must be evaluated and explained. Any corrective actions and re-analysis of samples must be fully explained and documented.

C. IMPLEMENTATION

Procedures for recording all aspects of the Quality Assurance Program are written and filed.

D. REPORTS TO MANAGEMENT

Quarterly reports are provided by the Quality Control officer to the President, Vice President of Quality and Regional Director. This report addresses the quarterly quality assurance activities including details of corrective actions implemented, audit results, and QC summary information.

MN-COMP 0044918

REFERENCES

1. Handbook for Analytical Quality Control in Water and Wastewater Laboratories, U.S. EPA 600/4-79-019, March, 1979.

2. Federal Register, 40 CFR Part 136, October 26, 1984.

3. Test Methods for Evaluating Solid Waste, U.S. EPA SW-846, September, 1987.

4. Quality Assurance of Chemical Measurements, Taylor, John K.; Lewis Publishers, Inc. 1987.

5. Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WPCF: 16th Edition, 1985.

6. NIOSH Manual of Analytical Methods, U.S. Department of Health, Education, and Welfare; Second Edition, 1977.

7. Methods for Non-conventional Pesticides Chemicals Analysis of Industrial and Municipal Wastewater, Test Methods, EPA-440/1-83/079-C.

8. Methods for Chemical Analysis of Water, Wastes, EPA-600/4-79--020, 1983.

9. California Administration Code, Title 2, Chapter 30, Article II, "Criteria for Identification of Hazardous and Extremely Hazardous Wastes."

10. The Determination of Inorganic Anions in Water by Ion Chromotography - Method 300.0 Test Method, EPA-600/4-84-017. March, 1984.

11. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 2nd Edition, U.S. EPA, revised April, 1984.

MN-COMP 0044919

APPENDIX J

HEALTH AND SAFETY PLAN

FORD RI/FS

MN-COMP 0044920

CONESTOGA-ROVERS AND ASSOCIATES
SITE HEALTH & SAFETY PLAN

Fill in the blanks and attach supporting documents as necessary.

Ref#:	2853	Written by:	Jon Christofferson
Office:	St. Paul	Date:	8/01/90
		Reviewed by:	
Anticipated start date:	Fall 1990	Date:	
		Industrial Hygiene:	Mitchell Bergner CIH
Duration:	Two Years	Date:	
		Site Engineer:	J. Christofferson
		Site Safety Officer:	Chuck Ahrens

A. Work Location Description

1. Site Name: Ford Motor Company Twin Cities Assembly Plant

2. Location: 966 South Mississippi River Blvd., St. Paul, Minnesota

3. Site Type:

HW Site	( )	Industrial	(X)	Active	( )
Spill	( )	Construction	( )	Inactive	( )
Other	( )	Describe			

4. Status: * RI/FS in progress. This plan is for completion of RI activities and for matters related to the FS.

5. Anticipated Activities: Soil borings, well installation testing & sampling, soil gas monitoring

(See page 9)

6. Size: Site is approximately 126 acres.

7. Surrounding Population: Mississippi River is to the west. North, east and south of the site is
Buildings/Homes/Industry light commercial/residential

8. Protection of Neighboring Properties: * Action will not affect neighboring properties

9. Topography: Site is primarily roof tops and sloped parking lots. Surrounding topography is a terrace with the river bluff to the west.

10. Anticipated Weather: Fall/winter in Minnesota
(temperature etc.)

11. Limiting Weather: (by which the job will be stopped) Heavy rains or snow may affect drilling operations. Temperatures below freezing may cause work stoppage.

12. Unusual Features: * N/A

B. Hazard Description

1. Initial Site Safety Assessment Review Complete (X) Partial ( )
If partial, why? Attach Initial Review to Addendum

2. Hazard level: A( ) B( ) C( ) D(X) Unknown( )
Who determined the hazard level? How? CRA in previous studies.
Upgrade to level C will be determined by field monitoring.

If hazard level exceeds level D attach an additional sheet with explanation/justification.

3. Types of hazards:

Chemical	(X)	Inhalation	(X)	Cold Stress	( )
Biological	( )	Ingestion	(X)	Heat Stress	( )
Physical	( )	Skin Contact	(X)	Noise	( )
Radiation	( )			Confined Space Entry	( )
Oxygen De f.	( )				
Explosive	( )				

Describe

4. Source of Hazard:

(X)	Air	Describe: During drilling, Monitoring will be conducted. A higher degree of protection is not expected to be required beyond that indicated above.
(X)	Soil	Describe: During drilling operations. Protection is not expected to be beyond that selected above.
(X)	Surface Water	Describe: The Mississippi River has been sampled near the Site during prior investigations and is not expected to be any level of concern.
(X)	Groundwater	Describe: During monitoring, levels of VOCs & metals were present. These levels are not expected to be hazardous beyond the level of protection selected.
( )	Other	Describe:

MN-COMP 0044922

5. Chemical and Physical Hazards of Concern

List the primary, identifyable, chemical and physical hazards.

Name	Concentrations (if known)	Primary Hazards	MSDS attached ?
Soil:			
cadmium	7.5 mg/kg	inhilation/digestion	NO
lead	3800 mg/kg	inhilation/digestion	NO
zinc	3500 mg/kg	inhilation/digestion	NO
ethylbenzene	100000 ug/kg	inhilation/skin contact	NO
total xylenes	980 ug/kg	inhilation/skin contact	NO
Groundwater:			
methylene chloride	230 ug/L	inhilation/skin contact	NO
1,1-dichloroethylene	43 ug/L	inhilation/skin contact	NO
benzene	510 ug/L	inhilation/skin contact	NO
ethylbenzene	3000 ug/L	inhilation/skin contact	NO

C. Personnel Protective Equipment

1. Level of Protection

Location	Job – Task	Level of Protection
	Well installation & soil borings	D
	Groundwater sampling	D
	Soil gas sampling	D
	Sampling of UST draintile sump	D
		A B C D
		A B C D
		A B C D
		A B C D
		A B C D
		A B C D
		A B C D

MN-COMP 0044923

2. Protective Equipment

LEVEL A

Respiratory

( ) SCBA or Airline with escape bottle
( ) Other

_____

( ) Other

_____

Head, Eye, Ear Protection ( ) N/A

( ) Hard Hat
( ) Ear Muffs or Plugs
( ) Other

_____

Foot Protection ( ) N/A

( ) Safety shoes
( ) Disposable Overboots
( ) Other

_____

Clothing

( ) Fully Encapsulated Suit
( ) Chemically Resistant Splash Suit
(NA) Tyvek Coverall, Standard
(NA) Tyvek Coverall, Polyethylene
(NA) Tyvek Coverall, Saranex
( ) Coverall, other
Specify: _____
( ) Other

_____

( ) Other

_____

Hand Protection ( ) N/A

( ) Undergloves
Type: _____
( ) Gloves
Type: _____
( ) Overgloves
Type: _____
( ) Other

_____

LEVEL B

Respiratory

( ) SCBA or Airline with escape bottle
( ) Full Face Resp.
Cartridge _____

_____

( ) Other

_____

( ) Other

_____

Head, Eye, Ear Protection ( ) N/A

( ) Hard Hat
( ) Ear Muffs or Plugs
( ) Other _____

Foot Protection ( ) N/A

( ) Safety shoes
( ) Disposable Overboots
( ) Other

_____

Clothing

( ) Fully Encapsulated suit
( ) Chemically Resistant Splash Suit
(NA) Tyvek Coverall, Standard
( ) Tyvek Coverall, Polyethylene
( ) Tyvek Coverall, Saranex
( ) Coverall, other
Specify: _____
( ) Other

_____

( ) Other

_____

Hand Protection ( ) N/A

( ) Undergloves
Type: _____
( ) Gloves
Type: _____
( ) Overgloves
Type: _____
( ) Other

_____

MN-COMP 0044924

2. Protective Equipment continued

LEVEL C

Respiratory

( ) Full Face Resp.
Cartridge
( ) Halfmask
Cartridge Organic Vapor, particulate
( ) Escape
Type
( ) Other

( ) Other

( ) Other

Clothing ( ) N/A

(NA) Fully Encapsulated suit
( ) Chemically Resistant Splash Suit
( ) Tyvek Coverall, Standard
( ) Tyvek Coverall, Polyethylene
( ) Tyvek Coverall, Saranex
( ) Coverall, other
Specify:
( ) Other

( ) Other

Head, Eye, Ear Protection ( ) N/A

( ) Hard Hat
( ) Goggles
( ) Safety Glasses w/ Sideshields
( ) Face Shield
( ) Chemical Goggles
( ) Ear Muffs or Plugs
( ) Other
Portable Eye Wash to be present.

Foot Protection ( ) N/A

( ) Safety shoes
( ) Disposable Overboots
( ) Other

Hand Protection

( ) Undergloves
Type:
( ) Gloves
Type: Standard Work Gloves
( ) Overgloves
Type:
( ) Other

LEVEL D

Respiratory (X) N/A

( ) Halfmask
Cartridge
( ) Escape
Type
( ) Other

( ) Other

Clothing ( ) N/A

(X) Tyvek Coverall, Standard
( ) Tyvek Coverall, Polyethylene
( ) Tyvek Coverall, Saranex
( ) Coverall, other
Specify:
( ) Other

( ) Other

Head, Eye, Ear Protection ( ) N/A

(X) Hard Hat
( ) Goggles
(X) Safety Glasses w/ Sideshields
( ) Face Shield
( ) Chemical Goggles
(X) Ear Muffs or Plugs*
( ) Other
* may be required during drilling

Foot Protection ( ) N/A

(X) Safety shoes
( ) Disposable Overboots
( ) Other

Hand Protection ( ) N/A

(X) Undergloves
Type: Surgical latex
(X) Gloves
Type: Cotton work gloves
( ) Overgloves
Type:
( ) Other

MN-COMP 0044925

D. PERSONAL AIR MONITORING

Depending on the throughness of the Initial Site Survey and the hazard levels resulting from the survey, additional breathing zone air monitoring may be necessary to protect the health of site workers and verify the level of protection employees are utilizing. Applicibility of this section is subject to Industrial Hygiene review.

ADDITIONAL AIR MONITORING NECESSARY (X)

ADDITIONAL AIR MONITORING NOT NECESSARY ( )

( ) Attach employee air sampling requirements to addendum.

* HNu measurements to be taken as work proceeds to confirm appropriateness of Level D determination

E. ENVIRONMENTAL MONITORING REQUIREMENTS

Additional environmental site monitoring may or may not be necessary during the course of this investigation.

ADDITIONAL ENVIRONMENTAL MONITORING NECESSARY ( )

ADDITIONAL ENVIRONMENTAL MONITORING NOT NECESSARY (X)

	Frequency	Notes
HNU/OVA		
Combustible Gas Indicator		
Oxygen Monitor		
Colorimetric Tubes (state type)		
Other	If unknown wastes are contacted, exposure levels will have to be ascessed and changes to this plan made.	
Other		

( ) See addendum for additional notes / requirements

MN-COMP 0044926

F. Personnel Decontamination

( ) Required

Attach diagram if required.

(X) Not required

Equipment Decontamination

(X) Required

( ) Not required

If required, describe and list equipment:

Steam cleaning of drilling rig and augers prior to and after use on site. Clean augers to be used between borings for QA/QC purposes.

MN-COMP 0044927

G. Personnel

All CRA field personnel are required to participate in training and medical management programs prior to field assignment and annually thereafter. Original copies of physical exams and training certifications are on file in the Minnesota Industrial Hygiene office.

PERSONNEL AUTHORIZED TO ENTER SITE

Name	Work Location Title/Task	Medical Current	Fit Test Current	Training Current
Rob Field		(X)	(X)	(X)
Chuck Ahrens		(X)	(X)	(X)
Jon Michels		(X)	(X)	(X)
		( )	( )	( )
		( )	( )	( )
		( )	( )	( )
		( )	( )	( )
		( )	( )	( )
		( )	( )	( )
		( )	( )	( )
		( )	( )	( )

Site Safety Coordinator _____

MN-COMP 0044928

H. Activities Covered Under This Plan

Task No.	Description	Preliminary Schedule
1.	Soil borings and sampling	On going
2.	Well installation and development	"
3.	Groundwater and surface water sampling, water levels	"
4.	Sample draintile sump at UST site	"
5.	Soil gas monitoring	"

MN-COMP 0044929

I. Contingency Contacts

Agency	Contact	Phone #
Fire Department	City of St. Paul	911
Police Department	City of St. Paul	911
Health Department	Ron Koch	627-5146
Local Hospital		
Poison Control Center	N/A	
State Environmental Agency	J. Todd Goeks - MPCA	296-7710
EPA-Regional Office		
EPA-ERT ICOM		
Spill Contractor		
F A A		
On Site Coordinator	CRA St. Paul Office	639-0913
Site Telephone	Plant Engineering - John Kallaus	696-0585
Nearest Telephone	Plant Security	699-1321
CRA INDUSTRIAL HYGIENE	MITCHELL S. BERGNER CIH ROH	612-639-0913
Other		

J. Contingency Plans

attach additional information

ALL EMERGENCY ACTIONS ARE TO BE REPORTED TO INDUSTRIAL HYGIENE ASAP

Medical Emergency

Name of Hospital: Midway Hospital — Phone No.: 641-5500

Address: 1700 University Ave. West

Name of Contact: Emergency Room — Phone No.: 641-5700

Address:

MN-COMP 0044930

Route to Hospital (attach map) MAP ATTACHED

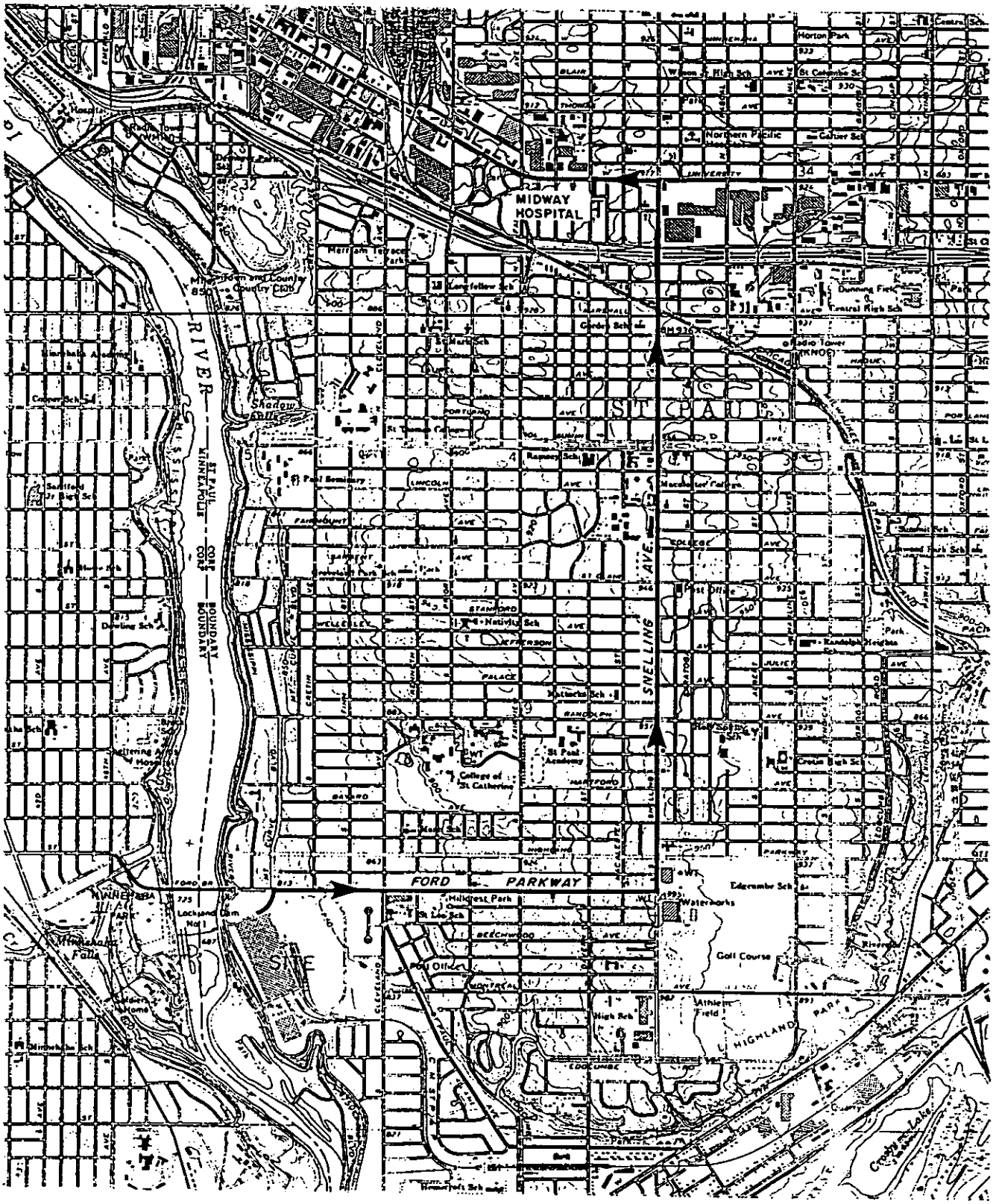
East on Ford Parkway to Snelling Ave. North on Snelling to University Ave.
West on University 3 blocks. Hospital on south side of University Ave.

Travel Time form Site (min.) 10

Distance to Hospital (Miles) 4.5

Name / Number 24 Hr. Ambulance Service 911

MN-COMP 0044931



ROUTE TO HOSPITAL

NOT TO SCALE

MN-COMP 0044932

CRA

EMERGENCY PLAN
Ford Motor Company

2853-20/08/90-M

L: Twin Cities

RECEIVED
ENVIRONMENTAL

Minnesota Pollution Control Agency

'93 JUL 12 P12:01

Jim Gibson – BAO
looks like you + plant received copies. A rare "success", however, we still have monitoring to do and need to continue to rely on CRA to keep us in compliance. Jerry

July 8, 1993

Mr. Jerome S. Amber
Principal Staff Engineer
Stationary Source Environmental
Control Office
Ford Motor Company
Commerce Park North
15201 Century Drive, Suite 608
Dearborn, Michigan 48120

(Black Stamped) by:	
RETAIN Record Copy (Red Stamped) Thru:	LIFE
Schedule Number:	

C+10

Dear Mr. Amber:

RE: PLP De-listing Status, Ford Motor Company - Twin Cities Assembly Plant Site

The Minnesota Pollution Control Agency Board, at its June 22, 1993, meeting, approved the Board Item deleting Ford Motor Company-Twin Cities Assembly Plant site from the Permanent List of Priorities.

Rick Jolley and I have enjoyed working with you to complete this project. If you have any questions, please feel free to contact me at (612) 296-7710 or toll-free at 1-800-657-3864.

Sincerely,

J. Todd Goeks

J. Todd Goeks
Project Manager
Response Unit II
Site Response Section
Ground Water and Solid Waste Division

JTG:pk

cc: Jon Christofferson, Conestoga Rovers & Associates
John Kallaus, Ford Motor Company
Jim Gibbson, Ford Motor Company
Kathy Hofer, Ford Motor Company, Office of General Counsel

ARCADIS
Infrastructure, environment, buildings

ARCADIS
430 First Avenue North
Suite 720
Minneapolis
Minnesota 55401
Tel 612.339.9434
Fax 612.336.4538
www.arcadis-us.com

Certified Mail Receipt 7001 0320 0004 2633 4634

Ms. Shanna Schmitt and
Ms. Stacey Hendry-Van Patten
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

ENVIRONMENT

Date:
March 17, 2009

Contact:
Bryan Zinda

Phone:
612.373.0234

Email:
bryan.zinda@arcadis-us.com

Our ref:
MN000593.0003

Subject:
Tunnel Survey Report, Collapse Area with Buried Drums – Feature 150
Ford Twin Cities Assembly Plant, St. Paul, Minnesota
MPCA VIC Project Number VP23530
MPCA PBP Project Number PB3682

Dear Ms. Schmitt and Ms. Hendry-Van Patten:

On behalf of Ford Motor Company (Ford), ARCADIS has prepared this brief summary report describing the tunnel survey for the Collapse Area with Buried Drums – Feature 150 for the Twin Cities Assembly Plant (Site) in St. Paul, Minnesota. This survey work was completed in accordance with the requirements of the Minnesota Pollution Control Agency (MPCA) Voluntary Investigation and Cleanup (VIC) Program and Petroleum Brownfields Program (PBP). The work was completed in accordance with discussions involving the MPCA.

Property Location and Description

The Site is located at 966 South Mississippi River Boulevard in St. Paul, Ramsey County, Minnesota at the approximate easting coordinate 484562.5 meters (m) and northing coordinate 4973822.5m. The Site is located in a mixed industrial, commercial, and residential use area on the eastern shore of the Mississippi River, along the east side of South Mississippi River Boulevard, south of Ford Parkway, and west of South Cleveland Avenue in St. Paul, Minnesota (see Figure 1). A network of tunnels underlies the site, and was described in the "*Phase I Environmental Site Assessment*" completed June 2007 by ARCADIS (Phase I).

Health and Safety

The survey of the tunnel was conducted according to the Health and Safety Plan (HASP) in accordance with Occupational Safety and Health Administration requirements as specified in the Code of Federal Regulations Title 29 Part 1910.120. The tunnels beneath the plant are a permitted confined space. All personnel that entered the tunnel were confined spaced trained prior to conducting the field work. Mid America Technical and Environmental Services of Maplewood, Minnesota provided the rescue teams for the work and the required permitting.

Survey of Feature 150 Collapse Area with Buried Drums

On October 3, 6 and 7, 2008 the tunnel leading to the Feature 150 was surveyed by Sunde Land Surveying (Sunde) of Bloomington, Minnesota. The tunnel location was surveyed to Ramsey County coordinate system [North American Datum of 1983 (NAD83)] and the elevation to vertical datum National Geodetic Vertical Datum of 1929 (NGVD 29). The location of the tunnel along with it terminus are presented on Figure 2.

The base of Feature 150 is located at an elevation of 711.0 feet mean sea level (MSL). The ground surface above the terminus of the tunnel is at an elevation of 772.9 feet MSL. The distance from the ground surface to the ceiling of the tunnel is approximately 56.7 feet. The end of the tunnel is located directly below the northeast corner of historical Disposal Area C, beneath the concrete parking area. A profile view of the terminus of the tunnel provided by Sunde is presented as Appendix A. Photographs of the tunnel and the location are presented in Appendix B.

Based on the location of the tunnel it is believed that the material encountered at the terminus is the consistent with material disposed of in the historical Disposal Area C. The description of the materials placed in Area C is consistent with the materials found at the end of the tunnel. As described in the Phase I the material at the terminus of the tunnel is concrete, wood chunks and paint sludge. Thus it is believed that the tunnel terminus has been filled from Disposal Area C materials and not a collapse of the tunnel.

Closing

Upon the closure of the TCAP the Feature 150 will be further evaluated. We appreciate your assistance with this project. If you have questions or need additional information, please call Bryan Zinda of ARCADIS at your convenience.

Sincerely,

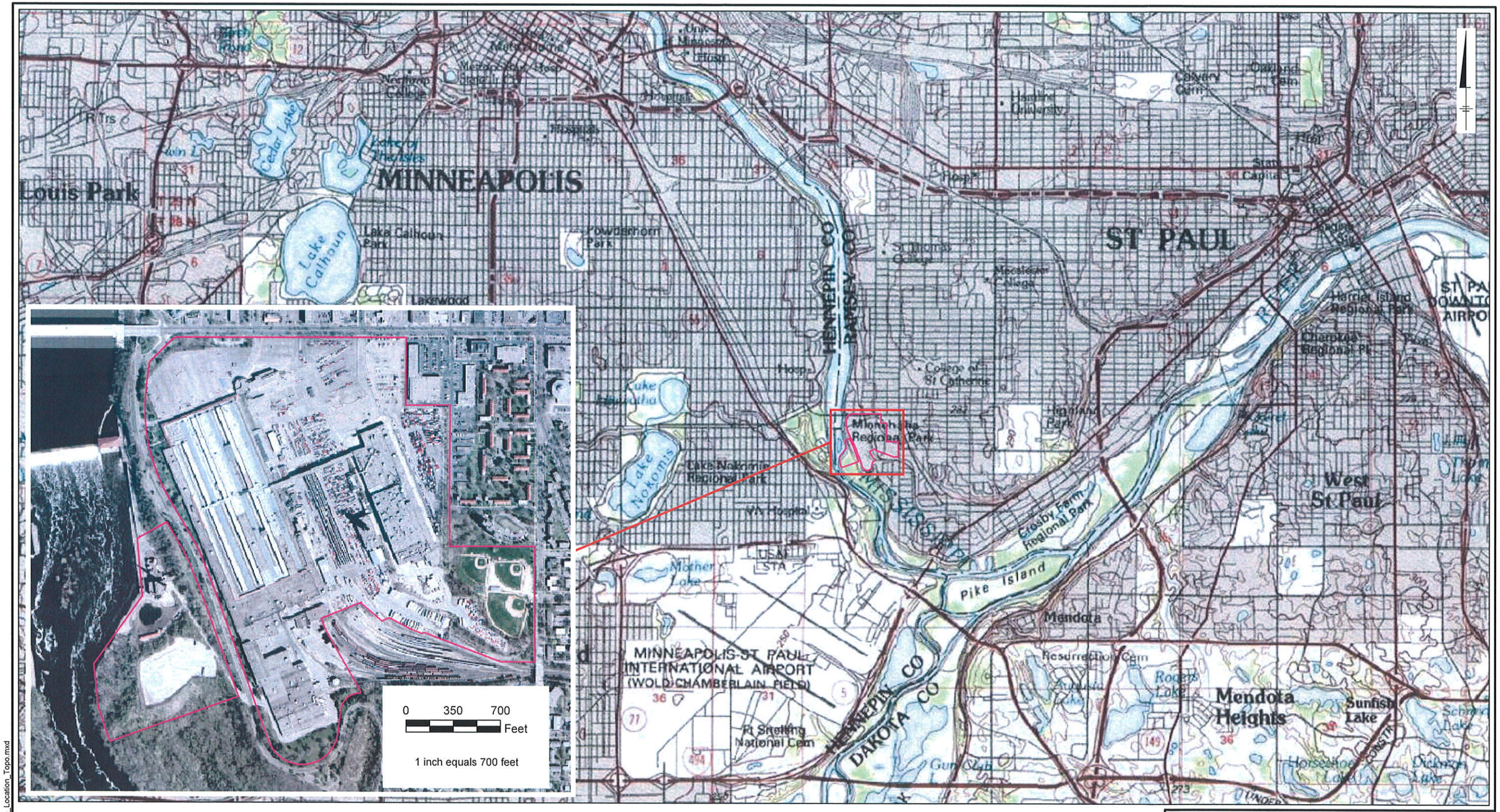
ARCADIS

Bryan Zinda, PE
Project Manager

Andrew Fiskness, PG
Staff Geologist

Copies:
Ms. Barbara Rusinowski, Ford Motor Company, Dearborn, Michigan
Mr. John Meyers, Ford Twin Cities Assembly Plant, St. Paul, Minnesota

Figures



LEGEND:

Ford Property Boundary

NOTES:

Imagery Source: United States Geological Survey
High Resolution Orthoimagery for the Minneapolis-St. Paul, Minnesota Urban Area

Topographic Map Source:
© 2007 National Geographic Society

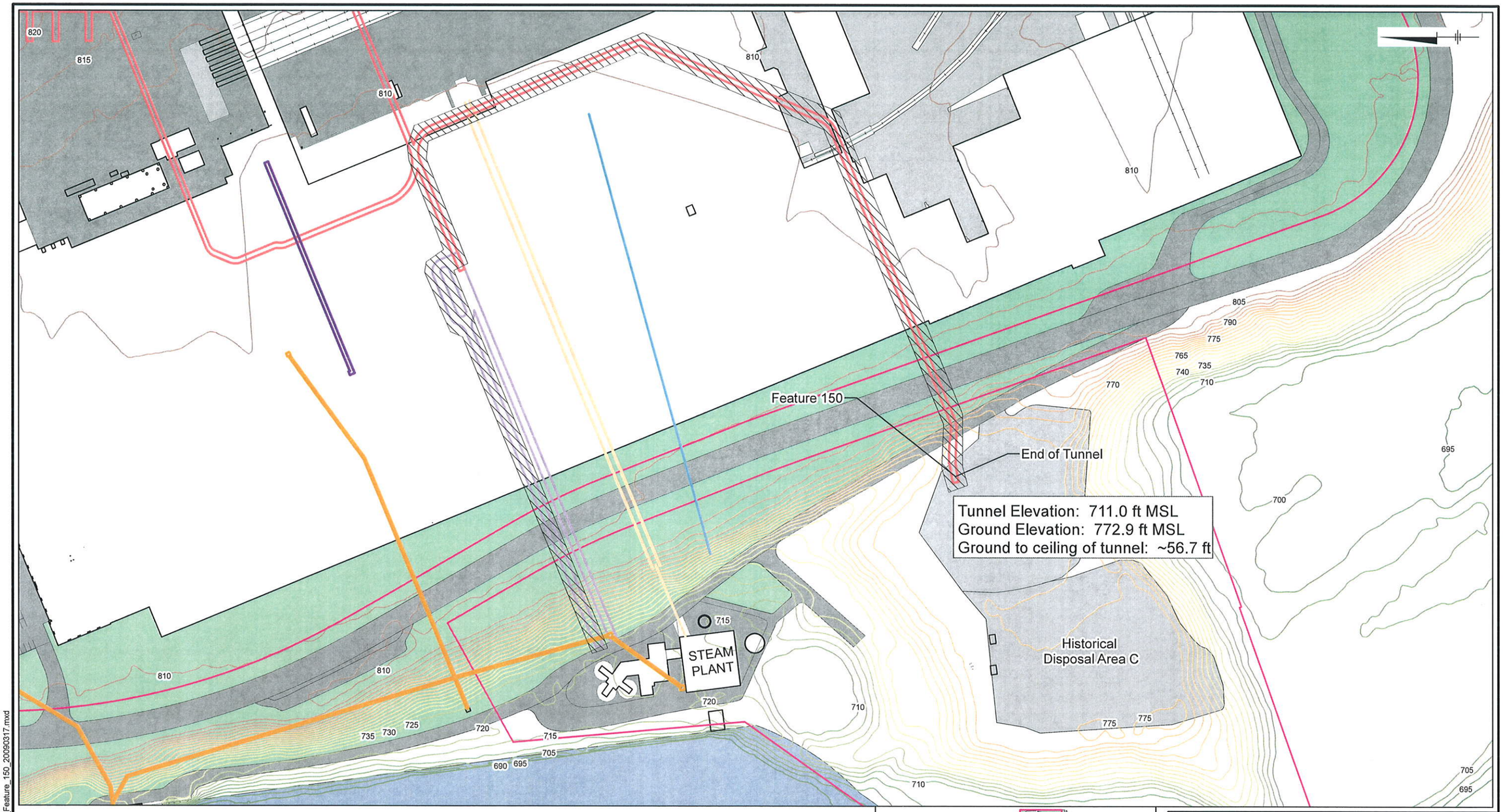
Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Site Location / Property Layout

ARCADIS

FIGURE
1

CITY: Minneapolis, MN DB: MGress PM: BZinda
Project: MN000593
G:\GIS\Projects\Ford Ranger\ArcMap\Fig1_Site_Location_Topo.mxd

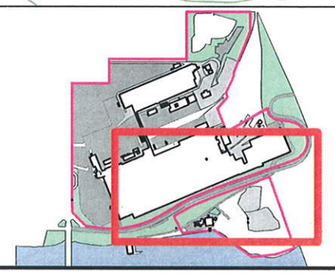


LEGEND:

- Ford Property Boundary
- Roads
- Rail
- Buildings
- Asphalt
- Concrete
- Grass
- Mississippi River
- Cable Tunnels
- Utility Tunnel
- Mined Sand Tunnels
- Elevation Contours (Feet)
- Gas Tunnel
- Steam Tunnel
- Traffic Tunnels
- Portion of Tunnel Surveyed

0 175 350 Feet

1 inch equals 175 feet



Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

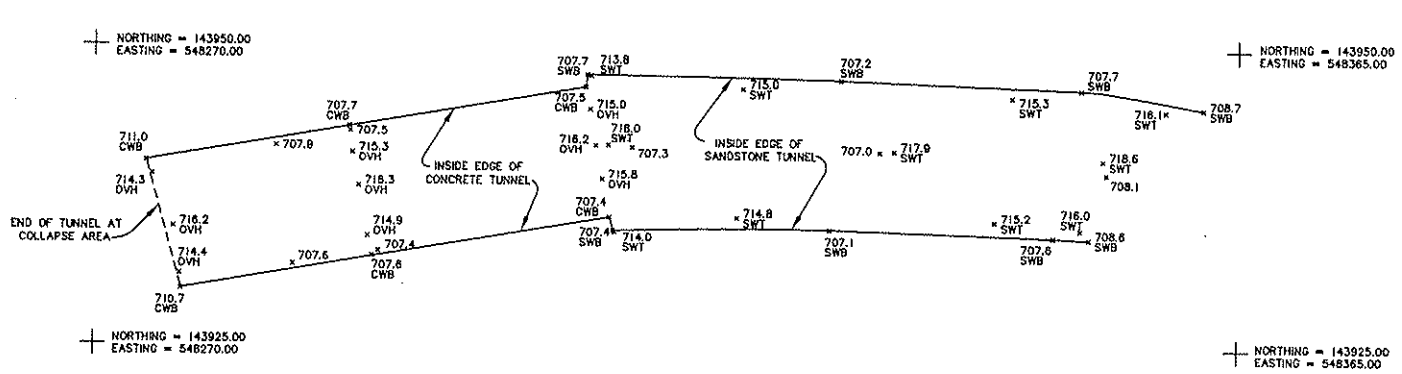
Feature - 150 Survey Location

ARCADIS

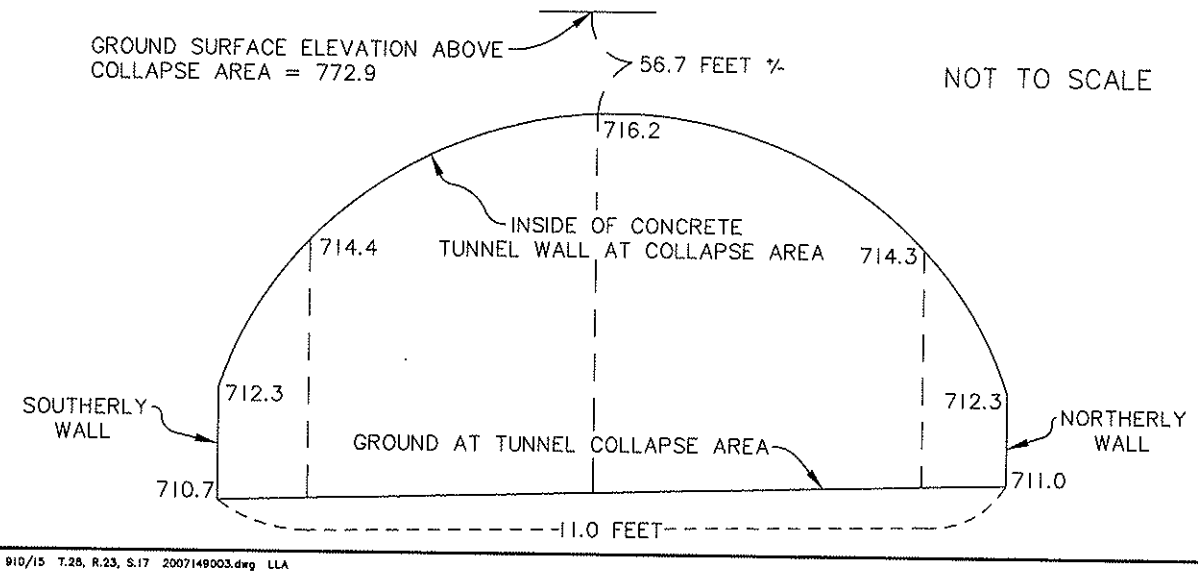
FIGURE 2

CITY: Minneapolis, MN DB: MGress PM: BZinda
Project: MN000593
G:\GIS\Projects\Ford Ranger\ArcMap\Tunnels_Feature_150_20090317.mxd

FORD MOTOR COMPANY (ST. PAUL, MINNESOTA PLANT)
TUNNEL COLLAPSE AREA SURVEY FOR:
ARCADIS U.S., INC.



PROFILE VIEW OF TUNNEL COLLAPSE AREA



LEGEND

CWB	Denotes concrete tunnel wall bottom
OVH	Denotes concrete tunnel wall top
SWB	Denotes sandstone tunnel wall bottom
SWT	Denotes sandstone tunnel wall top

NOTES

1.) Survey coordinate basis: Ramsey County (NAD83 1986)

2.) Vertical Datum: NGVD 29

I hereby certify that this sketch, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Dated this 8th day of October, 2008

SUNDE LAND SURVEYING, LLC.

By: _____
Mark S. Hanson, P.L.S. Minn. Lic. No. 15480

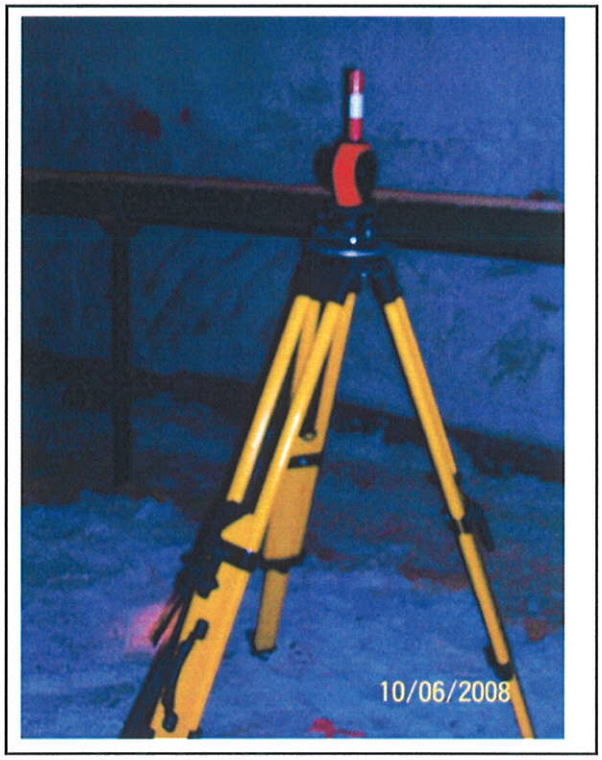
SUNDE LAND SURVEYING
www.sunde.com
Main Office:
900! East Bloomington Freeway (35W) • Suite 118
Bloomington, Minnesota 55420-3435
952-881-2455 (Fax: 952-888-9526)
North Office:
Brooklyn Park, Minn. 763-784-9346

2007-149 910/15 T.28, R.23, S.17 2007149003.dwg LLA

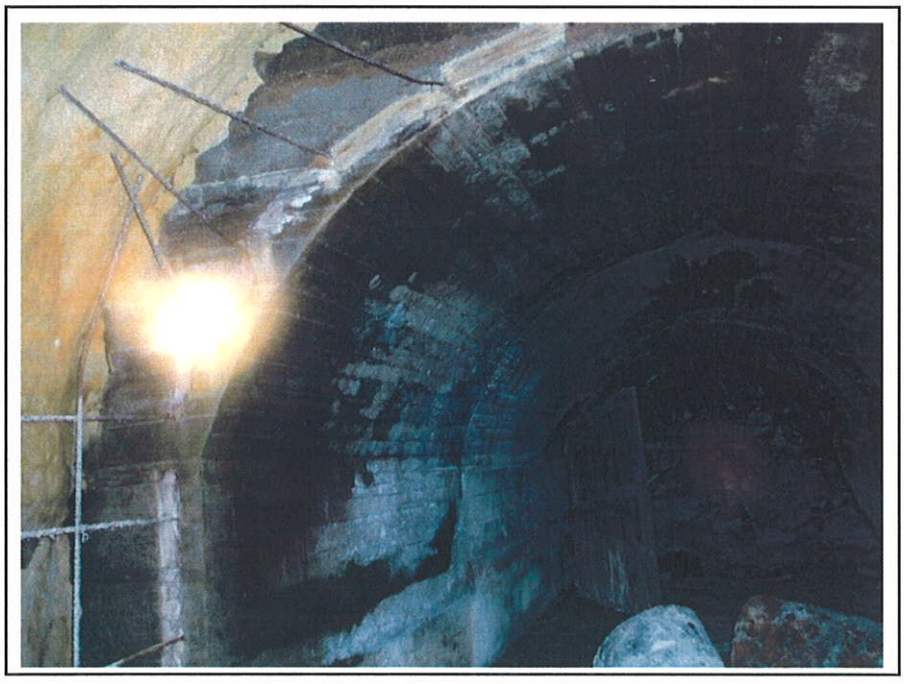
ARCADIS

Tunnel Survey Photos

Twin Cities Assembly Plant
(TCAP)
St. Paul, Minnesota



Survey equipment in tunnel.

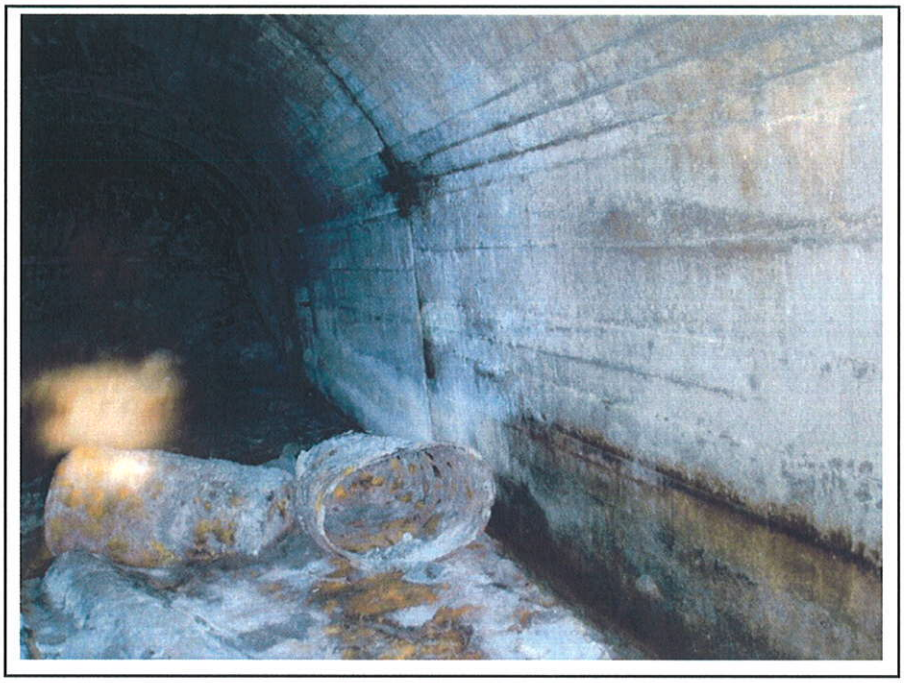


Drum at Feature 150 at end of tunnel.

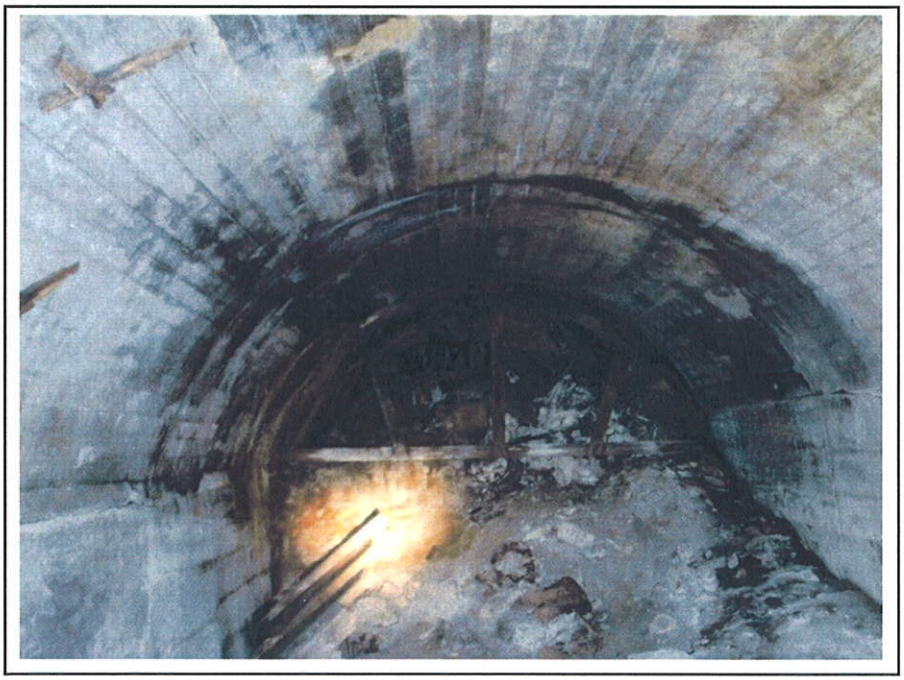
ARCADIS

Tunnel Survey Photos

Twin Cities Assembly Plant
(TCAP)
St. Paul, Minnesota



Drums at Feature 150 at the terminus of the tunnel.



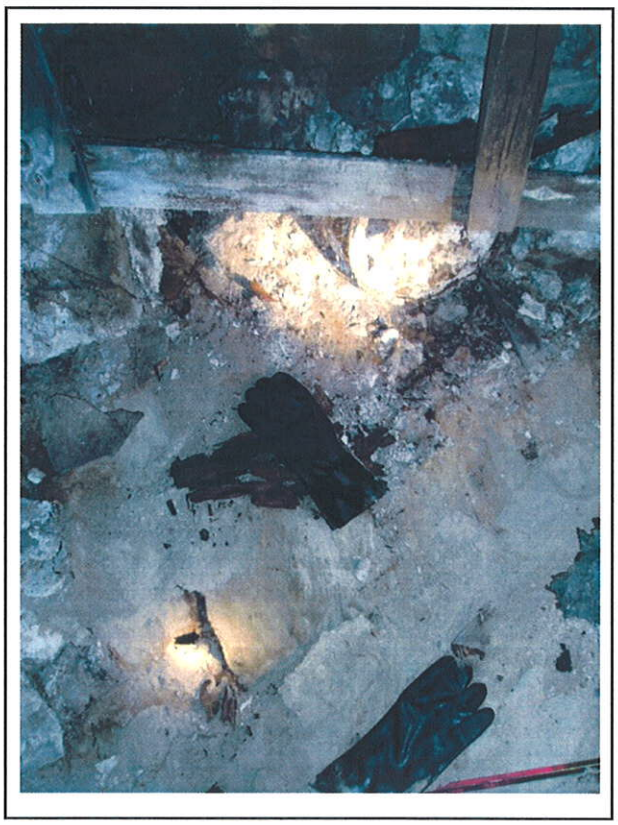
Material at terminus of the tunnel.

ARCADIS

Tunnel Survey Photos

Twin Cities Assembly Plant
(TCAP)
St. Paul, Minnesota

Floor of tunnel at Feature 150 at the terminus of the tunnel.



Close up of material at Feature 150 at the terminus of the tunnel.

ARCADIS

Tunnel Survey Photos

Twin Cities Assembly Plant
(TCAP)
St. Paul, Minnesota

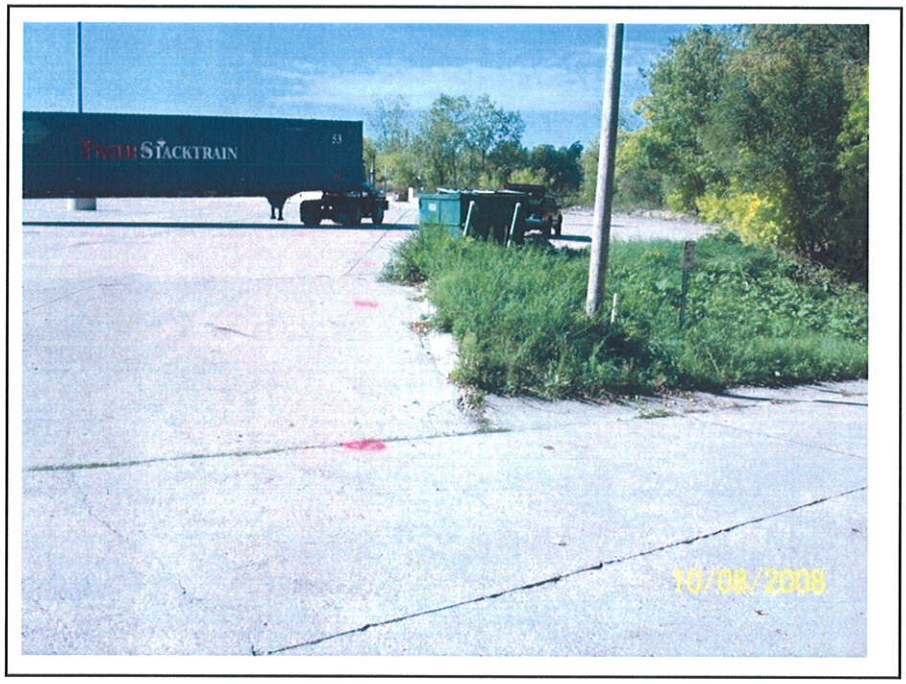
End of the tunnel marked in paint on the ground surface at historical Disposal Area C. Photograph looking to the southeast.

Tunnel marked in paint on the ground surface at historical Disposal Area C. Photograph looking to the southeast.

ARCADIS

Tunnel Survey Photos

Twin Cities Assembly Plant
(TCAP)
St. Paul, Minnesota



Location of south wall of tunnel marked with pink paint. Looking to the west.

ARCADIS
Infrastructure, environment, buildings

Certified Mail Receipt 7001 0320 0004 2633 4573

ARCADIS
430 First Avenue North
Suite 720
Minneapolis
Minnesota 55401
Tel 612.339.9434
Fax 612.336.4538
www.arcadis-us.com

Ms. Shanna Schmitt and
Ms. Stacey Hendry-Van Patten
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

ENVIRONMENT

Date:
December 14, 2009

Contact:
Bryan Zinda

Phone:
612.373.0234

Email:
bryan.zinda@arcadis-us.com

Our ref:
MN000593.0003

Subject:
Remedial Action Plan, 1A Tunnel Barrier Wall, Feature 150
Ford Twin Cities Assembly Plant, St. Paul, Minnesota
MPCA VIC Project Number VP23530
MPCA PBP Project Number PB3682

Dear Ms. Schmitt and Ms. Hendry-Van Patten:

On behalf of Ford Motor Company (Ford), ARCADIS has prepared this Remedial Action Plan (RAP) for the 1A Tunnel to prevent direct contact with waste materials present near the terminus of the tunnel for the Twin Cities Assembly Plant (Site) in St. Paul, Minnesota. The Site location is depicted on Figure 1.

Background Information

The area referred to as Feature 150 at the Ford Twin Cities Assembly Plant is an accumulation of materials on the far southern end of the 1A Tunnel. On October 3, 6, and 7, 2008 the 1A Tunnel leading to Feature 150 was surveyed by Sunde Land Surveying (Sunde) of Bloomington, Minnesota. The tunnel location was surveyed to Ramsey County coordinate system [North American Datum of 1983 (NAD83)] and the elevation to vertical datum National Geodetic Vertical Datum of 1929 (NGVD 29). The location and extent of the tunnel are presented on Figure 2.

The base of Feature 150 is located at an elevation of 711.0 feet above mean sea level (MSL). The ground surface above Feature 150 is at an elevation of 772.9 feet above MSL and the distance from the ground surface to the ceiling of the tunnel is approximately 56.7 feet. Feature 150 is located directly below the northeast corner of historical Disposal Area C. Historical Disposal Area C is now a concrete parking area.

Response Action

The MPCA requested a plan for the installation of a barrier wall in the 1A Tunnel to isolate the impacted area within the tunnel at Feature 150 in a letter dated October 16, 2009. The barrier wall will be installed near the terminus of the 1A tunnel just east of the waste material. The barrier wall, in combination with the locks at the entrance of the tunnels will be sufficient to prevent direct contact with the waste materials.

The barrier will be constructed at a point in the tunnel which is several thousand feet away from the entry portal of the tunnel. Since all materials will have to be hand-carried into position, the design theme for the work is to use materials that are readily available, relatively lightweight, and easy to construct.

Unistrut framing is a strong proven product, is relatively lightweight and has pre-engineered connectors. The Unistrut will be used for the main skeletal framing with a chain-link fence fabric attached for additional security. The barrio wall detail is presented in Figure 3. The Unistrut framing will be secured to the tunnel walls by drilling into the sandstone rock and anchoring with a sand/cement grout.

The general construction sequence will be as follows:

1. Bore 3-inch diameter holes in the tunnel floor to set the bottom portion of the P2000 Unistrut posts (shown below).

2. Bore matching holes in the tunnel ceiling for the upper portion of the posts to be installed.

3. Splice the upper and lower sections together with the P9200 tubing (shown below) and bolt in place.

4. Splice the horizontal sections together with the P9200 tubing (shown below) and bolt in place.

5. Install the horizontal Unistrut sections to the vertical sections using the P1045 connectors (shown below).

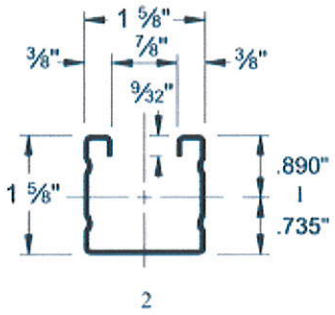
6. Attach the chain link fabric to the framing.

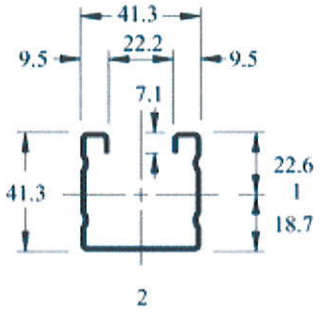
7. Mix sand/cement grout in approximate 2:1 proportions with water and fill the drilled holes in the tunnel floor with the grout mix.

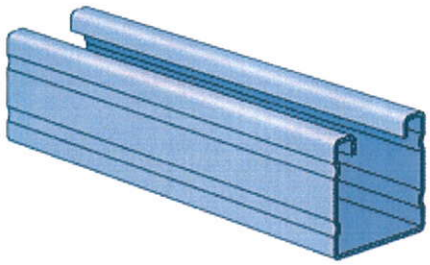
8. Allow grout mix to cure before installing the chain link fabric (approximately 24 hours).

Unistrut Components

P2000 - 1-5/8" x 1-5/8", 16 Gauge, Solid



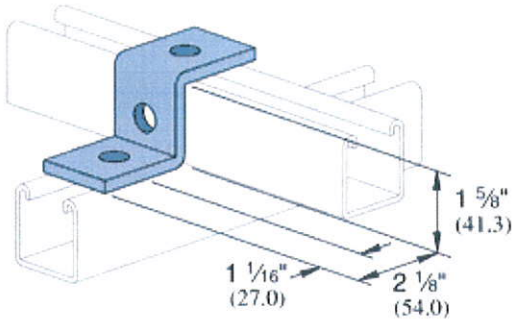




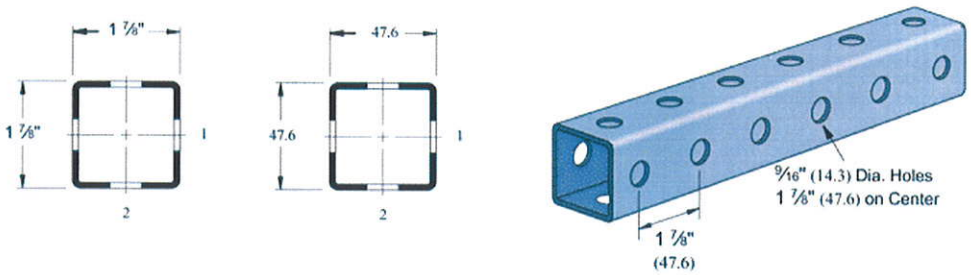
P1045 - Z Shape Fitting

Standard Dimensions:

- Hole Diameter: 9/16" (14.3mm)
- Hole Spacing (From End): 13/16" (20.6mm)
- Width: 1-5/8" (41mm)
- Thickness: 1/4" (6.4mm)



P9200 - 1 7/8" x 1 7/8" Telestrut Tubing



Schedule

Installation of the barrier wall will commence within two months of approval of the RAP by MPCA.

Closing

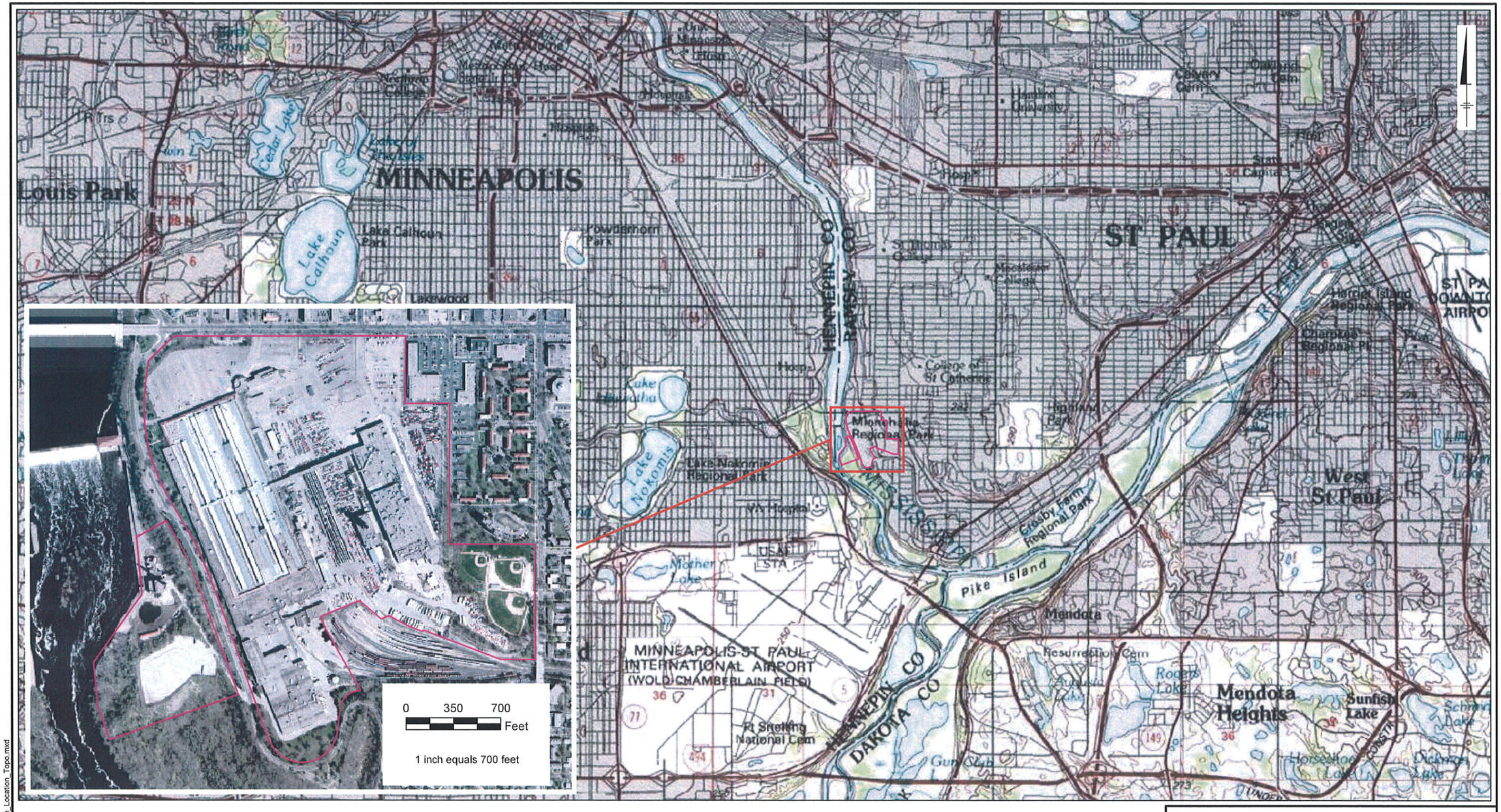
We appreciate the MPCA's understanding in this matter and look forward to receipt of your approval. If you have questions or need additional information, please call Bryan Zinda of ARCADIS at 612.373.0234 at your convenience.

Sincerely,

ARCADIS

Bryan Zinda, PE
Project Manager/Senior Engineer

Copies:
Ms. Barbara Rusinowski, Ford Motor Company, Dearborn, Michigan
Mr. John Meyers, Ford Twin Cities Assembly Plant, St. Paul, Minnesota



LEGEND:

Ford Property Boundary

NOTES:

Imagery Source: United States Geological Survey
High Resolution Orthoimagery for the Minneapolis-St. Paul, Minnesota Urban Area

Topographic Map Source:
© 2007 National Geographic Society

0 1 2
Miles

1 inch equals 1 miles

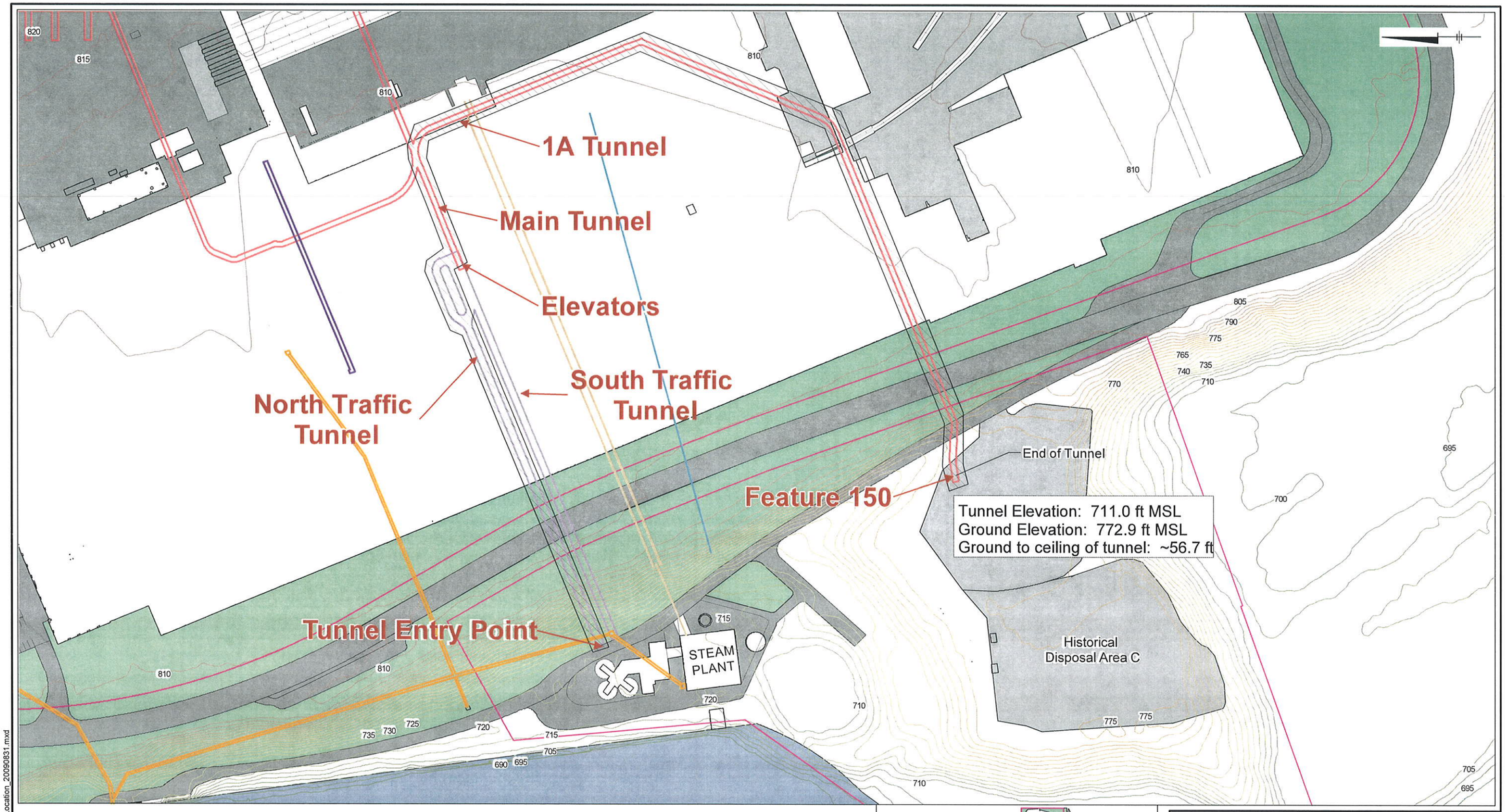
Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Site Location / Property Layout

ARCADIS

FIGURE
1

CITY: Minneapolis, MN DB: MGress PM: BZinda
Project: MN000593
G:\GIS\Projects\Ford Ranger\ArcMap\Fig1_Site_Location_Topo.mxd



LEGEND:

- Ford Property Boundary
- Roads
- Rail
- Buildings
- Asphalt
- Concrete
- Grass
- Mississippi River
- Cable Tunnels
- Utility Tunnel
- Mined Sand Tunnels
- Elevation Contours (Feet)
- Gas Tunnel
- Steam Tunnel
- Traffic Tunnels
- Portion of Tunnel Surveyed

0 175 350 Feet

1 inch = 175 feet

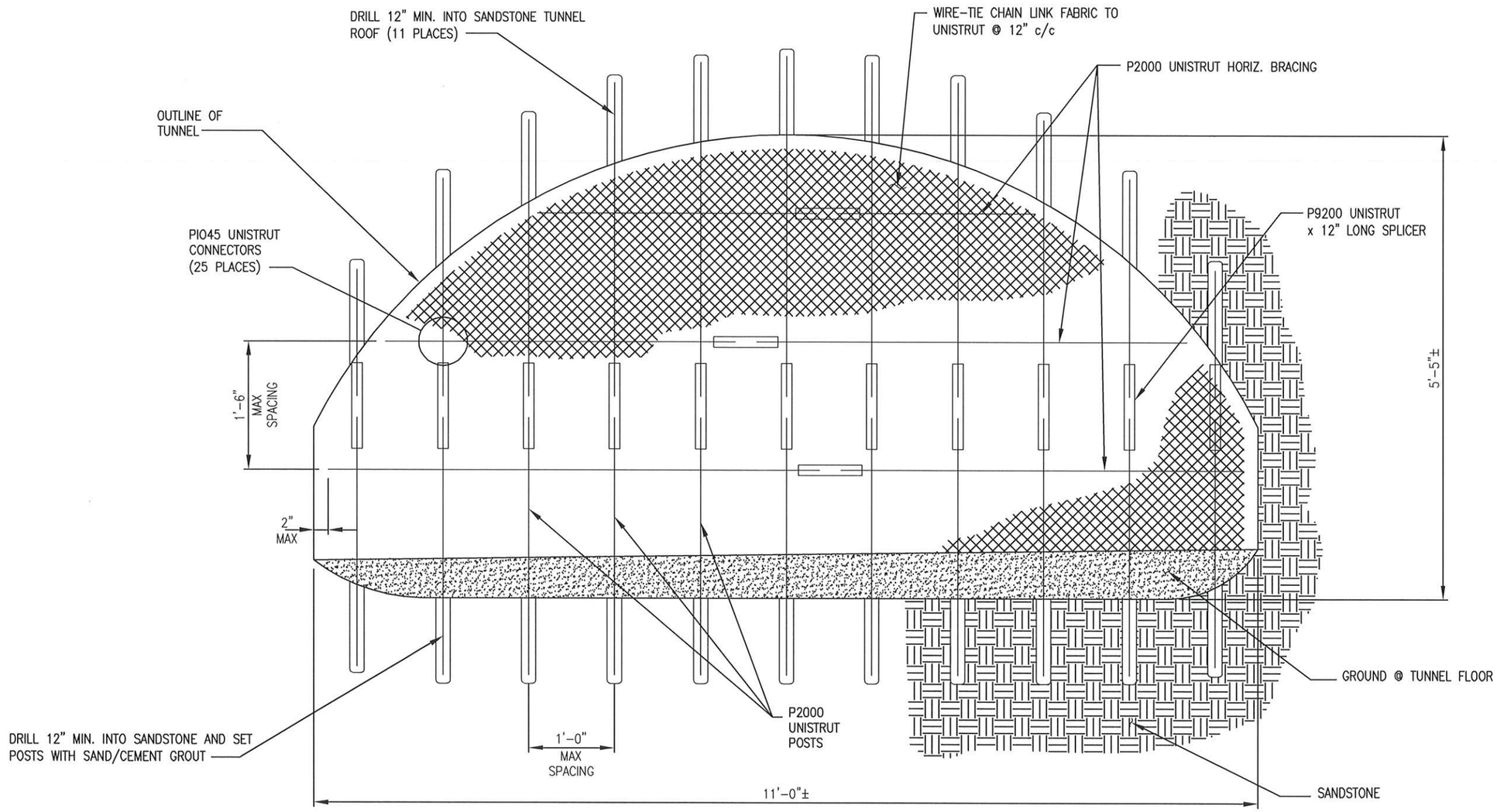
Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Tunnel Location Map

ARCADIS

FIGURE 2

CITY: Minneapolis, MN DB: MGress PM: BZinda
Project: MN000593
G:\GIS\Projects\Ford Ranger\ArcMap\Tunnel_Location_20090831.mxd



TWIN CITIES ASSEMBLY PLANT
FORD MOTOR COMPANY
ST. PAUL, MINNESOTA

1A TUNNEL BARRIER WALL DETAIL

ARCADIS

FIGURE 3

CITY:(Req'd) DIV/GROUP:(Req'd) DB:(Req'd) LD:(Opt) PIC:(Opt) PM:(Req'd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\PROJECTS\Ford-St.Paul\Working\Tunnel Work\Tunnel RAP\Figure 3.DWG LAYOUT: S-01 SAVED: 11/24/2009 8:10 AM ACADVER: 17.0S (LMS TECH) PAGESETUP:---- PLOTSTYLETABLE: BLACKGRAY-THIN.CTB PLOTTED: 11/24/2009 8:11 AM BY: DORN, RYAN
XREFS: IMAGES: PROJECTNAME: ----
oceplots-01990.tif

ARCADIS
Infrastructure, environment, buildings

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Fax 612.336.4538
www.arcadis-us.com

Certified Mail Receipt 7001 0320 0004 2633 4399

Ms. Shanna Schmitt and
Ms. Stacey Hendry-Van Patten
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

ENVIRONMENT

Date:
January 11, 2011

Contact:
Bryan Zinda

Phone:
612.373.0234

Email:
bryan.zinda@arcadis-us.com

Our ref:
DE000380.0001

Subject:
Response Action Implementation Report, 1A Tunnel Barrier Wall, Feature 150
Ford Twin Cities Assembly Plant, St. Paul, Minnesota
MPCA VIC Project Number VP23530
MPCA PBP Project Number PB3682

Dear Ms. Schmitt and Ms. Hendry-Van Patten:

On behalf of Ford Motor Company (Ford), ARCADIS has prepared this Response Action Implementation Report (RAIR) for the 1A Tunnel to prevent direct contact with waste materials present near the terminus of the tunnel for the Twin Cities Assembly Plant (Site) in St. Paul, Minnesota. The Site location and property layout are depicted on Figure 1.

Background Information

The area referred to as Feature 150 at the Ford Twin Cities Assembly Plant is an accumulation of materials on the far southern end of the 1A Tunnel. On October 3, 6, and 7, 2008 the 1A Tunnel leading to Feature 150 was surveyed by Sunde Land Surveying (Sunde) of Bloomington, Minnesota. The tunnel location was surveyed to Ramsey County coordinate system [North American Datum of 1983 (NAD83)] and the elevation to vertical datum National Geodetic Vertical Datum of 1929 (NGVD 29). The location and extent of the tunnel are presented on Figure 2.

The base of Feature 150 is located at an elevation of 711.0 feet above mean sea level (MSL). The ground surface above Feature 150 is at an elevation of 772.9 feet above MSL and the distance from the ground surface to the ceiling of the tunnel is approximately 56.7 feet. Feature 150 is located directly below the northeast corner of historical Disposal Area C. Historical Disposal Area C is now a concrete parking area.

Remedial Action

A Remedial Action Plan (RAP) was submitted to the MPCA on December 14, 2009 and approved by the MPCA on February 24, 2010. The remedial action consisted of the installation of a barrier wall in the 1A Tunnel (Feature 150) to isolate the impacted area. The barrier wall was installed near the terminus of the 1A Tunnel just east of the waste material. Work was conducted on December 10, 2010 and December 13 through 15, 2010.

The barrier was constructed at Feature 150, which is several thousand feet away from the entry portal of the tunnel. All materials were hand-carried into position via a permit-required confined pace entry. Unistrut framing was utilized since it is a strong proven product, is relatively lightweight and has pre-engineered connectors. The Unistrut was used for the main skeletal framing with a chain-link fence fabric attached for additional security. The Unistrut framing was secured to the tunnel walls by drilling and anchoring into the concrete formed wall.

The general construction consisted of the following:

1. Install chain link fabric in place using existing rebar from the concrete formed wall.

2. Core into the concrete formed wall; install anchor bolts through the Unistrut and into the concrete.

3. Splice the upper and middle horizontal Unistrut sections together with the P9200 tubing and bolt in place.

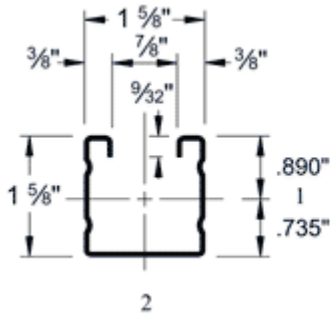
4. Fasten the vertical Unistrut sections to the horizontal sections.

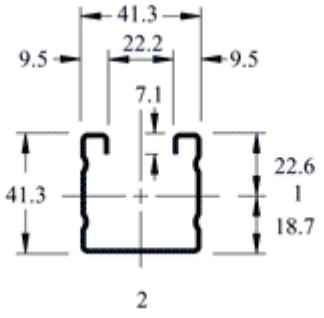
5. Tie the chain link fabric to the Unistrut framing.

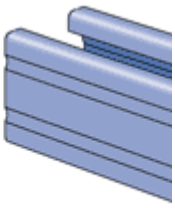
Photos of the barrier are shown on Figures 3, 4 and 5

Unistrut Components

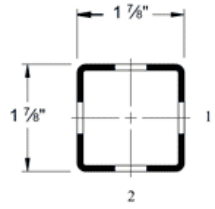
P2000 - 1-5/8" x 1-5/8", 16 Gauge, Solid

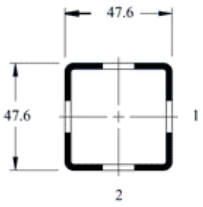


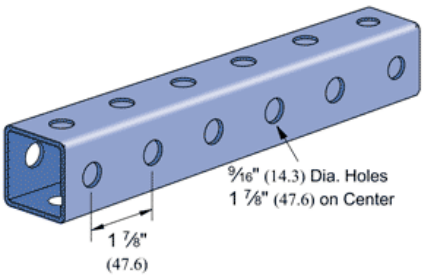




P9200 - 1 7/8" x 1 7/8" Telestrut Tubing







Summary

The installed barrier wall, in combination with the locks at the entrance of the tunnels is sufficient to prevent direct contact with the waste materials located at the terminal end of the 1A Tunnel and by installing the barrier wall, Ford has fulfilled is obligation of preventing direct contact with the waste materials present.

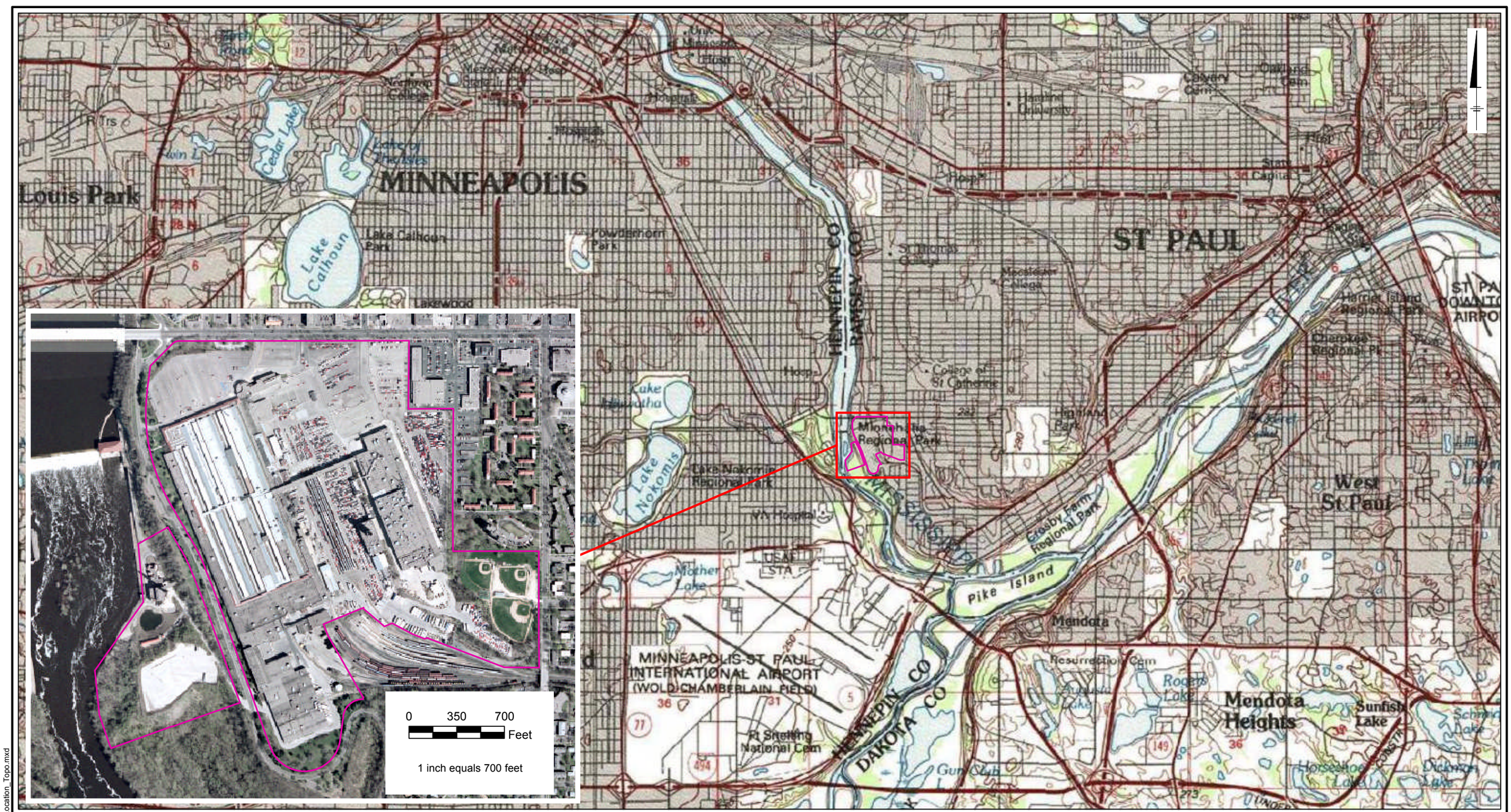
If you have questions or need additional information, please call Bryan Zinda of ARCADIS at 612.373.0234 at your convenience.

Sincerely,

ARCADIS U.S., Inc.

Bryan Zinda, PE
Senior Engineer

Copies:
Ms. Barbara Rusinowski, Ford Motor Company, Dearborn, Michigan
Mr. John Meyers, Ford Twin Cities Assembly Plant, St. Paul, Minnesota



LEGEND:

Ford Property Boundary

NOTES:

Imagery Source: United States Geological Survey
High Resolution Orthoimagery for the Minneapolis-St. Paul, Minnesota Urban Area

Topographic Map Source:
© 2007 National Geographic Society

0 1 2
Miles

1 inch equals 1 miles

Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Site Location / Property Layout

ARCADIS

FIGURE
1

CITY: Minneapolis, MN DB: MGress PM: BZinda
Project MN000593
G:\GIS\Projects\Ford Ranger\ArcMap\Fig1_Site_Location_Topo.mxd

1A Tunnel

Main Tunnel

Elevators

South Traffic Tunnel

North Traffic Tunnel

Feature 150

End of Tunnel

Tunnel Elevation: 711.0 ft MSL
Ground Elevation: 772.9 ft MSL
Ground to ceiling of tunnel: ~56.7 ft

Tunnel Entry Point

STEAM PLANT

Historical Disposal Area C

820 815 810 805 790 775 765 740 735 730 725 720 715 710 705 700 695 690

LEGEND:

- Ford Property Boundary
- Roads
- Rail
- Buildings
- Asphalt
- Concrete
- Grass
- Mississippi River
- Cable Tunnels
- Utility Tunnel
- Mined Sand Tunnels
- Elevation Contours (Feet)
- Gas Tunnel
- Steam Tunnel
- Traffic Tunnels
- Portion of Tunnel Surveyed

0 175 350 Feet

1 inch = 175 feet

Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Tunnel Location Map

ARCADIS

FIGURE 2

CITY: Minneapolis, MN DB: MGress PM: BZinda
Project: MN000593
G:\GIS\Projects\Ford Ranger\ArcMap\Tunnel_Location_20090831.mxd

ARCADIS

Figure 3.
Tunnel 1A – Barrier Wall Installation
Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Pre-Construction Photo.

Chain Link Fencing Installation.

ARCADIS

Figure 4.
Tunnel 1A – Barrier Wall Installation
Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Close-Up of Securing the Chain Link Fencing to the Concrete Wall.

Securing the Chain Link Fencing to the Concrete Wall.

ARCADIS

Figure 5.
Tunnel 1A – Barrier Wall Installation
Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota

Unistrut Installation.

Barrier Wall Construction Completion.

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING SEALING RECORD

Minnesota Statutes, Chapter 103I

Minnesota Well and Boring Sealing No. **H 39547**

Minnesota Unique No. or W-series No. (Leave blank if not known): 4 wells Unique #'s Unknown

WELL OR BORING LOCATION

County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction (sm. - lg.)
St Paul	28N	23W	17	NE¼NE¼SW¼

Date Sealed: 11/19/93

Approximate Date Well or Boring Constructed: 3 wells 11/81 1 well 4/90

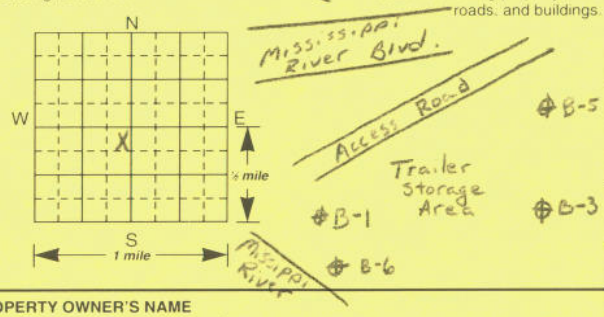
Historical Street Address or Fire Number and City of Well or Boring Location: East of 966 S. Mississippi R. Blvd. and North and South of Current Ford. Co. Trailer Storage Area

Depth Before Sealing: 60.5, 24.5, 22.6, 47 ft.

Original Depth: 60.5, 24.5, 22.6, 47 ft.

Show exact location of well or boring in section grid with "X".

Sketch map of well or boring location, showing property lines, roads, and buildings.



☒ Single Aquifer ☐ Multiaquifer

Static Water Level: ☐ Accurate ☒ Approximate

46', 11.5', 10', 41.5' ft. X below ____ above land surface

CASING TYPE

☒ Steel (1) ☒ Plastic (3) ☐ Tile ☐ Other

Screen from B-1, B-3, B-5, B-6 to 60.5, 24.5, 22.6, 37.0 – 47 ft. Open Hole from ____ to ____ ft. — Bottom Depth

OBSTRUCTION/DEBRIS/FILL

☐ Obstruction ☐ Debris ☐ Fill N.A.

Type of debris/obstruction ____

Obstruction/Debris/Fill removed? ☐ Yes ☐ No

PUMP

☐ Removed ☒ Not Present ☐ Other ____

PROPERTY OWNER'S NAME

Ford Motor Co.

Mailing Address if different than property address indicated above.

966 So. Mississippi Blvd.
St. Paul, MN

GEOLOGICAL MATERIAL	COLOR	HARDNESS OF FORMATION	FROM	TO
If not known, indicate estimated formation log from nearby well or boring.				
Sands, gravels, silts		md	0	60.5

CASING

4 wells

Diameter	Depth	Set in oversize hole?	Annular space initially grouted?
2 in.	from ____ to ____ ft.	☒ Yes ☐ No	☐ Yes ☐ No ☒ Unknown
____ in.	from ____ to ____ ft.	☐ Yes ☐ No	☐ Yes ☐ No ☐ Unknown
____ in.	from ____ to ____ ft.	☐ Yes ☐ No	☐ Yes ☐ No ☐ Unknown

METHOD USED TO SEAL ANNULAR SPACE BETWEEN 2 CASINGS, OR CASING AND BORE HOLE:

☒ No Annular Space Exists

☐ Annular space grouted with tremie pipe

☐ Casing Perforation/Removal

____ in. from ____ to ____ ft. ☐ Perforated ☐ Removed

____ in. from ____ to ____ ft. ☐ Perforated ☐ Removed

Type of perforator ____

☐ Other ____

GROUTING MATERIAL

Grouting material		from	to	ft.	yards	bags
B-1	Neat Cement	0	60.5			
B-3	Neat Cement	0	24.5			
B-5	Neat Cement	0	22.6			
B-6	Neat Cement	0	47			

REMARKS, SOURCE OF DATA, DIFFICULTIES IN SEALING

4 monitoring wells sealed on 11/19/93

2" Diameter casings filled with neat cement and cut off at grade.

B-1, B-3, B-5, B-6

UNSEALED WELLS AND BORINGS

Other unsealed well or boring on property? ☐ Yes ☒ No

LICENSED OR REGISTERED CONTRACTOR CERTIFICATION

This well or boring was sealed in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Braun Intertec Corp. — Contractor Business Name

M0109 — License or Registration No.

[signature] — Authorized Representative Signature

12/8/93 — Date

Mike McWilliams — Name of Person Sealing Well or Boring

IMPORTANT—FILE WITH PROPERTY PAPERS—WELL OWNER COPY

H 39547

HE-01434-01

STATE OF MINNESOTA DEPARTMENT OF HEALTH

#2

ABANDONED WELL RECORD

MINNESOTA UNIQUE WELL NO. (leave blank if not known)

1. LOCATION OF WELL

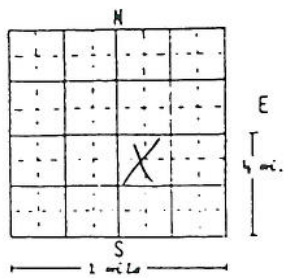
County Name: Ramsey

Township Name	Township Number	Range Number	Section No.	Fraction	4. WELL DEPTH (completed)	Date sealed
	28 (N) or S	23 E or (W)	17	NW-SE	44.5 ft.	5-31-89

Numerical Street Address and City of Well Location or Distance from Road Intersection

500' from Mississippi Blvd, St. Paul, Mn

Show exact location of well (in section grid with "X")



Sketch map of well location

Ford Plant enclosed site map

5. DRILLING METHOD (if known)

1 ☐ Cable tool 4 ☐ Reverse 7 ☐ Driven 10 ☐ Dug
2 ☐ Hollow Rod 5 ☐ Air 8 ☐ Bored 11 ☐ _____
3 ☐ Rotary 6 ☐ Jetted 9 ☒ Power Auger

6. OBSTRUCTIONS

Well obstructed ☐ Yes ☒ No
Obstructions removed ☐ Yes ☐ No If obstructions cannot be removed, contact MDH before sealing.

7. USE

1 ☐ Domestic 4 ☒ Monitoring 8 ☐ Heat Loop
2 ☐ Irrigation 5 ☐ Public 9 ☐ Industry
3 ☐ Test Well 6 ☐ Municipal 10 ☐ Commercial
7 ☐ Air Conditioning 11 ☐ _____

2. PROPERTY OWNER'S NAME

Ford Motor Company
966 S. Mississippi Blvd.
St. Paul, Mn

Mailing Address if different than property address indicated above

8. CASING(S)

1 ☐ Black 4 ☐ Threaded 7 ☒ _____
2 ☐ Galv. 5 ☐ Welded
3 ☒ Plastic 6 ☐ Stainless Steel Not Known

_____ in. to _____ ft.
_____ in. to _____ ft.

3. FORMATION LOG (If not known, indicate formation log from new well or nearby well.)

FORMATION LOG	COLOR	HARDNESS OF FORMATION	FROM	TO
cobbles, boulders			0	7
gravel, sand	brown		7	13
sand	brown		13	25
sand-gravel	brown		25	44

9. SCREEN

☒ Screened well from ____ ft. to Not Known ft. (If known)
☐ Open Hole from ____ ft. to ____ ft.

10. STATIC WATER LEVEL

29.5 ft. ☒ below ☐ above land surface Date Measured 11-18-81

11. WELLHEAD COMPLETION

1 ☐ Pitless Adapter 4 ☐ Found Buried N/A
2 ☐ Basement offset 5 ☐ _____
3 ☐ Well Pit

16. REMARKS, ELEVATION, SOURCE OF DATA - CASINGS REMOVED, CASINGS PERFORATED, ETC.

Enclosed site map.
Site mw #2

12. GROUTING INFORMATION

1 ☒ Neat Cement 2 ☐ Bentonite 3 ☒ cement

Grout material	from	to	ft. cu. yds
cement	0	2	
neat cement	2	44.5	

13. NEAREST SOURCES OF CONTAMINATION

____ feet _____ direction _____ type

Well disinfected before sealing? ☐ Yes

14. PUMP ☐ Removed ☐ Not Present N/A

Type: 1 ☐ Submersible 3 ☐ L.S. Turbine 5 ☐ Reciprocating
2 ☐ Jet 4 ☐ Centrifugal 6 ☐ _____

15. EXISTING WELLS (Please sketch locations of abandoned and active wells in remarks section or on back.)

Other unused well(s) on property? ☐ Yes ☐ No
Abandoned: ☒ Permanent ☐ Temporary ☐ Not sealed

17. WATER WELL CONTRACTORS CERTIFICATION

This well was sealed under my jurisdiction and this report is true to the best of my knowledge and belief.

GME Consultants, Inc
Licensee Business Name License No.

Address 14000 21st Ave N. Mpls. Mn

Signed _____ Date _____

Tom Moore Date 6-9-89
Name of Driller

OFFICIAL ABANDONED WELL RECORD (May be used for Property Transfer)

IMPORTANT: FILE WITH DEED

STATE OF MINNESOTA DEPARTMENT OF HEALTH

#4

ABANDONED WELL RECORD

MINNESOTA UNIQUE WELL NO. (leave blank if not known)

1. LOCATION OF WELL

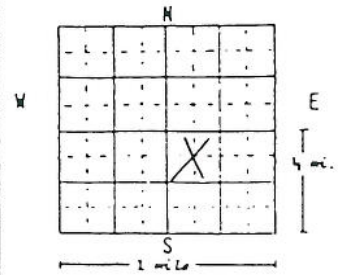
County Name: Ramsey

Township Name	Township Number	Range Number	Section No.	Fraction	4. WELL DEPTH (completed)	Date sealed
	28 N or S	23 E or W	17	NW - SE	29.5 ft.	5-31-89

Numerical Street Address and City of Well Location or Distance from Road Intersection

500' from Mississippi Blvd, St. Paul, Mn

Show exact location of well (in section grid with "X")



Sketch map of well location

Ford Plant
Enclosed site map

5. DRILLING METHOD (if known)

1 ☐ Cable tool 4 ☐ Reverse 7 ☐ Driven 10 ☐ Dug
2 ☐ Hollow Rod 5 ☐ Air 8 ☐ Bored 11 ☐ _____
3 ☐ Rotary 6 ☐ Jetted 9 ☒ Power Auger

6. OBSTRUCTIONS

Well obstructed ☐ Yes ☒ No
Obstructions removed ☐ Yes ☐ No If obstructions cannot be removed, contact MDH before sealing.

7. USE

1 ☐ Domestic 4 ☒ Monitoring 8 ☐ Heat Loop
2 ☐ Irrigation 5 ☐ Public 9 ☐ Industry
3 ☐ Test Well 6 ☐ Municipal 10 ☐ Commercial
7 ☐ Air Conditioning 11 ☐ _____

2. PROPERTY OWNER'S NAME

Ford Motor Company
966 S. Mississippi Blvd.
St. Paul, Mn

Mailing Address if different than property address indicated above

8. CASING(S)

1 ☐ Black 4 ☐ Threaded 7 ☐ _____
2 ☐ Galv. 5 ☐ Welded
3 ☒ Plastic 6 ☐ Stainless Steel Not Known
_____ in. to _____ ft.
_____ in. to _____ ft.

3. FORMATION LOG — If not known, indicate formation log from new well or nearby well.

FORMATION LOG	COLOR	HARDNESS OF FORMATION	FROM	TO
clay	brown		0	1
sand	brown		1	2
sand-fill	black		2	7
sand	brown		7	29

9. SCREEN

☐ Screened well from ____ ft. to Not. Known (If known)
☐ Open Hole from ____ ft. to ____ ft.

10. STATIC WATER LEVEL

19.5 ft. ☒ below ☐ above land surface Date Measured 11-19-81

11. WELLHEAD COMPLETION

1 ☐ Pitless Adapter 4 ☐ Found Buried
2 ☐ Basement offset 5 ☐ N/A
3 ☐ Well Pit

12. GROUTING INFORMATION

1 ☒ Neat Cement 2 ☐ Bentonite 3 ☐ _____
Grout material _____ from ____ to ____ ft. cu. yds ____
EOB to surface

13. NEAREST SOURCES OF CONTAMINATION

____ feet _____ direction _____ type
Well disinfected before sealing? ☐ Yes

14. PUMP ☐ Removed ☐ Not Present N/A

Type: 1 ☐ Submersible 3 ☐ L.S. Turbine 5 ☐ Reciprocating
2 ☐ Jet 4 ☐ Centrifugal 6 ☐ _____

15. EXISTING WELLS (Please sketch locations of abandoned and active wells in remarks section or on back.)

Other unused well(s) on property? ☒ Yes ☐ No
Abandoned: ☐ Permanent ☒ Temporary ☐ Not sealed

16. REMARKS, ELEVATION, SOURCE OF DATA - CASINGS REMOVED, CASINGS PERFORATED, ETC.

Enclosed site map.
Site MW #4

17. WATER WELL CONTRACTORS CERTIFICATION

This well was sealed under my jurisdiction and this report is true to the best of my knowledge and belief.

GME Consultants, Inc
Licensee Business Name License No.

Address 14000 21st Ave N. Mpls, Mn

Signed _____ Date _____

Tom Moore Date 6-9-89
Name of Driller

OFFICIAL ABANDONED WELL RECORD (May be used for Property Transfer)

IMPORTANT: FILE WITH DEED

Minnesota Pollution Control Agency
520 Lafayette Road, Saint Paul, Minnesota 55155
Telephone (612) 296-6300

Celebrate MINNESOTA 1990

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

April 9, 1990

Mr. Jerry Amber
Ford Motor Company
Environmental Control Office
Commerce Park North
15201 Century Drive, Suite 608
Dearborn, Michigan 48120

Dear Mr. Amber:

RE: Ford Motor Company-Twin Cities Assembly Plant

This letter is notification that the Minnesota Pollution Control Agency (MPCA) staff intends to recommend that the MPCA Board issue a Request for Response Action (RFRA) for the purpose of a Remedial Investigation and a Feasibility Study/Remedial Design and Response Actions to Ford Motor Company (Ford) for the Ford-Twin Cities Assembly Plant (Site) located at 966 South Mississippi River Boulevard, St. Paul, Minnesota. Ford has been identified by the MPCA staff as the Responsible Person (RP) under Minn. Stat. § 115B.03 for the release of hazardous substances from the Site. The detailed facts which have led MPCA staff to identify Ford as the RP, together with other pertinent statutory information, are found in the Site history provided in the enclosure to this letter.

All hazardous waste sites in the state of Minnesota are ranked by priority to target MPCA efforts most effectively. The ranking is done in accordance with criteria prescribed by the U.S. Environmental Protection Agency (EPA), called the Hazard Ranking Score (HRS) system. Following the scoring, the site may be included in the Minnesota Permanent List of Priorities (PLP) and/or included in the National Priorities List (NPL). The Site has been listed on the PLP, with a HRS score of 8.

The authority for the MPCA to issue the RFRA is found in Minn. Stat. §§ 115B.17 and 115B.18. The RFRA is a statutorily mandated MPCA request that a RP conduct an investigation of contamination, examine alternative response actions and conduct response actions at a specific site, following appropriate procedures. Should the RP choose not to undertake the required investigations and/or response actions, the statutes allow the MPCA to undertake these cleanup steps and recover the expenses incurred or request the Attorney General to bring a lawsuit to compel performance of the RFRA activities.

MN-COMP 0052288

The same statute imposes five determinations the MPCA Board must make before issuing RFRAs. The determinations are:

1. A facility exists or has been identified to have existed;

2. A release or threatened release has been identified;

3. The release or threatened release is or was from the identified facility;

4. The release or threatened release is or was of a hazardous substance and/or a pollutant or contaminant; and,

5. The person(s), to whom the RFRA is to be directed, is a RP.

Based on these five determinations, MPCA staff believes that sufficient evidence exists to support its decision to recommend that the MPCA Board issue a RFRA to Ford. The RFRA is expected to be presented to the MPCA Board at their May 22, 1990, Board meeting.

Should you feel that you have information you wish to have considered in the RFRA or Site history, please submit this information to the Project Manager within thirty (30) days of the date of this letter. Except in limited circumstances (e.g., new analytical data is generated or new information is obtained from record searches or depositions which indicates you may not be a responsible party) information provided after thirty (30) days of the date of this letter will not be considered for inclusion in the preparation of the RFRA and it is unlikely that the MPCA Board will consider that information at its May 22, 1990, meeting. Enclosed is a draft copy of the Site history.

The MPCA staff, in addition to soliciting any information you feel would be relevant to issuance of a RFRA, is hereby soliciting your preference to enter into or not to enter into negotiations of a Consent Order. A Consent Order is a negotiated contract between the MPCA and the Responsible Party. The Consent Order specifies the activities to be undertaken to clean up a site, specifies the order in which cleanup activities will occur and specifies the schedule for the cleanup activities. The MPCA staff will present your preference to the MPCA Board and if you indicate a preference to enter into Consent Order negotiations, a Consent Order negotiation period will be specified in the RFRA that the MPCA staff recommends to the MPCA Board.

Your written preference to either enter into or not to enter into Consent Order negotiations should also be submitted to the Project Manager within 30 days of the date of this letter.

For comments or questions on this letter or the proposed RFRA, please contact Mr. Todd Goeks, Project Manager, of my staff at (612) 296-7710.

Sincerely,

Gerald L. Willet

Gerald L. Willet
Commissioner

GLW:kkn

Enclosure

SITE HISTORY

In October 1980, the MPCA staff received a complaint reporting past waste disposal at the Ford Motor Company (Ford)-Twin Cities Assembly Plant Site (Site), located at 966 South Mississippi River Boulevard, St. Paul, Ramsey County, Minnesota. The complainant stated that, during the 1950's, Ford had dumped waste solvents and barreled paint wastes over the river bluff west of the assembly plant. The MPCA staff requested that Ford investigate and report on the company's past waste management practices.

In responses to the information request, Ford stated that unknown quantities of waste paint solvents and sludges had been disposed on-site during a period from early plant operation until approximately 1965.

In addition to the disposal area located over and along the base of the bluff west of Mississippi River Boulevard (Site C), Ford identified the locations of three other historical disposal areas. The first additional dump was located southeast of the main assembly plant. Used solvents and oils were burned and factory wastes were buried at this location during early years of plant operations. No information regarding waste quantities or years of operation was available for this dump. Reportedly, assembly plant engineering records indicate that during a 1962 parking lot expansion, materials from this area were excavated and relocated to Site C.

Another disposal area was located at the south end of an old test track located east of the assembly plant. Waste paint sludges and solvents were disposed of in this area during a period from 1943 to approximately 1960. Materials were reportedly excavated from this disposal area in 1966 during an expansion of the railroad "tri-level" car loading yard. Excavated materials were placed at Site C.

The third additional disposal area identified by Ford was located north of the steam plant. All waste materials from this location were excavated and transported to a permitted disposal facility in 1983. This excavation was conducted to facilitate construction of a wastewater treatment plant.

In addition to the excavated materials and wastes relocated from other dumps to Site C, waste paint solvents and sludges generated by the assembly plant continued to be disposed at Site C until approximately 1965. Site C received large quantities of demolition rubble and excavated soil generated during 1984 to 1986 from construction of the Ranger paint plant at the old test track location. Much of the past waste dump is now located under 30 feet of debris fill. Presently, a major portion of the filled area at Site C is paved with eight inches of concrete and is being used as a parking lot for truck trailers.

Ford has been in operation at the Site since 1915. Activities at the Site have included: auto glass manufacturing, automobile manufacturing, and automobile assembly and painting. Initially the plant was used exclusively for auto glass production. Later, the western half of the plant housed Model T manufacturing and painting. Glass manufacturing operations ceased in 1958.

The Site, including all areas discussed above, has been owned by Ford since the early 1900's. At MPCA staff's request, Ford initiated a hydrogeological

investigation at Site C by installing a limited ground water monitoring program in December 1982 to determine whether wastes deposited at the Site had degraded ground water quality. Ground water samples collected and analyzed from Site C in 1982 indicated relatively low-level concentrations of contaminants including: 22 parts per billion (ppb) cis 1,2-dichloroethylene (DCE), 15 ppb trans 1,2-DCE, 59 ppb ethyl acetate, 5 ppb trichloroethylene (TCE), 2.1 ppb toluene, and 70 ppb tetrahydrofuran. Ground water analysis for metals indicated 20 ppb cadmium, 390 ppb chromium, and 220 ppb lead, each of which is above the Recommended Allowable Limit (RAL) for drinking water. Additional ground water samples collected and analyzed in 1989 indicated reduced levels of both metals and solvents; however, since two wells which were directly downgradient were abandoned prior to this sampling event, the samples collected were not completely representative of the ground water underlying the disposal site. Ford is presently conducting additional ground water investigations at Site C to accurately assess ground water quality underlying this disposal site.

At MPCA staff's request, Ford also initiated an investigation at the dump site located southeast of the main assembly plant in June 1989 to determine whether past waste management practices have impacted ground water quality. Soil and ground water samples were collected and analyzed, indicating the following maximum contaminant concentrations: 100,000 ppb ethyl benzene and 980 ppb total xylenes in soil; and 230 ppb methylene chloride, 43 ppb 1,1-DCE, 510 ppb benzene, and 3000 ppb ethyl benzene in ground water.

In October 1989, while investigating the possible sources of earlier reported releases, MPCA staff collected a ground water grab sample from an unlined sump adjacent to underground tanks used for waste solvent storage. Laboratory results indicated 13,000 ppb benzene, 1,920,000 ppb methylisobutyl ketone (MIBK), 16,000 ppb toluene, and 210,000 ppb ethyl benzene. The wastes stored in the tanks include: xylene, toluene, MIBK, methyl ethyl ketone, and small amounts of unspecified solvents.

The MPCA staff believes that the five determinations required before the MPCA can issue a RFRA have been met as follows:

1. The Site is a facility because hazardous substances were stored, deposited, disposed of, or placed at the Site. Waste solvents, including toluene, xylene, methyl ethyl ketone (MEK), and MIBK were stored and unknown quantities of unspecified waste paint solvents and sludges were disposed of at the Site. The Site is also a facility because it contains buildings, pipes or pipelines, storage containers, and landfills.

2. A release or threatened release of hazardous substances has been identified. MPCA staff has identified, through Ford's responses to information requests, that a release of hazardous substances occurred when waste paint solvents and sludges were disposed of at the Site. Releases of hazardous substances have also been identified by analysis of soil and ground water samples collected at the Site which revealed the presence of ethyl benzene and xylene in soil, and ethyl benzene, toluene, methylene chloride, benzene, cis 1,2-DCE, trans 1,2-DCE, 1,1-DCE, ethyl acetate, TCE, tetrahydrofuran, and MIBK in ground water.

3. The release or threatened release of hazardous substances is from the facility. Soil and ground water samples collected at the Site reveal the

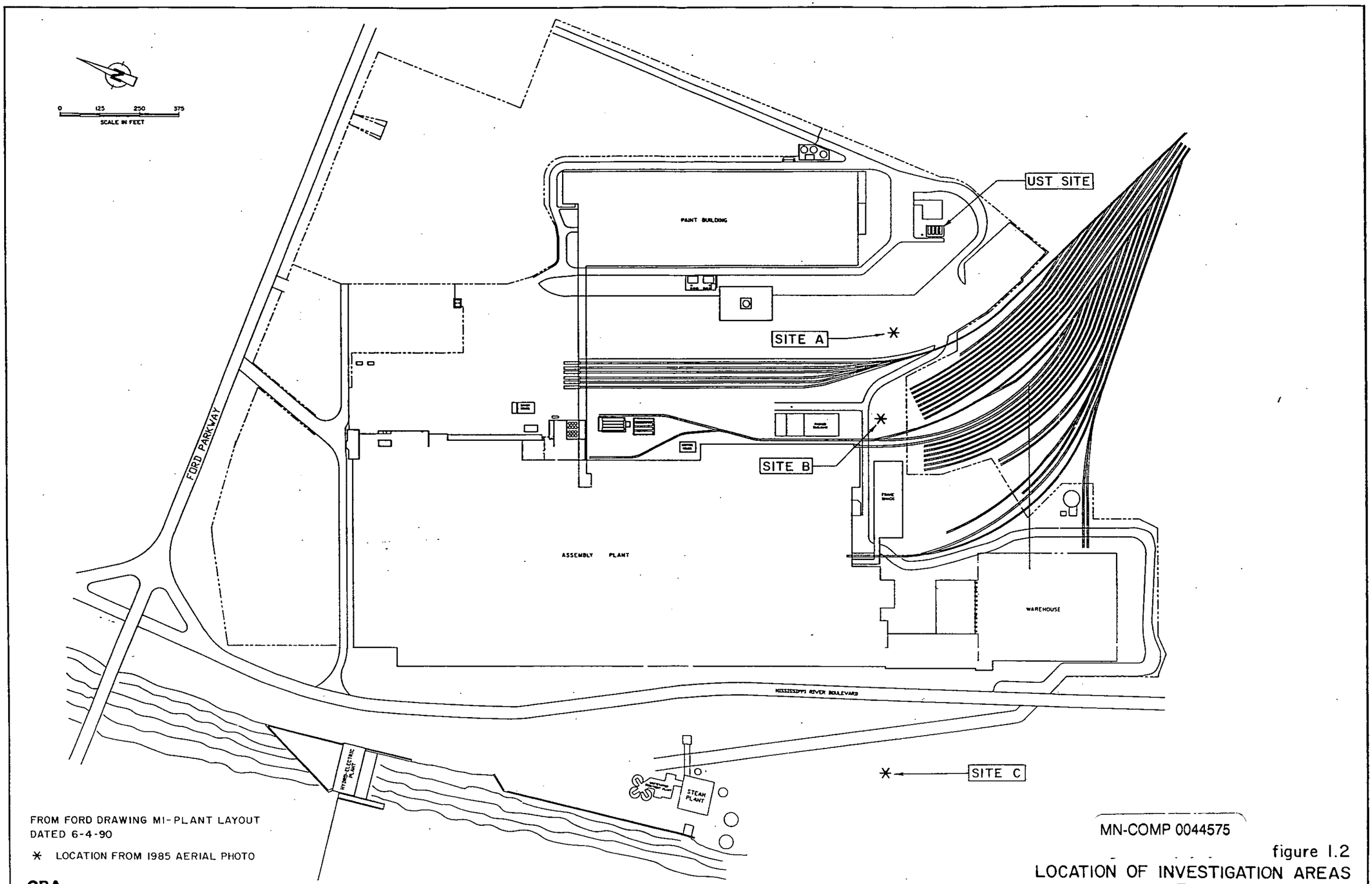
presence of ethyl benzene and xylene in soil, and ethyl benzene, toluene, methylene chloride, benzene, cis 1,2-DCE, trans 1,2-DCE, 1,1-DCE, ethyl acetate, TCE, tetrahydrofuran, and MIBK in ground water.

4. The releases or threatened releases are hazardous substances. Toluene, ethyl benzene, methylene chloride, benzene, cis 1,2-DCE, trans 1,2-DCE, 1,1-DCE, ethyl acetate, TCE, tetrahydrofuran, xylene, and MIBK are hazardous substances because they are listed as hazardous wastes pursuant to 40 CFR 261.33 or Minn. Rules pt. 7045.0135, subp. 4.F.

5. Ford is a responsible person because it owned and operated the facility when the hazardous substances were placed or came to be located in or on the facility and during the time of the release or threatened release. Ford is also a responsible person because it owns the Site property and engaged in the business of generating, storing, and disposing of hazardous substances at the Site.

APPENDIX B

Historical Figures



FROM FORD DRAWING MI-PLANT LAYOUT
DATED 6-4-90

* LOCATION FROM 1985 AERIAL PHOTO

CRA

MN-COMP 0044575

figure 1.2
LOCATION OF INVESTIGATION AREAS
Ford Motor Company

2853-17/08/90-M

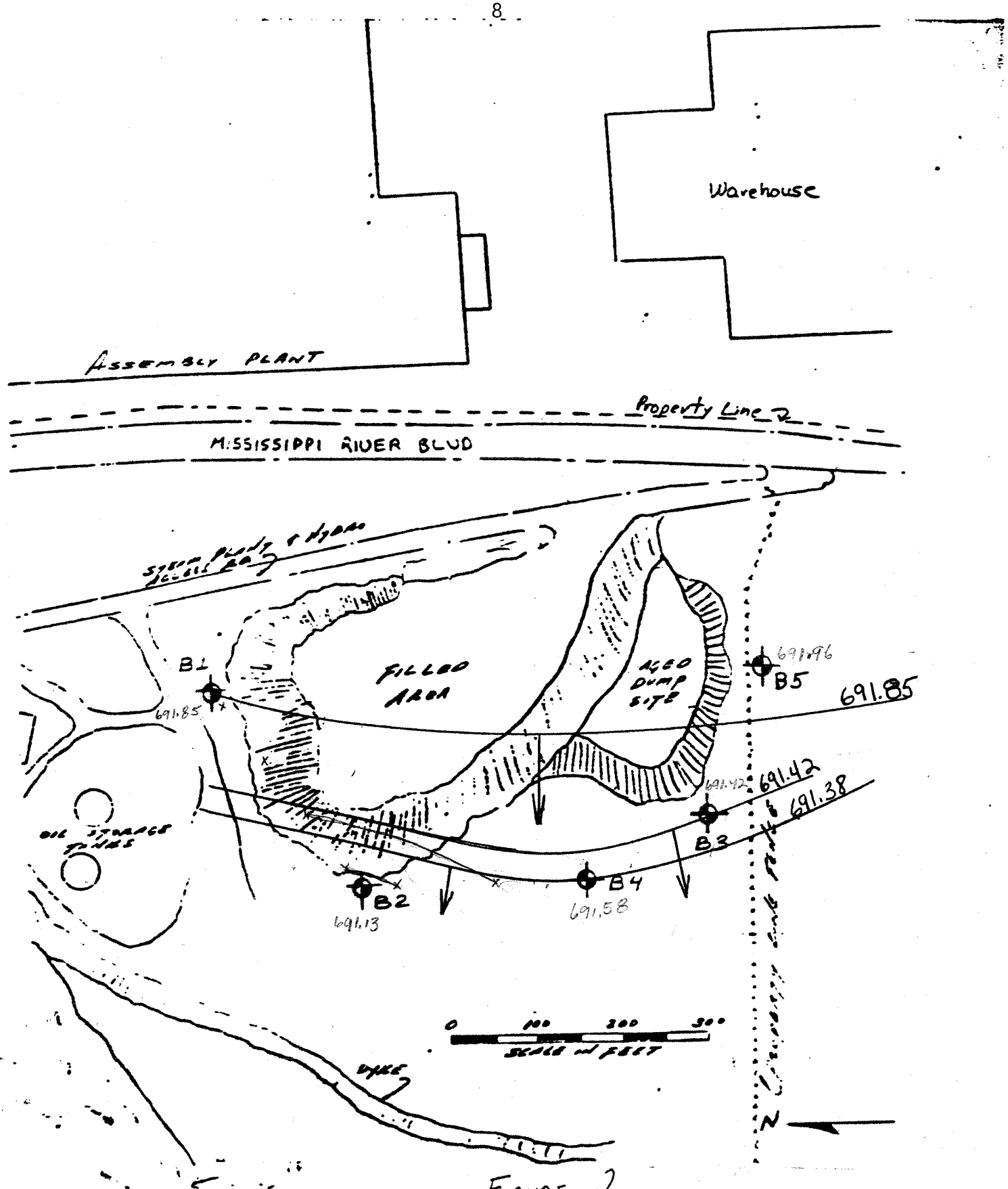
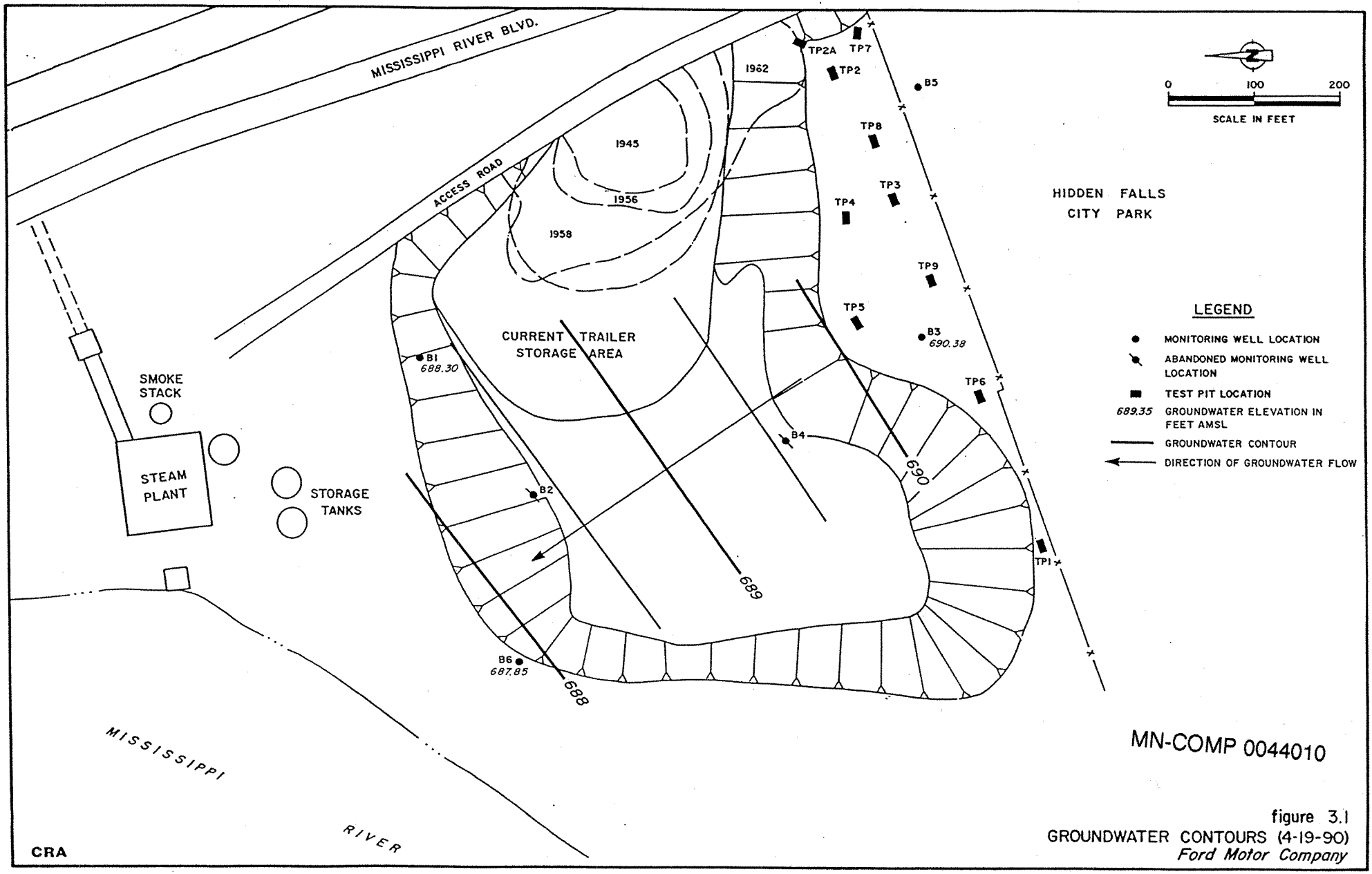


FIGURE 2
TWIN CITIES ASSEMBLY PLANT
GROUND WATER ELEVATIONS AND FLOW DIRECTION

MN-COMP 0043747



MN-COMP 0044010

figure 3.1
GROUNDWATER CONTOURS (4-19-90)
Ford Motor Company

2853-11/27/89-M

APPENDIX C

Area C – Three-Dimensional Model

APPENDIX D

Site Reconnaissance Photographic Log

Looking North, vegetation and rip rap north of Area C

© 2011 ARCADIS

Looking East, exposed concrete and metal along western base of Area C

 © 2011 ARCADIS

ARCADIS

Looking East, exposed concrete and metal along western base of Area C

 © 2011 ARCADIS

ARCADIS

Looking East, exposed concrete fill along western base and top of Area C

 © 2011 ARCADIS

Looking North/East, exposed concrete and soil control measures on top of western slope

 © 2011 ARCADIS

ARCADIS

Looking West/South, vegetation and scrap metal/debris on Mississippi River shore

 © 2011 ARCADIS

Looking North, exposed concrete and soil stability along southern slope

 © 2011 ARCADIS

Looking North, exposed fill material along southern base and slope

© 2011 ARCADIS

Looking West, exposed soil control and fill material on southern slope base

 © 2011 ARCADIS

Looking South, fence line along southern edge of Ford property

© 2011 ARCADIS

Looking South, storage parking lot of Area C, with fill station

© 2011 ARCADIS

Looking South/East, storage parking lot of Area C, with fill station

© 2011 ARCADIS

Storage parking lot, views of central, western edge, and SE corner

© 2011 ARCADIS

Looking East, southern edge of storage parking lot

© 2011 ARCADIS

Looking West/North, central and eastern edge of storage parking lot

© 2011 ARCADIS

Looking North, fill station barriers and storage/piping on north end of storage parking lot

© 2011 ARCADIS

Looking South/North, fill station barriers and piping on north end of storage parking lot

 © 2011 ARCADIS

ARCADIS

Looking North, barriers and fence line on north end of storage parking lot

© 2011 ARCADIS

Looking South, fence line on south end of storage parking lot

© 2011 ARCADIS

Looking Northeast, debris and electric manhole on northeast corner of storage parking lot

© 2011 ARCADIS

Looking South/Southeast, fence line along southern edge of Ford property

© 2011 ARCADIS

Looking East/North, view of fence from Hidden Falls Park property

© 2011 ARCADIS

Looking North/East, view of fence from Hidden Falls Park property

© 2011 ARCADIS

Looking North, view of fence from Hidden Falls Park property

© 2011 ARCADIS

Looking North, view of fence end and barrier concrete along Mississippi River shore

© 2011 ARCADIS

Looking South/Southeast, exposed Drums 3 and 4 on southern slope

© 2011 ARCADIS

APPENDIX E

Laboratory Analytical Reports

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

November 29, 2011

Mr. Jim Harms
Midamerica Technical
6989 N. 55th. St.
Suite C2
Oakdale, MN 55128

RE: Project: 11A-1311-C Ford
Pace Project No.: 10175662

Dear Mr. Harms:
Enclosed are the analytical results for sample(s) received by the laboratory on November 14, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures

cc: Ms. Alyssa Boock, Midamerica Technical
Ann Miller, Midamerica Technical

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 11A-1311-C Ford
Pace Project No.: 10175662

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Iowa Certification #: 368
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New Mexico Certification #: Pace
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
North Dakota Certification #: R-036A
Ohio VAP Certification #: CL101
Oklahoma Certification #: D9921
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Washington Certification #: C754
Wisconsin Certification #: 999407970

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 11A-1311-C Ford
Pace Project No.: 10175662

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10175662001	**Drum 1**	Solid	11/11/11 10:26	11/14/11 11:53
10175662002	**Drum 2**	Solid	11/11/11 10:49	11/14/11 11:53

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SAMPLE ANALYTE COUNT

Project: 11A-1311-C Ford
Pace Project No.: 10175662

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10175662001	**Drum 1**	EPA 6010	IP	7
		EPA 7470	CJS	1
		% Moisture	JDL	1
		EPA 8260	CNC	71
10175662002	**Drum 2**	EPA 6010	IP	7
		EPA 7470	CJS	1
		% Moisture	JDL	1
		EPA 8260	CNC	71

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ANALYTICAL RESULTS

Project: 11A-1311-C Ford
Pace Project No.: 10175662

Sample: Drum 1 **Lab ID: 10175662001** Collected: 11/11/11 10:26 Received: 11/14/11 11:53 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Leachate Method/Date: EPA 1311; 11/18/11 14:01							
Arsenic	ND	mg/L	0.050	5	11/18/11 15:08	11/21/11 21:32	7440-38-2	
Barium	**0.46**	mg/L	0.25	5	11/18/11 15:08	11/21/11 21:32	7440-39-3	
Cadmium	ND	mg/L	0.0050	5	11/18/11 15:08	11/21/11 21:32	7440-43-9	
Chromium	ND	mg/L	0.050	5	11/18/11 15:08	11/21/11 21:32	7440-47-3	
Lead	ND	mg/L	0.015	5	11/18/11 15:08	11/21/11 21:32	7439-92-1	
Selenium	ND	mg/L	0.075	5	11/18/11 15:08	11/21/11 21:32	7782-49-2	
Silver	ND	mg/L	0.050	5	11/18/11 15:08	11/21/11 21:32	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Leachate Method/Date: EPA 1311; 11/18/11 14:01							
Mercury	ND	ug/L	0.80	1	11/18/11 15:11	11/22/11 14:52	7439-97-6	
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**10.1**	%	0.10	1		11/28/11 00:00		
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	1370	1	11/17/11 10:41	11/18/11 02:14	67-64-1	
Allyl chloride	ND	ug/kg	220	1	11/17/11 10:41	11/18/11 02:14	107-05-1	
Benzene	ND	ug/kg	22.0	1	11/17/11 10:41	11/18/11 02:14	71-43-2	
Bromobenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	108-86-1	
Bromochloromethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	74-97-5	
Bromodichloromethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	75-27-4	
Bromoform	ND	ug/kg	220	1	11/17/11 10:41	11/18/11 02:14	75-25-2	CL
Bromomethane	ND	ug/kg	549	1	11/17/11 10:41	11/18/11 02:14	74-83-9	
2-Butanone (MEK)	ND	ug/kg	549	1	11/17/11 10:41	11/18/11 02:14	78-93-3	
n-Butylbenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	104-51-8	
sec-Butylbenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	135-98-8	
tert-Butylbenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	98-06-6	
Carbon tetrachloride	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	56-23-5	CL
Chlorobenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	108-90-7	
Chloroethane	ND	ug/kg	549	1	11/17/11 10:41	11/18/11 02:14	75-00-3	
Chloroform	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	67-66-3	
Chloromethane	ND	ug/kg	220	1	11/17/11 10:41	11/18/11 02:14	74-87-3	
2-Chlorotoluene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	95-49-8	
4-Chlorotoluene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	220	1	11/17/11 10:41	11/18/11 02:14	96-12-8	
Dibromochloromethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	124-48-1	CL
1,2-Dibromoethane (EDB)	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	106-93-4	
Dibromomethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	75-71-8	
1,1-Dichloroethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	75-34-3	

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ANALYTICAL RESULTS

Project: 11A-1311-C Ford
Pace Project No.: 10175662

Sample: Drum 1 **Lab ID: 10175662001** Collected: 11/11/11 10:26 Received: 11/14/11 11:53 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2-Dichloroethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	107-06-2	
1,1-Dichloroethene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	156-60-5	
Dichlorofluoromethane	ND	ug/kg	549	1	11/17/11 10:41	11/18/11 02:14	75-43-4	
1,2-Dichloropropane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	78-87-5	
1,3-Dichloropropane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	142-28-9	
2,2-Dichloropropane	ND	ug/kg	220	1	11/17/11 10:41	11/18/11 02:14	594-20-7	
1,1-Dichloropropene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	220	1	11/17/11 10:41	11/18/11 02:14	60-29-7	
Ethylbenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	274	1	11/17/11 10:41	11/18/11 02:14	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	98-82-8	
p-Isopropyltoluene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	99-87-6	
Methylene Chloride	ND	ug/kg	220	1	11/17/11 10:41	11/18/11 02:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	549	1	11/17/11 10:41	11/18/11 02:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	1634-04-4	
Naphthalene	ND	ug/kg	220	1	11/17/11 10:41	11/18/11 02:14	91-20-3	
n-Propylbenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	103-65-1	
Styrene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	79-34-5	
Tetrachloroethene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	127-18-4	
Tetrahydrofuran	ND	ug/kg	2200	1	11/17/11 10:41	11/18/11 02:14	109-99-9	
Toluene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	79-00-5	
Trichloroethene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	79-01-6	
Trichlorofluoromethane	ND	ug/kg	220	1	11/17/11 10:41	11/18/11 02:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	220	1	11/17/11 10:41	11/18/11 02:14	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	54.9	1	11/17/11 10:41	11/18/11 02:14	108-67-8	
Vinyl chloride	ND	ug/kg	22.0	1	11/17/11 10:41	11/18/11 02:14	75-01-4	
Xylene (Total)	ND	ug/kg	165	1	11/17/11 10:41	11/18/11 02:14	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	81	%	30-150	1	11/17/11 10:41	11/18/11 02:14	1868-53-7	
1,2-Dichloroethane-d4 (S)	85	%	30-150	1	11/17/11 10:41	11/18/11 02:14	17060-07-0	
Toluene-d8 (S)	82	%	30-150	1	11/17/11 10:41	11/18/11 02:14	2037-26-5	
4-Bromofluorobenzene (S)	84	%	30-150	1	11/17/11 10:41	11/18/11 02:14	460-00-4	

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ANALYTICAL RESULTS

Project: 11A-1311-C Ford
Pace Project No.: 10175662

Sample: Drum 2 **Lab ID: 10175662002** Collected: 11/11/11 10:49 Received: 11/14/11 11:53 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Leachate Method/Date: EPA 1311; 11/18/11 14:01							
Arsenic	ND	mg/L	0.050	5	11/18/11 15:08	11/21/11 21:46	7440-38-2	
Barium	**0.25**	mg/L	0.25	5	11/18/11 15:08	11/21/11 21:46	7440-39-3	
Cadmium	ND	mg/L	0.0050	5	11/18/11 15:08	11/21/11 21:46	7440-43-9	
Chromium	ND	mg/L	0.050	5	11/18/11 15:08	11/21/11 21:46	7440-47-3	
Lead	ND	mg/L	0.015	5	11/18/11 15:08	11/21/11 21:46	7439-92-1	
Selenium	ND	mg/L	0.075	5	11/18/11 15:08	11/21/11 21:46	7782-49-2	
Silver	ND	mg/L	0.050	5	11/18/11 15:08	11/21/11 21:46	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Leachate Method/Date: EPA 1311; 11/18/11 14:01							
Mercury	ND	ug/L	0.80	1	11/18/11 15:11	11/22/11 14:54	7439-97-6	
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**21.2**	%	0.10	1		11/28/11 00:00		
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	1550	1	11/17/11 10:41	11/18/11 02:32	67-64-1	
Allyl chloride	ND	ug/kg	248	1	11/17/11 10:41	11/18/11 02:32	107-05-1	
Benzene	ND	ug/kg	24.8	1	11/17/11 10:41	11/18/11 02:32	71-43-2	
Bromobenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	108-86-1	
Bromochloromethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	74-97-5	
Bromodichloromethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	75-27-4	
Bromoform	ND	ug/kg	248	1	11/17/11 10:41	11/18/11 02:32	75-25-2	CL
Bromomethane	ND	ug/kg	620	1	11/17/11 10:41	11/18/11 02:32	74-83-9	
2-Butanone (MEK)	ND	ug/kg	620	1	11/17/11 10:41	11/18/11 02:32	78-93-3	
n-Butylbenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	104-51-8	
sec-Butylbenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	135-98-8	
tert-Butylbenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	98-06-6	
Carbon tetrachloride	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	56-23-5	CL
Chlorobenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	108-90-7	
Chloroethane	ND	ug/kg	620	1	11/17/11 10:41	11/18/11 02:32	75-00-3	
Chloroform	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	67-66-3	
Chloromethane	ND	ug/kg	248	1	11/17/11 10:41	11/18/11 02:32	74-87-3	
2-Chlorotoluene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	95-49-8	
4-Chlorotoluene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	248	1	11/17/11 10:41	11/18/11 02:32	96-12-8	
Dibromochloromethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	124-48-1	CL
1,2-Dibromoethane (EDB)	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	106-93-4	
Dibromomethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	75-71-8	
1,1-Dichloroethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	75-34-3	

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ANALYTICAL RESULTS

Project: 11A-1311-C Ford
Pace Project No.: 10175662

Sample: Drum 2 **Lab ID: 10175662002** Collected: 11/11/11 10:49 Received: 11/14/11 11:53 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2-Dichloroethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	107-06-2	
1,1-Dichloroethene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	156-60-5	
Dichlorofluoromethane	ND	ug/kg	620	1	11/17/11 10:41	11/18/11 02:32	75-43-4	
1,2-Dichloropropane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	78-87-5	
1,3-Dichloropropane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	142-28-9	
2,2-Dichloropropane	ND	ug/kg	248	1	11/17/11 10:41	11/18/11 02:32	594-20-7	
1,1-Dichloropropene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	248	1	11/17/11 10:41	11/18/11 02:32	60-29-7	
Ethylbenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	310	1	11/17/11 10:41	11/18/11 02:32	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	98-82-8	
p-Isopropyltoluene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	99-87-6	
Methylene Chloride	ND	ug/kg	248	1	11/17/11 10:41	11/18/11 02:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	620	1	11/17/11 10:41	11/18/11 02:32	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	1634-04-4	
Naphthalene	ND	ug/kg	248	1	11/17/11 10:41	11/18/11 02:32	91-20-3	
n-Propylbenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	103-65-1	
Styrene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	79-34-5	
Tetrachloroethene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	127-18-4	
Tetrahydrofuran	ND	ug/kg	2480	1	11/17/11 10:41	11/18/11 02:32	109-99-9	
Toluene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	79-00-5	
Trichloroethene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	79-01-6	
Trichlorofluoromethane	ND	ug/kg	248	1	11/17/11 10:41	11/18/11 02:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	248	1	11/17/11 10:41	11/18/11 02:32	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	62.0	1	11/17/11 10:41	11/18/11 02:32	108-67-8	
Vinyl chloride	ND	ug/kg	24.8	1	11/17/11 10:41	11/18/11 02:32	75-01-4	
Xylene (Total)	ND	ug/kg	186	1	11/17/11 10:41	11/18/11 02:32	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	86	%	30-150	1	11/17/11 10:41	11/18/11 02:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	92	%	30-150	1	11/17/11 10:41	11/18/11 02:32	17060-07-0	
Toluene-d8 (S)	86	%	30-150	1	11/17/11 10:41	11/18/11 02:32	2037-26-5	
4-Bromofluorobenzene (S)	86	%	30-150	1	11/17/11 10:41	11/18/11 02:32	460-00-4	

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QUALITY CONTROL DATA

Project: 11A-1311-C Ford
Pace Project No.: 10175662

QC Batch: MERP/6226
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 10175662001, 10175662002

METHOD BLANK: 1101844 Matrix: Water
Associated Lab Samples: 10175662001, 10175662002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.80	11/22/11 14:27	

LABORATORY CONTROL SAMPLE: 1101845

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	15	15.3	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1101846 1101847

Parameter	Units	10175891001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	15	15	18.6	9.3	124	62	80-120	67	20	D6,M1

MATRIX SPIKE SAMPLE: 1101848

Parameter	Units	10175676006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	15	18.1	121	80-120	M1

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11A-1311-C Ford
Pace Project No.: 10175662

QC Batch: MPRP/29875
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET TCLP
Associated Lab Samples: 10175662001, 10175662002

METHOD BLANK: 1101849 Matrix: Water
Associated Lab Samples: 10175662001, 10175662002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.050	11/21/11 20:34	
Barium	mg/L	ND	0.25	11/21/11 20:34	
Cadmium	mg/L	ND	0.0050	11/21/11 20:34	
Chromium	mg/L	ND	0.050	11/21/11 20:34	
Lead	mg/L	ND	0.015	11/21/11 20:34	
Selenium	mg/L	ND	0.075	11/21/11 20:34	
Silver	mg/L	ND	0.050	11/21/11 20:34	

LABORATORY CONTROL SAMPLE: 1101850

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	1	0.99	99	80-120	
Barium	mg/L	1	1.1	106	80-120	
Cadmium	mg/L	1	1.1	111	80-120	
Chromium	mg/L	1	1.0	103	80-120	
Lead	mg/L	1	1.0	104	80-120	
Selenium	mg/L	1	1.1	105	80-120	
Silver	mg/L	.5	0.53	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1101851 1101852

Parameter	Units	10175891001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	1	1	0.97	0.92	97	92	75-125	5	30	
Barium	mg/L	ND	1	1	1.2	1.1	103	98	75-125	4	30	
Cadmium	mg/L	ND	1	1	1.1	1.1	110	106	75-125	3	30	
Chromium	mg/L	ND	1	1	1.0	0.99	102	98	75-125	4	30	
Lead	mg/L	0.038	1	1	1.1	1.0	103	99	75-125	4	30	
Selenium	mg/L	ND	1	1	1.0	0.99	102	97	75-125	4	30	
Silver	mg/L	ND	.5	.5	0.52	0.51	100	97	75-125	3	30	

MATRIX SPIKE SAMPLE: 1101853

Parameter	Units	10175676006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	ND	1	0.95	95	75-125	
Barium	mg/L	ND	1	1.1	100	75-125	
Cadmium	mg/L	ND	1	1.1	113	75-125	
Chromium	mg/L	ND	1	1.0	101	75-125	

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QUALITY CONTROL DATA

Project: 11A-1311-C Ford
Pace Project No.: 10175662

MATRIX SPIKE SAMPLE: 1101853

Parameter	Units	10175676006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	ND	1	1.0	101	75-125	
Selenium	mg/L	ND	1	0.98	98	75-125	
Silver	mg/L	ND	.5	0.52	93	75-125	

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QUALITY CONTROL DATA

Project: 11A-1311-C Ford
Pace Project No.: 10175662

QC Batch: MPRP/30004
QC Batch Method: % Moisture
Analysis Method: % Moisture
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 10175662001

SAMPLE DUPLICATE: 1106090

Parameter	Units	10176469001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	8.9	10.4	15	30	

SAMPLE DUPLICATE: 1106133

Parameter	Units	10175608004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	8.7	8.9	2	30	

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QUALITY CONTROL DATA

Project: 11A-1311-C Ford
Pace Project No.: 10175662

QC Batch: MPRP/30007
QC Batch Method: % Moisture
Analysis Method: % Moisture
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 10175662002

SAMPLE DUPLICATE: 1106226

Parameter	Units	10175209001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	4.6	4.6	1	30	

SAMPLE DUPLICATE: 1106227

Parameter	Units	10176136001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	57.8	58.4	1	30	

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QUALITY CONTROL DATA

Project: 11A-1311-C Ford
Pace Project No.: 10175662

QC Batch: MSV/18657 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV 5030 Med Level
Associated Lab Samples: 10175662001, 10175662002

METHOD BLANK: 1100603 Matrix: Solid
Associated Lab Samples: 10175662001, 10175662002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	50.0	11/17/11 21:03	
1,1,1-Trichloroethane	ug/kg	ND	50.0	11/17/11 21:03	
1,1,2,2-Tetrachloroethane	ug/kg	ND	50.0	11/17/11 21:03	
1,1,2-Trichloroethane	ug/kg	ND	50.0	11/17/11 21:03	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	50.0	11/17/11 21:03	
1,1-Dichloroethane	ug/kg	ND	50.0	11/17/11 21:03	
1,1-Dichloroethene	ug/kg	ND	50.0	11/17/11 21:03	
1,1-Dichloropropene	ug/kg	ND	50.0	11/17/11 21:03	
1,2,3-Trichlorobenzene	ug/kg	ND	50.0	11/17/11 21:03	
1,2,3-Trichloropropane	ug/kg	ND	200	11/17/11 21:03	
1,2,4-Trichlorobenzene	ug/kg	ND	50.0	11/17/11 21:03	
1,2,4-Trimethylbenzene	ug/kg	ND	50.0	11/17/11 21:03	
1,2-Dibromo-3-chloropropane	ug/kg	ND	200	11/17/11 21:03	
1,2-Dibromoethane (EDB)	ug/kg	ND	50.0	11/17/11 21:03	
1,2-Dichlorobenzene	ug/kg	ND	50.0	11/17/11 21:03	
1,2-Dichloroethane	ug/kg	ND	50.0	11/17/11 21:03	
1,2-Dichloropropane	ug/kg	ND	50.0	11/17/11 21:03	
1,3,5-Trimethylbenzene	ug/kg	ND	50.0	11/17/11 21:03	
1,3-Dichlorobenzene	ug/kg	ND	50.0	11/17/11 21:03	
1,3-Dichloropropane	ug/kg	ND	50.0	11/17/11 21:03	
1,4-Dichlorobenzene	ug/kg	ND	50.0	11/17/11 21:03	
2,2-Dichloropropane	ug/kg	ND	200	11/17/11 21:03	
2-Butanone (MEK)	ug/kg	ND	500	11/17/11 21:03	
2-Chlorotoluene	ug/kg	ND	50.0	11/17/11 21:03	
4-Chlorotoluene	ug/kg	ND	50.0	11/17/11 21:03	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	500	11/17/11 21:03	
Acetone	ug/kg	ND	1250	11/17/11 21:03	
Allyl chloride	ug/kg	ND	200	11/17/11 21:03	
Benzene	ug/kg	ND	20.0	11/17/11 21:03	
Bromobenzene	ug/kg	ND	50.0	11/17/11 21:03	
Bromochloromethane	ug/kg	ND	50.0	11/17/11 21:03	
Bromodichloromethane	ug/kg	ND	50.0	11/17/11 21:03	
Bromoform	ug/kg	ND	200	11/17/11 21:03	CL
Bromomethane	ug/kg	ND	500	11/17/11 21:03	
Carbon tetrachloride	ug/kg	ND	50.0	11/17/11 21:03	CL
Chlorobenzene	ug/kg	ND	50.0	11/17/11 21:03	
Chloroethane	ug/kg	ND	500	11/17/11 21:03	
Chloroform	ug/kg	ND	50.0	11/17/11 21:03	
Chloromethane	ug/kg	ND	200	11/17/11 21:03	
cis-1,2-Dichloroethene	ug/kg	ND	50.0	11/17/11 21:03	
cis-1,3-Dichloropropene	ug/kg	ND	50.0	11/17/11 21:03	
Dibromochloromethane	ug/kg	ND	50.0	11/17/11 21:03	CL
Dibromomethane	ug/kg	ND	50.0	11/17/11 21:03	

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QUALITY CONTROL DATA

Project: 11A-1311-C Ford
Pace Project No.: 10175662

METHOD BLANK: 1100603 Matrix: Solid

Associated Lab Samples: 10175662001, 10175662002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/kg	ND	50.0	11/17/11 21:03	
Dichlorofluoromethane	ug/kg	ND	500	11/17/11 21:03	
Diethyl ether (Ethyl ether)	ug/kg	ND	200	11/17/11 21:03	
Ethylbenzene	ug/kg	ND	50.0	11/17/11 21:03	
Hexachloro-1,3-butadiene	ug/kg	ND	250	11/17/11 21:03	
Isopropylbenzene (Cumene)	ug/kg	ND	50.0	11/17/11 21:03	
Methyl-tert-butyl ether	ug/kg	ND	50.0	11/17/11 21:03	
Methylene Chloride	ug/kg	ND	200	11/17/11 21:03	
n-Butylbenzene	ug/kg	ND	50.0	11/17/11 21:03	
n-Propylbenzene	ug/kg	ND	50.0	11/17/11 21:03	
Naphthalene	ug/kg	ND	200	11/17/11 21:03	
p-Isopropyltoluene	ug/kg	ND	50.0	11/17/11 21:03	
sec-Butylbenzene	ug/kg	ND	50.0	11/17/11 21:03	
Styrene	ug/kg	ND	50.0	11/17/11 21:03	
tert-Butylbenzene	ug/kg	ND	50.0	11/17/11 21:03	
Tetrachloroethene	ug/kg	ND	50.0	11/17/11 21:03	
Tetrahydrofuran	ug/kg	ND	2000	11/17/11 21:03	
Toluene	ug/kg	ND	50.0	11/17/11 21:03	
trans-1,2-Dichloroethene	ug/kg	ND	50.0	11/17/11 21:03	
trans-1,3-Dichloropropene	ug/kg	ND	50.0	11/17/11 21:03	
Trichloroethene	ug/kg	ND	50.0	11/17/11 21:03	
Trichlorofluoromethane	ug/kg	ND	200	11/17/11 21:03	
Vinyl chloride	ug/kg	ND	20.0	11/17/11 21:03	
Xylene (Total)	ug/kg	ND	150	11/17/11 21:03	
1,2-Dichloroethane-d4 (S)	%	99	30-150	11/17/11 21:03	
4-Bromofluorobenzene (S)	%	94	30-150	11/17/11 21:03	
Dibromofluoromethane (S)	%	93	30-150	11/17/11 21:03	
Toluene-d8 (S)	%	94	30-150	11/17/11 21:03	

LABORATORY CONTROL SAMPLE & LCSD: 1100604 1100605

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	1000	994	1020	99	102	75-125	3	20	
1,1,1-Trichloroethane	ug/kg	1000	1030	1060	103	106	75-126	3	20	
1,1,2,2-Tetrachloroethane	ug/kg	1000	1050	1050	105	105	75-125	.1	20	
1,1,2-Trichloroethane	ug/kg	1000	1050	1100	105	110	75-125	5	20	
1,1,2-Trichlorotrifluoroethane	ug/kg	1000	944	962	94	96	62-150	2	20	
1,1-Dichloroethane	ug/kg	1000	1020	1030	102	103	75-130	.5	20	
1,1-Dichloroethene	ug/kg	1000	926	974	93	97	67-142	5	20	
1,1-Dichloropropene	ug/kg	1000	980	1020	98	102	73-136	4	20	
1,2,3-Trichlorobenzene	ug/kg	1000	1040	1030	104	103	75-125	.9	20	
1,2,3-Trichloropropane	ug/kg	1000	1110	1090	111	109	75-125	1	20	
1,2,4-Trichlorobenzene	ug/kg	1000	1020	1020	102	102	75-125	.1	20	
1,2,4-Trimethylbenzene	ug/kg	1000	1030	1040	103	104	75-125	.9	20	
1,2-Dibromo-3-chloropropane	ug/kg	1000	1030	1040	103	104	66-125	1	20	

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QUALITY CONTROL DATA

Project: 11A-1311-C Ford
Pace Project No.: 10175662

LABORATORY CONTROL SAMPLE & LCSD: 1100604 1100605

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	1000	1040	1030	104	103	75-125	1	20	
1,2-Dichlorobenzene	ug/kg	1000	992	999	99	100	75-125	.7	20	
1,2-Dichloroethane	ug/kg	1000	1010	1020	101	102	75-125	.9	20	
1,2-Dichloropropane	ug/kg	1000	1020	1050	102	105	75-126	3	20	
1,3,5-Trimethylbenzene	ug/kg	1000	1030	1040	103	104	75-125	1	20	
1,3-Dichlorobenzene	ug/kg	1000	1000	1010	100	101	75-125	1	20	
1,3-Dichloropropane	ug/kg	1000	1040	1070	104	107	75-125	3	20	
1,4-Dichlorobenzene	ug/kg	1000	973	1020	97	102	75-125	5	20	
2,2-Dichloropropane	ug/kg	1000	1070	1160	107	116	43-137	7	20	
2-Butanone (MEK)	ug/kg	1000	1050	1050	105	105	63-129	.7	20	
2-Chlorotoluene	ug/kg	1000	1040	1040	104	104	75-125	.5	20	
4-Chlorotoluene	ug/kg	1000	1010	1020	101	102	75-125	2	20	
4-Methyl-2-pentanone (MIBK)	ug/kg	1000	1040	1070	104	107	70-125	3	20	
Acetone	ug/kg	2500	2940	2630	117	105	64-138	11	20	
Allyl chloride	ug/kg	1000	1030	1070	103	107	73-134	3	20	
Benzene	ug/kg	1000	1010	1040	101	104	75-125	3	20	
Bromobenzene	ug/kg	1000	1000	1030	100	103	75-125	3	20	
Bromochloromethane	ug/kg	1000	998	1030	100	103	75-129	3	20	
Bromodichloromethane	ug/kg	1000	1070	1090	107	109	75-125	2	20	
Bromoform	ug/kg	1000	968	983	97	98	62-125	2	20	
Bromomethane	ug/kg	1000	1010	1080	101	108	53-150	7	20	
Carbon tetrachloride	ug/kg	1000	1150	1180	115	118	72-127	2	20	
Chlorobenzene	ug/kg	1000	989	1000	99	100	75-125	2	20	
Chloroethane	ug/kg	1000	934	987	93	99	36-150	5	20	
Chloroform	ug/kg	1000	1020	1040	102	104	75-126	2	20	
Chloromethane	ug/kg	1000	884	915	88	92	57-140	3	20	
cis-1,2-Dichloroethene	ug/kg	1000	1020	1020	102	102	75-131	.04	20	
cis-1,3-Dichloropropene	ug/kg	1000	1060	1090	106	109	75-125	3	20	
Dibromochloromethane	ug/kg	1000	1050	995	105	99	75-125	5	20	
Dibromomethane	ug/kg	1000	1040	1060	104	106	75-125	2	20	
Dichlorodifluoromethane	ug/kg	1000	762	797	76	80	30-150	5	20	
Dichlorofluoromethane	ug/kg	1000	942	986	94	99	72-133	5	20	
Diethyl ether (Ethyl ether)	ug/kg	1000	1000	988	100	99	59-150	1	20	
Ethylbenzene	ug/kg	1000	1000	1020	100	102	75-129	2	20	
Hexachloro-1,3-butadiene	ug/kg	500	512	511	102	102	69-137	.3	20	
Isopropylbenzene (Cumene)	ug/kg	1000	988	1030	99	103	75-130	4	20	
Methyl-tert-butyl ether	ug/kg	1000	1070	1100	107	110	73-128	3	20	
Methylene Chloride	ug/kg	1000	889	952	89	95	68-128	7	20	
n-Butylbenzene	ug/kg	1000	1030	1060	103	106	75-128	2	20	
n-Propylbenzene	ug/kg	1000	1030	1040	103	104	75-126	2	20	
Naphthalene	ug/kg	1000	1080	1060	108	106	75-125	2	20	
p-Isopropyltoluene	ug/kg	1000	1030	1020	103	102	75-125	1	20	
sec-Butylbenzene	ug/kg	1000	990	1010	99	101	75-128	2	20	
Styrene	ug/kg	1000	1010	1050	101	105	75-125	4	20	
tert-Butylbenzene	ug/kg	1000	999	1030	100	103	75-126	3	20	
Tetrachloroethene	ug/kg	1000	970	1010	97	101	73-132	4	20	
Tetrahydrofuran	ug/kg	10000	10500	10100	105	101	63-134	4	20	
Toluene	ug/kg	1000	1010	1020	101	102	74-128	1	20	

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QUALITY CONTROL DATA

Project: 11A-1311-C Ford
Pace Project No.: 10175662

LABORATORY CONTROL SAMPLE & LCSD: 1100604 1100605

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/kg	1000	955	1050	95	105	75-136	9	20	
trans-1,3-Dichloropropene	ug/kg	1000	1000	1020	100	102	71-125	2	20	
Trichloroethene	ug/kg	1000	995	1010	99	101	75-131	1	20	
Trichlorofluoromethane	ug/kg	1000	956	945	96	95	65-148	1	20	
Vinyl chloride	ug/kg	1000	852	900	85	90	58-146	6	20	
Xylene (Total)	ug/kg	3000	3030	3080	101	103	73-129	2	20	
1,2-Dichloroethane-d4 (S)	%				96	96	30-150			
4-Bromofluorobenzene (S)	%				96	92	30-150			
Dibromofluoromethane (S)	%				97	96	30-150			
Toluene-d8 (S)	%				93	93	30-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1100606 1100607

Parameter	Units	10175893002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/kg	ND	1290	1290	995	962	77	75	48-136	3	30	
1,1,1-Trichloroethane	ug/kg	ND	1290	1290	1190	1140	92	89	57-143	4	30	
1,1,2,2-Tetrachloroethane	ug/kg	ND	1290	1290	1330	1270	103	99	47-146	5	30	
1,1,2-Trichloroethane	ug/kg	ND	1290	1290	1280	1220	99	94	59-130	5	30	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	1290	1290	1200	1170	93	91	38-150	2	30	
1,1-Dichloroethane	ug/kg	ND	1290	1290	1340	1300	104	101	59-139	3	30	
1,1-Dichloroethene	ug/kg	ND	1290	1290	1220	1130	95	88	44-150	8	30	
1,1-Dichloropropene	ug/kg	ND	1290	1290	1380	1300	107	101	68-141	6	30	
1,2,3-Trichlorobenzene	ug/kg	ND	1290	1290	1200	1110	93	86	40-144	7	30	
1,2,3-Trichloropropane	ug/kg	ND	1290	1290	1400	1290	108	100	49-146	8	30	
1,2,4-Trichlorobenzene	ug/kg	ND	1290	1290	1180	1090	91	84	42-141	8	30	
1,2,4-Trimethylbenzene	ug/kg	ND	1290	1290	1320	1230	103	96	54-141	7	30	
1,2-Dibromo-3-chloropropane	ug/kg	ND	1290	1290	1080	999	84	78	30-150	8	30	
1,2-Dibromoethane (EDB)	ug/kg	ND	1290	1290	1270	1240	98	96	55-130	2	30	
1,2-Dichlorobenzene	ug/kg	ND	1290	1290	1290	1210	100	94	61-129	6	30	
1,2-Dichloroethane	ug/kg	ND	1290	1290	1340	1330	104	103	57-137	1	30	
1,2-Dichloropropane	ug/kg	ND	1290	1290	1350	1280	104	99	54-136	5	30	
1,3,5-Trimethylbenzene	ug/kg	ND	1290	1290	1310	1220	101	94	51-147	7	30	
1,3-Dichlorobenzene	ug/kg	ND	1290	1290	1260	1180	97	91	59-133	7	30	
1,3-Dichloropropane	ug/kg	ND	1290	1290	1350	1290	105	100	52-135	5	30	
1,4-Dichlorobenzene	ug/kg	ND	1290	1290	1250	1160	97	90	56-135	8	30	
2,2-Dichloropropane	ug/kg	ND	1290	1290	1170	1160	91	90	30-150	1	30	
2-Butanone (MEK)	ug/kg	ND	1290	1290	1740	1380	134	107	43-147	23	30	
2-Chlorotoluene	ug/kg	ND	1290	1290	1350	1260	104	98	54-144	7	30	
4-Chlorotoluene	ug/kg	ND	1290	1290	1340	1250	104	97	57-147	7	30	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	1290	1290	1390	1270	108	98	51-136	9	30	
Acetone	ug/kg	ND	3220	3220	5650	3810	175	118	40-147	39	30	D6,M1
Allyl chloride	ug/kg	ND	1290	1290	1160	1130	90	87	58-136	3	30	
Benzene	ug/kg	ND	1290	1290	1290	1270	100	98	53-138	2	30	
Bromobenzene	ug/kg	ND	1290	1290	1260	1170	98	91	56-133	8	30	
Bromochloromethane	ug/kg	ND	1290	1290	1320	1240	102	96	58-139	6	30	
Bromodichloromethane	ug/kg	ND	1290	1290	1070	1050	83	81	59-129	2	30	

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(612)607-1700

QUALITY CONTROL DATA

Project: 11A-1311-C Ford
Pace Project No.: 10175662

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1100606 1100607

Parameter	Units	10175893002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromoform	ug/kg	ND	1290	1290	680	663	53	51	36-137	2	30	CL
Bromomethane	ug/kg	ND	1290	1290	1270	1250	98	97	30-150	2	30	
Carbon tetrachloride	ug/kg	ND	1290	1290	880	864	68	67	42-150	2	30	CL
Chlorobenzene	ug/kg	ND	1290	1290	1280	1220	99	95	60-134	5	30	
Chloroethane	ug/kg	ND	1290	1290	1380	1420	107	111	30-150	3	30	
Chloroform	ug/kg	ND	1290	1290	1340	1290	104	100	59-138	4	30	
Chloromethane	ug/kg	ND	1290	1290	1140	1140	89	89	55-128	.2	30	
cis-1,2-Dichloroethene	ug/kg	ND	1290	1290	1300	1260	100	98	52-143	3	30	
cis-1,3-Dichloropropene	ug/kg	ND	1290	1290	1230	1180	95	91	55-135	4	30	
Dibromochloromethane	ug/kg	ND	1290	1290	877	879	68	68	47-136	.2	30	CL
Dibromomethane	ug/kg	ND	1290	1290	1320	1230	102	96	50-136	7	30	
Dichlorodifluoromethane	ug/kg	ND	1290	1290	932	924	72	72	30-150	.9	30	
Dichlorofluoromethane	ug/kg	ND	1290	1290	1260	1190	98	92	56-142	6	30	
Diethyl ether (Ethyl ether)	ug/kg	ND	1290	1290	1230	1190	95	93	53-142	3	30	
Ethylbenzene	ug/kg	ND	1290	1290	1310	1250	101	97	54-144	5	30	
Hexachloro-1,3-butadiene	ug/kg	ND	646	644	596	581	92	90	31-150	3	30	
Isopropylbenzene (Cumene)	ug/kg	ND	1290	1290	1290	1220	100	95	58-140	5	30	
Methyl-tert-butyl ether	ug/kg	ND	1290	1290	1340	1200	104	93	56-132	12	30	
Methylene Chloride	ug/kg	ND	1290	1290	1260	1260	93	93	48-137	.3	30	
n-Butylbenzene	ug/kg	ND	1290	1290	1260	1180	97	91	50-150	6	30	
n-Propylbenzene	ug/kg	ND	1290	1290	1340	1230	104	95	64-142	9	30	
Naphthalene	ug/kg	ND	1290	1290	1270	1200	98	93	44-139	6	30	
p-Isopropyltoluene	ug/kg	ND	1290	1290	1260	1180	98	92	54-145	6	30	
sec-Butylbenzene	ug/kg	ND	1290	1290	1270	1190	98	92	72-135	6	30	
Styrene	ug/kg	ND	1290	1290	1260	1200	97	93	57-135	5	30	
tert-Butylbenzene	ug/kg	ND	1290	1290	1270	1200	98	94	58-148	5	30	
Tetrachloroethene	ug/kg	ND	1290	1290	1200	1140	93	88	54-141	6	30	
Tetrahydrofuran	ug/kg	ND	12900	12900	13600	12800	106	100	52-137	6	30	
Toluene	ug/kg	ND	1290	1290	1300	1250	101	97	55-141	4	30	
trans-1,2-Dichloroethene	ug/kg	ND	1290	1290	1220	1170	94	91	48-148	4	30	
trans-1,3-Dichloropropene	ug/kg	ND	1290	1290	1210	1170	93	91	57-130	3	30	
Trichloroethene	ug/kg	ND	1290	1290	1310	1200	101	94	51-142	8	30	
Trichlorofluoromethane	ug/kg	ND	1290	1290	2450	2300	190	178	50-150	6	30	CH,M1
Vinyl chloride	ug/kg	ND	1290	1290	1090	1110	84	86	55-133	2	30	
Xylene (Total)	ug/kg	ND	3870	3870	3780	3600	98	93	52-141	5	30	
1,2-Dichloroethane-d4 (S)	%						97	105	30-150			
4-Bromofluorobenzene (S)	%						97	101	30-150			
Dibromofluoromethane (S)	%						96	103	30-150			
Toluene-d8 (S)	%						97	101	30-150			

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 11A-1311-C Ford
Pace Project No.: 10175662

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10175662

Page: 1 of 1

1506716

Section A Required Client Information:

Company: MidAmerica, Inc.
Address: 6189 55th St. N. Suite C2
Oakdale MN 55128
Email To: jim@midamericaenv.com
Phone: Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Jim Harms
Copy To:
Purchase Order No.:
Project Name: Ford
Project Number: 11A-1311-C

Section C Invoice Information:

Attention: Jim Harms
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE:

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: RCRA Metals/TCLP	VOC's	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Drum 1	SL	G	11-11-11	10:26A				1	X								X	X		10175662001
2	Drum 2	SL	G	11-11-11	10:49A				1	X											002
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Jim Harms	11-14-11	9:30		11/14/11	9:30				
		11/14/11	1153	PACE	11-14-11	11:53	0.4	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jim Harms

SIGNATURE of SAMPLER: Jim Harms

DATE Signed (MM/DD/YY): 11-11-11

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Revised Date: 02Jun2011 Page 1 of 1
	Document Number: **F-L-213 Rev.01**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Mid America

Project # ~~10175665~~ 10175662 11-14-11

Optional
Proj. Due Date:
Proj. Name:

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____ Temp Blank: Yes X No _____

Thermometer Used 80344042 or ~~80512447~~ **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.4 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11-14-11 [illegible]

		Comments:
Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☒N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl Samp #
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☐No	Initial when completed _____ Lot # of added preservative _____
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	15.
Trip Blank Present:	☐Yes ☐No ☒N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [signature] **Date:** 11/15/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

February 28, 2012

Mr. Jim Harms
Midamerica Technical
6989 N. 55th. St.
Suite C2
Oakdale, MN 55128

RE: Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

Dear Mr. Harms:
Enclosed are the analytical results for sample(s) received by the laboratory on February 14, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures

cc: Ms. Alyssa Boock, Midamerica Technical
Ann Miller, Midamerica Technical

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CERTIFICATIONS

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Iowa Certification #: 368
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New Mexico Certification #: Pace
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
North Dakota Certification #: R-036A
Ohio VAP Certification #: CL101
Oklahoma Certification #: D9921
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Washington Certification #: C754
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10182983001	**Drum 3 & 4**	Solid	02/03/12 11:01	02/14/12 14:00

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SAMPLE ANALYTE COUNT

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10182983001	**Drum 3 & 4**	EPA 8082	KL1	11
		EPA 6010	IP	7
		EPA 7470	CJS	1
		EPA 7471	TEM	1
		% Moisture	JDL	1
		EPA 8270	JLR	72
		EPA 8260	CNC	71

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ANALYTICAL RESULTS

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

Sample: Drum 3 & 4 **Lab ID: 10182983001** Collected: 02/03/12 11:01 Received: 02/14/12 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3550							
PCB-1016 (Aroclor 1016)	ND	ug/kg	44.3	1	02/16/12 07:08	02/17/12 23:53	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	44.3	1	02/16/12 07:08	02/17/12 23:53	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	44.3	1	02/16/12 07:08	02/17/12 23:53	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	44.3	1	02/16/12 07:08	02/17/12 23:53	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	44.3	1	02/16/12 07:08	02/17/12 23:53	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/kg	44.3	1	02/16/12 07:08	02/17/12 23:53	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	44.3	1	02/16/12 07:08	02/17/12 23:53	11096-82-5	
PCB-1262 (Aroclor 1262)	ND	ug/kg	44.3	1	02/16/12 07:08	02/17/12 23:53	37324-23-5	
PCB-1268 (Aroclor 1268)	ND	ug/kg	44.3	1	02/16/12 07:08	02/17/12 23:53	11100-14-4	
Surrogates								
Tetrachloro-m-xylene (S)	66	%	30-150	1	02/16/12 07:08	02/17/12 23:53	877-09-8	
Decachlorobiphenyl (S)	73	%	30-150	1	02/16/12 07:08	02/17/12 23:53	2051-24-3	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Leachate Method/Date: EPA 1311; 02/17/12 13:29							
Arsenic	ND	mg/L	0.050	5	02/17/12 16:37	02/21/12 09:52	7440-38-2	
Barium	**1.7**	mg/L	0.25	5	02/17/12 16:37	02/20/12 14:42	7440-39-3	
Cadmium	ND	mg/L	0.0050	5	02/17/12 16:37	02/20/12 14:42	7440-43-9	
Chromium	ND	mg/L	0.050	5	02/17/12 16:37	02/20/12 14:42	7440-47-3	
Lead	**0.15**	mg/L	0.015	5	02/17/12 16:37	02/20/12 14:42	7439-92-1	
Selenium	ND	mg/L	0.075	5	02/17/12 16:37	02/20/12 14:42	7782-49-2	
Silver	ND	mg/L	0.050	5	02/17/12 16:37	02/20/12 14:42	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Leachate Method/Date: EPA 1311; 02/17/12 13:29							
Mercury	ND	ug/L	0.80	1	02/17/12 16:33	02/21/12 14:18	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	**0.028**	mg/kg	0.024	1	02/15/12 06:29	02/15/12 13:54	7439-97-6	
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**25.7**	%	0.10	1		02/15/12 00:00		
8270 MSSV	Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Acenaphthene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	83-32-9	
Acenaphthylene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	208-96-8	
Anthracene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	207-08-9	
4-Bromophenylphenyl ether	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	101-55-3	
Butylbenzylphthalate	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	85-68-7	
Carbazole	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	86-74-8	

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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

Sample: Drum 3 & 4 **Lab ID: 10182983001** Collected: 02/03/12 11:01 Received: 02/14/12 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270 Preparation Method: EPA 3550							
4-Chloro-3-methylphenol	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	59-50-7	
4-Chloroaniline	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	108-60-1	
2-Chloronaphthalene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	91-58-7	
2-Chlorophenol	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	7005-72-3	
Chrysene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	53-70-3	
Dibenzofuran	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	9020	10	02/15/12 13:22	02/21/12 19:39	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	120-83-2	
Diethylphthalate	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	105-67-9	
Dimethylphthalate	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	131-11-3	
Di-n-butylphthalate	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	22900	10	02/15/12 13:22	02/21/12 19:39	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	22900	10	02/15/12 13:22	02/21/12 19:39	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	606-20-2	
Di-n-octylphthalate	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	22900	10	02/15/12 13:22	02/21/12 19:39	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	117-81-7	
Fluoranthene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	206-44-0	
Fluorene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	87-68-3	
Hexachlorobenzene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	118-74-1	
Hexachloroethane	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	193-39-5	
Isophorone	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	78-59-1	
1-Methylnaphthalene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	90-12-0	
2-Methylnaphthalene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	95-48-7	
3&4-Methylphenol	ND	ug/kg	8890	10	02/15/12 13:22	02/21/12 19:39		
Naphthalene	**4560**	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	91-20-3	
2-Nitroaniline	ND	ug/kg	22900	10	02/15/12 13:22	02/21/12 19:39	88-74-4	
3-Nitroaniline	ND	ug/kg	22900	10	02/15/12 13:22	02/21/12 19:39	99-09-2	
4-Nitroaniline	ND	ug/kg	22900	10	02/15/12 13:22	02/21/12 19:39	100-01-6	
Nitrobenzene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	98-95-3	
2-Nitrophenol	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	88-75-5	
4-Nitrophenol	ND	ug/kg	22900	10	02/15/12 13:22	02/21/12 19:39	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	62-75-9	

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ANALYTICAL RESULTS

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

Sample: Drum 3 & 4 **Lab ID: 10182983001** Collected: 02/03/12 11:01 Received: 02/14/12 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV	Analytical Method: EPA 8270 Preparation Method: EPA 3550							
N-Nitroso-di-n-propylamine	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	86-30-6	
Pentachlorophenol	ND	ug/kg	9020	10	02/15/12 13:22	02/21/12 19:39	87-86-5	
Phenanthrene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	85-01-8	
Phenol	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	108-95-2	
Pyrene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	22900	10	02/15/12 13:22	02/21/12 19:39	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	4440	10	02/15/12 13:22	02/21/12 19:39	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	61	%	30-141	10	02/15/12 13:22	02/21/12 19:39	4165-60-0	D3
2-Fluorobiphenyl (S)	64	%	30-145	10	02/15/12 13:22	02/21/12 19:39	321-60-8	
Terphenyl-d14 (S)	62	%	30-150	10	02/15/12 13:22	02/21/12 19:39	1718-51-0	
Phenol-d6 (S)	49	%	30-142	10	02/15/12 13:22	02/21/12 19:39	13127-88-3	
2-Fluorophenol (S)	56	%	30-137	10	02/15/12 13:22	02/21/12 19:39	367-12-4	
2,4,6-Tribromophenol (S)	50	%	30-150	10	02/15/12 13:22	02/21/12 19:39	118-79-6	
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	1670	1	02/15/12 07:58	02/15/12 17:00	67-64-1	
Allyl chloride	ND	ug/kg	266	1	02/15/12 07:58	02/15/12 17:00	107-05-1	
Benzene	ND	ug/kg	26.6	1	02/15/12 07:58	02/15/12 17:00	71-43-2	
Bromobenzene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	108-86-1	
Bromochloromethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	74-97-5	
Bromodichloromethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	75-27-4	
Bromoform	ND	ug/kg	266	1	02/15/12 07:58	02/15/12 17:00	75-25-2	
Bromomethane	ND	ug/kg	666	1	02/15/12 07:58	02/15/12 17:00	74-83-9	
2-Butanone (MEK)	ND	ug/kg	666	1	02/15/12 07:58	02/15/12 17:00	78-93-3	
n-Butylbenzene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	104-51-8	
sec-Butylbenzene	**78.2**	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	135-98-8	
tert-Butylbenzene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	98-06-6	
Carbon tetrachloride	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	56-23-5	
Chlorobenzene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	108-90-7	
Chloroethane	ND	ug/kg	666	1	02/15/12 07:58	02/15/12 17:00	75-00-3	
Chloroform	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	67-66-3	
Chloromethane	ND	ug/kg	266	1	02/15/12 07:58	02/15/12 17:00	74-87-3	
2-Chlorotoluene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	95-49-8	
4-Chlorotoluene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	266	1	02/15/12 07:58	02/15/12 17:00	96-12-8	
Dibromochloromethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	106-93-4	
Dibromomethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	75-71-8	
1,1-Dichloroethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	75-34-3	

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ANALYTICAL RESULTS

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

Sample: Drum 3 & 4 **Lab ID: 10182983001** Collected: 02/03/12 11:01 Received: 02/14/12 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2-Dichloroethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	107-06-2	
1,1-Dichloroethene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	156-60-5	
Dichlorofluoromethane	ND	ug/kg	666	1	02/15/12 07:58	02/15/12 17:00	75-43-4	
1,2-Dichloropropane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	78-87-5	
1,3-Dichloropropane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	142-28-9	
2,2-Dichloropropane	ND	ug/kg	266	1	02/15/12 07:58	02/15/12 17:00	594-20-7	
1,1-Dichloropropene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	266	1	02/15/12 07:58	02/15/12 17:00	60-29-7	
Ethylbenzene	**1910**	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	333	1	02/15/12 07:58	02/15/12 17:00	87-68-3	
Isopropylbenzene (Cumene)	**324**	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	98-82-8	
p-Isopropyltoluene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	99-87-6	
Methylene Chloride	ND	ug/kg	266	1	02/15/12 07:58	02/15/12 17:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	666	1	02/15/12 07:58	02/15/12 17:00	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	1634-04-4	
Naphthalene	**4340**	ug/kg	266	1	02/15/12 07:58	02/15/12 17:00	91-20-3	
n-Propylbenzene	**338**	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	103-65-1	
Styrene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	79-34-5	
Tetrachloroethene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	127-18-4	
Tetrahydrofuran	ND	ug/kg	2660	1	02/15/12 07:58	02/15/12 17:00	109-99-9	
Toluene	**775**	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	79-00-5	
Trichloroethene	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	79-01-6	
Trichlorofluoromethane	ND	ug/kg	266	1	02/15/12 07:58	02/15/12 17:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	266	1	02/15/12 07:58	02/15/12 17:00	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	76-13-1	
1,2,4-Trimethylbenzene	**2380**	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	95-63-6	
1,3,5-Trimethylbenzene	**796**	ug/kg	66.6	1	02/15/12 07:58	02/15/12 17:00	108-67-8	
Vinyl chloride	ND	ug/kg	26.6	1	02/15/12 07:58	02/15/12 17:00	75-01-4	
Xylene (Total)	**11000**	ug/kg	200	1	02/15/12 07:58	02/15/12 17:00	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	121	%	55-127	1	02/15/12 07:58	02/15/12 17:00	1868-53-7	1M
1,2-Dichloroethane-d4 (S)	115	%	49-125	1	02/15/12 07:58	02/15/12 17:00	17060-07-0	
Toluene-d8 (S)	119	%	56-131	1	02/15/12 07:58	02/15/12 17:00	2037-26-5	
4-Bromofluorobenzene (S)	113	%	53-128	1	02/15/12 07:58	02/15/12 17:00	460-00-4	

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

QC Batch: MERP/6479
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 10182983001

METHOD BLANK: 1141748 Matrix: Water
Associated Lab Samples: 10182983001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.80	02/21/12 14:14	

LABORATORY CONTROL SAMPLE: 1141749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	15	15.6	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1141750 1141751

Parameter	Units	10183091001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	15	15	9.9	15.0	66	100	80-120	41	20	D6,M1

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

QC Batch: MERP/6469
QC Batch Method: EPA 7471
Analysis Method: EPA 7471
Analysis Description: 7471 Mercury
Associated Lab Samples: 10182983001

METHOD BLANK: 1140362 Matrix: Solid
Associated Lab Samples: 10182983001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.018	02/15/12 13:26	

LABORATORY CONTROL SAMPLE: 1140363

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.47	0.48	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1140364 1140365

Parameter	Units	10182876001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.052	.73	.67	0.63	0.67	79	92	80-120	5	20	M1

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

QC Batch: MPRP/30967
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET TCLP
Associated Lab Samples: 10182983001

METHOD BLANK: 1141752 Matrix: Water
Associated Lab Samples: 10182983001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.050	02/21/12 09:22	
Barium	mg/L	ND	0.25	02/20/12 14:11	
Cadmium	mg/L	ND	0.0050	02/20/12 14:11	
Chromium	mg/L	ND	0.050	02/20/12 14:11	
Lead	mg/L	ND	0.015	02/20/12 14:11	
Selenium	mg/L	ND	0.075	02/20/12 14:11	
Silver	mg/L	ND	0.050	02/20/12 14:11	

LABORATORY CONTROL SAMPLE: 1141753

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	1	0.94	94	80-120	
Barium	mg/L	1	1.0	101	80-120	
Cadmium	mg/L	1	1.0	102	80-120	
Chromium	mg/L	1	0.98	98	80-120	
Lead	mg/L	1	1.0	101	80-120	
Selenium	mg/L	1	1.0	102	80-120	
Silver	mg/L	.5	0.50	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1141754 1141755

Parameter	Units	10182976001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L		1	1	0.97	0.93	95	91	75-125	4	30	
Barium	mg/L		1	1	1.2	1.2	99	101	75-125	2	30	
Cadmium	mg/L		1	1	1.2	1.2	105	103	75-125	2	30	
Chromium	mg/L		1	1	0.99	1.0	99	99	75-125	.8	30	
Lead	mg/L	1.5	1	1	2.5	2.5	103	98	75-125	2	30	
Selenium	mg/L		1	1	1.0	1.0	101	99	75-125	2	30	
Silver	mg/L		.5	.5	0.50	0.50	100	101	75-125	.4	30	

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

QC Batch: MPRP/30945
QC Batch Method: % Moisture
Analysis Method: % Moisture
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 10182983001

SAMPLE DUPLICATE: 1140722

Parameter	Units	10182968012 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	13.5	15.0	10	30	

SAMPLE DUPLICATE: 1140723

Parameter	Units	10182983001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	25.7	24.4	5	30	

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

QC Batch: MSV/19261 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV 5030 Med Level
Associated Lab Samples: 10182983001

METHOD BLANK: 1140385 Matrix: Solid
Associated Lab Samples: 10182983001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	50.0	02/15/12 10:27	
1,1,1-Trichloroethane	ug/kg	ND	50.0	02/15/12 10:27	
1,1,2,2-Tetrachloroethane	ug/kg	ND	50.0	02/15/12 10:27	
1,1,2-Trichloroethane	ug/kg	ND	50.0	02/15/12 10:27	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	50.0	02/15/12 10:27	
1,1-Dichloroethane	ug/kg	ND	50.0	02/15/12 10:27	
1,1-Dichloroethene	ug/kg	ND	50.0	02/15/12 10:27	
1,1-Dichloropropene	ug/kg	ND	50.0	02/15/12 10:27	
1,2,3-Trichlorobenzene	ug/kg	ND	50.0	02/15/12 10:27	
1,2,3-Trichloropropane	ug/kg	ND	200	02/15/12 10:27	
1,2,4-Trichlorobenzene	ug/kg	ND	50.0	02/15/12 10:27	
1,2,4-Trimethylbenzene	ug/kg	ND	50.0	02/15/12 10:27	
1,2-Dibromo-3-chloropropane	ug/kg	ND	200	02/15/12 10:27	
1,2-Dibromoethane (EDB)	ug/kg	ND	50.0	02/15/12 10:27	
1,2-Dichlorobenzene	ug/kg	ND	50.0	02/15/12 10:27	
1,2-Dichloroethane	ug/kg	ND	50.0	02/15/12 10:27	
1,2-Dichloropropane	ug/kg	ND	50.0	02/15/12 10:27	
1,3,5-Trimethylbenzene	ug/kg	ND	50.0	02/15/12 10:27	
1,3-Dichlorobenzene	ug/kg	ND	50.0	02/15/12 10:27	
1,3-Dichloropropane	ug/kg	ND	50.0	02/15/12 10:27	
1,4-Dichlorobenzene	ug/kg	ND	50.0	02/15/12 10:27	
2,2-Dichloropropane	ug/kg	ND	200	02/15/12 10:27	
2-Butanone (MEK)	ug/kg	ND	500	02/15/12 10:27	
2-Chlorotoluene	ug/kg	ND	50.0	02/15/12 10:27	
4-Chlorotoluene	ug/kg	ND	50.0	02/15/12 10:27	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	500	02/15/12 10:27	
Acetone	ug/kg	ND	1250	02/15/12 10:27	
Allyl chloride	ug/kg	ND	200	02/15/12 10:27	
Benzene	ug/kg	ND	20.0	02/15/12 10:27	
Bromobenzene	ug/kg	ND	50.0	02/15/12 10:27	
Bromochloromethane	ug/kg	ND	50.0	02/15/12 10:27	
Bromodichloromethane	ug/kg	ND	50.0	02/15/12 10:27	
Bromoform	ug/kg	ND	200	02/15/12 10:27	
Bromomethane	ug/kg	ND	500	02/15/12 10:27	
Carbon tetrachloride	ug/kg	ND	50.0	02/15/12 10:27	
Chlorobenzene	ug/kg	ND	50.0	02/15/12 10:27	
Chloroethane	ug/kg	ND	500	02/15/12 10:27	
Chloroform	ug/kg	ND	50.0	02/15/12 10:27	
Chloromethane	ug/kg	ND	200	02/15/12 10:27	
cis-1,2-Dichloroethene	ug/kg	ND	50.0	02/15/12 10:27	
cis-1,3-Dichloropropene	ug/kg	ND	50.0	02/15/12 10:27	
Dibromochloromethane	ug/kg	ND	50.0	02/15/12 10:27	
Dibromomethane	ug/kg	ND	50.0	02/15/12 10:27	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

METHOD BLANK: 1140385 Matrix: Solid

Associated Lab Samples: 10182983001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/kg	ND	50.0	02/15/12 10:27	
Dichlorofluoromethane	ug/kg	ND	500	02/15/12 10:27	
Diethyl ether (Ethyl ether)	ug/kg	ND	200	02/15/12 10:27	
Ethylbenzene	ug/kg	ND	50.0	02/15/12 10:27	
Hexachloro-1,3-butadiene	ug/kg	ND	250	02/15/12 10:27	
Isopropylbenzene (Cumene)	ug/kg	ND	50.0	02/15/12 10:27	
Methyl-tert-butyl ether	ug/kg	ND	50.0	02/15/12 10:27	
Methylene Chloride	ug/kg	ND	200	02/15/12 10:27	
n-Butylbenzene	ug/kg	ND	50.0	02/15/12 10:27	
n-Propylbenzene	ug/kg	ND	50.0	02/15/12 10:27	
Naphthalene	ug/kg	ND	200	02/15/12 10:27	
p-Isopropyltoluene	ug/kg	ND	50.0	02/15/12 10:27	
sec-Butylbenzene	ug/kg	ND	50.0	02/15/12 10:27	
Styrene	ug/kg	ND	50.0	02/15/12 10:27	
tert-Butylbenzene	ug/kg	ND	50.0	02/15/12 10:27	
Tetrachloroethene	ug/kg	ND	50.0	02/15/12 10:27	
Tetrahydrofuran	ug/kg	ND	2000	02/15/12 10:27	
Toluene	ug/kg	ND	50.0	02/15/12 10:27	
trans-1,2-Dichloroethene	ug/kg	ND	50.0	02/15/12 10:27	
trans-1,3-Dichloropropene	ug/kg	ND	50.0	02/15/12 10:27	
Trichloroethene	ug/kg	ND	50.0	02/15/12 10:27	
Trichlorofluoromethane	ug/kg	ND	200	02/15/12 10:27	
Vinyl chloride	ug/kg	ND	20.0	02/15/12 10:27	
Xylene (Total)	ug/kg	ND	150	02/15/12 10:27	
1,2-Dichloroethane-d4 (S)	%	101	70-130	02/15/12 10:27	
4-Bromofluorobenzene (S)	%	93	53-128	02/15/12 10:27	
Dibromofluoromethane (S)	%	103	55-127	02/15/12 10:27	
Toluene-d8 (S)	%	98	70-130	02/15/12 10:27	

LABORATORY CONTROL SAMPLE & LCSD: 1140386 1140387

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	1000	801	846	80	85	72-125	6	20	
1,1,1-Trichloroethane	ug/kg	1000	869	913	87	91	68-134	5	20	
1,1,2,2-Tetrachloroethane	ug/kg	1000	811	902	81	90	74-125	11	20	
1,1,2-Trichloroethane	ug/kg	1000	819	919	82	92	75-125	11	20	
1,1,2-Trichlorotrifluoroethane	ug/kg	1000	897	972	90	97	64-133	8	20	
1,1-Dichloroethane	ug/kg	1000	892	929	89	93	74-125	4	20	
1,1-Dichloroethene	ug/kg	1000	887	921	89	92	64-133	4	20	
1,1-Dichloropropene	ug/kg	1000	878	931	88	93	70-134	6	20	
1,2,3-Trichlorobenzene	ug/kg	1000	729	821	73	82	70-125	12	20	
1,2,3-Trichloropropane	ug/kg	1000	774	872	77	87	71-125	12	20	
1,2,4-Trichlorobenzene	ug/kg	1000	789	868	79	87	69-125	9	20	
1,2,4-Trimethylbenzene	ug/kg	1000	853	892	85	89	75-129	4	20	
1,2-Dibromo-3-chloropropane	ug/kg	1000	696	819	70	82	62-127	16	20	

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

LABORATORY CONTROL SAMPLE & LCSD: 1140386 1140387

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	1000	842	928	84	93	73-125	10	20	
1,2-Dichlorobenzene	ug/kg	1000	857	909	86	91	75-125	6	20	
1,2-Dichloroethane	ug/kg	1000	837	894	84	89	70-131	7	20	
1,2-Dichloropropane	ug/kg	1000	903	951	90	95	75-125	5	20	
1,3,5-Trimethylbenzene	ug/kg	1000	855	885	85	88	74-130	3	20	
1,3-Dichlorobenzene	ug/kg	1000	866	911	87	91	75-125	5	20	
1,3-Dichloropropane	ug/kg	1000	833	900	83	90	75-125	8	20	
1,4-Dichlorobenzene	ug/kg	1000	869	910	87	91	75-125	5	20	
2,2-Dichloropropane	ug/kg	1000	919	946	92	95	46-144	3	20	
2-Butanone (MEK)	ug/kg	1000	779	924	78	92	41-150	17	20	
2-Chlorotoluene	ug/kg	1000	876	897	88	90	75-127	2	20	
4-Chlorotoluene	ug/kg	1000	862	894	86	89	75-127	4	20	
4-Methyl-2-pentanone (MIBK)	ug/kg	1000	770	919	77	92	67-127	18	20	
Acetone	ug/kg	2500	2260	2190	90	87	30-150	3	20	
Allyl chloride	ug/kg	1000	924	943	92	94	68-139	2	20	
Benzene	ug/kg	1000	909	956	91	96	74-126	5	20	
Bromobenzene	ug/kg	1000	853	899	85	90	75-125	5	20	
Bromochloromethane	ug/kg	1000	871	936	87	94	75-128	7	20	
Bromodichloromethane	ug/kg	1000	882	920	88	92	69-130	4	20	
Bromoform	ug/kg	1000	734	808	73	81	64-124	10	20	
Bromomethane	ug/kg	1000	787	771	79	77	54-139	2	20	
Carbon tetrachloride	ug/kg	1000	821	846	82	85	64-139	3	20	
Chlorobenzene	ug/kg	1000	859	913	86	91	75-125	6	20	
Chloroethane	ug/kg	1000	839	807	84	81	45-146	4	20	
Chloroform	ug/kg	1000	895	918	89	92	73-129	3	20	
Chloromethane	ug/kg	1000	762	734	76	73	55-125	4	20	
cis-1,2-Dichloroethene	ug/kg	1000	884	932	88	93	75-126	5	20	
cis-1,3-Dichloropropene	ug/kg	1000	894	936	89	94	70-130	5	20	
Dibromochloromethane	ug/kg	1000	781	836	78	84	69-125	7	20	
Dibromomethane	ug/kg	1000	876	976	88	98	73-125	11	20	
Dichlorodifluoromethane	ug/kg	1000	618	608	62	61	30-137	2	20	
Dichlorofluoromethane	ug/kg	1000	989	976	99	98	30-150	1	20	
Diethyl ether (Ethyl ether)	ug/kg	1000	829	913	83	91	68-131	10	20	
Ethylbenzene	ug/kg	1000	877	929	88	93	74-127	6	20	
Hexachloro-1,3-butadiene	ug/kg	500	386	404	77	81	59-130	4	20	
Isopropylbenzene (Cumene)	ug/kg	1000	883	932	88	93	72-131	5	20	
Methyl-tert-butyl ether	ug/kg	1000	831	930	83	93	65-132	11	20	
Methylene Chloride	ug/kg	1000	905	938	91	94	30-150	4	20	
n-Butylbenzene	ug/kg	1000	866	882	87	88	66-134	2	20	
n-Propylbenzene	ug/kg	1000	880	911	88	91	74-131	3	20	
Naphthalene	ug/kg	1000	764	881	76	88	66-130	14	20	
p-Isopropyltoluene	ug/kg	1000	845	874	85	87	65-134	3	20	
sec-Butylbenzene	ug/kg	1000	862	876	86	88	69-133	2	20	
Styrene	ug/kg	1000	852	933	85	93	75-125	9	20	
tert-Butylbenzene	ug/kg	1000	836	858	84	86	72-129	3	20	
Tetrachloroethene	ug/kg	1000	900	959	90	96	68-131	6	20	
Tetrahydrofuran	ug/kg	10000	7820	9240	78	92	67-131	17	20	
Toluene	ug/kg	1000	889	935	89	94	75-125	5	20	

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

LABORATORY CONTROL SAMPLE & LCSD: 1140386 1140387

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/kg	1000	919	935	92	93	74-129	2	20	
trans-1,3-Dichloropropene	ug/kg	1000	830	864	83	86	72-128	4	20	
Trichloroethene	ug/kg	1000	920	970	92	97	72-125	5	20	
Trichlorofluoromethane	ug/kg	1000	836	813	84	81	41-150	3	20	
Vinyl chloride	ug/kg	1000	799	765	80	77	54-128	4	20	
Xylene (Total)	ug/kg	3000	2610	2780	87	93	75-125	6	20	
1,2-Dichloroethane-d4 (S)	%				90	102	70-130			
4-Bromofluorobenzene (S)	%				88	95	53-128			
Dibromofluoromethane (S)	%				92	100	55-127			
Toluene-d8 (S)	%				90	99	70-130			

MATRIX SPIKE SAMPLE: 1140388

Parameter	Units	10182896002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	1090	1130	103	66-135	
1,1,1-Trichloroethane	ug/kg	ND	1090	1200	110	65-150	
1,1,2,2-Tetrachloroethane	ug/kg	ND	1090	1140	104	61-140	
1,1,2-Trichloroethane	ug/kg	ND	1090	1160	106	69-132	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	1090	1280	117	50-150	
1,1-Dichloroethane	ug/kg	ND	1090	1220	112	64-143	
1,1-Dichloroethene	ug/kg	ND	1090	1210	111	59-150	
1,1-Dichloropropene	ug/kg	ND	1090	1210	111	63-150	
1,2,3-Trichlorobenzene	ug/kg	ND	1090	1050	96	67-137	
1,2,3-Trichloropropane	ug/kg	ND	1090	1130	103	64-135	
1,2,4-Trichlorobenzene	ug/kg	ND	1090	1130	103	68-134	
1,2,4-Trimethylbenzene	ug/kg	ND	1090	1210	108	68-134	
1,2-Dibromo-3-chloropropane	ug/kg	ND	1090	1010	92	62-133	
1,2-Dibromoethane (EDB)	ug/kg	ND	1090	1180	108	65-136	
1,2-Dichlorobenzene	ug/kg	ND	1090	1190	109	66-138	
1,2-Dichloroethane	ug/kg	ND	1090	1170	107	59-141	
1,2-Dichloropropane	ug/kg	ND	1090	1260	116	64-141	
1,3,5-Trimethylbenzene	ug/kg	ND	1090	1190	108	65-147	
1,3-Dichlorobenzene	ug/kg	ND	1090	1210	110	67-138	
1,3-Dichloropropane	ug/kg	ND	1090	1160	106	64-138	
1,4-Dichlorobenzene	ug/kg	ND	1090	1200	110	66-136	
2,2-Dichloropropane	ug/kg	ND	1090	1230	113	39-150	
2-Butanone (MEK)	ug/kg	ND	1090	1070	98	39-150	
2-Chlorotoluene	ug/kg	ND	1090	1200	110	70-141	
4-Chlorotoluene	ug/kg	ND	1090	1200	110	70-139	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	1090	1160	106	63-139	
Acetone	ug/kg	ND	2740	3040	111	30-150	
Allyl chloride	ug/kg	ND	1090	1250	114	60-150	
Benzene	ug/kg	ND	1090	1250	114	62-144	
Bromobenzene	ug/kg	ND	1090	1190	109	67-140	
Bromochloromethane	ug/kg	ND	1090	1220	111	69-139	
Bromodichloromethane	ug/kg	ND	1090	1220	111	64-138	
Bromoform	ug/kg	ND	1090	1050	96	60-134	

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

MATRIX SPIKE SAMPLE: 1140388

Parameter	Units	10182896002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/kg	ND	1090	1080	99	52-150	
Carbon tetrachloride	ug/kg	ND	1090	1110	102	67-150	
Chlorobenzene	ug/kg	ND	1090	1190	109	65-139	
Chloroethane	ug/kg	ND	1090	1160	106	35-150	
Chloroform	ug/kg	ND	1090	1250	114	61-143	
Chloromethane	ug/kg	ND	1090	1070	98	44-136	
cis-1,2-Dichloroethene	ug/kg	ND	1090	1230	112	68-140	
cis-1,3-Dichloropropene	ug/kg	ND	1090	1230	112	60-143	
Dibromochloromethane	ug/kg	ND	1090	1090	100	64-134	
Dibromomethane	ug/kg	ND	1090	1240	114	65-135	
Dichlorodifluoromethane	ug/kg	ND	1090	914	84	30-150	
Dichlorofluoromethane	ug/kg	ND	1090	1290	118	30-150	
Diethyl ether (Ethyl ether)	ug/kg	ND	1090	1180	108	58-146	
Ethylbenzene	ug/kg	ND	1090	1220	112	65-146	
Hexachloro-1,3-butadiene	ug/kg	ND	546	615	113	60-150	
Isopropylbenzene (Cumene)	ug/kg	ND	1090	1240	113	73-143	
Methyl-tert-butyl ether	ug/kg	ND	1090	1180	108	57-145	
Methylene Chloride	ug/kg	ND	1090	1210	111	30-150	
n-Butylbenzene	ug/kg	ND	1090	1230	111	65-150	
n-Propylbenzene	ug/kg	ND	1090	1230	112	69-147	
Naphthalene	ug/kg	ND	1090	1110	99	60-142	
p-Isopropyltoluene	ug/kg	ND	1090	1190	109	65-149	
sec-Butylbenzene	ug/kg	ND	1090	1200	109	72-144	
Styrene	ug/kg	ND	1090	1240	113	69-138	
tert-Butylbenzene	ug/kg	ND	1090	1180	108	68-144	
Tetrachloroethene	ug/kg	ND	1090	1240	113	66-147	
Tetrahydrofuran	ug/kg	ND	10900	11300	103	59-142	
Toluene	ug/kg	ND	1090	1220	110	59-145	
trans-1,2-Dichloroethene	ug/kg	ND	1090	1240	114	63-148	
trans-1,3-Dichloropropene	ug/kg	ND	1090	1110	101	59-144	
Trichloroethene	ug/kg	ND	1090	1280	117	69-141	
Trichlorofluoromethane	ug/kg	ND	1090	1190	109	44-150	
Vinyl chloride	ug/kg	ND	1090	1120	102	51-144	
Xylene (Total)	ug/kg	ND	3280	3640	110	57-143	
1,2-Dichloroethane-d4 (S)	%				110	70-130	
4-Bromofluorobenzene (S)	%				105	53-128	
Dibromofluoromethane (S)	%				110	55-127	
Toluene-d8 (S)	%				109	70-130	

SAMPLE DUPLICATE: 1140389

Parameter	Units	10182896003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND		30	
1,1,1-Trichloroethane	ug/kg	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND		30	
1,1,2-Trichloroethane	ug/kg	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	ND		30	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

SAMPLE DUPLICATE: 1140389

Parameter	Units	10182896003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1-Dichloroethane	ug/kg	ND	ND		30	
1,1-Dichloroethene	ug/kg	ND	ND		30	
1,1-Dichloropropene	ug/kg	ND	ND		30	
1,2,3-Trichlorobenzene	ug/kg	ND	ND		30	
1,2,3-Trichloropropane	ug/kg	ND	ND		30	
1,2,4-Trichlorobenzene	ug/kg	ND	ND		30	
1,2,4-Trimethylbenzene	ug/kg	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/kg	ND	ND		30	
1,2-Dichlorobenzene	ug/kg	ND	ND		30	
1,2-Dichloroethane	ug/kg	ND	ND		30	
1,2-Dichloropropane	ug/kg	ND	ND		30	
1,3,5-Trimethylbenzene	ug/kg	ND	ND		30	
1,3-Dichlorobenzene	ug/kg	ND	ND		30	
1,3-Dichloropropane	ug/kg	ND	ND		30	
1,4-Dichlorobenzene	ug/kg	ND	ND		30	
2,2-Dichloropropane	ug/kg	ND	ND		30	
2-Butanone (MEK)	ug/kg	ND	ND		30	
2-Chlorotoluene	ug/kg	ND	ND		30	
4-Chlorotoluene	ug/kg	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND		30	
Acetone	ug/kg	ND	ND		30	
Allyl chloride	ug/kg	ND	ND		30	
Benzene	ug/kg	ND	ND		30	
Bromobenzene	ug/kg	ND	ND		30	
Bromochloromethane	ug/kg	ND	ND		30	
Bromodichloromethane	ug/kg	ND	ND		30	
Bromoform	ug/kg	ND	ND		30	
Bromomethane	ug/kg	ND	ND		30	
Carbon tetrachloride	ug/kg	ND	ND		30	
Chlorobenzene	ug/kg	ND	ND		30	
Chloroethane	ug/kg	ND	ND		30	
Chloroform	ug/kg	ND	ND		30	
Chloromethane	ug/kg	ND	ND		30	
cis-1,2-Dichloroethene	ug/kg	ND	ND		30	
cis-1,3-Dichloropropene	ug/kg	ND	ND		30	
Dibromochloromethane	ug/kg	ND	ND		30	
Dibromomethane	ug/kg	ND	ND		30	
Dichlorodifluoromethane	ug/kg	ND	ND		30	
Dichlorofluoromethane	ug/kg	ND	ND		30	
Diethyl ether (Ethyl ether)	ug/kg	ND	ND		30	
Ethylbenzene	ug/kg	ND	ND		30	
Hexachloro-1,3-butadiene	ug/kg	ND	ND		30	
Isopropylbenzene (Cumene)	ug/kg	ND	ND		30	
Methyl-tert-butyl ether	ug/kg	ND	ND		30	
Methylene Chloride	ug/kg	ND	ND		30	
n-Butylbenzene	ug/kg	ND	ND		30	
n-Propylbenzene	ug/kg	ND	ND		30	

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

SAMPLE DUPLICATE: 1140389

Parameter	Units	10182896003 Result	Dup Result	RPD	Max RPD	Qualifiers
Naphthalene	ug/kg	ND	ND		30	
p-Isopropyltoluene	ug/kg	ND	ND		30	
sec-Butylbenzene	ug/kg	ND	ND		30	
Styrene	ug/kg	ND	ND		30	
tert-Butylbenzene	ug/kg	ND	ND		30	
Tetrachloroethene	ug/kg	ND	ND		30	
Tetrahydrofuran	ug/kg	ND	ND		30	
Toluene	ug/kg	ND	ND		30	
trans-1,2-Dichloroethene	ug/kg	ND	ND		30	
trans-1,3-Dichloropropene	ug/kg	ND	ND		30	
Trichloroethene	ug/kg	ND	ND		30	
Trichlorofluoromethane	ug/kg	ND	ND		30	
Vinyl chloride	ug/kg	ND	ND		30	
Xylene (Total)	ug/kg	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	112	117	3		
4-Bromofluorobenzene (S)	%	106	110	3		
Dibromofluoromethane (S)	%	117	122	3		
Toluene-d8 (S)	%	112	118	2		

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

QC Batch: OEXT/17885
QC Batch Method: EPA 3550
Analysis Method: EPA 8082
Analysis Description: 8082 GCS PCB
Associated Lab Samples: 10182983001

METHOD BLANK: 1140832 Matrix: Solid
Associated Lab Samples: 10182983001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	33.0	02/17/12 21:46	
PCB-1221 (Aroclor 1221)	ug/kg	ND	33.0	02/17/12 21:46	
PCB-1232 (Aroclor 1232)	ug/kg	ND	33.0	02/17/12 21:46	
PCB-1242 (Aroclor 1242)	ug/kg	ND	33.0	02/17/12 21:46	
PCB-1248 (Aroclor 1248)	ug/kg	ND	33.0	02/17/12 21:46	
PCB-1254 (Aroclor 1254)	ug/kg	ND	33.0	02/17/12 21:46	
PCB-1260 (Aroclor 1260)	ug/kg	ND	33.0	02/17/12 21:46	
PCB-1262 (Aroclor 1262)	ug/kg	ND	33.0	02/17/12 21:46	
PCB-1268 (Aroclor 1268)	ug/kg	ND	33.0	02/17/12 21:46	
Decachlorobiphenyl (S)	%	87	30-150	02/17/12 21:46	
Tetrachloro-m-xylene (S)	%	89	30-150	02/17/12 21:46	

LABORATORY CONTROL SAMPLE: 1140833

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	667	595	89	64-125	
PCB-1260 (Aroclor 1260)	ug/kg	667	609	91	64-125	
Decachlorobiphenyl (S)	%			93	30-150	
Tetrachloro-m-xylene (S)	%			92	30-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1140834 1140835

Parameter	Units	10182876001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	ND	1040	1040	900	1010	87	97	41-125	12	30	
PCB-1260 (Aroclor 1260)	ug/kg	ND	1040	1040	866	986	84	95	30-150	13	30	
Decachlorobiphenyl (S)	%						0	93	30-150			S4
Tetrachloro-m-xylene (S)	%						0	85	30-150			D3,S4

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

QC Batch: OEXT/17877 Analysis Method: EPA 8270
QC Batch Method: EPA 3550 Analysis Description: 8270 Solid MSSV
Associated Lab Samples: 10182983001

METHOD BLANK: 1140591 Matrix: Solid
Associated Lab Samples: 10182983001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	330	02/20/12 09:12	
1,2-Dichlorobenzene	ug/kg	ND	330	02/20/12 09:12	
1,2-Diphenylhydrazine	ug/kg	ND	1700	02/20/12 09:12	
1,3-Dichlorobenzene	ug/kg	ND	330	02/20/12 09:12	
1,4-Dichlorobenzene	ug/kg	ND	330	02/20/12 09:12	
1-Methylnaphthalene	ug/kg	ND	330	02/20/12 09:12	
2,4,5-Trichlorophenol	ug/kg	ND	1700	02/20/12 09:12	
2,4,6-Trichlorophenol	ug/kg	ND	330	02/20/12 09:12	
2,4-Dichlorophenol	ug/kg	ND	330	02/20/12 09:12	
2,4-Dimethylphenol	ug/kg	ND	330	02/20/12 09:12	
2,4-Dinitrophenol	ug/kg	ND	1700	02/20/12 09:12	
2,4-Dinitrotoluene	ug/kg	ND	330	02/20/12 09:12	
2,6-Dinitrotoluene	ug/kg	ND	330	02/20/12 09:12	
2-Chloronaphthalene	ug/kg	ND	330	02/20/12 09:12	
2-Chlorophenol	ug/kg	ND	330	02/20/12 09:12	
2-Methylnaphthalene	ug/kg	ND	330	02/20/12 09:12	
2-Methylphenol(o-Cresol)	ug/kg	ND	330	02/20/12 09:12	
2-Nitroaniline	ug/kg	ND	1700	02/20/12 09:12	
2-Nitrophenol	ug/kg	ND	330	02/20/12 09:12	
3&4-Methylphenol	ug/kg	ND	660	02/20/12 09:12	
3,3'-Dichlorobenzidine	ug/kg	ND	670	02/20/12 09:12	
3-Nitroaniline	ug/kg	ND	1700	02/20/12 09:12	
4,6-Dinitro-2-methylphenol	ug/kg	ND	1700	02/20/12 09:12	
4-Bromophenylphenyl ether	ug/kg	ND	330	02/20/12 09:12	
4-Chloro-3-methylphenol	ug/kg	ND	330	02/20/12 09:12	
4-Chloroaniline	ug/kg	ND	330	02/20/12 09:12	
4-Chlorophenylphenyl ether	ug/kg	ND	330	02/20/12 09:12	
4-Nitroaniline	ug/kg	ND	1700	02/20/12 09:12	
4-Nitrophenol	ug/kg	ND	1700	02/20/12 09:12	
Acenaphthene	ug/kg	ND	330	02/20/12 09:12	
Acenaphthylene	ug/kg	ND	330	02/20/12 09:12	
Anthracene	ug/kg	ND	330	02/20/12 09:12	
Benzo(a)anthracene	ug/kg	ND	330	02/20/12 09:12	
Benzo(a)pyrene	ug/kg	ND	330	02/20/12 09:12	
Benzo(b)fluoranthene	ug/kg	ND	330	02/20/12 09:12	
Benzo(g,h,i)perylene	ug/kg	ND	330	02/20/12 09:12	
Benzo(k)fluoranthene	ug/kg	ND	330	02/20/12 09:12	
bis(2-Chloroethoxy)methane	ug/kg	ND	330	02/20/12 09:12	
bis(2-Chloroethyl) ether	ug/kg	ND	330	02/20/12 09:12	
bis(2-Chloroisopropyl) ether	ug/kg	ND	330	02/20/12 09:12	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	02/20/12 09:12	
Butylbenzylphthalate	ug/kg	ND	330	02/20/12 09:12	
Carbazole	ug/kg	ND	330	02/20/12 09:12	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

METHOD BLANK: 1140591 Matrix: Solid

Associated Lab Samples: 10182983001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chrysene	ug/kg	ND	330	02/20/12 09:12	
Di-n-butylphthalate	ug/kg	ND	330	02/20/12 09:12	
Di-n-octylphthalate	ug/kg	ND	330	02/20/12 09:12	
Dibenz(a,h)anthracene	ug/kg	ND	330	02/20/12 09:12	
Dibenzofuran	ug/kg	ND	330	02/20/12 09:12	
Diethylphthalate	ug/kg	ND	330	02/20/12 09:12	
Dimethylphthalate	ug/kg	ND	330	02/20/12 09:12	
Fluoranthene	ug/kg	ND	330	02/20/12 09:12	
Fluorene	ug/kg	ND	330	02/20/12 09:12	
Hexachloro-1,3-butadiene	ug/kg	ND	330	02/20/12 09:12	
Hexachlorobenzene	ug/kg	ND	330	02/20/12 09:12	
Hexachloroethane	ug/kg	ND	330	02/20/12 09:12	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	02/20/12 09:12	
Isophorone	ug/kg	ND	330	02/20/12 09:12	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	02/20/12 09:12	
N-Nitrosodimethylamine	ug/kg	ND	330	02/20/12 09:12	
N-Nitrosodiphenylamine	ug/kg	ND	330	02/20/12 09:12	
Naphthalene	ug/kg	ND	330	02/20/12 09:12	
Nitrobenzene	ug/kg	ND	330	02/20/12 09:12	
Pentachlorophenol	ug/kg	ND	670	02/20/12 09:12	
Phenanthrene	ug/kg	ND	330	02/20/12 09:12	
Phenol	ug/kg	ND	330	02/20/12 09:12	
Pyrene	ug/kg	ND	330	02/20/12 09:12	
2,4,6-Tribromophenol (S)	%	74	30-150	02/20/12 09:12	
2-Fluorobiphenyl (S)	%	73	30-145	02/20/12 09:12	
2-Fluorophenol (S)	%	69	30-137	02/20/12 09:12	
Nitrobenzene-d5 (S)	%	71	30-141	02/20/12 09:12	
Phenol-d6 (S)	%	67	30-142	02/20/12 09:12	
Terphenyl-d14 (S)	%	88	30-150	02/20/12 09:12	

LABORATORY CONTROL SAMPLE: 1140592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1670	1050	63	51-125	
1,2-Dichlorobenzene	ug/kg	1670	1030	62	53-125	
1,2-Diphenylhydrazine	ug/kg	1670	1210J	73	61-125	
1,3-Dichlorobenzene	ug/kg	1670	1050	63	53-125	
1,4-Dichlorobenzene	ug/kg	1670	1060	64	53-125	
1-Methylnaphthalene	ug/kg	1670	1070	64	61-125	
2,4,5-Trichlorophenol	ug/kg	1670	1170J	70	67-125	
2,4,6-Trichlorophenol	ug/kg	1670	1170	70	64-125	
2,4-Dichlorophenol	ug/kg	1670	1100	66	60-125	
2,4-Dimethylphenol	ug/kg	1670	1130	68	56-125	
2,4-Dinitrophenol	ug/kg	1670	1010J	61	30-125	
2,4-Dinitrotoluene	ug/kg	1670	1140	68	60-125	

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

LABORATORY CONTROL SAMPLE: 1140592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,6-Dinitrotoluene	ug/kg	1670	1120	67	62-125	
2-Chloronaphthalene	ug/kg	1670	1120	67	62-125	
2-Chlorophenol	ug/kg	1670	1070	64	51-125	
2-Methylnaphthalene	ug/kg	1670	1090	65	58-125	
2-Methylphenol(o-Cresol)	ug/kg	1670	1090	65	52-125	
2-Nitroaniline	ug/kg	1670	1310J	78	64-125	
2-Nitrophenol	ug/kg	1670	1120	67	53-125	
3&4-Methylphenol	ug/kg	1670	1090	65	54-125	
3,3'-Dichlorobenzidine	ug/kg	1670	944	57	49-125	
3-Nitroaniline	ug/kg	1670	1000J	60	51-125	
4,6-Dinitro-2-methylphenol	ug/kg	1670	1140J	68	30-127	
4-Bromophenylphenyl ether	ug/kg	1670	1220	73	64-125	
4-Chloro-3-methylphenol	ug/kg	1670	1170	70	61-125	
4-Chloroaniline	ug/kg	1670	721	43	39-125	
4-Chlorophenylphenyl ether	ug/kg	1670	1140	69	62-125	
4-Nitroaniline	ug/kg	1670	1050J	63	59-125	
4-Nitrophenol	ug/kg	1670	1210J	73	57-125	
Acenaphthene	ug/kg	1670	1110	66	61-125	
Acenaphthylene	ug/kg	1670	1130	68	64-125	
Anthracene	ug/kg	1670	1130	68	64-125	
Benzo(a)anthracene	ug/kg	1670	1140	69	62-125	
Benzo(a)pyrene	ug/kg	1670	1120	67	62-125	
Benzo(b)fluoranthene	ug/kg	1670	1080	65	62-125	
Benzo(g,h,i)perylene	ug/kg	1670	1190	71	62-125	
Benzo(k)fluoranthene	ug/kg	1670	1150	69	65-125	
bis(2-Chloroethoxy)methane	ug/kg	1670	1090	65	54-125	
bis(2-Chloroethyl) ether	ug/kg	1670	1040	62	45-125	
bis(2-Chloroisopropyl) ether	ug/kg	1670	1010	60	42-125	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1220	73	63-125	
Butylbenzylphthalate	ug/kg	1670	1220	73	62-125	
Carbazole	ug/kg	1670	1140	68	64-125	
Chrysene	ug/kg	1670	1110	67	63-125	
Di-n-butylphthalate	ug/kg	1670	1210	73	66-125	
Di-n-octylphthalate	ug/kg	1670	1150	69	64-125	
Dibenz(a,h)anthracene	ug/kg	1670	1160	69	63-125	
Dibenzofuran	ug/kg	1670	1130	68	64-125	
Diethylphthalate	ug/kg	1670	1180	71	63-125	
Dimethylphthalate	ug/kg	1670	1170	70	63-125	
Fluoranthene	ug/kg	1670	1120	67	64-125	
Fluorene	ug/kg	1670	1130	68	61-125	
Hexachloro-1,3-butadiene	ug/kg	1670	1090	65	48-125	
Hexachlorobenzene	ug/kg	1670	1140	68	64-125	
Hexachloroethane	ug/kg	1670	1090	65	41-125	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1150	69	63-125	
Isophorone	ug/kg	1670	1150	69	55-125	
N-Nitroso-di-n-propylamine	ug/kg	1670	1120	67	50-125	
N-Nitrosodimethylamine	ug/kg	1670	1180	71	41-125	
N-Nitrosodiphenylamine	ug/kg	1670	1180	71	65-125	

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QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

LABORATORY CONTROL SAMPLE: 1140592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	1670	1050	63	49-125	
Nitrobenzene	ug/kg	1670	1170	70	53-125	
Pentachlorophenol	ug/kg	1670	1070	64	40-125	
Phenanthrene	ug/kg	1670	1130	68	63-125	
Phenol	ug/kg	1670	1110	67	49-125	
Pyrene	ug/kg	1670	1200	72	64-125	
2,4,6-Tribromophenol (S)	%			78	30-150	
2-Fluorobiphenyl (S)	%			72	30-145	
2-Fluorophenol (S)	%			69	30-137	
Nitrobenzene-d5 (S)	%			70	30-141	
Phenol-d6 (S)	%			71	30-142	
Terphenyl-d14 (S)	%			81	30-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1140593 1140594

Parameter	Units	10182886004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trichlorobenzene	ug/kg	ND	1790	1790	1190	1170	67	65	48-125	2	30	
1,2-Dichlorobenzene	ug/kg	ND	1790	1790	1100	1070	62	60	41-125	3	30	
1,2-Diphenylhydrazine	ug/kg	ND	1790	1790	1250J	1320J	70	74	53-125		30	
1,3-Dichlorobenzene	ug/kg	ND	1790	1790	1150	1060	64	60	39-125	8	30	
1,4-Dichlorobenzene	ug/kg	ND	1790	1790	1110	1080	62	60	40-125	3	30	
1-Methylnaphthalene	ug/kg	ND	1790	1790	1180	1170	66	65	59-125	.9	30	
2,4,5-Trichlorophenol	ug/kg	ND	1790	1790	1230J	1300J	69	73	63-125		30	
2,4,6-Trichlorophenol	ug/kg	ND	1790	1790	1270	1330	71	74	59-125	5	30	
2,4-Dichlorophenol	ug/kg	ND	1790	1790	1220	1240	69	69	60-125	1	30	
2,4-Dimethylphenol	ug/kg	ND	1790	1790	1220	1260	68	70	52-125	3	30	
2,4-Dinitrophenol	ug/kg	ND	1790	1790	ND	ND	18	18	30-125		30	M1
2,4-Dinitrotoluene	ug/kg	ND	1790	1790	1080	1140	61	64	57-125	6	30	
2,6-Dinitrotoluene	ug/kg	ND	1790	1790	1070	1160	60	65	60-125	8	30	
2-Chloronaphthalene	ug/kg	ND	1790	1790	1240	1260	69	71	59-125	2	30	
2-Chlorophenol	ug/kg	ND	1790	1790	1160	1140	65	64	48-125	2	30	
2-Methylnaphthalene	ug/kg	ND	1790	1790	1150	1160	65	65	58-125	.4	30	
2-Methylphenol(o-Cresol)	ug/kg	ND	1790	1790	1190	1170	66	66	49-125	1	30	
2-Nitroaniline	ug/kg	ND	1790	1790	1440J	1460J	81	82	61-125		30	
2-Nitrophenol	ug/kg	ND	1790	1790	1010	990	57	55	47-125	3	30	
3&4-Methylphenol	ug/kg	ND	1790	1790	1200	1180	68	66	52-125	2	30	
3,3'-Dichlorobenzidine	ug/kg	ND	1790	1790	1270	1380	71	78	30-131	8	30	
3-Nitroaniline	ug/kg	ND	1790	1790	1330J	1400J	74	79	42-125		30	
4,6-Dinitro-2-methylphenol	ug/kg	ND	1790	1790	ND	ND	13	14	30-135		30	M1
4-Bromophenylphenyl ether	ug/kg	ND	1790	1790	1260	1320	71	74	62-125	4	30	
4-Chloro-3-methylphenol	ug/kg	ND	1790	1790	1260	1260	71	70	61-125	.4	30	
4-Chloroaniline	ug/kg	ND	1790	1790	881	918	49	51	30-125	4	30	
4-Chlorophenylphenyl ether	ug/kg	ND	1790	1790	1200	1240	67	69	60-125	3	30	
4-Nitroaniline	ug/kg	ND	1790	1790	1180J	1290J	66	73	47-125		30	
4-Nitrophenol	ug/kg	ND	1790	1790	1320J	1300J	74	73	30-139		30	
Acenaphthene	ug/kg	ND	1790	1790	1090	1110	61	62	59-125	2	30	

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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1140593 1140594

Parameter	Units	10182886004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Acenaphthylene	ug/kg	ND	1790	1790	1210	1220	68	68	60-125	1	30	
Anthracene	ug/kg	ND	1790	1790	1190	1240	67	69	63-125	4	30	
Benzo(a)anthracene	ug/kg	ND	1790	1790	1250	1290	70	72	60-125	3	30	
Benzo(a)pyrene	ug/kg	ND	1790	1790	1180	1180	66	66	60-125	.3	30	
Benzo(b)fluoranthene	ug/kg	ND	1790	1790	1110	1170	62	66	58-125	5	30	
Benzo(g,h,i)perylene	ug/kg	ND	1790	1790	1260	1290	71	73	30-141	3	30	
Benzo(k)fluoranthene	ug/kg	ND	1790	1790	1200	1220	67	68	62-125	2	30	
bis(2-Chloroethoxy)methane	ug/kg	ND	1790	1790	1190	1230	67	69	54-125	3	30	
bis(2-Chloroethyl) ether	ug/kg	ND	1790	1790	1160	1130	65	63	39-125	3	30	
bis(2-Chloroisopropyl) ether	ug/kg	ND	1790	1790	1110	1090	62	61	40-125	2	30	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	1790	1790	1340	1390	75	78	57-125	4	30	
Butylbenzylphthalate	ug/kg	ND	1790	1790	1280	1390	72	78	57-125	9	30	
Carbazole	ug/kg	ND	1790	1790	1190	1260	67	71	65-125	6	30	
Chrysene	ug/kg	ND	1790	1790	1210	1280	68	72	61-125	5	30	
Di-n-butylphthalate	ug/kg	ND	1790	1790	1250	1290	70	72	66-125	3	30	
Di-n-octylphthalate	ug/kg	ND	1790	1790	1330	1360	74	76	62-125	2	30	
Dibenz(a,h)anthracene	ug/kg	ND	1790	1790	1250	1240	70	70	60-125	.3	30	
Dibenzofuran	ug/kg	ND	1790	1790	1200	1230	67	69	59-125	2	30	
Diethylphthalate	ug/kg	ND	1790	1790	1260	1290	71	72	62-125	2	30	
Dimethylphthalate	ug/kg	ND	1790	1790	1240	1300	70	73	62-125	4	30	
Fluoranthene	ug/kg	ND	1790	1790	1070	1140	60	64	58-125	7	30	
Fluorene	ug/kg	ND	1790	1790	1200	1220	67	68	61-125	2	30	
Hexachloro-1,3-butadiene	ug/kg	ND	1790	1790	1270	1200	71	67	42-125	6	30	
Hexachlorobenzene	ug/kg	ND	1790	1790	1230	1310	69	73	60-125	6	30	
Hexachloroethane	ug/kg	ND	1790	1790	852	807	48	45	34-125	5	30	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	1790	1790	1250	1230	70	69	61-125	2	30	
Isophorone	ug/kg	ND	1790	1790	1280	1260	72	71	50-125	1	30	
N-Nitroso-di-n-propylamine	ug/kg	ND	1790	1790	1190	1150	67	65	49-125	3	30	
N-Nitrosodimethylamine	ug/kg	ND	1790	1790	1140	1080	64	60	33-125	5	30	
N-Nitrosodiphenylamine	ug/kg	ND	1790	1790	1270	1320	71	74	64-125	4	30	
Naphthalene	ug/kg	ND	1790	1790	1170	1130	66	63	47-125	4	30	
Nitrobenzene	ug/kg	ND	1790	1790	1300	1280	73	72	45-125	2	30	
Pentachlorophenol	ug/kg	ND	1790	1790	1030	1100	58	62	30-140	7	30	
Phenanthrene	ug/kg	ND	1790	1790	1200	1240	67	69	56-125	3	30	
Phenol	ug/kg	ND	1790	1790	1270	1200	71	67	49-125	5	30	
Pyrene	ug/kg	ND	1790	1790	1340	1480	75	83	56-125	10	30	
2,4,6-Tribromophenol (S)	%						71	72	30-150			
2-Fluorobiphenyl (S)	%						74	75	30-145			
2-Fluorophenol (S)	%						73	65	30-137			
Nitrobenzene-d5 (S)	%						76	72	30-141			
Phenol-d6 (S)	%						72	70	30-142			
Terphenyl-d14 (S)	%						80	88	30-150			

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

1M	The sample was received at the laboratory outside of the method recommended 48 hour holding time from collection to preservation.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 11A-1311-C2 Ford
Pace Project No.: 10182983

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10182983001	**Drum 3 & 4**	EPA 3550	OEXT/17885	EPA 8082	GCSV/9195
10182983001	**Drum 3 & 4**	EPA 3010	MPRP/30967	EPA 6010	ICP/12909
10182983001	**Drum 3 & 4**	EPA 7470	MERP/6479	EPA 7470	MERC/7285
10182983001	**Drum 3 & 4**	EPA 7471	MERP/6469	EPA 7471	MERC/7274
10182983001	**Drum 3 & 4**	% Moisture	MPRP/30945		
10182983001	**Drum 3 & 4**	EPA 3550	OEXT/17877	EPA 8270	MSSV/7758
10182983001	**Drum 3 & 4**	EPA 5035/5030B	MSV/19261	EPA 8260	MSV/19262

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CHAIN-OF-CUSTODY / Analytical Request Document

Pace Analytical® www.pacelabs.com

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of 1506721

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information: 10189983
Company: MidAmerica, Inc.	Report To: Jim Harms	Attention: Jim Harms
Address: 6989 55th St. N, Suite C2 Oakdale, MN 55128	Copy To:	Company Name:
Email To: jim@midamericaenv.com	Purchase Order No.: 11A1311C2	Address:
Phone: Fax:	Project Name: Ford	Pace Quote Reference:
Requested Due Date/TAT: Standard	Project Number: 11A-1311-C2	Pace Project Manager:
		Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE:

Requested Analysis Filtered (Y/N)

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test: VOCs	8 RCRA Metals TCLP	Mercury as Total	PCB's	Semi VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Drum 3 & 4	SL	C	2-3-12	11:01 Am				3										X	X	X	X	X		10189983001
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Jim Harms - MidAmerica	2-14-12	11:58am		2/14/12	1158				
		2/14/12	1400	FEDEX	2/14/12	1400	1.7	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jim Harms

SIGNATURE of SAMPLER: Jim Harms DATE Signed (MM/DD/YY): 2-3-12

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Revised Date: 02Jun2011 Page 1 of 1
	Document Number: **F-L-213 Rev.01**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: MidAmerican Project # 10182983

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ✓ No _____

Thermometer Used 80344042 or 80512447 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.7 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 2/14/12 LC

Comments:

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used: 2/14/12 LC	☑Yes ☐No ☐N/A	9. I do not have Vials for the VOC test their asking for
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: SL	☑Yes ☐No ☐N/A	12.
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl Samp #
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☑No ☐N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 2-14-12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

ANALYTICAL REPORT

Job Number: 240-52076-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
6/30/2015 2:34 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
06/30/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52076-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/17/2015 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 3.0º C, 4.0º C, 4.2º C and 4.6º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8) were analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 06/21/2015 and analyzed on 06/22/2015 and 06/23/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7), ASB-1002_60-64 (20150616) (240-52076-8) and MB-01 (20150616) (240-52076-9) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/18/2015 and analyzed on 06/22/2015 and 06/23/2015.

1,2-Dichloroethane-d4 (Surr), 4-Bromofluorobenzene (Surr), Dibromofluoromethane (Surr) and Toluene-d8 (Surr) failed the surrogate recovery criteria high for ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), and ASB-1002_60-64 (20150616) (240-52076-8).

1,2-Dichloroethane-d4 (Surr) failed the surrogate recovery criteria high for ASB-1002_55-60 (20150616) (240-52076-7). Refer to the QC report for details.

Samples ASB-1001_65-70 (20150615) (240-52076-3)[50X], ASB-1001_72-74 (20150615) (240-52076-4)[100X], ASB-1001_80-82 (20150615) (240-52076-6)[1.43X], ASB-1002_55-60 (20150616) (240-52076-7)[20X] and ASB-1002_60-64 (20150616) (240-52076-8) [100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-185697 and analytical batch 240-186116 on these samples: ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), and MB-01 (20150616) (240-52076-9).

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-185697 and analytical batch 240-186326 on these samples: ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8) were analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 06/22/2015, prepared on 06/23/2015 and analyzed on 06/26/2015 and 06/27/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/18/2015 and analyzed on 06/23/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl (Surr), 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr), Phenol-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for ASB-1001_65-70 (20150615) (240-52076-3) and ASB-1001_72-74 (20150615) (240-52076-4).

Nitrobenzene-d5 (Surr) failed the surrogate recovery criteria low for ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8).

Phenol-d5 (Surr) failed the surrogate recovery criteria high for ASB-1002_55-60 (20150616) (240-52076-7). Refer to the QC report for details.

Samples ASB-1001_65-70 (20150615) (240-52076-3)[200X], ASB-1001_72-74 (20150615) (240-52076-4)[200X], ASB-1001_80-82 (20150615) (240-52076-6)[2.5X], ASB-1002_55-60 (20150616) (240-52076-7)[50X] and ASB-1002_60-64 (20150616) (240-52076-8) [50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: The following samples was diluted due to the nature of the sample matrix: ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_80-82 (20150615) (240-52076-6), and ASB-1002_60-64 (20150616) (240-52076-8). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7), ASB-1002_60-64 (20150616) (240-52076-8) and MB-01 (20150616) (240-52076-9) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared on 06/22/2015 and analyzed on 06/23/2015.

Samples ASB-1001_65-70 (20150615) (240-52076-3)[100X], ASB-1001_72-74 (20150615) (240-52076-4)[200X], ASB-1002_55-60 (20150616) (240-52076-7)[20X] and ASB-1002_60-64 (20150616) (240-52076-8)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI-GRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the Gasoline Range Organics (GRO) mix (i.e., Naphthalene): ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7), and ASB-1002_60-64 (20150616) (240-52076-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/18/2015 and analyzed on 06/23/2015.

WI Diesel Range Organics (C10-C28) was detected in method blank MB 240-185628/12-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Samples ASB-1001_65-70 (20150615) (240-52076-3)[200X], ASB-1001_72-74 (20150615) (240-52076-4)[500X], ASB-1002_55-60 (20150616) (240-52076-7)[200X] and ASB-1002_60-64 (20150616) (240-52076-8)[500X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI DRO PREP: Due to the matrix, the following samples could not be concentrated to the final method required volume: ASB-1001_72-74 (20150615) (240-52076-4) and ASB-1002_60-64 (20150616) (240-52076-8). The reporting limits (RLs) are elevated proportionately.

Method(s) WI DRO PREP: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-185628.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 06/22/2015, prepared on 06/23/2015 and analyzed on 06/24/2015.

Several analytes were detected in method blank LB 240-186216/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Copper, Nickel, Potassium and Zinc were detected in method blank MB 240-186308/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Manganese failed the recovery criteria high for the MS/MSD of sample 240-52076-1 in batch 240-186556. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/18/2015 and analyzed on 06/19/2015 and 06/20/2015.

Potassium and Zinc were detected in method blank MB 240-185711/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Several analytes failed the recovery criteria high for the MS/MSD of sample 240-52076-1 in batch 240-185884.

Cadmium exceeded the RPD limit of sample 240-52076-1 in batch 240-185884.

Refer to the QC report for details.

Samples ASB-1001_72-74 (20150615) (240-52076-4)[5X] and ASB-1002_60-64 (20150616) (240-52076-8)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 06/22/2015, prepared on 06/23/2015 and analyzed on 06/24/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8) were analyzed for total

mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/18/2015 and analyzed on 06/19/2015.

Sample ASB-1001_72-74 (20150615) (240-52076-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 06/24/2015 and analyzed on 06/25/2015.

Samples ASB-1001_65-70 (20150615) (240-52076-3)[5X] and ASB-1001_72-74 (20150615) (240-52076-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 7196A: The following samples were diluted for hexavalent chromium due to the nature of the sample matrix: ASB-1001_65-70 (20150615) (240-52076-3) and ASB-1001_72-74 (20150615) (240-52076-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 06/24/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples ASB-1001_65-70 (20150615) (240-52076-3), ASB-1001_72-74 (20150615) (240-52076-4), ASB-1001_80-82 (20150615) (240-52076-6), ASB-1002_55-60 (20150616) (240-52076-7) and ASB-1002_60-64 (20150616) (240-52076-8) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/18/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52076-3	**ASB-1001_65-70 (20150615)**					
Benzene		3400	J	12000	ug/Kg	8260B
cis-1,2-Dichloroethene		5700	J	12000	ug/Kg	8260B
Cyclohexane		16000	J	23000	ug/Kg	8260B
Ethylbenzene		130000		12000	ug/Kg	8260B
Isopropylbenzene		27000		12000	ug/Kg	8260B
Methylcyclohexane		63000		23000	ug/Kg	8260B
m-Xylene & p-Xylene		320000		12000	ug/Kg	8260B
Naphthalene		280000		12000	ug/Kg	8260B
n-Butylbenzene		61000		12000	ug/Kg	8260B
N-Propylbenzene		32000		12000	ug/Kg	8260B
o-Xylene		180000		12000	ug/Kg	8260B
p-Isopropyltoluene		21000		12000	ug/Kg	8260B
sec-Butylbenzene		12000		12000	ug/Kg	8260B
Toluene		32000		12000	ug/Kg	8260B
1,2,4-Trimethylbenzene		370000		12000	ug/Kg	8260B
1,3,5-Trimethylbenzene		79000		12000	ug/Kg	8260B
1,1'-Biphenyl		2800	J	71000	ug/Kg	8270C
2-Methylnaphthalene		52000	J	71000	ug/Kg	8270C
Acenaphthene		5000	J	71000	ug/Kg	8270C
Acenaphthylene		2900	J	71000	ug/Kg	8270C
Anthracene		7200	J	71000	ug/Kg	8270C
Benzo[a]anthracene		7500	J	71000	ug/Kg	8270C
Benzo[a]pyrene		4300	J	71000	ug/Kg	8270C
Benzo[b]fluoranthene		5900	J	71000	ug/Kg	8270C
Benzo[g,h,i]perylene		2200	J	71000	ug/Kg	8270C
Benzo[k]fluoranthene		3200	J	71000	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		43000	J	71000	ug/Kg	8270C
Chrysene		7000	J	71000	ug/Kg	8270C
Dibenzofuran		5100	J	71000	ug/Kg	8270C
Fluoranthene		19000	J	71000	ug/Kg	8270C
Fluorene		7600	J	71000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		3000	J	71000	ug/Kg	8270C
Naphthalene		220000		71000	ug/Kg	8270C
Phenanthrene		33000	J	71000	ug/Kg	8270C
Pyrene		15000	J	71000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		4500		1100	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		7400	B	1800	mg/Kg	WI-DRO
Aluminum		2800		17	mg/Kg	6010B
Antimony		130		0.87	mg/Kg	6010B
Barium		1200		17	mg/Kg	6010B
Beryllium		0.088	J	0.44	mg/Kg	6010B
Calcium		33000		440	mg/Kg	6010B
Cadmium		3.1		0.17	mg/Kg	6010B
Cobalt		6.3		4.4	mg/Kg	6010B
Chromium		53		0.44	mg/Kg	6010B
Copper		37		2.2	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Sample ID / Analyte	Client Sample ID / Result	Qualifier	Reporting Limit	Units	Method
Iron	25000		8.7	mg/Kg	6010B
Potassium	730	B	440	mg/Kg	6010B
Magnesium	4200		440	mg/Kg	6010B
Manganese	260		1.3	mg/Kg	6010B
Sodium	860		440	mg/Kg	6010B
Nickel	25		3.5	mg/Kg	6010B
Vanadium	6.4		4.4	mg/Kg	6010B
Zinc	640	B	1.7	mg/Kg	6010B
Arsenic	11		0.87	mg/Kg	6010B
Lead	200		0.26	mg/Kg	6010B
Selenium	1.1		0.44	mg/Kg	6010B
Thallium	0.17	J	0.87	mg/Kg	6010B
Mercury	0.16		0.11	mg/Kg	7471A
Cr (VI)	1.5	J	4.3	mg/Kg	7196A
Cr (III)	52		2.1	mg/Kg	7196A
Percent Solids	94		0.10	%	Moisture
Percent Moisture	6.3		0.10	%	Moisture
TCLP					
Benzene	110		25	ug/L	8260B
2-Methylphenol	0.027		0.010	mg/L	8270C
3 & 4 Methylphenol	0.049		0.010	mg/L	8270C
Antimony	0.60		0.30	mg/L	6010B
Arsenic	0.013	J B	0.50	mg/L	6010B
Barium	0.65	J B	10	mg/L	6010B
Cadmium	0.00064	J	0.10	mg/L	6010B
Calcium	650		5.0	mg/L	6010B
Chromium	0.0029	J B	0.50	mg/L	6010B
Cobalt	0.054		0.050	mg/L	6010B
Copper	0.0041	J B	1.0	mg/L	6010B
Iron	0.21		0.10	mg/L	6010B
Lead	0.026	J B	0.50	mg/L	6010B
Magnesium	19		5.0	mg/L	6010B
Manganese	1.6	B	0.015	mg/L	6010B
Nickel	0.14	B	0.040	mg/L	6010B
Potassium	15	B	5.0	mg/L	6010B
Zinc	1.8	B	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52076-4	**ASB-1001_72-74 (20150615)**					
Benzene		10000	J	28000	ug/Kg	8260B
cis-1,2-Dichloroethene		32000		28000	ug/Kg	8260B
Cyclohexane		45000	J	55000	ug/Kg	8260B
Ethylbenzene		320000		28000	ug/Kg	8260B
Isopropylbenzene		30000		28000	ug/Kg	8260B
Methyl acetate		14000	J	55000	ug/Kg	8260B
Methylcyclohexane		130000		55000	ug/Kg	8260B
m-Xylene & p-Xylene		980000		28000	ug/Kg	8260B
Naphthalene		490000		28000	ug/Kg	8260B
n-Butylbenzene		90000		28000	ug/Kg	8260B
N-Propylbenzene		44000		28000	ug/Kg	8260B
o-Xylene		440000		28000	ug/Kg	8260B
p-Isopropyltoluene		18000	J	28000	ug/Kg	8260B
sec-Butylbenzene		14000	J	28000	ug/Kg	8260B
Toluene		160000		28000	ug/Kg	8260B
1,2,4-Trimethylbenzene		590000		28000	ug/Kg	8260B
1,3,5-Trimethylbenzene		170000		28000	ug/Kg	8260B
1,1'-Biphenyl		22000	J	400000	ug/Kg	8270C
2-Methylnaphthalene		390000	J	400000	ug/Kg	8270C
Acenaphthene		45000	J	400000	ug/Kg	8270C
Acenaphthylene		29000	J	400000	ug/Kg	8270C
Anthracene		69000	J	400000	ug/Kg	8270C
Benzo[a]anthracene		76000	J	400000	ug/Kg	8270C
Benzo[a]pyrene		56000	J	400000	ug/Kg	8270C
Benzo[b]fluoranthene		76000	J	400000	ug/Kg	8270C
Benzo[g,h,i]perylene		31000	J	400000	ug/Kg	8270C
Benzo[k]fluoranthene		30000	J	400000	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		580000		400000	ug/Kg	8270C
Carbazole		37000	J	400000	ug/Kg	8270C
Chrysene		78000	J	400000	ug/Kg	8270C
Dibenz(a,h)anthracene		11000	J	400000	ug/Kg	8270C
Dibenzofuran		46000	J	400000	ug/Kg	8270C
Fluoranthene		220000	J	400000	ug/Kg	8270C
Fluorene		77000	J	400000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		30000	J	400000	ug/Kg	8270C
Naphthalene		1200000		400000	ug/Kg	8270C
Phenol		11000	J	400000	ug/Kg	8270C
Phenanthrene		340000	J	400000	ug/Kg	8270C
Pyrene		160000	J	400000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		10000		2500	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		17000	B	6200	mg/Kg	WI-DRO
Aluminum		6100		23	mg/Kg	6010B
Antimony		140		5.8	mg/Kg	6010B
Barium		4300		120	mg/Kg	6010B
Beryllium		0.25	J	0.58	mg/Kg	6010B
Calcium		52000		580	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Cadmium		120		0.23	mg/Kg	6010B
Cobalt		18		5.8	mg/Kg	6010B
Chromium		100		0.58	mg/Kg	6010B
Copper		92		2.9	mg/Kg	6010B
Iron		18000		12	mg/Kg	6010B
Potassium		1800	B	580	mg/Kg	6010B
Magnesium		7100		580	mg/Kg	6010B
Manganese		310		1.7	mg/Kg	6010B
Silver		0.30	J	0.58	mg/Kg	6010B
Sodium		1600		580	mg/Kg	6010B
Nickel		17		4.6	mg/Kg	6010B
Vanadium		13		5.8	mg/Kg	6010B
Zinc		1300	B	12	mg/Kg	6010B
Arsenic		60		1.2	mg/Kg	6010B
Lead		2900		1.7	mg/Kg	6010B
Selenium		39		0.58	mg/Kg	6010B
Mercury		4.2		0.65	mg/Kg	7471A
Cr (III)		100		2.5	mg/Kg	7196A
Percent Solids		80		0.10	%	Moisture
Percent Moisture		20		0.10	%	Moisture
TCLP						
Benzene		360		25	ug/L	8260B
Trichloroethene		24	J	25	ug/L	8260B
2-Methylphenol		0.075		0.010	mg/L	8270C
3 & 4 Methylphenol		0.18		0.010	mg/L	8270C
Antimony		0.50		0.30	mg/L	6010B
Arsenic		0.022	J B	0.50	mg/L	6010B
Barium		1.3	J B	10	mg/L	6010B
Cadmium		0.0097	J	0.10	mg/L	6010B
Calcium		680		5.0	mg/L	6010B
Chromium		0.0037	J B	0.50	mg/L	6010B
Cobalt		0.080		0.050	mg/L	6010B
Copper		0.0052	J B	1.0	mg/L	6010B
Iron		0.44		0.10	mg/L	6010B
Lead		0.97	B	0.50	mg/L	6010B
Magnesium		18		5.0	mg/L	6010B
Manganese		2.1	B	0.015	mg/L	6010B
Nickel		0.073	B	0.040	mg/L	6010B
Potassium		14	B	5.0	mg/L	6010B
Vanadium		0.0053	J	0.050	mg/L	6010B
Zinc		3.4	B	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52076-6	**ASB-1001_80-82 (20150615)**					
Benzene		42	J	410	ug/Kg	8260B
cis-1,2-Dichloroethene		99	J	410	ug/Kg	8260B
Ethylbenzene		1400		410	ug/Kg	8260B
Isopropylbenzene		190	J	410	ug/Kg	8260B
Methylcyclohexane		920		820	ug/Kg	8260B
m-Xylene & p-Xylene		4300		410	ug/Kg	8260B
Naphthalene		3000		410	ug/Kg	8260B
n-Butylbenzene		750		410	ug/Kg	8260B
N-Propylbenzene		280	J	410	ug/Kg	8260B
o-Xylene		2000		410	ug/Kg	8260B
p-Isopropyltoluene		160	J	410	ug/Kg	8260B
sec-Butylbenzene		110	J	410	ug/Kg	8260B
Toluene		600		410	ug/Kg	8260B
1,2,4-Trimethylbenzene		3700		410	ug/Kg	8260B
1,3,5-Trimethylbenzene		1000		410	ug/Kg	8260B
1,1'-Biphenyl		70	J	1000	ug/Kg	8270C
2-Methylnaphthalene		1200		1000	ug/Kg	8270C
Acenaphthene		150	J	1000	ug/Kg	8270C
Acenaphthylene		75	J	1000	ug/Kg	8270C
Anthracene		220	J	1000	ug/Kg	8270C
Benzo[a]anthracene		240	J	1000	ug/Kg	8270C
Benzo[a]pyrene		160	J	1000	ug/Kg	8270C
Benzo[b]fluoranthene		240	J	1000	ug/Kg	8270C
Benzo[g,h,i]perylene		86	J	1000	ug/Kg	8270C
Benzo[k]fluoranthene		96	J	1000	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		1800		1000	ug/Kg	8270C
Carbazole		100	J	1000	ug/Kg	8270C
Chrysene		230	J	1000	ug/Kg	8270C
Dibenzofuran		160	J	1000	ug/Kg	8270C
Fluoranthene		630	J	1000	ug/Kg	8270C
Fluorene		240	J	1000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		87	J	1000	ug/Kg	8270C
Naphthalene		3200		1000	ug/Kg	8270C
Phenanthrene		1100		1000	ug/Kg	8270C
Pyrene		520	J	1000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		130		12	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		51	B	9.8	mg/Kg	WI-DRO
Aluminum		2800		23	mg/Kg	6010B
Antimony		1.3		1.2	mg/Kg	6010B
Barium		72		23	mg/Kg	6010B
Beryllium		0.15	J	0.58	mg/Kg	6010B
Calcium		29000		580	mg/Kg	6010B
Cadmium		0.57		0.23	mg/Kg	6010B
Cobalt		3.9	J	5.8	mg/Kg	6010B
Chromium		10		0.58	mg/Kg	6010B
Copper		4.8		2.9	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Iron		11000		12	mg/Kg	6010B
Potassium		560	J B	580	mg/Kg	6010B
Magnesium		8500		580	mg/Kg	6010B
Manganese		480		1.7	mg/Kg	6010B
Sodium		520	J	580	mg/Kg	6010B
Nickel		8.4		4.6	mg/Kg	6010B
Vanadium		12		5.8	mg/Kg	6010B
Zinc		27	B	2.3	mg/Kg	6010B
Arsenic		2.5		1.2	mg/Kg	6010B
Lead		14		0.35	mg/Kg	6010B
Mercury		0.044	J	0.11	mg/Kg	7471A
Cr (VI)		0.38	J	0.95	mg/Kg	7196A
Cr (III)		9.9		2.4	mg/Kg	7196A
Percent Solids		84		0.10	%	Moisture
Percent Moisture		16		0.10	%	Moisture
TCLP						
Antimony		0.0059	J	0.30	mg/L	6010B
Arsenic		0.012	J B	0.50	mg/L	6010B
Barium		1.2	J B	10	mg/L	6010B
Cadmium		0.00046	J	0.10	mg/L	6010B
Calcium		580		5.0	mg/L	6010B
Chromium		0.0043	J B	0.50	mg/L	6010B
Cobalt		0.013	J	0.050	mg/L	6010B
Copper		0.0042	J B	1.0	mg/L	6010B
Iron		0.053	J	0.10	mg/L	6010B
Magnesium		14		5.0	mg/L	6010B
Manganese		7.2	B	0.015	mg/L	6010B
Nickel		0.052	B	0.040	mg/L	6010B
Potassium		4.6	J B	5.0	mg/L	6010B
Zinc		0.17	J B	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52076-7	**ASB-1002_55-60 (20150616)**					
Benzene		480	J	5900	ug/Kg	8260B
Cyclohexane		3400	J	12000	ug/Kg	8260B
Ethylbenzene		22000		5900	ug/Kg	8260B
Isopropylbenzene		5600	J	5900	ug/Kg	8260B
Methylcyclohexane		13000		12000	ug/Kg	8260B
m-Xylene & p-Xylene		89000		5900	ug/Kg	8260B
Naphthalene		31000		5900	ug/Kg	8260B
n-Butylbenzene		22000		5900	ug/Kg	8260B
N-Propylbenzene		6300		5900	ug/Kg	8260B
o-Xylene		37000		5900	ug/Kg	8260B
p-Isopropyltoluene		3400	J	5900	ug/Kg	8260B
sec-Butylbenzene		2200	J	5900	ug/Kg	8260B
Toluene		2500	J	5900	ug/Kg	8260B
1,2,4-Trimethylbenzene		140000		5900	ug/Kg	8260B
1,3,5-Trimethylbenzene		39000		5900	ug/Kg	8260B
1,1'-Biphenyl		800	J	20000	ug/Kg	8270C
2-Methylnaphthalene		9000	J	20000	ug/Kg	8270C
Acenaphthene		2800	J	20000	ug/Kg	8270C
Acenaphthylene		300	J	20000	ug/Kg	8270C
Anthracene		4800	J	20000	ug/Kg	8270C
Benzo[a]anthracene		5100	J	20000	ug/Kg	8270C
Benzo[a]pyrene		4500	J	20000	ug/Kg	8270C
Benzo[b]fluoranthene		5400	J	20000	ug/Kg	8270C
Benzo[g,h,i]perylene		2600	J	20000	ug/Kg	8270C
Benzo[k]fluoranthene		2200	J	20000	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		1100	J	20000	ug/Kg	8270C
Chrysene		4800	J	20000	ug/Kg	8270C
Dibenz(a,h)anthracene		660	J	20000	ug/Kg	8270C
Dibenzofuran		2400	J	20000	ug/Kg	8270C
Di-n-butyl phthalate		2000	J	20000	ug/Kg	8270C
Fluoranthene		14000	J	20000	ug/Kg	8270C
Fluorene		3600	J	20000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		2500	J	20000	ug/Kg	8270C
Naphthalene		41000		20000	ug/Kg	8270C
Pentachlorophenol		2400	J	20000	ug/Kg	8270C
Phenanthrene		16000	J	20000	ug/Kg	8270C
Pyrene		11000	J	20000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		1000		240	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		7900	B	2000	mg/Kg	WI-DRO
Aluminum		7100		23	mg/Kg	6010B
Barium		120		23	mg/Kg	6010B
Beryllium		0.47	J	0.57	mg/Kg	6010B
Calcium		13000		570	mg/Kg	6010B
Cadmium		0.48		0.23	mg/Kg	6010B
Cobalt		10		5.7	mg/Kg	6010B
Chromium		18		0.57	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Copper		11		2.8	mg/Kg	6010B
Iron		13000		11	mg/Kg	6010B
Potassium		3700	B	570	mg/Kg	6010B
Magnesium		5200		570	mg/Kg	6010B
Manganese		220		1.7	mg/Kg	6010B
Sodium		170	J	570	mg/Kg	6010B
Nickel		20		4.6	mg/Kg	6010B
Vanadium		7.0		5.7	mg/Kg	6010B
Zinc		54	B	2.3	mg/Kg	6010B
Arsenic		4.4		1.1	mg/Kg	6010B
Lead		40		0.34	mg/Kg	6010B
Mercury		0.016	J	0.12	mg/Kg	7471A
Cr (III)		18		2.4	mg/Kg	7196A
Percent Solids		82		0.10	%	Moisture
Percent Moisture		18		0.10	%	Moisture
TCLP						
Benzene		67		25	ug/L	8260B
2-Methylphenol		0.0083		0.0040	mg/L	8270C
3 & 4 Methylphenol		0.018		0.0040	mg/L	8270C
Antimony		0.016	J	0.30	mg/L	6010B
Arsenic		0.0053	J B	0.50	mg/L	6010B
Barium		1.1	J B	10	mg/L	6010B
Cadmium		0.0022	J	0.10	mg/L	6010B
Calcium		430		5.0	mg/L	6010B
Chromium		0.0046	J B	0.50	mg/L	6010B
Cobalt		0.074		0.050	mg/L	6010B
Copper		0.0064	J B	1.0	mg/L	6010B
Iron		0.52		0.10	mg/L	6010B
Lead		0.60	B	0.50	mg/L	6010B
Magnesium		41		5.0	mg/L	6010B
Manganese		5.6	B	0.015	mg/L	6010B
Nickel		0.076	B	0.040	mg/L	6010B
Potassium		12	B	5.0	mg/L	6010B
Vanadium		0.0028	J	0.050	mg/L	6010B
Zinc		1.6	B	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52076-8	**ASB-1002_60-64 (20150616)**					
Benzene		5000	J	27000	ug/Kg	8260B
Cyclohexane		23000	J	55000	ug/Kg	8260B
Ethylbenzene		150000		27000	ug/Kg	8260B
Isopropylbenzene		31000		27000	ug/Kg	8260B
Methylcyclohexane		73000		55000	ug/Kg	8260B
m-Xylene & p-Xylene		560000		27000	ug/Kg	8260B
Naphthalene		170000		27000	ug/Kg	8260B
n-Butylbenzene		98000		27000	ug/Kg	8260B
N-Propylbenzene		39000		27000	ug/Kg	8260B
o-Xylene		230000		27000	ug/Kg	8260B
p-Isopropyltoluene		16000	J	27000	ug/Kg	8260B
sec-Butylbenzene		11000	J	27000	ug/Kg	8260B
Toluene		31000		27000	ug/Kg	8260B
1,2,4-Trimethylbenzene		690000		27000	ug/Kg	8260B
1,3,5-Trimethylbenzene		190000		27000	ug/Kg	8260B
1,1'-Biphenyl		1000	J	21000	ug/Kg	8270C
2-Methylnaphthalene		14000	J	21000	ug/Kg	8270C
Acenaphthene		860	J	21000	ug/Kg	8270C
Anthracene		810	J	21000	ug/Kg	8270C
Benzo[a]anthracene		780	J	21000	ug/Kg	8270C
Benzo[a]pyrene		610	J	21000	ug/Kg	8270C
Benzo[b]fluoranthene		790	J	21000	ug/Kg	8270C
Benzo[g,h,i]perylene		300	J	21000	ug/Kg	8270C
Benzo[k]fluoranthene		300	J	21000	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		1600	J	21000	ug/Kg	8270C
Chrysene		890	J	21000	ug/Kg	8270C
Dibenzofuran		720	J	21000	ug/Kg	8270C
Di-n-butyl phthalate		4300	J	21000	ug/Kg	8270C
Fluoranthene		2400	J	21000	ug/Kg	8270C
Fluorene		1100	J	21000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		620	J	21000	ug/Kg	8270C
Naphthalene		71000		21000	ug/Kg	8270C
Phenanthrene		4100	J	21000	ug/Kg	8270C
Pyrene		2100	J	21000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		11000		1300	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		26000	B	8400	mg/Kg	WI-DRO
Aluminum		5200		20	mg/Kg	6010B
Antimony		28		5.1	mg/Kg	6010B
Barium		3700		100	mg/Kg	6010B
Beryllium		0.29	J	0.51	mg/Kg	6010B
Calcium		20000		510	mg/Kg	6010B
Cadmium		16		0.20	mg/Kg	6010B
Cobalt		21		5.1	mg/Kg	6010B
Chromium		140		0.51	mg/Kg	6010B
Copper		63		2.5	mg/Kg	6010B
Iron		15000		10	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Sample ID / Analyte	Client Sample ID / Result	Qualifier	Reporting Limit	Units	Method
Potassium	2100	B	510	mg/Kg	6010B
Magnesium	6900		510	mg/Kg	6010B
Manganese	250		1.5	mg/Kg	6010B
Silver	0.11	J	0.51	mg/Kg	6010B
Sodium	560		510	mg/Kg	6010B
Nickel	19		4.1	mg/Kg	6010B
Vanadium	9.9		5.1	mg/Kg	6010B
Zinc	1400	B	10	mg/Kg	6010B
Arsenic	5.2		1.0	mg/Kg	6010B
Lead	2000		1.5	mg/Kg	6010B
Selenium	3.6		0.51	mg/Kg	6010B
Mercury	0.26		0.13	mg/Kg	7471A
Cr (III)	140		2.5	mg/Kg	7196A
Percent Solids	80		0.10	%	Moisture
Percent Moisture	20		0.10	%	Moisture
TCLP					
Benzene	89		25	ug/L	8260B
2-Methylphenol	0.017		0.0080	mg/L	8270C
3 & 4 Methylphenol	0.034		0.0080	mg/L	8270C
Aluminum	0.082	J	0.20	mg/L	6010B
Antimony	0.16	J	0.30	mg/L	6010B
Arsenic	0.0065	J B	0.50	mg/L	6010B
Barium	1.2	J B	10	mg/L	6010B
Beryllium	0.00018	J	0.0050	mg/L	6010B
Cadmium	0.0087	J	0.10	mg/L	6010B
Calcium	240		5.0	mg/L	6010B
Chromium	0.0062	J B	0.50	mg/L	6010B
Cobalt	0.16		0.050	mg/L	6010B
Copper	0.0050	J B	1.0	mg/L	6010B
Iron	5.9		0.10	mg/L	6010B
Lead	8.3	B	0.50	mg/L	6010B
Magnesium	22		5.0	mg/L	6010B
Manganese	3.0	B	0.015	mg/L	6010B
Nickel	0.086	B	0.040	mg/L	6010B
Potassium	9.8	B	5.0	mg/L	6010B
Vanadium	0.0030	J	0.050	mg/L	6010B
Zinc	6.3	B	1.0	mg/L	6010B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction			SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction			SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction			SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Method	Analyst	Analyst ID
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Walpole, Barbara	BW
SW846 7471A	Lecorchick, Willis A	WAL
SW846 7196A	Burns, Jill	JMB
SW846 7196A	Counts, Karen	KLC
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52076-3	ASB-1001_65-70 (20150615)	Solid	06/15/2015 1725	06/17/2015 0920
240-52076-4	ASB-1001_72-74 (20150615)	Solid	06/15/2015 1745	06/17/2015 0920
240-52076-6	ASB-1001_80-82 (20150615)	Solid	06/15/2015 1845	06/17/2015 0920
240-52076-7	ASB-1002_55-60 (20150616)	Solid	06/16/2015 1345	06/17/2015 0920
240-52076-8	ASB-1002_60-64 (20150616)	Solid	06/16/2015 1400	06/17/2015 0920
240-52076-9	MB-01 (20150616)	Solid	06/16/2015 0000	06/17/2015 0920

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_65-70 (20150615)

Lab Sample ID: 240-52076-3 Date Sampled: 06/15/2015 1725
Client Matrix: Solid % Moisture: 6.3 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143816.D
Dilution:	50			Initial Weight/Volume:	11.52 g
Analysis Date:	06/22/2015 2106			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		10000	46000
Allyl chloride		ND		1400	23000
Benzene		3400	J	420	12000
Bromobenzene		ND		600	12000
Bromochloromethane		ND		3200	12000
Bromodichloromethane		ND		1800	12000
Bromoform		ND		2800	12000
Bromomethane		ND		2400	12000
2-Butanone (MEK)		ND		3400	46000
Carbon disulfide		ND		2600	12000
Carbon tetrachloride		ND		2200	12000
Chlorobenzene		ND		1900	12000
Chlorodibromomethane		ND		2100	12000
Chloroethane		ND		2400	12000
Chloroform		ND		1700	12000
Chloromethane		ND		2200	12000
2-Chlorotoluene		ND		1900	12000
4-Chlorotoluene		ND		1200	12000
cis-1,2-Dichloroethene		5700	J	1800	12000
cis-1,3-Dichloropropene		ND		1000	12000
Cyclohexane		16000	J	1400	23000
1,2-Dibromo-3-Chloropropane		ND		3300	23000
1,2-Dibromoethane		ND		1500	12000
Dibromomethane		ND		2300	12000
1,2-Dichlorobenzene		ND		880	12000
1,3-Dichlorobenzene		ND		1400	12000
1,4-Dichlorobenzene		ND		1900	12000
Dichlorodifluoromethane		ND		2800	12000
1,1-Dichloroethane		ND		1600	12000
1,2-Dichloroethane		ND		2500	12000
1,1-Dichloroethene		ND		1400	12000
Dichlorofluoromethane		ND		1500	23000
1,2-Dichloropropane		ND		1500	12000
1,3-Dichloropropane		ND		1100	12000
2,2-Dichloropropane		ND		2400	12000
1,1-Dichloropropene		ND		1800	12000
Ethylbenzene		130000		1600	12000
Ethyl ether		ND		4500	23000
Hexachlorobutadiene		ND		2000	12000
2-Hexanone		ND		3900	46000
Isopropylbenzene		27000		600	12000
Methyl acetate		ND		2500	23000
Methylcyclohexane		63000		1800	23000
Methylene Chloride		ND		3900	12000
4-Methyl-2-pentanone (MIBK)		ND		2600	46000
Methyl tert butyl ether		ND		1400	12000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_65-70 (20150615)

Lab Sample ID: 240-52076-3 Date Sampled: 06/15/2015 1725
Client Matrix: Solid % Moisture: 6.3 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143816.D
Dilution:	50			Initial Weight/Volume:	11.52 g
Analysis Date:	06/22/2015 2106			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		320000		930	12000
Naphthalene		280000		1200	12000
n-Butylbenzene		61000		970	12000
N-Propylbenzene		32000		2800	12000
o-Xylene		180000		790	12000
p-Isopropyltoluene		21000		1200	12000
sec-Butylbenzene		12000		740	12000
Styrene		ND		1300	12000
tert-Butylbenzene		ND		1600	12000
1,1,1,2-Tetrachloroethane		ND		2300	12000
1,1,2,2-Tetrachloroethane		ND		2000	12000
Tetrachloroethene		ND		1300	12000
Tetrahydrofuran		ND		5600	46000
Toluene		32000		460	12000
trans-1,2-Dichloroethene		ND		1200	12000
trans-1,3-Dichloropropene		ND		1200	12000
1,2,3-Trichlorobenzene		ND		1800	12000
1,2,4-Trichlorobenzene		ND		1400	12000
1,1,1-Trichloroethane		ND		1900	12000
1,1,2-Trichloroethane		ND		3800	12000
Trichloroethene		ND		1800	12000
Trichlorofluoromethane		ND		1600	12000
1,2,3-Trichloropropane		ND		4800	12000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1900	12000
1,2,4-Trimethylbenzene		370000		600	12000
1,3,5-Trimethylbenzene		79000		690	12000
Vinyl chloride		ND		2600	12000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	274	X	26 - 141
Dibromofluoromethane (Surr)	210	X	30 - 122
1,2-Dichloroethane-d4 (Surr)	303	X	39 - 128
Toluene-d8 (Surr)	315	X	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_65-70 (20150615)

Lab Sample ID: 240-52076-3 Date Sampled: 06/15/2015 1725
Client Matrix: Solid Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950672.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/22/2015 2209			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2209				
Leach Date:	06/21/2015 1535				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		110		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	98		70 - 124
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	102		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_72-74 (20150615)

Lab Sample ID: 240-52076-4 Date Sampled: 06/15/2015 1745
Client Matrix: Solid % Moisture: 19.5 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143817.D
Dilution:	100			Initial Weight/Volume:	11.29 g
Analysis Date:	06/22/2015 2127			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		25000	110000
Allyl chloride		ND		3300	55000
Benzene		10000	J	990	28000
Bromobenzene		ND		1400	28000
Bromochloromethane		ND		7700	28000
Bromodichloromethane		ND		4200	28000
Bromoform		ND		6700	28000
Bromomethane		ND		5600	28000
2-Butanone (MEK)		ND		8000	110000
Carbon disulfide		ND		6200	28000
Carbon tetrachloride		ND		5300	28000
Chlorobenzene		ND		4500	28000
Chlorodibromomethane		ND		5100	28000
Chloroethane		ND		5600	28000
Chloroform		ND		4000	28000
Chloromethane		ND		5300	28000
2-Chlorotoluene		ND		4500	28000
4-Chlorotoluene		ND		2900	28000
cis-1,2-Dichloroethene		32000		4200	28000
cis-1,3-Dichloropropene		ND		2400	28000
Cyclohexane		45000	J	3300	55000
1,2-Dibromo-3-Chloropropane		ND		7800	55000
1,2-Dibromoethane		ND		3500	28000
Dibromomethane		ND		5500	28000
1,2-Dichlorobenzene		ND		2100	28000
1,3-Dichlorobenzene		ND		3300	28000
1,4-Dichlorobenzene		ND		4500	28000
Dichlorodifluoromethane		ND		6700	28000
1,1-Dichloroethane		ND		3900	28000
1,2-Dichloroethane		ND		5800	28000
1,1-Dichloroethene		ND		3300	28000
Dichlorofluoromethane		ND		3600	55000
1,2-Dichloropropane		ND		3500	28000
1,3-Dichloropropane		ND		2500	28000
2,2-Dichloropropane		ND		5700	28000
1,1-Dichloropropene		ND		4200	28000
Ethylbenzene		320000		3900	28000
Ethyl ether		ND		11000	55000
Hexachlorobutadiene		ND		4800	28000
2-Hexanone		ND		9200	110000
Isopropylbenzene		30000		1400	28000
Methyl acetate		14000	J	6100	55000
Methylcyclohexane		130000		4200	55000
Methylene Chloride		ND		9400	28000
4-Methyl-2-pentanone (MIBK)		ND		6200	110000
Methyl tert butyl ether		ND		3300	28000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_72-74 (20150615)

Lab Sample ID: 240-52076-4 Date Sampled: 06/15/2015 1745
Client Matrix: Solid % Moisture: 19.5 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143817.D
Dilution:	100			Initial Weight/Volume:	11.29 g
Analysis Date:	06/22/2015 2127			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		980000		2200	28000
Naphthalene		490000		2900	28000
n-Butylbenzene		90000		2300	28000
N-Propylbenzene		44000		6700	28000
o-Xylene		440000		1900	28000
p-Isopropyltoluene		18000	J	2800	28000
sec-Butylbenzene		14000	J	1800	28000
Styrene		ND		3000	28000
tert-Butylbenzene		ND		3700	28000
1,1,1,2-Tetrachloroethane		ND		5400	28000
1,1,2,2-Tetrachloroethane		ND		4700	28000
Tetrachloroethene		ND		3000	28000
Tetrahydrofuran		ND		13000	110000
Toluene		160000		1100	28000
trans-1,2-Dichloroethene		ND		2900	28000
trans-1,3-Dichloropropene		ND		2900	28000
1,2,3-Trichlorobenzene		ND		4300	28000
1,2,4-Trichlorobenzene		ND		3300	28000
1,1,1-Trichloroethane		ND		4600	28000
1,1,2-Trichloroethane		ND		9100	28000
Trichloroethene		ND		4300	28000
Trichlorofluoromethane		ND		3900	28000
1,2,3-Trichloropropane		ND		11000	28000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		4600	28000
1,2,4-Trimethylbenzene		590000		1400	28000
1,3,5-Trimethylbenzene		170000		1700	28000
Vinyl chloride		ND		6200	28000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	343	X	26 - 141
Dibromofluoromethane (Surr)	313	X	30 - 122
1,2-Dichloroethane-d4 (Surr)	396	X	39 - 128
Toluene-d8 (Surr)	447	X	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_72-74 (20150615)

Lab Sample ID: 240-52076-4 Date Sampled: 06/15/2015 1745
Client Matrix: Solid Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950673.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/22/2015 2233			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2233				
Leach Date:	06/21/2015 1535				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		360		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		24	J	8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 121
4-Bromofluorobenzene (Surr)	96		70 - 124
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	97		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1001_80-82 (20150615)**

Lab Sample ID: 240-52076-6 Date Sampled: 06/15/2015 1845
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143811.D
Dilution:	1.428			Initial Weight/Volume:	10.3 g
Analysis Date:	06/22/2015 1919			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		370	1600
Allyl chloride		ND		49	820
Benzene		42	J	15	410
Bromobenzene		ND		21	410
Bromochloromethane		ND		120	410
Bromodichloromethane		ND		63	410
Bromoform		ND		100	410
Bromomethane		ND		84	410
2-Butanone (MEK)		ND		120	1600
Carbon disulfide		ND		92	410
Carbon tetrachloride		ND		79	410
Chlorobenzene		ND		67	410
Chlorodibromomethane		ND		76	410
Chloroethane		ND		84	410
Chloroform		ND		59	410
Chloromethane		ND		79	410
2-Chlorotoluene		ND		67	410
4-Chlorotoluene		ND		43	410
cis-1,2-Dichloroethene		99	J	63	410
cis-1,3-Dichloropropene		ND		36	410
Cyclohexane		ND		49	820
1,2-Dibromo-3-Chloropropane		ND		120	820
1,2-Dibromoethane		ND		53	410
Dibromomethane		ND		82	410
1,2-Dichlorobenzene		ND		31	410
1,3-Dichlorobenzene		ND		49	410
1,4-Dichlorobenzene		ND		67	410
Dichlorodifluoromethane		ND		100	410
1,1-Dichloroethane		ND		58	410
1,2-Dichloroethane		ND		87	410
1,1-Dichloroethene		ND		49	410
Dichlorofluoromethane		ND		54	820
1,2-Dichloropropane		ND		53	410
1,3-Dichloropropane		ND		38	410
2,2-Dichloropropane		ND		86	410
1,1-Dichloropropene		ND		63	410
Ethylbenzene		1400		58	410
Ethyl ether		ND		160	820
Hexachlorobutadiene		ND		72	410
2-Hexanone		ND		140	1600
Isopropylbenzene		190	J	21	410
Methyl acetate		ND		90	820
Methylcyclohexane		920		63	820
Methylene Chloride		ND		140	410
4-Methyl-2-pentanone (MIBK)		ND		92	1600
Methyl tert butyl ether		ND		49	410

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_80-82 (20150615)

Lab Sample ID: 240-52076-6 Date Sampled: 06/15/2015 1845
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143811.D
Dilution:	1.428			Initial Weight/Volume:	10.3 g
Analysis Date:	06/22/2015 1919			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		4300		33	410
Naphthalene		3000		43	410
n-Butylbenzene		750		35	410
N-Propylbenzene		280	J	100	410
o-Xylene		2000		28	410
p-Isopropyltoluene		160	J	41	410
sec-Butylbenzene		110	J	26	410
Styrene		ND		44	410
tert-Butylbenzene		ND		56	410
1,1,1,2-Tetrachloroethane		ND		81	410
1,1,2,2-Tetrachloroethane		ND		71	410
Tetrachloroethene		ND		44	410
Tetrahydrofuran		ND		200	1600
Toluene		600		16	410
trans-1,2-Dichloroethene		ND		43	410
trans-1,3-Dichloropropene		ND		43	410
1,2,3-Trichlorobenzene		ND		64	410
1,2,4-Trichlorobenzene		ND		49	410
1,1,1-Trichloroethane		ND		69	410
1,1,2-Trichloroethane		ND		140	410
Trichloroethene		ND		64	410
Trichlorofluoromethane		ND		58	410
1,2,3-Trichloropropane		ND		170	410
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		69	410
1,2,4-Trimethylbenzene		3700		21	410
1,3,5-Trimethylbenzene		1000		25	410
Vinyl chloride		ND		92	410

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	90		26 - 141
Dibromofluoromethane (Surr)	75		30 - 122
1,2-Dichloroethane-d4 (Surr)	99		39 - 128
Toluene-d8 (Surr)	91		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1001_80-82 (20150615)**

Lab Sample ID: 240-52076-6 Date Sampled: 06/15/2015 1845
Client Matrix: Solid Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950675.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/22/2015 2321			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2321				
Leach Date:	06/21/2015 1535				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	93		70 - 124
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1002_55-60 (20150616)

Lab Sample ID: 240-52076-7 Date Sampled: 06/16/2015 1345
Client Matrix: Solid Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950676.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/22/2015 2345			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2345				
Leach Date:	06/21/2015 1535				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		67		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		80 - 121
4-Bromofluorobenzene (Surr)	97		70 - 124
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	100		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1002_55-60 (20150616)

Lab Sample ID: 240-52076-7 Date Sampled: 06/16/2015 1345
Client Matrix: Solid % Moisture: 18.0 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143830.D
Dilution:	20			Initial Weight/Volume:	10.28 g
Analysis Date:	06/23/2015 1520			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		5400	24000
Allyl chloride		ND		710	12000
Benzene		480	J	210	5900
Bromobenzene		ND		310	5900
Bromochloromethane		ND		1700	5900
Bromodichloromethane		ND		900	5900
Bromoform		ND		1400	5900
Bromomethane		ND		1200	5900
2-Butanone (MEK)		ND		1700	24000
Carbon disulfide		ND		1300	5900
Carbon tetrachloride		ND		1100	5900
Chlorobenzene		ND		970	5900
Chlorodibromomethane		ND		1100	5900
Chloroethane		ND		1200	5900
Chloroform		ND		850	5900
Chloromethane		ND		1100	5900
2-Chlorotoluene		ND		970	5900
4-Chlorotoluene		ND		620	5900
cis-1,2-Dichloroethene		ND		900	5900
cis-1,3-Dichloropropene		ND		520	5900
Cyclohexane		3400	J	710	12000
1,2-Dibromo-3-Chloropropane		ND		1700	12000
1,2-Dibromoethane		ND		760	5900
Dibromomethane		ND		1200	5900
1,2-Dichlorobenzene		ND		450	5900
1,3-Dichlorobenzene		ND		710	5900
1,4-Dichlorobenzene		ND		970	5900
Dichlorodifluoromethane		ND		1400	5900
1,1-Dichloroethane		ND		830	5900
1,2-Dichloroethane		ND		1300	5900
1,1-Dichloroethene		ND		710	5900
Dichlorofluoromethane		ND		780	12000
1,2-Dichloropropane		ND		760	5900
1,3-Dichloropropane		ND		550	5900
2,2-Dichloropropane		ND		1200	5900
1,1-Dichloropropene		ND		900	5900
Ethylbenzene		22000		830	5900
Ethyl ether		ND		2300	12000
Hexachlorobutadiene		ND		1000	5900
2-Hexanone		ND		2000	24000
Isopropylbenzene		5600	J	310	5900
Methyl acetate		ND		1300	12000
Methylcyclohexane		13000		900	12000
Methylene Chloride		ND		2000	5900
4-Methyl-2-pentanone (MIBK)		ND		1300	24000
Methyl tert butyl ether		ND		710	5900

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1002_55-60 (20150616)

Lab Sample ID: 240-52076-7 Date Sampled: 06/16/2015 1345
Client Matrix: Solid % Moisture: 18.0 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143830.D
Dilution:	20			Initial Weight/Volume:	10.28 g
Analysis Date:	06/23/2015 1520			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		89000		470	5900
Naphthalene		31000		620	5900
n-Butylbenzene		22000		500	5900
N-Propylbenzene		6300		1400	5900
o-Xylene		37000		400	5900
p-Isopropyltoluene		3400	J	590	5900
sec-Butylbenzene		2200	J	380	5900
Styrene		ND		640	5900
tert-Butylbenzene		ND		810	5900
1,1,1,2-Tetrachloroethane		ND		1200	5900
1,1,2,2-Tetrachloroethane		ND		1000	5900
Tetrachloroethene		ND		640	5900
Tetrahydrofuran		ND		2800	24000
Toluene		2500	J	240	5900
trans-1,2-Dichloroethene		ND		620	5900
trans-1,3-Dichloropropene		ND		620	5900
1,2,3-Trichlorobenzene		ND		930	5900
1,2,4-Trichlorobenzene		ND		710	5900
1,1,1-Trichloroethane		ND		1000	5900
1,1,2-Trichloroethane		ND		2000	5900
Trichloroethene		ND		930	5900
Trichlorofluoromethane		ND		830	5900
1,2,3-Trichloropropane		ND		2400	5900
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1000	5900
1,2,4-Trimethylbenzene		140000		310	5900
1,3,5-Trimethylbenzene		39000		360	5900
Vinyl chloride		ND		1300	5900

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	128		26 - 141
Dibromofluoromethane (Surr)	100		30 - 122
1,2-Dichloroethane-d4 (Surr)	140	X	39 - 128
Toluene-d8 (Surr)	123		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1002_60-64 (20150616)**

Lab Sample ID: 240-52076-8 Date Sampled: 06/16/2015 1400
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143831.D
Dilution:	100			Initial Weight/Volume:	11.44 g
Analysis Date:	06/23/2015 1542			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		25000	110000
Allyl chloride		ND		3300	55000
Benzene		5000	J	990	27000
Bromobenzene		ND		1400	27000
Bromochloromethane		ND		7700	27000
Bromodichloromethane		ND		4200	27000
Bromoform		ND		6700	27000
Bromomethane		ND		5600	27000
2-Butanone (MEK)		ND		8000	110000
Carbon disulfide		ND		6100	27000
Carbon tetrachloride		ND		5300	27000
Chlorobenzene		ND		4500	27000
Chlorodibromomethane		ND		5000	27000
Chloroethane		ND		5600	27000
Chloroform		ND		3900	27000
Chloromethane		ND		5300	27000
2-Chlorotoluene		ND		4500	27000
4-Chlorotoluene		ND		2800	27000
cis-1,2-Dichloroethene		ND		4200	27000
cis-1,3-Dichloropropene		ND		2400	27000
Cyclohexane		23000	J	3300	55000
1,2-Dibromo-3-Chloropropane		ND		7800	55000
1,2-Dibromoethane		ND		3500	27000
Dibromomethane		ND		5500	27000
1,2-Dichlorobenzene		ND		2100	27000
1,3-Dichlorobenzene		ND		3300	27000
1,4-Dichlorobenzene		ND		4500	27000
Dichlorodifluoromethane		ND		6700	27000
1,1-Dichloroethane		ND		3800	27000
1,2-Dichloroethane		ND		5800	27000
1,1-Dichloroethene		ND		3300	27000
Dichlorofluoromethane		ND		3600	55000
1,2-Dichloropropane		ND		3500	27000
1,3-Dichloropropane		ND		2500	27000
2,2-Dichloropropane		ND		5700	27000
1,1-Dichloropropene		ND		4200	27000
Ethylbenzene		150000		3800	27000
Ethyl ether		ND		11000	55000
Hexachlorobutadiene		ND		4800	27000
2-Hexanone		ND		9200	110000
Isopropylbenzene		31000		1400	27000
Methyl acetate		ND		6000	55000
Methylcyclohexane		73000		4200	55000
Methylene Chloride		ND		9300	27000
4-Methyl-2-pentanone (MIBK)		ND		6100	110000
Methyl tert butyl ether		ND		3300	27000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1002_60-64 (20150616)

Lab Sample ID: 240-52076-8 Date Sampled: 06/16/2015 1400
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143831.D
Dilution:	100			Initial Weight/Volume:	11.44 g
Analysis Date:	06/23/2015 1542			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		560000		2200	27000
Naphthalene		170000		2800	27000
n-Butylbenzene		98000		2300	27000
N-Propylbenzene		39000		6700	27000
o-Xylene		230000		1900	27000
p-Isopropyltoluene		16000	J	2700	27000
sec-Butylbenzene		11000	J	1800	27000
Styrene		ND		3000	27000
tert-Butylbenzene		ND		3700	27000
1,1,1,2-Tetrachloroethane		ND		5400	27000
1,1,2,2-Tetrachloroethane		ND		4700	27000
Tetrachloroethene		ND		3000	27000
Tetrahydrofuran		ND		13000	110000
Toluene		31000		1100	27000
trans-1,2-Dichloroethene		ND		2800	27000
trans-1,3-Dichloropropene		ND		2800	27000
1,2,3-Trichlorobenzene		ND		4300	27000
1,2,4-Trichlorobenzene		ND		3300	27000
1,1,1-Trichloroethane		ND		4600	27000
1,1,2-Trichloroethane		ND		9100	27000
Trichloroethene		ND		4300	27000
Trichlorofluoromethane		ND		3800	27000
1,2,3-Trichloropropane		ND		11000	27000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		4600	27000
1,2,4-Trimethylbenzene		690000		1400	27000
1,3,5-Trimethylbenzene		190000		1600	27000
Vinyl chloride		ND		6100	27000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	287	X	26 - 141
Dibromofluoromethane (Surr)	215	X	30 - 122
1,2-Dichloroethane-d4 (Surr)	324	X	39 - 128
Toluene-d8 (Surr)	310	X	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1002_60-64 (20150616)**

Lab Sample ID: 240-52076-8 Date Sampled: 06/16/2015 1400
Client Matrix: Solid Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950677.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/23/2015 0009			Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 0009				
Leach Date:	06/21/2015 1535				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		89		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		80 - 121
4-Bromofluorobenzene (Surr)	98		70 - 124
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	100		80 - 128

Client Sample ID: **MB-01 (20150616)**

Lab Sample ID: 240-52076-9 Date Sampled: 06/16/2015 0000
Client Matrix: Solid Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143810.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	06/22/2015 1858			Final Weight/Volume:	10.00 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		48	250
Chlorobenzene		ND		41	250
Chlorodibromomethane		ND		46	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		53	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **MB-01 (20150616)**

Lab Sample ID: 240-52076-9 Date Sampled: 06/16/2015 0000
Client Matrix: Solid Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143810.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	06/22/2015 1858			Final Weight/Volume:	10.00 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		43	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		42	250
1,1,2-Trichloroethane		ND		83	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		56	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	108		26 - 141
Dibromofluoromethane (Surr)	94		30 - 122
1,2-Dichloroethane-d4 (Surr)	117		39 - 128
Toluene-d8 (Surr)	109		33 - 134

Client Sample ID: **ASB-1001_65-70 (20150615)**

Lab Sample ID: 240-52076-3 Date Sampled: 06/15/2015 1725
Client Matrix: Solid % Moisture: 6.3 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623029.D
Dilution:	200			Initial Weight/Volume:	29.93 g
Analysis Date:	06/23/2015 1954			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		2800	J	750	71000
2,2'-oxybis[1-chloropropane]		ND		2000	71000
2,4,5-Trichlorophenol		ND		5300	71000
2,4,6-Trichlorophenol		ND		1900	71000
2,4-Dichlorophenol		ND		4300	71000
2,4-Dimethylphenol		ND		4300	71000
2,4-Dinitrophenol		ND		4500	340000
2,4-Dinitrotoluene		ND		3600	71000
2,6-Dinitrotoluene		ND		4500	71000
2-Chloronaphthalene		ND		96	71000
2-Chlorophenol		ND		1800	71000
2-Methylnaphthalene		52000	J	110	71000
2-Methylphenol		ND		2400	71000
2-Nitroaniline		ND		1900	340000
2-Nitrophenol		ND		1800	71000
3,3'-Dichlorobenzidine		ND		3900	340000
3-Nitroaniline		ND		3400	340000
4,6-Dinitro-2-methylphenol		ND		2000	340000
4-Bromophenyl phenyl ether		ND		2800	71000
4-Chloro-3-methylphenol		ND		4500	71000
4-Chloroaniline		ND		3600	71000
4-Chlorophenyl phenyl ether		ND		2800	71000
4-Nitroaniline		ND		5600	340000
4-Nitrophenol		ND		3600	340000
Acenaphthene		5000	J	160	71000
Acenaphthylene		2900	J	75	71000
Acetophenone		ND		2000	71000
Anthracene		7200	J	170	71000
Atrazine		ND		1900	71000
Benzaldehyde		ND		2600	71000
Benzo[a]anthracene		7500	J	130	71000
Benzo[a]pyrene		4300	J	140	71000
Benzo[b]fluoranthene		5900	J	130	71000
Benzo[g,h,i]perylene		2200	J	75	71000
Benzo[k]fluoranthene		3200	J	150	71000
Bis(2-chloroethoxy)methane		ND		4700	71000
Bis(2-chloroethyl)ether		ND		430	71000
Bis(2-ethylhexyl) phthalate		43000	J	4100	71000
Butyl benzyl phthalate		ND		2100	71000
Caprolactam		ND		7900	71000
Carbazole		ND		5800	71000
Chrysene		7000	J	240	71000
Dibenz(a,h)anthracene		ND		140	71000
Dibenzofuran		5100	J	140	71000
Diethyl phthalate		ND		3400	71000
Dimethyl phthalate		ND		3600	71000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_65-70 (20150615)

Lab Sample ID: 240-52076-3 Date Sampled: 06/15/2015 1725
Client Matrix: Solid % Moisture: 6.3 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623029.D
Dilution:	200			Initial Weight/Volume:	29.93 g
Analysis Date:	06/23/2015 1954			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		3200	71000
Di-n-octyl phthalate		ND		1700	71000
Fluoranthene		19000	J	120	71000
Fluorene		7600	J	110	71000
Hexachlorobenzene		ND		450	71000
Hexachlorobutadiene		ND		1200	71000
Hexachlorocyclopentadiene		ND		1700	340000
Hexachloroethane		ND		1900	71000
Indeno[1,2,3-cd]pyrene		3000	J	75	71000
Isophorone		ND		2800	71000
Naphthalene		220000		180	71000
Nitrobenzene		ND		470	71000
N-Nitrosodi-n-propylamine		ND		1300	71000
N-Nitrosodiphenylamine		ND		4500	71000
Pentachlorophenol		ND		1900	71000
Phenol		ND		1600	71000
Phenanthrene		33000	J	160	71000
Pyrene		15000	J	94	71000
3 & 4 Methylphenol		ND		4300	86000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	0	X	24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	0	X	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_65-70 (20150615)

Lab Sample ID: 240-52076-3 Date Sampled: 06/15/2015 1725
Client Matrix: Solid Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-186914	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-186294	Lab File ID:	50626021.D
Dilution:	2.5	Leach Batch:	240-186216	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 1827			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00085	0.010
2,4-Dinitrotoluene		ND		0.00063	0.010
Hexachlorobenzene		ND		0.00021	0.0020
Hexachlorobutadiene		ND		0.00068	0.010
Hexachloroethane		ND		0.00048	0.010
2-Methylphenol		0.027		0.00043	0.010
3 & 4 Methylphenol		0.049		0.0020	0.010
Nitrobenzene		ND		0.00010	0.010
Pentachlorophenol		ND		0.00068	0.010
Pyridine		ND		0.00088	0.010
2,4,5-Trichlorophenol		ND		0.00075	0.010
2,4,6-Trichlorophenol		ND		0.00060	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	77		30 - 110
2-Fluorophenol (Surr)	71		20 - 110
Nitrobenzene-d5 (Surr)	81		28 - 110
Phenol-d5 (Surr)	65		21 - 110
Terphenyl-d14 (Surr)	76		48 - 110
2,4,6-Tribromophenol (Surr)	96		23 - 110

Client Sample ID: **ASB-1001_72-74 (20150615)**

Lab Sample ID: 240-52076-4 Date Sampled: 06/15/2015 1745
Client Matrix: Solid % Moisture: 19.5 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623028.D
Dilution:	200			Initial Weight/Volume:	30.39 g
Analysis Date:	06/23/2015 1930			Final Weight/Volume:	10 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		22000	J	4300	400000
2,2'-oxybis[1-chloropropane]		ND		12000	400000
2,4,5-Trichlorophenol		ND		31000	400000
2,4,6-Trichlorophenol		ND		11000	400000
2,4-Dichlorophenol		ND		25000	400000
2,4-Dimethylphenol		ND		25000	400000
2,4-Dinitrophenol		ND		26000	2000000
2,4-Dinitrotoluene		ND		21000	400000
2,6-Dinitrotoluene		ND		26000	400000
2-Chloronaphthalene		ND		550	400000
2-Chlorophenol		ND		10000	400000
2-Methylnaphthalene		390000	J	610	400000
2-Methylphenol		ND		13000	400000
2-Nitroaniline		ND		11000	2000000
2-Nitrophenol		ND		10000	400000
3,3'-Dichlorobenzidine		ND		22000	2000000
3-Nitroaniline		ND		20000	2000000
4,6-Dinitro-2-methylphenol		ND		11000	2000000
4-Bromophenyl phenyl ether		ND		16000	400000
4-Chloro-3-methylphenol		ND		26000	400000
4-Chloroaniline		ND		21000	400000
4-Chlorophenyl phenyl ether		ND		16000	400000
4-Nitroaniline		ND		32000	2000000
4-Nitrophenol		ND		21000	2000000
Acenaphthene		45000	J	930	400000
Acenaphthylene		29000	J	430	400000
Acetophenone		ND		11000	400000
Anthracene		69000	J	960	400000
Atrazine		ND		11000	400000
Benzaldehyde		ND		15000	400000
Benzo[a]anthracene		76000	J	770	400000
Benzo[a]pyrene		56000	J	790	400000
Benzo[b]fluoranthene		76000	J	720	400000
Benzo[g,h,i]perylene		31000	J	430	400000
Benzo[k]fluoranthene		30000	J	830	400000
Bis(2-chloroethoxy)methane		ND		27000	400000
Bis(2-chloroethyl)ether		ND		2500	400000
Bis(2-ethylhexyl) phthalate		580000		23000	400000
Butyl benzyl phthalate		ND		12000	400000
Caprolactam		ND		45000	400000
Carbazole		37000	J	33000	400000
Chrysene		78000	J	1300	400000
Dibenz(a,h)anthracene		11000	J	810	400000
Dibenzofuran		46000	J	810	400000
Diethyl phthalate		ND		20000	400000
Dimethyl phthalate		ND		21000	400000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_72-74 (20150615)

Lab Sample ID: 240-52076-4 Date Sampled: 06/15/2015 1745
Client Matrix: Solid % Moisture: 19.5 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623028.D
Dilution:	200			Initial Weight/Volume:	30.39 g
Analysis Date:	06/23/2015 1930			Final Weight/Volume:	10 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		18000	400000
Di-n-octyl phthalate		ND		9700	400000
Fluoranthene		220000	J	670	400000
Fluorene		77000	J	650	400000
Hexachlorobenzene		ND		2600	400000
Hexachlorobutadiene		ND		6900	400000
Hexachlorocyclopentadiene		ND		9900	2000000
Hexachloroethane		ND		11000	400000
Indeno[1,2,3-cd]pyrene		30000	J	430	400000
Isophorone		ND		16000	400000
Naphthalene		1200000		1000	400000
Nitrobenzene		ND		2700	400000
N-Nitrosodi-n-propylamine		ND		7700	400000
N-Nitrosodiphenylamine		ND		26000	400000
Pentachlorophenol		ND		11000	400000
Phenol		11000	J	9000	400000
Phenanthrene		340000	J	900	400000
Pyrene		160000	J	540	400000
3 & 4 Methylphenol		ND		25000	490000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	0	X	24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	0	X	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1001_72-74 (20150615)**

Lab Sample ID: 240-52076-4 Date Sampled: 06/15/2015 1745
Client Matrix: Solid Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-186914	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-186294	Lab File ID:	50626022.D
Dilution:	2.5	Leach Batch:	240-186216	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 1852			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00085	0.010
2,4-Dinitrotoluene		ND		0.00063	0.010
Hexachlorobenzene		ND		0.00021	0.0020
Hexachlorobutadiene		ND		0.00068	0.010
Hexachloroethane		ND		0.00048	0.010
2-Methylphenol		0.075		0.00043	0.010
3 & 4 Methylphenol		0.18		0.0020	0.010
Nitrobenzene		ND		0.00010	0.010
Pentachlorophenol		ND		0.00068	0.010
Pyridine		ND		0.00088	0.010
2,4,5-Trichlorophenol		ND		0.00075	0.010
2,4,6-Trichlorophenol		ND		0.00060	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	56		30 - 110
2-Fluorophenol (Surr)	53		20 - 110
Nitrobenzene-d5 (Surr)	59		28 - 110
Phenol-d5 (Surr)	47		21 - 110
Terphenyl-d14 (Surr)	60		48 - 110
2,4,6-Tribromophenol (Surr)	70		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1001_80-82 (20150615)**

Lab Sample ID: 240-52076-6 Date Sampled: 06/15/2015 1845
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623025.D
Dilution:	2.5			Initial Weight/Volume:	29.50 g
Analysis Date:	06/23/2015 1820			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		70	J	11	1000
2,2'-oxybis[1-chloropropane]		ND		29	1000
2,4,5-Trichlorophenol		ND		75	1000
2,4,6-Trichlorophenol		ND		27	1000
2,4-Dichlorophenol		ND		60	1000
2,4-Dimethylphenol		ND		60	1000
2,4-Dinitrophenol		ND		63	4800
2,4-Dinitrotoluene		ND		51	1000
2,6-Dinitrotoluene		ND		63	1000
2-Chloronaphthalene		ND		1.4	1000
2-Chlorophenol		ND		25	1000
2-Methylnaphthalene		1200		1.5	1000
2-Methylphenol		ND		33	1000
2-Nitroaniline		ND		27	4800
2-Nitrophenol		ND		25	1000
3,3'-Dichlorobenzidine		ND		54	4800
3-Nitroaniline		ND		48	4800
4,6-Dinitro-2-methylphenol		ND		28	4800
4-Bromophenyl phenyl ether		ND		39	1000
4-Chloro-3-methylphenol		ND		63	1000
4-Chloroaniline		ND		51	1000
4-Chlorophenyl phenyl ether		ND		39	1000
4-Nitroaniline		ND		78	4800
4-Nitrophenol		ND		51	4800
Acenaphthene		150	J	2.3	1000
Acenaphthylene		75	J	1.1	1000
Acetophenone		ND		28	1000
Anthracene		220	J	2.4	1000
Atrazine		ND		27	1000
Benzaldehyde		ND		36	1000
Benzo[a]anthracene		240	J	1.9	1000
Benzo[a]pyrene		160	J	1.9	1000
Benzo[b]fluoranthene		240	J	1.8	1000
Benzo[g,h,i]perylene		86	J	1.1	1000
Benzo[k]fluoranthene		96	J	2.1	1000
Bis(2-chloroethoxy)methane		ND		66	1000
Bis(2-chloroethyl)ether		ND		6.0	1000
Bis(2-ethylhexyl) phthalate		1800		57	1000
Butyl benzyl phthalate		ND		30	1000
Caprolactam		ND		110	1000
Carbazole		100	J	81	1000
Chrysene		230	J	3.3	1000
Dibenz(a,h)anthracene		ND		2.0	1000
Dibenzofuran		160	J	2.0	1000
Diethyl phthalate		ND		48	1000
Dimethyl phthalate		ND		51	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_80-82 (20150615)

Lab Sample ID: 240-52076-6 Date Sampled: 06/15/2015 1845
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623025.D
Dilution:	2.5			Initial Weight/Volume:	29.50 g
Analysis Date:	06/23/2015 1820			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		45	1000
Di-n-octyl phthalate		ND		24	1000
Fluoranthene		630	J	1.7	1000
Fluorene		240	J	1.6	1000
Hexachlorobenzene		ND		6.3	1000
Hexachlorobutadiene		ND		17	1000
Hexachlorocyclopentadiene		ND		24	4800
Hexachloroethane		ND		27	1000
Indeno[1,2,3-cd]pyrene		87	J	1.1	1000
Isophorone		ND		39	1000
Naphthalene		3200		2.5	1000
Nitrobenzene		ND		6.6	1000
N-Nitrosodi-n-propylamine		ND		19	1000
N-Nitrosodiphenylamine		ND		63	1000
Pentachlorophenol		ND		27	1000
Phenol		ND		22	1000
Phenanthrene		1100		2.2	1000
Pyrene		520	J	1.3	1000
3 & 4 Methylphenol		ND		60	1200

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	80		24 - 110
2-Fluorophenol (Surr)	70		24 - 110
2,4,6-Tribromophenol (Surr)	83		10 - 110
Nitrobenzene-d5 (Surr)	88		20 - 110
Phenol-d5 (Surr)	83		26 - 110
Terphenyl-d14 (Surr)	83		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1001_80-82 (20150615)**

Lab Sample ID: 240-52076-6 Date Sampled: 06/15/2015 1845
Client Matrix: Solid Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187094	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-186294	Lab File ID:	50627016.D
Dilution:	2.5	Leach Batch:	240-186216	Initial Weight/Volume:	250 mL
Analysis Date:	06/27/2015 1931			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00085	0.010
2,4-Dinitrotoluene		ND		0.00063	0.010
Hexachlorobenzene		ND		0.00021	0.0020
Hexachlorobutadiene		ND		0.00068	0.010
Hexachloroethane		ND		0.00048	0.010
2-Methylphenol		ND		0.00043	0.010
3 & 4 Methylphenol		ND		0.0020	0.010
Nitrobenzene		ND		0.00010	0.010
Pentachlorophenol		ND		0.00068	0.010
Pyridine		ND		0.00088	0.010
2,4,5-Trichlorophenol		ND		0.00075	0.010
2,4,6-Trichlorophenol		ND		0.00060	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	76		30 - 110
2-Fluorophenol (Surr)	61		20 - 110
Nitrobenzene-d5 (Surr)	84		28 - 110
Phenol-d5 (Surr)	53		21 - 110
Terphenyl-d14 (Surr)	77		48 - 110
2,4,6-Tribromophenol (Surr)	94		23 - 110

Client Sample ID: **ASB-1002_55-60 (20150616)**

Lab Sample ID: 240-52076-7 Date Sampled: 06/16/2015 1345
Client Matrix: Solid % Moisture: 18.0 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623026.D
Dilution:	50			Initial Weight/Volume:	30.49 g
Analysis Date:	06/23/2015 1843			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		800	J	210	20000
2,2'-oxybis[1-chloropropane]		ND		570	20000
2,4,5-Trichlorophenol		ND		1500	20000
2,4,6-Trichlorophenol		ND		530	20000
2,4-Dichlorophenol		ND		1200	20000
2,4-Dimethylphenol		ND		1200	20000
2,4-Dinitrophenol		ND		1300	96000
2,4-Dinitrotoluene		ND		1000	20000
2,6-Dinitrotoluene		ND		1300	20000
2-Chloronaphthalene		ND		27	20000
2-Chlorophenol		ND		490	20000
2-Methylnaphthalene		9000	J	30	20000
2-Methylphenol		ND		660	20000
2-Nitroaniline		ND		550	96000
2-Nitrophenol		ND		500	20000
3,3'-Dichlorobenzidine		ND		1100	96000
3-Nitroaniline		ND		960	96000
4,6-Dinitro-2-methylphenol		ND		550	96000
4-Bromophenyl phenyl ether		ND		780	20000
4-Chloro-3-methylphenol		ND		1300	20000
4-Chloroaniline		ND		1000	20000
4-Chlorophenyl phenyl ether		ND		780	20000
4-Nitroaniline		ND		1600	96000
4-Nitrophenol		ND		1000	96000
Acenaphthene		2800	J	46	20000
Acenaphthylene		300	J	21	20000
Acetophenone		ND		550	20000
Anthracene		4800	J	47	20000
Atrazine		ND		550	20000
Benzaldehyde		ND		720	20000
Benzo[a]anthracene		5100	J	38	20000
Benzo[a]pyrene		4500	J	38	20000
Benzo[b]fluoranthene		5400	J	35	20000
Benzo[g,h,i]perylene		2600	J	21	20000
Benzo[k]fluoranthene		2200	J	41	20000
Bis(2-chloroethoxy)methane		ND		1300	20000
Bis(2-chloroethyl)ether		ND		120	20000
Bis(2-ethylhexyl) phthalate		1100	J	1100	20000
Butyl benzyl phthalate		ND		600	20000
Caprolactam		ND		2200	20000
Carbazole		ND		1600	20000
Chrysene		4800	J	66	20000
Dibenz(a,h)anthracene		660	J	40	20000
Dibenzofuran		2400	J	40	20000
Diethyl phthalate		ND		960	20000
Dimethyl phthalate		ND		1000	20000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1002_55-60 (20150616)

Lab Sample ID: 240-52076-7 Date Sampled: 06/16/2015 1345
Client Matrix: Solid % Moisture: 18.0 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623026.D
Dilution:	50			Initial Weight/Volume:	30.49 g
Analysis Date:	06/23/2015 1843			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		2000	J	900	20000
Di-n-octyl phthalate		ND		470	20000
Fluoranthene		14000	J	33	20000
Fluorene		3600	J	32	20000
Hexachlorobenzene		ND		130	20000
Hexachlorobutadiene		ND		340	20000
Hexachlorocyclopentadiene		ND		490	96000
Hexachloroethane		ND		540	20000
Indeno[1,2,3-cd]pyrene		2500	J	21	20000
Isophorone		ND		780	20000
Naphthalene		41000		49	20000
Nitrobenzene		ND		130	20000
N-Nitrosodi-n-propylamine		ND		380	20000
N-Nitrosodiphenylamine		ND		1300	20000
Pentachlorophenol		2400	J	550	20000
Phenol		ND		440	20000
Phenanthrene		16000	J	44	20000
Pyrene		11000	J	26	20000
3 & 4 Methylphenol		ND		1200	24000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	76		24 - 110
2-Fluorophenol (Surr)	66		24 - 110
2,4,6-Tribromophenol (Surr)	82		10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	112	X	26 - 110
Terphenyl-d14 (Surr)	86		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1002_55-60 (20150616)**

Lab Sample ID: 240-52076-7 Date Sampled: 06/16/2015 1345
Client Matrix: Solid Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-186914	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-186294	Lab File ID:	50626011.D
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 1419			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		0.0083		0.00017	0.0040
3 & 4 Methylphenol		0.018		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	86		30 - 110
2-Fluorophenol (Surr)	72		20 - 110
Nitrobenzene-d5 (Surr)	90		28 - 110
Phenol-d5 (Surr)	62		21 - 110
Terphenyl-d14 (Surr)	83		48 - 110
2,4,6-Tribromophenol (Surr)	97		23 - 110

Client Sample ID: **ASB-1002_60-64 (20150616)**

Lab Sample ID: 240-52076-8 Date Sampled: 06/16/2015 1400
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623027.D
Dilution:	50			Initial Weight/Volume:	29.85 g
Analysis Date:	06/23/2015 1907			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		1000	J	220	21000
2,2'-oxybis[1-chloropropane]		ND		600	21000
2,4,5-Trichlorophenol		ND		1600	21000
2,4,6-Trichlorophenol		ND		560	21000
2,4-Dichlorophenol		ND		1300	21000
2,4-Dimethylphenol		ND		1300	21000
2,4-Dinitrophenol		ND		1300	100000
2,4-Dinitrotoluene		ND		1100	21000
2,6-Dinitrotoluene		ND		1300	21000
2-Chloronaphthalene		ND		28	21000
2-Chlorophenol		ND		520	21000
2-Methylnaphthalene		14000	J	31	21000
2-Methylphenol		ND		690	21000
2-Nitroaniline		ND		570	100000
2-Nitrophenol		ND		520	21000
3,3'-Dichlorobenzidine		ND		1100	100000
3-Nitroaniline		ND		1000	100000
4,6-Dinitro-2-methylphenol		ND		580	100000
4-Bromophenyl phenyl ether		ND		820	21000
4-Chloro-3-methylphenol		ND		1300	21000
4-Chloroaniline		ND		1100	21000
4-Chlorophenyl phenyl ether		ND		820	21000
4-Nitroaniline		ND		1600	100000
4-Nitrophenol		ND		1100	100000
Acenaphthene		860	J	48	21000
Acenaphthylene		ND		22	21000
Acetophenone		ND		580	21000
Anthracene		810	J	49	21000
Atrazine		ND		570	21000
Benzaldehyde		ND		760	21000
Benzo[a]anthracene		780	J	40	21000
Benzo[a]pyrene		610	J	40	21000
Benzo[b]fluoranthene		790	J	37	21000
Benzo[g,h,i]perylene		300	J	22	21000
Benzo[k]fluoranthene		300	J	43	21000
Bis(2-chloroethoxy)methane		ND		1400	21000
Bis(2-chloroethyl)ether		ND		130	21000
Bis(2-ethylhexyl) phthalate		1600	J	1200	21000
Butyl benzyl phthalate		ND		630	21000
Caprolactam		ND		2300	21000
Carbazole		ND		1700	21000
Chrysene		890	J	69	21000
Dibenz(a,h)anthracene		ND		42	21000
Dibenzofuran		720	J	42	21000
Diethyl phthalate		ND		1000	21000
Dimethyl phthalate		ND		1100	21000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1002_60-64 (20150616)

Lab Sample ID: 240-52076-8 Date Sampled: 06/16/2015 1400
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623027.D
Dilution:	50			Initial Weight/Volume:	29.85 g
Analysis Date:	06/23/2015 1907			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		4300	J	940	21000
Di-n-octyl phthalate		ND		500	21000
Fluoranthene		2400	J	35	21000
Fluorene		1100	J	33	21000
Hexachlorobenzene		ND		130	21000
Hexachlorobutadiene		ND		350	21000
Hexachlorocyclopentadiene		ND		510	100000
Hexachloroethane		ND		570	21000
Indeno[1,2,3-cd]pyrene		620	J	22	21000
Isophorone		ND		820	21000
Naphthalene		71000		52	21000
Nitrobenzene		ND		140	21000
N-Nitrosodi-n-propylamine		ND		400	21000
N-Nitrosodiphenylamine		ND		1300	21000
Pentachlorophenol		ND		570	21000
Phenol		ND		460	21000
Phenanthrene		4100	J	46	21000
Pyrene		2100	J	28	21000
3 & 4 Methylphenol		ND		1300	25000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	51		24 - 110
2-Fluorophenol (Surr)	46		24 - 110
2,4,6-Tribromophenol (Surr)	77		10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	73		26 - 110
Terphenyl-d14 (Surr)	47		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1002_60-64 (20150616)**

Lab Sample ID: 240-52076-8 Date Sampled: 06/16/2015 1400
Client Matrix: Solid Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-186914	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-186294	Lab File ID:	50626023.D
Dilution:	2.0	Leach Batch:	240-186216	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 1916			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00068	0.0080
2,4-Dinitrotoluene		ND		0.00050	0.0080
Hexachlorobenzene		ND		0.00017	0.0016
Hexachlorobutadiene		ND		0.00054	0.0080
Hexachloroethane		ND		0.00038	0.0080
2-Methylphenol		0.017		0.00034	0.0080
3 & 4 Methylphenol		0.034		0.0016	0.0080
Nitrobenzene		ND		0.000080	0.0080
Pentachlorophenol		ND		0.00054	0.0080
Pyridine		ND		0.00070	0.0080
2,4,5-Trichlorophenol		ND		0.00060	0.0080
2,4,6-Trichlorophenol		ND		0.00048	0.0080

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	70		30 - 110
2-Fluorophenol (Surr)	61		20 - 110
Nitrobenzene-d5 (Surr)	73		28 - 110
Phenol-d5 (Surr)	50		21 - 110
Terphenyl-d14 (Surr)	71		48 - 110
2,4,6-Tribromophenol (Surr)	82		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_65-70 (20150615)

Lab Sample ID: 240-52076-3 Date Sampled: 06/15/2015 1725
Client Matrix: Solid % Moisture: 6.3 Date Received: 06/17/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186340	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186058	Lab File ID:	Y0062310.D
Dilution:	100			Initial Weight/Volume:	11.25 g
Analysis Date:	06/23/2015 1752			Final Weight/Volume:	11.2 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		4500		210	1100

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_72-74 (20150615)

Lab Sample ID: 240-52076-4 Date Sampled: 06/15/2015 1745
Client Matrix: Solid % Moisture: 19.5 Date Received: 06/17/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186340	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186058	Lab File ID:	Y0062311.D
Dilution:	200			Initial Weight/Volume:	11.67 g
Analysis Date:	06/23/2015 1828			Final Weight/Volume:	11.6 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		10000		490	2500

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_80-82 (20150615)

Lab Sample ID: 240-52076-6 Date Sampled: 06/15/2015 1845
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/17/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186340	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186058	Lab File ID:	Y0062313.D
Dilution:	1.0			Initial Weight/Volume:	12.53 g
Analysis Date:	06/23/2015 1938			Final Weight/Volume:	12.5 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		130		2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1002_55-60 (20150616)

Lab Sample ID: 240-52076-7 Date Sampled: 06/16/2015 1345
Client Matrix: Solid % Moisture: 18.0 Date Received: 06/17/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186340	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186058	Lab File ID:	Y0062314.D
Dilution:	20			Initial Weight/Volume:	11.5 g
Analysis Date:	06/23/2015 2012			Final Weight/Volume:	11.5 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		1000		49	240

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1002_60-64 (20150616)**

Lab Sample ID: 240-52076-8 Date Sampled: 06/16/2015 1400
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/17/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186340	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186058	Lab File ID:	Y0062315.D
Dilution:	100			Initial Weight/Volume:	9.93 g
Analysis Date:	06/23/2015 2048			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		11000		250	1300

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: MB-01 (20150616)

Lab Sample ID: 240-52076-9 Date Sampled: 06/16/2015 0000
Client Matrix: Solid Date Received: 06/17/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186340	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186058	Lab File ID:	Y0062317.D
Dilution:	1.0			Initial Weight/Volume:	0.07 g
Analysis Date:	06/23/2015 2158			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		290	1400

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_65-70 (20150615)

Lab Sample ID: 240-52076-3 Date Sampled: 06/15/2015 1725
Client Matrix: Solid % Moisture: 6.3 Date Received: 06/17/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186213	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-185628	Lab File ID:	P14F062216.D
Dilution:	200			Initial Weight/Volume:	28.36 g
Analysis Date:	06/23/2015 0031			Final Weight/Volume:	5 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		7400	B	220	1800

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_72-74 (20150615)

Lab Sample ID: 240-52076-4 Date Sampled: 06/15/2015 1745
Client Matrix: Solid % Moisture: 19.5 Date Received: 06/17/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186213	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-185628	Lab File ID:	P14F062217.D
Dilution:	500			Initial Weight/Volume:	28.67 g
Analysis Date:	06/23/2015 0058			Final Weight/Volume:	6 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		17000	B	760	6200

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1001_80-82 (20150615)

Lab Sample ID: 240-52076-6 Date Sampled: 06/15/2015 1845
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/17/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186213	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-185628	Lab File ID:	P14F062219.D
Dilution:	1.0			Initial Weight/Volume:	29.04 g
Analysis Date:	06/23/2015 0152			Final Weight/Volume:	5 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		51	B	1.2	9.8

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1002_55-60 (20150616)

Lab Sample ID: 240-52076-7 Date Sampled: 06/16/2015 1345
Client Matrix: Solid % Moisture: 18.0 Date Received: 06/17/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186213	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-185628	Lab File ID:	P14F062220.D
Dilution:	200			Initial Weight/Volume:	28.93 g
Analysis Date:	06/23/2015 0220			Final Weight/Volume:	5 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		7900	B	250	2000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: ASB-1002_60-64 (20150616)

Lab Sample ID: 240-52076-8 Date Sampled: 06/16/2015 1400
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/17/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186213	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-185628	Lab File ID:	P14F062221.D
Dilution:	500			Initial Weight/Volume:	28.75 g
Analysis Date:	06/23/2015 0247			Final Weight/Volume:	8 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		26000	B	1000	8400

Client Sample ID: **ASB-1001_65-70 (20150615)**

Lab Sample ID: 240-52076-3 Date Sampled: 06/15/2015 1725
Client Matrix: Solid % Moisture: 6.3 Date Received: 06/17/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-185884	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185711	Lab File ID:	I9061915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.22 g
Analysis Date:	06/19/2015 1723			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		2800		5.1	17
Barium		1200		0.36	17
Beryllium		0.088	J	0.023	0.44
Calcium		33000		20	440
Cadmium		3.1		0.018	0.17
Cobalt		6.3		0.041	4.4
Chromium		53		0.066	0.44
Copper		37		0.20	2.2
Iron		25000		2.8	8.7
Potassium		730	B	5.4	440
Magnesium		4200		4.5	440
Manganese		260		0.073	1.3
Silver		ND		0.055	0.44
Sodium		860		17	440
Nickel		25		0.070	3.5
Vanadium		6.4		0.17	4.4
Zinc		640	B	0.49	1.7
Arsenic		11		0.36	0.87
Lead		200		0.17	0.26
Selenium		1.1		0.30	0.44
Thallium		0.17	J	0.11	0.87

Analysis Method:	6010B	Analysis Batch:	240-186018	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185711	Lab File ID:	I9062015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.22 g
Analysis Date:	06/20/2015 1327			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		130		0.42	0.87

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-186556	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1936			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.60		0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1001_65-70 (20150615)**

Lab Sample ID: 240-52076-3 Date Sampled: 06/15/2015 1725
Client Matrix: Solid Date Received: 06/17/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.013	J B	0.0029	0.50
Barium		0.65	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00064	J	0.00014	0.10
Calcium		650		0.26	5.0
Chromium		0.0029	J B	0.00055	0.50
Cobalt		0.054		0.00056	0.050
Copper		0.0041	J B	0.0019	1.0
Iron		0.21		0.013	0.10
Lead		0.026	J B	0.0019	0.50
Magnesium		19		0.055	5.0
Manganese		1.6	B	0.00046	0.015
Nickel		0.14	B	0.00076	0.040
Potassium		15	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		1.8	B	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186611	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1210			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-185879	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.58 g
Analysis Date:	06/19/2015 1150			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.16		0.015	0.11

Client Sample ID: **ASB-1001_72-74 (20150615)**

Lab Sample ID: 240-52076-4 Date Sampled: 06/15/2015 1745
Client Matrix: Solid % Moisture: 19.5 Date Received: 06/17/2015 0920

6010B Metals (ICP)

Analysis Method: 6010B Analysis Batch: 240-185884 Instrument ID: I9
Prep Method: 3050B Prep Batch: 240-185711 Lab File ID: I9061915A.asc
Dilution: 1.0 Initial Weight/Volume: 1.07 g
Analysis Date: 06/19/2015 1728 Final Weight/Volume: 100 mL
Prep Date: 06/18/2015 1221

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6100		6.7	23
Beryllium		0.25	J	0.030	0.58
Calcium		52000		27	580
Cadmium		120		0.024	0.23
Cobalt		18		0.055	5.8
Chromium		100		0.087	0.58
Copper		92		0.27	2.9
Iron		18000		3.7	12
Potassium		1800	B	7.2	580
Magnesium		7100		6.0	580
Manganese		310		0.098	1.7
Silver		0.30	J	0.073	0.58
Sodium		1600		22	580
Nickel		17		0.093	4.6
Vanadium		13		0.23	5.8
Arsenic		60		0.48	1.2
Selenium		39		0.39	0.58
Thallium		ND		0.15	1.2

Analysis Method: 6010B Analysis Batch: 240-186018 Instrument ID: I9
Prep Method: 3050B Prep Batch: 240-185711 Lab File ID: I9062015A.asc
Dilution: 5.0 Initial Weight/Volume: 1.07 g
Analysis Date: 06/20/2015 1331 Final Weight/Volume: 100 mL
Prep Date: 06/18/2015 1221

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		140		2.8	5.8
Barium		4300		2.4	120
Zinc		1300	B	3.3	12
Lead		2900		1.2	1.7

6010B Metals (ICP)-TCLP

Analysis Method: 6010B Analysis Batch: 240-186556 Instrument ID: I9
Prep Method: 3010A Prep Batch: 240-186308 Lab File ID: I9062415A.asc
Dilution: 1.0 Leach Batch: 240-186216 Initial Weight/Volume: 50 mL
Analysis Date: 06/24/2015 1940 Final Weight/Volume: 50 mL
Prep Date: 06/23/2015 1009
Leach Date: 06/22/2015 1710

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.50		0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1001_72-74 (20150615)**

Lab Sample ID: 240-52076-4 Date Sampled: 06/15/2015 1745
Client Matrix: Solid Date Received: 06/17/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.022	J B	0.0029	0.50
Barium		1.3	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0097	J	0.00014	0.10
Calcium		680		0.26	5.0
Chromium		0.0037	J B	0.00055	0.50
Cobalt		0.080		0.00056	0.050
Copper		0.0052	J B	0.0019	1.0
Iron		0.44		0.013	0.10
Lead		0.97	B	0.0019	0.50
Magnesium		18		0.055	5.0
Manganese		2.1	B	0.00046	0.015
Nickel		0.073	B	0.00076	0.040
Potassium		14	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		0.0053	J	0.0024	0.050
Zinc		3.4	B	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186611	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1211			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-185879	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	5.0			Initial Weight/Volume:	0.57 g
Analysis Date:	06/19/2015 1301			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		4.2		0.092	0.65

Client Sample ID: ASB-1001_80-82 (20150615)

Lab Sample ID: 240-52076-6 Date Sampled: 06/15/2015 1845
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/17/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-185884	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185711	Lab File ID:	I9061915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.03 g
Analysis Date:	06/19/2015 1736			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		2800		6.7	23
Barium		72		0.47	23
Beryllium		0.15	J	0.030	0.58
Calcium		29000		26	580
Cadmium		0.57		0.024	0.23
Cobalt		3.9	J	0.054	5.8
Chromium		10		0.086	0.58
Copper		4.8		0.26	2.9
Iron		11000		3.7	12
Potassium		560	J B	7.1	580
Magnesium		8500		6.0	580
Manganese		480		0.097	1.7
Silver		ND		0.073	0.58
Sodium		520	J	22	580
Nickel		8.4		0.092	4.6
Vanadium		12		0.23	5.8
Zinc		27	B	0.65	2.3
Arsenic		2.5		0.47	1.2
Lead		14		0.23	0.35
Selenium		ND		0.39	0.58
Thallium		ND		0.15	1.2

Analysis Method:	6010B	Analysis Batch:	240-186018	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185711	Lab File ID:	I9062015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.03 g
Analysis Date:	06/20/2015 1347			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		1.3		0.55	1.2

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-186556	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1944			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.0059	J	0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1001_80-82 (20150615)**

Lab Sample ID: 240-52076-6 Date Sampled: 06/15/2015 1845
Client Matrix: Solid Date Received: 06/17/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.012	J B	0.0029	0.50
Barium		1.2	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00046	J	0.00014	0.10
Calcium		580		0.26	5.0
Chromium		0.0043	J B	0.00055	0.50
Cobalt		0.013	J	0.00056	0.050
Copper		0.0042	J B	0.0019	1.0
Iron		0.053	J	0.013	0.10
Lead		ND		0.0019	0.50
Magnesium		14		0.055	5.0
Manganese		7.2	B	0.00046	0.015
Nickel		0.052	B	0.00076	0.040
Potassium		4.6	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.17	J B	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186611	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1212			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-185879	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	06/19/2015 1139			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.044	J	0.015	0.11

Client Sample ID: **ASB-1002_55-60 (20150616)**

Lab Sample ID: 240-52076-7 Date Sampled: 06/16/2015 1345
Client Matrix: Solid % Moisture: 18.0 Date Received: 06/17/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-185884	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185711	Lab File ID:	I9061915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Analysis Date:	06/19/2015 1740			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7100		6.6	23
Barium		120		0.47	23
Beryllium		0.47	J	0.030	0.57
Calcium		13000		26	570
Cadmium		0.48		0.024	0.23
Cobalt		10		0.054	5.7
Chromium		18		0.085	0.57
Copper		11		0.26	2.8
Iron		13000		3.6	11
Potassium		3700	B	7.1	570
Magnesium		5200		5.9	570
Manganese		220		0.096	1.7
Silver		ND		0.072	0.57
Sodium		170	J	22	570
Nickel		20		0.091	4.6
Vanadium		7.0		0.23	5.7
Zinc		54	B	0.64	2.3
Arsenic		4.4		0.47	1.1
Lead		40		0.23	0.34
Selenium		ND		0.39	0.57
Thallium		ND		0.15	1.1

Analysis Method:	6010B	Analysis Batch:	240-186018	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185711	Lab File ID:	I9062015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Analysis Date:	06/20/2015 1352			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		ND		0.55	1.1

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-186556	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1957			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.016	J	0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1002_55-60 (20150616)**

Lab Sample ID: 240-52076-7 Date Sampled: 06/16/2015 1345
Client Matrix: Solid Date Received: 06/17/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.0053	J B	0.0029	0.50
Barium		1.1	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0022	J	0.00014	0.10
Calcium		430		0.26	5.0
Chromium		0.0046	J B	0.00055	0.50
Cobalt		0.074		0.00056	0.050
Copper		0.0064	J B	0.0019	1.0
Iron		0.52		0.013	0.10
Lead		0.60	B	0.0019	0.50
Magnesium		41		0.055	5.0
Manganese		5.6	B	0.00046	0.015
Nickel		0.076	B	0.00076	0.040
Potassium		12	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		0.0028	J	0.0024	0.050
Zinc		1.6	B	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186611	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1214			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-185879	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	06/19/2015 1141			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.016	J	0.016	0.12

Client Sample ID: **ASB-1002_60-64 (20150616)**

Lab Sample ID: 240-52076-8 Date Sampled: 06/16/2015 1400
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/17/2015 0920

6010B Metals (ICP)

Analysis Method: 6010B Analysis Batch: 240-185884 Instrument ID: I9
Prep Method: 3050B Prep Batch: 240-185711 Lab File ID: I9061915A.asc
Dilution: 1.0 Initial Weight/Volume: 1.23 g
Analysis Date: 06/19/2015 1744 Final Weight/Volume: 100 mL
Prep Date: 06/18/2015 1221

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5200		5.9	20
Beryllium		0.29	J	0.026	0.51
Calcium		20000		23	510
Cadmium		16		0.021	0.20
Cobalt		21		0.048	5.1
Chromium		140		0.076	0.51
Copper		63		0.23	2.5
Iron		15000		3.3	10
Potassium		2100	B	6.3	510
Magnesium		6900		5.3	510
Manganese		250		0.086	1.5
Silver		0.11	J	0.064	0.51
Sodium		560		19	510
Nickel		19		0.081	4.1
Vanadium		9.9		0.20	5.1
Arsenic		5.2		0.42	1.0
Selenium		3.6		0.35	0.51
Thallium		ND		0.13	1.0

Analysis Method: 6010B Analysis Batch: 240-186018 Instrument ID: I9
Prep Method: 3050B Prep Batch: 240-185711 Lab File ID: I9062015A.asc
Dilution: 5.0 Initial Weight/Volume: 1.23 g
Analysis Date: 06/20/2015 1356 Final Weight/Volume: 100 mL
Prep Date: 06/18/2015 1221

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		28		2.4	5.1
Barium		3700		2.1	100
Zinc		1400	B	2.9	10
Lead		2000		1.0	1.5

6010B Metals (ICP)-TCLP

Analysis Method: 6010B Analysis Batch: 240-186556 Instrument ID: I9
Prep Method: 3010A Prep Batch: 240-186308 Lab File ID: I9062415A.asc
Dilution: 1.0 Leach Batch: 240-186216 Initial Weight/Volume: 50 mL
Analysis Date: 06/24/2015 2001 Final Weight/Volume: 50 mL
Prep Date: 06/23/2015 1009
Leach Date: 06/22/2015 1710

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		0.082	J	0.040	0.20
Antimony		0.16	J	0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Client Sample ID: **ASB-1002_60-64 (20150616)**

Lab Sample ID: 240-52076-8 Date Sampled: 06/16/2015 1400
Client Matrix: Solid Date Received: 06/17/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.0065	J B	0.0029	0.50
Barium		1.2	J B	0.0010	10
Beryllium		0.00018	J	0.00013	0.0050
Cadmium		0.0087	J	0.00014	0.10
Calcium		240		0.26	5.0
Chromium		0.0062	J B	0.00055	0.50
Cobalt		0.16		0.00056	0.050
Copper		0.0050	J B	0.0019	1.0
Iron		5.9		0.013	0.10
Lead		8.3	B	0.0019	0.50
Magnesium		22		0.055	5.0
Manganese		3.0	B	0.00046	0.015
Nickel		0.086	B	0.00076	0.040
Potassium		9.8	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		0.0030	J	0.0024	0.050
Zinc		6.3	B	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186611	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1216			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-185879	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	06/19/2015 1135			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.26		0.019	0.13

General Chemistry

Client Sample ID: **ASB-1001_65-70 (20150615)**

Lab Sample ID: 240-52076-3 Date Sampled: 06/15/2015 1725
Client Matrix: Solid % Moisture: 6.3 Date Received: 06/17/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	1.5	J	mg/Kg	1.4	4.3	5.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1515						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	52		mg/Kg	0.14	2.1	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1241						DryWt Corrected: Y
Percent Solids	94		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827						DryWt Corrected: N
Percent Moisture	6.3		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1001_72-74 (20150615)**

Lab Sample ID: 240-52076-4 Date Sampled: 06/15/2015 1745
Client Matrix: Solid % Moisture: 19.5 Date Received: 06/17/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	1.7	5.0	5.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1515					DryWt Corrected: Y	
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	100		mg/Kg	0.16	2.5	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1241					DryWt Corrected: Y	
Percent Solids	80		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827					DryWt Corrected: N	
Percent Moisture	20		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827					DryWt Corrected: N	

General Chemistry

Client Sample ID: **ASB-1001_80-82 (20150615)**

Lab Sample ID: 240-52076-6 Date Sampled: 06/15/2015 1845
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/17/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.38	J	mg/Kg	0.32	0.95	1.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1403						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	9.9		mg/Kg	0.15	2.4	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1241						DryWt Corrected: Y
Percent Solids	84		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827						DryWt Corrected: N
Percent Moisture	16		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1002_55-60 (20150616)**

Lab Sample ID: 240-52076-7 Date Sampled: 06/16/2015 1345
Client Matrix: Solid % Moisture: 18.0 Date Received: 06/17/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.33	0.98	1.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1407						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	18		mg/Kg	0.16	2.4	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1241						DryWt Corrected: Y
Percent Solids	82		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827						DryWt Corrected: N
Percent Moisture	18		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1002_60-64 (20150616)**

Lab Sample ID: 240-52076-8 Date Sampled: 06/16/2015 1400
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/17/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.34	1.0	1.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1408					DryWt Corrected: Y	
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	140		mg/Kg	0.16	2.5	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1241					DryWt Corrected: Y	
Percent Solids	80		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827					DryWt Corrected: N	
Percent Moisture	20		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827					DryWt Corrected: N	

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC/MS Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC Semi VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-185687					
LCS 240-185697/2-A	Lab Control Sample	T	Solid	8260B	240-185697
MB 240-185697/1-A	Method Blank	T	Solid	8260B	240-185697
Prep Batch: 240-185697					
LCS 240-185697/2-A	Lab Control Sample	T	Solid	5035	
MB 240-185697/1-A	Method Blank	T	Solid	5035	
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	5035	
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	5035	
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	5035	
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	5035	
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	5035	
240-52076-9	MB-01 (20150616)	T	Solid	5035	
Prep Batch: 240-186101					
LB 240-186101/1-A	Method Blank	P	Solid	1311	
240-52076-3	ASB-1001_65-70 (20150615)	P	Solid	1311	
240-52076-4	ASB-1001_72-74 (20150615)	P	Solid	1311	
240-52076-6	ASB-1001_80-82 (20150615)	P	Solid	1311	
240-52076-7	ASB-1002_55-60 (20150616)	P	Solid	1311	
240-52076-8	ASB-1002_60-64 (20150616)	P	Solid	1311	
240-52076-8MS	Matrix Spike	P	Solid	1311	
240-52076-8MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-186116					
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	8260B	240-185697
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	8260B	240-185697
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	8260B	240-185697
240-52076-9	MB-01 (20150616)	T	Solid	8260B	240-185697
Analysis Batch:240-186195					
LB 240-186101/1-A	Method Blank	P	Solid	8260B	
LCS 240-186195/8	Lab Control Sample	T	Water	8260B	
240-52076-3	ASB-1001_65-70 (20150615)	P	Solid	8260B	
240-52076-4	ASB-1001_72-74 (20150615)	P	Solid	8260B	
240-52076-6	ASB-1001_80-82 (20150615)	P	Solid	8260B	
240-52076-7	ASB-1002_55-60 (20150616)	P	Solid	8260B	
240-52076-8	ASB-1002_60-64 (20150616)	P	Solid	8260B	
240-52076-8MS	Matrix Spike	P	Solid	8260B	
240-52076-8MSD	Matrix Spike Duplicate	P	Solid	8260B	
Analysis Batch:240-186326					
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	8260B	240-185697
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	8260B	240-185697

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-185656					
LCS 240-185656/24-A	Lab Control Sample	T	Solid	3540C	
MB 240-185656/23-A	Method Blank	T	Solid	3540C	
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	3540C	
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	3540C	
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	3540C	
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	3540C	
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	3540C	
Analysis Batch:240-186081					
LCS 240-185656/24-A	Lab Control Sample	T	Solid	8270C	240-185656
MB 240-185656/23-A	Method Blank	T	Solid	8270C	240-185656
Prep Batch: 240-186216					
240-52076-3	ASB-1001_65-70 (20150615)	P	Solid	1311	
240-52076-4	ASB-1001_72-74 (20150615)	P	Solid	1311	
240-52076-6	ASB-1001_80-82 (20150615)	P	Solid	1311	
240-52076-7	ASB-1002_55-60 (20150616)	P	Solid	1311	
240-52076-8	ASB-1002_60-64 (20150616)	P	Solid	1311	
240-52203-A-1-L MS	Matrix Spike	P	Solid	1311	
Analysis Batch:240-186276					
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	8270C	240-185656
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	8270C	240-185656
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	8270C	240-185656
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	8270C	240-185656
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	8270C	240-185656
Prep Batch: 240-186294					
LCS 240-186294/12-A	Lab Control Sample	T	Water	3510C	
MB 240-186294/11-A	Method Blank	T	Water	3510C	
240-52076-3	ASB-1001_65-70 (20150615)	P	Solid	3510C	240-186216
240-52076-4	ASB-1001_72-74 (20150615)	P	Solid	3510C	240-186216
240-52076-6	ASB-1001_80-82 (20150615)	P	Solid	3510C	240-186216
240-52076-7	ASB-1002_55-60 (20150616)	P	Solid	3510C	240-186216
240-52076-8	ASB-1002_60-64 (20150616)	P	Solid	3510C	240-186216
240-52203-A-1-L MS	Matrix Spike	P	Solid	3510C	240-186216
Analysis Batch:240-186705					
LCS 240-186294/12-A	Lab Control Sample	T	Water	8270C	240-186294
MB 240-186294/11-A	Method Blank	T	Water	8270C	240-186294
240-52203-A-1-L MS	Matrix Spike	P	Solid	8270C	240-186294

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:240-186914					
240-52076-3	ASB-1001_65-70 (20150615)	P	Solid	8270C	240-186294
240-52076-4	ASB-1001_72-74 (20150615)	P	Solid	8270C	240-186294
240-52076-7	ASB-1002_55-60 (20150616)	P	Solid	8270C	240-186294
240-52076-8	ASB-1002_60-64 (20150616)	P	Solid	8270C	240-186294
Analysis Batch:240-187094					
240-52076-6	ASB-1001_80-82 (20150615)	P	Solid	8270C	240-186294

Report Basis
P = TCLP
T = Total

GC VOA					
Prep Batch: 240-186058					
LCS 240-186058/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-186058/12-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-186058/1-A	Method Blank	T	Solid	5035	
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	5035	
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	5035	
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	5035	
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	5035	
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	5035	
240-52076-9	MB-01 (20150616)	T	Solid	5035	
Analysis Batch:240-186340					
LCS 240-186058/2-A	Lab Control Sample	T	Solid	WI-GRO	240-186058
LCSD 240-186058/12-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-186058
MB 240-186058/1-A	Method Blank	T	Solid	WI-GRO	240-186058
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	WI-GRO	240-186058
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	WI-GRO	240-186058
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	WI-GRO	240-186058
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	WI-GRO	240-186058
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	WI-GRO	240-186058
240-52076-9	MB-01 (20150616)	T	Solid	WI-GRO	240-186058

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-185628					
LCS 240-185628/13-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-185628/14-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-185628/12-A	Method Blank	T	Solid	WI DRO PREP	
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	WI DRO PREP	
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	WI DRO PREP	
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	WI DRO PREP	
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	WI DRO PREP	
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	WI DRO PREP	
Analysis Batch:240-185907					
LCS 240-185628/13-A	Lab Control Sample	T	Solid	WI-DRO	240-185628
LCSD 240-185628/14-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-185628
MB 240-185628/12-A	Method Blank	T	Solid	WI-DRO	240-185628
Analysis Batch:240-186213					
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	WI-DRO	240-185628
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	WI-DRO	240-185628
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	WI-DRO	240-185628
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	WI-DRO	240-185628
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	WI-DRO	240-185628

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-185711					
LCS 240-185711/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-185711/1-A	Method Blank	T	Solid	3050B	
240-52076-J-1-B MS	Matrix Spike	T	Solid	3050B	
240-52076-J-1-C MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	3050B	
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	3050B	
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	3050B	
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	3050B	
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	3050B	
Prep Batch: 240-185724					
LCS 240-185724/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-185724/1-A	Method Blank	T	Solid	7471A	
240-52076-J-1-E MS	Matrix Spike	T	Solid	7471A	
240-52076-J-1-F MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	7471A	
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	7471A	
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	7471A	
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	7471A	
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	7471A	
Analysis Batch:240-185879					
LCS 240-185724/2-A	Lab Control Sample	T	Solid	7471A	240-185724
MB 240-185724/1-A	Method Blank	T	Solid	7471A	240-185724
240-52076-J-1-E MS	Matrix Spike	T	Solid	7471A	240-185724
240-52076-J-1-F MSD	Matrix Spike Duplicate	T	Solid	7471A	240-185724
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	7471A	240-185724
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	7471A	240-185724
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	7471A	240-185724
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	7471A	240-185724
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	7471A	240-185724
Analysis Batch:240-185884					
LCS 240-185711/2-A	Lab Control Sample	T	Solid	6010B	240-185711
MB 240-185711/1-A	Method Blank	T	Solid	6010B	240-185711
240-52076-J-1-B MS	Matrix Spike	T	Solid	6010B	240-185711
240-52076-J-1-C MSD	Matrix Spike Duplicate	T	Solid	6010B	240-185711
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	6010B	240-185711
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	6010B	240-185711
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	6010B	240-185711
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	6010B	240-185711
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	6010B	240-185711

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-186018					
LCS 240-185711/2-A	Lab Control Sample	T	Solid	6010B	240-185711
MB 240-185711/1-A	Method Blank	T	Solid	6010B	240-185711
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	6010B	240-185711
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	6010B	240-185711
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	6010B	240-185711
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	6010B	240-185711
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	6010B	240-185711
Prep Batch: 240-186216					
LB 240-186216/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-186216/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-52076-K-1-D MS ^5	Matrix Spike	P	Solid	1311	
240-52076-K-1-G MS	Matrix Spike	P	Solid	1311	
240-52076-K-1-E MSD ^5	Matrix Spike Duplicate	P	Solid	1311	
240-52076-K-1-H MSD	Matrix Spike Duplicate	P	Solid	1311	
240-52076-3	ASB-1001_65-70 (20150615)	P	Solid	1311	
240-52076-4	ASB-1001_72-74 (20150615)	P	Solid	1311	
240-52076-6	ASB-1001_80-82 (20150615)	P	Solid	1311	
240-52076-7	ASB-1002_55-60 (20150616)	P	Solid	1311	
240-52076-8	ASB-1002_60-64 (20150616)	P	Solid	1311	
Prep Batch: 240-186308					
LCS 240-186308/3-A	Lab Control Sample	T	Water	3010A	
MB 240-186308/2-A	Method Blank	T	Water	3010A	
LB 240-186216/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-186216
240-52076-K-1-D MS ^5	Matrix Spike	P	Solid	3010A	240-186216
240-52076-K-1-E MSD ^5	Matrix Spike Duplicate	P	Solid	3010A	240-186216
240-52076-3	ASB-1001_65-70 (20150615)	P	Solid	3010A	240-186216
240-52076-4	ASB-1001_72-74 (20150615)	P	Solid	3010A	240-186216
240-52076-6	ASB-1001_80-82 (20150615)	P	Solid	3010A	240-186216
240-52076-7	ASB-1002_55-60 (20150616)	P	Solid	3010A	240-186216
240-52076-8	ASB-1002_60-64 (20150616)	P	Solid	3010A	240-186216
Prep Batch: 240-186309					
LCS 240-186309/3-A	Lab Control Sample	T	Water	7470A	
MB 240-186309/2-A	Method Blank	T	Water	7470A	
LB 240-186216/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-186216
240-52076-K-1-G MS	Matrix Spike	P	Solid	7470A	240-186216
240-52076-K-1-H MSD	Matrix Spike Duplicate	P	Solid	7470A	240-186216
240-52076-3	ASB-1001_65-70 (20150615)	P	Solid	7470A	240-186216
240-52076-4	ASB-1001_72-74 (20150615)	P	Solid	7470A	240-186216
240-52076-6	ASB-1001_80-82 (20150615)	P	Solid	7470A	240-186216
240-52076-7	ASB-1002_55-60 (20150616)	P	Solid	7470A	240-186216
240-52076-8	ASB-1002_60-64 (20150616)	P	Solid	7470A	240-186216

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-186556					
LB 240-186216/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-186308
LCS 240-186308/3-A	Lab Control Sample	T	Water	6010B	240-186308
MB 240-186308/2-A	Method Blank	T	Water	6010B	240-186308
240-52076-K-1-D MS ^5	Matrix Spike	P	Solid	6010B	240-186308
240-52076-K-1-E MSD ^5	Matrix Spike Duplicate	P	Solid	6010B	240-186308
240-52076-3	ASB-1001_65-70 (20150615)	P	Solid	6010B	240-186308
240-52076-4	ASB-1001_72-74 (20150615)	P	Solid	6010B	240-186308
240-52076-6	ASB-1001_80-82 (20150615)	P	Solid	6010B	240-186308
240-52076-7	ASB-1002_55-60 (20150616)	P	Solid	6010B	240-186308
240-52076-8	ASB-1002_60-64 (20150616)	P	Solid	6010B	240-186308
Analysis Batch:240-186611					
LB 240-186216/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-186309
LCS 240-186309/3-A	Lab Control Sample	T	Water	7470A	240-186309
MB 240-186309/2-A	Method Blank	T	Water	7470A	240-186309
240-52076-K-1-G MS	Matrix Spike	P	Solid	7470A	240-186309
240-52076-K-1-H MSD	Matrix Spike Duplicate	P	Solid	7470A	240-186309
240-52076-3	ASB-1001_65-70 (20150615)	P	Solid	7470A	240-186309
240-52076-4	ASB-1001_72-74 (20150615)	P	Solid	7470A	240-186309
240-52076-6	ASB-1001_80-82 (20150615)	P	Solid	7470A	240-186309
240-52076-7	ASB-1002_55-60 (20150616)	P	Solid	7470A	240-186309
240-52076-8	ASB-1002_60-64 (20150616)	P	Solid	7470A	240-186309

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-185642					
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	Moisture	
240-52076-3DU	Duplicate	T	Solid	Moisture	
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	Moisture	
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	Moisture	
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	Moisture	
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	Moisture	
Prep Batch: 240-186524					
LCSI 240-186524/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-186524/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-186524/9-A	Method Blank	T	Solid	3060A	
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	3060A	
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	3060A	
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	3060A	
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	3060A	
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	3060A	
Analysis Batch:240-186589					
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	7196A	
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	7196A	
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	7196A	
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	7196A	
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	7196A	
Analysis Batch:240-186823					
LCSI 240-186524/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-186524
LCSS 240-186524/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-186524
MB 240-186524/9-A	Method Blank	T	Solid	7196A	240-186524
240-52076-3	ASB-1001_65-70 (20150615)	T	Solid	7196A	240-186524
240-52076-4	ASB-1001_72-74 (20150615)	T	Solid	7196A	240-186524
240-52076-6	ASB-1001_80-82 (20150615)	T	Solid	7196A	240-186524
240-52076-7	ASB-1002_55-60 (20150616)	T	Solid	7196A	240-186524
240-52076-8	ASB-1002_60-64 (20150616)	T	Solid	7196A	240-186524

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52076-3	ASB-1001_65-70 (20150615)	274X	210X	303X	315X
240-52076-4	ASB-1001_72-74 (20150615)	343X	313X	396X	447X
240-52076-6	ASB-1001_80-82 (20150615)	90	75	99	91
240-52076-7	ASB-1002_55-60 (20150616)	128	100	140X	123
240-52076-8	ASB-1002_60-64 (20150616)	287X	215X	324X	310X
240-52076-9	MB-01 (20150616)	108	94	117	109
MB 240-185697/1-A		93	73	101	93
LCS 240-185697/2-A		92	86	104	98

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-186101/1-A MB		98	107	102	102
LCS 240-186195/8		104	104	97	108
240-52076-8 MS	ASB-1002_60-64 (20150616) MS	100	97	92	101
240-52076-8 MSD	ASB-1002_60-64 (20150616) MSD	102	98	95	104

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-52076-3	ASB-1001_65-70 (20150615)	98	98	100	102
240-52076-4	ASB-1001_72-74 (20150615)	95	96	99	97
240-52076-6	ASB-1001_80-82 (20150615)	97	93	100	99
240-52076-7	ASB-1002_55-60 (20150616)	92	97	100	100
240-52076-8	ASB-1002_60-64 (20150616)	96	98	100	100

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-185656/23-A		71	59	69	70	76	52
LCS 240-185656/24-A		71	62	72	69	75	80

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52076-3	ASB-1001_65-70 (20150615)	0X	0X	0X	0X	0X	0X
240-52076-4	ASB-1001_72-74 (20150615)	0X	0X	0X	0X	0X	0X
240-52076-6	ASB-1001_80-82 (20150615)	80	70	83	88	83	83
240-52076-7	ASB-1002_55-60 (20150616)	76	66	82	0X	112X	86
240-52076-8	ASB-1002_60-64 (20150616)	51	46	77	0X	73	47

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-52076-3	ASB-1001_65-70 (20150615)	77	71	81	65	76	96
240-52076-4	ASB-1001_72-74 (20150615)	56	53	59	47	60	70
240-52076-6	ASB-1001_80-82 (20150615)	76	61	84	53	77	94
240-52076-7	ASB-1002_55-60 (20150616)	86	72	90	62	83	97
240-52076-8	ASB-1002_60-64 (20150616)	70	61	73	50	71	82
MB 240-186294/11-A		89	82	93	79	89	93
LCS 240-186294/12-A		72	69	76	67	72	78
240-52203-A-1-L MS		86	84	77	57	76	58

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Method Blank - Batch: 240-185697

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-185697/1-A	Analysis Batch:	240-185687	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185697	Lab File ID:	143757.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/18/2015 2033	Units:	ug/Kg	Final Weight/Volume:	5.00 mL
Prep Date:	06/18/2015 1146				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Method Blank - Batch: 240-185697

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-185697/1-A	Analysis Batch:	240-185687	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185697	Lab File ID:	143757.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/18/2015 2033	Units:	ug/Kg	Final Weight/Volume:	5.00 mL
Prep Date:	06/18/2015 1146				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	93	26 - 141
Dibromofluoromethane (Surr)	73	30 - 122
1,2-Dichloroethane-d4 (Surr)	101	39 - 128
Toluene-d8 (Surr)	93	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Control Sample - Batch: 240-185697

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-185697/2-A	Analysis Batch:	240-185687	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185697	Lab File ID:	143756.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/18/2015 2012	Units:	ug/Kg	Final Weight/Volume:	5.00 mL
Prep Date:	06/18/2015 1146				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	1940	97	16 - 156	
Allyl chloride	1000	776	78	50 - 150	
Bromobenzene	1000	864	86	72 - 120	
Bromochloromethane	1000	879	88	56 - 128	
Bromodichloromethane	1000	865	87	28 - 123	
Benzene	1000	1000	100	70 - 120	
Bromoform	1000	728	73	10 - 120	
Bromomethane	1000	638	64	10 - 120	
2-Butanone (MEK)	2000	2040	102	10 - 199	
Carbon disulfide	1000	636	64	10 - 132	
Carbon tetrachloride	1000	892	89	29 - 120	
Chlorobenzene	1000	954	95	71 - 120	
Chlorodibromomethane	1000	851	85	22 - 120	
Chloroethane	1000	967	97	10 - 120	
Chloroform	1000	962	96	63 - 120	
Chloromethane	1000	768	77	25 - 120	
2-Chlorotoluene	1000	1050	105	68 - 122	
4-Chlorotoluene	1000	1040	104	68 - 122	
cis-1,2-Dichloroethene	1000	954	95	60 - 125	
cis-1,3-Dichloropropene	1000	906	91	25 - 120	
Cyclohexane	1000	1090	109	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	886	89	10 - 129	
1,2-Dibromoethane	1000	998	100	47 - 123	
Dibromomethane	1000	961	96	68 - 120	
1,2-Dichlorobenzene	1000	926	93	68 - 120	
1,3-Dichlorobenzene	1000	904	90	66 - 121	
1,4-Dichlorobenzene	1000	910	91	65 - 120	
Dichlorodifluoromethane	1000	491	49	10 - 120	
1,1-Dichloroethane	1000	1130	113	63 - 120	
1,2-Dichloroethane	1000	1100	110	68 - 120	
1,1-Dichloroethene	1000	690	69	44 - 143	
Dichlorofluoromethane	1000	1160	116	40 - 160	
1,2-Dichloropropane	1000	1180	118	73 - 120	
1,3-Dichloropropane	1000	1020	102	74 - 120	
2,2-Dichloropropane	1000	832	83	25 - 123	
1,1-Dichloropropene	1000	1070	107	60 - 123	
Ethylbenzene	1000	998	100	66 - 120	
Ethyl ether	1000	1170	117	70 - 130	
Hexachlorobutadiene	1000	954	95	34 - 135	
2-Hexanone	2000	1900	95	43 - 130	
Isopropylbenzene	1000	1040	104	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Control Sample - Batch: 240-185697

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-185697/2-A	Analysis Batch:	240-185687	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185697	Lab File ID:	143756.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/18/2015 2012	Units:	ug/Kg	Final Weight/Volume:	5.00 mL
Prep Date:	06/18/2015 1146				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	4650	93	44 - 173	
Methylcyclohexane	1000	982	98	41 - 133	
Methylene Chloride	1000	872	87	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	2150	107	49 - 121	
Methyl tert butyl ether	1000	918	92	34 - 157	
m-Xylene & p-Xylene	1000	1010	101	67 - 120	
Naphthalene	1000	944	94	37 - 126	
n-Butylbenzene	1000	1050	105	51 - 137	
N-Propylbenzene	1000	1020	102	64 - 130	
o-Xylene	1000	1020	102	68 - 120	
p-Isopropyltoluene	1000	1050	105	56 - 136	
sec-Butylbenzene	1000	1150	115	58 - 131	
Styrene	1000	869	87	60 - 120	
tert-Butylbenzene	1000	1060	106	58 - 128	
1,1,1,2-Tetrachloroethane	1000	998	100	27 - 121	
1,1,2,2-Tetrachloroethane	1000	1150	115	54 - 121	
Tetrachloroethene	1000	873	87	58 - 131	
Tetrahydrofuran	2000	1880	94	70 - 130	
Toluene	1000	1050	105	66 - 123	
trans-1,2-Dichloroethene	1000	895	89	58 - 121	
trans-1,3-Dichloropropene	1000	993	99	22 - 122	
1,2,3-Trichlorobenzene	1000	860	86	43 - 129	
1,2,4-Trichlorobenzene	1000	823	82	41 - 135	
1,1,1-Trichloroethane	1000	909	91	38 - 122	
1,1,2-Trichloroethane	1000	1040	104	74 - 120	
Trichloroethene	1000	962	96	59 - 124	
Trichlorofluoromethane	1000	1110	111	17 - 145	
1,2,3-Trichloropropane	1000	1050	105	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	673	67	48 - 151	
1,2,4-Trimethylbenzene	1000	1060	106	62 - 133	
1,3,5-Trimethylbenzene	1000	1090	109	60 - 130	
Vinyl chloride	1000	819	82	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	92	26 - 141
Dibromofluoromethane (Surr)	86	30 - 122
1,2-Dichloroethane-d4 (Surr)	104	39 - 128
Toluene-d8 (Surr)	98	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Method Blank - Batch: 240-186195

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-186101/1-A	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950663.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/22/2015 1839	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1839				
Leach Date:	06/21/2015 1535				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	98	70 - 124
Dibromofluoromethane (Surr)	107	80 - 128
1,2-Dichloroethane-d4 (Surr)	102	80 - 121
Toluene-d8 (Surr)	102	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Control Sample - Batch: 240-186195

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-186195/8	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UX950664.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/22/2015 1901	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1901				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	1050	105	80 - 120	
2-Butanone (MEK)	2000	1750	87	49 - 120	
Carbon tetrachloride	1000	1120	112	54 - 122	
Chlorobenzene	1000	1060	106	80 - 120	
Chloroform	1000	1110	111	80 - 123	
1,2-Dichloroethane	1000	1030	103	80 - 120	
1,1-Dichloroethene	1000	1090	109	71 - 133	
Tetrachloroethene	1000	1110	111	79 - 134	
Trichloroethene	1000	1080	108	78 - 130	
Vinyl chloride	1000	1050	105	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	104	70 - 124
Dibromofluoromethane (Surr)	104	80 - 128
1,2-Dichloroethane-d4 (Surr)	97	80 - 121
Toluene-d8 (Surr)	108	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186195

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-52076-8	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950678.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/23/2015 0033			Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 0033				5 mL
Leach Date:	06/21/2015 1535				

MSD Lab Sample ID:	240-52076-8	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950679.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/23/2015 0056			Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 0056				5 mL
Leach Date:	06/21/2015 1535				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	97	99	80 - 120	2	30		
2-Butanone (MEK)	76	82	49 - 120	6	30		
Carbon tetrachloride	96	102	60 - 120	5	30		
Chlorobenzene	101	101	80 - 120	0	30		
Chloroform	101	101	80 - 124	0	30		
1,2-Dichloroethane	96	96	80 - 120	0	30		
1,1-Dichloroethene	102	100	67 - 139	2	30		
Tetrachloroethene	105	104	74 - 138	1	30		
Trichloroethene	98	102	75 - 134	4	30		
Vinyl chloride	94	93	51 - 120	2	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	100	102	70 - 124
Dibromofluoromethane (Surr)	97	98	80 - 128
1,2-Dichloroethane-d4 (Surr)	92	95	80 - 121
Toluene-d8 (Surr)	101	104	80 - 120

Method Blank - Batch: 240-185656

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-185656/23-A	Analysis Batch:	240-186081	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185656	Lab File ID:	50622008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/22/2015 1208	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Method Blank - Batch: 240-185656

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-185656/23-A	Analysis Batch:	240-186081	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185656	Lab File ID:	50622008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/22/2015 1208	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	71	24 - 110
2-Fluorophenol (Surr)	59	24 - 110
Nitrobenzene-d5 (Surr)	69	20 - 110
Phenol-d5 (Surr)	70	26 - 110
Terphenyl-d14 (Surr)	76	36 - 110
2,4,6-Tribromophenol (Surr)	52	10 - 110

Lab Control Sample - Batch: 240-185656

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-185656/24-A	Analysis Batch:	240-186081	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185656	Lab File ID:	50622009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/22/2015 1232	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	457	69	35 - 110	
2,2'-oxybis[1-chloropropane]	667	489	73	29 - 110	
2,4-Dichlorophenol	667	453	68	39 - 110	
2,4-Dimethylphenol	667	420	63	29 - 110	
2,4-Dinitrophenol	1330	1290	97	10 - 110	J
2,4-Dinitrotoluene	667	534	80	48 - 110	
2,6-Dinitrotoluene	667	546	82	45 - 110	
2-Chloronaphthalene	667	431	65	32 - 110	
2,4,5-Trichlorophenol	667	436	65	25 - 110	
2-Chlorophenol	667	429	64	37 - 110	
2,4,6-Trichlorophenol	667	422	63	12 - 110	
2-Methylnaphthalene	667	466	70	36 - 110	
2-Methylphenol	667	421	63	41 - 110	
2-Nitroaniline	667	522	78	45 - 110	J
2-Nitrophenol	667	514	77	34 - 110	
3,3'-Dichlorobenzidine	1330	854	64	28 - 110	J
3-Nitroaniline	667	477	72	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	1350	101	10 - 110	J
4-Bromophenyl phenyl ether	667	530	80	39 - 110	
4-Chloro-3-methylphenol	667	492	74	48 - 110	
4-Chloroaniline	667	383	57	30 - 110	
4-Chlorophenyl phenyl ether	667	514	77	40 - 110	
4-Nitroaniline	667	547	82	48 - 110	J
4-Nitrophenol	1330	1090	82	28 - 110	J
Acenaphthene	667	474	71	38 - 110	
Acenaphthylene	667	460	69	40 - 110	
Acetophenone	667	423	63	40 - 110	
Anthracene	667	486	73	48 - 110	
Atrazine	1330	1120	84	66 - 127	
Benzaldehyde	1330	958	72	32 - 110	
Benzo[a]anthracene	667	460	69	50 - 110	
Benzo[a]pyrene	667	527	79	44 - 110	
Benzo[b]fluoranthene	667	520	78	43 - 110	
Benzo[g,h,i]perylene	667	552	83	51 - 110	
Benzo[k]fluoranthene	667	525	79	38 - 105	
Bis(2-chloroethoxy)methane	667	437	66	32 - 110	
Bis(2-chloroethyl)ether	667	419	63	34 - 110	
Bis(2-ethylhexyl) phthalate	667	464	70	50 - 110	
Butyl benzyl phthalate	667	437	66	51 - 110	
Caprolactam	1330	1080	81	44 - 114	
Carbazole	667	498	75	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Control Sample - Batch: 240-185656

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-185656/24-A	Analysis Batch:	240-186081	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185656	Lab File ID:	50622009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/22/2015 1232	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	494	74	50 - 110	
Dibenz(a,h)anthracene	667	556	83	51 - 110	
Dibenzofuran	667	471	71	43 - 110	
Diethyl phthalate	667	497	75	52 - 110	
Dimethyl phthalate	667	485	73	50 - 110	
Di-n-butyl phthalate	667	472	71	51 - 110	
Di-n-octyl phthalate	667	371	56	48 - 110	
Fluoranthene	667	512	77	51 - 110	
Fluorene	667	491	74	46 - 110	
Hexachlorobenzene	667	561	84	43 - 110	
Hexachlorobutadiene	667	442	66	29 - 110	
Hexachlorocyclopentadiene	667	245	37	12 - 110	J
Hexachloroethane	667	412	62	30 - 110	
Indeno[1,2,3-cd]pyrene	667	509	76	50 - 110	
Isophorone	667	472	71	36 - 110	
Naphthalene	667	452	68	36 - 110	
Nitrobenzene	667	474	71	32 - 110	
N-Nitrosodi-n-propylamine	667	480	72	38 - 110	
N-Nitrosodiphenylamine	1330	1020	76	46 - 110	
Pentachlorophenol	1330	652	49	10 - 110	
Phenol	667	463	69	38 - 110	
Phenanthrene	667	481	72	49 - 110	
Pyrene	667	469	70	49 - 110	
3 & 4 Methylphenol	667	429	64	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	71	24 - 110
2-Fluorophenol (Surr)	62	24 - 110
Nitrobenzene-d5 (Surr)	72	20 - 110
Phenol-d5 (Surr)	69	26 - 110
Terphenyl-d14 (Surr)	75	36 - 110
2,4,6-Tribromophenol (Surr)	80	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Method Blank - Batch: 240-186294

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-186294/11-A	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-186294	Lab File ID:	50625008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/25/2015 1117	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.0040
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	89	30 - 110
2-Fluorophenol (Surr)	82	20 - 110
Nitrobenzene-d5 (Surr)	93	28 - 110
Phenol-d5 (Surr)	79	21 - 110
Terphenyl-d14 (Surr)	89	48 - 110
2,4,6-Tribromophenol (Surr)	93	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Control Sample - Batch: 240-186294

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-186294/12-A	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-186294	Lab File ID:	50625009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/25/2015 1142	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0535	67	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0619	77	54 - 110	
Pyridine	0.0800	0.0445	56	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0566	71	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0557	70	46 - 110	
2-Methylphenol	0.0800	0.0739	92	44 - 111	
Hexachlorobenzene	0.0800	0.0508	64	50 - 110	
Hexachlorobutadiene	0.0800	0.0544	68	34 - 110	
Hexachloroethane	0.0800	0.0537	67	41 - 110	
Nitrobenzene	0.0800	0.0594	74	40 - 110	
Pentachlorophenol	0.160	0.106	67	12 - 110	
3 & 4 Methylphenol	0.0800	0.0619	77	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	72	30 - 110
2-Fluorophenol (Surr)	69	20 - 110
Nitrobenzene-d5 (Surr)	76	28 - 110
Phenol-d5 (Surr)	67	21 - 110
Terphenyl-d14 (Surr)	72	48 - 110
2,4,6-Tribromophenol (Surr)	78	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Matrix Spike - Batch: 240-186294

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-52203-A-1-L MS	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186294	Lab File ID:	50625028.D
Dilution:	50	Leach Batch:	240-186216	Initial Weight/Volume:	250 mL
Analysis Date:	06/25/2015 1936	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	06/22/2015 1710				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0513	64	31 - 110	J
2,4-Dinitrotoluene	ND	0.0800	0.0547	68	42 - 110	J
Pyridine	ND	0.0800	0.276	345	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0474	59	41 - 110	J
2,4,6-Trichlorophenol	ND	0.0800	0.0508	63	35 - 110	J
2-Methylphenol	3.6	0.0800	3.60	-26	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0586	73	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0549	69	28 - 110	J
Hexachloroethane	ND	0.0800	0.0576	72	26 - 110	J
Nitrobenzene	ND	0.0800	0.0838	105	32 - 110	J
Pentachlorophenol	ND	0.160	ND	0	10 - 124	
3 & 4 Methylphenol	7.2	0.0800	7.23	89	29 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	86	30 - 110
2-Fluorophenol (Surr)	84	20 - 110
Nitrobenzene-d5 (Surr)	77	28 - 110
Phenol-d5 (Surr)	57	21 - 110
Terphenyl-d14 (Surr)	76	48 - 110
2,4,6-Tribromophenol (Surr)	58	23 - 110

Method Blank - Batch: 240-186058 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-186058/1-A	Analysis Batch:	240-186340	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186058	Lab File ID:	Y0062306.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/23/2015 1532	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186058 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-186058/2-A	Analysis Batch:	240-186340	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186058	Lab File ID:	Y0062307.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/23/2015 1606	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186058/12-A	Analysis Batch:	240-186340	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186058	Lab File ID:	Y0062318.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/23/2015 2232	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	111	95	80 - 120	16	20		

Method Blank - Batch: 240-185628

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-185628/12-A	Analysis Batch:	240-185907	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-185628	Lab File ID:	P14F061908.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/19/2015 1811	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	3.47	J	0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-185628

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-185628/13-A	Analysis Batch:	240-185907	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-185628	Lab File ID:	P14F061909.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/19/2015 1838	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-185628/14-A	Analysis Batch:	240-185907	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-185628	Lab File ID:	P14F061921.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/20/2015 0003	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	110	115	70 - 120	4	20		

Method Blank - Batch: 240-185711 **Method: 6010B**
Preparation: 3050B

Lab Sample ID:	MB 240-185711/1-A	Analysis Batch:	240-185884	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9061915A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/19/2015 1642	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	ND		0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	ND		5.2	500
Manganese	ND		0.084	1.5
Sodium	ND		19	500
Nickel	ND		0.080	4.0
Potassium	12.4	J	6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Selenium	ND		0.34	0.50
Vanadium	ND		0.20	5.0
Thallium	ND		0.13	1.0
Zinc	0.584	J	0.56	2.0

Method Blank - Batch: 240-185711 **Method: 6010B**
Preparation: 3050B

Lab Sample ID:	MB 240-185711/1-A	Analysis Batch:	240-186018	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9062015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/20/2015 1258	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Antimony	ND		0.48	1.0

Lab Control Sample - Batch: 240-185711 **Method: 6010B**
Preparation: 3050B

Lab Sample ID:	LCS 240-185711/2-A	Analysis Batch:	240-185884	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9061915A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/19/2015 1646	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	189	95	80 - 120	
Barium	200	192	96	80 - 120	
Beryllium	5.00	4.64	93	80 - 120	
Cadmium	5.00	4.79	96	80 - 120	
Calcium	5000	4730	95	80 - 120	
Chromium	20.0	18.8	94	80 - 120	
Cobalt	50.0	47.3	95	80 - 120	
Copper	25.0	23.3	93	80 - 120	
Iron	100	97.5	98	80 - 120	
Magnesium	5000	4640	93	80 - 120	
Manganese	50.0	47.5	95	80 - 120	
Sodium	5000	4930	99	80 - 120	
Nickel	50.0	48.0	96	80 - 120	
Potassium	5000	4910	98	80 - 120	
Silver	5.00	4.76	95	80 - 120	
Arsenic	200	192	96	80 - 120	
Lead	50.0	46.5	93	80 - 120	
Selenium	200	190	95	80 - 120	
Vanadium	50.0	47.5	95	80 - 120	
Thallium	200	188	94	80 - 120	
Zinc	50.0	49.4	99	80 - 120	

Lab Control Sample - Batch: 240-185711 **Method: 6010B**
Preparation: 3050B

Lab Sample ID:	LCS 240-185711/2-A	Analysis Batch:	240-186018	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9062015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/20/2015 1303	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	50.0	48.8	98	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185711

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-52076-J-1-B MS
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/19/2015 1702
Prep Date: 06/18/2015 1221
Leach Date: N/A

Analysis Batch: 240-185884
Prep Batch: 240-185711
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9061915A.asc
Initial Weight/Volume: 1.15 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-52076-J-1-C MSD
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/19/2015 1707
Prep Date: 06/18/2015 1221
Leach Date: N/A

Analysis Batch: 240-185884
Prep Batch: 240-185711
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9061915A.asc
Initial Weight/Volume: 1.15 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	2765	2793	75 - 125	1	20	4	4
Beryllium	84	87	75 - 125	3	20		
Cadmium	92	196	75 - 125	34	20		F1 F2
Calcium	225	168	75 - 125	13	20	F1	F1
Chromium	149	187	75 - 125	4	20	4	4
Cobalt	100	122	75 - 125	14	20		
Copper	493	317	75 - 125	17	20	4	4
Iron	5989	10893	75 - 125	14	20	4	4
Magnesium	137	112	75 - 125	12	20	F1	
Manganese	413	371	75 - 125	3	20	4	4
Sodium	94	94	75 - 125	1	20		
Nickel	110	122	75 - 125	4	20		
Potassium	122	126	75 - 125	3	20		F1
Silver	82	98	75 - 125	14	20		
Arsenic	86	92	75 - 125	6	20		
Selenium	83	85	75 - 125	3	20		
Vanadium	98	104	75 - 125	5	20		
Thallium	89	90	75 - 125	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

TCLP SPLPE Leachate Blank - Batch: 240-186308

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-186216/1-B	Analysis Batch:	240-186556	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1853	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	06/22/2015 1710				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.00282	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.00123	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	0.00436	J	0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	0.000465	J	0.00046	0.015
Nickel	0.0342	J	0.00076	0.040
Potassium	1.57	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00331	J	0.0029	0.50
Lead	0.00209	J	0.0019	0.50
Selenium	ND		0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0
Zinc	0.0450	J	0.0096	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Method Blank - Batch: 240-186308

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-186308/2-A	Analysis Batch:	240-186556	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1906	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	0.00421	J	0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Nickel	0.0296	J	0.00076	0.040
Potassium	0.153	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	ND		0.0019	0.50
Selenium	ND		0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0
Zinc	0.0357	J	0.0096	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Lab Control Sample - Batch: 240-186308

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-186308/3-A	Analysis Batch:	240-186556	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1910	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	2.05	102	50 - 150	
Antimony	0.500	0.545	109	50 - 150	
Barium	2.00	2.07	103	50 - 150	J
Beryllium	0.0500	0.0515	103	50 - 150	
Cadmium	0.0500	0.0548	110	50 - 150	J
Calcium	50.0	50.1	100	50 - 150	
Chromium	0.200	0.208	104	50 - 150	J
Cobalt	0.500	0.536	107	50 - 150	
Copper	0.250	0.269	108	50 - 150	J
Iron	1.00	1.05	105	50 - 150	
Magnesium	50.0	49.4	99	50 - 150	
Manganese	0.500	0.513	103	50 - 150	
Nickel	0.500	0.574	115	50 - 150	
Potassium	50.0	52.4	105	50 - 150	
Silver	0.0500	0.0550	110	50 - 150	J
Arsenic	2.00	2.27	113	50 - 150	
Lead	0.500	0.485	97	50 - 150	J
Selenium	2.00	2.31	116	50 - 150	
Vanadium	0.500	0.535	107	50 - 150	
Thallium	2.00	1.99	100	50 - 150	J
Zinc	0.500	0.618	124	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186308

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52076-K-1-D MS ^5	Analysis Batch:	240-186556	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	5.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1923			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	06/22/2015 1710				

MSD Lab Sample ID:	240-52076-K-1-E MSD ^5	Analysis Batch:	240-186556	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	5.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1927			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	06/22/2015 1710				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	100	96	75 - 125	3	20		
Antimony	102	101	75 - 125	1	20	J	J
Barium	100	97	75 - 125	2	20		
Beryllium	100	98	75 - 125	2	20		
Cadmium	101	100	75 - 125	1	20		
Calcium	123	105	75 - 125	2	20	4	4
Chromium	96	95	75 - 125	1	20		
Cobalt	100	99	75 - 125	1	20		
Copper	97	98	75 - 125	0	20	J	J
Iron	111	105	75 - 125	2	20		
Magnesium	102	97	75 - 125	3	20		
Manganese	201	186	75 - 125	1	20	4	4
Nickel	103	100	75 - 125	2	20		
Potassium	101	98	75 - 125	2	20		
Silver	101	99	75 - 125	2	20	J	J
Arsenic	103	102	75 - 125	1	20		
Lead	106	103	75 - 125	1	20		
Selenium	104	103	75 - 125	1	20	J	J
Vanadium	103	103	75 - 125	0	20		
Thallium	98	97	75 - 125	1	20	J	J
Zinc	94	79	75 - 125	1	20	4	4

TCLP SPLPE Leachate Blank - Batch: 240-186309

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-186216/1-C	Analysis Batch:	240-186611	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1154	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-186309

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-186309/2-A	Analysis Batch:	240-186611	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1156	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-186309

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-186309/3-A	Analysis Batch:	240-186611	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1200	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00507	101	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186309

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-52076-K-1-G MS	Analysis Batch:	240-186611	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1203			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

MSD Lab Sample ID:	240-52076-K-1-H MSD	Analysis Batch:	240-186611	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1205			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	99	93	80 - 120	7	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Method Blank - Batch: 240-185724

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-185724/1-A	Analysis Batch:	240-185879	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/19/2015 1112	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-185724

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-185724/2-A	Analysis Batch:	240-185879	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/19/2015 1115	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.837	100	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185724

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52076-J-1-E MS	Analysis Batch:	240-185879	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.54 g
Analysis Date:	06/19/2015 1124			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52076-J-1-F MSD	Analysis Batch:	240-185879	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.54 g
Analysis Date:	06/19/2015 1126			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	103	105	80 - 120	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

Method Blank - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-186524/9-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.27	0.80

Lab Control Sample Insoluble - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-186524/11-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	736	114	75 - 125	

Lab Control Sample Soluble - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-186524/10-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	18.3	92	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52076-1

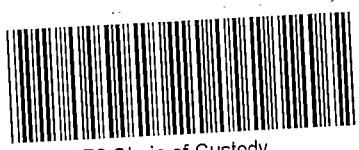
Duplicate - Batch: 240-185642

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52076-3	Analysis Batch:	240-185642	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/18/2015 0827	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	94	94	0.7	20	
Percent Moisture	6.3	5.6	11	20	

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS


240-52076 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

TestAmerica North Canton
4101 Shuffel St NW
North Canton OH 44720
330-497-9396

Chain of Custody Record

20/C3.0
085677
3.2/C4.2 3.0/C4.0
3.6/C4.6

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/16/15	COC No:
Company Name: ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:	1 of 1 COCs
Address: 430 First Avenue North, St. 720	Analysis Turnaround Time			Sampler: Tom Darmon
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-7434	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul MN	☐ 2 days			Job / SDG No.: 24006638
PO # MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	VOCs (8260)	SVOCs (8270) / TAL metals (6010)	GRO (WI mod Method)	DRO (WI mod Method)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP Metals (1311/6010)	Moisture Content	TAL/Chrom 6 - Chrom 3 SVOCs (8270)	Sample Specific Notes:
ASB-1001_39-42 (20150615)	6/15/15	1650	G	So	10	N	N	2	1	2	1	1	1	1	1		* Limited recovery, use same soil for for SVOCs and TAL metals analysis, Chromium 6+ and Chromium 3+
ASB-1001_50-54 (20150615)		1710	G	So	10			2	1	2	1	1	1	1	1		
ASB-1001_65-70 (20150615)		1725	G	So	10			2	1	2	1	1	1	1	1		
ASB-1001_72-74 (20150615)		1745	G	So	10			2	1	2	1	1	1	1	1		
ASB-1001_84-85 (20150615)		1830	G	So	11			2	1	2	1	1	1	2	1		
ASB-1001_80-82 (20150615)		1845	G	So	13			2	1	2	1	2	2	2	1		
ASB-1002_55-60 (20150616)	6/16/15	1345	G	So	11			2	1	2	1	1	1	1	1	1	1	
ASB-1002_60-64 (20150616)	6/16/15	1400	G	So	11			2	1	2	1	1	1	1	1	1	1	
MB-01 (20150616)	6/16/15	—	—	AQ	2			1		1							
								61		61	1	1	1	1	1	1	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other Matt

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
Level IV

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____			
Relinquished by: Kelly Hoehn	Company: ARCADIS	Date/Time: 6/16/15 1535	Received by:	Company: TAmi	Date/Time: 6-16-15 1535
Relinquished by:	Company: TAmi	Date/Time: 6-16-15 1640	Received by:	Company: TA	Date/Time: 6.17.15 920
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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06/30/2015

TestAmerica Canton Sample Receipt Form/Narrative Login # : 52070
Canton Facility

Client Arcadis Site Name

Cooler unpacked by:

Cooler Received on 6.17.15 Opened on 6.17.15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop-Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   IR GUN# A (CF +1.0 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   ~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~
   ~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~
   IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   ☑ See Multiple Cooler Form
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 4 Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC432654
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # Yes No

Contacted PM Date by via Verbal Voice Mail Other
Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Will log first 6 samples for Cr^{VI} + Cr^{3} even though it is not marked on COC per DJP.

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

TestAmerica Multiple Cooler Receipt Form/Narrative
Canton Facility

Login # : 520710

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
client	A	3.2	4.2	ice
"	"	3.0	4.0	"
"	"	2.0	3.0	"
"	"	3.6	4.6	"

July 01, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52076-1
Sample date: 2015-06-15 2015-06-16
Report received by CADENA: 2015-06-30
Initial Data Verification completed by CADENA: 2015-07-01

The following minor QC exceptions or missing information were noted:

WI-GRO and WI-DRO QC batch did not include MS recovery data and surrogate recoveries were not available for samples or QC.

WI-DRO method blank had a detection below the RL. Qualification of client sample results was not required based on this method blank detection.

GCMS VOC QC batch 185697 and WI-DRO batch 185628 did not include MS recovery data due to insufficient sample volume available for creating MS/MSD?s according to laboratory submittal case narrative.

GCMS VOC and GCMS SVOC surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results for client samples -003, -004, -007 and -008.

GCMS SVOC QC batch MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

Metals method blanks had detections below the RL in QC batch 185711 for potassium and zinc and in QC batch 186308 for barium, chromium, copper, manganese, nickel, potassium, arsenic, lead and zinc. Metals results should be considered to be non-detect at the RL and qualified with UB flags for the following samples and analytes:
CHROMIUM - UB flags - -003, -004, -006 and-007.
COPPER - UB flags - -003, -004,-006, -007 and -008.
NICKEL - B flags (non-detect at the concentration reported) - -003, -004, -006, -007, -008.
POTASSIUM - UB flags - -006.
ARSENIC - UB flags - -003, -006, -007, -008.
ZINC - UB flags - -006.

Metals sample -001 solid matrix MS/MSD recoveries were outliers biased high for calcium and MS or MSD recovery but not both alone with the MS/MSD RPD were outliers with the recoveries biased high for cadmium. Client sample -001 solid matrix cadmium and calcium results should be considered to be estimated and qualified with J flags. Recoveries for aluminum, chromium, copper, iron and manganese were not considered to be statistically reliable so were not used to qualify results due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule).

Metals sample -001 SPLP/TCLP matrix MS/MSD recoveries for aluminum, chromium, copper, iron and manganese were not considered to be statistically reliable so were not used to qualify results due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule). MS or MSD recoveries but not both were outliers biased high for magnesium and potassium so qualification was not required based on these QC outliers alone.

6 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52076-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240520763	ASB-1001_65-70 (20150615)	6/15/2015	5:25:00	X	X	X	X	X	X	X	X
240520764	ASB-1001_72-74 (20150615)	6/15/2015	5:45:00	X	X	X	X	X	X	X	X
240520766	ASB-1001_80-82 (20150615)	6/15/2015	6:45:00	X	X	X	X	X	X	X	X
240520767	ASB-1002_55-60 (20150616)	6/16/2015	1:45:00	X	X	X	X	X	X	X	X
240520768	ASB-1002_60-64 (20150616)	6/16/2015	2:00:00	X	X	X	X	X	X	X	X
240520769	MB-01 (20150616)	6/16/2015	12:00:00	X		X					

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52076-1

			Sample Name:	ASB-1001_65-70 (20150615)				ASB-1001_72-74 (20150615)				ASB-1001_80-82 (20150615)				ASB-1002_55-60 (20150616)				ASB-1002_60-64 (20150616)			
			Lab Sample ID:	240520763				240520764				240520766				240520767				240520768			
			Sample Date:	6/15/2015				6/15/2015				6/15/2015				6/16/2015				6/16/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
Metals																						
	OSW-6010B																					
	Arsenic	7440-38-2	0.013	0.50	mg/l	UB					0.012	0.50	mg/l	UB	0.0053	0.50	mg/l	UB	0.0065	0.50	mg/l	UB
	Cadmium	7440-43-9	3.1	0.17	mg/kg	J																
	Calcium	7440-70-2	33000	440	mg/kg	J																
	Chromium	7440-47-3	0.0029	0.50	mg/l	UB	0.0037	0.50	mg/l	UB	0.0043	0.50	mg/l	UB	0.0046	0.50	mg/l	UB				
	Copper	7440-50-8	0.0041	1.0	mg/l	UB	0.0052	1.0	mg/l	UB	0.0042	1.0	mg/l	UB	0.0064	1.0	mg/l	UB	0.0050	1.0	mg/l	UB
	Nickel	7440-02-0	0.14	0.040	mg/l	B	0.073	0.040	mg/l	B	0.052	0.040	mg/l	B	0.076	0.040	mg/l	B	0.086	0.040	mg/l	B
	Potassium	7440-09-7									4.6	5.0	mg/l	UB								
	Zinc	7440-66-6									0.17	1.0	mg/l	UB								

ANALYTICAL REPORT

Job Number: 240-52076-2

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
7/22/2015 1:19 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
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07/22/2015

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CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52076-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 6/17/2015 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 3.0º C, 4.0º C, 4.2º C and 4.6º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)
Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 06/21/2015 and analyzed on 06/22/2015.

Sample ASB-1001_39-42 (20150615) (240-52076-1)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: ASB-1001_39-42 (20150615) (240-52076-1). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-185697 and analytical batch 240-186116 on these samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) .

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)
Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/18/2015 and analyzed on 06/22/2015.

Sample ASB-1001_50-54 (20150615) (240-52076-2)[3.33X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 06/22/2015, prepared on 06/23/2015 and analyzed on 06/25/2015 and 06/26/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2-Methylphenol and Pentachlorophenol failed the recovery criteria low for the MS of sample 240-52203-1 in batch 240-186705. Pyridine failed the recovery criteria high. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/18/2015 and analyzed on 06/23/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Samples ASB-1001_39-42 (20150615) (240-52076-1)[4X] and ASB-1001_50-54 (20150615) (240-52076-2)[2.5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: The following sample was diluted due to the nature of the sample matrix: ASB-1001_39-42 (20150615) (240-52076-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared on 06/22/2015 and analyzed on 06/23/2015.

Samples ASB-1001_39-42 (20150615) (240-52076-1)[2X] and ASB-1001_50-54 (20150615) (240-52076-2)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI-GRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the Gasoline Range Organics (GRO) mix (i.e., Naphthalene): ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/18/2015 and analyzed on 06/22/2015 and 06/23/2015.

WI Diesel Range Organics (C10-C28) was detected in method blank MB 240-185628/12-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Samples ASB-1001_39-42 (20150615) (240-52076-1)[20X] and ASB-1001_50-54 (20150615) (240-52076-2)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI DRO PREP: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-185628.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)

Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 06/22/2015, prepared on 06/23/2015 and analyzed on 06/24/2015.

Several analytes were detected in method blank LB 240-186216/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Manganese failed the recovery criteria high for the MS/MSD of sample ASB-1001_39-42 (20150615)MS/MSD (240-52076-1) in batch 240-186556. Refer to the QC report for details.

Copper, Nickel, Potassium and Zinc were detected in method blank MB 240-186308/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)
Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/18/2015 and analyzed on 06/19/2015 and 06/20/2015.

Potassium and Zinc were detected in method blank MB 240-185711/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample ASB-1001_39-42 (20150615)MS (240-52076-1) in batch 240-186018. Aluminum, Calcium, Copper and Manganese failed the recovery criteria high. For the MSD of sample ASB-1001_39-42 (20150615)MSD (240-52076-1) in batch 240-186018, Chromium, Antimony and Lead failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, Cadmium, Antimony and Lead exceeded the RPD limit. Refer to the QC report for details.

Samples ASB-1001_39-42 (20150615) (240-52076-1)[20X] and ASB-1001_50-54 (20150615) (240-52076-2)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY
Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 06/22/2015, prepared on 06/23/2015 and analyzed on 06/24/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/18/2015 and analyzed on 06/19/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM
Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 06/24/2015 and analyzed on 06/25/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM
Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 06/24/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS
Samples ASB-1001_39-42 (20150615) (240-52076-1) and ASB-1001_50-54 (20150615) (240-52076-2) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/18/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52076-1	**ASB-1001_39-42 (20150615)**					
Benzene		72	J	290	ug/Kg	8260B
cis-1,2-Dichloroethene		53	J	290	ug/Kg	8260B
Ethylbenzene		210	J	290	ug/Kg	8260B
Methyl acetate		190	J	570	ug/Kg	8260B
Methylcyclohexane		53	J	570	ug/Kg	8260B
m-Xylene & p-Xylene		660		290	ug/Kg	8260B
Naphthalene		260	J	290	ug/Kg	8260B
n-Butylbenzene		170	J	290	ug/Kg	8260B
o-Xylene		110	J	290	ug/Kg	8260B
p-Isopropyltoluene		32	J	290	ug/Kg	8260B
sec-Butylbenzene		100	J	290	ug/Kg	8260B
Toluene		110	J	290	ug/Kg	8260B
Trichloroethene		46	J	290	ug/Kg	8260B
1,2,4-Trimethylbenzene		310		290	ug/Kg	8260B
1,3,5-Trimethylbenzene		84	J	290	ug/Kg	8260B
1,1'-Biphenyl		23	J	1700	ug/Kg	8270C
2-Methylnaphthalene		78	J	1700	ug/Kg	8270C
Acenaphthene		71	J	1700	ug/Kg	8270C
Acenaphthylene		20	J	1700	ug/Kg	8270C
Anthracene		150	J	1700	ug/Kg	8270C
Benzo[a]anthracene		460	J	1700	ug/Kg	8270C
Benzo[a]pyrene		590	J	1700	ug/Kg	8270C
Benzo[b]fluoranthene		980	J	1700	ug/Kg	8270C
Benzo[g,h,i]perylene		470	J	1700	ug/Kg	8270C
Benzo[k]fluoranthene		330	J	1700	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		120	J	1700	ug/Kg	8270C
Chrysene		590	J	1700	ug/Kg	8270C
Dibenz(a,h)anthracene		120	J	1700	ug/Kg	8270C
Dibenzofuran		48	J	1700	ug/Kg	8270C
Fluoranthene		960	J	1700	ug/Kg	8270C
Fluorene		83	J	1700	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		380	J	1700	ug/Kg	8270C
Naphthalene		270	J	1700	ug/Kg	8270C
Phenanthrene		580	J	1700	ug/Kg	8270C
Pyrene		1200	J	1700	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		140		23	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		950	B	210	mg/Kg	WI-DRO
Aluminum		7600		20	mg/Kg	6010B
Antimony		370	F2	20	mg/Kg	6010B
Barium		2300		390	mg/Kg	6010B
Beryllium		0.39	J	0.49	mg/Kg	6010B
Calcium		16000	F1	490	mg/Kg	6010B
Cadmium		11	F1 F2	0.20	mg/Kg	6010B
Cobalt		36		4.9	mg/Kg	6010B
Chromium		190		0.49	mg/Kg	6010B
Copper		220		2.5	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Iron		38000		9.8	mg/Kg	6010B
Potassium		1800	B	490	mg/Kg	6010B
Magnesium		5300		490	mg/Kg	6010B
Manganese		700		1.5	mg/Kg	6010B
Silver		1.4		0.49	mg/Kg	6010B
Sodium		370	J	490	mg/Kg	6010B
Nickel		110	F1	3.9	mg/Kg	6010B
Vanadium		19		4.9	mg/Kg	6010B
Zinc		1500	B	39	mg/Kg	6010B
Arsenic		27		0.98	mg/Kg	6010B
Lead		13000	F2	5.9	mg/Kg	6010B
Selenium		2.3		0.49	mg/Kg	6010B
Mercury		0.24		0.14	mg/Kg	7471A
Cr (VI)		0.53	J	1.0	mg/Kg	7196A
Cr (III)		190		2.5	mg/Kg	7196A
Percent Solids		80		0.10	%	Moisture
Percent Moisture		20		0.10	%	Moisture
TCLP						
Aluminum		0.53		0.20	mg/L	6010B
Antimony		0.21	J	0.30	mg/L	6010B
Arsenic		0.0094	J B	0.50	mg/L	6010B
Barium		7.4	J B	10	mg/L	6010B
Beryllium		0.00020	J	0.0050	mg/L	6010B
Cadmium		0.10		0.10	mg/L	6010B
Calcium		320		5.0	mg/L	6010B
Chromium		0.0073	J B	0.50	mg/L	6010B
Cobalt		0.18		0.050	mg/L	6010B
Copper		0.020	J B	1.0	mg/L	6010B
Iron		2.3		0.10	mg/L	6010B
Lead		8.4	B	0.50	mg/L	6010B
Magnesium		28		5.0	mg/L	6010B
Manganese		8.9	B	0.015	mg/L	6010B
Nickel		0.30	B	0.040	mg/L	6010B
Potassium		11	B	5.0	mg/L	6010B
Vanadium		0.0042	J	0.050	mg/L	6010B
Zinc		6.8	B	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52076-2	**ASB-1001_50-54 (20150615)**					
Ethylbenzene		8300		1000	ug/Kg	8260B
Isopropylbenzene		530	J	1000	ug/Kg	8260B
Methylcyclohexane		610	J	2100	ug/Kg	8260B
m-Xylene & p-Xylene		24000		1000	ug/Kg	8260B
Naphthalene		14000		1000	ug/Kg	8260B
n-Butylbenzene		6000		1000	ug/Kg	8260B
N-Propylbenzene		1200		1000	ug/Kg	8260B
o-Xylene		5400		1000	ug/Kg	8260B
p-Isopropyltoluene		610	J	1000	ug/Kg	8260B
sec-Butylbenzene		760	J	1000	ug/Kg	8260B
Toluene		110	J	1000	ug/Kg	8260B
1,2,4-Trimethylbenzene		22000		1000	ug/Kg	8260B
1,3,5-Trimethylbenzene		5200		1000	ug/Kg	8260B
1,1'-Biphenyl		25	J	1000	ug/Kg	8270C
2,4-Dimethylphenol		210	J	1000	ug/Kg	8270C
2-Methylnaphthalene		700	J	1000	ug/Kg	8270C
Acenaphthene		75	J	1000	ug/Kg	8270C
Anthracene		190	J	1000	ug/Kg	8270C
Benzo[a]anthracene		360	J	1000	ug/Kg	8270C
Benzo[a]pyrene		380	J	1000	ug/Kg	8270C
Benzo[b]fluoranthene		500	J	1000	ug/Kg	8270C
Benzo[g,h,i]perylene		280	J	1000	ug/Kg	8270C
Benzo[k]fluoranthene		240	J	1000	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		250	J	1000	ug/Kg	8270C
Chrysene		430	J	1000	ug/Kg	8270C
Dibenz(a,h)anthracene		80	J	1000	ug/Kg	8270C
Dibenzofuran		44	J	1000	ug/Kg	8270C
Fluoranthene		780	J	1000	ug/Kg	8270C
Fluorene		88	J	1000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		240	J	1000	ug/Kg	8270C
Naphthalene		2600		1000	ug/Kg	8270C
Phenanthrene		650	J	1000	ug/Kg	8270C
Pyrene		810	J	1000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		850		250	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		770	B	210	mg/Kg	WI-DRO
Aluminum		9500		21	mg/Kg	6010B
Antimony		130		10	mg/Kg	6010B
Barium		2100		21	mg/Kg	6010B
Beryllium		0.51		0.51	mg/Kg	6010B
Calcium		15000		510	mg/Kg	6010B
Cadmium		11		0.21	mg/Kg	6010B
Cobalt		21		5.1	mg/Kg	6010B
Chromium		100		0.51	mg/Kg	6010B
Copper		160		2.6	mg/Kg	6010B
Iron		27000		10	mg/Kg	6010B
Potassium		3700	B	510	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Magnesium		5300		510	mg/Kg	6010B
Manganese		500		1.5	mg/Kg	6010B
Silver		0.99		0.51	mg/Kg	6010B
Sodium		400	J	510	mg/Kg	6010B
Nickel		72		4.1	mg/Kg	6010B
Vanadium		14		5.1	mg/Kg	6010B
Zinc		780	B	2.1	mg/Kg	6010B
Arsenic		17		1.0	mg/Kg	6010B
Lead		9100		3.1	mg/Kg	6010B
Selenium		2.4		0.51	mg/Kg	6010B
Mercury		0.15		0.13	mg/Kg	7471A
Cr (VI)		0.62	J	0.99	mg/Kg	7196A
Cr (III)		100		2.5	mg/Kg	7196A
Percent Solids		81		0.10	%	Moisture
Percent Moisture		19		0.10	%	Moisture
TCLP						
2-Methylphenol		0.00091	J	0.0040	mg/L	8270C
3 & 4 Methylphenol		0.0011	J	0.0040	mg/L	8270C
Aluminum		0.21		0.20	mg/L	6010B
Antimony		0.10	J	0.30	mg/L	6010B
Arsenic		0.0084	J B	0.50	mg/L	6010B
Barium		6.8	J B	10	mg/L	6010B
Cadmium		0.082	J	0.10	mg/L	6010B
Calcium		360		5.0	mg/L	6010B
Chromium		0.0063	J B	0.50	mg/L	6010B
Cobalt		0.11		0.050	mg/L	6010B
Copper		0.012	J B	1.0	mg/L	6010B
Iron		2.5		0.10	mg/L	6010B
Lead		8.9	B	0.50	mg/L	6010B
Magnesium		31		5.0	mg/L	6010B
Manganese		7.4	B	0.015	mg/L	6010B
Nickel		0.23	B	0.040	mg/L	6010B
Potassium		13	B	5.0	mg/L	6010B
Zinc		4.4	B	1.0	mg/L	6010B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction			SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction			SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction			SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Method	Analyst	Analyst ID
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Walpole, Barbara	BW
SW846 7471A	Lecorchick, Willis A	WAL
SW846 7196A	Burns, Jill	JMB
SW846 7196A	Counts, Karen	KLC
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52076-1	ASB-1001_39-42 (20150615)	Solid	06/15/2015 1650	06/17/2015 0920
240-52076-2	ASB-1001_50-54 (20150615)	Solid	06/15/2015 1710	06/17/2015 0920

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_39-42 (20150615)

Lab Sample ID: 240-52076-1 Date Sampled: 06/15/2015 1650
Client Matrix: Solid % Moisture: 20.0 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143809.D
Dilution:	1.0			Initial Weight/Volume:	10.898 g
Analysis Date:	06/22/2015 1836			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		260	1100
Allyl chloride		ND		34	570
Benzene		72	J	10	290
Bromobenzene		ND		15	290
Bromochloromethane		ND		80	290
Bromodichloromethane		ND		44	290
Bromoform		ND		70	290
Bromomethane		ND		58	290
2-Butanone (MEK)		ND		84	1100
Carbon disulfide		ND		64	290
Carbon tetrachloride		ND		55	290
Chlorobenzene		ND		47	290
Chlorodibromomethane		ND		53	290
Chloroethane		ND		58	290
Chloroform		ND		41	290
Chloromethane		ND		55	290
2-Chlorotoluene		ND		47	290
4-Chlorotoluene		ND		30	290
cis-1,2-Dichloroethene		53	J	44	290
cis-1,3-Dichloropropene		ND		25	290
Cyclohexane		ND		34	570
1,2-Dibromo-3-Chloropropane		ND		81	570
1,2-Dibromoethane		ND		37	290
Dibromomethane		ND		57	290
1,2-Dichlorobenzene		ND		22	290
1,3-Dichlorobenzene		ND		34	290
1,4-Dichlorobenzene		ND		47	290
Dichlorodifluoromethane		ND		70	290
1,1-Dichloroethane		ND		40	290
1,2-Dichloroethane		ND		61	290
1,1-Dichloroethene		ND		34	290
Dichlorofluoromethane		ND		38	570
1,2-Dichloropropane		ND		37	290
1,3-Dichloropropane		ND		26	290
2,2-Dichloropropane		ND		60	290
1,1-Dichloropropene		ND		44	290
Ethylbenzene		210	J	40	290
Ethyl ether		ND		110	570
Hexachlorobutadiene		ND		50	290
2-Hexanone		ND		96	1100
Isopropylbenzene		ND		15	290
Methyl acetate		190	J	63	570
Methylcyclohexane		53	J	44	570
Methylene Chloride		ND		97	290
4-Methyl-2-pentanone (MIBK)		ND		64	1100
Methyl tert butyl ether		ND		34	290

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_39-42 (20150615)

Lab Sample ID: 240-52076-1 Date Sampled: 06/15/2015 1650
Client Matrix: Solid % Moisture: 20.0 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143809.D
Dilution:	1.0			Initial Weight/Volume:	10.898 g
Analysis Date:	06/22/2015 1836			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		660		23	290
Naphthalene		260	J	30	290
n-Butylbenzene		170	J	24	290
N-Propylbenzene		ND		70	290
o-Xylene		110	J	19	290
p-Isopropyltoluene		32	J	29	290
sec-Butylbenzene		100	J	18	290
Styrene		ND		31	290
tert-Butylbenzene		ND		39	290
1,1,1,2-Tetrachloroethane		ND		56	290
1,1,2,2-Tetrachloroethane		ND		49	290
Tetrachloroethene		ND		31	290
Tetrahydrofuran		ND		140	1100
Toluene		110	J	11	290
trans-1,2-Dichloroethene		ND		30	290
trans-1,3-Dichloropropene		ND		30	290
1,2,3-Trichlorobenzene		ND		45	290
1,2,4-Trichlorobenzene		ND		34	290
1,1,1-Trichloroethane		ND		48	290
1,1,2-Trichloroethane		ND		95	290
Trichloroethene		46	J	45	290
Trichlorofluoromethane		ND		40	290
1,2,3-Trichloropropane		ND		120	290
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		48	290
1,2,4-Trimethylbenzene		310		15	290
1,3,5-Trimethylbenzene		84	J	17	290
Vinyl chloride		ND		64	290

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	78		26 - 141
Dibromofluoromethane (Surr)	74		30 - 122
1,2-Dichloroethane-d4 (Surr)	99		39 - 128
Toluene-d8 (Surr)	89		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_39-42 (20150615)

Lab Sample ID: 240-52076-1 Date Sampled: 06/15/2015 1650
Client Matrix: Solid Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950670.D
Dilution:	2.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/22/2015 2121			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2121				
Leach Date:	06/21/2015 1535				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		19	50
1,2-Dichloroethane		ND		22	50
2-Butanone (MEK)		ND		57	500
Benzene		ND		13	50
Carbon tetrachloride		ND		13	50
Chlorobenzene		ND		15	50
Chloroform		ND		16	50
Tetrachloroethene		ND		29	50
Trichloroethene		ND		17	50
Vinyl chloride		ND		22	50

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	92		70 - 124
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	100		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_50-54 (20150615)

Lab Sample ID: 240-52076-2 Date Sampled: 06/15/2015 1710
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143813.D
Dilution:	3.333			Initial Weight/Volume:	9.92 g
Analysis Date:	06/22/2015 2002			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		940	4100
Allyl chloride		ND		120	2100
Benzene		ND		37	1000
Bromobenzene		ND		54	1000
Bromochloromethane		ND		290	1000
Bromodichloromethane		ND		160	1000
Bromoform		ND		250	1000
Bromomethane		ND		210	1000
2-Butanone (MEK)		ND		300	4100
Carbon disulfide		ND		230	1000
Carbon tetrachloride		ND		200	1000
Chlorobenzene		ND		170	1000
Chlorodibromomethane		ND		190	1000
Chloroethane		ND		210	1000
Chloroform		ND		150	1000
Chloromethane		ND		200	1000
2-Chlorotoluene		ND		170	1000
4-Chlorotoluene		ND		110	1000
cis-1,2-Dichloroethene		ND		160	1000
cis-1,3-Dichloropropene		ND		91	1000
Cyclohexane		ND		120	2100
1,2-Dibromo-3-Chloropropane		ND		290	2100
1,2-Dibromoethane		ND		130	1000
Dibromomethane		ND		210	1000
1,2-Dichlorobenzene		ND		79	1000
1,3-Dichlorobenzene		ND		120	1000
1,4-Dichlorobenzene		ND		170	1000
Dichlorodifluoromethane		ND		250	1000
1,1-Dichloroethane		ND		140	1000
1,2-Dichloroethane		ND		220	1000
1,1-Dichloroethene		ND		120	1000
Dichlorofluoromethane		ND		140	2100
1,2-Dichloropropane		ND		130	1000
1,3-Dichloropropane		ND		95	1000
2,2-Dichloropropane		ND		220	1000
1,1-Dichloropropene		ND		160	1000
Ethylbenzene		8300		140	1000
Ethyl ether		ND		410	2100
Hexachlorobutadiene		ND		180	1000
2-Hexanone		ND		350	4100
Isopropylbenzene		530	J	54	1000
Methyl acetate		ND		230	2100
Methylcyclohexane		610	J	160	2100
Methylene Chloride		ND		350	1000
4-Methyl-2-pentanone (MIBK)		ND		230	4100
Methyl tert butyl ether		ND		120	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_50-54 (20150615)

Lab Sample ID: 240-52076-2 Date Sampled: 06/15/2015 1710
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185697	Lab File ID:	143813.D
Dilution:	3.333			Initial Weight/Volume:	9.92 g
Analysis Date:	06/22/2015 2002			Final Weight/Volume:	10.0 mL
Prep Date:	06/18/2015 1146				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		24000		83	1000
Naphthalene		14000		110	1000
n-Butylbenzene		6000		87	1000
N-Propylbenzene		1200		250	1000
o-Xylene		5400		70	1000
p-Isopropyltoluene		610	J	100	1000
sec-Butylbenzene		760	J	66	1000
Styrene		ND		110	1000
tert-Butylbenzene		ND		140	1000
1,1,1,2-Tetrachloroethane		ND		200	1000
1,1,2,2-Tetrachloroethane		ND		180	1000
Tetrachloroethene		ND		110	1000
Tetrahydrofuran		ND		500	4100
Toluene		110	J	41	1000
trans-1,2-Dichloroethene		ND		110	1000
trans-1,3-Dichloropropene		ND		110	1000
1,2,3-Trichlorobenzene		ND		160	1000
1,2,4-Trichlorobenzene		ND		120	1000
1,1,1-Trichloroethane		ND		170	1000
1,1,2-Trichloroethane		ND		340	1000
Trichloroethene		ND		160	1000
Trichlorofluoromethane		ND		140	1000
1,2,3-Trichloropropane		ND		430	1000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		170	1000
1,2,4-Trimethylbenzene		22000		54	1000
1,3,5-Trimethylbenzene		5200		62	1000
Vinyl chloride		ND		230	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	84		26 - 141
Dibromofluoromethane (Surr)	74		30 - 122
1,2-Dichloroethane-d4 (Surr)	103		39 - 128
Toluene-d8 (Surr)	92		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_50-54 (20150615)

Lab Sample ID: 240-52076-2 Date Sampled: 06/15/2015 1710
Client Matrix: Solid Date Received: 06/17/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950671.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/22/2015 2145			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2145				
Leach Date:	06/21/2015 1535				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		80 - 121
4-Bromofluorobenzene (Surr)	103		70 - 124
Toluene-d8 (Surr)	106		80 - 120
Dibromofluoromethane (Surr)	105		80 - 128

Client Sample ID: **ASB-1001_39-42 (20150615)**

Lab Sample ID: 240-52076-1 Date Sampled: 06/15/2015 1650
Client Matrix: Solid % Moisture: 20.0 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623031.D
Dilution:	4.0			Initial Weight/Volume:	29.81 g
Analysis Date:	06/23/2015 2041			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		23	J	18	1700
2,2'-oxybis[1-chloropropane]		ND		48	1700
2,4,5-Trichlorophenol		ND		130	1700
2,4,6-Trichlorophenol		ND		45	1700
2,4-Dichlorophenol		ND		100	1700
2,4-Dimethylphenol		ND		100	1700
2,4-Dinitrophenol		ND		110	8000
2,4-Dinitrotoluene		ND		86	1700
2,6-Dinitrotoluene		ND		110	1700
2-Chloronaphthalene		ND		2.3	1700
2-Chlorophenol		ND		41	1700
2-Methylnaphthalene		78	J	2.5	1700
2-Methylphenol		ND		55	1700
2-Nitroaniline		ND		46	8000
2-Nitrophenol		ND		42	1700
3,3'-Dichlorobenzidine		ND		91	8000
3-Nitroaniline		ND		80	8000
4,6-Dinitro-2-methylphenol		ND		46	8000
4-Bromophenyl phenyl ether		ND		65	1700
4-Chloro-3-methylphenol		ND		110	1700
4-Chloroaniline		ND		86	1700
4-Chlorophenyl phenyl ether		ND		65	1700
4-Nitroaniline		ND		130	8000
4-Nitrophenol		ND		86	8000
Acenaphthene		71	J	3.8	1700
Acenaphthylene		20	J	1.8	1700
Acetophenone		ND		46	1700
Anthracene		150	J	3.9	1700
Atrazine		ND		46	1700
Benzaldehyde		ND		60	1700
Benzo[a]anthracene		460	J	3.2	1700
Benzo[a]pyrene		590	J	3.2	1700
Benzo[b]fluoranthene		980	J	3.0	1700
Benzo[g,h,i]perylene		470	J	1.8	1700
Benzo[k]fluoranthene		330	J	3.4	1700
Bis(2-chloroethoxy)methane		ND		110	1700
Bis(2-chloroethyl)ether		ND		10	1700
Bis(2-ethylhexyl) phthalate		120	J	96	1700
Butyl benzyl phthalate		ND		50	1700
Caprolactam		ND		190	1700
Carbazole		ND		140	1700
Chrysene		590	J	5.5	1700
Dibenz(a,h)anthracene		120	J	3.3	1700
Dibenzofuran		48	J	3.3	1700
Diethyl phthalate		ND		80	1700
Dimethyl phthalate		ND		86	1700

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_39-42 (20150615)

Lab Sample ID: 240-52076-1 Date Sampled: 06/15/2015 1650
Client Matrix: Solid % Moisture: 20.0 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623031.D
Dilution:	4.0			Initial Weight/Volume:	29.81 g
Analysis Date:	06/23/2015 2041			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		75	1700
Di-n-octyl phthalate		ND		40	1700
Fluoranthene		960	J	2.8	1700
Fluorene		83	J	2.7	1700
Hexachlorobenzene		ND		11	1700
Hexachlorobutadiene		ND		28	1700
Hexachlorocyclopentadiene		ND		41	8000
Hexachloroethane		ND		45	1700
Indeno[1,2,3-cd]pyrene		380	J	1.8	1700
Isophorone		ND		65	1700
Naphthalene		270	J	4.1	1700
Nitrobenzene		ND		11	1700
N-Nitrosodi-n-propylamine		ND		32	1700
N-Nitrosodiphenylamine		ND		110	1700
Pentachlorophenol		ND		46	1700
Phenol		ND		37	1700
Phenanthrene		580	J	3.7	1700
Pyrene		1200	J	2.2	1700
3 & 4 Methylphenol		ND		100	2000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	63		24 - 110
2-Fluorophenol (Surr)	56		24 - 110
2,4,6-Tribromophenol (Surr)	74		10 - 110
Nitrobenzene-d5 (Surr)	78		20 - 110
Phenol-d5 (Surr)	66		26 - 110
Terphenyl-d14 (Surr)	63		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_39-42 (20150615)

Lab Sample ID: 240-52076-1 Date Sampled: 06/15/2015 1650
Client Matrix: Solid Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-186914	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-186294	Lab File ID:	50626010.D
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 1354			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	77		30 - 110
2-Fluorophenol (Surr)	68		20 - 110
Nitrobenzene-d5 (Surr)	80		28 - 110
Phenol-d5 (Surr)	66		21 - 110
Terphenyl-d14 (Surr)	75		48 - 110
2,4,6-Tribromophenol (Surr)	83		23 - 110

Client Sample ID: **ASB-1001_50-54 (20150615)**

Lab Sample ID: 240-52076-2 Date Sampled: 06/15/2015 1710
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623030.D
Dilution:	2.5			Initial Weight/Volume:	30.42 g
Analysis Date:	06/23/2015 2017			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		25	J	11	1000
2,2'-oxybis[1-chloropropane]		ND		29	1000
2,4,5-Trichlorophenol		ND		76	1000
2,4,6-Trichlorophenol		ND		27	1000
2,4-Dichlorophenol		ND		61	1000
2,4-Dimethylphenol		210	J	61	1000
2,4-Dinitrophenol		ND		64	4900
2,4-Dinitrotoluene		ND		52	1000
2,6-Dinitrotoluene		ND		64	1000
2-Chloronaphthalene		ND		1.4	1000
2-Chlorophenol		ND		25	1000
2-Methylnaphthalene		700	J	1.5	1000
2-Methylphenol		ND		33	1000
2-Nitroaniline		ND		28	4900
2-Nitrophenol		ND		25	1000
3,3'-Dichlorobenzidine		ND		55	4900
3-Nitroaniline		ND		49	4900
4,6-Dinitro-2-methylphenol		ND		28	4900
4-Bromophenyl phenyl ether		ND		40	1000
4-Chloro-3-methylphenol		ND		64	1000
4-Chloroaniline		ND		52	1000
4-Chlorophenyl phenyl ether		ND		40	1000
4-Nitroaniline		ND		79	4900
4-Nitrophenol		ND		52	4900
Acenaphthene		75	J	2.3	1000
Acenaphthylene		ND		1.1	1000
Acetophenone		ND		28	1000
Anthracene		190	J	2.4	1000
Atrazine		ND		28	1000
Benzaldehyde		ND		36	1000
Benzo[a]anthracene		360	J	1.9	1000
Benzo[a]pyrene		380	J	1.9	1000
Benzo[b]fluoranthene		500	J	1.8	1000
Benzo[g,h,i]perylene		280	J	1.1	1000
Benzo[k]fluoranthene		240	J	2.1	1000
Bis(2-chloroethoxy)methane		ND		67	1000
Bis(2-chloroethyl)ether		ND		6.1	1000
Bis(2-ethylhexyl) phthalate		250	J	58	1000
Butyl benzyl phthalate		ND		30	1000
Caprolactam		ND		110	1000
Carbazole		ND		82	1000
Chrysene		430	J	3.3	1000
Dibenz(a,h)anthracene		80	J	2.0	1000
Dibenzofuran		44	J	2.0	1000
Diethyl phthalate		ND		49	1000
Dimethyl phthalate		ND		52	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_50-54 (20150615)

Lab Sample ID: 240-52076-2 Date Sampled: 06/15/2015 1710
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186276	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185656	Lab File ID:	50623030.D
Dilution:	2.5			Initial Weight/Volume:	30.42 g
Analysis Date:	06/23/2015 2017			Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		46	1000
Di-n-octyl phthalate		ND		24	1000
Fluoranthene		780	J	1.7	1000
Fluorene		88	J	1.6	1000
Hexachlorobenzene		ND		6.4	1000
Hexachlorobutadiene		ND		17	1000
Hexachlorocyclopentadiene		ND		25	4900
Hexachloroethane		ND		27	1000
Indeno[1,2,3-cd]pyrene		240	J	1.1	1000
Isophorone		ND		40	1000
Naphthalene		2600		2.5	1000
Nitrobenzene		ND		6.7	1000
N-Nitrosodi-n-propylamine		ND		19	1000
N-Nitrosodiphenylamine		ND		64	1000
Pentachlorophenol		ND		28	1000
Phenol		ND		22	1000
Phenanthrene		650	J	2.2	1000
Pyrene		810	J	1.3	1000
3 & 4 Methylphenol		ND		61	1200

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	79		24 - 110
2-Fluorophenol (Surr)	73		24 - 110
2,4,6-Tribromophenol (Surr)	81		10 - 110
Nitrobenzene-d5 (Surr)	92		20 - 110
Phenol-d5 (Surr)	81		26 - 110
Terphenyl-d14 (Surr)	79		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: **ASB-1001_50-54 (20150615)**

Lab Sample ID: 240-52076-2 Date Sampled: 06/15/2015 1710
Client Matrix: Solid Date Received: 06/17/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-186294	Lab File ID:	50625013.D
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	250 mL
Analysis Date:	06/25/2015 1438			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		0.00091	J	0.00017	0.0040
3 & 4 Methylphenol		0.0011	J	0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	87		30 - 110
2-Fluorophenol (Surr)	78		20 - 110
Nitrobenzene-d5 (Surr)	93		28 - 110
Phenol-d5 (Surr)	67		21 - 110
Terphenyl-d14 (Surr)	87		48 - 110
2,4,6-Tribromophenol (Surr)	95		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_39-42 (20150615)

Lab Sample ID: 240-52076-1 Date Sampled: 06/15/2015 1650
Client Matrix: Solid % Moisture: 20.0 Date Received: 06/17/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186340	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186058	Lab File ID:	Y0062308.D
Dilution:	2.0			Initial Weight/Volume:	11.081 g
Analysis Date:	06/23/2015 1642			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		140		4.5	23

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_50-54 (20150615)

Lab Sample ID: 240-52076-2 Date Sampled: 06/15/2015 1710
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/17/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186340	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186058	Lab File ID:	Y0062309.D
Dilution:	20			Initial Weight/Volume:	11.86 g
Analysis Date:	06/23/2015 1719			Final Weight/Volume:	11.8 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		850		49	250

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_39-42 (20150615)

Lab Sample ID: 240-52076-1 Date Sampled: 06/15/2015 1650
Client Matrix: Solid % Moisture: 20.0 Date Received: 06/17/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186213	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-185628	Lab File ID:	P14F062214.D
Dilution:	20			Initial Weight/Volume:	29.02 g
Analysis Date:	06/22/2015 2337			Final Weight/Volume:	5 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		950	B	25	210

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: ASB-1001_50-54 (20150615)

Lab Sample ID: 240-52076-2 Date Sampled: 06/15/2015 1710
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/17/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186213	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-185628	Lab File ID:	P14F062215.D
Dilution:	20			Initial Weight/Volume:	27.83 g
Analysis Date:	06/23/2015 0004			Final Weight/Volume:	5 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		770	B	26	210

Client Sample ID: ASB-1001_39-42 (20150615)

Lab Sample ID: 240-52076-1 Date Sampled: 06/15/2015 1650
Client Matrix: Solid % Moisture: 20.0 Date Received: 06/17/2015 0920

6010B Metals (ICP)

Analysis Method: 6010B Analysis Batch: 240-185884 Instrument ID: I9
Prep Method: 3050B Prep Batch: 240-185711 Lab File ID: I9061915A.asc
Dilution: 1.0 Initial Weight/Volume: 1.27 g
Analysis Date: 06/19/2015 1650 Final Weight/Volume: 100 mL
Prep Date: 06/18/2015 1221

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7600		5.7	20
Beryllium		0.39	J	0.026	0.49
Calcium		16000	F1	23	490
Cadmium		11	F1 F2	0.021	0.20
Cobalt		36		0.046	4.9
Chromium		190		0.074	0.49
Copper		220		0.23	2.5
Iron		38000		3.1	9.8
Potassium		1800	B	6.1	490
Magnesium		5300		5.1	490
Manganese		700		0.083	1.5
Silver		1.4		0.062	0.49
Sodium		370	J	19	490
Nickel		110	F1	0.079	3.9
Vanadium		19		0.20	4.9
Arsenic		27		0.40	0.98
Selenium		2.3		0.33	0.49
Thallium		ND		0.13	0.98

Analysis Method: 6010B Analysis Batch: 240-186018 Instrument ID: I9
Prep Method: 3050B Prep Batch: 240-185711 Lab File ID: I9062015A.asc
Dilution: 20 Initial Weight/Volume: 1.27 g
Analysis Date: 06/20/2015 1306 Final Weight/Volume: 100 mL
Prep Date: 06/18/2015 1221

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		370	F2	9.4	20
Barium		2300		8.1	390
Zinc		1500	B	11	39
Lead		13000	F2	3.9	5.9

6010B Metals (ICP)-TCLP

Analysis Method: 6010B Analysis Batch: 240-186556 Instrument ID: I9
Prep Method: 3010A Prep Batch: 240-186308 Lab File ID: I9062415A.asc
Dilution: 1.0 Leach Batch: 240-186216 Initial Weight/Volume: 50 mL
Analysis Date: 06/24/2015 1914 Final Weight/Volume: 50 mL
Prep Date: 06/23/2015 1009
Leach Date: 06/22/2015 1710

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		0.53		0.040	0.20
Antimony		0.21	J	0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: **ASB-1001_39-42 (20150615)**

Lab Sample ID: 240-52076-1 Date Sampled: 06/15/2015 1650
Client Matrix: Solid Date Received: 06/17/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.0094	J B	0.0029	0.50
Barium		7.4	J B	0.0010	10
Beryllium		0.00020	J	0.00013	0.0050
Cadmium		0.10		0.00014	0.10
Calcium		320		0.26	5.0
Chromium		0.0073	J B	0.00055	0.50
Cobalt		0.18		0.00056	0.050
Copper		0.020	J B	0.0019	1.0
Iron		2.3		0.013	0.10
Lead		8.4	B	0.0019	0.50
Magnesium		28		0.055	5.0
Manganese		8.9	B	0.00046	0.015
Nickel		0.30	B	0.00076	0.040
Potassium		11	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		0.0042	J	0.0024	0.050
Zinc		6.8	B	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186611	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1201			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-185879	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.52 g
Analysis Date:	06/19/2015 1117			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.24		0.020	0.14

Client Sample ID: ASB-1001_50-54 (20150615)

Lab Sample ID: 240-52076-2 Date Sampled: 06/15/2015 1710
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/17/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-185884	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185711	Lab File ID:	I9061915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.20 g
Analysis Date:	06/19/2015 1719			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		9500		6.0	21
Barium		2100		0.42	21
Beryllium		0.51		0.027	0.51
Calcium		15000		24	510
Cadmium		11		0.022	0.21
Cobalt		21		0.048	5.1
Chromium		100		0.077	0.51
Copper		160		0.24	2.6
Iron		27000		3.3	10
Potassium		3700	B	6.4	510
Magnesium		5300		5.3	510
Manganese		500		0.086	1.5
Silver		0.99		0.065	0.51
Sodium		400	J	20	510
Nickel		72		0.082	4.1
Vanadium		14		0.21	5.1
Zinc		780	B	0.58	2.1
Arsenic		17		0.42	1.0
Selenium		2.4		0.35	0.51
Thallium		ND		0.13	1.0

Analysis Method:	6010B	Analysis Batch:	240-186018	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185711	Lab File ID:	I9062015A.asc
Dilution:	10			Initial Weight/Volume:	1.20 g
Analysis Date:	06/20/2015 1323			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		130		4.9	10
Lead		9100		2.1	3.1

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-186556	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1931			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		0.21		0.040	0.20
Antimony		0.10	J	0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Client Sample ID: **ASB-1001_50-54 (20150615)**

Lab Sample ID: 240-52076-2 Date Sampled: 06/15/2015 1710
Client Matrix: Solid Date Received: 06/17/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.0084	J B	0.0029	0.50
Barium		6.8	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.082	J	0.00014	0.10
Calcium		360		0.26	5.0
Chromium		0.0063	J B	0.00055	0.50
Cobalt		0.11		0.00056	0.050
Copper		0.012	J B	0.0019	1.0
Iron		2.5		0.013	0.10
Lead		8.9	B	0.0019	0.50
Magnesium		31		0.055	5.0
Manganese		7.4	B	0.00046	0.015
Nickel		0.23	B	0.00076	0.040
Potassium		13	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		4.4	B	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186611	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1208			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-185879	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	06/19/2015 1137			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.15		0.018	0.13

General Chemistry

Client Sample ID: **ASB-1001_39-42 (20150615)**

Lab Sample ID: 240-52076-1 Date Sampled: 06/15/2015 1650
Client Matrix: Solid % Moisture: 20.0 Date Received: 06/17/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.53	J	mg/Kg	0.34	1.0	1.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1347						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	190		mg/Kg	0.16	2.5	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1241						DryWt Corrected: Y
Percent Solids	80		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827						DryWt Corrected: N
Percent Moisture	20		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1001_50-54 (20150615)**

Lab Sample ID: 240-52076-2 Date Sampled: 06/15/2015 1710
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/17/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.62	J	mg/Kg	0.33	0.99	1.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1350						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	100		mg/Kg	0.16	2.5	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1241						DryWt Corrected: Y
Percent Solids	81		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827						DryWt Corrected: N
Percent Moisture	19		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185642	Analysis Date: 06/18/2015 0827						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-185687					
LCS 240-185697/2-A	Lab Control Sample	T	Solid	8260B	240-185697
MB 240-185697/1-A	Method Blank	T	Solid	8260B	240-185697
Prep Batch: 240-185697					
LCS 240-185697/2-A	Lab Control Sample	T	Solid	5035	
MB 240-185697/1-A	Method Blank	T	Solid	5035	
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	5035	
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	5035	
Prep Batch: 240-186101					
LB 240-186101/1-A	Method Blank	P	Solid	1311	
240-52076-1	ASB-1001_39-42 (20150615)	P	Solid	1311	
240-52076-2	ASB-1001_50-54 (20150615)	P	Solid	1311	
240-52076-J-8-A MS	Matrix Spike	P	Solid	1311	
240-52076-J-8-A MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-186116					
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	8260B	240-185697
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	8260B	240-185697
Analysis Batch:240-186195					
LB 240-186101/1-A	Method Blank	P	Solid	8260B	
LCS 240-186195/8	Lab Control Sample	T	Water	8260B	
240-52076-1	ASB-1001_39-42 (20150615)	P	Solid	8260B	
240-52076-2	ASB-1001_50-54 (20150615)	P	Solid	8260B	
240-52076-J-8-A MS	Matrix Spike	P	Solid	8260B	
240-52076-J-8-A MSD	Matrix Spike Duplicate	P	Solid	8260B	

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-185656					
LCS 240-185656/24-A	Lab Control Sample	T	Solid	3540C	
MB 240-185656/23-A	Method Blank	T	Solid	3540C	
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	3540C	
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	3540C	
Analysis Batch:240-186081					
LCS 240-185656/24-A	Lab Control Sample	T	Solid	8270C	240-185656
MB 240-185656/23-A	Method Blank	T	Solid	8270C	240-185656
Prep Batch: 240-186216					
240-52076-1	ASB-1001_39-42 (20150615)	P	Solid	1311	
240-52076-2	ASB-1001_50-54 (20150615)	P	Solid	1311	
240-52203-A-1-L MS	Matrix Spike	P	Solid	1311	
Analysis Batch:240-186276					
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	8270C	240-185656
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	8270C	240-185656
Prep Batch: 240-186294					
LCS 240-186294/12-A	Lab Control Sample	T	Water	3510C	
MB 240-186294/11-A	Method Blank	T	Water	3510C	
240-52076-1	ASB-1001_39-42 (20150615)	P	Solid	3510C	240-186216
240-52076-2	ASB-1001_50-54 (20150615)	P	Solid	3510C	240-186216
240-52203-A-1-L MS	Matrix Spike	P	Solid	3510C	240-186216
Analysis Batch:240-186705					
LCS 240-186294/12-A	Lab Control Sample	T	Water	8270C	240-186294
MB 240-186294/11-A	Method Blank	T	Water	8270C	240-186294
240-52076-2	ASB-1001_50-54 (20150615)	P	Solid	8270C	240-186294
240-52203-A-1-L MS	Matrix Spike	P	Solid	8270C	240-186294
Analysis Batch:240-186914					
240-52076-1	ASB-1001_39-42 (20150615)	P	Solid	8270C	240-186294

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Prep Batch: 240-186058					
LCS 240-186058/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-186058/12-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-186058/1-A	Method Blank	T	Solid	5035	
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	5035	
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	5035	
Analysis Batch:240-186340					
LCS 240-186058/2-A	Lab Control Sample	T	Solid	WI-GRO	240-186058
LCSD 240-186058/12-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-186058
MB 240-186058/1-A	Method Blank	T	Solid	WI-GRO	240-186058
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	WI-GRO	240-186058
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	WI-GRO	240-186058

Report Basis
T = Total

GC Semi VOA

Prep Batch: 240-185628					
LCS 240-185628/13-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-185628/14-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-185628/12-A	Method Blank	T	Solid	WI DRO PREP	
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	WI DRO PREP	
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	WI DRO PREP	
Analysis Batch:240-185907					
LCS 240-185628/13-A	Lab Control Sample	T	Solid	WI-DRO	240-185628
LCSD 240-185628/14-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-185628
MB 240-185628/12-A	Method Blank	T	Solid	WI-DRO	240-185628
Analysis Batch:240-186213					
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	WI-DRO	240-185628
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	WI-DRO	240-185628

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-185711					
LCS 240-185711/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-185711/1-A	Method Blank	T	Solid	3050B	
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	3050B	
240-52076-1MS	Matrix Spike	T	Solid	3050B	
240-52076-1MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	3050B	
Prep Batch: 240-185724					
LCS 240-185724/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-185724/1-A	Method Blank	T	Solid	7471A	
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	7471A	
240-52076-1MS	Matrix Spike	T	Solid	7471A	
240-52076-1MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	7471A	
Analysis Batch:240-185879					
LCS 240-185724/2-A	Lab Control Sample	T	Solid	7471A	240-185724
MB 240-185724/1-A	Method Blank	T	Solid	7471A	240-185724
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	7471A	240-185724
240-52076-1MS	Matrix Spike	T	Solid	7471A	240-185724
240-52076-1MSD	Matrix Spike Duplicate	T	Solid	7471A	240-185724
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	7471A	240-185724
Analysis Batch:240-185884					
LCS 240-185711/2-A	Lab Control Sample	T	Solid	6010B	240-185711
MB 240-185711/1-A	Method Blank	T	Solid	6010B	240-185711
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	6010B	240-185711
240-52076-1MS	Matrix Spike	T	Solid	6010B	240-185711
240-52076-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-185711
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	6010B	240-185711
Analysis Batch:240-186018					
LCS 240-185711/2-A	Lab Control Sample	T	Solid	6010B	240-185711
MB 240-185711/1-A	Method Blank	T	Solid	6010B	240-185711
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	6010B	240-185711
240-52076-1MS	Matrix Spike	T	Solid	6010B	240-185711
240-52076-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-185711
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	6010B	240-185711

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-186216					
LB 240-186216/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-186216/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-52076-1	ASB-1001_39-42 (20150615)	P	Solid	1311	
240-52076-1MS	Matrix Spike	P	Solid	1311	
240-52076-1MSD	Matrix Spike Duplicate	P	Solid	1311	
240-52076-2	ASB-1001_50-54 (20150615)	P	Solid	1311	
Prep Batch: 240-186308					
LCS 240-186308/3-A	Lab Control Sample	T	Water	3010A	
MB 240-186308/2-A	Method Blank	T	Water	3010A	
LB 240-186216/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-186216
240-52076-1	ASB-1001_39-42 (20150615)	P	Solid	3010A	240-186216
240-52076-1MS	Matrix Spike	P	Solid	3010A	240-186216
240-52076-1MSD	Matrix Spike Duplicate	P	Solid	3010A	240-186216
240-52076-2	ASB-1001_50-54 (20150615)	P	Solid	3010A	240-186216
Prep Batch: 240-186309					
LCS 240-186309/3-A	Lab Control Sample	T	Water	7470A	
MB 240-186309/2-A	Method Blank	T	Water	7470A	
LB 240-186216/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-186216
240-52076-1	ASB-1001_39-42 (20150615)	P	Solid	7470A	240-186216
240-52076-1MS	Matrix Spike	P	Solid	7470A	240-186216
240-52076-1MSD	Matrix Spike Duplicate	P	Solid	7470A	240-186216
240-52076-2	ASB-1001_50-54 (20150615)	P	Solid	7470A	240-186216
Analysis Batch:240-186556					
LB 240-186216/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-186308
LCS 240-186308/3-A	Lab Control Sample	T	Water	6010B	240-186308
MB 240-186308/2-A	Method Blank	T	Water	6010B	240-186308
240-52076-1	ASB-1001_39-42 (20150615)	P	Solid	6010B	240-186308
240-52076-1MS	Matrix Spike	P	Solid	6010B	240-186308
240-52076-1MSD	Matrix Spike Duplicate	P	Solid	6010B	240-186308
240-52076-2	ASB-1001_50-54 (20150615)	P	Solid	6010B	240-186308
Analysis Batch:240-186611					
LB 240-186216/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-186309
LCS 240-186309/3-A	Lab Control Sample	T	Water	7470A	240-186309
MB 240-186309/2-A	Method Blank	T	Water	7470A	240-186309
240-52076-1	ASB-1001_39-42 (20150615)	P	Solid	7470A	240-186309
240-52076-1MS	Matrix Spike	P	Solid	7470A	240-186309
240-52076-1MSD	Matrix Spike Duplicate	P	Solid	7470A	240-186309
240-52076-2	ASB-1001_50-54 (20150615)	P	Solid	7470A	240-186309

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Report Basis					
P = TCLP					
T = Total					
General Chemistry					
Analysis Batch:240-185642					
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	Moisture	
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	Moisture	
240-52076-E-3 DU	Duplicate	T	Solid	Moisture	
Prep Batch: 240-186524					
LCSI 240-186524/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-186524/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-186524/9-A	Method Blank	T	Solid	3060A	
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	3060A	
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	3060A	
Analysis Batch:240-186589					
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	7196A	
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	7196A	
Analysis Batch:240-186823					
LCSI 240-186524/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-186524
LCSS 240-186524/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-186524
MB 240-186524/9-A	Method Blank	T	Solid	7196A	240-186524
240-52076-1	ASB-1001_39-42 (20150615)	T	Solid	7196A	240-186524
240-52076-2	ASB-1001_50-54 (20150615)	T	Solid	7196A	240-186524

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52076-1	ASB-1001_39-42 (20150615)	78	74	99	89
240-52076-2	ASB-1001_50-54 (20150615)	84	74	103	92
MB 240-185697/1-A		93	73	101	93
LCS 240-185697/2-A		92	86	104	98

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-186101/1-A MB		98	107	102	102
LCS 240-186195/8		104	104	97	108
240-52076-J-8-A MS		100	97	92	101
240-52076-J-8-A MSD		102	98	95	104

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-52076-1	ASB-1001_39-42 (20150615)	98	92	99	100
240-52076-2	ASB-1001_50-54 (20150615)	102	103	106	105

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-185656/23-A		71	59	69	70	76	52
LCS 240-185656/24-A		71	62	72	69	75	80

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52076-1	ASB-1001_39-42 (20150615)	63	56	74	78	66	63
240-52076-2	ASB-1001_50-54 (20150615)	79	73	81	92	81	79

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-52076-1	ASB-1001_39-42 (20150615)	77	68	80	66	75	83
240-52076-2	ASB-1001_50-54 (20150615)	87	78	93	67	87	95
MB 240-186294/11-A		89	82	93	79	89	93
LCS 240-186294/12-A		72	69	76	67	72	78
240-52203-A-1-L MS		86	84	77	57	76	58

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Method Blank - Batch: 240-185697

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-185697/1-A	Analysis Batch:	240-185687	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185697	Lab File ID:	143757.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/18/2015 2033	Units:	ug/Kg	Final Weight/Volume:	5.00 mL
Prep Date:	06/18/2015 1146				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Method Blank - Batch: 240-185697

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-185697/1-A	Analysis Batch:	240-185687	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185697	Lab File ID:	143757.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/18/2015 2033	Units:	ug/Kg	Final Weight/Volume:	5.00 mL
Prep Date:	06/18/2015 1146				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	93	26 - 141
Dibromofluoromethane (Surr)	73	30 - 122
1,2-Dichloroethane-d4 (Surr)	101	39 - 128
Toluene-d8 (Surr)	93	33 - 134

Lab Control Sample - Batch: 240-185697

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-185697/2-A	Analysis Batch:	240-185687	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185697	Lab File ID:	143756.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/18/2015 2012	Units:	ug/Kg	Final Weight/Volume:	5.00 mL
Prep Date:	06/18/2015 1146				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	1940	97	16 - 156	
Allyl chloride	1000	776	78	50 - 150	
Bromobenzene	1000	864	86	72 - 120	
Bromochloromethane	1000	879	88	56 - 128	
Bromodichloromethane	1000	865	87	28 - 123	
Benzene	1000	1000	100	70 - 120	
Bromoform	1000	728	73	10 - 120	
Bromomethane	1000	638	64	10 - 120	
2-Butanone (MEK)	2000	2040	102	10 - 199	
Carbon disulfide	1000	636	64	10 - 132	
Carbon tetrachloride	1000	892	89	29 - 120	
Chlorobenzene	1000	954	95	71 - 120	
Chlorodibromomethane	1000	851	85	22 - 120	
Chloroethane	1000	967	97	10 - 120	
Chloroform	1000	962	96	63 - 120	
Chloromethane	1000	768	77	25 - 120	
2-Chlorotoluene	1000	1050	105	68 - 122	
4-Chlorotoluene	1000	1040	104	68 - 122	
cis-1,2-Dichloroethene	1000	954	95	60 - 125	
cis-1,3-Dichloropropene	1000	906	91	25 - 120	
Cyclohexane	1000	1090	109	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	886	89	10 - 129	
1,2-Dibromoethane	1000	998	100	47 - 123	
Dibromomethane	1000	961	96	68 - 120	
1,2-Dichlorobenzene	1000	926	93	68 - 120	
1,3-Dichlorobenzene	1000	904	90	66 - 121	
1,4-Dichlorobenzene	1000	910	91	65 - 120	
Dichlorodifluoromethane	1000	491	49	10 - 120	
1,1-Dichloroethane	1000	1130	113	63 - 120	
1,2-Dichloroethane	1000	1100	110	68 - 120	
1,1-Dichloroethene	1000	690	69	44 - 143	
Dichlorofluoromethane	1000	1160	116	40 - 160	
1,2-Dichloropropane	1000	1180	118	73 - 120	
1,3-Dichloropropane	1000	1020	102	74 - 120	
2,2-Dichloropropane	1000	832	83	25 - 123	
1,1-Dichloropropene	1000	1070	107	60 - 123	
Ethylbenzene	1000	998	100	66 - 120	
Ethyl ether	1000	1170	117	70 - 130	
Hexachlorobutadiene	1000	954	95	34 - 135	
2-Hexanone	2000	1900	95	43 - 130	
Isopropylbenzene	1000	1040	104	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Control Sample - Batch: 240-185697

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-185697/2-A	Analysis Batch:	240-185687	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185697	Lab File ID:	143756.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/18/2015 2012	Units:	ug/Kg	Final Weight/Volume:	5.00 mL
Prep Date:	06/18/2015 1146				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	4650	93	44 - 173	
Methylcyclohexane	1000	982	98	41 - 133	
Methylene Chloride	1000	872	87	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	2150	107	49 - 121	
Methyl tert butyl ether	1000	918	92	34 - 157	
m-Xylene & p-Xylene	1000	1010	101	67 - 120	
Naphthalene	1000	944	94	37 - 126	
n-Butylbenzene	1000	1050	105	51 - 137	
N-Propylbenzene	1000	1020	102	64 - 130	
o-Xylene	1000	1020	102	68 - 120	
p-Isopropyltoluene	1000	1050	105	56 - 136	
sec-Butylbenzene	1000	1150	115	58 - 131	
Styrene	1000	869	87	60 - 120	
tert-Butylbenzene	1000	1060	106	58 - 128	
1,1,1,2-Tetrachloroethane	1000	998	100	27 - 121	
1,1,2,2-Tetrachloroethane	1000	1150	115	54 - 121	
Tetrachloroethene	1000	873	87	58 - 131	
Tetrahydrofuran	2000	1880	94	70 - 130	
Toluene	1000	1050	105	66 - 123	
trans-1,2-Dichloroethene	1000	895	89	58 - 121	
trans-1,3-Dichloropropene	1000	993	99	22 - 122	
1,2,3-Trichlorobenzene	1000	860	86	43 - 129	
1,2,4-Trichlorobenzene	1000	823	82	41 - 135	
1,1,1-Trichloroethane	1000	909	91	38 - 122	
1,1,2-Trichloroethane	1000	1040	104	74 - 120	
Trichloroethene	1000	962	96	59 - 124	
Trichlorofluoromethane	1000	1110	111	17 - 145	
1,2,3-Trichloropropane	1000	1050	105	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	673	67	48 - 151	
1,2,4-Trimethylbenzene	1000	1060	106	62 - 133	
1,3,5-Trimethylbenzene	1000	1090	109	60 - 130	
Vinyl chloride	1000	819	82	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	92	26 - 141
Dibromofluoromethane (Surr)	86	30 - 122
1,2-Dichloroethane-d4 (Surr)	104	39 - 128
Toluene-d8 (Surr)	98	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Method Blank - Batch: 240-186195

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-186101/1-A	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950663.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/22/2015 1839	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1839				
Leach Date:	06/21/2015 1535				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	98	70 - 124
Dibromofluoromethane (Surr)	107	80 - 128
1,2-Dichloroethane-d4 (Surr)	102	80 - 121
Toluene-d8 (Surr)	102	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Control Sample - Batch: 240-186195

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-186195/8	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UX950664.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/22/2015 1901	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1901				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	1050	105	80 - 120	
2-Butanone (MEK)	2000	1750	87	49 - 120	
Carbon tetrachloride	1000	1120	112	54 - 122	
Chlorobenzene	1000	1060	106	80 - 120	
Chloroform	1000	1110	111	80 - 123	
1,2-Dichloroethane	1000	1030	103	80 - 120	
1,1-Dichloroethene	1000	1090	109	71 - 133	
Tetrachloroethene	1000	1110	111	79 - 134	
Trichloroethene	1000	1080	108	78 - 130	
Vinyl chloride	1000	1050	105	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	104	70 - 124
Dibromofluoromethane (Surr)	104	80 - 128
1,2-Dichloroethane-d4 (Surr)	97	80 - 121
Toluene-d8 (Surr)	108	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186195

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-52076-J-8-A MS	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950678.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/23/2015 0033			Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 0033				5 mL
Leach Date:	06/21/2015 1535				

MSD Lab Sample ID:	240-52076-J-8-A MSD	Analysis Batch:	240-186195	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950679.D
Dilution:	1.0	Leach Batch:	240-186101	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/23/2015 0056			Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 0056				5 mL
Leach Date:	06/21/2015 1535				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	97	99	80 - 120	2	30		
2-Butanone (MEK)	76	82	49 - 120	6	30		
Carbon tetrachloride	96	102	60 - 120	5	30		
Chlorobenzene	101	101	80 - 120	0	30		
Chloroform	101	101	80 - 124	0	30		
1,2-Dichloroethane	96	96	80 - 120	0	30		
1,1-Dichloroethene	102	100	67 - 139	2	30		
Tetrachloroethene	105	104	74 - 138	1	30		
Trichloroethene	98	102	75 - 134	4	30		
Vinyl chloride	94	93	51 - 120	2	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	100	102	70 - 124
Dibromofluoromethane (Surr)	97	98	80 - 128
1,2-Dichloroethane-d4 (Surr)	92	95	80 - 121
Toluene-d8 (Surr)	101	104	80 - 120

Method Blank - Batch: 240-185656

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-185656/23-A	Analysis Batch:	240-186081	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185656	Lab File ID:	50622008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/22/2015 1208	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Method Blank - Batch: 240-185656

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-185656/23-A	Analysis Batch:	240-186081	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185656	Lab File ID:	50622008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/22/2015 1208	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	71	24 - 110
2-Fluorophenol (Surr)	59	24 - 110
Nitrobenzene-d5 (Surr)	69	20 - 110
Phenol-d5 (Surr)	70	26 - 110
Terphenyl-d14 (Surr)	76	36 - 110
2,4,6-Tribromophenol (Surr)	52	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Control Sample - Batch: 240-185656

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-185656/24-A	Analysis Batch:	240-186081	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185656	Lab File ID:	50622009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/22/2015 1232	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	457	69	35 - 110	
2,2'-oxybis[1-chloropropane]	667	489	73	29 - 110	
2,4-Dichlorophenol	667	453	68	39 - 110	
2,4-Dimethylphenol	667	420	63	29 - 110	
2,4-Dinitrophenol	1330	1290	97	10 - 110	J
2,4-Dinitrotoluene	667	534	80	48 - 110	
2,6-Dinitrotoluene	667	546	82	45 - 110	
2-Chloronaphthalene	667	431	65	32 - 110	
2,4,5-Trichlorophenol	667	436	65	25 - 110	
2-Chlorophenol	667	429	64	37 - 110	
2,4,6-Trichlorophenol	667	422	63	12 - 110	
2-Methylnaphthalene	667	466	70	36 - 110	
2-Methylphenol	667	421	63	41 - 110	
2-Nitroaniline	667	522	78	45 - 110	J
2-Nitrophenol	667	514	77	34 - 110	
3,3'-Dichlorobenzidine	1330	854	64	28 - 110	J
3-Nitroaniline	667	477	72	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	1350	101	10 - 110	J
4-Bromophenyl phenyl ether	667	530	80	39 - 110	
4-Chloro-3-methylphenol	667	492	74	48 - 110	
4-Chloroaniline	667	383	57	30 - 110	
4-Chlorophenyl phenyl ether	667	514	77	40 - 110	
4-Nitroaniline	667	547	82	48 - 110	J
4-Nitrophenol	1330	1090	82	28 - 110	J
Acenaphthene	667	474	71	38 - 110	
Acenaphthylene	667	460	69	40 - 110	
Acetophenone	667	423	63	40 - 110	
Anthracene	667	486	73	48 - 110	
Atrazine	1330	1120	84	66 - 127	
Benzaldehyde	1330	958	72	32 - 110	
Benzo[a]anthracene	667	460	69	50 - 110	
Benzo[a]pyrene	667	527	79	44 - 110	
Benzo[b]fluoranthene	667	520	78	43 - 110	
Benzo[g,h,i]perylene	667	552	83	51 - 110	
Benzo[k]fluoranthene	667	525	79	38 - 105	
Bis(2-chloroethoxy)methane	667	437	66	32 - 110	
Bis(2-chloroethyl)ether	667	419	63	34 - 110	
Bis(2-ethylhexyl) phthalate	667	464	70	50 - 110	
Butyl benzyl phthalate	667	437	66	51 - 110	
Caprolactam	1330	1080	81	44 - 114	
Carbazole	667	498	75	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Control Sample - Batch: 240-185656

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-185656/24-A	Analysis Batch:	240-186081	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185656	Lab File ID:	50622009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/22/2015 1232	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/18/2015 0913			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	494	74	50 - 110	
Dibenz(a,h)anthracene	667	556	83	51 - 110	
Dibenzofuran	667	471	71	43 - 110	
Diethyl phthalate	667	497	75	52 - 110	
Dimethyl phthalate	667	485	73	50 - 110	
Di-n-butyl phthalate	667	472	71	51 - 110	
Di-n-octyl phthalate	667	371	56	48 - 110	
Fluoranthene	667	512	77	51 - 110	
Fluorene	667	491	74	46 - 110	
Hexachlorobenzene	667	561	84	43 - 110	
Hexachlorobutadiene	667	442	66	29 - 110	
Hexachlorocyclopentadiene	667	245	37	12 - 110	J
Hexachloroethane	667	412	62	30 - 110	
Indeno[1,2,3-cd]pyrene	667	509	76	50 - 110	
Isophorone	667	472	71	36 - 110	
Naphthalene	667	452	68	36 - 110	
Nitrobenzene	667	474	71	32 - 110	
N-Nitrosodi-n-propylamine	667	480	72	38 - 110	
N-Nitrosodiphenylamine	1330	1020	76	46 - 110	
Pentachlorophenol	1330	652	49	10 - 110	
Phenol	667	463	69	38 - 110	
Phenanthrene	667	481	72	49 - 110	
Pyrene	667	469	70	49 - 110	
3 & 4 Methylphenol	667	429	64	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	71	24 - 110
2-Fluorophenol (Surr)	62	24 - 110
Nitrobenzene-d5 (Surr)	72	20 - 110
Phenol-d5 (Surr)	69	26 - 110
Terphenyl-d14 (Surr)	75	36 - 110
2,4,6-Tribromophenol (Surr)	80	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Method Blank - Batch: 240-186294

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-186294/11-A	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-186294	Lab File ID:	50625008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/25/2015 1117	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.0040
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	89	30 - 110
2-Fluorophenol (Surr)	82	20 - 110
Nitrobenzene-d5 (Surr)	93	28 - 110
Phenol-d5 (Surr)	79	21 - 110
Terphenyl-d14 (Surr)	89	48 - 110
2,4,6-Tribromophenol (Surr)	93	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Control Sample - Batch: 240-186294

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-186294/12-A	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-186294	Lab File ID:	50625009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/25/2015 1142	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0535	67	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0619	77	54 - 110	
Pyridine	0.0800	0.0445	56	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0566	71	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0557	70	46 - 110	
2-Methylphenol	0.0800	0.0739	92	44 - 111	
Hexachlorobenzene	0.0800	0.0508	64	50 - 110	
Hexachlorobutadiene	0.0800	0.0544	68	34 - 110	
Hexachloroethane	0.0800	0.0537	67	41 - 110	
Nitrobenzene	0.0800	0.0594	74	40 - 110	
Pentachlorophenol	0.160	0.106	67	12 - 110	
3 & 4 Methylphenol	0.0800	0.0619	77	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	72	30 - 110
2-Fluorophenol (Surr)	69	20 - 110
Nitrobenzene-d5 (Surr)	76	28 - 110
Phenol-d5 (Surr)	67	21 - 110
Terphenyl-d14 (Surr)	72	48 - 110
2,4,6-Tribromophenol (Surr)	78	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Matrix Spike - Batch: 240-186294

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-52203-A-1-L MS	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186294	Lab File ID:	50625028.D
Dilution:	50	Leach Batch:	240-186216	Initial Weight/Volume:	250 mL
Analysis Date:	06/25/2015 1936	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 0936			Injection Volume:	1 uL
Leach Date:	06/22/2015 1710				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0513	64	31 - 110	J
2,4-Dinitrotoluene	ND	0.0800	0.0547	68	42 - 110	J
Pyridine	ND	0.0800	0.276	345	21 - 110	F1
2,4,5-Trichlorophenol	ND	0.0800	0.0474	59	41 - 110	J
2,4,6-Trichlorophenol	ND	0.0800	0.0508	63	35 - 110	J
2-Methylphenol	3.6	0.0800	3.60	-26	33 - 112	4
Hexachlorobenzene	ND	0.0800	0.0586	73	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0549	69	28 - 110	J
Hexachloroethane	ND	0.0800	0.0576	72	26 - 110	J
Nitrobenzene	ND	0.0800	0.0838	105	32 - 110	J
Pentachlorophenol	ND	0.160	ND	0	10 - 124	F1
3 & 4 Methylphenol	7.2	0.0800	7.23	89	29 - 110	4

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	86	30 - 110
2-Fluorophenol (Surr)	84	20 - 110
Nitrobenzene-d5 (Surr)	77	28 - 110
Phenol-d5 (Surr)	57	21 - 110
Terphenyl-d14 (Surr)	76	48 - 110
2,4,6-Tribromophenol (Surr)	58	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Method Blank - Batch: 240-186058 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-186058/1-A	Analysis Batch:	240-186340	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186058	Lab File ID:	Y0062306.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/23/2015 1532	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186058 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-186058/2-A	Analysis Batch:	240-186340	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186058	Lab File ID:	Y0062307.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/23/2015 1606	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186058/12-A	Analysis Batch:	240-186340	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186058	Lab File ID:	Y0062318.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/23/2015 2232	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 0733			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	111	95	80 - 120	16	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Method Blank - Batch: 240-185628

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-185628/12-A	Analysis Batch:	240-185907	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-185628	Lab File ID:	P14F061908.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/19/2015 1811	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	3.47	J	0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-185628

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-185628/13-A	Analysis Batch:	240-185907	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-185628	Lab File ID:	P14F061909.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/19/2015 1838	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-185628/14-A	Analysis Batch:	240-185907	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-185628	Lab File ID:	P14F061921.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/20/2015 0003	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/18/2015 0713			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	110	115	70 - 120	4	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Method Blank - Batch: 240-185711 **Method: 6010B**
Preparation: 3050B

Lab Sample ID:	MB 240-185711/1-A	Analysis Batch:	240-185884	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9061915A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/19/2015 1642	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	ND		0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	ND		5.2	500
Manganese	ND		0.084	1.5
Sodium	ND		19	500
Nickel	ND		0.080	4.0
Potassium	12.4	J	6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Selenium	ND		0.34	0.50
Vanadium	ND		0.20	5.0
Thallium	ND		0.13	1.0
Zinc	0.584	J	0.56	2.0

Method Blank - Batch: 240-185711 **Method: 6010B**
Preparation: 3050B

Lab Sample ID:	MB 240-185711/1-A	Analysis Batch:	240-186018	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9062015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/20/2015 1258	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Antimony	ND		0.48	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Control Sample - Batch: 240-185711

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-185711/2-A	Analysis Batch:	240-185884	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9061915A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/19/2015 1646	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	189	95	80 - 120	
Barium	200	192	96	80 - 120	
Beryllium	5.00	4.64	93	80 - 120	
Cadmium	5.00	4.79	96	80 - 120	
Calcium	5000	4730	95	80 - 120	
Chromium	20.0	18.8	94	80 - 120	
Cobalt	50.0	47.3	95	80 - 120	
Copper	25.0	23.3	93	80 - 120	
Iron	100	97.5	98	80 - 120	
Magnesium	5000	4640	93	80 - 120	
Manganese	50.0	47.5	95	80 - 120	
Sodium	5000	4930	99	80 - 120	
Nickel	50.0	48.0	96	80 - 120	
Potassium	5000	4910	98	80 - 120	
Silver	5.00	4.76	95	80 - 120	
Arsenic	200	192	96	80 - 120	
Lead	50.0	46.5	93	80 - 120	
Selenium	200	190	95	80 - 120	
Vanadium	50.0	47.5	95	80 - 120	
Thallium	200	188	94	80 - 120	
Zinc	50.0	49.4	99	80 - 120	

Lab Control Sample - Batch: 240-185711

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-185711/2-A	Analysis Batch:	240-186018	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9062015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/20/2015 1303	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	50.0	48.8	98	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185711

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-52076-1	Analysis Batch:	240-185884	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9061915A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.15 g
Analysis Date:	06/19/2015 1702			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52076-1	Analysis Batch:	240-185884	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9061915A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.15 g
Analysis Date:	06/19/2015 1707			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	2068	2096	75 - 125	1	20	4	4
Beryllium	83	85	75 - 125	3	20		
Cadmium	52	155	75 - 125	34	20	F1	F1 F2
Calcium	167	110	75 - 125	13	20	F1	
Chromium	-22	16	75 - 125	4	20	4	4
Cobalt	87	109	75 - 125	14	20		
Copper	334	157	75 - 125	17	20	4	4
Iron	-925	3979	75 - 125	14	20	4	4
Magnesium	118	93	75 - 125	12	20		
Manganese	155	113	75 - 125	3	20	4	4
Sodium	93	92	75 - 125	1	20		
Nickel	70	81	75 - 125	4	20	F1	
Potassium	115	119	75 - 125	3	20		
Silver	77	93	75 - 125	14	20		
Arsenic	83	90	75 - 125	6	20		
Selenium	83	85	75 - 125	3	20		
Vanadium	91	97	75 - 125	5	20		
Thallium	89	90	75 - 125	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185711

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-52076-1	Analysis Batch:	240-186018	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9062015A.asc
Dilution:	20	Leach Batch:	N/A	Initial Weight/Volume:	1.15 g
Analysis Date:	06/20/2015 1315			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52076-1	Analysis Batch:	240-186018	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185711	Lab File ID:	I9062015A.asc
Dilution:	20	Leach Batch:	N/A	Initial Weight/Volume:	1.15 g
Analysis Date:	06/20/2015 1319			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1221				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	-335	-134	75 - 125	45	20	4	4 F2
Barium	111	345	75 - 125	18	20	4	4
Lead	-14903	-7947	75 - 125	53	20	4	4 F2
Zinc	-130	287	75 - 125	15	20	4	4

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

TCLP SPLPE Leachate Blank - Batch: 240-186308

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-186216/1-B	Analysis Batch:	240-186556	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1853	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	06/22/2015 1710				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.00282	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.00123	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	0.00436	J	0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	0.000465	J	0.00046	0.015
Nickel	0.0342	J	0.00076	0.040
Potassium	1.57	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00331	J	0.0029	0.50
Lead	0.00209	J	0.0019	0.50
Selenium	ND		0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0
Zinc	0.0450	J	0.0096	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Method Blank - Batch: 240-186308

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-186308/2-A	Analysis Batch:	240-186556	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1906	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	0.00421	J	0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Nickel	0.0296	J	0.00076	0.040
Potassium	0.153	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	ND		0.0019	0.50
Selenium	ND		0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0
Zinc	0.0357	J	0.0096	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Lab Control Sample - Batch: 240-186308

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-186308/3-A	Analysis Batch:	240-186556	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1910	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	2.05	102	50 - 150	
Antimony	0.500	0.545	109	50 - 150	
Barium	2.00	2.07	103	50 - 150	J
Beryllium	0.0500	0.0515	103	50 - 150	
Cadmium	0.0500	0.0548	110	50 - 150	J
Calcium	50.0	50.1	100	50 - 150	
Chromium	0.200	0.208	104	50 - 150	J
Cobalt	0.500	0.536	107	50 - 150	
Copper	0.250	0.269	108	50 - 150	J
Iron	1.00	1.05	105	50 - 150	
Magnesium	50.0	49.4	99	50 - 150	
Manganese	0.500	0.513	103	50 - 150	
Nickel	0.500	0.574	115	50 - 150	
Potassium	50.0	52.4	105	50 - 150	
Silver	0.0500	0.0550	110	50 - 150	J
Arsenic	2.00	2.27	113	50 - 150	
Lead	0.500	0.485	97	50 - 150	J
Selenium	2.00	2.31	116	50 - 150	
Vanadium	0.500	0.535	107	50 - 150	
Thallium	2.00	1.99	100	50 - 150	J
Zinc	0.500	0.618	124	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186308

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52076-1	Analysis Batch:	240-186556	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	5.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1923			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	06/22/2015 1710				

MSD Lab Sample ID:	240-52076-1	Analysis Batch:	240-186556	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186308	Lab File ID:	I9062415A.asc
Dilution:	5.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1927			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1009				
Leach Date:	06/22/2015 1710				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	100	96	75 - 125	3	20		
Antimony	102	101	75 - 125	1	20	J	J
Barium	100	97	75 - 125	2	20		
Beryllium	100	98	75 - 125	2	20		
Cadmium	101	100	75 - 125	1	20		
Calcium	123	105	75 - 125	2	20	4	4
Chromium	96	95	75 - 125	1	20		
Cobalt	100	99	75 - 125	1	20		
Copper	97	98	75 - 125	0	20	J	J
Iron	111	105	75 - 125	2	20		
Magnesium	102	97	75 - 125	3	20		
Manganese	201	186	75 - 125	1	20	4	4
Nickel	103	100	75 - 125	2	20		
Potassium	101	98	75 - 125	2	20		
Silver	101	99	75 - 125	2	20	J	J
Arsenic	103	102	75 - 125	1	20		
Lead	106	103	75 - 125	1	20		
Selenium	104	103	75 - 125	1	20	J	J
Vanadium	103	103	75 - 125	0	20		
Thallium	98	97	75 - 125	1	20	J	J
Zinc	94	79	75 - 125	1	20	4	4

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

TCLP SPLPE Leachate Blank - Batch: 240-186309

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-186216/1-C	Analysis Batch:	240-186611	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1154	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-186309

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-186309/2-A	Analysis Batch:	240-186611	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1156	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-186309

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-186309/3-A	Analysis Batch:	240-186611	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1200	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00507	101	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186309

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-52076-1	Analysis Batch:	240-186611	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1203			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

MSD Lab Sample ID:	240-52076-1	Analysis Batch:	240-186611	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-186309	Lab File ID:	062415ahg1.PRN
Dilution:	1.0	Leach Batch:	240-186216	Initial Weight/Volume:	50 mL
Analysis Date:	06/24/2015 1205			Final Weight/Volume:	50 mL
Prep Date:	06/23/2015 1400				
Leach Date:	06/22/2015 1710				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	99	93	80 - 120	7	20		

Method Blank - Batch: 240-185724

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-185724/1-A	Analysis Batch:	240-185879	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/19/2015 1112	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-185724

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-185724/2-A	Analysis Batch:	240-185879	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/19/2015 1115	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.837	100	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185724

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52076-1	Analysis Batch:	240-185879	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.54 g
Analysis Date:	06/19/2015 1124			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52076-1	Analysis Batch:	240-185879	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185724	Lab File ID:	061915AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.54 g
Analysis Date:	06/19/2015 1126			Final Weight/Volume:	100 mL
Prep Date:	06/18/2015 1500				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	103	105	80 - 120	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

Method Blank - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-186524/9-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.27	0.80

Lab Control Sample Insoluble - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-186524/11-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	736	114	75 - 125	

Lab Control Sample Soluble - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-186524/10-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	18.3	92	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52076-2

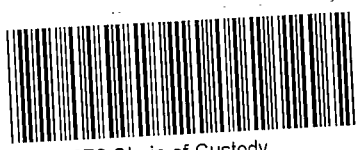
Duplicate - Batch: 240-185642

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52076-E-3 DU	Analysis Batch:	240-185642	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/18/2015 0827	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	94	94	0.7	20	
Percent Moisture	6.3	5.6	11	20	

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

TestAmerica North Canton
4101 Shuffel St NW
North Canton OH 44720
330-497-9396

Chain of Custody Record

20/C3.0
085677
3.2/C4.2 3.0/C4.0
3.6/C4.6

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/16/15	COC No:
Company Name: ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:	1 of 1 COCs
Address: 430 First Avenue North, St. 720	Analysis Turnaround Time			Sampler: Tom Darmon
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-7434	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TMP	☐ 1 week			
Site: St Paul MN	☐ 2 days			Job / SDG No.: 24006638
PO # MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	VOCs (8260)	SVOCs (8270)/TAL metals (6010)	GRO (WI mod Method)	DRO (WI mod Method)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP Metals (1311/6010)	Moisture Content	TAL/Chrom 6 - Chrom 3 SVOCs (8270)	Sample Specific Notes:
ASB-1001_39-42 (20150615)	6/15/15	1650	G	So	10	N	N	2	1	2	1	1	1	1	1		* Limited recovery, use same soil for for SVOCs and TAL metals analysis, Chromium 6+ and Chromium 3+
ASB-1001_50-54 (20150615)		1710	G	So	10			2	1	2	1	1	1	1	1		
ASB-1001_65-70 (20150615)		1725	G	So	10			2	1	2	1	1	1	1	1		
ASB-1001_72-74 (20150615)		1745	G	So	10			2	1	2	1	1	1	1	1		
ASB-1001_84-85 (20150615)		1830	G	So	11			2	1	2	1	1	1	2	1		
ASB-1001_80-82 (20150615)		1845	G	So	13			2	1	2	1	2	2	2	1		
ASB-1002_55-60 (20150616)	6/16/15	1345	G	So	11			2	▨	2	1	1	1	1	1	1	1	
ASB-1002_60-64 (20150616)	6/16/15	1400	G	So	11			2	▨	2	1	1	1	1	1	1	1	
MB-01 (20150616)	6/16/15	—	—	AQ	2			1		1							
								6	1	6	1	1	1	1	1	1	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other Matt

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
Level IV

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____			
Relinquished by: Kelly Hoehn	Company: ARCADIS	Date/Time: 6/16/15 1535	Received by:	Company: TAmi	Date/Time: 6-16-15 1535
Relinquished by:	Company: TAmi	Date/Time: 6-16-15 1640	Received by:	Company: TA	Date/Time: 6.17.15 920
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

07/22/2015

TestAmerica Canton Sample Receipt Form/Narrative Login # : 52076
Canton Facility

Client Arcadis Site Name _____ Cooler unpacked by: [signature]

Cooler Received on 6.17.15 Opened on 6.17.15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop-Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   IR GUN# A (CF +1.0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   ~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C~~ ☑ See Multiple Cooler Form
   ~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C~~
   IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 4 Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC432654
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other
Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

will log first 6 samples for Cr^6 + Cr^3 even though it is not marked on COC per DJP.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____.

TestAmerica Multiple Cooler Receipt Form/Narrative
Canton Facility

Login # : 520710

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
client	A	3.2	4.2	ice
"	"	3.0	4.0	"
"	"	2.0	3.0	"
"	"	3.6	4.6	"

July 23, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52076-2
Sample date: 2015-06-15
Report received by CADENA: 2015-07-22
Initial Data Verification completed by CADENA: 2015-07-23

The following minor QC exceptions or missing information were noted:

WI-GRO and WI-DRO sample results were not associated with surrogate recoveries and QC batch summaries did not include MS recovery data.

GCMS TCLP VOC QC batch did not include MS recovery data due to insufficient sample volume available according to the laboratory submittal case narrative.

WI-DRO blank had a detection below the RL. Qualification of client sample results was not required based on this method blank detection.

TCLP GCMS SVOC QC batch MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

Metals method blanks had detections below the RL for total potassium and zinc and TCLP barium, chromium, copper, manganese, nickel, potassium, arsenic, lead and zinc. Client samples -001 and -002 copper and arsenic results should be considered to be non-detect at the RL and qualified with UB flags.

Metals MS/MSD recoveries for sample -001 total metals analysis were diluted to below reliably quantifiable levels so were not used to qualify client sample results. Client sample -001 TCLP MS/MSD recoveries were not considered to be reliably due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule) for antimony, barium, lead, zinc and manganese. Note: TCLP metals sample -001 MS/MSD was analyzed at two different dilutions.

2 Soil sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52076-2

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240520761	ASB-1001_39-42 (20150615)	6/15/2015	4:50:00	X	X	X	X	X	X	X	X
240520762	ASB-1001_50-54 (20150615)	6/15/2015	5:10:00	X	X	X	X	X	X	X	X

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52076-2

		Sample Name:	ASB-1001_39-42 (20150615)				ASB-1001_50-54 (20150615)			
		Lab Sample ID:	240520761				240520762			
		Sample Date:	6/15/2015				6/15/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
Metals										
	OSW-6010B									
	Arsenic	7440-38-2	0.0094	0.50	mg/l	UB	0.0084	0.50	mg/l	UB
	Copper	7440-50-8	0.020	1.0	mg/l	UB	0.012	1.0	mg/l	UB

ANALYTICAL REPORT

Job Number: 240-52152-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
6/30/2015 3:04 PM

Denise Pohl, Project Manager II
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06/30/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52152-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/18/2015 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.2º C, 4.2º C and 5.6º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4) and ASB-1003_70-74 (20150617) (240-52152-5) were analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 06/22/2015 and 06/23/2015 and analyzed on 06/23/2015 and 06/24/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4), ASB-1003_70-74 (20150617) (240-52152-5) and MB-01 (20150617) (240-52152-6) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/19/2015 and analyzed on 06/22/2015, 06/23/2015, 06/24/2015 and 06/25/2015.

Toluene was detected in method blank MB 240-185863/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

1,2-Dichloroethane-d4 (Surr), 4-Bromofluorobenzene (Surr), Dibromofluoromethane (Surr) and Toluene-d8 (Surr) failed the surrogate recovery criteria high for ASB-1002_75-77 (20150616) (240-52152-1).

Dibromofluoromethane (Surr) failed the surrogate recovery criteria low for 240-52155-B-1-C MS and 240-52155-B-1-D MSD. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS/MSD of sample 240-52155-1 in batch 240-186226.

Several analytes exceeded the RPD limit of sample 240-52155-1 in batch 240-186226.

Refer to the QC report for details.

Samples ASB-1002_75-77 (20150616) (240-52152-1)[166.67X] and ASB-1002_80-84 (20150616) (240-52152-2)[16.67X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-185863 and analytical batch 240-186116 on these samples: ASB-1003_70-74 (20150617) (240-52152-5) and MB-01 (20150617) (240-52152-6).

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-185863 and analytical batch 240-186326 on this sample: ASB-1003_60-64 (20150617) (240-52152-4).

Method(s) 8260B: A MS/MSD was prepared for batch 185863, but was analyzed in a different analytical batch: ASB-1002_75-77 (20150616) (240-52152-1) and ASB-1002_80-84 (20150616) (240-52152-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4) and ASB-1003_70-74 (20150617) (240-52152-5) were analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 06/23/2015, prepared on 06/24/2015 and analyzed on 06/26/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4) and ASB-1003_70-74 (20150617) (240-52152-5) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/19/2015 and analyzed on 06/24/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-185853/11-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Di-n-butyl phthalate was detected in method blank MB 240-185853/11-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl (Surr), 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr), Phenol-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for ASB-1002_75-77 (20150616) (240-52152-1) and ASB-1002_80-84 (20150616) (240-52152-2). Refer to the QC report for details.

Samples ASB-1002_75-77 (20150616) (240-52152-1)[200X], ASB-1002_80-84 (20150616) (240-52152-2)[100X] and ASB-1003_70-74 (20150617) (240-52152-5)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: The continuing calibration verification (CCV) associated with batch 186512 recovered above the upper control limit for 2,4-Dinitrophenol. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following samples are impacted: ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4), and ASB-1003_70-74 (20150617) (240-52152-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4), ASB-1003_70-74 (20150617) (240-52152-5) and MB-01 (20150617) (240-52152-6) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared on 06/23/2015 and analyzed on 06/24/2015 and 06/25/2015.

Samples ASB-1002_75-77 (20150616) (240-52152-1)[200X], ASB-1002_80-84 (20150616) (240-52152-2)[50X] and ASB-1002_92-95 (20150616) (240-52152-3)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)
Sample ASB-1002_75-77 (20150616) (240-52152-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 06/19/2015 and analyzed on 06/23/2015.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

Tetrachloro-m-xylene failed the surrogate recovery criteria low for ASB-1002_75-77 (20150616) (240-52152-1). DCB Decachlorobiphenyl failed the surrogate recovery criteria high. Refer to the QC report for details.

Aroclor-1260 failed the recovery criteria high for the MS/MSD of sample 240-52132-1 in batch 240-186236. Refer to the QC report for details.

Sample ASB-1002_75-77 (20150616) (240-52152-1)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8082: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: ASB-1002_75-77 (20150616) (240-52152-1). Reagents: 2055995, 1848564, and 1931921.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO
Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4) and ASB-1003_70-74 (20150617) (240-52152-5) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/22/2015 and analyzed on 06/23/2015 and 06/24/2015.

Samples ASB-1002_75-77 (20150616) (240-52152-1)[400X], ASB-1002_80-84 (20150616) (240-52152-2)[40X], ASB-1003_60-64 (20150617) (240-52152-4)[5X] and ASB-1003_70-74 (20150617) (240-52152-5)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI DRO PREP: Due to the matrix, the following sample could not be concentrated to the final method required volume: ASB-1002_75-77 (20150616) (240-52152-1). The reporting limits (RLs) are elevated proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)
Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4) and ASB-1003_70-74 (20150617) (240-52152-5) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 06/23/2015, prepared on 06/24/2015 and analyzed on 06/25/2015 and 06/26/2015.

Several analytes were detected in method blank LB 240-186513/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Potassium was detected in method blank MB 240-186561/2-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Calcium, Iron, Zinc and Lead failed the recovery criteria low for the MS of sample ASB-1002_75-77 (20150616)MS (240-52152-1) in batch 240-186911. Zinc failed the recovery criteria low for the MSD of sample ASB-1002_75-77 (20150616)MSD (240-52152-1) in batch 240-186732. Refer to the QC report for details.

Sample ASB-1002_75-77 (20150616) (240-52152-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)
Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4) and ASB-1003_70-74 (20150617) (240-52152-5) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/19/2015 and analyzed on 06/20/2015, 06/23/2015 and 06/24/2015.

Chromium, Magnesium and Zinc were detected in method blank MB 240-185893/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a

result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample ASB-1002_75-77 (20150616)MS (240-52152-1) in batch 240-186476. Aluminum, Calcium, Magnesium and Barium failed the recovery criteria high. For the MSD of sample ASB-1002_75-77 (20150616)MSD (240-52152-1) in batch 240-186476, Several analytes failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, Several analytes exceeded the RPD limit. Refer to the QC report for details.

Sample ASB-1002_75-77 (20150616) (240-52152-1)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY

Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4) and ASB-1003_70-74 (20150617) (240-52152-5) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 06/23/2015, prepared on 06/24/2015 and analyzed on 06/25/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4) and ASB-1003_70-74 (20150617) (240-52152-5) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/19/2015 and analyzed on 06/22/2015.

Mercury failed the recovery criteria low for the MS/MSD of sample ASB-1002_75-77 (20150616)MS/MSD (240-52152-1) in batch 240-186138. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM

Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4) and ASB-1003_70-74 (20150617) (240-52152-5) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 06/24/2015 and analyzed on 06/25/2015.

Samples ASB-1002_75-77 (20150616) (240-52152-1)[10X], ASB-1003_60-64 (20150617) (240-52152-4)[5X] and ASB-1003_70-74 (20150617) (240-52152-5)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 7196A: The following samples were diluted for hexavalent chromium due to the nature of the sample matrix: ASB-1002_75-77 (20150616) (240-52152-1), ASB-1003_60-64 (20150617) (240-52152-4), and ASB-1003_70-74 (20150617) (240-52152-5). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM

Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4) and ASB-1003_70-74 (20150617) (240-52152-5) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 06/24/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples ASB-1002_75-77 (20150616) (240-52152-1), ASB-1002_80-84 (20150616) (240-52152-2), ASB-1002_92-95 (20150616) (240-52152-3), ASB-1003_60-64 (20150617) (240-52152-4) and ASB-1003_70-74 (20150617) (240-52152-5) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/19/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52152-1	**ASB-1002_75-77 (20150616)**					
Benzene		7800	J	29000	ug/Kg	8260B
cis-1,2-Dichloroethene		7600	J	29000	ug/Kg	8260B
Cyclohexane		34000	J	59000	ug/Kg	8260B
Ethylbenzene		170000		29000	ug/Kg	8260B
Isopropylbenzene		27000	J	29000	ug/Kg	8260B
Methylcyclohexane		95000		59000	ug/Kg	8260B
m-Xylene & p-Xylene		580000		29000	ug/Kg	8260B
Naphthalene		280000		29000	ug/Kg	8260B
n-Butylbenzene		110000		29000	ug/Kg	8260B
N-Propylbenzene		38000		29000	ug/Kg	8260B
o-Xylene		270000		29000	ug/Kg	8260B
p-Isopropyltoluene		17000	J	29000	ug/Kg	8260B
sec-Butylbenzene		14000	J	29000	ug/Kg	8260B
Toluene		96000	B	29000	ug/Kg	8260B
Trichloroethene		7800	J	29000	ug/Kg	8260B
1,2,4-Trimethylbenzene		530000		29000	ug/Kg	8260B
1,3,5-Trimethylbenzene		140000		29000	ug/Kg	8260B
1,1'-Biphenyl		2100	J	78000	ug/Kg	8270C
2-Methylnaphthalene		50000	J	78000	ug/Kg	8270C
Acenaphthene		1700	J	78000	ug/Kg	8270C
Anthracene		1600	J	78000	ug/Kg	8270C
Benzo[a]anthracene		1500	J	78000	ug/Kg	8270C
Benzo[a]pyrene		880	J	78000	ug/Kg	8270C
Benzo[b]fluoranthene		1200	J	78000	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		16000	J B	78000	ug/Kg	8270C
Chrysene		1900	J	78000	ug/Kg	8270C
Di-n-butyl phthalate		9400	J B	78000	ug/Kg	8270C
Fluoranthene		4300	J	78000	ug/Kg	8270C
Fluorene		2500	J	78000	ug/Kg	8270C
Naphthalene		220000		78000	ug/Kg	8270C
Phenanthrene		7700	J	78000	ug/Kg	8270C
Pyrene		3800	J	78000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		21000		2500	mg/Kg	WI-GRO
Aroclor-1260		2900		800	ug/Kg	8082
WI Diesel Range Organics (C10-C28)		24000		6800	mg/Kg	WI-DRO
Aluminum		2400		22	mg/Kg	6010B
Antimony		240	F2	1.1	mg/Kg	6010B
Barium		5700		220	mg/Kg	6010B
Beryllium		0.038	J	0.54	mg/Kg	6010B
Calcium		44000	F2	540	mg/Kg	6010B
Cadmium		120	F2	0.22	mg/Kg	6010B
Cobalt		50		5.4	mg/Kg	6010B
Chromium		290	B F2	0.54	mg/Kg	6010B
Copper		180	F2	2.7	mg/Kg	6010B
Iron		28000		11	mg/Kg	6010B
Potassium		370	J	540	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Magnesium		11000	B F1 F2	540	mg/Kg	6010B
Manganese		290		1.6	mg/Kg	6010B
Silver		1.1		0.54	mg/Kg	6010B
Sodium		1400		540	mg/Kg	6010B
Nickel		82		4.3	mg/Kg	6010B
Vanadium		5.9		5.4	mg/Kg	6010B
Zinc		5700	B	22	mg/Kg	6010B
Arsenic		21		1.1	mg/Kg	6010B
Lead		8400	F2	3.2	mg/Kg	6010B
Selenium		30		0.54	mg/Kg	6010B
Mercury		0.29	F1	0.13	mg/Kg	7471A
Cr (III)		290		2.4	mg/Kg	7196A
Percent Solids		83		0.10	%	Moisture
Percent Moisture		17		0.10	%	Moisture
TCLP						
2-Butanone (MEK)		140	J	250	ug/L	8260B
Benzene		270		25	ug/L	8260B
Trichloroethene		170		25	ug/L	8260B
2-Methylphenol		0.055		0.010	mg/L	8270C
3 & 4 Methylphenol		0.12		0.010	mg/L	8270C
Antimony		0.091	J	0.30	mg/L	6010B
Arsenic		0.0088	J B	0.50	mg/L	6010B
Barium		0.29	J B	10	mg/L	6010B
Cadmium		0.014	J	0.10	mg/L	6010B
Calcium		180	F1 B	5.0	mg/L	6010B
Chromium		0.0032	J B	0.50	mg/L	6010B
Cobalt		0.14		0.050	mg/L	6010B
Copper		0.0020	J B	1.0	mg/L	6010B
Iron		3.4	F1 B	0.10	mg/L	6010B
Lead		19	B F1	2.5	mg/L	6010B
Magnesium		15	B	5.0	mg/L	6010B
Manganese		0.63	B	0.015	mg/L	6010B
Nickel		0.032	J B	0.040	mg/L	6010B
Potassium		1.9	J B	5.0	mg/L	6010B
Zinc		4.3	B	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52152-2	**ASB-1002_80-84 (20150616)**					
Benzene		570	J	2300	ug/Kg	8260B
cis-1,2-Dichloroethene		760	J	2300	ug/Kg	8260B
Cyclohexane		3500	J	4600	ug/Kg	8260B
Ethylbenzene		16000		2300	ug/Kg	8260B
Isopropylbenzene		3700		2300	ug/Kg	8260B
Methylcyclohexane		14000		4600	ug/Kg	8260B
m-Xylene & p-Xylene		63000		2300	ug/Kg	8260B
Naphthalene		26000		2300	ug/Kg	8260B
n-Butylbenzene		12000		2300	ug/Kg	8260B
N-Propylbenzene		4800		2300	ug/Kg	8260B
o-Xylene		27000		2300	ug/Kg	8260B
p-Isopropyltoluene		3000		2300	ug/Kg	8260B
sec-Butylbenzene		1800	J	2300	ug/Kg	8260B
Toluene		9200	B	2300	ug/Kg	8260B
Trichloroethene		1100	J	2300	ug/Kg	8260B
1,2,4-Trimethylbenzene		68000		2300	ug/Kg	8260B
1,3,5-Trimethylbenzene		20000		2300	ug/Kg	8260B
1,1'-Biphenyl		1100	J	37000	ug/Kg	8270C
2-Methylnaphthalene		16000	J	37000	ug/Kg	8270C
Acenaphthene		710	J	37000	ug/Kg	8270C
Anthracene		550	J	37000	ug/Kg	8270C
Benzo[a]anthracene		690	J	37000	ug/Kg	8270C
Benzo[b]fluoranthene		690	J	37000	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		3400	J B	37000	ug/Kg	8270C
Chrysene		780	J	37000	ug/Kg	8270C
Di-n-butyl phthalate		12000	J B	37000	ug/Kg	8270C
Fluoranthene		2000	J	37000	ug/Kg	8270C
Fluorene		860	J	37000	ug/Kg	8270C
Naphthalene		78000		37000	ug/Kg	8270C
Phenanthrene		3100	J	37000	ug/Kg	8270C
Pyrene		1500	J	37000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		3000		590	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		2100		410	mg/Kg	WI-DRO
Aluminum		3900		19	mg/Kg	6010B
Antimony		4.0		0.96	mg/Kg	6010B
Barium		160		19	mg/Kg	6010B
Beryllium		0.14	J	0.48	mg/Kg	6010B
Calcium		36000		480	mg/Kg	6010B
Cadmium		1.2		0.19	mg/Kg	6010B
Cobalt		5.5		4.8	mg/Kg	6010B
Chromium		18	B	0.48	mg/Kg	6010B
Copper		8.1		2.4	mg/Kg	6010B
Iron		13000		9.6	mg/Kg	6010B
Potassium		440	J	480	mg/Kg	6010B
Magnesium		13000	B	480	mg/Kg	6010B
Manganese		620		1.4	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Sample ID / Analyte	Client Sample ID / Result	Qualifier	Reporting Limit	Units	Method
Sodium	140	J	480	mg/Kg	6010B
Nickel	14		3.8	mg/Kg	6010B
Vanadium	19		4.8	mg/Kg	6010B
Zinc	54	B	1.9	mg/Kg	6010B
Arsenic	2.5		0.96	mg/Kg	6010B
Lead	47		0.29	mg/Kg	6010B
Selenium	0.36	J	0.48	mg/Kg	6010B
Cr (III)	18		2.2	mg/Kg	7196A
Percent Solids	90		0.10	%	Moisture
Percent Moisture	10		0.10	%	Moisture
TCLP					
Benzene	12	J	25	ug/L	8260B
Trichloroethene	24	J	25	ug/L	8260B
2-Methylphenol	0.014		0.010	mg/L	8270C
3 & 4 Methylphenol	0.031		0.010	mg/L	8270C
Antimony	0.093	J	0.30	mg/L	6010B
Arsenic	0.0062	J B	0.50	mg/L	6010B
Barium	1.3	J B	10	mg/L	6010B
Cadmium	0.0024	J	0.10	mg/L	6010B
Calcium	570	B	5.0	mg/L	6010B
Chromium	0.0029	J B	0.50	mg/L	6010B
Cobalt	0.053		0.050	mg/L	6010B
Copper	0.068	J B	1.0	mg/L	6010B
Iron	0.064	J B	0.10	mg/L	6010B
Lead	0.71	B	0.50	mg/L	6010B
Magnesium	13	B	5.0	mg/L	6010B
Manganese	3.1	B	0.015	mg/L	6010B
Nickel	0.026	J B	0.040	mg/L	6010B
Potassium	3.2	J B	5.0	mg/L	6010B
Zinc	1.2	B	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52152-3	**ASB-1002_92-95 (20150616)**					
m-Xylene & p-Xylene		59	J	120	ug/Kg	8260B
Naphthalene		130		120	ug/Kg	8260B
n-Butylbenzene		20	J	120	ug/Kg	8260B
o-Xylene		26	J	120	ug/Kg	8260B
Toluene		13	J B	120	ug/Kg	8260B
1,2,4-Trimethylbenzene		82	J	120	ug/Kg	8260B
1,3,5-Trimethylbenzene		21	J	120	ug/Kg	8260B
Bis(2-ethylhexyl) phthalate		50	J B	370	ug/Kg	8270C
Naphthalene		11	J	370	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		770	J	1100	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		6.3	J	9.7	mg/Kg	WI-DRO
Aluminum		2800		19	mg/Kg	6010B
Barium		54		19	mg/Kg	6010B
Beryllium		0.11	J	0.47	mg/Kg	6010B
Calcium		58000		470	mg/Kg	6010B
Cadmium		0.083	J	0.19	mg/Kg	6010B
Cobalt		4.4	J	4.7	mg/Kg	6010B
Chromium		11	B	0.47	mg/Kg	6010B
Copper		6.4		2.4	mg/Kg	6010B
Iron		13000		9.4	mg/Kg	6010B
Potassium		390	J	470	mg/Kg	6010B
Magnesium		19000	B	470	mg/Kg	6010B
Manganese		500		1.4	mg/Kg	6010B
Sodium		120	J	470	mg/Kg	6010B
Nickel		11		3.8	mg/Kg	6010B
Vanadium		13		4.7	mg/Kg	6010B
Zinc		15	B	1.9	mg/Kg	6010B
Arsenic		4.0		0.94	mg/Kg	6010B
Lead		2.2		0.28	mg/Kg	6010B
Cr (III)		11		2.2	mg/Kg	7196A
Percent Solids		90		0.10	%	Moisture
Percent Moisture		9.9		0.10	%	Moisture
TCLP						
Arsenic		0.0048	J B	0.50	mg/L	6010B
Barium		0.84	J B	10	mg/L	6010B
Cadmium		0.00034	J	0.10	mg/L	6010B
Calcium		590	B	5.0	mg/L	6010B
Chromium		0.0027	J B	0.50	mg/L	6010B
Cobalt		0.0063	J	0.050	mg/L	6010B
Copper		0.027	J B	1.0	mg/L	6010B
Magnesium		21	B	5.0	mg/L	6010B
Manganese		4.4	B	0.015	mg/L	6010B
Nickel		0.014	J B	0.040	mg/L	6010B
Potassium		2.0	J B	5.0	mg/L	6010B
Zinc		0.048	J B	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52152-4	**ASB-1003_60-64 (20150617)**					
Methyl acetate		110	J	320	ug/Kg	8260B
Naphthalene		43	J	160	ug/Kg	8260B
1,2,4-Trimethylbenzene		14	J	160	ug/Kg	8260B
2-Methylnaphthalene		31	J	420	ug/Kg	8270C
Acenaphthylene		6.9	J	420	ug/Kg	8270C
Anthracene		8.0	J	420	ug/Kg	8270C
Benzo[a]anthracene		27	J	420	ug/Kg	8270C
Benzo[a]pyrene		31	J	420	ug/Kg	8270C
Benzo[b]fluoranthene		42	J	420	ug/Kg	8270C
Benzo[g,h,i]perylene		28	J	420	ug/Kg	8270C
Benzo[k]fluoranthene		20	J	420	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		36	J B	420	ug/Kg	8270C
Chrysene		40	J	420	ug/Kg	8270C
Fluoranthene		52	J	420	ug/Kg	8270C
Fluorene		12	J	420	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		24	J	420	ug/Kg	8270C
Naphthalene		7.7	J	420	ug/Kg	8270C
Phenanthrene		47	J	420	ug/Kg	8270C
Pyrene		62	J	420	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		6.8	J	12	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		270		55	mg/Kg	WI-DRO
Aluminum		11000		19	mg/Kg	6010B
Barium		100		19	mg/Kg	6010B
Beryllium		0.55		0.47	mg/Kg	6010B
Calcium		9000		470	mg/Kg	6010B
Cadmium		0.25		0.19	mg/Kg	6010B
Cobalt		8.7		4.7	mg/Kg	6010B
Chromium		18	B	0.47	mg/Kg	6010B
Copper		19		2.3	mg/Kg	6010B
Iron		16000		9.4	mg/Kg	6010B
Potassium		1300		470	mg/Kg	6010B
Magnesium		4400	B	470	mg/Kg	6010B
Manganese		370		1.4	mg/Kg	6010B
Silver		0.084	J	0.47	mg/Kg	6010B
Sodium		820		470	mg/Kg	6010B
Nickel		23		3.8	mg/Kg	6010B
Vanadium		30		4.7	mg/Kg	6010B
Zinc		75	B	1.9	mg/Kg	6010B
Arsenic		6.9		0.94	mg/Kg	6010B
Lead		26		0.28	mg/Kg	6010B
Mercury		0.062	J	0.12	mg/Kg	7471A
Cr (III)		18		2.5	mg/Kg	7196A
Percent Solids		79		0.10	%	Moisture
Percent Moisture		21		0.10	%	Moisture
TCLP						
Arsenic		0.011	J B	0.50	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Barium		1.0	J B	10	mg/L	6010B
Cadmium		0.0015	J	0.10	mg/L	6010B
Calcium		240	B	5.0	mg/L	6010B
Chromium		0.0060	J B	0.50	mg/L	6010B
Cobalt		0.029	J	0.050	mg/L	6010B
Copper		0.0026	J B	1.0	mg/L	6010B
Iron		0.65	B	0.10	mg/L	6010B
Lead		0.053	J B	0.50	mg/L	6010B
Magnesium		40	B	5.0	mg/L	6010B
Manganese		13	B	0.015	mg/L	6010B
Nickel		0.032	J B	0.040	mg/L	6010B
Potassium		4.4	J B	5.0	mg/L	6010B
Zinc		0.14	J B	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52152-5	**ASB-1003_70-74 (20150617)**					
Methyl acetate		77	J	320	ug/Kg	8260B
Methylcyclohexane		170	J	320	ug/Kg	8260B
m-Xylene & p-Xylene		49	J	160	ug/Kg	8260B
Naphthalene		95	J	160	ug/Kg	8260B
o-Xylene		48	J	160	ug/Kg	8260B
Toluene		15	J B	160	ug/Kg	8260B
1,2,4-Trimethylbenzene		46	J	160	ug/Kg	8260B
1,3,5-Trimethylbenzene		17	J	160	ug/Kg	8260B
1,1'-Biphenyl		120	J	1700	ug/Kg	8270C
2-Methylnaphthalene		850	J	1700	ug/Kg	8270C
Acenaphthene		350	J	1700	ug/Kg	8270C
Acenaphthylene		400	J	1700	ug/Kg	8270C
Acetophenone		50	J	1700	ug/Kg	8270C
Anthracene		870	J	1700	ug/Kg	8270C
Benzo[a]anthracene		2100		1700	ug/Kg	8270C
Benzo[a]pyrene		2200		1700	ug/Kg	8270C
Benzo[b]fluoranthene		2500		1700	ug/Kg	8270C
Benzo[g,h,i]perylene		1200	J	1700	ug/Kg	8270C
Benzo[k]fluoranthene		770	J	1700	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		120	J B	1700	ug/Kg	8270C
Carbazole		290	J	1700	ug/Kg	8270C
Chrysene		2200		1700	ug/Kg	8270C
Dibenz(a,h)anthracene		330	J	1700	ug/Kg	8270C
Dibenzofuran		360	J	1700	ug/Kg	8270C
Fluoranthene		3900		1700	ug/Kg	8270C
Fluorene		480	J	1700	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		980	J	1700	ug/Kg	8270C
Naphthalene		810	J	1700	ug/Kg	8270C
Phenanthrene		3200		1700	ug/Kg	8270C
Pyrene		3800		1700	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		9.4	J	13	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		380		110	mg/Kg	WI-DRO
Aluminum		5300		22	mg/Kg	6010B
Barium		67		22	mg/Kg	6010B
Beryllium		0.35	J	0.56	mg/Kg	6010B
Calcium		8400		560	mg/Kg	6010B
Cadmium		0.70		0.22	mg/Kg	6010B
Cobalt		7.0		5.6	mg/Kg	6010B
Chromium		14	B	0.56	mg/Kg	6010B
Copper		15		2.8	mg/Kg	6010B
Iron		11000		11	mg/Kg	6010B
Potassium		710		560	mg/Kg	6010B
Magnesium		3100	B	560	mg/Kg	6010B
Manganese		340		1.7	mg/Kg	6010B
Silver		0.65		0.56	mg/Kg	6010B
Sodium		320	J	560	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Nickel		13		4.5	mg/Kg	6010B
Vanadium		19		5.6	mg/Kg	6010B
Zinc		47	B	2.2	mg/Kg	6010B
Arsenic		4.1		1.1	mg/Kg	6010B
Lead		24		0.34	mg/Kg	6010B
Selenium		0.41	J	0.56	mg/Kg	6010B
Mercury		0.069	J	0.11	mg/Kg	7471A
Cr (III)		14		2.5	mg/Kg	7196A
Percent Solids		79		0.10	%	Moisture
Percent Moisture		21		0.10	%	Moisture
TCLP						
Arsenic		0.015	J B	0.50	mg/L	6010B
Barium		0.63	J B	10	mg/L	6010B
Cadmium		0.0056	J	0.10	mg/L	6010B
Calcium		280	B	5.0	mg/L	6010B
Chromium		0.0050	J B	0.50	mg/L	6010B
Cobalt		0.015	J	0.050	mg/L	6010B
Copper		0.044	J B	1.0	mg/L	6010B
Iron		0.071	J B	0.10	mg/L	6010B
Lead		0.049	J B	0.50	mg/L	6010B
Magnesium		26	B	5.0	mg/L	6010B
Manganese		8.2	B	0.015	mg/L	6010B
Nickel		0.021	J B	0.040	mg/L	6010B
Potassium		4.2	J B	5.0	mg/L	6010B
Zinc		0.27	J B	1.0	mg/L	6010B
240-52152-6	**MB-01 (20150617)**					
WI Gasoline Range Organics (C6-C10)		410	J	1800	mg/Kg	WI-GRO

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction	TAL CAN		SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL CAN	SW846 8082	
Soxhlet Extraction	TAL CAN		SW846 3540C
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Method	Analyst	Analyst ID
SW846 8260B	Lata, Todd	TJL2
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
WI-GRO WI-GRO	Reed, Rachel T	RTR
SW846 8082	Bosworth, Heather M	HMB
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 6010B	Walpole, Barbara	BW
SW846 7470A	Sutherland, Aaron	ADS
SW846 7471A	Walpole, Barbara	BW
SW846 7196A	Burns, Jill	JMB
SW846 7196A	Counts, Karen	KLC
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52152-1	ASB-1002_75-77 (20150616)	Solid	06/16/2015 1620	06/18/2015 0920
240-52152-2	ASB-1002_80-84 (20150616)	Solid	06/16/2015 1655	06/18/2015 0920
240-52152-3	ASB-1002_92-95 (20150616)	Solid	06/16/2015 1715	06/18/2015 0920
240-52152-4	ASB-1003_60-64 (20150617)	Solid	06/17/2015 1130	06/18/2015 0920
240-52152-5	ASB-1003_70-74 (20150617)	Solid	06/17/2015 1215	06/18/2015 0920
240-52152-6	MB-01 (20150617)	Solid	06/17/2015 0000	06/18/2015 0920

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1002_75-77 (20150616)**

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186664	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	UX88164.D
Dilution:	166.67			Initial Weight/Volume:	8.524 g
Analysis Date:	06/25/2015 0948			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		27000	120000
Allyl chloride		ND		3500	59000
Benzene		7800	J	1100	29000
Bromobenzene		ND		1500	29000
Bromochloromethane		ND		8200	29000
Bromodichloromethane		ND		4500	29000
Bromoform		ND		7200	29000
Bromomethane		ND		6000	29000
2-Butanone (MEK)		ND		8600	120000
Carbon disulfide		ND		6600	29000
Carbon tetrachloride		ND		5700	29000
Chlorobenzene		ND		4800	29000
Chlorodibromomethane		ND		5400	29000
Chloroethane		ND		6000	29000
Chloroform		ND		4200	29000
Chloromethane		ND		5700	29000
2-Chlorotoluene		ND		4800	29000
4-Chlorotoluene		ND		3100	29000
cis-1,2-Dichloroethene		7600	J	4500	29000
cis-1,3-Dichloropropene		ND		2600	29000
Cyclohexane		34000	J	3500	59000
1,2-Dibromo-3-Chloropropane		ND		8400	59000
1,2-Dibromoethane		ND		3800	29000
Dibromomethane		ND		5900	29000
1,2-Dichlorobenzene		ND		2200	29000
1,3-Dichlorobenzene		ND		3500	29000
1,4-Dichlorobenzene		ND		4800	29000
Dichlorodifluoromethane		ND		7200	29000
1,1-Dichloroethane		ND		4100	29000
1,2-Dichloroethane		ND		6200	29000
1,1-Dichloroethene		ND		3500	29000
Dichlorofluoromethane		ND		3900	59000
1,2-Dichloropropane		ND		3800	29000
1,3-Dichloropropane		ND		2700	29000
2,2-Dichloropropane		ND		6100	29000
1,1-Dichloropropene		ND		4500	29000
Ethylbenzene		170000		4100	29000
Ethyl ether		ND		12000	59000
Hexachlorobutadiene		ND		5200	29000
2-Hexanone		ND		9900	120000
Isopropylbenzene		27000	J	1500	29000
Methyl acetate		ND		6500	59000
Methylcyclohexane		95000		4500	59000
Methylene Chloride		ND		10000	29000
4-Methyl-2-pentanone (MIBK)		ND		6600	120000
Methyl tert butyl ether		ND		3500	29000

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_75-77 (20150616)

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186664	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	UX88164.D
Dilution:	166.67			Initial Weight/Volume:	8.524 g
Analysis Date:	06/25/2015 0948			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		580000		2400	29000
Naphthalene		280000		3100	29000
n-Butylbenzene		110000		2500	29000
N-Propylbenzene		38000		7200	29000
o-Xylene		270000		2000	29000
p-Isopropyltoluene		17000	J	2900	29000
sec-Butylbenzene		14000	J	1900	29000
Styrene		ND		3200	29000
tert-Butylbenzene		ND		4000	29000
1,1,1,2-Tetrachloroethane		ND		5800	29000
1,1,2,2-Tetrachloroethane		ND		5100	29000
Tetrachloroethene		ND		3200	29000
Tetrahydrofuran		ND		14000	120000
Toluene		96000	B	1200	29000
trans-1,2-Dichloroethene		ND		3100	29000
trans-1,3-Dichloropropene		ND		3100	29000
1,2,3-Trichlorobenzene		ND		4600	29000
1,2,4-Trichlorobenzene		ND		3500	29000
1,1,1-Trichloroethane		ND		4900	29000
1,1,2-Trichloroethane		ND		9800	29000
Trichloroethene		7800	J	4600	29000
Trichlorofluoromethane		ND		4100	29000
1,2,3-Trichloropropane		ND		12000	29000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		4900	29000
1,2,4-Trimethylbenzene		530000		1500	29000
1,3,5-Trimethylbenzene		140000		1800	29000
Vinyl chloride		ND		6600	29000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	424	X	26 - 141
Dibromofluoromethane (Surr)	288	X	30 - 122
1,2-Dichloroethane-d4 (Surr)	436	X	39 - 128
Toluene-d8 (Surr)	463	X	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_75-77 (20150616)

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186414	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950696.D
Dilution:	1.0	Leach Batch:	240-186220	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/23/2015 2121			Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 2121				
Leach Date:	06/22/2015 1800				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		140	J	29	250
Benzene		270		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		170		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 121
4-Bromofluorobenzene (Surr)	97		70 - 124
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	95		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_80-84 (20150616)

Lab Sample ID: 240-52152-2 Date Sampled: 06/16/2015 1655
Client Matrix: Solid % Moisture: 10.2 Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186562	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	143860.D
Dilution:	16.667			Initial Weight/Volume:	10.176 g
Analysis Date:	06/24/2015 1510			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		2100	9100
Allyl chloride		ND		270	4600
Benzene		570	J	82	2300
Bromobenzene		ND		120	2300
Bromochloromethane		ND		640	2300
Bromodichloromethane		ND		350	2300
Bromoform		ND		560	2300
Bromomethane		ND		460	2300
2-Butanone (MEK)		ND		670	9100
Carbon disulfide		ND		510	2300
Carbon tetrachloride		ND		440	2300
Chlorobenzene		ND		370	2300
Chlorodibromomethane		ND		420	2300
Chloroethane		ND		460	2300
Chloroform		ND		330	2300
Chloromethane		ND		440	2300
2-Chlorotoluene		ND		370	2300
4-Chlorotoluene		ND		240	2300
cis-1,2-Dichloroethene		760	J	350	2300
cis-1,3-Dichloropropene		ND		200	2300
Cyclohexane		3500	J	270	4600
1,2-Dibromo-3-Chloropropane		ND		650	4600
1,2-Dibromoethane		ND		290	2300
Dibromomethane		ND		460	2300
1,2-Dichlorobenzene		ND		170	2300
1,3-Dichlorobenzene		ND		270	2300
1,4-Dichlorobenzene		ND		370	2300
Dichlorodifluoromethane		ND		560	2300
1,1-Dichloroethane		ND		320	2300
1,2-Dichloroethane		ND		480	2300
1,1-Dichloroethene		ND		270	2300
Dichlorofluoromethane		ND		300	4600
1,2-Dichloropropane		ND		290	2300
1,3-Dichloropropane		ND		210	2300
2,2-Dichloropropane		ND		470	2300
1,1-Dichloropropene		ND		350	2300
Ethylbenzene		16000		320	2300
Ethyl ether		ND		890	4600
Hexachlorobutadiene		ND		400	2300
2-Hexanone		ND		770	9100
Isopropylbenzene		3700		120	2300
Methyl acetate		ND		500	4600
Methylcyclohexane		14000		350	4600
Methylene Chloride		ND		770	2300
4-Methyl-2-pentanone (MIBK)		ND		510	9100
Methyl tert butyl ether		ND		270	2300

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_80-84 (20150616)

Lab Sample ID: 240-52152-2 Date Sampled: 06/16/2015 1655
Client Matrix: Solid % Moisture: 10.2 Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186562	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	143860.D
Dilution:	16.667			Initial Weight/Volume:	10.176 g
Analysis Date:	06/24/2015 1510			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		63000		180	2300
Naphthalene		26000		240	2300
n-Butylbenzene		12000		190	2300
N-Propylbenzene		4800		560	2300
o-Xylene		27000		150	2300
p-Isopropyltoluene		3000		230	2300
sec-Butylbenzene		1800	J	150	2300
Styrene		ND		250	2300
tert-Butylbenzene		ND		310	2300
1,1,1,2-Tetrachloroethane		ND		450	2300
1,1,2,2-Tetrachloroethane		ND		390	2300
Tetrachloroethene		ND		250	2300
Tetrahydrofuran		ND		1100	9100
Toluene		9200	B	91	2300
trans-1,2-Dichloroethene		ND		240	2300
trans-1,3-Dichloropropene		ND		240	2300
1,2,3-Trichlorobenzene		ND		360	2300
1,2,4-Trichlorobenzene		ND		270	2300
1,1,1-Trichloroethane		ND		380	2300
1,1,2-Trichloroethane		ND		760	2300
Trichloroethene		1100	J	360	2300
Trichlorofluoromethane		ND		320	2300
1,2,3-Trichloropropane		ND		940	2300
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		380	2300
1,2,4-Trimethylbenzene		68000		120	2300
1,3,5-Trimethylbenzene		20000		140	2300
Vinyl chloride		ND		510	2300

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	82		26 - 141
Dibromofluoromethane (Surr)	68		30 - 122
1,2-Dichloroethane-d4 (Surr)	101		39 - 128
Toluene-d8 (Surr)	79		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_80-84 (20150616)

Lab Sample ID: 240-52152-2 Date Sampled: 06/16/2015 1655
Client Matrix: Solid Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186414	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950697.D
Dilution:	1.0	Leach Batch:	240-186220	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/23/2015 2143			Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 2143				
Leach Date:	06/22/2015 1800				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		12	J	6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		24	J	8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 121
4-Bromofluorobenzene (Surr)	97		70 - 124
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	97		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1002_92-95 (20150616)**

Lab Sample ID: 240-52152-3 Date Sampled: 06/16/2015 1715
Client Matrix: Solid % Moisture: 9.9 Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186226	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	UX88114.D
Dilution:	1.0			Initial Weight/Volume:	11.214 g
Analysis Date:	06/23/2015 1349			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		110	490
Allyl chloride		ND		15	250
Benzene		ND		4.5	120
Bromobenzene		ND		6.4	120
Bromochloromethane		ND		35	120
Bromodichloromethane		ND		19	120
Bromoform		ND		30	120
Bromomethane		ND		25	120
2-Butanone (MEK)		ND		36	490
Carbon disulfide		ND		28	120
Carbon tetrachloride		ND		24	120
Chlorobenzene		ND		20	120
Chlorodibromomethane		ND		23	120
Chloroethane		ND		25	120
Chloroform		ND		18	120
Chloromethane		ND		24	120
2-Chlorotoluene		ND		20	120
4-Chlorotoluene		ND		13	120
cis-1,2-Dichloroethene		ND		19	120
cis-1,3-Dichloropropene		ND		11	120
Cyclohexane		ND		15	250
1,2-Dibromo-3-Chloropropane		ND		35	250
1,2-Dibromoethane		ND		16	120
Dibromomethane		ND		25	120
1,2-Dichlorobenzene		ND		9.4	120
1,3-Dichlorobenzene		ND		15	120
1,4-Dichlorobenzene		ND		20	120
Dichlorodifluoromethane		ND		30	120
1,1-Dichloroethane		ND		17	120
1,2-Dichloroethane		ND		26	120
1,1-Dichloroethene		ND		15	120
Dichlorofluoromethane		ND		16	250
1,2-Dichloropropane		ND		16	120
1,3-Dichloropropane		ND		11	120
2,2-Dichloropropane		ND		26	120
1,1-Dichloropropene		ND		19	120
Ethylbenzene		ND		17	120
Ethyl ether		ND		48	250
Hexachlorobutadiene		ND		22	120
2-Hexanone		ND		42	490
Isopropylbenzene		ND		6.4	120
Methyl acetate		ND		27	250
Methylcyclohexane		ND		19	250
Methylene Chloride		ND		42	120
4-Methyl-2-pentanone (MIBK)		ND		28	490
Methyl tert butyl ether		ND		15	120

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_92-95 (20150616)

Lab Sample ID: 240-52152-3 Date Sampled: 06/16/2015 1715
Client Matrix: Solid % Moisture: 9.9 Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186226	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	UX88114.D
Dilution:	1.0			Initial Weight/Volume:	11.214 g
Analysis Date:	06/23/2015 1349			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		59	J	9.9	120
Naphthalene		130		13	120
n-Butylbenzene		20	J	10	120
N-Propylbenzene		ND		30	120
o-Xylene		26	J	8.4	120
p-Isopropyltoluene		ND		12	120
sec-Butylbenzene		ND		7.9	120
Styrene		ND		13	120
tert-Butylbenzene		ND		17	120
1,1,1,2-Tetrachloroethane		ND		24	120
1,1,2,2-Tetrachloroethane		ND		21	120
Tetrachloroethene		ND		13	120
Tetrahydrofuran		ND		59	490
Toluene		13	J B	4.9	120
trans-1,2-Dichloroethene		ND		13	120
trans-1,3-Dichloropropene		ND		13	120
1,2,3-Trichlorobenzene		ND		19	120
1,2,4-Trichlorobenzene		ND		15	120
1,1,1-Trichloroethane		ND		21	120
1,1,2-Trichloroethane		ND		41	120
Trichloroethene		ND		19	120
Trichlorofluoromethane		ND		17	120
1,2,3-Trichloropropane		ND		51	120
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		21	120
1,2,4-Trimethylbenzene		82	J	6.4	120
1,3,5-Trimethylbenzene		21	J	7.4	120
Vinyl chloride		ND		28	120

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	46		26 - 141
Dibromofluoromethane (Surr)	42		30 - 122
1,2-Dichloroethane-d4 (Surr)	54		39 - 128
Toluene-d8 (Surr)	45		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_92-95 (20150616)

Lab Sample ID: 240-52152-3 Date Sampled: 06/16/2015 1715
Client Matrix: Solid Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186414	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950698.D
Dilution:	1.0	Leach Batch:	240-186220	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/23/2015 2207			Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 2207				
Leach Date:	06/22/2015 1800				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	92		70 - 124
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	98		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1003_60-64 (20150617)

Lab Sample ID: 240-52152-4 Date Sampled: 06/17/2015 1130
Client Matrix: Solid % Moisture: 20.6 Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	143832.D
Dilution:	1.0			Initial Weight/Volume:	9.907 g
Analysis Date:	06/23/2015 1603			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		140	640
Allyl chloride		ND		19	320
Benzene		ND		5.7	160
Bromobenzene		ND		8.3	160
Bromochloromethane		ND		44	160
Bromodichloromethane		ND		24	160
Bromoform		ND		39	160
Bromomethane		ND		32	160
2-Butanone (MEK)		ND		46	640
Carbon disulfide		ND		36	160
Carbon tetrachloride		ND		30	160
Chlorobenzene		ND		26	160
Chlorodibromomethane		ND		29	160
Chloroethane		ND		32	160
Chloroform		ND		23	160
Chloromethane		ND		30	160
2-Chlorotoluene		ND		26	160
4-Chlorotoluene		ND		17	160
cis-1,2-Dichloroethene		ND		24	160
cis-1,3-Dichloropropene		ND		14	160
Cyclohexane		ND		19	320
1,2-Dibromo-3-Chloropropane		ND		45	320
1,2-Dibromoethane		ND		20	160
Dibromomethane		ND		32	160
1,2-Dichlorobenzene		ND		12	160
1,3-Dichlorobenzene		ND		19	160
1,4-Dichlorobenzene		ND		26	160
Dichlorodifluoromethane		ND		39	160
1,1-Dichloroethane		ND		22	160
1,2-Dichloroethane		ND		34	160
1,1-Dichloroethene		ND		19	160
Dichlorofluoromethane		ND		21	320
1,2-Dichloropropane		ND		20	160
1,3-Dichloropropane		ND		15	160
2,2-Dichloropropane		ND		33	160
1,1-Dichloropropene		ND		24	160
Ethylbenzene		ND		22	160
Ethyl ether		ND		62	320
Hexachlorobutadiene		ND		28	160
2-Hexanone		ND		53	640
Isopropylbenzene		ND		8.3	160
Methyl acetate		110	J	35	320
Methylcyclohexane		ND		24	320
Methylene Chloride		ND		54	160
4-Methyl-2-pentanone (MIBK)		ND		36	640
Methyl tert butyl ether		ND		19	160

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1003_60-64 (20150617)

Lab Sample ID: 240-52152-4 Date Sampled: 06/17/2015 1130
Client Matrix: Solid % Moisture: 20.6 Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	143832.D
Dilution:	1.0			Initial Weight/Volume:	9.907 g
Analysis Date:	06/23/2015 1603			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		13	160
Naphthalene		43	J	17	160
n-Butylbenzene		ND		13	160
N-Propylbenzene		ND		39	160
o-Xylene		ND		11	160
p-Isopropyltoluene		ND		16	160
sec-Butylbenzene		ND		10	160
Styrene		ND		17	160
tert-Butylbenzene		ND		22	160
1,1,1,2-Tetrachloroethane		ND		31	160
1,1,2,2-Tetrachloroethane		ND		27	160
Tetrachloroethene		ND		17	160
Tetrahydrofuran		ND		76	640
Toluene		ND		6.4	160
trans-1,2-Dichloroethene		ND		17	160
trans-1,3-Dichloropropene		ND		17	160
1,2,3-Trichlorobenzene		ND		25	160
1,2,4-Trichlorobenzene		ND		19	160
1,1,1-Trichloroethane		ND		27	160
1,1,2-Trichloroethane		ND		53	160
Trichloroethene		ND		25	160
Trichlorofluoromethane		ND		22	160
1,2,3-Trichloropropane		ND		65	160
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		27	160
1,2,4-Trimethylbenzene		14	J	8.3	160
1,3,5-Trimethylbenzene		ND		9.5	160
Vinyl chloride		ND		36	160

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	46		26 - 141
Dibromofluoromethane (Surr)	41		30 - 122
1,2-Dichloroethane-d4 (Surr)	47		39 - 128
Toluene-d8 (Surr)	40		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1003_60-64 (20150617)

Lab Sample ID: 240-52152-4 Date Sampled: 06/17/2015 1130
Client Matrix: Solid Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186630	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1245166.D
Dilution:	1.0	Leach Batch:	240-186535	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/24/2015 2213			Final Weight/Volume:	5 mL
Prep Date:	06/24/2015 2213				
Leach Date:	06/23/2015 2010				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		80 - 121
4-Bromofluorobenzene (Surr)	87		70 - 124
Toluene-d8 (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	87		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1003_70-74 (20150617)**

Lab Sample ID: 240-52152-5 Date Sampled: 06/17/2015 1215
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	143819.D
Dilution:	1.0			Initial Weight/Volume:	10.061 g
Analysis Date:	06/22/2015 2210			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		140	630
Allyl chloride		ND		19	320
Benzene		ND		5.7	160
Bromobenzene		ND		8.2	160
Bromochloromethane		ND		44	160
Bromodichloromethane		ND		24	160
Bromoform		ND		39	160
Bromomethane		ND		32	160
2-Butanone (MEK)		ND		46	630
Carbon disulfide		ND		35	160
Carbon tetrachloride		ND		30	160
Chlorobenzene		ND		26	160
Chlorodibromomethane		ND		29	160
Chloroethane		ND		32	160
Chloroform		ND		23	160
Chloromethane		ND		30	160
2-Chlorotoluene		ND		26	160
4-Chlorotoluene		ND		16	160
cis-1,2-Dichloroethene		ND		24	160
cis-1,3-Dichloropropene		ND		14	160
Cyclohexane		ND		19	320
1,2-Dibromo-3-Chloropropane		ND		45	320
1,2-Dibromoethane		ND		20	160
Dibromomethane		ND		32	160
1,2-Dichlorobenzene		ND		12	160
1,3-Dichlorobenzene		ND		19	160
1,4-Dichlorobenzene		ND		26	160
Dichlorodifluoromethane		ND		39	160
1,1-Dichloroethane		ND		22	160
1,2-Dichloroethane		ND		33	160
1,1-Dichloroethene		ND		19	160
Dichlorofluoromethane		ND		21	320
1,2-Dichloropropane		ND		20	160
1,3-Dichloropropane		ND		15	160
2,2-Dichloropropane		ND		33	160
1,1-Dichloropropene		ND		24	160
Ethylbenzene		ND		22	160
Ethyl ether		ND		62	320
Hexachlorobutadiene		ND		28	160
2-Hexanone		ND		53	630
Isopropylbenzene		ND		8.2	160
Methyl acetate		77	J	35	320
Methylcyclohexane		170	J	24	320
Methylene Chloride		ND		54	160
4-Methyl-2-pentanone (MIBK)		ND		35	630
Methyl tert butyl ether		ND		19	160

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1003_70-74 (20150617)

Lab Sample ID: 240-52152-5 Date Sampled: 06/17/2015 1215
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	143819.D
Dilution:	1.0			Initial Weight/Volume:	10.061 g
Analysis Date:	06/22/2015 2210			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		49	J	13	160
Naphthalene		95	J	16	160
n-Butylbenzene		ND		13	160
N-Propylbenzene		ND		39	160
o-Xylene		48	J	11	160
p-Isopropyltoluene		ND		16	160
sec-Butylbenzene		ND		10	160
Styrene		ND		17	160
tert-Butylbenzene		ND		21	160
1,1,1,2-Tetrachloroethane		ND		31	160
1,1,2,2-Tetrachloroethane		ND		27	160
Tetrachloroethene		ND		17	160
Tetrahydrofuran		ND		76	630
Toluene		15	J B	6.3	160
trans-1,2-Dichloroethene		ND		16	160
trans-1,3-Dichloropropene		ND		16	160
1,2,3-Trichlorobenzene		ND		25	160
1,2,4-Trichlorobenzene		ND		19	160
1,1,1-Trichloroethane		ND		27	160
1,1,2-Trichloroethane		ND		52	160
Trichloroethene		ND		25	160
Trichlorofluoromethane		ND		22	160
1,2,3-Trichloropropane		ND		65	160
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		27	160
1,2,4-Trimethylbenzene		46	J	8.2	160
1,3,5-Trimethylbenzene		17	J	9.5	160
Vinyl chloride		ND		35	160

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	33		26 - 141
Dibromofluoromethane (Surr)	37		30 - 122
1,2-Dichloroethane-d4 (Surr)	43		39 - 128
Toluene-d8 (Surr)	39		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1003_70-74 (20150617)

Lab Sample ID: 240-52152-5 Date Sampled: 06/17/2015 1215
Client Matrix: Solid Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186630	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1245167.D
Dilution:	1.0	Leach Batch:	240-186535	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/24/2015 2238			Final Weight/Volume:	5 mL
Prep Date:	06/24/2015 2238				
Leach Date:	06/23/2015 2010				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 121
4-Bromofluorobenzene (Surr)	93		70 - 124
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	89		80 - 128

Client Sample ID: **MB-01 (20150617)**

Lab Sample ID: 240-52152-6 Date Sampled: 06/17/2015 0000
Client Matrix: Solid Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	143820.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	06/22/2015 2231			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		110	500
Allyl chloride		ND		15	250
Benzene		ND		4.5	130
Bromobenzene		ND		6.5	130
Bromochloromethane		ND		35	130
Bromodichloromethane		ND		19	130
Bromoform		ND		31	130
Bromomethane		ND		26	130
2-Butanone (MEK)		ND		37	500
Carbon disulfide		ND		28	130
Carbon tetrachloride		ND		24	130
Chlorobenzene		ND		21	130
Chlorodibromomethane		ND		23	130
Chloroethane		ND		26	130
Chloroform		ND		18	130
Chloromethane		ND		24	130
2-Chlorotoluene		ND		21	130
4-Chlorotoluene		ND		13	130
cis-1,2-Dichloroethene		ND		19	130
cis-1,3-Dichloropropene		ND		11	130
Cyclohexane		ND		15	250
1,2-Dibromo-3-Chloropropane		ND		36	250
1,2-Dibromoethane		ND		16	130
Dibromomethane		ND		25	130
1,2-Dichlorobenzene		ND		9.5	130
1,3-Dichlorobenzene		ND		15	130
1,4-Dichlorobenzene		ND		21	130
Dichlorodifluoromethane		ND		31	130
1,1-Dichloroethane		ND		18	130
1,2-Dichloroethane		ND		27	130
1,1-Dichloroethene		ND		15	130
Dichlorofluoromethane		ND		17	250
1,2-Dichloropropane		ND		16	130
1,3-Dichloropropane		ND		12	130
2,2-Dichloropropane		ND		26	130
1,1-Dichloropropene		ND		19	130
Ethylbenzene		ND		18	130
Ethyl ether		ND		49	250
Hexachlorobutadiene		ND		22	130
2-Hexanone		ND		42	500
Isopropylbenzene		ND		6.5	130
Methyl acetate		ND		28	250
Methylcyclohexane		ND		19	250
Methylene Chloride		ND		43	130
4-Methyl-2-pentanone (MIBK)		ND		28	500
Methyl tert butyl ether		ND		15	130

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: MB-01 (20150617)

Lab Sample ID: 240-52152-6 Date Sampled: 06/17/2015 0000
Client Matrix: Solid Date Received: 06/18/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-185863	Lab File ID:	143820.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	06/22/2015 2231			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		10	130
Naphthalene		ND		13	130
n-Butylbenzene		ND		11	130
N-Propylbenzene		ND		31	130
o-Xylene		ND		8.5	130
p-Isopropyltoluene		ND		13	130
sec-Butylbenzene		ND		8.0	130
Styrene		ND		14	130
tert-Butylbenzene		ND		17	130
1,1,1,2-Tetrachloroethane		ND		25	130
1,1,2,2-Tetrachloroethane		ND		22	130
Tetrachloroethene		ND		14	130
Tetrahydrofuran		ND		60	500
Toluene		ND		5.0	130
trans-1,2-Dichloroethene		ND		13	130
trans-1,3-Dichloropropene		ND		13	130
1,2,3-Trichlorobenzene		ND		20	130
1,2,4-Trichlorobenzene		ND		15	130
1,1,1-Trichloroethane		ND		21	130
1,1,2-Trichloroethane		ND		42	130
Trichloroethene		ND		20	130
Trichlorofluoromethane		ND		18	130
1,2,3-Trichloropropane		ND		52	130
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		21	130
1,2,4-Trimethylbenzene		ND		6.5	130
1,3,5-Trimethylbenzene		ND		7.5	130
Vinyl chloride		ND		28	130

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	46		26 - 141
Dibromofluoromethane (Surr)	44		30 - 122
1,2-Dichloroethane-d4 (Surr)	54		39 - 128
Toluene-d8 (Surr)	50		33 - 134

Client Sample ID: **ASB-1002_75-77 (20150616)**

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185853	Lab File ID:	50624027.D
Dilution:	200			Initial Weight/Volume:	30.49 g
Analysis Date:	06/24/2015 2021			Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		2100	J	830	78000
2,2'-oxybis[1-chloropropane]		ND		2300	78000
2,4,5-Trichlorophenol		ND		5900	78000
2,4,6-Trichlorophenol		ND		2100	78000
2,4-Dichlorophenol		ND		4700	78000
2,4-Dimethylphenol		ND		4700	78000
2,4-Dinitrophenol		ND		5000	380000
2,4-Dinitrotoluene		ND		4000	78000
2,6-Dinitrotoluene		ND		5000	78000
2-Chloronaphthalene		ND		110	78000
2-Chlorophenol		ND		1900	78000
2-Methylnaphthalene		50000	J	120	78000
2-Methylphenol		ND		2600	78000
2-Nitroaniline		ND		2200	380000
2-Nitrophenol		ND		2000	78000
3,3'-Dichlorobenzidine		ND		4300	380000
3-Nitroaniline		ND		3800	380000
4,6-Dinitro-2-methylphenol		ND		2200	380000
4-Bromophenyl phenyl ether		ND		3100	78000
4-Chloro-3-methylphenol		ND		5000	78000
4-Chloroaniline		ND		4000	78000
4-Chlorophenyl phenyl ether		ND		3100	78000
4-Nitroaniline		ND		6200	380000
4-Nitrophenol		ND		4000	380000
Acenaphthene		1700	J	180	78000
Acenaphthylene		ND		83	78000
Acetophenone		ND		2200	78000
Anthracene		1600	J	180	78000
Atrazine		ND		2200	78000
Benzaldehyde		ND		2800	78000
Benzo[a]anthracene		1500	J	150	78000
Benzo[a]pyrene		880	J	150	78000
Benzo[b]fluoranthene		1200	J	140	78000
Benzo[g,h,i]perylene		ND		83	78000
Benzo[k]fluoranthene		ND		160	78000
Bis(2-chloroethoxy)methane		ND		5200	78000
Bis(2-chloroethyl)ether		ND		470	78000
Bis(2-ethylhexyl) phthalate		16000	J B	4500	78000
Butyl benzyl phthalate		ND		2400	78000
Caprolactam		ND		8800	78000
Carbazole		ND		6400	78000
Chrysene		1900	J	260	78000
Dibenz(a,h)anthracene		ND		160	78000
Dibenzofuran		ND		160	78000
Diethyl phthalate		ND		3800	78000
Dimethyl phthalate		ND		4000	78000

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_75-77 (20150616)

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185853	Lab File ID:	50624027.D
Dilution:	200			Initial Weight/Volume:	30.49 g
Analysis Date:	06/24/2015 2021			Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		9400	J B	3600	78000
Di-n-octyl phthalate		ND		1900	78000
Fluoranthene		4300	J	130	78000
Fluorene		2500	J	130	78000
Hexachlorobenzene		ND		500	78000
Hexachlorobutadiene		ND		1300	78000
Hexachlorocyclopentadiene		ND		1900	380000
Hexachloroethane		ND		2100	78000
Indeno[1,2,3-cd]pyrene		ND		83	78000
Isophorone		ND		3100	78000
Naphthalene		220000		190	78000
Nitrobenzene		ND		520	78000
N-Nitrosodi-n-propylamine		ND		1500	78000
N-Nitrosodiphenylamine		ND		5000	78000
Pentachlorophenol		ND		2200	78000
Phenol		ND		1700	78000
Phenanthrene		7700	J	170	78000
Pyrene		3800	J	100	78000
3 & 4 Methylphenol		ND		4700	95000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	0	X	24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	0	X	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1002_75-77 (20150616)**

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-186921	Instrument ID:	A4HP10
Prep Method:	3510C	Prep Batch:	240-186587	Lab File ID:	50626029.D
Dilution:	2.5	Leach Batch:	240-186513	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 2056			Final Weight/Volume:	2 mL
Prep Date:	06/24/2015 1240			Injection Volume:	1 uL
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00085	0.010
2,4-Dinitrotoluene		ND		0.00063	0.010
Hexachlorobenzene		ND		0.00021	0.0020
Hexachlorobutadiene		ND		0.00068	0.010
Hexachloroethane		ND		0.00048	0.010
2-Methylphenol		0.055		0.00043	0.010
3 & 4 Methylphenol		0.12		0.0020	0.010
Nitrobenzene		ND		0.00010	0.010
Pentachlorophenol		ND		0.00068	0.010
Pyridine		ND		0.00088	0.010
2,4,5-Trichlorophenol		ND		0.00075	0.010
2,4,6-Trichlorophenol		ND		0.00060	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	60		30 - 110
2-Fluorophenol (Surr)	44		20 - 110
Nitrobenzene-d5 (Surr)	56		28 - 110
Phenol-d5 (Surr)	47		21 - 110
Terphenyl-d14 (Surr)	65		48 - 110
2,4,6-Tribromophenol (Surr)	74		23 - 110

Client Sample ID: **ASB-1002_80-84 (20150616)**

Lab Sample ID: 240-52152-2 Date Sampled: 06/16/2015 1655
Client Matrix: Solid % Moisture: 10.2 Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185853	Lab File ID:	50624028.D
Dilution:	100			Initial Weight/Volume:	30.07 g
Analysis Date:	06/24/2015 2044			Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		1100	J	390	37000
2,2'-oxybis[1-chloropropane]		ND		1100	37000
2,4,5-Trichlorophenol		ND		2800	37000
2,4,6-Trichlorophenol		ND		990	37000
2,4-Dichlorophenol		ND		2200	37000
2,4-Dimethylphenol		ND		2200	37000
2,4-Dinitrophenol		ND		2300	180000
2,4-Dinitrotoluene		ND		1900	37000
2,6-Dinitrotoluene		ND		2300	37000
2-Chloronaphthalene		ND		50	37000
2-Chlorophenol		ND		910	37000
2-Methylnaphthalene		16000	J	56	37000
2-Methylphenol		ND		1200	37000
2-Nitroaniline		ND		1000	180000
2-Nitrophenol		ND		920	37000
3,3'-Dichlorobenzidine		ND		2000	180000
3-Nitroaniline		ND		1800	180000
4,6-Dinitro-2-methylphenol		ND		1000	180000
4-Bromophenyl phenyl ether		ND		1400	37000
4-Chloro-3-methylphenol		ND		2300	37000
4-Chloroaniline		ND		1900	37000
4-Chlorophenyl phenyl ether		ND		1400	37000
4-Nitroaniline		ND		2900	180000
4-Nitrophenol		ND		1900	180000
Acenaphthene		710	J	84	37000
Acenaphthylene		ND		39	37000
Acetophenone		ND		1000	37000
Anthracene		550	J	87	37000
Atrazine		ND		1000	37000
Benzaldehyde		ND		1300	37000
Benzo[a]anthracene		690	J	70	37000
Benzo[a]pyrene		ND		71	37000
Benzo[b]fluoranthene		690	J	66	37000
Benzo[g,h,i]perylene		ND		39	37000
Benzo[k]fluoranthene		ND		76	37000
Bis(2-chloroethoxy)methane		ND		2400	37000
Bis(2-chloroethyl)ether		ND		220	37000
Bis(2-ethylhexyl) phthalate		3400	J B	2100	37000
Butyl benzyl phthalate		ND		1100	37000
Caprolactam		ND		4100	37000
Carbazole		ND		3000	37000
Chrysene		780	J	120	37000
Dibenz(a,h)anthracene		ND		73	37000
Dibenzofuran		ND		73	37000
Diethyl phthalate		ND		1800	37000
Dimethyl phthalate		ND		1900	37000

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_80-84 (20150616)

Lab Sample ID: 240-52152-2 Date Sampled: 06/16/2015 1655
Client Matrix: Solid % Moisture: 10.2 Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185853	Lab File ID:	50624028.D
Dilution:	100			Initial Weight/Volume:	30.07 g
Analysis Date:	06/24/2015 2044			Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		12000	J B	1700	37000
Di-n-octyl phthalate		ND		880	37000
Fluoranthene		2000	J	61	37000
Fluorene		860	J	59	37000
Hexachlorobenzene		ND		230	37000
Hexachlorobutadiene		ND		620	37000
Hexachlorocyclopentadiene		ND		900	180000
Hexachloroethane		ND		1000	37000
Indeno[1,2,3-cd]pyrene		ND		39	37000
Isophorone		ND		1400	37000
Naphthalene		78000		91	37000
Nitrobenzene		ND		240	37000
N-Nitrosodi-n-propylamine		ND		700	37000
N-Nitrosodiphenylamine		ND		2300	37000
Pentachlorophenol		ND		1000	37000
Phenol		ND		810	37000
Phenanthrene		3100	J	81	37000
Pyrene		1500	J	49	37000
3 & 4 Methylphenol		ND		2200	44000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	0	X	24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	0	X	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_80-84 (20150616)

Lab Sample ID: 240-52152-2 Date Sampled: 06/16/2015 1655
Client Matrix: Solid Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-186921	Instrument ID:	A4HP10
Prep Method:	3510C	Prep Batch:	240-186587	Lab File ID:	50626030.D
Dilution:	2.5	Leach Batch:	240-186513	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 2119			Final Weight/Volume:	2 mL
Prep Date:	06/24/2015 1240			Injection Volume:	1 uL
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00085	0.010
2,4-Dinitrotoluene		ND		0.00063	0.010
Hexachlorobenzene		ND		0.00021	0.0020
Hexachlorobutadiene		ND		0.00068	0.010
Hexachloroethane		ND		0.00048	0.010
2-Methylphenol		0.014		0.00043	0.010
3 & 4 Methylphenol		0.031		0.0020	0.010
Nitrobenzene		ND		0.00010	0.010
Pentachlorophenol		ND		0.00068	0.010
Pyridine		ND		0.00088	0.010
2,4,5-Trichlorophenol		ND		0.00075	0.010
2,4,6-Trichlorophenol		ND		0.00060	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	67		30 - 110
2-Fluorophenol (Surr)	44		20 - 110
Nitrobenzene-d5 (Surr)	64		28 - 110
Phenol-d5 (Surr)	47		21 - 110
Terphenyl-d14 (Surr)	69		48 - 110
2,4,6-Tribromophenol (Surr)	80		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1002_92-95 (20150616)**

Lab Sample ID: 240-52152-3 Date Sampled: 06/16/2015 1715
Client Matrix: Solid % Moisture: 9.9 Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185853	Lab File ID:	50624024.D
Dilution:	1.0			Initial Weight/Volume:	29.89 g
Analysis Date:	06/24/2015 1911			Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		3.9	370
2,2'-oxybis[1-chloropropane]		ND		11	370
2,4,5-Trichlorophenol		ND		28	370
2,4,6-Trichlorophenol		ND		9.9	370
2,4-Dichlorophenol		ND		22	370
2,4-Dimethylphenol		ND		22	370
2,4-Dinitrophenol		ND		23	1800
2,4-Dinitrotoluene		ND		19	370
2,6-Dinitrotoluene		ND		23	370
2-Chloronaphthalene		ND		0.50	370
2-Chlorophenol		ND		9.1	370
2-Methylnaphthalene		ND		0.56	370
2-Methylphenol		ND		12	370
2-Nitroaniline		ND		10	1800
2-Nitrophenol		ND		9.2	370
3,3'-Dichlorobenzidine		ND		20	1800
3-Nitroaniline		ND		18	1800
4,6-Dinitro-2-methylphenol		ND		10	1800
4-Bromophenyl phenyl ether		ND		14	370
4-Chloro-3-methylphenol		ND		23	370
4-Chloroaniline		ND		19	370
4-Chlorophenyl phenyl ether		ND		14	370
4-Nitroaniline		ND		29	1800
4-Nitrophenol		ND		19	1800
Acenaphthene		ND		0.85	370
Acenaphthylene		ND		0.39	370
Acetophenone		ND		10	370
Anthracene		ND		0.87	370
Atrazine		ND		10	370
Benzaldehyde		ND		13	370
Benzo[a]anthracene		ND		0.70	370
Benzo[a]pyrene		ND		0.71	370
Benzo[b]fluoranthene		ND		0.66	370
Benzo[g,h,i]perylene		ND		0.39	370
Benzo[k]fluoranthene		ND		0.76	370
Bis(2-chloroethoxy)methane		ND		24	370
Bis(2-chloroethyl)ether		ND		2.2	370
Bis(2-ethylhexyl) phthalate		50	J B	21	370
Butyl benzyl phthalate		ND		11	370
Caprolactam		ND		41	370
Carbazole		ND		30	370
Chrysene		ND		1.2	370
Dibenz(a,h)anthracene		ND		0.73	370
Dibenzofuran		ND		0.73	370
Diethyl phthalate		ND		18	370
Dimethyl phthalate		ND		19	370

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_92-95 (20150616)

Lab Sample ID: 240-52152-3 Date Sampled: 06/16/2015 1715
Client Matrix: Solid % Moisture: 9.9 Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185853	Lab File ID:	50624024.D
Dilution:	1.0			Initial Weight/Volume:	29.89 g
Analysis Date:	06/24/2015 1911			Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		17	370
Di-n-octyl phthalate		ND		8.8	370
Fluoranthene		ND		0.61	370
Fluorene		ND		0.59	370
Hexachlorobenzene		ND		2.3	370
Hexachlorobutadiene		ND		6.2	370
Hexachlorocyclopentadiene		ND		9.0	1800
Hexachloroethane		ND		10	370
Indeno[1,2,3-cd]pyrene		ND		0.39	370
Isophorone		ND		14	370
Naphthalene		11	J	0.91	370
Nitrobenzene		ND		2.4	370
N-Nitrosodi-n-propylamine		ND		7.0	370
N-Nitrosodiphenylamine		ND		23	370
Pentachlorophenol		ND		10	370
Phenol		ND		8.1	370
Phenanthrene		ND		0.81	370
Pyrene		ND		0.49	370
3 & 4 Methylphenol		ND		22	450

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	62		24 - 110
2-Fluorophenol (Surr)	55		24 - 110
2,4,6-Tribromophenol (Surr)	44		10 - 110
Nitrobenzene-d5 (Surr)	65		20 - 110
Phenol-d5 (Surr)	62		26 - 110
Terphenyl-d14 (Surr)	70		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1002_92-95 (20150616)**

Lab Sample ID: 240-52152-3 Date Sampled: 06/16/2015 1715
Client Matrix: Solid Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-186921	Instrument ID:	A4HP10
Prep Method:	3510C	Prep Batch:	240-186587	Lab File ID:	50626024.D
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 1858			Final Weight/Volume:	2 mL
Prep Date:	06/24/2015 1240			Injection Volume:	1 uL
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	62		30 - 110
2-Fluorophenol (Surr)	41		20 - 110
Nitrobenzene-d5 (Surr)	62		28 - 110
Phenol-d5 (Surr)	40		21 - 110
Terphenyl-d14 (Surr)	70		48 - 110
2,4,6-Tribromophenol (Surr)	57		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1003_60-64 (20150617)**

Lab Sample ID: 240-52152-4 Date Sampled: 06/17/2015 1130
Client Matrix: Solid % Moisture: 20.6 Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185853	Lab File ID:	50624025.D
Dilution:	1.0			Initial Weight/Volume:	29.52 g
Analysis Date:	06/24/2015 1934			Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.5	420
2,2'-oxybis[1-chloropropane]		ND		12	420
2,4,5-Trichlorophenol		ND		32	420
2,4,6-Trichlorophenol		ND		11	420
2,4-Dichlorophenol		ND		26	420
2,4-Dimethylphenol		ND		26	420
2,4-Dinitrophenol		ND		27	2000
2,4-Dinitrotoluene		ND		22	420
2,6-Dinitrotoluene		ND		27	420
2-Chloronaphthalene		ND		0.58	420
2-Chlorophenol		ND		10	420
2-Methylnaphthalene		31	J	0.64	420
2-Methylphenol		ND		14	420
2-Nitroaniline		ND		12	2000
2-Nitrophenol		ND		11	420
3,3'-Dichlorobenzidine		ND		23	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		12	2000
4-Bromophenyl phenyl ether		ND		17	420
4-Chloro-3-methylphenol		ND		27	420
4-Chloroaniline		ND		22	420
4-Chlorophenyl phenyl ether		ND		17	420
4-Nitroaniline		ND		33	2000
4-Nitrophenol		ND		22	2000
Acenaphthene		ND		0.97	420
Acenaphthylene		6.9	J	0.45	420
Acetophenone		ND		12	420
Anthracene		8.0	J	1.0	420
Atrazine		ND		12	420
Benzaldehyde		ND		15	420
Benzo[a]anthracene		27	J	0.81	420
Benzo[a]pyrene		31	J	0.82	420
Benzo[b]fluoranthene		42	J	0.75	420
Benzo[g,h,i]perylene		28	J	0.45	420
Benzo[k]fluoranthene		20	J	0.87	420
Bis(2-chloroethoxy)methane		ND		28	420
Bis(2-chloroethyl)ether		ND		2.6	420
Bis(2-ethylhexyl) phthalate		36	J B	24	420
Butyl benzyl phthalate		ND		13	420
Caprolactam		ND		47	420
Carbazole		ND		35	420
Chrysene		40	J	1.4	420
Dibenz(a,h)anthracene		ND		0.84	420
Dibenzofuran		ND		0.84	420
Diethyl phthalate		ND		20	420
Dimethyl phthalate		ND		22	420

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1003_60-64 (20150617)

Lab Sample ID: 240-52152-4 Date Sampled: 06/17/2015 1130
Client Matrix: Solid % Moisture: 20.6 Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185853	Lab File ID:	50624025.D
Dilution:	1.0			Initial Weight/Volume:	29.52 g
Analysis Date:	06/24/2015 1934			Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		19	420
Di-n-octyl phthalate		ND		10	420
Fluoranthene		52	J	0.70	420
Fluorene		12	J	0.68	420
Hexachlorobenzene		ND		2.7	420
Hexachlorobutadiene		ND		7.2	420
Hexachlorocyclopentadiene		ND		10	2000
Hexachloroethane		ND		12	420
Indeno[1,2,3-cd]pyrene		24	J	0.45	420
Isophorone		ND		17	420
Naphthalene		7.7	J	1.0	420
Nitrobenzene		ND		2.8	420
N-Nitrosodi-n-propylamine		ND		8.1	420
N-Nitrosodiphenylamine		ND		27	420
Pentachlorophenol		ND		12	420
Phenol		ND		9.3	420
Phenanthrene		47	J	0.93	420
Pyrene		62	J	0.56	420
3 & 4 Methylphenol		ND		26	510

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	69		24 - 110
2-Fluorophenol (Surr)	58		24 - 110
2,4,6-Tribromophenol (Surr)	18		10 - 110
Nitrobenzene-d5 (Surr)	67		20 - 110
Phenol-d5 (Surr)	71		26 - 110
Terphenyl-d14 (Surr)	69		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1003_60-64 (20150617)**

Lab Sample ID: 240-52152-4 Date Sampled: 06/17/2015 1130
Client Matrix: Solid Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-186921	Instrument ID:	A4HP10
Prep Method:	3510C	Prep Batch:	240-186587	Lab File ID:	50626019.D
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 1700			Final Weight/Volume:	2 mL
Prep Date:	06/24/2015 1240			Injection Volume:	1 uL
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	61		30 - 110
2-Fluorophenol (Surr)	48		20 - 110
Nitrobenzene-d5 (Surr)	64		28 - 110
Phenol-d5 (Surr)	47		21 - 110
Terphenyl-d14 (Surr)	70		48 - 110
2,4,6-Tribromophenol (Surr)	64		23 - 110

Client Sample ID: **ASB-1003_70-74 (20150617)**

Lab Sample ID: 240-52152-5 Date Sampled: 06/17/2015 1215
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185853	Lab File ID:	50624029.D
Dilution:	4.0			Initial Weight/Volume:	30.21 g
Analysis Date:	06/24/2015 2108			Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		120	J	18	1700
2,2'-oxybis[1-chloropropane]		ND		48	1700
2,4,5-Trichlorophenol		ND		130	1700
2,4,6-Trichlorophenol		ND		45	1700
2,4-Dichlorophenol		ND		100	1700
2,4-Dimethylphenol		ND		100	1700
2,4-Dinitrophenol		ND		110	8100
2,4-Dinitrotoluene		ND		86	1700
2,6-Dinitrotoluene		ND		110	1700
2-Chloronaphthalene		ND		2.3	1700
2-Chlorophenol		ND		41	1700
2-Methylnaphthalene		850	J	2.5	1700
2-Methylphenol		ND		56	1700
2-Nitroaniline		ND		46	8100
2-Nitrophenol		ND		42	1700
3,3'-Dichlorobenzidine		ND		91	8100
3-Nitroaniline		ND		81	8100
4,6-Dinitro-2-methylphenol		ND		46	8100
4-Bromophenyl phenyl ether		ND		66	1700
4-Chloro-3-methylphenol		ND		110	1700
4-Chloroaniline		ND		86	1700
4-Chlorophenyl phenyl ether		ND		66	1700
4-Nitroaniline		ND		130	8100
4-Nitrophenol		ND		86	8100
Acenaphthene		350	J	3.8	1700
Acenaphthylene		400	J	1.8	1700
Acetophenone		50	J	46	1700
Anthracene		870	J	3.9	1700
Atrazine		ND		46	1700
Benzaldehyde		ND		61	1700
Benzo[a]anthracene		2100		3.2	1700
Benzo[a]pyrene		2200		3.2	1700
Benzo[b]fluoranthene		2500		3.0	1700
Benzo[g,h,i]perylene		1200	J	1.8	1700
Benzo[k]fluoranthene		770	J	3.4	1700
Bis(2-chloroethoxy)methane		ND		110	1700
Bis(2-chloroethyl)ether		ND		10	1700
Bis(2-ethylhexyl) phthalate		120	J B	96	1700
Butyl benzyl phthalate		ND		50	1700
Caprolactam		ND		190	1700
Carbazole		290	J	140	1700
Chrysene		2200		5.6	1700
Dibenz(a,h)anthracene		330	J	3.3	1700
Dibenzofuran		360	J	3.3	1700
Diethyl phthalate		ND		81	1700
Dimethyl phthalate		ND		86	1700

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1003_70-74 (20150617)

Lab Sample ID: 240-52152-5 Date Sampled: 06/17/2015 1215
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-185853	Lab File ID:	50624029.D
Dilution:	4.0			Initial Weight/Volume:	30.21 g
Analysis Date:	06/24/2015 2108			Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		76	1700
Di-n-octyl phthalate		ND		40	1700
Fluoranthene		3900		2.8	1700
Fluorene		480	J	2.7	1700
Hexachlorobenzene		ND		11	1700
Hexachlorobutadiene		ND		28	1700
Hexachlorocyclopentadiene		ND		41	8100
Hexachloroethane		ND		45	1700
Indeno[1,2,3-cd]pyrene		980	J	1.8	1700
Isophorone		ND		66	1700
Naphthalene		810	J	4.1	1700
Nitrobenzene		ND		11	1700
N-Nitrosodi-n-propylamine		ND		32	1700
N-Nitrosodiphenylamine		ND		110	1700
Pentachlorophenol		ND		46	1700
Phenol		ND		37	1700
Phenanthrene		3200		3.7	1700
Pyrene		3800		2.2	1700
3 & 4 Methylphenol		ND		100	2000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	60		24 - 110
2-Fluorophenol (Surr)	54		24 - 110
2,4,6-Tribromophenol (Surr)	66		10 - 110
Nitrobenzene-d5 (Surr)	61		20 - 110
Phenol-d5 (Surr)	67		26 - 110
Terphenyl-d14 (Surr)	66		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1003_70-74 (20150617)**

Lab Sample ID: 240-52152-5 Date Sampled: 06/17/2015 1215
Client Matrix: Solid Date Received: 06/18/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-186921	Instrument ID:	A4HP10
Prep Method:	3510C	Prep Batch:	240-186587	Lab File ID:	50626020.D
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 1723			Final Weight/Volume:	2 mL
Prep Date:	06/24/2015 1240			Injection Volume:	1 uL
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	71		30 - 110
2-Fluorophenol (Surr)	49		20 - 110
Nitrobenzene-d5 (Surr)	72		28 - 110
Phenol-d5 (Surr)	47		21 - 110
Terphenyl-d14 (Surr)	78		48 - 110
2,4,6-Tribromophenol (Surr)	74		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1002_75-77 (20150616)**

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/18/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186331	Lab File ID:	Y0062506.D
Dilution:	200			Initial Weight/Volume:	9.61 g
Analysis Date:	06/25/2015 1418			Final Weight/Volume:	10 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		21000		500	2500

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_80-84 (20150616)

Lab Sample ID: 240-52152-2 Date Sampled: 06/16/2015 1655
Client Matrix: Solid % Moisture: 10.2 Date Received: 06/18/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186548	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186331	Lab File ID:	Y0062411.D
Dilution:	50			Initial Weight/Volume:	9.43 g
Analysis Date:	06/24/2015 1743			Final Weight/Volume:	10 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		3000		120	590

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1002_92-95 (20150616)**

Lab Sample ID: 240-52152-3 Date Sampled: 06/16/2015 1715
Client Matrix: Solid % Moisture: 9.9 Date Received: 06/18/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186548	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186331	Lab File ID:	Y0062412.D
Dilution:	100			Initial Weight/Volume:	12.031 g
Analysis Date:	06/24/2015 1819			Final Weight/Volume:	12 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		770	J	220	1100

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1003_60-64 (20150617)

Lab Sample ID: 240-52152-4 Date Sampled: 06/17/2015 1130
Client Matrix: Solid % Moisture: 20.6 Date Received: 06/18/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186548	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186331	Lab File ID:	Y0062413.D
Dilution:	1.0			Initial Weight/Volume:	10.928 g
Analysis Date:	06/24/2015 1853			Final Weight/Volume:	10 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		6.8	J	2.3	12

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1003_70-74 (20150617)

Lab Sample ID: 240-52152-5 Date Sampled: 06/17/2015 1215
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/18/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186331	Lab File ID:	Y0062507.D
Dilution:	1.0			Initial Weight/Volume:	9.505 g
Analysis Date:	06/25/2015 1452			Final Weight/Volume:	10 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		9.4	J	2.7	13

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: MB-01 (20150617)

Lab Sample ID: 240-52152-6 Date Sampled: 06/17/2015 0000
Client Matrix: Solid Date Received: 06/18/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186548	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186331	Lab File ID:	Y0062415.D
Dilution:	1.0			Initial Weight/Volume:	0.057 g
Analysis Date:	06/24/2015 2002			Final Weight/Volume:	10 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		410	J	350	1800

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_75-77 (20150616)

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/18/2015 0920

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-186236	Instrument ID:	A2HP13
Prep Method:	3540C	Prep Batch:	240-185850	Initial Weight/Volume:	29.72 g
Dilution:	20			Final Weight/Volume:	10 mL
Analysis Date:	06/23/2015 0946			Injection Volume:	1 uL
Prep Date:	06/19/2015 0914			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor-1016		ND		290	800
Aroclor-1221		ND		390	800
Aroclor-1232		ND		490	800
Aroclor-1242		ND		270	800
Aroclor-1248		ND		190	800
Aroclor-1254		ND		340	800
Aroclor-1260		2900		220	800

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	0	X	13 - 134
DCB Decachlorobiphenyl	247	X	10 - 155

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_75-77 (20150616)

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/18/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186570	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-186109	Lab File ID:	P14F062408.D
Dilution:	400			Initial Weight/Volume:	30.57 g
Analysis Date:	06/24/2015 1748			Final Weight/Volume:	9 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		24000		830	6800

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_80-84 (20150616)

Lab Sample ID: 240-52152-2 Date Sampled: 06/16/2015 1655
Client Matrix: Solid % Moisture: 10.2 Date Received: 06/18/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186570	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-186109	Lab File ID:	P14F062409.D
Dilution:	40			Initial Weight/Volume:	25.89 g
Analysis Date:	06/24/2015 1815			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		2100		51	410

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_92-95 (20150616)

Lab Sample ID: 240-52152-3 Date Sampled: 06/16/2015 1715
Client Matrix: Solid % Moisture: 9.9 Date Received: 06/18/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-186109	Lab File ID:	P14F062315.D
Dilution:	1.0			Initial Weight/Volume:	27.48 g
Analysis Date:	06/23/2015 2100			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		6.3	J	1.2	9.7

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1003_60-64 (20150617)

Lab Sample ID: 240-52152-4 Date Sampled: 06/17/2015 1130
Client Matrix: Solid % Moisture: 20.6 Date Received: 06/18/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186570	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-186109	Lab File ID:	P14F062410.D
Dilution:	5.0			Initial Weight/Volume:	27.56 g
Analysis Date:	06/24/2015 1842			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		270		6.7	55

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1003_70-74 (20150617)

Lab Sample ID: 240-52152-5 Date Sampled: 06/17/2015 1215
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/18/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186570	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-186109	Lab File ID:	P14F062411.D
Dilution:	10			Initial Weight/Volume:	28.34 g
Analysis Date:	06/24/2015 1909			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		380		13	110

Client Sample ID: **ASB-1002_75-77 (20150616)**

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/18/2015 0920

6010B Metals (ICP)

Analysis Method: 6010B Analysis Batch: 240-186018 Instrument ID: I9
Prep Method: 3050B Prep Batch: 240-185893 Lab File ID: I9062015A.asc
Dilution: 1.0 Initial Weight/Volume: 1.12 g
Analysis Date: 06/20/2015 2125 Final Weight/Volume: 100 mL
Prep Date: 06/19/2015 1119

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		2400		6.2	22
Antimony		240	F2	0.52	1.1
Beryllium		0.038	J	0.028	0.54
Calcium		44000	F2	25	540
Cadmium		120	F2	0.023	0.22
Cobalt		50		0.051	5.4
Chromium		290	B F2	0.081	0.54
Copper		180	F2	0.25	2.7
Iron		28000		3.4	11
Potassium		370	J	6.7	540
Magnesium		11000	B F1 F2	5.6	540
Manganese		290		0.090	1.6
Silver		1.1		0.068	0.54
Sodium		1400		20	540
Nickel		82		0.086	4.3
Vanadium		5.9		0.22	5.4
Arsenic		21		0.44	1.1
Selenium		30		0.37	0.54
Thallium		ND		0.14	1.1

Analysis Method: 6010B Analysis Batch: 240-186476 Instrument ID: I12
Prep Method: 3050B Prep Batch: 240-185893 Lab File ID: I12062315A.asc
Dilution: 10 Initial Weight/Volume: 1.12 g
Analysis Date: 06/23/2015 1430 Final Weight/Volume: 100 mL
Prep Date: 06/19/2015 1119

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Barium		5700		4.4	220
Zinc		5700	B	6.0	22
Lead		8400	F2	2.2	3.2

6010B Metals (ICP)-TCLP

Analysis Method: 6010B Analysis Batch: 240-186732 Instrument ID: I9
Prep Method: 3010A Prep Batch: 240-186561 Lab File ID: I9062515A.asc
Dilution: 1.0 Leach Batch: 240-186513 Initial Weight/Volume: 50 mL
Analysis Date: 06/25/2015 1519 Final Weight/Volume: 50 mL
Prep Date: 06/24/2015 1146
Leach Date: 06/23/2015 1845

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.091	J	0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_75-77 (20150616)

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid Date Received: 06/18/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.0088	J B	0.0029	0.50
Barium		0.29	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.014	J	0.00014	0.10
Calcium		180	F1 B	0.26	5.0
Chromium		0.0032	J B	0.00055	0.50
Cobalt		0.14		0.00056	0.050
Copper		0.0020	J B	0.0019	1.0
Iron		3.4	F1 B	0.013	0.10
Magnesium		15	B	0.055	5.0
Manganese		0.63	B	0.00046	0.015
Nickel		0.032	J B	0.00076	0.040
Potassium		1.9	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		4.3	B	0.0096	1.0

Analysis Method:	6010B	Analysis Batch:	240-186911	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-186561	Lab File ID:	I9062615A.asc
Dilution:	5.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/26/2015 1037			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Lead		19	B F1	0.0095	2.5

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186738	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186565	Lab File ID:	062515AHG1.PRN
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 0950			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1400				
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-186138	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185906	Lab File ID:	062215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.57 g
Analysis Date:	06/22/2015 1056			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1445				

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1002_75-77 (20150616)**

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/18/2015 0920

7471A Mercury (CVAA)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.29	F1	0.018	0.13

Client Sample ID: **ASB-1002_80-84 (20150616)**

Lab Sample ID: 240-52152-2 Date Sampled: 06/16/2015 1655
Client Matrix: Solid % Moisture: 10.2 Date Received: 06/18/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186018	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185893	Lab File ID:	I9062015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	06/20/2015 2145			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1119				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3900		5.6	19
Antimony		4.0		0.46	0.96
Barium		160		0.39	19
Beryllium		0.14	J	0.025	0.48
Calcium		36000		22	480
Cadmium		1.2		0.020	0.19
Cobalt		5.5		0.045	4.8
Chromium		18	B	0.072	0.48
Copper		8.1		0.22	2.4
Iron		13000		3.1	9.6
Potassium		440	J	5.9	480
Magnesium		13000	B	5.0	480
Manganese		620		0.081	1.4
Silver		ND		0.060	0.48
Sodium		140	J	18	480
Nickel		14		0.077	3.8
Vanadium		19		0.19	4.8
Zinc		54	B	0.54	1.9
Arsenic		2.5		0.39	0.96
Lead		47		0.19	0.29
Thallium		ND		0.12	0.96

Analysis Method:	6010B	Analysis Batch:	240-186556	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185893	Lab File ID:	I9062415A.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	06/24/2015 1408			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1119				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		0.36	J	0.33	0.48

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-186561	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 1624			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.093	J	0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1002_80-84 (20150616)**

Lab Sample ID: 240-52152-2 Date Sampled: 06/16/2015 1655
Client Matrix: Solid Date Received: 06/18/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.0062	J B	0.0029	0.50
Barium		1.3	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0024	J	0.00014	0.10
Calcium		570	B	0.26	5.0
Chromium		0.0029	J B	0.00055	0.50
Cobalt		0.053		0.00056	0.050
Copper		0.068	J B	0.0019	1.0
Iron		0.064	J B	0.013	0.10
Lead		0.71	B	0.0019	0.50
Magnesium		13	B	0.055	5.0
Manganese		3.1	B	0.00046	0.015
Nickel		0.026	J B	0.00076	0.040
Potassium		3.2	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		1.2	B	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186738	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186565	Lab File ID:	062515AHG1.PRN
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 1013			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1400				
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-186138	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185906	Lab File ID:	062215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.52 g
Analysis Date:	06/22/2015 1102			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1445				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.018	0.13

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: ASB-1002_92-95 (20150616)

Lab Sample ID: 240-52152-3 Date Sampled: 06/16/2015 1715
Client Matrix: Solid % Moisture: 9.9 Date Received: 06/18/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186018	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185893	Lab File ID:	I9062015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.18 g
Analysis Date:	06/20/2015 2158			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1119				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		2800		5.5	19
Antimony		ND		0.45	0.94
Barium		54		0.39	19
Beryllium		0.11	J	0.024	0.47
Calcium		58000		22	470
Cadmium		0.083	J	0.020	0.19
Cobalt		4.4	J	0.044	4.7
Chromium		11	B	0.071	0.47
Copper		6.4		0.22	2.4
Iron		13000		3.0	9.4
Potassium		390	J	5.8	470
Magnesium		19000	B	4.9	470
Manganese		500		0.079	1.4
Silver		ND		0.059	0.47
Sodium		120	J	18	470
Nickel		11		0.075	3.8
Vanadium		13		0.19	4.7
Zinc		15	B	0.53	1.9
Arsenic		4.0		0.39	0.94
Lead		2.2		0.19	0.28
Selenium		ND		0.32	0.47
Thallium		ND		0.12	0.94

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-186561	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 1553			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0048	J B	0.0029	0.50
Barium		0.84	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00034	J	0.00014	0.10
Calcium		590	B	0.26	5.0
Chromium		0.0027	J B	0.00055	0.50
Cobalt		0.0063	J	0.00056	0.050
Copper		0.027	J B	0.0019	1.0
Iron		ND		0.013	0.10
Lead		ND		0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1002_92-95 (20150616)**

Lab Sample ID: 240-52152-3 Date Sampled: 06/16/2015 1715
Client Matrix: Solid Date Received: 06/18/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		21	B	0.055	5.0
Manganese		4.4	B	0.00046	0.015
Nickel		0.014	J B	0.00076	0.040
Potassium		2.0	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.048	J B	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186738	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186565	Lab File ID:	062515AHG1.PRN
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 0957			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1400				
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-186138	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185906	Lab File ID:	062215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.57 g
Analysis Date:	06/22/2015 1104			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1445				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.016	0.12

Client Sample ID: ASB-1003_60-64 (20150617)

Lab Sample ID: 240-52152-4 Date Sampled: 06/17/2015 1130
Client Matrix: Solid % Moisture: 20.6 Date Received: 06/18/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186018	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185893	Lab File ID:	I9062015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.34 g
Analysis Date:	06/20/2015 2202			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1119				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		11000		5.4	19
Antimony		ND		0.45	0.94
Barium		100		0.39	19
Beryllium		0.55		0.024	0.47
Calcium		9000		22	470
Cadmium		0.25		0.020	0.19
Cobalt		8.7		0.044	4.7
Chromium		18	B	0.070	0.47
Copper		19		0.22	2.3
Iron		16000		3.0	9.4
Potassium		1300		5.8	470
Magnesium		4400	B	4.9	470
Manganese		370		0.079	1.4
Silver		0.084	J	0.059	0.47
Sodium		820		18	470
Nickel		23		0.075	3.8
Vanadium		30		0.19	4.7
Zinc		75	B	0.53	1.9
Arsenic		6.9		0.39	0.94
Lead		26		0.19	0.28
Thallium		ND		0.12	0.94

Analysis Method:	6010B	Analysis Batch:	240-186476	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-185893	Lab File ID:	I12062315A.asc
Dilution:	1.0			Initial Weight/Volume:	1.34 g
Analysis Date:	06/23/2015 1446			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1119				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		ND		0.32	0.47

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-186561	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 1557			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1003_60-64 (20150617)**

Lab Sample ID: 240-52152-4 Date Sampled: 06/17/2015 1130
Client Matrix: Solid Date Received: 06/18/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.011	J B	0.0029	0.50
Barium		1.0	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0015	J	0.00014	0.10
Calcium		240	B	0.26	5.0
Chromium		0.0060	J B	0.00055	0.50
Cobalt		0.029	J	0.00056	0.050
Copper		0.0026	J B	0.0019	1.0
Iron		0.65	B	0.013	0.10
Lead		0.053	J B	0.0019	0.50
Magnesium		40	B	0.055	5.0
Manganese		13	B	0.00046	0.015
Nickel		0.032	J B	0.00076	0.040
Potassium		4.4	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.14	J B	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186738	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186565	Lab File ID:	062515AHG1.PRN
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 0959			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1400				
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-186138	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185906	Lab File ID:	062215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	06/22/2015 1106			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1445				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.062	J	0.017	0.12

Client Sample ID: **ASB-1003_70-74 (20150617)**

Lab Sample ID: 240-52152-5 Date Sampled: 06/17/2015 1215
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/18/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186018	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-185893	Lab File ID:	I9062015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	06/20/2015 2206			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1119				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5300		6.5	22
Antimony		ND		0.54	1.1
Barium		67		0.46	22
Beryllium		0.35	J	0.029	0.56
Calcium		8400		26	560
Cadmium		0.70		0.024	0.22
Cobalt		7.0		0.053	5.6
Chromium		14	B	0.084	0.56
Copper		15		0.26	2.8
Iron		11000		3.6	11
Potassium		710		7.0	560
Magnesium		3100	B	5.8	560
Manganese		340		0.094	1.7
Silver		0.65		0.071	0.56
Sodium		320	J	21	560
Nickel		13		0.090	4.5
Vanadium		19		0.22	5.6
Zinc		47	B	0.63	2.2
Arsenic		4.1		0.46	1.1
Lead		24		0.22	0.34
Thallium		ND		0.15	1.1

Analysis Method:	6010B	Analysis Batch:	240-186476	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-185893	Lab File ID:	I12062315A.asc
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	06/23/2015 1450			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1119				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		0.41	J	0.38	0.56

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-186561	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 1602			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Client Sample ID: **ASB-1003_70-74 (20150617)**

Lab Sample ID: 240-52152-5 Date Sampled: 06/17/2015 1215
Client Matrix: Solid Date Received: 06/18/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.015	J B	0.0029	0.50
Barium		0.63	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0056	J	0.00014	0.10
Calcium		280	B	0.26	5.0
Chromium		0.0050	J B	0.00055	0.50
Cobalt		0.015	J	0.00056	0.050
Copper		0.044	J B	0.0019	1.0
Iron		0.071	J B	0.013	0.10
Lead		0.049	J B	0.0019	0.50
Magnesium		26	B	0.055	5.0
Manganese		8.2	B	0.00046	0.015
Nickel		0.021	J B	0.00076	0.040
Potassium		4.2	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.27	J B	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-186738	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-186565	Lab File ID:	062515AHG1.PRN
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 1003			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1400				
Leach Date:	06/23/2015 1845				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-186138	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-185906	Lab File ID:	062215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.68 g
Analysis Date:	06/22/2015 1108			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1445				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.069	J	0.016	0.11

General Chemistry

Client Sample ID: **ASB-1002_75-77 (20150616)**

Lab Sample ID: 240-52152-1 Date Sampled: 06/16/2015 1620
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/18/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	3.3	9.6	10	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1515						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	290		mg/Kg	0.16	2.4	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1243						DryWt Corrected: Y
Percent Solids	83		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185832	Analysis Date: 06/19/2015 0838						DryWt Corrected: N
Percent Moisture	17		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185832	Analysis Date: 06/19/2015 0838						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1002_80-84 (20150616)**

Lab Sample ID: 240-52152-2 Date Sampled: 06/16/2015 1655
Client Matrix: Solid % Moisture: 10.2 Date Received: 06/18/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.30	0.89	1.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1412						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	18		mg/Kg	0.14	2.2	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1243						DryWt Corrected: Y
Percent Solids	90		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185832	Analysis Date: 06/19/2015 0838						DryWt Corrected: N
Percent Moisture	10		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185832	Analysis Date: 06/19/2015 0838						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1002_92-95 (20150616)**

Lab Sample ID: 240-52152-3 Date Sampled: 06/16/2015 1715
Client Matrix: Solid % Moisture: 9.9 Date Received: 06/18/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.30	0.89	1.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1416						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	11		mg/Kg	0.14	2.2	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1243						DryWt Corrected: Y
Percent Solids	90		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185832	Analysis Date: 06/19/2015 0838						DryWt Corrected: N
Percent Moisture	9.9		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185832	Analysis Date: 06/19/2015 0838						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1003_60-64 (20150617)**

Lab Sample ID: 240-52152-4 Date Sampled: 06/17/2015 1130
Client Matrix: Solid % Moisture: 20.6 Date Received: 06/18/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	1.7	5.0	5.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1515					DryWt Corrected: Y	
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	18		mg/Kg	0.16	2.5	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1243					DryWt Corrected: Y	
Percent Solids	79		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185832	Analysis Date: 06/19/2015 0838					DryWt Corrected: N	
Percent Moisture	21		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185832	Analysis Date: 06/19/2015 0838					DryWt Corrected: N	

General Chemistry

Client Sample ID: **ASB-1003_70-74 (20150617)**

Lab Sample ID: 240-52152-5 Date Sampled: 06/17/2015 1215
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/18/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	1.7	5.1	5.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1515						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	14		mg/Kg	0.17	2.5	1.0	7196A
Analysis Batch: 240-186589	Analysis Date: 06/24/2015 1243						DryWt Corrected: Y
Percent Solids	79		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185832	Analysis Date: 06/19/2015 0838						DryWt Corrected: N
Percent Moisture	21		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-185832	Analysis Date: 06/19/2015 0838						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC/MS Semi VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Section	Qualifier	Description
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-185863					
LCS 240-185863/2-A	Lab Control Sample	T	Solid	5035	
MB 240-185863/1-A	Method Blank	T	Solid	5035	
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	5035	
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	5035	
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	5035	
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	5035	
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	5035	
240-52152-6	MB-01 (20150617)	T	Solid	5035	
240-52155-B-1-C MS	Matrix Spike	T	Solid	5035	
240-52155-B-1-D MSD	Matrix Spike Duplicate	T	Solid	5035	
Analysis Batch:240-186116					
LCS 240-185863/2-A	Lab Control Sample	T	Solid	8260B	240-185863
MB 240-185863/1-A	Method Blank	T	Solid	8260B	240-185863
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	8260B	240-185863
240-52152-6	MB-01 (20150617)	T	Solid	8260B	240-185863
Prep Batch: 240-186220					
LB 240-186220/1-A	Method Blank	P	Solid	1311	
240-52152-1	ASB-1002_75-77 (20150616)	P	Solid	1311	
240-52152-2	ASB-1002_80-84 (20150616)	P	Solid	1311	
240-52152-3	ASB-1002_92-95 (20150616)	P	Solid	1311	
240-52153-A-11-A MS	Matrix Spike	P	Solid	1311	
240-52153-A-11-A MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-186226					
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	8260B	240-185863
240-52155-B-1-C MS	Matrix Spike	T	Solid	8260B	240-185863
240-52155-B-1-D MSD	Matrix Spike Duplicate	T	Solid	8260B	240-185863
Analysis Batch:240-186326					
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	8260B	240-185863
Analysis Batch:240-186414					
LB 240-186220/1-A	Method Blank	P	Solid	8260B	
LCS 240-186414/8	Lab Control Sample	T	Water	8260B	
240-52152-1	ASB-1002_75-77 (20150616)	P	Solid	8260B	
240-52152-2	ASB-1002_80-84 (20150616)	P	Solid	8260B	
240-52152-3	ASB-1002_92-95 (20150616)	P	Solid	8260B	
240-52153-A-11-A MS	Matrix Spike	P	Solid	8260B	
240-52153-A-11-A MSD	Matrix Spike Duplicate	P	Solid	8260B	

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-186535					
LB 240-186535/1-A	Method Blank	P	Solid	1311	
240-52152-4	ASB-1003_60-64 (20150617)	P	Solid	1311	
240-52152-5	ASB-1003_70-74 (20150617)	P	Solid	1311	
240-52152-5MS	Matrix Spike	P	Solid	1311	
240-52152-5MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-186562					
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	8260B	240-185863
Analysis Batch:240-186630					
LB 240-186535/1-A	Method Blank	P	Solid	8260B	
LCS 240-186630/11	Lab Control Sample	T	Water	8260B	
240-52152-4	ASB-1003_60-64 (20150617)	P	Solid	8260B	
240-52152-5	ASB-1003_70-74 (20150617)	P	Solid	8260B	
240-52152-5MS	Matrix Spike	P	Solid	8260B	
240-52152-5MSD	Matrix Spike Duplicate	P	Solid	8260B	
Analysis Batch:240-186664					
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	8260B	240-185863

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-185853					
LCS 240-185853/12-A	Lab Control Sample	T	Solid	3540C	
MB 240-185853/11-A	Method Blank	T	Solid	3540C	
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	3540C	
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	3540C	
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	3540C	
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	3540C	
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	3540C	
Prep Batch: 240-186190					
240-52030-A-3-H MS	Matrix Spike	P	Solid	1311	
Analysis Batch:240-186512					
LCS 240-185853/12-A	Lab Control Sample	T	Solid	8270C	240-185853
MB 240-185853/11-A	Method Blank	T	Solid	8270C	240-185853
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	8270C	240-185853
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	8270C	240-185853
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	8270C	240-185853
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	8270C	240-185853
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	8270C	240-185853
Prep Batch: 240-186513					
240-52152-1	ASB-1002_75-77 (20150616)	P	Solid	1311	
240-52152-2	ASB-1002_80-84 (20150616)	P	Solid	1311	
240-52152-3	ASB-1002_92-95 (20150616)	P	Solid	1311	
240-52152-4	ASB-1003_60-64 (20150617)	P	Solid	1311	
240-52152-5	ASB-1003_70-74 (20150617)	P	Solid	1311	
Prep Batch: 240-186587					
LCS 240-186587/17-A	Lab Control Sample	T	Water	3510C	
MB 240-186587/16-A	Method Blank	T	Water	3510C	
240-52030-A-3-H MS	Matrix Spike	P	Solid	3510C	240-186190
240-52152-1	ASB-1002_75-77 (20150616)	P	Solid	3510C	240-186513
240-52152-2	ASB-1002_80-84 (20150616)	P	Solid	3510C	240-186513
240-52152-3	ASB-1002_92-95 (20150616)	P	Solid	3510C	240-186513
240-52152-4	ASB-1003_60-64 (20150617)	P	Solid	3510C	240-186513
240-52152-5	ASB-1003_70-74 (20150617)	P	Solid	3510C	240-186513

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:240-186921					
LCS 240-186587/17-A	Lab Control Sample	T	Water	8270C	240-186587
MB 240-186587/16-A	Method Blank	T	Water	8270C	240-186587
240-52030-A-3-H MS	Matrix Spike	P	Solid	8270C	240-186587
240-52152-1	ASB-1002_75-77 (20150616)	P	Solid	8270C	240-186587
240-52152-2	ASB-1002_80-84 (20150616)	P	Solid	8270C	240-186587
240-52152-3	ASB-1002_92-95 (20150616)	P	Solid	8270C	240-186587
240-52152-4	ASB-1003_60-64 (20150617)	P	Solid	8270C	240-186587
240-52152-5	ASB-1003_70-74 (20150617)	P	Solid	8270C	240-186587

Report Basis
P = TCLP
T = Total

GC VOA					
Prep Batch: 240-186331					
LCS 240-186331/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-186331/12-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-186331/1-A	Method Blank	T	Solid	5035	
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	5035	
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	5035	
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	5035	
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	5035	
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	5035	
240-52152-6	MB-01 (20150617)	T	Solid	5035	
Analysis Batch:240-186548					
LCS 240-186331/2-A	Lab Control Sample	T	Solid	WI-GRO	240-186331
LCSD 240-186331/12-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-186331
MB 240-186331/1-A	Method Blank	T	Solid	WI-GRO	240-186331
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	WI-GRO	240-186331
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	WI-GRO	240-186331
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	WI-GRO	240-186331
240-52152-6	MB-01 (20150617)	T	Solid	WI-GRO	240-186331
Analysis Batch:240-186735					
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	WI-GRO	240-186331
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	WI-GRO	240-186331

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-185850					
LCS 240-185850/9-A	Lab Control Sample	T	Solid	3540C	
MB 240-185850/8-A	Method Blank	T	Solid	3540C	
240-52132-E-1-A MS	Matrix Spike	T	Solid	3540C	
240-52132-E-1-B MSD	Matrix Spike Duplicate	T	Solid	3540C	
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	3540C	
Prep Batch: 240-186109					
LCS 240-186109/13-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-186109/14-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-186109/12-A	Method Blank	T	Solid	WI DRO PREP	
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	WI DRO PREP	
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	WI DRO PREP	
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	WI DRO PREP	
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	WI DRO PREP	
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	WI DRO PREP	
Analysis Batch:240-186236					
LCS 240-185850/9-A	Lab Control Sample	T	Solid	8082	240-185850
MB 240-185850/8-A	Method Blank	T	Solid	8082	240-185850
240-52132-E-1-A MS	Matrix Spike	T	Solid	8082	240-185850
240-52132-E-1-B MSD	Matrix Spike Duplicate	T	Solid	8082	240-185850
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	8082	240-185850
Analysis Batch:240-186364					
LCS 240-186109/13-A	Lab Control Sample	T	Solid	WI-DRO	240-186109
LCSD 240-186109/14-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-186109
MB 240-186109/12-A	Method Blank	T	Solid	WI-DRO	240-186109
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	WI-DRO	240-186109
Analysis Batch:240-186570					
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	WI-DRO	240-186109
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	WI-DRO	240-186109
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	WI-DRO	240-186109
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	WI-DRO	240-186109

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-185893					
LCS 240-185893/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-185893/1-A	Method Blank	T	Solid	3050B	
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	3050B	
240-52152-1MS	Matrix Spike	T	Solid	3050B	
240-52152-1MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	3050B	
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	3050B	
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	3050B	
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	3050B	
Prep Batch: 240-185906					
LCS 240-185906/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-185906/1-A	Method Blank	T	Solid	7471A	
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	7471A	
240-52152-1MS	Matrix Spike	T	Solid	7471A	
240-52152-1MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	7471A	
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	7471A	
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	7471A	
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	7471A	
Analysis Batch:240-186018					
LCS 240-185893/2-A	Lab Control Sample	T	Solid	6010B	240-185893
MB 240-185893/1-A	Method Blank	T	Solid	6010B	240-185893
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	6010B	240-185893
240-52152-1MS	Matrix Spike	T	Solid	6010B	240-185893
240-52152-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-185893
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	6010B	240-185893
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	6010B	240-185893
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	6010B	240-185893
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	6010B	240-185893
Analysis Batch:240-186138					
LCS 240-185906/2-A	Lab Control Sample	T	Solid	7471A	240-185906
MB 240-185906/1-A	Method Blank	T	Solid	7471A	240-185906
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	7471A	240-185906
240-52152-1MS	Matrix Spike	T	Solid	7471A	240-185906
240-52152-1MSD	Matrix Spike Duplicate	T	Solid	7471A	240-185906
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	7471A	240-185906
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	7471A	240-185906
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	7471A	240-185906
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	7471A	240-185906

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-186476					
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	6010B	240-185893
240-52152-1MS	Matrix Spike	T	Solid	6010B	240-185893
240-52152-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-185893
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	6010B	240-185893
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	6010B	240-185893
Prep Batch: 240-186513					
LB 240-186513/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-186513/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-52152-1	ASB-1002_75-77 (20150616)	P	Solid	1311	
240-52152-1MS	Matrix Spike	P	Solid	1311	
240-52152-1MSD	Matrix Spike Duplicate	P	Solid	1311	
240-52152-2	ASB-1002_80-84 (20150616)	P	Solid	1311	
240-52152-3	ASB-1002_92-95 (20150616)	P	Solid	1311	
240-52152-4	ASB-1003_60-64 (20150617)	P	Solid	1311	
240-52152-5	ASB-1003_70-74 (20150617)	P	Solid	1311	
Analysis Batch:240-186556					
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	6010B	240-185893
Prep Batch: 240-186561					
LCS 240-186561/3-A	Lab Control Sample	T	Water	3010A	
MB 240-186561/2-A	Method Blank	T	Water	3010A	
LB 240-186513/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-186513
240-52152-1	ASB-1002_75-77 (20150616)	P	Solid	3010A	240-186513
240-52152-1MS	Matrix Spike	P	Solid	3010A	240-186513
240-52152-1MSD	Matrix Spike Duplicate	P	Solid	3010A	240-186513
240-52152-2	ASB-1002_80-84 (20150616)	P	Solid	3010A	240-186513
240-52152-3	ASB-1002_92-95 (20150616)	P	Solid	3010A	240-186513
240-52152-4	ASB-1003_60-64 (20150617)	P	Solid	3010A	240-186513
240-52152-5	ASB-1003_70-74 (20150617)	P	Solid	3010A	240-186513
Prep Batch: 240-186565					
LCS 240-186565/3-A	Lab Control Sample	T	Water	7470A	
MB 240-186565/2-A	Method Blank	T	Water	7470A	
LB 240-186513/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-186513
240-52152-1	ASB-1002_75-77 (20150616)	P	Solid	7470A	240-186513
240-52152-1MS	Matrix Spike	P	Solid	7470A	240-186513
240-52152-1MSD	Matrix Spike Duplicate	P	Solid	7470A	240-186513
240-52152-2	ASB-1002_80-84 (20150616)	P	Solid	7470A	240-186513
240-52152-3	ASB-1002_92-95 (20150616)	P	Solid	7470A	240-186513
240-52152-4	ASB-1003_60-64 (20150617)	P	Solid	7470A	240-186513
240-52152-5	ASB-1003_70-74 (20150617)	P	Solid	7470A	240-186513

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-186732					
LB 240-186513/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-186561
LCS 240-186561/3-A	Lab Control Sample	T	Water	6010B	240-186561
MB 240-186561/2-A	Method Blank	T	Water	6010B	240-186561
240-52152-1	ASB-1002_75-77 (20150616)	P	Solid	6010B	240-186561
240-52152-1MS	Matrix Spike	P	Solid	6010B	240-186561
240-52152-1MSD	Matrix Spike Duplicate	P	Solid	6010B	240-186561
240-52152-2	ASB-1002_80-84 (20150616)	P	Solid	6010B	240-186561
240-52152-3	ASB-1002_92-95 (20150616)	P	Solid	6010B	240-186561
240-52152-4	ASB-1003_60-64 (20150617)	P	Solid	6010B	240-186561
240-52152-5	ASB-1003_70-74 (20150617)	P	Solid	6010B	240-186561
Analysis Batch:240-186738					
LB 240-186513/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-186565
LCS 240-186565/3-A	Lab Control Sample	T	Water	7470A	240-186565
MB 240-186565/2-A	Method Blank	T	Water	7470A	240-186565
240-52152-1	ASB-1002_75-77 (20150616)	P	Solid	7470A	240-186565
240-52152-1MS	Matrix Spike	P	Solid	7470A	240-186565
240-52152-1MSD	Matrix Spike Duplicate	P	Solid	7470A	240-186565
240-52152-2	ASB-1002_80-84 (20150616)	P	Solid	7470A	240-186565
240-52152-3	ASB-1002_92-95 (20150616)	P	Solid	7470A	240-186565
240-52152-4	ASB-1003_60-64 (20150617)	P	Solid	7470A	240-186565
240-52152-5	ASB-1003_70-74 (20150617)	P	Solid	7470A	240-186565
Analysis Batch:240-186911					
240-52152-1	ASB-1002_75-77 (20150616)	P	Solid	6010B	240-186561
240-52152-1MS	Matrix Spike	P	Solid	6010B	240-186561
240-52152-1MSD	Matrix Spike Duplicate	P	Solid	6010B	240-186561

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-185832					
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	Moisture	
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	Moisture	
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	Moisture	
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	Moisture	
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	Moisture	
240-52152-5DU	Duplicate	T	Solid	Moisture	
Prep Batch: 240-186524					
LCSI 240-186524/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-186524/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-186524/9-A	Method Blank	T	Solid	3060A	
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	3060A	
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	3060A	
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	3060A	
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	3060A	
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	3060A	
Analysis Batch:240-186589					
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	7196A	
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	7196A	
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	7196A	
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	7196A	
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	7196A	
Analysis Batch:240-186823					
LCSI 240-186524/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-186524
LCSS 240-186524/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-186524
MB 240-186524/9-A	Method Blank	T	Solid	7196A	240-186524
240-52152-1	ASB-1002_75-77 (20150616)	T	Solid	7196A	240-186524
240-52152-2	ASB-1002_80-84 (20150616)	T	Solid	7196A	240-186524
240-52152-3	ASB-1002_92-95 (20150616)	T	Solid	7196A	240-186524
240-52152-4	ASB-1003_60-64 (20150617)	T	Solid	7196A	240-186524
240-52152-5	ASB-1003_70-74 (20150617)	T	Solid	7196A	240-186524

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52152-1	ASB-1002_75-77 (20150616)	424X	288X	436X	463X
240-52152-2	ASB-1002_80-84 (20150616)	82	68	101	79
240-52152-3	ASB-1002_92-95 (20150616)	46	42	54	45
240-52152-4	ASB-1003_60-64 (20150617)	46	41	47	40
240-52152-5	ASB-1003_70-74 (20150617)	33	37	43	39
240-52152-6	MB-01 (20150617)	46	44	54	50
MB 240-185863/1-A		90	79	99	95
LCS 240-185863/2-A		97	86	101	94
240-52155-B-1-C MS		58	23X	79	53
240-52155-B-1-D MSD		50	20X	73	46

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-186220/1-A MB		97	101	102	101
LB 240-186535/1-A MB		91	89	96	95
LCS 240-186414/8		99	98	93	102
LCS 240-186630/11		89	91	102	93
240-52152-5 MS	ASB-1003_70-74 (20150617) MS	89	96	96	95
240-52153-A-11-A MS		98	97	96	103
240-52152-5 MSD	ASB-1003_70-74 (20150617) MSD	97	96	96	97
240-52153-A-11-A MSD		102	98	89	105

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-52152-1	ASB-1002_75-77 (20150616)	95	97	99	95
240-52152-2	ASB-1002_80-84 (20150616)	94	97	99	97
240-52152-3	ASB-1002_92-95 (20150616)	97	92	98	98
240-52152-4	ASB-1003_60-64 (20150617)	92	87	93	87
240-52152-5	ASB-1003_70-74 (20150617)	94	93	97	89

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-185853/11-A		56	50	56	57	62	25
LCS 240-185853/12-A		56	48	54	56	65	49

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52152-1	ASB-1002_75-77 (20150616)	0X	0X	0X	0X	0X	0X
240-52152-2	ASB-1002_80-84 (20150616)	0X	0X	0X	0X	0X	0X
240-52152-3	ASB-1002_92-95 (20150616)	62	55	44	65	62	70
240-52152-4	ASB-1003_60-64 (20150617)	69	58	18	67	71	69
240-52152-5	ASB-1003_70-74 (20150617)	60	54	66	61	67	66

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-52152-1	ASB-1002_75-77 (20150616)	60	44	56	47	65	74
240-52152-2	ASB-1002_80-84 (20150616)	67	44	64	47	69	80
240-52152-3	ASB-1002_92-95 (20150616)	62	41	62	40	70	57
240-52152-4	ASB-1003_60-64 (20150617)	61	48	64	47	70	64
240-52152-5	ASB-1003_70-74 (20150617)	71	49	72	47	78	74
MB 240-186587/16-A		66	49	69	54	73	71
LCS 240-186587/17-A		69	48	70	47	71	72
240-52030-A-3-H MS		67	50	70	46	69	84

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TCX1 %Rec	DCB1 %Rec
240-52152-1	ASB-1002_75-77 (20150616)	0X	247X
MB 240-185850/8-A		79	89
LCS 240-185850/9-A		82	102
240-52132-E-1-A MS		63	68
240-52132-E-1-B MSD		76	73

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	13-134
DCB = DCB Decachlorobiphenyl	10-155

Method Blank - Batch: 240-185863 **Method: 8260B**
Preparation: 5035

Lab Sample ID:	MB 240-185863/1-A	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185863	Lab File ID:	143806.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/22/2015 1732	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Method Blank - Batch: 240-185863 **Method: 8260B**
Preparation: 5035

Lab Sample ID:	MB 240-185863/1-A	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185863	Lab File ID:	143806.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/22/2015 1732	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	12.9	J	10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	90	26 - 141
Dibromofluoromethane (Surr)	79	30 - 122
1,2-Dichloroethane-d4 (Surr)	99	39 - 128
Toluene-d8 (Surr)	95	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Control Sample - Batch: 240-185863

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-185863/2-A	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185863	Lab File ID:	143805.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/22/2015 1710	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	1560	78	16 - 156	
Allyl chloride	1000	700	70	50 - 150	
Bromobenzene	1000	828	83	72 - 120	
Bromochloromethane	1000	794	79	56 - 128	
Bromodichloromethane	1000	864	86	28 - 123	
Benzene	1000	923	92	70 - 120	
Bromoform	1000	725	72	10 - 120	
Bromomethane	1000	558	56	10 - 120	
2-Butanone (MEK)	2000	1720	86	10 - 199	
Carbon disulfide	1000	498	50	10 - 132	
Carbon tetrachloride	1000	796	80	29 - 120	
Chlorobenzene	1000	921	92	71 - 120	
Chlorodibromomethane	1000	813	81	22 - 120	
Chloroethane	1000	522	52	10 - 120	
Chloroform	1000	977	98	63 - 120	
Chloromethane	1000	516	52	25 - 120	
2-Chlorotoluene	1000	985	99	68 - 122	
4-Chlorotoluene	1000	961	96	68 - 122	
cis-1,2-Dichloroethene	1000	898	90	60 - 125	
cis-1,3-Dichloropropene	1000	882	88	25 - 120	
Cyclohexane	1000	788	79	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	793	79	10 - 129	
1,2-Dibromoethane	1000	988	99	47 - 123	
Dibromomethane	1000	863	86	68 - 120	
1,2-Dichlorobenzene	1000	904	90	68 - 120	
1,3-Dichlorobenzene	1000	861	86	66 - 121	
1,4-Dichlorobenzene	1000	871	87	65 - 120	
Dichlorodifluoromethane	1000	513	51	10 - 120	
1,1-Dichloroethane	1000	926	93	63 - 120	
1,2-Dichloroethane	1000	965	97	68 - 120	
1,1-Dichloroethene	1000	678	68	44 - 143	
Dichlorofluoromethane	1000	947	95	40 - 160	
1,2-Dichloropropane	1000	948	95	73 - 120	
1,3-Dichloropropane	1000	1020	102	74 - 120	
2,2-Dichloropropane	1000	791	79	25 - 123	
1,1-Dichloropropene	1000	977	98	60 - 123	
Ethylbenzene	1000	947	95	66 - 120	
Ethyl ether	1000	914	91	70 - 130	
Hexachlorobutadiene	1000	980	98	34 - 135	
2-Hexanone	2000	1630	81	43 - 130	
Isopropylbenzene	1000	950	95	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Control Sample - Batch: 240-185863

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-185863/2-A	Analysis Batch:	240-186116	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-185863	Lab File ID:	143805.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/22/2015 1710	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	4060	81	44 - 173	
Methylcyclohexane	1000	916	92	41 - 133	
Methylene Chloride	1000	967	97	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1820	91	49 - 121	
Methyl tert butyl ether	1000	912	91	34 - 157	
m-Xylene & p-Xylene	1000	969	97	67 - 120	
Naphthalene	1000	896	90	37 - 126	
n-Butylbenzene	1000	1010	101	51 - 137	
N-Propylbenzene	1000	970	97	64 - 130	
o-Xylene	1000	995	100	68 - 120	
p-Isopropyltoluene	1000	990	99	56 - 136	
sec-Butylbenzene	1000	1050	105	58 - 131	
Styrene	1000	830	83	60 - 120	
tert-Butylbenzene	1000	1000	100	58 - 128	
1,1,1,2-Tetrachloroethane	1000	926	93	27 - 121	
1,1,2,2-Tetrachloroethane	1000	1140	114	54 - 121	
Tetrachloroethene	1000	806	81	58 - 131	
Tetrahydrofuran	2000	1720	86	70 - 130	
Toluene	1000	991	99	66 - 123	
trans-1,2-Dichloroethene	1000	813	81	58 - 121	
trans-1,3-Dichloropropene	1000	996	100	22 - 122	
1,2,3-Trichlorobenzene	1000	874	87	43 - 129	
1,2,4-Trichlorobenzene	1000	853	85	41 - 135	
1,1,1-Trichloroethane	1000	881	88	38 - 122	
1,1,2-Trichloroethane	1000	999	100	74 - 120	
Trichloroethene	1000	857	86	59 - 124	
Trichlorofluoromethane	1000	978	98	17 - 145	
1,2,3-Trichloropropane	1000	1100	110	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	634	63	48 - 151	
1,2,4-Trimethylbenzene	1000	999	100	62 - 133	
1,3,5-Trimethylbenzene	1000	1020	102	60 - 130	
Vinyl chloride	1000	595	59	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	26 - 141
Dibromofluoromethane (Surr)	86	30 - 122
1,2-Dichloroethane-d4 (Surr)	101	39 - 128
Toluene-d8 (Surr)	94	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185863

Method: 8260B
Preparation: 5035

MS Lab Sample ID:	240-52155-B-1-C MS	Analysis Batch:	240-186226	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-185863	Lab File ID:	UX88110.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.17 g
Analysis Date:	06/23/2015 1224			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52155-B-1-D MSD	Analysis Batch:	240-186226	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-185863	Lab File ID:	UX88111.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.80 g
Analysis Date:	06/23/2015 1245			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acetone	97	97	10 - 142	12	30		
Allyl chloride	39	37	50 - 150	16	30	J F1	J F1
Bromobenzene	52	49	49 - 120	19	30		
Bromochloromethane	71	66	42 - 123	18	30		
Bromodichloromethane	44	41	18 - 133	18	30		
Benzene	62	56	10 - 199	21	30		
Bromoform	38	38	10 - 147	12	30		
Bromomethane	40	27	10 - 151	50	30		F2
2-Butanone (MEK)	88	87	10 - 172	14	30		
Carbon disulfide	0	0	10 - 155	NC	30	F1	F1
Carbon tetrachloride	21	0	12 - 135	NC	30	J	F1
Chlorobenzene	54	49	47 - 120	21	30		
Chlorodibromomethane	40	40	10 - 128	11	30		
Chloroethane	45	45	10 - 168	12	30		
Chloroform	69	64	51 - 120	19	30		
Chloromethane	57	52	16 - 120	20	30		
2-Chlorotoluene	44	41	51 - 120	20	30	F1	F1
4-Chlorotoluene	46	43	43 - 120	18	30		
cis-1,2-Dichloroethene	69	66	34 - 137	16	30		
cis-1,3-Dichloropropene	40	38	19 - 121	18	30		
Cyclohexane	27	19	10 - 154	40	30	J	J F2
1,2-Dibromo-3-Chloropropane	0	0	10 - 137	NC	30	F1	F1
1,2-Dibromoethane	46	44	32 - 127	16	30		
Dibromomethane	70	66	45 - 121	17	30		
1,2-Dichlorobenzene	50	45	27 - 126	21	30		
1,3-Dichlorobenzene	41	36	29 - 124	23	30		
1,4-Dichlorobenzene	43	40	30 - 123	21	30		
Dichlorodifluoromethane	26	23	10 - 120	21	30		J
1,1-Dichloroethane	68	63	18 - 160	19	30		
1,2-Dichloroethane	78	72	25 - 150	20	30		
1,1-Dichloroethene	69	59	10 - 179	28	30		
Dichlorofluoromethane	68	60	10 - 160	24	30		

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185863

Method: 8260B
Preparation: 5035

MS Lab Sample ID:	240-52155-B-1-C MS	Analysis Batch:	240-186226	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-185863	Lab File ID:	UX88110.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.17 g
Analysis Date:	06/23/2015 1224			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52155-B-1-D MSD	Analysis Batch:	240-186226	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-185863	Lab File ID:	UX88111.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.80 g
Analysis Date:	06/23/2015 1245			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,2-Dichloropropane	69	66	58 - 120	16	30		
1,3-Dichloropropane	71	68	58 - 120	17	30		
2,2-Dichloropropane	29	30	26 - 127	10	30		
1,1-Dichloropropene	52	45	42 - 126	27	30		
Ethylbenzene	48	42	27 - 143	24	30		
Ethyl ether	90	80	70 - 130	22	30		
Hexachlorobutadiene	24	20	10 - 134	33	30	J	J F2
2-Hexanone	89	87	21 - 141	13	30		
Isopropylbenzene	41	35	39 - 126	27	30		F1
Methyl acetate	1	-0.6	10 - 175	5	30	F1	F1
Methylcyclohexane	22	14	11 - 156	35	30	J	J F2
Methylene Chloride	74	72	10 - 148	15	30		
4-Methyl-2-pentanone (MIBK)	88	87	19 - 151	13	30		
Methyl tert butyl ether	81	79	26 - 159	15	30		
m-Xylene & p-Xylene	43	32	14 - 151	26	30		
Naphthalene	62	15	10 - 199	9	30	4	4
n-Butylbenzene	21	-5	13 - 154	21	30		F1
N-Propylbenzene	40	35	41 - 135	23	30	F1	F1
o-Xylene	48	40	18 - 151	25	30		
p-Isopropyltoluene	38	32	33 - 139	28	30		F1
sec-Butylbenzene	35	27	41 - 133	30	30	F1	F1
Styrene	52	46	31 - 137	23	30		
tert-Butylbenzene	39	31	45 - 132	32	30	F1	F1 F2
1,1,1,2-Tetrachloroethane	24	22	19 - 124	21	30	J	J
1,1,2,2-Tetrachloroethane	19	0	16 - 158	NC	30	J	F1
Tetrachloroethene	31	26	19 - 153	29	30		
Tetrahydrofuran	92	89	70 - 130	15	30		
Toluene	51	44	10 - 168	21	30		
trans-1,2-Dichloroethene	56	48	40 - 126	27	30		
trans-1,3-Dichloropropene	35	33	10 - 136	17	30		
1,2,3-Trichlorobenzene	35	32	10 - 123	19	30		
1,2,4-Trichlorobenzene	28	26	10 - 136	21	30		

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185863

Method: 8260B
Preparation: 5035

MS Lab Sample ID:	240-52155-B-1-C MS	Analysis Batch:	240-186226	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-185863	Lab File ID:	UX88110.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.17 g
Analysis Date:	06/23/2015 1224			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52155-B-1-D MSD	Analysis Batch:	240-186226	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-185863	Lab File ID:	UX88111.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.80 g
Analysis Date:	06/23/2015 1245			Final Weight/Volume:	5 mL
Prep Date:	06/19/2015 0954				5 mL
Leach Date:	N/A				

	% Rec.					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	37	34	10 - 159	22	30		
1,1,2-Trichloroethane	49	46	34 - 152	20	30		
Trichloroethene	95	89	10 - 193	18	30		
Trichlorofluoromethane	42	35	10 - 157	30	30		
1,2,3-Trichloropropane	79	80	54 - 142	10	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	43	40	23 - 168	19	30		
1,2,4-Trimethylbenzene	32	20	10 - 199	21	30		
1,3,5-Trimethylbenzene	33	26	10 - 173	25	30		
Vinyl chloride	52	46	15 - 123	24	30		

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
4-Bromofluorobenzene (Surr)	58		50		26 - 141
Dibromofluoromethane (Surr)	23	X	20	X	30 - 122
1,2-Dichloroethane-d4 (Surr)	79		73		39 - 128
Toluene-d8 (Surr)	53		46		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Method Blank - Batch: 240-186414

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-186220/1-A	Analysis Batch:	240-186414	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950690.D
Dilution:	1.0	Leach Batch:	240-186220	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/23/2015 1900	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 1900				
Leach Date:	06/22/2015 1800				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	70 - 124
Dibromofluoromethane (Surr)	101	80 - 128
1,2-Dichloroethane-d4 (Surr)	102	80 - 121
Toluene-d8 (Surr)	101	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Control Sample - Batch: 240-186414

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-186414/8	Analysis Batch:	240-186414	Instrument ID:	A3UX9
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UX950691.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/23/2015 1923	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 1923				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	997	100	80 - 120	
2-Butanone (MEK)	2000	1830	91	49 - 120	
Carbon tetrachloride	1000	1050	105	54 - 122	
Chlorobenzene	1000	1010	101	80 - 120	
Chloroform	1000	1040	104	80 - 123	
1,2-Dichloroethane	1000	959	96	80 - 120	
1,1-Dichloroethene	1000	1040	104	71 - 133	
Tetrachloroethene	1000	1040	104	79 - 134	
Trichloroethene	1000	998	100	78 - 130	
Vinyl chloride	1000	935	94	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	99	70 - 124
Dibromofluoromethane (Surr)	98	80 - 128
1,2-Dichloroethane-d4 (Surr)	93	80 - 121
Toluene-d8 (Surr)	102	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186414

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-52153-A-11-A MS	Analysis Batch:	240-186414	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950702.D
Dilution:	1.0	Leach Batch:	240-186220	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/23/2015 2343			Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 2343				5 mL
Leach Date:	06/22/2015 1800				

MSD Lab Sample ID:	240-52153-A-11-A MSD	Analysis Batch:	240-186414	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950703.D
Dilution:	1.0	Leach Batch:	240-186220	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/24/2015 0006			Final Weight/Volume:	5 mL
Prep Date:	06/24/2015 0006				5 mL
Leach Date:	06/22/2015 1800				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	97	97	80 - 120	1	30		
2-Butanone (MEK)	76	78	49 - 120	3	30		
Carbon tetrachloride	99	99	60 - 120	0	30		
Chlorobenzene	99	99	80 - 120	1	30		
Chloroform	101	99	80 - 124	2	30		
1,2-Dichloroethane	96	96	80 - 120	0	30		
1,1-Dichloroethene	102	103	67 - 139	2	30		
Tetrachloroethene	103	105	74 - 138	2	30		
Trichloroethene	102	98	75 - 134	4	30		
Vinyl chloride	91	90	51 - 120	1	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	98	102	70 - 124
Dibromofluoromethane (Surr)	97	98	80 - 128
1,2-Dichloroethane-d4 (Surr)	96	89	80 - 121
Toluene-d8 (Surr)	103	105	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Method Blank - Batch: 240-186630

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-186535/1-A	Analysis Batch:	240-186630	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1245162.D
Dilution:	1.0	Leach Batch:	240-186535	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/24/2015 2000	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/24/2015 2000				
Leach Date:	06/23/2015 2010				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	91	70 - 124
Dibromofluoromethane (Surr)	89	80 - 128
1,2-Dichloroethane-d4 (Surr)	96	80 - 121
Toluene-d8 (Surr)	95	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Control Sample - Batch: 240-186630

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-186630/11	Analysis Batch:	240-186630	Instrument ID:	A3UX12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	U1245163.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/24/2015 2101	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/24/2015 2101				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	1020	102	80 - 120	
2-Butanone (MEK)	2000	2040	102	49 - 120	
Carbon tetrachloride	1000	993	99	54 - 122	
Chlorobenzene	1000	976	98	80 - 120	
Chloroform	1000	1060	106	80 - 123	
1,2-Dichloroethane	1000	1080	108	80 - 120	
1,1-Dichloroethene	1000	971	97	71 - 133	
Tetrachloroethene	1000	934	93	79 - 134	
Trichloroethene	1000	1090	109	78 - 130	
Vinyl chloride	1000	937	94	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	89	70 - 124
Dibromofluoromethane (Surr)	91	80 - 128
1,2-Dichloroethane-d4 (Surr)	102	80 - 121
Toluene-d8 (Surr)	93	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186630

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-52152-5	Analysis Batch:	240-186630	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1245175.D
Dilution:	1.0	Leach Batch:	240-186535	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/25/2015 0154			Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 0154				5 mL
Leach Date:	06/23/2015 2010				

MSD Lab Sample ID:	240-52152-5	Analysis Batch:	240-186630	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1245176.D
Dilution:	1.0	Leach Batch:	240-186535	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/25/2015 0220			Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 0220				5 mL
Leach Date:	06/23/2015 2010				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	98	99	80 - 120	2	30		
2-Butanone (MEK)	99	101	49 - 120	1	30		
Carbon tetrachloride	89	93	60 - 120	5	30		
Chlorobenzene	96	96	80 - 120	1	30		
Chloroform	102	104	80 - 124	1	30		
1,2-Dichloroethane	106	110	80 - 120	4	30		
1,1-Dichloroethene	97	97	67 - 139	1	30		
Tetrachloroethene	90	90	74 - 138	1	30		
Trichloroethene	99	102	75 - 134	3	30		
Vinyl chloride	92	92	51 - 120	0	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	89	97	70 - 124
Dibromofluoromethane (Surr)	96	96	80 - 128
1,2-Dichloroethane-d4 (Surr)	96	96	80 - 121
Toluene-d8 (Surr)	95	97	80 - 120

Method Blank - Batch: 240-185853

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-185853/11-A	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185853	Lab File ID:	50624007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/24/2015 1209	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	35.3	J	19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Method Blank - Batch: 240-185853

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-185853/11-A	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185853	Lab File ID:	50624007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/24/2015 1209	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	16.1	J	15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	56	24 - 110
2-Fluorophenol (Surr)	50	24 - 110
Nitrobenzene-d5 (Surr)	56	20 - 110
Phenol-d5 (Surr)	57	26 - 110
Terphenyl-d14 (Surr)	62	36 - 110
2,4,6-Tribromophenol (Surr)	25	10 - 110

Lab Control Sample - Batch: 240-185853

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-185853/12-A	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185853	Lab File ID:	50624008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/24/2015 1232	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	354	53	35 - 110	
2,2'-oxybis[1-chloropropane]	667	396	59	29 - 110	
2,4-Dichlorophenol	667	347	52	39 - 110	
2,4-Dimethylphenol	667	357	54	29 - 110	
2,4-Dinitrophenol	1330	982	74	10 - 110	J
2,4-Dinitrotoluene	667	442	66	48 - 110	
2,6-Dinitrotoluene	667	454	68	45 - 110	
2-Chloronaphthalene	667	337	51	32 - 110	
2,4,5-Trichlorophenol	667	274	41	25 - 110	J
2-Chlorophenol	667	324	49	37 - 110	J
2,4,6-Trichlorophenol	667	257	39	12 - 110	J
2-Methylnaphthalene	667	347	52	36 - 110	
2-Methylphenol	667	322	48	41 - 110	J
2-Nitroaniline	667	431	65	45 - 110	J
2-Nitrophenol	667	387	58	34 - 110	
3,3'-Dichlorobenzidine	1330	825	62	28 - 110	J
3-Nitroaniline	667	401	60	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	1100	82	10 - 110	J
4-Bromophenyl phenyl ether	667	416	62	39 - 110	
4-Chloro-3-methylphenol	667	388	58	48 - 110	
4-Chloroaniline	667	304	46	30 - 110	J
4-Chlorophenyl phenyl ether	667	408	61	40 - 110	
4-Nitroaniline	667	473	71	48 - 110	J
4-Nitrophenol	1330	841	63	28 - 110	J
Acenaphthene	667	379	57	38 - 110	
Acenaphthylene	667	362	54	40 - 110	
Acetophenone	667	328	49	40 - 110	J
Anthracene	667	392	59	48 - 110	
Atrazine	1330	890	67	66 - 127	
Benzaldehyde	1330	759	57	32 - 110	
Benzo[a]anthracene	667	392	59	50 - 110	
Benzo[a]pyrene	667	438	66	44 - 110	
Benzo[b]fluoranthene	667	439	66	43 - 110	
Benzo[g,h,i]perylene	667	461	69	51 - 110	
Benzo[k]fluoranthene	667	456	68	38 - 105	
Bis(2-chloroethoxy)methane	667	335	50	32 - 110	
Bis(2-chloroethyl)ether	667	332	50	34 - 110	
Bis(2-ethylhexyl) phthalate	667	429	64	50 - 110	
Butyl benzyl phthalate	667	387	58	51 - 110	
Caprolactam	1330	889	67	44 - 114	
Carbazole	667	415	62	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Control Sample - Batch: 240-185853

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-185853/12-A	Analysis Batch:	240-186512	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-185853	Lab File ID:	50624008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/24/2015 1232	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/19/2015 0928			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	410	62	50 - 110	
Dibenz(a,h)anthracene	667	480	72	51 - 110	
Dibenzofuran	667	372	56	43 - 110	
Diethyl phthalate	667	422	63	52 - 110	
Dimethyl phthalate	667	399	60	50 - 110	
Di-n-butyl phthalate	667	415	62	51 - 110	
Di-n-octyl phthalate	667	350	52	48 - 110	
Fluoranthene	667	416	62	51 - 110	
Fluorene	667	381	57	46 - 110	
Hexachlorobenzene	667	429	64	43 - 110	
Hexachlorobutadiene	667	331	50	29 - 110	
Hexachlorocyclopentadiene	667	220	33	12 - 110	J
Hexachloroethane	667	316	47	30 - 110	J
Indeno[1,2,3-cd]pyrene	667	432	65	50 - 110	
Isophorone	667	366	55	36 - 110	
Naphthalene	667	345	52	36 - 110	
Nitrobenzene	667	377	57	32 - 110	
N-Nitrosodi-n-propylamine	667	372	56	38 - 110	
N-Nitrosodiphenylamine	1330	830	62	46 - 110	
Pentachlorophenol	1330	493	37	10 - 110	
Phenol	667	369	55	38 - 110	
Phenanthrene	667	384	58	49 - 110	
Pyrene	667	395	59	49 - 110	
3 & 4 Methylphenol	667	326	49	40 - 110	J

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	56	24 - 110
2-Fluorophenol (Surr)	48	24 - 110
Nitrobenzene-d5 (Surr)	54	20 - 110
Phenol-d5 (Surr)	56	26 - 110
Terphenyl-d14 (Surr)	65	36 - 110
2,4,6-Tribromophenol (Surr)	49	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Method Blank - Batch: 240-186587

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-186587/16-A	Analysis Batch:	240-186921	Instrument ID:	A4HP10
Client Matrix:	Water	Prep Batch:	240-186587	Lab File ID:	50626005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 1129	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/24/2015 1240			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.0040
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	66	30 - 110
2-Fluorophenol (Surr)	49	20 - 110
Nitrobenzene-d5 (Surr)	69	28 - 110
Phenol-d5 (Surr)	54	21 - 110
Terphenyl-d14 (Surr)	73	48 - 110
2,4,6-Tribromophenol (Surr)	71	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Control Sample - Batch: 240-186587

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-186587/17-A	Analysis Batch:	240-186921	Instrument ID:	A4HP10
Client Matrix:	Water	Prep Batch:	240-186587	Lab File ID:	50626006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 1153	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/24/2015 1240			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0463	58	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0616	77	54 - 110	
Pyridine	0.0800	0.0378	47	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0569	71	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0517	65	46 - 110	
2-Methylphenol	0.0800	0.0475	59	44 - 111	
Hexachlorobenzene	0.0800	0.0544	68	50 - 110	
Hexachlorobutadiene	0.0800	0.0455	57	34 - 110	
Hexachloroethane	0.0800	0.0469	59	41 - 110	
Nitrobenzene	0.0800	0.0569	71	40 - 110	
Pentachlorophenol	0.160	0.0777	49	12 - 110	
3 & 4 Methylphenol	0.0800	0.0499	62	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	69	30 - 110
2-Fluorophenol (Surr)	48	20 - 110
Nitrobenzene-d5 (Surr)	70	28 - 110
Phenol-d5 (Surr)	47	21 - 110
Terphenyl-d14 (Surr)	71	48 - 110
2,4,6-Tribromophenol (Surr)	72	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike - Batch: 240-186587

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-52030-A-3-H MS	Analysis Batch:	240-186921	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186587	Lab File ID:	50626026.D
Dilution:	1.0	Leach Batch:	240-186190	Initial Weight/Volume:	250 mL
Analysis Date:	06/26/2015 1945	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/24/2015 1240			Injection Volume:	1 uL
Leach Date:	06/22/2015 0800				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0460	57	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0594	74	42 - 110	
Pyridine	ND	0.0800	0.0395	49	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0636	79	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0524	66	35 - 110	
2-Methylphenol	ND	0.0800	0.0471	59	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0556	69	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0467	58	28 - 110	
Hexachloroethane	ND	0.0800	0.0507	63	26 - 110	
Nitrobenzene	ND	0.0800	0.0559	70	32 - 110	
Pentachlorophenol	ND	0.160	0.101	63	10 - 124	
3 & 4 Methylphenol	ND	0.0800	0.0506	63	29 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	67	30 - 110
2-Fluorophenol (Surr)	50	20 - 110
Nitrobenzene-d5 (Surr)	70	28 - 110
Phenol-d5 (Surr)	46	21 - 110
Terphenyl-d14 (Surr)	69	48 - 110
2,4,6-Tribromophenol (Surr)	84	23 - 110

Method Blank - Batch: 240-186331 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-186331/1-A	Analysis Batch:	240-186548	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186331	Lab File ID:	Y0062408.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/24/2015 1557	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186331 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-186331/2-A	Analysis Batch:	240-186548	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186331	Lab File ID:	Y0062409.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/24/2015 1633	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186331/12-A	Analysis Batch:	240-186548	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186331	Lab File ID:	Y0062420.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/24/2015 2257	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	116	114	80 - 120	1	20		

Method Blank - Batch: 240-185850

Method: 8082
Preparation: 3540C

Lab Sample ID:	MB 240-185850/8-A	Analysis Batch:	240-186236	Instrument ID:	A2HP13
Client Matrix:	Solid	Prep Batch:	240-185850	Lab File ID:	P1300016.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/23/2015 1120	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/19/2015 0914			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor-1016	ND		12	33
Aroclor-1221	ND		16	33
Aroclor-1232	ND		20	33
Aroclor-1242	ND		11	33
Aroclor-1248	ND		8.0	33
Aroclor-1254	ND		14	33
Aroclor-1260	ND		9.0	33

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	79	13 - 134
DCB Decachlorobiphenyl	89	10 - 155

Lab Control Sample - Batch: 240-185850

Method: 8082
Preparation: 3540C

Lab Sample ID:	LCS 240-185850/9-A	Analysis Batch:	240-186236	Instrument ID:	A2HP13
Client Matrix:	Solid	Prep Batch:	240-185850	Lab File ID:	P1300017.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/23/2015 1138	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/19/2015 0914			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor-1016	333	297	89	51 - 120	
Aroclor-1260	333	303	91	48 - 120	

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	82	13 - 134
DCB Decachlorobiphenyl	102	10 - 155

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185850

Method: 8082
Preparation: 3540C

MS Lab Sample ID:	240-52132-E-1-A MS	Analysis Batch:	240-186236	Instrument ID:	A2HP13
Client Matrix:	Solid	Prep Batch:	240-185850	Lab File ID:	P1300021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.73 g
Analysis Date:	06/23/2015 1253			Final Weight/Volume:	10 mL
Prep Date:	06/19/2015 0914			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	240-52132-E-1-B MSD	Analysis Batch:	240-186236	Instrument ID:	A2HP13
Client Matrix:	Solid	Prep Batch:	240-185850	Lab File ID:	P1300022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.50 g
Analysis Date:	06/23/2015 1310			Final Weight/Volume:	10 mL
Prep Date:	06/19/2015 0914			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor-1016	77	74	17 - 141	3	56		
Aroclor-1260	152	148	19 - 137	1	55	E F1	E F1

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	63	76	13 - 134
DCB Decachlorobiphenyl	68	73	10 - 155

Method Blank - Batch: 240-186109

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-186109/12-A	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-186109	Lab File ID:	P14F062311.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/23/2015 1911	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186109

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-186109/13-A	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-186109	Lab File ID:	P14F062312.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/23/2015 1938	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186109/14-A	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-186109	Lab File ID:	P14F062324.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/24/2015 0103	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	100	110	70 - 120	10	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Method Blank - Batch: 240-185893

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-185893/1-A	Analysis Batch:	240-186018	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185893	Lab File ID:	I9062015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/20/2015 0946	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1119				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	0.109	J	0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	5.66	J	5.2	500
Manganese	ND		0.084	1.5
Sodium	ND		19	500
Nickel	ND		0.080	4.0
Potassium	ND		6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Selenium	ND		0.34	0.50
Vanadium	ND		0.20	5.0
Thallium	ND		0.13	1.0
Zinc	1.69	J	0.56	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Control Sample - Batch: 240-185893

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-185893/2-A	Analysis Batch:	240-186018	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-185893	Lab File ID:	I9062015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/20/2015 0950	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1119				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	194	97	80 - 120	
Antimony	50.0	48.6	97	80 - 120	
Barium	200	187	94	80 - 120	
Beryllium	5.00	4.78	96	80 - 120	
Cadmium	5.00	4.87	97	80 - 120	
Calcium	5000	4900	98	80 - 120	
Chromium	20.0	19.0	95	80 - 120	
Cobalt	50.0	48.2	96	80 - 120	
Copper	25.0	23.6	94	80 - 120	
Iron	100	102	102	80 - 120	
Magnesium	5000	4840	97	80 - 120	
Manganese	50.0	47.6	95	80 - 120	
Sodium	5000	4860	97	80 - 120	
Nickel	50.0	48.8	98	80 - 120	
Potassium	5000	4850	97	80 - 120	
Silver	5.00	4.77	95	80 - 120	
Arsenic	200	195	98	80 - 120	
Lead	50.0	47.1	94	80 - 120	
Selenium	200	196	98	80 - 120	
Vanadium	50.0	47.6	95	80 - 120	
Thallium	200	191	95	80 - 120	
Zinc	50.0	49.7	99	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185893

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-52152-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/20/2015 2137
Prep Date: 06/19/2015 1119
Leach Date: N/A

Analysis Batch: 240-186018
Prep Batch: 240-185893
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9062015A.asc
Initial Weight/Volume: 1.19 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-52152-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/20/2015 2141
Prep Date: 06/19/2015 1119
Leach Date: N/A

Analysis Batch: 240-186018
Prep Batch: 240-185893
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9062015A.asc
Initial Weight/Volume: 1.19 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	205	259	75 - 125	4	20	4	4
Antimony	-103	78	75 - 125	40	20	4	4 F2
Beryllium	90	90	75 - 125	0	20		
Cadmium	-504	484	75 - 125	41	20	4	4 F2
Calcium	370	137	75 - 125	21	20	4	4 F2
Chromium	-340	22	75 - 125	29	20	4	4 F2
Cobalt	78	84	75 - 125	3	20		
Copper	-48	269	75 - 125	39	20	4	4 F2
Iron	-5234	-5139	75 - 125	0	20	4	4
Magnesium	261	129	75 - 125	32	20	F1	F1 F2
Manganese	80	0.2	75 - 125	13	20	4	4
Sodium	89	96	75 - 125	5	20		
Nickel	102	124	75 - 125	8	20		
Potassium	95	95	75 - 125	1	20		
Silver	80	82	75 - 125	2	20		
Arsenic	95	98	75 - 125	3	20		
Selenium	96	102	75 - 125	6	20		
Vanadium	84	83	75 - 125	1	20		
Thallium	90	90	75 - 125	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185893

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-52152-1	Analysis Batch:	240-186476	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-185893	Lab File ID:	I12062315A.asc
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1.19 g
Analysis Date:	06/23/2015 1438			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1119				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52152-1	Analysis Batch:	240-186476	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-185893	Lab File ID:	I12062315A.asc
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1.19 g
Analysis Date:	06/23/2015 1442			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1119				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	975	953	75 - 125	1	20	4	4
Lead	-5299	-2561	75 - 125	22	20	4	4 F2
Zinc	-3900	-2517	75 - 125	17	20	4	4

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

TCLP SPLPE Leachate Blank - Batch: 240-186561

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-186513/1-B	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186561	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 0921	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	06/23/2015 1845				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.00391	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	0.280	J	0.26	5.0
Chromium	0.00143	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	0.0252	J	0.0019	1.0
Iron	0.0283	J	0.013	0.10
Magnesium	0.107	J	0.055	5.0
Manganese	0.00102	J	0.00046	0.015
Nickel	0.00260	J	0.00076	0.040
Potassium	2.93	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00430	J	0.0029	0.50
Lead	0.0208	J	0.0019	0.50
Selenium	ND		0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0
Zinc	0.0395	J	0.0096	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Method Blank - Batch: 240-186561

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-186561/2-A	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-186561	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 0926	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Nickel	ND		0.00076	0.040
Potassium	0.706	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	ND		0.0019	0.50
Selenium	ND		0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0
Zinc	ND		0.0096	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Lab Control Sample - Batch: 240-186561

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-186561/3-A	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-186561	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 0930	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	2.05	102	50 - 150	
Antimony	0.500	0.524	105	50 - 150	
Barium	2.00	2.00	100	50 - 150	J
Beryllium	0.0500	0.0510	102	50 - 150	
Cadmium	0.0500	0.0521	104	50 - 150	J
Calcium	50.0	50.9	102	50 - 150	
Chromium	0.200	0.206	103	50 - 150	J
Cobalt	0.500	0.529	106	50 - 150	
Copper	0.250	0.280	112	50 - 150	J
Iron	1.00	1.06	106	50 - 150	
Magnesium	50.0	49.6	99	50 - 150	
Manganese	0.500	0.504	101	50 - 150	
Nickel	0.500	0.535	107	50 - 150	
Potassium	50.0	52.3	105	50 - 150	
Silver	0.0500	0.0539	108	50 - 150	J
Arsenic	2.00	2.20	110	50 - 150	
Lead	0.500	0.496	99	50 - 150	J
Selenium	2.00	2.27	114	50 - 150	
Vanadium	0.500	0.510	102	50 - 150	
Thallium	2.00	1.98	99	50 - 150	J
Zinc	0.500	0.601	120	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186561

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52152-1	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186561	Lab File ID:	I9062515A.asc
Dilution:	5.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 1528			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	06/23/2015 1845				

MSD Lab Sample ID:	240-52152-1	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186561	Lab File ID:	I9062515A.asc
Dilution:	5.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 1532			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	06/23/2015 1845				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	91	102	75 - 125	12	20		
Antimony	92	97	75 - 125	4	20	J	J
Barium	92	97	75 - 125	6	20	J	J
Beryllium	93	99	75 - 125	7	20		
Cadmium	96	102	75 - 125	5	20		
Calcium	67	96	75 - 125	7	20	F1	
Chromium	92	97	75 - 125	5	20		
Cobalt	91	97	75 - 125	5	20		
Copper	93	99	75 - 125	7	20	J	J
Iron	71	98	75 - 125	6	20	F1	
Magnesium	90	97	75 - 125	6	20		
Manganese	87	100	75 - 125	6	20		
Nickel	95	101	75 - 125	5	20		
Potassium	93	99	75 - 125	6	20		
Silver	98	103	75 - 125	5	20	J	J
Arsenic	97	102	75 - 125	5	20		
Selenium	95	102	75 - 125	7	20	J	J
Vanadium	92	97	75 - 125	5	20		
Thallium	92	97	75 - 125	5	20	J	J
Zinc	16	71	75 - 125	6	20	J 4	J 4

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186561

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52152-1	Analysis Batch:	240-186911	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186561	Lab File ID:	I9062615A.asc
Dilution:	5.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/26/2015 1045			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	06/23/2015 1845				

MSD Lab Sample ID:	240-52152-1	Analysis Batch:	240-186911	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186561	Lab File ID:	I9062615A.asc
Dilution:	5.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/26/2015 1049			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1146				
Leach Date:	06/23/2015 1845				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Lead	59	85	75 - 125	6	20	F1	

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

TCLP SPLPE Leachate Blank - Batch: 240-186565

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-186513/1-C	Analysis Batch:	240-186738	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-186565	Lab File ID:	062515AHG1.PRN
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 0945	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1400				
Leach Date:	06/23/2015 1845				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-186565

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-186565/2-A	Analysis Batch:	240-186738	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-186565	Lab File ID:	062515AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 0946	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-186565

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-186565/3-A	Analysis Batch:	240-186738	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-186565	Lab File ID:	062515AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 0948	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00488	98	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186565

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-52152-1	Analysis Batch:	240-186738	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-186565	Lab File ID:	062515AHG1.PRN
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 0951			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1400				
Leach Date:	06/23/2015 1845				

MSD Lab Sample ID:	240-52152-1	Analysis Batch:	240-186738	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-186565	Lab File ID:	062515AHG1.PRN
Dilution:	1.0	Leach Batch:	240-186513	Initial Weight/Volume:	50 mL
Analysis Date:	06/25/2015 0953			Final Weight/Volume:	50 mL
Prep Date:	06/24/2015 1400				
Leach Date:	06/23/2015 1845				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	100	96	80 - 120	4	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Method Blank - Batch: 240-185906

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-185906/1-A	Analysis Batch:	240-186138	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185906	Lab File ID:	062215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/22/2015 1049	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1445				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-185906

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-185906/2-A	Analysis Batch:	240-186138	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185906	Lab File ID:	062215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/22/2015 1051	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1445				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.877	105	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-185906

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52152-1	Analysis Batch:	240-186138	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185906	Lab File ID:	062215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.63 g
Analysis Date:	06/22/2015 1058			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1445				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52152-1	Analysis Batch:	240-186138	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-185906	Lab File ID:	062215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.63 g
Analysis Date:	06/22/2015 1100			Final Weight/Volume:	100 mL
Prep Date:	06/19/2015 1445				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	42	20	80 - 120	12	20	F1	F1

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Method Blank - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-186524/9-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.27	0.80

Lab Control Sample Insoluble - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-186524/11-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	736	114	75 - 125	

Lab Control Sample Soluble - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-186524/10-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	18.3	92	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52152-1

Duplicate - Batch: 240-185832

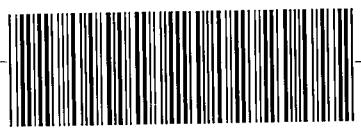
Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52152-5	Analysis Batch:	240-185832	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/19/2015 0838	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	79	79	0.2	20	
Percent Moisture	21	21	0.7	20	

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-52152 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica Canton

4101 Shuffel Street, N. N.

North Canton, OH 44720
Phone: 330 497 9396 Fax: 330 497 2

3.2/C4.2 4.6/C5.6 1.2/C7.2

Chain of Custody Record

103812

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/17/15	COC No:
Company Name: ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Ahli	Carrier:	1 of 1 COCs
Address: 430 First Avenue North, Ste 720	Analysis Turnaround Time			Sampler: Tom Barmon
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St. Paul MN	☐ 2 days			Job / SDG No.: 240066638
PO # MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	SVOCs (8270)	GRO (WI Mod Method)	DRO (WI Mod Method)	TAL Metals / Hexavalent Chromium	Trivalent Chromium (6010 (7196A))	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP Metals (1311/6010)	Moisture content	PCBs (8082)	Sample Specific Notes:
ASB-1002_75-77 (20150616)	6/16/15	1620	G	So	12	N	N	2	1	2	1	1		1	1	1	1	1	
ASB-1002_80-84 (20150616)	6/16/15	1655	G	So	11			2	1	2	1	1		1	1	1	1		
ASB-1002_90-95 (20150616)	6/16/15	1715	G	So	11			2	1	2	1	1		1	1	1	1		
ASB-1003_60-64 (20150617)	6/17/15	1130	G	So	11			2	1	2	1	1		1	1	1	1		
ASB-1003_70-74 (20150617)	6/17/15	1215	G	So	11			2	1	2	1	1		1	1	1	1		
ASB-61 (20150617)	6/17/15	—	—	AQ	2			1		1									
								6	1	6	1	1		1	1	1	1	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other Preserved

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Level IV

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp.(°C): Obs'd: _____ Corr'd: _____	Therm ID No.: IR 66
Relinquished by: Kelly Hoehn	Company: ARCADIS	Date/Time: 6/17/15 1600	Received by:	Company: TAmerica	Date/Time: 6-17-15
Relinquished by:	Company: TAmerica	Date/Time: 6-17-15 1646	Received by:	Company: TA	Date/Time: 6/18/15 920
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative Login # : 52152
Canton Facility

Client Arcadis Site Name

Cooler unpacked by:

Cooler Received on 6-18-15 Opened on 6-18-15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   IR GUN# A (CF +1.0 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   ~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~
   ~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~
   IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   ☑ See Multiple Cooler Form
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 3 Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC432654
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # Yes No

Contacted PM Date by via Verbal Voice Mail Other
Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

TestAmerica Multiple Cooler Receipt Form/Narrative
Canton Facility

Login #: 52152

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	A	3.2	4.2	Ice
1	1	4.6	5.6	1
1	1	1.2	2.2	1

July 01, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52152-1
Sample date: 2015-06-16 2015-06-17
Report received by CADENA: 2015-06-30
Initial Data Verification completed by CADENA: 2015-07-01

The following minor QC exceptions or missing information were noted:

WI-GRO and WI-DRO QC batch did not include MS recovery data and surrogate recoveries were not available for samples or QC.

GCMS SVOC CCV response outliers as noted in the laboratory submittal case narrative were not used to qualify results as part of this level 2 verification review.

GCMS VOC QC batch 185863 did not include MS recovery data due to insufficient sample volume available for creating MS/MSD's according to laboratory submittal case narrative.

GCMS VOC surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results for client sample -001.

GCMS VOC QC batch 185863 method blank had a detection below the RL for toluene. Client samples -003 and -005 toluene results should be considered to be non-detect at the RL and qualified with UB flags.

GCMS VOC QC batch 185863 and PCB QC batch MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

GCMS SVOC surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results for client samples -001 and -002.

GCMS SVOC QC batch 185853 method blank had detections below the RL for bis-2-ethylhexylphthalate and di-n-butylphthalate. Client samples -001, -002, -003, -004 and -005 bis-2-ethylhexylphthalate and sample -001 di-n-butylphthalate results should be considered to be non-detect at the RL and qualified with UB flags.

PCB sample -001 surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results.

Metals method blanks had detections below the RL in QC batch 185893 for chromium, magnesium and zinc and in QC batch 186561 for barium, calcium, chromium, copper, iron, magnesium, manganese, nickel, potassium, arsenic, lead and zinc. Metals results should be considered to be non-detect at the RL and qualified with UB flags for the following samples and analytes:
CHROMIUM, COPPER, POTASSIUM AND ARSENIC - UB flags - -001, -002, -003, -004 and -005.
IRON - UB flags - -002 and -005.
LEAD - UB flags - -004 and -005.
ZINC - UB flags - -003 and -004.

Metals sample -001 solid matrix MS/MSD recoveries were outliers biased high for magnesium. Client sample -001 solid matrix magnesium results should be considered to be estimated and qualified with J flags. Recoveries for aluminum, antimony, cadmium, calcium, cobalt, copper, iron, manganese, barium, lead and zinc were not considered to be statistically reliable so were not used to qualify results due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule).

Metals sample -001 SPLP/TCLP matrix MS/MSD recoveries for zinc were not considered to be statistically reliable so were not used to qualify results due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule). MS or MSD recoveries but not both were outliers biased low for calcium, iron and lead so qualification was not required based on these QC outliers alone. MS and MSD recoveries were outliers biased low for mercury so client sample -001 leachate matrix mercury results should be considered to be estimated and qualified with a J flag if detected or UJ flag if non-detect.

6 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, PCB, GC VOC, GC Other, Metals and General Chemistry parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52152-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Polychlorinated Biphenyls by GCECD	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240521521	ASB-1002_75-77 (20150616)	6/16/2015	4:20:00	X	X	X	X	X	X	X	X	X
240521522	ASB-1002_80-84 (20150616)	6/16/2015	4:55:00	X	X		X	X	X	X	X	X
240521523	ASB-1002_92-95 (20150616)	6/16/2015	5:15:00	X	X		X	X	X	X	X	X
240521524	ASB-1003_60-64 (20150617)	6/17/2015	11:30:00	X	X		X	X	X	X	X	X
240521525	ASB-1003_70-74 (20150617)	6/17/2015	12:15:00	X	X		X	X	X	X	X	X
240521526	MB-01 (20150617)	6/17/2015	12:00:00	X			X					

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52152-1

	Sample Name:	ASB-1002_75-77 (20150616)				ASB-1002_80-84 (20150616)				ASB-1002_92-95 (20150616)				ASB-1003_60-64 (20150617)				ASB-1003_70-74 (20150617)			
	Lab Sample ID:	240521521				240521522				240521523				240521524				240521525			
	Sample Date:	6/16/2015				6/16/2015				6/16/2015				6/17/2015				6/17/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																					
OSW-8260B																					
Toluene	108-88-3									13	120	ug/kg	UB					15	160	ug/kg	UB
GC/MS SVOC																					
OSW-8270C																					
Bis(2-ethylhexyl) phthalate	117-81-7	16000	78000	ug/kg	UB	3400	37000	ug/kg	UB	50	370	ug/kg	UB	36	420	ug/kg	UB	120	1700	ug/kg	UB
Di-n-butyl phthalate	84-74-2	9400	78000	ug/kg	UB																
Metals																					
OSW-6010B																					
Arsenic	7440-38-2	0.0088	0.50	mg/l	UB	0.0062	0.50	mg/l	UB	0.0048	0.50	mg/l	UB	0.011	0.50	mg/l	UB	0.015	0.50	mg/l	UB
Chromium	7440-47-3	0.0032	0.50	mg/l	UB	0.0029	0.50	mg/l	UB	0.0027	0.50	mg/l	UB	0.0060	0.50	mg/l	UB	0.0050	0.50	mg/l	UB
Copper	7440-50-8	0.0020	1.0	mg/l	UB	0.068	1.0	mg/l	UB	0.027	1.0	mg/l	UB	0.0026	1.0	mg/l	UB	0.044	1.0	mg/l	UB
Iron	7439-89-6					0.064	0.10	mg/l	UB									0.071	0.10	mg/l	UB
Lead	7439-92-1													0.053	0.50	mg/l	UB	0.049	0.50	mg/l	UB
Magnesium	7439-95-4	11000	540	mg/kg	J																
Potassium	7440-09-7	1.9	5.0	mg/l	UB	3.2	5.0	mg/l	UB	2.0	5.0	mg/l	UB	4.4	5.0	mg/l	UB	4.2	5.0	mg/l	UB
Zinc	7440-66-6									0.048	1.0	mg/l	UB	0.14	1.0	mg/l	UB				

ANALYTICAL REPORT

Job Number: 240-52266-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
7/2/2015 3:27 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
07/02/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52266-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 6/20/2015 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6º C and 2.8º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4) were analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 06/25/2015 and analyzed on 06/26/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3), ASB-1005_78-80 (20150618) (240-52266-4) and MB01 (20150619) (240-52266-5) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/22/2015 and analyzed on 06/23/2015.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-186224 and analytical batch 240-186326 on these samples: ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3), ASB-1005_78-80 (20150618) (240-52266-4), and MB01 (20150619) (240-52266-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4) were analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 06/28/2015, prepared on 06/29/2015 and analyzed on 06/30/2015 and 07/01/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/22/2015 and analyzed on 06/25/2015 and 06/29/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Hexachlorocyclopentadiene failed the recovery criteria low for the MS of sample 240-52269-15 in batch 240-186697.
Bis(2-chloroethyl)ether failed the recovery criteria high. Hexachlorocyclopentadiene failed the recovery criteria low for the MSD of sample 240-52269-15 in batch 240-186697. Refer to the QC report for details.

Samples ASB-1005_12-14 (20150618) (240-52266-1)[4X] and ASB-1005_37-40 (20150618) (240-52266-2)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: The following sample was diluted due to the nature of the sample matrix: ASB-1005_12-14 (20150618) (240-52266-1). Elevated reporting limits (RLs) are provided.

Method(s) 8270C: The continuing calibration verification (CCV) associated with batch 186697 recovered above the upper control limit for 2,4-Dinitrophenol. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following samples are impacted: ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3), ASB-1005_78-80 (20150618) (240-52266-4), (240-52269-C-15-A), (240-52269-C-15-B MS), and (240-52269-C-15-C MSD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3), ASB-1005_78-80 (20150618) (240-52266-4) and MB01 (20150619) (240-52266-5) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared and analyzed on 06/25/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/22/2015 and analyzed on 06/23/2015 and 06/24/2015.

Sample ASB-1005_12-14 (20150618) (240-52266-1)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 06/28/2015, prepared on 06/29/2015 and 06/30/2015 and analyzed on 06/30/2015 and 07/01/2015.

Several analytes were detected in method blank LB 240-187116/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Copper and Nickel were detected in method blank LB 240-187116/1-D at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Barium, Lead and Potassium were detected in method blank MB 240-187231/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Zinc failed the recovery criteria low for the MS of sample ASB-1005_37-40 (20150618)MS (240-52266-2) in batch 240-187549. Calcium and Manganese failed the recovery criteria high. Calcium failed the recovery criteria high for the MSD of sample ASB-1005_37-40 (20150618)MSD (240-52266-2) in batch 240-187549. Refer to the QC report for details.

Sample ASB-1005_37-40 (20150618) (240-52266-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 3010A: The matrix spike and matrix spike duplicate (MS/MSD) were spiked post preservation due to re-prep of the batch: ASB-1005_37-40 (20150618) (240-52266-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/24/2015 and analyzed on 06/25/2015.

Zinc was detected in method blank MB 240-186553/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample ASB-1005_12-14 (20150618)MS (240-52266-1) in batch 240-186732. Aluminum, Barium and Iron failed the recovery criteria high. For the MSD of sample ASB-1005_12-14 (20150618)MSD (240-52266-1) in batch 240-186732, Antimony failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, Calcium, Lead, Magnesium and Manganese exceeded the RPD limit. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 06/28/2015, prepared on 06/29/2015 and analyzed on 06/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/24/2015 and 06/29/2015 and analyzed on 06/26/2015 and 06/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 06/29/2015 and analyzed on 06/30/2015.

Samples ASB-1005_46-50 (20150618) (240-52266-3)[5X] and ASB-1005_78-80 (20150618) (240-52266-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 7196A: The following samples were diluted for hexavalent chromium due to the nature of the sample matrix: ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 07/01/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS
Samples ASB-1005_12-14 (20150618) (240-52266-1), ASB-1005_37-40 (20150618) (240-52266-2), ASB-1005_46-50 (20150618) (240-52266-3) and ASB-1005_78-80 (20150618) (240-52266-4) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/22/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52266-1	**ASB-1005_12-14 (20150618)**					
Ethylbenzene		660		320	ug/Kg	8260B
Isopropylbenzene		120	J	320	ug/Kg	8260B
Methyl acetate		1200		640	ug/Kg	8260B
Methylcyclohexane		220	J	640	ug/Kg	8260B
m-Xylene & p-Xylene		3000		320	ug/Kg	8260B
Naphthalene		1800		320	ug/Kg	8260B
n-Butylbenzene		1000		320	ug/Kg	8260B
N-Propylbenzene		330		320	ug/Kg	8260B
o-Xylene		30	J	320	ug/Kg	8260B
p-Isopropyltoluene		95	J	320	ug/Kg	8260B
sec-Butylbenzene		130	J	320	ug/Kg	8260B
1,2,4-Trimethylbenzene		4500		320	ug/Kg	8260B
1,3,5-Trimethylbenzene		1100		320	ug/Kg	8260B
2-Methylnaphthalene		300	J	1700	ug/Kg	8270C
Acenaphthene		60	J	1700	ug/Kg	8270C
Anthracene		110	J	1700	ug/Kg	8270C
Benzo[a]anthracene		200	J	1700	ug/Kg	8270C
Benzo[a]pyrene		190	J	1700	ug/Kg	8270C
Benzo[b]fluoranthene		280	J	1700	ug/Kg	8270C
Benzo[g,h,i]perylene		84	J	1700	ug/Kg	8270C
Benzo[k]fluoranthene		110	J	1700	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		710	J	1700	ug/Kg	8270C
Chrysene		240	J	1700	ug/Kg	8270C
Dibenzofuran		46	J	1700	ug/Kg	8270C
Fluoranthene		500	J	1700	ug/Kg	8270C
Fluorene		81	J	1700	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		100	J	1700	ug/Kg	8270C
Naphthalene		1600	J	1700	ug/Kg	8270C
Phenanthrene		430	J	1700	ug/Kg	8270C
Pyrene		420	J	1700	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		98		13	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		78		22	mg/Kg	WI-DRO
Aluminum		6100		21	mg/Kg	6010B
Antimony		2.4	F1	1.1	mg/Kg	6010B
Barium		280	F1	21	mg/Kg	6010B
Beryllium		0.42	J	0.53	mg/Kg	6010B
Calcium		16000	F2 F1	530	mg/Kg	6010B
Cadmium		0.24		0.21	mg/Kg	6010B
Cobalt		9.1		5.3	mg/Kg	6010B
Chromium		15		0.53	mg/Kg	6010B
Copper		15	F1	2.6	mg/Kg	6010B
Iron		12000		11	mg/Kg	6010B
Potassium		2500	F1	530	mg/Kg	6010B
Magnesium		5200	F2 F1	530	mg/Kg	6010B
Manganese		340	F2	1.6	mg/Kg	6010B
Sodium		140	J	530	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Nickel		19		4.2	mg/Kg	6010B
Vanadium		11		5.3	mg/Kg	6010B
Zinc		70	B	2.1	mg/Kg	6010B
Arsenic		5.0		1.1	mg/Kg	6010B
Lead		63	F2 F1	0.32	mg/Kg	6010B
Cr (VI)		1.3		1.0	mg/Kg	7196A
Cr (III)		13		2.5	mg/Kg	7196A
Percent Solids		79		0.10	%	Moisture
Percent Moisture		21		0.10	%	Moisture
TCLP						
Antimony		0.075	J	0.30	mg/L	6010B
Arsenic		0.015	J B	0.50	mg/L	6010B
Barium		2.6	J B	10	mg/L	6010B
Cadmium		0.0032	J	0.10	mg/L	6010B
Calcium		330	B	5.0	mg/L	6010B
Chromium		0.0034	J B	0.50	mg/L	6010B
Cobalt		0.097		0.050	mg/L	6010B
Iron		1.1	B	0.10	mg/L	6010B
Lead		3.0	B	0.50	mg/L	6010B
Magnesium		34	B	5.0	mg/L	6010B
Manganese		4.5	B	0.015	mg/L	6010B
Nickel		0.097	B	0.040	mg/L	6010B
Potassium		11	B	5.0	mg/L	6010B
Selenium		0.0060	J B	0.25	mg/L	6010B
Vanadium		0.0029	J	0.050	mg/L	6010B
Zinc		1.2		1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52266-2	**ASB-1005_37-40 (20150618)**					
Ethylbenzene		59	J	290	ug/Kg	8260B
Isopropylbenzene		200	J	290	ug/Kg	8260B
Methylcyclohexane		95	J	570	ug/Kg	8260B
m-Xylene & p-Xylene		320		290	ug/Kg	8260B
Naphthalene		4200		290	ug/Kg	8260B
n-Butylbenzene		900		290	ug/Kg	8260B
N-Propylbenzene		610		290	ug/Kg	8260B
o-Xylene		24	J	290	ug/Kg	8260B
sec-Butylbenzene		180	J	290	ug/Kg	8260B
1,2,4-Trimethylbenzene		450		290	ug/Kg	8260B
1,3,5-Trimethylbenzene		100	J	290	ug/Kg	8260B
1,1'-Biphenyl		5.5	J	390	ug/Kg	8270C
2-Methylnaphthalene		170	J	390	ug/Kg	8270C
Acenaphthene		8.6	J	390	ug/Kg	8270C
Anthracene		6.3	J	390	ug/Kg	8270C
Benzo[a]anthracene		9.3	J	390	ug/Kg	8270C
Benzo[a]pyrene		11	J	390	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		100	J	390	ug/Kg	8270C
Chrysene		13	J	390	ug/Kg	8270C
Fluoranthene		23	J	390	ug/Kg	8270C
Fluorene		7.7	J	390	ug/Kg	8270C
Naphthalene		1800		780	ug/Kg	8270C
Phenanthrene		46	J	390	ug/Kg	8270C
Pyrene		23	J	390	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		88		12	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		9.2	J	10	mg/Kg	WI-DRO
Aluminum		7700		19	mg/Kg	6010B
Barium		40		19	mg/Kg	6010B
Beryllium		0.52		0.48	mg/Kg	6010B
Calcium		9500		480	mg/Kg	6010B
Cadmium		0.027	J	0.19	mg/Kg	6010B
Cobalt		11		4.8	mg/Kg	6010B
Chromium		13		0.48	mg/Kg	6010B
Copper		17		2.4	mg/Kg	6010B
Iron		12000		9.6	mg/Kg	6010B
Potassium		4300		480	mg/Kg	6010B
Magnesium		5400		480	mg/Kg	6010B
Manganese		210		1.4	mg/Kg	6010B
Sodium		110	J	480	mg/Kg	6010B
Nickel		24		3.8	mg/Kg	6010B
Vanadium		4.8		4.8	mg/Kg	6010B
Zinc		110	B	1.9	mg/Kg	6010B
Arsenic		3.9		0.96	mg/Kg	6010B
Lead		17		0.29	mg/Kg	6010B
Selenium		0.39	J	0.48	mg/Kg	6010B
Cr (III)		13		2.4	mg/Kg	7196A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Solids		85		0.10	%	Moisture
Percent Moisture		15		0.10	%	Moisture
TCLP						
Antimony		0.42		0.30	mg/L	6010B
Arsenic		0.032	J B	0.50	mg/L	6010B
Barium		1.4	J B	10	mg/L	6010B
Cadmium		0.010	J	0.10	mg/L	6010B
Calcium		290	B	5.0	mg/L	6010B
Chromium		0.0029	J B	0.50	mg/L	6010B
Cobalt		0.042	J	0.050	mg/L	6010B
Copper		0.0085	J B	1.0	mg/L	6010B
Iron		1.5	B	0.10	mg/L	6010B
Lead		36	B	2.5	mg/L	6010B
Magnesium		32	B	5.0	mg/L	6010B
Manganese		3.3	B	0.015	mg/L	6010B
Nickel		0.17	B	0.040	mg/L	6010B
Potassium		12	B	5.0	mg/L	6010B
Selenium		0.0068	J B	0.25	mg/L	6010B
Zinc		3.5		1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52266-3	**ASB-1005_46-50 (20150618)**					
Methyl acetate		130	J	550	ug/Kg	8260B
Naphthalene		63	J	280	ug/Kg	8260B
1,1'-Biphenyl		6.0	J	390	ug/Kg	8270C
2-Methylnaphthalene		39	J	390	ug/Kg	8270C
Acenaphthene		45	J	390	ug/Kg	8270C
Acenaphthylene		8.7	J	390	ug/Kg	8270C
Anthracene		110	J	390	ug/Kg	8270C
Benzaldehyde		15	J	390	ug/Kg	8270C
Benzo[a]anthracene		310	J	390	ug/Kg	8270C
Benzo[a]pyrene		270	J	390	ug/Kg	8270C
Benzo[b]fluoranthene		380	J	390	ug/Kg	8270C
Benzo[g,h,i]perylene		130	J	390	ug/Kg	8270C
Benzo[k]fluoranthene		160	J	390	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		56	J	390	ug/Kg	8270C
Carbazole		56	J	390	ug/Kg	8270C
Chrysene		300	J	390	ug/Kg	8270C
Dibenz(a,h)anthracene		39	J	390	ug/Kg	8270C
Dibenzofuran		24	J	390	ug/Kg	8270C
Fluoranthene		650		390	ug/Kg	8270C
Fluorene		43	J	390	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		120	J	390	ug/Kg	8270C
Naphthalene		81	J	390	ug/Kg	8270C
Phenanthrene		420		390	ug/Kg	8270C
Pyrene		540		390	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		8.8	J	12	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		27		10	mg/Kg	WI-DRO
Aluminum		4600		21	mg/Kg	6010B
Barium		57		21	mg/Kg	6010B
Beryllium		0.32	J	0.52	mg/Kg	6010B
Calcium		42000		520	mg/Kg	6010B
Cadmium		0.19	J	0.21	mg/Kg	6010B
Cobalt		7.0		5.2	mg/Kg	6010B
Chromium		9.6		0.52	mg/Kg	6010B
Copper		12		2.6	mg/Kg	6010B
Iron		11000		10	mg/Kg	6010B
Potassium		1100		520	mg/Kg	6010B
Magnesium		13000		520	mg/Kg	6010B
Manganese		340		1.6	mg/Kg	6010B
Sodium		170	J	520	mg/Kg	6010B
Nickel		17		4.2	mg/Kg	6010B
Vanadium		13		5.2	mg/Kg	6010B
Zinc		35	B	2.1	mg/Kg	6010B
Arsenic		3.2		1.0	mg/Kg	6010B
Lead		18		0.31	mg/Kg	6010B
Mercury		0.25		0.12	mg/Kg	7471A
Cr (III)		9.6		2.4	mg/Kg	7196A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Solids		83		0.10	%	Moisture
Percent Moisture		17		0.10	%	Moisture
TCLP						
Arsenic		0.014	J B	0.50	mg/L	6010B
Barium		1.0	J B	10	mg/L	6010B
Cadmium		0.0010	J	0.10	mg/L	6010B
Calcium		460	B	5.0	mg/L	6010B
Chromium		0.0036	J B	0.50	mg/L	6010B
Cobalt		0.034	J	0.050	mg/L	6010B
Copper		0.011	J B	1.0	mg/L	6010B
Iron		0.12	B	0.10	mg/L	6010B
Lead		0.052	J B	0.50	mg/L	6010B
Magnesium		39	B	5.0	mg/L	6010B
Manganese		6.9	B	0.015	mg/L	6010B
Nickel		0.041	B	0.040	mg/L	6010B
Potassium		7.8	B	5.0	mg/L	6010B
Zinc		0.17	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52266-4	**ASB-1005_78-80 (20150618)**					
Methyl acetate		410	J	640	ug/Kg	8260B
Anthracene		4.2	J	390	ug/Kg	8270C
Benzaldehyde		35	J	390	ug/Kg	8270C
Benzo[a]pyrene		4.2	J	390	ug/Kg	8270C
Benzo[b]fluoranthene		8.9	J	390	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		50	J	390	ug/Kg	8270C
Fluoranthene		18	J	390	ug/Kg	8270C
Naphthalene		7.1	J	390	ug/Kg	8270C
Phenanthrene		16	J	390	ug/Kg	8270C
Pyrene		15	J	390	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		7.7	J	13	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		13		9.7	mg/Kg	WI-DRO
Aluminum		3500		19	mg/Kg	6010B
Barium		53		19	mg/Kg	6010B
Beryllium		0.20	J	0.47	mg/Kg	6010B
Calcium		14000		470	mg/Kg	6010B
Cadmium		0.11	J	0.19	mg/Kg	6010B
Cobalt		4.6	J	4.7	mg/Kg	6010B
Chromium		10		0.47	mg/Kg	6010B
Copper		6.1		2.4	mg/Kg	6010B
Iron		11000		9.4	mg/Kg	6010B
Potassium		360	J	470	mg/Kg	6010B
Magnesium		6100		470	mg/Kg	6010B
Manganese		340		1.4	mg/Kg	6010B
Sodium		560		470	mg/Kg	6010B
Nickel		10		3.8	mg/Kg	6010B
Vanadium		15		4.7	mg/Kg	6010B
Zinc		24	B	1.9	mg/Kg	6010B
Arsenic		1.9		0.94	mg/Kg	6010B
Lead		3.9		0.28	mg/Kg	6010B
Selenium		0.44	J	0.47	mg/Kg	6010B
Cr (III)		10		2.4	mg/Kg	7196A
Percent Solids		84		0.10	%	Moisture
Percent Moisture		16		0.10	%	Moisture
TCLP						
Arsenic		0.012	J B	0.50	mg/L	6010B
Barium		1.2	J B	10	mg/L	6010B
Cadmium		0.0010	J	0.10	mg/L	6010B
Calcium		230	B	5.0	mg/L	6010B
Chromium		0.0038	J B	0.50	mg/L	6010B
Cobalt		0.034	J	0.050	mg/L	6010B
Iron		1.1	B	0.10	mg/L	6010B
Lead		0.050	J B	0.50	mg/L	6010B
Magnesium		73	B	5.0	mg/L	6010B
Manganese		8.3	B	0.015	mg/L	6010B
Nickel		0.042	B	0.040	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Potassium		2.6	J B	5.0	mg/L	6010B
Selenium		0.0042	J B	0.25	mg/L	6010B
Vanadium		0.0036	J	0.050	mg/L	6010B
Zinc		0.040	J	1.0	mg/L	6010B
240-52266-5	**MB01 (20150619)**					
WI Gasoline Range Organics (C6-C10)		430	J	1900	mg/Kg	WI-GRO

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction			SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction			SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction			SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Method	Analyst	Analyst ID
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Walpole, Barbara	BW
SW846 7471A	Sutherland, Aaron	ADS
SW846 7471A	Walpole, Barbara	BW
SW846 7196A	Burns, Jill	JMB
SW846 7196A	Counts, Karen	KLC
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52266-1	ASB-1005_12-14 (20150618)	Solid	06/18/2015 1440	06/20/2015 1030
240-52266-2	ASB-1005_37-40 (20150618)	Solid	06/18/2015 1510	06/20/2015 1030
240-52266-3	ASB-1005_46-50 (20150618)	Solid	06/18/2015 1545	06/20/2015 1030
240-52266-4	ASB-1005_78-80 (20150618)	Solid	06/18/2015 1625	06/20/2015 1030
240-52266-5	MB01 (20150619)	Solid	06/19/2015 0000	06/20/2015 1030

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_12-14 (20150618)

Lab Sample ID: 240-52266-1 Date Sampled: 06/18/2015 1440
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143835.D
Dilution:	1.0			Initial Weight/Volume:	9.943 g
Analysis Date:	06/23/2015 1708			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		290	1300
Allyl chloride		ND		38	640
Benzene		ND		11	320
Bromobenzene		ND		17	320
Bromochloromethane		ND		89	320
Bromodichloromethane		ND		49	320
Bromoform		ND		78	320
Bromomethane		ND		65	320
2-Butanone (MEK)		ND		93	1300
Carbon disulfide		ND		72	320
Carbon tetrachloride		ND		61	320
Chlorobenzene		ND		52	320
Chlorodibromomethane		ND		59	320
Chloroethane		ND		65	320
Chloroform		ND		46	320
Chloromethane		ND		61	320
2-Chlorotoluene		ND		52	320
4-Chlorotoluene		ND		33	320
cis-1,2-Dichloroethene		ND		49	320
cis-1,3-Dichloropropene		ND		28	320
Cyclohexane		ND		38	640
1,2-Dibromo-3-Chloropropane		ND		91	640
1,2-Dibromoethane		ND		41	320
Dibromomethane		ND		64	320
1,2-Dichlorobenzene		ND		24	320
1,3-Dichlorobenzene		ND		38	320
1,4-Dichlorobenzene		ND		52	320
Dichlorodifluoromethane		ND		78	320
1,1-Dichloroethane		ND		45	320
1,2-Dichloroethane		ND		68	320
1,1-Dichloroethene		ND		38	320
Dichlorofluoromethane		ND		42	640
1,2-Dichloropropane		ND		41	320
1,3-Dichloropropane		ND		29	320
2,2-Dichloropropane		ND		66	320
1,1-Dichloropropene		ND		49	320
Ethylbenzene		660		45	320
Ethyl ether		ND		130	640
Hexachlorobutadiene		ND		56	320
2-Hexanone		ND		110	1300
Isopropylbenzene		120	J	17	320
Methyl acetate		1200		70	640
Methylcyclohexane		220	J	49	640
Methylene Chloride		ND		110	320
4-Methyl-2-pentanone (MIBK)		ND		72	1300
Methyl tert butyl ether		ND		38	320

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_12-14 (20150618)

Lab Sample ID: 240-52266-1 Date Sampled: 06/18/2015 1440
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143835.D
Dilution:	1.0			Initial Weight/Volume:	9.943 g
Analysis Date:	06/23/2015 1708			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		3000		26	320
Naphthalene		1800		33	320
n-Butylbenzene		1000		27	320
N-Propylbenzene		330		78	320
o-Xylene		30	J	22	320
p-Isopropyltoluene		95	J	32	320
sec-Butylbenzene		130	J	20	320
Styrene		ND		34	320
tert-Butylbenzene		ND		43	320
1,1,1,2-Tetrachloroethane		ND		63	320
1,1,2,2-Tetrachloroethane		ND		55	320
Tetrachloroethene		ND		34	320
Tetrahydrofuran		ND		150	1300
Toluene		ND		13	320
trans-1,2-Dichloroethene		ND		33	320
trans-1,3-Dichloropropene		ND		33	320
1,2,3-Trichlorobenzene		ND		50	320
1,2,4-Trichlorobenzene		ND		38	320
1,1,1-Trichloroethane		ND		54	320
1,1,2-Trichloroethane		ND		110	320
Trichloroethene		ND		50	320
Trichlorofluoromethane		ND		45	320
1,2,3-Trichloropropane		ND		130	320
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		54	320
1,2,4-Trimethylbenzene		4500		17	320
1,3,5-Trimethylbenzene		1100		19	320
Vinyl chloride		ND		72	320

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	91		26 - 141
Dibromofluoromethane (Surr)	83		30 - 122
1,2-Dichloroethane-d4 (Surr)	105		39 - 128
Toluene-d8 (Surr)	86		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_12-14 (20150618)

Lab Sample ID: 240-52266-1 Date Sampled: 06/18/2015 1440
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950769.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 2037			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 2037				
Leach Date:	06/25/2015 2010				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 121
4-Bromofluorobenzene (Surr)	97		70 - 124
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	97		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: **ASB-1005_37-40 (20150618)**

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143836.D
Dilution:	1.0			Initial Weight/Volume:	10.269 g
Analysis Date:	06/23/2015 1729			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		260	1100
Allyl chloride		ND		34	570
Benzene		ND		10	290
Bromobenzene		ND		15	290
Bromochloromethane		ND		80	290
Bromodichloromethane		ND		44	290
Bromoform		ND		70	290
Bromomethane		ND		59	290
2-Butanone (MEK)		ND		84	1100
Carbon disulfide		ND		64	290
Carbon tetrachloride		ND		55	290
Chlorobenzene		ND		47	290
Chlorodibromomethane		ND		53	290
Chloroethane		ND		59	290
Chloroform		ND		41	290
Chloromethane		ND		55	290
2-Chlorotoluene		ND		47	290
4-Chlorotoluene		ND		30	290
cis-1,2-Dichloroethene		ND		44	290
cis-1,3-Dichloropropene		ND		25	290
Cyclohexane		ND		34	570
1,2-Dibromo-3-Chloropropane		ND		82	570
1,2-Dibromoethane		ND		37	290
Dibromomethane		ND		57	290
1,2-Dichlorobenzene		ND		22	290
1,3-Dichlorobenzene		ND		34	290
1,4-Dichlorobenzene		ND		47	290
Dichlorodifluoromethane		ND		70	290
1,1-Dichloroethane		ND		40	290
1,2-Dichloroethane		ND		61	290
1,1-Dichloroethene		ND		34	290
Dichlorofluoromethane		ND		38	570
1,2-Dichloropropane		ND		37	290
1,3-Dichloropropane		ND		26	290
2,2-Dichloropropane		ND		60	290
1,1-Dichloropropene		ND		44	290
Ethylbenzene		59	J	40	290
Ethyl ether		ND		110	570
Hexachlorobutadiene		ND		51	290
2-Hexanone		ND		96	1100
Isopropylbenzene		200	J	15	290
Methyl acetate		ND		63	570
Methylcyclohexane		95	J	44	570
Methylene Chloride		ND		98	290
4-Methyl-2-pentanone (MIBK)		ND		64	1100
Methyl tert butyl ether		ND		34	290

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_37-40 (20150618)

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143836.D
Dilution:	1.0			Initial Weight/Volume:	10.269 g
Analysis Date:	06/23/2015 1729			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		320		23	290
Naphthalene		4200		30	290
n-Butylbenzene		900		24	290
N-Propylbenzene		610		70	290
o-Xylene		24	J	20	290
p-Isopropyltoluene		ND		29	290
sec-Butylbenzene		180	J	18	290
Styrene		ND		31	290
tert-Butylbenzene		ND		39	290
1,1,1,2-Tetrachloroethane		ND		56	290
1,1,2,2-Tetrachloroethane		ND		49	290
Tetrachloroethene		ND		31	290
Tetrahydrofuran		ND		140	1100
Toluene		ND		11	290
trans-1,2-Dichloroethene		ND		30	290
trans-1,3-Dichloropropene		ND		30	290
1,2,3-Trichlorobenzene		ND		45	290
1,2,4-Trichlorobenzene		ND		34	290
1,1,1-Trichloroethane		ND		48	290
1,1,2-Trichloroethane		ND		95	290
Trichloroethene		ND		45	290
Trichlorofluoromethane		ND		40	290
1,2,3-Trichloropropane		ND		120	290
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		48	290
1,2,4-Trimethylbenzene		450		15	290
1,3,5-Trimethylbenzene		100	J	17	290
Vinyl chloride		ND		64	290

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	103		26 - 141
Dibromofluoromethane (Surr)	86		30 - 122
1,2-Dichloroethane-d4 (Surr)	100		39 - 128
Toluene-d8 (Surr)	87		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_37-40 (20150618)

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950770.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 2101			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 2101				
Leach Date:	06/25/2015 2010				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	95		70 - 124
Toluene-d8 (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	99		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_46-50 (20150618)

Lab Sample ID: 240-52266-3 Date Sampled: 06/18/2015 1545
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143837.D
Dilution:	1.0			Initial Weight/Volume:	10.89 g
Analysis Date:	06/23/2015 1750			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		250	1100
Allyl chloride		ND		33	550
Benzene		ND		10	280
Bromobenzene		ND		14	280
Bromochloromethane		ND		77	280
Bromodichloromethane		ND		42	280
Bromoform		ND		68	280
Bromomethane		ND		56	280
2-Butanone (MEK)		ND		81	1100
Carbon disulfide		ND		62	280
Carbon tetrachloride		ND		53	280
Chlorobenzene		ND		45	280
Chlorodibromomethane		ND		51	280
Chloroethane		ND		56	280
Chloroform		ND		40	280
Chloromethane		ND		53	280
2-Chlorotoluene		ND		45	280
4-Chlorotoluene		ND		29	280
cis-1,2-Dichloroethene		ND		42	280
cis-1,3-Dichloropropene		ND		24	280
Cyclohexane		ND		33	550
1,2-Dibromo-3-Chloropropane		ND		79	550
1,2-Dibromoethane		ND		35	280
Dibromomethane		ND		55	280
1,2-Dichlorobenzene		ND		21	280
1,3-Dichlorobenzene		ND		33	280
1,4-Dichlorobenzene		ND		45	280
Dichlorodifluoromethane		ND		68	280
1,1-Dichloroethane		ND		39	280
1,2-Dichloroethane		ND		59	280
1,1-Dichloroethene		ND		33	280
Dichlorofluoromethane		ND		37	550
1,2-Dichloropropane		ND		35	280
1,3-Dichloropropane		ND		25	280
2,2-Dichloropropane		ND		58	280
1,1-Dichloropropene		ND		42	280
Ethylbenzene		ND		39	280
Ethyl ether		ND		110	550
Hexachlorobutadiene		ND		49	280
2-Hexanone		ND		93	1100
Isopropylbenzene		ND		14	280
Methyl acetate		130	J	61	550
Methylcyclohexane		ND		42	550
Methylene Chloride		ND		94	280
4-Methyl-2-pentanone (MIBK)		ND		62	1100
Methyl tert butyl ether		ND		33	280

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_46-50 (20150618)

Lab Sample ID: 240-52266-3 Date Sampled: 06/18/2015 1545
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143837.D
Dilution:	1.0			Initial Weight/Volume:	10.89 g
Analysis Date:	06/23/2015 1750			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		22	280
Naphthalene		63	J	29	280
n-Butylbenzene		ND		23	280
N-Propylbenzene		ND		68	280
o-Xylene		ND		19	280
p-Isopropyltoluene		ND		28	280
sec-Butylbenzene		ND		18	280
Styrene		ND		30	280
tert-Butylbenzene		ND		38	280
1,1,1,2-Tetrachloroethane		ND		54	280
1,1,2,2-Tetrachloroethane		ND		48	280
Tetrachloroethene		ND		30	280
Tetrahydrofuran		ND		130	1100
Toluene		ND		11	280
trans-1,2-Dichloroethene		ND		29	280
trans-1,3-Dichloropropene		ND		29	280
1,2,3-Trichlorobenzene		ND		43	280
1,2,4-Trichlorobenzene		ND		33	280
1,1,1-Trichloroethane		ND		46	280
1,1,2-Trichloroethane		ND		92	280
Trichloroethene		ND		43	280
Trichlorofluoromethane		ND		39	280
1,2,3-Trichloropropane		ND		110	280
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		46	280
1,2,4-Trimethylbenzene		ND		14	280
1,3,5-Trimethylbenzene		ND		17	280
Vinyl chloride		ND		62	280

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	97		26 - 141
Dibromofluoromethane (Surr)	80		30 - 122
1,2-Dichloroethane-d4 (Surr)	96		39 - 128
Toluene-d8 (Surr)	82		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_46-50 (20150618)

Lab Sample ID: 240-52266-3 Date Sampled: 06/18/2015 1545
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950771.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 2125			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 2125				
Leach Date:	06/25/2015 2010				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 121
4-Bromofluorobenzene (Surr)	90		70 - 124
Toluene-d8 (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	98		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: **ASB-1005_78-80 (20150618)**

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143838.D
Dilution:	1.0			Initial Weight/Volume:	9.201 g
Analysis Date:	06/23/2015 1812			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		290	1300
Allyl chloride		ND		39	640
Benzene		ND		12	320
Bromobenzene		ND		17	320
Bromochloromethane		ND		90	320
Bromodichloromethane		ND		49	320
Bromoform		ND		79	320
Bromomethane		ND		66	320
2-Butanone (MEK)		ND		94	1300
Carbon disulfide		ND		72	320
Carbon tetrachloride		ND		62	320
Chlorobenzene		ND		53	320
Chlorodibromomethane		ND		59	320
Chloroethane		ND		66	320
Chloroform		ND		46	320
Chloromethane		ND		62	320
2-Chlorotoluene		ND		53	320
4-Chlorotoluene		ND		34	320
cis-1,2-Dichloroethene		ND		49	320
cis-1,3-Dichloropropene		ND		28	320
Cyclohexane		ND		39	640
1,2-Dibromo-3-Chloropropane		ND		91	640
1,2-Dibromoethane		ND		41	320
Dibromomethane		ND		64	320
1,2-Dichlorobenzene		ND		24	320
1,3-Dichlorobenzene		ND		39	320
1,4-Dichlorobenzene		ND		53	320
Dichlorodifluoromethane		ND		79	320
1,1-Dichloroethane		ND		45	320
1,2-Dichloroethane		ND		68	320
1,1-Dichloroethene		ND		39	320
Dichlorofluoromethane		ND		43	640
1,2-Dichloropropane		ND		41	320
1,3-Dichloropropane		ND		30	320
2,2-Dichloropropane		ND		67	320
1,1-Dichloropropene		ND		49	320
Ethylbenzene		ND		45	320
Ethyl ether		ND		130	640
Hexachlorobutadiene		ND		57	320
2-Hexanone		ND		110	1300
Isopropylbenzene		ND		17	320
Methyl acetate		410	J	71	640
Methylcyclohexane		ND		49	640
Methylene Chloride		ND		110	320
4-Methyl-2-pentanone (MIBK)		ND		72	1300
Methyl tert butyl ether		ND		39	320

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_78-80 (20150618)

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143838.D
Dilution:	1.0			Initial Weight/Volume:	9.201 g
Analysis Date:	06/23/2015 1812			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		26	320
Naphthalene		ND		34	320
n-Butylbenzene		ND		27	320
N-Propylbenzene		ND		79	320
o-Xylene		ND		22	320
p-Isopropyltoluene		ND		32	320
sec-Butylbenzene		ND		21	320
Styrene		ND		35	320
tert-Butylbenzene		ND		44	320
1,1,1,2-Tetrachloroethane		ND		63	320
1,1,2,2-Tetrachloroethane		ND		55	320
Tetrachloroethene		ND		35	320
Tetrahydrofuran		ND		150	1300
Toluene		ND		13	320
trans-1,2-Dichloroethene		ND		34	320
trans-1,3-Dichloropropene		ND		34	320
1,2,3-Trichlorobenzene		ND		50	320
1,2,4-Trichlorobenzene		ND		39	320
1,1,1-Trichloroethane		ND		54	320
1,1,2-Trichloroethane		ND		110	320
Trichloroethene		ND		50	320
Trichlorofluoromethane		ND		45	320
1,2,3-Trichloropropane		ND		130	320
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		54	320
1,2,4-Trimethylbenzene		ND		17	320
1,3,5-Trimethylbenzene		ND		19	320
Vinyl chloride		ND		72	320

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	100		26 - 141
Dibromofluoromethane (Surr)	83		30 - 122
1,2-Dichloroethane-d4 (Surr)	105		39 - 128
Toluene-d8 (Surr)	84		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_78-80 (20150618)

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950772.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 2149			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 2149				
Leach Date:	06/25/2015 2010				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 121
4-Bromofluorobenzene (Surr)	90		70 - 124
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	99		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: **MB01 (20150619)**

Lab Sample ID: 240-52266-5 Date Sampled: 06/19/2015 0000
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143839.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	06/23/2015 1833			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		48	250
Chlorobenzene		ND		41	250
Chlorodibromomethane		ND		46	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		53	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: **MB01 (20150619)**

Lab Sample ID: 240-52266-5 Date Sampled: 06/19/2015 0000
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143839.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	06/23/2015 1833			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		43	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		42	250
1,1,2-Trichloroethane		ND		83	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		56	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	107		26 - 141
Dibromofluoromethane (Surr)	88		30 - 122
1,2-Dichloroethane-d4 (Surr)	112		39 - 128
Toluene-d8 (Surr)	89		33 - 134

Client Sample ID: **ASB-1005_12-14 (20150618)**

Lab Sample ID: 240-52266-1 Date Sampled: 06/18/2015 1440
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625029.D
Dilution:	4.0			Initial Weight/Volume:	30.15 g
Analysis Date:	06/25/2015 1909			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		18	1700
2,2'-oxybis[1-chloropropane]		ND		48	1700
2,4,5-Trichlorophenol		ND		130	1700
2,4,6-Trichlorophenol		ND		45	1700
2,4-Dichlorophenol		ND		100	1700
2,4-Dimethylphenol		ND		100	1700
2,4-Dinitrophenol		ND		110	8100
2,4-Dinitrotoluene		ND		86	1700
2,6-Dinitrotoluene		ND		110	1700
2-Chloronaphthalene		ND		2.3	1700
2-Chlorophenol		ND		41	1700
2-Methylnaphthalene		300	J	2.5	1700
2-Methylphenol		ND		56	1700
2-Nitroaniline		ND		46	8100
2-Nitrophenol		ND		42	1700
3,3'-Dichlorobenzidine		ND		91	8100
3-Nitroaniline		ND		81	8100
4,6-Dinitro-2-methylphenol		ND		47	8100
4-Bromophenyl phenyl ether		ND		66	1700
4-Chloro-3-methylphenol		ND		110	1700
4-Chloroaniline		ND		86	1700
4-Chlorophenyl phenyl ether		ND		66	1700
4-Nitroaniline		ND		130	8100
4-Nitrophenol		ND		86	8100
Acenaphthene		60	J	3.8	1700
Acenaphthylene		ND		1.8	1700
Acetophenone		ND		47	1700
Anthracene		110	J	3.9	1700
Atrazine		ND		46	1700
Benzaldehyde		ND		61	1700
Benzo[a]anthracene		200	J	3.2	1700
Benzo[a]pyrene		190	J	3.2	1700
Benzo[b]fluoranthene		280	J	3.0	1700
Benzo[g,h,i]perylene		84	J	1.8	1700
Benzo[k]fluoranthene		110	J	3.4	1700
Bis(2-chloroethoxy)methane		ND		110	1700
Bis(2-chloroethyl)ether		ND		10	1700
Bis(2-ethylhexyl) phthalate		710	J	96	1700
Butyl benzyl phthalate		ND		51	1700
Caprolactam		ND		190	1700
Carbazole		ND		140	1700
Chrysene		240	J	5.6	1700
Dibenz(a,h)anthracene		ND		3.3	1700
Dibenzofuran		46	J	3.3	1700
Diethyl phthalate		ND		81	1700
Dimethyl phthalate		ND		86	1700

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_12-14 (20150618)

Lab Sample ID: 240-52266-1 Date Sampled: 06/18/2015 1440
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625029.D
Dilution:	4.0			Initial Weight/Volume:	30.15 g
Analysis Date:	06/25/2015 1909			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		76	1700
Di-n-octyl phthalate		ND		40	1700
Fluoranthene		500	J	2.8	1700
Fluorene		81	J	2.7	1700
Hexachlorobenzene		ND		11	1700
Hexachlorobutadiene		ND		28	1700
Hexachlorocyclopentadiene		ND		41	8100
Hexachloroethane		ND		46	1700
Indeno[1,2,3-cd]pyrene		100	J	1.8	1700
Isophorone		ND		66	1700
Naphthalene		1600	J	4.1	1700
Nitrobenzene		ND		11	1700
N-Nitrosodi-n-propylamine		ND		32	1700
N-Nitrosodiphenylamine		ND		110	1700
Pentachlorophenol		ND		46	1700
Phenol		ND		37	1700
Phenanthrene		430	J	3.7	1700
Pyrene		420	J	2.2	1700
3 & 4 Methylphenol		ND		100	2000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	80		24 - 110
2-Fluorophenol (Surr)	71		24 - 110
2,4,6-Tribromophenol (Surr)	50		10 - 110
Nitrobenzene-d5 (Surr)	86		20 - 110
Phenol-d5 (Surr)	71		26 - 110
Terphenyl-d14 (Surr)	87		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_12-14 (20150618)

Lab Sample ID: 240-52266-1 Date Sampled: 06/18/2015 1440
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187215	Lab File ID:	50630013.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1815			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	53		30 - 110
2-Fluorophenol (Surr)	60		20 - 110
Nitrobenzene-d5 (Surr)	68		28 - 110
Phenol-d5 (Surr)	53		21 - 110
Terphenyl-d14 (Surr)	72		48 - 110
2,4,6-Tribromophenol (Surr)	65		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: **ASB-1005_37-40 (20150618)**

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625027.D
Dilution:	1.0			Initial Weight/Volume:	29.89 g
Analysis Date:	06/25/2015 1822			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		5.5	J	4.1	390
2,2'-oxybis[1-chloropropane]		ND		11	390
2,4,5-Trichlorophenol		ND		30	390
2,4,6-Trichlorophenol		ND		11	390
2,4-Dichlorophenol		ND		24	390
2,4-Dimethylphenol		ND		24	390
2,4-Dinitrophenol		ND		25	1900
2,4-Dinitrotoluene		ND		20	390
2,6-Dinitrotoluene		ND		25	390
2-Chloronaphthalene		ND		0.53	390
2-Chlorophenol		ND		9.7	390
2-Methylnaphthalene		170	J	0.59	390
2-Methylphenol		ND		13	390
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		9.8	390
3,3'-Dichlorobenzidine		ND		21	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		15	390
4-Chloro-3-methylphenol		ND		25	390
4-Chloroaniline		ND		20	390
4-Chlorophenyl phenyl ether		ND		15	390
4-Nitroaniline		ND		31	1900
4-Nitrophenol		ND		20	1900
Acenaphthene		8.6	J	0.90	390
Acenaphthylene		ND		0.41	390
Acetophenone		ND		11	390
Anthracene		6.3	J	0.92	390
Atrazine		ND		11	390
Benzaldehyde		ND		14	390
Benzo[a]anthracene		9.3	J	0.75	390
Benzo[a]pyrene		11	J	0.76	390
Benzo[b]fluoranthene		ND		0.70	390
Benzo[g,h,i]perylene		ND		0.41	390
Benzo[k]fluoranthene		ND		0.80	390
Bis(2-chloroethoxy)methane		ND		26	390
Bis(2-chloroethyl)ether		ND		2.4	390
Bis(2-ethylhexyl) phthalate		100	J	22	390
Butyl benzyl phthalate		ND		12	390
Caprolactam		ND		44	390
Carbazole		ND		32	390
Chrysene		13	J	1.3	390
Dibenz(a,h)anthracene		ND		0.78	390
Dibenzofuran		ND		0.78	390
Diethyl phthalate		ND		19	390
Dimethyl phthalate		ND		20	390

Client Sample ID: **ASB-1005_37-40 (20150618)**

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625027.D
Dilution:	1.0			Initial Weight/Volume:	29.89 g
Analysis Date:	06/25/2015 1822			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		18	390
Di-n-octyl phthalate		ND		9.4	390
Fluoranthene		23	J	0.65	390
Fluorene		7.7	J	0.63	390
Hexachlorobenzene		ND		2.5	390
Hexachlorobutadiene		ND		6.6	390
Hexachlorocyclopentadiene		ND		9.6	1900
Hexachloroethane		ND		11	390
Indeno[1,2,3-cd]pyrene		ND		0.41	390
Isophorone		ND		15	390
Nitrobenzene		ND		2.6	390
N-Nitrosodi-n-propylamine		ND		7.5	390
N-Nitrosodiphenylamine		ND		25	390
Pentachlorophenol		ND		11	390
Phenol		ND		8.6	390
Phenanthrene		46	J	0.86	390
Pyrene		23	J	0.52	390
3 & 4 Methylphenol		ND		24	470

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	87		24 - 110
2-Fluorophenol (Surr)	77		24 - 110
2,4,6-Tribromophenol (Surr)	50		10 - 110
Nitrobenzene-d5 (Surr)	91		20 - 110
Phenol-d5 (Surr)	86		26 - 110
Terphenyl-d14 (Surr)	93		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: **ASB-1005_37-40 (20150618)**

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-187180	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50629024.D
Dilution:	2.0			Initial Weight/Volume:	29.89 g
Analysis Date:	06/29/2015 1804	Run Type:	RA	Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Naphthalene		1800		1.9	780

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	67		24 - 110
2-Fluorophenol (Surr)	62		24 - 110
2,4,6-Tribromophenol (Surr)	42		10 - 110
Nitrobenzene-d5 (Surr)	73		20 - 110
Phenol-d5 (Surr)	71		26 - 110
Terphenyl-d14 (Surr)	71		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: **ASB-1005_37-40 (20150618)**

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187584	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187215	Lab File ID:	50701014.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	07/01/2015 1502			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	68		30 - 110
2-Fluorophenol (Surr)	74		20 - 110
Nitrobenzene-d5 (Surr)	84		28 - 110
Phenol-d5 (Surr)	65		21 - 110
Terphenyl-d14 (Surr)	87		48 - 110
2,4,6-Tribromophenol (Surr)	80		23 - 110

Client Sample ID: **ASB-1005_46-50 (20150618)**

Lab Sample ID: 240-52266-3 Date Sampled: 06/18/2015 1545
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625028.D
Dilution:	1.0			Initial Weight/Volume:	30.35 g
Analysis Date:	06/25/2015 1846			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		6.0	J	4.2	390
2,2'-oxybis[1-chloropropane]		ND		11	390
2,4,5-Trichlorophenol		ND		30	390
2,4,6-Trichlorophenol		ND		11	390
2,4-Dichlorophenol		ND		24	390
2,4-Dimethylphenol		ND		24	390
2,4-Dinitrophenol		ND		25	1900
2,4-Dinitrotoluene		ND		20	390
2,6-Dinitrotoluene		ND		25	390
2-Chloronaphthalene		ND		0.54	390
2-Chlorophenol		ND		9.8	390
2-Methylnaphthalene		39	J	0.60	390
2-Methylphenol		ND		13	390
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		9.9	390
3,3'-Dichlorobenzidine		ND		21	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		15	390
4-Chloro-3-methylphenol		ND		25	390
4-Chloroaniline		ND		20	390
4-Chlorophenyl phenyl ether		ND		15	390
4-Nitroaniline		ND		31	1900
4-Nitrophenol		ND		20	1900
Acenaphthene		45	J	0.91	390
Acenaphthylene		8.7	J	0.42	390
Acetophenone		ND		11	390
Anthracene		110	J	0.93	390
Atrazine		ND		11	390
Benzaldehyde		15	J	14	390
Benzo[a]anthracene		310	J	0.75	390
Benzo[a]pyrene		270	J	0.76	390
Benzo[b]fluoranthene		380	J	0.70	390
Benzo[g,h,i]perylene		130	J	0.42	390
Benzo[k]fluoranthene		160	J	0.81	390
Bis(2-chloroethoxy)methane		ND		26	390
Bis(2-chloroethyl)ether		ND		2.4	390
Bis(2-ethylhexyl) phthalate		56	J	23	390
Butyl benzyl phthalate		ND		12	390
Caprolactam		ND		44	390
Carbazole		56	J	32	390
Chrysene		300	J	1.3	390
Dibenz(a,h)anthracene		39	J	0.79	390
Dibenzofuran		24	J	0.79	390
Diethyl phthalate		ND		19	390
Dimethyl phthalate		ND		20	390

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_46-50 (20150618)

Lab Sample ID: 240-52266-3 Date Sampled: 06/18/2015 1545
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625028.D
Dilution:	1.0			Initial Weight/Volume:	30.35 g
Analysis Date:	06/25/2015 1846			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		18	390
Di-n-octyl phthalate		ND		9.4	390
Fluoranthene		650		0.66	390
Fluorene		43	J	0.63	390
Hexachlorobenzene		ND		2.5	390
Hexachlorobutadiene		ND		6.7	390
Hexachlorocyclopentadiene		ND		9.7	1900
Hexachloroethane		ND		11	390
Indeno[1,2,3-cd]pyrene		120	J	0.42	390
Isophorone		ND		15	390
Naphthalene		81	J	0.98	390
Nitrobenzene		ND		2.6	390
N-Nitrosodi-n-propylamine		ND		7.5	390
N-Nitrosodiphenylamine		ND		25	390
Pentachlorophenol		ND		11	390
Phenol		ND		8.7	390
Phenanthrene		420		0.87	390
Pyrene		540		0.52	390
3 & 4 Methylphenol		ND		24	480

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	82		24 - 110
2-Fluorophenol (Surr)	78		24 - 110
2,4,6-Tribromophenol (Surr)	32		10 - 110
Nitrobenzene-d5 (Surr)	86		20 - 110
Phenol-d5 (Surr)	87		26 - 110
Terphenyl-d14 (Surr)	84		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_46-50 (20150618)

Lab Sample ID: 240-52266-3 Date Sampled: 06/18/2015 1545
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187584	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187215	Lab File ID:	50701015.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	07/01/2015 1527			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	59		30 - 110
2-Fluorophenol (Surr)	60		20 - 110
Nitrobenzene-d5 (Surr)	72		28 - 110
Phenol-d5 (Surr)	49		21 - 110
Terphenyl-d14 (Surr)	82		48 - 110
2,4,6-Tribromophenol (Surr)	73		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: **ASB-1005_78-80 (20150618)**

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625026.D
Dilution:	1.0			Initial Weight/Volume:	29.75 g
Analysis Date:	06/25/2015 1759			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.2	390
2,2'-oxybis[1-chloropropane]		ND		11	390
2,4,5-Trichlorophenol		ND		30	390
2,4,6-Trichlorophenol		ND		11	390
2,4-Dichlorophenol		ND		24	390
2,4-Dimethylphenol		ND		24	390
2,4-Dinitrophenol		ND		25	1900
2,4-Dinitrotoluene		ND		20	390
2,6-Dinitrotoluene		ND		25	390
2-Chloronaphthalene		ND		0.54	390
2-Chlorophenol		ND		9.8	390
2-Methylnaphthalene		ND		0.60	390
2-Methylphenol		ND		13	390
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		9.9	390
3,3'-Dichlorobenzidine		ND		22	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		16	390
4-Chloro-3-methylphenol		ND		25	390
4-Chloroaniline		ND		20	390
4-Chlorophenyl phenyl ether		ND		16	390
4-Nitroaniline		ND		31	1900
4-Nitrophenol		ND		20	1900
Acenaphthene		ND		0.91	390
Acenaphthylene		ND		0.42	390
Acetophenone		ND		11	390
Anthracene		4.2	J	0.93	390
Atrazine		ND		11	390
Benzaldehyde		35	J	14	390
Benzo[a]anthracene		ND		0.75	390
Benzo[a]pyrene		4.2	J	0.77	390
Benzo[b]fluoranthene		8.9	J	0.71	390
Benzo[g,h,i]perylene		ND		0.42	390
Benzo[k]fluoranthene		ND		0.81	390
Bis(2-chloroethoxy)methane		ND		26	390
Bis(2-chloroethyl)ether		ND		2.4	390
Bis(2-ethylhexyl) phthalate		50	J	23	390
Butyl benzyl phthalate		ND		12	390
Caprolactam		ND		44	390
Carbazole		ND		32	390
Chrysene		ND		1.3	390
Dibenz(a,h)anthracene		ND		0.79	390
Dibenzofuran		ND		0.79	390
Diethyl phthalate		ND		19	390
Dimethyl phthalate		ND		20	390

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_78-80 (20150618)

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625026.D
Dilution:	1.0			Initial Weight/Volume:	29.75 g
Analysis Date:	06/25/2015 1759			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		18	390
Di-n-octyl phthalate		ND		9.4	390
Fluoranthene		18	J	0.66	390
Fluorene		ND		0.63	390
Hexachlorobenzene		ND		2.5	390
Hexachlorobutadiene		ND		6.7	390
Hexachlorocyclopentadiene		ND		9.7	1900
Hexachloroethane		ND		11	390
Indeno[1,2,3-cd]pyrene		ND		0.42	390
Isophorone		ND		16	390
Naphthalene		7.1	J	0.98	390
Nitrobenzene		ND		2.6	390
N-Nitrosodi-n-propylamine		ND		7.5	390
N-Nitrosodiphenylamine		ND		25	390
Pentachlorophenol		ND		11	390
Phenol		ND		8.7	390
Phenanthrene		16	J	0.87	390
Pyrene		15	J	0.53	390
3 & 4 Methylphenol		ND		24	480

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	78		24 - 110
2-Fluorophenol (Surr)	74		24 - 110
2,4,6-Tribromophenol (Surr)	60		10 - 110
Nitrobenzene-d5 (Surr)	83		20 - 110
Phenol-d5 (Surr)	35		26 - 110
Terphenyl-d14 (Surr)	88		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: **ASB-1005_78-80 (20150618)**

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187215	Lab File ID:	50630012.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1749			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	63		30 - 110
2-Fluorophenol (Surr)	72		20 - 110
Nitrobenzene-d5 (Surr)	84		28 - 110
Phenol-d5 (Surr)	63		21 - 110
Terphenyl-d14 (Surr)	78		48 - 110
2,4,6-Tribromophenol (Surr)	76		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_12-14 (20150618)

Lab Sample ID: 240-52266-1 Date Sampled: 06/18/2015 1440
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186729	Lab File ID:	Y0062512.D
Dilution:	1.0			Initial Weight/Volume:	9.892 g
Analysis Date:	06/25/2015 1748			Final Weight/Volume:	10 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		98		2.6	13

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_37-40 (20150618)

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186729	Lab File ID:	Y0062513.D
Dilution:	1.0			Initial Weight/Volume:	10.039 g
Analysis Date:	06/25/2015 1824			Final Weight/Volume:	10 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		88		2.3	12

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_46-50 (20150618)

Lab Sample ID: 240-52266-3 Date Sampled: 06/18/2015 1545
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186729	Lab File ID:	Y0062514.D
Dilution:	1.0			Initial Weight/Volume:	11.571 g
Analysis Date:	06/25/2015 1857			Final Weight/Volume:	11.5 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		8.8	J	2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_78-80 (20150618)

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186729	Lab File ID:	Y0062515.D
Dilution:	1.0			Initial Weight/Volume:	9.333 g
Analysis Date:	06/25/2015 1934			Final Weight/Volume:	10 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		7.7	J	2.5	13

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: MB01 (20150619)

Lab Sample ID: 240-52266-5 Date Sampled: 06/19/2015 0000
Client Matrix: Solid Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186729	Lab File ID:	Y0062516.D
Dilution:	1.0			Initial Weight/Volume:	0.053 g
Analysis Date:	06/25/2015 2009			Final Weight/Volume:	10 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		430	J	380	1900

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_12-14 (20150618)

Lab Sample ID: 240-52266-1 Date Sampled: 06/18/2015 1440
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/20/2015 1030

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186570	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-186109	Lab File ID:	P14F062412.D
Dilution:	2.0			Initial Weight/Volume:	27.67 g
Analysis Date:	06/24/2015 1936			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		78		2.7	22

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_37-40 (20150618)

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/20/2015 1030

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-186109	Lab File ID:	P14F062319.D
Dilution:	1.0			Initial Weight/Volume:	27.06 g
Analysis Date:	06/23/2015 2248			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		9.2	J	1.3	10

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_46-50 (20150618)

Lab Sample ID: 240-52266-3 Date Sampled: 06/18/2015 1545
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/20/2015 1030

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186570	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-186109	Lab File ID:	P14F062413.D
Dilution:	1.0			Initial Weight/Volume:	27.81 g
Analysis Date:	06/24/2015 2004			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		27		1.3	10

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_78-80 (20150618)

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/20/2015 1030

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-186109	Lab File ID:	P14F062321.D
Dilution:	1.0			Initial Weight/Volume:	29.27 g
Analysis Date:	06/23/2015 2342			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		13		1.2	9.7

Client Sample ID: **ASB-1005_12-14 (20150618)**

Lab Sample ID: 240-52266-1 Date Sampled: 06/18/2015 1440
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/20/2015 1030

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.20 g
Analysis Date:	06/25/2015 1242			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6100		6.1	21
Antimony		2.4	F1	0.51	1.1
Barium		280	F1	0.43	21
Beryllium		0.42	J	0.028	0.53
Calcium		16000	F2 F1	24	530
Cadmium		0.24		0.022	0.21
Cobalt		9.1		0.050	5.3
Chromium		15		0.079	0.53
Copper		15	F1	0.24	2.6
Iron		12000		3.4	11
Potassium		2500	F1	6.6	530
Magnesium		5200	F2 F1	5.5	530
Manganese		340	F2	0.089	1.6
Silver		ND		0.067	0.53
Sodium		140	J	20	530
Nickel		19		0.085	4.2
Vanadium		11		0.21	5.3
Zinc		70	B	0.59	2.1
Arsenic		5.0		0.43	1.1
Lead		63	F2 F1	0.21	0.32
Selenium		ND		0.36	0.53
Thallium		ND		0.14	1.1

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1443			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.075	J	0.0024	0.30
Arsenic		0.015	J B	0.0029	0.50
Barium		2.6	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0032	J	0.00014	0.10
Calcium		330	B	0.26	5.0
Chromium		0.0034	J B	0.00055	0.50
Cobalt		0.097		0.00056	0.050
Iron		1.1	B	0.013	0.10
Lead		3.0	B	0.0019	0.50
Magnesium		34	B	0.055	5.0

Client Sample ID: **ASB-1005_12-14 (20150618)**

Lab Sample ID: 240-52266-1 Date Sampled: 06/18/2015 1440
Client Matrix: Solid Date Received: 06/20/2015 1030

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Manganese		4.5	B	0.00046	0.015
Potassium		11	B	0.070	5.0
Selenium		0.0060	J B	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		0.0029	J	0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1540			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Copper		ND		0.0019	1.0
Nickel		0.097	B	0.00076	0.040
Zinc		1.2		0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187438	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0828			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187179	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 0901			Final Weight/Volume:	100 mL
Prep Date:	06/29/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.018	0.13

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_37-40 (20150618)

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/20/2015 1030

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.23 g
Analysis Date:	06/25/2015 1302			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7700		5.6	19
Antimony		ND		0.46	0.96
Barium		40		0.39	19
Beryllium		0.52		0.025	0.48
Calcium		9500		22	480
Cadmium		0.027	J	0.020	0.19
Cobalt		11		0.045	4.8
Chromium		13		0.072	0.48
Copper		17		0.22	2.4
Iron		12000		3.1	9.6
Potassium		4300		5.9	480
Magnesium		5400		5.0	480
Manganese		210		0.081	1.4
Silver		ND		0.060	0.48
Sodium		110	J	18	480
Nickel		24		0.077	3.8
Vanadium		4.8		0.19	4.8
Zinc		110	B	0.54	1.9
Arsenic		3.9		0.39	0.96
Lead		17		0.19	0.29
Selenium		0.39	J	0.33	0.48
Thallium		ND		0.12	0.96

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1426			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.42		0.0024	0.30
Arsenic		0.032	J B	0.0029	0.50
Barium		1.4	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.010	J	0.00014	0.10
Calcium		290	B	0.26	5.0
Chromium		0.0029	J B	0.00055	0.50
Cobalt		0.042	J	0.00056	0.050
Iron		1.5	B	0.013	0.10
Magnesium		32	B	0.055	5.0
Manganese		3.3	B	0.00046	0.015

Client Sample ID: **ASB-1005_37-40 (20150618)**

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid Date Received: 06/20/2015 1030

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Potassium		12	B	0.070	5.0
Selenium		0.0068	J B	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1515			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Copper		0.0085	J B	0.0019	1.0
Nickel		0.17	B	0.00076	0.040
Zinc		3.5		0.0096	1.0

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1552			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Lead		36	B	0.0095	2.5

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187438	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0823			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187002	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	06/26/2015 1028			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: **ASB-1005_37-40 (20150618)**

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/20/2015 1030

7471A Mercury (CVAA)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.016	0.12

Client Sample ID: **ASB-1005_46-50 (20150618)**

Lab Sample ID: 240-52266-3 Date Sampled: 06/18/2015 1545
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/20/2015 1030

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	06/25/2015 1306			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4600		6.0	21
Antimony		ND		0.50	1.0
Barium		57		0.43	21
Beryllium		0.32	J	0.027	0.52
Calcium		42000		24	520
Cadmium		0.19	J	0.022	0.21
Cobalt		7.0		0.049	5.2
Chromium		9.6		0.078	0.52
Copper		12		0.24	2.6
Iron		11000		3.3	10
Potassium		1100		6.4	520
Magnesium		13000		5.4	520
Manganese		340		0.087	1.6
Silver		ND		0.065	0.52
Sodium		170	J	20	520
Nickel		17		0.083	4.2
Vanadium		13		0.21	5.2
Zinc		35	B	0.58	2.1
Arsenic		3.2		0.43	1.0
Lead		18		0.21	0.31
Selenium		ND		0.35	0.52
Thallium		ND		0.14	1.0

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1455			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.014	J B	0.0029	0.50
Barium		1.0	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0010	J	0.00014	0.10
Calcium		460	B	0.26	5.0
Chromium		0.0036	J B	0.00055	0.50
Cobalt		0.034	J	0.00056	0.050
Iron		0.12	B	0.013	0.10
Lead		0.052	J B	0.0019	0.50
Magnesium		39	B	0.055	5.0

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: ASB-1005_46-50 (20150618)

Lab Sample ID: 240-52266-3 Date Sampled: 06/18/2015 1545
Client Matrix: Solid Date Received: 06/20/2015 1030

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Manganese		6.9	B	0.00046	0.015
Potassium		7.8	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1544			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Copper		0.011	J B	0.0019	1.0
Nickel		0.041	B	0.00076	0.040
Zinc		0.17	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187438	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0830			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187002	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	06/26/2015 1030			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.25		0.017	0.12

Client Sample ID: **ASB-1005_78-80 (20150618)**

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/20/2015 1030

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.26 g
Analysis Date:	06/25/2015 1310			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3500		5.5	19
Antimony		ND		0.45	0.94
Barium		53		0.39	19
Beryllium		0.20	J	0.024	0.47
Calcium		14000		22	470
Cadmium		0.11	J	0.020	0.19
Cobalt		4.6	J	0.044	4.7
Chromium		10		0.071	0.47
Copper		6.1		0.22	2.4
Iron		11000		3.0	9.4
Potassium		360	J	5.8	470
Magnesium		6100		4.9	470
Manganese		340		0.079	1.4
Silver		ND		0.059	0.47
Sodium		560		18	470
Nickel		10		0.075	3.8
Vanadium		15		0.19	4.7
Zinc		24	B	0.53	1.9
Arsenic		1.9		0.39	0.94
Lead		3.9		0.19	0.28
Thallium		ND		0.12	0.94

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.26 g
Analysis Date:	06/25/2015 1434			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		0.44	J	0.32	0.47

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1500			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30

Client Sample ID: **ASB-1005_78-80 (20150618)**

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid Date Received: 06/20/2015 1030

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.012	J B	0.0029	0.50
Barium		1.2	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0010	J	0.00014	0.10
Calcium		230	B	0.26	5.0
Chromium		0.0038	J B	0.00055	0.50
Cobalt		0.034	J	0.00056	0.050
Iron		1.1	B	0.013	0.10
Lead		0.050	J B	0.0019	0.50
Magnesium		73	B	0.055	5.0
Manganese		8.3	B	0.00046	0.015
Potassium		2.6	J B	0.070	5.0
Selenium		0.0042	J B	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		0.0036	J	0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1549			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Copper		ND		0.0019	1.0
Nickel		0.042	B	0.00076	0.040
Zinc		0.040	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187438	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0834			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187002	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.54 g
Analysis Date:	06/26/2015 1036			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Client Sample ID: **ASB-1005_78-80 (20150618)**

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/20/2015 1030

7471A Mercury (CVAA)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.018	0.13

General Chemistry

Client Sample ID: **ASB-1005_12-14 (20150618)**

Lab Sample ID: 240-52266-1 Date Sampled: 06/18/2015 1440
Client Matrix: Solid % Moisture: 21.3 Date Received: 06/20/2015 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	1.3		mg/Kg	0.34	1.0	1.0	7196A
Analysis Batch: 240-187474	Analysis Date: 06/30/2015 1218						DryWt Corrected: Y
Prep Batch: 240-187192	Prep Date: 06/29/2015 1029						
Cr (III)	13		mg/Kg	0.17	2.5	1.0	7196A
Analysis Batch: 240-187521	Analysis Date: 07/01/2015 0552						DryWt Corrected: Y
Percent Solids	79		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846						DryWt Corrected: N
Percent Moisture	21		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1005_37-40 (20150618)**

Lab Sample ID: 240-52266-2 Date Sampled: 06/18/2015 1510
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/20/2015 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.32	0.94	1.0	7196A
Analysis Batch: 240-187474	Analysis Date: 06/30/2015 1219						DryWt Corrected: Y
Prep Batch: 240-187192	Prep Date: 06/29/2015 1029						
Cr (III)	13		mg/Kg	0.15	2.4	1.0	7196A
Analysis Batch: 240-187521	Analysis Date: 07/01/2015 0552						DryWt Corrected: Y
Percent Solids	85		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846						DryWt Corrected: N
Percent Moisture	15		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1005_46-50 (20150618)**

Lab Sample ID: 240-52266-3 Date Sampled: 06/18/2015 1545
Client Matrix: Solid % Moisture: 17.0 Date Received: 06/20/2015 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	1.6	4.8	5.0	7196A
Analysis Batch: 240-187474	Analysis Date: 06/30/2015 1302					DryWt Corrected: Y	
Prep Batch: 240-187192	Prep Date: 06/29/2015 1029						
Cr (III)	9.6		mg/Kg	0.16	2.4	1.0	7196A
Analysis Batch: 240-187521	Analysis Date: 07/01/2015 0552					DryWt Corrected: Y	
Percent Solids	83		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846					DryWt Corrected: N	
Percent Moisture	17		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846					DryWt Corrected: N	

General Chemistry

Client Sample ID: **ASB-1005_78-80 (20150618)**

Lab Sample ID: 240-52266-4 Date Sampled: 06/18/2015 1625
Client Matrix: Solid % Moisture: 15.7 Date Received: 06/20/2015 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	1.6	4.7	5.0	7196A
Analysis Batch: 240-187474	Analysis Date: 06/30/2015 1303						DryWt Corrected: Y
Prep Batch: 240-187192	Prep Date: 06/29/2015 1029						
Cr (III)	10		mg/Kg	0.15	2.4	1.0	7196A
Analysis Batch: 240-187521	Analysis Date: 07/01/2015 0552						DryWt Corrected: Y
Percent Solids	84		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846						DryWt Corrected: N
Percent Moisture	16		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-186224					
LCS 240-186224/2-A	Lab Control Sample	T	Solid	5035	
MB 240-186224/1-A	Method Blank	T	Solid	5035	
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	5035	
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	5035	
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	5035	
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	5035	
240-52266-5	MB01 (20150619)	T	Solid	5035	
Analysis Batch:240-186326					
LCS 240-186224/2-A	Lab Control Sample	T	Solid	8260B	240-186224
MB 240-186224/1-A	Method Blank	T	Solid	8260B	240-186224
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	8260B	240-186224
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	8260B	240-186224
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	8260B	240-186224
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	8260B	240-186224
240-52266-5	MB01 (20150619)	T	Solid	8260B	240-186224
Prep Batch: 240-186960					
LB 240-186960/1-A	Method Blank	P	Solid	1311	
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	1311	
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	1311	
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	1311	
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	1311	
240-52266-4MS	Matrix Spike	P	Solid	1311	
240-52266-4MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-187017					
LB 240-186960/1-A	Method Blank	P	Solid	8260B	
LCS 240-187017/10	Lab Control Sample	T	Water	8260B	
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	8260B	
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	8260B	
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	8260B	
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	8260B	
240-52266-4MS	Matrix Spike	P	Solid	8260B	
240-52266-4MSD	Matrix Spike Duplicate	P	Solid	8260B	

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-186070					
LCS 240-186070/20-A	Lab Control Sample	T	Solid	3540C	
MB 240-186070/19-A	Method Blank	T	Solid	3540C	
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	3540C	
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	3540C	
240-52266-2RA	ASB-1005_37-40 (20150618)	T	Solid	3540C	
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	3540C	
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	3540C	
240-52269-C-15-B MS	Matrix Spike	T	Solid	3540C	
240-52269-C-15-C MSD	Matrix Spike Duplicate	T	Solid	3540C	
Analysis Batch:240-186697					
LCS 240-186070/20-A	Lab Control Sample	T	Solid	8270C	240-186070
MB 240-186070/19-A	Method Blank	T	Solid	8270C	240-186070
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	8270C	240-186070
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	8270C	240-186070
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	8270C	240-186070
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	8270C	240-186070
240-52269-C-15-B MS	Matrix Spike	T	Solid	8270C	240-186070
240-52269-C-15-C MSD	Matrix Spike Duplicate	T	Solid	8270C	240-186070
Prep Batch: 240-187116					
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	1311	
240-52266-1MS	Matrix Spike	P	Solid	1311	
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	1311	
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	1311	
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	1311	
Analysis Batch:240-187180					
240-52266-2RA	ASB-1005_37-40 (20150618)	T	Solid	8270C	240-186070
Prep Batch: 240-187215					
LCS 240-187215/16-A	Lab Control Sample	T	Water	3510C	
MB 240-187215/15-A	Method Blank	T	Water	3510C	
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	3510C	240-187116
240-52266-1MS	Matrix Spike	P	Solid	3510C	240-187116
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	3510C	240-187116
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	3510C	240-187116
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	3510C	240-187116
Analysis Batch:240-187453					
LCS 240-187215/16-A	Lab Control Sample	T	Water	8270C	240-187215
MB 240-187215/15-A	Method Blank	T	Water	8270C	240-187215
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	8270C	240-187215
240-52266-1MS	Matrix Spike	P	Solid	8270C	240-187215
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	8270C	240-187215

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:240-187584					
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	8270C	240-187215
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	8270C	240-187215

Report Basis
P = TCLP
T = Total

GC VOA					
Prep Batch: 240-186729					
LCS 240-186729/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-186729/14-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-186729/1-A	Method Blank	T	Solid	5035	
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	5035	
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	5035	
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	5035	
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	5035	
240-52266-5	MB01 (20150619)	T	Solid	5035	
Analysis Batch:240-186735					
LCS 240-186729/2-A	Lab Control Sample	T	Solid	WI-GRO	240-186729
LCSD 240-186729/14-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-186729
MB 240-186729/1-A	Method Blank	T	Solid	WI-GRO	240-186729
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	WI-GRO	240-186729
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	WI-GRO	240-186729
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	WI-GRO	240-186729
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	WI-GRO	240-186729
240-52266-5	MB01 (20150619)	T	Solid	WI-GRO	240-186729

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-186109					
LCS 240-186109/13-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-186109/14-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-186109/12-A	Method Blank	T	Solid	WI DRO PREP	
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	WI DRO PREP	
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	WI DRO PREP	
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	WI DRO PREP	
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	WI DRO PREP	
Analysis Batch:240-186364					
LCS 240-186109/13-A	Lab Control Sample	T	Solid	WI-DRO	240-186109
LCSD 240-186109/14-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-186109
MB 240-186109/12-A	Method Blank	T	Solid	WI-DRO	240-186109
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	WI-DRO	240-186109
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	WI-DRO	240-186109
Analysis Batch:240-186570					
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	WI-DRO	240-186109
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	WI-DRO	240-186109

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-186553					
LCS 240-186553/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-186553/1-A	Method Blank	T	Solid	3050B	
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	3050B	
240-52266-1MS	Matrix Spike	T	Solid	3050B	
240-52266-1MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	3050B	
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	3050B	
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	3050B	
Prep Batch: 240-186588					
LCS 240-186588/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-186588/1-A	Method Blank	T	Solid	7471A	
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	7471A	
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	7471A	
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	7471A	
Analysis Batch:240-186732					
LCS 240-186553/2-A	Lab Control Sample	T	Solid	6010B	240-186553
MB 240-186553/1-A	Method Blank	T	Solid	6010B	240-186553
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	6010B	240-186553
240-52266-1MS	Matrix Spike	T	Solid	6010B	240-186553
240-52266-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-186553
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	6010B	240-186553
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	6010B	240-186553
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	6010B	240-186553
Analysis Batch:240-187002					
LCS 240-186588/2-A	Lab Control Sample	T	Solid	7471A	240-186588
MB 240-186588/1-A	Method Blank	T	Solid	7471A	240-186588
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	7471A	240-186588
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	7471A	240-186588
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	7471A	240-186588
Prep Batch: 240-187116					
LB 240-187116/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-187116/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-187116/1-D	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	1311	
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	1311	
240-52266-2MS	Matrix Spike	P	Solid	1311	
240-52266-2MSD	Matrix Spike Duplicate	P	Solid	1311	
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	1311	
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	1311	

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187179					
LCS 240-187179/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-187179/1-A	Method Blank	T	Solid	7471A	
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	7471A	
240-52266-1MS	Matrix Spike	T	Solid	7471A	
240-52266-1MSD	Matrix Spike Duplicate	T	Solid	7471A	
Prep Batch: 240-187231					
LCS 240-187231/3-A	Lab Control Sample	T	Water	3010A	
MB 240-187231/2-A	Method Blank	T	Water	3010A	
LB 240-187116/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-187116
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	3010A	240-187116
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	3010A	240-187116
240-52266-2MS	Matrix Spike	P	Solid	3010A	240-187116
240-52266-2MSD	Matrix Spike Duplicate	P	Solid	3010A	240-187116
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	3010A	240-187116
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	3010A	240-187116
Prep Batch: 240-187233					
LCS 240-187233/3-A	Lab Control Sample	T	Water	7470A	
MB 240-187233/2-A	Method Blank	T	Water	7470A	
LB 240-187116/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187116
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	7470A	240-187116
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	7470A	240-187116
240-52266-2MS	Matrix Spike	P	Solid	7470A	240-187116
240-52266-2MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187116
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	7470A	240-187116
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	7470A	240-187116
Analysis Batch:240-187366					
LB 240-187116/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-187231
LCS 240-187231/3-A	Lab Control Sample	T	Water	6010B	240-187231
MB 240-187231/2-A	Method Blank	T	Water	6010B	240-187231
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	6010B	240-187231
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	6010B	240-187231
240-52266-2MS	Matrix Spike	P	Solid	6010B	240-187231
240-52266-2MSD	Matrix Spike Duplicate	P	Solid	6010B	240-187231
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	6010B	240-187231
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	6010B	240-187231

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187416					
LCS 240-187416/3-A	Lab Control Sample	T	Water	3010A	
MB 240-187416/2-A	Method Blank	T	Water	3010A	
LB 240-187116/1-D	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-187116
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	3010A	240-187116
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	3010A	240-187116
240-52266-2MS	Matrix Spike	P	Solid	3010A	240-187116
240-52266-2MSD	Matrix Spike Duplicate	P	Solid	3010A	240-187116
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	3010A	240-187116
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	3010A	240-187116
Analysis Batch:240-187438					
LB 240-187116/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187233
LCS 240-187233/3-A	Lab Control Sample	T	Water	7470A	240-187233
MB 240-187233/2-A	Method Blank	T	Water	7470A	240-187233
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	7470A	240-187233
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	7470A	240-187233
240-52266-2MS	Matrix Spike	P	Solid	7470A	240-187233
240-52266-2MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187233
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	7470A	240-187233
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	7470A	240-187233
Analysis Batch:240-187460					
LCS 240-187179/2-A	Lab Control Sample	T	Solid	7471A	240-187179
MB 240-187179/1-A	Method Blank	T	Solid	7471A	240-187179
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	7471A	240-187179
240-52266-1MS	Matrix Spike	T	Solid	7471A	240-187179
240-52266-1MSD	Matrix Spike Duplicate	T	Solid	7471A	240-187179
Analysis Batch:240-187549					
LB 240-187116/1-D	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-187416
LCS 240-187416/3-A	Lab Control Sample	T	Water	6010B	240-187416
MB 240-187416/2-A	Method Blank	T	Water	6010B	240-187416
240-52266-1	ASB-1005_12-14 (20150618)	P	Solid	6010B	240-187416
240-52266-2	ASB-1005_37-40 (20150618)	P	Solid	6010B	240-187416
240-52266-2MS	Matrix Spike	P	Solid	6010B	240-187416
240-52266-2MSD	Matrix Spike Duplicate	P	Solid	6010B	240-187416
240-52266-3	ASB-1005_46-50 (20150618)	P	Solid	6010B	240-187416
240-52266-4	ASB-1005_78-80 (20150618)	P	Solid	6010B	240-187416

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-186084					
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	Moisture	
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	Moisture	
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	Moisture	
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	Moisture	
240-52266-4DU	Duplicate	T	Solid	Moisture	
Prep Batch: 240-187192					
LCSI 240-187192/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-187192/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-187192/9-A	Method Blank	T	Solid	3060A	
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	3060A	
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	3060A	
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	3060A	
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	3060A	
Analysis Batch:240-187474					
LCSI 240-187192/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-187192
LCSS 240-187192/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-187192
MB 240-187192/9-A	Method Blank	T	Solid	7196A	240-187192
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	7196A	240-187192
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	7196A	240-187192
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	7196A	240-187192
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	7196A	240-187192
Analysis Batch:240-187521					
240-52266-1	ASB-1005_12-14 (20150618)	T	Solid	7196A	
240-52266-2	ASB-1005_37-40 (20150618)	T	Solid	7196A	
240-52266-3	ASB-1005_46-50 (20150618)	T	Solid	7196A	
240-52266-4	ASB-1005_78-80 (20150618)	T	Solid	7196A	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52266-1	ASB-1005_12-14 (20150618)	91	83	105	86
240-52266-2	ASB-1005_37-40 (20150618)	103	86	100	87
240-52266-3	ASB-1005_46-50 (20150618)	97	80	96	82
240-52266-4	ASB-1005_78-80 (20150618)	100	83	105	84
240-52266-5	MB01 (20150619)	107	88	112	89
MB 240-186224/1-A		97	76	93	80
LCS 240-186224/2-A		97	88	96	81

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-186960/1-A MB		97	99	95	101
LCS 240-187017/10		101	95	89	102
240-52266-4 MS	ASB-1005_78-80 (20150618) MS	103	98	87	104
240-52266-4 MSD	ASB-1005_78-80 (20150618) MSD	97	99	89	101

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-52266-1	ASB-1005_12-14 (20150618)	95	97	100	97
240-52266-2	ASB-1005_37-40 (20150618)	98	95	105	99
240-52266-3	ASB-1005_46-50 (20150618)	94	90	95	98
240-52266-4	ASB-1005_78-80 (20150618)	94	90	97	99

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-186070/19-A		71	61	74	74	77	24
LCS 240-186070/20-A		75	66	77	76	76	53
240-52269-C-15-B MS		81	78	81	87	75	70
240-52269-C-15-C MSD		74	69	73	82	77	54

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52266-1	ASB-1005_12-14 (20150618)	80	71	50	86	71	87
240-52266-2	ASB-1005_37-40 (20150618)	87	77	50	91	86	93
240-52266-2 RA	ASB-1005_37-40 (20150618) RA	67	62	42	73	71	71
240-52266-3	ASB-1005_46-50 (20150618)	82	78	32	86	87	84
240-52266-4	ASB-1005_78-80 (20150618)	78	74	60	83	35	88

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-52266-1	ASB-1005_12-14 (20150618)	53	60	68	53	72	65
240-52266-2	ASB-1005_37-40 (20150618)	68	74	84	65	87	80
240-52266-3	ASB-1005_46-50 (20150618)	59	60	72	49	82	73
240-52266-4	ASB-1005_78-80 (20150618)	63	72	84	63	78	76
MB 240-187215/15-A		73	81	83	81	84	74
LCS 240-187215/16-A		70	61	71	53	79	71
240-52266-1 MS	ASB-1005_12-14 (20150618) MS	60	61	71	54	69	60

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Method Blank - Batch: 240-186224

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-186224/1-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143834.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1646	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Method Blank - Batch: 240-186224

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-186224/1-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143834.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1646	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	26 - 141
Dibromofluoromethane (Surr)	76	30 - 122
1,2-Dichloroethane-d4 (Surr)	93	39 - 128
Toluene-d8 (Surr)	80	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Control Sample - Batch: 240-186224

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-186224/2-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143833.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1625	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	2490	124	16 - 156	
Allyl chloride	1000	799	80	50 - 150	
Bromobenzene	1000	936	94	72 - 120	
Bromochloromethane	1000	893	89	56 - 128	
Bromodichloromethane	1000	819	82	28 - 123	
Benzene	1000	954	95	70 - 120	
Bromoform	1000	760	76	10 - 120	
Bromomethane	1000	459	46	10 - 120	
2-Butanone (MEK)	2000	2020	101	10 - 199	
Carbon disulfide	1000	633	63	10 - 132	
Carbon tetrachloride	1000	869	87	29 - 120	
Chlorobenzene	1000	876	88	71 - 120	
Chlorodibromomethane	1000	785	79	22 - 120	
Chloroethane	1000	634	63	10 - 120	
Chloroform	1000	993	99	63 - 120	
Chloromethane	1000	738	74	25 - 120	
2-Chlorotoluene	1000	1070	107	68 - 122	
4-Chlorotoluene	1000	1080	108	68 - 122	
cis-1,2-Dichloroethene	1000	974	97	60 - 125	
cis-1,3-Dichloropropene	1000	873	87	25 - 120	
Cyclohexane	1000	990	99	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	1070	107	10 - 129	
1,2-Dibromoethane	1000	965	97	47 - 123	
Dibromomethane	1000	1000	100	68 - 120	
1,2-Dichlorobenzene	1000	1010	101	68 - 120	
1,3-Dichlorobenzene	1000	983	98	66 - 121	
1,4-Dichlorobenzene	1000	980	98	65 - 120	
Dichlorodifluoromethane	1000	692	69	10 - 120	
1,1-Dichloroethane	1000	1040	104	63 - 120	
1,2-Dichloroethane	1000	964	96	68 - 120	
1,1-Dichloroethene	1000	844	84	44 - 143	
Dichlorofluoromethane	1000	1110	111	40 - 160	
1,2-Dichloropropane	1000	1000	100	73 - 120	
1,3-Dichloropropane	1000	906	91	74 - 120	
2,2-Dichloropropane	1000	740	74	25 - 123	
1,1-Dichloropropene	1000	1010	101	60 - 123	
Ethylbenzene	1000	915	91	66 - 120	
Ethyl ether	1000	1150	115	70 - 130	
Hexachlorobutadiene	1000	1030	103	34 - 135	
2-Hexanone	2000	1570	79	43 - 130	
Isopropylbenzene	1000	931	93	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Control Sample - Batch: 240-186224

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-186224/2-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143833.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1625	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	5000	100	44 - 173	
Methylcyclohexane	1000	939	94	41 - 133	
Methylene Chloride	1000	925	93	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1930	97	49 - 121	
Methyl tert butyl ether	1000	981	98	34 - 157	
m-Xylene & p-Xylene	1000	927	93	67 - 120	
Naphthalene	1000	1060	106	37 - 126	
n-Butylbenzene	1000	1060	106	51 - 137	
N-Propylbenzene	1000	1010	101	64 - 130	
o-Xylene	1000	949	95	68 - 120	
p-Isopropyltoluene	1000	1030	103	56 - 136	
sec-Butylbenzene	1000	1100	110	58 - 131	
Styrene	1000	850	85	60 - 120	
tert-Butylbenzene	1000	1020	102	58 - 128	
1,1,1,2-Tetrachloroethane	1000	940	94	27 - 121	
1,1,2,2-Tetrachloroethane	1000	1090	109	54 - 121	
Tetrachloroethene	1000	808	81	58 - 131	
Tetrahydrofuran	2000	2080	104	70 - 130	
Toluene	1000	911	91	66 - 123	
trans-1,2-Dichloroethene	1000	928	93	58 - 121	
trans-1,3-Dichloropropene	1000	955	95	22 - 122	
1,2,3-Trichlorobenzene	1000	980	98	43 - 129	
1,2,4-Trichlorobenzene	1000	971	97	41 - 135	
1,1,1-Trichloroethane	1000	853	85	38 - 122	
1,1,2-Trichloroethane	1000	918	92	74 - 120	
Trichloroethene	1000	944	94	59 - 124	
Trichlorofluoromethane	1000	1160	116	17 - 145	
1,2,3-Trichloropropane	1000	1000	100	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	820	82	48 - 151	
1,2,4-Trimethylbenzene	1000	1040	104	62 - 133	
1,3,5-Trimethylbenzene	1000	1060	106	60 - 130	
Vinyl chloride	1000	800	80	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	26 - 141
Dibromofluoromethane (Surr)	88	30 - 122
1,2-Dichloroethane-d4 (Surr)	96	39 - 128
Toluene-d8 (Surr)	81	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Method Blank - Batch: 240-187017

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-186960/1-A	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950762.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 1751	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1751				
Leach Date:	06/25/2015 2010				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	70 - 124
Dibromofluoromethane (Surr)	99	80 - 128
1,2-Dichloroethane-d4 (Surr)	95	80 - 121
Toluene-d8 (Surr)	101	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Control Sample - Batch: 240-187017

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-187017/10	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UX950763.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 1813	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1813				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	952	95	80 - 120	
2-Butanone (MEK)	2000	1490	74	49 - 120	
Carbon tetrachloride	1000	964	96	54 - 122	
Chlorobenzene	1000	971	97	80 - 120	
Chloroform	1000	976	98	80 - 123	
1,2-Dichloroethane	1000	910	91	80 - 120	
1,1-Dichloroethene	1000	965	97	71 - 133	
Tetrachloroethene	1000	993	99	79 - 134	
Trichloroethene	1000	940	94	78 - 130	
Vinyl chloride	1000	868	87	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	101	70 - 124
Dibromofluoromethane (Surr)	95	80 - 128
1,2-Dichloroethane-d4 (Surr)	89	80 - 121
Toluene-d8 (Surr)	102	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187017

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-52266-4	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950778.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/27/2015 0014			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0014				5 mL
Leach Date:	06/25/2015 2010				

MSD Lab Sample ID:	240-52266-4	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950779.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/27/2015 0038			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0038				5 mL
Leach Date:	06/25/2015 2010				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	93	92	80 - 120	1	30		
2-Butanone (MEK)	66	64	49 - 120	3	30		
Carbon tetrachloride	94	95	60 - 120	1	30		
Chlorobenzene	96	93	80 - 120	2	30		
Chloroform	94	96	80 - 124	2	30		
1,2-Dichloroethane	88	89	80 - 120	1	30		
1,1-Dichloroethene	97	98	67 - 139	1	30		
Tetrachloroethene	101	98	74 - 138	3	30		
Trichloroethene	96	96	75 - 134	0	30		
Vinyl chloride	82	84	51 - 120	3	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	103	97	70 - 124
Dibromofluoromethane (Surr)	98	99	80 - 128
1,2-Dichloroethane-d4 (Surr)	87	89	80 - 121
Toluene-d8 (Surr)	104	101	80 - 120

Method Blank - Batch: 240-186070

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-186070/19-A	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1033	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Method Blank - Batch: 240-186070

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-186070/19-A	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1033	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	71	24 - 110
2-Fluorophenol (Surr)	61	24 - 110
Nitrobenzene-d5 (Surr)	74	20 - 110
Phenol-d5 (Surr)	74	26 - 110
Terphenyl-d14 (Surr)	77	36 - 110
2,4,6-Tribromophenol (Surr)	24	10 - 110

Lab Control Sample - Batch: 240-186070

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-186070/20-A	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1056	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	484	73	35 - 110	
2,2'-oxybis[1-chloropropane]	667	568	85	29 - 110	
2,4-Dichlorophenol	667	455	68	39 - 110	
2,4-Dimethylphenol	667	498	75	29 - 110	
2,4-Dinitrophenol	1330	747	56	10 - 110	J
2,4-Dinitrotoluene	667	553	83	48 - 110	
2,6-Dinitrotoluene	667	583	87	45 - 110	
2-Chloronaphthalene	667	472	71	32 - 110	
2,4,5-Trichlorophenol	667	307	46	25 - 110	J
2-Chlorophenol	667	448	67	37 - 110	
2,4,6-Trichlorophenol	667	296	44	12 - 110	J
2-Methylnaphthalene	667	494	74	36 - 110	
2-Methylphenol	667	457	68	41 - 110	
2-Nitroaniline	667	562	84	45 - 110	J
2-Nitrophenol	667	509	76	34 - 110	
3,3'-Dichlorobenzidine	1330	1000	75	28 - 110	J
3-Nitroaniline	667	549	82	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	1050	79	10 - 110	J
4-Bromophenyl phenyl ether	667	551	83	39 - 110	
4-Chloro-3-methylphenol	667	540	81	48 - 110	
4-Chloroaniline	667	455	68	30 - 110	
4-Chlorophenyl phenyl ether	667	537	80	40 - 110	
4-Nitroaniline	667	592	89	48 - 110	J
4-Nitrophenol	1330	939	70	28 - 110	J
Acenaphthene	667	508	76	38 - 110	
Acenaphthylene	667	499	75	40 - 110	
Acetophenone	667	463	70	40 - 110	
Anthracene	667	505	76	48 - 110	
Atrazine	1330	1120	84	66 - 127	
Benzaldehyde	1330	1100	82	32 - 110	
Benzo[a]anthracene	667	488	73	50 - 110	
Benzo[a]pyrene	667	531	80	44 - 110	
Benzo[b]fluoranthene	667	540	81	43 - 110	
Benzo[g,h,i]perylene	667	546	82	51 - 110	
Benzo[k]fluoranthene	667	535	80	38 - 105	
Bis(2-chloroethoxy)methane	667	481	72	32 - 110	
Bis(2-chloroethyl)ether	667	469	70	34 - 110	
Bis(2-ethylhexyl) phthalate	667	496	74	50 - 110	
Butyl benzyl phthalate	667	474	71	51 - 110	
Caprolactam	1330	1170	88	44 - 114	
Carbazole	667	523	78	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Control Sample - Batch: 240-186070

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-186070/20-A	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1056	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	509	76	50 - 110	
Dibenz(a,h)anthracene	667	572	86	51 - 110	
Dibenzofuran	667	504	76	43 - 110	
Diethyl phthalate	667	527	79	52 - 110	
Dimethyl phthalate	667	519	78	50 - 110	
Di-n-butyl phthalate	667	503	76	51 - 110	
Di-n-octyl phthalate	667	422	63	48 - 110	
Fluoranthene	667	532	80	51 - 110	
Fluorene	667	513	77	46 - 110	
Hexachlorobenzene	667	527	79	43 - 110	
Hexachlorobutadiene	667	474	71	29 - 110	
Hexachlorocyclopentadiene	667	254	38	12 - 110	J
Hexachloroethane	667	433	65	30 - 110	
Indeno[1,2,3-cd]pyrene	667	524	79	50 - 110	
Isophorone	667	533	80	36 - 110	
Naphthalene	667	479	72	36 - 110	
Nitrobenzene	667	530	79	32 - 110	
N-Nitrosodi-n-propylamine	667	535	80	38 - 110	
N-Nitrosodiphenylamine	1330	1060	79	46 - 110	
Pentachlorophenol	1330	559	42	10 - 110	
Phenol	667	512	77	38 - 110	
Phenanthrene	667	498	75	49 - 110	
Pyrene	667	501	75	49 - 110	
3 & 4 Methylphenol	667	459	69	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	75	24 - 110
2-Fluorophenol (Surr)	66	24 - 110
Nitrobenzene-d5 (Surr)	77	20 - 110
Phenol-d5 (Surr)	76	26 - 110
Terphenyl-d14 (Surr)	76	36 - 110
2,4,6-Tribromophenol (Surr)	53	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186070

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52269-C-15-B MS	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.43 g
Analysis Date:	06/25/2015 1451			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52269-C-15-C MSD	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.24 g
Analysis Date:	06/25/2015 1514			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,2'-oxybis[1-chloropropane]	101	90	11 - 110	11	42		
2,4-Dichlorophenol	79	75	10 - 110	4	34		
2,4-Dimethylphenol	88	75	10 - 110	15	31		
2,4-Dinitrophenol	69	68	10 - 110	2	99	J	J
2,4-Dinitrotoluene	77	80	32 - 110	5	30		
2,6-Dinitrotoluene	83	86	35 - 110	4	30		
2-Chloronaphthalene	76	70	28 - 110	7	30		
2,4,5-Trichlorophenol	75	56	10 - 117	27	99		
2-Chlorophenol	79	69	10 - 110	13	47		
2,4,6-Trichlorophenol	66	49	10 - 110	29	38		J
2-Methylnaphthalene	80	76	10 - 133	4	42		
2-Methylphenol	80	76	24 - 110	4	51		
2-Nitroaniline	85	83	39 - 110	3	31	J	J
2-Nitrophenol	88	79	10 - 110	10	49		
3,3'-Dichlorobenzidine	64	67	10 - 110	5	56	J	J
3-Nitroaniline	53	60	10 - 110	13	30	J	J
4,6-Dinitro-2-methylphenol	74	73	10 - 110	0	55	J	J
4-Bromophenyl phenyl ether	78	81	33 - 110	4	30		
4-Chloro-3-methylphenol	89	88	25 - 110	0	54		
4-Chloroaniline	37	46	10 - 110	22	36	J	J
4-Chlorophenyl phenyl ether	83	82	32 - 110	1	30		
4-Nitroaniline	58	70	10 - 110	18	48	J	J
4-Nitrophenol	93	87	10 - 113	6	49	J	J
Acenaphthene	82	79	22 - 110	3	99		
Acenaphthylene	76	75	24 - 110	1	99		
Anthracene	77	77	20 - 110	1	99		
Benzo[a]anthracene	73	73	10 - 122	0	99		
Benzo[a]pyrene	82	85	10 - 110	3	99		
Benzo[b]fluoranthene	86	89	12 - 118	4	99		
Benzo[g,h,i]perylene	58	69	10 - 117	17	99		
Benzo[k]fluoranthene	84	81	10 - 121	4	99		
Bis(2-chloroethoxy)methane	80	72	26 - 110	11	37		

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186070

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52269-C-15-B MS	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.43 g
Analysis Date:	06/25/2015 1451			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52269-C-15-C MSD	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.24 g
Analysis Date:	06/25/2015 1514			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Bis(2-chloroethyl)ether	115	73	21 - 110	43	55	F1	
Bis(2-ethylhexyl) phthalate	76	81	40 - 110	6	30		
Butyl benzyl phthalate	77	80	44 - 110	4	30		
Chrysene	75	78	10 - 125	4	99		
Dibenz(a,h)anthracene	70	78	14 - 113	12	99		
Dibenzofuran	80	77	29 - 110	3	30		
Diethyl phthalate	82	83	42 - 110	2	30		
Dimethyl phthalate	80	79	41 - 110	1	30		
Di-n-butyl phthalate	79	78	43 - 110	0	30		
Di-n-octyl phthalate	82	80	24 - 119	3	30		
Fluoranthene	78	78	10 - 110	0	99		
Fluorene	80	77	23 - 110	2	99		
Hexachlorobenzene	80	79	34 - 110	0	30		
Hexachlorobutadiene	75	67	25 - 110	11	34		
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	42	53	12 - 110	25	50	J	
Indeno[1,2,3-cd]pyrene	62	72	10 - 114	15	99		
Isophorone	88	79	29 - 110	9	38		
Naphthalene	79	71	10 - 111	10	99		
Nitrobenzene	86	77	23 - 110	10	41		
N-Nitrosodi-n-propylamine	99	84	26 - 110	15	42		
N-Nitrosodiphenylamine	81	81	22 - 110	1	30		
Pentachlorophenol	43	43	10 - 110	2	50		
Phenol	84	80	17 - 110	4	53		
Phenanthrene	77	77	10 - 166	0	99		
Pyrene	73	76	10 - 147	5	99		
3 & 4 Methylphenol	80	81	25 - 110	2	50		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	81	74	24 - 110
2-Fluorophenol (Surr)	78	69	24 - 110
Nitrobenzene-d5 (Surr)	81	73	20 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Phenol-d5 (Surr)	87	82	26 - 110
Terphenyl-d14 (Surr)	75	77	36 - 110
2,4,6-Tribromophenol (Surr)	70	54	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Method Blank - Batch: 240-187215

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-187215/15-A	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187215	Lab File ID:	50630003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1356	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.0040
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	73	30 - 110
2-Fluorophenol (Surr)	81	20 - 110
Nitrobenzene-d5 (Surr)	83	28 - 110
Phenol-d5 (Surr)	81	21 - 110
Terphenyl-d14 (Surr)	84	48 - 110
2,4,6-Tribromophenol (Surr)	74	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Control Sample - Batch: 240-187215

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-187215/16-A	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187215	Lab File ID:	50630004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1422	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0469	59	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0532	67	54 - 110	
Pyridine	0.0800	0.0601	75	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0563	70	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0548	69	46 - 110	
2-Methylphenol	0.0800	0.0582	73	44 - 111	
Hexachlorobenzene	0.0800	0.0618	77	50 - 110	
Hexachlorobutadiene	0.0800	0.0404	50	34 - 110	
Hexachloroethane	0.0800	0.0457	57	41 - 110	
Nitrobenzene	0.0800	0.0548	68	40 - 110	
Pentachlorophenol	0.160	0.122	76	12 - 110	
3 & 4 Methylphenol	0.0800	0.0595	74	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	70	30 - 110
2-Fluorophenol (Surr)	61	20 - 110
Nitrobenzene-d5 (Surr)	71	28 - 110
Phenol-d5 (Surr)	53	21 - 110
Terphenyl-d14 (Surr)	79	48 - 110
2,4,6-Tribromophenol (Surr)	71	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Matrix Spike - Batch: 240-187215

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-52266-1	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-187215	Lab File ID:	50630014.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1840	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0336	42	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0550	69	42 - 110	
Pyridine	ND	0.0800	0.0557	70	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0585	73	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0574	72	35 - 110	
2-Methylphenol	ND	0.0800	0.0609	76	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0571	71	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0363	45	28 - 110	
Hexachloroethane	ND	0.0800	0.0322	40	26 - 110	
Nitrobenzene	ND	0.0800	0.0656	82	32 - 110	
Pentachlorophenol	ND	0.160	0.132	82	10 - 124	
3 & 4 Methylphenol	ND	0.0800	0.0631	79	29 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	60	30 - 110
2-Fluorophenol (Surr)	61	20 - 110
Nitrobenzene-d5 (Surr)	71	28 - 110
Phenol-d5 (Surr)	54	21 - 110
Terphenyl-d14 (Surr)	69	48 - 110
2,4,6-Tribromophenol (Surr)	60	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Method Blank - Batch: 240-186729 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-186729/1-A	Analysis Batch:	240-186735	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186729	Lab File ID:	Y0062510.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/25/2015 1638	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186729 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-186729/2-A	Analysis Batch:	240-186735	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186729	Lab File ID:	Y0062511.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/25/2015 1714	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186729/14-A	Analysis Batch:	240-186735	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186729	Lab File ID:	Y0062524.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/26/2015 0049	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	110	111	80 - 120	1	20		

Method Blank - Batch: 240-186109

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-186109/12-A	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-186109	Lab File ID:	P14F062311.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/23/2015 1911	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186109

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-186109/13-A	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-186109	Lab File ID:	P14F062312.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/23/2015 1938	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186109/14-A	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-186109	Lab File ID:	P14F062324.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/24/2015 0103	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	100	110	70 - 120	10	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Method Blank - Batch: 240-186553

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-186553/1-A	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/25/2015 1235	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	ND		0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	ND		5.2	500
Manganese	ND		0.084	1.5
Sodium	ND		19	500
Nickel	ND		0.080	4.0
Potassium	ND		6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Selenium	ND		0.34	0.50
Vanadium	ND		0.20	5.0
Thallium	ND		0.13	1.0
Zinc	0.597	J	0.56	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Control Sample - Batch: 240-186553

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-186553/2-A	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/25/2015 1239	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	188	94	80 - 120	
Antimony	50.0	47.5	95	80 - 120	
Barium	200	185	92	80 - 120	
Beryllium	5.00	4.69	94	80 - 120	
Cadmium	5.00	4.93	99	80 - 120	
Calcium	5000	4680	94	80 - 120	
Chromium	20.0	18.4	92	80 - 120	
Cobalt	50.0	46.5	93	80 - 120	
Copper	25.0	23.4	94	80 - 120	
Iron	100	96.7	97	80 - 120	
Magnesium	5000	4660	93	80 - 120	
Manganese	50.0	47.7	95	80 - 120	
Sodium	5000	4780	96	80 - 120	
Nickel	50.0	47.2	94	80 - 120	
Potassium	5000	4700	94	80 - 120	
Silver	5.00	4.83	97	80 - 120	
Arsenic	200	187	93	80 - 120	
Lead	50.0	45.0	90	80 - 120	
Selenium	200	182	91	80 - 120	
Vanadium	50.0	48.6	97	80 - 120	
Thallium	200	184	92	80 - 120	
Zinc	50.0	48.1	96	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186553

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-52266-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/25/2015 1254
Prep Date: 06/24/2015 1132
Leach Date: N/A

Analysis Batch: 240-186732
Prep Batch: 240-186553
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9062515A.asc
Initial Weight/Volume: 1.17 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-52266-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/25/2015 1258
Prep Date: 06/24/2015 1132
Leach Date: N/A

Analysis Batch: 240-186732
Prep Batch: 240-186553
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9062515A.asc
Initial Weight/Volume: 1.17 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	1632	2366	75 - 125	15	20	4	4
Antimony	39	47	75 - 125	17	20	F1	F1
Barium	390	447	75 - 125	10	20	F1	F1
Beryllium	84	84	75 - 125	0	20		
Cadmium	87	92	75 - 125	5	20		
Calcium	40	219	75 - 125	42	20	F1	F1 F2
Chromium	104	113	75 - 125	5	20		
Cobalt	91	92	75 - 125	0	20		
Copper	71	75	75 - 125	3	20	F1	
Iron	313	1314	75 - 125	9	20	4	4
Magnesium	86	164	75 - 125	35	20		F1 F2
Manganese	-28	271	75 - 125	40	20	4	4 F2
Sodium	84	85	75 - 125	1	20		
Nickel	94	93	75 - 125	0	20		
Potassium	115	126	75 - 125	6	20		F1
Silver	84	89	75 - 125	6	20		
Arsenic	83	84	75 - 125	1	20		
Lead	39	76	75 - 125	21	20	F1	F2
Selenium	80	81	75 - 125	1	20		
Vanadium	85	89	75 - 125	4	20		
Thallium	87	88	75 - 125	2	20		
Zinc	84	119	75 - 125	15	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

TCLP SPLPE Leachate Blank - Batch: 240-187231

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-187116/1-B	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1414	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.0830	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	0.633	J	0.26	5.0
Chromium	0.00108	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Iron	0.0240	J	0.013	0.10
Magnesium	0.0679	J	0.055	5.0
Manganese	0.000707	J	0.00046	0.015
Potassium	0.969	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00838	J	0.0029	0.50
Lead	0.0365	J	0.0019	0.50
Selenium	0.00592	J	0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Method Blank - Batch: 240-187231

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-187231/2-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1418	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.0139	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Potassium	0.180	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	0.0377	J	0.0019	0.50
Selenium	ND		0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Lab Control Sample - Batch: 240-187231

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-187231/3-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1422	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	1.99	100	50 - 150	
Antimony	0.500	0.521	104	50 - 150	
Barium	2.00	1.99	99	50 - 150	J
Beryllium	0.0500	0.0496	99	50 - 150	
Cadmium	0.0500	0.0508	102	50 - 150	J
Calcium	50.0	49.4	99	50 - 150	
Chromium	0.200	0.200	100	50 - 150	J
Cobalt	0.500	0.522	104	50 - 150	
Iron	1.00	1.02	102	50 - 150	
Magnesium	50.0	48.5	97	50 - 150	
Manganese	0.500	0.503	101	50 - 150	
Potassium	50.0	51.6	103	50 - 150	
Silver	0.0500	0.0556	111	50 - 150	J
Arsenic	2.00	2.17	109	50 - 150	
Lead	0.500	0.504	101	50 - 150	
Selenium	2.00	2.22	111	50 - 150	
Vanadium	0.500	0.496	99	50 - 150	
Thallium	2.00	1.94	97	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187231

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID: 240-52266-2
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 06/30/2015 1435
Prep Date: 06/29/2015 1151
Leach Date: 06/28/2015 1400

Analysis Batch: 240-187366
Prep Batch: 240-187231
Leach Batch: 240-187116

Instrument ID: I9
Lab File ID: I9063015A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-52266-2
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 06/30/2015 1439
Prep Date: 06/29/2015 1151
Leach Date: 06/28/2015 1400

Analysis Batch: 240-187366
Prep Batch: 240-187231
Leach Batch: 240-187116

Instrument ID: I9
Lab File ID: I9063015A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	94	96	75 - 125	2	20		
Antimony	102	106	75 - 125	2	20	J	J
Barium	99	99	75 - 125	0	20		
Beryllium	100	99	75 - 125	0	20		
Cadmium	102	101	75 - 125	1	20		
Calcium	137	130	75 - 125	1	20	4	4
Chromium	98	96	75 - 125	1	20		
Cobalt	103	101	75 - 125	2	20		
Iron	110	107	75 - 125	1	20		
Magnesium	102	101	75 - 125	1	20		
Manganese	129	122	75 - 125	1	20	4	4
Potassium	102	100	75 - 125	1	20		
Silver	103	101	75 - 125	1	20	J	J
Arsenic	104	103	75 - 125	1	20		
Selenium	105	103	75 - 125	2	20	J	J
Vanadium	100	98	75 - 125	2	20		
Thallium	100	98	75 - 125	1	20	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187231

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52266-2	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1600			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52266-2	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1604			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Lead	111	102	75 - 125	1	20	4	4

TCLP SPLPE Leachate Blank - Batch: 240-187416

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-187116/1-D	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1502	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Copper	0.00312	J	0.0019	1.0
Nickel	0.00313	J	0.00076	0.040
Zinc	ND		0.0096	1.0

Method Blank - Batch: 240-187416

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-187416/2-A	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1507	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Copper	ND		0.0019	1.0
Nickel	ND		0.00076	0.040
Zinc	ND		0.0096	1.0

Lab Control Sample - Batch: 240-187416

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-187416/3-A	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1511	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Copper	0.250	0.247	99	50 - 150	J
Nickel	0.500	0.504	101	50 - 150	
Zinc	0.500	0.544	109	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187416

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52266-2	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1532			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52266-2	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1536			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Copper	94	96	75 - 125	2	20	J	J
Nickel	96	100	75 - 125	3	20		
Zinc	61	82	75 - 125	3	20	J 4	J 4

TCLP SPLPE Leachate Blank - Batch: 240-187233

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-187116/1-C	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0819	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-187233

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-187233/2-A	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0820	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-187233

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-187233/3-A	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0822	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00500	100	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187233

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-52266-2	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0825			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52266-2	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0826			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	95	98	80 - 120	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Method Blank - Batch: 240-186588

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-186588/1-A	Analysis Batch:	240-187002	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/26/2015 1018	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-186588

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-186588/2-A	Analysis Batch:	240-187002	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/26/2015 1020	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.822	99	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Method Blank - Batch: 240-187179

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-187179/1-A	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187179	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 0858	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/29/2015 1330				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-187179

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-187179/2-A	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187179	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 0900	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/29/2015 1330				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.829	99	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187179

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52266-1	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187179	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.64 g
Analysis Date:	06/30/2015 0903			Final Weight/Volume:	100 mL
Prep Date:	06/29/2015 1330				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52266-1	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187179	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.64 g
Analysis Date:	06/30/2015 0905			Final Weight/Volume:	100 mL
Prep Date:	06/29/2015 1330				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	109	117	80 - 120	7	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Method Blank - Batch: 240-187192

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-187192/9-A	Analysis Batch:	240-187474	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-187192	Lab File ID:	187192.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/30/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/29/2015 1029				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.27	0.80

Lab Control Sample Insoluble - Batch: 240-187192

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-187192/11-A	Analysis Batch:	240-187474	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-187192	Lab File ID:	187192.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/30/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/29/2015 1029				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	651	101	75 - 125	

Lab Control Sample Soluble - Batch: 240-187192

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-187192/10-A	Analysis Batch:	240-187474	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-187192	Lab File ID:	187192.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/30/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/29/2015 1029				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	17.9	90	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52266-1

Duplicate - Batch: 240-186084

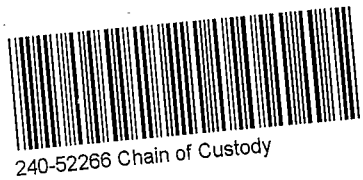
Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52266-4	Analysis Batch:	240-186084	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/22/2015 0846	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	84	85	0.7	20	
Percent Moisture	16	15	4	20	

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica Canton

4101 Shuffel Street, N. U.

North Canton, OH 44720
Phone: 330 497 9396 Fax: 330 497 ?

1.6/C26 1.8/C2.8

Chain of Custody Record

103963

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/19/15	COC No:
Company Name: ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:	____ of ____ COCs
Address: 430 first Ave North Ste 720	Analysis Turnaround Time			Sampler: Tom Parman
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-4434	TAT if different from Below ____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St. Paul MN	☐ 2 days			Job / SDG No.: 24006638
PO# MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	SVOCs (8270)	GRO (w/ mod methods)	DRO (w/ mod methods)	TAL metals (6010)	Hexavalent chromium (7196A)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP metals (1311/6010)	Moisture Content	Sample Specific Notes:
ASB-1005_12-14 (20150618)	6/18/15	1440	G	SO	10			X	X	X	X	X		X	X	X	X	
ASB-1005_37-40 (20150618)	6/18/15	1510	G	SO	10			X	X	X	X	X		X	X	X	X	
ASB-1005_46-50 (20150618)	6/18/15	1545	G	SO	10			X	X	X	X	X		X	X	X	X	
ASB-1005_78-80 (20150618)	6/18/15	1625	G	SO	10			X	X	X	X	X		X	X	X	X	
MB01 (20150619)	6/19/15	—	—	L	2			X		X								

Page 119 of 121

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Level IV

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

	Company	Date/Time		Company	Date/Time
Relinquished by: Lindsey Kenyon	ARCADIS	6/19/15 1534	Received by: Barb Butler	TA	6/19/15 1534
Relinquished by: Barb Butler	TA	6/19/15 1700	Received by:	TA-Canton	6/20/15 1030
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

07/02/2015

TestAmerica Canton Sample Receipt Form/Narrative — Login # : 52264

Canton Facility

Client Arcadis — Site Name _____ — Cooler unpacked by: [signature]

Cooler Received on 6/20/15 — Opened on 6/20/15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop-Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box ~~Client Cooler~~ Box Other _____

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A (CF +1.0 °C) Observed Cooler Temp. 1.6 °C Corrected Cooler Temp. 2.6 °C

~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C~~

~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C~~

IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

☑ See Multiple Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 — Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? — Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? — Yes No
3. Shippers' packing slip attached to the cooler(s)? — Yes No
4. Did custody papers accompany the sample(s)? — Yes No
5. Were the custody papers relinquished & signed in the appropriate place? — Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? — Yes No
7. Did all bottles arrive in good condition (Unbroken)? — Yes No
8. Could all bottle labels be reconciled with the COC? — Yes No
9. Were correct bottle(s) used for the test(s) indicated? — Yes No
10. Sufficient quantity received to perform indicated analyses? — Yes No
11. Were sample(s) at the correct pH upon receipt? — Yes No NA pH Strip Lot# HC432654
12. Were VOAs on the COC? — Yes No
13. Were air bubbles >6 mm in any VOA vials? — Yes No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # _____ — Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # : 52266**
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
client	A	1.6	2.6	Ice
2	1	1.8	2.8	"

C:\Users\livengoodc\AppData\Local\Microsoft\Windows\Temporary Internet Files\OLKD16\WI-NC-099-031813 Cooler Receipt Form_page 2 - Multiple Coolers.doc
Revision 3, 3/18/13 rls

July 04, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52266-1
Sample date: 2015-06-18 2015-06-19
Report received by CADENA: 2015-07-02
Initial Data Verification completed by CADENA: 2015-07-04

The following minor QC exceptions or missing information were noted:

WI-GRO and WI-DRO QC batch did not include MS recovery data and surrogate recoveries were not available for samples or QC.

GCMS SVOC CCV response outliers as noted in the laboratory submittal case narrative were not used to qualify results as part of this level 2 verification review.

GCMS VOC QC batch 186224 did not include MS recovery data due to insufficient sample volume available for creating MS/MSD's according to laboratory submittal case narrative.

GCMS SVOC QC batch 186070 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

Metals method blanks had detections below the RL in QC batch 186553 for zinc and in QC batch 187231 for barium, calcium, chromium, iron, magnesium, manganese, potassium, arsenic, lead and selenium and in QC batch 187416 for TCLP copper and nickel. Metals results should be considered to be non-detect at the RL and qualified with UB flags for the following samples and analytes:
TCLP COPPER - UB flags - -002, -003.

Metals sample -001 solid matrix MS/MSD recoveries were outliers biased high for barium and biased low for antimony and biased high and low for calcium and biased low with the RPD also an outlier for lead and biased high with he MS/MSD RPD also an outlier for magnesium. Client sample -001 solid matrix antimony, lead, barium, calcium and magnesium results should be considered to be estimated and qualified with J flags. MS or MSD recoveries but not both were outliers for potassium and copper so qualification was not required based on these QC outliers alone. Recoveries for aluminum, iron, manganese were not considered to be statistically reliable so were not used to qualify results due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule).

Metals sample -002 MS/MSD recoveries were not considered to be statistically reliable so were not used to qualify results for calcium and manganese.

Metals sample -002 SPLP/TCLP matrix MS/MSD recoveries for zinc were not considered to be statistically reliable so were not used to qualify results due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule).

5 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52266-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240522661	ASB-1005_12-14 (20150618)	6/18/2015	2:40:00	X	X	X	X	X	X	X	X
240522662	ASB-1005_37-40 (20150618)	6/18/2015	3:10:00	X	X	X	X	X	X	X	X
240522663	ASB-1005_46-50 (20150618)	6/18/2015	3:45:00	X	X	X	X	X	X	X	X
240522664	ASB-1005_78-80 (20150618)	6/18/2015	4:25:00	X	X	X	X	X	X	X	X
240522665	MB01 (20150619)	6/19/2015	12:00:00	X		X					

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52266-1

			Sample Name:	ASB-1005_12-14 (20150618)				ASB-1005_37-40 (20150618)				ASB-1005_46-50 (20150618)			
			Lab Sample ID:	240522661				240522662				240522663			
			Sample Date:	6/18/2015				6/18/2015				6/18/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
Metals														
	OSW-6010B													
	Antimony	7440-36-0	2.4	1.1	mg/kg	J								
	Barium	7440-39-3	280	21	mg/kg	J								
	Calcium	7440-70-2	16000	530	mg/kg	J								
	Copper	7440-50-8					0.0085	1.0	mg/l	UB	0.011	1.0	mg/l	UB
	Lead	7439-92-1	63	0.32	mg/kg	J								
	Magnesium	7439-95-4	5200	530	mg/kg	J								

ANALYTICAL REPORT

Job Number: 240-52267-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
7/2/2015 4:01 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
07/02/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52267-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 6/20/2015 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6° C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)
Samples ASB-1003_80-82 (20150617) (240-52267-1) and ASB-1003_90-94 (20150617) (240-52267-2) were analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 06/24/2015 and analyzed on 06/25/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)
Samples ASB-1003_80-82 (20150617) (240-52267-1), ASB-1003_90-94 (20150617) (240-52267-2) and MB01 (20150618) (240-52267-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/22/2015 and analyzed on 06/23/2015.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-186224 and analytical batch 240-186326 on these samples: ASB-1003_80-82 (20150617) (240-52267-1), ASB-1003_90-94 (20150617) (240-52267-2), and MB01 (20150618) (240-52267-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)
Samples ASB-1003_80-82 (20150617) (240-52267-1) and ASB-1003_90-94 (20150617) (240-52267-2) were analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 06/28/2015, prepared on 06/29/2015 and analyzed on 06/30/2015 and 07/01/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1003_80-82 (20150617) (240-52267-1) and ASB-1003_90-94 (20150617) (240-52267-2) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/22/2015 and analyzed on 06/25/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Hexachlorocyclopentadiene failed the recovery criteria low for the MS of sample 240-52269-15 in batch 240-186697. Bis(2-chloroethyl)ether failed the recovery criteria high. Hexachlorocyclopentadiene failed the recovery criteria low for the MSD of sample 240-52269-15 in batch 240-186697. Refer to the QC report for details.

Method(s) 8270C: The continuing calibration verification (CCV) associated with batch 186697 recovered above the upper control limit for 2,4-Dinitrophenol. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following samples are impacted: ASB-1003_80-82 (20150617) (240-52267-1), ASB-1003_90-94 (20150617) (240-52267-2), (240-52269-C-15-A), (240-52269-C-15-B MS), and (240-52269-C-15-C MSD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples ASB-1003_80-82 (20150617) (240-52267-1), ASB-1003_90-94 (20150617) (240-52267-2) and MB01 (20150618) (240-52267-3) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared on 06/23/2015 and analyzed on 06/24/2015 and 06/25/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples ASB-1003_80-82 (20150617) (240-52267-1) and ASB-1003_90-94 (20150617) (240-52267-2) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/22/2015 and analyzed on 06/24/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)

Samples ASB-1003_80-82 (20150617) (240-52267-1) and ASB-1003_90-94 (20150617) (240-52267-2) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 06/28/2015, prepared on 06/29/2015 and 06/30/2015 and analyzed on 06/30/2015 and 07/01/2015.

Several analytes were detected in method blank LB 240-187116/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Copper and Nickel were detected in method blank LB 240-187116/1-D at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Barium, Lead and Potassium were detected in method blank MB 240-187231/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Calcium and Manganese failed the recovery criteria high for the MS of sample 240-52266-2 in batch 240-187366. Calcium failed the recovery criteria high for the MSD of sample 240-52266-2 in batch 240-187366. Zinc failed the recovery criteria low for the MS of sample 240-52266-2 in batch 240-187549. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples ASB-1003_80-82 (20150617) (240-52267-1) and ASB-1003_90-94 (20150617) (240-52267-2) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/24/2015 and analyzed on 06/25/2015.

Zinc was detected in method blank MB 240-186553/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample 240-52266-1 in batch 240-186732. Aluminum, Barium and Iron failed the recovery criteria high. For the MSD of sample 240-52266-1 in batch 240-186732, Antimony failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, Calcium, Lead, Magnesium and Manganese exceeded the RPD limit. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY
Samples ASB-1003_80-82 (20150617) (240-52267-1) and ASB-1003_90-94 (20150617) (240-52267-2) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 06/28/2015, prepared on 06/29/2015 and analyzed on 06/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Samples ASB-1003_80-82 (20150617) (240-52267-1) and ASB-1003_90-94 (20150617) (240-52267-2) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/24/2015 and analyzed on 06/26/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM
Samples ASB-1003_80-82 (20150617) (240-52267-1) and ASB-1003_90-94 (20150617) (240-52267-2) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 06/24/2015 and analyzed on 06/25/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM
Samples ASB-1003_80-82 (20150617) (240-52267-1) and ASB-1003_90-94 (20150617) (240-52267-2) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 07/01/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS
Samples ASB-1003_80-82 (20150617) (240-52267-1) and ASB-1003_90-94 (20150617) (240-52267-2) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/22/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52267-1	**ASB-1003_80-82 (20150617)**					
Methyl acetate		61	J	520	ug/Kg	8260B
Naphthalene		31	J	260	ug/Kg	8260B
1,1'-Biphenyl		4.5	J	360	ug/Kg	8270C
2-Methylnaphthalene		24	J	360	ug/Kg	8270C
Acenaphthene		18	J	360	ug/Kg	8270C
Acenaphthylene		4.7	J	360	ug/Kg	8270C
Anthracene		39	J	360	ug/Kg	8270C
Benzo[a]anthracene		60	J	360	ug/Kg	8270C
Benzo[a]pyrene		57	J	360	ug/Kg	8270C
Benzo[b]fluoranthene		75	J	360	ug/Kg	8270C
Benzo[g,h,i]perylene		28	J	360	ug/Kg	8270C
Benzo[k]fluoranthene		24	J	360	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		110	J	360	ug/Kg	8270C
Chrysene		61	J	360	ug/Kg	8270C
Dibenzofuran		19	J	360	ug/Kg	8270C
Fluoranthene		140	J	360	ug/Kg	8270C
Fluorene		30	J	360	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		28	J	360	ug/Kg	8270C
Naphthalene		20	J	360	ug/Kg	8270C
Phenanthrene		150	J	360	ug/Kg	8270C
Pyrene		130	J	360	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		13		9.4	mg/Kg	WI-DRO
Aluminum		1600		18	mg/Kg	6010B
Barium		26		18	mg/Kg	6010B
Beryllium		0.076	J	0.45	mg/Kg	6010B
Calcium		33000		450	mg/Kg	6010B
Cadmium		0.057	J	0.18	mg/Kg	6010B
Cobalt		2.6	J	4.5	mg/Kg	6010B
Chromium		8.3		0.45	mg/Kg	6010B
Copper		3.5		2.2	mg/Kg	6010B
Iron		6100		9.0	mg/Kg	6010B
Potassium		210	J	450	mg/Kg	6010B
Magnesium		5200		450	mg/Kg	6010B
Manganese		270		1.3	mg/Kg	6010B
Sodium		66	J	450	mg/Kg	6010B
Nickel		6.8		3.6	mg/Kg	6010B
Vanadium		9.2		4.5	mg/Kg	6010B
Zinc		11	B	1.8	mg/Kg	6010B
Arsenic		1.4		0.90	mg/Kg	6010B
Lead		1.8		0.27	mg/Kg	6010B
Cr (III)		8.3		2.2	mg/Kg	7196A
Percent Solids		91		0.10	%	Moisture
Percent Moisture		8.8		0.10	%	Moisture
TCLP						
Arsenic		0.014	J B	0.50	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Barium		0.92	J B	10	mg/L	6010B
Calcium		630	B	5.0	mg/L	6010B
Chromium		0.0034	J B	0.50	mg/L	6010B
Cobalt		0.0097	J	0.050	mg/L	6010B
Iron		0.16	B	0.10	mg/L	6010B
Lead		0.037	J B	0.50	mg/L	6010B
Magnesium		20	B	5.0	mg/L	6010B
Manganese		5.4	B	0.015	mg/L	6010B
Nickel		0.020	J B	0.040	mg/L	6010B
Potassium		2.3	J B	5.0	mg/L	6010B
Selenium		0.0040	J B	0.25	mg/L	6010B
Zinc		0.025	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52267-2	**ASB-1003_90-94 (20150617)**					
Bis(2-ethylhexyl) phthalate		29	J	370	ug/Kg	8270C
Aluminum		1900		21	mg/Kg	6010B
Barium		20	J	21	mg/Kg	6010B
Beryllium		0.086	J	0.52	mg/Kg	6010B
Calcium		25000		520	mg/Kg	6010B
Cadmium		0.038	J	0.21	mg/Kg	6010B
Cobalt		3.0	J	5.2	mg/Kg	6010B
Chromium		8.2		0.52	mg/Kg	6010B
Copper		3.7		2.6	mg/Kg	6010B
Iron		6800		10	mg/Kg	6010B
Potassium		250	J	520	mg/Kg	6010B
Magnesium		7900		520	mg/Kg	6010B
Manganese		210		1.6	mg/Kg	6010B
Sodium		69	J	520	mg/Kg	6010B
Nickel		7.9		4.2	mg/Kg	6010B
Vanadium		9.8		5.2	mg/Kg	6010B
Zinc		9.9	B	2.1	mg/Kg	6010B
Arsenic		1.2		1.0	mg/Kg	6010B
Lead		1.1		0.31	mg/Kg	6010B
Cr (III)		8.2		2.2	mg/Kg	7196A
Percent Solids		89		0.10	%	Moisture
Percent Moisture		11		0.10	%	Moisture
TCLP						
Arsenic		0.010	J B	0.50	mg/L	6010B
Barium		0.53	J B	10	mg/L	6010B
Calcium		520	B	5.0	mg/L	6010B
Chromium		0.0024	J B	0.50	mg/L	6010B
Cobalt		0.0057	J	0.050	mg/L	6010B
Copper		0.0022	J B	1.0	mg/L	6010B
Iron		0.13	B	0.10	mg/L	6010B
Lead		0.038	J B	0.50	mg/L	6010B
Magnesium		30	B	5.0	mg/L	6010B
Manganese		3.5	B	0.015	mg/L	6010B
Nickel		0.014	J B	0.040	mg/L	6010B
Potassium		2.2	J B	5.0	mg/L	6010B
Selenium		0.0050	J B	0.25	mg/L	6010B
Zinc		0.37	J	1.0	mg/L	6010B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction			SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction			SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction			SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method	Analyst	Analyst ID
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Walpole, Barbara	BW
SW846 7471A	Sutherland, Aaron	ADS
SW846 7196A	Burns, Jill	JMB
SW846 7196A	Counts, Karen	KLC
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52267-1	ASB-1003_80-82 (20150617)	Solid	06/17/2015 1440	06/20/2015 1030
240-52267-2	ASB-1003_90-94 (20150617)	Solid	06/17/2015 1600	06/20/2015 1030
240-52267-3	MB01 (20150618)	Solid	06/18/2015 0000	06/20/2015 1030

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: ASB-1003_80-82 (20150617)

Lab Sample ID: 240-52267-1 Date Sampled: 06/17/2015 1440
Client Matrix: Solid % Moisture: 8.8 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143840.D
Dilution:	1.0			Initial Weight/Volume:	10.446 g
Analysis Date:	06/23/2015 1855			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		240	1000
Allyl chloride		ND		31	520
Benzene		ND		9.4	260
Bromobenzene		ND		14	260
Bromochloromethane		ND		73	260
Bromodichloromethane		ND		40	260
Bromoform		ND		64	260
Bromomethane		ND		54	260
2-Butanone (MEK)		ND		77	1000
Carbon disulfide		ND		59	260
Carbon tetrachloride		ND		50	260
Chlorobenzene		ND		43	260
Chlorodibromomethane		ND		48	260
Chloroethane		ND		54	260
Chloroform		ND		38	260
Chloromethane		ND		50	260
2-Chlorotoluene		ND		43	260
4-Chlorotoluene		ND		27	260
cis-1,2-Dichloroethene		ND		40	260
cis-1,3-Dichloropropene		ND		23	260
Cyclohexane		ND		31	520
1,2-Dibromo-3-Chloropropane		ND		75	520
1,2-Dibromoethane		ND		34	260
Dibromomethane		ND		52	260
1,2-Dichlorobenzene		ND		20	260
1,3-Dichlorobenzene		ND		31	260
1,4-Dichlorobenzene		ND		43	260
Dichlorodifluoromethane		ND		64	260
1,1-Dichloroethane		ND		37	260
1,2-Dichloroethane		ND		56	260
1,1-Dichloroethene		ND		31	260
Dichlorofluoromethane		ND		35	520
1,2-Dichloropropane		ND		34	260
1,3-Dichloropropane		ND		24	260
2,2-Dichloropropane		ND		55	260
1,1-Dichloropropene		ND		40	260
Ethylbenzene		ND		37	260
Ethyl ether		ND		100	520
Hexachlorobutadiene		ND		46	260
2-Hexanone		ND		88	1000
Isopropylbenzene		ND		14	260
Methyl acetate		61	J	58	520
Methylcyclohexane		ND		40	520
Methylene Chloride		ND		89	260
4-Methyl-2-pentanone (MIBK)		ND		59	1000
Methyl tert butyl ether		ND		31	260

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: ASB-1003_80-82 (20150617)

Lab Sample ID: 240-52267-1 Date Sampled: 06/17/2015 1440
Client Matrix: Solid % Moisture: 8.8 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143840.D
Dilution:	1.0			Initial Weight/Volume:	10.446 g
Analysis Date:	06/23/2015 1855			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		21	260
Naphthalene		31	J	27	260
n-Butylbenzene		ND		22	260
N-Propylbenzene		ND		64	260
o-Xylene		ND		18	260
p-Isopropyltoluene		ND		26	260
sec-Butylbenzene		ND		17	260
Styrene		ND		28	260
tert-Butylbenzene		ND		36	260
1,1,1,2-Tetrachloroethane		ND		51	260
1,1,2,2-Tetrachloroethane		ND		45	260
Tetrachloroethene		ND		28	260
Tetrahydrofuran		ND		130	1000
Toluene		ND		10	260
trans-1,2-Dichloroethene		ND		27	260
trans-1,3-Dichloropropene		ND		27	260
1,2,3-Trichlorobenzene		ND		41	260
1,2,4-Trichlorobenzene		ND		31	260
1,1,1-Trichloroethane		ND		44	260
1,1,2-Trichloroethane		ND		87	260
Trichloroethene		ND		41	260
Trichlorofluoromethane		ND		37	260
1,2,3-Trichloropropane		ND		110	260
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		44	260
1,2,4-Trimethylbenzene		ND		14	260
1,3,5-Trimethylbenzene		ND		16	260
Vinyl chloride		ND		59	260

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	105		26 - 141
Dibromofluoromethane (Surr)	81		30 - 122
1,2-Dichloroethane-d4 (Surr)	106		39 - 128
Toluene-d8 (Surr)	83		33 - 134

Client Sample ID: **ASB-1003_80-82 (20150617)**

Lab Sample ID: 240-52267-1 Date Sampled: 06/17/2015 1440
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186839	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950729.D
Dilution:	1.0	Leach Batch:	240-186655	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/25/2015 2219			Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 2219				
Leach Date:	06/24/2015 1830				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 121
4-Bromofluorobenzene (Surr)	94		70 - 124
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	97		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: ASB-1003_90-94 (20150617)

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid % Moisture: 10.8 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143841.D
Dilution:	1.0			Initial Weight/Volume:	10.215 g
Analysis Date:	06/23/2015 1916			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		250	1100
Allyl chloride		ND		33	550
Benzene		ND		9.9	270
Bromobenzene		ND		14	270
Bromochloromethane		ND		77	270
Bromodichloromethane		ND		42	270
Bromoform		ND		67	270
Bromomethane		ND		56	270
2-Butanone (MEK)		ND		80	1100
Carbon disulfide		ND		61	270
Carbon tetrachloride		ND		53	270
Chlorobenzene		ND		45	270
Chlorodibromomethane		ND		50	270
Chloroethane		ND		56	270
Chloroform		ND		39	270
Chloromethane		ND		53	270
2-Chlorotoluene		ND		45	270
4-Chlorotoluene		ND		29	270
cis-1,2-Dichloroethene		ND		42	270
cis-1,3-Dichloropropene		ND		24	270
Cyclohexane		ND		33	550
1,2-Dibromo-3-Chloropropane		ND		78	550
1,2-Dibromoethane		ND		35	270
Dibromomethane		ND		55	270
1,2-Dichlorobenzene		ND		21	270
1,3-Dichlorobenzene		ND		33	270
1,4-Dichlorobenzene		ND		45	270
Dichlorodifluoromethane		ND		67	270
1,1-Dichloroethane		ND		38	270
1,2-Dichloroethane		ND		58	270
1,1-Dichloroethene		ND		33	270
Dichlorofluoromethane		ND		36	550
1,2-Dichloropropane		ND		35	270
1,3-Dichloropropane		ND		25	270
2,2-Dichloropropane		ND		57	270
1,1-Dichloropropene		ND		42	270
Ethylbenzene		ND		38	270
Ethyl ether		ND		110	550
Hexachlorobutadiene		ND		48	270
2-Hexanone		ND		92	1100
Isopropylbenzene		ND		14	270
Methyl acetate		ND		60	550
Methylcyclohexane		ND		42	550
Methylene Chloride		ND		93	270
4-Methyl-2-pentanone (MIBK)		ND		61	1100
Methyl tert butyl ether		ND		33	270

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: ASB-1003_90-94 (20150617)

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid % Moisture: 10.8 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143841.D
Dilution:	1.0			Initial Weight/Volume:	10.215 g
Analysis Date:	06/23/2015 1916			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		22	270
Naphthalene		ND		29	270
n-Butylbenzene		ND		23	270
N-Propylbenzene		ND		67	270
o-Xylene		ND		19	270
p-Isopropyltoluene		ND		27	270
sec-Butylbenzene		ND		18	270
Styrene		ND		30	270
tert-Butylbenzene		ND		37	270
1,1,1,2-Tetrachloroethane		ND		54	270
1,1,2,2-Tetrachloroethane		ND		47	270
Tetrachloroethene		ND		30	270
Tetrahydrofuran		ND		130	1100
Toluene		ND		11	270
trans-1,2-Dichloroethene		ND		29	270
trans-1,3-Dichloropropene		ND		29	270
1,2,3-Trichlorobenzene		ND		43	270
1,2,4-Trichlorobenzene		ND		33	270
1,1,1-Trichloroethane		ND		46	270
1,1,2-Trichloroethane		ND		91	270
Trichloroethene		ND		43	270
Trichlorofluoromethane		ND		38	270
1,2,3-Trichloropropane		ND		110	270
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		46	270
1,2,4-Trimethylbenzene		ND		14	270
1,3,5-Trimethylbenzene		ND		16	270
Vinyl chloride		ND		61	270

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	105		26 - 141
Dibromofluoromethane (Surr)	84		30 - 122
1,2-Dichloroethane-d4 (Surr)	109		39 - 128
Toluene-d8 (Surr)	86		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: ASB-1003_90-94 (20150617)

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-186839	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950730.D
Dilution:	1.0	Leach Batch:	240-186655	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/25/2015 2244			Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 2244				
Leach Date:	06/24/2015 1830				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 121
4-Bromofluorobenzene (Surr)	92		70 - 124
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	97		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: **MB01 (20150618)**

Lab Sample ID: 240-52267-3 Date Sampled: 06/18/2015 0000
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143842.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	06/23/2015 1938			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		48	250
Chlorobenzene		ND		41	250
Chlorodibromomethane		ND		46	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		53	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: **MB01 (20150618)**

Lab Sample ID: 240-52267-3 Date Sampled: 06/18/2015 0000
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143842.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	06/23/2015 1938			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		43	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		42	250
1,1,2-Trichloroethane		ND		83	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		56	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	122		26 - 141
Dibromofluoromethane (Surr)	95		30 - 122
1,2-Dichloroethane-d4 (Surr)	121		39 - 128
Toluene-d8 (Surr)	95		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: **ASB-1003_80-82 (20150617)**

Lab Sample ID: 240-52267-1 Date Sampled: 06/17/2015 1440
Client Matrix: Solid % Moisture: 8.8 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625025.D
Dilution:	1.0			Initial Weight/Volume:	30.37 g
Analysis Date:	06/25/2015 1735			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		4.5	J	3.8	360
2,2'-oxybis[1-chloropropane]		ND		10	360
2,4,5-Trichlorophenol		ND		27	360
2,4,6-Trichlorophenol		ND		9.6	360
2,4-Dichlorophenol		ND		22	360
2,4-Dimethylphenol		ND		22	360
2,4-Dinitrophenol		ND		23	1700
2,4-Dinitrotoluene		ND		18	360
2,6-Dinitrotoluene		ND		23	360
2-Chloronaphthalene		ND		0.49	360
2-Chlorophenol		ND		8.9	360
2-Methylnaphthalene		24	J	0.54	360
2-Methylphenol		ND		12	360
2-Nitroaniline		ND		9.9	1700
2-Nitrophenol		ND		9.0	360
3,3'-Dichlorobenzidine		ND		19	1700
3-Nitroaniline		ND		17	1700
4,6-Dinitro-2-methylphenol		ND		10	1700
4-Bromophenyl phenyl ether		ND		14	360
4-Chloro-3-methylphenol		ND		23	360
4-Chloroaniline		ND		18	360
4-Chlorophenyl phenyl ether		ND		14	360
4-Nitroaniline		ND		28	1700
4-Nitrophenol		ND		18	1700
Acenaphthene		18	J	0.82	360
Acenaphthylene		4.7	J	0.38	360
Acetophenone		ND		10	360
Anthracene		39	J	0.84	360
Atrazine		ND		9.9	360
Benzaldehyde		ND		13	360
Benzo[a]anthracene		60	J	0.68	360
Benzo[a]pyrene		57	J	0.69	360
Benzo[b]fluoranthene		75	J	0.64	360
Benzo[g,h,i]perylene		28	J	0.38	360
Benzo[k]fluoranthene		24	J	0.74	360
Bis(2-chloroethoxy)methane		ND		24	360
Bis(2-chloroethyl)ether		ND		2.2	360
Bis(2-ethylhexyl) phthalate		110	J	21	360
Butyl benzyl phthalate		ND		11	360
Caprolactam		ND		40	360
Carbazole		ND		29	360
Chrysene		61	J	1.2	360
Dibenz(a,h)anthracene		ND		0.71	360
Dibenzofuran		19	J	0.71	360
Diethyl phthalate		ND		17	360
Dimethyl phthalate		ND		18	360

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: ASB-1003_80-82 (20150617)

Lab Sample ID: 240-52267-1 Date Sampled: 06/17/2015 1440
Client Matrix: Solid % Moisture: 8.8 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625025.D
Dilution:	1.0			Initial Weight/Volume:	30.37 g
Analysis Date:	06/25/2015 1735			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		16	360
Di-n-octyl phthalate		ND		8.6	360
Fluoranthene		140	J	0.60	360
Fluorene		30	J	0.57	360
Hexachlorobenzene		ND		2.3	360
Hexachlorobutadiene		ND		6.1	360
Hexachlorocyclopentadiene		ND		8.8	1700
Hexachloroethane		ND		9.7	360
Indeno[1,2,3-cd]pyrene		28	J	0.38	360
Isophorone		ND		14	360
Naphthalene		20	J	0.89	360
Nitrobenzene		ND		2.4	360
N-Nitrosodi-n-propylamine		ND		6.8	360
N-Nitrosodiphenylamine		ND		23	360
Pentachlorophenol		ND		9.9	360
Phenol		ND		7.9	360
Phenanthrene		150	J	0.79	360
Pyrene		130	J	0.48	360
3 & 4 Methylphenol		ND		22	430

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	72		24 - 110
2-Fluorophenol (Surr)	58		24 - 110
2,4,6-Tribromophenol (Surr)	39		10 - 110
Nitrobenzene-d5 (Surr)	73		20 - 110
Phenol-d5 (Surr)	61		26 - 110
Terphenyl-d14 (Surr)	82		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: ASB-1003_80-82 (20150617)

Lab Sample ID: 240-52267-1 Date Sampled: 06/17/2015 1440
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187584	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187215	Lab File ID:	50701016.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	07/01/2015 1552			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	68		30 - 110
2-Fluorophenol (Surr)	70		20 - 110
Nitrobenzene-d5 (Surr)	79		28 - 110
Phenol-d5 (Surr)	59		21 - 110
Terphenyl-d14 (Surr)	82		48 - 110
2,4,6-Tribromophenol (Surr)	78		23 - 110

Client Sample ID: **ASB-1003_90-94 (20150617)**

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid % Moisture: 10.8 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625020.D
Dilution:	1.0			Initial Weight/Volume:	29.92 g
Analysis Date:	06/25/2015 1538			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		3.9	370
2,2'-oxybis[1-chloropropane]		ND		11	370
2,4,5-Trichlorophenol		ND		28	370
2,4,6-Trichlorophenol		ND		10	370
2,4-Dichlorophenol		ND		22	370
2,4-Dimethylphenol		ND		22	370
2,4-Dinitrophenol		ND		24	1800
2,4-Dinitrotoluene		ND		19	370
2,6-Dinitrotoluene		ND		24	370
2-Chloronaphthalene		ND		0.51	370
2-Chlorophenol		ND		9.2	370
2-Methylnaphthalene		ND		0.56	370
2-Methylphenol		ND		12	370
2-Nitroaniline		ND		10	1800
2-Nitrophenol		ND		9.3	370
3,3'-Dichlorobenzidine		ND		20	1800
3-Nitroaniline		ND		18	1800
4,6-Dinitro-2-methylphenol		ND		10	1800
4-Bromophenyl phenyl ether		ND		15	370
4-Chloro-3-methylphenol		ND		24	370
4-Chloroaniline		ND		19	370
4-Chlorophenyl phenyl ether		ND		15	370
4-Nitroaniline		ND		29	1800
4-Nitrophenol		ND		19	1800
Acenaphthene		ND		0.85	370
Acenaphthylene		ND		0.39	370
Acetophenone		ND		10	370
Anthracene		ND		0.88	370
Atrazine		ND		10	370
Benzaldehyde		ND		13	370
Benzo[a]anthracene		ND		0.71	370
Benzo[a]pyrene		ND		0.72	370
Benzo[b]fluoranthene		ND		0.66	370
Benzo[g,h,i]perylene		ND		0.39	370
Benzo[k]fluoranthene		ND		0.76	370
Bis(2-chloroethoxy)methane		ND		25	370
Bis(2-chloroethyl)ether		ND		2.2	370
Bis(2-ethylhexyl) phthalate		29	J	21	370
Butyl benzyl phthalate		ND		11	370
Caprolactam		ND		42	370
Carbazole		ND		30	370
Chrysene		ND		1.2	370
Dibenz(a,h)anthracene		ND		0.74	370
Dibenzofuran		ND		0.74	370
Diethyl phthalate		ND		18	370
Dimethyl phthalate		ND		19	370

Client Sample ID: **ASB-1003_90-94 (20150617)**

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid % Moisture: 10.8 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-186070	Lab File ID:	50625020.D
Dilution:	1.0			Initial Weight/Volume:	29.92 g
Analysis Date:	06/25/2015 1538			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		17	370
Di-n-octyl phthalate		ND		8.9	370
Fluoranthene		ND		0.62	370
Fluorene		ND		0.60	370
Hexachlorobenzene		ND		2.4	370
Hexachlorobutadiene		ND		6.3	370
Hexachlorocyclopentadiene		ND		9.1	1800
Hexachloroethane		ND		10	370
Indeno[1,2,3-cd]pyrene		ND		0.39	370
Isophorone		ND		15	370
Naphthalene		ND		0.92	370
Nitrobenzene		ND		2.5	370
N-Nitrosodi-n-propylamine		ND		7.1	370
N-Nitrosodiphenylamine		ND		24	370
Pentachlorophenol		ND		10	370
Phenol		ND		8.2	370
Phenanthrene		ND		0.82	370
Pyrene		ND		0.49	370
3 & 4 Methylphenol		ND		22	450

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	65		24 - 110
2-Fluorophenol (Surr)	61		24 - 110
2,4,6-Tribromophenol (Surr)	54		10 - 110
Nitrobenzene-d5 (Surr)	67		20 - 110
Phenol-d5 (Surr)	72		26 - 110
Terphenyl-d14 (Surr)	79		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: **ASB-1003_90-94 (20150617)**

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187215	Lab File ID:	50630015.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1906			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	69		30 - 110
2-Fluorophenol (Surr)	68		20 - 110
Nitrobenzene-d5 (Surr)	75		28 - 110
Phenol-d5 (Surr)	71		21 - 110
Terphenyl-d14 (Surr)	74		48 - 110
2,4,6-Tribromophenol (Surr)	69		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: **ASB-1003_80-82 (20150617)**

Lab Sample ID: 240-52267-1 Date Sampled: 06/17/2015 1440
Client Matrix: Solid % Moisture: 8.8 Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186331	Lab File ID:	Y0062508.D
Dilution:	1.0			Initial Weight/Volume:	13.737 g
Analysis Date:	06/25/2015 1528			Final Weight/Volume:	13.7 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.2	11

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: ASB-1003_90-94 (20150617)

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid % Moisture: 10.8 Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186548	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186331	Lab File ID:	Y0062418.D
Dilution:	1.0			Initial Weight/Volume:	11.009 g
Analysis Date:	06/24/2015 2147			Final Weight/Volume:	10 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.0	10

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: MB01 (20150618)

Lab Sample ID: 240-52267-3 Date Sampled: 06/18/2015 0000
Client Matrix: Solid Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186548	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186331	Lab File ID:	Y0062419.D
Dilution:	1.0			Initial Weight/Volume:	0.076 g
Analysis Date:	06/24/2015 2223			Final Weight/Volume:	10 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		260	1300

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: ASB-1003_80-82 (20150617)

Lab Sample ID: 240-52267-1 Date Sampled: 06/17/2015 1440
Client Matrix: Solid % Moisture: 8.8 Date Received: 06/20/2015 1030

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-186109	Lab File ID:	P14F062322.D
Dilution:	1.0			Initial Weight/Volume:	27.87 g
Analysis Date:	06/24/2015 0009			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		13		1.2	9.4

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: ASB-1003_90-94 (20150617)

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid % Moisture: 10.8 Date Received: 06/20/2015 1030

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-186109	Lab File ID:	P14F062323.D
Dilution:	1.0			Initial Weight/Volume:	26.57 g
Analysis Date:	06/24/2015 0036			Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		ND		1.2	10

Client Sample ID: **ASB-1003_80-82 (20150617)**

Lab Sample ID: 240-52267-1 Date Sampled: 06/17/2015 1440
Client Matrix: Solid % Moisture: 8.8 Date Received: 06/20/2015 1030

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.22 g
Analysis Date:	06/25/2015 1323			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		1600		5.2	18
Antimony		ND		0.43	0.90
Barium		26		0.37	18
Beryllium		0.076	J	0.023	0.45
Calcium		33000		21	450
Cadmium		0.057	J	0.019	0.18
Cobalt		2.6	J	0.042	4.5
Chromium		8.3		0.067	0.45
Copper		3.5		0.21	2.2
Iron		6100		2.9	9.0
Potassium		210	J	5.6	450
Magnesium		5200		4.7	450
Manganese		270		0.075	1.3
Silver		ND		0.057	0.45
Sodium		66	J	17	450
Nickel		6.8		0.072	3.6
Vanadium		9.2		0.18	4.5
Zinc		11	B	0.50	1.8
Arsenic		1.4		0.37	0.90
Lead		1.8		0.18	0.27
Selenium		ND		0.31	0.45
Thallium		ND		0.12	0.90

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1504			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.014	J B	0.0029	0.50
Barium		0.92	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		ND		0.00014	0.10
Calcium		630	B	0.26	5.0
Chromium		0.0034	J B	0.00055	0.50
Cobalt		0.0097	J	0.00056	0.050
Iron		0.16	B	0.013	0.10
Lead		0.037	J B	0.0019	0.50
Magnesium		20	B	0.055	5.0

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: **ASB-1003_80-82 (20150617)**

Lab Sample ID: 240-52267-1 Date Sampled: 06/17/2015 1440
Client Matrix: Solid Date Received: 06/20/2015 1030

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Manganese		5.4	B	0.00046	0.015
Potassium		2.3	J B	0.070	5.0
Selenium		0.0040	J B	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1553			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Copper		ND		0.0019	1.0
Nickel		0.020	J B	0.00076	0.040
Zinc		0.025	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187438	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0836			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187002	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.54 g
Analysis Date:	06/26/2015 1038			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.017	0.12

Client Sample ID: **ASB-1003_90-94 (20150617)**

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid % Moisture: 10.8 Date Received: 06/20/2015 1030

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Analysis Date:	06/25/2015 1327			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		1900		6.1	21
Antimony		ND		0.50	1.0
Barium		20	J	0.43	21
Beryllium		0.086	J	0.027	0.52
Calcium		25000		24	520
Cadmium		0.038	J	0.022	0.21
Cobalt		3.0	J	0.049	5.2
Chromium		8.2		0.079	0.52
Copper		3.7		0.24	2.6
Iron		6800		3.4	10
Potassium		250	J	6.5	520
Magnesium		7900		5.4	520
Manganese		210		0.088	1.6
Silver		ND		0.066	0.52
Sodium		69	J	20	520
Nickel		7.9		0.084	4.2
Vanadium		9.8		0.21	5.2
Zinc		9.9	B	0.59	2.1
Arsenic		1.2		0.43	1.0
Selenium		ND		0.36	0.52
Thallium		ND		0.14	1.0

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Analysis Date:	06/25/2015 1438			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lead		1.1		0.21	0.31

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1509			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30

Client Sample ID: **ASB-1003_90-94 (20150617)**

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid Date Received: 06/20/2015 1030

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.010	J B	0.0029	0.50
Barium		0.53	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		ND		0.00014	0.10
Calcium		520	B	0.26	5.0
Chromium		0.0024	J B	0.00055	0.50
Cobalt		0.0057	J	0.00056	0.050
Iron		0.13	B	0.013	0.10
Lead		0.038	J B	0.0019	0.50
Magnesium		30	B	0.055	5.0
Manganese		3.5	B	0.00046	0.015
Potassium		2.2	J B	0.070	5.0
Selenium		0.0050	J B	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1558			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Copper		0.0022	J B	0.0019	1.0
Nickel		0.014	J B	0.00076	0.040
Zinc		0.37	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187438	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0837			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187002	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	06/26/2015 1040			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Client Sample ID: **ASB-1003_90-94 (20150617)**

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid % Moisture: 10.8 Date Received: 06/20/2015 1030

7471A Mercury (CVAA)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.014	0.10

General Chemistry

Client Sample ID: **ASB-1003_80-82 (20150617)**

Lab Sample ID: 240-52267-1 Date Sampled: 06/17/2015 1440
Client Matrix: Solid % Moisture: 8.8 Date Received: 06/20/2015 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.30	0.88	1.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1421						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	8.3		mg/Kg	0.14	2.2	1.0	7196A
Analysis Batch: 240-187521	Analysis Date: 07/01/2015 0552						DryWt Corrected: Y
Percent Solids	91		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846						DryWt Corrected: N
Percent Moisture	8.8		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1003_90-94 (20150617)**

Lab Sample ID: 240-52267-2 Date Sampled: 06/17/2015 1600
Client Matrix: Solid % Moisture: 10.8 Date Received: 06/20/2015 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.30	0.90	1.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1426						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	8.2		mg/Kg	0.15	2.2	1.0	7196A
Analysis Batch: 240-187521	Analysis Date: 07/01/2015 0552						DryWt Corrected: Y
Percent Solids	89		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846						DryWt Corrected: N
Percent Moisture	11		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186084	Analysis Date: 06/22/2015 0846						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-186224					
LCS 240-186224/2-A	Lab Control Sample	T	Solid	5035	
MB 240-186224/1-A	Method Blank	T	Solid	5035	
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	5035	
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	5035	
240-52267-3	MB01 (20150618)	T	Solid	5035	
Analysis Batch:240-186326					
LCS 240-186224/2-A	Lab Control Sample	T	Solid	8260B	240-186224
MB 240-186224/1-A	Method Blank	T	Solid	8260B	240-186224
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	8260B	240-186224
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	8260B	240-186224
240-52267-3	MB01 (20150618)	T	Solid	8260B	240-186224
Prep Batch: 240-186655					
LB 240-186655/1-A	Method Blank	P	Solid	1311	
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	1311	
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	1311	
240-52288-A-1-A MS	Matrix Spike	P	Solid	1311	
240-52288-A-1-A MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-186839					
LB 240-186655/1-A	Method Blank	P	Solid	8260B	
LCS 240-186839/8	Lab Control Sample	T	Water	8260B	
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	8260B	
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	8260B	
240-52288-A-1-A MS	Matrix Spike	P	Solid	8260B	
240-52288-A-1-A MSD	Matrix Spike Duplicate	P	Solid	8260B	

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-186070					
LCS 240-186070/20-A	Lab Control Sample	T	Solid	3540C	
MB 240-186070/19-A	Method Blank	T	Solid	3540C	
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	3540C	
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	3540C	
240-52269-C-15-B MS	Matrix Spike	T	Solid	3540C	
240-52269-C-15-C MSD	Matrix Spike Duplicate	T	Solid	3540C	
Analysis Batch:240-186697					
LCS 240-186070/20-A	Lab Control Sample	T	Solid	8270C	240-186070
MB 240-186070/19-A	Method Blank	T	Solid	8270C	240-186070
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	8270C	240-186070
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	8270C	240-186070
240-52269-C-15-B MS	Matrix Spike	T	Solid	8270C	240-186070
240-52269-C-15-C MSD	Matrix Spike Duplicate	T	Solid	8270C	240-186070
Prep Batch: 240-187116					
240-52266-K-1-D MS	Matrix Spike	P	Solid	1311	
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	1311	
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	1311	
Prep Batch: 240-187215					
LCS 240-187215/16-A	Lab Control Sample	T	Water	3510C	
MB 240-187215/15-A	Method Blank	T	Water	3510C	
240-52266-K-1-D MS	Matrix Spike	P	Solid	3510C	240-187116
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	3510C	240-187116
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	3510C	240-187116
Analysis Batch:240-187453					
LCS 240-187215/16-A	Lab Control Sample	T	Water	8270C	240-187215
MB 240-187215/15-A	Method Blank	T	Water	8270C	240-187215
240-52266-K-1-D MS	Matrix Spike	P	Solid	8270C	240-187215
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	8270C	240-187215
Analysis Batch:240-187584					
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	8270C	240-187215

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Prep Batch: 240-186331					
LCS 240-186331/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-186331/12-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-186331/1-A	Method Blank	T	Solid	5035	
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	5035	
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	5035	
240-52267-3	MB01 (20150618)	T	Solid	5035	
Analysis Batch:240-186548					
LCS 240-186331/2-A	Lab Control Sample	T	Solid	WI-GRO	240-186331
LCSD 240-186331/12-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-186331
MB 240-186331/1-A	Method Blank	T	Solid	WI-GRO	240-186331
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	WI-GRO	240-186331
240-52267-3	MB01 (20150618)	T	Solid	WI-GRO	240-186331
Analysis Batch:240-186735					
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	WI-GRO	240-186331

Report Basis
T = Total

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-186109					
LCS 240-186109/13-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-186109/14-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-186109/12-A	Method Blank	T	Solid	WI DRO PREP	
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	WI DRO PREP	
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	WI DRO PREP	
Analysis Batch:240-186364					
LCS 240-186109/13-A	Lab Control Sample	T	Solid	WI-DRO	240-186109
LCSD 240-186109/14-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-186109
MB 240-186109/12-A	Method Blank	T	Solid	WI-DRO	240-186109
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	WI-DRO	240-186109
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	WI-DRO	240-186109

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-186553					
LCS 240-186553/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-186553/1-A	Method Blank	T	Solid	3050B	
240-52266-J-1-B MS	Matrix Spike	T	Solid	3050B	
240-52266-J-1-C MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	3050B	
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	3050B	
Prep Batch: 240-186588					
LCS 240-186588/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-186588/1-A	Method Blank	T	Solid	7471A	
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	7471A	
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	7471A	
Analysis Batch:240-186732					
LCS 240-186553/2-A	Lab Control Sample	T	Solid	6010B	240-186553
MB 240-186553/1-A	Method Blank	T	Solid	6010B	240-186553
240-52266-J-1-B MS	Matrix Spike	T	Solid	6010B	240-186553
240-52266-J-1-C MSD	Matrix Spike Duplicate	T	Solid	6010B	240-186553
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	6010B	240-186553
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	6010B	240-186553
Analysis Batch:240-187002					
LCS 240-186588/2-A	Lab Control Sample	T	Solid	7471A	240-186588
MB 240-186588/1-A	Method Blank	T	Solid	7471A	240-186588
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	7471A	240-186588
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	7471A	240-186588
Prep Batch: 240-187116					
LB 240-187116/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-187116/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-187116/1-D	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-52266-J-2-E MS ^5	Matrix Spike	P	Solid	1311	
240-52266-J-2-H MS	Matrix Spike	P	Solid	1311	
240-52266-J-2-K MS ^5	Matrix Spike	P	Solid	1311	
240-52266-J-2-F MSD ^5	Matrix Spike Duplicate	P	Solid	1311	
240-52266-J-2-I MSD	Matrix Spike Duplicate	P	Solid	1311	
240-52266-J-2-L MSD ^5	Matrix Spike Duplicate	P	Solid	1311	
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	1311	
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	1311	

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187231					
LCS 240-187231/3-A	Lab Control Sample	T	Water	3010A	
MB 240-187231/2-A	Method Blank	T	Water	3010A	
LB 240-187116/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-187116
240-52266-J-2-E MS ^5	Matrix Spike	P	Solid	3010A	240-187116
240-52266-J-2-F MSD ^5	Matrix Spike Duplicate	P	Solid	3010A	240-187116
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	3010A	240-187116
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	3010A	240-187116
Prep Batch: 240-187233					
LCS 240-187233/3-A	Lab Control Sample	T	Water	7470A	
MB 240-187233/2-A	Method Blank	T	Water	7470A	
LB 240-187116/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187116
240-52266-J-2-H MS	Matrix Spike	P	Solid	7470A	240-187116
240-52266-J-2-I MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187116
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	7470A	240-187116
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	7470A	240-187116
Analysis Batch:240-187366					
LB 240-187116/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-187231
LCS 240-187231/3-A	Lab Control Sample	T	Water	6010B	240-187231
MB 240-187231/2-A	Method Blank	T	Water	6010B	240-187231
240-52266-J-2-E MS ^5	Matrix Spike	P	Solid	6010B	240-187231
240-52266-J-2-F MSD ^5	Matrix Spike Duplicate	P	Solid	6010B	240-187231
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	6010B	240-187231
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	6010B	240-187231
Prep Batch: 240-187416					
LCS 240-187416/3-A	Lab Control Sample	T	Water	3010A	
MB 240-187416/2-A	Method Blank	T	Water	3010A	
LB 240-187116/1-D	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-187116
240-52266-J-2-K MS ^5	Matrix Spike	P	Solid	3010A	240-187116
240-52266-J-2-L MSD ^5	Matrix Spike Duplicate	P	Solid	3010A	240-187116
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	3010A	240-187116
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	3010A	240-187116
Analysis Batch:240-187438					
LB 240-187116/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187233
LCS 240-187233/3-A	Lab Control Sample	T	Water	7470A	240-187233
MB 240-187233/2-A	Method Blank	T	Water	7470A	240-187233
240-52266-J-2-H MS	Matrix Spike	P	Solid	7470A	240-187233
240-52266-J-2-I MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187233
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	7470A	240-187233
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	7470A	240-187233

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-187549					
LB 240-187116/1-D	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-187416
LCS 240-187416/3-A	Lab Control Sample	T	Water	6010B	240-187416
MB 240-187416/2-A	Method Blank	T	Water	6010B	240-187416
240-52266-J-2-K MS ^5	Matrix Spike	P	Solid	6010B	240-187416
240-52266-J-2-L MSD ^5	Matrix Spike Duplicate	P	Solid	6010B	240-187416
240-52267-1	ASB-1003_80-82 (20150617)	P	Solid	6010B	240-187416
240-52267-2	ASB-1003_90-94 (20150617)	P	Solid	6010B	240-187416

Report Basis
P = TCLP
T = Total

General Chemistry					
Analysis Batch:240-186084					
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	Moisture	
240-52267-1DU	Duplicate	T	Solid	Moisture	
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	Moisture	
Prep Batch: 240-186524					
LCSI 240-186524/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-186524/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-186524/9-A	Method Blank	T	Solid	3060A	
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	3060A	
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	3060A	
Analysis Batch:240-186823					
LCSI 240-186524/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-186524
LCSS 240-186524/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-186524
MB 240-186524/9-A	Method Blank	T	Solid	7196A	240-186524
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	7196A	240-186524
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	7196A	240-186524
Analysis Batch:240-187521					
240-52267-1	ASB-1003_80-82 (20150617)	T	Solid	7196A	
240-52267-2	ASB-1003_90-94 (20150617)	T	Solid	7196A	

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52267-1	ASB-1003_80-82 (20150617)	105	81	106	83
240-52267-2	ASB-1003_90-94 (20150617)	105	84	109	86
240-52267-3	MB01 (20150618)	122	95	121	95
MB 240-186224/1-A		97	76	93	80
LCS 240-186224/2-A		97	88	96	81

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-186655/1-A MB		93	96	91	100
LCS 240-186839/8		101	100	99	103
240-52288-A-1-A MS		102	98	95	103
240-52288-A-1-A MSD		99	99	93	102

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-52267-1	ASB-1003_80-82 (20150617)	95	94	99	97
240-52267-2	ASB-1003_90-94 (20150617)	94	92	98	97

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-186070/19-A		71	61	74	74	77	24
LCS 240-186070/20-A		75	66	77	76	76	53
240-52269-C-15-B MS		81	78	81	87	75	70
240-52269-C-15-C MSD		74	69	73	82	77	54

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52267-1	ASB-1003_80-82 (20150617)	72	58	39	73	61	82
240-52267-2	ASB-1003_90-94 (20150617)	65	61	54	67	72	79

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-52267-1	ASB-1003_80-82 (20150617)	68	70	79	59	82	78
240-52267-2	ASB-1003_90-94 (20150617)	69	68	75	71	74	69
MB 240-187215/15-A		73	81	83	81	84	74
LCS 240-187215/16-A		70	61	71	53	79	71
240-52266-K-1-D MS		60	61	71	54	69	60

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method Blank - Batch: 240-186224 **Method: 8260B**
Preparation: 5035

Lab Sample ID:	MB 240-186224/1-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143834.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1646	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method Blank - Batch: 240-186224 **Method: 8260B**
Preparation: 5035

Lab Sample ID:	MB 240-186224/1-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143834.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1646	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	26 - 141
Dibromofluoromethane (Surr)	76	30 - 122
1,2-Dichloroethane-d4 (Surr)	93	39 - 128
Toluene-d8 (Surr)	80	33 - 134

Lab Control Sample - Batch: 240-186224

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-186224/2-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143833.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1625	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	2490	124	16 - 156	
Allyl chloride	1000	799	80	50 - 150	
Bromobenzene	1000	936	94	72 - 120	
Bromochloromethane	1000	893	89	56 - 128	
Bromodichloromethane	1000	819	82	28 - 123	
Benzene	1000	954	95	70 - 120	
Bromoform	1000	760	76	10 - 120	
Bromomethane	1000	459	46	10 - 120	
2-Butanone (MEK)	2000	2020	101	10 - 199	
Carbon disulfide	1000	633	63	10 - 132	
Carbon tetrachloride	1000	869	87	29 - 120	
Chlorobenzene	1000	876	88	71 - 120	
Chlorodibromomethane	1000	785	79	22 - 120	
Chloroethane	1000	634	63	10 - 120	
Chloroform	1000	993	99	63 - 120	
Chloromethane	1000	738	74	25 - 120	
2-Chlorotoluene	1000	1070	107	68 - 122	
4-Chlorotoluene	1000	1080	108	68 - 122	
cis-1,2-Dichloroethene	1000	974	97	60 - 125	
cis-1,3-Dichloropropene	1000	873	87	25 - 120	
Cyclohexane	1000	990	99	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	1070	107	10 - 129	
1,2-Dibromoethane	1000	965	97	47 - 123	
Dibromomethane	1000	1000	100	68 - 120	
1,2-Dichlorobenzene	1000	1010	101	68 - 120	
1,3-Dichlorobenzene	1000	983	98	66 - 121	
1,4-Dichlorobenzene	1000	980	98	65 - 120	
Dichlorodifluoromethane	1000	692	69	10 - 120	
1,1-Dichloroethane	1000	1040	104	63 - 120	
1,2-Dichloroethane	1000	964	96	68 - 120	
1,1-Dichloroethene	1000	844	84	44 - 143	
Dichlorofluoromethane	1000	1110	111	40 - 160	
1,2-Dichloropropane	1000	1000	100	73 - 120	
1,3-Dichloropropane	1000	906	91	74 - 120	
2,2-Dichloropropane	1000	740	74	25 - 123	
1,1-Dichloropropene	1000	1010	101	60 - 123	
Ethylbenzene	1000	915	91	66 - 120	
Ethyl ether	1000	1150	115	70 - 130	
Hexachlorobutadiene	1000	1030	103	34 - 135	
2-Hexanone	2000	1570	79	43 - 130	
Isopropylbenzene	1000	931	93	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Control Sample - Batch: 240-186224

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-186224/2-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143833.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1625	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	5000	100	44 - 173	
Methylcyclohexane	1000	939	94	41 - 133	
Methylene Chloride	1000	925	93	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1930	97	49 - 121	
Methyl tert butyl ether	1000	981	98	34 - 157	
m-Xylene & p-Xylene	1000	927	93	67 - 120	
Naphthalene	1000	1060	106	37 - 126	
n-Butylbenzene	1000	1060	106	51 - 137	
N-Propylbenzene	1000	1010	101	64 - 130	
o-Xylene	1000	949	95	68 - 120	
p-Isopropyltoluene	1000	1030	103	56 - 136	
sec-Butylbenzene	1000	1100	110	58 - 131	
Styrene	1000	850	85	60 - 120	
tert-Butylbenzene	1000	1020	102	58 - 128	
1,1,1,2-Tetrachloroethane	1000	940	94	27 - 121	
1,1,2,2-Tetrachloroethane	1000	1090	109	54 - 121	
Tetrachloroethene	1000	808	81	58 - 131	
Tetrahydrofuran	2000	2080	104	70 - 130	
Toluene	1000	911	91	66 - 123	
trans-1,2-Dichloroethene	1000	928	93	58 - 121	
trans-1,3-Dichloropropene	1000	955	95	22 - 122	
1,2,3-Trichlorobenzene	1000	980	98	43 - 129	
1,2,4-Trichlorobenzene	1000	971	97	41 - 135	
1,1,1-Trichloroethane	1000	853	85	38 - 122	
1,1,2-Trichloroethane	1000	918	92	74 - 120	
Trichloroethene	1000	944	94	59 - 124	
Trichlorofluoromethane	1000	1160	116	17 - 145	
1,2,3-Trichloropropane	1000	1000	100	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	820	82	48 - 151	
1,2,4-Trimethylbenzene	1000	1040	104	62 - 133	
1,3,5-Trimethylbenzene	1000	1060	106	60 - 130	
Vinyl chloride	1000	800	80	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	26 - 141
Dibromofluoromethane (Surr)	88	30 - 122
1,2-Dichloroethane-d4 (Surr)	96	39 - 128
Toluene-d8 (Surr)	81	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method Blank - Batch: 240-186839

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-186655/1-A	Analysis Batch:	240-186839	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950718.D
Dilution:	1.0	Leach Batch:	240-186655	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/25/2015 1808	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 1808				
Leach Date:	06/24/2015 1830				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	93	70 - 124
Dibromofluoromethane (Surr)	96	80 - 128
1,2-Dichloroethane-d4 (Surr)	91	80 - 121
Toluene-d8 (Surr)	100	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Control Sample - Batch: 240-186839

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-186839/8	Analysis Batch:	240-186839	Instrument ID:	A3UX9
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UX950719.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/25/2015 1832	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 1832				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	1020	102	80 - 120	
2-Butanone (MEK)	2000	1580	79	49 - 120	
Carbon tetrachloride	1000	1060	106	54 - 122	
Chlorobenzene	1000	1020	102	80 - 120	
Chloroform	1000	1020	102	80 - 123	
1,2-Dichloroethane	1000	997	100	80 - 120	
1,1-Dichloroethene	1000	1110	111	71 - 133	
Tetrachloroethene	1000	1080	108	79 - 134	
Trichloroethene	1000	1040	104	78 - 130	
Vinyl chloride	1000	937	94	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	101	70 - 124
Dibromofluoromethane (Surr)	100	80 - 128
1,2-Dichloroethane-d4 (Surr)	99	80 - 121
Toluene-d8 (Surr)	103	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186839

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-52288-A-1-A MS	Analysis Batch:	240-186839	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950732.D
Dilution:	1.0	Leach Batch:	240-186655	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/25/2015 2332			Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 2332				5 mL
Leach Date:	06/24/2015 1830				

MSD Lab Sample ID:	240-52288-A-1-A MSD	Analysis Batch:	240-186839	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950733.D
Dilution:	1.0	Leach Batch:	240-186655	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/25/2015 2356			Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 2356				5 mL
Leach Date:	06/24/2015 1830				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	96	93	80 - 120	4	30		
2-Butanone (MEK)	77	76	49 - 120	0	30		
Carbon tetrachloride	100	90	60 - 120	10	30		
Chlorobenzene	98	93	80 - 120	5	30		
Chloroform	99	97	80 - 124	2	30		
1,2-Dichloroethane	95	93	80 - 120	2	30		
1,1-Dichloroethene	102	95	67 - 139	7	30		
Tetrachloroethene	103	94	74 - 138	10	30		
Trichloroethene	100	93	75 - 134	7	30		
Vinyl chloride	90	86	51 - 120	5	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	102	99	70 - 124
Dibromofluoromethane (Surr)	98	99	80 - 128
1,2-Dichloroethane-d4 (Surr)	95	93	80 - 121
Toluene-d8 (Surr)	103	102	80 - 120

Method Blank - Batch: 240-186070

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-186070/19-A	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1033	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method Blank - Batch: 240-186070

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-186070/19-A	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1033	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	71	24 - 110
2-Fluorophenol (Surr)	61	24 - 110
Nitrobenzene-d5 (Surr)	74	20 - 110
Phenol-d5 (Surr)	74	26 - 110
Terphenyl-d14 (Surr)	77	36 - 110
2,4,6-Tribromophenol (Surr)	24	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Control Sample - Batch: 240-186070

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-186070/20-A	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1056	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	484	73	35 - 110	
2,2'-oxybis[1-chloropropane]	667	568	85	29 - 110	
2,4-Dichlorophenol	667	455	68	39 - 110	
2,4-Dimethylphenol	667	498	75	29 - 110	
2,4-Dinitrophenol	1330	747	56	10 - 110	J
2,4-Dinitrotoluene	667	553	83	48 - 110	
2,6-Dinitrotoluene	667	583	87	45 - 110	
2-Chloronaphthalene	667	472	71	32 - 110	
2,4,5-Trichlorophenol	667	307	46	25 - 110	J
2-Chlorophenol	667	448	67	37 - 110	
2,4,6-Trichlorophenol	667	296	44	12 - 110	J
2-Methylnaphthalene	667	494	74	36 - 110	
2-Methylphenol	667	457	68	41 - 110	
2-Nitroaniline	667	562	84	45 - 110	J
2-Nitrophenol	667	509	76	34 - 110	
3,3'-Dichlorobenzidine	1330	1000	75	28 - 110	J
3-Nitroaniline	667	549	82	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	1050	79	10 - 110	J
4-Bromophenyl phenyl ether	667	551	83	39 - 110	
4-Chloro-3-methylphenol	667	540	81	48 - 110	
4-Chloroaniline	667	455	68	30 - 110	
4-Chlorophenyl phenyl ether	667	537	80	40 - 110	
4-Nitroaniline	667	592	89	48 - 110	J
4-Nitrophenol	1330	939	70	28 - 110	J
Acenaphthene	667	508	76	38 - 110	
Acenaphthylene	667	499	75	40 - 110	
Acetophenone	667	463	70	40 - 110	
Anthracene	667	505	76	48 - 110	
Atrazine	1330	1120	84	66 - 127	
Benzaldehyde	1330	1100	82	32 - 110	
Benzo[a]anthracene	667	488	73	50 - 110	
Benzo[a]pyrene	667	531	80	44 - 110	
Benzo[b]fluoranthene	667	540	81	43 - 110	
Benzo[g,h,i]perylene	667	546	82	51 - 110	
Benzo[k]fluoranthene	667	535	80	38 - 105	
Bis(2-chloroethoxy)methane	667	481	72	32 - 110	
Bis(2-chloroethyl)ether	667	469	70	34 - 110	
Bis(2-ethylhexyl) phthalate	667	496	74	50 - 110	
Butyl benzyl phthalate	667	474	71	51 - 110	
Caprolactam	1330	1170	88	44 - 114	
Carbazole	667	523	78	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Control Sample - Batch: 240-186070

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-186070/20-A	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1056	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	509	76	50 - 110	
Dibenz(a,h)anthracene	667	572	86	51 - 110	
Dibenzofuran	667	504	76	43 - 110	
Diethyl phthalate	667	527	79	52 - 110	
Dimethyl phthalate	667	519	78	50 - 110	
Di-n-butyl phthalate	667	503	76	51 - 110	
Di-n-octyl phthalate	667	422	63	48 - 110	
Fluoranthene	667	532	80	51 - 110	
Fluorene	667	513	77	46 - 110	
Hexachlorobenzene	667	527	79	43 - 110	
Hexachlorobutadiene	667	474	71	29 - 110	
Hexachlorocyclopentadiene	667	254	38	12 - 110	J
Hexachloroethane	667	433	65	30 - 110	
Indeno[1,2,3-cd]pyrene	667	524	79	50 - 110	
Isophorone	667	533	80	36 - 110	
Naphthalene	667	479	72	36 - 110	
Nitrobenzene	667	530	79	32 - 110	
N-Nitrosodi-n-propylamine	667	535	80	38 - 110	
N-Nitrosodiphenylamine	1330	1060	79	46 - 110	
Pentachlorophenol	1330	559	42	10 - 110	
Phenol	667	512	77	38 - 110	
Phenanthrene	667	498	75	49 - 110	
Pyrene	667	501	75	49 - 110	
3 & 4 Methylphenol	667	459	69	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	75	24 - 110
2-Fluorophenol (Surr)	66	24 - 110
Nitrobenzene-d5 (Surr)	77	20 - 110
Phenol-d5 (Surr)	76	26 - 110
Terphenyl-d14 (Surr)	76	36 - 110
2,4,6-Tribromophenol (Surr)	53	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186070

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52269-C-15-B MS	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.43 g
Analysis Date:	06/25/2015 1451			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52269-C-15-C MSD	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.24 g
Analysis Date:	06/25/2015 1514			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,2'-oxybis[1-chloropropane]	101	90	11 - 110	11	42		
2,4-Dichlorophenol	79	75	10 - 110	4	34		
2,4-Dimethylphenol	88	75	10 - 110	15	31		
2,4-Dinitrophenol	69	68	10 - 110	2	99	J	J
2,4-Dinitrotoluene	77	80	32 - 110	5	30		
2,6-Dinitrotoluene	83	86	35 - 110	4	30		
2-Chloronaphthalene	76	70	28 - 110	7	30		
2,4,5-Trichlorophenol	75	56	10 - 117	27	99		
2-Chlorophenol	79	69	10 - 110	13	47		
2,4,6-Trichlorophenol	66	49	10 - 110	29	38		J
2-Methylnaphthalene	80	76	10 - 133	4	42		
2-Methylphenol	80	76	24 - 110	4	51		
2-Nitroaniline	85	83	39 - 110	3	31	J	J
2-Nitrophenol	88	79	10 - 110	10	49		
3,3'-Dichlorobenzidine	64	67	10 - 110	5	56	J	J
3-Nitroaniline	53	60	10 - 110	13	30	J	J
4,6-Dinitro-2-methylphenol	74	73	10 - 110	0	55	J	J
4-Bromophenyl phenyl ether	78	81	33 - 110	4	30		
4-Chloro-3-methylphenol	89	88	25 - 110	0	54		
4-Chloroaniline	37	46	10 - 110	22	36	J	J
4-Chlorophenyl phenyl ether	83	82	32 - 110	1	30		
4-Nitroaniline	58	70	10 - 110	18	48	J	J
4-Nitrophenol	93	87	10 - 113	6	49	J	J
Acenaphthene	82	79	22 - 110	3	99		
Acenaphthylene	76	75	24 - 110	1	99		
Anthracene	77	77	20 - 110	1	99		
Benzo[a]anthracene	73	73	10 - 122	0	99		
Benzo[a]pyrene	82	85	10 - 110	3	99		
Benzo[b]fluoranthene	86	89	12 - 118	4	99		
Benzo[g,h,i]perylene	58	69	10 - 117	17	99		
Benzo[k]fluoranthene	84	81	10 - 121	4	99		
Bis(2-chloroethoxy)methane	80	72	26 - 110	11	37		

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186070

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52269-C-15-B MS	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.43 g
Analysis Date:	06/25/2015 1451			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52269-C-15-C MSD	Analysis Batch:	240-186697	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-186070	Lab File ID:	50625019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.24 g
Analysis Date:	06/25/2015 1514			Final Weight/Volume:	2 mL
Prep Date:	06/22/2015 0805			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Bis(2-chloroethyl)ether	115	73	21 - 110	43	55	F1	
Bis(2-ethylhexyl) phthalate	76	81	40 - 110	6	30		
Butyl benzyl phthalate	77	80	44 - 110	4	30		
Chrysene	75	78	10 - 125	4	99		
Dibenz(a,h)anthracene	70	78	14 - 113	12	99		
Dibenzofuran	80	77	29 - 110	3	30		
Diethyl phthalate	82	83	42 - 110	2	30		
Dimethyl phthalate	80	79	41 - 110	1	30		
Di-n-butyl phthalate	79	78	43 - 110	0	30		
Di-n-octyl phthalate	82	80	24 - 119	3	30		
Fluoranthene	78	78	10 - 110	0	99		
Fluorene	80	77	23 - 110	2	99		
Hexachlorobenzene	80	79	34 - 110	0	30		
Hexachlorobutadiene	75	67	25 - 110	11	34		
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	42	53	12 - 110	25	50	J	
Indeno[1,2,3-cd]pyrene	62	72	10 - 114	15	99		
Isophorone	88	79	29 - 110	9	38		
Naphthalene	79	71	10 - 111	10	99		
Nitrobenzene	86	77	23 - 110	10	41		
N-Nitrosodi-n-propylamine	99	84	26 - 110	15	42		
N-Nitrosodiphenylamine	81	81	22 - 110	1	30		
Pentachlorophenol	43	43	10 - 110	2	50		
Phenol	84	80	17 - 110	4	53		
Phenanthrene	77	77	10 - 166	0	99		
Pyrene	73	76	10 - 147	5	99		
3 & 4 Methylphenol	80	81	25 - 110	2	50		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	81	74	24 - 110
2-Fluorophenol (Surr)	78	69	24 - 110
Nitrobenzene-d5 (Surr)	81	73	20 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Phenol-d5 (Surr)	87	82	26 - 110
Terphenyl-d14 (Surr)	75	77	36 - 110
2,4,6-Tribromophenol (Surr)	70	54	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method Blank - Batch: 240-187215

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-187215/15-A	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187215	Lab File ID:	50630003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1356	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.0040
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	73	30 - 110
2-Fluorophenol (Surr)	81	20 - 110
Nitrobenzene-d5 (Surr)	83	28 - 110
Phenol-d5 (Surr)	81	21 - 110
Terphenyl-d14 (Surr)	84	48 - 110
2,4,6-Tribromophenol (Surr)	74	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Control Sample - Batch: 240-187215

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-187215/16-A	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187215	Lab File ID:	50630004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1422	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0469	59	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0532	67	54 - 110	
Pyridine	0.0800	0.0601	75	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0563	70	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0548	69	46 - 110	
2-Methylphenol	0.0800	0.0582	73	44 - 111	
Hexachlorobenzene	0.0800	0.0618	77	50 - 110	
Hexachlorobutadiene	0.0800	0.0404	50	34 - 110	
Hexachloroethane	0.0800	0.0457	57	41 - 110	
Nitrobenzene	0.0800	0.0548	68	40 - 110	
Pentachlorophenol	0.160	0.122	76	12 - 110	
3 & 4 Methylphenol	0.0800	0.0595	74	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	70	30 - 110
2-Fluorophenol (Surr)	61	20 - 110
Nitrobenzene-d5 (Surr)	71	28 - 110
Phenol-d5 (Surr)	53	21 - 110
Terphenyl-d14 (Surr)	79	48 - 110
2,4,6-Tribromophenol (Surr)	71	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Matrix Spike - Batch: 240-187215

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-52266-K-1-D MS	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-187215	Lab File ID:	50630014.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1840	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0336	42	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0550	69	42 - 110	
Pyridine	ND	0.0800	0.0557	70	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0585	73	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0574	72	35 - 110	
2-Methylphenol	ND	0.0800	0.0609	76	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0571	71	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0363	45	28 - 110	
Hexachloroethane	ND	0.0800	0.0322	40	26 - 110	
Nitrobenzene	ND	0.0800	0.0656	82	32 - 110	
Pentachlorophenol	ND	0.160	0.132	82	10 - 124	
3 & 4 Methylphenol	ND	0.0800	0.0631	79	29 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	60	30 - 110
2-Fluorophenol (Surr)	61	20 - 110
Nitrobenzene-d5 (Surr)	71	28 - 110
Phenol-d5 (Surr)	54	21 - 110
Terphenyl-d14 (Surr)	69	48 - 110
2,4,6-Tribromophenol (Surr)	60	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method Blank - Batch: 240-186331 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-186331/1-A	Analysis Batch:	240-186548	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186331	Lab File ID:	Y0062408.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/24/2015 1557	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186331 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-186331/2-A	Analysis Batch:	240-186548	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186331	Lab File ID:	Y0062409.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/24/2015 1633	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186331/12-A	Analysis Batch:	240-186548	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186331	Lab File ID:	Y0062420.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/24/2015 2257	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/23/2015 1119			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	116	114	80 - 120	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method Blank - Batch: 240-186109

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-186109/12-A	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-186109	Lab File ID:	P14F062311.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/23/2015 1911	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186109

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-186109/13-A	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-186109	Lab File ID:	P14F062312.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/23/2015 1938	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186109/14-A	Analysis Batch:	240-186364	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-186109	Lab File ID:	P14F062324.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/24/2015 0103	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 1014			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	100	110	70 - 120	10	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method Blank - Batch: 240-186553

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-186553/1-A	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/25/2015 1235	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	ND		0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	ND		5.2	500
Manganese	ND		0.084	1.5
Sodium	ND		19	500
Nickel	ND		0.080	4.0
Potassium	ND		6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Selenium	ND		0.34	0.50
Vanadium	ND		0.20	5.0
Thallium	ND		0.13	1.0
Zinc	0.597	J	0.56	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Control Sample - Batch: 240-186553

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-186553/2-A	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/25/2015 1239	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	188	94	80 - 120	
Antimony	50.0	47.5	95	80 - 120	
Barium	200	185	92	80 - 120	
Beryllium	5.00	4.69	94	80 - 120	
Cadmium	5.00	4.93	99	80 - 120	
Calcium	5000	4680	94	80 - 120	
Chromium	20.0	18.4	92	80 - 120	
Cobalt	50.0	46.5	93	80 - 120	
Copper	25.0	23.4	94	80 - 120	
Iron	100	96.7	97	80 - 120	
Magnesium	5000	4660	93	80 - 120	
Manganese	50.0	47.7	95	80 - 120	
Sodium	5000	4780	96	80 - 120	
Nickel	50.0	47.2	94	80 - 120	
Potassium	5000	4700	94	80 - 120	
Silver	5.00	4.83	97	80 - 120	
Arsenic	200	187	93	80 - 120	
Lead	50.0	45.0	90	80 - 120	
Selenium	200	182	91	80 - 120	
Vanadium	50.0	48.6	97	80 - 120	
Thallium	200	184	92	80 - 120	
Zinc	50.0	48.1	96	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186553

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-52266-J-1-B MS
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/25/2015 1254
Prep Date: 06/24/2015 1132
Leach Date: N/A

Analysis Batch: 240-186732
Prep Batch: 240-186553
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9062515A.asc
Initial Weight/Volume: 1.17 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-52266-J-1-C MSD
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/25/2015 1258
Prep Date: 06/24/2015 1132
Leach Date: N/A

Analysis Batch: 240-186732
Prep Batch: 240-186553
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9062515A.asc
Initial Weight/Volume: 1.17 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	1632	2366	75 - 125	15	20	4	4
Antimony	39	47	75 - 125	17	20	F1	F1
Barium	390	447	75 - 125	10	20	F1	F1
Beryllium	84	84	75 - 125	0	20		
Cadmium	87	92	75 - 125	5	20		
Calcium	40	219	75 - 125	42	20	F1	F1 F2
Chromium	104	113	75 - 125	5	20		
Cobalt	91	92	75 - 125	0	20		
Copper	71	75	75 - 125	3	20	F1	
Iron	313	1314	75 - 125	9	20	4	4
Magnesium	86	164	75 - 125	35	20		F1 F2
Manganese	-28	271	75 - 125	40	20	4	4 F2
Sodium	84	85	75 - 125	1	20		
Nickel	94	93	75 - 125	0	20		
Potassium	115	126	75 - 125	6	20		F1
Silver	84	89	75 - 125	6	20		
Arsenic	83	84	75 - 125	1	20		
Lead	39	76	75 - 125	21	20	F1	F2
Selenium	80	81	75 - 125	1	20		
Vanadium	85	89	75 - 125	4	20		
Thallium	87	88	75 - 125	2	20		
Zinc	84	119	75 - 125	15	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

TCLP SPLPE Leachate Blank - Batch: 240-187231

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-187116/1-B	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1414	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.0830	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	0.633	J	0.26	5.0
Chromium	0.00108	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Iron	0.0240	J	0.013	0.10
Magnesium	0.0679	J	0.055	5.0
Manganese	0.000707	J	0.00046	0.015
Potassium	0.969	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00838	J	0.0029	0.50
Lead	0.0365	J	0.0019	0.50
Selenium	0.00592	J	0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method Blank - Batch: 240-187231

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-187231/2-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1418	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.0139	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Potassium	0.180	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	0.0377	J	0.0019	0.50
Selenium	ND		0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Lab Control Sample - Batch: 240-187231

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-187231/3-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1422	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	1.99	100	50 - 150	
Antimony	0.500	0.521	104	50 - 150	
Barium	2.00	1.99	99	50 - 150	J
Beryllium	0.0500	0.0496	99	50 - 150	
Cadmium	0.0500	0.0508	102	50 - 150	J
Calcium	50.0	49.4	99	50 - 150	
Chromium	0.200	0.200	100	50 - 150	J
Cobalt	0.500	0.522	104	50 - 150	
Iron	1.00	1.02	102	50 - 150	
Magnesium	50.0	48.5	97	50 - 150	
Manganese	0.500	0.503	101	50 - 150	
Potassium	50.0	51.6	103	50 - 150	
Silver	0.0500	0.0556	111	50 - 150	J
Arsenic	2.00	2.17	109	50 - 150	
Lead	0.500	0.504	101	50 - 150	
Selenium	2.00	2.22	111	50 - 150	
Vanadium	0.500	0.496	99	50 - 150	
Thallium	2.00	1.94	97	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187231

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52266-J-2-E MS ^5	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1435			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52266-J-2-F MSD ^5	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1439			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	94	96	75 - 125	2	20		
Antimony	102	106	75 - 125	2	20	J	J
Barium	99	99	75 - 125	0	20		
Beryllium	100	99	75 - 125	0	20		
Cadmium	102	101	75 - 125	1	20		
Calcium	137	130	75 - 125	1	20	4	4
Chromium	98	96	75 - 125	1	20		
Cobalt	103	101	75 - 125	2	20		
Iron	110	107	75 - 125	1	20		
Magnesium	102	101	75 - 125	1	20		
Manganese	129	122	75 - 125	1	20	4	4
Potassium	102	100	75 - 125	1	20		
Silver	103	101	75 - 125	1	20	J	J
Arsenic	104	103	75 - 125	1	20		
Selenium	105	103	75 - 125	2	20	J	J
Vanadium	100	98	75 - 125	2	20		
Thallium	100	98	75 - 125	1	20	J	J

TCLP SPLPE Leachate Blank - Batch: 240-187416

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-187116/1-D	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1502	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Copper	0.00312	J	0.0019	1.0
Nickel	0.00313	J	0.00076	0.040
Zinc	ND		0.0096	1.0

Method Blank - Batch: 240-187416

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-187416/2-A	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1507	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Copper	ND		0.0019	1.0
Nickel	ND		0.00076	0.040
Zinc	ND		0.0096	1.0

Lab Control Sample - Batch: 240-187416

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-187416/3-A	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1511	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Copper	0.250	0.247	99	50 - 150	J
Nickel	0.500	0.504	101	50 - 150	
Zinc	0.500	0.544	109	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187416

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52266-J-2-K MS ^5	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1532			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52266-J-2-L MSD ^5	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1536			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Copper	94	96	75 - 125	2	20	J	J
Nickel	96	100	75 - 125	3	20		
Zinc	61	82	75 - 125	3	20	J 4	J 4

TCLP SPLPE Leachate Blank - Batch: 240-187233

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-187116/1-C	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0819	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-187233

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-187233/2-A	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0820	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-187233

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-187233/3-A	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0822	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00500	100	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187233

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-52266-J-2-H MS	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0825			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52266-J-2-I MSD	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0826			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	95	98	80 - 120	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method Blank - Batch: 240-186588

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-186588/1-A	Analysis Batch:	240-187002	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/26/2015 1018	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-186588

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-186588/2-A	Analysis Batch:	240-187002	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/26/2015 1020	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.822	99	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Method Blank - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-186524/9-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.27	0.80

Lab Control Sample Insoluble - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-186524/11-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	736	114	75 - 125	

Lab Control Sample Soluble - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-186524/10-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	18.3	92	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52267-1

Duplicate - Batch: 240-186084

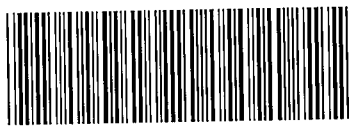
Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52267-1	Analysis Batch:	240-186084	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/22/2015 0846	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	91	91	0.07	20	
Percent Moisture	8.8	8.9	0.7	20	

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-52267 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica Canton
4101 Shuffel Street, N. U.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497. 2

1.6/C2.6

Chain of Custody Record

103813

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/18/15	COC No:
Company Name: ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Pull	Carrier:	1 of ____ COCs
Address: 430 First Avenue North, Ste 720	Analysis Turnaround Time			Sampler: Tom Dermon
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below ____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul MN	☐ 2 days			Job / SDG No.: 240066638
P O # MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	SVOCs (8270)	GRO (w/ Mod Method)	DRO (w/ Mod Method)	TAL metals (6010)	Hexavalent Chromium (7196A)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP metals (1311/6010)	Moisture Content	Temperature	Sample Specific Notes:
ASB-1003_90-92(20150617)	6/17/15	1440	G	SO	10			X	X	X	X	X		X	X	X	X		Analyze for TCLP TAL metals for all 50:1 Samples.
ASB-1003_90-94(20150617)	6/17/15	1600	G	SO	10			X	X	X	X	X		X	X	X	X		
MB01 (20150618)	6/18/15	—	—	L	2			X		X									
Temp Blank	6/18/15	—	—	L	1													X	
								6	1	6	1	1		1	1	1	1		

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Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Level IV

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: ____ Corr'd: ____	Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Lindsey Kenyon	ARCADIS	6/19/15 1534	Barb Rutter	TA	6/19/15 1534
Relinquished by: Barb Rutter	Company: TA	Date/Time: 6/19/15 1700	Received by:	Company: TA	Date/Time: 6.20.15 1030
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

6/20/2015

TestAmerica Canton Sample Receipt Form/Narrative Login # : 52207
Canton Facility

Client Arcadis Site Name

Cooler unpacked by:

Cooler Received on 6-2015 Opened on 6-2015

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop-Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box (Client Cooler) Box Other

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   IR GUN# A (CF +1.0 °C) Observed Cooler Temp. 1.6 °C Corrected Cooler Temp. 2.6 °C
   ~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~
   ~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~
   IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   ☐ See Multiple Cooler Form
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Were sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# HC432654
12. Were VOAs on the COC? (Yes) No
13. Were air bubbles >6 mm in any VOA vials? Yes No (NA)
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # (Yes) No

Contacted PM Date by via Verbal Voice Mail Other
Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

July 07, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52267-1
Sample date: 2015-06-17 2015-06-18
Report received by CADENA: 2015-07-07
Initial Data Verification completed by CADENA: 2015-07-07

The following minor QC exceptions or missing information were noted:

WI-GRO and WI-DRO QC batch did not include MS recovery data and surrogate recoveries were not available for samples or QC.

GCMS SVOC CCV response outliers as noted in the laboratory submittal case narrative were not used to qualify results as part of this level 2 verification review.

GCMS VOC QC batch 186224 did not include MS recovery data due to insufficient sample volume available for creating MS/MSD"s according to laboratory submittal case narrative.

GCMS SVOC QC batch 186070 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

Metals method blanks had detections below the RL in QC batch 186553 for zinc and in QC batch 187231 for barium, calcium, chromium, iron, magnesium, manganese, potassium, arsenic, lead and selenium and in QC batch 187416 for TCLP copper and nickel. Metals results should be considered to be non-detect at the RL and qualified with UB flags for the following samples and analytes:
TCLP COPPER - UB flags - -002.
TCLP NICKEL - UB flags - -002.
TCLP CHROMIUM - UB flags - -001, -002.
TCLP POTASSIUM - UB flags - -001, -002.
TCLP ARSENIC - UB flags - -001, -002.
TCLP LEAD - UB flags - -001, -002.
TCLP SELENIUM - UB flags - -001, -002.

Metals QC batches MS/MSD recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

3 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52267-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240522671	ASB-1003_80-82 (20150617)	6/17/2015	2:40:00	X	X	X	X	X	X	X	X
240522672	ASB-1003_90-94 (20150617)	6/17/2015	4:00:00	X	X	X	X	X	X	X	X
240522673	MB01 (20150618)	6/18/2015	12:00:00	X		X					

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52267-1

			Sample Name:	ASB-1003_80-82 (20150617)				ASB-1003_90-94 (20150617)			
			Lab Sample ID:	240522671				240522672			
			Sample Date:	6/17/2015				6/17/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
Metals										
	OSW-6010B									
	Arsenic	7440-38-2	0.014	0.50	mg/l	UB	0.010	0.50	mg/l	UB
	Chromium	7440-47-3	0.0034	0.50	mg/l	UB	0.0024	0.50	mg/l	UB
	Copper	7440-50-8					0.0022	1.0	mg/l	UB
	Lead	7439-92-1	0.037	0.50	mg/l	UB	0.038	0.50	mg/l	UB
	Nickel	7440-02-0					0.014	0.040	mg/l	UB
	Potassium	7440-09-7	2.3	5.0	mg/l	UB	2.2	5.0	mg/l	UB
	Selenium	7782-49-2	0.0040	0.25	mg/l	UB	0.0050	0.25	mg/l	UB

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52267-1

		Sample Name:	ASB-1003_80-82 (20150617)				ASB-1003_90-94 (20150617)				MB01 (20150618)			
		Lab Sample ID:	240522671				240522672				240522673			
		Sample Date:	6/17/2015				6/17/2015				6/18/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	25	ug/l	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	520	ug/kg	---	ND	550	ug/kg	---	ND	500	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1000	ug/kg	---	ND	250	ug/l	---	ND	1000	ug/kg	---
2-Chlorotoluene	95-49-8	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
2-Hexanone	591-78-6	ND	1000	ug/kg	---	ND	1100	ug/kg	---	ND	1000	ug/kg	---
4-Chlorotoluene	106-43-4	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1000	ug/kg	---	ND	1100	ug/kg	---	ND	1000	ug/kg	---
Acetone	67-64-1	ND	1000	ug/kg	---	ND	1100	ug/kg	---	ND	1000	ug/kg	---
Allyl chloride	107-05-1	ND	520	ug/kg	---	ND	550	ug/kg	---	ND	500	ug/kg	---
Benzene	71-43-2	ND	25	ug/l	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Bromobenzene	108-86-1	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Bromochloromethane	74-97-5	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Bromodichloromethane	75-27-4	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Bromoform	75-25-2	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Bromomethane	74-83-9	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Carbon disulfide	75-15-0	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Carbon tetrachloride	56-23-5	ND	25	ug/l	---	ND	25	ug/l	---	ND	250	ug/kg	---
Chlorobenzene	108-90-7	ND	25	ug/l	---	ND	25	ug/l	---	ND	250	ug/kg	---
Chlorodibromomethane	124-48-1	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Chloroethane	75-00-3	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Chloroform	67-66-3	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Chloromethane	74-87-3	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Cyclohexane	110-82-7	ND	520	ug/kg	---	ND	550	ug/kg	---	ND	500	ug/kg	---
Dibromomethane	74-95-3	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	520	ug/kg	---	ND	550	ug/kg	---	ND	500	ug/kg	---
Ethyl ether	60-29-7	ND	520	ug/kg	---	ND	550	ug/kg	---	ND	500	ug/kg	---
Ethylbenzene	100-41-4	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Isopropylbenzene	98-82-8	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Methyl acetate	79-20-9	61	520	ug/kg	J	ND	550	ug/kg	---	ND	500	ug/kg	---
Methyl tert butyl ether	1634-04-4	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Methylcyclohexane	108-87-2	ND	520	ug/kg	---	ND	550	ug/kg	---	ND	500	ug/kg	---
Methylene Chloride	75-09-2	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
n-Butylbenzene	104-51-8	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
N-Propylbenzene	103-65-1	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Naphthalene	91-20-3	31	260	ug/kg	J	ND	270	ug/kg	---	ND	250	ug/kg	---
o-Xylene	95-47-6	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
sec-Butylbenzene	135-98-8	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Styrene	100-42-5	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
tert-Butylbenzene	98-06-6	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Tetrachloroethene	127-18-4	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1000	ug/kg	---	ND	1100	ug/kg	---	ND	1000	ug/kg	---
Toluene	108-88-3	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
trans-1,2-Dichloroethene	156-60-5	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Trichloroethene	79-01-6	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	260	ug/kg	---	ND	270	ug/kg	---	ND	250	ug/kg	---
Vinyl chloride	75-01-4	ND	260	ug/kg	---	ND	25	ug/l	---	ND	250	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52267-1

		Sample Name:	ASB-1003_80-82 (20150617)				ASB-1003_90-94 (20150617)				MB01 (20150618)			
		Lab Sample ID:	240522671				240522672				240522673			
		Sample Date:	6/17/2015				6/17/2015				6/18/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	4.5	360	ug/kg	J	ND	370	ug/kg	---				
1,4-Dichlorobenzene	106-46-7	ND	0.0040	mg/l	---	ND	0.0040	mg/l	---				
2,2'-oxybis[1-chloropropane]	108-60-1	ND	360	ug/kg	---	ND	370	ug/kg	---				
2,4,5-Trichlorophenol	95-95-4	ND	360	ug/kg	---	ND	0.0040	mg/l	---				
2,4,6-Trichlorophenol	88-06-2	ND	360	ug/kg	---	ND	370	ug/kg	---				
2,4-Dichlorophenol	120-83-2	ND	360	ug/kg	---	ND	370	ug/kg	---				
2,4-Dimethylphenol	105-67-9	ND	360	ug/kg	---	ND	370	ug/kg	---				
2,4-Dinitrophenol	51-28-5	ND	1700	ug/kg	---	ND	1800	ug/kg	---				
2,4-Dinitrotoluene	121-14-2	ND	0.0040	mg/l	---	ND	370	ug/kg	---				
2,6-Dinitrotoluene	606-20-2	ND	360	ug/kg	---	ND	370	ug/kg	---				
2-Chloronaphthalene	91-58-7	ND	360	ug/kg	---	ND	370	ug/kg	---				
2-Chlorophenol	95-57-8	ND	360	ug/kg	---	ND	370	ug/kg	---				
2-Methylnaphthalene	91-57-6	24	360	ug/kg	J	ND	370	ug/kg	---				
2-Methylphenol	95-48-7	ND	360	ug/kg	---	ND	370	ug/kg	---				
2-Nitroaniline	88-74-4	ND	1700	ug/kg	---	ND	1800	ug/kg	---				
2-Nitrophenol	88-75-5	ND	360	ug/kg	---	ND	370	ug/kg	---				
3 & 4 Methylphenol	65794-96-9	ND	430	ug/kg	---	ND	450	ug/kg	---				
3,3'-Dichlorobenzidine	91-94-1	ND	1700	ug/kg	---	ND	1800	ug/kg	---				
3-Nitroaniline	99-09-2	ND	1700	ug/kg	---	ND	1800	ug/kg	---				
4,6-Dinitro-2-methylphenol	534-52-1	ND	1700	ug/kg	---	ND	1800	ug/kg	---				
4-Bromophenyl phenyl ether	101-55-3	ND	360	ug/kg	---	ND	370	ug/kg	---				
4-Chloro-3-methylphenol	59-50-7	ND	360	ug/kg	---	ND	370	ug/kg	---				
4-Chloroaniline	106-47-8	ND	360	ug/kg	---	ND	370	ug/kg	---				
4-Chlorophenyl phenyl ether	7005-72-3	ND	360	ug/kg	---	ND	370	ug/kg	---				
4-Nitroaniline	100-01-6	ND	1700	ug/kg	---	ND	1800	ug/kg	---				
4-Nitrophenol	100-02-7	ND	1700	ug/kg	---	ND	1800	ug/kg	---				
Acenaphthene	83-32-9	18	360	ug/kg	J	ND	370	ug/kg	---				
Acenaphthylene	208-96-8	4.7	360	ug/kg	J	ND	370	ug/kg	---				
Acetophenone	98-86-2	ND	360	ug/kg	---	ND	370	ug/kg	---				
Anthracene	120-12-7	39	360	ug/kg	J	ND	370	ug/kg	---				
Atrazine	1912-24-9	ND	360	ug/kg	---	ND	370	ug/kg	---				
Benzaldehyde	100-52-7	ND	360	ug/kg	---	ND	370	ug/kg	---				
Benzo[a]anthracene	56-55-3	60	360	ug/kg	J	ND	370	ug/kg	---				
Benzo[a]pyrene	50-32-8	57	360	ug/kg	J	ND	370	ug/kg	---				
Benzo[b]fluoranthene	205-99-2	75	360	ug/kg	J	ND	370	ug/kg	---				
Benzo[g,h,i]perylene	191-24-2	28	360	ug/kg	J	ND	370	ug/kg	---				
Benzo[k]fluoranthene	207-08-9	24	360	ug/kg	J	ND	370	ug/kg	---				
Bis(2-chloroethoxy)methane	111-91-1	ND	360	ug/kg	---	ND	370	ug/kg	---				
Bis(2-chloroethyl)ether	111-44-4	ND	360	ug/kg	---	ND	370	ug/kg	---				
Bis(2-ethylhexyl) phthalate	117-81-7	110	360	ug/kg	J	29	370	ug/kg	J				
Butyl benzyl phthalate	85-68-7	ND	360	ug/kg	---	ND	370	ug/kg	---				
Caprolactam	105-60-2	ND	360	ug/kg	---	ND	370	ug/kg	---				
Carbazole	86-74-8	ND	360	ug/kg	---	ND	370	ug/kg	---				
Chrysene	218-01-9	61	360	ug/kg	J	ND	370	ug/kg	---				
Di-n-butyl phthalate	84-74-2	ND	360	ug/kg	---	ND	370	ug/kg	---				
Di-n-octyl phthalate	117-84-0	ND	360	ug/kg	---	ND	370	ug/kg	---				
Dibenz(a,h)anthracene	53-70-3	ND	360	ug/kg	---	ND	370	ug/kg	---				
Dibenzofuran	132-64-9	19	360	ug/kg	J	ND	370	ug/kg	---				
Diethyl phthalate	84-66-2	ND	360	ug/kg	---	ND	370	ug/kg	---				
Dimethyl phthalate	131-11-3	ND	360	ug/kg	---	ND	370	ug/kg	---				
Fluoranthene	206-44-0	140	360	ug/kg	J	ND	370	ug/kg	---				
Fluorene	86-73-7	30	360	ug/kg	J	ND	370	ug/kg	---				
Hexachlorobenzene	118-74-1	ND	360	ug/kg	---	ND	370	ug/kg	---				
Hexachlorobutadiene	87-68-3	ND	360	ug/kg	---	ND	370	ug/kg	---				
Hexachlorocyclopentadiene	77-47-4	ND	1700	ug/kg	---	ND	1800	ug/kg	---				
Hexachloroethane	67-72-1	ND	360	ug/kg	---	ND	370	ug/kg	---				
Indeno[1,2,3-cd]pyrene	193-39-5	28	360	ug/kg	J	ND	370	ug/kg	---				
Isophorone	78-59-1	ND	360	ug/kg	---	ND	370	ug/kg	---				
N-Nitrosodi-n-propylamine	621-64-7	ND	360	ug/kg	---	ND	370	ug/kg	---				
N-Nitrosodiphenylamine	86-30-6	ND	360	ug/kg	---	ND	370	ug/kg	---				
Naphthalene	91-20-3	20	360	ug/kg	J	ND	370	ug/kg	---				
Nitrobenzene	98-95-3	ND	360	ug/kg	---	ND	370	ug/kg	---				
Pentachlorophenol	87-86-5	ND	360	ug/kg	---	ND	370	ug/kg	---				
Phenanthrene	85-01-8	150	360	ug/kg	J	ND	370	ug/kg	---				
Phenol	108-95-2	ND	360	ug/kg	---	ND	370	ug/kg	---				
Pyrene	129-00-0	130	360	ug/kg	J	ND	370	ug/kg	---				
Pyridine	110-86-1	ND	0.0040	mg/l	---	ND	0.0040	mg/l	---				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52267-1

			Sample Name:	ASB-1003_80-82 (20150617)				ASB-1003_90-94 (20150617)				MB01 (20150618)			
			Lab Sample ID:	240522671				240522672				240522673			
			Sample Date:	6/17/2015				6/17/2015				6/18/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	11	mg/kg	---	ND	10	mg/kg	---	ND	1300	mg/kg	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	13	9.4	mg/kg	---	ND	10	mg/kg	---				
Metals														
	OSW-6010B													
	Aluminum	7429-90-5	1600	18	mg/kg	---	1900	21	mg/kg	---				
	Antimony	7440-36-0	ND	0.90	mg/kg	---	ND	0.30	mg/l	---				
	Arsenic	7440-38-2	0.014	0.50	mg/l	UB	1.2	1.0	mg/kg	---				
	Barium	7440-39-3	26	18	mg/kg	---	0.53	10	mg/l	J				
	Beryllium	7440-41-7	ND	0.0050	mg/l	---	0.086	0.52	mg/kg	J				
	Cadmium	7440-43-9	ND	0.10	mg/l	---	ND	0.10	mg/l	---				
	Calcium	7440-70-2	630	5.0	mg/l	---	25000	520	mg/kg	---				
	Chromium	7440-47-3	8.3	0.45	mg/kg	---	8.2	0.52	mg/kg	---				
	Cobalt	7440-48-4	0.0097	0.050	mg/l	J	0.0057	0.050	mg/l	J				
	Copper	7440-50-8	3.5	2.2	mg/kg	---	3.7	2.6	mg/kg	---				
	Iron	7439-89-6	6100	9.0	mg/kg	---	6800	10	mg/kg	---				
	Lead	7439-92-1	1.8	0.27	mg/kg	---	1.1	0.31	mg/kg	---				
	Magnesium	7439-95-4	5200	450	mg/kg	---	7900	520	mg/kg	---				
	Manganese	7439-96-5	270	1.3	mg/kg	---	210	1.6	mg/kg	---				
	Nickel	7440-02-0	6.8	3.6	mg/kg	---	7.9	4.2	mg/kg	---				
	Potassium	7440-09-7	210	450	mg/kg	J	250	520	mg/kg	J				
	Selenium	7782-49-2	ND	0.45	mg/kg	---	0.0050	0.25	mg/l	UB				
	Silver	7440-22-4	ND	0.45	mg/kg	---	ND	0.50	mg/l	---				
	Sodium	7440-23-5	66	450	mg/kg	J	69	520	mg/kg	J				
	Thallium	7440-28-0	ND	2.0	mg/l	---	ND	1.0	mg/kg	---				
	Vanadium	7440-62-2	ND	0.050	mg/l	---	9.8	5.2	mg/kg	---				
	Zinc	7440-66-6	11	1.8	mg/kg	---	0.37	1.0	mg/l	J				
	OSW-7470A													
	Mercury	7439-97-6	ND	0.12	mg/kg	---	ND	0.10	mg/kg	---				
General Chemistry														
	OSW-7196A													
	Cr (III)	16065-83-1	8.3	2.2	mg/kg	---	8.2	2.2	mg/kg	---				
	Cr (VI)	18540-29-9	ND	0.88	mg/kg	---	ND	0.90	mg/kg	---				

ANALYTICAL REPORT

Job Number: 240-52291-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
7/8/2015 1:39 PM

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07/08/2015

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CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52291-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/20/2015 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.0º C, 2.8º C and 3.0º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4) and ASB-1004_83-85(20150619) (240-52291-5) were analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 06/25/2015 and analyzed on 06/26/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4), ASB-1004_83-85(20150619) (240-52291-5) and MB01(20150619) (240-52291-6) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/22/2015 and analyzed on 06/23/2015 and 06/24/2015.

1,2-Dichloroethane-d4 (Surr), 4-Bromofluorobenzene (Surr), Dibromofluoromethane (Surr) and Toluene-d8 (Surr) failed the surrogate recovery criteria high for ASB-1004_60-62(20150619) (240-52291-2). 1,2-Dichloroethane-d4 (Surr) and 4-Bromofluorobenzene (Surr) failed the surrogate recovery criteria high for ASB-1004_69-70(20150619) (240-52291-3). Refer to the QC report for details.

Samples ASB-1004_60-62(20150619) (240-52291-2)[333.33X] and ASB-1004_69-70(20150619) (240-52291-3)[25X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-186224 and analytical batch 240-186326 on these samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_79-80(20150619) (240-52291-4), ASB-1004_83-85(20150619) (240-52291-5) and MB01(20150619) (240-52291-6) .

Method(s) 8260B: A MS/MSD was prepared for batch 186224, but was analyzed in a different analytical batch. Batch includes: ASB-1004_60-62(20150619) (240-52291-2) and ASB-1004_69-70(20150619) (240-52291-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4) and ASB-1004_83-85(20150619) (240-52291-5) were analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 06/28/2015, prepared on 06/29/2015 and 07/06/2015 and analyzed on 06/30/2015, 07/01/2015 and 07/07/2015.

1,4-Dichlorobenzene failed the recovery criteria low for LCS 240-187216/5-A. Refer to the QC report for details.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Method(s) 8270C: The laboratory control sample (LCS) for 187216 recovered outside control limits for the following analyte: 1,4-Dichlorobenzene. The associated sample(s) was re-prepared and/or re-analyzed outside holding time. Both sets of data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4) and ASB-1004_83-85(20150619) (240-52291-5) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/23/2015 and analyzed on 06/25/2015, 06/26/2015 and 06/27/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate and Di-n-butyl phthalate were detected in method blank MB 240-186302/12-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Nitrobenzene-d5 (Surr) failed the surrogate recovery criteria low for ASB-1004_60-62(20150619) (240-52291-2). Nitrobenzene-d5 (Surr) failed the surrogate recovery criteria low for ASB-1004_69-70(20150619) (240-52291-3). Nitrobenzene-d5 (Surr) failed the surrogate recovery criteria low for ASB-1004_69-70(20150619)MS (240-52291-3MS). Nitrobenzene-d5 (Surr) failed the surrogate recovery criteria low for ASB-1004_69-70(20150619)MSD (240-52291-3MSD). Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample ASB-1004_69-70(20150619)MS (240-52291-3) in batch 240-187094. 2,4-Dinitrophenol failed the recovery criteria high. Several analytes failed the recovery criteria low for the MSD of sample ASB-1004_69-70(20150619)MSD (240-52291-3) in batch 240-187094. Several analytes failed the recovery criteria high. Refer to the QC report for details.

Samples ASB-1004_60-62(20150619) (240-52291-2)[20X], ASB-1004_69-70(20150619) (240-52291-3)[25X] and ASB-1004_83-85(20150619) (240-52291-5)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: The following samples was diluted due to the nature of the sample matrix: ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_60-62(20150619) MS (240-52291-M-2-N MS), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_69-70(20150619) MS (240-52291-I-3-B MS), ASB-1004_69-70(20150619) MSD (240-52291-I-3-C MSD), ASB-1004_83-85(20150619) (240-52291-5) and (240-52289-C-4-C) and (240-52289-C-4-D MS). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4), ASB-1004_83-85(20150619) (240-52291-5) and MB01(20150619) (240-52291-6) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared on 06/25/2015 and analyzed on 06/25/2015 and 06/26/2015.

Samples ASB-1004_60-62(20150619) (240-52291-2)[100X], ASB-1004_69-70(20150619) (240-52291-3)[100X], ASB-1004_79-80(20150619) (240-52291-4)[10X] and ASB-1004_83-85(20150619) (240-52291-5)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4) and ASB-1004_83-85(20150619) (240-52291-5) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/27/2015 and analyzed on 06/29/2015 and

06/30/2015.

Samples ASB-1004_60-62(20150619) (240-52291-2)[500X] and ASB-1004_69-70(20150619) (240-52291-3)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI DRO Mix: ASB-1004_60-62(20150619) (240-52291-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4) and ASB-1004_83-85(20150619) (240-52291-5) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 06/28/2015, prepared on 06/29/2015 and 06/30/2015 and analyzed on 06/30/2015 and 07/01/2015.

Several analytes were detected in method blank LB 240-187116/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Copper and Nickel were detected in method blank LB 240-187116/1-D at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Antimony, Arsenic and Lead were detected in method blank LB 240-187117/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Copper was detected in method blank LB 240-187117/1-D at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Barium, Lead and Potassium were detected in method blank MB 240-187231/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Antimony, Cadmium and Lead were detected in method blank MB 240-187247/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Calcium and Manganese failed the recovery criteria high for the MS of sample 240-52266-2 in batch 240-187366. Calcium failed the recovery criteria high for the MSD of sample 240-52266-2 in batch 240-187366. Zinc failed the recovery criteria low for the MS of sample 240-52266-2 in batch 240-187549. Lead and Zinc failed the recovery criteria low for the MS of sample ASB-1004_60-62(20150619)MS (240-52291-2) in batch 240-187549. Lead failed the recovery criteria low for the MSD of sample ASB-1004_60-62(20150619)MSD (240-52291-2) in batch 240-187549. Iron, Manganese and Zinc failed the recovery criteria high. Refer to the QC report for details.

Samples ASB-1004_60-62(20150619) (240-52291-2)[5X] and ASB-1004_60-62(20150619) (240-52291-2)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4) and ASB-1004_83-85(20150619) (240-52291-5) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/24/2015 and analyzed on 06/25/2015.

Zinc was detected in method blank MB 240-186553/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample 240-52266-1 in batch 240-186732. Aluminum, Barium and Iron failed the recovery criteria high. For the MSD of sample 240-52266-1 in batch 240-186732, Antimony failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, Calcium, Lead, Magnesium and Manganese exceeded the RPD limit. Refer to the QC report for details.

Sample ASB-1004_60-62(20150619) (240-52291-2)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 3010A: The matrix spike and matrix spike duplicate (MS/MSD) was spiked post preservation due to reprep of the batch. Batch includes: ASB-1004_60-62(20150619) (240-52291-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4) and ASB-1004_83-85(20150619) (240-52291-5) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 06/28/2015, prepared on 06/29/2015 and analyzed on 06/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4) and ASB-1004_83-85(20150619) (240-52291-5) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/24/2015 and analyzed on 06/26/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4) and ASB-1004_83-85(20150619) (240-52291-5) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 06/24/2015 and 06/29/2015 and analyzed on 06/25/2015 and 06/30/2015.

Sample ASB-1004_60-62(20150619) (240-52291-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 7196A: The following sample was diluted for hexavalent chromium due to the nature of the sample matrix: ASB-1004_60-62(20150619) (240-52291-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4) and ASB-1004_83-85(20150619) (240-52291-5) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 07/01/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples ASB-1004_37-40(20150619) (240-52291-1), ASB-1004_60-62(20150619) (240-52291-2), ASB-1004_69-70(20150619) (240-52291-3), ASB-1004_79-80(20150619) (240-52291-4) and ASB-1004_83-85(20150619) (240-52291-5) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/23/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52291-1	**ASB-1004_37-40(20150619)**					
Methyl acetate		160	J	690	ug/Kg	8260B
Benzo[a]anthracene		6.2	J	400	ug/Kg	8270C
Benzo[a]pyrene		4.1	J	400	ug/Kg	8270C
Benzo[b]fluoranthene		6.8	J	400	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		60	J B	400	ug/Kg	8270C
Caprolactam		54	J	400	ug/Kg	8270C
Chrysene		6.0	J	400	ug/Kg	8270C
Di-n-butyl phthalate		42	J B	400	ug/Kg	8270C
Fluoranthene		14	J	400	ug/Kg	8270C
Naphthalene		4.4	J	400	ug/Kg	8270C
Phenanthrene		15	J	400	ug/Kg	8270C
Pyrene		12	J	400	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		4.1	J	13	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		4.1	J	12	mg/Kg	WI-DRO
Aluminum		9300		22	mg/Kg	6010B
Barium		21	J	22	mg/Kg	6010B
Beryllium		0.60		0.55	mg/Kg	6010B
Calcium		11000		550	mg/Kg	6010B
Cadmium		0.030	J	0.22	mg/Kg	6010B
Cobalt		12		5.5	mg/Kg	6010B
Chromium		16		0.55	mg/Kg	6010B
Copper		12		2.7	mg/Kg	6010B
Iron		13000		11	mg/Kg	6010B
Potassium		5300		550	mg/Kg	6010B
Magnesium		5000		550	mg/Kg	6010B
Manganese		210		1.6	mg/Kg	6010B
Sodium		95	J	550	mg/Kg	6010B
Nickel		22		4.4	mg/Kg	6010B
Vanadium		6.7		5.5	mg/Kg	6010B
Zinc		20	B	2.2	mg/Kg	6010B
Arsenic		4.3		1.1	mg/Kg	6010B
Lead		2.6		0.33	mg/Kg	6010B
Cr (III)		16		2.4	mg/Kg	7196A
Percent Solids		82		0.10	%	Moisture
Percent Moisture		18		0.10	%	Moisture
TCLP						
Arsenic		0.0081	J B	0.50	mg/L	6010B
Barium		0.46	J B	10	mg/L	6010B
Cadmium		0.00054	J	0.10	mg/L	6010B
Calcium		400	B	5.0	mg/L	6010B
Chromium		0.0036	J B	0.50	mg/L	6010B
Cobalt		0.059		0.050	mg/L	6010B
Iron		0.32	B	0.10	mg/L	6010B
Lead		0.046	J B	0.50	mg/L	6010B
Magnesium		89	B	5.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Manganese		8.2	B	0.015	mg/L	6010B
Nickel		0.070	B	0.040	mg/L	6010B
Potassium		13	B	5.0	mg/L	6010B
Selenium		0.0079	J B	0.25	mg/L	6010B
Zinc		0.16	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52291-2	**ASB-1004_60-62(20150619)**					
cis-1,2-Dichloroethene		20000	J	120000	ug/Kg	8260B
Ethylbenzene		640000		120000	ug/Kg	8260B
Isopropylbenzene		39000	J	120000	ug/Kg	8260B
Methylcyclohexane		36000	J	230000	ug/Kg	8260B
m-Xylene & p-Xylene		1700000		120000	ug/Kg	8260B
Naphthalene		210000		120000	ug/Kg	8260B
n-Butylbenzene		210000		120000	ug/Kg	8260B
N-Propylbenzene		97000	J	120000	ug/Kg	8260B
o-Xylene		780000		120000	ug/Kg	8260B
p-Isopropyltoluene		21000	J	120000	ug/Kg	8260B
sec-Butylbenzene		26000	J	120000	ug/Kg	8260B
Toluene		330000		120000	ug/Kg	8260B
Trichloroethene		30000	J	120000	ug/Kg	8260B
1,2,4-Trimethylbenzene		1600000		120000	ug/Kg	8260B
1,3,5-Trimethylbenzene		480000		120000	ug/Kg	8260B
1,1'-Biphenyl		410	J	7900	ug/Kg	8270C
2-Methylnaphthalene		6800	J	7900	ug/Kg	8270C
Acenaphthene		320	J	7900	ug/Kg	8270C
Anthracene		230	J	7900	ug/Kg	8270C
Benzo[a]anthracene		380	J	7900	ug/Kg	8270C
Benzo[a]pyrene		200	J	7900	ug/Kg	8270C
Benzo[b]fluoranthene		380	J	7900	ug/Kg	8270C
Benzo[g,h,i]perylene		120	J	7900	ug/Kg	8270C
Benzo[k]fluoranthene		160	J	7900	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		7700	J B	7900	ug/Kg	8270C
Chrysene		480	J	7900	ug/Kg	8270C
Dibenzofuran		280	J	7900	ug/Kg	8270C
Fluoranthene		1200	J	7900	ug/Kg	8270C
Fluorene		390	J	7900	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		120	J	7900	ug/Kg	8270C
Naphthalene		32000		7900	ug/Kg	8270C
Phenanthrene		1800	J	7900	ug/Kg	8270C
Pyrene		1000	J	7900	ug/Kg	8270C
3 & 4 Methylphenol		630	J	9600	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		8700		1200	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		33000		5500	mg/Kg	WI-DRO
Aluminum		6100		21	mg/Kg	6010B
Antimony		110		1.1	mg/Kg	6010B
Barium		4000		210	mg/Kg	6010B
Beryllium		0.23	J	0.53	mg/Kg	6010B
Calcium		29000		530	mg/Kg	6010B
Cadmium		21		0.21	mg/Kg	6010B
Cobalt		26		5.3	mg/Kg	6010B
Chromium		340		0.53	mg/Kg	6010B
Copper		69		2.6	mg/Kg	6010B
Iron		19000		11	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Potassium		920		530	mg/Kg	6010B
Magnesium		5100		530	mg/Kg	6010B
Manganese		340		1.6	mg/Kg	6010B
Silver		0.39	J	0.53	mg/Kg	6010B
Sodium		840		530	mg/Kg	6010B
Nickel		16		4.2	mg/Kg	6010B
Vanadium		8.0		5.3	mg/Kg	6010B
Zinc		5900	B	21	mg/Kg	6010B
Arsenic		25		1.1	mg/Kg	6010B
Lead		6000		3.2	mg/Kg	6010B
Selenium		4.5		0.53	mg/Kg	6010B
Mercury		0.14		0.13	mg/Kg	7471A
Cr (III)		340		2.4	mg/Kg	7196A
Percent Solids		83		0.10	%	Moisture
Percent Moisture		17		0.10	%	Moisture
TCLP						
Benzene		30		25	ug/L	8260B
Trichloroethene		190		25	ug/L	8260B
2-Methylphenol		0.022		0.016	mg/L	8270C
3 & 4 Methylphenol		0.065		0.016	mg/L	8270C
Aluminum		1.1		0.20	mg/L	6010B
Antimony		1.9	B	0.30	mg/L	6010B
Arsenic		0.12	J B	0.50	mg/L	6010B
Barium		0.76	J	10	mg/L	6010B
Beryllium		0.00027	J	0.0050	mg/L	6010B
Cadmium		0.053	J B	0.10	mg/L	6010B
Calcium		380		5.0	mg/L	6010B
Chromium		0.014	J	0.50	mg/L	6010B
Cobalt		0.25		0.050	mg/L	6010B
Copper		0.070	J B	1.0	mg/L	6010B
Iron		35		0.10	mg/L	6010B
Lead		250	B	25	mg/L	6010B
Magnesium		17		5.0	mg/L	6010B
Manganese		3.4		0.015	mg/L	6010B
Nickel		0.12		0.040	mg/L	6010B
Potassium		3.3	J	5.0	mg/L	6010B
Selenium		0.0068	J	0.25	mg/L	6010B
Zinc		25		5.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52291-3	**ASB-1004_69-70(20150619)**					
Cyclohexane		8000	J	13000	ug/Kg	8260B
Ethylbenzene		7700		6700	ug/Kg	8260B
Isopropylbenzene		8000		6700	ug/Kg	8260B
Methylcyclohexane		62000		13000	ug/Kg	8260B
m-Xylene & p-Xylene		7700		6700	ug/Kg	8260B
Naphthalene		26000		6700	ug/Kg	8260B
n-Butylbenzene		32000		6700	ug/Kg	8260B
N-Propylbenzene		16000		6700	ug/Kg	8260B
o-Xylene		640	J	6700	ug/Kg	8260B
p-Isopropyltoluene		4700	J	6700	ug/Kg	8260B
sec-Butylbenzene		7600		6700	ug/Kg	8260B
Toluene		320	J	6700	ug/Kg	8260B
1,2,4-Trimethylbenzene		140000		6700	ug/Kg	8260B
1,3,5-Trimethylbenzene		1900	J	6700	ug/Kg	8260B
1,1'-Biphenyl		230	J	8800	ug/Kg	8270C
2-Methylnaphthalene		16000		8800	ug/Kg	8270C
Acenaphthene		220	J	8800	ug/Kg	8270C
Anthracene		180	J	8800	ug/Kg	8270C
Benzo[a]anthracene		240	J	8800	ug/Kg	8270C
Benzo[a]pyrene		180	J	8800	ug/Kg	8270C
Benzo[b]fluoranthene		250	J	8800	ug/Kg	8270C
Benzo[g,h,i]perylene		130	J	8800	ug/Kg	8270C
Benzo[k]fluoranthene		110	J	8800	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		7400	J	8800	ug/Kg	8270C
Chrysene		290	J	8800	ug/Kg	8270C
Fluoranthene		690	J	8800	ug/Kg	8270C
Fluorene		290	J	8800	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		110	J	8800	ug/Kg	8270C
Naphthalene		6100	J	8800	ug/Kg	8270C
Phenanthrene		790	J	8800	ug/Kg	8270C
Pyrene		570	J	8800	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		9400		1000	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		3700		490	mg/Kg	WI-DRO
Aluminum		710		16	mg/Kg	6010B
Antimony		4.6		0.79	mg/Kg	6010B
Barium		820		16	mg/Kg	6010B
Beryllium		0.057	J	0.39	mg/Kg	6010B
Calcium		11000		390	mg/Kg	6010B
Cadmium		12		0.16	mg/Kg	6010B
Cobalt		1.9	J	3.9	mg/Kg	6010B
Chromium		16		0.39	mg/Kg	6010B
Copper		8.9		2.0	mg/Kg	6010B
Iron		3800		7.9	mg/Kg	6010B
Potassium		250	J	390	mg/Kg	6010B
Magnesium		2900		390	mg/Kg	6010B
Manganese		66		1.2	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Sodium		84	J	390	mg/Kg	6010B
Nickel		2.7	J	3.1	mg/Kg	6010B
Vanadium		2.3	J	3.9	mg/Kg	6010B
Zinc		130	B	1.6	mg/Kg	6010B
Arsenic		1.4		0.79	mg/Kg	6010B
Lead		230		0.24	mg/Kg	6010B
Selenium		2.7		0.39	mg/Kg	6010B
Mercury		0.032	J	0.099	mg/Kg	7471A
Cr (III)		16		2.2	mg/Kg	7196A
Percent Solids		92		0.10	%	Moisture
Percent Moisture		7.8		0.10	%	Moisture
TCLP						
Antimony		0.0029	J	0.30	mg/L	6010B
Arsenic		0.0096	J B	0.50	mg/L	6010B
Barium		2.0	J B	10	mg/L	6010B
Cadmium		0.00085	J	0.10	mg/L	6010B
Calcium		400	B	5.0	mg/L	6010B
Chromium		0.0022	J B	0.50	mg/L	6010B
Cobalt		0.021	J	0.050	mg/L	6010B
Copper		0.0019	J B	1.0	mg/L	6010B
Iron		0.81	B	0.10	mg/L	6010B
Lead		0.12	J B	0.50	mg/L	6010B
Magnesium		33	B	5.0	mg/L	6010B
Manganese		1.3	B	0.015	mg/L	6010B
Nickel		0.033	J B	0.040	mg/L	6010B
Potassium		2.9	J B	5.0	mg/L	6010B
Selenium		0.0052	J B	0.25	mg/L	6010B
Zinc		0.40	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52291-4	**ASB-1004_79-80(20150619)**					
m-Xylene & p-Xylene		29	J	280	ug/Kg	8260B
1,2,4-Trimethylbenzene		20	J	280	ug/Kg	8260B
Bis(2-ethylhexyl) phthalate		39	J B	380	ug/Kg	8270C
Caprolactam		60	J	380	ug/Kg	8270C
Diethyl phthalate		25	J	380	ug/Kg	8270C
Di-n-butyl phthalate		39	J B	380	ug/Kg	8270C
Isophorone		18	J	380	ug/Kg	8270C
Phenol		19	J	380	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		67	J	120	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		5.2	J	11	mg/Kg	WI-DRO
Aluminum		1200		16	mg/Kg	6010B
Barium		18		16	mg/Kg	6010B
Beryllium		0.11	J	0.41	mg/Kg	6010B
Calcium		19000		410	mg/Kg	6010B
Cadmium		0.071	J	0.16	mg/Kg	6010B
Cobalt		2.2	J	4.1	mg/Kg	6010B
Chromium		3.9		0.41	mg/Kg	6010B
Copper		3.9		2.0	mg/Kg	6010B
Iron		5200		8.1	mg/Kg	6010B
Potassium		500		410	mg/Kg	6010B
Magnesium		7200		410	mg/Kg	6010B
Manganese		500		1.2	mg/Kg	6010B
Sodium		57	J	410	mg/Kg	6010B
Nickel		7.1		3.2	mg/Kg	6010B
Vanadium		5.4		4.1	mg/Kg	6010B
Zinc		7.2	B	1.6	mg/Kg	6010B
Arsenic		1.2		0.81	mg/Kg	6010B
Lead		2.4		0.24	mg/Kg	6010B
Cr (III)		3.9		2.3	mg/Kg	7196A
Percent Solids		87		0.10	%	Moisture
Percent Moisture		13		0.10	%	Moisture
TCLP						
Arsenic		0.013	J B	0.50	mg/L	6010B
Barium		0.58	J B	10	mg/L	6010B
Cadmium		0.00025	J	0.10	mg/L	6010B
Calcium		550	B	5.0	mg/L	6010B
Chromium		0.0035	J B	0.50	mg/L	6010B
Cobalt		0.026	J	0.050	mg/L	6010B
Iron		0.020	J B	0.10	mg/L	6010B
Lead		0.037	J B	0.50	mg/L	6010B
Magnesium		24	B	5.0	mg/L	6010B
Manganese		7.5	B	0.015	mg/L	6010B
Nickel		0.090	B	0.040	mg/L	6010B
Potassium		2.9	J B	5.0	mg/L	6010B
Zinc		0.20	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52291-5	**ASB-1004_83-85(20150619)**					
Methyl acetate		74	J	570	ug/Kg	8260B
m-Xylene & p-Xylene		83	J	290	ug/Kg	8260B
o-Xylene		36	J	290	ug/Kg	8260B
Toluene		21	J	290	ug/Kg	8260B
1,2,4-Trimethylbenzene		110	J	290	ug/Kg	8260B
1,3,5-Trimethylbenzene		29	J	290	ug/Kg	8260B
1,1'-Biphenyl		87	J	1900	ug/Kg	8270C
2,4-Dimethylphenol		350	J	1900	ug/Kg	8270C
2-Methylnaphthalene		1600	J	1900	ug/Kg	8270C
Acenaphthene		360	J	1900	ug/Kg	8270C
Acenaphthylene		140	J	1900	ug/Kg	8270C
Anthracene		560	J	1900	ug/Kg	8270C
Benzo[a]anthracene		1000	J	1900	ug/Kg	8270C
Benzo[a]pyrene		750	J	1900	ug/Kg	8270C
Benzo[b]fluoranthene		1000	J	1900	ug/Kg	8270C
Benzo[g,h,i]perylene		300	J	1900	ug/Kg	8270C
Benzo[k]fluoranthene		490	J	1900	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		560	J B	1900	ug/Kg	8270C
Carbazole		320	J	1900	ug/Kg	8270C
Chrysene		1000	J	1900	ug/Kg	8270C
Dibenz(a,h)anthracene		110	J	1900	ug/Kg	8270C
Dibenzofuran		280	J	1900	ug/Kg	8270C
Fluoranthene		2400		1900	ug/Kg	8270C
Fluorene		550	J	1900	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		310	J	1900	ug/Kg	8270C
Naphthalene		2600		1900	ug/Kg	8270C
Phenanthrene		2500		1900	ug/Kg	8270C
Pyrene		2000		1900	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		430		110	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		18		11	mg/Kg	WI-DRO
Aluminum		2500		17	mg/Kg	6010B
Antimony		1.2		0.83	mg/Kg	6010B
Barium		490		17	mg/Kg	6010B
Beryllium		0.15	J	0.42	mg/Kg	6010B
Calcium		26000		420	mg/Kg	6010B
Cadmium		1.9		0.17	mg/Kg	6010B
Cobalt		4.0	J	4.2	mg/Kg	6010B
Chromium		15		0.42	mg/Kg	6010B
Copper		6.5		2.1	mg/Kg	6010B
Iron		9200		8.3	mg/Kg	6010B
Potassium		540		420	mg/Kg	6010B
Magnesium		8400		420	mg/Kg	6010B
Manganese		390		1.2	mg/Kg	6010B
Sodium		170	J	420	mg/Kg	6010B
Nickel		9.0		3.3	mg/Kg	6010B
Vanadium		12		4.2	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Zinc		81	B	1.7	mg/Kg	6010B
Arsenic		1.8		0.83	mg/Kg	6010B
Lead		81		0.25	mg/Kg	6010B
Selenium		0.58		0.42	mg/Kg	6010B
Mercury		0.020	J	0.11	mg/Kg	7471A
Cr (VI)		0.79	J	0.95	mg/Kg	7196A
Cr (III)		14		2.4	mg/Kg	7196A
Percent Solids		84		0.10	%	Moisture
Percent Moisture		16		0.10	%	Moisture
TCLP						
Trichloroethene		20	J	25	ug/L	8260B
Arsenic		0.011	J B	0.50	mg/L	6010B
Barium		2.1	J B	10	mg/L	6010B
Cadmium		0.00014	J	0.10	mg/L	6010B
Calcium		590	B	5.0	mg/L	6010B
Chromium		0.0027	J B	0.50	mg/L	6010B
Cobalt		0.028	J	0.050	mg/L	6010B
Iron		0.079	J B	0.10	mg/L	6010B
Lead		0.044	J B	0.50	mg/L	6010B
Magnesium		19	B	5.0	mg/L	6010B
Manganese		3.8	B	0.015	mg/L	6010B
Nickel		0.044	B	0.040	mg/L	6010B
Potassium		5.6	B	5.0	mg/L	6010B
Zinc		0.17	J	1.0	mg/L	6010B
240-52291-6TB	**MB01(20150619)**					
Methyl acetate		94	J	500	ug/Kg	8260B
WI Gasoline Range Organics (C6-C10)		230	J	1100	mg/Kg	WI-GRO

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction			SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction			SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction			SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method	Analyst	Analyst ID
SW846 8260B	Lata, Todd	TJL2
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Walpole, Barbara	BW
SW846 7471A	Sutherland, Aaron	ADS
SW846 7196A	Burns, Jill	JMB
SW846 7196A	Counts, Karen	KLC
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52291-1	ASB-1004_37-40(20150619)	Solid	06/19/2015 1330	06/20/2015 1030
240-52291-2	ASB-1004_60-62(20150619)	Solid	06/19/2015 1350	06/20/2015 1030
240-52291-3	ASB-1004_69-70(20150619)	Solid	06/19/2015 1420	06/20/2015 1030
240-52291-4	ASB-1004_79-80(20150619)	Solid	06/19/2015 1445	06/20/2015 1030
240-52291-5	ASB-1004_83-85(20150619)	Solid	06/19/2015 1515	06/20/2015 1030
240-52291-6TB	MB01(20150619)	Solid	06/19/2015 0000	06/20/2015 1030

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_37-40(20150619)

Lab Sample ID: 240-52291-1 Date Sampled: 06/19/2015 1330
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143843.D
Dilution:	1.0			Initial Weight/Volume:	8.816 g
Analysis Date:	06/23/2015 1959			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		310	1400
Allyl chloride		ND		42	690
Benzene		ND		12	350
Bromobenzene		ND		18	350
Bromochloromethane		ND		97	350
Bromodichloromethane		ND		53	350
Bromoform		ND		85	350
Bromomethane		ND		71	350
2-Butanone (MEK)		ND		100	1400
Carbon disulfide		ND		78	350
Carbon tetrachloride		ND		67	350
Chlorobenzene		ND		57	350
Chlorodibromomethane		ND		64	350
Chloroethane		ND		71	350
Chloroform		ND		50	350
Chloromethane		ND		67	350
2-Chlorotoluene		ND		57	350
4-Chlorotoluene		ND		36	350
cis-1,2-Dichloroethene		ND		53	350
cis-1,3-Dichloropropene		ND		31	350
Cyclohexane		ND		42	690
1,2-Dibromo-3-Chloropropane		ND		99	690
1,2-Dibromoethane		ND		44	350
Dibromomethane		ND		69	350
1,2-Dichlorobenzene		ND		26	350
1,3-Dichlorobenzene		ND		42	350
1,4-Dichlorobenzene		ND		57	350
Dichlorodifluoromethane		ND		85	350
1,1-Dichloroethane		ND		49	350
1,2-Dichloroethane		ND		74	350
1,1-Dichloroethene		ND		42	350
Dichlorofluoromethane		ND		46	690
1,2-Dichloropropane		ND		44	350
1,3-Dichloropropane		ND		32	350
2,2-Dichloropropane		ND		72	350
1,1-Dichloropropene		ND		53	350
Ethylbenzene		ND		49	350
Ethyl ether		ND		140	690
Hexachlorobutadiene		ND		61	350
2-Hexanone		ND		120	1400
Isopropylbenzene		ND		18	350
Methyl acetate		160	J	76	690
Methylcyclohexane		ND		53	690
Methylene Chloride		ND		120	350
4-Methyl-2-pentanone (MIBK)		ND		78	1400
Methyl tert butyl ether		ND		42	350

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_37-40(20150619)

Lab Sample ID: 240-52291-1 Date Sampled: 06/19/2015 1330
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143843.D
Dilution:	1.0			Initial Weight/Volume:	8.816 g
Analysis Date:	06/23/2015 1959			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		28	350
Naphthalene		ND		36	350
n-Butylbenzene		ND		29	350
N-Propylbenzene		ND		85	350
o-Xylene		ND		24	350
p-Isopropyltoluene		ND		35	350
sec-Butylbenzene		ND		22	350
Styrene		ND		37	350
tert-Butylbenzene		ND		47	350
1,1,1,2-Tetrachloroethane		ND		68	350
1,1,2,2-Tetrachloroethane		ND		60	350
Tetrachloroethene		ND		37	350
Tetrahydrofuran		ND		170	1400
Toluene		ND		14	350
trans-1,2-Dichloroethene		ND		36	350
trans-1,3-Dichloropropene		ND		36	350
1,2,3-Trichlorobenzene		ND		54	350
1,2,4-Trichlorobenzene		ND		42	350
1,1,1-Trichloroethane		ND		58	350
1,1,2-Trichloroethane		ND		120	350
Trichloroethene		ND		54	350
Trichlorofluoromethane		ND		49	350
1,2,3-Trichloropropane		ND		140	350
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		58	350
1,2,4-Trimethylbenzene		ND		18	350
1,3,5-Trimethylbenzene		ND		21	350
Vinyl chloride		ND		78	350

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	104		26 - 141
Dibromofluoromethane (Surr)	84		30 - 122
1,2-Dichloroethane-d4 (Surr)	104		39 - 128
Toluene-d8 (Surr)	85		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_37-40(20150619)

Lab Sample ID: 240-52291-1 Date Sampled: 06/19/2015 1330
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950764.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 1837			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1837				
Leach Date:	06/25/2015 2010				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		80 - 121
4-Bromofluorobenzene (Surr)	94		70 - 124
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	94		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_60-62(20150619)

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186562	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143868.D
Dilution:	333.333			Initial Weight/Volume:	8.695 g
Analysis Date:	06/24/2015 1801			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		100000	460000
Allyl chloride		ND		14000	230000
Benzene		ND		4200	120000
Bromobenzene		ND		6000	120000
Bromochloromethane		ND		32000	120000
Bromodichloromethane		ND		18000	120000
Bromoform		ND		28000	120000
Bromomethane		ND		24000	120000
2-Butanone (MEK)		ND		34000	460000
Carbon disulfide		ND		26000	120000
Carbon tetrachloride		ND		22000	120000
Chlorobenzene		ND		19000	120000
Chlorodibromomethane		ND		21000	120000
Chloroethane		ND		24000	120000
Chloroform		ND		17000	120000
Chloromethane		ND		22000	120000
2-Chlorotoluene		ND		19000	120000
4-Chlorotoluene		ND		12000	120000
cis-1,2-Dichloroethene		20000	J	18000	120000
cis-1,3-Dichloropropene		ND		10000	120000
Cyclohexane		ND		14000	230000
1,2-Dibromo-3-Chloropropane		ND		33000	230000
1,2-Dibromoethane		ND		15000	120000
Dibromomethane		ND		23000	120000
1,2-Dichlorobenzene		ND		8800	120000
1,3-Dichlorobenzene		ND		14000	120000
1,4-Dichlorobenzene		ND		19000	120000
Dichlorodifluoromethane		ND		28000	120000
1,1-Dichloroethane		ND		16000	120000
1,2-Dichloroethane		ND		25000	120000
1,1-Dichloroethene		ND		14000	120000
Dichlorofluoromethane		ND		15000	230000
1,2-Dichloropropane		ND		15000	120000
1,3-Dichloropropane		ND		11000	120000
2,2-Dichloropropane		ND		24000	120000
1,1-Dichloropropene		ND		18000	120000
Ethylbenzene		640000		16000	120000
Ethyl ether		ND		45000	230000
Hexachlorobutadiene		ND		20000	120000
2-Hexanone		ND		39000	460000
Isopropylbenzene		39000	J	6000	120000
Methyl acetate		ND		26000	230000
Methylcyclohexane		36000	J	18000	230000
Methylene Chloride		ND		39000	120000
4-Methyl-2-pentanone (MIBK)		ND		26000	460000
Methyl tert butyl ether		ND		14000	120000

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_60-62(20150619)

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186562	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143868.D
Dilution:	333.333			Initial Weight/Volume:	8.695 g
Analysis Date:	06/24/2015 1801			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		1700000		9300	120000
Naphthalene		210000		12000	120000
n-Butylbenzene		210000		9700	120000
N-Propylbenzene		97000	J	28000	120000
o-Xylene		780000		7900	120000
p-Isopropyltoluene		21000	J	12000	120000
sec-Butylbenzene		26000	J	7400	120000
Styrene		ND		13000	120000
tert-Butylbenzene		ND		16000	120000
1,1,1,2-Tetrachloroethane		ND		23000	120000
1,1,2,2-Tetrachloroethane		ND		20000	120000
Tetrachloroethene		ND		13000	120000
Tetrahydrofuran		ND		56000	460000
Toluene		330000		4600	120000
trans-1,2-Dichloroethene		ND		12000	120000
trans-1,3-Dichloropropene		ND		12000	120000
1,2,3-Trichlorobenzene		ND		18000	120000
1,2,4-Trichlorobenzene		ND		14000	120000
1,1,1-Trichloroethane		ND		19000	120000
1,1,2-Trichloroethane		ND		38000	120000
Trichloroethene		30000	J	18000	120000
Trichlorofluoromethane		ND		16000	120000
1,2,3-Trichloropropane		ND		48000	120000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		19000	120000
1,2,4-Trimethylbenzene		1600000		6000	120000
1,3,5-Trimethylbenzene		480000		7000	120000
Vinyl chloride		ND		26000	120000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	330	X	26 - 141
Dibromofluoromethane (Surr)	295	X	30 - 122
1,2-Dichloroethane-d4 (Surr)	300	X	39 - 128
Toluene-d8 (Surr)	319	X	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_60-62(20150619)

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950765.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 1901			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1901				
Leach Date:	06/25/2015 2010				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		30		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		190		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 121
4-Bromofluorobenzene (Surr)	97		70 - 124
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	99		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_69-70(20150619)

Lab Sample ID: 240-52291-3 Date Sampled: 06/19/2015 1420
Client Matrix: Solid % Moisture: 7.8 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186562	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143867.D
Dilution:	25			Initial Weight/Volume:	10.082 g
Analysis Date:	06/24/2015 1740			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		6100	27000
Allyl chloride		ND		810	13000
Benzene		ND		240	6700
Bromobenzene		ND		350	6700
Bromochloromethane		ND		1900	6700
Bromodichloromethane		ND		1000	6700
Bromoform		ND		1600	6700
Bromomethane		ND		1400	6700
2-Butanone (MEK)		ND		2000	27000
Carbon disulfide		ND		1500	6700
Carbon tetrachloride		ND		1300	6700
Chlorobenzene		ND		1100	6700
Chlorodibromomethane		ND		1200	6700
Chloroethane		ND		1400	6700
Chloroform		ND		970	6700
Chloromethane		ND		1300	6700
2-Chlorotoluene		ND		1100	6700
4-Chlorotoluene		ND		700	6700
cis-1,2-Dichloroethene		ND		1000	6700
cis-1,3-Dichloropropene		ND		590	6700
Cyclohexane		8000	J	810	13000
1,2-Dibromo-3-Chloropropane		ND		1900	13000
1,2-Dibromoethane		ND		860	6700
Dibromomethane		ND		1300	6700
1,2-Dichlorobenzene		ND		510	6700
1,3-Dichlorobenzene		ND		810	6700
1,4-Dichlorobenzene		ND		1100	6700
Dichlorodifluoromethane		ND		1600	6700
1,1-Dichloroethane		ND		940	6700
1,2-Dichloroethane		ND		1400	6700
1,1-Dichloroethene		ND		810	6700
Dichlorofluoromethane		ND		890	13000
1,2-Dichloropropane		ND		860	6700
1,3-Dichloropropane		ND		620	6700
2,2-Dichloropropane		ND		1400	6700
1,1-Dichloropropene		ND		1000	6700
Ethylbenzene		7700		940	6700
Ethyl ether		ND		2600	13000
Hexachlorobutadiene		ND		1200	6700
2-Hexanone		ND		2300	27000
Isopropylbenzene		8000		350	6700
Methyl acetate		ND		1500	13000
Methylcyclohexane		62000		1000	13000
Methylene Chloride		ND		2300	6700
4-Methyl-2-pentanone (MIBK)		ND		1500	27000
Methyl tert butyl ether		ND		810	6700

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_69-70(20150619)

Lab Sample ID: 240-52291-3 Date Sampled: 06/19/2015 1420
Client Matrix: Solid % Moisture: 7.8 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186562	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143867.D
Dilution:	25			Initial Weight/Volume:	10.082 g
Analysis Date:	06/24/2015 1740			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		7700		540	6700
Naphthalene		26000		700	6700
n-Butylbenzene		32000		560	6700
N-Propylbenzene		16000		1600	6700
o-Xylene		640	J	460	6700
p-Isopropyltoluene		4700	J	670	6700
sec-Butylbenzene		7600		430	6700
Styrene		ND		730	6700
tert-Butylbenzene		ND		910	6700
1,1,1,2-Tetrachloroethane		ND		1300	6700
1,1,2,2-Tetrachloroethane		ND		1200	6700
Tetrachloroethene		ND		730	6700
Tetrahydrofuran		ND		3200	27000
Toluene		320	J	270	6700
trans-1,2-Dichloroethene		ND		700	6700
trans-1,3-Dichloropropene		ND		700	6700
1,2,3-Trichlorobenzene		ND		1000	6700
1,2,4-Trichlorobenzene		ND		810	6700
1,1,1-Trichloroethane		ND		1100	6700
1,1,2-Trichloroethane		ND		2200	6700
Trichloroethene		ND		1000	6700
Trichlorofluoromethane		ND		940	6700
1,2,3-Trichloropropane		ND		2800	6700
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1100	6700
1,2,4-Trimethylbenzene		140000		350	6700
1,3,5-Trimethylbenzene		1900	J	400	6700
Vinyl chloride		ND		1500	6700

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	142	X	26 - 141
Dibromofluoromethane (Surr)	107		30 - 122
1,2-Dichloroethane-d4 (Surr)	143	X	39 - 128
Toluene-d8 (Surr)	126		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_69-70(20150619)

Lab Sample ID: 240-52291-3 Date Sampled: 06/19/2015 1420
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950766.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 1925			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1925				
Leach Date:	06/25/2015 2010				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90		80 - 121
4-Bromofluorobenzene (Surr)	91		70 - 124
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	95		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_79-80(20150619)

Lab Sample ID: 240-52291-4 Date Sampled: 06/19/2015 1445
Client Matrix: Solid % Moisture: 12.6 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143844.D
Dilution:	1.0			Initial Weight/Volume:	10.135 g
Analysis Date:	06/23/2015 2020			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		260	1100
Allyl chloride		ND		34	560
Benzene		ND		10	280
Bromobenzene		ND		15	280
Bromochloromethane		ND		79	280
Bromodichloromethane		ND		43	280
Bromoform		ND		69	280
Bromomethane		ND		58	280
2-Butanone (MEK)		ND		82	1100
Carbon disulfide		ND		63	280
Carbon tetrachloride		ND		54	280
Chlorobenzene		ND		46	280
Chlorodibromomethane		ND		52	280
Chloroethane		ND		58	280
Chloroform		ND		41	280
Chloromethane		ND		54	280
2-Chlorotoluene		ND		46	280
4-Chlorotoluene		ND		29	280
cis-1,2-Dichloroethene		ND		43	280
cis-1,3-Dichloropropene		ND		25	280
Cyclohexane		ND		34	560
1,2-Dibromo-3-Chloropropane		ND		80	560
1,2-Dibromoethane		ND		36	280
Dibromomethane		ND		56	280
1,2-Dichlorobenzene		ND		21	280
1,3-Dichlorobenzene		ND		34	280
1,4-Dichlorobenzene		ND		46	280
Dichlorodifluoromethane		ND		69	280
1,1-Dichloroethane		ND		40	280
1,2-Dichloroethane		ND		60	280
1,1-Dichloroethene		ND		34	280
Dichlorofluoromethane		ND		37	560
1,2-Dichloropropane		ND		36	280
1,3-Dichloropropane		ND		26	280
2,2-Dichloropropane		ND		59	280
1,1-Dichloropropene		ND		43	280
Ethylbenzene		ND		40	280
Ethyl ether		ND		110	560
Hexachlorobutadiene		ND		50	280
2-Hexanone		ND		95	1100
Isopropylbenzene		ND		15	280
Methyl acetate		ND		62	560
Methylcyclohexane		ND		43	560
Methylene Chloride		ND		96	280
4-Methyl-2-pentanone (MIBK)		ND		63	1100
Methyl tert butyl ether		ND		34	280

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_79-80(20150619)

Lab Sample ID: 240-52291-4 Date Sampled: 06/19/2015 1445
Client Matrix: Solid % Moisture: 12.6 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143844.D
Dilution:	1.0			Initial Weight/Volume:	10.135 g
Analysis Date:	06/23/2015 2020			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		29	J	23	280
Naphthalene		ND		29	280
n-Butylbenzene		ND		24	280
N-Propylbenzene		ND		69	280
o-Xylene		ND		19	280
p-Isopropyltoluene		ND		28	280
sec-Butylbenzene		ND		18	280
Styrene		ND		30	280
tert-Butylbenzene		ND		38	280
1,1,1,2-Tetrachloroethane		ND		55	280
1,1,2,2-Tetrachloroethane		ND		49	280
Tetrachloroethene		ND		30	280
Tetrahydrofuran		ND		140	1100
Toluene		ND		11	280
trans-1,2-Dichloroethene		ND		29	280
trans-1,3-Dichloropropene		ND		29	280
1,2,3-Trichlorobenzene		ND		44	280
1,2,4-Trichlorobenzene		ND		34	280
1,1,1-Trichloroethane		ND		47	280
1,1,2-Trichloroethane		ND		94	280
Trichloroethene		ND		44	280
Trichlorofluoromethane		ND		40	280
1,2,3-Trichloropropane		ND		120	280
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		47	280
1,2,4-Trimethylbenzene		20	J	15	280
1,3,5-Trimethylbenzene		ND		17	280
Vinyl chloride		ND		63	280

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	99		26 - 141
Dibromofluoromethane (Surr)	83		30 - 122
1,2-Dichloroethane-d4 (Surr)	104		39 - 128
Toluene-d8 (Surr)	82		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_79-80(20150619)

Lab Sample ID: 240-52291-4 Date Sampled: 06/19/2015 1445
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950767.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 1949			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1949				
Leach Date:	06/25/2015 2010				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 121
4-Bromofluorobenzene (Surr)	93		70 - 124
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	98		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_83-85(20150619)

Lab Sample ID: 240-52291-5 Date Sampled: 06/19/2015 1515
Client Matrix: Solid % Moisture: 16.1 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143845.D
Dilution:	1.0			Initial Weight/Volume:	10.398 g
Analysis Date:	06/23/2015 2042			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		260	1100
Allyl chloride		ND		34	570
Benzene		ND		10	290
Bromobenzene		ND		15	290
Bromochloromethane		ND		80	290
Bromodichloromethane		ND		44	290
Bromoform		ND		70	290
Bromomethane		ND		58	290
2-Butanone (MEK)		ND		84	1100
Carbon disulfide		ND		64	290
Carbon tetrachloride		ND		55	290
Chlorobenzene		ND		47	290
Chlorodibromomethane		ND		53	290
Chloroethane		ND		58	290
Chloroform		ND		41	290
Chloromethane		ND		55	290
2-Chlorotoluene		ND		47	290
4-Chlorotoluene		ND		30	290
cis-1,2-Dichloroethene		ND		44	290
cis-1,3-Dichloropropene		ND		25	290
Cyclohexane		ND		34	570
1,2-Dibromo-3-Chloropropane		ND		81	570
1,2-Dibromoethane		ND		37	290
Dibromomethane		ND		57	290
1,2-Dichlorobenzene		ND		22	290
1,3-Dichlorobenzene		ND		34	290
1,4-Dichlorobenzene		ND		47	290
Dichlorodifluoromethane		ND		70	290
1,1-Dichloroethane		ND		40	290
1,2-Dichloroethane		ND		61	290
1,1-Dichloroethene		ND		34	290
Dichlorofluoromethane		ND		38	570
1,2-Dichloropropane		ND		37	290
1,3-Dichloropropane		ND		26	290
2,2-Dichloropropane		ND		60	290
1,1-Dichloropropene		ND		44	290
Ethylbenzene		ND		40	290
Ethyl ether		ND		110	570
Hexachlorobutadiene		ND		50	290
2-Hexanone		ND		96	1100
Isopropylbenzene		ND		15	290
Methyl acetate		74	J	63	570
Methylcyclohexane		ND		44	570
Methylene Chloride		ND		97	290
4-Methyl-2-pentanone (MIBK)		ND		64	1100
Methyl tert butyl ether		ND		34	290

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_83-85(20150619)

Lab Sample ID: 240-52291-5 Date Sampled: 06/19/2015 1515
Client Matrix: Solid % Moisture: 16.1 Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143845.D
Dilution:	1.0			Initial Weight/Volume:	10.398 g
Analysis Date:	06/23/2015 2042			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		83	J	23	290
Naphthalene		ND		30	290
n-Butylbenzene		ND		24	290
N-Propylbenzene		ND		70	290
o-Xylene		36	J	19	290
p-Isopropyltoluene		ND		29	290
sec-Butylbenzene		ND		18	290
Styrene		ND		31	290
tert-Butylbenzene		ND		39	290
1,1,1,2-Tetrachloroethane		ND		56	290
1,1,2,2-Tetrachloroethane		ND		49	290
Tetrachloroethene		ND		31	290
Tetrahydrofuran		ND		140	1100
Toluene		21	J	11	290
trans-1,2-Dichloroethene		ND		30	290
trans-1,3-Dichloropropene		ND		30	290
1,2,3-Trichlorobenzene		ND		45	290
1,2,4-Trichlorobenzene		ND		34	290
1,1,1-Trichloroethane		ND		48	290
1,1,2-Trichloroethane		ND		95	290
Trichloroethene		ND		45	290
Trichlorofluoromethane		ND		40	290
1,2,3-Trichloropropane		ND		120	290
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		48	290
1,2,4-Trimethylbenzene		110	J	15	290
1,3,5-Trimethylbenzene		29	J	17	290
Vinyl chloride		ND		64	290

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	109		26 - 141
Dibromofluoromethane (Surr)	90		30 - 122
1,2-Dichloroethane-d4 (Surr)	114		39 - 128
Toluene-d8 (Surr)	89		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_83-85(20150619)

Lab Sample ID: 240-52291-5 Date Sampled: 06/19/2015 1515
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950768.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 2013			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 2013				
Leach Date:	06/25/2015 2010				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		20	J	8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	99		70 - 124
Toluene-d8 (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	99		80 - 128

Client Sample ID: **MB01(20150619)**

Lab Sample ID: 240-52291-6TB
Client Matrix: Solid

Date Sampled: 06/19/2015 0000
Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143846.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	06/23/2015 2103			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		48	250
Chlorobenzene		ND		41	250
Chlorodibromomethane		ND		46	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		53	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		94	J	55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **MB01(20150619)**

Lab Sample ID: 240-52291-6TB Date Sampled: 06/19/2015 0000
Client Matrix: Solid Date Received: 06/20/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186224	Lab File ID:	143846.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	06/23/2015 2103			Final Weight/Volume:	10 mL
Prep Date:	06/22/2015 2107				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		43	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		42	250
1,1,2-Trichloroethane		ND		83	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		56	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	114		26 - 141
Dibromofluoromethane (Surr)	94		30 - 122
1,2-Dichloroethane-d4 (Surr)	121		39 - 128
Toluene-d8 (Surr)	97		33 - 134

Client Sample ID: **ASB-1004_37-40(20150619)**

Lab Sample ID: 240-52291-1 Date Sampled: 06/19/2015 1330
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186914	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-186302	Lab File ID:	50626017.D
Dilution:	1.0			Initial Weight/Volume:	30.28 g
Analysis Date:	06/26/2015 1648			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.2	400
2,2'-oxybis[1-chloropropane]		ND		12	400
2,4,5-Trichlorophenol		ND		30	400
2,4,6-Trichlorophenol		ND		11	400
2,4-Dichlorophenol		ND		24	400
2,4-Dimethylphenol		ND		24	400
2,4-Dinitrophenol		ND		25	1900
2,4-Dinitrotoluene		ND		21	400
2,6-Dinitrotoluene		ND		25	400
2-Chloronaphthalene		ND		0.55	400
2-Chlorophenol		ND		9.9	400
2-Methylnaphthalene		ND		0.61	400
2-Methylphenol		ND		13	400
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		10	400
3,3'-Dichlorobenzidine		ND		22	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		16	400
4-Chloro-3-methylphenol		ND		25	400
4-Chloroaniline		ND		21	400
4-Chlorophenyl phenyl ether		ND		16	400
4-Nitroaniline		ND		32	1900
4-Nitrophenol		ND		21	1900
Acenaphthene		ND		0.92	400
Acenaphthylene		ND		0.42	400
Acetophenone		ND		11	400
Anthracene		ND		0.95	400
Atrazine		ND		11	400
Benzaldehyde		ND		15	400
Benzo[a]anthracene		6.2	J	0.76	400
Benzo[a]pyrene		4.1	J	0.78	400
Benzo[b]fluoranthene		6.8	J	0.72	400
Benzo[g,h,i]perylene		ND		0.42	400
Benzo[k]fluoranthene		ND		0.82	400
Bis(2-chloroethoxy)methane		ND		27	400
Bis(2-chloroethyl)ether		ND		2.4	400
Bis(2-ethylhexyl) phthalate		60	J B	23	400
Butyl benzyl phthalate		ND		12	400
Caprolactam		54	J	45	400
Carbazole		ND		33	400
Chrysene		6.0	J	1.3	400
Dibenz(a,h)anthracene		ND		0.80	400
Dibenzofuran		ND		0.80	400
Diethyl phthalate		ND		19	400
Dimethyl phthalate		ND		21	400

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_37-40(20150619)

Lab Sample ID: 240-52291-1 Date Sampled: 06/19/2015 1330
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186914	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-186302	Lab File ID:	50626017.D
Dilution:	1.0			Initial Weight/Volume:	30.28 g
Analysis Date:	06/26/2015 1648			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		42	J B	18	400
Di-n-octyl phthalate		ND		9.6	400
Fluoranthene		14	J	0.67	400
Fluorene		ND		0.64	400
Hexachlorobenzene		ND		2.5	400
Hexachlorobutadiene		ND		6.8	400
Hexachlorocyclopentadiene		ND		9.8	1900
Hexachloroethane		ND		11	400
Indeno[1,2,3-cd]pyrene		ND		0.42	400
Isophorone		ND		16	400
Naphthalene		4.4	J	0.99	400
Nitrobenzene		ND		2.7	400
N-Nitrosodi-n-propylamine		ND		7.6	400
N-Nitrosodiphenylamine		ND		25	400
Pentachlorophenol		ND		11	400
Phenol		ND		8.9	400
Phenanthrene		15	J	0.89	400
Pyrene		12	J	0.53	400
3 & 4 Methylphenol		ND		24	490

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	51		24 - 110
2-Fluorophenol (Surr)	49		24 - 110
2,4,6-Tribromophenol (Surr)	40		10 - 110
Nitrobenzene-d5 (Surr)	50		20 - 110
Phenol-d5 (Surr)	53		26 - 110
Terphenyl-d14 (Surr)	54		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_37-40(20150619)

Lab Sample ID: 240-52291-1 Date Sampled: 06/19/2015 1330
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187215	Lab File ID:	50630017.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1958			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	83		30 - 110
2-Fluorophenol (Surr)	75		20 - 110
Nitrobenzene-d5 (Surr)	89		28 - 110
Phenol-d5 (Surr)	69		21 - 110
Terphenyl-d14 (Surr)	80		48 - 110
2,4,6-Tribromophenol (Surr)	80		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_60-62(20150619)

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186914	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-186302	Lab File ID:	50626027.D
Dilution:	20			Initial Weight/Volume:	30.13 g
Analysis Date:	06/26/2015 2055			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		410	J	84	7900
2,2'-oxybis[1-chloropropane]		ND		230	7900
2,4,5-Trichlorophenol		ND		600	7900
2,4,6-Trichlorophenol		ND		210	7900
2,4-Dichlorophenol		ND		480	7900
2,4-Dimethylphenol		ND		480	7900
2,4-Dinitrophenol		ND		510	39000
2,4-Dinitrotoluene		ND		410	7900
2,6-Dinitrotoluene		ND		510	7900
2-Chloronaphthalene		ND		11	7900
2-Chlorophenol		ND		200	7900
2-Methylnaphthalene		6800	J	12	7900
2-Methylphenol		ND		260	7900
2-Nitroaniline		ND		220	39000
2-Nitrophenol		ND		200	7900
3,3'-Dichlorobenzidine		ND		430	39000
3-Nitroaniline		ND		390	39000
4,6-Dinitro-2-methylphenol		ND		220	39000
4-Bromophenyl phenyl ether		ND		310	7900
4-Chloro-3-methylphenol		ND		510	7900
4-Chloroaniline		ND		410	7900
4-Chlorophenyl phenyl ether		ND		310	7900
4-Nitroaniline		ND		630	39000
4-Nitrophenol		ND		410	39000
Acenaphthene		320	J	18	7900
Acenaphthylene		ND		8.4	7900
Acetophenone		ND		220	7900
Anthracene		230	J	19	7900
Atrazine		ND		220	7900
Benzaldehyde		ND		290	7900
Benzo[a]anthracene		380	J	15	7900
Benzo[a]pyrene		200	J	15	7900
Benzo[b]fluoranthene		380	J	14	7900
Benzo[g,h,i]perylene		120	J	8.4	7900
Benzo[k]fluoranthene		160	J	16	7900
Bis(2-chloroethoxy)methane		ND		530	7900
Bis(2-chloroethyl)ether		ND		48	7900
Bis(2-ethylhexyl) phthalate		7700	J B	460	7900
Butyl benzyl phthalate		ND		240	7900
Caprolactam		ND		890	7900
Carbazole		ND		650	7900
Chrysene		480	J	26	7900
Dibenz(a,h)anthracene		ND		16	7900
Dibenzofuran		280	J	16	7900
Diethyl phthalate		ND		390	7900
Dimethyl phthalate		ND		410	7900

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_60-62(20150619)

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186914	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-186302	Lab File ID:	50626027.D
Dilution:	20			Initial Weight/Volume:	30.13 g
Analysis Date:	06/26/2015 2055			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		360	7900
Di-n-octyl phthalate		ND		190	7900
Fluoranthene		1200	J	13	7900
Fluorene		390	J	13	7900
Hexachlorobenzene		ND		51	7900
Hexachlorobutadiene		ND		130	7900
Hexachlorocyclopentadiene		ND		200	39000
Hexachloroethane		ND		220	7900
Indeno[1,2,3-cd]pyrene		120	J	8.4	7900
Isophorone		ND		310	7900
Naphthalene		32000		20	7900
Nitrobenzene		ND		53	7900
N-Nitrosodi-n-propylamine		ND		150	7900
N-Nitrosodiphenylamine		ND		510	7900
Pentachlorophenol		ND		220	7900
Phenol		ND		180	7900
Phenanthrene		1800	J	18	7900
Pyrene		1000	J	11	7900
3 & 4 Methylphenol		630	J	480	9600

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	53		24 - 110
2-Fluorophenol (Surr)	50		24 - 110
2,4,6-Tribromophenol (Surr)	54		10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	50		26 - 110
Terphenyl-d14 (Surr)	47		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_60-62(20150619)

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187584	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187216	Lab File ID:	50701025.D
Dilution:	4.0	Leach Batch:	240-187117	Initial Weight/Volume:	250 mL
Analysis Date:	07/01/2015 1936			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1114			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND	*	0.0014	0.016
2,4-Dinitrotoluene		ND		0.0010	0.016
Hexachlorobenzene		ND		0.00034	0.0032
Hexachlorobutadiene		ND		0.0011	0.016
Hexachloroethane		ND		0.00076	0.016
2-Methylphenol		0.022		0.00068	0.016
3 & 4 Methylphenol		0.065		0.0032	0.016
Nitrobenzene		ND		0.00016	0.016
Pentachlorophenol		ND		0.0011	0.016
Pyridine		ND		0.0014	0.016
2,4,5-Trichlorophenol		ND		0.0012	0.016
2,4,6-Trichlorophenol		ND		0.00096	0.016

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	49		30 - 110
2-Fluorophenol (Surr)	61		20 - 110
Nitrobenzene-d5 (Surr)	73		28 - 110
Phenol-d5 (Surr)	62		21 - 110
Terphenyl-d14 (Surr)	66		48 - 110
2,4,6-Tribromophenol (Surr)	67		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_60-62(20150619)**

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188138	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187986	Lab File ID:	50707008.D
Dilution:	4.0	Leach Batch:	240-187117	Initial Weight/Volume:	250 mL
Analysis Date:	07/07/2015 1228	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 0926			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND	H	0.0014	0.016
2,4-Dinitrotoluene		ND	H	0.0010	0.016
Hexachlorobenzene		ND	H	0.00034	0.0032
Hexachlorobutadiene		ND	H	0.0011	0.016
Hexachloroethane		ND	H F1	0.00076	0.016
2-Methylphenol		ND	H	0.00068	0.016
3 & 4 Methylphenol		0.053	H	0.0032	0.016
Nitrobenzene		ND	H	0.00016	0.016
Pentachlorophenol		ND	H	0.0011	0.016
Pyridine		ND	H	0.0014	0.016
2,4,5-Trichlorophenol		ND	H	0.0012	0.016
2,4,6-Trichlorophenol		ND	H	0.00096	0.016

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	58		30 - 110
2-Fluorophenol (Surr)	45		20 - 110
Nitrobenzene-d5 (Surr)	58		28 - 110
Phenol-d5 (Surr)	42		21 - 110
Terphenyl-d14 (Surr)	48		48 - 110
2,4,6-Tribromophenol (Surr)	60		23 - 110

Client Sample ID: **ASB-1004_69-70(20150619)**

Lab Sample ID: 240-52291-3 Date Sampled: 06/19/2015 1420
Client Matrix: Solid % Moisture: 7.8 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-187094	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-186302	Lab File ID:	50627018.D
Dilution:	25			Initial Weight/Volume:	30.46 g
Analysis Date:	06/27/2015 2020			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		230	J	93	8800
2,2'-oxybis[1-chloropropane]		ND		250	8800
2,4,5-Trichlorophenol		ND	F1	670	8800
2,4,6-Trichlorophenol		ND		240	8800
2,4-Dichlorophenol		ND	F1	530	8800
2,4-Dimethylphenol		ND	F1	530	8800
2,4-Dinitrophenol		ND	F1	560	43000
2,4-Dinitrotoluene		ND		450	8800
2,6-Dinitrotoluene		ND	F1	560	8800
2-Chloronaphthalene		ND		12	8800
2-Chlorophenol		ND		220	8800
2-Methylnaphthalene		16000		13	8800
2-Methylphenol		ND		290	8800
2-Nitroaniline		ND		240	43000
2-Nitrophenol		ND	F1	220	8800
3,3'-Dichlorobenzidine		ND	F1	480	43000
3-Nitroaniline		ND	F1	430	43000
4,6-Dinitro-2-methylphenol		ND		250	43000
4-Bromophenyl phenyl ether		ND		350	8800
4-Chloro-3-methylphenol		ND	F1	560	8800
4-Chloroaniline		ND	F1	450	8800
4-Chlorophenyl phenyl ether		ND		350	8800
4-Nitroaniline		ND	F1	690	43000
4-Nitrophenol		ND		450	43000
Acenaphthene		220	J	20	8800
Acenaphthylene		ND		9.3	8800
Acetophenone		ND	F1	250	8800
Anthracene		180	J	21	8800
Atrazine		ND		240	8800
Benzaldehyde		ND		320	8800
Benzo[a]anthracene		240	J	17	8800
Benzo[a]pyrene		180	J	17	8800
Benzo[b]fluoranthene		250	J	16	8800
Benzo[g,h,i]perylene		130	J	9.3	8800
Benzo[k]fluoranthene		110	J	18	8800
Bis(2-chloroethoxy)methane		ND	F1	590	8800
Bis(2-chloroethyl)ether		ND		53	8800
Bis(2-ethylhexyl) phthalate		7400	J	510	8800
Butyl benzyl phthalate		ND		270	8800
Caprolactam		ND	F1	990	8800
Carbazole		ND		720	8800
Chrysene		290	J	29	8800
Dibenz(a,h)anthracene		ND		18	8800
Dibenzofuran		ND		18	8800
Diethyl phthalate		ND		430	8800
Dimethyl phthalate		ND		450	8800

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_69-70(20150619)

Lab Sample ID: 240-52291-3 Date Sampled: 06/19/2015 1420
Client Matrix: Solid % Moisture: 7.8 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-187094	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-186302	Lab File ID:	50627018.D
Dilution:	25			Initial Weight/Volume:	30.46 g
Analysis Date:	06/27/2015 2020			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		400	8800
Di-n-octyl phthalate		ND		210	8800
Fluoranthene		690	J	15	8800
Fluorene		290	J	14	8800
Hexachlorobenzene		ND		56	8800
Hexachlorobutadiene		ND		150	8800
Hexachlorocyclopentadiene		ND	F1	220	43000
Hexachloroethane		ND	F1	240	8800
Indeno[1,2,3-cd]pyrene		110	J	9.3	8800
Isophorone		ND	F1	350	8800
Naphthalene		6100	J	22	8800
Nitrobenzene		ND	F1	59	8800
N-Nitrosodi-n-propylamine		ND	F1	170	8800
N-Nitrosodiphenylamine		ND	F1	560	8800
Pentachlorophenol		ND		240	8800
Phenol		ND		190	8800
Phenanthrene		790	J	19	8800
Pyrene		570	J	12	8800
3 & 4 Methylphenol		ND	F1	530	11000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	72		24 - 110
2-Fluorophenol (Surr)	64		24 - 110
2,4,6-Tribromophenol (Surr)	78		10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	83		26 - 110
Terphenyl-d14 (Surr)	67		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_69-70(20150619)

Lab Sample ID: 240-52291-3 Date Sampled: 06/19/2015 1420
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187584	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187215	Lab File ID:	50701017.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	07/01/2015 1617			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	76		30 - 110
2-Fluorophenol (Surr)	69		20 - 110
Nitrobenzene-d5 (Surr)	77		28 - 110
Phenol-d5 (Surr)	68		21 - 110
Terphenyl-d14 (Surr)	88		48 - 110
2,4,6-Tribromophenol (Surr)	76		23 - 110

Client Sample ID: **ASB-1004_79-80(20150619)**

Lab Sample ID: 240-52291-4 Date Sampled: 06/19/2015 1445
Client Matrix: Solid % Moisture: 12.6 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-186302	Lab File ID:	50625012.D
Dilution:	1.0			Initial Weight/Volume:	29.87 g
Analysis Date:	06/25/2015 1413			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.0	380
2,2'-oxybis[1-chloropropane]		ND		11	380
2,4,5-Trichlorophenol		ND		29	380
2,4,6-Trichlorophenol		ND		10	380
2,4-Dichlorophenol		ND		23	380
2,4-Dimethylphenol		ND		23	380
2,4-Dinitrophenol		ND		24	1800
2,4-Dinitrotoluene		ND		20	380
2,6-Dinitrotoluene		ND		24	380
2-Chloronaphthalene		ND		0.52	380
2-Chlorophenol		ND		9.4	380
2-Methylnaphthalene		ND		0.57	380
2-Methylphenol		ND		13	380
2-Nitroaniline		ND		10	1800
2-Nitrophenol		ND		9.5	380
3,3'-Dichlorobenzidine		ND		21	1800
3-Nitroaniline		ND		18	1800
4,6-Dinitro-2-methylphenol		ND		11	1800
4-Bromophenyl phenyl ether		ND		15	380
4-Chloro-3-methylphenol		ND		24	380
4-Chloroaniline		ND		20	380
4-Chlorophenyl phenyl ether		ND		15	380
4-Nitroaniline		ND		30	1800
4-Nitrophenol		ND		20	1800
Acenaphthene		ND		0.87	380
Acenaphthylene		ND		0.40	380
Acetophenone		ND		11	380
Anthracene		ND		0.90	380
Atrazine		ND		10	380
Benzaldehyde		ND		14	380
Benzo[a]anthracene		ND		0.72	380
Benzo[a]pyrene		ND		0.74	380
Benzo[b]fluoranthene		ND		0.68	380
Benzo[g,h,i]perylene		ND		0.40	380
Benzo[k]fluoranthene		ND		0.78	380
Bis(2-chloroethoxy)methane		ND		25	380
Bis(2-chloroethyl)ether		ND		2.3	380
Bis(2-ethylhexyl) phthalate		39	J B	22	380
Butyl benzyl phthalate		ND		11	380
Caprolactam		60	J	43	380
Carbazole		ND		31	380
Chrysene		ND		1.3	380
Dibenz(a,h)anthracene		ND		0.76	380
Dibenzofuran		ND		0.76	380
Diethyl phthalate		25	J	18	380
Dimethyl phthalate		ND		20	380

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_79-80(20150619)

Lab Sample ID: 240-52291-4 Date Sampled: 06/19/2015 1445
Client Matrix: Solid % Moisture: 12.6 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-186302	Lab File ID:	50625012.D
Dilution:	1.0			Initial Weight/Volume:	29.87 g
Analysis Date:	06/25/2015 1413			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		39	J B	17	380
Di-n-octyl phthalate		ND		9.1	380
Fluoranthene		ND		0.63	380
Fluorene		ND		0.61	380
Hexachlorobenzene		ND		2.4	380
Hexachlorobutadiene		ND		6.4	380
Hexachlorocyclopentadiene		ND		9.3	1800
Hexachloroethane		ND		10	380
Indeno[1,2,3-cd]pyrene		ND		0.40	380
Isophorone		18	J	15	380
Naphthalene		ND		0.94	380
Nitrobenzene		ND		2.5	380
N-Nitrosodi-n-propylamine		ND		7.2	380
N-Nitrosodiphenylamine		ND		24	380
Pentachlorophenol		ND		10	380
Phenol		19	J	8.4	380
Phenanthrene		ND		0.84	380
Pyrene		ND		0.51	380
3 & 4 Methylphenol		ND		23	460

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	84		24 - 110
2-Fluorophenol (Surr)	85		24 - 110
2,4,6-Tribromophenol (Surr)	63		10 - 110
Nitrobenzene-d5 (Surr)	85		20 - 110
Phenol-d5 (Surr)	84		26 - 110
Terphenyl-d14 (Surr)	87		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_79-80(20150619)**

Lab Sample ID: 240-52291-4 Date Sampled: 06/19/2015 1445
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187584	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187215	Lab File ID:	50701018.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	07/01/2015 1642			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	75		30 - 110
2-Fluorophenol (Surr)	60		20 - 110
Nitrobenzene-d5 (Surr)	78		28 - 110
Phenol-d5 (Surr)	59		21 - 110
Terphenyl-d14 (Surr)	83		48 - 110
2,4,6-Tribromophenol (Surr)	67		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_83-85(20150619)**

Lab Sample ID: 240-52291-5 Date Sampled: 06/19/2015 1515
Client Matrix: Solid % Moisture: 16.1 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186914	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-186302	Lab File ID:	50626028.D
Dilution:	5.0			Initial Weight/Volume:	30.32 g
Analysis Date:	06/26/2015 2120			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		87	J	21	1900
2,2'-oxybis[1-chloropropane]		ND		56	1900
2,4,5-Trichlorophenol		ND		150	1900
2,4,6-Trichlorophenol		ND		52	1900
2,4-Dichlorophenol		ND		120	1900
2,4-Dimethylphenol		350	J	120	1900
2,4-Dinitrophenol		ND		120	9400
2,4-Dinitrotoluene		ND		100	1900
2,6-Dinitrotoluene		ND		120	1900
2-Chloronaphthalene		ND		2.7	1900
2-Chlorophenol		ND		48	1900
2-Methylnaphthalene		1600	J	2.9	1900
2-Methylphenol		ND		65	1900
2-Nitroaniline		ND		54	9400
2-Nitrophenol		ND		49	1900
3,3'-Dichlorobenzidine		ND		110	9400
3-Nitroaniline		ND		94	9400
4,6-Dinitro-2-methylphenol		ND		54	9400
4-Bromophenyl phenyl ether		ND		77	1900
4-Chloro-3-methylphenol		ND		120	1900
4-Chloroaniline		ND		100	1900
4-Chlorophenyl phenyl ether		ND		77	1900
4-Nitroaniline		ND		150	9400
4-Nitrophenol		ND		100	9400
Acenaphthene		360	J	4.5	1900
Acenaphthylene		140	J	2.1	1900
Acetophenone		ND		54	1900
Anthracene		560	J	4.6	1900
Atrazine		ND		54	1900
Benzaldehyde		ND		71	1900
Benzo[a]anthracene		1000	J	3.7	1900
Benzo[a]pyrene		750	J	3.8	1900
Benzo[b]fluoranthene		1000	J	3.5	1900
Benzo[g,h,i]perylene		300	J	2.1	1900
Benzo[k]fluoranthene		490	J	4.0	1900
Bis(2-chloroethoxy)methane		ND		130	1900
Bis(2-chloroethyl)ether		ND		12	1900
Bis(2-ethylhexyl) phthalate		560	J B	110	1900
Butyl benzyl phthalate		ND		59	1900
Caprolactam		ND		220	1900
Carbazole		320	J	160	1900
Chrysene		1000	J	6.5	1900
Dibenz(a,h)anthracene		110	J	3.9	1900
Dibenzofuran		280	J	3.9	1900
Diethyl phthalate		ND		94	1900
Dimethyl phthalate		ND		100	1900

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_83-85(20150619)

Lab Sample ID: 240-52291-5 Date Sampled: 06/19/2015 1515
Client Matrix: Solid % Moisture: 16.1 Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-186914	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-186302	Lab File ID:	50626028.D
Dilution:	5.0			Initial Weight/Volume:	30.32 g
Analysis Date:	06/26/2015 2120			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		88	1900
Di-n-octyl phthalate		ND		47	1900
Fluoranthene		2400		3.2	1900
Fluorene		550	J	3.1	1900
Hexachlorobenzene		ND		12	1900
Hexachlorobutadiene		ND		33	1900
Hexachlorocyclopentadiene		ND		48	9400
Hexachloroethane		ND		53	1900
Indeno[1,2,3-cd]pyrene		310	J	2.1	1900
Isophorone		ND		77	1900
Naphthalene		2600		4.8	1900
Nitrobenzene		ND		13	1900
N-Nitrosodi-n-propylamine		ND		37	1900
N-Nitrosodiphenylamine		ND		120	1900
Pentachlorophenol		ND		54	1900
Phenol		ND		43	1900
Phenanthrene		2500		4.3	1900
Pyrene		2000		2.6	1900
3 & 4 Methylphenol		ND		120	2400

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	63		24 - 110
2-Fluorophenol (Surr)	63		24 - 110
2,4,6-Tribromophenol (Surr)	41		10 - 110
Nitrobenzene-d5 (Surr)	74		20 - 110
Phenol-d5 (Surr)	66		26 - 110
Terphenyl-d14 (Surr)	63		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_83-85(20150619)

Lab Sample ID: 240-52291-5 Date Sampled: 06/19/2015 1515
Client Matrix: Solid Date Received: 06/20/2015 1030

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187584	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187215	Lab File ID:	50701019.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	07/01/2015 1707			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	83		30 - 110
2-Fluorophenol (Surr)	81		20 - 110
Nitrobenzene-d5 (Surr)	88		28 - 110
Phenol-d5 (Surr)	82		21 - 110
Terphenyl-d14 (Surr)	92		48 - 110
2,4,6-Tribromophenol (Surr)	82		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_37-40(20150619)**

Lab Sample ID: 240-52291-1 Date Sampled: 06/19/2015 1330
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186729	Lab File ID:	Y0062518.D
Dilution:	1.0			Initial Weight/Volume:	9.361 g
Analysis Date:	06/25/2015 2117			Final Weight/Volume:	10 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		4.1	J	2.6	13

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_60-62(20150619)**

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186729	Lab File ID:	Y0062606.D
Dilution:	100			Initial Weight/Volume:	9.871 g
Analysis Date:	06/26/2015 0954			Final Weight/Volume:	10 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		8700		250	1200

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_69-70(20150619)**

Lab Sample ID: 240-52291-3 Date Sampled: 06/19/2015 1420
Client Matrix: Solid % Moisture: 7.8 Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186729	Lab File ID:	Y0062520.D
Dilution:	100			Initial Weight/Volume:	10.436 g
Analysis Date:	06/25/2015 2227			Final Weight/Volume:	10 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		9400		210	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_79-80(20150619)**

Lab Sample ID: 240-52291-4 Date Sampled: 06/19/2015 1445
Client Matrix: Solid % Moisture: 12.6 Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186729	Lab File ID:	Y0062521.D
Dilution:	10			Initial Weight/Volume:	9.738 g
Analysis Date:	06/25/2015 2303			Final Weight/Volume:	10 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		67	J	24	120

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_83-85(20150619)**

Lab Sample ID: 240-52291-5 Date Sampled: 06/19/2015 1515
Client Matrix: Solid % Moisture: 16.1 Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186735	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186729	Lab File ID:	Y0062522.D
Dilution:	10			Initial Weight/Volume:	10.563 g
Analysis Date:	06/25/2015 2339			Final Weight/Volume:	10 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		430		23	110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **MB01(20150619)**

Lab Sample ID: 240-52291-6TB Date Sampled: 06/19/2015 0000
Client Matrix: Solid Date Received: 06/20/2015 1030

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186729	Lab File ID:	Y0062607.D
Dilution:	1.0			Initial Weight/Volume:	0.089 g
Analysis Date:	06/26/2015 1030			Final Weight/Volume:	10 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		230	J	220	1100

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_37-40(20150619)**

Lab Sample ID: 240-52291-1 Date Sampled: 06/19/2015 1330
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/20/2015 1030

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187239	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F062918.D
Dilution:	1.0			Initial Weight/Volume:	25.2 g
Analysis Date:	06/29/2015 2125			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		4.1	J	1.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_60-62(20150619)

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/20/2015 1030

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187400	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F063015.D
Dilution:	500			Initial Weight/Volume:	26.27 g
Analysis Date:	06/30/2015 1655			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		33000		680	5500

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_69-70(20150619)**

Lab Sample ID: 240-52291-3 Date Sampled: 06/19/2015 1420
Client Matrix: Solid % Moisture: 7.8 Date Received: 06/20/2015 1030

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187400	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F063016.D
Dilution:	50			Initial Weight/Volume:	26.52 g
Analysis Date:	06/30/2015 1722			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		3700		60	490

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_79-80(20150619)

Lab Sample ID: 240-52291-4 Date Sampled: 06/19/2015 1445
Client Matrix: Solid % Moisture: 12.6 Date Received: 06/20/2015 1030

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187239	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F062921.D
Dilution:	1.0			Initial Weight/Volume:	25.46 g
Analysis Date:	06/29/2015 2247			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		5.2	J	1.3	11

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_83-85(20150619)

Lab Sample ID: 240-52291-5 Date Sampled: 06/19/2015 1515
Client Matrix: Solid % Moisture: 16.1 Date Received: 06/20/2015 1030

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187239	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F062922.D
Dilution:	1.0			Initial Weight/Volume:	25.54 g
Analysis Date:	06/29/2015 2315			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		18		1.4	11

Client Sample ID: **ASB-1004_37-40(20150619)**

Lab Sample ID: 240-52291-1 Date Sampled: 06/19/2015 1330
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/20/2015 1030

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Analysis Date:	06/25/2015 1331			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		9300		6.3	22
Antimony		ND		0.52	1.1
Barium		21	J	0.45	22
Beryllium		0.60		0.028	0.55
Calcium		11000		25	550
Cadmium		0.030	J	0.023	0.22
Cobalt		12		0.051	5.5
Chromium		16		0.082	0.55
Copper		12		0.25	2.7
Iron		13000		3.5	11
Potassium		5300		6.8	550
Magnesium		5000		5.7	550
Manganese		210		0.092	1.6
Silver		ND		0.069	0.55
Sodium		95	J	21	550
Nickel		22		0.087	4.4
Vanadium		6.7		0.22	5.5
Zinc		20	B	0.61	2.2
Arsenic		4.3		0.45	1.1
Lead		2.6		0.22	0.33
Selenium		ND		0.37	0.55
Thallium		ND		0.14	1.1

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1526			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0081	J B	0.0029	0.50
Barium		0.46	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00054	J	0.00014	0.10
Calcium		400	B	0.26	5.0
Chromium		0.0036	J B	0.00055	0.50
Cobalt		0.059		0.00056	0.050
Iron		0.32	B	0.013	0.10
Lead		0.046	J B	0.0019	0.50
Magnesium		89	B	0.055	5.0

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_37-40(20150619)**

Lab Sample ID: 240-52291-1 Date Sampled: 06/19/2015 1330
Client Matrix: Solid Date Received: 06/20/2015 1030

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Manganese		8.2	B	0.00046	0.015
Potassium		13	B	0.070	5.0
Selenium		0.0079	J B	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1623			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Copper		ND		0.0019	1.0
Nickel		0.070	B	0.00076	0.040
Zinc		0.16	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187438	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0845			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187002	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.57 g
Analysis Date:	06/26/2015 1042			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.018	0.13

Client Sample ID: **ASB-1004_60-62(20150619)**

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/20/2015 1030

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	06/25/2015 1335			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6100		6.1	21
Antimony		110		0.50	1.1
Beryllium		0.23	J	0.027	0.53
Calcium		29000		24	530
Cadmium		21		0.022	0.21
Cobalt		26		0.049	5.3
Chromium		340		0.079	0.53
Copper		69		0.24	2.6
Iron		19000		3.4	11
Potassium		920		6.5	530
Magnesium		5100		5.5	530
Manganese		340		0.088	1.6
Silver		0.39	J	0.066	0.53
Sodium		840		20	530
Nickel		16		0.084	4.2
Vanadium		8.0		0.21	5.3
Arsenic		25		0.43	1.1
Selenium		4.5		0.36	0.53
Thallium		ND		0.14	1.1

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	10			Initial Weight/Volume:	1.15 g
Analysis Date:	06/25/2015 1442			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Barium		4000		4.3	210
Zinc		5900	B	5.9	21
Lead		6000		2.1	3.2

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187247	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1701			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1223				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		1.1		0.040	0.20
Antimony		1.9	B	0.0024	0.30

Client Sample ID: **ASB-1004_60-62(20150619)**

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid Date Received: 06/20/2015 1030

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.12	J B	0.0029	0.50
Barium		0.76	J	0.0010	10
Beryllium		0.00027	J	0.00013	0.0050
Cadmium		0.053	J B	0.00014	0.10
Calcium		380		0.26	5.0
Chromium		0.014	J	0.00055	0.50
Cobalt		0.25		0.00056	0.050
Iron		35		0.013	0.10
Magnesium		17		0.055	5.0
Manganese		3.4		0.00046	0.015
Potassium		3.3	J	0.070	5.0
Selenium		0.0068	J	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187418	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1418			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1051				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Copper		0.070	J B	0.0019	1.0
Nickel		0.12		0.00076	0.040

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187418	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1442			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1051				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Zinc		25		0.048	5.0

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187247	Lab File ID:	I9070115A.asc
Dilution:	50	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1151			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1223				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Lead		250	B	0.095	25

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_60-62(20150619)**

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid Date Received: 06/20/2015 1030

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187438	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187248	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0957			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187002	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.58 g
Analysis Date:	06/26/2015 1044			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.14		0.018	0.13

Client Sample ID: **ASB-1004_69-70(20150619)**

Lab Sample ID: 240-52291-3 Date Sampled: 06/19/2015 1420
Client Matrix: Solid % Moisture: 7.8 Date Received: 06/20/2015 1030

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.38 g
Analysis Date:	06/25/2015 1339			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		710		4.6	16
Antimony		4.6		0.38	0.79
Barium		820		0.32	16
Beryllium		0.057	J	0.020	0.39
Calcium		11000		18	390
Cadmium		12		0.016	0.16
Cobalt		1.9	J	0.037	3.9
Chromium		16		0.059	0.39
Copper		8.9		0.18	2.0
Iron		3800		2.5	7.9
Potassium		250	J	4.9	390
Magnesium		2900		4.1	390
Manganese		66		0.066	1.2
Silver		ND		0.049	0.39
Sodium		84	J	15	390
Nickel		2.7	J	0.063	3.1
Vanadium		2.3	J	0.16	3.9
Zinc		130	B	0.44	1.6
Arsenic		1.4		0.32	0.79
Lead		230		0.16	0.24
Selenium		2.7		0.27	0.39
Thallium		ND		0.10	0.79

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1530			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.0029	J	0.0024	0.30
Arsenic		0.0096	J B	0.0029	0.50
Barium		2.0	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00085	J	0.00014	0.10
Calcium		400	B	0.26	5.0
Chromium		0.0022	J B	0.00055	0.50
Cobalt		0.021	J	0.00056	0.050
Iron		0.81	B	0.013	0.10
Lead		0.12	J B	0.0019	0.50
Magnesium		33	B	0.055	5.0

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_69-70(20150619)**

Lab Sample ID: 240-52291-3 Date Sampled: 06/19/2015 1420
Client Matrix: Solid Date Received: 06/20/2015 1030

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Manganese		1.3	B	0.00046	0.015
Potassium		2.9	J B	0.070	5.0
Selenium		0.0052	J B	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1627			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Copper		0.0019	J B	0.0019	1.0
Nickel		0.033	J B	0.00076	0.040
Zinc		0.40	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187438	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0846			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187002	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	06/26/2015 1047			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.032	J	0.014	0.099

Client Sample ID: **ASB-1004_79-80(20150619)**

Lab Sample ID: 240-52291-4 Date Sampled: 06/19/2015 1445
Client Matrix: Solid % Moisture: 12.6 Date Received: 06/20/2015 1030

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.41 g
Analysis Date:	06/25/2015 1343			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		1200		4.7	16
Antimony		ND		0.39	0.81
Barium		18		0.33	16
Beryllium		0.11	J	0.021	0.41
Calcium		19000		19	410
Cadmium		0.071	J	0.017	0.16
Cobalt		2.2	J	0.038	4.1
Chromium		3.9		0.061	0.41
Copper		3.9		0.19	2.0
Iron		5200		2.6	8.1
Potassium		500		5.0	410
Magnesium		7200		4.2	410
Manganese		500		0.068	1.2
Silver		ND		0.051	0.41
Sodium		57	J	15	410
Nickel		7.1		0.065	3.2
Vanadium		5.4		0.16	4.1
Zinc		7.2	B	0.45	1.6
Arsenic		1.2		0.33	0.81
Lead		2.4		0.16	0.24
Selenium		ND		0.28	0.41
Thallium		ND		0.11	0.81

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1535			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.013	J B	0.0029	0.50
Barium		0.58	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00025	J	0.00014	0.10
Calcium		550	B	0.26	5.0
Chromium		0.0035	J B	0.00055	0.50
Cobalt		0.026	J	0.00056	0.050
Iron		0.020	J B	0.013	0.10
Lead		0.037	J B	0.0019	0.50
Magnesium		24	B	0.055	5.0

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: **ASB-1004_79-80(20150619)**

Lab Sample ID: 240-52291-4 Date Sampled: 06/19/2015 1445
Client Matrix: Solid Date Received: 06/20/2015 1030

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Manganese		7.5	B	0.00046	0.015
Potassium		2.9	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1632			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Copper		ND		0.0019	1.0
Nickel		0.090	B	0.00076	0.040
Zinc		0.20	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187438	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0848			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187002	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	06/26/2015 1049			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.015	0.11

Client Sample ID: **ASB-1004_83-85(20150619)**

Lab Sample ID: 240-52291-5 Date Sampled: 06/19/2015 1515
Client Matrix: Solid % Moisture: 16.1 Date Received: 06/20/2015 1030

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-186732	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0			Initial Weight/Volume:	1.43 g
Analysis Date:	06/25/2015 1348			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		2500		4.8	17
Antimony		1.2		0.40	0.83
Barium		490		0.34	17
Beryllium		0.15	J	0.022	0.42
Calcium		26000		19	420
Cadmium		1.9		0.017	0.17
Cobalt		4.0	J	0.039	4.2
Chromium		15		0.062	0.42
Copper		6.5		0.19	2.1
Iron		9200		2.7	8.3
Potassium		540		5.2	420
Magnesium		8400		4.3	420
Manganese		390		0.070	1.2
Silver		ND		0.052	0.42
Sodium		170	J	16	420
Nickel		9.0		0.067	3.3
Vanadium		12		0.17	4.2
Zinc		81	B	0.47	1.7
Arsenic		1.8		0.34	0.83
Lead		81		0.17	0.25
Selenium		0.58		0.28	0.42
Thallium		ND		0.11	0.83

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1547			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.011	J B	0.0029	0.50
Barium		2.1	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00014	J	0.00014	0.10
Calcium		590	B	0.26	5.0
Chromium		0.0027	J B	0.00055	0.50
Cobalt		0.028	J	0.00056	0.050
Iron		0.079	J B	0.013	0.10
Lead		0.044	J B	0.0019	0.50
Magnesium		19	B	0.055	5.0

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Client Sample ID: ASB-1004_83-85(20150619)

Lab Sample ID: 240-52291-5 Date Sampled: 06/19/2015 1515
Client Matrix: Solid Date Received: 06/20/2015 1030

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Manganese		3.8	B	0.00046	0.015
Potassium		5.6	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1636			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Copper		ND		0.0019	1.0
Nickel		0.044	B	0.00076	0.040
Zinc		0.17	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187438	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0850			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187002	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	06/26/2015 1051			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.020	J	0.016	0.11

General Chemistry

Client Sample ID: **ASB-1004_37-40(20150619)**

Lab Sample ID: 240-52291-1 Date Sampled: 06/19/2015 1330
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/20/2015 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.33	0.98	1.0	7196A
Analysis Batch: 240-187474	Analysis Date: 06/30/2015 1233						DryWt Corrected: Y
Prep Batch: 240-187192	Prep Date: 06/29/2015 1029						
Cr (III)	16		mg/Kg	0.16	2.4	1.0	7196A
Analysis Batch: 240-187521	Analysis Date: 07/01/2015 0552						DryWt Corrected: Y
Percent Solids	82		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186275	Analysis Date: 06/23/2015 0848						DryWt Corrected: N
Percent Moisture	18		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186275	Analysis Date: 06/23/2015 0848						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1004_60-62(20150619)**

Lab Sample ID: 240-52291-2 Date Sampled: 06/19/2015 1350
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/20/2015 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	1.6	4.8	5.0	7196A
Analysis Batch: 240-187474	Analysis Date: 06/30/2015 1303						DryWt Corrected: Y
Prep Batch: 240-187192	Prep Date: 06/29/2015 1029						
Cr (III)	340		mg/Kg	0.16	2.4	1.0	7196A
Analysis Batch: 240-187521	Analysis Date: 07/01/2015 0552						DryWt Corrected: Y
Percent Solids	83		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186275	Analysis Date: 06/23/2015 0848						DryWt Corrected: N
Percent Moisture	17		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186275	Analysis Date: 06/23/2015 0848						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1004_69-70(20150619)**

Lab Sample ID: 240-52291-3 Date Sampled: 06/19/2015 1420
Client Matrix: Solid % Moisture: 7.8 Date Received: 06/20/2015 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.29	0.87	1.0	7196A
Analysis Batch: 240-187474	Analysis Date: 06/30/2015 1238						DryWt Corrected: Y
Prep Batch: 240-187192	Prep Date: 06/29/2015 1029						
Cr (III)	16		mg/Kg	0.14	2.2	1.0	7196A
Analysis Batch: 240-187521	Analysis Date: 07/01/2015 0552						DryWt Corrected: Y
Percent Solids	92		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186275	Analysis Date: 06/23/2015 0848						DryWt Corrected: N
Percent Moisture	7.8		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186275	Analysis Date: 06/23/2015 0848						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1004_79-80(20150619)**

Lab Sample ID: 240-52291-4 Date Sampled: 06/19/2015 1445
Client Matrix: Solid % Moisture: 12.6 Date Received: 06/20/2015 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.31	0.92	1.0	7196A
Analysis Batch: 240-187474	Analysis Date: 06/30/2015 1239						DryWt Corrected: Y
Prep Batch: 240-187192	Prep Date: 06/29/2015 1029						
Cr (III)	3.9		mg/Kg	0.15	2.3	1.0	7196A
Analysis Batch: 240-187521	Analysis Date: 07/01/2015 0552						DryWt Corrected: Y
Percent Solids	87		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186275	Analysis Date: 06/23/2015 0848						DryWt Corrected: N
Percent Moisture	13		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186275	Analysis Date: 06/23/2015 0848						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1004_83-85(20150619)**

Lab Sample ID: 240-52291-5 Date Sampled: 06/19/2015 1515
Client Matrix: Solid % Moisture: 16.1 Date Received: 06/20/2015 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.79	J	mg/Kg	0.32	0.95	1.0	7196A
Analysis Batch: 240-186823	Analysis Date: 06/25/2015 1429						DryWt Corrected: Y
Prep Batch: 240-186524	Prep Date: 06/24/2015 1013						
Cr (III)	14		mg/Kg	0.15	2.4	1.0	7196A
Analysis Batch: 240-187521	Analysis Date: 07/01/2015 0552						DryWt Corrected: Y
Percent Solids	84		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186275	Analysis Date: 06/23/2015 0848						DryWt Corrected: N
Percent Moisture	16		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186275	Analysis Date: 06/23/2015 0848						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC/MS Semi VOA		
	B	Compound was found in the blank and sample.
	*	LCS or LCSD is outside acceptance limits.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time
	X	Surrogate is outside control limits
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Section	Qualifier	Description
General Chemistry		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-186224					
LCS 240-186224/2-A	Lab Control Sample	T	Solid	5035	
MB 240-186224/1-A	Method Blank	T	Solid	5035	
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	5035	
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	5035	
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	5035	
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	5035	
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	5035	
240-52291-6TB	MB01(20150619)	T	Solid	5035	
Analysis Batch:240-186326					
LCS 240-186224/2-A	Lab Control Sample	T	Solid	8260B	240-186224
MB 240-186224/1-A	Method Blank	T	Solid	8260B	240-186224
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	8260B	240-186224
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	8260B	240-186224
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	8260B	240-186224
240-52291-6TB	MB01(20150619)	T	Solid	8260B	240-186224
Analysis Batch:240-186562					
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	8260B	240-186224
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	8260B	240-186224
Prep Batch: 240-186960					
LB 240-186960/1-A	Method Blank	P	Solid	1311	
240-52266-J-4-C MS	Matrix Spike	P	Solid	1311	
240-52266-J-4-C MSD	Matrix Spike Duplicate	P	Solid	1311	
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	1311	
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	1311	
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	1311	
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	1311	
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	1311	
Analysis Batch:240-187017					
LB 240-186960/1-A	Method Blank	P	Solid	8260B	
LCS 240-187017/10	Lab Control Sample	T	Water	8260B	
240-52266-J-4-C MS	Matrix Spike	P	Solid	8260B	
240-52266-J-4-C MSD	Matrix Spike Duplicate	P	Solid	8260B	
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	8260B	
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	8260B	
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	8260B	
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	8260B	
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	8260B	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-186302					
LCS 240-186302/13-A	Lab Control Sample	T	Solid	3540C	
MB 240-186302/12-A	Method Blank	T	Solid	3540C	
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	3540C	
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	3540C	
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	3540C	
240-52291-3MS	Matrix Spike	T	Solid	3540C	
240-52291-3MSD	Matrix Spike Duplicate	T	Solid	3540C	
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	3540C	
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	3540C	
Analysis Batch:240-186705					
LCS 240-186302/13-A	Lab Control Sample	T	Solid	8270C	240-186302
MB 240-186302/12-A	Method Blank	T	Solid	8270C	240-186302
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	8270C	240-186302
Analysis Batch:240-186914					
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	8270C	240-186302
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	8270C	240-186302
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	8270C	240-186302
Analysis Batch:240-187094					
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	8270C	240-186302
240-52291-3MS	Matrix Spike	T	Solid	8270C	240-186302
240-52291-3MSD	Matrix Spike Duplicate	T	Solid	8270C	240-186302
Prep Batch: 240-187116					
240-52266-K-1-D MS	Matrix Spike	P	Solid	1311	
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	1311	
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	1311	
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	1311	
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	1311	
Prep Batch: 240-187117					
240-52289-C-4-D MS	Matrix Spike	P	Solid	1311	
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	1311	
240-52291-2RE	ASB-1004_60-62(20150619)	P	Solid	1311	
240-52291-2MSRE	Matrix Spike	P	Solid	1311	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-187215					
LCS 240-187215/16-A	Lab Control Sample	T	Water	3510C	
MB 240-187215/15-A	Method Blank	T	Water	3510C	
240-52266-K-1-D MS	Matrix Spike	P	Solid	3510C	240-187116
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	3510C	240-187116
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	3510C	240-187116
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	3510C	240-187116
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	3510C	240-187116
Prep Batch: 240-187216					
LCS 240-187216/5-A	Lab Control Sample	T	Water	3510C	
MB 240-187216/4-A	Method Blank	T	Water	3510C	
240-52289-C-4-D MS	Matrix Spike	P	Solid	3510C	240-187117
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	3510C	240-187117
Analysis Batch:240-187453					
LCS 240-187215/16-A	Lab Control Sample	T	Water	8270C	240-187215
MB 240-187215/15-A	Method Blank	T	Water	8270C	240-187215
240-52266-K-1-D MS	Matrix Spike	P	Solid	8270C	240-187215
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	8270C	240-187215
Analysis Batch:240-187584					
LCS 240-187216/5-A	Lab Control Sample	T	Water	8270C	240-187216
MB 240-187216/4-A	Method Blank	T	Water	8270C	240-187216
240-52289-C-4-D MS	Matrix Spike	P	Solid	8270C	240-187216
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	8270C	240-187216
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	8270C	240-187215
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	8270C	240-187215
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	8270C	240-187215
Prep Batch: 240-187986					
LCS 240-187986/5-A	Lab Control Sample	T	Water	3510C	
MB 240-187986/4-A	Method Blank	T	Water	3510C	
240-52291-2RE	ASB-1004_60-62(20150619)	P	Solid	3510C	240-187117
240-52291-2MSRE	Matrix Spike	P	Solid	3510C	240-187117
Analysis Batch:240-188138					
LCS 240-187986/5-A	Lab Control Sample	T	Water	8270C	240-187986
MB 240-187986/4-A	Method Blank	T	Water	8270C	240-187986
240-52291-2RE	ASB-1004_60-62(20150619)	P	Solid	8270C	240-187986
240-52291-2MSRE	Matrix Spike	P	Solid	8270C	240-187986

Report Basis
P = TCLP
T = Total

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Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Prep Batch: 240-186729					
LCS 240-186729/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-186729/14-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-186729/1-A	Method Blank	T	Solid	5035	
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	5035	
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	5035	
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	5035	
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	5035	
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	5035	
240-52291-6TB	MB01(20150619)	T	Solid	5035	
Analysis Batch:240-186735					
LCS 240-186729/2-A	Lab Control Sample	T	Solid	WI-GRO	240-186729
LCSD 240-186729/14-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-186729
MB 240-186729/1-A	Method Blank	T	Solid	WI-GRO	240-186729
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	WI-GRO	240-186729
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	WI-GRO	240-186729
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	WI-GRO	240-186729
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	WI-GRO	240-186729
Analysis Batch:240-186873					
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	WI-GRO	240-186729
240-52291-6TB	MB01(20150619)	T	Solid	WI-GRO	240-186729

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-187058					
LCS 240-187058/15-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-187058/16-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-187058/14-A	Method Blank	T	Solid	WI DRO PREP	
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	WI DRO PREP	
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	WI DRO PREP	
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	WI DRO PREP	
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	WI DRO PREP	
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	WI DRO PREP	
Analysis Batch:240-187239					
LCS 240-187058/15-A	Lab Control Sample	T	Solid	WI-DRO	240-187058
LCSD 240-187058/16-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-187058
MB 240-187058/14-A	Method Blank	T	Solid	WI-DRO	240-187058
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	WI-DRO	240-187058
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	WI-DRO	240-187058
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	WI-DRO	240-187058
Analysis Batch:240-187400					
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	WI-DRO	240-187058
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	WI-DRO	240-187058

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-186553					
LCS 240-186553/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-186553/1-A	Method Blank	T	Solid	3050B	
240-52266-J-1-B MS	Matrix Spike	T	Solid	3050B	
240-52266-J-1-C MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	3050B	
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	3050B	
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	3050B	
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	3050B	
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	3050B	
Prep Batch: 240-186588					
LCS 240-186588/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-186588/1-A	Method Blank	T	Solid	7471A	
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	7471A	
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	7471A	
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	7471A	
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	7471A	
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	7471A	
Analysis Batch:240-186732					
LCS 240-186553/2-A	Lab Control Sample	T	Solid	6010B	240-186553
MB 240-186553/1-A	Method Blank	T	Solid	6010B	240-186553
240-52266-J-1-B MS	Matrix Spike	T	Solid	6010B	240-186553
240-52266-J-1-C MSD	Matrix Spike Duplicate	T	Solid	6010B	240-186553
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	6010B	240-186553
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	6010B	240-186553
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	6010B	240-186553
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	6010B	240-186553
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	6010B	240-186553
Analysis Batch:240-187002					
LCS 240-186588/2-A	Lab Control Sample	T	Solid	7471A	240-186588
MB 240-186588/1-A	Method Blank	T	Solid	7471A	240-186588
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	7471A	240-186588
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	7471A	240-186588
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	7471A	240-186588
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	7471A	240-186588
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	7471A	240-186588

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187116					
LB 240-187116/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-187116/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-187116/1-D	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-52266-J-2-E MS ^5	Matrix Spike	P	Solid	1311	
240-52266-J-2-H MS	Matrix Spike	P	Solid	1311	
240-52266-J-2-K MS ^5	Matrix Spike	P	Solid	1311	
240-52266-J-2-F MSD ^5	Matrix Spike Duplicate	P	Solid	1311	
240-52266-J-2-I MSD	Matrix Spike Duplicate	P	Solid	1311	
240-52266-J-2-L MSD ^5	Matrix Spike Duplicate	P	Solid	1311	
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	1311	
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	1311	
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	1311	
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	1311	
Prep Batch: 240-187117					
LB 240-187117/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-187117/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-187117/1-D	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	1311	
240-52291-2MS	Matrix Spike	P	Solid	1311	
240-52291-2MSD	Matrix Spike Duplicate	P	Solid	1311	
Prep Batch: 240-187231					
LCS 240-187231/3-A	Lab Control Sample	T	Water	3010A	
MB 240-187231/2-A	Method Blank	T	Water	3010A	
LB 240-187116/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-187116
240-52266-J-2-E MS ^5	Matrix Spike	P	Solid	3010A	240-187116
240-52266-J-2-F MSD ^5	Matrix Spike Duplicate	P	Solid	3010A	240-187116
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	3010A	240-187116
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	3010A	240-187116
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	3010A	240-187116
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	3010A	240-187116
Prep Batch: 240-187233					
LCS 240-187233/3-A	Lab Control Sample	T	Water	7470A	
MB 240-187233/2-A	Method Blank	T	Water	7470A	
LB 240-187116/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187116
240-52266-J-2-H MS	Matrix Spike	P	Solid	7470A	240-187116
240-52266-J-2-I MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187116
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	7470A	240-187116
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	7470A	240-187116
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	7470A	240-187116
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	7470A	240-187116

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187247					
LCS 240-187247/3-A	Lab Control Sample	T	Water	3010A	
MB 240-187247/2-A	Method Blank	T	Water	3010A	
LB 240-187117/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-187117
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	3010A	240-187117
240-52291-2MS	Matrix Spike	P	Solid	3010A	240-187117
240-52291-2MSD	Matrix Spike Duplicate	P	Solid	3010A	240-187117
Prep Batch: 240-187248					
LCS 240-187248/3-A	Lab Control Sample	T	Water	7470A	
MB 240-187248/2-A	Method Blank	T	Water	7470A	
LB 240-187117/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187117
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	7470A	240-187117
240-52291-2MS	Matrix Spike	P	Solid	7470A	240-187117
240-52291-2MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187117
Analysis Batch:240-187366					
LB 240-187116/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-187231
LCS 240-187231/3-A	Lab Control Sample	T	Water	6010B	240-187231
MB 240-187231/2-A	Method Blank	T	Water	6010B	240-187231
LB 240-187117/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-187247
LCS 240-187247/3-A	Lab Control Sample	T	Water	6010B	240-187247
MB 240-187247/2-A	Method Blank	T	Water	6010B	240-187247
240-52266-J-2-E MS ^5	Matrix Spike	P	Solid	6010B	240-187231
240-52266-J-2-F MSD ^5	Matrix Spike Duplicate	P	Solid	6010B	240-187231
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	6010B	240-187231
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	6010B	240-187247
240-52291-2MS	Matrix Spike	P	Solid	6010B	240-187247
240-52291-2MSD	Matrix Spike Duplicate	P	Solid	6010B	240-187247
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	6010B	240-187231
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	6010B	240-187231
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	6010B	240-187231
Prep Batch: 240-187416					
LCS 240-187416/3-A	Lab Control Sample	T	Water	3010A	
MB 240-187416/2-A	Method Blank	T	Water	3010A	
LB 240-187116/1-D	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-187116
240-52266-J-2-K MS ^5	Matrix Spike	P	Solid	3010A	240-187116
240-52266-J-2-L MSD ^5	Matrix Spike Duplicate	P	Solid	3010A	240-187116
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	3010A	240-187116
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	3010A	240-187116
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	3010A	240-187116
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	3010A	240-187116

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187418					
LCS 240-187418/3-A	Lab Control Sample	T	Water	3010A	
MB 240-187418/2-A	Method Blank	T	Water	3010A	
LB 240-187117/1-D	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-187117
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	3010A	240-187117
240-52291-2MS	Matrix Spike	P	Solid	3010A	240-187117
240-52291-2MSD	Matrix Spike Duplicate	P	Solid	3010A	240-187117
Analysis Batch:240-187438					
LB 240-187116/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187233
LCS 240-187233/3-A	Lab Control Sample	T	Water	7470A	240-187233
MB 240-187233/2-A	Method Blank	T	Water	7470A	240-187233
LB 240-187117/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187248
LCS 240-187248/3-A	Lab Control Sample	T	Water	7470A	240-187248
MB 240-187248/2-A	Method Blank	T	Water	7470A	240-187248
240-52266-J-2-H MS	Matrix Spike	P	Solid	7470A	240-187233
240-52266-J-2-I MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187233
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	7470A	240-187233
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	7470A	240-187248
240-52291-2MS	Matrix Spike	P	Solid	7470A	240-187248
240-52291-2MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187248
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	7470A	240-187233
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	7470A	240-187233
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	7470A	240-187233
Analysis Batch:240-187549					
LB 240-187116/1-D	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-187416
LCS 240-187416/3-A	Lab Control Sample	T	Water	6010B	240-187416
MB 240-187416/2-A	Method Blank	T	Water	6010B	240-187416
LB 240-187117/1-D	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-187418
LCS 240-187418/3-A	Lab Control Sample	T	Water	6010B	240-187418
MB 240-187418/2-A	Method Blank	T	Water	6010B	240-187418
240-52266-J-2-K MS ^5	Matrix Spike	P	Solid	6010B	240-187416
240-52266-J-2-L MSD ^5	Matrix Spike Duplicate	P	Solid	6010B	240-187416
240-52291-1	ASB-1004_37-40(20150619)	P	Solid	6010B	240-187416
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	6010B	240-187247
240-52291-2MS	Matrix Spike	P	Solid	6010B	240-187247
240-52291-2MSD	Matrix Spike Duplicate	P	Solid	6010B	240-187247
240-52291-2	ASB-1004_60-62(20150619)	P	Solid	6010B	240-187418
240-52291-2MS	Matrix Spike	P	Solid	6010B	240-187418
240-52291-2MSD	Matrix Spike Duplicate	P	Solid	6010B	240-187418
240-52291-3	ASB-1004_69-70(20150619)	P	Solid	6010B	240-187416
240-52291-4	ASB-1004_79-80(20150619)	P	Solid	6010B	240-187416
240-52291-5	ASB-1004_83-85(20150619)	P	Solid	6010B	240-187416

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-186275					
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	Moisture	
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	Moisture	
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	Moisture	
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	Moisture	
240-52291-4DU	Duplicate	T	Solid	Moisture	
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	Moisture	
Prep Batch: 240-186524					
LCSI 240-186524/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-186524/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-186524/9-A	Method Blank	T	Solid	3060A	
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	3060A	
Analysis Batch:240-186823					
LCSI 240-186524/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-186524
LCSS 240-186524/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-186524
MB 240-186524/9-A	Method Blank	T	Solid	7196A	240-186524
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	7196A	240-186524
Prep Batch: 240-187192					
LCSI 240-187192/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-187192/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-187192/9-A	Method Blank	T	Solid	3060A	
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	3060A	
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	3060A	
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	3060A	
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	3060A	
Analysis Batch:240-187474					
LCSI 240-187192/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-187192
LCSS 240-187192/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-187192
MB 240-187192/9-A	Method Blank	T	Solid	7196A	240-187192
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	7196A	240-187192
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	7196A	240-187192
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	7196A	240-187192
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	7196A	240-187192
Analysis Batch:240-187521					
240-52291-1	ASB-1004_37-40(20150619)	T	Solid	7196A	
240-52291-2	ASB-1004_60-62(20150619)	T	Solid	7196A	
240-52291-3	ASB-1004_69-70(20150619)	T	Solid	7196A	
240-52291-4	ASB-1004_79-80(20150619)	T	Solid	7196A	
240-52291-5	ASB-1004_83-85(20150619)	T	Solid	7196A	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52291-1	ASB-1004_37-40(20150619)	104	84	104	85
240-52291-2	ASB-1004_60-62(20150619)	330X	295X	300X	319X
240-52291-3	ASB-1004_69-70(20150619)	142X	107	143X	126
240-52291-4	ASB-1004_79-80(20150619)	99	83	104	82
240-52291-5	ASB-1004_83-85(20150619)	109	90	114	89
240-52291-6	MB01(20150619)	114	94	121	97
MB 240-186224/1-A		97	76	93	80
LCS 240-186224/2-A		97	88	96	81

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-186960/1-A MB		97	99	95	101
LCS 240-187017/10		101	95	89	102
240-52266-J-4-C MS		103	98	87	104
240-52266-J-4-C MSD		97	99	89	101

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-52291-1	ASB-1004_37-40(20150619)	92	94	99	94
240-52291-2	ASB-1004_60-62(20150619)	94	97	98	99
240-52291-3	ASB-1004_69-70(20150619)	90	91	97	95
240-52291-4	ASB-1004_79-80(20150619)	94	93	98	98
240-52291-5	ASB-1004_83-85(20150619)	98	99	103	99

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-186302/12-A		76	74	77	76	80	42
LCS 240-186302/13-A		62	65	63	66	75	55
240-52291-3 MS	ASB-1004_69-70(20150619) MS	68	56	0X	63	71	70
240-52291-3 MSD	ASB-1004_69-70(20150619) MSD	71	54	0X	80	64	67

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52291-1	ASB-1004_37-40(20150619)	51	49	40	50	53	54
240-52291-2	ASB-1004_60-62(20150619)	53	50	54	0X	50	47
240-52291-3	ASB-1004_69-70(20150619)	72	64	78	0X	83	67
240-52291-4	ASB-1004_79-80(20150619)	84	85	63	85	84	87
240-52291-5	ASB-1004_83-85(20150619)	63	63	41	74	66	63

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-52291-1	ASB-1004_37-40(20150619)	83	75	89	69	80	80
240-52291-2	ASB-1004_60-62(20150619)	49	61	73	62	66	67
240-52291-2 RE	ASB-1004_60-62(20150619) RE	58	45	58	42	48	60
240-52291-3	ASB-1004_69-70(20150619)	76	69	77	68	88	76
240-52291-4	ASB-1004_79-80(20150619)	75	60	78	59	83	67
240-52291-5	ASB-1004_83-85(20150619)	83	81	88	82	92	82
MB 240-187215/15-A		73	81	83	81	84	74
MB 240-187216/4-A		71	65	76	54	75	71
MB 240-187986/4-A		70	63	70	53	71	74
LCS 240-187215/16-A		70	61	71	53	79	71
LCS 240-187216/5-A		56	54	68	42	77	66
LCS 240-187986/5-A		79	65	78	55	78	82
240-52291-2 MS RE	ASB-1004_60-62(20150619) MS RE	66	51	66	50	58	56
240-52266-K-1-D MS		60	61	71	54	69	60
240-52289-C-4-D MS		57	65	71	56	79	73

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Method Blank - Batch: 240-186224

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-186224/1-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143834.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1646	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-186224 **Method: 8260B**
Preparation: 5035

Lab Sample ID:	MB 240-186224/1-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143834.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1646	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	26 - 141
Dibromofluoromethane (Surr)	76	30 - 122
1,2-Dichloroethane-d4 (Surr)	93	39 - 128
Toluene-d8 (Surr)	80	33 - 134

Lab Control Sample - Batch: 240-186224

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-186224/2-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143833.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1625	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	2490	124	16 - 156	
Allyl chloride	1000	799	80	50 - 150	
Bromobenzene	1000	936	94	72 - 120	
Bromochloromethane	1000	893	89	56 - 128	
Bromodichloromethane	1000	819	82	28 - 123	
Benzene	1000	954	95	70 - 120	
Bromoform	1000	760	76	10 - 120	
Bromomethane	1000	459	46	10 - 120	
2-Butanone (MEK)	2000	2020	101	10 - 199	
Carbon disulfide	1000	633	63	10 - 132	
Carbon tetrachloride	1000	869	87	29 - 120	
Chlorobenzene	1000	876	88	71 - 120	
Chlorodibromomethane	1000	785	79	22 - 120	
Chloroethane	1000	634	63	10 - 120	
Chloroform	1000	993	99	63 - 120	
Chloromethane	1000	738	74	25 - 120	
2-Chlorotoluene	1000	1070	107	68 - 122	
4-Chlorotoluene	1000	1080	108	68 - 122	
cis-1,2-Dichloroethene	1000	974	97	60 - 125	
cis-1,3-Dichloropropene	1000	873	87	25 - 120	
Cyclohexane	1000	990	99	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	1070	107	10 - 129	
1,2-Dibromoethane	1000	965	97	47 - 123	
Dibromomethane	1000	1000	100	68 - 120	
1,2-Dichlorobenzene	1000	1010	101	68 - 120	
1,3-Dichlorobenzene	1000	983	98	66 - 121	
1,4-Dichlorobenzene	1000	980	98	65 - 120	
Dichlorodifluoromethane	1000	692	69	10 - 120	
1,1-Dichloroethane	1000	1040	104	63 - 120	
1,2-Dichloroethane	1000	964	96	68 - 120	
1,1-Dichloroethene	1000	844	84	44 - 143	
Dichlorofluoromethane	1000	1110	111	40 - 160	
1,2-Dichloropropane	1000	1000	100	73 - 120	
1,3-Dichloropropane	1000	906	91	74 - 120	
2,2-Dichloropropane	1000	740	74	25 - 123	
1,1-Dichloropropene	1000	1010	101	60 - 123	
Ethylbenzene	1000	915	91	66 - 120	
Ethyl ether	1000	1150	115	70 - 130	
Hexachlorobutadiene	1000	1030	103	34 - 135	
2-Hexanone	2000	1570	79	43 - 130	
Isopropylbenzene	1000	931	93	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Control Sample - Batch: 240-186224

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-186224/2-A	Analysis Batch:	240-186326	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186224	Lab File ID:	143833.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/23/2015 1625	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2015 2107				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	5000	100	44 - 173	
Methylcyclohexane	1000	939	94	41 - 133	
Methylene Chloride	1000	925	93	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1930	97	49 - 121	
Methyl tert butyl ether	1000	981	98	34 - 157	
m-Xylene & p-Xylene	1000	927	93	67 - 120	
Naphthalene	1000	1060	106	37 - 126	
n-Butylbenzene	1000	1060	106	51 - 137	
N-Propylbenzene	1000	1010	101	64 - 130	
o-Xylene	1000	949	95	68 - 120	
p-Isopropyltoluene	1000	1030	103	56 - 136	
sec-Butylbenzene	1000	1100	110	58 - 131	
Styrene	1000	850	85	60 - 120	
tert-Butylbenzene	1000	1020	102	58 - 128	
1,1,1,2-Tetrachloroethane	1000	940	94	27 - 121	
1,1,2,2-Tetrachloroethane	1000	1090	109	54 - 121	
Tetrachloroethene	1000	808	81	58 - 131	
Tetrahydrofuran	2000	2080	104	70 - 130	
Toluene	1000	911	91	66 - 123	
trans-1,2-Dichloroethene	1000	928	93	58 - 121	
trans-1,3-Dichloropropene	1000	955	95	22 - 122	
1,2,3-Trichlorobenzene	1000	980	98	43 - 129	
1,2,4-Trichlorobenzene	1000	971	97	41 - 135	
1,1,1-Trichloroethane	1000	853	85	38 - 122	
1,1,2-Trichloroethane	1000	918	92	74 - 120	
Trichloroethene	1000	944	94	59 - 124	
Trichlorofluoromethane	1000	1160	116	17 - 145	
1,2,3-Trichloropropane	1000	1000	100	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	820	82	48 - 151	
1,2,4-Trimethylbenzene	1000	1040	104	62 - 133	
1,3,5-Trimethylbenzene	1000	1060	106	60 - 130	
Vinyl chloride	1000	800	80	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	26 - 141
Dibromofluoromethane (Surr)	88	30 - 122
1,2-Dichloroethane-d4 (Surr)	96	39 - 128
Toluene-d8 (Surr)	81	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-187017

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-186960/1-A	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950762.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 1751	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1751				
Leach Date:	06/25/2015 2010				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	70 - 124
Dibromofluoromethane (Surr)	99	80 - 128
1,2-Dichloroethane-d4 (Surr)	95	80 - 121
Toluene-d8 (Surr)	101	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Control Sample - Batch: 240-187017

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-187017/10	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UX950763.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/26/2015 1813	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1813				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	952	95	80 - 120	
2-Butanone (MEK)	2000	1490	74	49 - 120	
Carbon tetrachloride	1000	964	96	54 - 122	
Chlorobenzene	1000	971	97	80 - 120	
Chloroform	1000	976	98	80 - 123	
1,2-Dichloroethane	1000	910	91	80 - 120	
1,1-Dichloroethene	1000	965	97	71 - 133	
Tetrachloroethene	1000	993	99	79 - 134	
Trichloroethene	1000	940	94	78 - 130	
Vinyl chloride	1000	868	87	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	101	70 - 124
Dibromofluoromethane (Surr)	95	80 - 128
1,2-Dichloroethane-d4 (Surr)	89	80 - 121
Toluene-d8 (Surr)	102	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187017

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-52266-J-4-C MS	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950778.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/27/2015 0014			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0014				5 mL
Leach Date:	06/25/2015 2010				

MSD Lab Sample ID:	240-52266-J-4-C MSD	Analysis Batch:	240-187017	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950779.D
Dilution:	1.0	Leach Batch:	240-186960	Initial Weight/Volume:	0.1 mL
Analysis Date:	06/27/2015 0038			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0038				5 mL
Leach Date:	06/25/2015 2010				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	93	92	80 - 120	1	30		
2-Butanone (MEK)	66	64	49 - 120	3	30		
Carbon tetrachloride	94	95	60 - 120	1	30		
Chlorobenzene	96	93	80 - 120	2	30		
Chloroform	94	96	80 - 124	2	30		
1,2-Dichloroethane	88	89	80 - 120	1	30		
1,1-Dichloroethene	97	98	67 - 139	1	30		
Tetrachloroethene	101	98	74 - 138	3	30		
Trichloroethene	96	96	75 - 134	0	30		
Vinyl chloride	82	84	51 - 120	3	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	103	97	70 - 124
Dibromofluoromethane (Surr)	98	99	80 - 128
1,2-Dichloroethane-d4 (Surr)	87	89	80 - 121
Toluene-d8 (Surr)	104	101	80 - 120

Method Blank - Batch: 240-186302

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-186302/12-A	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186302	Lab File ID:	50625006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1028	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	33.1	J	19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-186302

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-186302/12-A	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186302	Lab File ID:	50625006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1028	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	33.8	J	15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	76	24 - 110
2-Fluorophenol (Surr)	74	24 - 110
Nitrobenzene-d5 (Surr)	77	20 - 110
Phenol-d5 (Surr)	76	26 - 110
Terphenyl-d14 (Surr)	80	36 - 110
2,4,6-Tribromophenol (Surr)	42	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Control Sample - Batch: 240-186302

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-186302/13-A	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186302	Lab File ID:	50625007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1052	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	409	61	35 - 110	
2,2'-oxybis[1-chloropropane]	667	446	67	29 - 110	
2,4-Dichlorophenol	667	389	58	39 - 110	
2,4-Dimethylphenol	667	394	59	29 - 110	
2,4-Dinitrophenol	1330	940	70	10 - 110	J
2,4-Dinitrotoluene	667	516	77	48 - 110	
2,6-Dinitrotoluene	667	493	74	45 - 110	
2-Chloronaphthalene	667	403	60	32 - 110	
2,4,5-Trichlorophenol	667	278	42	25 - 110	J
2-Chlorophenol	667	398	60	37 - 110	
2,4,6-Trichlorophenol	667	309	46	12 - 110	J
2-Methylnaphthalene	667	402	60	36 - 110	
2-Methylphenol	667	468	70	41 - 110	
2-Nitroaniline	667	498	75	45 - 110	J
2-Nitrophenol	667	401	60	34 - 110	
3,3'-Dichlorobenzidine	1330	727	55	28 - 110	J
3-Nitroaniline	667	417	63	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	922	69	10 - 110	J
4-Bromophenyl phenyl ether	667	459	69	39 - 110	
4-Chloro-3-methylphenol	667	455	68	48 - 110	
4-Chloroaniline	667	257	39	30 - 110	J
4-Chlorophenyl phenyl ether	667	437	66	40 - 110	
4-Nitroaniline	667	446	67	48 - 110	J
4-Nitrophenol	1330	807	61	28 - 110	J
Acenaphthene	667	415	62	38 - 110	
Acenaphthylene	667	417	63	40 - 110	
Acetophenone	667	444	67	40 - 110	
Anthracene	667	484	73	48 - 110	
Atrazine	1330	1140	85	66 - 127	
Benzaldehyde	1330	871	65	32 - 110	
Benzo[a]anthracene	667	471	71	50 - 110	
Benzo[a]pyrene	667	509	76	44 - 110	
Benzo[b]fluoranthene	667	544	82	43 - 110	
Benzo[g,h,i]perylene	667	597	90	51 - 110	
Benzo[k]fluoranthene	667	533	80	38 - 105	
Bis(2-chloroethoxy)methane	667	409	61	32 - 110	
Bis(2-chloroethyl)ether	667	421	63	34 - 110	
Bis(2-ethylhexyl) phthalate	667	575	86	50 - 110	
Butyl benzyl phthalate	667	522	78	51 - 110	
Caprolactam	1330	1100	82	44 - 114	
Carbazole	667	532	80	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Control Sample - Batch: 240-186302

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-186302/13-A	Analysis Batch:	240-186705	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186302	Lab File ID:	50625007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/25/2015 1052	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	506	76	50 - 110	
Dibenz(a,h)anthracene	667	588	88	51 - 110	
Dibenzofuran	667	422	63	43 - 110	
Diethyl phthalate	667	494	74	52 - 110	
Dimethyl phthalate	667	475	71	50 - 110	
Di-n-butyl phthalate	667	623	93	51 - 110	
Di-n-octyl phthalate	667	587	88	48 - 110	
Fluoranthene	667	576	86	51 - 110	
Fluorene	667	440	66	46 - 110	
Hexachlorobenzene	667	415	62	43 - 110	
Hexachlorobutadiene	667	372	56	29 - 110	
Hexachlorocyclopentadiene	667	114	17	12 - 110	J
Hexachloroethane	667	438	66	30 - 110	
Indeno[1,2,3-cd]pyrene	667	580	87	50 - 110	
Isophorone	667	426	64	36 - 110	
Naphthalene	667	394	59	36 - 110	
Nitrobenzene	667	404	61	32 - 110	
N-Nitrosodi-n-propylamine	667	453	68	38 - 110	
N-Nitrosodiphenylamine	1330	1000	75	46 - 110	
Pentachlorophenol	1330	869	65	10 - 110	
Phenol	667	427	64	38 - 110	
Phenanthrene	667	485	73	49 - 110	
Pyrene	667	536	80	49 - 110	
3 & 4 Methylphenol	667	456	68	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	62	24 - 110
2-Fluorophenol (Surr)	65	24 - 110
Nitrobenzene-d5 (Surr)	63	20 - 110
Phenol-d5 (Surr)	66	26 - 110
Terphenyl-d14 (Surr)	75	36 - 110
2,4,6-Tribromophenol (Surr)	55	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186302

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52291-3	Analysis Batch:	240-187094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186302	Lab File ID:	50627019.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	30.30 g
Analysis Date:	06/27/2015 2045			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52291-3	Analysis Batch:	240-187094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186302	Lab File ID:	50627020.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	29.86 g
Analysis Date:	06/27/2015 2110			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	66	63	32 - 110	1	32	J	J
2,2'-oxybis[1-chloropropane]	64	61	11 - 110	3	42	J	J
2,4-Dichlorophenol	0	154	10 - 110	NC	34	F1	J F1
2,4-Dimethylphenol	0	0	10 - 110	NC	31	F1	F1
2,4-Dinitrophenol	167	172	10 - 110	4	99	J F1	J F1
2,4-Dinitrotoluene	67	73	32 - 110	10	30	J	J
2,6-Dinitrotoluene	0	79	35 - 110	NC	30	F1	J
2-Chloronaphthalene	61	63	28 - 110	5	30	J	J
2,4,5-Trichlorophenol	0	0	10 - 117	NC	99	F1	F1
2-Chlorophenol	60	58	10 - 110	3	47	J	J
2,4,6-Trichlorophenol	66	73	10 - 110	12	38	J	J
2-Methylnaphthalene	-4	237	10 - 133	11	42	4	4
2-Methylphenol	69	72	24 - 110	7	51	J	J
2-Nitroaniline	76	82	39 - 110	9	31	J	J
2-Nitrophenol	0	0	10 - 110	NC	49	F1	F1
3,3'-Dichlorobenzidine	34	0	10 - 110	NC	56	J	F1
3-Nitroaniline	62	0	10 - 110	NC	30	J	F1
4,6-Dinitro-2-methylphenol	79	82	10 - 110	5	55	J	J
4-Bromophenyl phenyl ether	69	66	33 - 110	3	30	J	J
4-Chloro-3-methylphenol	106	111	25 - 110	6	54	J	J F1
4-Chloroaniline	0	0	10 - 110	NC	36	F1	F1
4-Chlorophenyl phenyl ether	68	70	32 - 110	5	30	J	J
4-Nitroaniline	0	0	10 - 110	NC	48	F1	F1
4-Nitrophenol	76	74	10 - 113	1	49	J	J
Acenaphthene	62	73	22 - 110	13	99	J	J
Acenaphthylene	70	73	24 - 110	5	99	J	J
Acetophenone	0	0	31 - 110	NC	43	F1	F1
Anthracene	65	71	20 - 110	8	99	J	J
Atrazine	75	84	45 - 118	13	30	J	J
Benzaldehyde	86	87	23 - 110	2	42	J	J
Benzo[a]anthracene	68	73	10 - 122	5	99	J	J
Benzo[a]pyrene	62	69	10 - 110	8	99	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186302

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52291-3	Analysis Batch:	240-187094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186302	Lab File ID:	50627019.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	30.30 g
Analysis Date:	06/27/2015 2045			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52291-3	Analysis Batch:	240-187094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186302	Lab File ID:	50627020.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	29.86 g
Analysis Date:	06/27/2015 2110			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	61	66	12 - 118	6	99	J	J
Benzo[g,h,i]perylene	73	82	10 - 117	10	99	J	J
Benzo[k]fluoranthene	62	67	10 - 121	8	99	J	J
Bis(2-chloroethoxy)methane	0	0	26 - 110	NC	37	F1	F1
Bis(2-chloroethyl)ether	47	50	21 - 110	7	55	J	J
Bis(2-ethylhexyl) phthalate	20	107	40 - 110	8	30	J 4	J 4
Butyl benzyl phthalate	72	78	44 - 110	9	30	J	J
Caprolactam	0	0	10 - 134	NC	32	F1	F1
Carbazole	NC	NC	34 - 110	NC	30		
Chrysene	65	70	10 - 125	6	99	J	J
Dibenz(a,h)anthracene	74	78	14 - 113	6	99	J	J
Dibenzofuran	86	88	29 - 110	3	30	J	J
Diethyl phthalate	78	79	42 - 110	3	30	J	J
Dimethyl phthalate	73	78	41 - 110	8	30	J	J
Di-n-butyl phthalate	86	93	43 - 110	10	30	J	J
Di-n-octyl phthalate	66	67	24 - 119	3	30	J	J
Fluoranthene	72	86	10 - 110	9	99	J	J
Fluorene	69	80	23 - 110	10	99	J	J
Hexachlorobenzene	60	56	34 - 110	5	30	J	J
Hexachlorobutadiene	68	67	25 - 110	0	34	J	J
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	0	0	12 - 110	NC	50	F1	F1
Indeno[1,2,3-cd]pyrene	73	72	10 - 114	1	99	J	J
Isophorone	0	0	29 - 110	NC	38	F1	F1
Naphthalene	-55	200	10 - 111	28	99	J 4	J 4
Nitrobenzene	0	0	23 - 110	NC	41	F1	F1
N-Nitrosodi-n-propylamine	0	0	26 - 110	NC	42	F1	F1
N-Nitrosodiphenylamine	0	0	22 - 110	NC	30	F1	F1
Pentachlorophenol	57	57	10 - 110	2	50	J	J
Phenol	66	67	17 - 110	2	53	J	J
Phenanthrene	78	84	10 - 166	4	99	J	J
Pyrene	81	87	10 - 147	4	99	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186302

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52291-3	Analysis Batch:	240-187094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186302	Lab File ID:	50627019.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	30.30 g
Analysis Date:	06/27/2015 2045			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52291-3	Analysis Batch:	240-187094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-186302	Lab File ID:	50627020.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	29.86 g
Analysis Date:	06/27/2015 2110			Final Weight/Volume:	2 mL
Prep Date:	06/23/2015 1001			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
3 & 4 Methylphenol	0	0	25 - 110	NC	50	F1	F1

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
2-Fluorobiphenyl (Surr)	68		71		24 - 110
2-Fluorophenol (Surr)	56		54		24 - 110
Nitrobenzene-d5 (Surr)	0	X	0	X	20 - 110
Phenol-d5 (Surr)	63		80		26 - 110
Terphenyl-d14 (Surr)	71		64		36 - 110
2,4,6-Tribromophenol (Surr)	70		67		10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-187215

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-187215/15-A	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187215	Lab File ID:	50630003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1356	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.0040
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	73	30 - 110
2-Fluorophenol (Surr)	81	20 - 110
Nitrobenzene-d5 (Surr)	83	28 - 110
Phenol-d5 (Surr)	81	21 - 110
Terphenyl-d14 (Surr)	84	48 - 110
2,4,6-Tribromophenol (Surr)	74	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Control Sample - Batch: 240-187215

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-187215/16-A	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187215	Lab File ID:	50630004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1422	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0469	59	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0532	67	54 - 110	
Pyridine	0.0800	0.0601	75	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0563	70	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0548	69	46 - 110	
2-Methylphenol	0.0800	0.0582	73	44 - 111	
Hexachlorobenzene	0.0800	0.0618	77	50 - 110	
Hexachlorobutadiene	0.0800	0.0404	50	34 - 110	
Hexachloroethane	0.0800	0.0457	57	41 - 110	
Nitrobenzene	0.0800	0.0548	68	40 - 110	
Pentachlorophenol	0.160	0.122	76	12 - 110	
3 & 4 Methylphenol	0.0800	0.0595	74	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	70	30 - 110
2-Fluorophenol (Surr)	61	20 - 110
Nitrobenzene-d5 (Surr)	71	28 - 110
Phenol-d5 (Surr)	53	21 - 110
Terphenyl-d14 (Surr)	79	48 - 110
2,4,6-Tribromophenol (Surr)	71	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike - Batch: 240-187215

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-52266-K-1-D MS	Analysis Batch:	240-187453	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-187215	Lab File ID:	50630014.D
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	250 mL
Analysis Date:	06/30/2015 1840	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1109			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0336	42	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0550	69	42 - 110	
Pyridine	ND	0.0800	0.0557	70	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0585	73	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0574	72	35 - 110	
2-Methylphenol	ND	0.0800	0.0609	76	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0571	71	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0363	45	28 - 110	
Hexachloroethane	ND	0.0800	0.0322	40	26 - 110	
Nitrobenzene	ND	0.0800	0.0656	82	32 - 110	
Pentachlorophenol	ND	0.160	0.132	82	10 - 124	
3 & 4 Methylphenol	ND	0.0800	0.0631	79	29 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	60	30 - 110
2-Fluorophenol (Surr)	61	20 - 110
Nitrobenzene-d5 (Surr)	71	28 - 110
Phenol-d5 (Surr)	54	21 - 110
Terphenyl-d14 (Surr)	69	48 - 110
2,4,6-Tribromophenol (Surr)	60	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-187216

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-187216/4-A	Analysis Batch:	240-187584	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187216	Lab File ID:	50701005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	07/01/2015 1118	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1114			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.0040
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	71	30 - 110
2-Fluorophenol (Surr)	65	20 - 110
Nitrobenzene-d5 (Surr)	76	28 - 110
Phenol-d5 (Surr)	54	21 - 110
Terphenyl-d14 (Surr)	75	48 - 110
2,4,6-Tribromophenol (Surr)	71	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Control Sample - Batch: 240-187216

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-187216/5-A	Analysis Batch:	240-187584	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187216	Lab File ID:	50701006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	07/01/2015 1143	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1114			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0370	46	52 - 110	*
2,4-Dinitrotoluene	0.0800	0.0575	72	54 - 110	
Pyridine	0.0800	0.0483	60	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0559	70	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0562	70	46 - 110	
2-Methylphenol	0.0800	0.0579	72	44 - 111	
Hexachlorobenzene	0.0800	0.0706	88	50 - 110	
Hexachlorobutadiene	0.0800	0.0363	45	34 - 110	
Hexachloroethane	0.0800	0.0356	44	41 - 110	
Nitrobenzene	0.0800	0.0572	71	40 - 110	
Pentachlorophenol	0.160	0.131	82	12 - 110	
3 & 4 Methylphenol	0.0800	0.0566	71	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	56	30 - 110
2-Fluorophenol (Surr)	54	20 - 110
Nitrobenzene-d5 (Surr)	68	28 - 110
Phenol-d5 (Surr)	42	21 - 110
Terphenyl-d14 (Surr)	77	48 - 110
2,4,6-Tribromophenol (Surr)	66	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike - Batch: 240-187216

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-52289-C-4-D MS	Analysis Batch:	240-187584	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-187216	Lab File ID:	50701024.D
Dilution:	2.0	Leach Batch:	240-187117	Initial Weight/Volume:	250 mL
Analysis Date:	07/01/2015 1911	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1114			Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0366	46	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0606	76	42 - 110	
Pyridine	ND	0.0800	0.0499	62	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0649	81	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0630	79	35 - 110	
2-Methylphenol	ND	0.0800	0.0695	87	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0694	87	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0385	48	28 - 110	
Hexachloroethane	ND	0.0800	0.0499	62	26 - 110	
Nitrobenzene	ND	0.0800	0.0597	75	32 - 110	
Pentachlorophenol	ND	0.160	0.137	86	10 - 124	
3 & 4 Methylphenol	ND	0.0800	0.0678	85	29 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	57	30 - 110
2-Fluorophenol (Surr)	65	20 - 110
Nitrobenzene-d5 (Surr)	71	28 - 110
Phenol-d5 (Surr)	56	21 - 110
Terphenyl-d14 (Surr)	79	48 - 110
2,4,6-Tribromophenol (Surr)	73	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-187986

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-187986/4-A	Analysis Batch:	240-188138	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187986	Lab File ID:	50707003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	07/07/2015 1024	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 0926			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.0040
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	70	30 - 110
2-Fluorophenol (Surr)	63	20 - 110
Nitrobenzene-d5 (Surr)	70	28 - 110
Phenol-d5 (Surr)	53	21 - 110
Terphenyl-d14 (Surr)	71	48 - 110
2,4,6-Tribromophenol (Surr)	74	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Control Sample - Batch: 240-187986

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-187986/5-A	Analysis Batch:	240-188138	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187986	Lab File ID:	50707004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	07/07/2015 1049	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 0926			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0581	73	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0581	73	54 - 110	
Pyridine	0.0800	0.0593	74	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0605	76	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0608	76	46 - 110	
2-Methylphenol	0.0800	0.0641	80	44 - 111	
Hexachlorobenzene	0.0800	0.0715	89	50 - 110	
Hexachlorobutadiene	0.0800	0.0511	64	34 - 110	
Hexachloroethane	0.0800	0.0569	71	41 - 110	
Nitrobenzene	0.0800	0.0615	77	40 - 110	
Pentachlorophenol	0.160	0.139	87	12 - 110	
3 & 4 Methylphenol	0.0800	0.0653	82	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	79	30 - 110
2-Fluorophenol (Surr)	65	20 - 110
Nitrobenzene-d5 (Surr)	78	28 - 110
Phenol-d5 (Surr)	55	21 - 110
Terphenyl-d14 (Surr)	78	48 - 110
2,4,6-Tribromophenol (Surr)	82	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	66	30 - 110
2-Fluorophenol (Surr)	51	20 - 110
Nitrobenzene-d5 (Surr)	66	28 - 110
Phenol-d5 (Surr)	50	21 - 110
Terphenyl-d14 (Surr)	58	48 - 110
2,4,6-Tribromophenol (Surr)	56	23 - 110

Matrix Spike - Batch: 240-187986

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-52291-2RE	Analysis Batch:	240-188138	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-187986	Lab File ID:	50707009.D
Dilution:	4.0	Leach Batch:	240-187117	Initial Weight/Volume:	250 mL
Analysis Date:	07/07/2015 1253	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 0926	Run Type:	RE	Injection Volume:	1 uL
Leach Date:	06/28/2015 1400				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0444	56	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0514	64	42 - 110	
Pyridine	ND	0.0800	0.0451	56	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0509	64	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0515	64	35 - 110	
2-Methylphenol	ND	0.0800	0.0675	84	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0489	61	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0451	56	28 - 110	
Hexachloroethane	ND	0.0800	ND	0	26 - 110	F1
Nitrobenzene	ND	0.0800	0.0581	73	32 - 110	
Pentachlorophenol	ND	0.160	0.106	67	10 - 124	
3 & 4 Methylphenol	0.053	0.0800	0.114	76	29 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-186729

Method: WI-GRO
Preparation: 5035

Lab Sample ID:	MB 240-186729/1-A	Analysis Batch:	240-186735	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186729	Lab File ID:	Y0062510.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/25/2015 1638	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186729

Method: WI-GRO
Preparation: 5035

LCS Lab Sample ID:	LCS 240-186729/2-A	Analysis Batch:	240-186735	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186729	Lab File ID:	Y0062511.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/25/2015 1714	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186729/14-A	Analysis Batch:	240-186735	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186729	Lab File ID:	Y0062524.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/26/2015 0049	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/25/2015 0911			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	110	111	80 - 120	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-187058

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-187058/14-A	Analysis Batch:	240-187239	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187058	Lab File ID:	P14F062908.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 1651	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-187058

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-187058/15-A	Analysis Batch:	240-187239	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187058	Lab File ID:	P14F062909.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 1718	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-187058/16-A	Analysis Batch:	240-187239	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187058	Lab File ID:	P14F062923.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 2342	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	91	109	70 - 120	18	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-186553

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-186553/1-A	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/25/2015 1235	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	ND		0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	ND		5.2	500
Manganese	ND		0.084	1.5
Sodium	ND		19	500
Nickel	ND		0.080	4.0
Potassium	ND		6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Selenium	ND		0.34	0.50
Vanadium	ND		0.20	5.0
Thallium	ND		0.13	1.0
Zinc	0.597	J	0.56	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Control Sample - Batch: 240-186553

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-186553/2-A	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/25/2015 1239	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	188	94	80 - 120	
Antimony	50.0	47.5	95	80 - 120	
Barium	200	185	92	80 - 120	
Beryllium	5.00	4.69	94	80 - 120	
Cadmium	5.00	4.93	99	80 - 120	
Calcium	5000	4680	94	80 - 120	
Chromium	20.0	18.4	92	80 - 120	
Cobalt	50.0	46.5	93	80 - 120	
Copper	25.0	23.4	94	80 - 120	
Iron	100	96.7	97	80 - 120	
Magnesium	5000	4660	93	80 - 120	
Manganese	50.0	47.7	95	80 - 120	
Sodium	5000	4780	96	80 - 120	
Nickel	50.0	47.2	94	80 - 120	
Potassium	5000	4700	94	80 - 120	
Silver	5.00	4.83	97	80 - 120	
Arsenic	200	187	93	80 - 120	
Lead	50.0	45.0	90	80 - 120	
Selenium	200	182	91	80 - 120	
Vanadium	50.0	48.6	97	80 - 120	
Thallium	200	184	92	80 - 120	
Zinc	50.0	48.1	96	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186553

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-52266-J-1-B MS	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.17 g
Analysis Date:	06/25/2015 1254			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52266-J-1-C MSD	Analysis Batch:	240-186732	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186553	Lab File ID:	I9062515A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.17 g
Analysis Date:	06/25/2015 1258			Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1132				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	1632	2366	75 - 125	15	20	4	4
Antimony	39	47	75 - 125	17	20	F1	F1
Barium	390	447	75 - 125	10	20	F1	F1
Beryllium	84	84	75 - 125	0	20		
Cadmium	87	92	75 - 125	5	20		
Calcium	40	219	75 - 125	42	20	F1	F1 F2
Chromium	104	113	75 - 125	5	20		
Cobalt	91	92	75 - 125	0	20		
Copper	71	75	75 - 125	3	20	F1	
Iron	313	1314	75 - 125	9	20	4	4
Magnesium	86	164	75 - 125	35	20		F1 F2
Manganese	-28	271	75 - 125	40	20	4	4 F2
Sodium	84	85	75 - 125	1	20		
Nickel	94	93	75 - 125	0	20		
Potassium	115	126	75 - 125	6	20		F1
Silver	84	89	75 - 125	6	20		
Arsenic	83	84	75 - 125	1	20		
Lead	39	76	75 - 125	21	20	F1	F2
Selenium	80	81	75 - 125	1	20		
Vanadium	85	89	75 - 125	4	20		
Thallium	87	88	75 - 125	2	20		
Zinc	84	119	75 - 125	15	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

TCLP SPLPE Leachate Blank - Batch: 240-187231

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-187116/1-B	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1414	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.0830	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	0.633	J	0.26	5.0
Chromium	0.00108	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Iron	0.0240	J	0.013	0.10
Magnesium	0.0679	J	0.055	5.0
Manganese	0.000707	J	0.00046	0.015
Potassium	0.969	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00838	J	0.0029	0.50
Lead	0.0365	J	0.0019	0.50
Selenium	0.00592	J	0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-187231

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-187231/2-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1418	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.0139	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Potassium	0.180	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	0.0377	J	0.0019	0.50
Selenium	ND		0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Control Sample - Batch: 240-187231

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-187231/3-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1422	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	1.99	100	50 - 150	
Antimony	0.500	0.521	104	50 - 150	
Barium	2.00	1.99	99	50 - 150	J
Beryllium	0.0500	0.0496	99	50 - 150	
Cadmium	0.0500	0.0508	102	50 - 150	J
Calcium	50.0	49.4	99	50 - 150	
Chromium	0.200	0.200	100	50 - 150	J
Cobalt	0.500	0.522	104	50 - 150	
Iron	1.00	1.02	102	50 - 150	
Magnesium	50.0	48.5	97	50 - 150	
Manganese	0.500	0.503	101	50 - 150	
Potassium	50.0	51.6	103	50 - 150	
Silver	0.0500	0.0556	111	50 - 150	J
Arsenic	2.00	2.17	109	50 - 150	
Lead	0.500	0.504	101	50 - 150	
Selenium	2.00	2.22	111	50 - 150	
Vanadium	0.500	0.496	99	50 - 150	
Thallium	2.00	1.94	97	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187231

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52266-J-2-E MS ^5	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1435			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52266-J-2-F MSD ^5	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187231	Lab File ID:	I9063015A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1439			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1151				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	94	96	75 - 125	2	20		
Antimony	102	106	75 - 125	2	20	J	J
Barium	99	99	75 - 125	0	20		
Beryllium	100	99	75 - 125	0	20		
Cadmium	102	101	75 - 125	1	20		
Calcium	137	130	75 - 125	1	20	4	4
Chromium	98	96	75 - 125	1	20		
Cobalt	103	101	75 - 125	2	20		
Iron	110	107	75 - 125	1	20		
Magnesium	102	101	75 - 125	1	20		
Manganese	129	122	75 - 125	1	20	4	4
Potassium	102	100	75 - 125	1	20		
Silver	103	101	75 - 125	1	20	J	J
Arsenic	104	103	75 - 125	1	20		
Selenium	105	103	75 - 125	2	20	J	J
Vanadium	100	98	75 - 125	2	20		
Thallium	100	98	75 - 125	1	20	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

TCLP SPLPE Leachate Blank - Batch: 240-187247

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-187117/1-B	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187247	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1649	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1223				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	0.0263	J	0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Potassium	ND		0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00661	J	0.0029	0.50
Lead	0.0390	J	0.0019	0.50
Selenium	ND		0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-187247

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-187247/2-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187247	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1654	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1223				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	0.00695	J	0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	0.000323	J	0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Potassium	ND		0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	0.0395	J	0.0019	0.50
Selenium	ND		0.0040	0.25
Vanadium	ND		0.0024	0.050
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Lab Control Sample - Batch: 240-187247

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-187247/3-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187247	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1658	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1223				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	2.03	101	50 - 150	
Antimony	0.500	0.531	106	50 - 150	
Barium	2.00	2.02	101	50 - 150	J
Beryllium	0.0500	0.0506	101	50 - 150	
Cadmium	0.0500	0.0499	100	50 - 150	J
Calcium	50.0	50.0	100	50 - 150	
Chromium	0.200	0.200	100	50 - 150	J
Cobalt	0.500	0.507	101	50 - 150	
Iron	1.00	1.06	106	50 - 150	
Magnesium	50.0	49.1	98	50 - 150	
Manganese	0.500	0.505	101	50 - 150	
Potassium	50.0	50.3	101	50 - 150	
Silver	0.0500	0.0514	103	50 - 150	J
Arsenic	2.00	2.10	105	50 - 150	
Lead	0.500	0.533	107	50 - 150	
Selenium	2.00	2.16	108	50 - 150	
Vanadium	0.500	0.507	101	50 - 150	
Thallium	2.00	2.02	101	50 - 150	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187247

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID: 240-52291-2
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 06/30/2015 1710
Prep Date: 06/29/2015 1223
Leach Date: 06/28/2015 1400

Analysis Batch: 240-187366
Prep Batch: 240-187247
Leach Batch: 240-187117

Instrument ID: I9
Lab File ID: I9063015A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-52291-2
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 06/30/2015 1714
Prep Date: 06/29/2015 1223
Leach Date: 06/28/2015 1400

Analysis Batch: 240-187366
Prep Batch: 240-187247
Leach Batch: 240-187117

Instrument ID: I9
Lab File ID: I9063015A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	91	97	75 - 125	4	20		
Antimony	95	105	75 - 125	2	20		
Barium	97	100	75 - 125	2	20	J	
Beryllium	98	99	75 - 125	1	20		
Cadmium	99	101	75 - 125	1	20		
Calcium	100	119	75 - 125	2	20	4	4
Chromium	96	97	75 - 125	1	20		
Cobalt	97	99	75 - 125	1	20		
Iron	99	183	75 - 125	2	20	4	4
Magnesium	98	100	75 - 125	1	20		
Manganese	109	129	75 - 125	2	20	4	4
Potassium	100	101	75 - 125	1	20		
Silver	99	101	75 - 125	1	20	J	J
Arsenic	101	102	75 - 125	1	20		
Selenium	103	103	75 - 125	0	20	J	J
Vanadium	96	100	75 - 125	4	20		
Thallium	98	100	75 - 125	1	20	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187247

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52291-2	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187247	Lab File ID:	I9070115A.asc
Dilution:	50	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1207			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1223				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52291-2	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187247	Lab File ID:	I9070115A.asc
Dilution:	50	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1212			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1223				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Lead	-74	26	75 - 125	2	20	4	4

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

TCLP SPLPE Leachate Blank - Batch: 240-187416

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-187116/1-D	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1502	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Copper	0.00312	J	0.0019	1.0
Nickel	0.00313	J	0.00076	0.040
Zinc	ND		0.0096	1.0

Method Blank - Batch: 240-187416

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-187416/2-A	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1507	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Copper	ND		0.0019	1.0
Nickel	ND		0.00076	0.040
Zinc	ND		0.0096	1.0

Lab Control Sample - Batch: 240-187416

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-187416/3-A	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1511	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Copper	0.250	0.247	99	50 - 150	J
Nickel	0.500	0.504	101	50 - 150	
Zinc	0.500	0.544	109	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187416

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52266-J-2-K MS ^5	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1532			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52266-J-2-L MSD ^5	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187416	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1536			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1046				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Copper	94	96	75 - 125	2	20	J	J
Nickel	96	100	75 - 125	3	20		
Zinc	61	82	75 - 125	3	20	J 4	J 4

TCLP SPLPE Leachate Blank - Batch: 240-187418

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-187117/1-D	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187418	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1405	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1051				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Copper	0.00220	J	0.0019	1.0
Nickel	ND		0.00076	0.040
Zinc	ND		0.0096	1.0

Method Blank - Batch: 240-187418

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-187418/2-A	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187418	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1410	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1051				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Copper	ND		0.0019	1.0
Nickel	ND		0.00076	0.040
Zinc	ND		0.0096	1.0

Lab Control Sample - Batch: 240-187418

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-187418/3-A	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187418	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1414	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1051				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Copper	0.250	0.245	98	50 - 150	J
Nickel	0.500	0.490	98	50 - 150	
Zinc	0.500	0.499	100	50 - 150	J

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187418

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52291-2	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187418	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1426			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1051				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52291-2	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187418	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1438			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1051				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Copper	93	99	75 - 125	5	20	J	J
Nickel	95	100	75 - 125	4	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187418

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52291-2	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187418	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1450			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1051				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52291-2	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187418	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1454			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1051				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Zinc	14	240	75 - 125	4	20	4	4

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

TCLP SPLPE Leachate Blank - Batch: 240-187233

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-187116/1-C	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0819	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-187233

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-187233/2-A	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0820	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-187233

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-187233/3-A	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0822	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00500	100	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187233

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-52266-J-2-H MS	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0825			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52266-J-2-I MSD	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187233	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187116	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0826			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	95	98	80 - 120	3	20		

Method Blank - Batch: 240-187248

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-187248/2-A	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187248	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0951	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

TCLP SPLPE Leachate Blank - Batch: 240-187248

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-187117/1-C	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187248	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0952	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-187248

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-187248/3-A	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187248	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0954	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00505	101	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187248

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-52291-2	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187248	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 0958			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

MSD Lab Sample ID:	240-52291-2	Analysis Batch:	240-187438	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187248	Lab File ID:	063015AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187117	Initial Weight/Volume:	50 mL
Analysis Date:	06/30/2015 1000			Final Weight/Volume:	50 mL
Prep Date:	06/29/2015 1400				
Leach Date:	06/28/2015 1400				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	96	98	80 - 120	2	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-186588

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-186588/1-A	Analysis Batch:	240-187002	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/26/2015 1018	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-186588

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-186588/2-A	Analysis Batch:	240-187002	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186588	Lab File ID:	062615A-HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/26/2015 1020	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1510				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.822	99	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-186524/9-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.27	0.80

Lab Control Sample Insoluble - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-186524/11-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	736	114	75 - 125	

Lab Control Sample Soluble - Batch: 240-186524

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-186524/10-A	Analysis Batch:	240-186823	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-186524	Lab File ID:	186524.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/25/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/24/2015 1013				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	18.3	92	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Method Blank - Batch: 240-187192

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-187192/9-A	Analysis Batch:	240-187474	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-187192	Lab File ID:	187192.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/30/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/29/2015 1029				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.27	0.80

Lab Control Sample Insoluble - Batch: 240-187192

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-187192/11-A	Analysis Batch:	240-187474	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-187192	Lab File ID:	187192.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/30/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/29/2015 1029				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	651	101	75 - 125	

Lab Control Sample Soluble - Batch: 240-187192

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-187192/10-A	Analysis Batch:	240-187474	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-187192	Lab File ID:	187192.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	06/30/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/29/2015 1029				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	17.9	90	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52291-1

Duplicate - Batch: 240-186275

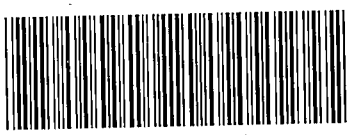
Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52291-4	Analysis Batch:	240-186275	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/23/2015 0848	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	87	90	3	20	
Percent Moisture	13	10	20	20	

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-52291 Chain of Custody

4101 Shuffel Street N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

TestAmerica Canton

4101 Shuffel Street, N. W.
North Canton, OH 44720
Phone: 330 497 9396 Fax: 330 497 ?

1.8 / C 2.8
1.0 / C 2.0
2.0 / C 3.0

Chain of Custody Record

103814

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact		Project Manager: Kris Hinskey	Site Contact: Kelly Hoein	Date: 6/19/15	COC No:
Company Name:	ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier: FedEx	1 of 1 COCs
Address:	430 First Avenue North, Ste 720	**Analysis Turnaround Time**			Sampler: Tom Darmo
City/State/Zip:	Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Phone:	612-339-9434	TAT if different from Below			Walk-in Client:
Fax:		☒ 2 weeks			Lab Sampling:
Project Name:	Ford TCAP	☐ 1 week			
Site:	St Paul MN	☐ 2 days			Job / SDG No.: 24006638
P O #	MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	VOC (8260)	SVOCs (8270)	GRO (w/ MeOH methods)	DRO (w/ mod methods)	TAL metals (Total)	Hexavalent Chromium (7196A)	TCLP VOCs (1311/8260)	TCLP SVOC (1311/8270)	TCLP metals (1311/6010)	Moisture content	Sample Specific Notes:
ASB-1004_37-40 (20150619)	6/19/15	1330	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1004_60-62 (20150619)	6/19/15	1350	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1004_65-70 (20150619)	6/19/15	1420	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1004_79-80 (20150619)	6/19/15	1445	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1004_83-85 (20150619)	6/19/15	1515	G	SO	11			X	X	X	X	X		X	X	X	X	
MB01 (20150619)	6/19/15	—	—	L	2			X		X								

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH — VOC (8260): 6; GRO: 6

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Level IV

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: ____ Corr'd: ____		Therm ID No.: ____
Relinquished by: Thomas Darmo	Company: ARCADIS	Date/Time: 6/19/15 1700	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: [signature]	Company: TA Canton	Date/Time: 10-20-15 10:30am

TestAmerica Canton Sample Receipt Form/Narrative Canton Facility — Login # : 52291

Client Arcadis — Site Name — Cooler unpacked by: Jenny Stiller

Cooler Received on 6-20-15 — Opened on 6-22-15

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time — Storage Location

TestAmerica Cooler # — Foam Box (Client Cooler) Box Other

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   - IR GUN# A (CF +1.0 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C
   - ~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C~~
   - ~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C~~
   - IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C

   ☑ See Multiple Cooler Form
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 3 (Yes) No
   - Were custody seals on the outside of the cooler(s) signed & dated? (1 each) (Yes) No NA
   - Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? Yes (No)
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Were sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# HC432654
12. Were VOAs on the COC? (Yes) No
13. Were air bubbles >6 mm in any VOA vials? Yes No (NA)
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # 02024014 (Yes) No

Contacted PM ____ Date ____ by ____ via Verbal Voice Mail Other

Concerning ____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.

Sample(s) ASB-1004-60-62(20150619) 1X1L were received in a broken container.

Sample(s) ____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory.

Time preserved: ____ Preservative(s) added/Lot number(s): ____

TestAmerica Multiple Cooler Receipt Form/Narrative
Canton Facility

Login # : 52291

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
clt cooler	A	1.8	2.8	wet ice
1	A	1.0	2.0	wet ice
1	A	2.0	3.0	wet ice

July 08, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52291-1
Sample date: 2015-06-19
Report received by CADENA: 2015-07-08
Initial Data Verification completed by CADENA: 2015-07-08

The following minor QC exceptions or missing information were noted:

WI-GRO and WI-DRO QC batch did not include MS recovery data and surrogate recoveries were not available for samples or QC.

WI-GRO QC batch method blank had a detection below the RL. Client samples -001 and -004 WI-GRO results should be considered to be non-detect at the RL and qualified with UB flags and sample -005 non-detect at the concentration reported and qualified with a B flag.

GCMS VOC QC batch 186224 did not include MS recovery data due to insufficient sample volume available for creating MS/MSD"s according to laboratory submittal case narrative.

GCMS SVOC client sample -003 totals analysis MS recoveries were diluted to below reliably quantifiable levels so were not used to qualify results. Sample -002 re-analysis MS recoveries were outliers biased low for hexachloroethane. These results were not considered to be the reportable results so qualification was not required based on this low bias QC outlier.

GCMS VOC surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results for client samples -002 and -003 totals analyses.

GCMS VOC trip blank had a detection below the RL for methyl acetate. Client samples -001 and -005 results for this analyte should be considered to be non-detect at the RL and qualified with UB flags.

GCMS SVOC surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results for client samples -002 and -003 totals analyses. Note: client sample -002 TCLP re-analysis was performed outside of the referenced holding time so these re-analysis results should be considered to be estimated and qualified with J flags if detected and UJ flags if non-detect.

GCMS SVOC QC batch 186302 method blank had detections below the RL for bis-2-ethylhexylphthalate and di-n-butylphthalate. Client samples -001, -004 and -005 bis-2-ethylhexylphthalate and samples -001 and -004 di-n-butylphthalate results should be considered to be non-detect at the RL and qualified with UB flags.

GCMS SVOC QC batch 187216 LCS recoveries were outliers biased low for 1,4-dichlorobenzene. Qualification of reportable client sample results was not required based on this LCS recovery outlier.

Metals method blanks had detections below the RL in QC batch 186553 for zinc and in QC batch 187231 for barium, calcium, chromium, iron, magnesium, manganese, potassium, arsenic, lead and selenium and in QC batch 187416 for TCLP copper and nickel and batch 187418 for TCLP copper and batch 187247 for antimony, arsenic, lead and cadmium. Metals results should be considered to be non-detect at the RL and qualified with UB flags for the following samples and analytes:
TCLP COPPER - UB flags - -003.
TCLP CHROMIUM - UB flags - -001, -003, -004 and -005.
TCLP ARSENIC - UB flags - -001, -003, -004 and -005.
TCLP LEAD - UB flags - -001, -003, -004 and -005.
TCLP SELENIUM - UB flags - -001, -003.
TCLP IRON - UB flags - -004 and -005.

Metals QC batch 187416, 187247, 186553 MS/MSD recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

Metals sample -002 MS/MSD recoveries were not considered to be statistically reliable due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule) so were not used to qualify results for calcium, iron, manganese, lead and zinc.

5 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52291-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240522911	ASB-1004_37-40(20150619)	6/19/2015	1:30:00	X	X	X	X	X	X	X	X
240522912	ASB-1004_60-62(20150619)	6/19/2015	1:50:00	X	X	X	X	X	X	X	X
240522913	ASB-1004_69-70(20150619)	6/19/2015	2:20:00	X	X	X	X	X	X	X	X
240522914	ASB-1004_79-80(20150619)	6/19/2015	2:45:00	X	X	X	X	X	X	X	X
240522915	ASB-1004_83-85(20150619)	6/19/2015	3:15:00	X	X	X	X	X	X	X	X
240522916	MB01(20150619)	6/19/2015	12:00:00	X		X					

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52291-1

		Sample Name:	ASB-1004_37-40(20150619)				ASB-1004_69-70(20150619)				ASB-1004_79-80(20150619)				ASB-1004_83-85(20150619)			
		Lab Sample ID:	240522911				240522913				240522914				240522915			
		Sample Date:	6/19/2015				6/19/2015				6/19/2015				6/19/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																		
	OSW-8260B																	
	Methyl acetate	79-20-9	160	690	ug/kg	UB									74	570	ug/kg	UB
GC/MS SVOC																		
	OSW-8270C																	
	Bis(2-ethylhexyl) phthalate	117-81-7	60	400	ug/kg	UB					39	380	ug/kg	UB	560	1900	ug/kg	UB
	Di-n-butyl phthalate	84-74-2	42	400	ug/kg	UB					39	380	ug/kg	UB				
GC VOC																		
	PUBL-SW-140																	
	WI Gasoline Range Organics (C6-C10)	E-1005	4.1	13	mg/kg	UB					67	120	mg/kg	UB	430	110	mg/kg	B
Metals																		
	OSW-6010B																	
	Arsenic	7440-38-2	0.0081	0.50	mg/l	UB	0.0096	0.50	mg/l	UB	0.013	0.50	mg/l	UB	0.011	0.50	mg/l	UB
	Chromium	7440-47-3	0.0036	0.50	mg/l	UB	0.0022	0.50	mg/l	UB	0.0035	0.50	mg/l	UB	0.0027	0.50	mg/l	UB
	Copper	7440-50-8					0.0019	1.0	mg/l	UB								
	Iron	7439-89-6									0.020	0.10	mg/l	UB	0.079	0.10	mg/l	UB
	Lead	7439-92-1	0.046	0.50	mg/l	UB	0.12	0.50	mg/l	UB	0.037	0.50	mg/l	UB	0.044	0.50	mg/l	UB
	Selenium	7782-49-2	0.0079	0.25	mg/l	UB	0.0052	0.25	mg/l	UB								

ANALYTICAL REPORT

Job Number: 240-52439-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
7/10/2015 9:22 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
07/10/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52439-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/24/2015 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 3.4º C, 3.8º C, 4.0º C, 4.2º C and 4.6º C.

Exceptions: The following samples were received without a pre-weighed methanol container for WI-DRO: ASB-1006_39-42(20150622) (240-52439-1) and ASB-1006_52-54(20150622) (240-52439-2). The client was contacted regarding this issue, and the laboratory was instructed to proceed with TPH-DRO analysis instead of the WI-DRO.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623) (240-52439-9) and ASB-1007_75-77(20150623) (240-52439-10) were analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 06/29/2015 and analyzed on 07/01/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), MB-01(20150623) (240-52439-7), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623) (240-52439-9), ASB-1007_75-77(20150623) (240-52439-10) and MB-01(20150623) (240-52439-11) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/26/2015 and analyzed on 06/29/2015 and 06/30/2015.

1,2-Dichloroethane-d4 (Surr) and Dibromofluoromethane (Surr) failed the surrogate recovery criteria high for MB-01(20150623) (240-52439-11). 1,2-Dichloroethane-d4 (Surr), Dibromofluoromethane (Surr) and Toluene-d8 (Surr) failed the surrogate recovery criteria high for ASB-1007_22-25(20150623) (240-52439-6). 1,2-Dichloroethane-d4 (Surr), 4-Bromofluorobenzene (Surr), Dibromofluoromethane (Surr) and Toluene-d8 (Surr) failed the surrogate recovery criteria high for ASB-1007_67-70(20150623) (240-52439-9). Refer to the QC report for details.

Acetone failed the recovery criteria high for MRL 240-187197/8. Refer to the QC report for details.

Samples ASB-1006_57-60(20150622) (240-52439-3)[1.25X], ASB-1007_22-25(20150623) (240-52439-6)[33.33X] and ASB-1007_67-70(20150623) (240-52439-9)[200X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: Surrogate recovery for the following sample was outside of acceptance limits: MB-01(20150623) (240-52439-11). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-186967 and analytical batch 240-187197.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-186967 and analytical batch 240-187454 on this sample ASB-1006_52-54(20150622) (240-52439-2) .

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623) (240-52439-9) and ASB-1007_75-77(20150623) (240-52439-10) were analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 06/29/2015, prepared on 07/06/2015 and analyzed on 07/08/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Method(s) 3540C: Due to the matrix, the following sample could not be concentrated to the final method required volume: ASB-1007_67-70(20150623) (240-52439-9). The reporting limits (RLs) are elevated proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623) (240-52439-9) and ASB-1007_75-77(20150623) (240-52439-10) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/29/2015 and 06/30/2015 and analyzed on 07/01/2015, 07/09/2015 and 07/10/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Several analytes failed the surrogate recovery criteria low for ASB-1007_22-25(20150623) (240-52439-6). Terphenyl-d14 (Surr) failed the surrogate recovery criteria high. 2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl (Surr), 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr), Phenol-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for ASB-1007_67-70(20150623) (240-52439-9). Refer to the QC report for details.

Hexachlorocyclopentadiene failed the recovery criteria low for the MS/MSD of sample 240-52391-49 in batch 240-187535.

Several analytes failed the recovery criteria low for the MS/MSD of sample 240-52442-3 in batch 240-188479. Refer to the QC report for details.

Samples ASB-1006_57-60(20150622) (240-52439-3)[20X], ASB-1006_65-67(20150622) (240-52439-4)[4X], ASB-1007_22-25(20150623) (240-52439-6)[200X], ASB-1007_22-25(20150623) (240-52439-6)[500X], ASB-1007_62-65(20150623) (240-52439-8)[4X] and ASB-1007_67-70(20150623) (240-52439-9)[133.34X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: The following samples were diluted due to the nature of the sample matrix: ASB-1007_22-25(20150623) (240-52439-6) and ASB-1007_67-70(20150623) (240-52439-9). Elevated reporting limits (RLs) are provided.

Method(s) 3540C: Due to the matrix, the following sample could not be concentrated to the final method required volume: ASB-1007_67-70(20150623) (240-52439-9). The reporting limits (RLs) are elevated proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), MB-01(20150623) (240-52439-7), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623)

(240-52439-9), ASB-1007_75-77(20150623) (240-52439-10) and MB-01(20150623) (240-52439-11) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared on 06/26/2015 and analyzed on 06/26/2015 and 06/29/2015.

Samples ASB-1007_22-25(20150623) (240-52439-6)[10X] and ASB-1007_67-70(20150623) (240-52439-9)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI-GRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the Gasoline Range Organics (GRO) mix (i.e., Naphthalene): ASB-1006_65-67(20150622) (240-52439-4) and ASB-1007_22-25(20150623) (240-52439-6).

Method(s) WI-GRO: The following sample was diluted due to the nature of the sample matrix: ASB-1007_22-25(20150623) (240-52439-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS (DRO)

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3) and ASB-1007_62-65(20150623) (240-52439-8) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 06/29/2015 and 07/02/2015 and analyzed on 06/30/2015 and 07/06/2015.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Sample ASB-1006_57-60(20150622) (240-52439-3)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), ASB-1007_67-70(20150623) (240-52439-9) and ASB-1007_75-77(20150623) (240-52439-10) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/27/2015 and analyzed on 06/29/2015 and 06/30/2015.

Samples ASB-1006_39-42(20150622) (240-52439-1) and ASB-1006_52-54(20150622) (240-52439-2) were not received in proper container for WI DRO and per client OK to do by EPA SW-846 Method 8015B - DRO. Samples ASB-1006_57-60(20150622) (240-52439-3) and ASB-1007_62-65(20150623) (240-52439-8) were received with less than 25 grams and per client OK to do by EPA SW-846 Method 8015B - DRO.

Samples ASB-1006_65-67(20150622) (240-52439-4)[2X], ASB-1007_22-25(20150623) (240-52439-6)[100X], ASB-1007_67-70(20150623) (240-52439-9)[200X] and ASB-1007_75-77(20150623) (240-52439-10)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WIS DRO mix : ASB-1006_65-67(20150622) (240-52439-4), ASB-1007_22-25(20150623) (240-52439-6) and ASB-1007_75-77(20150623) (240-52439-10).

Method(s) WI DRO PREP: Due to the matrix, the following sample could not be concentrated to the final method required volume: ASB-1007_67-70(20150623) (240-52439-9). The reporting limits (RLs) are elevated proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623) (240-52439-9) and ASB-1007_75-77(20150623) (240-52439-10) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 06/29/2015, prepared on 06/30/2015 and analyzed on 07/01/2015 and 07/02/2015.

Several analytes were detected in method blank LB 240-187303/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Sample ASB-1007_67-70(20150623) (240-52439-9)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Vanadium was detected in method blank MB 240-187383/2-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

TOTAL METALS (ICP)

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623) (240-52439-9) and ASB-1007_75-77(20150623) (240-52439-10) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/26/2015 and analyzed on 06/29/2015 and 06/30/2015.

Barium, Manganese, Nickel and Vanadium were detected in method blank MB 240-186943/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Barium was detected in method blank MB 240-186969/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Antimony and Calcium failed the recovery criteria low for the MS of sample ASB-1006_39-42(20150622)MS (240-52439-1) in batch 240-187203. Aluminum, Copper, Iron and Manganese failed the recovery criteria high.

For the MSD of sample ASB-1006_39-42(20150622)MSD (240-52439-1) in batch 240-187203, Antimony and Calcium failed the recovery criteria low. Aluminum, Iron and Manganese failed the recovery criteria high. Also, Copper exceeded the RPD limit.

Several analytes failed the recovery criteria low for the MS of sample 240-52462-1 in batch 240-187366. Aluminum failed the recovery criteria high.

For the MSD of sample 240-52462-1 in batch 240-187366, several analytes failed the recovery criteria low. Aluminum failed the recovery criteria high. Also, Copper exceeded the RPD limit.

Refer to the QC report for details.

Sample ASB-1007_67-70(20150623) (240-52439-9)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623) (240-52439-9) and ASB-1007_75-77(20150623) (240-52439-10) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 06/29/2015, prepared on 06/30/2015 and analyzed on 07/01/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623) (240-52439-9) and ASB-1007_75-77(20150623) (240-52439-10) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/26/2015 and analyzed on 06/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623) (240-52439-9) and ASB-1007_75-77(20150623) (240-52439-10) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 07/01/2015 and analyzed on 07/02/2015.

Samples ASB-1006_39-42(20150622) (240-52439-1)[5X], ASB-1006_65-67(20150622) (240-52439-4)[5X] and ASB-1007_67-70(20150623) (240-52439-9)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 7196A: The following samples was diluted due to the nature of the sample matrix: ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_65-67(20150622) (240-52439-4) and ASB-1007_67-70(20150623) (240-52439-9). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623) (240-52439-9) and ASB-1007_75-77(20150623) (240-52439-10) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 07/02/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples ASB-1006_39-42(20150622) (240-52439-1), ASB-1006_52-54(20150622) (240-52439-2), ASB-1006_57-60(20150622) (240-52439-3), ASB-1006_65-67(20150622) (240-52439-4), ASB-1006_78-80(20150622) (240-52439-5), ASB-1007_22-25(20150623) (240-52439-6), ASB-1007_62-65(20150623) (240-52439-8), ASB-1007_67-70(20150623) (240-52439-9) and ASB-1007_75-77(20150623) (240-52439-10) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/25/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52439-1	**ASB-1006_39-42(20150622)**					
Methyl acetate		170	J	560	ug/Kg	8260B
2-Methylnaphthalene		4.6	J	380	ug/Kg	8270C
Anthracene		6.0	J	380	ug/Kg	8270C
Benzo[a]anthracene		14	J	380	ug/Kg	8270C
Benzo[a]pyrene		16	J	380	ug/Kg	8270C
Benzo[b]fluoranthene		23	J	380	ug/Kg	8270C
Benzo[g,h,i]perylene		15	J	380	ug/Kg	8270C
Benzo[k]fluoranthene		9.1	J	380	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		39	J	380	ug/Kg	8270C
Chrysene		16	J	380	ug/Kg	8270C
Fluoranthene		32	J	380	ug/Kg	8270C
Fluorene		4.4	J	380	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		16	J	380	ug/Kg	8270C
Naphthalene		5.6	J	380	ug/Kg	8270C
Phenanthrene		28	J	380	ug/Kg	8270C
Pyrene		28	J	380	ug/Kg	8270C
Diesel Range Organics [C10 - C28]		9.4	J	19	mg/Kg	8015B
Aluminum		5000		21	mg/Kg	6010B
Barium		71	B	21	mg/Kg	6010B
Beryllium		0.30	J	0.53	mg/Kg	6010B
Calcium		13000	F1	530	mg/Kg	6010B
Cadmium		0.096	J	0.21	mg/Kg	6010B
Cobalt		7.0		5.3	mg/Kg	6010B
Chromium		13		0.53	mg/Kg	6010B
Copper		12	F2 F1	2.7	mg/Kg	6010B
Iron		12000		11	mg/Kg	6010B
Potassium		1300		530	mg/Kg	6010B
Magnesium		4600		530	mg/Kg	6010B
Manganese		340		1.6	mg/Kg	6010B
Sodium		90	J	530	mg/Kg	6010B
Nickel		16		4.2	mg/Kg	6010B
Vanadium		14		5.3	mg/Kg	6010B
Zinc		24		2.1	mg/Kg	6010B
Arsenic		4.1		1.1	mg/Kg	6010B
Lead		6.8		0.32	mg/Kg	6010B
Mercury		0.014	J	0.099	mg/Kg	7471A
Cr (III)		13		2.3	mg/Kg	7196A
Percent Solids		88		0.10	%	Moisture
Percent Moisture		12		0.10	%	Moisture
TCLP						
Arsenic		0.0054	J B	0.50	mg/L	6010B
Barium		0.45	J B	10	mg/L	6010B
Cadmium		0.00056	J	0.10	mg/L	6010B
Calcium		420		5.0	mg/L	6010B
Chromium		0.0030	J B	0.50	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Cobalt		0.055		0.050	mg/L	6010B
Iron		0.098	J	0.10	mg/L	6010B
Magnesium		57		5.0	mg/L	6010B
Manganese		5.4	B	0.015	mg/L	6010B
Nickel		0.057	B	0.040	mg/L	6010B
Potassium		14	B	5.0	mg/L	6010B
Zinc		0.12	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52439-2	**ASB-1006_52-54(20150622)**					
Acetone		310	J	1300	ug/Kg	8260B
Methyl acetate		310	J	650	ug/Kg	8260B
Methylcyclohexane		79	J	650	ug/Kg	8260B
Bis(2-ethylhexyl) phthalate		29	J	410	ug/Kg	8270C
Naphthalene		7.1	J	410	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		2.4	J	9.4	mg/Kg	WI-GRO
Aluminum		8900		20	mg/Kg	6010B
Barium		21	B	20	mg/Kg	6010B
Beryllium		0.58		0.51	mg/Kg	6010B
Calcium		7900		510	mg/Kg	6010B
Cobalt		12		5.1	mg/Kg	6010B
Chromium		15		0.51	mg/Kg	6010B
Copper		14		2.5	mg/Kg	6010B
Iron		13000		10	mg/Kg	6010B
Potassium		4900		510	mg/Kg	6010B
Magnesium		5400		510	mg/Kg	6010B
Manganese		160		1.5	mg/Kg	6010B
Sodium		82	J	510	mg/Kg	6010B
Nickel		22		4.1	mg/Kg	6010B
Vanadium		6.2		5.1	mg/Kg	6010B
Zinc		29		2.0	mg/Kg	6010B
Arsenic		4.9		1.0	mg/Kg	6010B
Lead		2.7		0.30	mg/Kg	6010B
Cr (III)		15		2.5	mg/Kg	7196A
Percent Solids		81		0.10	%	Moisture
Percent Moisture		19		0.10	%	Moisture
TCLP						
Arsenic		0.0083	J B	0.50	mg/L	6010B
Barium		0.20	J B	10	mg/L	6010B
Cadmium		0.00073	J	0.10	mg/L	6010B
Calcium		290		5.0	mg/L	6010B
Chromium		0.0032	J B	0.50	mg/L	6010B
Cobalt		0.074		0.050	mg/L	6010B
Copper		0.0021	J	1.0	mg/L	6010B
Iron		0.38		0.10	mg/L	6010B
Lead		0.14	J	0.50	mg/L	6010B
Magnesium		76		5.0	mg/L	6010B
Manganese		3.3	B	0.015	mg/L	6010B
Nickel		0.081	B	0.040	mg/L	6010B
Potassium		12	B	5.0	mg/L	6010B
Selenium		0.0042	J	0.25	mg/L	6010B
Zinc		0.18	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52439-3	**ASB-1006_57-60(20150622)**					
Benzene		33	J	380	ug/Kg	8260B
Ethylbenzene		100	J	380	ug/Kg	8260B
Methyl acetate		370	J	770	ug/Kg	8260B
Methylcyclohexane		160	J	770	ug/Kg	8260B
m-Xylene & p-Xylene		280	J	380	ug/Kg	8260B
Naphthalene		8000		380	ug/Kg	8260B
o-Xylene		93	J	380	ug/Kg	8260B
p-Isopropyltoluene		39	J	380	ug/Kg	8260B
Toluene		27	J	380	ug/Kg	8260B
1,2,4-Trimethylbenzene		110	J	380	ug/Kg	8260B
1,3,5-Trimethylbenzene		41	J	380	ug/Kg	8260B
1,1'-Biphenyl		1800	J	7500	ug/Kg	8270C
2-Methylnaphthalene		10000		7500	ug/Kg	8270C
Acenaphthene		6400	J	7500	ug/Kg	8270C
Acenaphthylene		1500	J	7500	ug/Kg	8270C
Anthracene		7200	J	7500	ug/Kg	8270C
Benzo[a]anthracene		8600		7500	ug/Kg	8270C
Benzo[a]pyrene		5200	J	7500	ug/Kg	8270C
Benzo[b]fluoranthene		8200		7500	ug/Kg	8270C
Benzo[g,h,i]perylene		1400	J	7500	ug/Kg	8270C
Benzo[k]fluoranthene		4800	J	7500	ug/Kg	8270C
Carbazole		6800	J	7500	ug/Kg	8270C
Chrysene		8600		7500	ug/Kg	8270C
Dibenzofuran		5300	J	7500	ug/Kg	8270C
Fluoranthene		25000		7500	ug/Kg	8270C
Fluorene		9200		7500	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		1300	J	7500	ug/Kg	8270C
Naphthalene		25000		7500	ug/Kg	8270C
Phenanthrene		31000		7500	ug/Kg	8270C
Pyrene		20000		7500	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		14		6.5	mg/Kg	WI-GRO
Diesel Range Organics [C10 - C28]		660		190	mg/Kg	8015B
Aluminum		5800		17	mg/Kg	6010B
Antimony		1.5		0.84	mg/Kg	6010B
Barium		56	B	17	mg/Kg	6010B
Beryllium		0.32	J	0.42	mg/Kg	6010B
Calcium		20000		420	mg/Kg	6010B
Cadmium		0.13	J	0.17	mg/Kg	6010B
Cobalt		9.1		4.2	mg/Kg	6010B
Chromium		13		0.42	mg/Kg	6010B
Copper		12		2.1	mg/Kg	6010B
Iron		13000		8.4	mg/Kg	6010B
Potassium		1800		420	mg/Kg	6010B
Magnesium		4400		420	mg/Kg	6010B
Manganese		430		1.3	mg/Kg	6010B
Sodium		91	J	420	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Nickel		18		3.4	mg/Kg	6010B
Vanadium		15		4.2	mg/Kg	6010B
Zinc		44		1.7	mg/Kg	6010B
Arsenic		3.6		0.84	mg/Kg	6010B
Lead		80		0.25	mg/Kg	6010B
Mercury		0.027	J	0.10	mg/Kg	7471A
Cr (VI)		0.33	J	0.90	mg/Kg	7196A
Cr (III)		12		2.2	mg/Kg	7196A
Percent Solids		89		0.10	%	Moisture
Percent Moisture		11		0.10	%	Moisture
TCLP						
Antimony		0.0060	J	0.30	mg/L	6010B
Arsenic		0.011	J B	0.50	mg/L	6010B
Barium		0.95	J B	10	mg/L	6010B
Cadmium		0.0012	J	0.10	mg/L	6010B
Calcium		470		5.0	mg/L	6010B
Chromium		0.0029	J B	0.50	mg/L	6010B
Cobalt		0.032	J	0.050	mg/L	6010B
Iron		0.060	J	0.10	mg/L	6010B
Lead		0.084	J	0.50	mg/L	6010B
Magnesium		20		5.0	mg/L	6010B
Manganese		4.8	B	0.015	mg/L	6010B
Nickel		0.049	B	0.040	mg/L	6010B
Potassium		12	B	5.0	mg/L	6010B
Zinc		0.18	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52439-4	**ASB-1006_65-67(20150622)**					
Benzene		40	J	330	ug/Kg	8260B
Ethylbenzene		58	J	330	ug/Kg	8260B
Isopropylbenzene		63	J	330	ug/Kg	8260B
Methyl acetate		530	J	660	ug/Kg	8260B
Methylcyclohexane		230	J	660	ug/Kg	8260B
m-Xylene & p-Xylene		350		330	ug/Kg	8260B
Naphthalene		160	J	330	ug/Kg	8260B
n-Butylbenzene		69	J	330	ug/Kg	8260B
o-Xylene		37	J	330	ug/Kg	8260B
sec-Butylbenzene		43	J	330	ug/Kg	8260B
Toluene		52	J	330	ug/Kg	8260B
1,2,4-Trimethylbenzene		110	J	330	ug/Kg	8260B
1,1'-Biphenyl		72	J	1600	ug/Kg	8270C
2-Methylnaphthalene		410	J	1600	ug/Kg	8270C
Acenaphthene		440	J	1600	ug/Kg	8270C
Acenaphthylene		350	J	1600	ug/Kg	8270C
Anthracene		820	J	1600	ug/Kg	8270C
Benzo[a]anthracene		1900		1600	ug/Kg	8270C
Benzo[a]pyrene		1600		1600	ug/Kg	8270C
Benzo[b]fluoranthene		2100		1600	ug/Kg	8270C
Benzo[g,h,i]perylene		630	J	1600	ug/Kg	8270C
Benzo[k]fluoranthene		750	J	1600	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		220	J	1600	ug/Kg	8270C
Carbazole		200	J	1600	ug/Kg	8270C
Chrysene		1900		1600	ug/Kg	8270C
Dibenz(a,h)anthracene		230	J	1600	ug/Kg	8270C
Dibenzofuran		180	J	1600	ug/Kg	8270C
Fluoranthene		3600		1600	ug/Kg	8270C
Fluorene		410	J	1600	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		580	J	1600	ug/Kg	8270C
Naphthalene		560	J	1600	ug/Kg	8270C
Phenanthrene		2500		1600	ug/Kg	8270C
Pyrene		3300		1600	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		18		6.6	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		190		23	mg/Kg	WI-DRO
Aluminum		2500		22	mg/Kg	6010B
Barium		72	B	22	mg/Kg	6010B
Beryllium		0.14	J	0.56	mg/Kg	6010B
Calcium		11000		560	mg/Kg	6010B
Cadmium		1.4		0.22	mg/Kg	6010B
Cobalt		4.1	J	5.6	mg/Kg	6010B
Chromium		12		0.56	mg/Kg	6010B
Copper		14		2.8	mg/Kg	6010B
Iron		8000		11	mg/Kg	6010B
Potassium		360	J	560	mg/Kg	6010B
Magnesium		3500		560	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Manganese		270		1.7	mg/Kg	6010B
Silver		1.5		0.56	mg/Kg	6010B
Sodium		99	J	560	mg/Kg	6010B
Nickel		10		4.5	mg/Kg	6010B
Vanadium		13		5.6	mg/Kg	6010B
Zinc		49		2.2	mg/Kg	6010B
Arsenic		3.7		1.1	mg/Kg	6010B
Lead		48		0.34	mg/Kg	6010B
Mercury		0.25		0.11	mg/Kg	7471A
Cr (III)		12		2.5	mg/Kg	7196A
Percent Solids		80		0.10	%	Moisture
Percent Moisture		20		0.10	%	Moisture
TCLP						
Arsenic		0.012	J B	0.50	mg/L	6010B
Barium		0.64	J B	10	mg/L	6010B
Cadmium		0.024	J	0.10	mg/L	6010B
Calcium		250		5.0	mg/L	6010B
Chromium		0.0038	J B	0.50	mg/L	6010B
Cobalt		0.016	J	0.050	mg/L	6010B
Copper		0.0041	J	1.0	mg/L	6010B
Iron		0.17		0.10	mg/L	6010B
Lead		0.033	J	0.50	mg/L	6010B
Magnesium		27		5.0	mg/L	6010B
Manganese		4.6	B	0.015	mg/L	6010B
Nickel		0.036	J B	0.040	mg/L	6010B
Potassium		2.7	J B	5.0	mg/L	6010B
Zinc		0.33	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52439-5	**ASB-1006_78-80(20150622)**					
Methyl acetate		270	J	640	ug/Kg	8260B
2-Methylnaphthalene		5.9	J	400	ug/Kg	8270C
Acenaphthylene		7.8	J	400	ug/Kg	8270C
Anthracene		14	J	400	ug/Kg	8270C
Benzo[a]anthracene		49	J	400	ug/Kg	8270C
Benzo[a]pyrene		56	J	400	ug/Kg	8270C
Benzo[b]fluoranthene		70	J	400	ug/Kg	8270C
Benzo[g,h,i]perylene		40	J	400	ug/Kg	8270C
Benzo[k]fluoranthene		24	J	400	ug/Kg	8270C
Chrysene		51	J	400	ug/Kg	8270C
Fluoranthene		92	J	400	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		40	J	400	ug/Kg	8270C
Naphthalene		7.5	J	400	ug/Kg	8270C
Phenanthrene		50	J	400	ug/Kg	8270C
Pyrene		95	J	400	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		16		11	mg/Kg	WI-DRO
Aluminum		2600		20	mg/Kg	6010B
Barium		34	B	20	mg/Kg	6010B
Beryllium		0.11	J	0.51	mg/Kg	6010B
Calcium		5400		510	mg/Kg	6010B
Cadmium		0.040	J	0.20	mg/Kg	6010B
Cobalt		3.2	J	5.1	mg/Kg	6010B
Chromium		8.5		0.51	mg/Kg	6010B
Copper		4.5		2.5	mg/Kg	6010B
Iron		7400		10	mg/Kg	6010B
Potassium		340	J	510	mg/Kg	6010B
Magnesium		3300		510	mg/Kg	6010B
Manganese		77		1.5	mg/Kg	6010B
Sodium		90	J	510	mg/Kg	6010B
Nickel		12		4.1	mg/Kg	6010B
Vanadium		13		5.1	mg/Kg	6010B
Zinc		21		2.0	mg/Kg	6010B
Arsenic		1.3		1.0	mg/Kg	6010B
Lead		6.7		0.30	mg/Kg	6010B
Mercury		0.087	J	0.12	mg/Kg	7471A
Cr (III)		8.5		2.4	mg/Kg	7196A
Percent Solids		82		0.10	%	Moisture
Percent Moisture		18		0.10	%	Moisture
TCLP						
Arsenic		0.0077	J B	0.50	mg/L	6010B
Barium		0.33	J B	10	mg/L	6010B
Cadmium		0.00036	J	0.10	mg/L	6010B
Calcium		540		5.0	mg/L	6010B
Chromium		0.0030	J B	0.50	mg/L	6010B
Cobalt		0.010	J	0.050	mg/L	6010B
Iron		0.027	J	0.10	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Magnesium		16		5.0	mg/L	6010B
Manganese		2.4	B	0.015	mg/L	6010B
Nickel		0.025	J B	0.040	mg/L	6010B
Potassium		2.7	J B	5.0	mg/L	6010B
Zinc		0.021	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52439-6	**ASB-1007_22-25(20150623)**					
Naphthalene		180000		9600	ug/Kg	8260B
1,2,4-Trimethylbenzene		780	J	9600	ug/Kg	8260B
1,1'-Biphenyl		18000	J	73000	ug/Kg	8270C
2-Methylnaphthalene		49000	J	73000	ug/Kg	8270C
Acenaphthene		87000		73000	ug/Kg	8270C
Acenaphthylene		7300	J	73000	ug/Kg	8270C
Anthracene		180000		73000	ug/Kg	8270C
Benzo[a]anthracene		190000		73000	ug/Kg	8270C
Benzo[a]pyrene		140000		73000	ug/Kg	8270C
Benzo[b]fluoranthene		190000		73000	ug/Kg	8270C
Benzo[g,h,i]perylene		46000	J	73000	ug/Kg	8270C
Benzo[k]fluoranthene		63000	J	73000	ug/Kg	8270C
Carbazole		70000	J	73000	ug/Kg	8270C
Chrysene		170000		73000	ug/Kg	8270C
Dibenz(a,h)anthracene		14000	J	73000	ug/Kg	8270C
Dibenzofuran		97000		73000	ug/Kg	8270C
Fluoranthene		430000		180000	ug/Kg	8270C
Fluorene		150000		73000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		47000	J	73000	ug/Kg	8270C
Naphthalene		150000		73000	ug/Kg	8270C
Phenanthrene		500000		180000	ug/Kg	8270C
Pyrene		310000		180000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		44	J	51	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		4200		1000	mg/Kg	WI-DRO
Aluminum		4500		19	mg/Kg	6010B
Barium		43	B	19	mg/Kg	6010B
Beryllium		0.21	J	0.47	mg/Kg	6010B
Calcium		20000		470	mg/Kg	6010B
Cadmium		0.15	J	0.19	mg/Kg	6010B
Cobalt		3.6	J	4.7	mg/Kg	6010B
Chromium		9.1		0.47	mg/Kg	6010B
Copper		9.0		2.4	mg/Kg	6010B
Iron		7800		9.5	mg/Kg	6010B
Potassium		500		470	mg/Kg	6010B
Magnesium		4400		470	mg/Kg	6010B
Manganese		250		1.4	mg/Kg	6010B
Silver		0.081	J	0.47	mg/Kg	6010B
Sodium		220	J	470	mg/Kg	6010B
Nickel		10		3.8	mg/Kg	6010B
Vanadium		14		4.7	mg/Kg	6010B
Zinc		33		1.9	mg/Kg	6010B
Arsenic		2.2		0.95	mg/Kg	6010B
Lead		33		0.28	mg/Kg	6010B
Selenium		0.39	J	0.47	mg/Kg	6010B
Cr (III)		9.1		2.2	mg/Kg	7196A
Percent Solids		90		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Moisture		9.7		0.10	%	Moisture
TCLP						
2-Methylphenol		0.0015	J	0.0040	mg/L	8270C
3 & 4 Methylphenol		0.0035	J	0.0040	mg/L	8270C
Arsenic		0.011	J B	0.50	mg/L	6010B
Barium		0.57	J B	10	mg/L	6010B
Cadmium		0.00055	J	0.10	mg/L	6010B
Calcium		570		5.0	mg/L	6010B
Chromium		0.0037	J B	0.50	mg/L	6010B
Cobalt		0.013	J	0.050	mg/L	6010B
Iron		0.10		0.10	mg/L	6010B
Lead		0.0026	J	0.50	mg/L	6010B
Magnesium		10		5.0	mg/L	6010B
Manganese		4.3	B	0.015	mg/L	6010B
Nickel		0.026	J B	0.040	mg/L	6010B
Potassium		5.8	B	5.0	mg/L	6010B
Zinc		0.034	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52439-8	**ASB-1007_62-65(20150623)**					
Ethylbenzene		89	J	380	ug/Kg	8260B
Methyl acetate		620	J	750	ug/Kg	8260B
m-Xylene & p-Xylene		330	J	380	ug/Kg	8260B
Naphthalene		1500		380	ug/Kg	8260B
o-Xylene		150	J	380	ug/Kg	8260B
Toluene		15	J	380	ug/Kg	8260B
1,2,4-Trimethylbenzene		68	J	380	ug/Kg	8260B
1,3,5-Trimethylbenzene		24	J	380	ug/Kg	8260B
1,1'-Biphenyl		80	J	1600	ug/Kg	8270C
2-Methylnaphthalene		290	J	1600	ug/Kg	8270C
Acenaphthene		450	J	1600	ug/Kg	8270C
Acenaphthylene		37	J	1600	ug/Kg	8270C
Anthracene		1000	J	1600	ug/Kg	8270C
Benzo[a]anthracene		1200	J	1600	ug/Kg	8270C
Benzo[a]pyrene		940	J	1600	ug/Kg	8270C
Benzo[b]fluoranthene		1200	J	1600	ug/Kg	8270C
Benzo[g,h,i]perylene		280	J	1600	ug/Kg	8270C
Benzo[k]fluoranthene		630	J	1600	ug/Kg	8270C
Carbazole		440	J	1600	ug/Kg	8270C
Chrysene		1100	J	1600	ug/Kg	8270C
Dibenz(a,h)anthracene		120	J	1600	ug/Kg	8270C
Dibenzofuran		510	J	1600	ug/Kg	8270C
Fluoranthene		3300		1600	ug/Kg	8270C
Fluorene		840	J	1600	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		270	J	1600	ug/Kg	8270C
Naphthalene		610	J	1600	ug/Kg	8270C
Phenanthrene		3900		1600	ug/Kg	8270C
Pyrene		2600		1600	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		1.3	J	6.2	mg/Kg	WI-GRO
Diesel Range Organics [C10 - C28]		39		19	mg/Kg	8015B
Aluminum		5700		16	mg/Kg	6010B
Barium		45	B	16	mg/Kg	6010B
Beryllium		0.43		0.41	mg/Kg	6010B
Calcium		17000		410	mg/Kg	6010B
Cadmium		0.12	J	0.16	mg/Kg	6010B
Cobalt		10		4.1	mg/Kg	6010B
Chromium		15		0.41	mg/Kg	6010B
Copper		14		2.0	mg/Kg	6010B
Iron		21000		8.1	mg/Kg	6010B
Potassium		2400		410	mg/Kg	6010B
Magnesium		6000		410	mg/Kg	6010B
Manganese		310		1.2	mg/Kg	6010B
Sodium		100	J	410	mg/Kg	6010B
Nickel		20		3.2	mg/Kg	6010B
Vanadium		10		4.1	mg/Kg	6010B
Zinc		28		1.6	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Arsenic		5.2		0.81	mg/Kg	6010B
Lead		14		0.24	mg/Kg	6010B
Selenium		0.28	J	0.41	mg/Kg	6010B
Mercury		0.021	J	0.11	mg/Kg	7471A
Cr (III)		15		2.3	mg/Kg	7196A
Percent Solids		86		0.10	%	Moisture
Percent Moisture		14		0.10	%	Moisture
TCLP						
Arsenic		0.011	J B	0.50	mg/L	6010B
Barium		0.66	J B	10	mg/L	6010B
Cadmium		0.00038	J	0.10	mg/L	6010B
Calcium		610		5.0	mg/L	6010B
Chromium		0.0031	J B	0.50	mg/L	6010B
Cobalt		0.023	J	0.050	mg/L	6010B
Iron		0.022	J	0.10	mg/L	6010B
Magnesium		24		5.0	mg/L	6010B
Manganese		2.6	B	0.015	mg/L	6010B
Nickel		0.050	B	0.040	mg/L	6010B
Potassium		8.4	B	5.0	mg/L	6010B
Zinc		0.015	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52439-9	**ASB-1007_67-70(20150623)**					
Benzene		14000	J	60000	ug/Kg	8260B
cis-1,2-Dichloroethene		23000	J	60000	ug/Kg	8260B
Cyclohexane		52000	J	120000	ug/Kg	8260B
Ethylbenzene		370000		60000	ug/Kg	8260B
Isopropylbenzene		68000		60000	ug/Kg	8260B
Methylcyclohexane		220000		120000	ug/Kg	8260B
m-Xylene & p-Xylene		1300000		60000	ug/Kg	8260B
Naphthalene		520000		60000	ug/Kg	8260B
n-Butylbenzene		190000		60000	ug/Kg	8260B
N-Propylbenzene		73000		60000	ug/Kg	8260B
o-Xylene		600000		60000	ug/Kg	8260B
p-Isopropyltoluene		36000	J	60000	ug/Kg	8260B
sec-Butylbenzene		24000	J	60000	ug/Kg	8260B
Toluene		230000		60000	ug/Kg	8260B
Trichloroethene		11000	J	60000	ug/Kg	8260B
1,2,4-Trimethylbenzene		1200000		60000	ug/Kg	8260B
1,3,5-Trimethylbenzene		320000		60000	ug/Kg	8260B
1,1'-Biphenyl		8900	J	250000	ug/Kg	8270C
2-Methylnaphthalene		190000	J	250000	ug/Kg	8270C
Acenaphthene		7700	J	250000	ug/Kg	8270C
Anthracene		4900	J	250000	ug/Kg	8270C
Benzo[a]anthracene		5600	J	250000	ug/Kg	8270C
Benzo[a]pyrene		8700	J	250000	ug/Kg	8270C
Benzo[b]fluoranthene		11000	J	250000	ug/Kg	8270C
Benzo[g,h,i]perylene		7100	J	250000	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		33000	J	250000	ug/Kg	8270C
Chrysene		8800	J	250000	ug/Kg	8270C
Dibenzofuran		5400	J	250000	ug/Kg	8270C
Fluoranthene		18000	J	250000	ug/Kg	8270C
Fluorene		7500	J	250000	ug/Kg	8270C
Naphthalene		830000		250000	ug/Kg	8270C
Phenanthrene		29000	J	250000	ug/Kg	8270C
Pyrene		14000	J	250000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		8200		600	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		37000		5700	mg/Kg	WI-DRO
Aluminum		2000		21	mg/Kg	6010B
Antimony		510		1.1	mg/Kg	6010B
Barium		6900	B	210	mg/Kg	6010B
Beryllium		0.058	J	0.53	mg/Kg	6010B
Calcium		14000		530	mg/Kg	6010B
Cadmium		150		0.21	mg/Kg	6010B
Cobalt		35		5.3	mg/Kg	6010B
Chromium		430		0.53	mg/Kg	6010B
Copper		230		2.7	mg/Kg	6010B
Iron		18000		11	mg/Kg	6010B
Potassium		370	J	530	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Magnesium		2700		530	mg/Kg	6010B
Manganese		200		1.6	mg/Kg	6010B
Silver		0.68		0.53	mg/Kg	6010B
Sodium		1000		530	mg/Kg	6010B
Nickel		32		4.3	mg/Kg	6010B
Vanadium		5.6		5.3	mg/Kg	6010B
Zinc		5300		21	mg/Kg	6010B
Arsenic		18		1.1	mg/Kg	6010B
Lead		6500		3.2	mg/Kg	6010B
Selenium		34		0.53	mg/Kg	6010B
Mercury		0.36		0.12	mg/Kg	7471A
Cr (III)		430		2.3	mg/Kg	7196A
Percent Solids		88		0.10	%	Moisture
Percent Moisture		12		0.10	%	Moisture
TCLP						
Benzene		180		25	ug/L	8260B
Trichloroethene		100		25	ug/L	8260B
2-Methylphenol		0.085		0.0040	mg/L	8270C
3 & 4 Methylphenol		0.18		0.0040	mg/L	8270C
Aluminum		0.075	J	0.20	mg/L	6010B
Antimony		0.45		0.30	mg/L	6010B
Arsenic		0.014	J B	0.50	mg/L	6010B
Barium		0.68	J B	10	mg/L	6010B
Cadmium		0.044	J	0.10	mg/L	6010B
Calcium		160		5.0	mg/L	6010B
Chromium		0.0047	J B	0.50	mg/L	6010B
Cobalt		0.28		0.050	mg/L	6010B
Copper		0.0078	J	1.0	mg/L	6010B
Iron		13		0.10	mg/L	6010B
Lead		32		2.5	mg/L	6010B
Magnesium		5.3		5.0	mg/L	6010B
Manganese		1.0	B	0.015	mg/L	6010B
Nickel		0.071	B	0.040	mg/L	6010B
Potassium		4.0	J B	5.0	mg/L	6010B
Vanadium		0.0029	J B	0.050	mg/L	6010B
Zinc		11		5.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52439-10	**ASB-1007_75-77(20150623)**					
Methyl acetate		110	J	630	ug/Kg	8260B
Naphthalene		35	J	310	ug/Kg	8260B
Benzo[a]anthracene		6.0	J	370	ug/Kg	8270C
Benzo[a]pyrene		11	J	370	ug/Kg	8270C
Benzo[b]fluoranthene		11	J	370	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		35	J	370	ug/Kg	8270C
Chrysene		6.0	J	370	ug/Kg	8270C
Di-n-butyl phthalate		17	J	370	ug/Kg	8270C
Fluoranthene		13	J	370	ug/Kg	8270C
Naphthalene		4.9	J	370	ug/Kg	8270C
Phenanthrene		13	J	370	ug/Kg	8270C
Pyrene		9.5	J	370	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		2.8	J	5.9	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		4100		990	mg/Kg	WI-DRO
Aluminum		1400		18	mg/Kg	6010B
Barium		14	J B	18	mg/Kg	6010B
Beryllium		0.075	J	0.45	mg/Kg	6010B
Calcium		2500		450	mg/Kg	6010B
Cobalt		1.8	J	4.5	mg/Kg	6010B
Chromium		4.8		0.45	mg/Kg	6010B
Copper		1.8	J	2.2	mg/Kg	6010B
Iron		4900		8.9	mg/Kg	6010B
Potassium		170	J	450	mg/Kg	6010B
Magnesium		1600		450	mg/Kg	6010B
Manganese		61	B	1.3	mg/Kg	6010B
Sodium		75	J	450	mg/Kg	6010B
Nickel		4.1	B	3.6	mg/Kg	6010B
Vanadium		8.5	B	4.5	mg/Kg	6010B
Zinc		7.8		1.8	mg/Kg	6010B
Arsenic		1.0		0.89	mg/Kg	6010B
Lead		1.5		0.27	mg/Kg	6010B
Cr (VI)		0.75	J	0.88	mg/Kg	7196A
Cr (III)		4.1		2.2	mg/Kg	7196A
Percent Solids		91		0.10	%	Moisture
Percent Moisture		9.5		0.10	%	Moisture
TCLP						
Arsenic		0.0089	J B	0.50	mg/L	6010B
Barium		0.31	J B	10	mg/L	6010B
Beryllium		0.00021	J	0.0050	mg/L	6010B
Cadmium		0.00046	J	0.10	mg/L	6010B
Calcium		83		5.0	mg/L	6010B
Chromium		0.0021	J B	0.50	mg/L	6010B
Cobalt		0.014	J	0.050	mg/L	6010B
Iron		6.4		0.10	mg/L	6010B
Lead		0.021	J	0.50	mg/L	6010B
Magnesium		40		5.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Manganese		1.4	B	0.015	mg/L	6010B
Nickel		0.024	J B	0.040	mg/L	6010B
Potassium		2.5	J B	5.0	mg/L	6010B
Vanadium		0.0024	J B	0.050	mg/L	6010B
Zinc		0.030	J	1.0	mg/L	6010B
240-52439-11	**MB-01(20150623)**					
Methyl acetate		660		500	ug/Kg	8260B
Toluene		11	J	250	ug/Kg	8260B
WI Gasoline Range Organics (C6-C10)		180	J	810	mg/Kg	WI-GRO

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction	TAL CAN		SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Diesel Range Organics (DRO) (GC)	TAL CAN	SW846 8015B	
Soxhlet Extraction	TAL CAN		SW846 3540C
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method	Analyst	Analyst ID
SW846 8260B	Lata, Todd	TJL2
SW846 8260B	Macenczak, Steven	SAM
SW846 8260B	Quayle, Rick	RJQ
SW846 8270C	Gruber, John	JMG
SW846 8270C	Hula, Tom	TMH
WI-GRO WI-GRO	Reed, Rachel T	RTR
SW846 8015B	Bolgrin, Deborah	DEB
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Walpole, Barbara	BW
SW846 7471A	Walpole, Barbara	BW
SW846 7196A	Burns, Jill	JMB
SW846 7196A	Counts, Karen	KLC
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52439-1	ASB-1006_39-42(20150622)	Solid	06/22/2015 1510	06/24/2015 0930
240-52439-2	ASB-1006_52-54(20150622)	Solid	06/22/2015 1545	06/24/2015 0930
240-52439-3	ASB-1006_57-60(20150622)	Solid	06/22/2015 1610	06/24/2015 0930
240-52439-4	ASB-1006_65-67(20150622)	Solid	06/22/2015 1650	06/24/2015 0930
240-52439-5	ASB-1006_78-80(20150622)	Solid	06/22/2015 1710	06/24/2015 0930
240-52439-6	ASB-1007_22-25(20150623)	Solid	06/23/2015 1110	06/24/2015 0930
240-52439-7	MB-01(20150623)	Solid	06/23/2015 0000	06/24/2015 0930
240-52439-8	ASB-1007_62-65(20150623)	Solid	06/23/2015 1225	06/24/2015 0930
240-52439-9	ASB-1007_67-70(20150623)	Solid	06/23/2015 1300	06/24/2015 0930
240-52439-10	ASB-1007_75-77(20150623)	Solid	06/23/2015 1330	06/24/2015 0930
240-52439-11	MB-01(20150623)	Solid	06/23/2015 0000	06/24/2015 0930

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_39-42(20150622)**

Lab Sample ID: 240-52439-1 Date Sampled: 06/22/2015 1510
Client Matrix: Solid % Moisture: 11.8 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143890.D
Dilution:	1.0			Initial Weight/Volume:	10.116 g
Analysis Date:	06/29/2015 1547			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		250	1100
Allyl chloride		ND		34	560
Benzene		ND		10	280
Bromobenzene		ND		15	280
Bromochloromethane		ND		78	280
Bromodichloromethane		ND		43	280
Bromoform		ND		68	280
Bromomethane		ND		57	280
2-Butanone (MEK)		ND		82	1100
Carbon disulfide		ND		63	280
Carbon tetrachloride		ND		54	280
Chlorobenzene		ND		46	280
Chlorodibromomethane		ND		52	280
Chloroethane		ND		57	280
Chloroform		ND		40	280
Chloromethane		ND		54	280
2-Chlorotoluene		ND		46	280
4-Chlorotoluene		ND		29	280
cis-1,2-Dichloroethene		ND		43	280
cis-1,3-Dichloropropene		ND		25	280
Cyclohexane		ND		34	560
1,2-Dibromo-3-Chloropropane		ND		80	560
1,2-Dibromoethane		ND		36	280
Dibromomethane		ND		56	280
1,2-Dichlorobenzene		ND		21	280
1,3-Dichlorobenzene		ND		34	280
1,4-Dichlorobenzene		ND		46	280
Dichlorodifluoromethane		ND		68	280
1,1-Dichloroethane		ND		39	280
1,2-Dichloroethane		ND		59	280
1,1-Dichloroethene		ND		34	280
Dichlorofluoromethane		ND		37	560
1,2-Dichloropropane		ND		36	280
1,3-Dichloropropane		ND		26	280
2,2-Dichloropropane		ND		58	280
1,1-Dichloropropene		ND		43	280
Ethylbenzene		ND		39	280
Ethyl ether		ND		110	560
Hexachlorobutadiene		ND		49	280
2-Hexanone		ND		94	1100
Isopropylbenzene		ND		15	280
Methyl acetate		170	J	62	560
Methylcyclohexane		ND		43	560
Methylene Chloride		ND		95	280
4-Methyl-2-pentanone (MIBK)		ND		63	1100
Methyl tert butyl ether		ND		34	280

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1006_39-42(20150622)

Lab Sample ID: 240-52439-1 Date Sampled: 06/22/2015 1510
Client Matrix: Solid % Moisture: 11.8 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143890.D
Dilution:	1.0			Initial Weight/Volume:	10.116 g
Analysis Date:	06/29/2015 1547			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		22	280
Naphthalene		ND		29	280
n-Butylbenzene		ND		24	280
N-Propylbenzene		ND		68	280
o-Xylene		ND		19	280
p-Isopropyltoluene		ND		28	280
sec-Butylbenzene		ND		18	280
Styrene		ND		30	280
tert-Butylbenzene		ND		38	280
1,1,1,2-Tetrachloroethane		ND		55	280
1,1,2,2-Tetrachloroethane		ND		48	280
Tetrachloroethene		ND		30	280
Tetrahydrofuran		ND		130	1100
Toluene		ND		11	280
trans-1,2-Dichloroethene		ND		29	280
trans-1,3-Dichloropropene		ND		29	280
1,2,3-Trichlorobenzene		ND		44	280
1,2,4-Trichlorobenzene		ND		34	280
1,1,1-Trichloroethane		ND		47	280
1,1,2-Trichloroethane		ND		93	280
Trichloroethene		ND		44	280
Trichlorofluoromethane		ND		39	280
1,2,3-Trichloropropane		ND		120	280
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		47	280
1,2,4-Trimethylbenzene		ND		15	280
1,3,5-Trimethylbenzene		ND		17	280
Vinyl chloride		ND		63	280

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	91		26 - 141
Dibromofluoromethane (Surr)	94		30 - 122
1,2-Dichloroethane-d4 (Surr)	106		39 - 128
Toluene-d8 (Surr)	95		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_39-42(20150622)**

Lab Sample ID: 240-52439-1 Date Sampled: 06/22/2015 1510
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950830.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 1720			Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 1720				
Leach Date:	06/29/2015 1845				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	90		70 - 124
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	100		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_52-54(20150622)**

Lab Sample ID: 240-52439-2 Date Sampled: 06/22/2015 1545
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143929.D
Dilution:	1.0			Initial Weight/Volume:	9.496 g
Analysis Date:	06/30/2015 2314			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		310	J	290	1300
Allyl chloride		ND		39	650
Benzene		ND		12	320
Bromobenzene		ND		17	320
Bromochloromethane		ND		90	320
Bromodichloromethane		ND		49	320
Bromoform		ND		79	320
Bromomethane		ND		66	320
2-Butanone (MEK)		ND		94	1300
Carbon disulfide		ND		72	320
Carbon tetrachloride		ND		62	320
Chlorobenzene		ND		53	320
Chlorodibromomethane		ND		59	320
Chloroethane		ND		66	320
Chloroform		ND		47	320
Chloromethane		ND		62	320
2-Chlorotoluene		ND		53	320
4-Chlorotoluene		ND		34	320
cis-1,2-Dichloroethene		ND		49	320
cis-1,3-Dichloropropene		ND		28	320
Cyclohexane		ND		39	650
1,2-Dibromo-3-Chloropropane		ND		92	650
1,2-Dibromoethane		ND		41	320
Dibromomethane		ND		65	320
1,2-Dichlorobenzene		ND		25	320
1,3-Dichlorobenzene		ND		39	320
1,4-Dichlorobenzene		ND		53	320
Dichlorodifluoromethane		ND		79	320
1,1-Dichloroethane		ND		45	320
1,2-Dichloroethane		ND		68	320
1,1-Dichloroethene		ND		39	320
Dichlorofluoromethane		ND		43	650
1,2-Dichloropropane		ND		41	320
1,3-Dichloropropane		ND		30	320
2,2-Dichloropropane		ND		67	320
1,1-Dichloropropene		ND		49	320
Ethylbenzene		ND		45	320
Ethyl ether		ND		130	650
Hexachlorobutadiene		ND		57	320
2-Hexanone		ND		110	1300
Isopropylbenzene		ND		17	320
Methyl acetate		310	J	71	650
Methylcyclohexane		79	J	49	650
Methylene Chloride		ND		110	320
4-Methyl-2-pentanone (MIBK)		ND		72	1300
Methyl tert butyl ether		ND		39	320

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1006_52-54(20150622)

Lab Sample ID: 240-52439-2 Date Sampled: 06/22/2015 1545
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143929.D
Dilution:	1.0			Initial Weight/Volume:	9.496 g
Analysis Date:	06/30/2015 2314			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		26	320
Naphthalene		ND		34	320
n-Butylbenzene		ND		27	320
N-Propylbenzene		ND		79	320
o-Xylene		ND		22	320
p-Isopropyltoluene		ND		32	320
sec-Butylbenzene		ND		21	320
Styrene		ND		35	320
tert-Butylbenzene		ND		44	320
1,1,1,2-Tetrachloroethane		ND		63	320
1,1,2,2-Tetrachloroethane		ND		56	320
Tetrachloroethene		ND		35	320
Tetrahydrofuran		ND		160	1300
Toluene		ND		13	320
trans-1,2-Dichloroethene		ND		34	320
trans-1,3-Dichloropropene		ND		34	320
1,2,3-Trichlorobenzene		ND		50	320
1,2,4-Trichlorobenzene		ND		39	320
1,1,1-Trichloroethane		ND		54	320
1,1,2-Trichloroethane		ND		110	320
Trichloroethene		ND		50	320
Trichlorofluoromethane		ND		45	320
1,2,3-Trichloropropane		ND		130	320
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		54	320
1,2,4-Trimethylbenzene		ND		17	320
1,3,5-Trimethylbenzene		ND		19	320
Vinyl chloride		ND		72	320

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	108		26 - 141
Dibromofluoromethane (Surr)	101		30 - 122
1,2-Dichloroethane-d4 (Surr)	117		39 - 128
Toluene-d8 (Surr)	100		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_52-54(20150622)**

Lab Sample ID: 240-52439-2 Date Sampled: 06/22/2015 1545
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950831.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 1745			Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 1745				
Leach Date:	06/29/2015 1845				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		80 - 121
4-Bromofluorobenzene (Surr)	93		70 - 124
Toluene-d8 (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	103		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_57-60(20150622)**

Lab Sample ID: 240-52439-3 Date Sampled: 06/22/2015 1610
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143897.D
Dilution:	1.25			Initial Weight/Volume:	9.128 g
Analysis Date:	06/29/2015 1817			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		350	1500
Allyl chloride		ND		46	770
Benzene		33	J	14	380
Bromobenzene		ND		20	380
Bromochloromethane		ND		110	380
Bromodichloromethane		ND		58	380
Bromoform		ND		94	380
Bromomethane		ND		78	380
2-Butanone (MEK)		ND		110	1500
Carbon disulfide		ND		86	380
Carbon tetrachloride		ND		74	380
Chlorobenzene		ND		63	380
Chlorodibromomethane		ND		71	380
Chloroethane		ND		78	380
Chloroform		ND		55	380
Chloromethane		ND		74	380
2-Chlorotoluene		ND		63	380
4-Chlorotoluene		ND		40	380
cis-1,2-Dichloroethene		ND		58	380
cis-1,3-Dichloropropene		ND		34	380
Cyclohexane		ND		46	770
1,2-Dibromo-3-Chloropropane		ND		110	770
1,2-Dibromoethane		ND		49	380
Dibromomethane		ND		77	380
1,2-Dichlorobenzene		ND		29	380
1,3-Dichlorobenzene		ND		46	380
1,4-Dichlorobenzene		ND		63	380
Dichlorodifluoromethane		ND		94	380
1,1-Dichloroethane		ND		54	380
1,2-Dichloroethane		ND		81	380
1,1-Dichloroethene		ND		46	380
Dichlorofluoromethane		ND		51	770
1,2-Dichloropropane		ND		49	380
1,3-Dichloropropane		ND		35	380
2,2-Dichloropropane		ND		80	380
1,1-Dichloropropene		ND		58	380
Ethylbenzene		100	J	54	380
Ethyl ether		ND		150	770
Hexachlorobutadiene		ND		68	380
2-Hexanone		ND		130	1500
Isopropylbenzene		ND		20	380
Methyl acetate		370	J	85	770
Methylcyclohexane		160	J	58	770
Methylene Chloride		ND		130	380
4-Methyl-2-pentanone (MIBK)		ND		86	1500
Methyl tert butyl ether		ND		46	380

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1006_57-60(20150622)

Lab Sample ID: 240-52439-3 Date Sampled: 06/22/2015 1610
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143897.D
Dilution:	1.25			Initial Weight/Volume:	9.128 g
Analysis Date:	06/29/2015 1817			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		280	J	31	380
Naphthalene		8000		40	380
n-Butylbenzene		ND		32	380
N-Propylbenzene		ND		94	380
o-Xylene		93	J	26	380
p-Isopropyltoluene		39	J	38	380
sec-Butylbenzene		ND		25	380
Styrene		ND		41	380
tert-Butylbenzene		ND		52	380
1,1,1,2-Tetrachloroethane		ND		75	380
1,1,2,2-Tetrachloroethane		ND		66	380
Tetrachloroethene		ND		41	380
Tetrahydrofuran		ND		180	1500
Toluene		27	J	15	380
trans-1,2-Dichloroethene		ND		40	380
trans-1,3-Dichloropropene		ND		40	380
1,2,3-Trichlorobenzene		ND		60	380
1,2,4-Trichlorobenzene		ND		46	380
1,1,1-Trichloroethane		ND		65	380
1,1,2-Trichloroethane		ND		130	380
Trichloroethene		ND		60	380
Trichlorofluoromethane		ND		54	380
1,2,3-Trichloropropane		ND		160	380
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		65	380
1,2,4-Trimethylbenzene		110	J	20	380
1,3,5-Trimethylbenzene		41	J	23	380
Vinyl chloride		ND		86	380

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	89		26 - 141
Dibromofluoromethane (Surr)	100		30 - 122
1,2-Dichloroethane-d4 (Surr)	114		39 - 128
Toluene-d8 (Surr)	100		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_57-60(20150622)**

Lab Sample ID: 240-52439-3 Date Sampled: 06/22/2015 1610
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950832.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 1809			Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 1809				
Leach Date:	06/29/2015 1845				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	93		70 - 124
Toluene-d8 (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	102		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_65-67(20150622)**

Lab Sample ID: 240-52439-4 Date Sampled: 06/22/2015 1650
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143891.D
Dilution:	1.0			Initial Weight/Volume:	9.476 g
Analysis Date:	06/29/2015 1608			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		300	1300
Allyl chloride		ND		39	660
Benzene		40	J	12	330
Bromobenzene		ND		17	330
Bromochloromethane		ND		92	330
Bromodichloromethane		ND		50	330
Bromoform		ND		80	330
Bromomethane		ND		67	330
2-Butanone (MEK)		ND		96	1300
Carbon disulfide		ND		74	330
Carbon tetrachloride		ND		63	330
Chlorobenzene		ND		54	330
Chlorodibromomethane		ND		60	330
Chloroethane		ND		67	330
Chloroform		ND		47	330
Chloromethane		ND		63	330
2-Chlorotoluene		ND		54	330
4-Chlorotoluene		ND		34	330
cis-1,2-Dichloroethene		ND		50	330
cis-1,3-Dichloropropene		ND		29	330
Cyclohexane		ND		39	660
1,2-Dibromo-3-Chloropropane		ND		93	660
1,2-Dibromoethane		ND		42	330
Dibromomethane		ND		66	330
1,2-Dichlorobenzene		ND		25	330
1,3-Dichlorobenzene		ND		39	330
1,4-Dichlorobenzene		ND		54	330
Dichlorodifluoromethane		ND		80	330
1,1-Dichloroethane		ND		46	330
1,2-Dichloroethane		ND		70	330
1,1-Dichloroethene		ND		39	330
Dichlorofluoromethane		ND		43	660
1,2-Dichloropropane		ND		42	330
1,3-Dichloropropane		ND		30	330
2,2-Dichloropropane		ND		68	330
1,1-Dichloropropene		ND		50	330
Ethylbenzene		58	J	46	330
Ethyl ether		ND		130	660
Hexachlorobutadiene		ND		58	330
2-Hexanone		ND		110	1300
Isopropylbenzene		63	J	17	330
Methyl acetate		530	J	72	660
Methylcyclohexane		230	J	50	660
Methylene Chloride		ND		110	330
4-Methyl-2-pentanone (MIBK)		ND		74	1300
Methyl tert butyl ether		ND		39	330

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1006_65-67(20150622)

Lab Sample ID: 240-52439-4 Date Sampled: 06/22/2015 1650
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143891.D
Dilution:	1.0			Initial Weight/Volume:	9.476 g
Analysis Date:	06/29/2015 1608			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		350		26	330
Naphthalene		160	J	34	330
n-Butylbenzene		69	J	28	330
N-Propylbenzene		ND		80	330
o-Xylene		37	J	22	330
p-Isopropyltoluene		ND		33	330
sec-Butylbenzene		43	J	21	330
Styrene		ND		36	330
tert-Butylbenzene		ND		45	330
1,1,1,2-Tetrachloroethane		ND		64	330
1,1,2,2-Tetrachloroethane		ND		57	330
Tetrachloroethene		ND		36	330
Tetrahydrofuran		ND		160	1300
Toluene		52	J	13	330
trans-1,2-Dichloroethene		ND		34	330
trans-1,3-Dichloropropene		ND		34	330
1,2,3-Trichlorobenzene		ND		51	330
1,2,4-Trichlorobenzene		ND		39	330
1,1,1-Trichloroethane		ND		55	330
1,1,2-Trichloroethane		ND		110	330
Trichloroethene		ND		51	330
Trichlorofluoromethane		ND		46	330
1,2,3-Trichloropropane		ND		140	330
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		55	330
1,2,4-Trimethylbenzene		110	J	17	330
1,3,5-Trimethylbenzene		ND		20	330
Vinyl chloride		ND		74	330

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	89		26 - 141
Dibromofluoromethane (Surr)	99		30 - 122
1,2-Dichloroethane-d4 (Surr)	109		39 - 128
Toluene-d8 (Surr)	98		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_65-67(20150622)**

Lab Sample ID: 240-52439-4 Date Sampled: 06/22/2015 1650
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950833.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 1833			Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 1833				
Leach Date:	06/29/2015 1845				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	90		70 - 124
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	100		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_78-80(20150622)**

Lab Sample ID: 240-52439-5 Date Sampled: 06/22/2015 1710
Client Matrix: Solid % Moisture: 17.9 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143892.D
Dilution:	1.0			Initial Weight/Volume:	9.584 g
Analysis Date:	06/29/2015 1629			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		290	1300
Allyl chloride		ND		38	640
Benzene		ND		11	320
Bromobenzene		ND		17	320
Bromochloromethane		ND		89	320
Bromodichloromethane		ND		48	320
Bromoform		ND		77	320
Bromomethane		ND		65	320
2-Butanone (MEK)		ND		93	1300
Carbon disulfide		ND		71	320
Carbon tetrachloride		ND		61	320
Chlorobenzene		ND		52	320
Chlorodibromomethane		ND		58	320
Chloroethane		ND		65	320
Chloroform		ND		46	320
Chloromethane		ND		61	320
2-Chlorotoluene		ND		52	320
4-Chlorotoluene		ND		33	320
cis-1,2-Dichloroethene		ND		48	320
cis-1,3-Dichloropropene		ND		28	320
Cyclohexane		ND		38	640
1,2-Dibromo-3-Chloropropane		ND		90	640
1,2-Dibromoethane		ND		41	320
Dibromomethane		ND		64	320
1,2-Dichlorobenzene		ND		24	320
1,3-Dichlorobenzene		ND		38	320
1,4-Dichlorobenzene		ND		52	320
Dichlorodifluoromethane		ND		77	320
1,1-Dichloroethane		ND		44	320
1,2-Dichloroethane		ND		67	320
1,1-Dichloroethene		ND		38	320
Dichlorofluoromethane		ND		42	640
1,2-Dichloropropane		ND		41	320
1,3-Dichloropropane		ND		29	320
2,2-Dichloropropane		ND		66	320
1,1-Dichloropropene		ND		48	320
Ethylbenzene		ND		44	320
Ethyl ether		ND		120	640
Hexachlorobutadiene		ND		56	320
2-Hexanone		ND		110	1300
Isopropylbenzene		ND		17	320
Methyl acetate		270	J	70	640
Methylcyclohexane		ND		48	640
Methylene Chloride		ND		110	320
4-Methyl-2-pentanone (MIBK)		ND		71	1300
Methyl tert butyl ether		ND		38	320

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1006_78-80(20150622)

Lab Sample ID: 240-52439-5 Date Sampled: 06/22/2015 1710
Client Matrix: Solid % Moisture: 17.9 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143892.D
Dilution:	1.0			Initial Weight/Volume:	9.584 g
Analysis Date:	06/29/2015 1629			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		25	320
Naphthalene		ND		33	320
n-Butylbenzene		ND		27	320
N-Propylbenzene		ND		77	320
o-Xylene		ND		22	320
p-Isopropyltoluene		ND		32	320
sec-Butylbenzene		ND		20	320
Styrene		ND		34	320
tert-Butylbenzene		ND		43	320
1,1,1,2-Tetrachloroethane		ND		62	320
1,1,2,2-Tetrachloroethane		ND		55	320
Tetrachloroethene		ND		34	320
Tetrahydrofuran		ND		150	1300
Toluene		ND		13	320
trans-1,2-Dichloroethene		ND		33	320
trans-1,3-Dichloropropene		ND		33	320
1,2,3-Trichlorobenzene		ND		50	320
1,2,4-Trichlorobenzene		ND		38	320
1,1,1-Trichloroethane		ND		53	320
1,1,2-Trichloroethane		ND		110	320
Trichloroethene		ND		50	320
Trichlorofluoromethane		ND		44	320
1,2,3-Trichloropropane		ND		130	320
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		53	320
1,2,4-Trimethylbenzene		ND		17	320
1,3,5-Trimethylbenzene		ND		19	320
Vinyl chloride		ND		71	320

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	83		26 - 141
Dibromofluoromethane (Surr)	92		30 - 122
1,2-Dichloroethane-d4 (Surr)	103		39 - 128
Toluene-d8 (Surr)	89		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_78-80(20150622)**

Lab Sample ID: 240-52439-5 Date Sampled: 06/22/2015 1710
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950834.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 1857			Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 1857				
Leach Date:	06/29/2015 1845				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		80 - 121
4-Bromofluorobenzene (Surr)	89		70 - 124
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	100		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_22-25(20150623)

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143898.D
Dilution:	33.333			Initial Weight/Volume:	9.643 g
Analysis Date:	06/29/2015 1838			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		8600	38000
Allyl chloride		ND		1100	19000
Benzene		ND		340	9600
Bromobenzene		ND		500	9600
Bromochloromethane		ND		2700	9600
Bromodichloromethane		ND		1500	9600
Bromoform		ND		2300	9600
Bromomethane		ND		2000	9600
2-Butanone (MEK)		ND		2800	38000
Carbon disulfide		ND		2100	9600
Carbon tetrachloride		ND		1800	9600
Chlorobenzene		ND		1600	9600
Chlorodibromomethane		ND		1800	9600
Chloroethane		ND		2000	9600
Chloroform		ND		1400	9600
Chloromethane		ND		1800	9600
2-Chlorotoluene		ND		1600	9600
4-Chlorotoluene		ND		990	9600
cis-1,2-Dichloroethene		ND		1500	9600
cis-1,3-Dichloropropene		ND		840	9600
Cyclohexane		ND		1100	19000
1,2-Dibromo-3-Chloropropane		ND		2700	19000
1,2-Dibromoethane		ND		1200	9600
Dibromomethane		ND		1900	9600
1,2-Dichlorobenzene		ND		730	9600
1,3-Dichlorobenzene		ND		1100	9600
1,4-Dichlorobenzene		ND		1600	9600
Dichlorodifluoromethane		ND		2300	9600
1,1-Dichloroethane		ND		1300	9600
1,2-Dichloroethane		ND		2000	9600
1,1-Dichloroethene		ND		1100	9600
Dichlorofluoromethane		ND		1300	19000
1,2-Dichloropropane		ND		1200	9600
1,3-Dichloropropane		ND		880	9600
2,2-Dichloropropane		ND		2000	9600
1,1-Dichloropropene		ND		1500	9600
Ethylbenzene		ND		1300	9600
Ethyl ether		ND		3700	19000
Hexachlorobutadiene		ND		1700	9600
2-Hexanone		ND		3200	38000
Isopropylbenzene		ND		500	9600
Methyl acetate		ND		2100	19000
Methylcyclohexane		ND		1500	19000
Methylene Chloride		ND		3300	9600
4-Methyl-2-pentanone (MIBK)		ND		2100	38000
Methyl tert butyl ether		ND		1100	9600

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_22-25(20150623)

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143898.D
Dilution:	33.333			Initial Weight/Volume:	9.643 g
Analysis Date:	06/29/2015 1838			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		770	9600
Naphthalene		180000		990	9600
n-Butylbenzene		ND		800	9600
N-Propylbenzene		ND		2300	9600
o-Xylene		ND		650	9600
p-Isopropyltoluene		ND		960	9600
sec-Butylbenzene		ND		610	9600
Styrene		ND		1000	9600
tert-Butylbenzene		ND		1300	9600
1,1,1,2-Tetrachloroethane		ND		1900	9600
1,1,2,2-Tetrachloroethane		ND		1600	9600
Tetrachloroethene		ND		1000	9600
Tetrahydrofuran		ND		4600	38000
Toluene		ND		380	9600
trans-1,2-Dichloroethene		ND		990	9600
trans-1,3-Dichloropropene		ND		990	9600
1,2,3-Trichlorobenzene		ND		1500	9600
1,2,4-Trichlorobenzene		ND		1100	9600
1,1,1-Trichloroethane		ND		1600	9600
1,1,2-Trichloroethane		ND		3200	9600
Trichloroethene		ND		1500	9600
Trichlorofluoromethane		ND		1300	9600
1,2,3-Trichloropropane		ND		3900	9600
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1600	9600
1,2,4-Trimethylbenzene		780	J	500	9600
1,3,5-Trimethylbenzene		ND		570	9600
Vinyl chloride		ND		2100	9600

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	137		26 - 141
Dibromofluoromethane (Surr)	136	X	30 - 122
1,2-Dichloroethane-d4 (Surr)	159	X	39 - 128
Toluene-d8 (Surr)	154	X	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_22-25(20150623)

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950835.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 1921			Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 1921				
Leach Date:	06/29/2015 1845				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		80 - 121
4-Bromofluorobenzene (Surr)	94		70 - 124
Toluene-d8 (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	108		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **MB-01(20150623)**

Lab Sample ID: 240-52439-7 Date Sampled: 06/23/2015 0000
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143893.D
Dilution:	1.0			Initial Weight/Volume:	10.0 g
Analysis Date:	06/29/2015 1651			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		48	250
Chlorobenzene		ND		41	250
Chlorodibromomethane		ND		46	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		53	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **MB-01(20150623)**

Lab Sample ID: 240-52439-7 Date Sampled: 06/23/2015 0000
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143893.D
Dilution:	1.0			Initial Weight/Volume:	10.0 g
Analysis Date:	06/29/2015 1651			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		43	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		42	250
1,1,2-Trichloroethane		ND		83	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		56	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	89		26 - 141
Dibromofluoromethane (Surr)	104		30 - 122
1,2-Dichloroethane-d4 (Surr)	111		39 - 128
Toluene-d8 (Surr)	97		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_62-65(20150623)

Lab Sample ID: 240-52439-8 Date Sampled: 06/23/2015 1225
Client Matrix: Solid % Moisture: 14.5 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143894.D
Dilution:	1.0			Initial Weight/Volume:	7.791 g
Analysis Date:	06/29/2015 1712			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		340	1500
Allyl chloride		ND		45	750
Benzene		ND		14	380
Bromobenzene		ND		20	380
Bromochloromethane		ND		110	380
Bromodichloromethane		ND		57	380
Bromoform		ND		92	380
Bromomethane		ND		77	380
2-Butanone (MEK)		ND		110	1500
Carbon disulfide		ND		84	380
Carbon tetrachloride		ND		72	380
Chlorobenzene		ND		62	380
Chlorodibromomethane		ND		69	380
Chloroethane		ND		77	380
Chloroform		ND		54	380
Chloromethane		ND		72	380
2-Chlorotoluene		ND		62	380
4-Chlorotoluene		ND		39	380
cis-1,2-Dichloroethene		ND		57	380
cis-1,3-Dichloropropene		ND		33	380
Cyclohexane		ND		45	750
1,2-Dibromo-3-Chloropropane		ND		110	750
1,2-Dibromoethane		ND		48	380
Dibromomethane		ND		75	380
1,2-Dichlorobenzene		ND		29	380
1,3-Dichlorobenzene		ND		45	380
1,4-Dichlorobenzene		ND		62	380
Dichlorodifluoromethane		ND		92	380
1,1-Dichloroethane		ND		53	380
1,2-Dichloroethane		ND		80	380
1,1-Dichloroethene		ND		45	380
Dichlorofluoromethane		ND		50	750
1,2-Dichloropropane		ND		48	380
1,3-Dichloropropane		ND		35	380
2,2-Dichloropropane		ND		78	380
1,1-Dichloropropene		ND		57	380
Ethylbenzene		89	J	53	380
Ethyl ether		ND		150	750
Hexachlorobutadiene		ND		66	380
2-Hexanone		ND		130	1500
Isopropylbenzene		ND		20	380
Methyl acetate		620	J	83	750
Methylcyclohexane		ND		57	750
Methylene Chloride		ND		130	380
4-Methyl-2-pentanone (MIBK)		ND		84	1500
Methyl tert butyl ether		ND		45	380

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_62-65(20150623)

Lab Sample ID: 240-52439-8 Date Sampled: 06/23/2015 1225
Client Matrix: Solid % Moisture: 14.5 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143894.D
Dilution:	1.0			Initial Weight/Volume:	7.791 g
Analysis Date:	06/29/2015 1712			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		330	J	30	380
Naphthalene		1500		39	380
n-Butylbenzene		ND		32	380
N-Propylbenzene		ND		92	380
o-Xylene		150	J	26	380
p-Isopropyltoluene		ND		38	380
sec-Butylbenzene		ND		24	380
Styrene		ND		41	380
tert-Butylbenzene		ND		51	380
1,1,1,2-Tetrachloroethane		ND		74	380
1,1,2,2-Tetrachloroethane		ND		65	380
Tetrachloroethene		ND		41	380
Tetrahydrofuran		ND		180	1500
Toluene		15	J	15	380
trans-1,2-Dichloroethene		ND		39	380
trans-1,3-Dichloropropene		ND		39	380
1,2,3-Trichlorobenzene		ND		59	380
1,2,4-Trichlorobenzene		ND		45	380
1,1,1-Trichloroethane		ND		63	380
1,1,2-Trichloroethane		ND		120	380
Trichloroethene		ND		59	380
Trichlorofluoromethane		ND		53	380
1,2,3-Trichloropropane		ND		150	380
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		63	380
1,2,4-Trimethylbenzene		68	J	20	380
1,3,5-Trimethylbenzene		24	J	23	380
Vinyl chloride		ND		84	380

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	93		26 - 141
Dibromofluoromethane (Surr)	106		30 - 122
1,2-Dichloroethane-d4 (Surr)	116		39 - 128
Toluene-d8 (Surr)	99		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_62-65(20150623)

Lab Sample ID: 240-52439-8 Date Sampled: 06/23/2015 1225
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950836.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 1945			Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 1945				
Leach Date:	06/29/2015 1845				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	93		70 - 124
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	102		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_67-70(20150623)

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid % Moisture: 12.3 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143899.D
Dilution:	200			Initial Weight/Volume:	9.554 g
Analysis Date:	06/29/2015 1859			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		54000	240000
Allyl chloride		ND		7200	120000
Benzene		14000	J	2100	60000
Bromobenzene		ND		3100	60000
Bromochloromethane		ND		17000	60000
Bromodichloromethane		ND		9100	60000
Bromoform		ND		15000	60000
Bromomethane		ND		12000	60000
2-Butanone (MEK)		ND		17000	240000
Carbon disulfide		ND		13000	60000
Carbon tetrachloride		ND		11000	60000
Chlorobenzene		ND		9800	60000
Chlorodibromomethane		ND		11000	60000
Chloroethane		ND		12000	60000
Chloroform		ND		8600	60000
Chloromethane		ND		11000	60000
2-Chlorotoluene		ND		9800	60000
4-Chlorotoluene		ND		6200	60000
cis-1,2-Dichloroethene		23000	J	9100	60000
cis-1,3-Dichloropropene		ND		5300	60000
Cyclohexane		52000	J	7200	120000
1,2-Dibromo-3-Chloropropane		ND		17000	120000
1,2-Dibromoethane		ND		7600	60000
Dibromomethane		ND		12000	60000
1,2-Dichlorobenzene		ND		4500	60000
1,3-Dichlorobenzene		ND		7200	60000
1,4-Dichlorobenzene		ND		9800	60000
Dichlorodifluoromethane		ND		15000	60000
1,1-Dichloroethane		ND		8400	60000
1,2-Dichloroethane		ND		13000	60000
1,1-Dichloroethene		ND		7200	60000
Dichlorofluoromethane		ND		7900	120000
1,2-Dichloropropane		ND		7600	60000
1,3-Dichloropropane		ND		5500	60000
2,2-Dichloropropane		ND		12000	60000
1,1-Dichloropropene		ND		9100	60000
Ethylbenzene		370000		8400	60000
Ethyl ether		ND		23000	120000
Hexachlorobutadiene		ND		11000	60000
2-Hexanone		ND		20000	240000
Isopropylbenzene		68000		3100	60000
Methyl acetate		ND		13000	120000
Methylcyclohexane		220000		9100	120000
Methylene Chloride		ND		20000	60000
4-Methyl-2-pentanone (MIBK)		ND		13000	240000
Methyl tert butyl ether		ND		7200	60000

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_67-70(20150623)

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid % Moisture: 12.3 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143899.D
Dilution:	200			Initial Weight/Volume:	9.554 g
Analysis Date:	06/29/2015 1859			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		1300000		4800	60000
Naphthalene		520000		6200	60000
n-Butylbenzene		190000		5000	60000
N-Propylbenzene		73000		15000	60000
o-Xylene		600000		4100	60000
p-Isopropyltoluene		36000	J	6000	60000
sec-Butylbenzene		24000	J	3800	60000
Styrene		ND		6400	60000
tert-Butylbenzene		ND		8100	60000
1,1,1,2-Tetrachloroethane		ND		12000	60000
1,1,2,2-Tetrachloroethane		ND		10000	60000
Tetrachloroethene		ND		6400	60000
Tetrahydrofuran		ND		29000	240000
Toluene		230000		2400	60000
trans-1,2-Dichloroethene		ND		6200	60000
trans-1,3-Dichloropropene		ND		6200	60000
1,2,3-Trichlorobenzene		ND		9300	60000
1,2,4-Trichlorobenzene		ND		7200	60000
1,1,1-Trichloroethane		ND		10000	60000
1,1,2-Trichloroethane		ND		20000	60000
Trichloroethene		11000	J	9300	60000
Trichlorofluoromethane		ND		8400	60000
1,2,3-Trichloropropane		ND		25000	60000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		10000	60000
1,2,4-Trimethylbenzene		1200000		3100	60000
1,3,5-Trimethylbenzene		320000		3600	60000
Vinyl chloride		ND		13000	60000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	241	X	26 - 141
Dibromofluoromethane (Surr)	285	X	30 - 122
1,2-Dichloroethane-d4 (Surr)	259	X	39 - 128
Toluene-d8 (Surr)	497	X	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_67-70(20150623)

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950837.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 2009			Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 2009				
Leach Date:	06/29/2015 1845				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		180		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		100		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 121
4-Bromofluorobenzene (Surr)	94		70 - 124
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	100		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_75-77(20150623)**

Lab Sample ID: 240-52439-10 Date Sampled: 06/23/2015 1330
Client Matrix: Solid % Moisture: 9.5 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143895.D
Dilution:	1.0			Initial Weight/Volume:	8.821 g
Analysis Date:	06/29/2015 1734			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		280	1300
Allyl chloride		ND		38	630
Benzene		ND		11	310
Bromobenzene		ND		16	310
Bromochloromethane		ND		88	310
Bromodichloromethane		ND		48	310
Bromoform		ND		76	310
Bromomethane		ND		64	310
2-Butanone (MEK)		ND		91	1300
Carbon disulfide		ND		70	310
Carbon tetrachloride		ND		60	310
Chlorobenzene		ND		51	310
Chlorodibromomethane		ND		58	310
Chloroethane		ND		64	310
Chloroform		ND		45	310
Chloromethane		ND		60	310
2-Chlorotoluene		ND		51	310
4-Chlorotoluene		ND		33	310
cis-1,2-Dichloroethene		ND		48	310
cis-1,3-Dichloropropene		ND		28	310
Cyclohexane		ND		38	630
1,2-Dibromo-3-Chloropropane		ND		89	630
1,2-Dibromoethane		ND		40	310
Dibromomethane		ND		63	310
1,2-Dichlorobenzene		ND		24	310
1,3-Dichlorobenzene		ND		38	310
1,4-Dichlorobenzene		ND		51	310
Dichlorodifluoromethane		ND		76	310
1,1-Dichloroethane		ND		44	310
1,2-Dichloroethane		ND		66	310
1,1-Dichloroethene		ND		38	310
Dichlorofluoromethane		ND		41	630
1,2-Dichloropropane		ND		40	310
1,3-Dichloropropane		ND		29	310
2,2-Dichloropropane		ND		65	310
1,1-Dichloropropene		ND		48	310
Ethylbenzene		ND		44	310
Ethyl ether		ND		120	630
Hexachlorobutadiene		ND		55	310
2-Hexanone		ND		110	1300
Isopropylbenzene		ND		16	310
Methyl acetate		110	J	69	630
Methylcyclohexane		ND		48	630
Methylene Chloride		ND		110	310
4-Methyl-2-pentanone (MIBK)		ND		70	1300
Methyl tert butyl ether		ND		38	310

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_75-77(20150623)

Lab Sample ID: 240-52439-10 Date Sampled: 06/23/2015 1330
Client Matrix: Solid % Moisture: 9.5 Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143895.D
Dilution:	1.0			Initial Weight/Volume:	8.821 g
Analysis Date:	06/29/2015 1734			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		25	310
Naphthalene		35	J	33	310
n-Butylbenzene		ND		26	310
N-Propylbenzene		ND		76	310
o-Xylene		ND		21	310
p-Isopropyltoluene		ND		31	310
sec-Butylbenzene		ND		20	310
Styrene		ND		34	310
tert-Butylbenzene		ND		43	310
1,1,1,2-Tetrachloroethane		ND		61	310
1,1,2,2-Tetrachloroethane		ND		54	310
Tetrachloroethene		ND		34	310
Tetrahydrofuran		ND		150	1300
Toluene		ND		13	310
trans-1,2-Dichloroethene		ND		33	310
trans-1,3-Dichloropropene		ND		33	310
1,2,3-Trichlorobenzene		ND		49	310
1,2,4-Trichlorobenzene		ND		38	310
1,1,1-Trichloroethane		ND		53	310
1,1,2-Trichloroethane		ND		100	310
Trichloroethene		ND		49	310
Trichlorofluoromethane		ND		44	310
1,2,3-Trichloropropane		ND		130	310
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		53	310
1,2,4-Trimethylbenzene		ND		16	310
1,3,5-Trimethylbenzene		ND		19	310
Vinyl chloride		ND		70	310

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	94		26 - 141
Dibromofluoromethane (Surr)	101		30 - 122
1,2-Dichloroethane-d4 (Surr)	114		39 - 128
Toluene-d8 (Surr)	100		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_75-77(20150623)**

Lab Sample ID: 240-52439-10 Date Sampled: 06/23/2015 1330
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950838.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 2034			Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 2034				
Leach Date:	06/29/2015 1845				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		80 - 121
4-Bromofluorobenzene (Surr)	92		70 - 124
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	102		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **MB-01(20150623)**

Lab Sample ID: 240-52439-11 Date Sampled: 06/23/2015 0000
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143896.D
Dilution:	1.0			Initial Weight/Volume:	10.0 g
Analysis Date:	06/29/2015 1755			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		48	250
Chlorobenzene		ND		41	250
Chlorodibromomethane		ND		46	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		53	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		660		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **MB-01(20150623)**

Lab Sample ID: 240-52439-11 Date Sampled: 06/23/2015 0000
Client Matrix: Solid Date Received: 06/24/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-186967	Lab File ID:	143896.D
Dilution:	1.0			Initial Weight/Volume:	10.0 g
Analysis Date:	06/29/2015 1755			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 1145				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		43	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		11	J	10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		42	250
1,1,2-Trichloroethane		ND		83	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		56	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	121		26 - 141
Dibromofluoromethane (Surr)	130	X	30 - 122
1,2-Dichloroethane-d4 (Surr)	141	X	39 - 128
Toluene-d8 (Surr)	130		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_39-42(20150622)**

Lab Sample ID: 240-52439-1 Date Sampled: 06/22/2015 1510
Client Matrix: Solid % Moisture: 11.8 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50709012.D
Dilution:	1.0			Initial Weight/Volume:	29.71 g
Analysis Date:	07/09/2015 1305			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.0	380
2,2'-oxybis[1-chloropropane]		ND		11	380
2,4,5-Trichlorophenol		ND		29	380
2,4,6-Trichlorophenol		ND		10	380
2,4-Dichlorophenol		ND		23	380
2,4-Dimethylphenol		ND		23	380
2,4-Dinitrophenol		ND		24	1800
2,4-Dinitrotoluene		ND		19	380
2,6-Dinitrotoluene		ND		24	380
2-Chloronaphthalene		ND		0.52	380
2-Chlorophenol		ND		9.4	380
2-Methylnaphthalene		4.6	J	0.57	380
2-Methylphenol		ND		13	380
2-Nitroaniline		ND		10	1800
2-Nitrophenol		ND		9.5	380
3,3'-Dichlorobenzidine		ND		21	1800
3-Nitroaniline		ND		18	1800
4,6-Dinitro-2-methylphenol		ND		11	1800
4-Bromophenyl phenyl ether		ND		15	380
4-Chloro-3-methylphenol		ND		24	380
4-Chloroaniline		ND		19	380
4-Chlorophenyl phenyl ether		ND		15	380
4-Nitroaniline		ND		30	1800
4-Nitrophenol		ND		19	1800
Acenaphthene		ND		0.87	380
Acenaphthylene		ND		0.40	380
Acetophenone		ND		11	380
Anthracene		6.0	J	0.89	380
Atrazine		ND		10	380
Benzaldehyde		ND		14	380
Benzo[a]anthracene		14	J	0.72	380
Benzo[a]pyrene		16	J	0.73	380
Benzo[b]fluoranthene		23	J	0.68	380
Benzo[g,h,i]perylene		15	J	0.40	380
Benzo[k]fluoranthene		9.1	J	0.78	380
Bis(2-chloroethoxy)methane		ND		25	380
Bis(2-chloroethyl)ether		ND		2.3	380
Bis(2-ethylhexyl) phthalate		39	J	22	380
Butyl benzyl phthalate		ND		11	380
Caprolactam		ND		42	380
Carbazole		ND		31	380
Chrysene		16	J	1.3	380
Dibenz(a,h)anthracene		ND		0.76	380
Dibenzofuran		ND		0.76	380
Diethyl phthalate		ND		18	380
Dimethyl phthalate		ND		19	380

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1006_39-42(20150622)

Lab Sample ID: 240-52439-1 Date Sampled: 06/22/2015 1510
Client Matrix: Solid % Moisture: 11.8 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50709012.D
Dilution:	1.0			Initial Weight/Volume:	29.71 g
Analysis Date:	07/09/2015 1305			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		17	380
Di-n-octyl phthalate		ND		9.0	380
Fluoranthene		32	J	0.63	380
Fluorene		4.4	J	0.61	380
Hexachlorobenzene		ND		2.4	380
Hexachlorobutadiene		ND		6.4	380
Hexachlorocyclopentadiene		ND		9.3	1800
Hexachloroethane		ND		10	380
Indeno[1,2,3-cd]pyrene		16	J	0.40	380
Isophorone		ND		15	380
Naphthalene		5.6	J	0.94	380
Nitrobenzene		ND		2.5	380
N-Nitrosodi-n-propylamine		ND		7.2	380
N-Nitrosodiphenylamine		ND		24	380
Pentachlorophenol		ND		10	380
Phenol		ND		8.4	380
Phenanthrene		28	J	0.84	380
Pyrene		28	J	0.50	380
3 & 4 Methylphenol		ND		23	460

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	75		24 - 110
2-Fluorophenol (Surr)	65		24 - 110
2,4,6-Tribromophenol (Surr)	29		10 - 110
Nitrobenzene-d5 (Surr)	67		20 - 110
Phenol-d5 (Surr)	64		26 - 110
Terphenyl-d14 (Surr)	78		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_39-42(20150622)**

Lab Sample ID: 240-52439-1 Date Sampled: 06/22/2015 1510
Client Matrix: Solid Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-188035	Lab File ID:	50708021.D
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1713			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1145			Injection Volume:	1 uL
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		30 - 110
2-Fluorophenol (Surr)	57		20 - 110
Nitrobenzene-d5 (Surr)	76		28 - 110
Phenol-d5 (Surr)	50		21 - 110
Terphenyl-d14 (Surr)	74		48 - 110
2,4,6-Tribromophenol (Surr)	76		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1006_52-54(20150622)

Lab Sample ID: 240-52439-2 Date Sampled: 06/22/2015 1545
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187199	Lab File ID:	0701021.D
Dilution:	1.0			Initial Weight/Volume:	29.83 g
Analysis Date:	07/01/2015 1513			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.3	410
2,2'-oxybis[1-chloropropane]		ND		12	410
2,4,5-Trichlorophenol		ND		31	410
2,4,6-Trichlorophenol		ND		11	410
2,4-Dichlorophenol		ND		25	410
2,4-Dimethylphenol		ND		25	410
2,4-Dinitrophenol		ND		26	2000
2,4-Dinitrotoluene		ND		21	410
2,6-Dinitrotoluene		ND		26	410
2-Chloronaphthalene		ND		0.56	410
2-Chlorophenol		ND		10	410
2-Methylnaphthalene		ND		0.62	410
2-Methylphenol		ND		14	410
2-Nitroaniline		ND		11	2000
2-Nitrophenol		ND		10	410
3,3'-Dichlorobenzidine		ND		22	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		11	2000
4-Bromophenyl phenyl ether		ND		16	410
4-Chloro-3-methylphenol		ND		26	410
4-Chloroaniline		ND		21	410
4-Chlorophenyl phenyl ether		ND		16	410
4-Nitroaniline		ND		32	2000
4-Nitrophenol		ND		21	2000
Acenaphthene		ND		0.94	410
Acenaphthylene		ND		0.43	410
Acetophenone		ND		11	410
Anthracene		ND		0.96	410
Atrazine		ND		11	410
Benzaldehyde		ND		15	410
Benzo[a]anthracene		ND		0.78	410
Benzo[a]pyrene		ND		0.79	410
Benzo[b]fluoranthene		ND		0.73	410
Benzo[g,h,i]perylene		ND		0.43	410
Benzo[k]fluoranthene		ND		0.84	410
Bis(2-chloroethoxy)methane		ND		27	410
Bis(2-chloroethyl)ether		ND		2.5	410
Bis(2-ethylhexyl) phthalate		29	J	23	410
Butyl benzyl phthalate		ND		12	410
Caprolactam		ND		46	410
Carbazole		ND		33	410
Chrysene		ND		1.4	410
Dibenz(a,h)anthracene		ND		0.81	410
Dibenzofuran		ND		0.81	410
Diethyl phthalate		ND		20	410
Dimethyl phthalate		ND		21	410

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1006_52-54(20150622)

Lab Sample ID: 240-52439-2 Date Sampled: 06/22/2015 1545
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187199	Lab File ID:	0701021.D
Dilution:	1.0			Initial Weight/Volume:	29.83 g
Analysis Date:	07/01/2015 1513			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		19	410
Di-n-octyl phthalate		ND		9.8	410
Fluoranthene		ND		0.68	410
Fluorene		ND		0.65	410
Hexachlorobenzene		ND		2.6	410
Hexachlorobutadiene		ND		6.9	410
Hexachlorocyclopentadiene		ND		10	2000
Hexachloroethane		ND		11	410
Indeno[1,2,3-cd]pyrene		ND		0.43	410
Isophorone		ND		16	410
Naphthalene		7.1	J	1.0	410
Nitrobenzene		ND		2.7	410
N-Nitrosodi-n-propylamine		ND		7.8	410
N-Nitrosodiphenylamine		ND		26	410
Pentachlorophenol		ND		11	410
Phenol		ND		9.0	410
Phenanthrene		ND		0.90	410
Pyrene		ND		0.54	410
3 & 4 Methylphenol		ND		25	490

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	55		24 - 110
2-Fluorophenol (Surr)	54		24 - 110
2,4,6-Tribromophenol (Surr)	28		10 - 110
Nitrobenzene-d5 (Surr)	53		20 - 110
Phenol-d5 (Surr)	47		26 - 110
Terphenyl-d14 (Surr)	63		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_52-54(20150622)**

Lab Sample ID: 240-52439-2 Date Sampled: 06/22/2015 1545
Client Matrix: Solid Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-188035	Lab File ID:	50708013.D
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1356			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1145			Injection Volume:	1 uL
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	83		30 - 110
2-Fluorophenol (Surr)	62		20 - 110
Nitrobenzene-d5 (Surr)	83		28 - 110
Phenol-d5 (Surr)	55		21 - 110
Terphenyl-d14 (Surr)	80		48 - 110
2,4,6-Tribromophenol (Surr)	87		23 - 110

Client Sample ID: **ASB-1006_57-60(20150622)**

Lab Sample ID: 240-52439-3 Date Sampled: 06/22/2015 1610
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187199	Lab File ID:	0701023.D
Dilution:	20			Initial Weight/Volume:	29.73 g
Analysis Date:	07/01/2015 1559			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		1800	J	79	7500
2,2'-oxybis[1-chloropropane]		ND		220	7500
2,4,5-Trichlorophenol		ND		570	7500
2,4,6-Trichlorophenol		ND		200	7500
2,4-Dichlorophenol		ND		450	7500
2,4-Dimethylphenol		ND		450	7500
2,4-Dinitrophenol		ND		480	36000
2,4-Dinitrotoluene		ND		380	7500
2,6-Dinitrotoluene		ND		480	7500
2-Chloronaphthalene		ND		10	7500
2-Chlorophenol		ND		190	7500
2-Methylnaphthalene		10000		11	7500
2-Methylphenol		ND		250	7500
2-Nitroaniline		ND		210	36000
2-Nitrophenol		ND		190	7500
3,3'-Dichlorobenzidine		ND		410	36000
3-Nitroaniline		ND		360	36000
4,6-Dinitro-2-methylphenol		ND		210	36000
4-Bromophenyl phenyl ether		ND		290	7500
4-Chloro-3-methylphenol		ND		480	7500
4-Chloroaniline		ND		380	7500
4-Chlorophenyl phenyl ether		ND		290	7500
4-Nitroaniline		ND		590	36000
4-Nitrophenol		ND		380	36000
Acenaphthene		6400	J	17	7500
Acenaphthylene		1500	J	7.9	7500
Acetophenone		ND		210	7500
Anthracene		7200	J	18	7500
Atrazine		ND		210	7500
Benzaldehyde		ND		270	7500
Benzo[a]anthracene		8600		14	7500
Benzo[a]pyrene		5200	J	14	7500
Benzo[b]fluoranthene		8200		13	7500
Benzo[g,h,i]perylene		1400	J	7.9	7500
Benzo[k]fluoranthene		4800	J	15	7500
Bis(2-chloroethoxy)methane		ND		500	7500
Bis(2-chloroethyl)ether		ND		45	7500
Bis(2-ethylhexyl) phthalate		ND		430	7500
Butyl benzyl phthalate		ND		230	7500
Caprolactam		ND		840	7500
Carbazole		6800	J	610	7500
Chrysene		8600		25	7500
Dibenz(a,h)anthracene		ND		15	7500
Dibenzofuran		5300	J	15	7500
Diethyl phthalate		ND		360	7500
Dimethyl phthalate		ND		380	7500

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_57-60(20150622)**

Lab Sample ID: 240-52439-3 Date Sampled: 06/22/2015 1610
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187199	Lab File ID:	0701023.D
Dilution:	20			Initial Weight/Volume:	29.73 g
Analysis Date:	07/01/2015 1559			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		340	7500
Di-n-octyl phthalate		ND		180	7500
Fluoranthene		25000		12	7500
Fluorene		9200		12	7500
Hexachlorobenzene		ND		48	7500
Hexachlorobutadiene		ND		130	7500
Hexachlorocyclopentadiene		ND		180	36000
Hexachloroethane		ND		200	7500
Indeno[1,2,3-cd]pyrene		1300	J	7.9	7500
Isophorone		ND		290	7500
Naphthalene		25000		19	7500
Nitrobenzene		ND		50	7500
N-Nitrosodi-n-propylamine		ND		140	7500
N-Nitrosodiphenylamine		ND		480	7500
Pentachlorophenol		ND		210	7500
Phenol		ND		170	7500
Phenanthrene		31000		17	7500
Pyrene		20000		10	7500
3 & 4 Methylphenol		ND		450	9100

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	82		24 - 110
2-Fluorophenol (Surr)	64		24 - 110
2,4,6-Tribromophenol (Surr)	31		10 - 110
Nitrobenzene-d5 (Surr)	60		20 - 110
Phenol-d5 (Surr)	61		26 - 110
Terphenyl-d14 (Surr)	87		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_57-60(20150622)**

Lab Sample ID: 240-52439-3 Date Sampled: 06/22/2015 1610
Client Matrix: Solid Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-188035	Lab File ID:	50708014.D
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1420			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1145			Injection Volume:	1 uL
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	64		30 - 110
2-Fluorophenol (Surr)	54		20 - 110
Nitrobenzene-d5 (Surr)	68		28 - 110
Phenol-d5 (Surr)	51		21 - 110
Terphenyl-d14 (Surr)	72		48 - 110
2,4,6-Tribromophenol (Surr)	67		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_65-67(20150622)**

Lab Sample ID: 240-52439-4 Date Sampled: 06/22/2015 1650
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50709016.D
Dilution:	4.0			Initial Weight/Volume:	30.19 g
Analysis Date:	07/09/2015 1443			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		72	J	17	1600
2,2'-oxybis[1-chloropropane]		ND		47	1600
2,4,5-Trichlorophenol		ND		120	1600
2,4,6-Trichlorophenol		ND		44	1600
2,4-Dichlorophenol		ND		99	1600
2,4-Dimethylphenol		ND		99	1600
2,4-Dinitrophenol		ND		100	7900
2,4-Dinitrotoluene		ND		84	1600
2,6-Dinitrotoluene		ND		100	1600
2-Chloronaphthalene		ND		2.2	1600
2-Chlorophenol		ND		41	1600
2-Methylnaphthalene		410	J	2.5	1600
2-Methylphenol		ND		54	1600
2-Nitroaniline		ND		45	7900
2-Nitrophenol		ND		41	1600
3,3'-Dichlorobenzidine		ND		89	7900
3-Nitroaniline		ND		79	7900
4,6-Dinitro-2-methylphenol		ND		46	7900
4-Bromophenyl phenyl ether		ND		64	1600
4-Chloro-3-methylphenol		ND		100	1600
4-Chloroaniline		ND		84	1600
4-Chlorophenyl phenyl ether		ND		64	1600
4-Nitroaniline		ND		130	7900
4-Nitrophenol		ND		84	7900
Acenaphthene		440	J	3.8	1600
Acenaphthylene		350	J	1.7	1600
Acetophenone		ND		46	1600
Anthracene		820	J	3.9	1600
Atrazine		ND		45	1600
Benzaldehyde		ND		59	1600
Benzo[a]anthracene		1900		3.1	1600
Benzo[a]pyrene		1600		3.2	1600
Benzo[b]fluoranthene		2100		2.9	1600
Benzo[g,h,i]perylene		630	J	1.7	1600
Benzo[k]fluoranthene		750	J	3.4	1600
Bis(2-chloroethoxy)methane		ND		110	1600
Bis(2-chloroethyl)ether		ND		9.9	1600
Bis(2-ethylhexyl) phthalate		220	J	94	1600
Butyl benzyl phthalate		ND		50	1600
Caprolactam		ND		180	1600
Carbazole		200	J	130	1600
Chrysene		1900		5.4	1600
Dibenz(a,h)anthracene		230	J	3.3	1600
Dibenzofuran		180	J	3.3	1600
Diethyl phthalate		ND		79	1600
Dimethyl phthalate		ND		84	1600

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1006_65-67(20150622)

Lab Sample ID: 240-52439-4 Date Sampled: 06/22/2015 1650
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50709016.D
Dilution:	4.0			Initial Weight/Volume:	30.19 g
Analysis Date:	07/09/2015 1443			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		74	1600
Di-n-octyl phthalate		ND		39	1600
Fluoranthene		3600		2.7	1600
Fluorene		410	J	2.6	1600
Hexachlorobenzene		ND		10	1600
Hexachlorobutadiene		ND		28	1600
Hexachlorocyclopentadiene		ND		40	7900
Hexachloroethane		ND		45	1600
Indeno[1,2,3-cd]pyrene		580	J	1.7	1600
Isophorone		ND		64	1600
Naphthalene		560	J	4.1	1600
Nitrobenzene		ND		11	1600
N-Nitrosodi-n-propylamine		ND		31	1600
N-Nitrosodiphenylamine		ND		100	1600
Pentachlorophenol		ND		45	1600
Phenol		ND		36	1600
Phenanthrene		2500		3.6	1600
Pyrene		3300		2.2	1600
3 & 4 Methylphenol		ND		99	2000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	66		24 - 110
2-Fluorophenol (Surr)	57		24 - 110
2,4,6-Tribromophenol (Surr)	42		10 - 110
Nitrobenzene-d5 (Surr)	64		20 - 110
Phenol-d5 (Surr)	63		26 - 110
Terphenyl-d14 (Surr)	64		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_65-67(20150622)**

Lab Sample ID: 240-52439-4 Date Sampled: 06/22/2015 1650
Client Matrix: Solid Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-188035	Lab File ID:	50708015.D
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1445			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1145			Injection Volume:	1 uL
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	66		30 - 110
2-Fluorophenol (Surr)	48		20 - 110
Nitrobenzene-d5 (Surr)	71		28 - 110
Phenol-d5 (Surr)	45		21 - 110
Terphenyl-d14 (Surr)	72		48 - 110
2,4,6-Tribromophenol (Surr)	60		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_78-80(20150622)**

Lab Sample ID: 240-52439-5 Date Sampled: 06/22/2015 1710
Client Matrix: Solid % Moisture: 17.9 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50709011.D
Dilution:	1.0			Initial Weight/Volume:	29.85 g
Analysis Date:	07/09/2015 1241			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.3	400
2,2'-oxybis[1-chloropropane]		ND		12	400
2,4,5-Trichlorophenol		ND		31	400
2,4,6-Trichlorophenol		ND		11	400
2,4-Dichlorophenol		ND		24	400
2,4-Dimethylphenol		ND		24	400
2,4-Dinitrophenol		ND		26	2000
2,4-Dinitrotoluene		ND		21	400
2,6-Dinitrotoluene		ND		26	400
2-Chloronaphthalene		ND		0.55	400
2-Chlorophenol		ND		10	400
2-Methylnaphthalene		5.9	J	0.61	400
2-Methylphenol		ND		13	400
2-Nitroaniline		ND		11	2000
2-Nitrophenol		ND		10	400
3,3'-Dichlorobenzidine		ND		22	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		11	2000
4-Bromophenyl phenyl ether		ND		16	400
4-Chloro-3-methylphenol		ND		26	400
4-Chloroaniline		ND		21	400
4-Chlorophenyl phenyl ether		ND		16	400
4-Nitroaniline		ND		32	2000
4-Nitrophenol		ND		21	2000
Acenaphthene		ND		0.93	400
Acenaphthylene		7.8	J	0.43	400
Acetophenone		ND		11	400
Anthracene		14	J	0.95	400
Atrazine		ND		11	400
Benzaldehyde		ND		15	400
Benzo[a]anthracene		49	J	0.77	400
Benzo[a]pyrene		56	J	0.78	400
Benzo[b]fluoranthene		70	J	0.72	400
Benzo[g,h,i]perylene		40	J	0.43	400
Benzo[k]fluoranthene		24	J	0.83	400
Bis(2-chloroethoxy)methane		ND		27	400
Bis(2-chloroethyl)ether		ND		2.4	400
Bis(2-ethylhexyl) phthalate		ND		23	400
Butyl benzyl phthalate		ND		12	400
Caprolactam		ND		45	400
Carbazole		ND		33	400
Chrysene		51	J	1.3	400
Dibenz(a,h)anthracene		ND		0.81	400
Dibenzofuran		ND		0.81	400
Diethyl phthalate		ND		20	400
Dimethyl phthalate		ND		21	400

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1006_78-80(20150622)

Lab Sample ID: 240-52439-5 Date Sampled: 06/22/2015 1710
Client Matrix: Solid % Moisture: 17.9 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50709011.D
Dilution:	1.0			Initial Weight/Volume:	29.85 g
Analysis Date:	07/09/2015 1241			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		18	400
Di-n-octyl phthalate		ND		9.7	400
Fluoranthene		92	J	0.67	400
Fluorene		ND		0.65	400
Hexachlorobenzene		ND		2.6	400
Hexachlorobutadiene		ND		6.9	400
Hexachlorocyclopentadiene		ND		9.9	2000
Hexachloroethane		ND		11	400
Indeno[1,2,3-cd]pyrene		40	J	0.43	400
Isophorone		ND		16	400
Naphthalene		7.5	J	1.0	400
Nitrobenzene		ND		2.7	400
N-Nitrosodi-n-propylamine		ND		7.7	400
N-Nitrosodiphenylamine		ND		26	400
Pentachlorophenol		ND		11	400
Phenol		ND		8.9	400
Phenanthrene		50	J	0.89	400
Pyrene		95	J	0.54	400
3 & 4 Methylphenol		ND		24	490

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	78		24 - 110
2-Fluorophenol (Surr)	69		24 - 110
2,4,6-Tribromophenol (Surr)	30		10 - 110
Nitrobenzene-d5 (Surr)	71		20 - 110
Phenol-d5 (Surr)	61		26 - 110
Terphenyl-d14 (Surr)	80		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_78-80(20150622)**

Lab Sample ID: 240-52439-5 Date Sampled: 06/22/2015 1710
Client Matrix: Solid Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-188035	Lab File ID:	50708016.D
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1510			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1145			Injection Volume:	1 uL
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	68		30 - 110
2-Fluorophenol (Surr)	57		20 - 110
Nitrobenzene-d5 (Surr)	71		28 - 110
Phenol-d5 (Surr)	53		21 - 110
Terphenyl-d14 (Surr)	72		48 - 110
2,4,6-Tribromophenol (Surr)	75		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_22-25(20150623)**

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50709014.D
Dilution:	200			Initial Weight/Volume:	29.82 g
Analysis Date:	07/09/2015 1355			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		18000	J	780	73000
2,2'-oxybis[1-chloropropane]		ND		2100	73000
2,4,5-Trichlorophenol		ND		5600	73000
2,4,6-Trichlorophenol		ND		2000	73000
2,4-Dichlorophenol		ND		4500	73000
2,4-Dimethylphenol		ND		4500	73000
2,4-Dinitrophenol		ND		4700	360000
2,4-Dinitrotoluene		ND		3800	73000
2,6-Dinitrotoluene		ND		4700	73000
2-Chloronaphthalene		ND		100	73000
2-Chlorophenol		ND		1800	73000
2-Methylnaphthalene		49000	J	110	73000
2-Methylphenol		ND		2400	73000
2-Nitroaniline		ND		2000	360000
2-Nitrophenol		ND		1800	73000
3,3'-Dichlorobenzidine		ND		4000	360000
3-Nitroaniline		ND		3600	360000
4,6-Dinitro-2-methylphenol		ND		2000	360000
4-Bromophenyl phenyl ether		ND		2900	73000
4-Chloro-3-methylphenol		ND		4700	73000
4-Chloroaniline		ND		3800	73000
4-Chlorophenyl phenyl ether		ND		2900	73000
4-Nitroaniline		ND		5800	360000
4-Nitrophenol		ND		3800	360000
Acenaphthene		87000		170	73000
Acenaphthylene		7300	J	78	73000
Acetophenone		ND		2000	73000
Anthracene		180000		170	73000
Atrazine		ND		2000	73000
Benzaldehyde		ND		2700	73000
Benzo[a]anthracene		190000		140	73000
Benzo[a]pyrene		140000		140	73000
Benzo[b]fluoranthene		190000		130	73000
Benzo[g,h,i]perylene		46000	J	78	73000
Benzo[k]fluoranthene		63000	J	150	73000
Bis(2-chloroethoxy)methane		ND		4900	73000
Bis(2-chloroethyl)ether		ND		450	73000
Bis(2-ethylhexyl) phthalate		ND		4200	73000
Butyl benzyl phthalate		ND		2200	73000
Caprolactam		ND		8200	73000
Carbazole		70000	J	6000	73000
Chrysene		170000		240	73000
Dibenz(a,h)anthracene		14000	J	150	73000
Dibenzofuran		97000		150	73000
Diethyl phthalate		ND		3600	73000
Dimethyl phthalate		ND		3800	73000

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_22-25(20150623)

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50709014.D
Dilution:	200			Initial Weight/Volume:	29.82 g
Analysis Date:	07/09/2015 1355			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		3300	73000
Di-n-octyl phthalate		ND		1800	73000
Fluorene		150000		120	73000
Hexachlorobenzene		ND		470	73000
Hexachlorobutadiene		ND		1200	73000
Hexachlorocyclopentadiene		ND		1800	360000
Hexachloroethane		ND		2000	73000
Indeno[1,2,3-cd]pyrene		47000	J	78	73000
Isophorone		ND		2900	73000
Naphthalene		150000		180	73000
Nitrobenzene		ND		490	73000
N-Nitrosodi-n-propylamine		ND		1400	73000
N-Nitrosodiphenylamine		ND		4700	73000
Pentachlorophenol		ND		2000	73000
Phenol		ND		1600	73000
3 & 4 Methylphenol		ND		4500	89000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	102		24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	96		20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	116	X	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_22-25(20150623)**

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188680	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50710011.D
Dilution:	500			Initial Weight/Volume:	29.82 g
Analysis Date:	07/10/2015 1359	Run Type:	RA	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Fluoranthene		430000		310	180000
Phenanthrene		500000		410	180000
Pyrene		310000		240	180000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	0	X	24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	0	X	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_22-25(20150623)**

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-188035	Lab File ID:	50708017.D
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1534			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1145			Injection Volume:	1 uL
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		0.0015	J	0.00017	0.0040
3 & 4 Methylphenol		0.0035	J	0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	68		30 - 110
2-Fluorophenol (Surr)	61		20 - 110
Nitrobenzene-d5 (Surr)	75		28 - 110
Phenol-d5 (Surr)	53		21 - 110
Terphenyl-d14 (Surr)	74		48 - 110
2,4,6-Tribromophenol (Surr)	76		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_62-65(20150623)**

Lab Sample ID: 240-52439-8 Date Sampled: 06/23/2015 1225
Client Matrix: Solid % Moisture: 14.5 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187199	Lab File ID:	0701022.D
Dilution:	4.0			Initial Weight/Volume:	29.59 g
Analysis Date:	07/01/2015 1536			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		80	J	17	1600
2,2'-oxybis[1-chloropropane]		ND		45	1600
2,4,5-Trichlorophenol		ND		120	1600
2,4,6-Trichlorophenol		ND		42	1600
2,4-Dichlorophenol		ND		95	1600
2,4-Dimethylphenol		ND		95	1600
2,4-Dinitrophenol		ND		100	7600
2,4-Dinitrotoluene		ND		81	1600
2,6-Dinitrotoluene		ND		100	1600
2-Chloronaphthalene		ND		2.1	1600
2-Chlorophenol		ND		39	1600
2-Methylnaphthalene		290	J	2.4	1600
2-Methylphenol		ND		52	1600
2-Nitroaniline		ND		43	7600
2-Nitrophenol		ND		39	1600
3,3'-Dichlorobenzidine		ND		85	7600
3-Nitroaniline		ND		76	7600
4,6-Dinitro-2-methylphenol		ND		44	7600
4-Bromophenyl phenyl ether		ND		62	1600
4-Chloro-3-methylphenol		ND		100	1600
4-Chloroaniline		ND		81	1600
4-Chlorophenyl phenyl ether		ND		62	1600
4-Nitroaniline		ND		120	7600
4-Nitrophenol		ND		81	7600
Acenaphthene		450	J	3.6	1600
Acenaphthylene		37	J	1.7	1600
Acetophenone		ND		44	1600
Anthracene		1000	J	3.7	1600
Atrazine		ND		43	1600
Benzaldehyde		ND		57	1600
Benzo[a]anthracene		1200	J	3.0	1600
Benzo[a]pyrene		940	J	3.0	1600
Benzo[b]fluoranthene		1200	J	2.8	1600
Benzo[g,h,i]perylene		280	J	1.7	1600
Benzo[k]fluoranthene		630	J	3.2	1600
Bis(2-chloroethoxy)methane		ND		100	1600
Bis(2-chloroethyl)ether		ND		9.5	1600
Bis(2-ethylhexyl) phthalate		ND		90	1600
Butyl benzyl phthalate		ND		47	1600
Caprolactam		ND		180	1600
Carbazole		440	J	130	1600
Chrysene		1100	J	5.2	1600
Dibenz(a,h)anthracene		120	J	3.1	1600
Dibenzofuran		510	J	3.1	1600
Diethyl phthalate		ND		76	1600
Dimethyl phthalate		ND		81	1600

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_62-65(20150623)

Lab Sample ID: 240-52439-8 Date Sampled: 06/23/2015 1225
Client Matrix: Solid % Moisture: 14.5 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187199	Lab File ID:	0701022.D
Dilution:	4.0			Initial Weight/Volume:	29.59 g
Analysis Date:	07/01/2015 1536			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		71	1600
Di-n-octyl phthalate		ND		37	1600
Fluoranthene		3300		2.6	1600
Fluorene		840	J	2.5	1600
Hexachlorobenzene		ND		10	1600
Hexachlorobutadiene		ND		27	1600
Hexachlorocyclopentadiene		ND		38	7600
Hexachloroethane		ND		43	1600
Indeno[1,2,3-cd]pyrene		270	J	1.7	1600
Isophorone		ND		62	1600
Naphthalene		610	J	3.9	1600
Nitrobenzene		ND		10	1600
N-Nitrosodi-n-propylamine		ND		30	1600
N-Nitrosodiphenylamine		ND		100	1600
Pentachlorophenol		ND		43	1600
Phenol		ND		35	1600
Phenanthrene		3900		3.5	1600
Pyrene		2600		2.1	1600
3 & 4 Methylphenol		ND		95	1900

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	58		24 - 110
2-Fluorophenol (Surr)	50		24 - 110
2,4,6-Tribromophenol (Surr)	18		10 - 110
Nitrobenzene-d5 (Surr)	49		20 - 110
Phenol-d5 (Surr)	49		26 - 110
Terphenyl-d14 (Surr)	69		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_62-65(20150623)**

Lab Sample ID: 240-52439-8 Date Sampled: 06/23/2015 1225
Client Matrix: Solid Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-188035	Lab File ID:	50708018.D
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1559			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1145			Injection Volume:	1 uL
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	72		30 - 110
2-Fluorophenol (Surr)	64		20 - 110
Nitrobenzene-d5 (Surr)	76		28 - 110
Phenol-d5 (Surr)	57		21 - 110
Terphenyl-d14 (Surr)	77		48 - 110
2,4,6-Tribromophenol (Surr)	79		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_67-70(20150623)**

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid % Moisture: 12.3 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188680	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50710042.D
Dilution:	133.34			Initial Weight/Volume:	30.00 g
Analysis Date:	07/10/2015 1511			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		8900	J	2700	250000
2,2'-oxybis[1-chloropropane]		ND		7200	250000
2,4,5-Trichlorophenol		ND		19000	250000
2,4,6-Trichlorophenol		ND		6800	250000
2,4-Dichlorophenol		ND		15000	250000
2,4-Dimethylphenol		ND		15000	250000
2,4-Dinitrophenol		ND		16000	1200000
2,4-Dinitrotoluene		ND		13000	250000
2,6-Dinitrotoluene		ND		16000	250000
2-Chloronaphthalene		ND		340	250000
2-Chlorophenol		ND		6200	250000
2-Methylnaphthalene		190000	J	380	250000
2-Methylphenol		ND		8400	250000
2-Nitroaniline		ND		6900	1200000
2-Nitrophenol		ND		6300	250000
3,3'-Dichlorobenzidine		ND		14000	1200000
3-Nitroaniline		ND		12000	1200000
4,6-Dinitro-2-methylphenol		ND		7000	1200000
4-Bromophenyl phenyl ether		ND		9900	250000
4-Chloro-3-methylphenol		ND		16000	250000
4-Chloroaniline		ND		13000	250000
4-Chlorophenyl phenyl ether		ND		9900	250000
4-Nitroaniline		ND		20000	1200000
4-Nitrophenol		ND		13000	1200000
Acenaphthene		7700	J	580	250000
Acenaphthylene		ND		270	250000
Acetophenone		ND		7000	250000
Anthracene		4900	J	590	250000
Atrazine		ND		6900	250000
Benzaldehyde		ND		9100	250000
Benzo[a]anthracene		5600	J	480	250000
Benzo[a]pyrene		8700	J	490	250000
Benzo[b]fluoranthene		11000	J	450	250000
Benzo[g,h,i]perylene		7100	J	270	250000
Benzo[k]fluoranthene		ND		520	250000
Bis(2-chloroethoxy)methane		ND		17000	250000
Bis(2-chloroethyl)ether		ND		1500	250000
Bis(2-ethylhexyl) phthalate		33000	J	14000	250000
Butyl benzyl phthalate		ND		7600	250000
Caprolactam		ND		28000	250000
Carbazole		ND		21000	250000
Chrysene		8800	J	840	250000
Dibenz(a,h)anthracene		ND		500	250000
Dibenzofuran		5400	J	500	250000
Diethyl phthalate		ND		12000	250000
Dimethyl phthalate		ND		13000	250000

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_67-70(20150623)

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid % Moisture: 12.3 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188680	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50710042.D
Dilution:	133.34			Initial Weight/Volume:	30.00 g
Analysis Date:	07/10/2015 1511			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		11000	250000
Di-n-octyl phthalate		ND		6000	250000
Fluoranthene		18000	J	420	250000
Fluorene		7500	J	400	250000
Hexachlorobenzene		ND		1600	250000
Hexachlorobutadiene		ND		4300	250000
Hexachlorocyclopentadiene		ND		6200	1200000
Hexachloroethane		ND		6800	250000
Indeno[1,2,3-cd]pyrene		ND		270	250000
Isophorone		ND		9900	250000
Naphthalene		830000		620	250000
Nitrobenzene		ND		1700	250000
N-Nitrosodi-n-propylamine		ND		4800	250000
N-Nitrosodiphenylamine		ND		16000	250000
Pentachlorophenol		ND		6900	250000
Phenol		ND		5500	250000
Phenanthrene		29000	J	550	250000
Pyrene		14000	J	330	250000
3 & 4 Methylphenol		ND		15000	300000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	0	X	24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	0	X	36 - 110

Client Sample ID: **ASB-1007_67-70(20150623)**

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-188035	Lab File ID:	50708019.D
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1623			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1145			Injection Volume:	1 uL
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		0.085		0.00017	0.0040
3 & 4 Methylphenol		0.18		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	67		30 - 110
2-Fluorophenol (Surr)	66		20 - 110
Nitrobenzene-d5 (Surr)	72		28 - 110
Phenol-d5 (Surr)	56		21 - 110
Terphenyl-d14 (Surr)	68		48 - 110
2,4,6-Tribromophenol (Surr)	86		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_75-77(20150623)**

Lab Sample ID: 240-52439-10 Date Sampled: 06/23/2015 1330
Client Matrix: Solid % Moisture: 9.5 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50709010.D
Dilution:	1.0			Initial Weight/Volume:	29.95 g
Analysis Date:	07/09/2015 1217			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		3.9	370
2,2'-oxybis[1-chloropropane]		ND		11	370
2,4,5-Trichlorophenol		ND		28	370
2,4,6-Trichlorophenol		ND		9.8	370
2,4-Dichlorophenol		ND		22	370
2,4-Dimethylphenol		ND		22	370
2,4-Dinitrophenol		ND		23	1800
2,4-Dinitrotoluene		ND		19	370
2,6-Dinitrotoluene		ND		23	370
2-Chloronaphthalene		ND		0.50	370
2-Chlorophenol		ND		9.1	370
2-Methylnaphthalene		ND		0.55	370
2-Methylphenol		ND		12	370
2-Nitroaniline		ND		10	1800
2-Nitrophenol		ND		9.2	370
3,3'-Dichlorobenzidine		ND		20	1800
3-Nitroaniline		ND		18	1800
4,6-Dinitro-2-methylphenol		ND		10	1800
4-Bromophenyl phenyl ether		ND		14	370
4-Chloro-3-methylphenol		ND		23	370
4-Chloroaniline		ND		19	370
4-Chlorophenyl phenyl ether		ND		14	370
4-Nitroaniline		ND		29	1800
4-Nitrophenol		ND		19	1800
Acenaphthene		ND		0.84	370
Acenaphthylene		ND		0.39	370
Acetophenone		ND		10	370
Anthracene		ND		0.86	370
Atrazine		ND		10	370
Benzaldehyde		ND		13	370
Benzo[a]anthracene		6.0	J	0.70	370
Benzo[a]pyrene		11	J	0.71	370
Benzo[b]fluoranthene		11	J	0.65	370
Benzo[g,h,i]perylene		ND		0.39	370
Benzo[k]fluoranthene		ND		0.75	370
Bis(2-chloroethoxy)methane		ND		24	370
Bis(2-chloroethyl)ether		ND		2.2	370
Bis(2-ethylhexyl) phthalate		35	J	21	370
Butyl benzyl phthalate		ND		11	370
Caprolactam		ND		41	370
Carbazole		ND		30	370
Chrysene		6.0	J	1.2	370
Dibenz(a,h)anthracene		ND		0.73	370
Dibenzofuran		ND		0.73	370
Diethyl phthalate		ND		18	370
Dimethyl phthalate		ND		19	370

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_75-77(20150623)

Lab Sample ID: 240-52439-10 Date Sampled: 06/23/2015 1330
Client Matrix: Solid % Moisture: 9.5 Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-187404	Lab File ID:	50709010.D
Dilution:	1.0			Initial Weight/Volume:	29.95 g
Analysis Date:	07/09/2015 1217			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		17	J	17	370
Di-n-octyl phthalate		ND		8.7	370
Fluoranthene		13	J	0.61	370
Fluorene		ND		0.59	370
Hexachlorobenzene		ND		2.3	370
Hexachlorobutadiene		ND		6.2	370
Hexachlorocyclopentadiene		ND		9.0	1800
Hexachloroethane		ND		10	370
Indeno[1,2,3-cd]pyrene		ND		0.39	370
Isophorone		ND		14	370
Naphthalene		4.9	J	0.91	370
Nitrobenzene		ND		2.4	370
N-Nitrosodi-n-propylamine		ND		7.0	370
N-Nitrosodiphenylamine		ND		23	370
Pentachlorophenol		ND		10	370
Phenol		ND		8.1	370
Phenanthrene		13	J	0.81	370
Pyrene		9.5	J	0.49	370
3 & 4 Methylphenol		ND		22	440

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		24 - 110
2-Fluorophenol (Surr)	67		24 - 110
2,4,6-Tribromophenol (Surr)	47		10 - 110
Nitrobenzene-d5 (Surr)	68		20 - 110
Phenol-d5 (Surr)	69		26 - 110
Terphenyl-d14 (Surr)	85		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_75-77(20150623)**

Lab Sample ID: 240-52439-10 Date Sampled: 06/23/2015 1330
Client Matrix: Solid Date Received: 06/24/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-188035	Lab File ID:	50708020.D
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1648			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1145			Injection Volume:	1 uL
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	66		30 - 110
2-Fluorophenol (Surr)	60		20 - 110
Nitrobenzene-d5 (Surr)	73		28 - 110
Phenol-d5 (Surr)	52		21 - 110
Terphenyl-d14 (Surr)	71		48 - 110
2,4,6-Tribromophenol (Surr)	77		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1006_39-42(20150622)

Lab Sample ID: 240-52439-1 Date Sampled: 06/22/2015 1510
Client Matrix: Solid % Moisture: 11.8 Date Received: 06/24/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186852	Lab File ID:	Y0062611.D
Dilution:	1.0			Initial Weight/Volume:	11.076 g
Analysis Date:	06/26/2015 1254			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		1.0	5.1

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_52-54(20150622)**

Lab Sample ID: 240-52439-2 Date Sampled: 06/22/2015 1545
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/24/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186852	Lab File ID:	Y0062612.D
Dilution:	1.0			Initial Weight/Volume:	6.559 g
Analysis Date:	06/26/2015 1328			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		2.4	J	1.9	9.4

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_57-60(20150622)**

Lab Sample ID: 240-52439-3 Date Sampled: 06/22/2015 1610
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/24/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186852	Lab File ID:	Y0062613.D
Dilution:	1.0			Initial Weight/Volume:	8.6734 g
Analysis Date:	06/26/2015 1404			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		14		1.3	6.5

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_65-67(20150622)**

Lab Sample ID: 240-52439-4 Date Sampled: 06/22/2015 1650
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/24/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186852	Lab File ID:	Y0062906.D
Dilution:	1.0			Initial Weight/Volume:	9.495 g
Analysis Date:	06/29/2015 0846			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		18		1.3	6.6

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_78-80(20150622)**

Lab Sample ID: 240-52439-5 Date Sampled: 06/22/2015 1710
Client Matrix: Solid % Moisture: 17.9 Date Received: 06/24/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186852	Lab File ID:	Y0062907.D
Dilution:	1.0			Initial Weight/Volume:	8.861 g
Analysis Date:	06/29/2015 0921			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		1.4	6.9

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: ASB-1007_22-25(20150623)

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/24/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186852	Lab File ID:	Y0062908.D
Dilution:	10			Initial Weight/Volume:	10.83 g
Analysis Date:	06/29/2015 0956			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		44	J	10	51

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **MB-01(20150623)**

Lab Sample ID: 240-52439-7 Date Sampled: 06/23/2015 0000
Client Matrix: Solid Date Received: 06/24/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186852	Lab File ID:	Y0062617.D
Dilution:	1.0			Initial Weight/Volume:	0.178 g
Analysis Date:	06/26/2015 1624			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		56	280

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_62-65(20150623)**

Lab Sample ID: 240-52439-8 Date Sampled: 06/23/2015 1225
Client Matrix: Solid % Moisture: 14.5 Date Received: 06/24/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186852	Lab File ID:	Y0062618.D
Dilution:	1.0			Initial Weight/Volume:	9.464 g
Analysis Date:	06/26/2015 1701			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		1.3	J	1.2	6.2

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_67-70(20150623)**

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid % Moisture: 12.3 Date Received: 06/24/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186852	Lab File ID:	Y0062620.D
Dilution:	100			Initial Weight/Volume:	9.481 g
Analysis Date:	06/26/2015 1811			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		8200		120	600

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_75-77(20150623)**

Lab Sample ID: 240-52439-10 Date Sampled: 06/23/2015 1330
Client Matrix: Solid % Moisture: 9.5 Date Received: 06/24/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186852	Lab File ID:	Y0062621.D
Dilution:	1.0			Initial Weight/Volume:	9.319 g
Analysis Date:	06/26/2015 1847			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		2.8	J	1.2	5.9

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **MB-01(20150623)**

Lab Sample ID: 240-52439-11 Date Sampled: 06/23/2015 0000
Client Matrix: Solid Date Received: 06/24/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186852	Lab File ID:	Y0062622.D
Dilution:	1.0			Initial Weight/Volume:	0.062 g
Analysis Date:	06/26/2015 1921			Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		180	J	160	810

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_39-42(20150622)**

Lab Sample ID: 240-52439-1 Date Sampled: 06/22/2015 1510
Client Matrix: Solid % Moisture: 11.8 Date Received: 06/24/2015 0930

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	240-187440	Instrument ID:	A2HP5F
Prep Method:	3540C	Prep Batch:	240-187228	Initial Weight/Volume:	30.29 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/30/2015 1659			Injection Volume:	1 uL
Prep Date:	06/29/2015 1140			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel Range Organics [C10 - C28]		9.4	J	7.2	19

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl (Surr)	75		40 - 160

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_52-54(20150622)**

Lab Sample ID: 240-52439-2 Date Sampled: 06/22/2015 1545
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/24/2015 0930

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	240-188024	Instrument ID:	A2HP5F
Prep Method:	3540C	Prep Batch:	240-187825	Initial Weight/Volume:	30.35 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	07/06/2015 1701			Injection Volume:	1 uL
Prep Date:	07/02/2015 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel Range Organics [C10 - C28]		ND		7.8	20

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl (Surr)	71		40 - 160

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_57-60(20150622)**

Lab Sample ID: 240-52439-3 Date Sampled: 06/22/2015 1610
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/24/2015 0930

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	240-188024	Instrument ID:	A2HP5F
Prep Method:	3540C	Prep Batch:	240-187825	Initial Weight/Volume:	30.37 g
Dilution:	10			Final Weight/Volume:	5 mL
Analysis Date:	07/06/2015 1732			Injection Volume:	1 uL
Prep Date:	07/02/2015 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel Range Organics [C10 - C28]		660		71	190

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl (Surr)	74		40 - 160

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_62-65(20150623)**

Lab Sample ID: 240-52439-8 Date Sampled: 06/23/2015 1225
Client Matrix: Solid % Moisture: 14.5 Date Received: 06/24/2015 0930

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	240-188024	Instrument ID:	A2HP5F
Prep Method:	3540C	Prep Batch:	240-187825	Initial Weight/Volume:	30.14 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	07/06/2015 1804			Injection Volume:	1 uL
Prep Date:	07/02/2015 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel Range Organics [C10 - C28]		39		7.4	19

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl (Surr)	72		40 - 160

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_65-67(20150622)**

Lab Sample ID: 240-52439-4 Date Sampled: 06/22/2015 1650
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/24/2015 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187397	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R063008.D
Dilution:	2.0			Initial Weight/Volume:	25.65 g
Analysis Date:	06/30/2015 1343			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		190		2.9	23

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_78-80(20150622)**

Lab Sample ID: 240-52439-5 Date Sampled: 06/22/2015 1710
Client Matrix: Solid % Moisture: 17.9 Date Received: 06/24/2015 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R062911.D
Dilution:	1.0			Initial Weight/Volume:	26.36 g
Analysis Date:	06/29/2015 1813			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		16		1.4	11

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_22-25(20150623)**

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/24/2015 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187397	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R063009.D
Dilution:	100			Initial Weight/Volume:	26.63 g
Analysis Date:	06/30/2015 1410			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		4200		120	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_67-70(20150623)**

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid % Moisture: 12.3 Date Received: 06/24/2015 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187397	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R063010.D
Dilution:	200			Initial Weight/Volume:	26.91 g
Analysis Date:	06/30/2015 1438			Final Weight/Volume:	14 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		37000		700	5700

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_75-77(20150623)**

Lab Sample ID: 240-52439-10 Date Sampled: 06/23/2015 1330
Client Matrix: Solid % Moisture: 9.5 Date Received: 06/24/2015 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187397	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R063011.D
Dilution:	100			Initial Weight/Volume:	26.88 g
Analysis Date:	06/30/2015 1505			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		4100		120	990

Client Sample ID: **ASB-1006_39-42(20150622)**

Lab Sample ID: 240-52439-1 Date Sampled: 06/22/2015 1510
Client Matrix: Solid % Moisture: 11.8 Date Received: 06/24/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187203	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186969	Lab File ID:	I9062915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Analysis Date:	06/29/2015 1558			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1149				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5000		6.1	21
Antimony		ND	F1	0.51	1.1
Barium		71	B	0.43	21
Beryllium		0.30	J	0.028	0.53
Calcium		13000	F1	24	530
Cadmium		0.096	J	0.022	0.21
Cobalt		7.0		0.050	5.3
Chromium		13		0.080	0.53
Copper		12	F2 F1	0.24	2.7
Iron		12000		3.4	11
Potassium		1300		6.6	530
Magnesium		4600		5.5	530
Manganese		340		0.089	1.6
Silver		ND		0.067	0.53
Sodium		90	J	20	530
Nickel		16		0.085	4.2
Vanadium		14		0.21	5.3
Zinc		24		0.59	2.1
Arsenic		4.1		0.43	1.1
Lead		6.8		0.21	0.32
Selenium		ND		0.36	0.53
Thallium		ND		0.14	1.1

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1318			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0054	J B	0.0029	0.50
Barium		0.45	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00056	J	0.00014	0.10
Calcium		420		0.26	5.0
Chromium		0.0030	J B	0.00055	0.50
Cobalt		0.055		0.00056	0.050
Copper		ND		0.0019	1.0
Iron		0.098	J	0.013	0.10
Lead		ND		0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_39-42(20150622)**

Lab Sample ID: 240-52439-1 Date Sampled: 06/22/2015 1510
Client Matrix: Solid Date Received: 06/24/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		57		0.055	5.0
Manganese		5.4	B	0.00046	0.015
Nickel		0.057	B	0.00076	0.040
Potassium		14	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.12	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187645	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1201			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.69 g
Analysis Date:	06/30/2015 0956			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.014	J	0.014	0.099

Client Sample ID: **ASB-1006_52-54(20150622)**

Lab Sample ID: 240-52439-2 Date Sampled: 06/22/2015 1545
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/24/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187203	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186969	Lab File ID:	I9062915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.21 g
Analysis Date:	06/29/2015 1617			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1149				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		8900		5.9	20
Antimony		ND		0.49	1.0
Barium		21	B	0.42	20
Beryllium		0.58		0.026	0.51
Calcium		7900		23	510
Cadmium		ND		0.021	0.20
Cobalt		12		0.048	5.1
Chromium		15		0.076	0.51
Copper		14		0.23	2.5
Iron		13000		3.2	10
Potassium		4900		6.3	510
Magnesium		5400		5.3	510
Manganese		160		0.085	1.5
Silver		ND		0.064	0.51
Sodium		82	J	19	510
Nickel		22		0.081	4.1
Vanadium		6.2		0.20	5.1
Zinc		29		0.57	2.0
Arsenic		4.9		0.42	1.0
Lead		2.7		0.20	0.30
Selenium		ND		0.34	0.51
Thallium		ND		0.13	1.0

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1322			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0083	J B	0.0029	0.50
Barium		0.20	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00073	J	0.00014	0.10
Calcium		290		0.26	5.0
Chromium		0.0032	J B	0.00055	0.50
Cobalt		0.074		0.00056	0.050
Copper		0.0021	J	0.0019	1.0
Iron		0.38		0.013	0.10
Lead		0.14	J	0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_52-54(20150622)**

Lab Sample ID: 240-52439-2 Date Sampled: 06/22/2015 1545
Client Matrix: Solid Date Received: 06/24/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		76		0.055	5.0
Manganese		3.3	B	0.00046	0.015
Nickel		0.081	B	0.00076	0.040
Potassium		12	B	0.070	5.0
Selenium		0.0042	J	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.18	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187645	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1203			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 1036			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.017	0.12

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_57-60(20150622)**

Lab Sample ID: 240-52439-3 Date Sampled: 06/22/2015 1610
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/24/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187203	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186969	Lab File ID:	I9062915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.33 g
Analysis Date:	06/29/2015 1621			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1149				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5800		4.9	17
Antimony		1.5		0.40	0.84
Barium		56	B	0.35	17
Beryllium		0.32	J	0.022	0.42
Calcium		20000		19	420
Cadmium		0.13	J	0.018	0.17
Cobalt		9.1		0.040	4.2
Chromium		13		0.063	0.42
Copper		12		0.19	2.1
Iron		13000		2.7	8.4
Potassium		1800		5.2	420
Magnesium		4400		4.4	420
Manganese		430		0.071	1.3
Silver		ND		0.053	0.42
Sodium		91	J	16	420
Nickel		18		0.067	3.4
Vanadium		15		0.17	4.2
Zinc		44		0.47	1.7
Arsenic		3.6		0.35	0.84
Lead		80		0.17	0.25
Selenium		ND		0.29	0.42
Thallium		ND		0.11	0.84

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1327			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.0060	J	0.0024	0.30
Arsenic		0.011	J B	0.0029	0.50
Barium		0.95	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0012	J	0.00014	0.10
Calcium		470		0.26	5.0
Chromium		0.0029	J B	0.00055	0.50
Cobalt		0.032	J	0.00056	0.050
Copper		ND		0.0019	1.0
Iron		0.060	J	0.013	0.10
Lead		0.084	J	0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_57-60(20150622)**

Lab Sample ID: 240-52439-3 Date Sampled: 06/22/2015 1610
Client Matrix: Solid Date Received: 06/24/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		20		0.055	5.0
Manganese		4.8	B	0.00046	0.015
Nickel		0.049	B	0.00076	0.040
Potassium		12	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.18	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187645	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1205			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.67 g
Analysis Date:	06/30/2015 1035			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.027	J	0.014	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_65-67(20150622)**

Lab Sample ID: 240-52439-4 Date Sampled: 06/22/2015 1650
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/24/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187203	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186969	Lab File ID:	I9062915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	06/29/2015 1626			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1149				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		2500		6.5	22
Antimony		ND		0.54	1.1
Barium		72	B	0.46	22
Beryllium		0.14	J	0.029	0.56
Calcium		11000		26	560
Cadmium		1.4		0.024	0.22
Cobalt		4.1	J	0.053	5.6
Chromium		12		0.084	0.56
Copper		14		0.26	2.8
Iron		8000		3.6	11
Potassium		360	J	7.0	560
Magnesium		3500		5.8	560
Manganese		270		0.094	1.7
Silver		1.5		0.071	0.56
Sodium		99	J	21	560
Nickel		10		0.090	4.5
Vanadium		13		0.22	5.6
Zinc		49		0.63	2.2
Arsenic		3.7		0.46	1.1
Lead		48		0.22	0.34
Selenium		ND		0.38	0.56
Thallium		ND		0.15	1.1

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1331			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.012	J B	0.0029	0.50
Barium		0.64	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.024	J	0.00014	0.10
Calcium		250		0.26	5.0
Chromium		0.0038	J B	0.00055	0.50
Cobalt		0.016	J	0.00056	0.050
Copper		0.0041	J	0.0019	1.0
Iron		0.17		0.013	0.10
Lead		0.033	J	0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_65-67(20150622)**

Lab Sample ID: 240-52439-4 Date Sampled: 06/22/2015 1650
Client Matrix: Solid Date Received: 06/24/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		27		0.055	5.0
Manganese		4.6	B	0.00046	0.015
Nickel		0.036	J B	0.00076	0.040
Potassium		2.7	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.33	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187645	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1206			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	06/30/2015 1014			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.25		0.016	0.11

Client Sample ID: **ASB-1006_78-80(20150622)**

Lab Sample ID: 240-52439-5 Date Sampled: 06/22/2015 1710
Client Matrix: Solid % Moisture: 17.9 Date Received: 06/24/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187203	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186969	Lab File ID:	I9062915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.20 g
Analysis Date:	06/29/2015 1638			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1149				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		2600		5.9	20
Antimony		ND		0.49	1.0
Barium		34	B	0.42	20
Beryllium		0.11	J	0.026	0.51
Calcium		5400		23	510
Cadmium		0.040	J	0.021	0.20
Cobalt		3.2	J	0.048	5.1
Chromium		8.5		0.076	0.51
Copper		4.5		0.23	2.5
Iron		7400		3.2	10
Potassium		340	J	6.3	510
Magnesium		3300		5.3	510
Manganese		77		0.085	1.5
Silver		ND		0.064	0.51
Sodium		90	J	19	510
Nickel		12		0.081	4.1
Vanadium		13		0.20	5.1
Zinc		21		0.57	2.0
Arsenic		1.3		0.42	1.0
Lead		6.7		0.20	0.30
Selenium		ND		0.34	0.51
Thallium		ND		0.13	1.0

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1336			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0077	J B	0.0029	0.50
Barium		0.33	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00036	J	0.00014	0.10
Calcium		540		0.26	5.0
Chromium		0.0030	J B	0.00055	0.50
Cobalt		0.010	J	0.00056	0.050
Copper		ND		0.0019	1.0
Iron		0.027	J	0.013	0.10
Lead		ND		0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1006_78-80(20150622)**

Lab Sample ID: 240-52439-5 Date Sampled: 06/22/2015 1710
Client Matrix: Solid Date Received: 06/24/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		16		0.055	5.0
Manganese		2.4	B	0.00046	0.015
Nickel		0.025	J B	0.00076	0.040
Potassium		2.7	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.021	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187645	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1211			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	06/30/2015 1020			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.087	J	0.017	0.12

Client Sample ID: **ASB-1007_22-25(20150623)**

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/24/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187203	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186969	Lab File ID:	I9062915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.17 g
Analysis Date:	06/29/2015 1642			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1149				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4500		5.5	19
Antimony		ND		0.45	0.95
Barium		43	B	0.39	19
Beryllium		0.21	J	0.025	0.47
Calcium		20000		22	470
Cadmium		0.15	J	0.020	0.19
Cobalt		3.6	J	0.044	4.7
Chromium		9.1		0.071	0.47
Copper		9.0		0.22	2.4
Iron		7800		3.0	9.5
Potassium		500		5.9	470
Magnesium		4400		4.9	470
Manganese		250		0.079	1.4
Silver		0.081	J	0.060	0.47
Sodium		220	J	18	470
Nickel		10		0.076	3.8
Vanadium		14		0.19	4.7
Zinc		33		0.53	1.9
Arsenic		2.2		0.39	0.95
Lead		33		0.19	0.28
Selenium		0.39	J	0.32	0.47
Thallium		ND		0.12	0.95

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1348			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.011	J B	0.0029	0.50
Barium		0.57	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00055	J	0.00014	0.10
Calcium		570		0.26	5.0
Chromium		0.0037	J B	0.00055	0.50
Cobalt		0.013	J	0.00056	0.050
Copper		ND		0.0019	1.0
Iron		0.10		0.013	0.10
Lead		0.0026	J	0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_22-25(20150623)**

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid Date Received: 06/24/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		10		0.055	5.0
Manganese		4.3	B	0.00046	0.015
Nickel		0.026	J B	0.00076	0.040
Potassium		5.8	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.034	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187645	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1213			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.51 g
Analysis Date:	06/30/2015 1012			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.018	0.13

Client Sample ID: **ASB-1007_62-65(20150623)**

Lab Sample ID: 240-52439-8 Date Sampled: 06/23/2015 1225
Client Matrix: Solid % Moisture: 14.5 Date Received: 06/24/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187203	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186969	Lab File ID:	I9062915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.44 g
Analysis Date:	06/29/2015 1646			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1149				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5700		4.7	16
Antimony		ND		0.39	0.81
Barium		45	B	0.33	16
Beryllium		0.43		0.021	0.41
Calcium		17000		19	410
Cadmium		0.12	J	0.017	0.16
Cobalt		10		0.038	4.1
Chromium		15		0.061	0.41
Copper		14		0.19	2.0
Iron		21000		2.6	8.1
Potassium		2400		5.0	410
Magnesium		6000		4.2	410
Manganese		310		0.068	1.2
Silver		ND		0.051	0.41
Sodium		100	J	15	410
Nickel		20		0.065	3.2
Vanadium		10		0.16	4.1
Zinc		28		0.45	1.6
Arsenic		5.2		0.33	0.81
Lead		14		0.16	0.24
Selenium		0.28	J	0.28	0.41
Thallium		ND		0.11	0.81

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1353			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.011	J B	0.0029	0.50
Barium		0.66	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00038	J	0.00014	0.10
Calcium		610		0.26	5.0
Chromium		0.0031	J B	0.00055	0.50
Cobalt		0.023	J	0.00056	0.050
Copper		ND		0.0019	1.0
Iron		0.022	J	0.013	0.10
Lead		ND		0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_62-65(20150623)**

Lab Sample ID: 240-52439-8 Date Sampled: 06/23/2015 1225
Client Matrix: Solid Date Received: 06/24/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		24		0.055	5.0
Manganese		2.6	B	0.00046	0.015
Nickel		0.050	B	0.00076	0.040
Potassium		8.4	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.015	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187645	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1215			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	06/30/2015 1022			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.021	J	0.015	0.11

Client Sample ID: **ASB-1007_67-70(20150623)**

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid % Moisture: 12.3 Date Received: 06/24/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187203	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186969	Lab File ID:	I9062915A.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Analysis Date:	06/29/2015 1650			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1149				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		2000		6.2	21
Antimony		510		0.51	1.1
Beryllium		0.058	J	0.028	0.53
Calcium		14000		25	530
Cadmium		150		0.022	0.21
Cobalt		35		0.050	5.3
Chromium		430		0.080	0.53
Copper		230		0.25	2.7
Iron		18000		3.4	11
Potassium		370	J	6.6	530
Magnesium		2700		5.5	530
Manganese		200		0.089	1.6
Silver		0.68		0.067	0.53
Sodium		1000		20	530
Nickel		32		0.085	4.3
Vanadium		5.6		0.21	5.3
Arsenic		18		0.44	1.1
Selenium		34		0.36	0.53
Thallium		ND		0.14	1.1

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186969	Lab File ID:	I9063015A.asc
Dilution:	10			Initial Weight/Volume:	1.07 g
Analysis Date:	06/30/2015 0649			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1149				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Barium		6900	B	4.4	210
Zinc		5300		6.0	21
Lead		6500		2.1	3.2

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1357			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		0.075	J	0.040	0.20
Antimony		0.45		0.0024	0.30

Client Sample ID: **ASB-1007_67-70(20150623)**

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid Date Received: 06/24/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.014	J B	0.0029	0.50
Barium		0.68	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.044	J	0.00014	0.10
Calcium		160		0.26	5.0
Chromium		0.0047	J B	0.00055	0.50
Cobalt		0.28		0.00056	0.050
Copper		0.0078	J	0.0019	1.0
Iron		13		0.013	0.10
Magnesium		5.3		0.055	5.0
Manganese		1.0	B	0.00046	0.015
Nickel		0.071	B	0.00076	0.040
Potassium		4.0	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		0.0029	J B	0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-187814	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187383	Lab File ID:	I9070215A.asc
Dilution:	5.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 1254			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Lead		32		0.0095	2.5
Zinc		11		0.048	5.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187645	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1217			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	06/30/2015 1004			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_67-70(20150623)**

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid % Moisture: 12.3 Date Received: 06/24/2015 0930

7471A Mercury (CVAA)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.36		0.017	0.12

Client Sample ID: **ASB-1007_75-77(20150623)**

Lab Sample ID: 240-52439-10 Date Sampled: 06/23/2015 1330
Client Matrix: Solid % Moisture: 9.5 Date Received: 06/24/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.24 g
Analysis Date:	06/30/2015 0909			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		1400		5.2	18
Antimony		ND		0.43	0.89
Barium		14	J B	0.37	18
Beryllium		0.075	J	0.023	0.45
Calcium		2500		20	450
Cadmium		ND		0.019	0.18
Cobalt		1.8	J	0.042	4.5
Chromium		4.8		0.067	0.45
Copper		1.8	J	0.20	2.2
Iron		4900		2.9	8.9
Potassium		170	J	5.5	450
Magnesium		1600		4.6	450
Manganese		61	B	0.075	1.3
Silver		ND		0.056	0.45
Sodium		75	J	17	450
Nickel		4.1	B	0.071	3.6
Vanadium		8.5	B	0.18	4.5
Zinc		7.8		0.50	1.8
Arsenic		1.0		0.37	0.89
Lead		1.5		0.18	0.27
Selenium		ND		0.30	0.45
Thallium		ND		0.12	0.89

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187549	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1401			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0089	J B	0.0029	0.50
Barium		0.31	J B	0.0010	10
Beryllium		0.00021	J	0.00013	0.0050
Cadmium		0.00046	J	0.00014	0.10
Calcium		83		0.26	5.0
Chromium		0.0021	J B	0.00055	0.50
Cobalt		0.014	J	0.00056	0.050
Copper		ND		0.0019	1.0
Iron		6.4		0.013	0.10
Lead		0.021	J	0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Client Sample ID: **ASB-1007_75-77(20150623)**

Lab Sample ID: 240-52439-10 Date Sampled: 06/23/2015 1330
Client Matrix: Solid Date Received: 06/24/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		40		0.055	5.0
Manganese		1.4	B	0.00046	0.015
Nickel		0.024	J B	0.00076	0.040
Potassium		2.5	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		0.0024	J B	0.0024	0.050
Zinc		0.030	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187645	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1218			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	06/30/2015 0947			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.015	0.11

General Chemistry

Client Sample ID: **ASB-1006_39-42(20150622)**

Lab Sample ID: 240-52439-1 Date Sampled: 06/22/2015 1510
Client Matrix: Solid % Moisture: 11.8 Date Received: 06/24/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	1.5	4.5	5.0	7196A
Analysis Batch: 240-187854	Analysis Date: 07/02/2015 1451						DryWt Corrected: Y
Prep Batch: 240-187654	Prep Date: 07/01/2015 1414						
Cr (III)	13		mg/Kg	0.15	2.3	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814						DryWt Corrected: Y
Percent Solids	88		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N
Percent Moisture	12		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1006_52-54(20150622)**

Lab Sample ID: 240-52439-2 Date Sampled: 06/22/2015 1545
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/24/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.33	0.98	1.0	7196A
Analysis Batch: 240-187854	Analysis Date: 07/02/2015 1359						DryWt Corrected: Y
Prep Batch: 240-187654	Prep Date: 07/01/2015 1414						
Cr (III)	15		mg/Kg	0.16	2.5	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814						DryWt Corrected: Y
Percent Solids	81		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N
Percent Moisture	19		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1006_57-60(20150622)**

Lab Sample ID: 240-52439-3 Date Sampled: 06/22/2015 1610
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/24/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.33	J	mg/Kg	0.30	0.90	1.0	7196A
Analysis Batch: 240-187854	Analysis Date: 07/02/2015 1402						DryWt Corrected: Y
Prep Batch: 240-187654	Prep Date: 07/01/2015 1414						
Cr (III)	12		mg/Kg	0.15	2.2	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814						DryWt Corrected: Y
Percent Solids	89		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N
Percent Moisture	11		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1006_65-67(20150622)**

Lab Sample ID: 240-52439-4 Date Sampled: 06/22/2015 1650
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/24/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	1.7	5.0	5.0	7196A
Analysis Batch: 240-187854	Analysis Date: 07/02/2015 1451					DryWt Corrected: Y	
Prep Batch: 240-187654	Prep Date: 07/01/2015 1414						
Cr (III)	12		mg/Kg	0.16	2.5	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814					DryWt Corrected: Y	
Percent Solids	80		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548					DryWt Corrected: N	
Percent Moisture	20		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548					DryWt Corrected: N	

General Chemistry

Client Sample ID: **ASB-1006_78-80(20150622)**

Lab Sample ID: 240-52439-5 Date Sampled: 06/22/2015 1710
Client Matrix: Solid % Moisture: 17.9 Date Received: 06/24/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.33	0.97	1.0	7196A
Analysis Batch: 240-187854	Analysis Date: 07/02/2015 1408						DryWt Corrected: Y
Prep Batch: 240-187654	Prep Date: 07/01/2015 1414						
Cr (III)	8.5		mg/Kg	0.16	2.4	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814						DryWt Corrected: Y
Percent Solids	82		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N
Percent Moisture	18		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1007_22-25(20150623)**

Lab Sample ID: 240-52439-6 Date Sampled: 06/23/2015 1110
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/24/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.30	0.89	1.0	7196A
Analysis Batch: 240-187854	Analysis Date: 07/02/2015 1412						DryWt Corrected: Y
Prep Batch: 240-187654	Prep Date: 07/01/2015 1414						
Cr (III)	9.1		mg/Kg	0.14	2.2	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814						DryWt Corrected: Y
Percent Solids	90		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N
Percent Moisture	9.7		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1007_62-65(20150623)**

Lab Sample ID: 240-52439-8 Date Sampled: 06/23/2015 1225
Client Matrix: Solid % Moisture: 14.5 Date Received: 06/24/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.32	0.94	1.0	7196A
Analysis Batch: 240-187854	Analysis Date: 07/02/2015 1416						DryWt Corrected: Y
Prep Batch: 240-187654	Prep Date: 07/01/2015 1414						
Cr (III)	15		mg/Kg	0.15	2.3	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814						DryWt Corrected: Y
Percent Solids	86		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N
Percent Moisture	14		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1007_67-70(20150623)**

Lab Sample ID: 240-52439-9 Date Sampled: 06/23/2015 1300
Client Matrix: Solid % Moisture: 12.3 Date Received: 06/24/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	3.1	9.1	10	7196A
Analysis Batch: 240-187854	Analysis Date: 07/02/2015 1452						DryWt Corrected: Y
Prep Batch: 240-187654	Prep Date: 07/01/2015 1414						
Cr (III)	430		mg/Kg	0.15	2.3	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814						DryWt Corrected: Y
Percent Solids	88		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N
Percent Moisture	12		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1007_75-77(20150623)**

Lab Sample ID: 240-52439-10 Date Sampled: 06/23/2015 1330
Client Matrix: Solid % Moisture: 9.5 Date Received: 06/24/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.75	J	mg/Kg	0.30	0.88	1.0	7196A
Analysis Batch: 240-187854	Analysis Date: 07/02/2015 1421						DryWt Corrected: Y
Prep Batch: 240-187654	Prep Date: 07/01/2015 1414						
Cr (III)	4.1		mg/Kg	0.14	2.2	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814						DryWt Corrected: Y
Percent Solids	91		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N
Percent Moisture	9.5		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186724	Analysis Date: 06/25/2015 1548						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Section	Qualifier	Description
GC/MS VOA		
	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC/MS Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Section	Qualifier	Description
General Chemistry		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-186967					
LCS 240-186967/2-A	Lab Control Sample	T	Solid	5035	
MB 240-186967/1-A	Method Blank	T	Solid	5035	
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	5035	
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	5035	
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	5035	
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	5035	
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	5035	
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	5035	
240-52439-7	MB-01(20150623)	T	Solid	5035	
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	5035	
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	5035	
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	5035	
240-52439-11	MB-01(20150623)	T	Solid	5035	
Analysis Batch:240-187197					
LCS 240-186967/2-A	Lab Control Sample	T	Solid	8260B	240-186967
MB 240-186967/1-A	Method Blank	T	Solid	8260B	240-186967
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	8260B	240-186967
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	8260B	240-186967
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	8260B	240-186967
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	8260B	240-186967
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	8260B	240-186967
240-52439-7	MB-01(20150623)	T	Solid	8260B	240-186967
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	8260B	240-186967
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	8260B	240-186967
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	8260B	240-186967
240-52439-11	MB-01(20150623)	T	Solid	8260B	240-186967
Prep Batch: 240-187311					
LB 240-187311/1-A	Method Blank	P	Solid	1311	
240-52439-1	ASB-1006_39-42(20150622)	P	Solid	1311	
240-52439-2	ASB-1006_52-54(20150622)	P	Solid	1311	
240-52439-3	ASB-1006_57-60(20150622)	P	Solid	1311	
240-52439-4	ASB-1006_65-67(20150622)	P	Solid	1311	
240-52439-5	ASB-1006_78-80(20150622)	P	Solid	1311	
240-52439-6	ASB-1007_22-25(20150623)	P	Solid	1311	
240-52439-8	ASB-1007_62-65(20150623)	P	Solid	1311	
240-52439-9	ASB-1007_67-70(20150623)	P	Solid	1311	
240-52439-10	ASB-1007_75-77(20150623)	P	Solid	1311	
240-52461-A-2-A MS	Matrix Spike	P	Solid	1311	
240-52461-A-2-A MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-187454					
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	8260B	240-186967

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-187636					
LB 240-187311/1-A	Method Blank	P	Solid	8260B	
240-52439-1	ASB-1006_39-42(20150622)	P	Solid	8260B	
240-52439-2	ASB-1006_52-54(20150622)	P	Solid	8260B	
240-52439-3	ASB-1006_57-60(20150622)	P	Solid	8260B	
240-52439-4	ASB-1006_65-67(20150622)	P	Solid	8260B	
240-52439-5	ASB-1006_78-80(20150622)	P	Solid	8260B	
240-52439-6	ASB-1007_22-25(20150623)	P	Solid	8260B	
240-52439-8	ASB-1007_62-65(20150623)	P	Solid	8260B	
240-52439-9	ASB-1007_67-70(20150623)	P	Solid	8260B	
240-52439-10	ASB-1007_75-77(20150623)	P	Solid	8260B	
240-52461-A-2-A MS	Matrix Spike	P	Solid	8260B	
240-52461-A-2-A MSD	Matrix Spike Duplicate	P	Solid	8260B	
Analysis Batch:240-187770					
LCS 240-187770/4	Lab Control Sample	T	Water	8260B	

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-187199					
LCS 240-187199/24-A	Lab Control Sample	T	Solid	3540C	
MB 240-187199/23-A	Method Blank	T	Solid	3540C	
240-52391-C-49-D MS	Matrix Spike	T	Solid	3540C	
240-52391-C-49-E MSD	Matrix Spike Duplicate	T	Solid	3540C	
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	3540C	
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	3540C	
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	3540C	
Prep Batch: 240-187303					
240-52439-1	ASB-1006_39-42(20150622)	P	Solid	1311	
240-52439-2	ASB-1006_52-54(20150622)	P	Solid	1311	
240-52439-3	ASB-1006_57-60(20150622)	P	Solid	1311	
240-52439-4	ASB-1006_65-67(20150622)	P	Solid	1311	
240-52439-5	ASB-1006_78-80(20150622)	P	Solid	1311	
240-52439-6	ASB-1007_22-25(20150623)	P	Solid	1311	
240-52439-8	ASB-1007_62-65(20150623)	P	Solid	1311	
240-52439-9	ASB-1007_67-70(20150623)	P	Solid	1311	
240-52439-10	ASB-1007_75-77(20150623)	P	Solid	1311	
Prep Batch: 240-187404					
LCS 240-187404/24-A	Lab Control Sample	T	Solid	3540C	
MB 240-187404/23-A	Method Blank	T	Solid	3540C	
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	3540C	
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	3540C	
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	3540C	
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	3540C	
240-52439-6RA	ASB-1007_22-25(20150623)	T	Solid	3540C	
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	3540C	
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	3540C	
240-52442-M-3-D MS	Matrix Spike	T	Solid	3540C	
240-52442-M-3-E MSD	Matrix Spike Duplicate	T	Solid	3540C	
Analysis Batch:240-187535					
LCS 240-187199/24-A	Lab Control Sample	T	Solid	8270C	240-187199
MB 240-187199/23-A	Method Blank	T	Solid	8270C	240-187199
240-52391-C-49-D MS	Matrix Spike	T	Solid	8270C	240-187199
240-52391-C-49-E MSD	Matrix Spike Duplicate	T	Solid	8270C	240-187199
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	8270C	240-187199
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	8270C	240-187199
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	8270C	240-187199

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-188035					
LCS 240-188035/19-A	Lab Control Sample	T	Water	3510C	
MB 240-188035/18-A	Method Blank	T	Water	3510C	
240-52439-1	ASB-1006_39-42(20150622)	P	Solid	3510C	240-187303
240-52439-2	ASB-1006_52-54(20150622)	P	Solid	3510C	240-187303
240-52439-3	ASB-1006_57-60(20150622)	P	Solid	3510C	240-187303
240-52439-4	ASB-1006_65-67(20150622)	P	Solid	3510C	240-187303
240-52439-5	ASB-1006_78-80(20150622)	P	Solid	3510C	240-187303
240-52439-6	ASB-1007_22-25(20150623)	P	Solid	3510C	240-187303
240-52439-8	ASB-1007_62-65(20150623)	P	Solid	3510C	240-187303
240-52439-9	ASB-1007_67-70(20150623)	P	Solid	3510C	240-187303
240-52439-10	ASB-1007_75-77(20150623)	P	Solid	3510C	240-187303
Analysis Batch:240-188311					
LCS 240-188035/19-A	Lab Control Sample	T	Water	8270C	240-188035
MB 240-188035/18-A	Method Blank	T	Water	8270C	240-188035
240-52439-1	ASB-1006_39-42(20150622)	P	Solid	8270C	240-188035
240-52439-2	ASB-1006_52-54(20150622)	P	Solid	8270C	240-188035
240-52439-3	ASB-1006_57-60(20150622)	P	Solid	8270C	240-188035
240-52439-4	ASB-1006_65-67(20150622)	P	Solid	8270C	240-188035
240-52439-5	ASB-1006_78-80(20150622)	P	Solid	8270C	240-188035
240-52439-6	ASB-1007_22-25(20150623)	P	Solid	8270C	240-188035
240-52439-8	ASB-1007_62-65(20150623)	P	Solid	8270C	240-188035
240-52439-9	ASB-1007_67-70(20150623)	P	Solid	8270C	240-188035
240-52439-10	ASB-1007_75-77(20150623)	P	Solid	8270C	240-188035
Analysis Batch:240-188479					
LCS 240-187404/24-A	Lab Control Sample	T	Solid	8270C	240-187404
MB 240-187404/23-A	Method Blank	T	Solid	8270C	240-187404
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	8270C	240-187404
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	8270C	240-187404
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	8270C	240-187404
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	8270C	240-187404
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	8270C	240-187404
240-52442-M-3-D MS	Matrix Spike	T	Solid	8270C	240-187404
240-52442-M-3-E MSD	Matrix Spike Duplicate	T	Solid	8270C	240-187404
Analysis Batch:240-188680					
240-52439-6RA	ASB-1007_22-25(20150623)	T	Solid	8270C	240-187404
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	8270C	240-187404

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Prep Batch: 240-186852					
LCS 240-186852/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-186852/14-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-186852/1-A	Method Blank	T	Solid	5035	
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	5035	
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	5035	
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	5035	
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	5035	
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	5035	
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	5035	
240-52439-7	MB-01(20150623)	T	Solid	5035	
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	5035	
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	5035	
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	5035	
240-52439-11	MB-01(20150623)	T	Solid	5035	
Analysis Batch:240-186873					
LCS 240-186852/2-A	Lab Control Sample	T	Solid	WI-GRO	240-186852
LCSD 240-186852/14-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-186852
MB 240-186852/1-A	Method Blank	T	Solid	WI-GRO	240-186852
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	WI-GRO	240-186852
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	WI-GRO	240-186852
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	WI-GRO	240-186852
240-52439-7	MB-01(20150623)	T	Solid	WI-GRO	240-186852
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	WI-GRO	240-186852
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	WI-GRO	240-186852
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	WI-GRO	240-186852
240-52439-11	MB-01(20150623)	T	Solid	WI-GRO	240-186852
Analysis Batch:240-187143					
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	WI-GRO	240-186852
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	WI-GRO	240-186852
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	WI-GRO	240-186852

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-187060					
LCS 240-187060/22-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-187060/23-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-187060/21-A	Method Blank	T	Solid	WI DRO PREP	
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	WI DRO PREP	
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	WI DRO PREP	
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	WI DRO PREP	
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	WI DRO PREP	
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	WI DRO PREP	
Prep Batch: 240-187228					
LCS 240-187228/10-A	Lab Control Sample	T	Solid	3540C	
MB 240-187228/9-A	Method Blank	T	Solid	3540C	
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	3540C	
Analysis Batch:240-187243					
LCS 240-187060/22-A	Lab Control Sample	T	Solid	WI-DRO	240-187060
LCSD 240-187060/23-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-187060
MB 240-187060/21-A	Method Blank	T	Solid	WI-DRO	240-187060
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	WI-DRO	240-187060
Analysis Batch:240-187397					
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	WI-DRO	240-187060
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	WI-DRO	240-187060
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	WI-DRO	240-187060
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	WI-DRO	240-187060
Analysis Batch:240-187440					
LCS 240-187228/10-A	Lab Control Sample	T	Solid	8015B	240-187228
MB 240-187228/9-A	Method Blank	T	Solid	8015B	240-187228
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	8015B	240-187228
Prep Batch: 240-187825					
LCS 240-187825/9-A	Lab Control Sample	T	Solid	3540C	
MB 240-187825/8-A	Method Blank	T	Solid	3540C	
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	3540C	
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	3540C	
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	3540C	
Analysis Batch:240-188024					
LCS 240-187825/9-A	Lab Control Sample	T	Solid	8015B	240-187825
MB 240-187825/8-A	Method Blank	T	Solid	8015B	240-187825
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	8015B	240-187825
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	8015B	240-187825
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	8015B	240-187825

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-186943					
LCS 240-186943/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-186943/1-A	Method Blank	T	Solid	3050B	
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	3050B	
240-52462-I-1-B MS	Matrix Spike	T	Solid	3050B	
240-52462-I-1-C MSD	Matrix Spike Duplicate	T	Solid	3050B	
Prep Batch: 240-186944					
LCS 240-186944/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-186944/1-A	Method Blank	T	Solid	7471A	
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	7471A	
240-52462-I-1-E MS	Matrix Spike	T	Solid	7471A	
240-52462-I-1-F MSD	Matrix Spike Duplicate	T	Solid	7471A	
Prep Batch: 240-186969					
LCS 240-186969/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-186969/1-A	Method Blank	T	Solid	3050B	
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	3050B	
240-52439-1MS	Matrix Spike	T	Solid	3050B	
240-52439-1MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	3050B	
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	3050B	
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	3050B	
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	3050B	
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	3050B	
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	3050B	
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	3050B	
Prep Batch: 240-186987					
LCS 240-186987/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-186987/1-A	Method Blank	T	Solid	7471A	
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	7471A	
240-52439-1MS	Matrix Spike	T	Solid	7471A	
240-52439-1MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	7471A	
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	7471A	
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	7471A	
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	7471A	
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	7471A	
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	7471A	
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	7471A	

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-187203					
LCS 240-186969/2-A	Lab Control Sample	T	Solid	6010B	240-186969
MB 240-186969/1-A	Method Blank	T	Solid	6010B	240-186969
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	6010B	240-186969
240-52439-1MS	Matrix Spike	T	Solid	6010B	240-186969
240-52439-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-186969
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	6010B	240-186969
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	6010B	240-186969
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	6010B	240-186969
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	6010B	240-186969
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	6010B	240-186969
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	6010B	240-186969
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	6010B	240-186969
Prep Batch: 240-187303					
LB 240-187303/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-187303/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-52375-A-1-G MS ^5	Matrix Spike	P	Solid	1311	
240-52375-A-1-J MS	Matrix Spike	P	Solid	1311	
240-52375-A-1-H MSD ^5	Matrix Spike Duplicate	P	Solid	1311	
240-52375-A-1-K MSD	Matrix Spike Duplicate	P	Solid	1311	
240-52439-1	ASB-1006_39-42(20150622)	P	Solid	1311	
240-52439-2	ASB-1006_52-54(20150622)	P	Solid	1311	
240-52439-3	ASB-1006_57-60(20150622)	P	Solid	1311	
240-52439-4	ASB-1006_65-67(20150622)	P	Solid	1311	
240-52439-5	ASB-1006_78-80(20150622)	P	Solid	1311	
240-52439-6	ASB-1007_22-25(20150623)	P	Solid	1311	
240-52439-8	ASB-1007_62-65(20150623)	P	Solid	1311	
240-52439-9	ASB-1007_67-70(20150623)	P	Solid	1311	
240-52439-10	ASB-1007_75-77(20150623)	P	Solid	1311	
Analysis Batch:240-187366					
LCS 240-186943/2-A	Lab Control Sample	T	Solid	6010B	240-186943
MB 240-186943/1-A	Method Blank	T	Solid	6010B	240-186943
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	6010B	240-186969
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	6010B	240-186943
240-52462-I-1-B MS	Matrix Spike	T	Solid	6010B	240-186943
240-52462-I-1-C MSD	Matrix Spike Duplicate	T	Solid	6010B	240-186943

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187383					
LCS 240-187383/3-A	Lab Control Sample	T	Water	3010A	
MB 240-187383/2-A	Method Blank	T	Water	3010A	
LB 240-187303/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-187303
240-52375-A-1-G MS ^5	Matrix Spike	P	Solid	3010A	240-187303
240-52375-A-1-H MSD ^5	Matrix Spike Duplicate	P	Solid	3010A	240-187303
240-52439-1	ASB-1006_39-42(20150622)	P	Solid	3010A	240-187303
240-52439-2	ASB-1006_52-54(20150622)	P	Solid	3010A	240-187303
240-52439-3	ASB-1006_57-60(20150622)	P	Solid	3010A	240-187303
240-52439-4	ASB-1006_65-67(20150622)	P	Solid	3010A	240-187303
240-52439-5	ASB-1006_78-80(20150622)	P	Solid	3010A	240-187303
240-52439-6	ASB-1007_22-25(20150623)	P	Solid	3010A	240-187303
240-52439-8	ASB-1007_62-65(20150623)	P	Solid	3010A	240-187303
240-52439-9	ASB-1007_67-70(20150623)	P	Solid	3010A	240-187303
240-52439-10	ASB-1007_75-77(20150623)	P	Solid	3010A	240-187303
Prep Batch: 240-187385					
LCS 240-187385/3-A	Lab Control Sample	T	Water	7470A	
MB 240-187385/2-A	Method Blank	T	Water	7470A	
LB 240-187303/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187303
240-52375-A-1-J MS	Matrix Spike	P	Solid	7470A	240-187303
240-52375-A-1-K MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187303
240-52439-1	ASB-1006_39-42(20150622)	P	Solid	7470A	240-187303
240-52439-2	ASB-1006_52-54(20150622)	P	Solid	7470A	240-187303
240-52439-3	ASB-1006_57-60(20150622)	P	Solid	7470A	240-187303
240-52439-4	ASB-1006_65-67(20150622)	P	Solid	7470A	240-187303
240-52439-5	ASB-1006_78-80(20150622)	P	Solid	7470A	240-187303
240-52439-6	ASB-1007_22-25(20150623)	P	Solid	7470A	240-187303
240-52439-8	ASB-1007_62-65(20150623)	P	Solid	7470A	240-187303
240-52439-9	ASB-1007_67-70(20150623)	P	Solid	7470A	240-187303
240-52439-10	ASB-1007_75-77(20150623)	P	Solid	7470A	240-187303

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-187460					
LCS 240-186944/2-A	Lab Control Sample	T	Solid	7471A	240-186944
MB 240-186944/1-A	Method Blank	T	Solid	7471A	240-186944
LCS 240-186987/2-A	Lab Control Sample	T	Solid	7471A	240-186987
MB 240-186987/1-A	Method Blank	T	Solid	7471A	240-186987
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	7471A	240-186987
240-52439-1MS	Matrix Spike	T	Solid	7471A	240-186987
240-52439-1MSD	Matrix Spike Duplicate	T	Solid	7471A	240-186987
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	7471A	240-186987
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	7471A	240-186987
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	7471A	240-186987
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	7471A	240-186987
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	7471A	240-186987
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	7471A	240-186987
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	7471A	240-186987
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	7471A	240-186944
240-52462-I-1-E MS	Matrix Spike	T	Solid	7471A	240-186944
240-52462-I-1-F MSD	Matrix Spike Duplicate	T	Solid	7471A	240-186944
Analysis Batch:240-187549					
LB 240-187303/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-187383
LCS 240-187383/3-A	Lab Control Sample	T	Water	6010B	240-187383
MB 240-187383/2-A	Method Blank	T	Water	6010B	240-187383
240-52375-A-1-G MS ^5	Matrix Spike	P	Solid	6010B	240-187383
240-52375-A-1-H MSD ^5	Matrix Spike Duplicate	P	Solid	6010B	240-187383
240-52439-1	ASB-1006_39-42(20150622)	P	Solid	6010B	240-187383
240-52439-2	ASB-1006_52-54(20150622)	P	Solid	6010B	240-187383
240-52439-3	ASB-1006_57-60(20150622)	P	Solid	6010B	240-187383
240-52439-4	ASB-1006_65-67(20150622)	P	Solid	6010B	240-187383
240-52439-5	ASB-1006_78-80(20150622)	P	Solid	6010B	240-187383
240-52439-6	ASB-1007_22-25(20150623)	P	Solid	6010B	240-187383
240-52439-8	ASB-1007_62-65(20150623)	P	Solid	6010B	240-187383
240-52439-9	ASB-1007_67-70(20150623)	P	Solid	6010B	240-187383
240-52439-10	ASB-1007_75-77(20150623)	P	Solid	6010B	240-187383

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-187645					
LB 240-187303/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187385
LCS 240-187385/3-A	Lab Control Sample	T	Water	7470A	240-187385
MB 240-187385/2-A	Method Blank	T	Water	7470A	240-187385
240-52375-A-1-J MS	Matrix Spike	P	Solid	7470A	240-187385
240-52375-A-1-K MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187385
240-52439-1	ASB-1006_39-42(20150622)	P	Solid	7470A	240-187385
240-52439-2	ASB-1006_52-54(20150622)	P	Solid	7470A	240-187385
240-52439-3	ASB-1006_57-60(20150622)	P	Solid	7470A	240-187385
240-52439-4	ASB-1006_65-67(20150622)	P	Solid	7470A	240-187385
240-52439-5	ASB-1006_78-80(20150622)	P	Solid	7470A	240-187385
240-52439-6	ASB-1007_22-25(20150623)	P	Solid	7470A	240-187385
240-52439-8	ASB-1007_62-65(20150623)	P	Solid	7470A	240-187385
240-52439-9	ASB-1007_67-70(20150623)	P	Solid	7470A	240-187385
240-52439-10	ASB-1007_75-77(20150623)	P	Solid	7470A	240-187385
Analysis Batch:240-187814					
240-52439-9	ASB-1007_67-70(20150623)	P	Solid	6010B	240-187383

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-186724					
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	Moisture	
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	Moisture	
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	Moisture	
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	Moisture	
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	Moisture	
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	Moisture	
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	Moisture	
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	Moisture	
240-52439-9DU	Duplicate	T	Solid	Moisture	
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	Moisture	
500-97802-A-2 MS	Matrix Spike	T	Solid	Moisture	
Prep Batch: 240-187654					
LCSI 240-187654/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-187654/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-187654/9-A	Method Blank	T	Solid	3060A	
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	3060A	
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	3060A	
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	3060A	
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	3060A	
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	3060A	
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	3060A	
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	3060A	
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	3060A	
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	3060A	
Analysis Batch:240-187738					
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	7196A	
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	7196A	
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	7196A	
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	7196A	
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	7196A	
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	7196A	
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	7196A	
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	7196A	
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	7196A	

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-187854					
LCSI 240-187654/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-187654
LCSS 240-187654/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-187654
MB 240-187654/9-A	Method Blank	T	Solid	7196A	240-187654
240-52439-1	ASB-1006_39-42(20150622)	T	Solid	7196A	240-187654
240-52439-2	ASB-1006_52-54(20150622)	T	Solid	7196A	240-187654
240-52439-3	ASB-1006_57-60(20150622)	T	Solid	7196A	240-187654
240-52439-4	ASB-1006_65-67(20150622)	T	Solid	7196A	240-187654
240-52439-5	ASB-1006_78-80(20150622)	T	Solid	7196A	240-187654
240-52439-6	ASB-1007_22-25(20150623)	T	Solid	7196A	240-187654
240-52439-8	ASB-1007_62-65(20150623)	T	Solid	7196A	240-187654
240-52439-9	ASB-1007_67-70(20150623)	T	Solid	7196A	240-187654
240-52439-10	ASB-1007_75-77(20150623)	T	Solid	7196A	240-187654

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
MRL 240-187197/8		90	96	103	92

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	10-150
DBFM = Dibromofluoromethane (Surr)	10-150
DCA = 1,2-Dichloroethane-d4 (Surr)	10-150
TOL = Toluene-d8 (Surr)	10-150

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52439-1	ASB-1006_39-42(20150622)	91	94	106	95
240-52439-2	ASB-1006_52-54(20150622)	108	101	117	100
240-52439-3	ASB-1006_57-60(20150622)	89	100	114	100
240-52439-4	ASB-1006_65-67(20150622)	89	99	109	98
240-52439-5	ASB-1006_78-80(20150622)	83	92	103	89
240-52439-6	ASB-1007_22-25(20150623)	137	136X	159X	154X
240-52439-7	MB-01(20150623)	89	104	111	97
240-52439-8	ASB-1007_62-65(20150623)	93	106	116	99
240-52439-9	ASB-1007_67-70(20150623)	241X	285X	259X	497X
240-52439-10	ASB-1007_75-77(20150623)	94	101	114	100
240-52439-11	MB-01(20150623)	121	130X	141X	130
MB 240-186967/1-A		87	96	109	95
LCS 240-186967/2-A		95	108	114	102

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-187311/1-A MB		90	96	98	99
240-52461-A-2-A MS		100	104	96	110
240-52461-A-2-A MSD		102	106	99	109

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-52439-1	ASB-1006_39-42(20150622)	97	90	100	100
240-52439-2	ASB-1006_52-54(20150622)	102	93	102	103
240-52439-3	ASB-1006_57-60(20150622)	98	93	102	102
240-52439-4	ASB-1006_65-67(20150622)	99	90	101	100
240-52439-5	ASB-1006_78-80(20150622)	100	89	101	100
240-52439-6	ASB-1007_22-25(20150623)	103	94	104	108
240-52439-8	ASB-1007_62-65(20150623)	97	93	99	102
240-52439-9	ASB-1007_67-70(20150623)	94	94	99	100
240-52439-10	ASB-1007_75-77(20150623)	96	92	101	102

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LCS 240-187770/4		94	104	96	106

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-187199/23-A		67	62	64	67	76	14
MB 240-187404/23-A		80	51	71	73	84	10
LCS 240-187199/24-A		68	69	71	71	73	30
LCS 240-187404/24-A		56	52	57	54	81	61
240-52391-C-49-D MS		60	59	56	62	68	31
240-52442-M-3-D MS		85	63	83	71	80	43
240-52391-C-49-E MSD		55	46	47	52	67	32
240-52442-M-3-E MSD		78	61	72	70	75	30

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52439-1	ASB-1006_39-42(20150622)	75	65	29	67	64	78
240-52439-2	ASB-1006_52-54(20150622)	55	54	28	53	47	63
240-52439-3	ASB-1006_57-60(20150622)	82	64	31	60	61	87
240-52439-4	ASB-1006_65-67(20150622)	66	57	42	64	63	64
240-52439-5	ASB-1006_78-80(20150622)	78	69	30	71	61	80
240-52439-6	ASB-1007_22-25(20150623)	102	0X	0X	96	0X	116X
240-52439-6 RA	ASB-1007_22-25(20150623) RA	0X	0X	0X	0X	0X	0X
240-52439-8	ASB-1007_62-65(20150623)	58	50	18	49	49	69
240-52439-9	ASB-1007_67-70(20150623)	0X	0X	0X	0X	0X	0X
240-52439-10	ASB-1007_75-77(20150623)	74	67	47	68	69	85

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-52439-1	ASB-1006_39-42(20150622)	74	57	76	50	74	76
240-52439-2	ASB-1006_52-54(20150622)	83	62	83	55	80	87
240-52439-3	ASB-1006_57-60(20150622)	64	54	68	51	72	67
240-52439-4	ASB-1006_65-67(20150622)	66	48	71	45	72	60
240-52439-5	ASB-1006_78-80(20150622)	68	57	71	53	72	75
240-52439-6	ASB-1007_22-25(20150623)	68	61	75	53	74	76
240-52439-8	ASB-1007_62-65(20150623)	72	64	76	57	77	79
240-52439-9	ASB-1007_67-70(20150623)	67	66	72	56	68	86
240-52439-10	ASB-1007_75-77(20150623)	66	60	73	52	71	77
MB 240-188035/18-A		76	67	78	58	83	82
LCS 240-188035/19-A		72	63	76	55	81	84

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Surrogate Recovery Report

8015B Diesel Range Organics (DRO) (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH1 %Rec
240-52439-1	ASB-1006_39-42(20150622)	75
240-52439-2	ASB-1006_52-54(20150622)	71
240-52439-3	ASB-1006_57-60(20150622)	74
240-52439-8	ASB-1007_62-65(20150623)	72
MB 240-187228/9-A		70
MB 240-187825/8-A		70
LCS 240-187228/10-A		76
LCS 240-187825/9-A		68

Surrogate	Acceptance Limits
OTPH = o-Terphenyl (Surr)	40-160

Method Blank - Batch: 240-186967

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-186967/1-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186967	Lab File ID:	143888.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.0 g
Analysis Date:	06/29/2015 1504	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1145				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Blank - Batch: 240-186967

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-186967/1-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186967	Lab File ID:	143888.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.0 g
Analysis Date:	06/29/2015 1504	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1145				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	87	26 - 141
Dibromofluoromethane (Surr)	96	30 - 122
1,2-Dichloroethane-d4 (Surr)	109	39 - 128
Toluene-d8 (Surr)	95	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Control Sample - Batch: 240-186967

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-186967/2-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186967	Lab File ID:	143887.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.0 g
Analysis Date:	06/29/2015 1442	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1145				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	1920	96	16 - 156	
Allyl chloride	1000	926	93	50 - 150	
Bromobenzene	1000	898	90	72 - 120	
Bromochloromethane	1000	1060	106	56 - 128	
Bromodichloromethane	1000	926	93	28 - 123	
Benzene	1000	1010	101	70 - 120	
Bromoform	1000	891	89	10 - 120	
Bromomethane	1000	508	51	10 - 120	
2-Butanone (MEK)	2000	1570	78	10 - 199	
Carbon disulfide	1000	843	84	10 - 132	
Carbon tetrachloride	1000	1030	103	29 - 120	
Chlorobenzene	1000	944	94	71 - 120	
Chlorodibromomethane	1000	966	97	22 - 120	
Chloroethane	1000	647	65	10 - 120	
Chloroform	1000	1090	109	63 - 120	
Chloromethane	1000	749	75	25 - 120	
2-Chlorotoluene	1000	947	95	68 - 122	
4-Chlorotoluene	1000	925	92	68 - 122	
cis-1,2-Dichloroethene	1000	1040	104	60 - 125	
cis-1,3-Dichloropropene	1000	951	95	25 - 120	
Cyclohexane	1000	902	90	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	949	95	10 - 129	
1,2-Dibromoethane	1000	945	94	47 - 123	
Dibromomethane	1000	1040	104	68 - 120	
1,2-Dichlorobenzene	1000	975	97	68 - 120	
1,3-Dichlorobenzene	1000	907	91	66 - 121	
1,4-Dichlorobenzene	1000	926	93	65 - 120	
Dichlorodifluoromethane	1000	773	77	10 - 120	
1,1-Dichloroethane	1000	1020	102	63 - 120	
1,2-Dichloroethane	1000	975	98	68 - 120	
1,1-Dichloroethene	1000	1000	100	44 - 143	
Dichlorofluoromethane	1000	1140	114	40 - 160	
1,2-Dichloropropane	1000	948	95	73 - 120	
1,3-Dichloropropane	1000	969	97	74 - 120	
2,2-Dichloropropane	1000	947	95	25 - 123	
1,1-Dichloropropene	1000	1130	113	60 - 123	
Ethylbenzene	1000	942	94	66 - 120	
Ethyl ether	1000	990	99	70 - 130	
Hexachlorobutadiene	1000	1020	102	34 - 135	
2-Hexanone	2000	1320	66	43 - 130	
Isopropylbenzene	1000	1030	103	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Control Sample - Batch: 240-186967

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-186967/2-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-186967	Lab File ID:	143887.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.0 g
Analysis Date:	06/29/2015 1442	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 1145				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	4550	91	44 - 173	
Methylcyclohexane	1000	1070	107	41 - 133	
Methylene Chloride	1000	1030	103	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1670	83	49 - 121	
Methyl tert butyl ether	1000	1140	114	34 - 157	
m-Xylene & p-Xylene	1000	983	98	67 - 120	
Naphthalene	1000	932	93	37 - 126	
n-Butylbenzene	1000	932	93	51 - 137	
N-Propylbenzene	1000	904	90	64 - 130	
o-Xylene	1000	1030	103	68 - 120	
p-Isopropyltoluene	1000	921	92	56 - 136	
sec-Butylbenzene	1000	964	96	58 - 131	
Styrene	1000	885	88	60 - 120	
tert-Butylbenzene	1000	934	93	58 - 128	
1,1,1,2-Tetrachloroethane	1000	1140	114	27 - 121	
1,1,2,2-Tetrachloroethane	1000	1030	103	54 - 121	
Tetrachloroethene	1000	1020	102	58 - 131	
Tetrahydrofuran	2000	1850	92	70 - 130	
Toluene	1000	944	94	66 - 123	
trans-1,2-Dichloroethene	1000	1040	104	58 - 121	
trans-1,3-Dichloropropene	1000	1070	107	22 - 122	
1,2,3-Trichlorobenzene	1000	991	99	43 - 129	
1,2,4-Trichlorobenzene	1000	990	99	41 - 135	
1,1,1-Trichloroethane	1000	1030	103	38 - 122	
1,1,2-Trichloroethane	1000	948	95	74 - 120	
Trichloroethene	1000	1020	102	59 - 124	
Trichlorofluoromethane	1000	1190	119	17 - 145	
1,2,3-Trichloropropane	1000	958	96	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	1020	102	48 - 151	
1,2,4-Trimethylbenzene	1000	924	92	62 - 133	
1,3,5-Trimethylbenzene	1000	948	95	60 - 130	
Vinyl chloride	1000	823	82	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	95	26 - 141
Dibromofluoromethane (Surr)	108	30 - 122
1,2-Dichloroethane-d4 (Surr)	114	39 - 128
Toluene-d8 (Surr)	102	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Reporting Limit Check - Batch: 240-187197 **Method: 8260B**
Preparation: N/A

Lab Sample ID:	MRL 240-187197/8	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	143885.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/29/2015 1359	Units:	ng/uL	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	0.0100	0.0183	183	10 - 150	^
Allyl chloride	0.00500	0.00462	92	10 - 150	
Bromobenzene	0.00500	0.00410	82	10 - 150	
Bromochloromethane	0.00500	0.00490	98	10 - 150	
Bromodichloromethane	0.00500	0.00445	89	10 - 150	
Benzene	0.00500	0.00474	95	10 - 150	
Bromoform	0.00500	0.00618	124	10 - 150	
Bromomethane	0.00500	0.00524	105	10 - 150	
2-Butanone (MEK)	0.0100	0.00711	71	10 - 150	J
Carbon disulfide	0.00500	0.00437	87	10 - 150	
Carbon tetrachloride	0.00500	0.00458	92	10 - 150	
Chlorobenzene	0.00500	0.00438	88	10 - 150	
Chlorodibromomethane	0.00500	0.00374	75	10 - 150	
Chloroethane	0.00500	0.00510	102	10 - 150	
Chloroform	0.00500	0.00489	98	10 - 150	
Chloromethane	0.00500	0.00473	95	10 - 150	
2-Chlorotoluene	0.00500	0.00412	82	10 - 150	
4-Chlorotoluene	0.00500	0.00443	89	10 - 150	
cis-1,2-Dichloroethene	0.00500	0.00469	94	10 - 150	
cis-1,3-Dichloropropene	0.00500	0.00380	76	10 - 150	
Cyclohexane	0.00500	0.00450	90	10 - 150	
1,2-Dibromo-3-Chloropropane	0.00500	0.00339	68	10 - 150	
1,2-Dibromoethane	0.00500	0.00448	90	10 - 150	
Dibromomethane	0.00500	0.00495	99	10 - 150	
1,2-Dichlorobenzene	0.00500	0.00434	87	10 - 150	
1,3-Dichlorobenzene	0.00500	0.00412	82	10 - 150	
1,4-Dichlorobenzene	0.00500	0.00405	81	10 - 150	
Dichlorodifluoromethane	0.00500	0.00640	128	10 - 150	
1,1-Dichloroethane	0.00500	0.00456	91	10 - 150	
1,2-Dichloroethane	0.00500	0.00447	89	10 - 150	
1,1-Dichloroethene	0.00500	0.00500	100	10 - 150	
Dichlorofluoromethane	0.00500	0.00521	104	10 - 150	
1,2-Dichloropropane	0.00500	0.00426	85	10 - 150	
1,3-Dichloropropane	0.00500	0.00458	92	10 - 150	
2,2-Dichloropropane	0.00500	0.00453	91	10 - 150	
1,1-Dichloropropene	0.00500	0.00464	93	10 - 150	
Ethylbenzene	0.00500	0.00431	86	10 - 150	
Ethyl ether	0.00500	0.00424	85	10 - 150	
Hexachlorobutadiene	0.00500	0.00424	85	10 - 150	
2-Hexanone	0.0100	0.00585	59	10 - 150	J
Isopropylbenzene	0.00500	0.00431	86	10 - 150	

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Reporting Limit Check - Batch: 240-187197 **Method: 8260B**
Preparation: N/A

Lab Sample ID:	MRL 240-187197/8	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	143885.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/29/2015 1359	Units:	ng/uL	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	0.0250	0.0212	85	10 - 150	
Methylcyclohexane	0.00500	0.00494	99	10 - 150	
Methylene Chloride	0.00500	0.00259	52	10 - 150	
4-Methyl-2-pentanone (MIBK)	0.0100	0.00714	71	10 - 150	J
Methyl tert butyl ether	0.00500	0.00488	98	10 - 150	
m-Xylene & p-Xylene	0.00500	0.00446	89	10 - 150	
Naphthalene	0.00500	0.00397	79	10 - 150	
n-Butylbenzene	0.00500	0.00402	80	10 - 150	
N-Propylbenzene	0.00500	0.00412	82	10 - 150	
o-Xylene	0.00500	0.00451	90	10 - 150	
p-Isopropyltoluene	0.00500	0.00401	80	10 - 150	
sec-Butylbenzene	0.00500	0.00405	81	10 - 150	
Styrene	0.00500	0.00401	80	10 - 150	
tert-Butylbenzene	0.00500	0.00394	79	10 - 150	
1,1,1,2-Tetrachloroethane	0.00500	0.00481	96	10 - 150	
1,1,2,2-Tetrachloroethane	0.00500	0.00468	94	10 - 150	
Tetrachloroethene	0.00500	0.00450	90	10 - 150	
Tetrahydrofuran	0.0100	0.00740	74	10 - 150	
Toluene	0.00500	0.00435	87	10 - 150	
trans-1,2-Dichloroethene	0.00500	0.00479	96	10 - 150	
trans-1,3-Dichloropropene	0.00500	0.00381	76	10 - 150	
1,2,3-Trichlorobenzene	0.00500	0.00440	88	10 - 150	
1,2,4-Trichlorobenzene	0.00500	0.00449	90	10 - 150	
1,1,1-Trichloroethane	0.00500	0.00475	95	10 - 150	
1,1,2-Trichloroethane	0.00500	0.00416	83	10 - 150	
Trichloroethene	0.00500	0.00477	95	10 - 150	
Trichlorofluoromethane	0.00500	0.00563	113	10 - 150	
1,2,3-Trichloropropane	0.00500	0.00447	89	10 - 150	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.00500	0.00518	104	10 - 150	
1,2,4-Trimethylbenzene	0.00500	0.00411	82	10 - 150	
1,3,5-Trimethylbenzene	0.00500	0.00413	83	10 - 150	
Vinyl chloride	0.00500	0.00501	100	10 - 150	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	90	10 - 150
Dibromofluoromethane (Surr)	96	10 - 150
1,2-Dichloroethane-d4 (Surr)	103	10 - 150
Toluene-d8 (Surr)	92	10 - 150

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Blank - Batch: 240-187636

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-187311/1-A	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950828.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 1632	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 1632				
Leach Date:	06/29/2015 1845				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	90	70 - 124
Dibromofluoromethane (Surr)	96	80 - 128
1,2-Dichloroethane-d4 (Surr)	98	80 - 121
Toluene-d8 (Surr)	99	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187636

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-52461-A-2-A MS	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950841.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 2146			Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 2146				5 mL
Leach Date:	06/29/2015 1845				

MSD Lab Sample ID:	240-52461-A-2-A MSD	Analysis Batch:	240-187636	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950842.D
Dilution:	1.0	Leach Batch:	240-187311	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/01/2015 2210			Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 2210				5 mL
Leach Date:	06/29/2015 1845				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	105	102	80 - 120	2	30		
2-Butanone (MEK)	86	82	49 - 120	4	30		
Carbon tetrachloride	105	101	60 - 120	3	30		
Chlorobenzene	105	100	80 - 120	5	30		
Chloroform	109	107	80 - 124	2	30		
1,2-Dichloroethane	101	100	80 - 120	1	30		
1,1-Dichloroethene	112	108	67 - 139	3	30		
Tetrachloroethene	106	101	74 - 138	4	30		
Trichloroethene	104	102	75 - 134	1	30		
Vinyl chloride	104	104	51 - 120	0	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	100	102	70 - 124
Dibromofluoromethane (Surr)	104	106	80 - 128
1,2-Dichloroethane-d4 (Surr)	96	99	80 - 121
Toluene-d8 (Surr)	110	109	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Control Sample - Batch: 240-187770

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-187770/4	Analysis Batch:	240-187770	Instrument ID:	A3UX9
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UX950845.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/02/2015 1022	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1022				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	1050	105	80 - 120	
2-Butanone (MEK)	2000	1690	85	49 - 120	
Carbon tetrachloride	1000	1070	107	54 - 122	
Chlorobenzene	1000	1070	107	80 - 120	
Chloroform	1000	1080	108	80 - 123	
1,2-Dichloroethane	1000	1000	100	80 - 120	
1,1-Dichloroethene	1000	1070	107	71 - 133	
Tetrachloroethene	1000	1100	110	79 - 134	
Trichloroethene	1000	1050	105	78 - 130	
Vinyl chloride	1000	1030	103	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	94	70 - 124
Dibromofluoromethane (Surr)	104	80 - 128
1,2-Dichloroethane-d4 (Surr)	96	80 - 121
Toluene-d8 (Surr)	106	80 - 120

Method Blank - Batch: 240-187199

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187199/23-A	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187199	Lab File ID:	0701005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/01/2015 0906	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Blank - Batch: 240-187199

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187199/23-A	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187199	Lab File ID:	0701005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/01/2015 0906	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	67	24 - 110
2-Fluorophenol (Surr)	62	24 - 110
Nitrobenzene-d5 (Surr)	64	20 - 110
Phenol-d5 (Surr)	67	26 - 110
Terphenyl-d14 (Surr)	76	36 - 110
2,4,6-Tribromophenol (Surr)	14	10 - 110

Lab Control Sample - Batch: 240-187199

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187199/24-A	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187199	Lab File ID:	0701006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/01/2015 0929	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	443	66	35 - 110	
2,2'-oxybis[1-chloropropane]	667	445	67	29 - 110	
2,4-Dichlorophenol	667	421	63	39 - 110	
2,4-Dimethylphenol	667	442	66	29 - 110	
2,4-Dinitrophenol	1330	278	21	10 - 110	J
2,4-Dinitrotoluene	667	492	74	48 - 110	
2,6-Dinitrotoluene	667	499	75	45 - 110	
2-Chloronaphthalene	667	441	66	32 - 110	
2,4,5-Trichlorophenol	667	240	36	25 - 110	J
2-Chlorophenol	667	449	67	37 - 110	
2,4,6-Trichlorophenol	667	220	33	12 - 110	J
2-Methylnaphthalene	667	469	70	36 - 110	
2-Methylphenol	667	461	69	41 - 110	
2-Nitroaniline	667	493	74	45 - 110	J
2-Nitrophenol	667	413	62	34 - 110	
3,3'-Dichlorobenzidine	1330	722	54	28 - 110	J
3-Nitroaniline	667	486	73	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	513	38	10 - 110	J
4-Bromophenyl phenyl ether	667	503	75	39 - 110	
4-Chloro-3-methylphenol	667	490	73	48 - 110	
4-Chloroaniline	667	406	61	30 - 110	
4-Chlorophenyl phenyl ether	667	461	69	40 - 110	
4-Nitroaniline	667	504	76	48 - 110	J
4-Nitrophenol	1330	709	53	28 - 110	J
Acenaphthene	667	446	67	38 - 110	
Acenaphthylene	667	462	69	40 - 110	
Acetophenone	667	445	67	40 - 110	
Anthracene	667	506	76	48 - 110	
Atrazine	1330	1060	80	66 - 127	
Benzaldehyde	1330	975	73	32 - 110	
Benzo[a]anthracene	667	493	74	50 - 110	
Benzo[a]pyrene	667	479	72	44 - 110	
Benzo[b]fluoranthene	667	481	72	43 - 110	
Benzo[g,h,i]perylene	667	472	71	51 - 110	
Benzo[k]fluoranthene	667	552	83	38 - 105	
Bis(2-chloroethoxy)methane	667	460	69	32 - 110	
Bis(2-chloroethyl)ether	667	441	66	34 - 110	
Bis(2-ethylhexyl) phthalate	667	535	80	50 - 110	
Butyl benzyl phthalate	667	534	80	51 - 110	
Caprolactam	1330	1220	91	44 - 114	
Carbazole	667	506	76	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Control Sample - Batch: 240-187199

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187199/24-A	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187199	Lab File ID:	0701006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/01/2015 0929	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	499	75	50 - 110	
Dibenz(a,h)anthracene	667	448	67	51 - 110	
Dibenzofuran	667	460	69	43 - 110	
Diethyl phthalate	667	477	72	52 - 110	
Dimethyl phthalate	667	466	70	50 - 110	
Di-n-butyl phthalate	667	538	81	51 - 110	
Di-n-octyl phthalate	667	453	68	48 - 110	
Fluoranthene	667	518	78	51 - 110	
Fluorene	667	460	69	46 - 110	
Hexachlorobenzene	667	490	74	43 - 110	
Hexachlorobutadiene	667	440	66	29 - 110	
Hexachlorocyclopentadiene	667	255	38	12 - 110	J
Hexachloroethane	667	424	64	30 - 110	
Indeno[1,2,3-cd]pyrene	667	463	69	50 - 110	
Isophorone	667	464	70	36 - 110	
Naphthalene	667	458	69	36 - 110	
Nitrobenzene	667	450	67	32 - 110	
N-Nitrosodi-n-propylamine	667	464	70	38 - 110	
N-Nitrosodiphenylamine	1330	992	74	46 - 110	
Pentachlorophenol	1330	561	42	10 - 110	
Phenol	667	461	69	38 - 110	
Phenanthrene	667	483	72	49 - 110	
Pyrene	667	505	76	49 - 110	
3 & 4 Methylphenol	667	470	71	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	68	24 - 110
2-Fluorophenol (Surr)	69	24 - 110
Nitrobenzene-d5 (Surr)	71	20 - 110
Phenol-d5 (Surr)	71	26 - 110
Terphenyl-d14 (Surr)	73	36 - 110
2,4,6-Tribromophenol (Surr)	30	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187199

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52391-C-49-D MS	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187199	Lab File ID:	0701019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.11 g
Analysis Date:	07/01/2015 1427			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52391-C-49-E MSD	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187199	Lab File ID:	0701020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.22 g
Analysis Date:	07/01/2015 1450			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	60	55	32 - 110	8	32		
2,2'-oxybis[1-chloropropane]	54	46	11 - 110	16	42		J
2,4-Dichlorophenol	53	52	10 - 110	4	34		
2,4-Dimethylphenol	63	57	10 - 110	10	31		
2,4-Dinitrophenol	44	40	10 - 110	10	99	J	J
2,4-Dinitrotoluene	65	67	32 - 110	2	30		
2,6-Dinitrotoluene	66	67	35 - 110	1	30		
2-Chloronaphthalene	60	55	28 - 110	8	30		
2,4,5-Trichlorophenol	34	34	10 - 117	1	99	J	J
2-Chlorophenol	55	45	10 - 110	20	47		J
2,4,6-Trichlorophenol	34	35	10 - 110	3	38	J	J
2-Methylnaphthalene	62	54	10 - 133	14	42		
2-Methylphenol	60	52	24 - 110	16	51		
2-Nitroaniline	69	68	39 - 110	1	31	J	J
2-Nitrophenol	55	46	10 - 110	18	49		J
3,3'-Dichlorobenzidine	44	45	10 - 110	2	56	J	J
3-Nitroaniline	62	63	10 - 110	1	30	J	J
4,6-Dinitro-2-methylphenol	51	48	10 - 110	8	55	J	J
4-Bromophenyl phenyl ether	67	66	33 - 110	3	30		
4-Chloro-3-methylphenol	65	64	25 - 110	2	54		
4-Chloroaniline	47	45	10 - 110	5	36	J	J
4-Chlorophenyl phenyl ether	63	62	32 - 110	3	30		
4-Nitroaniline	63	65	10 - 110	3	48	J	J
4-Nitrophenol	52	51	10 - 113	1	49	J	J
Acenaphthene	62	59	22 - 110	5	99		
Acenaphthylene	64	61	24 - 110	5	99		
Acetophenone	55	46	31 - 110	19	43		J
Anthracene	69	67	20 - 110	3	99		
Atrazine	70	69	45 - 118	1	30		
Benzaldehyde	58	48	23 - 110	19	42		
Benzo[a]anthracene	68	67	10 - 122	2	99		
Benzo[a]pyrene	63	62	10 - 110	2	99		

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187199

Method: 8270C
Preparation: 3540C

MS Lab Sample ID: 240-52391-C-49-D MS
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/01/2015 1427
Prep Date: 06/29/2015 1050
Leach Date: N/A

Analysis Batch: 240-187535
Prep Batch: 240-187199
Leach Batch: N/A

Instrument ID: A4AG2
Lab File ID: 0701019.D
Initial Weight/Volume: 30.11 g
Final Weight/Volume: 2 mL
Injection Volume: 1 uL

MSD Lab Sample ID: 240-52391-C-49-E MSD
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/01/2015 1450
Prep Date: 06/29/2015 1050
Leach Date: N/A

Analysis Batch: 240-187535
Prep Batch: 240-187199
Leach Batch: N/A

Instrument ID: A4AG2
Lab File ID: 0701020.D
Initial Weight/Volume: 30.22 g
Final Weight/Volume: 2 mL
Injection Volume: 1 uL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	73	76	12 - 118	4	99		
Benzo[g,h,i]perylene	35	30	10 - 117	15	99	J	J
Benzo[k]fluoranthene	76	77	10 - 121	0	99		
Bis(2-chloroethoxy)methane	57	48	26 - 110	16	37		J
Bis(2-chloroethyl)ether	54	45	21 - 110	18	55		J
Bis(2-ethylhexyl) phthalate	70	73	40 - 110	3	30		
Butyl benzyl phthalate	77	76	44 - 110	1	30		
Caprolactam	87	81	10 - 134	7	32		
Carbazole	68	67	34 - 110	1	30		
Chrysene	68	67	10 - 125	1	99		
Dibenz(a,h)anthracene	41	36	14 - 113	14	99	J	J
Dibenzofuran	64	61	29 - 110	4	30		
Diethyl phthalate	65	64	42 - 110	2	30		
Dimethyl phthalate	63	62	41 - 110	3	30		
Di-n-butyl phthalate	72	71	43 - 110	2	30		
Di-n-octyl phthalate	90	98	24 - 119	8	30		
Fluoranthene	69	69	10 - 110	0	99		
Fluorene	65	63	23 - 110	4	99		
Hexachlorobenzene	64	64	34 - 110	1	30		
Hexachlorobutadiene	51	44	25 - 110	16	34		J
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	34	24	12 - 110	36	50	J	J
Indeno[1,2,3-cd]pyrene	40	36	10 - 114	12	99	J	J
Isophorone	59	51	29 - 110	14	38		
Naphthalene	56	48	10 - 111	16	99		
Nitrobenzene	55	48	23 - 110	14	41		J
N-Nitrosodi-n-propylamine	60	50	26 - 110	18	42		
N-Nitrosodiphenylamine	68	66	22 - 110	3	30		
Pentachlorophenol	23	28	10 - 110	18	50	J	
Phenol	59	47	17 - 110	23	53		J
Phenanthrene	66	65	10 - 166	2	99		
Pyrene	70	71	10 - 147	0	99		

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187199

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52391-C-49-D MS	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187199	Lab File ID:	0701019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.11 g
Analysis Date:	07/01/2015 1427			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52391-C-49-E MSD	Analysis Batch:	240-187535	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187199	Lab File ID:	0701020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.22 g
Analysis Date:	07/01/2015 1450			Final Weight/Volume:	2 mL
Prep Date:	06/29/2015 1050			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
3 & 4 Methylphenol	64	55	25 - 110	17	50		J

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	60	55	24 - 110
2-Fluorophenol (Surr)	59	46	24 - 110
Nitrobenzene-d5 (Surr)	56	47	20 - 110
Phenol-d5 (Surr)	62	52	26 - 110
Terphenyl-d14 (Surr)	68	67	36 - 110
2,4,6-Tribromophenol (Surr)	31	32	10 - 110

Method Blank - Batch: 240-187404

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187404/23-A	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-187404	Lab File ID:	50709004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 0952	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Blank - Batch: 240-187404

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187404/23-A	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-187404	Lab File ID:	50709004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 0952	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	80	24 - 110
2-Fluorophenol (Surr)	51	24 - 110
Nitrobenzene-d5 (Surr)	71	20 - 110
Phenol-d5 (Surr)	73	26 - 110
Terphenyl-d14 (Surr)	84	36 - 110
2,4,6-Tribromophenol (Surr)	10	10 - 110

Lab Control Sample - Batch: 240-187404

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187404/24-A	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-187404	Lab File ID:	50709005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 1016	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	369	55	35 - 110	
2,2'-oxybis[1-chloropropane]	667	353	53	29 - 110	
2,4-Dichlorophenol	667	269	40	39 - 110	J
2,4-Dimethylphenol	667	346	52	29 - 110	
2,4-Dinitrophenol	1330	684	51	10 - 110	J
2,4-Dinitrotoluene	667	580	87	48 - 110	
2,6-Dinitrotoluene	667	519	78	45 - 110	
2-Chloronaphthalene	667	359	54	32 - 110	
2,4,5-Trichlorophenol	667	332	50	25 - 110	
2-Chlorophenol	667	313	47	37 - 110	J
2,4,6-Trichlorophenol	667	359	54	12 - 110	
2-Methylnaphthalene	667	383	57	36 - 110	
2-Methylphenol	667	365	55	41 - 110	
2-Nitroaniline	667	496	74	45 - 110	J
2-Nitrophenol	667	375	56	34 - 110	
3,3'-Dichlorobenzidine	1330	1020	77	28 - 110	J
3-Nitroaniline	667	544	82	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	970	73	10 - 110	J
4-Bromophenyl phenyl ether	667	490	74	39 - 110	
4-Chloro-3-methylphenol	667	457	69	48 - 110	
4-Chloroaniline	667	359	54	30 - 110	
4-Chlorophenyl phenyl ether	667	440	66	40 - 110	
4-Nitroaniline	667	620	93	48 - 110	J
4-Nitrophenol	1330	951	71	28 - 110	J
Acenaphthene	667	387	58	38 - 110	
Acenaphthylene	667	397	59	40 - 110	
Acetophenone	667	357	54	40 - 110	
Anthracene	667	521	78	48 - 110	
Atrazine	1330	1240	93	66 - 127	
Benzaldehyde	1330	798	60	32 - 110	
Benzo[a]anthracene	667	547	82	50 - 110	
Benzo[a]pyrene	667	502	75	44 - 110	
Benzo[b]fluoranthene	667	546	82	43 - 110	
Benzo[g,h,i]perylene	667	506	76	51 - 110	
Benzo[k]fluoranthene	667	519	78	38 - 105	
Bis(2-chloroethoxy)methane	667	357	54	32 - 110	
Bis(2-chloroethyl)ether	667	330	50	34 - 110	
Bis(2-ethylhexyl) phthalate	667	640	96	50 - 110	
Butyl benzyl phthalate	667	606	91	51 - 110	
Caprolactam	1330	1170	88	44 - 114	
Carbazole	667	530	79	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Control Sample - Batch: 240-187404

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187404/24-A	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-187404	Lab File ID:	50709005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 1016	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	554	83	50 - 110	
Dibenz(a,h)anthracene	667	512	77	51 - 110	
Dibenzofuran	667	416	62	43 - 110	
Diethyl phthalate	667	554	83	52 - 110	
Dimethyl phthalate	667	497	75	50 - 110	
Di-n-butyl phthalate	667	588	88	51 - 110	
Di-n-octyl phthalate	667	533	80	48 - 110	
Fluoranthene	667	541	81	51 - 110	
Fluorene	667	441	66	46 - 110	
Hexachlorobenzene	667	471	71	43 - 110	
Hexachlorobutadiene	667	360	54	29 - 110	
Hexachlorocyclopentadiene	667	96.1	14	12 - 110	J
Hexachloroethane	667	313	47	30 - 110	J
Indeno[1,2,3-cd]pyrene	667	522	78	50 - 110	
Isophorone	667	386	58	36 - 110	
Naphthalene	667	348	52	36 - 110	
Nitrobenzene	667	350	53	32 - 110	
N-Nitrosodi-n-propylamine	667	383	57	38 - 110	
N-Nitrosodiphenylamine	1330	1000	75	46 - 110	
Pentachlorophenol	1330	893	67	10 - 110	
Phenol	667	335	50	38 - 110	
Phenanthrene	667	485	73	49 - 110	
Pyrene	667	521	78	49 - 110	
3 & 4 Methylphenol	667	377	57	40 - 110	J

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	56	24 - 110
2-Fluorophenol (Surr)	52	24 - 110
Nitrobenzene-d5 (Surr)	57	20 - 110
Phenol-d5 (Surr)	54	26 - 110
Terphenyl-d14 (Surr)	81	36 - 110
2,4,6-Tribromophenol (Surr)	61	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187404

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-M-3-D MS	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-187404	Lab File ID:	50709034.D
Dilution:	6.667	Leach Batch:	N/A	Initial Weight/Volume:	30.38 g
Analysis Date:	07/09/2015 1555			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-M-3-E MSD	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-187404	Lab File ID:	50709035.D
Dilution:	6.667	Leach Batch:	N/A	Initial Weight/Volume:	29.97 g
Analysis Date:	07/09/2015 1619			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	67	64	32 - 110	3	32	J	J
2,2'-oxybis[1-chloropropane]	78	71	11 - 110	8	42	J	J
2,4-Dichlorophenol	62	61	10 - 110	1	34	J	J
2,4-Dimethylphenol	0	25	10 - 110	NC	31	F1	J
2,4-Dinitrophenol	57	57	10 - 110	1	99	J	J
2,4-Dinitrotoluene	63	61	32 - 110	2	30	J	J
2,6-Dinitrotoluene	69	67	35 - 110	2	30	J	J
2-Chloronaphthalene	71	67	28 - 110	4	30	J	J
2,4,5-Trichlorophenol	57	36	10 - 117	44	99	J	J
2-Chlorophenol	55	60	10 - 110	10	47	J	J
2,4,6-Trichlorophenol	51	37	10 - 110	30	38	J	J
2-Methylnaphthalene	67	63	10 - 133	2	42	J	J
2-Methylphenol	45	45	24 - 110	3	51	J	J
2-Nitroaniline	78	74	39 - 110	4	31	J	J
2-Nitrophenol	68	63	10 - 110	6	49	J	J
3,3'-Dichlorobenzidine	21	26	10 - 110	24	56	J	J
3-Nitroaniline	54	61	10 - 110	13	30	J	J
4,6-Dinitro-2-methylphenol	33	32	10 - 110	1	55	J	J
4-Bromophenyl phenyl ether	81	70	33 - 110	13	30	J	J
4-Chloro-3-methylphenol	0	37	25 - 110	NC	54	F1	J
4-Chloroaniline	41	47	10 - 110	16	36	J	J
4-Chlorophenyl phenyl ether	75	70	32 - 110	6	30	J	J
4-Nitroaniline	61	64	10 - 110	5	48	J	J
4-Nitrophenol	49	42	10 - 113	14	49	J	J
Acenaphthene	7	7	22 - 110	1	99	J F1	J F1
Acenaphthylene	72	68	24 - 110	4	99	J	J
Acetophenone	85	75	31 - 110	12	43	J	J
Anthracene	-25	-21	20 - 110	4	99	J F1	J F1
Atrazine	91	86	45 - 118	5	30	J	J
Benzaldehyde	92	80	23 - 110	13	42	J	J
Benzo[a]anthracene	-173	-158	10 - 122	6	99	J F1	J F1
Benzo[a]pyrene	-117	-111	10 - 110	2	99	J F1	J F1

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187404

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-M-3-D MS	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-187404	Lab File ID:	50709034.D
Dilution:	6.667	Leach Batch:	N/A	Initial Weight/Volume:	30.38 g
Analysis Date:	07/09/2015 1555			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-M-3-E MSD	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-187404	Lab File ID:	50709035.D
Dilution:	6.667	Leach Batch:	N/A	Initial Weight/Volume:	29.97 g
Analysis Date:	07/09/2015 1619			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	-195	-188	12 - 118	2	99	J 4	J 4
Benzo[g,h,i]perylene	-46	-50	10 - 117	5	99	J F1	J F1
Benzo[k]fluoranthene	-48	-37	10 - 121	7	99	J F1	J F1
Bis(2-chloroethoxy)methane	74	73	26 - 110	0	37	J	J
Bis(2-chloroethyl)ether	76	65	21 - 110	14	55	J	J
Bis(2-ethylhexyl) phthalate	75	68	40 - 110	6	30	J	J
Butyl benzyl phthalate	102	90	44 - 110	10	30	J	J
Caprolactam	89	90	10 - 134	2	32	J	J
Carbazole	8	11	34 - 110	3	30	J F1	J F1
Chrysene	-164	-154	10 - 125	4	99	J F1	J F1
Dibenz(a,h)anthracene	23	23	14 - 113	0	99	J	J
Dibenzofuran	46	41	29 - 110	5	30	J	J
Diethyl phthalate	79	75	42 - 110	3	30	J	J
Dimethyl phthalate	79	73	41 - 110	7	30	J	J
Di-n-butyl phthalate	72	61	43 - 110	11	30	J	J
Di-n-octyl phthalate	112	107	24 - 119	3	30	J	J
Fluoranthene	-478	-446	10 - 110	9	99	J 4	J 4
Fluorene	14	9	23 - 110	7	99	J F1	J F1
Hexachlorobenzene	70	68	34 - 110	3	30	J	J
Hexachlorobutadiene	67	69	25 - 110	3	34	J	J
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	30	23	12 - 110	28	50	J	J
Indeno[1,2,3-cd]pyrene	-30	-37	10 - 114	8	99	J F1	J F1
Isophorone	81	74	29 - 110	8	38	J	J
Naphthalene	6	2	10 - 111	5	99	J F1	J F1
Nitrobenzene	73	73	23 - 110	1	41	J	J
N-Nitrosodi-n-propylamine	83	76	26 - 110	7	42	J	J
N-Nitrosodiphenylamine	56	58	22 - 110	6	30	J	J
Phenol	70	68	17 - 110	1	53	J	J
Phenanthrene	-327	-307	10 - 166	9	99	J 4	J 4
Pyrene	-364	-342	10 - 147	7	99	J 4	J 4
3 & 4 Methylphenol	47	58	25 - 110	24	50	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187404

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-M-3-D MS	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-187404	Lab File ID:	50709034.D
Dilution:	6.667	Leach Batch:	N/A	Initial Weight/Volume:	30.38 g
Analysis Date:	07/09/2015 1555			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-M-3-E MSD	Analysis Batch:	240-188479	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-187404	Lab File ID:	50709035.D
Dilution:	6.667	Leach Batch:	N/A	Initial Weight/Volume:	29.97 g
Analysis Date:	07/09/2015 1619			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1013			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	85	78	24 - 110
2-Fluorophenol (Surr)	63	61	24 - 110
Nitrobenzene-d5 (Surr)	83	72	20 - 110
Phenol-d5 (Surr)	71	70	26 - 110
Terphenyl-d14 (Surr)	80	75	36 - 110
2,4,6-Tribromophenol (Surr)	43	30	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Blank - Batch: 240-188035

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-188035/18-A	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-188035	Lab File ID:	50708005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1038	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1145			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.0040
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	76	30 - 110
2-Fluorophenol (Surr)	67	20 - 110
Nitrobenzene-d5 (Surr)	78	28 - 110
Phenol-d5 (Surr)	58	21 - 110
Terphenyl-d14 (Surr)	83	48 - 110
2,4,6-Tribromophenol (Surr)	82	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Control Sample - Batch: 240-188035

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-188035/19-A	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-188035	Lab File ID:	50708006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1103	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1145			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0432	54	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0607	76	54 - 110	
Pyridine	0.0800	0.0500	62	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0608	76	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0632	79	46 - 110	
2-Methylphenol	0.0800	0.0636	79	44 - 111	
Hexachlorobenzene	0.0800	0.0712	89	50 - 110	
Hexachlorobutadiene	0.0800	0.0419	52	34 - 110	
Hexachloroethane	0.0800	0.0387	48	41 - 110	
Nitrobenzene	0.0800	0.0590	74	40 - 110	
Pentachlorophenol	0.160	0.136	85	12 - 110	
3 & 4 Methylphenol	0.0800	0.0649	81	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	72	30 - 110
2-Fluorophenol (Surr)	63	20 - 110
Nitrobenzene-d5 (Surr)	76	28 - 110
Phenol-d5 (Surr)	55	21 - 110
Terphenyl-d14 (Surr)	81	48 - 110
2,4,6-Tribromophenol (Surr)	84	23 - 110

Method Blank - Batch: 240-186852 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-186852/1-A	Analysis Batch:	240-186873	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186852	Lab File ID:	Y0062609.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/26/2015 1144	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186852 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-186852/2-A	Analysis Batch:	240-186873	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186852	Lab File ID:	Y0062610.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/26/2015 1218	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186852/14-A	Analysis Batch:	240-186873	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186852	Lab File ID:	Y0062623.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/26/2015 1958	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0555			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	101	94	80 - 120	7	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Blank - Batch: 240-187228

Method: 8015B
Preparation: 3540C

Lab Sample ID:	MB 240-187228/9-A	Analysis Batch:	240-187440	Instrument ID:	A2HP5F
Client Matrix:	Solid	Prep Batch:	240-187228	Lab File ID:	P5F63007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/30/2015 1526	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/29/2015 1140			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Diesel Range Organics [C10 - C28]	ND		6.4	17

Surrogate	% Rec	Acceptance Limits
o-Terphenyl (Surr)	70	40 - 160

Lab Control Sample - Batch: 240-187228

Method: 8015B
Preparation: 3540C

Lab Sample ID:	LCS 240-187228/10-A	Analysis Batch:	240-187440	Instrument ID:	A2HP5F
Client Matrix:	Solid	Prep Batch:	240-187228	Lab File ID:	P5F63008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/30/2015 1557	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/29/2015 1140			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Diesel Range Organics [C10 - C28]	83.3	63.9	77	52 - 120	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl (Surr)	76	40 - 160

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Blank - Batch: 240-187825

Method: 8015B
Preparation: 3540C

Lab Sample ID:	MB 240-187825/8-A	Analysis Batch:	240-188024	Instrument ID:	A2HP5F
Client Matrix:	Solid	Prep Batch:	240-187825	Lab File ID:	P5F70608.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/06/2015 1526	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1216			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Diesel Range Organics [C10 - C28]	ND		6.4	17

Surrogate	% Rec	Acceptance Limits
o-Terphenyl (Surr)	70	40 - 160

Lab Control Sample - Batch: 240-187825

Method: 8015B
Preparation: 3540C

Lab Sample ID:	LCS 240-187825/9-A	Analysis Batch:	240-188024	Instrument ID:	A2HP5F
Client Matrix:	Solid	Prep Batch:	240-187825	Lab File ID:	P5F70609.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/06/2015 1558	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1216			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Diesel Range Organics [C10 - C28]	83.3	60.2	72	52 - 120	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl (Surr)	68	40 - 160

Method Blank - Batch: 240-187060

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-187060/21-A	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-187060	Lab File ID:	P14R062908.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 1651	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-187060

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-187060/22-A	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-187060	Lab File ID:	P14R062909.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 1718	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-187060/23-A	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-187060	Lab File ID:	P14R062929.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/30/2015 0227	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	87	105	70 - 120	19	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Blank - Batch: 240-186943

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-186943/1-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/30/2015 0654	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	0.722	J	0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	ND		0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	ND		5.2	500
Manganese	0.103	J	0.084	1.5
Sodium	ND		19	500
Nickel	1.03	J	0.080	4.0
Potassium	ND		6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Vanadium	0.326	J	0.20	5.0
Selenium	ND		0.34	0.50
Zinc	ND		0.56	2.0
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Control Sample - Batch: 240-186943

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-186943/2-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/30/2015 0658	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	194	97	80 - 120	
Antimony	50.0	48.2	96	80 - 120	
Barium	200	188	94	80 - 120	
Beryllium	5.00	4.83	97	80 - 120	
Cadmium	5.00	4.87	97	80 - 120	
Calcium	5000	4880	98	80 - 120	
Chromium	20.0	18.9	95	80 - 120	
Cobalt	50.0	48.0	96	80 - 120	
Copper	25.0	24.1	96	80 - 120	
Iron	100	101	101	80 - 120	
Magnesium	5000	4830	97	80 - 120	
Manganese	50.0	48.4	97	80 - 120	
Sodium	5000	4910	98	80 - 120	
Nickel	50.0	48.5	97	80 - 120	
Potassium	5000	4840	97	80 - 120	
Silver	5.00	4.89	98	80 - 120	
Arsenic	200	195	97	80 - 120	
Lead	50.0	47.0	94	80 - 120	
Vanadium	50.0	47.8	96	80 - 120	
Selenium	200	192	96	80 - 120	
Zinc	50.0	48.9	98	80 - 120	
Thallium	200	190	95	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186943

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-52462-I-1-B MS
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/30/2015 0722
Prep Date: 06/26/2015 1033
Leach Date: N/A

Analysis Batch: 240-187366
Prep Batch: 240-186943
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9063015A.asc
Initial Weight/Volume: 1.27 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-52462-I-1-C MSD
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/30/2015 0726
Prep Date: 06/26/2015 1033
Leach Date: N/A

Analysis Batch: 240-187366
Prep Batch: 240-186943
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9063015A.asc
Initial Weight/Volume: 1.27 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	433	788	75 - 125	15	20	4	4
Antimony	52	57	75 - 125	9	20	F1	F1
Barium	80	83	75 - 125	4	20		
Beryllium	84	88	75 - 125	4	20		
Cadmium	85	87	75 - 125	3	20		
Calcium	-228	-166	75 - 125	13	20	4	4
Chromium	75	81	75 - 125	5	20		
Cobalt	89	98	75 - 125	9	20		
Copper	73	106	75 - 125	24	20	F1	F2
Iron	-1902	-1017	75 - 125	10	20	4	4
Magnesium	10	36	75 - 125	11	20	F1	F1
Manganese	-194	-56	75 - 125	17	20	4	4
Sodium	88	92	75 - 125	5	20		
Nickel	85	98	75 - 125	11	20		
Potassium	88	94	75 - 125	6	20		
Silver	90	93	75 - 125	3	20		
Arsenic	87	91	75 - 125	4	20		
Lead	72	72	75 - 125	0	20	F1	F1
Vanadium	81	90	75 - 125	7	20		
Selenium	86	90	75 - 125	4	20		
Zinc	70	75	75 - 125	3	20	F1	
Thallium	91	94	75 - 125	4	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Blank - Batch: 240-186969

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-186969/1-A	Analysis Batch:	240-187203	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186969	Lab File ID:	I9062915A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/29/2015 1550	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1149				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	0.506	J	0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	ND		0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	ND		5.2	500
Manganese	ND		0.084	1.5
Sodium	ND		19	500
Nickel	ND		0.080	4.0
Potassium	ND		6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Vanadium	ND		0.20	5.0
Selenium	ND		0.34	0.50
Zinc	ND		0.56	2.0
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Control Sample - Batch: 240-186969

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-186969/2-A	Analysis Batch:	240-187203	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186969	Lab File ID:	I9062915A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/29/2015 1554	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1149				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	187	94	80 - 120	
Antimony	50.0	47.3	95	80 - 120	
Barium	200	184	92	80 - 120	
Beryllium	5.00	4.72	94	80 - 120	
Cadmium	5.00	4.70	94	80 - 120	
Calcium	5000	4740	95	80 - 120	
Chromium	20.0	18.7	94	80 - 120	
Cobalt	50.0	47.2	94	80 - 120	
Copper	25.0	23.6	94	80 - 120	
Iron	100	98.1	98	80 - 120	
Magnesium	5000	4670	93	80 - 120	
Manganese	50.0	47.2	94	80 - 120	
Sodium	5000	4760	95	80 - 120	
Nickel	50.0	47.8	96	80 - 120	
Potassium	5000	4750	95	80 - 120	
Silver	5.00	4.72	94	80 - 120	
Arsenic	200	191	96	80 - 120	
Lead	50.0	46.2	92	80 - 120	
Vanadium	50.0	47.2	94	80 - 120	
Selenium	200	191	96	80 - 120	
Zinc	50.0	48.8	98	80 - 120	
Thallium	200	189	94	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186969

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-52439-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/29/2015 1610
Prep Date: 06/26/2015 1149
Leach Date: N/A

Analysis Batch: 240-187203
Prep Batch: 240-186969
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9062915A.asc
Initial Weight/Volume: 1.27 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-52439-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/29/2015 1614
Prep Date: 06/26/2015 1149
Leach Date: N/A

Analysis Batch: 240-187203
Prep Batch: 240-186969
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9062915A.asc
Initial Weight/Volume: 1.27 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	919	1286	75 - 125	9	20	4	4
Antimony	43	39	75 - 125	9	20	F1	F1
Barium	92	79	75 - 125	10	20		
Beryllium	87	86	75 - 125	1	20		
Cadmium	87	85	75 - 125	2	20		
Calcium	64	73	75 - 125	2	20	F1	F1
Chromium	92	90	75 - 125	1	20		
Cobalt	97	95	75 - 125	2	20		
Copper	306	86	75 - 125	89	20	F1	F2
Iron	2217	1831	75 - 125	3	20	4	4
Magnesium	101	103	75 - 125	1	20		
Manganese	343	275	75 - 125	6	20	4	4
Sodium	89	87	75 - 125	2	20		
Nickel	99	97	75 - 125	1	20		
Potassium	93	103	75 - 125	8	20		
Silver	89	86	75 - 125	4	20		
Arsenic	89	87	75 - 125	2	20		
Lead	83	79	75 - 125	4	20		
Vanadium	98	93	75 - 125	4	20		
Selenium	88	86	75 - 125	2	20		
Zinc	101	94	75 - 125	5	20		
Thallium	95	93	75 - 125	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

TCLP SPLPE Leachate Blank - Batch: 240-187383

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-187303/1-B	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1232	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.00277	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.00101	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	0.00124	J	0.00046	0.015
Nickel	0.00321	J	0.00076	0.040
Potassium	0.369	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00643	J	0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Blank - Batch: 240-187383

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-187383/2-A	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1236	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Nickel	ND		0.00076	0.040
Potassium	ND		0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	0.00287	J	0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Lab Control Sample - Batch: 240-187383

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-187383/3-A	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1240	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	1.97	98	50 - 150	
Antimony	0.500	0.493	99	50 - 150	
Barium	2.00	1.92	96	50 - 150	J
Beryllium	0.0500	0.0493	99	50 - 150	
Cadmium	0.0500	0.0529	106	50 - 150	J
Calcium	50.0	49.7	99	50 - 150	
Chromium	0.200	0.200	100	50 - 150	J
Cobalt	0.500	0.518	104	50 - 150	
Copper	0.250	0.251	100	50 - 150	J
Iron	1.00	1.00	100	50 - 150	
Magnesium	50.0	49.1	98	50 - 150	
Manganese	0.500	0.497	99	50 - 150	
Nickel	0.500	0.522	104	50 - 150	
Potassium	50.0	51.7	103	50 - 150	
Silver	0.0500	0.0550	110	50 - 150	J
Arsenic	2.00	2.19	109	50 - 150	
Lead	0.500	0.474	95	50 - 150	J
Vanadium	0.500	0.519	104	50 - 150	
Selenium	2.00	2.22	111	50 - 150	
Zinc	0.500	0.559	112	50 - 150	J
Thallium	2.00	1.92	96	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187383

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52375-A-1-G MS ^5	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1301			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

MSD Lab Sample ID:	240-52375-A-1-H MSD ^5	Analysis Batch:	240-187549	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187383	Lab File ID:	I9070115A.asc
Dilution:	5.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1305			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 0909				
Leach Date:	06/29/2015 1700				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	94	91	75 - 125	4	20		
Antimony	97	96	75 - 125	1	20	J	J
Barium	96	97	75 - 125	2	20	J	J
Beryllium	98	98	75 - 125	0	20		
Cadmium	105	105	75 - 125	0	20		
Calcium	79	82	75 - 125	0	20	4	4
Chromium	97	97	75 - 125	1	20		
Cobalt	101	101	75 - 125	0	20		
Copper	99	99	75 - 125	0	20	J	J
Iron	100	101	75 - 125	1	20		
Magnesium	98	98	75 - 125	1	20		
Manganese	100	100	75 - 125	0	20		
Nickel	101	102	75 - 125	1	20		
Potassium	100	101	75 - 125	0	20		
Silver	90	104	75 - 125	15	20	J	J
Arsenic	106	106	75 - 125	0	20		
Lead	98	98	75 - 125	1	20		
Vanadium	101	106	75 - 125	5	20		
Selenium	105	104	75 - 125	0	20	J	J
Thallium	98	99	75 - 125	0	20	J	J

TCLP SPLPE Leachate Blank - Batch: 240-187385

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-187303/1-C	Analysis Batch:	240-187645	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1145	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-187385

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-187385/2-A	Analysis Batch:	240-187645	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1147	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-187385

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-187385/3-A	Analysis Batch:	240-187645	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1152	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00480	96	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187385

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-52375-A-1-J MS	Analysis Batch:	240-187645	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1155			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

MSD Lab Sample ID:	240-52375-A-1-K MSD	Analysis Batch:	240-187645	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187385	Lab File ID:	070115AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187303	Initial Weight/Volume:	50 mL
Analysis Date:	07/01/2015 1156			Final Weight/Volume:	50 mL
Prep Date:	06/30/2015 1400				
Leach Date:	06/29/2015 1700				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	98	97	80 - 120	1	20		

Method Blank - Batch: 240-186944

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-186944/1-A	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 0907	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-186944

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-186944/2-A	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 0909	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.819	98	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186944

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52462-I-1-E MS	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.56 g
Analysis Date:	06/30/2015 0913			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52462-I-1-F MSD	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.56 g
Analysis Date:	06/30/2015 0915			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	114	108	80 - 120	5	20		

Method Blank - Batch: 240-186987

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-186987/1-A	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 0951	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-186987

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-186987/2-A	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 0954	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.847	102	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186987

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52439-1	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.58 g
Analysis Date:	06/30/2015 0958			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52439-1	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186987	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.58 g
Analysis Date:	06/30/2015 1000			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	105	111	80 - 120	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Method Blank - Batch: 240-187654

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-187654/9-A	Analysis Batch:	240-187854	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-187654	Lab File ID:	187654.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	07/02/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1414				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.27	0.80

Lab Control Sample Insoluble - Batch: 240-187654

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-187654/11-A	Analysis Batch:	240-187854	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-187654	Lab File ID:	187654.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	07/02/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1414				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	686	107	75 - 125	

Lab Control Sample Soluble - Batch: 240-187654

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-187654/10-A	Analysis Batch:	240-187854	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-187654	Lab File ID:	187654.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	07/02/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1414				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	18.4	92	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52439-1

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual

Duplicate - Batch: 240-186724

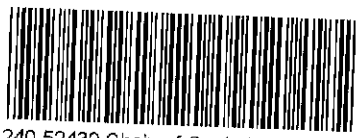
Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52439-9	Analysis Batch:	240-186724	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/25/2015 1548	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	88	88	0.1	20	
Percent Moisture	12	12	0.7	20	

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-52439 Chain of Custody

4101 Shuffel Street N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

TestAmerica Canton

4101 Shuffel Street, N. W.

North Canton, OH 44720

Phone: 330 497 9396 Fax: 330 497 [illegible]

28/C3.8

24/C3.4

Chain of Custody Record

103961

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/23/15	COC No:
Company Name: ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Pollock	Carrier:	1 of 2 COCs
Address: 420 First Avenue North, Ste 726	Analysis Turnaround Time			Sampler: Tom Dermon
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9479	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul MN	☐ 2 days			Job / SDG No.: 24006638
P O # MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	SVOCs (8270)	GRO (w/ Mod method)	DRO (w/ Mod Method)	TAL Metals (6010)	Hexavalent Chromium (7196A)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP TAL metals (1311/6010)	moisture content	Sample Specific Notes:
ASB-1007_62-65(20150623)	6/23/15	1225	G	SO	14			X	X	X	X	X		X	X	X	X	
ASB-1007_67-70(20150623)	6/23/15	1300	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1007_75-77(20150623)	6/23/15	1330	G	SO	11			X	X	X	X	X		X	X	X	X	
[illegible]501(20150623)	6/23/15	—	G	WT	2			X		X								

Page 207 of 210

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other None

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown	☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Level IV

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____
Relinquished by: Kelly Hoehn	Company: ARCADIS	Date/Time: 6/23/15 1530	Received by:	Company: TA	Date/Time: 6-23-15 1530
Relinquished by:	Company: TA	Date/Time: 6-23-15 1914	Received by:	Company: TA	Date/Time: 6/24/15 930
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

07/30/2015

3.0/C4.0
3.2/C4.2
3.6/C4.6

TestAmerica Canton

4101 Shuffel Street, N. N.
North Canton, OH 44720
Phone: 330 497 9396 Fax: 330 497 2

Chain of Custody Record

103960

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/23/15	COC No.
Company Name: ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:	1 of 2 COCs
Address: 430 First Avenue North, Ste 720	Analysis Turnaround Time			Sampler: Tom Darmon
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAA	☐ 1 week			
Site: St Paul MN	☐ 2 days			Job / SDG No.: 240006638
P O # MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	SVOCs (8270)	GRO (Wi Mod Method)	DRO (Wi Mod Method)	TAL metals (6010) / Hexavalent Chromium (7196A)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP TAL metals (1311/6010)	Moisture content	Sample Specific Notes
ASB-1006_39-42(20150622)	6/22/15	1510	G	SO	11			X	X	X	X	X	X	X	X	X	
ASB-1006_52-54(20150622)	6/22/15	1545	G	SO	10			X	X	X	X	X	X	X	X	X	
ASB-1006_57-60(20150622)	6/22/15	1610	G	SO	11			X	X	X	X	X	X	X	X	X	
ASB-1006_65-67(20150622)	6/22/15	1650	G	SO	11			X	X	X	X	X	X	X	X	X	
ASB-1006_78-80(20150622)	6/22/15	1710	G	SO	11			X	X	X	X	X	X	X	X	X	
ASB-1007_22-25(20150623)	6/23/15	1110	G	SO	14			X	X	X	X	X	X	X	X	X	
FB-01(20150623)	6/23/15	—															

Preservation Used: 1= Ice, 2= HCL, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other Water

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Level IV

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____

Relinquished by:	Company: ARCADIS	Date/Time: 6/23/15 1530	Received by	Company: TAcanc	Date/Time: 6-23-15 1536
Relinquished by:	Company: TAcanc	Date/Time: 6-23-15	Received by:	Company: TA	Date/Time: 6-24-15 930
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative — Login # : 52439
Canton Facility

Client Arcadis — Site Name _____ — Cooler unpacked by:

Cooler Received on 6-24-15 — Opened on 6-24-15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A (CF +1.0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C~~

~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C~~

☑ See Multiple Cooler Form

IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 5	Yes	No
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Were sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC432654
12. Were VOAs on the COC?	Yes	No
13. Were air bubbles >6 mm in any VOA vials?	Yes	No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES — Samples processed by:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative
Canton Facility

Login # : 52439

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	A	3.0	4.0	Ice
"	"	3.2	4.2	"
"	"	3.6	4.6	"
"	"	2.8	3.8	"
"	"	2.4	3.4	"

July 11, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52439-1
Sample date: 2015-06-22 2015-06-23
Report received by CADENA: 2015-07-10
Initial Data Verification completed by CADENA: 2015-07-11

The following minor QC exceptions or missing information were noted:

WI-GRO and WI-DRO QC batch did not include MS recovery data and surrogate recoveries were not available for samples or QC.

GCMS VOC QC batch 186967 did not include MS recovery data due to insufficient sample volume available for creating MS/MSD's according to laboratory submittal case narrative.

GCMS VOC surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results for client samples -006 and -009 totals analyses. Client sample -011 surrogate recoveries were outliers biased high for 2 out of 4 surrogates so detected GCMS VOC analytes should be considered to be estimated and qualified with J flags with non-detect results not requiring qualification.

GCMS SVOC surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results for client samples -006 and -009 totals analyses.

GCMS SVOC QC batch and Metals QC batch 186943, 187383 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

Metals method blanks had detections below the RL in QC batch 186969 for total zinc and in QC batch 187383 for TCLP barium, chromium, manganese, nickel, potassium, arsenic and vanadium and in QC batch 186943 for total barium, manganese, nickel and vanadium. Metals results should be considered to be non-detect at the RL and qualified with UB flags for the following samples and analytes:
TCLP CHROMIUM - UB flags - -001, -002, -003, -004, -005, -006, -008, -009 and -010.
TCLP ARSENIC - UB flags - -001, -002, -003, -004, -005, -006, -008, -009 and -010.
TCLP VANADIUM - UB flags - -009 and -010.

Metals sample -001 MS/MSD recoveries were not considered to be statistically reliable due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule) so were not used to qualify results for aluminum, iron and manganese. MS/MSD recoveries were outliers biased low for antimony and calcium and MS or MSD recovery but not both along with the MS/MSD RPD were outliers with the recovery biased high for copper. Client sample -001 total antimony, calcium and copper results should be considered to be estimated and qualified with J flags if detected and UJ flags if non-detect.

11 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52439-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Non-Halogenated Cmpds by GC/FID	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240524391	ASB-1006_39-42(20150622)	6/22/2015	3:10:00	X	X	X	X		X	X	X	X
2405243910	ASB-1007_75-77(20150623)	6/23/2015	1:30:00	X	X		X	X	X	X	X	X
2405243911	MB-01(20150623)	6/23/2015	12:00:00	X			X					
240524392	ASB-1006_52-54(20150622)	6/22/2015	3:45:00	X	X	X	X		X	X	X	X
240524393	ASB-1006_57-60(20150622)	6/22/2015	4:10:00	X	X	X	X		X	X	X	X
240524394	ASB-1006_65-67(20150622)	6/22/2015	4:50:00	X	X		X	X	X	X	X	X
240524395	ASB-1006_78-80(20150622)	6/22/2015	5:10:00	X	X		X	X	X	X	X	X
240524396	ASB-1007_22-25(20150623)	6/23/2015	11:10:00	X	X		X	X	X	X	X	X
240524397	MB-01(20150623)	6/23/2015	12:00:00	X			X					
240524398	ASB-1007_62-65(20150623)	6/23/2015	12:25:00	X	X	X	X		X	X	X	X
240524399	ASB-1007_67-70(20150623)	6/23/2015	1:00:00	X	X		X	X	X	X	X	X

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52439-1

			Sample Name:	ASB-1006_39-42(20150622)				ASB-1007_75-77(20150623)				MB-01(20150623)				ASB-1006_52-54(20150622)				ASB-1006_57-60(20150622)			
			Lab Sample ID:	240524391				2405243910				2405243911				240524392				240524393			
			Sample Date:	6/22/2015				6/23/2015				6/23/2015				6/22/2015				6/22/2015			
	Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																							
	OSW-8260B																						
	Methyl acetate	79-20-9										660	500	ug/kg	J								
	Toluene	108-88-3										11	250	ug/kg	J								
Metals																							
	OSW-6010B																						
	Total Antimony	7440-36-0		ND	1.1	mg/kg	UJ																
	TCLP Arsenic	7440-38-2		0.0054	0.50	mg/l	UB	0.0089	0.50	mg/l	UB					0.0083	0.50	mg/l	UB	0.011	0.50	mg/l	UB
	Total Calcium	7440-70-2		13000	530	mg/kg	J																
	TCLP Chromium	7440-47-3		0.0030	0.50	mg/l	UB	0.0021	0.50	mg/l	UB					0.0032	0.50	mg/l	UB	0.0029	0.50	mg/l	UB
	Total Copper	7440-50-8		12	2.7	mg/kg	J																
	TCLP Vanadium	7440-62-2						0.0024	0.050	mg/l	UB												

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52439-1

	Sample Name:	ASB-1006_65-67(20150622)					ASB-1006_78-80(20150622)					ASB-1007_22-25(20150623)					ASB-1007_62-65(20150623)					ASB-1007_67-70(20150623)			
	Lab Sample ID:	240524394					240524395					240524396					240524398					240524399			
	Sample Date:	6/22/2015					6/22/2015					6/23/2015					6/23/2015					6/23/2015			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**		**Result**	**Report Limit**	**Units**	**Valid Qualifier**		**Result**	**Report Limit**	**Units**	**Valid Qualifier**		**Result**	**Report Limit**	**Units**	**Valid Qualifier**		**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC																									
OSW-8260B																									
Methyl acetate	79-20-9																								
Toluene	108-88-3																								
Metals																									
OSW-6010B																									
Total Antimony	7440-36-0																								
TCLP Arsenic	7440-38-2	0.012	0.50	mg/l	UB		0.0077	0.50	mg/l	UB		0.011	0.50	mg/l	UB		0.011	0.50	mg/l	UB		0.014	0.50	mg/l	UB
Total Calcium	7440-70-2																								
TCLP Chromium	7440-47-3	0.0038	0.50	mg/l	UB		0.0030	0.50	mg/l	UB		0.0037	0.50	mg/l	UB		0.0031	0.50	mg/l	UB		0.0047	0.50	mg/l	UB
Total Copper	7440-50-8																								
TCLP Vanadium	7440-62-2																					0.0029	0.050	mg/l	UB

ANALYTICAL REPORT

Job Number: 240-52462-2

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
John McFadden
Project Manager I
7/13/2015 5:15 PM

Designee for
Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
07/13/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52462-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/25/2015 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 7 coolers at receipt time were 1.8º C, 2.6º C, 3.2º C, 3.8º C, 3.8º C, 4.4º C and 4.8º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13) and ASB-1008_70-72(20150624) (240-52462-14) were analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 07/01/2015 and analyzed on 07/04/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13), ASB-1008_70-72(20150624) (240-52462-14) and MB-01(20150624) (240-52462-15) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/27/2015 and analyzed on 07/01/2015.

1,2-Dichloroethane-d4 (Surr), 4-Bromofluorobenzene (Surr) and Toluene-d8 (Surr) failed the surrogate recovery criteria high for ASB-1008_30-33(20150624) (240-52462-12). 1,2-Dichloroethane-d4 (Surr), 4-Bromofluorobenzene (Surr) and Toluene-d8 (Surr) failed the surrogate recovery criteria high for ASB-1008_70-72(20150624) (240-52462-14).

Sample ASB-1008_30-33(20150624) (240-52462-12)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-187043 and analytical batch 240-187606 on these samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13), ASB-1008_70-72(20150624) (240-52462-14) and MB-01(20150624) (240-52462-15) .

Surrogate recovery for the following sample was outside of acceptance limits: ASB-1008_70-72(20150624) (240-52462-14). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)
Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13) and ASB-1008_70-72(20150624) (240-52462-14) were analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 06/30/2015, prepared on 07/01/2015 and analyzed on 07/06/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)
Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13) and ASB-1008_70-72(20150624) (240-52462-14) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/30/2015 and analyzed on 07/08/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl (Surr), 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr), Phenol-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for ASB-1008_30-33(20150624) (240-52462-12).

Samples ASB-1008_30-33(20150624) (240-52462-12)[1000X] and ASB-1008_52-54(20150624) (240-52462-13)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO
Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13), ASB-1008_70-72(20150624) (240-52462-14) and MB-01(20150624) (240-52462-15) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared on 06/26/2015 and analyzed on 06/27/2015 and 06/29/2015.

Sample ASB-1008_30-33(20150624) (240-52462-12)[20X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the Gasoline Range Organics (GRO) mix (i.e., Naphthalene): ASB-1008_30-33(20150624) (240-52462-12) and ASB-1008_70-72(20150624) (240-52462-14).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO
Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13) and ASB-1008_70-72(20150624) (240-52462-14) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/27/2015 and analyzed on 06/30/2015.

Sample ASB-1008_30-33(20150624) (240-52462-12)[200X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WIS DRO mix : ASB-1008_30-33(20150624) (240-52462-12).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)
Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13) and ASB-1008_70-72(20150624) (240-52462-14) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 06/30/2015, prepared on 07/01/2015 and analyzed on 07/02/2015.

Iron, Magnesium and Potassium were detected in method blank MB 240-187567/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Several analytes were detected in method blank LB 240-187499/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13) and ASB-1008_70-72(20150624) (240-52462-14) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/26/2015 and analyzed on 06/30/2015.

Barium, Manganese, Nickel and Vanadium were detected in method blank MB 240-186943/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY

Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13) and ASB-1008_70-72(20150624) (240-52462-14) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 06/30/2015, prepared on 07/01/2015 and analyzed on 07/02/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13) and ASB-1008_70-72(20150624) (240-52462-14) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/26/2015 and analyzed on 06/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM

Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13) and ASB-1008_70-72(20150624) (240-52462-14) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 07/06/2015 and analyzed on 07/07/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM

Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13) and ASB-1008_70-72(20150624) (240-52462-14) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 07/02/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples ASB-1008_30-33(20150624) (240-52462-12), ASB-1008_52-54(20150624) (240-52462-13) and ASB-1008_70-72(20150624) (240-52462-14) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/26/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-12	**ASB-1008_30-33(20150624)**					
Naphthalene		390000		25000	ug/Kg	8260B
1,2,4-Trimethylbenzene		1300	J	25000	ug/Kg	8260B
1,1'-Biphenyl		25000	J	350000	ug/Kg	8270C
2-Methylnaphthalene		80000	J	350000	ug/Kg	8270C
Acenaphthene		120000	J	350000	ug/Kg	8270C
Acenaphthylene		7100	J	350000	ug/Kg	8270C
Anthracene		220000	J	350000	ug/Kg	8270C
Benzo[a]anthracene		250000	J	350000	ug/Kg	8270C
Benzo[a]pyrene		200000	J	350000	ug/Kg	8270C
Benzo[b]fluoranthene		240000	J	350000	ug/Kg	8270C
Benzo[g,h,i]perylene		110000	J	350000	ug/Kg	8270C
Benzo[k]fluoranthene		99000	J	350000	ug/Kg	8270C
Carbazole		100000	J	350000	ug/Kg	8270C
Chrysene		240000	J	350000	ug/Kg	8270C
Dibenz(a,h)anthracene		34000	J	350000	ug/Kg	8270C
Dibenzofuran		130000	J	350000	ug/Kg	8270C
Fluoranthene		610000		350000	ug/Kg	8270C
Fluorene		190000	J	350000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		100000	J	350000	ug/Kg	8270C
Naphthalene		270000	J	350000	ug/Kg	8270C
Phenanthrene		750000		350000	ug/Kg	8270C
Pyrene		500000		350000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		200	J	210	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		13000		1900	mg/Kg	WI-DRO
Aluminum		4100		18	mg/Kg	6010B
Antimony		1.8		0.89	mg/Kg	6010B
Barium		51	B	18	mg/Kg	6010B
Beryllium		0.22	J	0.44	mg/Kg	6010B
Calcium		33000		440	mg/Kg	6010B
Cadmium		0.16	J	0.18	mg/Kg	6010B
Cobalt		3.6	J	4.4	mg/Kg	6010B
Chromium		11		0.44	mg/Kg	6010B
Copper		11		2.2	mg/Kg	6010B
Iron		7500		8.9	mg/Kg	6010B
Potassium		460		440	mg/Kg	6010B
Magnesium		6800		440	mg/Kg	6010B
Manganese		330	B	1.3	mg/Kg	6010B
Sodium		280	J	440	mg/Kg	6010B
Nickel		9.6	B	3.6	mg/Kg	6010B
Vanadium		13	B	4.4	mg/Kg	6010B
Zinc		35		1.8	mg/Kg	6010B
Arsenic		3.6		0.89	mg/Kg	6010B
Lead		120		0.27	mg/Kg	6010B
Mercury		0.039	J	0.11	mg/Kg	7471A
Cr (III)		11		2.2	mg/Kg	7196A
Percent Solids		93		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Moisture		7.0		0.10	%	Moisture
TCLP						
Benzene		23	J	25	ug/L	8260B
2-Methylphenol		0.0070		0.0040	mg/L	8270C
3 & 4 Methylphenol		0.023		0.0040	mg/L	8270C
Antimony		0.050	J	0.30	mg/L	6010B
Arsenic		0.012	J B	0.50	mg/L	6010B
Barium		0.48	J B	10	mg/L	6010B
Cadmium		0.00031	J	0.10	mg/L	6010B
Calcium		670		5.0	mg/L	6010B
Chromium		0.0033	J B	0.50	mg/L	6010B
Cobalt		0.0076	J	0.050	mg/L	6010B
Iron		0.059	J B	0.10	mg/L	6010B
Lead		0.029	J	0.50	mg/L	6010B
Magnesium		12	B	5.0	mg/L	6010B
Manganese		5.5	B	0.015	mg/L	6010B
Nickel		0.019	J B	0.040	mg/L	6010B
Potassium		7.0	B	5.0	mg/L	6010B
Zinc		0.11	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-13	**ASB-1008_52-54(20150624)**					
Methyl acetate		150	J	530	ug/Kg	8260B
Naphthalene		230	J	270	ug/Kg	8260B
1,1'-Biphenyl		74	J	1600	ug/Kg	8270C
2-Methylnaphthalene		260	J	1600	ug/Kg	8270C
Acenaphthene		440	J	1600	ug/Kg	8270C
Acenaphthylene		56	J	1600	ug/Kg	8270C
Anthracene		960	J	1600	ug/Kg	8270C
Benzo[a]anthracene		1300	J	1600	ug/Kg	8270C
Benzo[a]pyrene		1100	J	1600	ug/Kg	8270C
Benzo[b]fluoranthene		1300	J	1600	ug/Kg	8270C
Benzo[g,h,i]perylene		430	J	1600	ug/Kg	8270C
Benzo[k]fluoranthene		610	J	1600	ug/Kg	8270C
Carbazole		390	J	1600	ug/Kg	8270C
Chrysene		1200	J	1600	ug/Kg	8270C
Dibenz(a,h)anthracene		120	J	1600	ug/Kg	8270C
Dibenzofuran		500	J	1600	ug/Kg	8270C
Fluoranthene		3200		1600	ug/Kg	8270C
Fluorene		820	J	1600	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		420	J	1600	ug/Kg	8270C
Naphthalene		500	J	1600	ug/Kg	8270C
Phenanthrene		3300		1600	ug/Kg	8270C
Pyrene		2500		1600	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		7.5	J	11	mg/Kg	WI-DRO
Aluminum		4400		21	mg/Kg	6010B
Barium		48	B	21	mg/Kg	6010B
Beryllium		0.25	J	0.52	mg/Kg	6010B
Calcium		28000		520	mg/Kg	6010B
Cadmium		0.10	J	0.21	mg/Kg	6010B
Cobalt		6.9		5.2	mg/Kg	6010B
Chromium		14		0.52	mg/Kg	6010B
Copper		14		2.6	mg/Kg	6010B
Iron		14000		10	mg/Kg	6010B
Potassium		790		520	mg/Kg	6010B
Magnesium		5400		520	mg/Kg	6010B
Manganese		420	B	1.6	mg/Kg	6010B
Silver		0.51	J	0.52	mg/Kg	6010B
Sodium		180	J	520	mg/Kg	6010B
Nickel		17	B	4.1	mg/Kg	6010B
Vanadium		15	B	5.2	mg/Kg	6010B
Zinc		28		2.1	mg/Kg	6010B
Arsenic		4.3		1.0	mg/Kg	6010B
Lead		10		0.31	mg/Kg	6010B
Mercury		0.022	J	0.12	mg/Kg	7471A
Cr (III)		14		2.3	mg/Kg	7196A
Percent Solids		85		0.10	%	Moisture
Percent Moisture		15		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
TCLP						
Aluminum		0.24		0.20	mg/L	6010B
Arsenic		0.0079	J B	0.50	mg/L	6010B
Barium		0.93	J B	10	mg/L	6010B
Cadmium		0.00064	J	0.10	mg/L	6010B
Calcium		630		5.0	mg/L	6010B
Chromium		0.0047	J B	0.50	mg/L	6010B
Cobalt		0.022	J	0.050	mg/L	6010B
Iron		0.27	B	0.10	mg/L	6010B
Magnesium		21	B	5.0	mg/L	6010B
Manganese		7.0	B	0.015	mg/L	6010B
Nickel		0.036	J B	0.040	mg/L	6010B
Potassium		4.3	J B	5.0	mg/L	6010B
Zinc		0.045	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-14	**ASB-1008_70-72(20150624)**					
Methyl acetate		340	J	740	ug/Kg	8260B
Toluene		18	J	370	ug/Kg	8260B
Anthracene		5.2	J	390	ug/Kg	8270C
Benzaldehyde		37	J	390	ug/Kg	8270C
Benzo[a]anthracene		16	J	390	ug/Kg	8270C
Benzo[a]pyrene		14	J	390	ug/Kg	8270C
Benzo[b]fluoranthene		19	J	390	ug/Kg	8270C
Benzo[g,h,i]perylene		11	J	390	ug/Kg	8270C
Benzo[k]fluoranthene		8.5	J	390	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		40	J	390	ug/Kg	8270C
Caprolactam		55	J	390	ug/Kg	8270C
Chrysene		16	J	390	ug/Kg	8270C
Fluoranthene		29	J	390	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		8.0	J	390	ug/Kg	8270C
Naphthalene		6.6	J	390	ug/Kg	8270C
Phenanthrene		16	J	390	ug/Kg	8270C
Pyrene		25	J	390	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		2.6	J	12	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		3.9	J	11	mg/Kg	WI-DRO
Aluminum		3400		19	mg/Kg	6010B
Barium		55	B	19	mg/Kg	6010B
Beryllium		0.15	J	0.47	mg/Kg	6010B
Calcium		9500		470	mg/Kg	6010B
Cadmium		0.061	J	0.19	mg/Kg	6010B
Cobalt		4.2	J	4.7	mg/Kg	6010B
Chromium		10		0.47	mg/Kg	6010B
Copper		4.8		2.3	mg/Kg	6010B
Iron		9900		9.4	mg/Kg	6010B
Potassium		380	J	470	mg/Kg	6010B
Magnesium		4300		470	mg/Kg	6010B
Manganese		250	B	1.4	mg/Kg	6010B
Sodium		100	J	470	mg/Kg	6010B
Nickel		9.1	B	3.8	mg/Kg	6010B
Vanadium		15	B	4.7	mg/Kg	6010B
Zinc		20		1.9	mg/Kg	6010B
Arsenic		1.8		0.94	mg/Kg	6010B
Lead		3.8		0.28	mg/Kg	6010B
Mercury		0.023	J	0.13	mg/Kg	7471A
Cr (III)		10		2.4	mg/Kg	7196A
Percent Solids		84		0.10	%	Moisture
Percent Moisture		16		0.10	%	Moisture
TCLP						
Arsenic		0.010	J B	0.50	mg/L	6010B
Barium		0.79	J B	10	mg/L	6010B
Cadmium		0.00083	J	0.10	mg/L	6010B
Calcium		210		5.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Chromium		0.0054	J B	0.50	mg/L	6010B
Cobalt		0.023	J	0.050	mg/L	6010B
Copper		0.0020	J	1.0	mg/L	6010B
Iron		3.0	B	0.10	mg/L	6010B
Magnesium		45	B	5.0	mg/L	6010B
Manganese		8.1	B	0.015	mg/L	6010B
Nickel		0.034	J B	0.040	mg/L	6010B
Potassium		4.1	J B	5.0	mg/L	6010B
Zinc		0.031	J	1.0	mg/L	6010B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction	TAL CAN		SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method	Analyst	Analyst ID
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
SW846 8270C	Ulman, Mark	MRU
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Walpole, Barbara	BW
SW846 7471A	Walpole, Barbara	BW
SW846 7196A	Burns, Jill	JMB
SW846 7196A	Counts, Karen	KLC
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52462-12	ASB-1008_30-33(20150624)	Solid	06/24/2015 1200	06/25/2015 0900
240-52462-13	ASB-1008_52-54(20150624)	Solid	06/24/2015 1230	06/25/2015 0900
240-52462-14	ASB-1008_70-72(20150624)	Solid	06/24/2015 1300	06/25/2015 0900
240-52462-15	MB-01(20150624)	Solid	06/24/2015 0000	06/25/2015 0900

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: ASB-1008_30-33(20150624)

Lab Sample ID: 240-52462-12 Date Sampled: 06/24/2015 1200
Client Matrix: Solid % Moisture: 7.0 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143948.D
Dilution:	100			Initial Weight/Volume:	10.725 g
Analysis Date:	07/01/2015 1611			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		23000	100000
Allyl chloride		ND		3000	50000
Benzene		ND		900	25000
Bromobenzene		ND		1300	25000
Bromochloromethane		ND		7000	25000
Bromodichloromethane		ND		3800	25000
Bromoform		ND		6100	25000
Bromomethane		ND		5100	25000
2-Butanone (MEK)		ND		7300	100000
Carbon disulfide		ND		5600	25000
Carbon tetrachloride		ND		4800	25000
Chlorobenzene		ND		4100	25000
Chlorodibromomethane		ND		4600	25000
Chloroethane		ND		5100	25000
Chloroform		ND		3600	25000
Chloromethane		ND		4800	25000
2-Chlorotoluene		ND		4100	25000
4-Chlorotoluene		ND		2600	25000
cis-1,2-Dichloroethene		ND		3800	25000
cis-1,3-Dichloropropene		ND		2200	25000
Cyclohexane		ND		3000	50000
1,2-Dibromo-3-Chloropropane		ND		7100	50000
1,2-Dibromoethane		ND		3200	25000
Dibromomethane		ND		5000	25000
1,2-Dichlorobenzene		ND		1900	25000
1,3-Dichlorobenzene		ND		3000	25000
1,4-Dichlorobenzene		ND		4100	25000
Dichlorodifluoromethane		ND		6100	25000
1,1-Dichloroethane		ND		3500	25000
1,2-Dichloroethane		ND		5300	25000
1,1-Dichloroethene		ND		3000	25000
Dichlorofluoromethane		ND		3300	50000
1,2-Dichloropropane		ND		3200	25000
1,3-Dichloropropane		ND		2300	25000
2,2-Dichloropropane		ND		5200	25000
1,1-Dichloropropene		ND		3800	25000
Ethylbenzene		ND		3500	25000
Ethyl ether		ND		9800	50000
Hexachlorobutadiene		ND		4400	25000
2-Hexanone		ND		8400	100000
Isopropylbenzene		ND		1300	25000
Methyl acetate		ND		5500	50000
Methylcyclohexane		ND		3800	50000
Methylene Chloride		ND		8500	25000
4-Methyl-2-pentanone (MIBK)		ND		5600	100000
Methyl tert butyl ether		ND		3000	25000

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: ASB-1008_30-33(20150624)

Lab Sample ID: 240-52462-12 Date Sampled: 06/24/2015 1200
Client Matrix: Solid % Moisture: 7.0 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143948.D
Dilution:	100			Initial Weight/Volume:	10.725 g
Analysis Date:	07/01/2015 1611			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		2000	25000
Naphthalene		390000		2600	25000
n-Butylbenzene		ND		2100	25000
N-Propylbenzene		ND		6100	25000
o-Xylene		ND		1700	25000
p-Isopropyltoluene		ND		2500	25000
sec-Butylbenzene		ND		1600	25000
Styrene		ND		2700	25000
tert-Butylbenzene		ND		3400	25000
1,1,1,2-Tetrachloroethane		ND		4900	25000
1,1,2,2-Tetrachloroethane		ND		4300	25000
Tetrachloroethene		ND		2700	25000
Tetrahydrofuran		ND		12000	100000
Toluene		ND		1000	25000
trans-1,2-Dichloroethene		ND		2600	25000
trans-1,3-Dichloropropene		ND		2600	25000
1,2,3-Trichlorobenzene		ND		3900	25000
1,2,4-Trichlorobenzene		ND		3000	25000
1,1,1-Trichloroethane		ND		4200	25000
1,1,2-Trichloroethane		ND		8300	25000
Trichloroethene		ND		3900	25000
Trichlorofluoromethane		ND		3500	25000
1,2,3-Trichloropropane		ND		10000	25000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		4200	25000
1,2,4-Trimethylbenzene		1300	J	1300	25000
1,3,5-Trimethylbenzene		ND		1500	25000
Vinyl chloride		ND		5600	25000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	265	X	26 - 141
Dibromofluoromethane (Surr)	79		30 - 122
1,2-Dichloroethane-d4 (Surr)	217	X	39 - 128
Toluene-d8 (Surr)	197	X	33 - 134

Client Sample ID: **ASB-1008_30-33(20150624)**

Lab Sample ID: 240-52462-12 Date Sampled: 06/24/2015 1200
Client Matrix: Solid Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187908	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950906.D
Dilution:	1.0	Leach Batch:	240-187733	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/04/2015 1259			Final Weight/Volume:	5 mL
Prep Date:	07/04/2015 1259				
Leach Date:	07/01/2015 1930				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		23	J	6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	93		70 - 124
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	104		80 - 128

Client Sample ID: **ASB-1008_52-54(20150624)**

Lab Sample ID: 240-52462-13 Date Sampled: 06/24/2015 1230
Client Matrix: Solid % Moisture: 14.6 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143945.D
Dilution:	1.0			Initial Weight/Volume:	10.985 g
Analysis Date:	07/01/2015 1507			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		240	1100
Allyl chloride		ND		32	530
Benzene		ND		9.6	270
Bromobenzene		ND		14	270
Bromochloromethane		ND		75	270
Bromodichloromethane		ND		41	270
Bromoform		ND		65	270
Bromomethane		ND		54	270
2-Butanone (MEK)		ND		78	1100
Carbon disulfide		ND		60	270
Carbon tetrachloride		ND		51	270
Chlorobenzene		ND		44	270
Chlorodibromomethane		ND		49	270
Chloroethane		ND		54	270
Chloroform		ND		38	270
Chloromethane		ND		51	270
2-Chlorotoluene		ND		44	270
4-Chlorotoluene		ND		28	270
cis-1,2-Dichloroethene		ND		41	270
cis-1,3-Dichloropropene		ND		23	270
Cyclohexane		ND		32	530
1,2-Dibromo-3-Chloropropane		ND		76	530
1,2-Dibromoethane		ND		34	270
Dibromomethane		ND		53	270
1,2-Dichlorobenzene		ND		20	270
1,3-Dichlorobenzene		ND		32	270
1,4-Dichlorobenzene		ND		44	270
Dichlorodifluoromethane		ND		65	270
1,1-Dichloroethane		ND		37	270
1,2-Dichloroethane		ND		57	270
1,1-Dichloroethene		ND		32	270
Dichlorofluoromethane		ND		35	530
1,2-Dichloropropane		ND		34	270
1,3-Dichloropropane		ND		25	270
2,2-Dichloropropane		ND		55	270
1,1-Dichloropropene		ND		41	270
Ethylbenzene		ND		37	270
Ethyl ether		ND		100	530
Hexachlorobutadiene		ND		47	270
2-Hexanone		ND		90	1100
Isopropylbenzene		ND		14	270
Methyl acetate		150	J	59	530
Methylcyclohexane		ND		41	530
Methylene Chloride		ND		91	270
4-Methyl-2-pentanone (MIBK)		ND		60	1100
Methyl tert butyl ether		ND		32	270

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: ASB-1008_52-54(20150624)

Lab Sample ID: 240-52462-13 Date Sampled: 06/24/2015 1230
Client Matrix: Solid % Moisture: 14.6 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143945.D
Dilution:	1.0			Initial Weight/Volume:	10.985 g
Analysis Date:	07/01/2015 1507			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		21	270
Naphthalene		230	J	28	270
n-Butylbenzene		ND		22	270
N-Propylbenzene		ND		65	270
o-Xylene		ND		18	270
p-Isopropyltoluene		ND		27	270
sec-Butylbenzene		ND		17	270
Styrene		ND		29	270
tert-Butylbenzene		ND		36	270
1,1,1,2-Tetrachloroethane		ND		52	270
1,1,2,2-Tetrachloroethane		ND		46	270
Tetrachloroethene		ND		29	270
Tetrahydrofuran		ND		130	1100
Toluene		ND		11	270
trans-1,2-Dichloroethene		ND		28	270
trans-1,3-Dichloropropene		ND		28	270
1,2,3-Trichlorobenzene		ND		42	270
1,2,4-Trichlorobenzene		ND		32	270
1,1,1-Trichloroethane		ND		45	270
1,1,2-Trichloroethane		ND		89	270
Trichloroethene		ND		42	270
Trichlorofluoromethane		ND		37	270
1,2,3-Trichloropropane		ND		110	270
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		45	270
1,2,4-Trimethylbenzene		ND		14	270
1,3,5-Trimethylbenzene		ND		16	270
Vinyl chloride		ND		60	270

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	99		26 - 141
Dibromofluoromethane (Surr)	81		30 - 122
1,2-Dichloroethane-d4 (Surr)	102		39 - 128
Toluene-d8 (Surr)	92		33 - 134

Client Sample ID: **ASB-1008_52-54(20150624)**

Lab Sample ID: 240-52462-13 Date Sampled: 06/24/2015 1230
Client Matrix: Solid Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187908	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950907.D
Dilution:	1.0	Leach Batch:	240-187733	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/04/2015 1321			Final Weight/Volume:	5 mL
Prep Date:	07/04/2015 1321				
Leach Date:	07/01/2015 1930				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 121
4-Bromofluorobenzene (Surr)	91		70 - 124
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: ASB-1008_70-72(20150624)

Lab Sample ID: 240-52462-14 Date Sampled: 06/24/2015 1300
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143946.D
Dilution:	1.0			Initial Weight/Volume:	7.981 g
Analysis Date:	07/01/2015 1529			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		340	1500
Allyl chloride		ND		44	740
Benzene		ND		13	370
Bromobenzene		ND		19	370
Bromochloromethane		ND		100	370
Bromodichloromethane		ND		56	370
Bromoform		ND		90	370
Bromomethane		ND		76	370
2-Butanone (MEK)		ND		110	1500
Carbon disulfide		ND		83	370
Carbon tetrachloride		ND		71	370
Chlorobenzene		ND		61	370
Chlorodibromomethane		ND		68	370
Chloroethane		ND		76	370
Chloroform		ND		53	370
Chloromethane		ND		71	370
2-Chlorotoluene		ND		61	370
4-Chlorotoluene		ND		39	370
cis-1,2-Dichloroethene		ND		56	370
cis-1,3-Dichloropropene		ND		33	370
Cyclohexane		ND		44	740
1,2-Dibromo-3-Chloropropane		ND		110	740
1,2-Dibromoethane		ND		47	370
Dibromomethane		ND		74	370
1,2-Dichlorobenzene		ND		28	370
1,3-Dichlorobenzene		ND		44	370
1,4-Dichlorobenzene		ND		61	370
Dichlorodifluoromethane		ND		90	370
1,1-Dichloroethane		ND		52	370
1,2-Dichloroethane		ND		79	370
1,1-Dichloroethene		ND		44	370
Dichlorofluoromethane		ND		49	740
1,2-Dichloropropane		ND		47	370
1,3-Dichloropropane		ND		34	370
2,2-Dichloropropane		ND		77	370
1,1-Dichloropropene		ND		56	370
Ethylbenzene		ND		52	370
Ethyl ether		ND		150	740
Hexachlorobutadiene		ND		65	370
2-Hexanone		ND		120	1500
Isopropylbenzene		ND		19	370
Methyl acetate		340	J	82	740
Methylcyclohexane		ND		56	740
Methylene Chloride		ND		130	370
4-Methyl-2-pentanone (MIBK)		ND		83	1500
Methyl tert butyl ether		ND		44	370

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: ASB-1008_70-72(20150624)

Lab Sample ID: 240-52462-14 Date Sampled: 06/24/2015 1300
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143946.D
Dilution:	1.0			Initial Weight/Volume:	7.981 g
Analysis Date:	07/01/2015 1529			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		30	370
Naphthalene		ND		39	370
n-Butylbenzene		ND		31	370
N-Propylbenzene		ND		90	370
o-Xylene		ND		25	370
p-Isopropyltoluene		ND		37	370
sec-Butylbenzene		ND		24	370
Styrene		ND		40	370
tert-Butylbenzene		ND		50	370
1,1,1,2-Tetrachloroethane		ND		73	370
1,1,2,2-Tetrachloroethane		ND		64	370
Tetrachloroethene		ND		40	370
Tetrahydrofuran		ND		180	1500
Toluene		18	J	15	370
trans-1,2-Dichloroethene		ND		39	370
trans-1,3-Dichloropropene		ND		39	370
1,2,3-Trichlorobenzene		ND		58	370
1,2,4-Trichlorobenzene		ND		44	370
1,1,1-Trichloroethane		ND		62	370
1,1,2-Trichloroethane		ND		120	370
Trichloroethene		ND		58	370
Trichlorofluoromethane		ND		52	370
1,2,3-Trichloropropane		ND		150	370
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		62	370
1,2,4-Trimethylbenzene		ND		19	370
1,3,5-Trimethylbenzene		ND		22	370
Vinyl chloride		ND		83	370

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	149	X	26 - 141
Dibromofluoromethane (Surr)	122		30 - 122
1,2-Dichloroethane-d4 (Surr)	152	X	39 - 128
Toluene-d8 (Surr)	135	X	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_70-72(20150624)**

Lab Sample ID: 240-52462-14 Date Sampled: 06/24/2015 1300
Client Matrix: Solid Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187908	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950908.D
Dilution:	1.0	Leach Batch:	240-187733	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/04/2015 1345			Final Weight/Volume:	5 mL
Prep Date:	07/04/2015 1345				
Leach Date:	07/01/2015 1930				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	93		70 - 124
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	102		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **MB-01(20150624)**

Lab Sample ID: 240-52462-15 Date Sampled: 06/24/2015 0000
Client Matrix: Solid Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143947.D
Dilution:	1.0			Initial Weight/Volume:	10 g
Analysis Date:	07/01/2015 1550			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		48	250
Chlorobenzene		ND		41	250
Chlorodibromomethane		ND		46	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		53	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **MB-01(20150624)**

Lab Sample ID: 240-52462-15 Date Sampled: 06/24/2015 0000
Client Matrix: Solid Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143947.D
Dilution:	1.0			Initial Weight/Volume:	10 g
Analysis Date:	07/01/2015 1550			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		43	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		42	250
1,1,2-Trichloroethane		ND		83	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		56	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	109		26 - 141
Dibromofluoromethane (Surr)	89		30 - 122
1,2-Dichloroethane-d4 (Surr)	117		39 - 128
Toluene-d8 (Surr)	101		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_30-33(20150624)**

Lab Sample ID: 240-52462-12 Date Sampled: 06/24/2015 1200
Client Matrix: Solid % Moisture: 7.0 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708011.D
Dilution:	1000			Initial Weight/Volume:	30.32 g
Analysis Date:	07/08/2015 1150			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		25000	J	3700	350000
2,2'-oxybis[1-chloropropane]		ND		10000	350000
2,4,5-Trichlorophenol		ND		27000	350000
2,4,6-Trichlorophenol		ND		9500	350000
2,4-Dichlorophenol		ND		21000	350000
2,4-Dimethylphenol		ND		21000	350000
2,4-Dinitrophenol		ND		22000	1700000
2,4-Dinitrotoluene		ND		18000	350000
2,6-Dinitrotoluene		ND		22000	350000
2-Chloronaphthalene		ND		480	350000
2-Chlorophenol		ND		8700	350000
2-Methylnaphthalene		80000	J	530	350000
2-Methylphenol		ND		12000	350000
2-Nitroaniline		ND		9700	1700000
2-Nitrophenol		ND		8800	350000
3,3'-Dichlorobenzidine		ND		19000	1700000
3-Nitroaniline		ND		17000	1700000
4,6-Dinitro-2-methylphenol		ND		9800	1700000
4-Bromophenyl phenyl ether		ND		14000	350000
4-Chloro-3-methylphenol		ND		22000	350000
4-Chloroaniline		ND		18000	350000
4-Chlorophenyl phenyl ether		ND		14000	350000
4-Nitroaniline		ND		28000	1700000
4-Nitrophenol		ND		18000	1700000
Acenaphthene		120000	J	810	350000
Acenaphthylene		7100	J	370	350000
Acetophenone		ND		9800	350000
Anthracene		220000	J	830	350000
Atrazine		ND		9700	350000
Benzaldehyde		ND		13000	350000
Benzo[a]anthracene		250000	J	670	350000
Benzo[a]pyrene		200000	J	680	350000
Benzo[b]fluoranthene		240000	J	630	350000
Benzo[g,h,i]perylene		110000	J	370	350000
Benzo[k]fluoranthene		99000	J	720	350000
Bis(2-chloroethoxy)methane		ND		23000	350000
Bis(2-chloroethyl)ether		ND		2100	350000
Bis(2-ethylhexyl) phthalate		ND		20000	350000
Butyl benzyl phthalate		ND		11000	350000
Caprolactam		ND		39000	350000
Carbazole		100000	J	29000	350000
Chrysene		240000	J	1200	350000
Dibenz(a,h)anthracene		34000	J	700	350000
Dibenzofuran		130000	J	700	350000
Diethyl phthalate		ND		17000	350000
Dimethyl phthalate		ND		18000	350000

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: ASB-1008_30-33(20150624)

Lab Sample ID: 240-52462-12 Date Sampled: 06/24/2015 1200
Client Matrix: Solid % Moisture: 7.0 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708011.D
Dilution:	1000			Initial Weight/Volume:	30.32 g
Analysis Date:	07/08/2015 1150			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		16000	350000
Di-n-octyl phthalate		ND		8400	350000
Fluoranthene		610000		590	350000
Fluorene		190000	J	560	350000
Hexachlorobenzene		ND		2200	350000
Hexachlorobutadiene		ND		6000	350000
Hexachlorocyclopentadiene		ND		8600	1700000
Hexachloroethane		ND		9600	350000
Indeno[1,2,3-cd]pyrene		100000	J	370	350000
Isophorone		ND		14000	350000
Naphthalene		270000	J	870	350000
Nitrobenzene		ND		2300	350000
N-Nitrosodi-n-propylamine		ND		6700	350000
N-Nitrosodiphenylamine		ND		22000	350000
Pentachlorophenol		ND		9700	350000
Phenol		ND		7800	350000
Phenanthrene		750000		780	350000
Pyrene		500000		470	350000
3 & 4 Methylphenol		ND		21000	430000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	0	X	24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	0	X	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_30-33(20150624)**

Lab Sample ID: 240-52462-12 Date Sampled: 06/24/2015 1200
Client Matrix: Solid Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187984	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187661	Lab File ID:	50706018.D
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	250 mL
Analysis Date:	07/06/2015 1737			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1457			Injection Volume:	1 uL
Leach Date:	06/30/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		0.0070		0.00017	0.0040
3 & 4 Methylphenol		0.023		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	78		30 - 110
2-Fluorophenol (Surr)	68		20 - 110
Nitrobenzene-d5 (Surr)	79		28 - 110
Phenol-d5 (Surr)	62		21 - 110
Terphenyl-d14 (Surr)	80		48 - 110
2,4,6-Tribromophenol (Surr)	70		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: ASB-1008_52-54(20150624)

Lab Sample ID: 240-52462-13 Date Sampled: 06/24/2015 1230
Client Matrix: Solid % Moisture: 14.6 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708020.D
Dilution:	4.0			Initial Weight/Volume:	29.80 g
Analysis Date:	07/08/2015 1539			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		74	J	17	1600
2,2'-oxybis[1-chloropropane]		ND		45	1600
2,4,5-Trichlorophenol		ND		120	1600
2,4,6-Trichlorophenol		ND		42	1600
2,4-Dichlorophenol		ND		94	1600
2,4-Dimethylphenol		ND		94	1600
2,4-Dinitrophenol		ND		99	7500
2,4-Dinitrotoluene		ND		80	1600
2,6-Dinitrotoluene		ND		99	1600
2-Chloronaphthalene		ND		2.1	1600
2-Chlorophenol		ND		39	1600
2-Methylnaphthalene		260	J	2.4	1600
2-Methylphenol		ND		52	1600
2-Nitroaniline		ND		43	7500
2-Nitrophenol		ND		39	1600
3,3'-Dichlorobenzidine		ND		85	7500
3-Nitroaniline		ND		75	7500
4,6-Dinitro-2-methylphenol		ND		43	7500
4-Bromophenyl phenyl ether		ND		61	1600
4-Chloro-3-methylphenol		ND		99	1600
4-Chloroaniline		ND		80	1600
4-Chlorophenyl phenyl ether		ND		61	1600
4-Nitroaniline		ND		120	7500
4-Nitrophenol		ND		80	7500
Acenaphthene		440	J	3.6	1600
Acenaphthylene		56	J	1.7	1600
Acetophenone		ND		43	1600
Anthracene		960	J	3.7	1600
Atrazine		ND		43	1600
Benzaldehyde		ND		57	1600
Benzo[a]anthracene		1300	J	3.0	1600
Benzo[a]pyrene		1100	J	3.0	1600
Benzo[b]fluoranthene		1300	J	2.8	1600
Benzo[g,h,i]perylene		430	J	1.7	1600
Benzo[k]fluoranthene		610	J	3.2	1600
Bis(2-chloroethoxy)methane		ND		100	1600
Bis(2-chloroethyl)ether		ND		9.4	1600
Bis(2-ethylhexyl) phthalate		ND		90	1600
Butyl benzyl phthalate		ND		47	1600
Caprolactam		ND		170	1600
Carbazole		390	J	130	1600
Chrysene		1200	J	5.2	1600
Dibenz(a,h)anthracene		120	J	3.1	1600
Dibenzofuran		500	J	3.1	1600
Diethyl phthalate		ND		75	1600
Dimethyl phthalate		ND		80	1600

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: ASB-1008_52-54(20150624)

Lab Sample ID: 240-52462-13 Date Sampled: 06/24/2015 1230
Client Matrix: Solid % Moisture: 14.6 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708020.D
Dilution:	4.0			Initial Weight/Volume:	29.80 g
Analysis Date:	07/08/2015 1539			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		71	1600
Di-n-octyl phthalate		ND		37	1600
Fluoranthene		3200		2.6	1600
Fluorene		820	J	2.5	1600
Hexachlorobenzene		ND		9.9	1600
Hexachlorobutadiene		ND		26	1600
Hexachlorocyclopentadiene		ND		38	7500
Hexachloroethane		ND		42	1600
Indeno[1,2,3-cd]pyrene		420	J	1.7	1600
Isophorone		ND		61	1600
Naphthalene		500	J	3.9	1600
Nitrobenzene		ND		10	1600
N-Nitrosodi-n-propylamine		ND		30	1600
N-Nitrosodiphenylamine		ND		99	1600
Pentachlorophenol		ND		43	1600
Phenol		ND		34	1600
Phenanthrene		3300		3.4	1600
Pyrene		2500		2.1	1600
3 & 4 Methylphenol		ND		94	1900

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	85		24 - 110
2-Fluorophenol (Surr)	73		24 - 110
2,4,6-Tribromophenol (Surr)	31		10 - 110
Nitrobenzene-d5 (Surr)	70		20 - 110
Phenol-d5 (Surr)	78		26 - 110
Terphenyl-d14 (Surr)	86		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_52-54(20150624)**

Lab Sample ID: 240-52462-13 Date Sampled: 06/24/2015 1230
Client Matrix: Solid Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187984	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187661	Lab File ID:	50706016.D
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	250 mL
Analysis Date:	07/06/2015 1647			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1457			Injection Volume:	1 uL
Leach Date:	06/30/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	78		30 - 110
2-Fluorophenol (Surr)	73		20 - 110
Nitrobenzene-d5 (Surr)	76		28 - 110
Phenol-d5 (Surr)	77		21 - 110
Terphenyl-d14 (Surr)	82		48 - 110
2,4,6-Tribromophenol (Surr)	76		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_70-72(20150624)**

Lab Sample ID: 240-52462-14 Date Sampled: 06/24/2015 1300
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708013.D
Dilution:	1.0			Initial Weight/Volume:	30.20 g
Analysis Date:	07/08/2015 1241			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.1	390
2,2'-oxybis[1-chloropropane]		ND		11	390
2,4,5-Trichlorophenol		ND		29	390
2,4,6-Trichlorophenol		ND		10	390
2,4-Dichlorophenol		ND		24	390
2,4-Dimethylphenol		ND		24	390
2,4-Dinitrophenol		ND		25	1900
2,4-Dinitrotoluene		ND		20	390
2,6-Dinitrotoluene		ND		25	390
2-Chloronaphthalene		ND		0.53	390
2-Chlorophenol		ND		9.6	390
2-Methylnaphthalene		ND		0.59	390
2-Methylphenol		ND		13	390
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		9.8	390
3,3'-Dichlorobenzidine		ND		21	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		15	390
4-Chloro-3-methylphenol		ND		25	390
4-Chloroaniline		ND		20	390
4-Chlorophenyl phenyl ether		ND		15	390
4-Nitroaniline		ND		31	1900
4-Nitrophenol		ND		20	1900
Acenaphthene		ND		0.89	390
Acenaphthylene		ND		0.41	390
Acetophenone		ND		11	390
Anthracene		5.2	J	0.92	390
Atrazine		ND		11	390
Benzaldehyde		37	J	14	390
Benzo[a]anthracene		16	J	0.74	390
Benzo[a]pyrene		14	J	0.75	390
Benzo[b]fluoranthene		19	J	0.69	390
Benzo[g,h,i]perylene		11	J	0.41	390
Benzo[k]fluoranthene		8.5	J	0.80	390
Bis(2-chloroethoxy)methane		ND		26	390
Bis(2-chloroethyl)ether		ND		2.4	390
Bis(2-ethylhexyl) phthalate		40	J	22	390
Butyl benzyl phthalate		ND		12	390
Caprolactam		55	J	43	390
Carbazole		ND		32	390
Chrysene		16	J	1.3	390
Dibenz(a,h)anthracene		ND		0.78	390
Dibenzofuran		ND		0.78	390
Diethyl phthalate		ND		19	390
Dimethyl phthalate		ND		20	390

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_70-72(20150624)**

Lab Sample ID: 240-52462-14 Date Sampled: 06/24/2015 1300
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708013.D
Dilution:	1.0			Initial Weight/Volume:	30.20 g
Analysis Date:	07/08/2015 1241			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		18	390
Di-n-octyl phthalate		ND		9.3	390
Fluoranthene		29	J	0.65	390
Fluorene		ND		0.62	390
Hexachlorobenzene		ND		2.5	390
Hexachlorobutadiene		ND		6.6	390
Hexachlorocyclopentadiene		ND		9.5	1900
Hexachloroethane		ND		11	390
Indeno[1,2,3-cd]pyrene		8.0	J	0.41	390
Isophorone		ND		15	390
Naphthalene		6.6	J	0.96	390
Nitrobenzene		ND		2.6	390
N-Nitrosodi-n-propylamine		ND		7.4	390
N-Nitrosodiphenylamine		ND		25	390
Pentachlorophenol		ND		11	390
Phenol		ND		8.6	390
Phenanthrene		16	J	0.86	390
Pyrene		25	J	0.52	390
3 & 4 Methylphenol		ND		24	470

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	72		24 - 110
2-Fluorophenol (Surr)	72		24 - 110
2,4,6-Tribromophenol (Surr)	54		10 - 110
Nitrobenzene-d5 (Surr)	64		20 - 110
Phenol-d5 (Surr)	79		26 - 110
Terphenyl-d14 (Surr)	76		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_70-72(20150624)**

Lab Sample ID: 240-52462-14 Date Sampled: 06/24/2015 1300
Client Matrix: Solid Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-187984	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187661	Lab File ID:	50706017.D
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	250 mL
Analysis Date:	07/06/2015 1712			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1457			Injection Volume:	1 uL
Leach Date:	06/30/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	73		30 - 110
2-Fluorophenol (Surr)	66		20 - 110
Nitrobenzene-d5 (Surr)	74		28 - 110
Phenol-d5 (Surr)	62		21 - 110
Terphenyl-d14 (Surr)	78		48 - 110
2,4,6-Tribromophenol (Surr)	75		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_30-33(20150624)**

Lab Sample ID: 240-52462-12 Date Sampled: 06/24/2015 1200
Client Matrix: Solid % Moisture: 7.0 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062913.D
Dilution:	20			Initial Weight/Volume:	10.241 g
Analysis Date:	06/29/2015 1253			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		200	J	42	210

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: ASB-1008_52-54(20150624)

Lab Sample ID: 240-52462-13 Date Sampled: 06/24/2015 1230
Client Matrix: Solid % Moisture: 14.6 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062640.D
Dilution:	1.0			Initial Weight/Volume:	9.823 g
Analysis Date:	06/27/2015 0601			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_70-72(20150624)**

Lab Sample ID: 240-52462-14 Date Sampled: 06/24/2015 1300
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062914.D
Dilution:	1.0			Initial Weight/Volume:	9.952 g
Analysis Date:	06/29/2015 1329			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		2.6	J	2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **MB-01(20150624)**

Lab Sample ID: 240-52462-15 Date Sampled: 06/24/2015 0000
Client Matrix: Solid Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062642.D
Dilution:	1.0			Initial Weight/Volume:	0.117 g
Analysis Date:	06/27/2015 0711			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		170	850

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_30-33(20150624)**

Lab Sample ID: 240-52462-12 Date Sampled: 06/24/2015 1200
Client Matrix: Solid % Moisture: 7.0 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187397	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R063014.D
Dilution:	200			Initial Weight/Volume:	27.76 g
Analysis Date:	06/30/2015 1627			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		13000		230	1900

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: ASB-1008_52-54(20150624)

Lab Sample ID: 240-52462-13 Date Sampled: 06/24/2015 1230
Client Matrix: Solid % Moisture: 14.6 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R062927.D
Dilution:	1.0			Initial Weight/Volume:	25.39 g
Analysis Date:	06/30/2015 0132			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		7.5	J	1.4	11

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: ASB-1008_70-72(20150624)

Lab Sample ID: 240-52462-14 Date Sampled: 06/24/2015 1300
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R062928.D
Dilution:	1.0			Initial Weight/Volume:	26.49 g
Analysis Date:	06/30/2015 0200			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		3.9	J	1.3	11

Client Sample ID: **ASB-1008_30-33(20150624)**

Lab Sample ID: 240-52462-12 Date Sampled: 06/24/2015 1200
Client Matrix: Solid % Moisture: 7.0 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.21 g
Analysis Date:	06/30/2015 0849			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4100		5.2	18
Antimony		1.8		0.43	0.89
Barium		51	B	0.36	18
Beryllium		0.22	J	0.023	0.44
Calcium		33000		20	440
Cadmium		0.16	J	0.019	0.18
Cobalt		3.6	J	0.042	4.4
Chromium		11		0.067	0.44
Copper		11		0.20	2.2
Iron		7500		2.8	8.9
Potassium		460		5.5	440
Magnesium		6800		4.6	440
Manganese		330	B	0.075	1.3
Silver		ND		0.056	0.44
Sodium		280	J	17	440
Nickel		9.6	B	0.071	3.6
Vanadium		13	B	0.18	4.4
Zinc		35		0.50	1.8
Arsenic		3.6		0.36	0.89
Lead		120		0.18	0.27
Thallium		ND		0.12	0.89

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.21 g
Analysis Date:	06/30/2015 1207			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		ND		0.30	0.44

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187814	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187567	Lab File ID:	I9070215A.asc
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 1420			Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 0849				
Leach Date:	06/30/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.050	J	0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_30-33(20150624)**

Lab Sample ID: 240-52462-12 Date Sampled: 06/24/2015 1200
Client Matrix: Solid Date Received: 06/25/2015 0900

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.012	J B	0.0029	0.50
Barium		0.48	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00031	J	0.00014	0.10
Calcium		670		0.26	5.0
Chromium		0.0033	J B	0.00055	0.50
Cobalt		0.0076	J	0.00056	0.050
Copper		ND		0.0019	1.0
Iron		0.059	J B	0.013	0.10
Lead		0.029	J	0.0019	0.50
Magnesium		12	B	0.055	5.0
Manganese		5.5	B	0.00046	0.015
Nickel		0.019	J B	0.00076	0.040
Potassium		7.0	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.11	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187791	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187569	Lab File ID:	070215AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 0850			Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 1400				
Leach Date:	06/30/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	06/30/2015 0945			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.039	J	0.015	0.11

Client Sample ID: **ASB-1008_52-54(20150624)**

Lab Sample ID: 240-52462-13 Date Sampled: 06/24/2015 1230
Client Matrix: Solid % Moisture: 14.6 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	06/30/2015 0853			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4400		6.0	21
Antimony		ND		0.50	1.0
Barium		48	B	0.43	21
Beryllium		0.25	J	0.027	0.52
Calcium		28000		24	520
Cadmium		0.10	J	0.022	0.21
Cobalt		6.9		0.049	5.2
Chromium		14		0.078	0.52
Copper		14		0.24	2.6
Iron		14000		3.3	10
Potassium		790		6.4	520
Magnesium		5400		5.4	520
Manganese		420	B	0.087	1.6
Silver		0.51	J	0.065	0.52
Sodium		180	J	20	520
Nickel		17	B	0.083	4.1
Vanadium		15	B	0.21	5.2
Zinc		28		0.58	2.1
Arsenic		4.3		0.43	1.0
Lead		10		0.21	0.31
Selenium		ND		0.35	0.52
Thallium		ND		0.13	1.0

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187814	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187567	Lab File ID:	I9070215A.asc
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 1459			Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 0849				
Leach Date:	06/30/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		0.24		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0079	J B	0.0029	0.50
Barium		0.93	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00064	J	0.00014	0.10
Calcium		630		0.26	5.0
Chromium		0.0047	J B	0.00055	0.50
Cobalt		0.022	J	0.00056	0.050
Copper		ND		0.0019	1.0
Iron		0.27	B	0.013	0.10
Lead		ND		0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_52-54(20150624)**

Lab Sample ID: 240-52462-13 Date Sampled: 06/24/2015 1230
Client Matrix: Solid Date Received: 06/25/2015 0900

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		21	B	0.055	5.0
Manganese		7.0	B	0.00046	0.015
Nickel		0.036	J B	0.00076	0.040
Potassium		4.3	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.045	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187791	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187569	Lab File ID:	070215AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 0902			Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 1400				
Leach Date:	06/30/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	06/30/2015 0949			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.022	J	0.017	0.12

Client Sample ID: **ASB-1008_70-72(20150624)**

Lab Sample ID: 240-52462-14 Date Sampled: 06/24/2015 1300
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.26 g
Analysis Date:	06/30/2015 0857			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3400		5.4	19
Antimony		ND		0.45	0.94
Barium		55	B	0.39	19
Beryllium		0.15	J	0.024	0.47
Calcium		9500		22	470
Cadmium		0.061	J	0.020	0.19
Cobalt		4.2	J	0.044	4.7
Chromium		10		0.070	0.47
Copper		4.8		0.22	2.3
Iron		9900		3.0	9.4
Potassium		380	J	5.8	470
Magnesium		4300		4.9	470
Manganese		250	B	0.079	1.4
Silver		ND		0.059	0.47
Sodium		100	J	18	470
Nickel		9.1	B	0.075	3.8
Vanadium		15	B	0.19	4.7
Zinc		20		0.53	1.9
Arsenic		1.8		0.39	0.94
Lead		3.8		0.19	0.28
Selenium		ND		0.32	0.47
Thallium		ND		0.12	0.94

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-187814	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-187567	Lab File ID:	I9070215A.asc
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 1503			Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 0849				
Leach Date:	06/30/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.010	J B	0.0029	0.50
Barium		0.79	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00083	J	0.00014	0.10
Calcium		210		0.26	5.0
Chromium		0.0054	J B	0.00055	0.50
Cobalt		0.023	J	0.00056	0.050
Copper		0.0020	J	0.0019	1.0
Iron		3.0	B	0.013	0.10
Lead		ND		0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Client Sample ID: **ASB-1008_70-72(20150624)**

Lab Sample ID: 240-52462-14 Date Sampled: 06/24/2015 1300
Client Matrix: Solid Date Received: 06/25/2015 0900

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		45	B	0.055	5.0
Manganese		8.1	B	0.00046	0.015
Nickel		0.034	J B	0.00076	0.040
Potassium		4.1	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.031	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-187791	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187569	Lab File ID:	070215AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 0904			Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 1400				
Leach Date:	06/30/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	06/30/2015 0928			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.023	J	0.018	0.13

General Chemistry

Client Sample ID: **ASB-1008_30-33(20150624)**

Lab Sample ID: 240-52462-12 Date Sampled: 06/24/2015 1200
Client Matrix: Solid % Moisture: 7.0 Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.29	0.86	1.0	7196A
Analysis Batch: 240-188230	Analysis Date: 07/07/2015 1236					DryWt Corrected: Y	
Prep Batch: 240-188002	Prep Date: 07/06/2015 1018						
Cr (III)	11		mg/Kg	0.14	2.2	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814					DryWt Corrected: Y	
Percent Solids	93		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940					DryWt Corrected: N	
Percent Moisture	7.0		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940					DryWt Corrected: N	

General Chemistry

Client Sample ID: **ASB-1008_52-54(20150624)**

Lab Sample ID: 240-52462-13 Date Sampled: 06/24/2015 1230
Client Matrix: Solid % Moisture: 14.6 Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.32	0.94	1.0	7196A
Analysis Batch: 240-188230	Analysis Date: 07/07/2015 1238						DryWt Corrected: Y
Prep Batch: 240-188002	Prep Date: 07/06/2015 1018						
Cr (III)	14		mg/Kg	0.15	2.3	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814						DryWt Corrected: Y
Percent Solids	85		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N
Percent Moisture	15		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1008_70-72(20150624)**

Lab Sample ID: 240-52462-14 Date Sampled: 06/24/2015 1300
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.32	0.95	1.0	7196A
Analysis Batch: 240-188230	Analysis Date: 07/07/2015 1248					DryWt Corrected: Y	
Prep Batch: 240-188002	Prep Date: 07/06/2015 1018						
Cr (III)	10		mg/Kg	0.15	2.4	1.0	7196A
Analysis Batch: 240-187738	Analysis Date: 07/02/2015 0814					DryWt Corrected: Y	
Percent Solids	84		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940					DryWt Corrected: N	
Percent Moisture	16		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940					DryWt Corrected: N	

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC/MS Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-187043					
LCS 240-187043/2-A	Lab Control Sample	T	Solid	5035	
MB 240-187043/1-A	Method Blank	T	Solid	5035	
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	5035	
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	5035	
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	5035	
240-52462-15	MB-01(20150624)	T	Solid	5035	
Analysis Batch:240-187197					
LCS 240-187043/2-A	Lab Control Sample	T	Solid	8260B	240-187043
MB 240-187043/1-A	Method Blank	T	Solid	8260B	240-187043
Analysis Batch:240-187606					
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	8260B	240-187043
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	8260B	240-187043
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	8260B	240-187043
240-52462-15	MB-01(20150624)	T	Solid	8260B	240-187043
Prep Batch: 240-187733					
LB 240-187733/1-A	Method Blank	P	Solid	1311	
240-52462-12	ASB-1008_30-33(20150624)	P	Solid	1311	
240-52462-13	ASB-1008_52-54(20150624)	P	Solid	1311	
240-52462-14	ASB-1008_70-72(20150624)	P	Solid	1311	
240-52462-14MS	Matrix Spike	P	Solid	1311	
240-52462-14MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-187908					
LB 240-187733/1-A	Method Blank	P	Solid	8260B	
LCS 240-187908/8	Lab Control Sample	T	Water	8260B	
240-52462-12	ASB-1008_30-33(20150624)	P	Solid	8260B	
240-52462-13	ASB-1008_52-54(20150624)	P	Solid	8260B	
240-52462-14	ASB-1008_70-72(20150624)	P	Solid	8260B	
240-52462-14MS	Matrix Spike	P	Solid	8260B	
240-52462-14MSD	Matrix Spike Duplicate	P	Solid	8260B	

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-187250					
240-52450-A-1-I MS	Matrix Spike	P	Solid	1311	
Prep Batch: 240-187413					
LCS 240-187413/24-A	Lab Control Sample	T	Solid	3540C	
MB 240-187413/23-A	Method Blank	T	Solid	3540C	
240-52442-AJ-4-J MS	Matrix Spike	T	Solid	3540C	
240-52442-AJ-4-K MSD	Matrix Spike Duplicate	T	Solid	3540C	
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	3540C	
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	3540C	
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	3540C	
Prep Batch: 240-187499					
240-52462-12	ASB-1008_30-33(20150624)	P	Solid	1311	
240-52462-13	ASB-1008_52-54(20150624)	P	Solid	1311	
240-52462-14	ASB-1008_70-72(20150624)	P	Solid	1311	
Prep Batch: 240-187661					
LCS 240-187661/7-A	Lab Control Sample	T	Water	3510C	
MB 240-187661/6-A	Method Blank	T	Water	3510C	
240-52450-A-1-I MS	Matrix Spike	P	Solid	3510C	240-187250
240-52462-12	ASB-1008_30-33(20150624)	P	Solid	3510C	240-187499
240-52462-13	ASB-1008_52-54(20150624)	P	Solid	3510C	240-187499
240-52462-14	ASB-1008_70-72(20150624)	P	Solid	3510C	240-187499
Analysis Batch:240-187745					
LCS 240-187413/24-A	Lab Control Sample	T	Solid	8270C	240-187413
MB 240-187413/23-A	Method Blank	T	Solid	8270C	240-187413
Analysis Batch:240-187984					
LCS 240-187661/7-A	Lab Control Sample	T	Water	8270C	240-187661
MB 240-187661/6-A	Method Blank	T	Water	8270C	240-187661
240-52450-A-1-I MS	Matrix Spike	P	Solid	8270C	240-187661
240-52462-12	ASB-1008_30-33(20150624)	P	Solid	8270C	240-187661
240-52462-13	ASB-1008_52-54(20150624)	P	Solid	8270C	240-187661
240-52462-14	ASB-1008_70-72(20150624)	P	Solid	8270C	240-187661
Analysis Batch:240-188301					
240-52442-AJ-4-J MS	Matrix Spike	T	Solid	8270C	240-187413
240-52442-AJ-4-K MSD	Matrix Spike Duplicate	T	Solid	8270C	240-187413
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	8270C	240-187413
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	8270C	240-187413
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	8270C	240-187413

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Report Basis					
P = TCLP					
T = Total					
GC VOA					
Prep Batch: 240-186853					
LCS 240-186853/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-186853/18-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-186853/1-A	Method Blank	T	Solid	5035	
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	5035	
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	5035	
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	5035	
240-52462-15	MB-01(20150624)	T	Solid	5035	
Analysis Batch:240-186873					
LCS 240-186853/2-A	Lab Control Sample	T	Solid	WI-GRO	240-186853
LCSD 240-186853/18-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-186853
MB 240-186853/1-A	Method Blank	T	Solid	WI-GRO	240-186853
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	WI-GRO	240-186853
240-52462-15	MB-01(20150624)	T	Solid	WI-GRO	240-186853
Analysis Batch:240-187143					
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	WI-GRO	240-186853
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	WI-GRO	240-186853

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-187060					
LCS 240-187060/22-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-187060/23-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-187060/21-A	Method Blank	T	Solid	WI DRO PREP	
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	WI DRO PREP	
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	WI DRO PREP	
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	WI DRO PREP	
Analysis Batch:240-187243					
LCS 240-187060/22-A	Lab Control Sample	T	Solid	WI-DRO	240-187060
LCSD 240-187060/23-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-187060
MB 240-187060/21-A	Method Blank	T	Solid	WI-DRO	240-187060
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	WI-DRO	240-187060
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	WI-DRO	240-187060
Analysis Batch:240-187397					
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	WI-DRO	240-187060

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-186943					
LCS 240-186943/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-186943/1-A	Method Blank	T	Solid	3050B	
240-52462-I-1-B MS	Matrix Spike	T	Solid	3050B	
240-52462-I-1-C MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	3050B	
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	3050B	
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	3050B	
Prep Batch: 240-186944					
LCS 240-186944/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-186944/1-A	Method Blank	T	Solid	7471A	
240-52462-I-1-E MS	Matrix Spike	T	Solid	7471A	
240-52462-I-1-F MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	7471A	
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	7471A	
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	7471A	
Analysis Batch:240-187366					
LCS 240-186943/2-A	Lab Control Sample	T	Solid	6010B	240-186943
MB 240-186943/1-A	Method Blank	T	Solid	6010B	240-186943
240-52462-I-1-B MS	Matrix Spike	T	Solid	6010B	240-186943
240-52462-I-1-C MSD	Matrix Spike Duplicate	T	Solid	6010B	240-186943
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	6010B	240-186943
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	6010B	240-186943
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	6010B	240-186943
Analysis Batch:240-187460					
LCS 240-186944/2-A	Lab Control Sample	T	Solid	7471A	240-186944
MB 240-186944/1-A	Method Blank	T	Solid	7471A	240-186944
240-52462-I-1-E MS	Matrix Spike	T	Solid	7471A	240-186944
240-52462-I-1-F MSD	Matrix Spike Duplicate	T	Solid	7471A	240-186944
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	7471A	240-186944
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	7471A	240-186944
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	7471A	240-186944
Prep Batch: 240-187499					
LB 240-187499/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-187499/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-52462-12	ASB-1008_30-33(20150624)	P	Solid	1311	
240-52462-12MS	Matrix Spike	P	Solid	1311	
240-52462-12MSD	Matrix Spike Duplicate	P	Solid	1311	
240-52462-13	ASB-1008_52-54(20150624)	P	Solid	1311	
240-52462-14	ASB-1008_70-72(20150624)	P	Solid	1311	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187567					
LCS 240-187567/3-A	Lab Control Sample	T	Water	3010A	
MB 240-187567/2-A	Method Blank	T	Water	3010A	
LB 240-187499/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-187499
240-52462-12	ASB-1008_30-33(20150624)	P	Solid	3010A	240-187499
240-52462-12MS	Matrix Spike	P	Solid	3010A	240-187499
240-52462-12MSD	Matrix Spike Duplicate	P	Solid	3010A	240-187499
240-52462-13	ASB-1008_52-54(20150624)	P	Solid	3010A	240-187499
240-52462-14	ASB-1008_70-72(20150624)	P	Solid	3010A	240-187499
Prep Batch: 240-187569					
LCS 240-187569/3-A	Lab Control Sample	T	Water	7470A	
MB 240-187569/2-A	Method Blank	T	Water	7470A	
LB 240-187499/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187499
240-52462-12	ASB-1008_30-33(20150624)	P	Solid	7470A	240-187499
240-52462-12MS	Matrix Spike	P	Solid	7470A	240-187499
240-52462-12MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187499
240-52462-13	ASB-1008_52-54(20150624)	P	Solid	7470A	240-187499
240-52462-14	ASB-1008_70-72(20150624)	P	Solid	7470A	240-187499
Analysis Batch:240-187791					
LB 240-187499/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187569
LCS 240-187569/3-A	Lab Control Sample	T	Water	7470A	240-187569
MB 240-187569/2-A	Method Blank	T	Water	7470A	240-187569
240-52462-12	ASB-1008_30-33(20150624)	P	Solid	7470A	240-187569
240-52462-12MS	Matrix Spike	P	Solid	7470A	240-187569
240-52462-12MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187569
240-52462-13	ASB-1008_52-54(20150624)	P	Solid	7470A	240-187569
240-52462-14	ASB-1008_70-72(20150624)	P	Solid	7470A	240-187569
Analysis Batch:240-187814					
LB 240-187499/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-187567
LCS 240-187567/3-A	Lab Control Sample	T	Water	6010B	240-187567
MB 240-187567/2-A	Method Blank	T	Water	6010B	240-187567
240-52462-12	ASB-1008_30-33(20150624)	P	Solid	6010B	240-187567
240-52462-12MS	Matrix Spike	P	Solid	6010B	240-187567
240-52462-12MSD	Matrix Spike Duplicate	P	Solid	6010B	240-187567
240-52462-13	ASB-1008_52-54(20150624)	P	Solid	6010B	240-187567
240-52462-14	ASB-1008_70-72(20150624)	P	Solid	6010B	240-187567

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-186917					
240-52462-E-7 DU	Duplicate	T	Solid	Moisture	
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	Moisture	
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	Moisture	
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	Moisture	
Analysis Batch:240-187738					
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	7196A	
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	7196A	
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	7196A	
Prep Batch: 240-188002					
LCSI 240-188002/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-188002/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-188002/9-A	Method Blank	T	Solid	3060A	
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	3060A	
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	3060A	
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	3060A	
Analysis Batch:240-188230					
LCSI 240-188002/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-188002
LCSS 240-188002/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-188002
MB 240-188002/9-A	Method Blank	T	Solid	7196A	240-188002
240-52462-12	ASB-1008_30-33(20150624)	T	Solid	7196A	240-188002
240-52462-13	ASB-1008_52-54(20150624)	T	Solid	7196A	240-188002
240-52462-14	ASB-1008_70-72(20150624)	T	Solid	7196A	240-188002

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52462-12	ASB-1008_30-33(20150624)	265X	79	217X	197X
240-52462-13	ASB-1008_52-54(20150624)	99	81	102	92
240-52462-14	ASB-1008_70-72(20150624)	149X	122	152X	135X
240-52462-15	MB-01(20150624)	109	89	117	101
MB 240-187043/1-A		88	101	110	95
LCS 240-187043/2-A		81	99	101	92

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-187733/1-A MB		88	104	97	101
LCS 240-187908/8		97	101	97	103
240-52462-14 MS	ASB-1008_70-72(20150624) MS	95	101	95	101
240-52462-14 MSD	ASB-1008_70-72(20150624) MSD	94	101	92	101

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-52462-12	ASB-1008_30-33(20150624)	97	93	101	104
240-52462-13	ASB-1008_52-54(20150624)	95	91	100	99
240-52462-14	ASB-1008_70-72(20150624)	99	93	101	102

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-187413/23-A		60	51	56	61	64	13
LCS 240-187413/24-A		66	68	65	70	74	58
240-52442-AJ-4-J MS		76	77	76	81	76	62
240-52442-AJ-4-K MSD		78	74	80	83	78	59

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52462-12	ASB-1008_30-33(20150624)	0X	0X	0X	0X	0X	0X
240-52462-13	ASB-1008_52-54(20150624)	85	73	31	70	78	86
240-52462-14	ASB-1008_70-72(20150624)	72	72	54	64	79	76

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-52462-12	ASB-1008_30-33(20150624)	78	68	79	62	80	70
240-52462-13	ASB-1008_52-54(20150624)	78	73	76	77	82	76
240-52462-14	ASB-1008_70-72(20150624)	73	66	74	62	78	75
MB 240-187661/6-A		87	75	87	68	89	81
LCS 240-187661/7-A		83	70	83	59	85	75
240-52450-A-1-I MS		81	74	83	75	85	76

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Method Blank - Batch: 240-187043

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-187043/1-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187043	Lab File ID:	143905.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 2108	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method Blank - Batch: 240-187043

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-187043/1-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187043	Lab File ID:	143905.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 2108	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	88	26 - 141
Dibromofluoromethane (Surr)	101	30 - 122
1,2-Dichloroethane-d4 (Surr)	110	39 - 128
Toluene-d8 (Surr)	95	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Control Sample - Batch: 240-187043

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-187043/2-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187043	Lab File ID:	143904.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 2046	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	1700	85	16 - 156	
Allyl chloride	1000	893	89	50 - 150	
Bromobenzene	1000	816	82	72 - 120	
Bromochloromethane	1000	941	94	56 - 128	
Bromodichloromethane	1000	868	87	28 - 123	
Benzene	1000	970	97	70 - 120	
Bromoform	1000	799	80	10 - 120	
Bromomethane	1000	476	48	10 - 120	
2-Butanone (MEK)	2000	1490	74	10 - 199	
Carbon disulfide	1000	778	78	10 - 132	
Carbon tetrachloride	1000	972	97	29 - 120	
Chlorobenzene	1000	916	92	71 - 120	
Chlorodibromomethane	1000	865	86	22 - 120	
Chloroethane	1000	726	73	10 - 120	
Chloroform	1000	1030	103	63 - 120	
Chloromethane	1000	784	78	25 - 120	
2-Chlorotoluene	1000	906	91	68 - 122	
4-Chlorotoluene	1000	846	85	68 - 122	
cis-1,2-Dichloroethene	1000	970	97	60 - 125	
cis-1,3-Dichloropropene	1000	840	84	25 - 120	
Cyclohexane	1000	868	87	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	834	83	10 - 129	
1,2-Dibromoethane	1000	910	91	47 - 123	
Dibromomethane	1000	930	93	68 - 120	
1,2-Dichlorobenzene	1000	886	89	68 - 120	
1,3-Dichlorobenzene	1000	859	86	66 - 121	
1,4-Dichlorobenzene	1000	875	88	65 - 120	
Dichlorodifluoromethane	1000	924	92	10 - 120	
1,1-Dichloroethane	1000	970	97	63 - 120	
1,2-Dichloroethane	1000	911	91	68 - 120	
1,1-Dichloroethene	1000	1020	102	44 - 143	
Dichlorofluoromethane	1000	1090	109	40 - 160	
1,2-Dichloropropane	1000	897	90	73 - 120	
1,3-Dichloropropane	1000	891	89	74 - 120	
2,2-Dichloropropane	1000	936	94	25 - 123	
1,1-Dichloropropene	1000	1070	107	60 - 123	
Ethylbenzene	1000	924	92	66 - 120	
Ethyl ether	1000	924	92	70 - 130	
Hexachlorobutadiene	1000	984	98	34 - 135	
2-Hexanone	2000	1120	56	43 - 130	
Isopropylbenzene	1000	991	99	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Control Sample - Batch: 240-187043

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-187043/2-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187043	Lab File ID:	143904.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 2046	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	4090	82	44 - 173	
Methylcyclohexane	1000	1000	100	41 - 133	
Methylene Chloride	1000	1010	101	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1530	76	49 - 121	
Methyl tert butyl ether	1000	1000	100	34 - 157	
m-Xylene & p-Xylene	1000	932	93	67 - 120	
Naphthalene	1000	846	85	37 - 126	
n-Butylbenzene	1000	852	85	51 - 137	
N-Propylbenzene	1000	841	84	64 - 130	
o-Xylene	1000	1010	101	68 - 120	
p-Isopropyltoluene	1000	878	88	56 - 136	
sec-Butylbenzene	1000	911	91	58 - 131	
Styrene	1000	842	84	60 - 120	
tert-Butylbenzene	1000	884	88	58 - 128	
1,1,1,2-Tetrachloroethane	1000	1060	106	27 - 121	
1,1,2,2-Tetrachloroethane	1000	858	86	54 - 121	
Tetrachloroethene	1000	1010	101	58 - 131	
Tetrahydrofuran	2000	1650	83	70 - 130	
Toluene	1000	938	94	66 - 123	
trans-1,2-Dichloroethene	1000	988	99	58 - 121	
trans-1,3-Dichloropropene	1000	922	92	22 - 122	
1,2,3-Trichlorobenzene	1000	905	91	43 - 129	
1,2,4-Trichlorobenzene	1000	888	89	41 - 135	
1,1,1-Trichloroethane	1000	995	99	38 - 122	
1,1,2-Trichloroethane	1000	895	90	74 - 120	
Trichloroethene	1000	1000	100	59 - 124	
Trichlorofluoromethane	1000	1120	112	17 - 145	
1,2,3-Trichloropropane	1000	866	87	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	1030	103	48 - 151	
1,2,4-Trimethylbenzene	1000	860	86	62 - 133	
1,3,5-Trimethylbenzene	1000	882	88	60 - 130	
Vinyl chloride	1000	851	85	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	81	26 - 141
Dibromofluoromethane (Surr)	99	30 - 122
1,2-Dichloroethane-d4 (Surr)	101	39 - 128
Toluene-d8 (Surr)	92	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method Blank - Batch: 240-187908

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-187733/1-A	Analysis Batch:	240-187908	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950904.D
Dilution:	1.0	Leach Batch:	240-187733	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/04/2015 1212	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	07/04/2015 1212				
Leach Date:	07/01/2015 1930				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	88	70 - 124
Dibromofluoromethane (Surr)	104	80 - 128
1,2-Dichloroethane-d4 (Surr)	97	80 - 121
Toluene-d8 (Surr)	101	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Control Sample - Batch: 240-187908

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-187908/8	Analysis Batch:	240-187908	Instrument ID:	A3UX9
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UX950905.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/04/2015 1236	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	07/04/2015 1236				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	1040	104	80 - 120	
2-Butanone (MEK)	2000	1660	83	49 - 120	
Carbon tetrachloride	1000	1020	102	54 - 122	
Chlorobenzene	1000	1040	104	80 - 120	
Chloroform	1000	1050	105	80 - 123	
1,2-Dichloroethane	1000	1010	101	80 - 120	
1,1-Dichloroethene	1000	1010	101	71 - 133	
Tetrachloroethene	1000	1060	106	79 - 134	
Trichloroethene	1000	1030	103	78 - 130	
Vinyl chloride	1000	985	99	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	70 - 124
Dibromofluoromethane (Surr)	101	80 - 128
1,2-Dichloroethane-d4 (Surr)	97	80 - 121
Toluene-d8 (Surr)	103	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187908

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-52462-14	Analysis Batch:	240-187908	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950918.D
Dilution:	1.0	Leach Batch:	240-187733	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/04/2015 1746			Final Weight/Volume:	5 mL
Prep Date:	07/04/2015 1746				5 mL
Leach Date:	07/01/2015 1930				

MSD Lab Sample ID:	240-52462-14	Analysis Batch:	240-187908	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950919.D
Dilution:	1.0	Leach Batch:	240-187733	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/04/2015 1810			Final Weight/Volume:	5 mL
Prep Date:	07/04/2015 1810				5 mL
Leach Date:	07/01/2015 1930				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	103	99	80 - 120	3	30		
2-Butanone (MEK)	90	87	49 - 120	3	30		
Carbon tetrachloride	103	101	60 - 120	2	30		
Chlorobenzene	101	98	80 - 120	3	30		
Chloroform	103	101	80 - 124	3	30		
1,2-Dichloroethane	99	95	80 - 120	4	30		
1,1-Dichloroethene	107	98	67 - 139	8	30		
Tetrachloroethene	102	100	74 - 138	1	30		
Trichloroethene	103	102	75 - 134	1	30		
Vinyl chloride	101	96	51 - 120	5	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	95	94	70 - 124
Dibromofluoromethane (Surr)	101	101	80 - 128
1,2-Dichloroethane-d4 (Surr)	95	92	80 - 121
Toluene-d8 (Surr)	101	101	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method Blank - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187413/23-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1154	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method Blank - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187413/23-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1154	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	60	24 - 110
2-Fluorophenol (Surr)	51	24 - 110
Nitrobenzene-d5 (Surr)	56	20 - 110
Phenol-d5 (Surr)	61	26 - 110
Terphenyl-d14 (Surr)	64	36 - 110
2,4,6-Tribromophenol (Surr)	13	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Control Sample - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187413/24-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1217	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	432	65	35 - 110	
2,2'-oxybis[1-chloropropane]	667	408	61	29 - 110	
2,4-Dichlorophenol	667	434	65	39 - 110	
2,4-Dimethylphenol	667	428	64	29 - 110	
2,4-Dinitrophenol	1330	706	53	10 - 110	J
2,4-Dinitrotoluene	667	516	77	48 - 110	
2,6-Dinitrotoluene	667	501	75	45 - 110	
2-Chloronaphthalene	667	432	65	32 - 110	
2,4,5-Trichlorophenol	667	356	53	25 - 110	
2-Chlorophenol	667	412	62	37 - 110	
2,4,6-Trichlorophenol	667	379	57	12 - 110	
2-Methylnaphthalene	667	430	65	36 - 110	
2-Methylphenol	667	448	67	41 - 110	
2-Nitroaniline	667	506	76	45 - 110	J
2-Nitrophenol	667	404	61	34 - 110	
3,3'-Dichlorobenzidine	1330	718	54	28 - 110	J
3-Nitroaniline	667	490	73	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	828	62	10 - 110	J
4-Bromophenyl phenyl ether	667	465	70	39 - 110	
4-Chloro-3-methylphenol	667	485	73	48 - 110	
4-Chloroaniline	667	370	55	30 - 110	
4-Chlorophenyl phenyl ether	667	458	69	40 - 110	
4-Nitroaniline	667	501	75	48 - 110	J
4-Nitrophenol	1330	842	63	28 - 110	J
Acenaphthene	667	439	66	38 - 110	
Acenaphthylene	667	461	69	40 - 110	
Acetophenone	667	425	64	40 - 110	
Anthracene	667	491	74	48 - 110	
Atrazine	1330	1060	79	66 - 127	
Benzaldehyde	1330	887	67	32 - 110	
Benzo[a]anthracene	667	496	74	50 - 110	
Benzo[a]pyrene	667	490	74	44 - 110	
Benzo[b]fluoranthene	667	503	75	43 - 110	
Benzo[g,h,i]perylene	667	554	83	51 - 110	
Benzo[k]fluoranthene	667	533	80	38 - 105	
Bis(2-chloroethoxy)methane	667	426	64	32 - 110	
Bis(2-chloroethyl)ether	667	410	61	34 - 110	
Bis(2-ethylhexyl) phthalate	667	574	86	50 - 110	
Butyl benzyl phthalate	667	541	81	51 - 110	
Caprolactam	1330	1250	94	44 - 114	
Carbazole	667	495	74	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Control Sample - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187413/24-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1217	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	513	77	50 - 110	
Dibenz(a,h)anthracene	667	509	76	51 - 110	
Dibenzofuran	667	453	68	43 - 110	
Diethyl phthalate	667	490	73	52 - 110	
Dimethyl phthalate	667	469	70	50 - 110	
Di-n-butyl phthalate	667	544	82	51 - 110	
Di-n-octyl phthalate	667	489	73	48 - 110	
Fluoranthene	667	514	77	51 - 110	
Fluorene	667	459	69	46 - 110	
Hexachlorobenzene	667	450	68	43 - 110	
Hexachlorobutadiene	667	379	57	29 - 110	
Hexachlorocyclopentadiene	667	177	27	12 - 110	J
Hexachloroethane	667	385	58	30 - 110	
Indeno[1,2,3-cd]pyrene	667	522	78	50 - 110	
Isophorone	667	442	66	36 - 110	
Naphthalene	667	400	60	36 - 110	
Nitrobenzene	667	421	63	32 - 110	
N-Nitrosodi-n-propylamine	667	442	66	38 - 110	
N-Nitrosodiphenylamine	1330	963	72	46 - 110	
Pentachlorophenol	1330	751	56	10 - 110	
Phenol	667	425	64	38 - 110	
Phenanthrene	667	469	70	49 - 110	
Pyrene	667	506	76	49 - 110	
3 & 4 Methylphenol	667	480	72	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	66	24 - 110
2-Fluorophenol (Surr)	68	24 - 110
Nitrobenzene-d5 (Surr)	65	20 - 110
Phenol-d5 (Surr)	70	26 - 110
Terphenyl-d14 (Surr)	74	36 - 110
2,4,6-Tribromophenol (Surr)	58	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187413

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-AJ-4-J MS	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708009.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.70 g
Analysis Date:	07/08/2015 1059			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-AJ-4-K MSD	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708010.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.88 g
Analysis Date:	07/08/2015 1124			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	69	75	32 - 110	6	32	J	J
2,2'-oxybis[1-chloropropane]	72	78	11 - 110	7	42	J	J
2,4-Dichlorophenol	77	81	10 - 110	4	34	J	J
2,4-Dimethylphenol	77	77	10 - 110	1	31	J	J
2,4-Dinitrophenol	34	34	10 - 110	0	99	J	J
2,4-Dinitrotoluene	67	71	32 - 110	6	30	J	J
2,6-Dinitrotoluene	69	75	35 - 110	8	30	J	J
2-Chloronaphthalene	73	82	28 - 110	11	30	J	J
2,4,5-Trichlorophenol	75	69	10 - 117	10	99	J	J
2-Chlorophenol	72	80	10 - 110	9	47	J	J
2,4,6-Trichlorophenol	66	65	10 - 110	2	38	J	J
2-Methylnaphthalene	70	73	10 - 133	3	42	J	J
2-Methylphenol	83	82	24 - 110	2	51	J	J
2-Nitroaniline	72	79	39 - 110	8	31	J	J
2-Nitrophenol	69	74	10 - 110	5	49	J	J
3,3'-Dichlorobenzidine	28	29	10 - 110	3	56	J	J
3-Nitroaniline	68	73	10 - 110	6	30	J	J
4,6-Dinitro-2-methylphenol	37	35	10 - 110	6	55	J	J
4-Bromophenyl phenyl ether	78	78	33 - 110	0	30	J	J
4-Chloro-3-methylphenol	75	80	25 - 110	6	54	J	J
4-Chloroaniline	59	59	10 - 110	1	36	J	J
4-Chlorophenyl phenyl ether	75	83	32 - 110	10	30	J	J
4-Nitroaniline	70	52	10 - 110	29	48	J	J
4-Nitrophenol	77	78	10 - 113	1	49	J	J
Acenaphthene	84	61	22 - 110	22	99	J	J
Acenaphthylene	70	73	24 - 110	4	99	J	J
Acetophenone	78	80	31 - 110	1	43	J	J
Anthracene	80	50	20 - 110	23	99	J	J
Atrazine	87	94	45 - 118	7	30	J	J
Benzaldehyde	85	86	23 - 110	0	42	J	J
Benzo[a]anthracene	78	27	10 - 122	19	99		
Benzo[a]pyrene	66	39	10 - 110	11	99		J

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187413

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-AJ-4-J MS	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708009.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.70 g
Analysis Date:	07/08/2015 1059			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-AJ-4-K MSD	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708010.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.88 g
Analysis Date:	07/08/2015 1124			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	40	24	12 - 118	5	99		
Benzo[g,h,i]perylene	51	38	10 - 117	8	99	J	J
Benzo[k]fluoranthene	52	58	10 - 121	3	99	J	J
Bis(2-chloroethoxy)methane	78	80	26 - 110	2	37	J	J
Bis(2-chloroethyl)ether	72	76	21 - 110	6	55	J	J
Bis(2-ethylhexyl) phthalate	68	107	40 - 110	32	30	J	J F2
Butyl benzyl phthalate	83	88	44 - 110	5	30	J	J
Caprolactam	91	93	10 - 134	2	32	J	J
Carbazole	75	63	34 - 110	11	30	J	J
Chrysene	66	35	10 - 125	10	99		
Dibenz(a,h)anthracene	55	59	14 - 113	4	99	J	J
Dibenzofuran	74	66	29 - 110	9	30	J	J
Diethyl phthalate	80	84	42 - 110	4	30	J	J
Dimethyl phthalate	81	80	41 - 110	2	30	J	J
Di-n-butyl phthalate	69	74	43 - 110	4	30	J	J
Di-n-octyl phthalate	76	81	24 - 119	6	30	J	J
Fluoranthene	84	-34	10 - 110	24	99	4	4
Fluorene	86	66	23 - 110	20	99	J	J
Hexachlorobenzene	68	68	34 - 110	1	30	J	J
Hexachlorobutadiene	75	78	25 - 110	4	34	J	J
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	59	53	12 - 110	10	50	J	J
Indeno[1,2,3-cd]pyrene	57	45	10 - 114	8	99	J	J
Isophorone	78	84	29 - 110	8	38	J	J
Naphthalene	52	51	10 - 111	2	99	J	J
Nitrobenzene	72	80	23 - 110	9	41	J	J
N-Nitrosodi-n-propylamine	74	83	26 - 110	10	42	J	J
N-Nitrosodiphenylamine	79	82	22 - 110	3	30	J	J
Phenol	76	85	17 - 110	11	53	J	J
Phenanthrene	91	-23	10 - 166	35	99		F1
Pyrene	83	7	10 - 147	17	99		F1
3 & 4 Methylphenol	78	82	25 - 110	5	50	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187413

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-AJ-4-J MS	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708009.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.70 g
Analysis Date:	07/08/2015 1059			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-AJ-4-K MSD	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708010.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.88 g
Analysis Date:	07/08/2015 1124			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	76	78	24 - 110
2-Fluorophenol (Surr)	77	74	24 - 110
Nitrobenzene-d5 (Surr)	76	80	20 - 110
Phenol-d5 (Surr)	81	83	26 - 110
Terphenyl-d14 (Surr)	76	78	36 - 110
2,4,6-Tribromophenol (Surr)	62	59	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method Blank - Batch: 240-187661

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-187661/6-A	Analysis Batch:	240-187984	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187661	Lab File ID:	50706012.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	07/06/2015 1508	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1457			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.0040
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	87	30 - 110
2-Fluorophenol (Surr)	75	20 - 110
Nitrobenzene-d5 (Surr)	87	28 - 110
Phenol-d5 (Surr)	68	21 - 110
Terphenyl-d14 (Surr)	89	48 - 110
2,4,6-Tribromophenol (Surr)	81	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Control Sample - Batch: 240-187661

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-187661/7-A	Analysis Batch:	240-187984	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187661	Lab File ID:	50706013.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	07/06/2015 1533	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1457			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0563	70	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0615	77	54 - 110	
Pyridine	0.0800	0.0550	69	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0654	82	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0630	79	46 - 110	
2-Methylphenol	0.0800	0.0691	86	44 - 111	
Hexachlorobenzene	0.0800	0.0704	88	50 - 110	
Hexachlorobutadiene	0.0800	0.0527	66	34 - 110	
Hexachloroethane	0.0800	0.0552	69	41 - 110	
Nitrobenzene	0.0800	0.0649	81	40 - 110	
Pentachlorophenol	0.160	0.134	84	12 - 110	
3 & 4 Methylphenol	0.0800	0.0698	87	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	83	30 - 110
2-Fluorophenol (Surr)	70	20 - 110
Nitrobenzene-d5 (Surr)	83	28 - 110
Phenol-d5 (Surr)	59	21 - 110
Terphenyl-d14 (Surr)	85	48 - 110
2,4,6-Tribromophenol (Surr)	75	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Matrix Spike - Batch: 240-187661

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-52450-A-1-I MS	Analysis Batch:	240-187984	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-187661	Lab File ID:	50706015.D
Dilution:	1.0	Leach Batch:	240-187250	Initial Weight/Volume:	250 mL
Analysis Date:	07/06/2015 1622	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1457			Injection Volume:	1 uL
Leach Date:	06/29/2015 1200				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0587	73	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0614	77	42 - 110	
Pyridine	ND	0.0800	0.0658	82	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0636	80	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0633	79	35 - 110	
2-Methylphenol	ND	0.0800	0.0784	98	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0692	87	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0545	68	28 - 110	
Hexachloroethane	ND	0.0800	0.0573	72	26 - 110	
Nitrobenzene	ND	0.0800	0.0655	82	32 - 110	
Pentachlorophenol	ND	0.160	0.133	83	10 - 124	
3 & 4 Methylphenol	ND	0.0800	0.0721	90	29 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	81	30 - 110
2-Fluorophenol (Surr)	74	20 - 110
Nitrobenzene-d5 (Surr)	83	28 - 110
Phenol-d5 (Surr)	75	21 - 110
Terphenyl-d14 (Surr)	85	48 - 110
2,4,6-Tribromophenol (Surr)	76	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method Blank - Batch: 240-186853 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-186853/1-A	Analysis Batch:	240-186873	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186853	Lab File ID:	Y0062625.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/26/2015 2108	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186853 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-186853/2-A	Analysis Batch:	240-186873	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186853	Lab File ID:	Y0062626.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/26/2015 2144	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186853/18-A	Analysis Batch:	240-186873	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186853	Lab File ID:	Y0062643.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/27/2015 0745	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	103	97	80 - 120	6	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method Blank - Batch: 240-187060

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-187060/21-A	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-187060	Lab File ID:	P14R062908.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 1651	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-187060

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-187060/22-A	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-187060	Lab File ID:	P14R062909.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 1718	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-187060/23-A	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-187060	Lab File ID:	P14R062929.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/30/2015 0227	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	87	105	70 - 120	19	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method Blank - Batch: 240-186943

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-186943/1-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/30/2015 0654	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	0.722	J	0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	ND		0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	ND		5.2	500
Manganese	0.103	J	0.084	1.5
Sodium	ND		19	500
Nickel	1.03	J	0.080	4.0
Potassium	ND		6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Vanadium	0.326	J	0.20	5.0
Selenium	ND		0.34	0.50
Zinc	ND		0.56	2.0
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Control Sample - Batch: 240-186943

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-186943/2-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/30/2015 0658	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	194	97	80 - 120	
Antimony	50.0	48.2	96	80 - 120	
Barium	200	188	94	80 - 120	
Beryllium	5.00	4.83	97	80 - 120	
Cadmium	5.00	4.87	97	80 - 120	
Calcium	5000	4880	98	80 - 120	
Chromium	20.0	18.9	95	80 - 120	
Cobalt	50.0	48.0	96	80 - 120	
Copper	25.0	24.1	96	80 - 120	
Iron	100	101	101	80 - 120	
Magnesium	5000	4830	97	80 - 120	
Manganese	50.0	48.4	97	80 - 120	
Sodium	5000	4910	98	80 - 120	
Nickel	50.0	48.5	97	80 - 120	
Potassium	5000	4840	97	80 - 120	
Silver	5.00	4.89	98	80 - 120	
Arsenic	200	195	97	80 - 120	
Lead	50.0	47.0	94	80 - 120	
Vanadium	50.0	47.8	96	80 - 120	
Selenium	200	192	96	80 - 120	
Zinc	50.0	48.9	98	80 - 120	
Thallium	200	190	95	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186943

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-52462-I-1-B MS
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/30/2015 0722
Prep Date: 06/26/2015 1033
Leach Date: N/A

Analysis Batch: 240-187366
Prep Batch: 240-186943
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9063015A.asc
Initial Weight/Volume: 1.27 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-52462-I-1-C MSD
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 06/30/2015 0726
Prep Date: 06/26/2015 1033
Leach Date: N/A

Analysis Batch: 240-187366
Prep Batch: 240-186943
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9063015A.asc
Initial Weight/Volume: 1.27 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	433	788	75 - 125	15	20	4	4
Antimony	52	57	75 - 125	9	20	F1	F1
Barium	80	83	75 - 125	4	20		
Beryllium	84	88	75 - 125	4	20		
Cadmium	85	87	75 - 125	3	20		
Calcium	-228	-166	75 - 125	13	20	4	4
Chromium	75	81	75 - 125	5	20		
Cobalt	89	98	75 - 125	9	20		
Copper	73	106	75 - 125	24	20	F1	F2
Iron	-1902	-1017	75 - 125	10	20	4	4
Magnesium	10	36	75 - 125	11	20	F1	F1
Manganese	-194	-56	75 - 125	17	20	4	4
Sodium	88	92	75 - 125	5	20		
Nickel	85	98	75 - 125	11	20		
Potassium	88	94	75 - 125	6	20		
Silver	90	93	75 - 125	3	20		
Arsenic	87	91	75 - 125	4	20		
Lead	72	72	75 - 125	0	20	F1	F1
Vanadium	81	90	75 - 125	7	20		
Selenium	86	90	75 - 125	4	20		
Zinc	70	75	75 - 125	3	20	F1	
Thallium	91	94	75 - 125	4	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

TCLP SPLPE Leachate Blank - Batch: 240-187567

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-187499/1-B	Analysis Batch:	240-187814	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187567	Lab File ID:	I9070215A.asc
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 1408	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 0849				
Leach Date:	06/30/2015 1800				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.00326	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.00154	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	0.000466	J	0.00046	0.015
Nickel	0.00284	J	0.00076	0.040
Potassium	0.384	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00577	J	0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method Blank - Batch: 240-187567

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-187567/2-A	Analysis Batch:	240-187814	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187567	Lab File ID:	I9070215A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 1412	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 0849				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	0.0188	J	0.013	0.10
Magnesium	0.0588	J	0.055	5.0
Manganese	ND		0.00046	0.015
Nickel	ND		0.00076	0.040
Potassium	0.0764	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Lab Control Sample - Batch: 240-187567

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-187567/3-A	Analysis Batch:	240-187814	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-187567	Lab File ID:	I9070215A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 1416	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 0849				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	2.01	100	50 - 150	
Antimony	0.500	0.514	103	50 - 150	
Barium	2.00	1.99	99	50 - 150	J
Beryllium	0.0500	0.0508	102	50 - 150	
Cadmium	0.0500	0.0526	105	50 - 150	J
Calcium	50.0	49.2	98	50 - 150	
Chromium	0.200	0.206	103	50 - 150	J
Cobalt	0.500	0.533	107	50 - 150	
Copper	0.250	0.258	103	50 - 150	J
Iron	1.00	1.08	108	50 - 150	
Magnesium	50.0	48.1	96	50 - 150	
Manganese	0.500	0.504	101	50 - 150	
Nickel	0.500	0.538	108	50 - 150	
Potassium	50.0	51.2	102	50 - 150	
Silver	0.0500	0.0523	105	50 - 150	J
Arsenic	2.00	2.17	108	50 - 150	
Lead	0.500	0.481	96	50 - 150	J
Vanadium	0.500	0.514	103	50 - 150	
Selenium	2.00	2.25	113	50 - 150	
Zinc	0.500	0.581	116	50 - 150	J
Thallium	2.00	1.97	99	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187567

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52462-12	Analysis Batch:	240-187814	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187567	Lab File ID:	I9070215A.asc
Dilution:	5.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 1429			Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 0849				
Leach Date:	06/30/2015 1800				

MSD Lab Sample ID:	240-52462-12	Analysis Batch:	240-187814	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-187567	Lab File ID:	I9070215A.asc
Dilution:	5.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 1433			Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 0849				
Leach Date:	06/30/2015 1800				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	93	99	75 - 125	6	20		
Antimony	97	101	75 - 125	4	20	J	J
Barium	96	100	75 - 125	4	20	J	
Beryllium	100	101	75 - 125	2	20		
Cadmium	101	104	75 - 125	3	20		
Calcium	60	113	75 - 125	4	20	4	4
Chromium	97	101	75 - 125	4	20		
Cobalt	101	104	75 - 125	3	20		
Copper	100	101	75 - 125	1	20	J	J
Iron	115	116	75 - 125	1	20		
Magnesium	98	102	75 - 125	3	20		
Manganese	43	91	75 - 125	4	20	4	4
Nickel	102	105	75 - 125	3	20		
Potassium	101	105	75 - 125	3	20		
Silver	100	104	75 - 125	3	20	J	J
Arsenic	106	109	75 - 125	3	20		
Lead	97	100	75 - 125	3	20		
Vanadium	99	98	75 - 125	2	20		
Selenium	108	111	75 - 125	2	20	J	J
Zinc	106	109	75 - 125	3	20	J	J
Thallium	98	102	75 - 125	3	20	J	J

TCLP SPLPE Leachate Blank - Batch: 240-187569

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-187499/1-C	Analysis Batch:	240-187791	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187569	Lab File ID:	070215AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 0845	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 1400				
Leach Date:	06/30/2015 1800				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-187569

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-187569/2-A	Analysis Batch:	240-187791	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187569	Lab File ID:	070215AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 0847	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-187569

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-187569/3-A	Analysis Batch:	240-187791	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187569	Lab File ID:	070215AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 0848	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00501	100	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187569

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-52462-12	Analysis Batch:	240-187791	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187569	Lab File ID:	070215AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 0854			Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 1400				
Leach Date:	06/30/2015 1800				

MSD Lab Sample ID:	240-52462-12	Analysis Batch:	240-187791	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187569	Lab File ID:	070215AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187499	Initial Weight/Volume:	50 mL
Analysis Date:	07/02/2015 0856			Final Weight/Volume:	50 mL
Prep Date:	07/01/2015 1400				
Leach Date:	06/30/2015 1800				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	97	97	80 - 120	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method Blank - Batch: 240-186944

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-186944/1-A	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 0907	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-186944

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-186944/2-A	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 0909	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.819	98	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186944

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52462-I-1-E MS	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.56 g
Analysis Date:	06/30/2015 0913			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52462-I-1-F MSD	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.56 g
Analysis Date:	06/30/2015 0915			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	114	108	80 - 120	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Method Blank - Batch: 240-188002

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-188002/9-A	Analysis Batch:	240-188230	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-188002	Lab File ID:	188002.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	07/07/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/06/2015 1018				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.27	0.80

Lab Control Sample Insoluble - Batch: 240-188002

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-188002/11-A	Analysis Batch:	240-188230	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-188002	Lab File ID:	188002.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	07/07/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/06/2015 1018				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	630	98	75 - 125	

Lab Control Sample Soluble - Batch: 240-188002

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-188002/10-A	Analysis Batch:	240-188230	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-188002	Lab File ID:	188002.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	07/07/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/06/2015 1018				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	19.4	97	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-2

Duplicate - Batch: 240-186917

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52462-E-7 DU	Analysis Batch:	240-186917	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/26/2015 0940	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	86	86	0.4	20	
Percent Moisture	14	14	2	20	

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS

240-52462 Chain of Custody

4101 Shuffel Street N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

TestAmerica Canton

4101 Shuffel Street, N. N.

North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497. 2

Chain of Custody Record

103962

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/24/15	COC No:
Company Name: ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:	1 of 2 COCs
Address: 430 First Avenue North, Ste 720	Analysis Turnaround Time			Sampler: Tom Dermen
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul MN	☐ 2 days			Job / SDG No.: 240066638
P O # MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	SVOCs (8270)	GRO (w/ Mod Method)	DRO (w/ Mod Method)	TAL Metals (6010)	Hexavalent Chromium (7196A)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP TAL Metals (1311/6010)	Moisture content	Sample Specific Notes:
ASB-1008_30-33(20150624)	6/24/15	1200	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1008_52-54(20150624)	6/24/15	1230	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1008_70-72(20150624)	6/24/15	1300	G	SO	11			X	X	X	X	X		X	X	X	X	
MB-01(20150624)	6/24/15	—	G	WT	2			X		X								

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other MeOH

								6	1	6	1	1		1	1	1	1	

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Level IV

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	ARCADIS	6/24/15 1550	[signature]	TAcan	6-24-15 1550
Relinquished by: [signature]	Company: TAcan	Date/Time: 6-24-15 1910	Received by: [signature]	Company: TA	Date/Time: 6-25-15 900
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 52462

Client Arcadis Site Name

Cooler unpacked by:

Cooler Received on 6-25-16 Opened on 6-25-15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   IR GUN# A (CF +1.0 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   ~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~
   ~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~
   IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

   ☑ See Multiple Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 7 Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC432654
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # Yes No

Contacted PM Date by via Verbal Voice Mail Other

Concerning

Samples processed by:

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

TestAmerica Multiple Cooler Receipt Form/Narrative Login # : 52462
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	A	3.4	4.4	ICE
		2.8	3.8	
		3.8	4.8	
		1.6	2.6	
		0.8	1.8	
		2.8	3.8	
		2.2	3.2	

July 14, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52462-2
Sample date: 2015-06-24
Report received by CADENA: 2015-07-13
Initial Data Verification completed by CADENA: 2015-07-14

The following minor QC exceptions or missing information were noted:

WI-GRO and WI-DRO QC batch did not include MS recovery data and surrogate recoveries were not available for samples or QC.

GCMS VOC QC batch 187043 did not include MS recovery data due to insufficient sample volume available for creating MS/MSD's according to laboratory submittal case narrative.

GCMS VOC surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results for client samples -012 totals analyses. Client sample -014 surrogate recoveries were outliers biased high for 3 out of 4 surrogates so detected TOTAL GCMS VOC analytes should be considered to be estimated and qualified with J flags with non-detect results not requiring qualification.

GCMS SVOC surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results for client samples -012 totals analyses.

GCMS SVOC QC batch and Metals QC batch 186943 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

Metals method blanks had detections below the RL in QC batch 187567 for TCLP barium, chromium, manganese, nickel, potassium, arsenic, iron and magnesium and in QC batch 186943 for total barium, manganese, nickel and vanadium. Metals results should be considered to be non-detect at the RL and qualified with UB flags for the following samples and analytes:
TCLP CHROMIUM - UB flags - -012, -013 and -014.
TCLP ARSENIC - UB flags - -012, -013 and -014.
TCLP IRON - UB flags - -012.

Metals sample -012 MS/MSD recoveries were not considered to be statistically reliable due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule) so were not used to qualify results for calcium and manganese.

4 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52462-2

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
2405246212	ASB-1008_30-33(20150624)	6/24/2015	12:00:00	X	X	X	X	X	X	X	X
2405246213	ASB-1008_52-54(20150624)	6/24/2015	12:30:00	X	X	X	X	X	X	X	X
2405246214	ASB-1008_70-72(20150624)	6/24/2015	1:00:00	X	X	X	X	X	X	X	X
2405246215	MB-01(20150624)	6/24/2015	12:00:00	X		X					

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-2

			Sample Name:	ASB-1008_30-33(20150624)				ASB-1008_52-54(20150624)				ASB-1008_70-72(20150624)			
			Lab Sample ID:	2405246212				2405246213				2405246214			
			Sample Date:	6/24/2015				6/24/2015				6/24/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC														
	OSW-8260B													
	Methyl acetate	79-20-9									340	740	ug/kg	J
	Toluene	108-88-3									18	370	ug/kg	J
Metals														
	OSW-6010B													
	Arsenic	7440-38-2	0.012	0.50	mg/l	UB	0.0079	0.50	mg/l	UB	0.010	0.50	mg/l	UB
	Chromium	7440-47-3	0.0033	0.50	mg/l	UB	0.0047	0.50	mg/l	UB	0.0054	0.50	mg/l	UB
	Iron	7439-89-6	0.059	0.10	mg/l	UB								

ANALYTICAL REPORT

Job Number: 240-52505-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
John McFadden
Project Manager I
7/15/2015 10:56 PM

Designee for
Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
07/15/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52505-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/26/2015 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 1.6º C, 1.8º C, 3.2º C, 4.2º C and 5.2º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) were analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 06/30/2015 and analyzed on 07/03/2015 and 07/04/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6), ASB-1010_55-57(20150625) (240-52505-7) and MB-01(20150625) (240-52505-8) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/27/2015 and analyzed on 06/29/2015.

1,2-Dichloroethane-d4 (Surr) failed the surrogate recovery criteria high for ASB-1009_70-72(20150625) (240-52505-4).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 187104.

Surrogate recovery for the following sample was outside the upper control limit: ASB-1009_70-72(20150625) (240-52505-4). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625)

(240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) were analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 07/01/2015, prepared on 07/02/2015 and analyzed on 07/07/2015 and 07/09/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

The continuing calibration verification (CCV) associated with batch 188482 recovered above the upper control limit for Pentachlorophenol. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following samples are impacted: ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/30/2015, 07/08/2015 and 07/11/2015 and analyzed on 07/08/2015, 07/10/2015 and 07/14/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-188303/4-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Caprolactam, Di-n-butyl phthalate, Isophorone and Phenol were detected in method blank MB 240-188303/4-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Bis(2-ethylhexyl) phthalate and Di-n-butyl phthalate were detected in method blank MB 240-188799/17-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Bis(2-ethylhexyl) phthalate failed the recovery criteria high for LCS 240-188303/5-A.

Samples ASB-1009_42-44(20150624) (240-52505-2)[6.67X], ASB-1010_70-73(20150625) (240-52505-6)[2.5X] and ASB-1010_70-73(20150625) (240-52505-6)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The Method Blank and Laboratory Control Sample (LCS) for batch 188303 associated with samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) recovered outside control limits for Bis-2-ethylhexyl phthalate. Upon re-extraction and re-analysis all QC met acceptance criteria, however, sample holding times had been exceeded. Both sets of data will be reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6), ASB-1010_55-57(20150625) (240-52505-7) and MB-01(20150625) (240-52505-8) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared and analyzed on 06/29/2015.

Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the Gasoline Range Organics (GRO) mix (i.e., Naphthalene): ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1010_38-40(20150625) (240-52505-5) and ASB-1010_70-73(20150625) (240-52505-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 07/02/2015 and analyzed on 07/06/2015 and 07/07/2015.

WI Diesel Range Organics (C10-C28) failed the recovery criteria high for LCSD 240-187816/23-A. WI Diesel Range Organics (C10-C28) exceeded the RPD limit.

Sample ASB-1010_38-40(20150625) (240-52505-5)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) : ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_62-65(20150624) (240-52505-3), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6), and ASB-1010_55-57(20150625) (240-52505-7).

The laboratory control sample duplicate (LCSD) for preparation batch 240-187816 and analytical batch 240-188186 recovered outside acceptance limits for WI Diesel Range Organics (C10-C28). There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported.

The laboratory control sample duplicate (LCSD) for preparation batch 240-187816 and analytical batch 240-188039 recovered outside acceptance limits for WI Diesel Range Organics (C10-C28). There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported.

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 240-187816 recovered outside control limits for the following analytes: WI Diesel Range Organics (C10-C28) .

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 07/01/2015, prepared on 07/02/2015 and analyzed on 07/06/2015.

Several analytes were detected in method blank LB 240-187731/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Manganese was detected in method blank MB 240-187780/2-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/30/2015 and analyzed on 07/01/2015 and 07/06/2015.

Magnesium, Nickel and Zinc were detected in method blank MB 240-187368/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 07/01/2015, prepared on 07/02/2015 and analyzed on 07/06/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/30/2015 and analyzed on 07/01/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625)

(240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 07/06/2015 and analyzed on 07/07/2015.

Samples ASB-1009_55-57(20150624) (240-52505-1)[2X] and ASB-1010_55-57(20150625) (240-52505-7)[2X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 07/07/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples ASB-1009_55-57(20150624) (240-52505-1), ASB-1009_42-44(20150624) (240-52505-2), ASB-1009_62-65(20150624) (240-52505-3), ASB-1009_70-72(20150625) (240-52505-4), ASB-1010_38-40(20150625) (240-52505-5), ASB-1010_70-73(20150625) (240-52505-6) and ASB-1010_55-57(20150625) (240-52505-7) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/27/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52505-1	**ASB-1009_55-57(20150624)**					
Methyl acetate		1300		530	ug/Kg	8260B
Naphthalene		56	J	260	ug/Kg	8260B
Toluene		17	J	260	ug/Kg	8260B
1,2,4-Trimethylbenzene		32	J	260	ug/Kg	8260B
1,1'-Biphenyl		20	J	400	ug/Kg	8270C
2-Methylnaphthalene		61	J	400	ug/Kg	8270C
Acenaphthene		200	J	400	ug/Kg	8270C
Acenaphthylene		29	J	400	ug/Kg	8270C
Anthracene		260	J	400	ug/Kg	8270C
Benzo[a]anthracene		460		400	ug/Kg	8270C
Benzo[a]pyrene		350	J	400	ug/Kg	8270C
Benzo[b]fluoranthene		470		400	ug/Kg	8270C
Benzo[g,h,i]perylene		150	J	400	ug/Kg	8270C
Benzo[k]fluoranthene		220	J	400	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		260	J B *	400	ug/Kg	8270C
Carbazole		92	J	400	ug/Kg	8270C
Chrysene		480		400	ug/Kg	8270C
Dibenz(a,h)anthracene		51	J	400	ug/Kg	8270C
Dibenzofuran		130	J	400	ug/Kg	8270C
Di-n-butyl phthalate		30	J B	400	ug/Kg	8270C
Fluoranthene		1100		400	ug/Kg	8270C
Fluorene		190	J	400	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		150	J	400	ug/Kg	8270C
Naphthalene		30	J	400	ug/Kg	8270C
Phenanthrene		940		400	ug/Kg	8270C
Pyrene		860		400	ug/Kg	8270C
3 & 4 Methylphenol		41	J	490	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		5.6	J	13	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		13	*	11	mg/Kg	WI-DRO
Aluminum		6900		19	mg/Kg	6010B
Barium		51		19	mg/Kg	6010B
Beryllium		0.41	J	0.48	mg/Kg	6010B
Calcium		24000		480	mg/Kg	6010B
Cadmium		0.15	J	0.19	mg/Kg	6010B
Cobalt		9.0		4.8	mg/Kg	6010B
Chromium		22		0.48	mg/Kg	6010B
Copper		14		2.4	mg/Kg	6010B
Iron		15000		9.6	mg/Kg	6010B
Potassium		1600		480	mg/Kg	6010B
Magnesium		10000	B	480	mg/Kg	6010B
Manganese		320		1.4	mg/Kg	6010B
Sodium		170	J	480	mg/Kg	6010B
Nickel		21	B	3.8	mg/Kg	6010B
Vanadium		18		4.8	mg/Kg	6010B
Zinc		36	B	1.9	mg/Kg	6010B
Arsenic		4.4		0.96	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Lead		14		0.29	mg/Kg	6010B
Selenium		0.34	J	0.48	mg/Kg	6010B
Cr (III)		22		2.5	mg/Kg	7196A
Percent Solids		81		0.10	%	Moisture
Percent Moisture		19		0.10	%	Moisture
TCLP						
3 & 4 Methylphenol		0.0013	J	0.0040	mg/L	8270C
Antimony		0.0046	J	0.30	mg/L	6010B
Arsenic		0.011	J B	0.50	mg/L	6010B
Barium		0.67	J B	10	mg/L	6010B
Beryllium		0.00018	J	0.0050	mg/L	6010B
Cadmium		0.00053	J	0.10	mg/L	6010B
Calcium		590		5.0	mg/L	6010B
Chromium		0.0010	J B	0.50	mg/L	6010B
Cobalt		0.013	J	0.050	mg/L	6010B
Copper		0.0027	J	1.0	mg/L	6010B
Iron		0.038	J B	0.10	mg/L	6010B
Magnesium		22		5.0	mg/L	6010B
Manganese		4.1	B	0.015	mg/L	6010B
Nickel		0.019	J B	0.040	mg/L	6010B
Potassium		9.0	B	5.0	mg/L	6010B
Selenium		0.0061	J	0.25	mg/L	6010B
Zinc		0.014	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52505-2	**ASB-1009_42-44(20150624)**					
Methyl acetate		110	J	620	ug/Kg	8260B
2-Methylnaphthalene		160	J	2800	ug/Kg	8270C
Acenaphthene		1600	J	2800	ug/Kg	8270C
Anthracene		2000	J	2800	ug/Kg	8270C
Benzo[a]anthracene		3000		2800	ug/Kg	8270C
Benzo[a]pyrene		2700	J	2800	ug/Kg	8270C
Benzo[b]fluoranthene		3600		2800	ug/Kg	8270C
Benzo[g,h,i]perylene		900	J	2800	ug/Kg	8270C
Benzo[k]fluoranthene		1500	J	2800	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		180	J	2800	ug/Kg	8270C
Carbazole		1200	J	2800	ug/Kg	8270C
Chrysene		3100		2800	ug/Kg	8270C
Dibenz(a,h)anthracene		280	J	2800	ug/Kg	8270C
Dibenzofuran		570	J	2800	ug/Kg	8270C
Fluoranthene		8500		2800	ug/Kg	8270C
Fluorene		1200	J	2800	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		900	J	2800	ug/Kg	8270C
Naphthalene		130	J	2800	ug/Kg	8270C
Phenanthrene		8100		2800	ug/Kg	8270C
Pyrene		6800		2800	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		8.0	J *	12	mg/Kg	WI-DRO
Aluminum		6100		18	mg/Kg	6010B
Antimony		1.1		0.90	mg/Kg	6010B
Barium		50		18	mg/Kg	6010B
Beryllium		0.44	J	0.45	mg/Kg	6010B
Calcium		34000		450	mg/Kg	6010B
Cadmium		0.27		0.18	mg/Kg	6010B
Cobalt		9.7		4.5	mg/Kg	6010B
Chromium		13		0.45	mg/Kg	6010B
Copper		13		2.2	mg/Kg	6010B
Iron		12000		9.0	mg/Kg	6010B
Potassium		2300		450	mg/Kg	6010B
Magnesium		9700	B	450	mg/Kg	6010B
Manganese		380		1.3	mg/Kg	6010B
Sodium		120	J	450	mg/Kg	6010B
Nickel		23	B	3.6	mg/Kg	6010B
Vanadium		11		4.5	mg/Kg	6010B
Zinc		36	B	1.8	mg/Kg	6010B
Arsenic		4.8		0.90	mg/Kg	6010B
Lead		110		0.27	mg/Kg	6010B
Mercury		0.018	J	0.12	mg/Kg	7471A
Cr (III)		13		2.5	mg/Kg	7196A
Percent Solids		79		0.10	%	Moisture
Percent Moisture		21		0.10	%	Moisture
TCLP						
Antimony		0.11	J	0.30	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Arsenic		0.016	J B	0.50	mg/L	6010B
Barium		0.87	J B	10	mg/L	6010B
Beryllium		0.00022	J	0.0050	mg/L	6010B
Cadmium		0.0023	J	0.10	mg/L	6010B
Calcium		520		5.0	mg/L	6010B
Chromium		0.0012	J B	0.50	mg/L	6010B
Cobalt		0.032	J	0.050	mg/L	6010B
Copper		0.0043	J	1.0	mg/L	6010B
Iron		0.031	J B	0.10	mg/L	6010B
Lead		0.89		0.50	mg/L	6010B
Magnesium		23		5.0	mg/L	6010B
Manganese		4.3	B	0.015	mg/L	6010B
Nickel		0.053	B	0.040	mg/L	6010B
Potassium		6.7	B	5.0	mg/L	6010B
Selenium		0.0053	J	0.25	mg/L	6010B
Zinc		0.13	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52505-3	**ASB-1009_62-65(20150624)**					
Methyl acetate		1300		540	ug/Kg	8260B
m-Xylene & p-Xylene		28	J	270	ug/Kg	8260B
1,2,4-Trimethylbenzene		39	J	270	ug/Kg	8260B
2-Methylnaphthalene		33	J	360	ug/Kg	8270C
Acenaphthene		3.5	J	360	ug/Kg	8270C
Acenaphthylene		7.5	J	360	ug/Kg	8270C
Anthracene		9.3	J	360	ug/Kg	8270C
Benzaldehyde		28	J	360	ug/Kg	8270C
Benzo[a]anthracene		27	J	360	ug/Kg	8270C
Benzo[a]pyrene		35	J	360	ug/Kg	8270C
Benzo[b]fluoranthene		48	J	360	ug/Kg	8270C
Benzo[g,h,i]perylene		34	J	360	ug/Kg	8270C
Benzo[k]fluoranthene		13	J	360	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		310	J B *	360	ug/Kg	8270C
Caprolactam		43	J B	360	ug/Kg	8270C
Chrysene		39	J	360	ug/Kg	8270C
Dibenzofuran		2.9	J	360	ug/Kg	8270C
Di-n-butyl phthalate		27	J B	360	ug/Kg	8270C
Fluoranthene		51	J	360	ug/Kg	8270C
Fluorene		3.9	J	360	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		24	J	360	ug/Kg	8270C
Naphthalene		22	J	360	ug/Kg	8270C
Phenanthrene		27	J	360	ug/Kg	8270C
Pyrene		55	J	360	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		60	*	9.1	mg/Kg	WI-DRO
Aluminum		1000		17	mg/Kg	6010B
Barium		13	J	17	mg/Kg	6010B
Beryllium		0.085	J	0.43	mg/Kg	6010B
Calcium		13000		430	mg/Kg	6010B
Cadmium		0.10	J	0.17	mg/Kg	6010B
Cobalt		0.90	J	4.3	mg/Kg	6010B
Chromium		2.3		0.43	mg/Kg	6010B
Copper		3.6		2.1	mg/Kg	6010B
Iron		4000		8.5	mg/Kg	6010B
Potassium		280	J	430	mg/Kg	6010B
Magnesium		1200	B	430	mg/Kg	6010B
Manganese		110		1.3	mg/Kg	6010B
Sodium		61	J	430	mg/Kg	6010B
Nickel		2.7	J B	3.4	mg/Kg	6010B
Vanadium		2.9	J	4.3	mg/Kg	6010B
Zinc		10	B	1.7	mg/Kg	6010B
Arsenic		0.63	J	0.85	mg/Kg	6010B
Lead		13		0.26	mg/Kg	6010B
Thallium		0.11	J	0.85	mg/Kg	6010B
Cr (III)		2.3		2.2	mg/Kg	7196A
Percent Solids		92		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Moisture		7.5		0.10	%	Moisture
TCLP						
Antimony		0.0062	J	0.30	mg/L	6010B
Arsenic		0.0064	J B	0.50	mg/L	6010B
Barium		0.29	J B	10	mg/L	6010B
Beryllium		0.00024	J	0.0050	mg/L	6010B
Cadmium		0.00052	J	0.10	mg/L	6010B
Calcium		630		5.0	mg/L	6010B
Chromium		0.0013	J B	0.50	mg/L	6010B
Cobalt		0.0028	J	0.050	mg/L	6010B
Copper		0.0043	J	1.0	mg/L	6010B
Lead		0.0038	J	0.50	mg/L	6010B
Magnesium		9.4		5.0	mg/L	6010B
Manganese		1.1	B	0.015	mg/L	6010B
Nickel		0.013	J B	0.040	mg/L	6010B
Potassium		8.1	B	5.0	mg/L	6010B
Vanadium		0.0039	J	0.050	mg/L	6010B
Zinc		0.0099	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52505-4	**ASB-1009_70-72(20150625)**					
Methyl acetate		97	J	640	ug/Kg	8260B
Toluene		26	J	320	ug/Kg	8260B
1,2,4-Trimethylbenzene		25	J	320	ug/Kg	8260B
Acenaphthene		7.6	J	380	ug/Kg	8270C
Acenaphthylene		23	J	380	ug/Kg	8270C
Anthracene		25	J	380	ug/Kg	8270C
Benzo[a]anthracene		100	J	380	ug/Kg	8270C
Benzo[a]pyrene		96	J	380	ug/Kg	8270C
Benzo[b]fluoranthene		92	J	380	ug/Kg	8270C
Benzo[g,h,i]perylene		66	J	380	ug/Kg	8270C
Benzo[k]fluoranthene		40	J	380	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		570	B *	380	ug/Kg	8270C
Chrysene		100	J	380	ug/Kg	8270C
Dibenz(a,h)anthracene		15	J	380	ug/Kg	8270C
Di-n-butyl phthalate		30	J B	380	ug/Kg	8270C
Fluoranthene		150	J	380	ug/Kg	8270C
Fluorene		5.6	J	380	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		49	J	380	ug/Kg	8270C
Phenanthrene		75	J	380	ug/Kg	8270C
Pyrene		220	J	380	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		11	*	9.6	mg/Kg	WI-DRO
Aluminum		2300		15	mg/Kg	6010B
Barium		34		15	mg/Kg	6010B
Beryllium		0.14	J	0.39	mg/Kg	6010B
Calcium		33000		390	mg/Kg	6010B
Cadmium		0.070	J	0.15	mg/Kg	6010B
Cobalt		3.6	J	3.9	mg/Kg	6010B
Chromium		9.1		0.39	mg/Kg	6010B
Copper		4.8		1.9	mg/Kg	6010B
Iron		9800		7.7	mg/Kg	6010B
Potassium		260	J	390	mg/Kg	6010B
Magnesium		13000	B	390	mg/Kg	6010B
Manganese		390		1.2	mg/Kg	6010B
Sodium		93	J	390	mg/Kg	6010B
Nickel		9.8	B	3.1	mg/Kg	6010B
Vanadium		10		3.9	mg/Kg	6010B
Zinc		15	B	1.5	mg/Kg	6010B
Arsenic		2.0		0.77	mg/Kg	6010B
Lead		3.1		0.23	mg/Kg	6010B
Cr (III)		9.1		2.3	mg/Kg	7196A
Percent Solids		88		0.10	%	Moisture
Percent Moisture		12		0.10	%	Moisture
TCLP						
Arsenic		0.0057	J B	0.50	mg/L	6010B
Barium		0.94	J B	10	mg/L	6010B
Beryllium		0.00021	J	0.0050	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Cadmium		0.00029	J	0.10	mg/L	6010B
Calcium		470		5.0	mg/L	6010B
Chromium		0.0014	J B	0.50	mg/L	6010B
Cobalt		0.0063	J	0.050	mg/L	6010B
Copper		0.0034	J	1.0	mg/L	6010B
Iron		0.045	J B	0.10	mg/L	6010B
Lead		0.0029	J	0.50	mg/L	6010B
Magnesium		15		5.0	mg/L	6010B
Manganese		3.7	B	0.015	mg/L	6010B
Nickel		0.014	J B	0.040	mg/L	6010B
Potassium		2.8	J B	5.0	mg/L	6010B
Zinc		0.036	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52505-5	**ASB-1010_38-40(20150625)**					
Methyl acetate		91	J	560	ug/Kg	8260B
Naphthalene		91	J	280	ug/Kg	8260B
n-Butylbenzene		41	J	280	ug/Kg	8260B
1,2,4-Trimethylbenzene		41	J	280	ug/Kg	8260B
1,1'-Biphenyl		21	J	360	ug/Kg	8270C
2-Methylnaphthalene		340	J	360	ug/Kg	8270C
Acenaphthene		33	J	360	ug/Kg	8270C
Acenaphthylene		14	J	360	ug/Kg	8270C
Anthracene		39	J	360	ug/Kg	8270C
Benzaldehyde		31	J	360	ug/Kg	8270C
Benzo[a]anthracene		80	J	360	ug/Kg	8270C
Benzo[a]pyrene		82	J	360	ug/Kg	8270C
Benzo[b]fluoranthene		130	J	360	ug/Kg	8270C
Benzo[g,h,i]perylene		37	J	360	ug/Kg	8270C
Benzo[k]fluoranthene		56	J	360	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		700	B *	360	ug/Kg	8270C
Chrysene		130	J	360	ug/Kg	8270C
Dibenzofuran		56	J	360	ug/Kg	8270C
Dimethyl phthalate		26	J	360	ug/Kg	8270C
Di-n-butyl phthalate		35	J B	360	ug/Kg	8270C
Fluoranthene		170	J	360	ug/Kg	8270C
Fluorene		31	J	360	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		26	J	360	ug/Kg	8270C
Naphthalene		130	J	360	ug/Kg	8270C
Phenol		16	J B	360	ug/Kg	8270C
Phenanthrene		190	J	360	ug/Kg	8270C
Pyrene		160	J	360	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		7.9	J	11	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		150	*	45	mg/Kg	WI-DRO
Aluminum		4200		20	mg/Kg	6010B
Antimony		0.55	J	1.0	mg/Kg	6010B
Barium		35		20	mg/Kg	6010B
Beryllium		0.20	J	0.50	mg/Kg	6010B
Calcium		47000		500	mg/Kg	6010B
Cadmium		0.12	J	0.20	mg/Kg	6010B
Cobalt		3.7	J	5.0	mg/Kg	6010B
Chromium		8.9		0.50	mg/Kg	6010B
Copper		8.5		2.5	mg/Kg	6010B
Iron		8100		10	mg/Kg	6010B
Potassium		750		500	mg/Kg	6010B
Magnesium		11000	B	500	mg/Kg	6010B
Manganese		260		1.5	mg/Kg	6010B
Sodium		300	J	500	mg/Kg	6010B
Nickel		9.4	B	4.0	mg/Kg	6010B
Vanadium		16		5.0	mg/Kg	6010B
Zinc		21	B	2.0	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Arsenic		2.1		1.0	mg/Kg	6010B
Lead		11		0.30	mg/Kg	6010B
Cr (VI)		0.50	J	0.89	mg/Kg	7196A
Cr (III)		8.4		2.2	mg/Kg	7196A
Percent Solids		90		0.10	%	Moisture
Percent Moisture		9.7		0.10	%	Moisture
TCLP						
Antimony		0.011	J	0.30	mg/L	6010B
Arsenic		0.0099	J B	0.50	mg/L	6010B
Barium		0.27	J B	10	mg/L	6010B
Beryllium		0.00016	J	0.0050	mg/L	6010B
Cadmium		0.00029	J	0.10	mg/L	6010B
Calcium		560		5.0	mg/L	6010B
Chromium		0.0024	J B	0.50	mg/L	6010B
Copper		0.0023	J	1.0	mg/L	6010B
Magnesium		13		5.0	mg/L	6010B
Manganese		0.028	B	0.015	mg/L	6010B
Nickel		0.0026	J B	0.040	mg/L	6010B
Potassium		14	B	5.0	mg/L	6010B
Selenium		0.0069	J	0.25	mg/L	6010B
Vanadium		0.019	J	0.050	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52505-6	**ASB-1010_70-73(20150625)**					
Benzene		14	J	260	ug/Kg	8260B
Methyl acetate		98	J	520	ug/Kg	8260B
m-Xylene & p-Xylene		31	J	260	ug/Kg	8260B
Naphthalene		340		260	ug/Kg	8260B
o-Xylene		18	J	260	ug/Kg	8260B
Toluene		60	J	260	ug/Kg	8260B
1,2,4-Trimethylbenzene		33	J	260	ug/Kg	8260B
1,1'-Biphenyl		84	J	1600	ug/Kg	8270C
2-Methylnaphthalene		340	J	1600	ug/Kg	8270C
Acenaphthene		550	J	1600	ug/Kg	8270C
Acenaphthylene		280	J	1600	ug/Kg	8270C
Anthracene		1000	J	1600	ug/Kg	8270C
Benzo[a]anthracene		2400		1600	ug/Kg	8270C
Benzo[a]pyrene		2100		1600	ug/Kg	8270C
Benzo[b]fluoranthene		2500		1600	ug/Kg	8270C
Benzo[g,h,i]perylene		1400	J	1600	ug/Kg	8270C
Benzo[k]fluoranthene		940	J	1600	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		260	J B *	1600	ug/Kg	8270C
Carbazole		480	J	1600	ug/Kg	8270C
Chrysene		2400		1600	ug/Kg	8270C
Dibenz(a,h)anthracene		340	J	1600	ug/Kg	8270C
Dibenzofuran		330	J	1600	ug/Kg	8270C
Fluoranthene		4700		1600	ug/Kg	8270C
Fluorene		590	J	1600	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		1100	J	1600	ug/Kg	8270C
Naphthalene		580	J	1600	ug/Kg	8270C
Phenanthrene		3900		1600	ug/Kg	8270C
Pyrene		4400		1600	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		2.3	J	11	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		44	*	9.7	mg/Kg	WI-DRO
Aluminum		1900		21	mg/Kg	6010B
Barium		26		21	mg/Kg	6010B
Beryllium		0.12	J	0.54	mg/Kg	6010B
Calcium		7200		540	mg/Kg	6010B
Cadmium		1.1		0.21	mg/Kg	6010B
Cobalt		2.8	J	5.4	mg/Kg	6010B
Chromium		7.2		0.54	mg/Kg	6010B
Copper		6.8		2.7	mg/Kg	6010B
Iron		6000		11	mg/Kg	6010B
Potassium		570		540	mg/Kg	6010B
Magnesium		2300	B	540	mg/Kg	6010B
Manganese		130		1.6	mg/Kg	6010B
Silver		0.18	J	0.54	mg/Kg	6010B
Sodium		140	J	540	mg/Kg	6010B
Nickel		7.1	B	4.3	mg/Kg	6010B
Vanadium		8.4		5.4	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Zinc		32	B	2.1	mg/Kg	6010B
Arsenic		1.8		1.1	mg/Kg	6010B
Lead		24		0.32	mg/Kg	6010B
Mercury		0.079	J	0.11	mg/Kg	7471A
Cr (III)		7.2		2.4	mg/Kg	7196A
Percent Solids		85		0.10	%	Moisture
Percent Moisture		15		0.10	%	Moisture
TCLP						
Antimony		0.0029	J	0.30	mg/L	6010B
Arsenic		0.0089	J B	0.50	mg/L	6010B
Barium		0.53	J B	10	mg/L	6010B
Beryllium		0.00022	J	0.0050	mg/L	6010B
Cadmium		0.017	J	0.10	mg/L	6010B
Calcium		220		5.0	mg/L	6010B
Chromium		0.0010	J B	0.50	mg/L	6010B
Cobalt		0.018	J	0.050	mg/L	6010B
Copper		0.014	J	1.0	mg/L	6010B
Iron		0.53	B	0.10	mg/L	6010B
Lead		0.070	J	0.50	mg/L	6010B
Magnesium		36		5.0	mg/L	6010B
Manganese		2.5	B	0.015	mg/L	6010B
Nickel		0.036	J B	0.040	mg/L	6010B
Potassium		14	B	5.0	mg/L	6010B
Selenium		0.0057	J	0.25	mg/L	6010B
Zinc		0.27	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52505-7	**ASB-1010_55-57(20150625)**					
Acenaphthene		2.6	J	390	ug/Kg	8270C
Acenaphthylene		6.9	J	390	ug/Kg	8270C
Anthracene		7.9	J	390	ug/Kg	8270C
Benzo[a]anthracene		20	J	390	ug/Kg	8270C
Benzo[a]pyrene		25	J	390	ug/Kg	8270C
Benzo[b]fluoranthene		33	J	390	ug/Kg	8270C
Benzo[g,h,i]perylene		62	J	390	ug/Kg	8270C
Benzo[k]fluoranthene		13	J	390	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		1200	B *	390	ug/Kg	8270C
Caprolactam		48	J B	390	ug/Kg	8270C
Chrysene		34	J	390	ug/Kg	8270C
Di-n-butyl phthalate		37	J B	390	ug/Kg	8270C
Fluoranthene		31	J	390	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		14	J	390	ug/Kg	8270C
Phenanthrene		22	J	390	ug/Kg	8270C
Pyrene		34	J	390	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		25	*	10	mg/Kg	WI-DRO
Aluminum		8400		22	mg/Kg	6010B
Barium		28		22	mg/Kg	6010B
Beryllium		0.56		0.55	mg/Kg	6010B
Calcium		22000		550	mg/Kg	6010B
Cadmium		0.048	J	0.22	mg/Kg	6010B
Cobalt		11		5.5	mg/Kg	6010B
Chromium		17		0.55	mg/Kg	6010B
Copper		10		2.7	mg/Kg	6010B
Iron		15000		11	mg/Kg	6010B
Potassium		4300		550	mg/Kg	6010B
Magnesium		5300	B	550	mg/Kg	6010B
Manganese		280		1.6	mg/Kg	6010B
Sodium		380	J	550	mg/Kg	6010B
Nickel		20	B	4.4	mg/Kg	6010B
Vanadium		9.0		5.5	mg/Kg	6010B
Zinc		21	B	2.2	mg/Kg	6010B
Arsenic		3.6		1.1	mg/Kg	6010B
Lead		4.6		0.33	mg/Kg	6010B
Cr (III)		17		2.4	mg/Kg	7196A
Percent Solids		85		0.10	%	Moisture
Percent Moisture		15		0.10	%	Moisture
TCLP						
Arsenic		0.0050	J B	0.50	mg/L	6010B
Barium		0.57	J B	10	mg/L	6010B
Cadmium		0.00049	J	0.10	mg/L	6010B
Calcium		480		5.0	mg/L	6010B
Chromium		0.0025	J B	0.50	mg/L	6010B
Cobalt		0.031	J	0.050	mg/L	6010B
Copper		0.063	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Iron		0.045	J B	0.10	mg/L	6010B
Magnesium		33		5.0	mg/L	6010B
Manganese		6.0	B	0.015	mg/L	6010B
Nickel		0.037	J B	0.040	mg/L	6010B
Potassium		7.6	B	5.0	mg/L	6010B
Zinc		0.15	J	1.0	mg/L	6010B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction	TAL CAN		SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method	Analyst	Analyst ID
SW846 8260B	Lata, Todd	TJL2
SW846 8260B	Lavey, Tim	TJL1
SW846 8270C	Gruber, John	JMG
SW846 8270C	Ulman, Mark	MRU
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Martin, Aaron	AMM2
SW846 7470A	Walpole, Barbara	BW
SW846 7471A	Walpole, Barbara	BW
SW846 7196A	Burns, Jill	JMB
SW846 7196A	Counts, Karen	KLC
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52505-1	ASB-1009_55-57(20150624)	Solid	06/24/2015 1755	06/26/2015 0920
240-52505-2	ASB-1009_42-44(20150624)	Solid	06/24/2015 1745	06/26/2015 0920
240-52505-3	ASB-1009_62-65(20150624)	Solid	06/24/2015 1815	06/26/2015 0920
240-52505-4	ASB-1009_70-72(20150625)	Solid	06/25/2015 0745	06/26/2015 0920
240-52505-5	ASB-1010_38-40(20150625)	Solid	06/25/2015 1345	06/26/2015 0920
240-52505-6	ASB-1010_70-73(20150625)	Solid	06/25/2015 1300	06/26/2015 0920
240-52505-7	ASB-1010_55-57(20150625)	Solid	06/25/2015 1415	06/26/2015 0920
240-52505-8	MB-01(20150625)	Solid	06/25/2015 0000	06/26/2015 0920

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_55-57(20150624)**

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88197.D
Dilution:	1.0			Initial Weight/Volume:	11.592 g
Analysis Date:	06/29/2015 0856			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		240	1100
Allyl chloride		ND		32	530
Benzene		ND		9.5	260
Bromobenzene		ND		14	260
Bromochloromethane		ND		74	260
Bromodichloromethane		ND		40	260
Bromoform		ND		65	260
Bromomethane		ND		54	260
2-Butanone (MEK)		ND		77	1100
Carbon disulfide		ND		59	260
Carbon tetrachloride		ND		51	260
Chlorobenzene		ND		43	260
Chlorodibromomethane		ND		49	260
Chloroethane		ND		54	260
Chloroform		ND		38	260
Chloromethane		ND		51	260
2-Chlorotoluene		ND		43	260
4-Chlorotoluene		ND		28	260
cis-1,2-Dichloroethene		ND		40	260
cis-1,3-Dichloropropene		ND		23	260
Cyclohexane		ND		32	530
1,2-Dibromo-3-Chloropropane		ND		75	530
1,2-Dibromoethane		ND		34	260
Dibromomethane		ND		53	260
1,2-Dichlorobenzene		ND		20	260
1,3-Dichlorobenzene		ND		32	260
1,4-Dichlorobenzene		ND		43	260
Dichlorodifluoromethane		ND		65	260
1,1-Dichloroethane		ND		37	260
1,2-Dichloroethane		ND		56	260
1,1-Dichloroethene		ND		32	260
Dichlorofluoromethane		ND		35	530
1,2-Dichloropropane		ND		34	260
1,3-Dichloropropane		ND		24	260
2,2-Dichloropropane		ND		55	260
1,1-Dichloropropene		ND		40	260
Ethylbenzene		ND		37	260
Ethyl ether		ND		100	530
Hexachlorobutadiene		ND		47	260
2-Hexanone		ND		89	1100
Isopropylbenzene		ND		14	260
Methyl acetate		1300		58	530
Methylcyclohexane		ND		40	530
Methylene Chloride		ND		90	260
4-Methyl-2-pentanone (MIBK)		ND		59	1100
Methyl tert butyl ether		ND		32	260

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_55-57(20150624)**

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88197.D
Dilution:	1.0			Initial Weight/Volume:	11.592 g
Analysis Date:	06/29/2015 0856			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		21	260
Naphthalene		56	J	28	260
n-Butylbenzene		ND		22	260
N-Propylbenzene		ND		65	260
o-Xylene		ND		18	260
p-Isopropyltoluene		ND		26	260
sec-Butylbenzene		ND		17	260
Styrene		ND		29	260
tert-Butylbenzene		ND		36	260
1,1,1,2-Tetrachloroethane		ND		52	260
1,1,2,2-Tetrachloroethane		ND		46	260
Tetrachloroethene		ND		29	260
Tetrahydrofuran		ND		130	1100
Toluene		17	J	11	260
trans-1,2-Dichloroethene		ND		28	260
trans-1,3-Dichloropropene		ND		28	260
1,2,3-Trichlorobenzene		ND		41	260
1,2,4-Trichlorobenzene		ND		32	260
1,1,1-Trichloroethane		ND		44	260
1,1,2-Trichloroethane		ND		88	260
Trichloroethene		ND		41	260
Trichlorofluoromethane		ND		37	260
1,2,3-Trichloropropane		ND		110	260
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		44	260
1,2,4-Trimethylbenzene		32	J	14	260
1,3,5-Trimethylbenzene		ND		16	260
Vinyl chloride		ND		59	260

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	102		26 - 141
Dibromofluoromethane (Surr)	79		30 - 122
1,2-Dichloroethane-d4 (Surr)	103		39 - 128
Toluene-d8 (Surr)	101		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_55-57(20150624)**

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187887	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950890.D
Dilution:	1.0	Leach Batch:	240-187500	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/03/2015 2139			Final Weight/Volume:	5 mL
Prep Date:	07/03/2015 2139				
Leach Date:	06/30/2015 2015				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		80 - 121
4-Bromofluorobenzene (Surr)	89		70 - 124
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	104		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_42-44(20150624)

Lab Sample ID: 240-52505-2 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 20.8 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88198.D
Dilution:	1.0			Initial Weight/Volume:	10.264 g
Analysis Date:	06/29/2015 0917			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		280	1200
Allyl chloride		ND		37	620
Benzene		ND		11	310
Bromobenzene		ND		16	310
Bromochloromethane		ND		86	310
Bromodichloromethane		ND		47	310
Bromoform		ND		75	310
Bromomethane		ND		63	310
2-Butanone (MEK)		ND		90	1200
Carbon disulfide		ND		69	310
Carbon tetrachloride		ND		59	310
Chlorobenzene		ND		50	310
Chlorodibromomethane		ND		57	310
Chloroethane		ND		63	310
Chloroform		ND		44	310
Chloromethane		ND		59	310
2-Chlorotoluene		ND		50	310
4-Chlorotoluene		ND		32	310
cis-1,2-Dichloroethene		ND		47	310
cis-1,3-Dichloropropene		ND		27	310
Cyclohexane		ND		37	620
1,2-Dibromo-3-Chloropropane		ND		87	620
1,2-Dibromoethane		ND		39	310
Dibromomethane		ND		62	310
1,2-Dichlorobenzene		ND		23	310
1,3-Dichlorobenzene		ND		37	310
1,4-Dichlorobenzene		ND		50	310
Dichlorodifluoromethane		ND		75	310
1,1-Dichloroethane		ND		43	310
1,2-Dichloroethane		ND		65	310
1,1-Dichloroethene		ND		37	310
Dichlorofluoromethane		ND		41	620
1,2-Dichloropropane		ND		39	310
1,3-Dichloropropane		ND		28	310
2,2-Dichloropropane		ND		64	310
1,1-Dichloropropene		ND		47	310
Ethylbenzene		ND		43	310
Ethyl ether		ND		120	620
Hexachlorobutadiene		ND		54	310
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		16	310
Methyl acetate		110	J	68	620
Methylcyclohexane		ND		47	620
Methylene Chloride		ND		100	310
4-Methyl-2-pentanone (MIBK)		ND		69	1200
Methyl tert butyl ether		ND		37	310

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_42-44(20150624)

Lab Sample ID: 240-52505-2 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 20.8 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88198.D
Dilution:	1.0			Initial Weight/Volume:	10.264 g
Analysis Date:	06/29/2015 0917			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		25	310
Naphthalene		ND		32	310
n-Butylbenzene		ND		26	310
N-Propylbenzene		ND		75	310
o-Xylene		ND		21	310
p-Isopropyltoluene		ND		31	310
sec-Butylbenzene		ND		20	310
Styrene		ND		33	310
tert-Butylbenzene		ND		42	310
1,1,1,2-Tetrachloroethane		ND		60	310
1,1,2,2-Tetrachloroethane		ND		53	310
Tetrachloroethene		ND		33	310
Tetrahydrofuran		ND		150	1200
Toluene		ND		12	310
trans-1,2-Dichloroethene		ND		32	310
trans-1,3-Dichloropropene		ND		32	310
1,2,3-Trichlorobenzene		ND		48	310
1,2,4-Trichlorobenzene		ND		37	310
1,1,1-Trichloroethane		ND		52	310
1,1,2-Trichloroethane		ND		100	310
Trichloroethene		ND		48	310
Trichlorofluoromethane		ND		43	310
1,2,3-Trichloropropane		ND		130	310
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		52	310
1,2,4-Trimethylbenzene		ND		16	310
1,3,5-Trimethylbenzene		ND		18	310
Vinyl chloride		ND		69	310

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	102		26 - 141
Dibromofluoromethane (Surr)	77		30 - 122
1,2-Dichloroethane-d4 (Surr)	99		39 - 128
Toluene-d8 (Surr)	103		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_42-44(20150624)**

Lab Sample ID: 240-52505-2 Date Sampled: 06/24/2015 1745
Client Matrix: Solid Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187887	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950891.D
Dilution:	1.0	Leach Batch:	240-187500	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/03/2015 2203			Final Weight/Volume:	5 mL
Prep Date:	07/03/2015 2203				
Leach Date:	06/30/2015 2015				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	92		70 - 124
Toluene-d8 (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	101		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_62-65(20150624)

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid % Moisture: 7.5 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88199.D
Dilution:	1.0			Initial Weight/Volume:	9.946 g
Analysis Date:	06/29/2015 0938			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		250	1100
Allyl chloride		ND		33	540
Benzene		ND		9.8	270
Bromobenzene		ND		14	270
Bromochloromethane		ND		76	270
Bromodichloromethane		ND		41	270
Bromoform		ND		66	270
Bromomethane		ND		55	270
2-Butanone (MEK)		ND		79	1100
Carbon disulfide		ND		61	270
Carbon tetrachloride		ND		52	270
Chlorobenzene		ND		45	270
Chlorodibromomethane		ND		50	270
Chloroethane		ND		55	270
Chloroform		ND		39	270
Chloromethane		ND		52	270
2-Chlorotoluene		ND		45	270
4-Chlorotoluene		ND		28	270
cis-1,2-Dichloroethene		ND		41	270
cis-1,3-Dichloropropene		ND		24	270
Cyclohexane		ND		33	540
1,2-Dibromo-3-Chloropropane		ND		77	540
1,2-Dibromoethane		ND		35	270
Dibromomethane		ND		54	270
1,2-Dichlorobenzene		ND		21	270
1,3-Dichlorobenzene		ND		33	270
1,4-Dichlorobenzene		ND		45	270
Dichlorodifluoromethane		ND		66	270
1,1-Dichloroethane		ND		38	270
1,2-Dichloroethane		ND		58	270
1,1-Dichloroethene		ND		33	270
Dichlorofluoromethane		ND		36	540
1,2-Dichloropropane		ND		35	270
1,3-Dichloropropane		ND		25	270
2,2-Dichloropropane		ND		57	270
1,1-Dichloropropene		ND		41	270
Ethylbenzene		ND		38	270
Ethyl ether		ND		110	540
Hexachlorobutadiene		ND		48	270
2-Hexanone		ND		91	1100
Isopropylbenzene		ND		14	270
Methyl acetate		1300		60	540
Methylcyclohexane		ND		41	540
Methylene Chloride		ND		92	270
4-Methyl-2-pentanone (MIBK)		ND		61	1100
Methyl tert butyl ether		ND		33	270

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_62-65(20150624)

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid % Moisture: 7.5 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88199.D
Dilution:	1.0			Initial Weight/Volume:	9.946 g
Analysis Date:	06/29/2015 0938			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		28	J	22	270
Naphthalene		ND		28	270
n-Butylbenzene		ND		23	270
N-Propylbenzene		ND		66	270
o-Xylene		ND		18	270
p-Isopropyltoluene		ND		27	270
sec-Butylbenzene		ND		17	270
Styrene		ND		29	270
tert-Butylbenzene		ND		37	270
1,1,1,2-Tetrachloroethane		ND		53	270
1,1,2,2-Tetrachloroethane		ND		47	270
Tetrachloroethene		ND		29	270
Tetrahydrofuran		ND		130	1100
Toluene		ND		11	270
trans-1,2-Dichloroethene		ND		28	270
trans-1,3-Dichloropropene		ND		28	270
1,2,3-Trichlorobenzene		ND		42	270
1,2,4-Trichlorobenzene		ND		33	270
1,1,1-Trichloroethane		ND		46	270
1,1,2-Trichloroethane		ND		90	270
Trichloroethene		ND		42	270
Trichlorofluoromethane		ND		38	270
1,2,3-Trichloropropane		ND		110	270
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		46	270
1,2,4-Trimethylbenzene		39	J	14	270
1,3,5-Trimethylbenzene		ND		16	270
Vinyl chloride		ND		61	270

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	115		26 - 141
Dibromofluoromethane (Surr)	83		30 - 122
1,2-Dichloroethane-d4 (Surr)	113		39 - 128
Toluene-d8 (Surr)	115		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_62-65(20150624)**

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187887	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950892.D
Dilution:	1.0	Leach Batch:	240-187500	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/03/2015 2227			Final Weight/Volume:	5 mL
Prep Date:	07/03/2015 2227				
Leach Date:	06/30/2015 2015				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	94		70 - 124
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	102		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_70-72(20150625)

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid % Moisture: 11.6 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88200.D
Dilution:	1.0			Initial Weight/Volume:	8.83 g
Analysis Date:	06/29/2015 0959			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		290	1300
Allyl chloride		ND		38	640
Benzene		ND		12	320
Bromobenzene		ND		17	320
Bromochloromethane		ND		90	320
Bromodichloromethane		ND		49	320
Bromoform		ND		78	320
Bromomethane		ND		65	320
2-Butanone (MEK)		ND		94	1300
Carbon disulfide		ND		72	320
Carbon tetrachloride		ND		61	320
Chlorobenzene		ND		53	320
Chlorodibromomethane		ND		59	320
Chloroethane		ND		65	320
Chloroform		ND		46	320
Chloromethane		ND		61	320
2-Chlorotoluene		ND		53	320
4-Chlorotoluene		ND		33	320
cis-1,2-Dichloroethene		ND		49	320
cis-1,3-Dichloropropene		ND		28	320
Cyclohexane		ND		38	640
1,2-Dibromo-3-Chloropropane		ND		91	640
1,2-Dibromoethane		ND		41	320
Dibromomethane		ND		64	320
1,2-Dichlorobenzene		ND		24	320
1,3-Dichlorobenzene		ND		38	320
1,4-Dichlorobenzene		ND		53	320
Dichlorodifluoromethane		ND		78	320
1,1-Dichloroethane		ND		45	320
1,2-Dichloroethane		ND		68	320
1,1-Dichloroethene		ND		38	320
Dichlorofluoromethane		ND		42	640
1,2-Dichloropropane		ND		41	320
1,3-Dichloropropane		ND		29	320
2,2-Dichloropropane		ND		67	320
1,1-Dichloropropene		ND		49	320
Ethylbenzene		ND		45	320
Ethyl ether		ND		130	640
Hexachlorobutadiene		ND		56	320
2-Hexanone		ND		110	1300
Isopropylbenzene		ND		17	320
Methyl acetate		97	J	70	640
Methylcyclohexane		ND		49	640
Methylene Chloride		ND		110	320
4-Methyl-2-pentanone (MIBK)		ND		72	1300
Methyl tert butyl ether		ND		38	320

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_70-72(20150625)**

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid % Moisture: 11.6 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88200.D
Dilution:	1.0			Initial Weight/Volume:	8.83 g
Analysis Date:	06/29/2015 0959			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		26	320
Naphthalene		ND		33	320
n-Butylbenzene		ND		27	320
N-Propylbenzene		ND		78	320
o-Xylene		ND		22	320
p-Isopropyltoluene		ND		32	320
sec-Butylbenzene		ND		20	320
Styrene		ND		35	320
tert-Butylbenzene		ND		44	320
1,1,1,2-Tetrachloroethane		ND		63	320
1,1,2,2-Tetrachloroethane		ND		55	320
Tetrachloroethene		ND		35	320
Tetrahydrofuran		ND		150	1300
Toluene		26	J	13	320
trans-1,2-Dichloroethene		ND		33	320
trans-1,3-Dichloropropene		ND		33	320
1,2,3-Trichlorobenzene		ND		50	320
1,2,4-Trichlorobenzene		ND		38	320
1,1,1-Trichloroethane		ND		54	320
1,1,2-Trichloroethane		ND		110	320
Trichloroethene		ND		50	320
Trichlorofluoromethane		ND		45	320
1,2,3-Trichloropropane		ND		130	320
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		54	320
1,2,4-Trimethylbenzene		25	J	17	320
1,3,5-Trimethylbenzene		ND		19	320
Vinyl chloride		ND		72	320

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	133		26 - 141
Dibromofluoromethane (Surr)	101		30 - 122
1,2-Dichloroethane-d4 (Surr)	133	X	39 - 128
Toluene-d8 (Surr)	130		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_70-72(20150625)**

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187887	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950893.D
Dilution:	1.0	Leach Batch:	240-187500	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/03/2015 2251			Final Weight/Volume:	5 mL
Prep Date:	07/03/2015 2251				
Leach Date:	06/30/2015 2015				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	89		70 - 124
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	98		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_38-40(20150625)

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88201.D
Dilution:	1.0			Initial Weight/Volume:	9.933 g
Analysis Date:	06/29/2015 1021			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		250	1100
Allyl chloride		ND		33	560
Benzene		ND		10	280
Bromobenzene		ND		15	280
Bromochloromethane		ND		78	280
Bromodichloromethane		ND		42	280
Bromoform		ND		68	280
Bromomethane		ND		57	280
2-Butanone (MEK)		ND		81	1100
Carbon disulfide		ND		62	280
Carbon tetrachloride		ND		54	280
Chlorobenzene		ND		46	280
Chlorodibromomethane		ND		51	280
Chloroethane		ND		57	280
Chloroform		ND		40	280
Chloromethane		ND		54	280
2-Chlorotoluene		ND		46	280
4-Chlorotoluene		ND		29	280
cis-1,2-Dichloroethene		ND		42	280
cis-1,3-Dichloropropene		ND		25	280
Cyclohexane		ND		33	560
1,2-Dibromo-3-Chloropropane		ND		79	560
1,2-Dibromoethane		ND		36	280
Dibromomethane		ND		56	280
1,2-Dichlorobenzene		ND		21	280
1,3-Dichlorobenzene		ND		33	280
1,4-Dichlorobenzene		ND		46	280
Dichlorodifluoromethane		ND		68	280
1,1-Dichloroethane		ND		39	280
1,2-Dichloroethane		ND		59	280
1,1-Dichloroethene		ND		33	280
Dichlorofluoromethane		ND		37	560
1,2-Dichloropropane		ND		36	280
1,3-Dichloropropane		ND		26	280
2,2-Dichloropropane		ND		58	280
1,1-Dichloropropene		ND		42	280
Ethylbenzene		ND		39	280
Ethyl ether		ND		110	560
Hexachlorobutadiene		ND		49	280
2-Hexanone		ND		94	1100
Isopropylbenzene		ND		15	280
Methyl acetate		91	J	61	560
Methylcyclohexane		ND		42	560
Methylene Chloride		ND		95	280
4-Methyl-2-pentanone (MIBK)		ND		62	1100
Methyl tert butyl ether		ND		33	280

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_38-40(20150625)

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88201.D
Dilution:	1.0			Initial Weight/Volume:	9.933 g
Analysis Date:	06/29/2015 1021			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		22	280
Naphthalene		91	J	29	280
n-Butylbenzene		41	J	23	280
N-Propylbenzene		ND		68	280
o-Xylene		ND		19	280
p-Isopropyltoluene		ND		28	280
sec-Butylbenzene		ND		18	280
Styrene		ND		30	280
tert-Butylbenzene		ND		38	280
1,1,1,2-Tetrachloroethane		ND		55	280
1,1,2,2-Tetrachloroethane		ND		48	280
Tetrachloroethene		ND		30	280
Tetrahydrofuran		ND		130	1100
Toluene		ND		11	280
trans-1,2-Dichloroethene		ND		29	280
trans-1,3-Dichloropropene		ND		29	280
1,2,3-Trichlorobenzene		ND		44	280
1,2,4-Trichlorobenzene		ND		33	280
1,1,1-Trichloroethane		ND		47	280
1,1,2-Trichloroethane		ND		93	280
Trichloroethene		ND		44	280
Trichlorofluoromethane		ND		39	280
1,2,3-Trichloropropane		ND		110	280
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		47	280
1,2,4-Trimethylbenzene		41	J	15	280
1,3,5-Trimethylbenzene		ND		17	280
Vinyl chloride		ND		62	280

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	102		26 - 141
Dibromofluoromethane (Surr)	37		30 - 122
1,2-Dichloroethane-d4 (Surr)	107		39 - 128
Toluene-d8 (Surr)	102		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_38-40(20150625)

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187887	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950894.D
Dilution:	1.0	Leach Batch:	240-187500	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/03/2015 2316			Final Weight/Volume:	5 mL
Prep Date:	07/03/2015 2316				
Leach Date:	06/30/2015 2015				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	87		70 - 124
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	103		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_70-73(20150625)

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88202.D
Dilution:	1.0			Initial Weight/Volume:	11.293 g
Analysis Date:	06/29/2015 1042			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		240	1000
Allyl chloride		ND		31	520
Benzene		14	J	9.4	260
Bromobenzene		ND		14	260
Bromochloromethane		ND		73	260
Bromodichloromethane		ND		40	260
Bromoform		ND		64	260
Bromomethane		ND		53	260
2-Butanone (MEK)		ND		76	1000
Carbon disulfide		ND		58	260
Carbon tetrachloride		ND		50	260
Chlorobenzene		ND		43	260
Chlorodibromomethane		ND		48	260
Chloroethane		ND		53	260
Chloroform		ND		38	260
Chloromethane		ND		50	260
2-Chlorotoluene		ND		43	260
4-Chlorotoluene		ND		27	260
cis-1,2-Dichloroethene		ND		40	260
cis-1,3-Dichloropropene		ND		23	260
Cyclohexane		ND		31	520
1,2-Dibromo-3-Chloropropane		ND		74	520
1,2-Dibromoethane		ND		33	260
Dibromomethane		ND		52	260
1,2-Dichlorobenzene		ND		20	260
1,3-Dichlorobenzene		ND		31	260
1,4-Dichlorobenzene		ND		43	260
Dichlorodifluoromethane		ND		64	260
1,1-Dichloroethane		ND		37	260
1,2-Dichloroethane		ND		55	260
1,1-Dichloroethene		ND		31	260
Dichlorofluoromethane		ND		34	520
1,2-Dichloropropane		ND		33	260
1,3-Dichloropropane		ND		24	260
2,2-Dichloropropane		ND		54	260
1,1-Dichloropropene		ND		40	260
Ethylbenzene		ND		37	260
Ethyl ether		ND		100	520
Hexachlorobutadiene		ND		46	260
2-Hexanone		ND		88	1000
Isopropylbenzene		ND		14	260
Methyl acetate		98	J	57	520
Methylcyclohexane		ND		40	520
Methylene Chloride		ND		89	260
4-Methyl-2-pentanone (MIBK)		ND		58	1000
Methyl tert butyl ether		ND		31	260

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_70-73(20150625)

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88202.D
Dilution:	1.0			Initial Weight/Volume:	11.293 g
Analysis Date:	06/29/2015 1042			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		31	J	21	260
Naphthalene		340		27	260
n-Butylbenzene		ND		22	260
N-Propylbenzene		ND		64	260
o-Xylene		18	J	18	260
p-Isopropyltoluene		ND		26	260
sec-Butylbenzene		ND		17	260
Styrene		ND		28	260
tert-Butylbenzene		ND		36	260
1,1,1,2-Tetrachloroethane		ND		51	260
1,1,2,2-Tetrachloroethane		ND		45	260
Tetrachloroethene		ND		28	260
Tetrahydrofuran		ND		130	1000
Toluene		60	J	10	260
trans-1,2-Dichloroethene		ND		27	260
trans-1,3-Dichloropropene		ND		27	260
1,2,3-Trichlorobenzene		ND		41	260
1,2,4-Trichlorobenzene		ND		31	260
1,1,1-Trichloroethane		ND		44	260
1,1,2-Trichloroethane		ND		87	260
Trichloroethene		ND		41	260
Trichlorofluoromethane		ND		37	260
1,2,3-Trichloropropane		ND		110	260
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		44	260
1,2,4-Trimethylbenzene		33	J	14	260
1,3,5-Trimethylbenzene		ND		16	260
Vinyl chloride		ND		58	260

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	99		26 - 141
Dibromofluoromethane (Surr)	75		30 - 122
1,2-Dichloroethane-d4 (Surr)	104		39 - 128
Toluene-d8 (Surr)	99		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_70-73(20150625)

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187887	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950895.D
Dilution:	1.0	Leach Batch:	240-187500	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/03/2015 2340			Final Weight/Volume:	5 mL
Prep Date:	07/03/2015 2340				
Leach Date:	06/30/2015 2015				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	88		70 - 124
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	100		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_55-57(20150625)

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88203.D
Dilution:	1.0			Initial Weight/Volume:	10.796 g
Analysis Date:	06/29/2015 1103			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		250	1100
Allyl chloride		ND		33	550
Benzene		ND		9.8	270
Bromobenzene		ND		14	270
Bromochloromethane		ND		76	270
Bromodichloromethane		ND		41	270
Bromoform		ND		67	270
Bromomethane		ND		56	270
2-Butanone (MEK)		ND		80	1100
Carbon disulfide		ND		61	270
Carbon tetrachloride		ND		52	270
Chlorobenzene		ND		45	270
Chlorodibromomethane		ND		50	270
Chloroethane		ND		56	270
Chloroform		ND		39	270
Chloromethane		ND		52	270
2-Chlorotoluene		ND		45	270
4-Chlorotoluene		ND		28	270
cis-1,2-Dichloroethene		ND		41	270
cis-1,3-Dichloropropene		ND		24	270
Cyclohexane		ND		33	550
1,2-Dibromo-3-Chloropropane		ND		78	550
1,2-Dibromoethane		ND		35	270
Dibromomethane		ND		55	270
1,2-Dichlorobenzene		ND		21	270
1,3-Dichlorobenzene		ND		33	270
1,4-Dichlorobenzene		ND		45	270
Dichlorodifluoromethane		ND		67	270
1,1-Dichloroethane		ND		38	270
1,2-Dichloroethane		ND		58	270
1,1-Dichloroethene		ND		33	270
Dichlorofluoromethane		ND		36	550
1,2-Dichloropropane		ND		35	270
1,3-Dichloropropane		ND		25	270
2,2-Dichloropropane		ND		57	270
1,1-Dichloropropene		ND		41	270
Ethylbenzene		ND		38	270
Ethyl ether		ND		110	550
Hexachlorobutadiene		ND		48	270
2-Hexanone		ND		92	1100
Isopropylbenzene		ND		14	270
Methyl acetate		ND		60	550
Methylcyclohexane		ND		41	550
Methylene Chloride		ND		93	270
4-Methyl-2-pentanone (MIBK)		ND		61	1100
Methyl tert butyl ether		ND		33	270

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_55-57(20150625)

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88203.D
Dilution:	1.0			Initial Weight/Volume:	10.796 g
Analysis Date:	06/29/2015 1103			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		22	270
Naphthalene		ND		28	270
n-Butylbenzene		ND		23	270
N-Propylbenzene		ND		67	270
o-Xylene		ND		19	270
p-Isopropyltoluene		ND		27	270
sec-Butylbenzene		ND		17	270
Styrene		ND		29	270
tert-Butylbenzene		ND		37	270
1,1,1,2-Tetrachloroethane		ND		54	270
1,1,2,2-Tetrachloroethane		ND		47	270
Tetrachloroethene		ND		29	270
Tetrahydrofuran		ND		130	1100
Toluene		ND		11	270
trans-1,2-Dichloroethene		ND		28	270
trans-1,3-Dichloropropene		ND		28	270
1,2,3-Trichlorobenzene		ND		43	270
1,2,4-Trichlorobenzene		ND		33	270
1,1,1-Trichloroethane		ND		46	270
1,1,2-Trichloroethane		ND		91	270
Trichloroethene		ND		43	270
Trichlorofluoromethane		ND		38	270
1,2,3-Trichloropropane		ND		110	270
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		46	270
1,2,4-Trimethylbenzene		ND		14	270
1,3,5-Trimethylbenzene		ND		16	270
Vinyl chloride		ND		61	270

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	98		26 - 141
Dibromofluoromethane (Surr)	73		30 - 122
1,2-Dichloroethane-d4 (Surr)	100		39 - 128
Toluene-d8 (Surr)	97		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_55-57(20150625)**

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-187887	Instrument ID:	A3UX9
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UX950896.D
Dilution:	1.0	Leach Batch:	240-187500	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/04/2015 0004			Final Weight/Volume:	5 mL
Prep Date:	07/04/2015 0004				
Leach Date:	06/30/2015 2015				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		80 - 121
4-Bromofluorobenzene (Surr)	90		70 - 124
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	101		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **MB-01(20150625)**

Lab Sample ID: 240-52505-8 Date Sampled: 06/25/2015 0000
Client Matrix: Solid Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88204.D
Dilution:	1.0			Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 1124			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		48	250
Chlorobenzene		ND		41	250
Chlorodibromomethane		ND		46	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		53	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **MB-01(20150625)**

Lab Sample ID: 240-52505-8 Date Sampled: 06/25/2015 0000
Client Matrix: Solid Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187104	Lab File ID:	UX88204.D
Dilution:	1.0			Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 1124			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		43	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		42	250
1,1,2-Trichloroethane		ND		83	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		56	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	112		26 - 141
Dibromofluoromethane (Surr)	86		30 - 122
1,2-Dichloroethane-d4 (Surr)	118		39 - 128
Toluene-d8 (Surr)	114		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_55-57(20150624)

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710024.D
Dilution:	1.0			Initial Weight/Volume:	30.25 g
Analysis Date:	07/10/2015 1724			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		20	J	4.3	400
2,2'-oxybis[1-chloropropane]		ND		12	400
2,4,5-Trichlorophenol		ND		30	400
2,4,6-Trichlorophenol		ND		11	400
2,4-Dichlorophenol		ND		24	400
2,4-Dimethylphenol		ND		24	400
2,4-Dinitrophenol		ND		26	1900
2,4-Dinitrotoluene		ND		21	400
2,6-Dinitrotoluene		ND		26	400
2-Chloronaphthalene		ND		0.55	400
2-Chlorophenol		ND		10	400
2-Methylnaphthalene		61	J	0.61	400
2-Methylphenol		ND		13	400
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		10	400
3,3'-Dichlorobenzidine		ND		22	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		16	400
4-Chloro-3-methylphenol		ND		26	400
4-Chloroaniline		ND		21	400
4-Chlorophenyl phenyl ether		ND		16	400
4-Nitroaniline		ND		32	1900
4-Nitrophenol		ND		21	1900
Acenaphthene		200	J	0.93	400
Acenaphthylene		29	J	0.43	400
Acetophenone		ND		11	400
Anthracene		260	J	0.95	400
Atrazine		ND		11	400
Benzaldehyde		ND		15	400
Benzo[a]anthracene		460		0.77	400
Benzo[a]pyrene		350	J	0.78	400
Benzo[b]fluoranthene		470		0.72	400
Benzo[g,h,i]perylene		150	J	0.43	400
Benzo[k]fluoranthene		220	J	0.83	400
Bis(2-chloroethoxy)methane		ND		27	400
Bis(2-chloroethyl)ether		ND		2.4	400
Bis(2-ethylhexyl) phthalate		260	J B *	23	400
Butyl benzyl phthalate		ND		12	400
Caprolactam		ND		45	400
Carbazole		92	J	33	400
Chrysene		480		1.3	400
Dibenz(a,h)anthracene		51	J	0.80	400
Dibenzofuran		130	J	0.80	400
Diethyl phthalate		ND		19	400
Dimethyl phthalate		ND		21	400

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_55-57(20150624)

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710024.D
Dilution:	1.0			Initial Weight/Volume:	30.25 g
Analysis Date:	07/10/2015 1724			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		30	J B	18	400
Di-n-octyl phthalate		ND		9.6	400
Fluoranthene		1100		0.67	400
Fluorene		190	J	0.65	400
Hexachlorobenzene		ND		2.6	400
Hexachlorobutadiene		ND		6.8	400
Hexachlorocyclopentadiene		ND		9.9	1900
Hexachloroethane		ND		11	400
Indeno[1,2,3-cd]pyrene		150	J	0.43	400
Isophorone		ND		16	400
Naphthalene		30	J	1.0	400
Nitrobenzene		ND		2.7	400
N-Nitrosodi-n-propylamine		ND		7.7	400
N-Nitrosodiphenylamine		ND		26	400
Pentachlorophenol		ND		11	400
Phenol		ND		8.9	400
Phenanthrene		940		0.89	400
Pyrene		860		0.54	400
3 & 4 Methylphenol		41	J	24	490

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	75		24 - 110
2-Fluorophenol (Surr)	63		24 - 110
2,4,6-Tribromophenol (Surr)	62		10 - 110
Nitrobenzene-d5 (Surr)	53		20 - 110
Phenol-d5 (Surr)	72		26 - 110
Terphenyl-d14 (Surr)	82		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_55-57(20150624)

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714010.D
Dilution:	1.0			Initial Weight/Volume:	29.55 g
Analysis Date:	07/14/2015 1535	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		6.5	J H	4.4	410
2,2'-oxybis[1-chloropropane]		ND	H	12	410
2,4,5-Trichlorophenol		ND	H	31	410
2,4,6-Trichlorophenol		ND	H	11	410
2,4-Dichlorophenol		ND	H	25	410
2,4-Dimethylphenol		ND	H	25	410
2,4-Dinitrophenol		ND	H	26	2000
2,4-Dinitrotoluene		ND	H	21	410
2,6-Dinitrotoluene		ND	H	26	410
2-Chloronaphthalene		ND	H	0.56	410
2-Chlorophenol		ND	H	10	410
2-Methylnaphthalene		76	J H	0.62	410
2-Methylphenol		ND	H	14	410
2-Nitroaniline		ND	H	11	2000
2-Nitrophenol		ND	H	10	410
3,3'-Dichlorobenzidine		ND	H	22	2000
3-Nitroaniline		ND	H	20	2000
4,6-Dinitro-2-methylphenol		ND	H	11	2000
4-Bromophenyl phenyl ether		ND	H	16	410
4-Chloro-3-methylphenol		ND	H	26	410
4-Chloroaniline		ND	H	21	410
4-Chlorophenyl phenyl ether		ND	H	16	410
4-Nitroaniline		ND	H	32	2000
4-Nitrophenol		ND	H	21	2000
Acenaphthene		51	J H	0.95	410
Acenaphthylene		20	J H	0.44	410
Acetophenone		ND	H	11	410
Anthracene		120	J H	0.97	410
Atrazine		ND	H	11	410
Benzaldehyde		ND	H	15	410
Benzo[a]anthracene		230	J H	0.78	410
Benzo[a]pyrene		170	J H	0.80	410
Benzo[b]fluoranthene		250	J H	0.74	410
Benzo[g,h,i]perylene		68	J H	0.44	410
Benzo[k]fluoranthene		120	J H	0.85	410
Bis(2-chloroethoxy)methane		ND	H	27	410
Bis(2-chloroethyl)ether		ND	H	2.5	410
Bis(2-ethylhexyl) phthalate		78	J H B	24	410
Butyl benzyl phthalate		ND	H	12	410
Caprolactam		62	J H	46	410
Carbazole		45	J H	34	410
Chrysene		260	J H	1.4	410
Dibenz(a,h)anthracene		ND	H	0.82	410
Dibenzofuran		40	J H	0.82	410
Diethyl phthalate		ND	H	20	410
Dimethyl phthalate		ND	H	21	410

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_55-57(20150624)

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714010.D
Dilution:	1.0			Initial Weight/Volume:	29.55 g
Analysis Date:	07/14/2015 1535	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		41	J H B	19	410
Di-n-octyl phthalate		ND	H	9.8	410
Fluoranthene		560	H	0.69	410
Fluorene		71	J H	0.66	410
Hexachlorobenzene		ND	H	2.6	410
Hexachlorobutadiene		ND	H	7.0	410
Hexachlorocyclopentadiene		ND	H	10	2000
Hexachloroethane		ND	H	11	410
Indeno[1,2,3-cd]pyrene		70	J H	0.44	410
Isophorone		ND	H	16	410
Naphthalene		29	J H	1.0	410
Nitrobenzene		ND	H	2.7	410
N-Nitrosodi-n-propylamine		ND	H	7.8	410
N-Nitrosodiphenylamine		ND	H	26	410
Pentachlorophenol		ND	H	11	410
Phenol		ND	H	9.1	410
Phenanthrene		510	H	0.91	410
Pyrene		440	H	0.55	410
3 & 4 Methylphenol		27	J H	25	500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	66		24 - 110
2-Fluorophenol (Surr)	67		24 - 110
2,4,6-Tribromophenol (Surr)	31		10 - 110
Nitrobenzene-d5 (Surr)	62		20 - 110
Phenol-d5 (Surr)	69		26 - 110
Terphenyl-d14 (Surr)	68		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_55-57(20150624)**

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188138	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187793	Lab File ID:	50707023.D
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	250 mL
Analysis Date:	07/07/2015 1635			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1024			Injection Volume:	1 uL
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		0.0013	J	0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	80		30 - 110
2-Fluorophenol (Surr)	72		20 - 110
Nitrobenzene-d5 (Surr)	84		28 - 110
Phenol-d5 (Surr)	65		21 - 110
Terphenyl-d14 (Surr)	85		48 - 110
2,4,6-Tribromophenol (Surr)	76		23 - 110

Client Sample ID: **ASB-1009_42-44(20150624)**

Lab Sample ID: 240-52505-2 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 20.8 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708023.D
Dilution:	6.667			Initial Weight/Volume:	29.98 g
Analysis Date:	07/08/2015 1655			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		29	2800
2,2'-oxybis[1-chloropropane]		ND		80	2800
2,4,5-Trichlorophenol		ND		210	2800
2,4,6-Trichlorophenol		ND		75	2800
2,4-Dichlorophenol		ND		170	2800
2,4-Dimethylphenol		ND		170	2800
2,4-Dinitrophenol		ND		180	13000
2,4-Dinitrotoluene		ND		140	2800
2,6-Dinitrotoluene		ND		180	2800
2-Chloronaphthalene		ND		3.8	2800
2-Chlorophenol		ND		69	2800
2-Methylnaphthalene		160	J	4.2	2800
2-Methylphenol		ND		93	2800
2-Nitroaniline		ND		77	13000
2-Nitrophenol		ND		70	2800
3,3'-Dichlorobenzidine		ND		150	13000
3-Nitroaniline		ND		130	13000
4,6-Dinitro-2-methylphenol		ND		77	13000
4-Bromophenyl phenyl ether		ND		110	2800
4-Chloro-3-methylphenol		ND		180	2800
4-Chloroaniline		ND		140	2800
4-Chlorophenyl phenyl ether		ND		110	2800
4-Nitroaniline		ND		220	13000
4-Nitrophenol		ND		140	13000
Acenaphthene		1600	J	6.4	2800
Acenaphthylene		ND		2.9	2800
Acetophenone		ND		77	2800
Anthracene		2000	J	6.6	2800
Atrazine		ND		77	2800
Benzaldehyde		ND		100	2800
Benzo[a]anthracene		3000		5.3	2800
Benzo[a]pyrene		2700	J	5.4	2800
Benzo[b]fluoranthene		3600		5.0	2800
Benzo[g,h,i]perylene		900	J	2.9	2800
Benzo[k]fluoranthene		1500	J	5.7	2800
Bis(2-chloroethoxy)methane		ND		190	2800
Bis(2-chloroethyl)ether		ND		17	2800
Bis(2-ethylhexyl) phthalate		180	J	160	2800
Butyl benzyl phthalate		ND		84	2800
Caprolactam		ND		310	2800
Carbazole		1200	J	230	2800
Chrysene		3100		9.3	2800
Dibenz(a,h)anthracene		280	J	5.6	2800
Dibenzofuran		570	J	5.6	2800
Diethyl phthalate		ND		130	2800
Dimethyl phthalate		ND		140	2800

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_42-44(20150624)

Lab Sample ID: 240-52505-2 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 20.8 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708023.D
Dilution:	6.667			Initial Weight/Volume:	29.98 g
Analysis Date:	07/08/2015 1655			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		130	2800
Di-n-octyl phthalate		ND		67	2800
Fluoranthene		8500		4.6	2800
Fluorene		1200	J	4.5	2800
Hexachlorobenzene		ND		18	2800
Hexachlorobutadiene		ND		47	2800
Hexachlorocyclopentadiene		ND		68	13000
Hexachloroethane		ND		76	2800
Indeno[1,2,3-cd]pyrene		900	J	2.9	2800
Isophorone		ND		110	2800
Naphthalene		130	J	6.9	2800
Nitrobenzene		ND		19	2800
N-Nitrosodi-n-propylamine		ND		53	2800
N-Nitrosodiphenylamine		ND		180	2800
Pentachlorophenol		ND		77	2800
Phenol		ND		61	2800
Phenanthrene		8100		6.1	2800
Pyrene		6800		3.7	2800
3 & 4 Methylphenol		ND		170	3400

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	79		24 - 110
2-Fluorophenol (Surr)	71		24 - 110
2,4,6-Tribromophenol (Surr)	34		10 - 110
Nitrobenzene-d5 (Surr)	63		20 - 110
Phenol-d5 (Surr)	80		26 - 110
Terphenyl-d14 (Surr)	78		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_42-44(20150624)

Lab Sample ID: 240-52505-2 Date Sampled: 06/24/2015 1745
Client Matrix: Solid Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188138	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187793	Lab File ID:	50707024.D
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	250 mL
Analysis Date:	07/07/2015 1659			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1024			Injection Volume:	1 uL
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	80		30 - 110
2-Fluorophenol (Surr)	74		20 - 110
Nitrobenzene-d5 (Surr)	84		28 - 110
Phenol-d5 (Surr)	70		21 - 110
Terphenyl-d14 (Surr)	86		48 - 110
2,4,6-Tribromophenol (Surr)	76		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_62-65(20150624)**

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid % Moisture: 7.5 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710021.D
Dilution:	1.0			Initial Weight/Volume:	29.71 g
Analysis Date:	07/10/2015 1608			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		3.8	360
2,2'-oxybis[1-chloropropane]		ND		10	360
2,4,5-Trichlorophenol		ND		27	360
2,4,6-Trichlorophenol		ND		9.7	360
2,4-Dichlorophenol		ND		22	360
2,4-Dimethylphenol		ND		22	360
2,4-Dinitrophenol		ND		23	1700
2,4-Dinitrotoluene		ND		19	360
2,6-Dinitrotoluene		ND		23	360
2-Chloronaphthalene		ND		0.49	360
2-Chlorophenol		ND		9.0	360
2-Methylnaphthalene		33	J	0.55	360
2-Methylphenol		ND		12	360
2-Nitroaniline		ND		9.9	1700
2-Nitrophenol		ND		9.1	360
3,3'-Dichlorobenzidine		ND		20	1700
3-Nitroaniline		ND		17	1700
4,6-Dinitro-2-methylphenol		ND		10	1700
4-Bromophenyl phenyl ether		ND		14	360
4-Chloro-3-methylphenol		ND		23	360
4-Chloroaniline		ND		19	360
4-Chlorophenyl phenyl ether		ND		14	360
4-Nitroaniline		ND		28	1700
4-Nitrophenol		ND		19	1700
Acenaphthene		3.5	J	0.83	360
Acenaphthylene		7.5	J	0.38	360
Acetophenone		ND		10	360
Anthracene		9.3	J	0.85	360
Atrazine		ND		9.9	360
Benzaldehyde		28	J	13	360
Benzo[a]anthracene		27	J	0.69	360
Benzo[a]pyrene		35	J	0.70	360
Benzo[b]fluoranthene		48	J	0.64	360
Benzo[g,h,i]perylene		34	J	0.38	360
Benzo[k]fluoranthene		13	J	0.74	360
Bis(2-chloroethoxy)methane		ND		24	360
Bis(2-chloroethyl)ether		ND		2.2	360
Bis(2-ethylhexyl) phthalate		310	J B *	21	360
Butyl benzyl phthalate		ND		11	360
Caprolactam		43	J B	40	360
Carbazole		ND		29	360
Chrysene		39	J	1.2	360
Dibenz(a,h)anthracene		ND		0.72	360
Dibenzofuran		2.9	J	0.72	360
Diethyl phthalate		ND		17	360
Dimethyl phthalate		ND		19	360

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_62-65(20150624)

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid % Moisture: 7.5 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710021.D
Dilution:	1.0			Initial Weight/Volume:	29.71 g
Analysis Date:	07/10/2015 1608			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		27	J B	16	360
Di-n-octyl phthalate		ND		8.6	360
Fluoranthene		51	J	0.60	360
Fluorene		3.9	J	0.58	360
Hexachlorobenzene		ND		2.3	360
Hexachlorobutadiene		ND		6.1	360
Hexachlorocyclopentadiene		ND		8.8	1700
Hexachloroethane		ND		9.8	360
Indeno[1,2,3-cd]pyrene		24	J	0.38	360
Isophorone		ND		14	360
Naphthalene		22	J	0.90	360
Nitrobenzene		ND		2.4	360
N-Nitrosodi-n-propylamine		ND		6.9	360
N-Nitrosodiphenylamine		ND		23	360
Pentachlorophenol		ND		9.9	360
Phenol		ND		8.0	360
Phenanthrene		27	J	0.80	360
Pyrene		55	J	0.48	360
3 & 4 Methylphenol		ND		22	440

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	71		24 - 110
2-Fluorophenol (Surr)	74		24 - 110
2,4,6-Tribromophenol (Surr)	57		10 - 110
Nitrobenzene-d5 (Surr)	63		20 - 110
Phenol-d5 (Surr)	72		26 - 110
Terphenyl-d14 (Surr)	81		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_62-65(20150624)

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid % Moisture: 7.5 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714012.D
Dilution:	1.0			Initial Weight/Volume:	29.52 g
Analysis Date:	07/14/2015 1623	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	3.8	360
2,2'-oxybis[1-chloropropane]		ND	H	10	360
2,4,5-Trichlorophenol		ND	H	27	360
2,4,6-Trichlorophenol		ND	H	9.8	360
2,4-Dichlorophenol		ND	H	22	360
2,4-Dimethylphenol		ND	H	22	360
2,4-Dinitrophenol		ND	H	23	1800
2,4-Dinitrotoluene		ND	H	19	360
2,6-Dinitrotoluene		ND	H	23	360
2-Chloronaphthalene		ND	H	0.49	360
2-Chlorophenol		ND	H	9.0	360
2-Methylnaphthalene		42	J H	0.55	360
2-Methylphenol		ND	H	12	360
2-Nitroaniline		ND	H	10	1800
2-Nitrophenol		ND	H	9.1	360
3,3'-Dichlorobenzidine		ND	H	20	1800
3-Nitroaniline		ND	H	18	1800
4,6-Dinitro-2-methylphenol		ND	H	10	1800
4-Bromophenyl phenyl ether		ND	H	14	360
4-Chloro-3-methylphenol		ND	H	23	360
4-Chloroaniline		ND	H	19	360
4-Chlorophenyl phenyl ether		ND	H	14	360
4-Nitroaniline		ND	H	29	1800
4-Nitrophenol		ND	H	19	1800
Acenaphthene		5.0	J H	0.84	360
Acenaphthylene		12	J H	0.38	360
Acetophenone		25	J H	10	360
Anthracene		16	J H	0.86	360
Atrazine		ND	H	10	360
Benzaldehyde		ND	H	13	360
Benzo[a]anthracene		71	J H	0.69	360
Benzo[a]pyrene		90	J H	0.70	360
Benzo[b]fluoranthene		120	J H	0.65	360
Benzo[g,h,i]perylene		40	J H	0.38	360
Benzo[k]fluoranthene		44	J H	0.75	360
Bis(2-chloroethoxy)methane		ND	H	24	360
Bis(2-chloroethyl)ether		ND	H	2.2	360
Bis(2-ethylhexyl) phthalate		64	J H B	21	360
Butyl benzyl phthalate		ND	H	11	360
Caprolactam		ND	H	41	360
Carbazole		ND	H	30	360
Chrysene		85	J H	1.2	360
Dibenz(a,h)anthracene		ND	H	0.73	360
Dibenzofuran		ND	H	0.73	360
Diethyl phthalate		ND	H	18	360
Dimethyl phthalate		ND	H	19	360

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_62-65(20150624)

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid % Moisture: 7.5 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714012.D
Dilution:	1.0			Initial Weight/Volume:	29.52 g
Analysis Date:	07/14/2015 1623	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		26	J H B	16	360
Di-n-octyl phthalate		ND	H	8.7	360
Fluoranthene		100	J H	0.60	360
Fluorene		5.7	J H	0.58	360
Hexachlorobenzene		ND	H	2.3	360
Hexachlorobutadiene		ND	H	6.2	360
Hexachlorocyclopentadiene		ND	H	8.9	1800
Hexachloroethane		ND	H	9.9	360
Indeno[1,2,3-cd]pyrene		39	J H	0.38	360
Isophorone		ND	H	14	360
Naphthalene		27	J H	0.90	360
Nitrobenzene		ND	H	2.4	360
N-Nitrosodi-n-propylamine		ND	H	6.9	360
N-Nitrosodiphenylamine		ND	H	23	360
Pentachlorophenol		ND	H	10	360
Phenol		16	J H	8.0	360
Phenanthrene		37	J H	0.80	360
Pyrene		120	J H	0.48	360
3 & 4 Methylphenol		ND	H	22	440

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	64		24 - 110
2-Fluorophenol (Surr)	63		24 - 110
2,4,6-Tribromophenol (Surr)	14		10 - 110
Nitrobenzene-d5 (Surr)	57		20 - 110
Phenol-d5 (Surr)	65		26 - 110
Terphenyl-d14 (Surr)	68		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_62-65(20150624)**

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188138	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187793	Lab File ID:	50707025.D
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	250 mL
Analysis Date:	07/07/2015 1724			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1024			Injection Volume:	1 uL
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	84		30 - 110
2-Fluorophenol (Surr)	77		20 - 110
Nitrobenzene-d5 (Surr)	85		28 - 110
Phenol-d5 (Surr)	71		21 - 110
Terphenyl-d14 (Surr)	86		48 - 110
2,4,6-Tribromophenol (Surr)	85		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_70-72(20150625)**

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid % Moisture: 11.6 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710022.D
Dilution:	1.0			Initial Weight/Volume:	29.61 g
Analysis Date:	07/10/2015 1634			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.0	380
2,2'-oxybis[1-chloropropane]		ND		11	380
2,4,5-Trichlorophenol		ND		29	380
2,4,6-Trichlorophenol		ND		10	380
2,4-Dichlorophenol		ND		23	380
2,4-Dimethylphenol		ND		23	380
2,4-Dinitrophenol		ND		24	1800
2,4-Dinitrotoluene		ND		19	380
2,6-Dinitrotoluene		ND		24	380
2-Chloronaphthalene		ND		0.52	380
2-Chlorophenol		ND		9.4	380
2-Methylnaphthalene		ND		0.57	380
2-Methylphenol		ND		13	380
2-Nitroaniline		ND		10	1800
2-Nitrophenol		ND		9.5	380
3,3'-Dichlorobenzidine		ND		21	1800
3-Nitroaniline		ND		18	1800
4,6-Dinitro-2-methylphenol		ND		11	1800
4-Bromophenyl phenyl ether		ND		15	380
4-Chloro-3-methylphenol		ND		24	380
4-Chloroaniline		ND		19	380
4-Chlorophenyl phenyl ether		ND		15	380
4-Nitroaniline		ND		30	1800
4-Nitrophenol		ND		19	1800
Acenaphthene		7.6	J	0.87	380
Acenaphthylene		23	J	0.40	380
Acetophenone		ND		11	380
Anthracene		25	J	0.89	380
Atrazine		ND		10	380
Benzaldehyde		ND		14	380
Benzo[a]anthracene		100	J	0.72	380
Benzo[a]pyrene		96	J	0.73	380
Benzo[b]fluoranthene		92	J	0.68	380
Benzo[g,h,i]perylene		66	J	0.40	380
Benzo[k]fluoranthene		40	J	0.78	380
Bis(2-chloroethoxy)methane		ND		25	380
Bis(2-chloroethyl)ether		ND		2.3	380
Bis(2-ethylhexyl) phthalate		570	B *	22	380
Butyl benzyl phthalate		ND		11	380
Caprolactam		ND		42	380
Carbazole		ND		31	380
Chrysene		100	J	1.3	380
Dibenz(a,h)anthracene		15	J	0.76	380
Dibenzofuran		ND		0.76	380
Diethyl phthalate		ND		18	380
Dimethyl phthalate		ND		19	380

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_70-72(20150625)

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid % Moisture: 11.6 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710022.D
Dilution:	1.0			Initial Weight/Volume:	29.61 g
Analysis Date:	07/10/2015 1634			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		30	J B	17	380
Di-n-octyl phthalate		ND		9.1	380
Fluoranthene		150	J	0.63	380
Fluorene		5.6	J	0.61	380
Hexachlorobenzene		ND		2.4	380
Hexachlorobutadiene		ND		6.4	380
Hexachlorocyclopentadiene		ND		9.3	1800
Hexachloroethane		ND		10	380
Indeno[1,2,3-cd]pyrene		49	J	0.40	380
Isophorone		ND		15	380
Naphthalene		ND		0.94	380
Nitrobenzene		ND		2.5	380
N-Nitrosodi-n-propylamine		ND		7.2	380
N-Nitrosodiphenylamine		ND		24	380
Pentachlorophenol		ND		10	380
Phenol		ND		8.4	380
Phenanthrene		75	J	0.84	380
Pyrene		220	J	0.50	380
3 & 4 Methylphenol		ND		23	460

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	65		24 - 110
2-Fluorophenol (Surr)	64		24 - 110
2,4,6-Tribromophenol (Surr)	52		10 - 110
Nitrobenzene-d5 (Surr)	61		20 - 110
Phenol-d5 (Surr)	67		26 - 110
Terphenyl-d14 (Surr)	77		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_70-72(20150625)**

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid % Moisture: 11.6 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714009.D
Dilution:	1.0			Initial Weight/Volume:	30.38 g
Analysis Date:	07/14/2015 1511	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	3.9	370
2,2'-oxybis[1-chloropropane]		ND	H	11	370
2,4,5-Trichlorophenol		ND	H	28	370
2,4,6-Trichlorophenol		ND	H	9.9	370
2,4-Dichlorophenol		ND	H	22	370
2,4-Dimethylphenol		ND	H	22	370
2,4-Dinitrophenol		ND	H	23	1800
2,4-Dinitrotoluene		ND	H	19	370
2,6-Dinitrotoluene		ND	H	23	370
2-Chloronaphthalene		ND	H	0.50	370
2-Chlorophenol		ND	H	9.2	370
2-Methylnaphthalene		8.9	J H	0.56	370
2-Methylphenol		ND	H	12	370
2-Nitroaniline		ND	H	10	1800
2-Nitrophenol		ND	H	9.3	370
3,3'-Dichlorobenzidine		ND	H	20	1800
3-Nitroaniline		ND	H	18	1800
4,6-Dinitro-2-methylphenol		ND	H	10	1800
4-Bromophenyl phenyl ether		ND	H	15	370
4-Chloro-3-methylphenol		ND	H	23	370
4-Chloroaniline		ND	H	19	370
4-Chlorophenyl phenyl ether		ND	H	15	370
4-Nitroaniline		ND	H	29	1800
4-Nitrophenol		ND	H	19	1800
Acenaphthene		ND	H	0.85	370
Acenaphthylene		56	J H	0.39	370
Acetophenone		ND	H	10	370
Anthracene		27	J H	0.87	370
Atrazine		ND	H	10	370
Benzaldehyde		ND	H	13	370
Benzo[a]anthracene		120	J H	0.70	370
Benzo[a]pyrene		130	J H	0.71	370
Benzo[b]fluoranthene		130	J H	0.66	370
Benzo[g,h,i]perylene		72	J H	0.39	370
Benzo[k]fluoranthene		43	J H	0.76	370
Bis(2-chloroethoxy)methane		ND	H	25	370
Bis(2-chloroethyl)ether		ND	H	2.2	370
Bis(2-ethylhexyl) phthalate		37	J H B	21	370
Butyl benzyl phthalate		ND	H	11	370
Caprolactam		ND	H	41	370
Carbazole		ND	H	30	370
Chrysene		120	J H	1.2	370
Dibenz(a,h)anthracene		24	J H	0.74	370
Dibenzofuran		ND	H	0.74	370
Diethyl phthalate		ND	H	18	370
Dimethyl phthalate		ND	H	19	370

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_70-72(20150625)

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid % Moisture: 11.6 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714009.D
Dilution:	1.0			Initial Weight/Volume:	30.38 g
Analysis Date:	07/14/2015 1511	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND	H	17	370
Di-n-octyl phthalate		ND	H	8.8	370
Fluoranthene		140	J H	0.61	370
Fluorene		ND	H	0.59	370
Hexachlorobenzene		ND	H	2.3	370
Hexachlorobutadiene		ND	H	6.3	370
Hexachlorocyclopentadiene		ND	H	9.0	1800
Hexachloroethane		ND	H	10	370
Indeno[1,2,3-cd]pyrene		62	J H	0.39	370
Isophorone		ND	H	15	370
Naphthalene		8.9	J H	0.92	370
Nitrobenzene		ND	H	2.5	370
N-Nitrosodi-n-propylamine		ND	H	7.0	370
N-Nitrosodiphenylamine		ND	H	23	370
Pentachlorophenol		ND	H	10	370
Phenol		ND	H	8.2	370
Phenanthrene		57	J H	0.82	370
Pyrene		190	J H	0.49	370
3 & 4 Methylphenol		ND	H	22	450

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	62		24 - 110
2-Fluorophenol (Surr)	66		24 - 110
2,4,6-Tribromophenol (Surr)	33		10 - 110
Nitrobenzene-d5 (Surr)	62		20 - 110
Phenol-d5 (Surr)	68		26 - 110
Terphenyl-d14 (Surr)	72		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_70-72(20150625)**

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188482	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187793	Lab File ID:	50709016.D
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	250 mL
Analysis Date:	07/09/2015 1705			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1024			Injection Volume:	1 uL
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	65		30 - 110
2-Fluorophenol (Surr)	58		20 - 110
Nitrobenzene-d5 (Surr)	65		28 - 110
Phenol-d5 (Surr)	53		21 - 110
Terphenyl-d14 (Surr)	71		48 - 110
2,4,6-Tribromophenol (Surr)	68		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_38-40(20150625)

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710026.D
Dilution:	1.0			Initial Weight/Volume:	30.38 g
Analysis Date:	07/10/2015 1815			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		21	J	3.8	360
2,2'-oxybis[1-chloropropane]		ND		10	360
2,4,5-Trichlorophenol		ND		27	360
2,4,6-Trichlorophenol		ND		9.7	360
2,4-Dichlorophenol		ND		22	360
2,4-Dimethylphenol		ND		22	360
2,4-Dinitrophenol		ND		23	1800
2,4-Dinitrotoluene		ND		19	360
2,6-Dinitrotoluene		ND		23	360
2-Chloronaphthalene		ND		0.49	360
2-Chlorophenol		ND		9.0	360
2-Methylnaphthalene		340	J	0.55	360
2-Methylphenol		ND		12	360
2-Nitroaniline		ND		10	1800
2-Nitrophenol		ND		9.1	360
3,3'-Dichlorobenzidine		ND		20	1800
3-Nitroaniline		ND		18	1800
4,6-Dinitro-2-methylphenol		ND		10	1800
4-Bromophenyl phenyl ether		ND		14	360
4-Chloro-3-methylphenol		ND		23	360
4-Chloroaniline		ND		19	360
4-Chlorophenyl phenyl ether		ND		14	360
4-Nitroaniline		ND		28	1800
4-Nitrophenol		ND		19	1800
Acenaphthene		33	J	0.83	360
Acenaphthylene		14	J	0.38	360
Acetophenone		ND		10	360
Anthracene		39	J	0.85	360
Atrazine		ND		10	360
Benzaldehyde		31	J	13	360
Benzo[a]anthracene		80	J	0.69	360
Benzo[a]pyrene		82	J	0.70	360
Benzo[b]fluoranthene		130	J	0.65	360
Benzo[g,h,i]perylene		37	J	0.38	360
Benzo[k]fluoranthene		56	J	0.74	360
Bis(2-chloroethoxy)methane		ND		24	360
Bis(2-chloroethyl)ether		ND		2.2	360
Bis(2-ethylhexyl) phthalate		700	B *	21	360
Butyl benzyl phthalate		ND		11	360
Caprolactam		ND		40	360
Carbazole		ND		30	360
Chrysene		130	J	1.2	360
Dibenz(a,h)anthracene		ND		0.72	360
Dibenzofuran		56	J	0.72	360
Diethyl phthalate		ND		18	360
Dimethyl phthalate		26	J	19	360

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_38-40(20150625)

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710026.D
Dilution:	1.0			Initial Weight/Volume:	30.38 g
Analysis Date:	07/10/2015 1815			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		35	J B	16	360
Di-n-octyl phthalate		ND		8.6	360
Fluoranthene		170	J	0.60	360
Fluorene		31	J	0.58	360
Hexachlorobenzene		ND		2.3	360
Hexachlorobutadiene		ND		6.1	360
Hexachlorocyclopentadiene		ND		8.9	1800
Hexachloroethane		ND		9.8	360
Indeno[1,2,3-cd]pyrene		26	J	0.38	360
Isophorone		ND		14	360
Naphthalene		130	J	0.90	360
Nitrobenzene		ND		2.4	360
N-Nitrosodi-n-propylamine		ND		6.9	360
N-Nitrosodiphenylamine		ND		23	360
Pentachlorophenol		ND		10	360
Phenol		16	J B	8.0	360
Phenanthrene		190	J	0.80	360
Pyrene		160	J	0.48	360
3 & 4 Methylphenol		ND		22	440

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		24 - 110
2-Fluorophenol (Surr)	72		24 - 110
2,4,6-Tribromophenol (Surr)	51		10 - 110
Nitrobenzene-d5 (Surr)	62		20 - 110
Phenol-d5 (Surr)	75		26 - 110
Terphenyl-d14 (Surr)	82		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_38-40(20150625)

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714013.D
Dilution:	1.0			Initial Weight/Volume:	29.50 g
Analysis Date:	07/14/2015 1647	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		12	J H	3.9	370
2,2'-oxybis[1-chloropropane]		ND	H	11	370
2,4,5-Trichlorophenol		ND	H	28	370
2,4,6-Trichlorophenol		ND	H	10	370
2,4-Dichlorophenol		ND	H	23	370
2,4-Dimethylphenol		ND	H	23	370
2,4-Dinitrophenol		ND	H	24	1800
2,4-Dinitrotoluene		ND	H	19	370
2,6-Dinitrotoluene		ND	H	24	370
2-Chloronaphthalene		ND	H	0.51	370
2-Chlorophenol		ND	H	9.2	370
2-Methylnaphthalene		170	J H	0.56	370
2-Methylphenol		ND	H	12	370
2-Nitroaniline		ND	H	10	1800
2-Nitrophenol		ND	H	9.4	370
3,3'-Dichlorobenzidine		ND	H	20	1800
3-Nitroaniline		ND	H	18	1800
4,6-Dinitro-2-methylphenol		ND	H	10	1800
4-Bromophenyl phenyl ether		ND	H	15	370
4-Chloro-3-methylphenol		ND	H	24	370
4-Chloroaniline		ND	H	19	370
4-Chlorophenyl phenyl ether		ND	H	15	370
4-Nitroaniline		ND	H	29	1800
4-Nitrophenol		ND	H	19	1800
Acenaphthene		17	J H	0.86	370
Acenaphthylene		7.6	J H	0.39	370
Acetophenone		27	J H	10	370
Anthracene		24	J H	0.88	370
Atrazine		ND	H	10	370
Benzaldehyde		ND	H	14	370
Benzo[a]anthracene		50	J H	0.71	370
Benzo[a]pyrene		52	J H	0.72	370
Benzo[b]fluoranthene		94	J H	0.66	370
Benzo[g,h,i]perylene		32	J H	0.39	370
Benzo[k]fluoranthene		19	J H	0.77	370
Bis(2-chloroethoxy)methane		ND	H	25	370
Bis(2-chloroethyl)ether		ND	H	2.3	370
Bis(2-ethylhexyl) phthalate		350	J H B	21	370
Butyl benzyl phthalate		ND	H	11	370
Caprolactam		ND	H	42	370
Carbazole		ND	H	30	370
Chrysene		86	J H	1.2	370
Dibenz(a,h)anthracene		ND	H	0.74	370
Dibenzofuran		ND	H	0.74	370
Diethyl phthalate		ND	H	18	370
Dimethyl phthalate		ND	H	19	370

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_38-40(20150625)

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714013.D
Dilution:	1.0			Initial Weight/Volume:	29.50 g
Analysis Date:	07/14/2015 1647	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		37	J H B	17	370
Di-n-octyl phthalate		ND	H	8.9	370
Fluoranthene		110	J H	0.62	370
Fluorene		22	J H	0.60	370
Hexachlorobenzene		ND	H	2.4	370
Hexachlorobutadiene		ND	H	6.3	370
Hexachlorocyclopentadiene		ND	H	9.1	1800
Hexachloroethane		ND	H	10	370
Indeno[1,2,3-cd]pyrene		ND	H	0.39	370
Isophorone		ND	H	15	370
Naphthalene		33	J H	0.92	370
Nitrobenzene		ND	H	2.5	370
N-Nitrosodi-n-propylamine		ND	H	7.1	370
N-Nitrosodiphenylamine		ND	H	24	370
Pentachlorophenol		ND	H	10	370
Phenol		16	J H	8.2	370
Phenanthrene		110	J H	0.82	370
Pyrene		110	J H	0.50	370
3 & 4 Methylphenol		ND	H	23	450

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	62		24 - 110
2-Fluorophenol (Surr)	61		24 - 110
2,4,6-Tribromophenol (Surr)	21		10 - 110
Nitrobenzene-d5 (Surr)	55		20 - 110
Phenol-d5 (Surr)	65		26 - 110
Terphenyl-d14 (Surr)	69		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_38-40(20150625)**

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188482	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187793	Lab File ID:	50709015.D
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	250 mL
Analysis Date:	07/09/2015 1640			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1024			Injection Volume:	1 uL
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	77		30 - 110
2-Fluorophenol (Surr)	77		20 - 110
Nitrobenzene-d5 (Surr)	75		28 - 110
Phenol-d5 (Surr)	79		21 - 110
Terphenyl-d14 (Surr)	80		48 - 110
2,4,6-Tribromophenol (Surr)	85		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_70-73(20150625)**

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714014.D
Dilution:	2.5			Initial Weight/Volume:	30.21 g
Analysis Date:	07/14/2015 1711	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		71	J H	10	970
2,2'-oxybis[1-chloropropane]		ND	H	28	970
2,4,5-Trichlorophenol		ND	H	73	970
2,4,6-Trichlorophenol		ND	H	26	970
2,4-Dichlorophenol		ND	H	59	970
2,4-Dimethylphenol		ND	H	59	970
2,4-Dinitrophenol		ND	H	61	4700
2,4-Dinitrotoluene		ND	H	50	970
2,6-Dinitrotoluene		ND	H	61	970
2-Chloronaphthalene		ND	H	1.3	970
2-Chlorophenol		ND	H	24	970
2-Methylnaphthalene		340	J H	1.5	970
2-Methylphenol		ND	H	32	970
2-Nitroaniline		ND	H	27	4700
2-Nitrophenol		ND	H	24	970
3,3'-Dichlorobenzidine		ND	H	53	4700
3-Nitroaniline		ND	H	47	4700
4,6-Dinitro-2-methylphenol		ND	H	27	4700
4-Bromophenyl phenyl ether		ND	H	38	970
4-Chloro-3-methylphenol		ND	H	61	970
4-Chloroaniline		ND	H	50	970
4-Chlorophenyl phenyl ether		ND	H	38	970
4-Nitroaniline		ND	H	76	4700
4-Nitrophenol		ND	H	50	4700
Acenaphthene		280	J H	2.2	970
Acenaphthylene		370	J H	1.0	970
Acetophenone		ND	H	27	970
Anthracene		720	J H	2.3	970
Atrazine		ND	H	27	970
Benzaldehyde		ND	H	35	970
Benzo[a]anthracene		1900	H	1.8	970
Benzo[a]pyrene		1600	H	1.9	970
Benzo[b]fluoranthene		2100	H	1.7	970
Benzo[g,h,i]perylene		550	J H	1.0	970
Benzo[k]fluoranthene		830	J H	2.0	970
Bis(2-chloroethoxy)methane		ND	H	64	970
Bis(2-chloroethyl)ether		ND	H	5.9	970
Bis(2-ethylhexyl) phthalate		ND	H	56	970
Butyl benzyl phthalate		ND	H	29	970
Caprolactam		ND	H	110	970
Carbazole		250	J H	79	970
Chrysene		1800	H	3.2	970
Dibenz(a,h)anthracene		190	J H	1.9	970
Dibenzofuran		170	J H	1.9	970
Diethyl phthalate		ND	H	47	970
Dimethyl phthalate		ND	H	50	970

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_70-73(20150625)

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714014.D
Dilution:	2.5			Initial Weight/Volume:	30.21 g
Analysis Date:	07/14/2015 1711	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND	H	44	970
Di-n-octyl phthalate		ND	H	23	970
Fluoranthene		3300	H	1.6	970
Fluorene		310	J H	1.6	970
Hexachlorobenzene		ND	H	6.1	970
Hexachlorobutadiene		ND	H	16	970
Hexachlorocyclopentadiene		ND	H	24	4700
Hexachloroethane		ND	H	26	970
Indeno[1,2,3-cd]pyrene		500	J H	1.0	970
Isophorone		ND	H	38	970
Naphthalene		440	J H	2.4	970
Nitrobenzene		ND	H	6.4	970
N-Nitrosodi-n-propylamine		ND	H	18	970
N-Nitrosodiphenylamine		ND	H	61	970
Pentachlorophenol		ND	H	27	970
Phenol		ND	H	21	970
Phenanthrene		2600	H	2.1	970
Pyrene		3200	H	1.3	970
3 & 4 Methylphenol		ND	H	59	1200

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	64		24 - 110
2-Fluorophenol (Surr)	53		24 - 110
2,4,6-Tribromophenol (Surr)	49		10 - 110
Nitrobenzene-d5 (Surr)	44		20 - 110
Phenol-d5 (Surr)	57		26 - 110
Terphenyl-d14 (Surr)	80		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_70-73(20150625)

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710023.D
Dilution:	4.0			Initial Weight/Volume:	29.66 g
Analysis Date:	07/10/2015 1659			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		84	J	17	1600
2,2'-oxybis[1-chloropropane]		ND		45	1600
2,4,5-Trichlorophenol		ND		120	1600
2,4,6-Trichlorophenol		ND		42	1600
2,4-Dichlorophenol		ND		95	1600
2,4-Dimethylphenol		ND		95	1600
2,4-Dinitrophenol		ND		100	7600
2,4-Dinitrotoluene		ND		81	1600
2,6-Dinitrotoluene		ND		100	1600
2-Chloronaphthalene		ND		2.1	1600
2-Chlorophenol		ND		39	1600
2-Methylnaphthalene		340	J	2.4	1600
2-Methylphenol		ND		52	1600
2-Nitroaniline		ND		43	7600
2-Nitrophenol		ND		40	1600
3,3'-Dichlorobenzidine		ND		86	7600
3-Nitroaniline		ND		76	7600
4,6-Dinitro-2-methylphenol		ND		44	7600
4-Bromophenyl phenyl ether		ND		62	1600
4-Chloro-3-methylphenol		ND		100	1600
4-Chloroaniline		ND		81	1600
4-Chlorophenyl phenyl ether		ND		62	1600
4-Nitroaniline		ND		120	7600
4-Nitrophenol		ND		81	7600
Acenaphthene		550	J	3.6	1600
Acenaphthylene		280	J	1.7	1600
Acetophenone		ND		44	1600
Anthracene		1000	J	3.7	1600
Atrazine		ND		43	1600
Benzaldehyde		ND		57	1600
Benzo[a]anthracene		2400		3.0	1600
Benzo[a]pyrene		2100		3.1	1600
Benzo[b]fluoranthene		2500		2.8	1600
Benzo[g,h,i]perylene		1400	J	1.7	1600
Benzo[k]fluoranthene		940	J	3.2	1600
Bis(2-chloroethoxy)methane		ND		100	1600
Bis(2-chloroethyl)ether		ND		9.5	1600
Bis(2-ethylhexyl) phthalate		260	J B *	91	1600
Butyl benzyl phthalate		ND		48	1600
Caprolactam		ND		180	1600
Carbazole		480	J	130	1600
Chrysene		2400		5.2	1600
Dibenz(a,h)anthracene		340	J	3.1	1600
Dibenzofuran		330	J	3.1	1600
Diethyl phthalate		ND		76	1600
Dimethyl phthalate		ND		81	1600

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_70-73(20150625)

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710023.D
Dilution:	4.0			Initial Weight/Volume:	29.66 g
Analysis Date:	07/10/2015 1659			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		72	1600
Di-n-octyl phthalate		ND		38	1600
Fluoranthene		4700		2.6	1600
Fluorene		590	J	2.5	1600
Hexachlorobenzene		ND		10	1600
Hexachlorobutadiene		ND		27	1600
Hexachlorocyclopentadiene		ND		39	7600
Hexachloroethane		ND		43	1600
Indeno[1,2,3-cd]pyrene		1100	J	1.7	1600
Isophorone		ND		62	1600
Naphthalene		580	J	3.9	1600
Nitrobenzene		ND		10	1600
N-Nitrosodi-n-propylamine		ND		30	1600
N-Nitrosodiphenylamine		ND		100	1600
Pentachlorophenol		ND		43	1600
Phenol		ND		35	1600
Phenanthrene		3900		3.5	1600
Pyrene		4400		2.1	1600
3 & 4 Methylphenol		ND		95	1900

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	69		24 - 110
2-Fluorophenol (Surr)	68		24 - 110
2,4,6-Tribromophenol (Surr)	56		10 - 110
Nitrobenzene-d5 (Surr)	58		20 - 110
Phenol-d5 (Surr)	72		26 - 110
Terphenyl-d14 (Surr)	73		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_70-73(20150625)

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188482	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187793	Lab File ID:	50709017.D
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	250 mL
Analysis Date:	07/09/2015 1729			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1024			Injection Volume:	1 uL
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	82		30 - 110
2-Fluorophenol (Surr)	75		20 - 110
Nitrobenzene-d5 (Surr)	83		28 - 110
Phenol-d5 (Surr)	65		21 - 110
Terphenyl-d14 (Surr)	86		48 - 110
2,4,6-Tribromophenol (Surr)	91		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_55-57(20150625)

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710025.D
Dilution:	1.0			Initial Weight/Volume:	30.08 g
Analysis Date:	07/10/2015 1749			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.1	390
2,2'-oxybis[1-chloropropane]		ND		11	390
2,4,5-Trichlorophenol		ND		29	390
2,4,6-Trichlorophenol		ND		10	390
2,4-Dichlorophenol		ND		24	390
2,4-Dimethylphenol		ND		24	390
2,4-Dinitrophenol		ND		25	1900
2,4-Dinitrotoluene		ND		20	390
2,6-Dinitrotoluene		ND		25	390
2-Chloronaphthalene		ND		0.53	390
2-Chlorophenol		ND		9.6	390
2-Methylnaphthalene		ND		0.59	390
2-Methylphenol		ND		13	390
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		9.8	390
3,3'-Dichlorobenzidine		ND		21	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		15	390
4-Chloro-3-methylphenol		ND		25	390
4-Chloroaniline		ND		20	390
4-Chlorophenyl phenyl ether		ND		15	390
4-Nitroaniline		ND		31	1900
4-Nitrophenol		ND		20	1900
Acenaphthene		2.6	J	0.89	390
Acenaphthylene		6.9	J	0.41	390
Acetophenone		ND		11	390
Anthracene		7.9	J	0.92	390
Atrazine		ND		11	390
Benzaldehyde		ND		14	390
Benzo[a]anthracene		20	J	0.74	390
Benzo[a]pyrene		25	J	0.75	390
Benzo[b]fluoranthene		33	J	0.69	390
Benzo[g,h,i]perylene		62	J	0.41	390
Benzo[k]fluoranthene		13	J	0.80	390
Bis(2-chloroethoxy)methane		ND		26	390
Bis(2-chloroethyl)ether		ND		2.4	390
Bis(2-ethylhexyl) phthalate		1200	B *	22	390
Butyl benzyl phthalate		ND		12	390
Caprolactam		48	J B	43	390
Carbazole		ND		32	390
Chrysene		34	J	1.3	390
Dibenz(a,h)anthracene		ND		0.78	390
Dibenzofuran		ND		0.78	390
Diethyl phthalate		ND		19	390
Dimethyl phthalate		ND		20	390

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_55-57(20150625)

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710025.D
Dilution:	1.0			Initial Weight/Volume:	30.08 g
Analysis Date:	07/10/2015 1749			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		37	J B	18	390
Di-n-octyl phthalate		ND		9.3	390
Fluoranthene		31	J	0.65	390
Fluorene		ND		0.62	390
Hexachlorobenzene		ND		2.5	390
Hexachlorobutadiene		ND		6.6	390
Hexachlorocyclopentadiene		ND		9.5	1900
Hexachloroethane		ND		11	390
Indeno[1,2,3-cd]pyrene		14	J	0.41	390
Isophorone		ND		15	390
Naphthalene		ND		0.96	390
Nitrobenzene		ND		2.6	390
N-Nitrosodi-n-propylamine		ND		7.4	390
N-Nitrosodiphenylamine		ND		25	390
Pentachlorophenol		ND		11	390
Phenol		ND		8.6	390
Phenanthrene		22	J	0.86	390
Pyrene		34	J	0.52	390
3 & 4 Methylphenol		ND		24	470

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	73		24 - 110
2-Fluorophenol (Surr)	62		24 - 110
2,4,6-Tribromophenol (Surr)	68		10 - 110
Nitrobenzene-d5 (Surr)	59		20 - 110
Phenol-d5 (Surr)	69		26 - 110
Terphenyl-d14 (Surr)	76		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_55-57(20150625)

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714011.D
Dilution:	1.0			Initial Weight/Volume:	30.33 g
Analysis Date:	07/14/2015 1559	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	4.1	380
2,2'-oxybis[1-chloropropane]		ND	H	11	380
2,4,5-Trichlorophenol		ND	H	29	380
2,4,6-Trichlorophenol		ND	H	10	380
2,4-Dichlorophenol		ND	H	23	380
2,4-Dimethylphenol		ND	H	23	380
2,4-Dinitrophenol		ND	H	24	1900
2,4-Dinitrotoluene		ND	H	20	380
2,6-Dinitrotoluene		ND	H	24	380
2-Chloronaphthalene		ND	H	0.52	380
2-Chlorophenol		ND	H	9.6	380
2-Methylnaphthalene		5.6	J H	0.58	380
2-Methylphenol		ND	H	13	380
2-Nitroaniline		ND	H	11	1900
2-Nitrophenol		ND	H	9.7	380
3,3'-Dichlorobenzidine		ND	H	21	1900
3-Nitroaniline		ND	H	19	1900
4,6-Dinitro-2-methylphenol		ND	H	11	1900
4-Bromophenyl phenyl ether		ND	H	15	380
4-Chloro-3-methylphenol		ND	H	24	380
4-Chloroaniline		ND	H	20	380
4-Chlorophenyl phenyl ether		ND	H	15	380
4-Nitroaniline		ND	H	30	1900
4-Nitrophenol		ND	H	20	1900
Acenaphthene		ND	H	0.89	380
Acenaphthylene		4.1	J H	0.41	380
Acetophenone		ND	H	11	380
Anthracene		6.7	J H	0.91	380
Atrazine		ND	H	11	380
Benzaldehyde		ND	H	14	380
Benzo[a]anthracene		18	J H	0.73	380
Benzo[a]pyrene		27	J H	0.75	380
Benzo[b]fluoranthene		39	J H	0.69	380
Benzo[g,h,i]perylene		40	J H	0.41	380
Benzo[k]fluoranthene		ND	H	0.79	380
Bis(2-chloroethoxy)methane		ND	H	26	380
Bis(2-chloroethyl)ether		ND	H	2.3	380
Bis(2-ethylhexyl) phthalate		44	J H B	22	380
Butyl benzyl phthalate		ND	H	12	380
Caprolactam		ND	H	43	380
Carbazole		ND	H	31	380
Chrysene		28	J H	1.3	380
Dibenz(a,h)anthracene		ND	H	0.77	380
Dibenzofuran		ND	H	0.77	380
Diethyl phthalate		ND	H	19	380
Dimethyl phthalate		ND	H	20	380

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_55-57(20150625)

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714011.D
Dilution:	1.0			Initial Weight/Volume:	30.33 g
Analysis Date:	07/14/2015 1559	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		17	J H B	17	380
Di-n-octyl phthalate		ND	H	9.2	380
Fluoranthene		33	J H	0.64	380
Fluorene		4.3	J H	0.62	380
Hexachlorobenzene		ND	H	2.4	380
Hexachlorobutadiene		ND	H	6.5	380
Hexachlorocyclopentadiene		ND	H	9.4	1900
Hexachloroethane		ND	H	10	380
Indeno[1,2,3-cd]pyrene		ND	H	0.41	380
Isophorone		ND	H	15	380
Naphthalene		ND	H	0.96	380
Nitrobenzene		ND	H	2.6	380
N-Nitrosodi-n-propylamine		ND	H	7.3	380
N-Nitrosodiphenylamine		ND	H	24	380
Pentachlorophenol		ND	H	11	380
Phenol		ND	H	8.5	380
Phenanthrene		25	J H	0.85	380
Pyrene		35	J H	0.51	380
3 & 4 Methylphenol		ND	H	23	470

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	67		24 - 110
2-Fluorophenol (Surr)	62		24 - 110
2,4,6-Tribromophenol (Surr)	63		10 - 110
Nitrobenzene-d5 (Surr)	58		20 - 110
Phenol-d5 (Surr)	70		26 - 110
Terphenyl-d14 (Surr)	72		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_55-57(20150625)**

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-188482	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-187793	Lab File ID:	50709014.D
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	250 mL
Analysis Date:	07/09/2015 1615			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1024			Injection Volume:	1 uL
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.0040
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	83		30 - 110
2-Fluorophenol (Surr)	54		20 - 110
Nitrobenzene-d5 (Surr)	82		28 - 110
Phenol-d5 (Surr)	51		21 - 110
Terphenyl-d14 (Surr)	85		48 - 110
2,4,6-Tribromophenol (Surr)	62		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_55-57(20150624)

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187153	Lab File ID:	Y0062918.D
Dilution:	1.0			Initial Weight/Volume:	9.534 g
Analysis Date:	06/29/2015 1557			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 0704			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		5.6	J	2.6	13

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_42-44(20150624)**

Lab Sample ID: 240-52505-2 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 20.8 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187153	Lab File ID:	Y0062919.D
Dilution:	1.0			Initial Weight/Volume:	10.085 g
Analysis Date:	06/29/2015 1632			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 0704			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	13

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_62-65(20150624)**

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid % Moisture: 7.5 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187153	Lab File ID:	Y0062920.D
Dilution:	1.0			Initial Weight/Volume:	10.89 g
Analysis Date:	06/29/2015 1707			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 0704			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.0	9.9

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_70-72(20150625)**

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid % Moisture: 11.6 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187153	Lab File ID:	Y0062921.D
Dilution:	1.0			Initial Weight/Volume:	10.105 g
Analysis Date:	06/29/2015 1743			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 0704			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.2	11

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_38-40(20150625)

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187153	Lab File ID:	Y0062922.D
Dilution:	1.0			Initial Weight/Volume:	12.333 g
Analysis Date:	06/29/2015 1817			Final Weight/Volume:	12.3 mL
Prep Date:	06/29/2015 0704			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		7.9	J	2.2	11

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_70-73(20150625)**

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187153	Lab File ID:	Y0062923.D
Dilution:	1.0			Initial Weight/Volume:	10.827 g
Analysis Date:	06/29/2015 1854			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 0704			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		2.3	J	2.2	11

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1010_55-57(20150625)

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187153	Lab File ID:	Y0062924.D
Dilution:	1.0			Initial Weight/Volume:	10.315 g
Analysis Date:	06/29/2015 1927			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 0704			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.3	11

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: MB-01(20150625)

Lab Sample ID: 240-52505-8 Date Sampled: 06/25/2015 0000
Client Matrix: Solid Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187153	Lab File ID:	Y0062925.D
Dilution:	1.0			Initial Weight/Volume:	0.134 g
Analysis Date:	06/29/2015 2003			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 0704			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		150	750

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_55-57(20150624)**

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070610.D
Dilution:	1.0			Initial Weight/Volume:	27.65 g
Analysis Date:	07/06/2015 1721			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		13	*	1.3	11

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_42-44(20150624)**

Lab Sample ID: 240-52505-2 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 20.8 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070611.D
Dilution:	1.0			Initial Weight/Volume:	25.28 g
Analysis Date:	07/06/2015 1748			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		8.0	J *	1.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_62-65(20150624)**

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid % Moisture: 7.5 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188186	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070709.D
Dilution:	1.0			Initial Weight/Volume:	28.62 g
Analysis Date:	07/07/2015 1559			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		60	*	1.1	9.1

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_70-72(20150625)**

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid % Moisture: 11.6 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070613.D
Dilution:	1.0			Initial Weight/Volume:	28.29 g
Analysis Date:	07/06/2015 1843			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		11	*	1.2	9.6

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_38-40(20150625)**

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188186	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070710.D
Dilution:	5.0			Initial Weight/Volume:	29.41 g
Analysis Date:	07/07/2015 1626			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		150	*	5.5	45

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_70-73(20150625)**

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070615.D
Dilution:	1.0			Initial Weight/Volume:	29.12 g
Analysis Date:	07/06/2015 1937			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		44	*	1.2	9.7

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_55-57(20150625)**

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188186	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070711.D
Dilution:	1.0			Initial Weight/Volume:	27.15 g
Analysis Date:	07/07/2015 1654			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		25	*	1.3	10

Client Sample ID: **ASB-1009_55-57(20150624)**

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.28 g
Analysis Date:	07/01/2015 1717			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6900		5.6	19
Antimony		ND		0.46	0.96
Barium		51		0.39	19
Beryllium		0.41	J	0.025	0.48
Calcium		24000		22	480
Cadmium		0.15	J	0.020	0.19
Cobalt		9.0		0.045	4.8
Chromium		22		0.072	0.48
Copper		14		0.22	2.4
Iron		15000		3.1	9.6
Potassium		1600		5.9	480
Magnesium		10000	B	5.0	480
Manganese		320		0.081	1.4
Silver		ND		0.060	0.48
Sodium		170	J	18	480
Nickel		21	B	0.077	3.8
Vanadium		18		0.19	4.8
Zinc		36	B	0.54	1.9
Arsenic		4.4		0.39	0.96
Lead		14		0.19	0.29
Selenium		0.34	J	0.33	0.48
Thallium		ND		0.12	0.96

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3010A	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1802			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.0046	J	0.0024	0.30
Arsenic		0.011	J B	0.0029	0.50
Barium		0.67	J B	0.0010	10
Beryllium		0.00018	J	0.00013	0.0050
Cadmium		0.00053	J	0.00014	0.10
Calcium		590		0.26	5.0
Chromium		0.0010	J B	0.00055	0.50
Cobalt		0.013	J	0.00056	0.050
Copper		0.0027	J	0.0019	1.0
Iron		0.038	J B	0.013	0.10
Lead		ND		0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_55-57(20150624)**

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid Date Received: 06/26/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		22		0.055	5.0
Manganese		4.1	B	0.00046	0.015
Nickel		0.019	J B	0.00076	0.040
Potassium		9.0	B	0.070	5.0
Selenium		0.0061	J	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.014	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-188033	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 0954			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	07/01/2015 1001			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.019	0.13

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_42-44(20150624)

Lab Sample ID: 240-52505-2 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 20.8 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.41 g
Analysis Date:	07/01/2015 1721			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6100		5.2	18
Barium		50		0.37	18
Beryllium		0.44	J	0.023	0.45
Calcium		34000		21	450
Cobalt		9.7		0.042	4.5
Chromium		13		0.067	0.45
Copper		13		0.21	2.2
Iron		12000		2.9	9.0
Potassium		2300		5.6	450
Magnesium		9700	B	4.7	450
Manganese		380		0.075	1.3
Silver		ND		0.056	0.45
Sodium		120	J	17	450
Nickel		23	B	0.072	3.6
Vanadium		11		0.18	4.5
Zinc		36	B	0.50	1.8
Lead		110		0.18	0.27

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070615A.asc
Dilution:	1.0			Initial Weight/Volume:	1.41 g
Analysis Date:	07/06/2015 1414			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		1.1		0.43	0.90
Cadmium		0.27		0.019	0.18
Arsenic		4.8		0.37	0.90
Selenium		ND		0.30	0.45
Thallium		ND		0.12	0.90

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3010A	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1814			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.11	J	0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_42-44(20150624)**

Lab Sample ID: 240-52505-2 Date Sampled: 06/24/2015 1745
Client Matrix: Solid Date Received: 06/26/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.016	J B	0.0029	0.50
Barium		0.87	J B	0.0010	10
Beryllium		0.00022	J	0.00013	0.0050
Cadmium		0.0023	J	0.00014	0.10
Calcium		520		0.26	5.0
Chromium		0.0012	J B	0.00055	0.50
Cobalt		0.032	J	0.00056	0.050
Copper		0.0043	J	0.0019	1.0
Iron		0.031	J B	0.013	0.10
Lead		0.89		0.0019	0.50
Magnesium		23		0.055	5.0
Manganese		4.3	B	0.00046	0.015
Nickel		0.053	B	0.00076	0.040
Potassium		6.7	B	0.070	5.0
Selenium		0.0053	J	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.13	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-188033	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 0955			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.65 g
Analysis Date:	07/01/2015 1002			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.018	J	0.016	0.12

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: ASB-1009_62-65(20150624)

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid % Moisture: 7.5 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.27 g
Analysis Date:	07/01/2015 1725			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		1000		4.9	17
Antimony		ND		0.41	0.85
Barium		13	J	0.35	17
Beryllium		0.085	J	0.022	0.43
Calcium		13000		20	430
Cadmium		0.10	J	0.018	0.17
Cobalt		0.90	J	0.040	4.3
Chromium		2.3		0.064	0.43
Copper		3.6		0.20	2.1
Iron		4000		2.7	8.5
Potassium		280	J	5.3	430
Magnesium		1200	B	4.4	430
Manganese		110		0.072	1.3
Silver		ND		0.054	0.43
Sodium		61	J	16	430
Nickel		2.7	J B	0.068	3.4
Vanadium		2.9	J	0.17	4.3
Zinc		10	B	0.48	1.7
Arsenic		0.63	J	0.35	0.85
Lead		13		0.17	0.26
Selenium		ND		0.29	0.43
Thallium		0.11	J	0.11	0.85

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3010A	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1818			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.0062	J	0.0024	0.30
Arsenic		0.0064	J B	0.0029	0.50
Barium		0.29	J B	0.0010	10
Beryllium		0.00024	J	0.00013	0.0050
Cadmium		0.00052	J	0.00014	0.10
Calcium		630		0.26	5.0
Chromium		0.0013	J B	0.00055	0.50
Cobalt		0.0028	J	0.00056	0.050
Copper		0.0043	J	0.0019	1.0
Iron		ND		0.013	0.10
Lead		0.0038	J	0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_62-65(20150624)**

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid Date Received: 06/26/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		9.4		0.055	5.0
Manganese		1.1	B	0.00046	0.015
Nickel		0.013	J B	0.00076	0.040
Potassium		8.1	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		0.0039	J	0.0024	0.050
Zinc		0.0099	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-188033	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 0957			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.51 g
Analysis Date:	07/01/2015 1005			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.018	0.13

Client Sample ID: **ASB-1009_70-72(20150625)**

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid % Moisture: 11.6 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.46 g
Analysis Date:	07/01/2015 1738			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		2300		4.5	15
Antimony		ND		0.37	0.77
Barium		34		0.32	15
Beryllium		0.14	J	0.020	0.39
Calcium		33000		18	390
Cadmium		0.070	J	0.016	0.15
Cobalt		3.6	J	0.036	3.9
Chromium		9.1		0.058	0.39
Copper		4.8		0.18	1.9
Iron		9800		2.5	7.7
Potassium		260	J	4.8	390
Magnesium		13000	B	4.0	390
Manganese		390		0.065	1.2
Silver		ND		0.049	0.39
Sodium		93	J	15	390
Nickel		9.8	B	0.062	3.1
Vanadium		10		0.15	3.9
Zinc		15	B	0.43	1.5
Arsenic		2.0		0.32	0.77
Lead		3.1		0.15	0.23
Selenium		ND		0.26	0.39
Thallium		ND		0.10	0.77

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3010A	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1823			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0057	J B	0.0029	0.50
Barium		0.94	J B	0.0010	10
Beryllium		0.00021	J	0.00013	0.0050
Cadmium		0.00029	J	0.00014	0.10
Calcium		470		0.26	5.0
Chromium		0.0014	J B	0.00055	0.50
Cobalt		0.0063	J	0.00056	0.050
Copper		0.0034	J	0.0019	1.0
Iron		0.045	J B	0.013	0.10
Lead		0.0029	J	0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1009_70-72(20150625)**

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid Date Received: 06/26/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		15		0.055	5.0
Manganese		3.7	B	0.00046	0.015
Nickel		0.014	J B	0.00076	0.040
Potassium		2.8	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.036	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-188033	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1009			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.65 g
Analysis Date:	07/01/2015 1007			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.015	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_38-40(20150625)**

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.10 g
Analysis Date:	07/01/2015 1742			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4200		5.8	20
Antimony		0.55	J	0.48	1.0
Barium		35		0.41	20
Beryllium		0.20	J	0.026	0.50
Calcium		47000		23	500
Cadmium		0.12	J	0.021	0.20
Cobalt		3.7	J	0.047	5.0
Chromium		8.9		0.076	0.50
Copper		8.5		0.23	2.5
Iron		8100		3.2	10
Potassium		750		6.2	500
Magnesium		11000	B	5.2	500
Manganese		260		0.085	1.5
Silver		ND		0.063	0.50
Sodium		300	J	19	500
Nickel		9.4	B	0.081	4.0
Vanadium		16		0.20	5.0
Zinc		21	B	0.56	2.0
Arsenic		2.1		0.41	1.0
Lead		11		0.20	0.30
Selenium		ND		0.34	0.50
Thallium		ND		0.13	1.0

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3010A	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1827			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.011	J	0.0024	0.30
Arsenic		0.0099	J B	0.0029	0.50
Barium		0.27	J B	0.0010	10
Beryllium		0.00016	J	0.00013	0.0050
Cadmium		0.00029	J	0.00014	0.10
Calcium		560		0.26	5.0
Chromium		0.0024	J B	0.00055	0.50
Cobalt		ND		0.00056	0.050
Copper		0.0023	J	0.0019	1.0
Iron		ND		0.013	0.10
Lead		ND		0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_38-40(20150625)**

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid Date Received: 06/26/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		13		0.055	5.0
Manganese		0.028	B	0.00046	0.015
Nickel		0.0026	J B	0.00076	0.040
Potassium		14	B	0.070	5.0
Selenium		0.0069	J	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		0.019	J	0.0024	0.050
Zinc		ND		0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-188033	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1014			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	07/01/2015 1008			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.017	0.12

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_70-73(20150625)**

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.10 g
Analysis Date:	07/01/2015 1746			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		1900		6.2	21
Antimony		ND		0.51	1.1
Barium		26		0.44	21
Beryllium		0.12	J	0.028	0.54
Calcium		7200		25	540
Cadmium		1.1		0.023	0.21
Cobalt		2.8	J	0.050	5.4
Chromium		7.2		0.080	0.54
Copper		6.8		0.25	2.7
Iron		6000		3.4	11
Potassium		570		6.6	540
Magnesium		2300	B	5.6	540
Manganese		130		0.090	1.6
Silver		0.18	J	0.068	0.54
Sodium		140	J	20	540
Nickel		7.1	B	0.086	4.3
Vanadium		8.4		0.21	5.4
Zinc		32	B	0.60	2.1
Arsenic		1.8		0.44	1.1
Lead		24		0.21	0.32
Selenium		ND		0.36	0.54
Thallium		ND		0.14	1.1

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3010A	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1832			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.0029	J	0.0024	0.30
Arsenic		0.0089	J B	0.0029	0.50
Barium		0.53	J B	0.0010	10
Beryllium		0.00022	J	0.00013	0.0050
Cadmium		0.017	J	0.00014	0.10
Calcium		220		0.26	5.0
Chromium		0.0010	J B	0.00055	0.50
Cobalt		0.018	J	0.00056	0.050
Copper		0.014	J	0.0019	1.0
Iron		0.53	B	0.013	0.10
Lead		0.070	J	0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_70-73(20150625)**

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid Date Received: 06/26/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		36		0.055	5.0
Manganese		2.5	B	0.00046	0.015
Nickel		0.036	J B	0.00076	0.040
Potassium		14	B	0.070	5.0
Selenium		0.0057	J	0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.27	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-188033	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1013			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	07/01/2015 1014			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.079	J	0.015	0.11

Client Sample ID: **ASB-1010_55-57(20150625)**

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.08 g
Analysis Date:	07/01/2015 1750			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		8400		6.3	22
Antimony		ND		0.52	1.1
Barium		28		0.45	22
Beryllium		0.56		0.028	0.55
Calcium		22000		25	550
Cadmium		0.048	J	0.023	0.22
Cobalt		11		0.051	5.5
Chromium		17		0.082	0.55
Copper		10		0.25	2.7
Iron		15000		3.5	11
Potassium		4300		6.8	550
Magnesium		5300	B	5.7	550
Manganese		280		0.092	1.6
Silver		ND		0.069	0.55
Sodium		380	J	21	550
Nickel		20	B	0.087	4.4
Vanadium		9.0		0.22	5.5
Zinc		21	B	0.61	2.2
Arsenic		3.6		0.45	1.1
Lead		4.6		0.22	0.33
Selenium		ND		0.37	0.55
Thallium		ND		0.14	1.1

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3010A	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1836			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0050	J B	0.0029	0.50
Barium		0.57	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00049	J	0.00014	0.10
Calcium		480		0.26	5.0
Chromium		0.0025	J B	0.00055	0.50
Cobalt		0.031	J	0.00056	0.050
Copper		0.063	J	0.0019	1.0
Iron		0.045	J B	0.013	0.10
Lead		ND		0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Client Sample ID: **ASB-1010_55-57(20150625)**

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid Date Received: 06/26/2015 0920

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		33		0.055	5.0
Manganese		6.0	B	0.00046	0.015
Nickel		0.037	J B	0.00076	0.040
Potassium		7.6	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.15	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-188033	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1020			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	07/01/2015 1810				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.68 g
Analysis Date:	07/01/2015 1016			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.015	0.10

General Chemistry

Client Sample ID: **ASB-1009_55-57(20150624)**

Lab Sample ID: 240-52505-1 Date Sampled: 06/24/2015 1755
Client Matrix: Solid % Moisture: 18.5 Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.66	2.0	2.0	7196A
Analysis Batch: 240-188230	Analysis Date: 07/07/2015 1511						DryWt Corrected: Y
Prep Batch: 240-188002	Prep Date: 07/06/2015 1018						
Cr (III)	22		mg/Kg	0.16	2.5	1.0	7196A
Analysis Batch: 240-188115	Analysis Date: 07/07/2015 0447						DryWt Corrected: Y
Percent Solids	81		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	19		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1009_42-44(20150624)**

Lab Sample ID: 240-52505-2 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 20.8 Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.34	1.0	1.0	7196A
Analysis Batch: 240-188230	Analysis Date: 07/07/2015 1252					DryWt Corrected: Y	
Prep Batch: 240-188002	Prep Date: 07/06/2015 1018						
Cr (III)	13		mg/Kg	0.16	2.5	1.0	7196A
Analysis Batch: 240-188115	Analysis Date: 07/07/2015 0447					DryWt Corrected: Y	
Percent Solids	79		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236					DryWt Corrected: N	
Percent Moisture	21		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236					DryWt Corrected: N	

General Chemistry

Client Sample ID: **ASB-1009_62-65(20150624)**

Lab Sample ID: 240-52505-3 Date Sampled: 06/24/2015 1815
Client Matrix: Solid % Moisture: 7.5 Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.29	0.86	1.0	7196A
Analysis Batch: 240-188230	Analysis Date: 07/07/2015 1254						DryWt Corrected: Y
Prep Batch: 240-188002	Prep Date: 07/06/2015 1018						
Cr (III)	2.3		mg/Kg	0.14	2.2	1.0	7196A
Analysis Batch: 240-188115	Analysis Date: 07/07/2015 0447						DryWt Corrected: Y
Percent Solids	92		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	7.5		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1009_70-72(20150625)**

Lab Sample ID: 240-52505-4 Date Sampled: 06/25/2015 0745
Client Matrix: Solid % Moisture: 11.6 Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.31	0.90	1.0	7196A
Analysis Batch: 240-188230	Analysis Date: 07/07/2015 1257						DryWt Corrected: Y
Prep Batch: 240-188002	Prep Date: 07/06/2015 1018						
Cr (III)	9.1		mg/Kg	0.15	2.3	1.0	7196A
Analysis Batch: 240-188115	Analysis Date: 07/07/2015 0447						DryWt Corrected: Y
Percent Solids	88		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	12		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1010_38-40(20150625)**

Lab Sample ID: 240-52505-5 Date Sampled: 06/25/2015 1345
Client Matrix: Solid % Moisture: 9.7 Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.50	J	mg/Kg	0.30	0.89	1.0	7196A
Analysis Batch: 240-188230	Analysis Date: 07/07/2015 1258						DryWt Corrected: Y
Prep Batch: 240-188002	Prep Date: 07/06/2015 1018						
Cr (III)	8.4		mg/Kg	0.14	2.2	1.0	7196A
Analysis Batch: 240-188115	Analysis Date: 07/07/2015 0447						DryWt Corrected: Y
Percent Solids	90		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	9.7		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1010_70-73(20150625)**

Lab Sample ID: 240-52505-6 Date Sampled: 06/25/2015 1300
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.32	0.94	1.0	7196A
Analysis Batch: 240-188230	Analysis Date: 07/07/2015 1431						DryWt Corrected: Y
Prep Batch: 240-188002	Prep Date: 07/06/2015 1018						
Cr (III)	7.2		mg/Kg	0.15	2.4	1.0	7196A
Analysis Batch: 240-188115	Analysis Date: 07/07/2015 0447						DryWt Corrected: Y
Percent Solids	85		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	15		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **ASB-1010_55-57(20150625)**

Lab Sample ID: 240-52505-7 Date Sampled: 06/25/2015 1415
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.64	1.9	2.0	7196A
Analysis Batch: 240-188230	Analysis Date: 07/07/2015 1511						DryWt Corrected: Y
Prep Batch: 240-188002	Prep Date: 07/06/2015 1018						
Cr (III)	17		mg/Kg	0.15	2.4	1.0	7196A
Analysis Batch: 240-188115	Analysis Date: 07/07/2015 0447						DryWt Corrected: Y
Percent Solids	85		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	15		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC/MS Semi VOA		
	B	Compound was found in the blank and sample.
	*	LCS or LCSD is outside acceptance limits.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	*	LCS or LCSD is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	*	RPD of the LCS and LCSD exceeds the control limits
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Section	Qualifier	Description
General Chemistry		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-187104					
LCS 240-187104/2-A	Lab Control Sample	T	Solid	5035	
MB 240-187104/1-A	Method Blank	T	Solid	5035	
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	5035	
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	5035	
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	5035	
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	5035	
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	5035	
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	5035	
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	5035	
240-52505-8	MB-01(20150625)	T	Solid	5035	
Analysis Batch:240-187125					
LCS 240-187104/2-A	Lab Control Sample	T	Solid	8260B	240-187104
MB 240-187104/1-A	Method Blank	T	Solid	8260B	240-187104
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	8260B	240-187104
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	8260B	240-187104
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	8260B	240-187104
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	8260B	240-187104
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	8260B	240-187104
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	8260B	240-187104
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	8260B	240-187104
240-52505-8	MB-01(20150625)	T	Solid	8260B	240-187104
Prep Batch: 240-187500					
LB 240-187500/1-A	Method Blank	P	Solid	1311	
240-52505-1	ASB-1009_55-57(20150624)	P	Solid	1311	
240-52505-2	ASB-1009_42-44(20150624)	P	Solid	1311	
240-52505-3	ASB-1009_62-65(20150624)	P	Solid	1311	
240-52505-4	ASB-1009_70-72(20150625)	P	Solid	1311	
240-52505-5	ASB-1010_38-40(20150625)	P	Solid	1311	
240-52505-6	ASB-1010_70-73(20150625)	P	Solid	1311	
240-52505-7	ASB-1010_55-57(20150625)	P	Solid	1311	
240-52505-7MS	Matrix Spike	P	Solid	1311	
240-52505-7MSD	Matrix Spike Duplicate	P	Solid	1311	

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-187887					
LB 240-187500/1-A	Method Blank	P	Solid	8260B	
LCS 240-187887/11	Lab Control Sample	T	Water	8260B	
240-52505-1	ASB-1009_55-57(20150624)	P	Solid	8260B	
240-52505-2	ASB-1009_42-44(20150624)	P	Solid	8260B	
240-52505-3	ASB-1009_62-65(20150624)	P	Solid	8260B	
240-52505-4	ASB-1009_70-72(20150625)	P	Solid	8260B	
240-52505-5	ASB-1010_38-40(20150625)	P	Solid	8260B	
240-52505-6	ASB-1010_70-73(20150625)	P	Solid	8260B	
240-52505-7	ASB-1010_55-57(20150625)	P	Solid	8260B	
240-52505-7MS	Matrix Spike	P	Solid	8260B	
240-52505-7MSD	Matrix Spike Duplicate	P	Solid	8260B	

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-187413					
LCS 240-187413/24-A	Lab Control Sample	T	Solid	3540C	
MB 240-187413/23-A	Method Blank	T	Solid	3540C	
240-52442-AJ-4-J MS	Matrix Spike	T	Solid	3540C	
240-52442-AJ-4-K MSD	Matrix Spike Duplicate	T	Solid	3540C	
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	3540C	
Prep Batch: 240-187686					
240-52001-A-11-G MS	Matrix Spike	P	Solid	1311	
Prep Batch: 240-187731					
240-52505-1	ASB-1009_55-57(20150624)	P	Solid	1311	
240-52505-2	ASB-1009_42-44(20150624)	P	Solid	1311	
240-52505-3	ASB-1009_62-65(20150624)	P	Solid	1311	
240-52505-4	ASB-1009_70-72(20150625)	P	Solid	1311	
240-52505-5	ASB-1010_38-40(20150625)	P	Solid	1311	
240-52505-6	ASB-1010_70-73(20150625)	P	Solid	1311	
240-52505-7	ASB-1010_55-57(20150625)	P	Solid	1311	
Analysis Batch:240-187745					
LCS 240-187413/24-A	Lab Control Sample	T	Solid	8270C	240-187413
MB 240-187413/23-A	Method Blank	T	Solid	8270C	240-187413
Prep Batch: 240-187793					
LCS 240-187793/18-A	Lab Control Sample	T	Water	3510C	
MB 240-187793/17-A	Method Blank	T	Water	3510C	
240-52001-A-11-G MS	Matrix Spike	P	Solid	3510C	240-187686
240-52505-1	ASB-1009_55-57(20150624)	P	Solid	3510C	240-187731
240-52505-2	ASB-1009_42-44(20150624)	P	Solid	3510C	240-187731
240-52505-3	ASB-1009_62-65(20150624)	P	Solid	3510C	240-187731
240-52505-4	ASB-1009_70-72(20150625)	P	Solid	3510C	240-187731
240-52505-5	ASB-1010_38-40(20150625)	P	Solid	3510C	240-187731
240-52505-6	ASB-1010_70-73(20150625)	P	Solid	3510C	240-187731
240-52505-7	ASB-1010_55-57(20150625)	P	Solid	3510C	240-187731
Analysis Batch:240-188138					
240-52505-1	ASB-1009_55-57(20150624)	P	Solid	8270C	240-187793
240-52505-2	ASB-1009_42-44(20150624)	P	Solid	8270C	240-187793
240-52505-3	ASB-1009_62-65(20150624)	P	Solid	8270C	240-187793
Analysis Batch:240-188301					
240-52442-AJ-4-J MS	Matrix Spike	T	Solid	8270C	240-187413
240-52442-AJ-4-K MSD	Matrix Spike Duplicate	T	Solid	8270C	240-187413
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	8270C	240-187413

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-188303					
LCS 240-188303/5-A	Lab Control Sample	T	Solid	3540C	
MB 240-188303/4-A	Method Blank	T	Solid	3540C	
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	3540C	
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	3540C	
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	3540C	
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	3540C	
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	3540C	
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	3540C	
240-52680-J-1-C MS	Matrix Spike	T	Solid	3540C	
240-52680-J-1-D MSD	Matrix Spike Duplicate	T	Solid	3540C	
Analysis Batch:240-188311					
LCS 240-187793/18-A	Lab Control Sample	T	Water	8270C	240-187793
MB 240-187793/17-A	Method Blank	T	Water	8270C	240-187793
Analysis Batch:240-188482					
240-52001-A-11-G MS	Matrix Spike	P	Solid	8270C	240-187793
240-52505-4	ASB-1009_70-72(20150625)	P	Solid	8270C	240-187793
240-52505-5	ASB-1010_38-40(20150625)	P	Solid	8270C	240-187793
240-52505-6	ASB-1010_70-73(20150625)	P	Solid	8270C	240-187793
240-52505-7	ASB-1010_55-57(20150625)	P	Solid	8270C	240-187793
Analysis Batch:240-188645					
LCS 240-188303/5-A	Lab Control Sample	T	Solid	8270C	240-188303
MB 240-188303/4-A	Method Blank	T	Solid	8270C	240-188303
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	8270C	240-188303
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	8270C	240-188303
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	8270C	240-188303
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	8270C	240-188303
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	8270C	240-188303
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	8270C	240-188303
240-52680-J-1-C MS	Matrix Spike	T	Solid	8270C	240-188303
240-52680-J-1-D MSD	Matrix Spike Duplicate	T	Solid	8270C	240-188303
Prep Batch: 240-188799					
LCS 240-188799/18-A	Lab Control Sample	T	Solid	3540C	
MB 240-188799/17-A	Method Blank	T	Solid	3540C	
240-52505-1RE	ASB-1009_55-57(20150624)	T	Solid	3540C	
240-52505-3RE	ASB-1009_62-65(20150624)	T	Solid	3540C	
240-52505-4RE	ASB-1009_70-72(20150625)	T	Solid	3540C	
240-52505-5RE	ASB-1010_38-40(20150625)	T	Solid	3540C	
240-52505-6RE	ASB-1010_70-73(20150625)	T	Solid	3540C	
240-52505-7RE	ASB-1010_55-57(20150625)	T	Solid	3540C	

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:240-189030					
LCS 240-188799/18-A	Lab Control Sample	T	Solid	8270C	240-188799
MB 240-188799/17-A	Method Blank	T	Solid	8270C	240-188799
240-52505-1RE	ASB-1009_55-57(20150624)	T	Solid	8270C	240-188799
240-52505-3RE	ASB-1009_62-65(20150624)	T	Solid	8270C	240-188799
240-52505-4RE	ASB-1009_70-72(20150625)	T	Solid	8270C	240-188799
240-52505-5RE	ASB-1010_38-40(20150625)	T	Solid	8270C	240-188799
240-52505-6RE	ASB-1010_70-73(20150625)	T	Solid	8270C	240-188799
240-52505-7RE	ASB-1010_55-57(20150625)	T	Solid	8270C	240-188799

Report Basis
P = TCLP
T = Total

GC VOA					
Analysis Batch:240-187143					
LCS 240-187153/2-A	Lab Control Sample	T	Solid	WI-GRO	240-187153
LCSD 240-187153/11-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-187153
MB 240-187153/1-A	Method Blank	T	Solid	WI-GRO	240-187153
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	WI-GRO	240-187153
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	WI-GRO	240-187153
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	WI-GRO	240-187153
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	WI-GRO	240-187153
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	WI-GRO	240-187153
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	WI-GRO	240-187153
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	WI-GRO	240-187153
240-52505-8	MB-01(20150625)	T	Solid	WI-GRO	240-187153
Prep Batch: 240-187153					
LCS 240-187153/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-187153/11-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-187153/1-A	Method Blank	T	Solid	5035	
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	5035	
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	5035	
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	5035	
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	5035	
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	5035	
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	5035	
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	5035	
240-52505-8	MB-01(20150625)	T	Solid	5035	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-187816					
LCS 240-187816/22-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-187816/23-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-187816/21-A	Method Blank	T	Solid	WI DRO PREP	
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	WI DRO PREP	
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	WI DRO PREP	
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	WI DRO PREP	
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	WI DRO PREP	
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	WI DRO PREP	
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	WI DRO PREP	
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	WI DRO PREP	
Analysis Batch:240-188039					
LCS 240-187816/22-A	Lab Control Sample	T	Solid	WI-DRO	240-187816
LCSD 240-187816/23-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-187816
MB 240-187816/21-A	Method Blank	T	Solid	WI-DRO	240-187816
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	WI-DRO	240-187816
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	WI-DRO	240-187816
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	WI-DRO	240-187816
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	WI-DRO	240-187816
Analysis Batch:240-188186					
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	WI-DRO	240-187816
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	WI-DRO	240-187816
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	WI-DRO	240-187816

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187368					
LCS 240-187368/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-187368/1-A	Method Blank	T	Solid	3050B	
240-52477-C-51-B MS	Matrix Spike	T	Solid	3050B	
240-52477-C-51-C MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	3050B	
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	3050B	
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	3050B	
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	3050B	
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	3050B	
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	3050B	
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	3050B	
Prep Batch: 240-187370					
LCS 240-187370/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-187370/1-A	Method Blank	T	Solid	7471A	
240-52477-C-51-E MS	Matrix Spike	T	Solid	7471A	
240-52477-C-51-F MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	7471A	
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	7471A	
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	7471A	
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	7471A	
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	7471A	
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	7471A	
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	7471A	
Analysis Batch:240-187628					
LCS 240-187370/2-A	Lab Control Sample	T	Solid	7471A	240-187370
MB 240-187370/1-A	Method Blank	T	Solid	7471A	240-187370
240-52477-C-51-E MS	Matrix Spike	T	Solid	7471A	240-187370
240-52477-C-51-F MSD	Matrix Spike Duplicate	T	Solid	7471A	240-187370
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	7471A	240-187370
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	7471A	240-187370
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	7471A	240-187370
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	7471A	240-187370
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	7471A	240-187370
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	7471A	240-187370
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	7471A	240-187370

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187731					
LB 240-187731/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-187731/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-52481-B-1-E MS ^5	Matrix Spike	P	Solid	1311	
240-52481-B-1-H MS	Matrix Spike	P	Solid	1311	
240-52481-B-1-F MSD ^5	Matrix Spike Duplicate	P	Solid	1311	
240-52481-B-1-I MSD	Matrix Spike Duplicate	P	Solid	1311	
240-52505-1	ASB-1009_55-57(20150624)	P	Solid	1311	
240-52505-2	ASB-1009_42-44(20150624)	P	Solid	1311	
240-52505-3	ASB-1009_62-65(20150624)	P	Solid	1311	
240-52505-4	ASB-1009_70-72(20150625)	P	Solid	1311	
240-52505-5	ASB-1010_38-40(20150625)	P	Solid	1311	
240-52505-6	ASB-1010_70-73(20150625)	P	Solid	1311	
240-52505-7	ASB-1010_55-57(20150625)	P	Solid	1311	
Analysis Batch:240-187776					
LCS 240-187368/2-A	Lab Control Sample	T	Solid	6010B	240-187368
MB 240-187368/1-A	Method Blank	T	Solid	6010B	240-187368
240-52477-C-51-B MS	Matrix Spike	T	Solid	6010B	240-187368
240-52477-C-51-C MSD	Matrix Spike Duplicate	T	Solid	6010B	240-187368
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	6010B	240-187368
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	6010B	240-187368
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	6010B	240-187368
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	6010B	240-187368
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	6010B	240-187368
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	6010B	240-187368
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	6010B	240-187368
Prep Batch: 240-187780					
LCS 240-187780/3-A	Lab Control Sample	T	Water	3010A	
MB 240-187780/2-A	Method Blank	T	Water	3010A	
LB 240-187731/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-187731
240-52481-B-1-E MS ^5	Matrix Spike	P	Solid	3010A	240-187731
240-52481-B-1-F MSD ^5	Matrix Spike Duplicate	P	Solid	3010A	240-187731
240-52505-1	ASB-1009_55-57(20150624)	P	Solid	3010A	240-187731
240-52505-2	ASB-1009_42-44(20150624)	P	Solid	3010A	240-187731
240-52505-3	ASB-1009_62-65(20150624)	P	Solid	3010A	240-187731
240-52505-4	ASB-1009_70-72(20150625)	P	Solid	3010A	240-187731
240-52505-5	ASB-1010_38-40(20150625)	P	Solid	3010A	240-187731
240-52505-6	ASB-1010_70-73(20150625)	P	Solid	3010A	240-187731
240-52505-7	ASB-1010_55-57(20150625)	P	Solid	3010A	240-187731

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187781					
LCS 240-187781/3-A	Lab Control Sample	T	Water	7470A	
MB 240-187781/2-A	Method Blank	T	Water	7470A	
LB 240-187731/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187731
240-52481-B-1-H MS	Matrix Spike	P	Solid	7470A	240-187731
240-52481-B-1-I MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187731
240-52505-1	ASB-1009_55-57(20150624)	P	Solid	7470A	240-187731
240-52505-2	ASB-1009_42-44(20150624)	P	Solid	7470A	240-187731
240-52505-3	ASB-1009_62-65(20150624)	P	Solid	7470A	240-187731
240-52505-4	ASB-1009_70-72(20150625)	P	Solid	7470A	240-187731
240-52505-5	ASB-1010_38-40(20150625)	P	Solid	7470A	240-187731
240-52505-6	ASB-1010_70-73(20150625)	P	Solid	7470A	240-187731
240-52505-7	ASB-1010_55-57(20150625)	P	Solid	7470A	240-187731
Analysis Batch:240-188033					
LB 240-187731/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-187781
LCS 240-187781/3-A	Lab Control Sample	T	Water	7470A	240-187781
MB 240-187781/2-A	Method Blank	T	Water	7470A	240-187781
240-52481-B-1-H MS	Matrix Spike	P	Solid	7470A	240-187781
240-52481-B-1-I MSD	Matrix Spike Duplicate	P	Solid	7470A	240-187781
240-52505-1	ASB-1009_55-57(20150624)	P	Solid	7470A	240-187781
240-52505-2	ASB-1009_42-44(20150624)	P	Solid	7470A	240-187781
240-52505-3	ASB-1009_62-65(20150624)	P	Solid	7470A	240-187781
240-52505-4	ASB-1009_70-72(20150625)	P	Solid	7470A	240-187781
240-52505-5	ASB-1010_38-40(20150625)	P	Solid	7470A	240-187781
240-52505-6	ASB-1010_70-73(20150625)	P	Solid	7470A	240-187781
240-52505-7	ASB-1010_55-57(20150625)	P	Solid	7470A	240-187781
Analysis Batch:240-188177					
LB 240-187731/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-187780
LCS 240-187780/3-A	Lab Control Sample	T	Water	6010B	240-187780
MB 240-187780/2-A	Method Blank	T	Water	6010B	240-187780
240-52481-B-1-E MS ^5	Matrix Spike	P	Solid	6010B	240-187780
240-52481-B-1-F MSD ^5	Matrix Spike Duplicate	P	Solid	6010B	240-187780
240-52505-1	ASB-1009_55-57(20150624)	P	Solid	6010B	240-187780
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	6010B	240-187368
240-52505-2	ASB-1009_42-44(20150624)	P	Solid	6010B	240-187780
240-52505-3	ASB-1009_62-65(20150624)	P	Solid	6010B	240-187780
240-52505-4	ASB-1009_70-72(20150625)	P	Solid	6010B	240-187780
240-52505-5	ASB-1010_38-40(20150625)	P	Solid	6010B	240-187780
240-52505-6	ASB-1010_70-73(20150625)	P	Solid	6010B	240-187780
240-52505-7	ASB-1010_55-57(20150625)	P	Solid	6010B	240-187780

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-187091					
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	Moisture	
240-52505-1DU	Duplicate	T	Solid	Moisture	
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	Moisture	
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	Moisture	
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	Moisture	
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	Moisture	
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	Moisture	
240-52505-6DU	Duplicate	T	Solid	Moisture	
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	Moisture	
Prep Batch: 240-188002					
LCSI 240-188002/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-188002/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-188002/9-A	Method Blank	T	Solid	3060A	
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	3060A	
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	3060A	
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	3060A	
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	3060A	
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	3060A	
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	3060A	
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	3060A	
Analysis Batch:240-188115					
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	7196A	
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	7196A	
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	7196A	
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	7196A	
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	7196A	
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	7196A	
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	7196A	
Analysis Batch:240-188230					
LCSI 240-188002/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-188002
LCSS 240-188002/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-188002
MB 240-188002/9-A	Method Blank	T	Solid	7196A	240-188002
240-52505-1	ASB-1009_55-57(20150624)	T	Solid	7196A	240-188002
240-52505-2	ASB-1009_42-44(20150624)	T	Solid	7196A	240-188002
240-52505-3	ASB-1009_62-65(20150624)	T	Solid	7196A	240-188002
240-52505-4	ASB-1009_70-72(20150625)	T	Solid	7196A	240-188002
240-52505-5	ASB-1010_38-40(20150625)	T	Solid	7196A	240-188002
240-52505-6	ASB-1010_70-73(20150625)	T	Solid	7196A	240-188002
240-52505-7	ASB-1010_55-57(20150625)	T	Solid	7196A	240-188002

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52505-1	ASB-1009_55-57(20150624)	102	79	103	101
240-52505-2	ASB-1009_42-44(20150624)	102	77	99	103
240-52505-3	ASB-1009_62-65(20150624)	115	83	113	115
240-52505-4	ASB-1009_70-72(20150625)	133	101	133X	130
240-52505-5	ASB-1010_38-40(20150625)	102	37	107	102
240-52505-6	ASB-1010_70-73(20150625)	99	75	104	99
240-52505-7	ASB-1010_55-57(20150625)	98	73	100	97
240-52505-8	MB-01(20150625)	112	86	118	114
MB 240-187104/1-A		101	79	105	103
LCS 240-187104/2-A		106	88	109	105

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-187500/1-A MB		92	100	96	101
LCS 240-187887/11		93	98	92	101
240-52505-7 MS	ASB-1010_55-57(20150625) MS	95	100	97	104
240-52505-7 MSD	ASB-1010_55-57(20150625) MSD	93	97	92	102

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-52505-1	ASB-1009_55-57(20150624)	101	89	100	104
240-52505-2	ASB-1009_42-44(20150624)	98	92	102	101
240-52505-3	ASB-1009_62-65(20150624)	98	94	101	102
240-52505-4	ASB-1009_70-72(20150625)	98	89	97	98
240-52505-5	ASB-1010_38-40(20150625)	98	87	98	103
240-52505-6	ASB-1010_70-73(20150625)	97	88	98	100
240-52505-7	ASB-1010_55-57(20150625)	96	90	100	101

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-187413/23-A		60	51	56	61	64	13
MB 240-188303/4-A		78	77	70	80	85	59
MB 240-188799/17-A		56	52	51	57	78	23
LCS 240-187413/24-A		66	68	65	70	74	58
LCS 240-188303/5-A		74	74	76	74	81	54
LCS 240-188799/18-A		53	53	62	57	72	44
240-52442-AJ-4-J MS		76	77	76	81	76	62
240-52680-J-1-C MS		64	78	60	81	66	77
240-52442-AJ-4-K MSD		78	74	80	83	78	59
240-52680-J-1-D MSD		69	72	72	71	75	64

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52505-1 RE	ASB-1009_55-57(20150624) RE	66	67	31	62	69	68
240-52505-1	ASB-1009_55-57(20150624)	75	63	62	53	72	82
240-52505-2	ASB-1009_42-44(20150624)	79	71	34	63	80	78
240-52505-3 RE	ASB-1009_62-65(20150624) RE	64	63	14	57	65	68
240-52505-3	ASB-1009_62-65(20150624)	71	74	57	63	72	81
240-52505-4 RE	ASB-1009_70-72(20150625) RE	62	66	33	62	68	72
240-52505-4	ASB-1009_70-72(20150625)	65	64	52	61	67	77
240-52505-5 RE	ASB-1010_38-40(20150625) RE	62	61	21	55	65	69
240-52505-5	ASB-1010_38-40(20150625)	74	72	51	62	75	82
240-52505-6 RE	ASB-1010_70-73(20150625) RE	64	53	49	44	57	80
240-52505-6	ASB-1010_70-73(20150625)	69	68	56	58	72	73
240-52505-7 RE	ASB-1010_55-57(20150625) RE	67	62	63	58	70	72
240-52505-7	ASB-1010_55-57(20150625)	73	62	68	59	69	76

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-52505-1	ASB-1009_55-57(20150624)	80	72	84	65	85	76
240-52505-2	ASB-1009_42-44(20150624)	80	74	84	70	86	76
240-52505-3	ASB-1009_62-65(20150624)	84	77	85	71	86	85
240-52505-4	ASB-1009_70-72(20150625)	65	58	65	53	71	68
240-52505-5	ASB-1010_38-40(20150625)	77	77	75	79	80	85
240-52505-6	ASB-1010_70-73(20150625)	82	75	83	65	86	91
240-52505-7	ASB-1010_55-57(20150625)	83	54	82	51	85	62
MB 240-187793/17-A		88	78	89	67	92	98
LCS 240-187793/18-A		90	81	90	72	95	104
240-52001-A-11-G MS		84	76	84	71	82	88

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Method Blank - Batch: 240-187104

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-187104/1-A	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187104	Lab File ID:	UX88194.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 0752	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-187104

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-187104/1-A	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187104	Lab File ID:	UX88194.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 0752	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	101	26 - 141
Dibromofluoromethane (Surr)	79	30 - 122
1,2-Dichloroethane-d4 (Surr)	105	39 - 128
Toluene-d8 (Surr)	103	33 - 134

Lab Control Sample - Batch: 240-187104

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-187104/2-A	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187104	Lab File ID:	UX88195.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 0813	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	1790	89	16 - 156	
Allyl chloride	1000	583	58	50 - 150	
Bromobenzene	1000	970	97	72 - 120	
Bromochloromethane	1000	926	93	56 - 128	
Bromodichloromethane	1000	518	52	28 - 123	
Benzene	1000	903	90	70 - 120	
Bromoform	1000	469	47	10 - 120	
Bromomethane	1000	756	76	10 - 120	
2-Butanone (MEK)	2000	1870	93	10 - 199	
Carbon disulfide	1000	611	61	10 - 132	
Carbon tetrachloride	1000	362	36	29 - 120	
Chlorobenzene	1000	950	95	71 - 120	
Chlorodibromomethane	1000	520	52	22 - 120	
Chloroethane	1000	692	69	10 - 120	
Chloroform	1000	881	88	63 - 120	
Chloromethane	1000	859	86	25 - 120	
2-Chlorotoluene	1000	960	96	68 - 122	
4-Chlorotoluene	1000	938	94	68 - 122	
cis-1,2-Dichloroethene	1000	926	93	60 - 125	
cis-1,3-Dichloropropene	1000	556	56	25 - 120	
Cyclohexane	1000	924	92	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	404	40	10 - 129	J
1,2-Dibromoethane	1000	662	66	47 - 123	
Dibromomethane	1000	940	94	68 - 120	
1,2-Dichlorobenzene	1000	929	93	68 - 120	
1,3-Dichlorobenzene	1000	905	91	66 - 121	
1,4-Dichlorobenzene	1000	887	89	65 - 120	
Dichlorodifluoromethane	1000	621	62	10 - 120	
1,1-Dichloroethane	1000	993	99	63 - 120	
1,2-Dichloroethane	1000	1050	105	68 - 120	
1,1-Dichloroethene	1000	788	79	44 - 143	
Dichlorofluoromethane	1000	1050	105	40 - 160	
1,2-Dichloropropane	1000	1070	107	73 - 120	
1,3-Dichloropropane	1000	1010	101	74 - 120	
2,2-Dichloropropane	1000	409	41	25 - 123	
1,1-Dichloropropene	1000	897	90	60 - 123	
Ethylbenzene	1000	910	91	66 - 120	
Ethyl ether	1000	1260	126	70 - 130	
Hexachlorobutadiene	1000	883	88	34 - 135	
2-Hexanone	2000	1870	93	43 - 130	
Isopropylbenzene	1000	922	92	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Control Sample - Batch: 240-187104

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-187104/2-A	Analysis Batch:	240-187125	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187104	Lab File ID:	UX88195.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 0813	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 1850				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	4470	89	44 - 173	
Methylcyclohexane	1000	853	85	41 - 133	
Methylene Chloride	1000	906	91	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1890	94	49 - 121	
Methyl tert butyl ether	1000	997	100	34 - 157	
m-Xylene & p-Xylene	1000	927	93	67 - 120	
Naphthalene	1000	863	86	37 - 126	
n-Butylbenzene	1000	899	90	51 - 137	
N-Propylbenzene	1000	907	91	64 - 130	
o-Xylene	1000	963	96	68 - 120	
p-Isopropyltoluene	1000	947	95	56 - 136	
sec-Butylbenzene	1000	901	90	58 - 131	
Styrene	1000	899	90	60 - 120	
tert-Butylbenzene	1000	949	95	58 - 128	
1,1,1,2-Tetrachloroethane	1000	386	39	27 - 121	
1,1,2,2-Tetrachloroethane	1000	810	81	54 - 121	
Tetrachloroethene	1000	934	93	58 - 131	
Tetrahydrofuran	2000	1850	92	70 - 130	
Toluene	1000	994	99	66 - 123	
trans-1,2-Dichloroethene	1000	878	88	58 - 121	
trans-1,3-Dichloropropene	1000	480	48	22 - 122	
1,2,3-Trichlorobenzene	1000	860	86	43 - 129	
1,2,4-Trichlorobenzene	1000	848	85	41 - 135	
1,1,1-Trichloroethane	1000	537	54	38 - 122	
1,1,2-Trichloroethane	1000	986	99	74 - 120	
Trichloroethene	1000	898	90	59 - 124	
Trichlorofluoromethane	1000	708	71	17 - 145	
1,2,3-Trichloropropane	1000	916	92	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	773	77	48 - 151	
1,2,4-Trimethylbenzene	1000	912	91	62 - 133	
1,3,5-Trimethylbenzene	1000	921	92	60 - 130	
Vinyl chloride	1000	1010	101	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	106	26 - 141
Dibromofluoromethane (Surr)	88	30 - 122
1,2-Dichloroethane-d4 (Surr)	109	39 - 128
Toluene-d8 (Surr)	105	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-187887

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-187500/1-A	Analysis Batch:	240-187887	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950884.D
Dilution:	1.0	Leach Batch:	240-187500	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/03/2015 1922	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	07/03/2015 1922				
Leach Date:	06/30/2015 2015				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	92	70 - 124
Dibromofluoromethane (Surr)	100	80 - 128
1,2-Dichloroethane-d4 (Surr)	96	80 - 121
Toluene-d8 (Surr)	101	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Control Sample - Batch: 240-187887

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-187887/11	Analysis Batch:	240-187887	Instrument ID:	A3UX9
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UX950885.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/03/2015 1945	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	07/03/2015 1945				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	1020	102	80 - 120	
2-Butanone (MEK)	2000	1690	84	49 - 120	
Carbon tetrachloride	1000	974	97	54 - 122	
Chlorobenzene	1000	1000	100	80 - 120	
Chloroform	1000	1030	103	80 - 123	
1,2-Dichloroethane	1000	985	99	80 - 120	
1,1-Dichloroethene	1000	1010	101	71 - 133	
Tetrachloroethene	1000	1010	101	79 - 134	
Trichloroethene	1000	1030	103	78 - 130	
Vinyl chloride	1000	994	99	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	93	70 - 124
Dibromofluoromethane (Surr)	98	80 - 128
1,2-Dichloroethane-d4 (Surr)	92	80 - 121
Toluene-d8 (Surr)	101	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187887

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-52505-7	Analysis Batch:	240-187887	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950899.D
Dilution:	1.0	Leach Batch:	240-187500	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/04/2015 0116			Final Weight/Volume:	5 mL
Prep Date:	07/04/2015 0116				5 mL
Leach Date:	06/30/2015 2015				

MSD Lab Sample ID:	240-52505-7	Analysis Batch:	240-187887	Instrument ID:	A3UX9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX950900.D
Dilution:	1.0	Leach Batch:	240-187500	Initial Weight/Volume:	0.1 mL
Analysis Date:	07/04/2015 0140			Final Weight/Volume:	5 mL
Prep Date:	07/04/2015 0140				5 mL
Leach Date:	06/30/2015 2015				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	107	100	80 - 120	7	30		
2-Butanone (MEK)	82	82	49 - 120	0	30		
Carbon tetrachloride	107	98	60 - 120	8	30		
Chlorobenzene	104	99	80 - 120	5	30		
Chloroform	110	103	80 - 124	6	30		
1,2-Dichloroethane	103	98	80 - 120	4	30		
1,1-Dichloroethene	108	100	67 - 139	7	30		
Tetrachloroethene	108	96	74 - 138	12	30		
Trichloroethene	107	100	75 - 134	7	30		
Vinyl chloride	104	98	51 - 120	6	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	95	93	70 - 124
Dibromofluoromethane (Surr)	100	97	80 - 128
1,2-Dichloroethane-d4 (Surr)	97	92	80 - 121
Toluene-d8 (Surr)	104	102	80 - 120

Method Blank - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187413/23-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1154	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187413/23-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1154	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	60	24 - 110
2-Fluorophenol (Surr)	51	24 - 110
Nitrobenzene-d5 (Surr)	56	20 - 110
Phenol-d5 (Surr)	61	26 - 110
Terphenyl-d14 (Surr)	64	36 - 110
2,4,6-Tribromophenol (Surr)	13	10 - 110

Lab Control Sample - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187413/24-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1217	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	432	65	35 - 110	
2,2'-oxybis[1-chloropropane]	667	408	61	29 - 110	
2,4-Dichlorophenol	667	434	65	39 - 110	
2,4-Dimethylphenol	667	428	64	29 - 110	
2,4-Dinitrophenol	1330	706	53	10 - 110	J
2,4-Dinitrotoluene	667	516	77	48 - 110	
2,6-Dinitrotoluene	667	501	75	45 - 110	
2-Chloronaphthalene	667	432	65	32 - 110	
2,4,5-Trichlorophenol	667	356	53	25 - 110	
2-Chlorophenol	667	412	62	37 - 110	
2,4,6-Trichlorophenol	667	379	57	12 - 110	
2-Methylnaphthalene	667	430	65	36 - 110	
2-Methylphenol	667	448	67	41 - 110	
2-Nitroaniline	667	506	76	45 - 110	J
2-Nitrophenol	667	404	61	34 - 110	
3,3'-Dichlorobenzidine	1330	718	54	28 - 110	J
3-Nitroaniline	667	490	73	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	828	62	10 - 110	J
4-Bromophenyl phenyl ether	667	465	70	39 - 110	
4-Chloro-3-methylphenol	667	485	73	48 - 110	
4-Chloroaniline	667	370	55	30 - 110	
4-Chlorophenyl phenyl ether	667	458	69	40 - 110	
4-Nitroaniline	667	501	75	48 - 110	J
4-Nitrophenol	1330	842	63	28 - 110	J
Acenaphthene	667	439	66	38 - 110	
Acenaphthylene	667	461	69	40 - 110	
Acetophenone	667	425	64	40 - 110	
Anthracene	667	491	74	48 - 110	
Atrazine	1330	1060	79	66 - 127	
Benzaldehyde	1330	887	67	32 - 110	
Benzo[a]anthracene	667	496	74	50 - 110	
Benzo[a]pyrene	667	490	74	44 - 110	
Benzo[b]fluoranthene	667	503	75	43 - 110	
Benzo[g,h,i]perylene	667	554	83	51 - 110	
Benzo[k]fluoranthene	667	533	80	38 - 105	
Bis(2-chloroethoxy)methane	667	426	64	32 - 110	
Bis(2-chloroethyl)ether	667	410	61	34 - 110	
Bis(2-ethylhexyl) phthalate	667	574	86	50 - 110	
Butyl benzyl phthalate	667	541	81	51 - 110	
Caprolactam	1330	1250	94	44 - 114	
Carbazole	667	495	74	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Control Sample - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187413/24-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1217	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	513	77	50 - 110	
Dibenz(a,h)anthracene	667	509	76	51 - 110	
Dibenzofuran	667	453	68	43 - 110	
Diethyl phthalate	667	490	73	52 - 110	
Dimethyl phthalate	667	469	70	50 - 110	
Di-n-butyl phthalate	667	544	82	51 - 110	
Di-n-octyl phthalate	667	489	73	48 - 110	
Fluoranthene	667	514	77	51 - 110	
Fluorene	667	459	69	46 - 110	
Hexachlorobenzene	667	450	68	43 - 110	
Hexachlorobutadiene	667	379	57	29 - 110	
Hexachlorocyclopentadiene	667	177	27	12 - 110	J
Hexachloroethane	667	385	58	30 - 110	
Indeno[1,2,3-cd]pyrene	667	522	78	50 - 110	
Isophorone	667	442	66	36 - 110	
Naphthalene	667	400	60	36 - 110	
Nitrobenzene	667	421	63	32 - 110	
N-Nitrosodi-n-propylamine	667	442	66	38 - 110	
N-Nitrosodiphenylamine	1330	963	72	46 - 110	
Pentachlorophenol	1330	751	56	10 - 110	
Phenol	667	425	64	38 - 110	
Phenanthrene	667	469	70	49 - 110	
Pyrene	667	506	76	49 - 110	
3 & 4 Methylphenol	667	480	72	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	66	24 - 110
2-Fluorophenol (Surr)	68	24 - 110
Nitrobenzene-d5 (Surr)	65	20 - 110
Phenol-d5 (Surr)	70	26 - 110
Terphenyl-d14 (Surr)	74	36 - 110
2,4,6-Tribromophenol (Surr)	58	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187413

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-AJ-4-J MS	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708009.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.70 g
Analysis Date:	07/08/2015 1059			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-AJ-4-K MSD	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708010.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.88 g
Analysis Date:	07/08/2015 1124			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	69	75	32 - 110	6	32	J	J
2,2'-oxybis[1-chloropropane]	72	78	11 - 110	7	42	J	J
2,4-Dichlorophenol	77	81	10 - 110	4	34	J	J
2,4-Dimethylphenol	77	77	10 - 110	1	31	J	J
2,4-Dinitrophenol	34	34	10 - 110	0	99	J	J
2,4-Dinitrotoluene	67	71	32 - 110	6	30	J	J
2,6-Dinitrotoluene	69	75	35 - 110	8	30	J	J
2-Chloronaphthalene	73	82	28 - 110	11	30	J	J
2,4,5-Trichlorophenol	75	69	10 - 117	10	99	J	J
2-Chlorophenol	72	80	10 - 110	9	47	J	J
2,4,6-Trichlorophenol	66	65	10 - 110	2	38	J	J
2-Methylnaphthalene	70	73	10 - 133	3	42	J	J
2-Methylphenol	83	82	24 - 110	2	51	J	J
2-Nitroaniline	72	79	39 - 110	8	31	J	J
2-Nitrophenol	69	74	10 - 110	5	49	J	J
3,3'-Dichlorobenzidine	28	29	10 - 110	3	56	J	J
3-Nitroaniline	68	73	10 - 110	6	30	J	J
4,6-Dinitro-2-methylphenol	37	35	10 - 110	6	55	J	J
4-Bromophenyl phenyl ether	78	78	33 - 110	0	30	J	J
4-Chloro-3-methylphenol	75	80	25 - 110	6	54	J	J
4-Chloroaniline	59	59	10 - 110	1	36	J	J
4-Chlorophenyl phenyl ether	75	83	32 - 110	10	30	J	J
4-Nitroaniline	70	52	10 - 110	29	48	J	J
4-Nitrophenol	77	78	10 - 113	1	49	J	J
Acenaphthene	84	61	22 - 110	22	99	J	J
Acenaphthylene	70	73	24 - 110	4	99	J	J
Acetophenone	78	80	31 - 110	1	43	J	J
Anthracene	80	50	20 - 110	23	99	J	J
Atrazine	87	94	45 - 118	7	30	J	J
Benzaldehyde	85	86	23 - 110	0	42	J	J
Benzo[a]anthracene	78	27	10 - 122	19	99		
Benzo[a]pyrene	66	39	10 - 110	11	99		J

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187413

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-AJ-4-J MS	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708009.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.70 g
Analysis Date:	07/08/2015 1059			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-AJ-4-K MSD	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708010.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.88 g
Analysis Date:	07/08/2015 1124			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	40	24	12 - 118	5	99		
Benzo[g,h,i]perylene	51	38	10 - 117	8	99	J	J
Benzo[k]fluoranthene	52	58	10 - 121	3	99	J	J
Bis(2-chloroethoxy)methane	78	80	26 - 110	2	37	J	J
Bis(2-chloroethyl)ether	72	76	21 - 110	6	55	J	J
Bis(2-ethylhexyl) phthalate	68	107	40 - 110	32	30	J	J F2
Butyl benzyl phthalate	83	88	44 - 110	5	30	J	J
Caprolactam	91	93	10 - 134	2	32	J	J
Carbazole	75	63	34 - 110	11	30	J	J
Chrysene	66	35	10 - 125	10	99		
Dibenz(a,h)anthracene	55	59	14 - 113	4	99	J	J
Dibenzofuran	74	66	29 - 110	9	30	J	J
Diethyl phthalate	80	84	42 - 110	4	30	J	J
Dimethyl phthalate	81	80	41 - 110	2	30	J	J
Di-n-butyl phthalate	69	74	43 - 110	4	30	J	J
Di-n-octyl phthalate	76	81	24 - 119	6	30	J	J
Fluoranthene	84	-34	10 - 110	24	99	4	4
Fluorene	86	66	23 - 110	20	99	J	J
Hexachlorobenzene	68	68	34 - 110	1	30	J	J
Hexachlorobutadiene	75	78	25 - 110	4	34	J	J
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	59	53	12 - 110	10	50	J	J
Indeno[1,2,3-cd]pyrene	57	45	10 - 114	8	99	J	J
Isophorone	78	84	29 - 110	8	38	J	J
Naphthalene	52	51	10 - 111	2	99	J	J
Nitrobenzene	72	80	23 - 110	9	41	J	J
N-Nitrosodi-n-propylamine	74	83	26 - 110	10	42	J	J
N-Nitrosodiphenylamine	79	82	22 - 110	3	30	J	J
Phenol	76	85	17 - 110	11	53	J	J
Phenanthrene	91	-23	10 - 166	35	99		F1
Pyrene	83	7	10 - 147	17	99		F1
3 & 4 Methylphenol	78	82	25 - 110	5	50	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187413

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-AJ-4-J MS	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708009.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.70 g
Analysis Date:	07/08/2015 1059			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-AJ-4-K MSD	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708010.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.88 g
Analysis Date:	07/08/2015 1124			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	76	78	24 - 110
2-Fluorophenol (Surr)	77	74	24 - 110
Nitrobenzene-d5 (Surr)	76	80	20 - 110
Phenol-d5 (Surr)	81	83	26 - 110
Terphenyl-d14 (Surr)	76	78	36 - 110
2,4,6-Tribromophenol (Surr)	62	59	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-187793

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-187793/17-A	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187793	Lab File ID:	50708003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 0949	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1024			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.0040
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	88	30 - 110
2-Fluorophenol (Surr)	78	20 - 110
Nitrobenzene-d5 (Surr)	89	28 - 110
Phenol-d5 (Surr)	67	21 - 110
Terphenyl-d14 (Surr)	92	48 - 110
2,4,6-Tribromophenol (Surr)	98	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Control Sample - Batch: 240-187793

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-187793/18-A	Analysis Batch:	240-188311	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-187793	Lab File ID:	50708004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	07/08/2015 1014	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1024			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0603	75	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0703	88	54 - 110	
Pyridine	0.0800	0.0543	68	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0749	94	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0748	93	46 - 110	
2-Methylphenol	0.0800	0.0798	100	44 - 111	
Hexachlorobenzene	0.0800	0.0833	104	50 - 110	
Hexachlorobutadiene	0.0800	0.0552	69	34 - 110	
Hexachloroethane	0.0800	0.0565	71	41 - 110	
Nitrobenzene	0.0800	0.0721	90	40 - 110	
Pentachlorophenol	0.160	0.159	100	12 - 110	
3 & 4 Methylphenol	0.0800	0.0791	99	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	90	30 - 110
2-Fluorophenol (Surr)	81	20 - 110
Nitrobenzene-d5 (Surr)	90	28 - 110
Phenol-d5 (Surr)	72	21 - 110
Terphenyl-d14 (Surr)	95	48 - 110
2,4,6-Tribromophenol (Surr)	104	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Matrix Spike - Batch: 240-187793

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-52001-A-11-G MS	Analysis Batch:	240-188482	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-187793	Lab File ID:	50709012.D
Dilution:	4.0	Leach Batch:	240-187686	Initial Weight/Volume:	250 mL
Analysis Date:	07/09/2015 1526	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1024			Injection Volume:	1 uL
Leach Date:	07/01/2015 0800				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0579	72	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0688	86	42 - 110	
Pyridine	ND	0.0800	0.0564	70	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0695	87	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0690	86	35 - 110	
2-Methylphenol	0.014 J	0.0800	0.0871	91	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0607	76	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0542	68	28 - 110	
Hexachloroethane	ND	0.0800	0.0569	71	26 - 110	
Nitrobenzene	ND	0.0800	0.0673	84	32 - 110	
Pentachlorophenol	ND	0.160	0.123	77	10 - 124	
3 & 4 Methylphenol	0.46	0.0800	0.576	149	29 - 110	4

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	84	30 - 110
2-Fluorophenol (Surr)	76	20 - 110
Nitrobenzene-d5 (Surr)	84	28 - 110
Phenol-d5 (Surr)	71	21 - 110
Terphenyl-d14 (Surr)	82	48 - 110
2,4,6-Tribromophenol (Surr)	88	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-188303

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188303/4-A	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/10/2015 0923	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	583		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	43.0	J	37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-188303

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188303/4-A	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/10/2015 0923	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	33.9	J	15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	14.5	J	13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	17.0	J	7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	78	24 - 110
2-Fluorophenol (Surr)	77	24 - 110
Nitrobenzene-d5 (Surr)	70	20 - 110
Phenol-d5 (Surr)	80	26 - 110
Terphenyl-d14 (Surr)	85	36 - 110
2,4,6-Tribromophenol (Surr)	59	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Control Sample - Batch: 240-188303

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188303/5-A	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/10/2015 0949	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	468	70	35 - 110	
2,2'-oxybis[1-chloropropane]	667	452	68	29 - 110	
2,4-Dichlorophenol	667	490	73	39 - 110	
2,4-Dimethylphenol	667	523	78	29 - 110	
2,4-Dinitrophenol	1330	267	20	10 - 110	J
2,4-Dinitrotoluene	667	510	76	48 - 110	
2,6-Dinitrotoluene	667	522	78	45 - 110	
2-Chloronaphthalene	667	481	72	32 - 110	
2,4,5-Trichlorophenol	667	421	63	25 - 110	
2-Chlorophenol	667	467	70	37 - 110	
2,4,6-Trichlorophenol	667	377	57	12 - 110	
2-Methylnaphthalene	667	502	75	36 - 110	
2-Methylphenol	667	487	73	41 - 110	
2-Nitroaniline	667	518	78	45 - 110	J
2-Nitrophenol	667	512	77	34 - 110	
3,3'-Dichlorobenzidine	1330	994	75	28 - 110	J
3-Nitroaniline	667	509	76	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	638	48	10 - 110	J
4-Bromophenyl phenyl ether	667	536	80	39 - 110	
4-Chloro-3-methylphenol	667	533	80	48 - 110	
4-Chloroaniline	667	427	64	30 - 110	
4-Chlorophenyl phenyl ether	667	505	76	40 - 110	
4-Nitroaniline	667	509	76	48 - 110	J
4-Nitrophenol	1330	922	69	28 - 110	J
Acenaphthene	667	483	73	38 - 110	
Acenaphthylene	667	489	73	40 - 110	
Acetophenone	667	465	70	40 - 110	
Anthracene	667	505	76	48 - 110	
Atrazine	1330	1180	89	66 - 127	
Benzaldehyde	1330	1070	80	32 - 110	
Benzo[a]anthracene	667	523	78	50 - 110	
Benzo[a]pyrene	667	511	77	44 - 110	
Benzo[b]fluoranthene	667	518	78	43 - 110	
Benzo[g,h,i]perylene	667	558	84	51 - 110	
Benzo[k]fluoranthene	667	514	77	38 - 105	
Bis(2-chloroethoxy)methane	667	496	74	32 - 110	
Bis(2-chloroethyl)ether	667	481	72	34 - 110	
Bis(2-ethylhexyl) phthalate	667	1070	160	50 - 110	*
Butyl benzyl phthalate	667	547	82	51 - 110	
Caprolactam	1330	1100	83	44 - 114	
Carbazole	667	551	83	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Control Sample - Batch: 240-188303

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188303/5-A	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/10/2015 0949	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	537	81	50 - 110	
Dibenz(a,h)anthracene	667	537	81	51 - 110	
Dibenzofuran	667	498	75	43 - 110	
Diethyl phthalate	667	493	74	52 - 110	
Dimethyl phthalate	667	509	76	50 - 110	
Di-n-butyl phthalate	667	606	91	51 - 110	
Di-n-octyl phthalate	667	515	77	48 - 110	
Fluoranthene	667	548	82	51 - 110	
Fluorene	667	497	75	46 - 110	
Hexachlorobenzene	667	539	81	43 - 110	
Hexachlorobutadiene	667	522	78	29 - 110	
Hexachlorocyclopentadiene	667	349	52	12 - 110	J
Hexachloroethane	667	441	66	30 - 110	
Indeno[1,2,3-cd]pyrene	667	542	81	50 - 110	
Isophorone	667	510	77	36 - 110	
Naphthalene	667	480	72	36 - 110	
Nitrobenzene	667	508	76	32 - 110	
N-Nitrosodi-n-propylamine	667	473	71	38 - 110	
N-Nitrosodiphenylamine	1330	1050	79	46 - 110	
Pentachlorophenol	1330	637	48	10 - 110	
Phenol	667	493	74	38 - 110	
Phenanthrene	667	498	75	49 - 110	
Pyrene	667	554	83	49 - 110	
3 & 4 Methylphenol	667	473	71	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	74	24 - 110
2-Fluorophenol (Surr)	74	24 - 110
Nitrobenzene-d5 (Surr)	76	20 - 110
Phenol-d5 (Surr)	74	26 - 110
Terphenyl-d14 (Surr)	81	36 - 110
2,4,6-Tribromophenol (Surr)	54	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-188303

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52680-J-1-C MS	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.00 g
Analysis Date:	07/10/2015 1518			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52680-J-1-D MSD	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.41 g
Analysis Date:	07/10/2015 1543			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	61	65	32 - 110	5	32		
2,2'-oxybis[1-chloropropane]	46	67	11 - 110	35	42	J	
2,4-Dichlorophenol	83	73	10 - 110	14	34		
2,4-Dimethylphenol	83	73	10 - 110	14	31		
2,4-Dinitrophenol	22	20	10 - 110	11	99	J	J
2,4-Dinitrotoluene	80	75	32 - 110	8	30		
2,6-Dinitrotoluene	85	70	35 - 110	20	30		
2-Chloronaphthalene	63	68	28 - 110	7	30		
2,4,5-Trichlorophenol	74	66	10 - 117	13	99		
2-Chlorophenol	78	71	10 - 110	11	47		
2,4,6-Trichlorophenol	78	65	10 - 110	19	38		
2-Methylnaphthalene	55	70	10 - 133	22	42		
2-Methylphenol	82	73	24 - 110	14	51		
2-Nitroaniline	85	74	39 - 110	16	31	J	J
2-Nitrophenol	73	73	10 - 110	1	49		
3,3'-Dichlorobenzidine	90	77	10 - 110	17	56	J	J
3-Nitroaniline	83	66	10 - 110	25	30	J	J
4,6-Dinitro-2-methylphenol	39	36	10 - 110	10	55	J	J
4-Bromophenyl phenyl ether	69	83	33 - 110	17	30		
4-Chloro-3-methylphenol	85	76	25 - 110	12	54		
4-Chloroaniline	64	57	10 - 110	13	36		
4-Chlorophenyl phenyl ether	65	74	32 - 110	11	30		
4-Nitroaniline	82	69	10 - 110	18	48	J	J
4-Nitrophenol	82	72	10 - 113	14	49	J	J
Acenaphthene	68	67	22 - 110	3	99		
Acenaphthylene	70	67	24 - 110	5	99		
Acetophenone	73	68	31 - 110	9	43		
Anthracene	72	76	20 - 110	3	99		
Atrazine	97	90	45 - 118	8	30		
Benzaldehyde	63	77	23 - 110	19	42		
Benzo[a]anthracene	70	76	10 - 122	7	99		
Benzo[a]pyrene	62	75	10 - 110	18	99		

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-188303

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52680-J-1-C MS	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.00 g
Analysis Date:	07/10/2015 1518			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52680-J-1-D MSD	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.41 g
Analysis Date:	07/10/2015 1543			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	60	75	12 - 118	21	99		
Benzo[g,h,i]perylene	66	83	10 - 117	21	99		
Benzo[k]fluoranthene	62	72	10 - 121	13	99		
Bis(2-chloroethoxy)methane	78	70	26 - 110	12	37		
Bis(2-chloroethyl)ether	60	71	21 - 110	15	55		
Bis(2-ethylhexyl) phthalate	48	89	40 - 110	28	30		
Butyl benzyl phthalate	79	80	44 - 110	1	30		
Caprolactam	51	86	10 - 134	50	32		F2
Carbazole	87	84	34 - 110	5	30		
Chrysene	70	75	10 - 125	5	99		
Dibenz(a,h)anthracene	64	79	14 - 113	19	99		
Dibenzofuran	70	70	29 - 110	2	30		
Diethyl phthalate	82	71	42 - 110	15	30		
Dimethyl phthalate	85	73	41 - 110	17	30		
Di-n-butyl phthalate	81	90	43 - 110	8	30		
Di-n-octyl phthalate	54	75	24 - 119	31	30		F2
Fluoranthene	73	81	10 - 110	10	99		
Fluorene	71	70	23 - 110	3	99		
Hexachlorobenzene	60	79	34 - 110	25	30		
Hexachlorobutadiene	31	73	25 - 110	79	34	J	F2
Hexachlorocyclopentadiene	4	12	10 - 110	98	79	J F1	J F2
Hexachloroethane	12	61	12 - 110	132	50	J	F2
Indeno[1,2,3-cd]pyrene	65	81	10 - 114	20	99		
Isophorone	82	74	29 - 110	12	38		
Naphthalene	46	67	10 - 111	35	99	J	
Nitrobenzene	66	71	23 - 110	6	41		
N-Nitrosodi-n-propylamine	77	68	26 - 110	13	42		
N-Nitrosodiphenylamine	88	81	22 - 110	9	30		
Pentachlorophenol	60	60	10 - 110	1	50		
Phenol	78	72	17 - 110	10	53		
Phenanthrene	71	69	10 - 166	3	99		
Pyrene	77	75	10 - 147	4	99		

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-188303

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52680-J-1-C MS	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.00 g
Analysis Date:	07/10/2015 1518			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52680-J-1-D MSD	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.41 g
Analysis Date:	07/10/2015 1543			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
3 & 4 Methylphenol	80	69	25 - 110	15	50		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	64	69	24 - 110
2-Fluorophenol (Surr)	78	72	24 - 110
Nitrobenzene-d5 (Surr)	60	72	20 - 110
Phenol-d5 (Surr)	81	71	26 - 110
Terphenyl-d14 (Surr)	66	75	36 - 110
2,4,6-Tribromophenol (Surr)	77	64	10 - 110

Method Blank - Batch: 240-188799

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188799/17-A	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188799	Lab File ID:	50714005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/14/2015 1311	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	30.5	J	19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-188799

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188799/17-A	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188799	Lab File ID:	50714005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/14/2015 1311	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	16.0	J	15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	56	24 - 110
2-Fluorophenol (Surr)	52	24 - 110
Nitrobenzene-d5 (Surr)	51	20 - 110
Phenol-d5 (Surr)	57	26 - 110
Terphenyl-d14 (Surr)	78	36 - 110
2,4,6-Tribromophenol (Surr)	23	10 - 110

Lab Control Sample - Batch: 240-188799

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188799/18-A	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188799	Lab File ID:	50714025.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/14/2015 1423	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	345	52	35 - 110	
2,2'-oxybis[1-chloropropane]	667	351	53	29 - 110	
2,4-Dichlorophenol	667	347	52	39 - 110	
2,4-Dimethylphenol	667	350	52	29 - 110	
2,4-Dinitrophenol	1330	437	33	10 - 110	J
2,4-Dinitrotoluene	667	481	72	48 - 110	
2,6-Dinitrotoluene	667	445	67	45 - 110	
2-Chloronaphthalene	667	343	51	32 - 110	
2,4,5-Trichlorophenol	667	318	48	25 - 110	J
2-Chlorophenol	667	341	51	37 - 110	
2,4,6-Trichlorophenol	667	250	37	12 - 110	J
2-Methylnaphthalene	667	353	53	36 - 110	
2-Methylphenol	667	371	56	41 - 110	
2-Nitroaniline	667	464	70	45 - 110	J
2-Nitrophenol	667	363	55	34 - 110	
3,3'-Dichlorobenzidine	1330	877	66	28 - 110	J
3-Nitroaniline	667	493	74	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	646	48	10 - 110	J
4-Bromophenyl phenyl ether	667	454	68	39 - 110	
4-Chloro-3-methylphenol	667	453	68	48 - 110	
4-Chloroaniline	667	348	52	30 - 110	
4-Chlorophenyl phenyl ether	667	394	59	40 - 110	
4-Nitroaniline	667	523	78	48 - 110	J
4-Nitrophenol	1330	873	65	28 - 110	J
Acenaphthene	667	354	53	38 - 110	
Acenaphthylene	667	365	55	40 - 110	
Acetophenone	667	336	50	40 - 110	
Anthracene	667	472	71	48 - 110	
Atrazine	1330	1060	80	66 - 127	
Benzaldehyde	1330	759	57	32 - 110	
Benzo[a]anthracene	667	474	71	50 - 110	
Benzo[a]pyrene	667	451	68	44 - 110	
Benzo[b]fluoranthene	667	451	68	43 - 110	
Benzo[g,h,i]perylene	667	445	67	51 - 110	
Benzo[k]fluoranthene	667	448	67	38 - 105	
Bis(2-chloroethoxy)methane	667	347	52	32 - 110	
Bis(2-chloroethyl)ether	667	323	48	34 - 110	J
Bis(2-ethylhexyl) phthalate	667	561	84	50 - 110	
Butyl benzyl phthalate	667	518	78	51 - 110	
Caprolactam	1330	1110	83	44 - 114	
Carbazole	667	483	72	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Control Sample - Batch: 240-188799

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188799/18-A	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188799	Lab File ID:	50714025.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/14/2015 1423	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	481	72	50 - 110	
Dibenz(a,h)anthracene	667	448	67	51 - 110	
Dibenzofuran	667	369	55	43 - 110	
Diethyl phthalate	667	475	71	52 - 110	
Dimethyl phthalate	667	440	66	50 - 110	
Di-n-butyl phthalate	667	515	77	51 - 110	
Di-n-octyl phthalate	667	466	70	48 - 110	
Fluoranthene	667	491	74	51 - 110	
Fluorene	667	395	59	46 - 110	
Hexachlorobenzene	667	443	66	43 - 110	
Hexachlorobutadiene	667	326	49	29 - 110	J
Hexachlorocyclopentadiene	667	161	24	12 - 110	J
Hexachloroethane	667	308	46	30 - 110	J
Indeno[1,2,3-cd]pyrene	667	442	66	50 - 110	
Isophorone	667	366	55	36 - 110	
Naphthalene	667	322	48	36 - 110	J
Nitrobenzene	667	331	50	32 - 110	
N-Nitrosodi-n-propylamine	667	382	57	38 - 110	
N-Nitrosodiphenylamine	1330	903	68	46 - 110	
Pentachlorophenol	1330	655	49	10 - 110	
Phenol	667	362	54	38 - 110	
Phenanthrene	667	446	67	49 - 110	
Pyrene	667	467	70	49 - 110	
3 & 4 Methylphenol	667	389	58	40 - 110	J

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	53	24 - 110
2-Fluorophenol (Surr)	53	24 - 110
Nitrobenzene-d5 (Surr)	62	20 - 110
Phenol-d5 (Surr)	57	26 - 110
Terphenyl-d14 (Surr)	72	36 - 110
2,4,6-Tribromophenol (Surr)	44	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-187153 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-187153/1-A	Analysis Batch:	240-187143	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-187153	Lab File ID:	Y0062916.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/29/2015 1439	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/29/2015 0704			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-187153 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-187153/2-A	Analysis Batch:	240-187143	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-187153	Lab File ID:	Y0062917.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/29/2015 1515	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/29/2015 0704			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-187153/11-A	Analysis Batch:	240-187143	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-187153	Lab File ID:	Y0062926.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/29/2015 2037	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/29/2015 0704			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	96	94	80 - 120	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-187816

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-187816/21-A	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187816	Lab File ID:	P14F070608.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/06/2015 1627	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-187816

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-187816/22-A	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187816	Lab File ID:	P14F070609.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/06/2015 1654	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-187816/23-A	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187816	Lab File ID:	P14F070631.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/07/2015 0252	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	105	130	70 - 120	21	20		*

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-187368

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-187368/1-A	Analysis Batch:	240-187776	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	07/01/2015 1630	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	ND		0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	6.97	J	5.2	500
Manganese	ND		0.084	1.5
Sodium	ND		19	500
Nickel	0.124	J	0.080	4.0
Potassium	ND		6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Vanadium	ND		0.20	5.0
Selenium	ND		0.34	0.50
Zinc	1.18	J	0.56	2.0
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Control Sample - Batch: 240-187368

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-187368/2-A	Analysis Batch:	240-187776	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	07/01/2015 1634	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	189	94	80 - 120	
Antimony	50.0	47.6	95	80 - 120	
Barium	200	190	95	80 - 120	
Beryllium	5.00	4.76	95	80 - 120	
Cadmium	5.00	4.95	99	80 - 120	
Calcium	5000	4950	99	80 - 120	
Chromium	20.0	19.6	98	80 - 120	
Cobalt	50.0	47.7	95	80 - 120	
Copper	25.0	24.0	96	80 - 120	
Iron	100	100	100	80 - 120	
Magnesium	5000	4850	97	80 - 120	
Manganese	50.0	49.7	99	80 - 120	
Sodium	5000	4850	97	80 - 120	
Nickel	50.0	48.4	97	80 - 120	
Potassium	5000	4760	95	80 - 120	
Silver	5.00	4.92	98	80 - 120	
Arsenic	200	193	97	80 - 120	
Lead	50.0	47.3	95	80 - 120	
Vanadium	50.0	48.3	97	80 - 120	
Selenium	200	191	95	80 - 120	
Zinc	50.0	50.4	101	80 - 120	
Thallium	200	190	95	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187368

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-52477-C-51-B MS	Analysis Batch:	240-187776	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.26 g
Analysis Date:	07/01/2015 1658			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52477-C-51-C MSD	Analysis Batch:	240-187776	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.26 g
Analysis Date:	07/01/2015 1702			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	1153	1249	75 - 125	2	20	4	4
Antimony	40	42	75 - 125	3	20	F1	F1
Barium	84	84	75 - 125	0	20		
Beryllium	81	81	75 - 125	1	20		
Cadmium	84	84	75 - 125	0	20		
Calcium	78	119	75 - 125	13	20		
Chromium	84	88	75 - 125	2	20		
Cobalt	96	100	75 - 125	3	20		
Copper	80	78	75 - 125	1	20		
Iron	-93	-310	75 - 125	1	20	4	4
Magnesium	85	95	75 - 125	5	20		
Manganese	56	136	75 - 125	13	20	4	4
Sodium	85	85	75 - 125	0	20		
Nickel	97	101	75 - 125	3	20		
Potassium	90	88	75 - 125	1	20		
Silver	84	84	75 - 125	1	20		
Arsenic	82	82	75 - 125	1	20		
Lead	80	90	75 - 125	8	20		
Vanadium	86	80	75 - 125	4	20		
Selenium	79	80	75 - 125	0	20		
Zinc	97	107	75 - 125	4	20		
Thallium	92	93	75 - 125	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

TCLP SPLPE Leachate Blank - Batch: 240-187780

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-187731/1-B	Analysis Batch:	240-188177	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1728	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	07/01/2015 1810				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.00328	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.00126	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	0.0147	J	0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	0.000597	J	0.00046	0.015
Nickel	0.00413	J	0.00076	0.040
Potassium	0.428	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00350	J	0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-187780

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-187780/2-A	Analysis Batch:	240-188177	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1732	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	0.000481	J	0.00046	0.015
Nickel	ND		0.00076	0.040
Potassium	ND		0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Lab Control Sample - Batch: 240-187780

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-187780/3-A	Analysis Batch:	240-188177	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1736	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	1.93	97	50 - 150	
Antimony	0.500	0.528	106	50 - 150	
Barium	2.00	1.98	99	50 - 150	J
Beryllium	0.0500	0.0479	96	50 - 150	
Cadmium	0.0500	0.0532	106	50 - 150	J
Calcium	50.0	48.0	96	50 - 150	
Chromium	0.200	0.200	100	50 - 150	J
Cobalt	0.500	0.509	102	50 - 150	
Copper	0.250	0.263	105	50 - 150	J
Iron	1.00	0.999	100	50 - 150	
Magnesium	50.0	46.8	94	50 - 150	
Manganese	0.500	0.500	100	50 - 150	
Nickel	0.500	0.515	103	50 - 150	
Potassium	50.0	53.6	107	50 - 150	
Silver	0.0500	0.0552	110	50 - 150	J
Arsenic	2.00	2.18	109	50 - 150	
Lead	0.500	0.466	93	50 - 150	J
Vanadium	0.500	0.491	98	50 - 150	
Selenium	2.00	2.27	113	50 - 150	
Zinc	0.500	0.555	111	50 - 150	J
Thallium	2.00	1.90	95	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187780

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-52481-B-1-E MS ^5	Analysis Batch:	240-188177	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	5.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1749			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	07/01/2015 1810				

MSD Lab Sample ID:	240-52481-B-1-F MSD ^5	Analysis Batch:	240-188177	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187780	Lab File ID:	I12070615A.asc
Dilution:	5.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 1753			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 0942				
Leach Date:	07/01/2015 1810				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	94	96	75 - 125	2	20		
Antimony	101	100	75 - 125	1	20	J	J
Barium	98	103	75 - 125	5	20	J	
Beryllium	97	98	75 - 125	2	20		
Cadmium	102	105	75 - 125	2	20		
Calcium	97	99	75 - 125	2	20		
Chromium	99	102	75 - 125	3	20		
Cobalt	99	100	75 - 125	1	20		
Copper	79	113	75 - 125	2	20	J 4	J 4
Iron	97	99	75 - 125	2	20		
Magnesium	94	96	75 - 125	2	20		
Nickel	122	137	75 - 125	2	20	4	4
Potassium	100	101	75 - 125	1	20		
Silver	97	104	75 - 125	8	20	J	J
Lead	98	100	75 - 125	2	20		
Vanadium	97	97	75 - 125	1	20		
Zinc	107	112	75 - 125	1	20	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

TCLP SPLPE Leachate Blank - Batch: 240-187781

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-187731/1-C	Analysis Batch:	240-188033	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 0939	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	07/01/2015 1810				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-187781

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-187781/2-A	Analysis Batch:	240-188033	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 0941	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-187781

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-187781/3-A	Analysis Batch:	240-188033	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 0942	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00490	98	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187781

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-52481-B-1-H MS	Analysis Batch:	240-188033	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 0949			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	07/01/2015 1810				

MSD Lab Sample ID:	240-52481-B-1-I MSD	Analysis Batch:	240-188033	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-187781	Lab File ID:	070615AHG1.PRN
Dilution:	1.0	Leach Batch:	240-187731	Initial Weight/Volume:	50 mL
Analysis Date:	07/06/2015 0950			Final Weight/Volume:	50 mL
Prep Date:	07/02/2015 1400				
Leach Date:	07/01/2015 1810				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	97	98	80 - 120	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-187370

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-187370/1-A	Analysis Batch:	240-187628	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	07/01/2015 0940	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-187370

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-187370/2-A	Analysis Batch:	240-187628	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	07/01/2015 0942	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.827	99	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187370

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52477-C-51-E MS	Analysis Batch:	240-187628	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.52 g
Analysis Date:	07/01/2015 0950			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52477-C-51-F MSD	Analysis Batch:	240-187628	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.52 g
Analysis Date:	07/01/2015 0952			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	149	133	80 - 120	8	20	F1	F1

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Method Blank - Batch: 240-188002

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-188002/9-A	Analysis Batch:	240-188230	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-188002	Lab File ID:	188002.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	07/07/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/06/2015 1018				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.27	0.80

Lab Control Sample Insoluble - Batch: 240-188002

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-188002/11-A	Analysis Batch:	240-188230	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-188002	Lab File ID:	188002.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	07/07/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/06/2015 1018				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	630	98	75 - 125	

Lab Control Sample Soluble - Batch: 240-188002

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-188002/10-A	Analysis Batch:	240-188230	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-188002	Lab File ID:	188002.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	07/07/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/06/2015 1018				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	19.4	97	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52505-1

Duplicate - Batch: 240-187091

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52505-1	Analysis Batch:	240-187091	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/27/2015 1236	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	81	80		20	
Percent Moisture	19	20		20	

Duplicate - Batch: 240-187091

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52505-6	Analysis Batch:	240-187091	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/27/2015 1236	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	85	84		20	
Percent Moisture	15	16		20	

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS

240-52505 Chain of Custody

4101 Shuffel Street N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

0,8/C1,8
3,2/C4,2
0,6/C1,6
2,2/C3,2
4,2/C5,2

TestAmerica Canton

4101 Shuffel Street, N. N.

North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.2

Chain of Custody Record

103954

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/25/15	COC No:
Company Name: ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:	1 of ____ COCs
Address: 430 first Ave. North, Ste 720	Analysis Turnaround Time			Sampler:
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below ____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: ford TCAP	☐ 1 week			
Site: St. Paul, MN	☐ 2 days			Job / SDG No.: 24006638
PO# MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	SVOCs (8270)	GRO (w/mod method)	DRO (w/mod method)	TAL metals (6010)/	Hexavalent chromium (7196)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP metals (1311/6010)	Moisture content	Sample Specific Notes:
ASB-1009_55-57(20150624)	6/24/15	1755	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1009_42-44(20150624)	6/24/15	1745	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1009_62-65(20150624)	6/24/15	1815	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1009_70-72(20150625)	6/25/15	0745	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1010_38-40(20150625)	6/25/15	1345	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1010_70-73(20150625)	6/25/15	1300	G	SO	11			X	X	X	X	X		X	X	X	X	
ASB-1010_55-57(20150625)	6/25/15	1415	G	SO	11			X	X	X	X	X		X	X	X	X	
MB-01(20150625)	6/25/15	—	G	WT	2			1		1								
Temp Blank	6/25/15	—			1													
								6		6								

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Level IV

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Lindsey Kenyon	ARCADIS	6/25/15 1200		TAmrk	6.25.15 1610
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAmrk	6-25-15	Greg Bruno	TA Can	6/26/15 0920
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative Login # :
Canton Facility

Client Arcadis Site Name Ford TCAP

Cooler unpacked by: Gary Burns

Cooler Received on 6/26/15 Opened on 6/27/15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other Multiple

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

~~IR GUN# A~~ (CF +1.0 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~

~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~

☑ See Multiple Cooler Form

IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 each	Yes	No
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Were sample(s) at the correct pH upon receipt?	Yes No	NA pH Strip Lot# HC432654
12. Were VOAs on the COC?	Yes	No
13. Were air bubbles >6 mm in any VOA vials?	Yes No	NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No

Contacted PM Date by via Verbal Voice Mail Other

Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

TestAmerica Multiple Cooler Receipt Form/Narrative — Login # : _____
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	A	0.8	1.8	ICE
↓	↓	3.2	4.2	↓
241-2009		0.6	1.6	
		2.2	3.2	
		4.2	5.2	

July 17, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52505-1
Sample date: 2015-06-24 2015-06-25
Report received by CADENA: 2015-07-15
Initial Data Verification completed by CADENA: 2015-07-17

The following minor QC exceptions or missing information were noted:

GCMS VOC CCV response outliers as noted in the laboratory submittal case narrative were not used to qualify results as part of this level 2 verification review.

GCMS VOC QC batch 187104 did not include MS recovery data due to insufficient sample volume available according to the laboratory submittal case narrative.

GCMS VOC sample -004 surrogate recoveries were outliers biased high for 1 out of 4 surrogates. Client sample -004 detected GCMS VOC analytes should be considered to be estimated and qualified with J flags. Non-detect results did not require qualification.

WI-GRO and WI-DRO QC batch did not include MS recovery data and surrogate recoveries were not available for samples or QC.

WI-DRO QC batch LCS duplicate recovery as an outlier biased high along with an outlier for the LCS/LCSD RPD. Client samples -001, -002, -003, -004, -005, -006, -007 WI-DRO results should be considered to be estimated and qualified with J flags.

GCMS SVOC method blanks had detections below the RL for bis-2-ethylhexylphthalate and di-n-butylphthalate in QC batch 188799 and for bis-2-ethylhexylphthalate, caprolactam, di-n-butylphthalate, isophorone and phenol in QC batch 188303. Client samples bis-2-ethylhexylphthalate -001, -003, -004, -005 and -007 re-analysis results should be considered to be non-detect at the RL and qualified with UB flags. Note: re-analysis results were used as final reportable results for these samples and sample -006 which was non-detect. Client samples -001, -002, -004, -005 and -007 di-n-butylphthalate results and client samples -003 and -007 caprolactam results and client sample -005 phenol results should also be considered to be non-detect at the RL and qualified with UB flags.

GCMS SVOC QC batch 188303 LCS recoveries were outliers biased high for bis-2-ethylhexylphthalte. Client samples -001, -003, -004, -005, -006 and -007 were re-analyzed outside of the referenced holding time in response to this LCS outlier. Re-analysis QC batch LCS recovery for this analyte was acceptable. Client sample re-analysis results should all be considered to be estimated and qualified with UJ flags based on the holding time exceedance and the bis-2-ethylhexylphthalate results are also qualified as non-detect as noted above due to associated method blank detections. The original GCMS SVOC sample results were all considered to be the final reportable values with the exception of the bis-2-ethylhexylphthalate for client samples -001, -003, -004, -005, -006 and -007 which were reported from the re-analyses results.

GCMS SVOC QC batch 188303, 187413 and 187793 and Metals QC batch 187780, 187370 and 187368 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on this sample-specific QC outlier.

Metals method blanks had detections below the RL in QC batch 187368 for magnesium, nickel and zinc and in QC batch 187780 for TCLP arsenic, barium, chromium, iron, manganese, nickel and potassium. Client samples -001, -002, -003, -004, -005, -006 and -007 TCLP chromium and TCLP arsenic results and client samples -001, -002, -004, -007 TCLP iron results and client sample -001, -003, -004 and -005 TCLP nickel results should all be considered to be non-detect at the RL and qualified with UB flags.

8 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52505-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240525051	ASB-1009_55-57(20150624)	6/24/2015	5:55:00	X	X	X	X	X	X	X	X
240525052	ASB-1009_42-44(20150624)	6/24/2015	5:45:00	X	X	X	X	X	X	X	X
240525053	ASB-1009_62-65(20150624)	6/24/2015	6:15:00	X	X	X	X	X	X	X	X
240525054	ASB-1009_70-72(20150625)	6/25/2015	7:45:00	X	X	X	X	X	X	X	X
240525055	ASB-1010_38-40(20150625)	6/25/2015	1:45:00	X	X	X	X	X	X	X	X
240525056	ASB-1010_70-73(20150625)	6/25/2015	1:00:00	X	X	X	X	X	X	X	X
240525057	ASB-1010_55-57(20150625)	6/25/2015	2:15:00	X	X	X	X	X	X	X	X
240525058	MB-01(20150625)	6/25/2015	12:00:00	X		X					

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52505-1

		Sample Name:	ASB-1009_55-57(20150624)				ASB-1009_42-44(20150624)				ASB-1009_62-65(20150624)				ASB-1009_70-72(20150625)				ASB-1010_38-40(20150625)				ASB-1010_55-57(20150625)			
		Lab Sample ID:	240525051				240525052				240525053				240525054				240525055				240525057			
		Sample Date:	6/24/2015				6/24/2015				6/24/2015				6/25/2015				6/25/2015				6/25/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																										
	OSW-8260B																									
	1,2,4-Trimethylbenzene	95-63-6													25	320	ug/kg	J								
	Methyl acetate	79-20-9													97	640	ug/kg	J								
	Toluene	108-88-3													26	320	ug/kg	J								
GC/MS SVOC																										
	OSW-8270C																									
	Bis(2-ethylhexyl) phthalate	117-81-7	78	410	ug/kg	UB					64	360	ug/kg	UB	37	370	ug/kg	UB	350	370	ug/kg	UB	44	380	ug/kg	UB
	Caprolactam	105-60-2									43	360	ug/kg	UB									48	390	ug/kg	UB
	Di-n-butyl phthalate	84-74-2	30	400	ug/kg	UB					27	360	ug/kg	UB	30	380	ug/kg	UB	35	360	ug/kg	UB	37	390	ug/kg	UB
	Phenol	108-95-2																	16	360	ug/kg	UB				
GC Other																										
	PUBL-SW-141																									
	WI Diesel Range Organics (C10-C28)	E-1004	13	11	mg/kg	J	8.0	12	mg/kg	J	60	9.1	mg/kg	J	11	9.6	mg/kg	J	150	45	mg/kg	J	25	10	mg/kg	J
Metals																										
	OSW-6010B																									
	Arsenic	7440-38-2	0.011	0.50	mg/l	UB	0.016	0.50	mg/l	UB	0.0064	0.50	mg/l	UB	0.0057	0.50	mg/l	UB	0.0099	0.50	mg/l	UB	0.0050	0.50	mg/l	UB
	Chromium	7440-47-3	0.0010	0.50	mg/l	UB	0.0012	0.50	mg/l	UB	0.0013	0.50	mg/l	UB	0.0014	0.50	mg/l	UB	0.0024	0.50	mg/l	UB	0.0025	0.50	mg/l	UB
	Iron	7439-89-6	0.038	0.10	mg/l	UB	0.031	0.10	mg/l	UB					0.045	0.10	mg/l	UB					0.045	0.10	mg/l	UB
	Nickel	7440-02-0	0.019	0.040	mg/l	UB					0.013	0.040	mg/l	UB	0.014	0.040	mg/l	UB	0.0026	0.040	mg/l	UB				

ANALYTICAL REPORT

Job Number: 240-52462-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
John McFadden
Project Manager I
7/13/2015 5:01 PM

Designee for
Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
07/13/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52462-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/25/2015 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 7 coolers at receipt time were 1.8º C, 2.6º C, 3.2º C, 3.8º C, 3.8º C, 4.4º C and 4.8º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples HA-03_0-0.5(20150624) (240-52462-1), HA-02_0-0.5(20150624) (240-52462-2), HA-05_0-1(20150624) (240-52462-3), HA-01_0-1(20150624) (240-52462-4), HA-04_0-1(20150624) (240-52462-5), HA-07_0-1(20150624) (240-52462-6), HA-06_0-1(20150624) (240-52462-7), HA-08_0-1(20150624) (240-52462-8), HA-09_0-0.5(20150624) (240-52462-9), HA-10_0-1(20150624) (240-52462-10) and MB-01(20150624) (240-52462-11) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/27/2015 and analyzed on 06/29/2015, 06/30/2015 and 07/01/2015.

Acetone failed the recovery criteria high for MRL 240-187197/8.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 187043..

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-187043 and analytical batch 240-187454 on these samples HA-07_0-1(20150624) (240-52462-6), HA-06_0-1(20150624) (240-52462-7), HA-08_0-1(20150624) (240-52462-8) and HA-09_0-0.5(20150624) (240-52462-9) .

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-187043 and analytical batch 240-187606 on these samples HA-10_0-1(20150624) (240-52462-10) and MB-01(20150624) (240-52462-11) .

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples HA-03_0-0.5(20150624) (240-52462-1), HA-02_0-0.5(20150624) (240-52462-2), HA-05_0-1(20150624) (240-52462-3), HA-01_0-1(20150624) (240-52462-4), HA-04_0-1(20150624) (240-52462-5), HA-07_0-1(20150624) (240-52462-6), HA-06_0-1(20150624) (240-52462-7), HA-08_0-1(20150624) (240-52462-8), HA-09_0-0.5(20150624) (240-52462-9) and HA-10_0-1(20150624) (240-52462-10) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/30/2015 and 07/09/2015 and analyzed on 07/08/2015, 07/09/2015 and 07/11/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-188504/17-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Di-n-butyl phthalate was detected in method blank MB 240-188504/17-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

2,4,6-Tribromophenol (Surr) failed the surrogate recovery criteria low for HA-09_0-0.5(20150624) (240-52462-9).

Samples HA-02_0-0.5(20150624) (240-52462-2)[2X] and HA-06_0-1(20150624) (240-52462-7)[2.5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Surrogate recovery for the following sample was outside control limits: HA-09_0-0.5(20150624) (240-52462-9). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples HA-03_0-0.5(20150624) (240-52462-1), HA-02_0-0.5(20150624) (240-52462-2), HA-05_0-1(20150624) (240-52462-3), HA-01_0-1(20150624) (240-52462-4), HA-04_0-1(20150624) (240-52462-5), HA-07_0-1(20150624) (240-52462-6), HA-06_0-1(20150624) (240-52462-7), HA-08_0-1(20150624) (240-52462-8), HA-09_0-0.5(20150624) (240-52462-9), HA-10_0-1(20150624) (240-52462-10) and MB-01(20150624) (240-52462-11) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared on 06/26/2015 and analyzed on 06/26/2015, 06/27/2015 and 06/29/2015.

Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the Gasoline Range Organics (GRO) mix (i.e., Naphthalene): HA-03_0-0.5(20150624) (240-52462-1) and HA-05_0-1(20150624) (240-52462-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples HA-03_0-0.5(20150624) (240-52462-1), HA-02_0-0.5(20150624) (240-52462-2), HA-05_0-1(20150624) (240-52462-3), HA-01_0-1(20150624) (240-52462-4), HA-04_0-1(20150624) (240-52462-5), HA-07_0-1(20150624) (240-52462-6), HA-06_0-1(20150624) (240-52462-7), HA-08_0-1(20150624) (240-52462-8), HA-09_0-0.5(20150624) (240-52462-9) and HA-10_0-1(20150624) (240-52462-10) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/27/2015 and analyzed on 06/29/2015 and 06/30/2015.

Sample HA-06_0-1(20150624) (240-52462-7)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WIS DRO mix : HA-03_0-0.5(20150624) (240-52462-1) and HA-06_0-1(20150624) (240-52462-7).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples HA-03_0-0.5(20150624) (240-52462-1), HA-02_0-0.5(20150624) (240-52462-2), HA-05_0-1(20150624) (240-52462-3), HA-01_0-1(20150624) (240-52462-4), HA-04_0-1(20150624) (240-52462-5), HA-07_0-1(20150624) (240-52462-6), HA-06_0-1(20150624) (240-52462-7), HA-08_0-1(20150624) (240-52462-8), HA-09_0-0.5(20150624) (240-52462-9) and HA-10_0-1(20150624) (240-52462-10) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/26/2015 and analyzed on 06/30/2015.

Barium, Manganese, Nickel and Vanadium were detected in method blank MB 240-186943/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples HA-03_0-0.5(20150624) (240-52462-1), HA-02_0-0.5(20150624) (240-52462-2), HA-05_0-1(20150624) (240-52462-3), HA-01_0-1(20150624) (240-52462-4), HA-04_0-1(20150624) (240-52462-5), HA-07_0-1(20150624) (240-52462-6), HA-06_0-1(20150624) (240-52462-7), HA-08_0-1(20150624) (240-52462-8), HA-09_0-0.5(20150624) (240-52462-9) and HA-10_0-1(20150624) (240-52462-10) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/26/2015 and analyzed on 06/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples HA-03_0-0.5(20150624) (240-52462-1), HA-02_0-0.5(20150624) (240-52462-2), HA-05_0-1(20150624) (240-52462-3), HA-01_0-1(20150624) (240-52462-4), HA-04_0-1(20150624) (240-52462-5), HA-07_0-1(20150624) (240-52462-6), HA-06_0-1(20150624) (240-52462-7), HA-08_0-1(20150624) (240-52462-8), HA-09_0-0.5(20150624) (240-52462-9) and HA-10_0-1(20150624) (240-52462-10) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/26/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-1	**HA-03_0-0.5(20150624)**					
Methyl acetate		130	J	590	ug/Kg	8260B
Toluene		14	J	290	ug/Kg	8260B
2-Methylnaphthalene		15	J	370	ug/Kg	8270C
Acenaphthene		24	J	370	ug/Kg	8270C
Acenaphthylene		100	J	370	ug/Kg	8270C
Anthracene		77	J	370	ug/Kg	8270C
Benzaldehyde		14	J	370	ug/Kg	8270C
Benzo[a]anthracene		480		370	ug/Kg	8270C
Benzo[a]pyrene		470		370	ug/Kg	8270C
Benzo[b]fluoranthene		730		370	ug/Kg	8270C
Benzo[g,h,i]perylene		360	J	370	ug/Kg	8270C
Benzo[k]fluoranthene		290	J	370	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		91	J	370	ug/Kg	8270C
Carbazole		48	J	370	ug/Kg	8270C
Chrysene		600		370	ug/Kg	8270C
Dibenz(a,h)anthracene		92	J	370	ug/Kg	8270C
Dibenzofuran		21	J	370	ug/Kg	8270C
Di-n-butyl phthalate		24	J	370	ug/Kg	8270C
Fluoranthene		1100		370	ug/Kg	8270C
Fluorene		28	J	370	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		300	J	370	ug/Kg	8270C
Naphthalene		17	J	370	ug/Kg	8270C
Phenanthrene		480		370	ug/Kg	8270C
Pyrene		910		370	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		2.6	J	12	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		33		10	mg/Kg	WI-DRO
Aluminum		3000		19	mg/Kg	6010B
Barium		40	B	19	mg/Kg	6010B
Beryllium		0.22	J	0.48	mg/Kg	6010B
Calcium		29000		480	mg/Kg	6010B
Cadmium		0.51		0.19	mg/Kg	6010B
Cobalt		4.0	J	4.8	mg/Kg	6010B
Chromium		9.4		0.48	mg/Kg	6010B
Copper		11	F1 F2	2.4	mg/Kg	6010B
Iron		8800		9.7	mg/Kg	6010B
Potassium		560		480	mg/Kg	6010B
Magnesium		10000	F1	480	mg/Kg	6010B
Manganese		400	B	1.5	mg/Kg	6010B
Sodium		62	J	480	mg/Kg	6010B
Nickel		11	B	3.9	mg/Kg	6010B
Vanadium		13	B	4.8	mg/Kg	6010B
Zinc		46	F1	1.9	mg/Kg	6010B
Arsenic		3.0		0.97	mg/Kg	6010B
Lead		18	F1	0.29	mg/Kg	6010B
Mercury		0.025	J	0.12	mg/Kg	7471A
Percent Solids		89		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Moisture		11		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-2	**HA-02_0-0.5(20150624)**					
Methyl acetate		270	J	700	ug/Kg	8260B
m-Xylene & p-Xylene		28	J	350	ug/Kg	8260B
Naphthalene		41	J	350	ug/Kg	8260B
2-Methylnaphthalene		37	J	810	ug/Kg	8270C
Acenaphthene		170	J	810	ug/Kg	8270C
Acenaphthylene		16	J	810	ug/Kg	8270C
Anthracene		280	J	810	ug/Kg	8270C
Benzo[a]anthracene		910		810	ug/Kg	8270C
Benzo[a]pyrene		790	J	810	ug/Kg	8270C
Benzo[b]fluoranthene		1200		810	ug/Kg	8270C
Benzo[g,h,i]perylene		550	J	810	ug/Kg	8270C
Benzo[k]fluoranthene		400	J	810	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		56	J	810	ug/Kg	8270C
Carbazole		160	J	810	ug/Kg	8270C
Chrysene		1000		810	ug/Kg	8270C
Dibenz(a,h)anthracene		170	J	810	ug/Kg	8270C
Dibenzofuran		78	J	810	ug/Kg	8270C
Fluoranthene		1800		810	ug/Kg	8270C
Fluorene		150	J	810	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		450	J	810	ug/Kg	8270C
Naphthalene		40	J	810	ug/Kg	8270C
Phenanthrene		1200		810	ug/Kg	8270C
Pyrene		1500		810	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		48		9.8	mg/Kg	WI-DRO
Aluminum		6600		20	mg/Kg	6010B
Barium		45	B	20	mg/Kg	6010B
Beryllium		0.31	J	0.51	mg/Kg	6010B
Calcium		23000		510	mg/Kg	6010B
Cadmium		0.12	J	0.20	mg/Kg	6010B
Cobalt		11		5.1	mg/Kg	6010B
Chromium		19		0.51	mg/Kg	6010B
Copper		25		2.5	mg/Kg	6010B
Iron		15000		10	mg/Kg	6010B
Potassium		1200		510	mg/Kg	6010B
Magnesium		11000		510	mg/Kg	6010B
Manganese		410	B	1.5	mg/Kg	6010B
Sodium		57	J	510	mg/Kg	6010B
Nickel		20	B	4.1	mg/Kg	6010B
Vanadium		19	B	5.1	mg/Kg	6010B
Zinc		52		2.0	mg/Kg	6010B
Arsenic		4.6		1.0	mg/Kg	6010B
Lead		13		0.30	mg/Kg	6010B
Selenium		0.43	J	0.51	mg/Kg	6010B
Mercury		0.055	J	0.13	mg/Kg	7471A
Percent Solids		81		0.10	%	Moisture
Percent Moisture		19		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-3	**HA-05_0-1(20150624)**					
Methyl acetate		93	J	560	ug/Kg	8260B
2-Methylnaphthalene		7.2	J	380	ug/Kg	8270C
Acenaphthene		12	J	380	ug/Kg	8270C
Acenaphthylene		31	J	380	ug/Kg	8270C
Anthracene		42	J	380	ug/Kg	8270C
Benzaldehyde		28	J	380	ug/Kg	8270C
Benzo[a]anthracene		170	J	380	ug/Kg	8270C
Benzo[a]pyrene		140	J	380	ug/Kg	8270C
Benzo[b]fluoranthene		250	J	380	ug/Kg	8270C
Benzo[g,h,i]perylene		76	J	380	ug/Kg	8270C
Benzo[k]fluoranthene		79	J	380	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		27	J	380	ug/Kg	8270C
Chrysene		190	J	380	ug/Kg	8270C
Dibenz(a,h)anthracene		25	J	380	ug/Kg	8270C
Dibenzofuran		8.3	J	380	ug/Kg	8270C
Fluoranthene		370	J	380	ug/Kg	8270C
Fluorene		15	J	380	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		73	J	380	ug/Kg	8270C
Naphthalene		8.1	J	380	ug/Kg	8270C
Phenanthrene		200	J	380	ug/Kg	8270C
Pyrene		310	J	380	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		12		10	mg/Kg	WI-DRO
Aluminum		4600		19	mg/Kg	6010B
Barium		50	B	19	mg/Kg	6010B
Beryllium		0.29	J	0.48	mg/Kg	6010B
Calcium		16000		480	mg/Kg	6010B
Cadmium		0.12	J	0.19	mg/Kg	6010B
Cobalt		5.7		4.8	mg/Kg	6010B
Chromium		9.3		0.48	mg/Kg	6010B
Copper		11		2.4	mg/Kg	6010B
Iron		9700		9.7	mg/Kg	6010B
Potassium		690		480	mg/Kg	6010B
Magnesium		6000		480	mg/Kg	6010B
Manganese		450	B	1.5	mg/Kg	6010B
Sodium		54	J	480	mg/Kg	6010B
Nickel		13	B	3.9	mg/Kg	6010B
Vanadium		18	B	4.8	mg/Kg	6010B
Zinc		28		1.9	mg/Kg	6010B
Arsenic		2.6		0.97	mg/Kg	6010B
Lead		7.7		0.29	mg/Kg	6010B
Selenium		0.39	J	0.48	mg/Kg	6010B
Mercury		0.014	J	0.10	mg/Kg	7471A
Percent Solids		87		0.10	%	Moisture
Percent Moisture		13		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-4	**HA-01_0-1(20150624)**					
Methyl acetate		170	J	650	ug/Kg	8260B
2-Methylnaphthalene		19	J	400	ug/Kg	8270C
Acenaphthene		32	J	400	ug/Kg	8270C
Acenaphthylene		24	J	400	ug/Kg	8270C
Anthracene		83	J	400	ug/Kg	8270C
Benzaldehyde		17	J	400	ug/Kg	8270C
Benzo[a]anthracene		310	J	400	ug/Kg	8270C
Benzo[a]pyrene		290	J	400	ug/Kg	8270C
Benzo[b]fluoranthene		400		400	ug/Kg	8270C
Benzo[g,h,i]perylene		120	J	400	ug/Kg	8270C
Benzo[k]fluoranthene		170	J	400	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		77	J	400	ug/Kg	8270C
Carbazole		54	J	400	ug/Kg	8270C
Chrysene		370	J	400	ug/Kg	8270C
Dibenz(a,h)anthracene		32	J	400	ug/Kg	8270C
Dibenzofuran		23	J	400	ug/Kg	8270C
Di-n-butyl phthalate		31	J	400	ug/Kg	8270C
Fluoranthene		670		400	ug/Kg	8270C
Fluorene		35	J	400	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		110	J	400	ug/Kg	8270C
Naphthalene		22	J	400	ug/Kg	8270C
Phenanthrene		390	J	400	ug/Kg	8270C
Pyrene		560		400	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		14		10	mg/Kg	WI-DRO
Aluminum		9200		19	mg/Kg	6010B
Barium		100	B	19	mg/Kg	6010B
Beryllium		0.51		0.46	mg/Kg	6010B
Calcium		4800		460	mg/Kg	6010B
Cadmium		0.19		0.19	mg/Kg	6010B
Cobalt		8.4		4.6	mg/Kg	6010B
Chromium		15		0.46	mg/Kg	6010B
Copper		16		2.3	mg/Kg	6010B
Iron		14000		9.3	mg/Kg	6010B
Potassium		1100		460	mg/Kg	6010B
Magnesium		2900		460	mg/Kg	6010B
Manganese		550	B	1.4	mg/Kg	6010B
Sodium		49	J	460	mg/Kg	6010B
Nickel		17	B	3.7	mg/Kg	6010B
Vanadium		29	B	4.6	mg/Kg	6010B
Zinc		70		1.9	mg/Kg	6010B
Arsenic		6.8		0.93	mg/Kg	6010B
Lead		38		0.28	mg/Kg	6010B
Selenium		0.82		0.46	mg/Kg	6010B
Mercury		0.045	J	0.13	mg/Kg	7471A
Percent Solids		83		0.10	%	Moisture
Percent Moisture		17		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-5	**HA-04_0-1(20150624)**					
Methyl acetate		170	J	610	ug/Kg	8260B
2-Methylnaphthalene		11	J	390	ug/Kg	8270C
Acenaphthene		22	J	390	ug/Kg	8270C
Anthracene		40	J	390	ug/Kg	8270C
Benzaldehyde		24	J	390	ug/Kg	8270C
Benzo[a]anthracene		98	J	390	ug/Kg	8270C
Benzo[a]pyrene		98	J	390	ug/Kg	8270C
Benzo[b]fluoranthene		140	J	390	ug/Kg	8270C
Benzo[g,h,i]perylene		50	J	390	ug/Kg	8270C
Benzo[k]fluoranthene		53	J	390	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		85	J	390	ug/Kg	8270C
Chrysene		110	J	390	ug/Kg	8270C
Dibenz(a,h)anthracene		14	J	390	ug/Kg	8270C
Dibenzofuran		14	J	390	ug/Kg	8270C
Di-n-butyl phthalate		30	J	390	ug/Kg	8270C
Fluoranthene		190	J	390	ug/Kg	8270C
Fluorene		23	J	390	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		45	J	390	ug/Kg	8270C
Naphthalene		16	J	390	ug/Kg	8270C
Phenanthrene		150	J	390	ug/Kg	8270C
Pyrene		160	J	390	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		8.4	J	11	mg/Kg	WI-DRO
Aluminum		6400		22	mg/Kg	6010B
Barium		170	B	22	mg/Kg	6010B
Beryllium		0.42	J	0.55	mg/Kg	6010B
Calcium		16000		550	mg/Kg	6010B
Cadmium		0.42		0.22	mg/Kg	6010B
Cobalt		8.0		5.5	mg/Kg	6010B
Chromium		13		0.55	mg/Kg	6010B
Copper		15		2.7	mg/Kg	6010B
Iron		13000		11	mg/Kg	6010B
Potassium		940		550	mg/Kg	6010B
Magnesium		6100		550	mg/Kg	6010B
Manganese		1200	B	1.6	mg/Kg	6010B
Sodium		56	J	550	mg/Kg	6010B
Nickel		28	B	4.4	mg/Kg	6010B
Vanadium		24	B	5.5	mg/Kg	6010B
Zinc		88		2.2	mg/Kg	6010B
Arsenic		6.0		1.1	mg/Kg	6010B
Lead		18		0.33	mg/Kg	6010B
Selenium		0.58		0.55	mg/Kg	6010B
Mercury		0.045	J	0.13	mg/Kg	7471A
Percent Solids		85		0.10	%	Moisture
Percent Moisture		15		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-6	**HA-07_0-1(20150624)**					
Methyl acetate		180	J	680	ug/Kg	8260B
2-Methylnaphthalene		4.1	J	380	ug/Kg	8270C
Acenaphthylene		5.4	J	380	ug/Kg	8270C
Anthracene		6.0	J	380	ug/Kg	8270C
Benzaldehyde		20	J	380	ug/Kg	8270C
Benzo[a]anthracene		30	J	380	ug/Kg	8270C
Benzo[a]pyrene		32	J	380	ug/Kg	8270C
Benzo[b]fluoranthene		52	J	380	ug/Kg	8270C
Benzo[g,h,i]perylene		20	J	380	ug/Kg	8270C
Benzo[k]fluoranthene		14	J	380	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		61	J	380	ug/Kg	8270C
Chrysene		39	J	380	ug/Kg	8270C
Di-n-butyl phthalate		26	J	380	ug/Kg	8270C
Fluoranthene		66	J	380	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		17	J	380	ug/Kg	8270C
Naphthalene		10	J	380	ug/Kg	8270C
Phenanthrene		31	J	380	ug/Kg	8270C
Pyrene		55	J	380	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		5.2	J	11	mg/Kg	WI-DRO
Aluminum		3900		21	mg/Kg	6010B
Barium		34	B	21	mg/Kg	6010B
Beryllium		0.25	J	0.53	mg/Kg	6010B
Calcium		5300		530	mg/Kg	6010B
Cadmium		0.17	J	0.21	mg/Kg	6010B
Cobalt		5.0	J	5.3	mg/Kg	6010B
Chromium		7.9		0.53	mg/Kg	6010B
Copper		5.7		2.7	mg/Kg	6010B
Iron		6300		11	mg/Kg	6010B
Potassium		420	J	530	mg/Kg	6010B
Magnesium		2200		530	mg/Kg	6010B
Manganese		190	B	1.6	mg/Kg	6010B
Sodium		27	J	530	mg/Kg	6010B
Nickel		11	B	4.3	mg/Kg	6010B
Vanadium		12	B	5.3	mg/Kg	6010B
Zinc		32		2.1	mg/Kg	6010B
Arsenic		2.5		1.1	mg/Kg	6010B
Lead		5.1		0.32	mg/Kg	6010B
Selenium		0.41	J	0.53	mg/Kg	6010B
Mercury		0.016	J	0.11	mg/Kg	7471A
Percent Solids		87		0.10	%	Moisture
Percent Moisture		13		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-7	**HA-06_0-1(20150624)**					
Methyl acetate		170	J	600	ug/Kg	8260B
Toluene		13	J	300	ug/Kg	8260B
1,1'-Biphenyl		15	J	960	ug/Kg	8270C
2-Methylnaphthalene		130	J	960	ug/Kg	8270C
Acenaphthene		120	J	960	ug/Kg	8270C
Acenaphthylene		95	J	960	ug/Kg	8270C
Anthracene		250	J	960	ug/Kg	8270C
Benzaldehyde		44	J	960	ug/Kg	8270C
Benzo[a]anthracene		940	J	960	ug/Kg	8270C
Benzo[a]pyrene		940	J	960	ug/Kg	8270C
Benzo[b]fluoranthene		1500		960	ug/Kg	8270C
Benzo[g,h,i]perylene		550	J	960	ug/Kg	8270C
Benzo[k]fluoranthene		380	J	960	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		63	J	960	ug/Kg	8270C
Carbazole		140	J	960	ug/Kg	8270C
Chrysene		1100		960	ug/Kg	8270C
Dibenz(a,h)anthracene		130	J	960	ug/Kg	8270C
Dibenzofuran		55	J	960	ug/Kg	8270C
Fluoranthene		1800		960	ug/Kg	8270C
Fluorene		120	J	960	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		350	J	960	ug/Kg	8270C
Naphthalene		130	J	960	ug/Kg	8270C
Phenanthrene		930	J	960	ug/Kg	8270C
Pyrene		1500		960	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		220		50	mg/Kg	WI-DRO
Aluminum		3800		20	mg/Kg	6010B
Barium		39	B	20	mg/Kg	6010B
Beryllium		0.21	J	0.50	mg/Kg	6010B
Calcium		17000		500	mg/Kg	6010B
Cadmium		0.53		0.20	mg/Kg	6010B
Cobalt		4.2	J	5.0	mg/Kg	6010B
Chromium		9.1		0.50	mg/Kg	6010B
Copper		14		2.5	mg/Kg	6010B
Iron		8900		10	mg/Kg	6010B
Potassium		830		500	mg/Kg	6010B
Magnesium		4900		500	mg/Kg	6010B
Manganese		250	B	1.5	mg/Kg	6010B
Sodium		63	J	500	mg/Kg	6010B
Nickel		11	B	4.0	mg/Kg	6010B
Vanadium		16	B	5.0	mg/Kg	6010B
Zinc		40		2.0	mg/Kg	6010B
Arsenic		2.8		1.0	mg/Kg	6010B
Lead		32		0.30	mg/Kg	6010B
Mercury		0.11		0.11	mg/Kg	7471A
Percent Solids		86		0.10	%	Moisture
Percent Moisture		14		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-8	**HA-08_0-1(20150624)**					
Acetone		390	J	1200	ug/Kg	8260B
Methyl acetate		210	J	590	ug/Kg	8260B
2-Methylnaphthalene		8.0	J	390	ug/Kg	8270C
Acenaphthene		11	J	390	ug/Kg	8270C
Acenaphthylene		8.2	J	390	ug/Kg	8270C
Acetophenone		11	J	390	ug/Kg	8270C
Anthracene		29	J	390	ug/Kg	8270C
Benzaldehyde		30	J	390	ug/Kg	8270C
Benzo[a]anthracene		130	J	390	ug/Kg	8270C
Benzo[a]pyrene		130	J	390	ug/Kg	8270C
Benzo[b]fluoranthene		170	J	390	ug/Kg	8270C
Benzo[g,h,i]perylene		74	J	390	ug/Kg	8270C
Benzo[k]fluoranthene		73	J	390	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		53	J	390	ug/Kg	8270C
Chrysene		150	J	390	ug/Kg	8270C
Dibenz(a,h)anthracene		21	J	390	ug/Kg	8270C
Dibenzofuran		8.6	J	390	ug/Kg	8270C
Di-n-butyl phthalate		20	J	390	ug/Kg	8270C
Fluoranthene		280	J	390	ug/Kg	8270C
Fluorene		9.0	J	390	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		62	J	390	ug/Kg	8270C
Naphthalene		8.6	J	390	ug/Kg	8270C
Phenanthrene		130	J	390	ug/Kg	8270C
Pyrene		230	J	390	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		14		10	mg/Kg	WI-DRO
Aluminum		5400		21	mg/Kg	6010B
Barium		46	B	21	mg/Kg	6010B
Beryllium		0.33	J	0.53	mg/Kg	6010B
Calcium		37000		530	mg/Kg	6010B
Cadmium		0.31		0.21	mg/Kg	6010B
Cobalt		8.4		5.3	mg/Kg	6010B
Chromium		11		0.53	mg/Kg	6010B
Copper		12		2.7	mg/Kg	6010B
Iron		12000		11	mg/Kg	6010B
Potassium		1900		530	mg/Kg	6010B
Magnesium		8800		530	mg/Kg	6010B
Manganese		490	B	1.6	mg/Kg	6010B
Sodium		71	J	530	mg/Kg	6010B
Nickel		17	B	4.3	mg/Kg	6010B
Vanadium		14	B	5.3	mg/Kg	6010B
Zinc		49		2.1	mg/Kg	6010B
Arsenic		4.0		1.1	mg/Kg	6010B
Lead		14		0.32	mg/Kg	6010B
Mercury		0.022	J	0.13	mg/Kg	7471A
Percent Solids		84		0.10	%	Moisture
Percent Moisture		16		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-9	**HA-09_0-0.5(20150624)**					
Acetone		360	J	1300	ug/Kg	8260B
Methyl acetate		200	J	630	ug/Kg	8260B
2-Methylnaphthalene		5.2	J	430	ug/Kg	8270C
Acenaphthene		8.7	J	430	ug/Kg	8270C
Acenaphthylene		6.1	J	430	ug/Kg	8270C
Anthracene		15	J	430	ug/Kg	8270C
Benzaldehyde		28	J	430	ug/Kg	8270C
Benzo[a]anthracene		62	J	430	ug/Kg	8270C
Benzo[a]pyrene		60	J	430	ug/Kg	8270C
Benzo[b]fluoranthene		91	J	430	ug/Kg	8270C
Benzo[g,h,i]perylene		34	J	430	ug/Kg	8270C
Benzo[k]fluoranthene		36	J	430	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		34	J	430	ug/Kg	8270C
Chrysene		77	J	430	ug/Kg	8270C
Fluoranthene		140	J	430	ug/Kg	8270C
Fluorene		7.6	J	430	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		26	J	430	ug/Kg	8270C
Naphthalene		6.4	J	430	ug/Kg	8270C
Phenanthrene		72	J	430	ug/Kg	8270C
Pyrene		110	J	430	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		13		11	mg/Kg	WI-DRO
Aluminum		6500		20	mg/Kg	6010B
Barium		39	B	20	mg/Kg	6010B
Beryllium		0.42	J	0.50	mg/Kg	6010B
Calcium		15000		500	mg/Kg	6010B
Cadmium		0.16	J	0.20	mg/Kg	6010B
Cobalt		8.5		5.0	mg/Kg	6010B
Chromium		12		0.50	mg/Kg	6010B
Copper		9.9		2.5	mg/Kg	6010B
Iron		12000		9.9	mg/Kg	6010B
Potassium		2300		500	mg/Kg	6010B
Magnesium		5200		500	mg/Kg	6010B
Manganese		310	B	1.5	mg/Kg	6010B
Sodium		50	J	500	mg/Kg	6010B
Nickel		17	B	4.0	mg/Kg	6010B
Vanadium		14	B	5.0	mg/Kg	6010B
Zinc		35		2.0	mg/Kg	6010B
Arsenic		4.3		0.99	mg/Kg	6010B
Lead		8.9		0.30	mg/Kg	6010B
Selenium		0.39	J	0.50	mg/Kg	6010B
Mercury		0.027	J	0.15	mg/Kg	7471A
Percent Solids		77		0.10	%	Moisture
Percent Moisture		23		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52462-10	**HA-10_0-1(20150624)**					
Methyl acetate		630	J	650	ug/Kg	8260B
2-Methylnaphthalene		6.3	J	400	ug/Kg	8270C
Acenaphthene		5.5	J	400	ug/Kg	8270C
Acenaphthylene		7.8	J	400	ug/Kg	8270C
Acetophenone		13	J	400	ug/Kg	8270C
Anthracene		15	J	400	ug/Kg	8270C
Benzaldehyde		41	J	400	ug/Kg	8270C
Benzo[a]anthracene		72	J	400	ug/Kg	8270C
Benzo[a]pyrene		70	J	400	ug/Kg	8270C
Benzo[b]fluoranthene		110	J	400	ug/Kg	8270C
Benzo[g,h,i]perylene		48	J	400	ug/Kg	8270C
Benzo[k]fluoranthene		40	J	400	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		39	J	400	ug/Kg	8270C
Chrysene		86	J	400	ug/Kg	8270C
Dibenz(a,h)anthracene		13	J	400	ug/Kg	8270C
Fluoranthene		140	J	400	ug/Kg	8270C
Fluorene		7.7	J	400	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		39	J	400	ug/Kg	8270C
Naphthalene		21	J	400	ug/Kg	8270C
Phenanthrene		72	J	400	ug/Kg	8270C
Pyrene		120	J	400	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		15		11	mg/Kg	WI-DRO
Aluminum		7500		20	mg/Kg	6010B
Barium		55	B	20	mg/Kg	6010B
Beryllium		0.42	J	0.50	mg/Kg	6010B
Calcium		19000		500	mg/Kg	6010B
Cadmium		0.18	J	0.20	mg/Kg	6010B
Cobalt		7.1		5.0	mg/Kg	6010B
Chromium		13		0.50	mg/Kg	6010B
Copper		11		2.5	mg/Kg	6010B
Iron		19000		10	mg/Kg	6010B
Potassium		2200		500	mg/Kg	6010B
Magnesium		5800		500	mg/Kg	6010B
Manganese		410	B	1.5	mg/Kg	6010B
Sodium		56	J	500	mg/Kg	6010B
Nickel		16	B	4.0	mg/Kg	6010B
Vanadium		16	B	5.0	mg/Kg	6010B
Zinc		38		2.0	mg/Kg	6010B
Arsenic		4.4		1.0	mg/Kg	6010B
Lead		13		0.30	mg/Kg	6010B
Mercury		0.041	J	0.14	mg/Kg	7471A
Percent Solids		82		0.10	%	Moisture
Percent Moisture		18		0.10	%	Moisture

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Method	Analyst	Analyst ID
SW846 8260B	Lata, Todd	TJL2
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Hula, Tom	TMH
SW846 8270C	Ulman, Mark	MRU
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 7471A	Walpole, Barbara	BW
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52462-1	HA-03_0-0.5(20150624)	Solid	06/24/2015 0810	06/25/2015 0900
240-52462-2	HA-02_0-0.5(20150624)	Solid	06/24/2015 0845	06/25/2015 0900
240-52462-3	HA-05_0-1(20150624)	Solid	06/24/2015 0915	06/25/2015 0900
240-52462-4	HA-01_0-1(20150624)	Solid	06/24/2015 1020	06/25/2015 0900
240-52462-5	HA-04_0-1(20150624)	Solid	06/24/2015 1045	06/25/2015 0900
240-52462-6	HA-07_0-1(20150624)	Solid	06/24/2015 1115	06/25/2015 0900
240-52462-7	HA-06_0-1(20150624)	Solid	06/24/2015 1210	06/25/2015 0900
240-52462-8	HA-08_0-1(20150624)	Solid	06/24/2015 1250	06/25/2015 0900
240-52462-9	HA-09_0-0.5(20150624)	Solid	06/24/2015 1315	06/25/2015 0900
240-52462-10	HA-10_0-1(20150624)	Solid	06/24/2015 1345	06/25/2015 0900
240-52462-11	MB-01(20150624)	Solid	06/24/2015 0000	06/25/2015 0900

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-03_0-0.5(20150624)**

Lab Sample ID: 240-52462-1 Date Sampled: 06/24/2015 0810
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143906.D
Dilution:	1.0			Initial Weight/Volume:	9.553 g
Analysis Date:	06/29/2015 2129			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		270	1200
Allyl chloride		ND		35	590
Benzene		ND		11	290
Bromobenzene		ND		15	290
Bromochloromethane		ND		82	290
Bromodichloromethane		ND		45	290
Bromoform		ND		72	290
Bromomethane		ND		60	290
2-Butanone (MEK)		ND		86	1200
Carbon disulfide		ND		66	290
Carbon tetrachloride		ND		56	290
Chlorobenzene		ND		48	290
Chlorodibromomethane		ND		54	290
Chloroethane		ND		60	290
Chloroform		ND		42	290
Chloromethane		ND		56	290
2-Chlorotoluene		ND		48	290
4-Chlorotoluene		ND		31	290
cis-1,2-Dichloroethene		ND		45	290
cis-1,3-Dichloropropene		ND		26	290
Cyclohexane		ND		35	590
1,2-Dibromo-3-Chloropropane		ND		83	590
1,2-Dibromoethane		ND		38	290
Dibromomethane		ND		59	290
1,2-Dichlorobenzene		ND		22	290
1,3-Dichlorobenzene		ND		35	290
1,4-Dichlorobenzene		ND		48	290
Dichlorodifluoromethane		ND		72	290
1,1-Dichloroethane		ND		41	290
1,2-Dichloroethane		ND		62	290
1,1-Dichloroethene		ND		35	290
Dichlorofluoromethane		ND		39	590
1,2-Dichloropropane		ND		38	290
1,3-Dichloropropane		ND		27	290
2,2-Dichloropropane		ND		61	290
1,1-Dichloropropene		ND		45	290
Ethylbenzene		ND		41	290
Ethyl ether		ND		120	590
Hexachlorobutadiene		ND		52	290
2-Hexanone		ND		99	1200
Isopropylbenzene		ND		15	290
Methyl acetate		130	J	65	590
Methylcyclohexane		ND		45	590
Methylene Chloride		ND		100	290
4-Methyl-2-pentanone (MIBK)		ND		66	1200
Methyl tert butyl ether		ND		35	290

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-03_0-0.5(20150624)**

Lab Sample ID: 240-52462-1 Date Sampled: 06/24/2015 0810
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143906.D
Dilution:	1.0			Initial Weight/Volume:	9.553 g
Analysis Date:	06/29/2015 2129			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		23	290
Naphthalene		ND		31	290
n-Butylbenzene		ND		25	290
N-Propylbenzene		ND		72	290
o-Xylene		ND		20	290
p-Isopropyltoluene		ND		29	290
sec-Butylbenzene		ND		19	290
Styrene		ND		32	290
tert-Butylbenzene		ND		40	290
1,1,1,2-Tetrachloroethane		ND		58	290
1,1,2,2-Tetrachloroethane		ND		50	290
Tetrachloroethene		ND		32	290
Tetrahydrofuran		ND		140	1200
Toluene		14	J	12	290
trans-1,2-Dichloroethene		ND		31	290
trans-1,3-Dichloropropene		ND		31	290
1,2,3-Trichlorobenzene		ND		46	290
1,2,4-Trichlorobenzene		ND		35	290
1,1,1-Trichloroethane		ND		49	290
1,1,2-Trichloroethane		ND		97	290
Trichloroethene		ND		46	290
Trichlorofluoromethane		ND		41	290
1,2,3-Trichloropropane		ND		120	290
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		49	290
1,2,4-Trimethylbenzene		ND		15	290
1,3,5-Trimethylbenzene		ND		18	290
Vinyl chloride		ND		66	290

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	89		26 - 141
Dibromofluoromethane (Surr)	93		30 - 122
1,2-Dichloroethane-d4 (Surr)	105		39 - 128
Toluene-d8 (Surr)	92		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-02_0-0.5(20150624)**

Lab Sample ID: 240-52462-2 Date Sampled: 06/24/2015 0845
Client Matrix: Solid % Moisture: 18.6 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143907.D
Dilution:	1.0			Initial Weight/Volume:	8.792 g
Analysis Date:	06/29/2015 2150			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		320	1400
Allyl chloride		ND		42	700
Benzene		ND		13	350
Bromobenzene		ND		18	350
Bromochloromethane		ND		98	350
Bromodichloromethane		ND		53	350
Bromoform		ND		85	350
Bromomethane		ND		71	350
2-Butanone (MEK)		ND		100	1400
Carbon disulfide		ND		78	350
Carbon tetrachloride		ND		67	350
Chlorobenzene		ND		57	350
Chlorodibromomethane		ND		64	350
Chloroethane		ND		71	350
Chloroform		ND		50	350
Chloromethane		ND		67	350
2-Chlorotoluene		ND		57	350
4-Chlorotoluene		ND		36	350
cis-1,2-Dichloroethene		ND		53	350
cis-1,3-Dichloropropene		ND		31	350
Cyclohexane		ND		42	700
1,2-Dibromo-3-Chloropropane		ND		99	700
1,2-Dibromoethane		ND		45	350
Dibromomethane		ND		70	350
1,2-Dichlorobenzene		ND		27	350
1,3-Dichlorobenzene		ND		42	350
1,4-Dichlorobenzene		ND		57	350
Dichlorodifluoromethane		ND		85	350
1,1-Dichloroethane		ND		49	350
1,2-Dichloroethane		ND		74	350
1,1-Dichloroethene		ND		42	350
Dichlorofluoromethane		ND		46	700
1,2-Dichloropropane		ND		45	350
1,3-Dichloropropane		ND		32	350
2,2-Dichloropropane		ND		73	350
1,1-Dichloropropene		ND		53	350
Ethylbenzene		ND		49	350
Ethyl ether		ND		140	700
Hexachlorobutadiene		ND		61	350
2-Hexanone		ND		120	1400
Isopropylbenzene		ND		18	350
Methyl acetate		270	J	77	700
Methylcyclohexane		ND		53	700
Methylene Chloride		ND		120	350
4-Methyl-2-pentanone (MIBK)		ND		78	1400
Methyl tert butyl ether		ND		42	350

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-02_0-0.5(20150624)

Lab Sample ID: 240-52462-2 Date Sampled: 06/24/2015 0845
Client Matrix: Solid % Moisture: 18.6 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143907.D
Dilution:	1.0			Initial Weight/Volume:	8.792 g
Analysis Date:	06/29/2015 2150			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		28	J	28	350
Naphthalene		41	J	36	350
n-Butylbenzene		ND		29	350
N-Propylbenzene		ND		85	350
o-Xylene		ND		24	350
p-Isopropyltoluene		ND		35	350
sec-Butylbenzene		ND		22	350
Styrene		ND		38	350
tert-Butylbenzene		ND		47	350
1,1,1,2-Tetrachloroethane		ND		68	350
1,1,2,2-Tetrachloroethane		ND		60	350
Tetrachloroethene		ND		38	350
Tetrahydrofuran		ND		170	1400
Toluene		ND		14	350
trans-1,2-Dichloroethene		ND		36	350
trans-1,3-Dichloropropene		ND		36	350
1,2,3-Trichlorobenzene		ND		54	350
1,2,4-Trichlorobenzene		ND		42	350
1,1,1-Trichloroethane		ND		59	350
1,1,2-Trichloroethane		ND		120	350
Trichloroethene		ND		54	350
Trichlorofluoromethane		ND		49	350
1,2,3-Trichloropropane		ND		140	350
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		59	350
1,2,4-Trimethylbenzene		ND		18	350
1,3,5-Trimethylbenzene		ND		21	350
Vinyl chloride		ND		78	350

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	92		26 - 141
Dibromofluoromethane (Surr)	88		30 - 122
1,2-Dichloroethane-d4 (Surr)	101		39 - 128
Toluene-d8 (Surr)	86		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-05_0-1(20150624)**

Lab Sample ID: 240-52462-3 Date Sampled: 06/24/2015 0915
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143908.D
Dilution:	1.0			Initial Weight/Volume:	10.276 g
Analysis Date:	06/29/2015 2212			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		250	1100
Allyl chloride		ND		34	560
Benzene		ND		10	280
Bromobenzene		ND		15	280
Bromochloromethane		ND		79	280
Bromodichloromethane		ND		43	280
Bromoform		ND		68	280
Bromomethane		ND		57	280
2-Butanone (MEK)		ND		82	1100
Carbon disulfide		ND		63	280
Carbon tetrachloride		ND		54	280
Chlorobenzene		ND		46	280
Chlorodibromomethane		ND		52	280
Chloroethane		ND		57	280
Chloroform		ND		40	280
Chloromethane		ND		54	280
2-Chlorotoluene		ND		46	280
4-Chlorotoluene		ND		29	280
cis-1,2-Dichloroethene		ND		43	280
cis-1,3-Dichloropropene		ND		25	280
Cyclohexane		ND		34	560
1,2-Dibromo-3-Chloropropane		ND		80	560
1,2-Dibromoethane		ND		36	280
Dibromomethane		ND		56	280
1,2-Dichlorobenzene		ND		21	280
1,3-Dichlorobenzene		ND		34	280
1,4-Dichlorobenzene		ND		46	280
Dichlorodifluoromethane		ND		68	280
1,1-Dichloroethane		ND		39	280
1,2-Dichloroethane		ND		59	280
1,1-Dichloroethene		ND		34	280
Dichlorofluoromethane		ND		37	560
1,2-Dichloropropane		ND		36	280
1,3-Dichloropropane		ND		26	280
2,2-Dichloropropane		ND		58	280
1,1-Dichloropropene		ND		43	280
Ethylbenzene		ND		39	280
Ethyl ether		ND		110	560
Hexachlorobutadiene		ND		49	280
2-Hexanone		ND		94	1100
Isopropylbenzene		ND		15	280
Methyl acetate		93	J	62	560
Methylcyclohexane		ND		43	560
Methylene Chloride		ND		95	280
4-Methyl-2-pentanone (MIBK)		ND		63	1100
Methyl tert butyl ether		ND		34	280

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-05_0-1(20150624)**

Lab Sample ID: 240-52462-3 Date Sampled: 06/24/2015 0915
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143908.D
Dilution:	1.0			Initial Weight/Volume:	10.276 g
Analysis Date:	06/29/2015 2212			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		22	280
Naphthalene		ND		29	280
n-Butylbenzene		ND		24	280
N-Propylbenzene		ND		68	280
o-Xylene		ND		19	280
p-Isopropyltoluene		ND		28	280
sec-Butylbenzene		ND		18	280
Styrene		ND		30	280
tert-Butylbenzene		ND		38	280
1,1,1,2-Tetrachloroethane		ND		55	280
1,1,2,2-Tetrachloroethane		ND		48	280
Tetrachloroethene		ND		30	280
Tetrahydrofuran		ND		130	1100
Toluene		ND		11	280
trans-1,2-Dichloroethene		ND		29	280
trans-1,3-Dichloropropene		ND		29	280
1,2,3-Trichlorobenzene		ND		44	280
1,2,4-Trichlorobenzene		ND		34	280
1,1,1-Trichloroethane		ND		47	280
1,1,2-Trichloroethane		ND		93	280
Trichloroethene		ND		44	280
Trichlorofluoromethane		ND		39	280
1,2,3-Trichloropropane		ND		120	280
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		47	280
1,2,4-Trimethylbenzene		ND		15	280
1,3,5-Trimethylbenzene		ND		17	280
Vinyl chloride		ND		63	280

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	84		26 - 141
Dibromofluoromethane (Surr)	96		30 - 122
1,2-Dichloroethane-d4 (Surr)	108		39 - 128
Toluene-d8 (Surr)	93		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-01_0-1(20150624)**

Lab Sample ID: 240-52462-4 Date Sampled: 06/24/2015 1020
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143909.D
Dilution:	1.0			Initial Weight/Volume:	9.255 g
Analysis Date:	06/29/2015 2233			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		300	1300
Allyl chloride		ND		39	650
Benzene		ND		12	330
Bromobenzene		ND		17	330
Bromochloromethane		ND		91	330
Bromodichloromethane		ND		50	330
Bromoform		ND		80	330
Bromomethane		ND		67	330
2-Butanone (MEK)		ND		95	1300
Carbon disulfide		ND		73	330
Carbon tetrachloride		ND		63	330
Chlorobenzene		ND		54	330
Chlorodibromomethane		ND		60	330
Chloroethane		ND		67	330
Chloroform		ND		47	330
Chloromethane		ND		63	330
2-Chlorotoluene		ND		54	330
4-Chlorotoluene		ND		34	330
cis-1,2-Dichloroethene		ND		50	330
cis-1,3-Dichloropropene		ND		29	330
Cyclohexane		ND		39	650
1,2-Dibromo-3-Chloropropane		ND		93	650
1,2-Dibromoethane		ND		42	330
Dibromomethane		ND		65	330
1,2-Dichlorobenzene		ND		25	330
1,3-Dichlorobenzene		ND		39	330
1,4-Dichlorobenzene		ND		54	330
Dichlorodifluoromethane		ND		80	330
1,1-Dichloroethane		ND		46	330
1,2-Dichloroethane		ND		69	330
1,1-Dichloroethene		ND		39	330
Dichlorofluoromethane		ND		43	650
1,2-Dichloropropane		ND		42	330
1,3-Dichloropropane		ND		30	330
2,2-Dichloropropane		ND		68	330
1,1-Dichloropropene		ND		50	330
Ethylbenzene		ND		46	330
Ethyl ether		ND		130	650
Hexachlorobutadiene		ND		57	330
2-Hexanone		ND		110	1300
Isopropylbenzene		ND		17	330
Methyl acetate		170	J	72	650
Methylcyclohexane		ND		50	650
Methylene Chloride		ND		110	330
4-Methyl-2-pentanone (MIBK)		ND		73	1300
Methyl tert butyl ether		ND		39	330

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-01_0-1(20150624)**

Lab Sample ID: 240-52462-4 Date Sampled: 06/24/2015 1020
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143909.D
Dilution:	1.0			Initial Weight/Volume:	9.255 g
Analysis Date:	06/29/2015 2233			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		26	330
Naphthalene		ND		34	330
n-Butylbenzene		ND		27	330
N-Propylbenzene		ND		80	330
o-Xylene		ND		22	330
p-Isopropyltoluene		ND		33	330
sec-Butylbenzene		ND		21	330
Styrene		ND		35	330
tert-Butylbenzene		ND		44	330
1,1,1,2-Tetrachloroethane		ND		64	330
1,1,2,2-Tetrachloroethane		ND		56	330
Tetrachloroethene		ND		35	330
Tetrahydrofuran		ND		160	1300
Toluene		ND		13	330
trans-1,2-Dichloroethene		ND		34	330
trans-1,3-Dichloropropene		ND		34	330
1,2,3-Trichlorobenzene		ND		51	330
1,2,4-Trichlorobenzene		ND		39	330
1,1,1-Trichloroethane		ND		55	330
1,1,2-Trichloroethane		ND		110	330
Trichloroethene		ND		51	330
Trichlorofluoromethane		ND		46	330
1,2,3-Trichloropropane		ND		130	330
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		55	330
1,2,4-Trimethylbenzene		ND		17	330
1,3,5-Trimethylbenzene		ND		20	330
Vinyl chloride		ND		73	330

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	82		26 - 141
Dibromofluoromethane (Surr)	91		30 - 122
1,2-Dichloroethane-d4 (Surr)	104		39 - 128
Toluene-d8 (Surr)	90		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-04_0-1(20150624)**

Lab Sample ID: 240-52462-5 Date Sampled: 06/24/2015 1045
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143910.D
Dilution:	1.0			Initial Weight/Volume:	9.66 g
Analysis Date:	06/29/2015 2254			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		280	1200
Allyl chloride		ND		37	610
Benzene		ND		11	310
Bromobenzene		ND		16	310
Bromochloromethane		ND		85	310
Bromodichloromethane		ND		46	310
Bromoform		ND		74	310
Bromomethane		ND		62	310
2-Butanone (MEK)		ND		89	1200
Carbon disulfide		ND		68	310
Carbon tetrachloride		ND		59	310
Chlorobenzene		ND		50	310
Chlorodibromomethane		ND		56	310
Chloroethane		ND		62	310
Chloroform		ND		44	310
Chloromethane		ND		59	310
2-Chlorotoluene		ND		50	310
4-Chlorotoluene		ND		32	310
cis-1,2-Dichloroethene		ND		46	310
cis-1,3-Dichloropropene		ND		27	310
Cyclohexane		ND		37	610
1,2-Dibromo-3-Chloropropane		ND		87	610
1,2-Dibromoethane		ND		39	310
Dibromomethane		ND		61	310
1,2-Dichlorobenzene		ND		23	310
1,3-Dichlorobenzene		ND		37	310
1,4-Dichlorobenzene		ND		50	310
Dichlorodifluoromethane		ND		74	310
1,1-Dichloroethane		ND		43	310
1,2-Dichloroethane		ND		65	310
1,1-Dichloroethene		ND		37	310
Dichlorofluoromethane		ND		40	610
1,2-Dichloropropane		ND		39	310
1,3-Dichloropropane		ND		28	310
2,2-Dichloropropane		ND		63	310
1,1-Dichloropropene		ND		46	310
Ethylbenzene		ND		43	310
Ethyl ether		ND		120	610
Hexachlorobutadiene		ND		54	310
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		16	310
Methyl acetate		170	J	67	610
Methylcyclohexane		ND		46	610
Methylene Chloride		ND		100	310
4-Methyl-2-pentanone (MIBK)		ND		68	1200
Methyl tert butyl ether		ND		37	310

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-04_0-1(20150624)

Lab Sample ID: 240-52462-5 Date Sampled: 06/24/2015 1045
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143910.D
Dilution:	1.0			Initial Weight/Volume:	9.66 g
Analysis Date:	06/29/2015 2254			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		24	310
Naphthalene		ND		32	310
n-Butylbenzene		ND		26	310
N-Propylbenzene		ND		74	310
o-Xylene		ND		21	310
p-Isopropyltoluene		ND		31	310
sec-Butylbenzene		ND		20	310
Styrene		ND		33	310
tert-Butylbenzene		ND		42	310
1,1,1,2-Tetrachloroethane		ND		60	310
1,1,2,2-Tetrachloroethane		ND		53	310
Tetrachloroethene		ND		33	310
Tetrahydrofuran		ND		150	1200
Toluene		ND		12	310
trans-1,2-Dichloroethene		ND		32	310
trans-1,3-Dichloropropene		ND		32	310
1,2,3-Trichlorobenzene		ND		48	310
1,2,4-Trichlorobenzene		ND		37	310
1,1,1-Trichloroethane		ND		51	310
1,1,2-Trichloroethane		ND		100	310
Trichloroethene		ND		48	310
Trichlorofluoromethane		ND		43	310
1,2,3-Trichloropropane		ND		130	310
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		51	310
1,2,4-Trimethylbenzene		ND		16	310
1,3,5-Trimethylbenzene		ND		18	310
Vinyl chloride		ND		68	310

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	85		26 - 141
Dibromofluoromethane (Surr)	96		30 - 122
1,2-Dichloroethane-d4 (Surr)	109		39 - 128
Toluene-d8 (Surr)	93		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-07_0-1(20150624)**

Lab Sample ID: 240-52462-6 Date Sampled: 06/24/2015 1115
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143930.D
Dilution:	1.0			Initial Weight/Volume:	8.527 g
Analysis Date:	06/30/2015 2335			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		310	1400
Allyl chloride		ND		41	680
Benzene		ND		12	340
Bromobenzene		ND		18	340
Bromochloromethane		ND		95	340
Bromodichloromethane		ND		51	340
Bromoform		ND		82	340
Bromomethane		ND		69	340
2-Butanone (MEK)		ND		99	1400
Carbon disulfide		ND		76	340
Carbon tetrachloride		ND		65	340
Chlorobenzene		ND		55	340
Chlorodibromomethane		ND		62	340
Chloroethane		ND		69	340
Chloroform		ND		49	340
Chloromethane		ND		65	340
2-Chlorotoluene		ND		55	340
4-Chlorotoluene		ND		35	340
cis-1,2-Dichloroethene		ND		51	340
cis-1,3-Dichloropropene		ND		30	340
Cyclohexane		ND		41	680
1,2-Dibromo-3-Chloropropane		ND		96	680
1,2-Dibromoethane		ND		43	340
Dibromomethane		ND		68	340
1,2-Dichlorobenzene		ND		26	340
1,3-Dichlorobenzene		ND		41	340
1,4-Dichlorobenzene		ND		55	340
Dichlorodifluoromethane		ND		82	340
1,1-Dichloroethane		ND		47	340
1,2-Dichloroethane		ND		72	340
1,1-Dichloroethene		ND		41	340
Dichlorofluoromethane		ND		45	680
1,2-Dichloropropane		ND		43	340
1,3-Dichloropropane		ND		31	340
2,2-Dichloropropane		ND		70	340
1,1-Dichloropropene		ND		51	340
Ethylbenzene		ND		47	340
Ethyl ether		ND		130	680
Hexachlorobutadiene		ND		60	340
2-Hexanone		ND		110	1400
Isopropylbenzene		ND		18	340
Methyl acetate		180	J	74	680
Methylcyclohexane		ND		51	680
Methylene Chloride		ND		110	340
4-Methyl-2-pentanone (MIBK)		ND		76	1400
Methyl tert butyl ether		ND		41	340

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-07_0-1(20150624)**

Lab Sample ID: 240-52462-6 Date Sampled: 06/24/2015 1115
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143930.D
Dilution:	1.0			Initial Weight/Volume:	8.527 g
Analysis Date:	06/30/2015 2335			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		27	340
Naphthalene		ND		35	340
n-Butylbenzene		ND		28	340
N-Propylbenzene		ND		82	340
o-Xylene		ND		23	340
p-Isopropyltoluene		ND		34	340
sec-Butylbenzene		ND		22	340
Styrene		ND		37	340
tert-Butylbenzene		ND		46	340
1,1,1,2-Tetrachloroethane		ND		66	340
1,1,2,2-Tetrachloroethane		ND		58	340
Tetrachloroethene		ND		37	340
Tetrahydrofuran		ND		160	1400
Toluene		ND		14	340
trans-1,2-Dichloroethene		ND		35	340
trans-1,3-Dichloropropene		ND		35	340
1,2,3-Trichlorobenzene		ND		53	340
1,2,4-Trichlorobenzene		ND		41	340
1,1,1-Trichloroethane		ND		57	340
1,1,2-Trichloroethane		ND		110	340
Trichloroethene		ND		53	340
Trichlorofluoromethane		ND		47	340
1,2,3-Trichloropropane		ND		140	340
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		57	340
1,2,4-Trimethylbenzene		ND		18	340
1,3,5-Trimethylbenzene		ND		20	340
Vinyl chloride		ND		76	340

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	99		26 - 141
Dibromofluoromethane (Surr)	94		30 - 122
1,2-Dichloroethane-d4 (Surr)	111		39 - 128
Toluene-d8 (Surr)	96		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-06_0-1(20150624)**

Lab Sample ID: 240-52462-7 Date Sampled: 06/24/2015 1210
Client Matrix: Solid % Moisture: 13.8 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143931.D
Dilution:	1.0			Initial Weight/Volume:	9.653 g
Analysis Date:	06/30/2015 2357			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		270	1200
Allyl chloride		ND		36	600
Benzene		ND		11	300
Bromobenzene		ND		16	300
Bromochloromethane		ND		84	300
Bromodichloromethane		ND		46	300
Bromoform		ND		73	300
Bromomethane		ND		61	300
2-Butanone (MEK)		ND		88	1200
Carbon disulfide		ND		67	300
Carbon tetrachloride		ND		58	300
Chlorobenzene		ND		49	300
Chlorodibromomethane		ND		55	300
Chloroethane		ND		61	300
Chloroform		ND		43	300
Chloromethane		ND		58	300
2-Chlorotoluene		ND		49	300
4-Chlorotoluene		ND		31	300
cis-1,2-Dichloroethene		ND		46	300
cis-1,3-Dichloropropene		ND		26	300
Cyclohexane		ND		36	600
1,2-Dibromo-3-Chloropropane		ND		85	600
1,2-Dibromoethane		ND		38	300
Dibromomethane		ND		60	300
1,2-Dichlorobenzene		ND		23	300
1,3-Dichlorobenzene		ND		36	300
1,4-Dichlorobenzene		ND		49	300
Dichlorodifluoromethane		ND		73	300
1,1-Dichloroethane		ND		42	300
1,2-Dichloroethane		ND		64	300
1,1-Dichloroethene		ND		36	300
Dichlorofluoromethane		ND		40	600
1,2-Dichloropropane		ND		38	300
1,3-Dichloropropane		ND		28	300
2,2-Dichloropropane		ND		63	300
1,1-Dichloropropene		ND		46	300
Ethylbenzene		ND		42	300
Ethyl ether		ND		120	600
Hexachlorobutadiene		ND		53	300
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		16	300
Methyl acetate		170	J	66	600
Methylcyclohexane		ND		46	600
Methylene Chloride		ND		100	300
4-Methyl-2-pentanone (MIBK)		ND		67	1200
Methyl tert butyl ether		ND		36	300

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-06_0-1(20150624)**

Lab Sample ID: 240-52462-7 Date Sampled: 06/24/2015 1210
Client Matrix: Solid % Moisture: 13.8 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143931.D
Dilution:	1.0			Initial Weight/Volume:	9.653 g
Analysis Date:	06/30/2015 2357			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		24	300
Naphthalene		ND		31	300
n-Butylbenzene		ND		25	300
N-Propylbenzene		ND		73	300
o-Xylene		ND		20	300
p-Isopropyltoluene		ND		30	300
sec-Butylbenzene		ND		19	300
Styrene		ND		32	300
tert-Butylbenzene		ND		41	300
1,1,1,2-Tetrachloroethane		ND		59	300
1,1,2,2-Tetrachloroethane		ND		52	300
Tetrachloroethene		ND		32	300
Tetrahydrofuran		ND		140	1200
Toluene		13	J	12	300
trans-1,2-Dichloroethene		ND		31	300
trans-1,3-Dichloropropene		ND		31	300
1,2,3-Trichlorobenzene		ND		47	300
1,2,4-Trichlorobenzene		ND		36	300
1,1,1-Trichloroethane		ND		50	300
1,1,2-Trichloroethane		ND		100	300
Trichloroethene		ND		47	300
Trichlorofluoromethane		ND		42	300
1,2,3-Trichloropropane		ND		120	300
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		50	300
1,2,4-Trimethylbenzene		ND		16	300
1,3,5-Trimethylbenzene		ND		18	300
Vinyl chloride		ND		67	300

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	87		26 - 141
Dibromofluoromethane (Surr)	90		30 - 122
1,2-Dichloroethane-d4 (Surr)	100		39 - 128
Toluene-d8 (Surr)	88		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-08_0-1(20150624)**

Lab Sample ID: 240-52462-8 Date Sampled: 06/24/2015 1250
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143932.D
Dilution:	1.0			Initial Weight/Volume:	10.094 g
Analysis Date:	07/01/2015 0018			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		390	J	270	1200
Allyl chloride		ND		35	590
Benzene		ND		11	290
Bromobenzene		ND		15	290
Bromochloromethane		ND		82	290
Bromodichloromethane		ND		45	290
Bromoform		ND		72	290
Bromomethane		ND		60	290
2-Butanone (MEK)		ND		86	1200
Carbon disulfide		ND		66	290
Carbon tetrachloride		ND		56	290
Chlorobenzene		ND		48	290
Chlorodibromomethane		ND		54	290
Chloroethane		ND		60	290
Chloroform		ND		42	290
Chloromethane		ND		56	290
2-Chlorotoluene		ND		48	290
4-Chlorotoluene		ND		30	290
cis-1,2-Dichloroethene		ND		45	290
cis-1,3-Dichloropropene		ND		26	290
Cyclohexane		ND		35	590
1,2-Dibromo-3-Chloropropane		ND		83	590
1,2-Dibromoethane		ND		38	290
Dibromomethane		ND		59	290
1,2-Dichlorobenzene		ND		22	290
1,3-Dichlorobenzene		ND		35	290
1,4-Dichlorobenzene		ND		48	290
Dichlorodifluoromethane		ND		72	290
1,1-Dichloroethane		ND		41	290
1,2-Dichloroethane		ND		62	290
1,1-Dichloroethene		ND		35	290
Dichlorofluoromethane		ND		39	590
1,2-Dichloropropane		ND		38	290
1,3-Dichloropropane		ND		27	290
2,2-Dichloropropane		ND		61	290
1,1-Dichloropropene		ND		45	290
Ethylbenzene		ND		41	290
Ethyl ether		ND		110	590
Hexachlorobutadiene		ND		52	290
2-Hexanone		ND		98	1200
Isopropylbenzene		ND		15	290
Methyl acetate		210	J	64	590
Methylcyclohexane		ND		45	590
Methylene Chloride		ND		100	290
4-Methyl-2-pentanone (MIBK)		ND		66	1200
Methyl tert butyl ether		ND		35	290

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-08_0-1(20150624)**

Lab Sample ID: 240-52462-8 Date Sampled: 06/24/2015 1250
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143932.D
Dilution:	1.0			Initial Weight/Volume:	10.094 g
Analysis Date:	07/01/2015 0018			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		23	290
Naphthalene		ND		30	290
n-Butylbenzene		ND		25	290
N-Propylbenzene		ND		72	290
o-Xylene		ND		20	290
p-Isopropyltoluene		ND		29	290
sec-Butylbenzene		ND		19	290
Styrene		ND		32	290
tert-Butylbenzene		ND		40	290
1,1,1,2-Tetrachloroethane		ND		57	290
1,1,2,2-Tetrachloroethane		ND		50	290
Tetrachloroethene		ND		32	290
Tetrahydrofuran		ND		140	1200
Toluene		ND		12	290
trans-1,2-Dichloroethene		ND		30	290
trans-1,3-Dichloropropene		ND		30	290
1,2,3-Trichlorobenzene		ND		46	290
1,2,4-Trichlorobenzene		ND		35	290
1,1,1-Trichloroethane		ND		49	290
1,1,2-Trichloroethane		ND		97	290
Trichloroethene		ND		46	290
Trichlorofluoromethane		ND		41	290
1,2,3-Trichloropropane		ND		120	290
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		49	290
1,2,4-Trimethylbenzene		ND		15	290
1,3,5-Trimethylbenzene		ND		18	290
Vinyl chloride		ND		66	290

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	85		26 - 141
Dibromofluoromethane (Surr)	91		30 - 122
1,2-Dichloroethane-d4 (Surr)	104		39 - 128
Toluene-d8 (Surr)	91		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-09_0-0.5(20150624)**

Lab Sample ID: 240-52462-9 Date Sampled: 06/24/2015 1315
Client Matrix: Solid % Moisture: 23.2 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143933.D
Dilution:	1.0			Initial Weight/Volume:	10.364 g
Analysis Date:	07/01/2015 0039			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		360	J	280	1300
Allyl chloride		ND		38	630
Benzene		ND		11	310
Bromobenzene		ND		16	310
Bromochloromethane		ND		88	310
Bromodichloromethane		ND		48	310
Bromoform		ND		77	310
Bromomethane		ND		64	310
2-Butanone (MEK)		ND		92	1300
Carbon disulfide		ND		70	310
Carbon tetrachloride		ND		60	310
Chlorobenzene		ND		52	310
Chlorodibromomethane		ND		58	310
Chloroethane		ND		64	310
Chloroform		ND		45	310
Chloromethane		ND		60	310
2-Chlorotoluene		ND		52	310
4-Chlorotoluene		ND		33	310
cis-1,2-Dichloroethene		ND		48	310
cis-1,3-Dichloropropene		ND		28	310
Cyclohexane		ND		38	630
1,2-Dibromo-3-Chloropropane		ND		89	630
1,2-Dibromoethane		ND		40	310
Dibromomethane		ND		63	310
1,2-Dichlorobenzene		ND		24	310
1,3-Dichlorobenzene		ND		38	310
1,4-Dichlorobenzene		ND		52	310
Dichlorodifluoromethane		ND		77	310
1,1-Dichloroethane		ND		44	310
1,2-Dichloroethane		ND		67	310
1,1-Dichloroethene		ND		38	310
Dichlorofluoromethane		ND		41	630
1,2-Dichloropropane		ND		40	310
1,3-Dichloropropane		ND		29	310
2,2-Dichloropropane		ND		65	310
1,1-Dichloropropene		ND		48	310
Ethylbenzene		ND		44	310
Ethyl ether		ND		120	630
Hexachlorobutadiene		ND		55	310
2-Hexanone		ND		110	1300
Isopropylbenzene		ND		16	310
Methyl acetate		200	J	69	630
Methylcyclohexane		ND		48	630
Methylene Chloride		ND		110	310
4-Methyl-2-pentanone (MIBK)		ND		70	1300
Methyl tert butyl ether		ND		38	310

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-09_0-0.5(20150624)**

Lab Sample ID: 240-52462-9 Date Sampled: 06/24/2015 1315
Client Matrix: Solid % Moisture: 23.2 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143933.D
Dilution:	1.0			Initial Weight/Volume:	10.364 g
Analysis Date:	07/01/2015 0039			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		25	310
Naphthalene		ND		33	310
n-Butylbenzene		ND		26	310
N-Propylbenzene		ND		77	310
o-Xylene		ND		21	310
p-Isopropyltoluene		ND		31	310
sec-Butylbenzene		ND		20	310
Styrene		ND		34	310
tert-Butylbenzene		ND		43	310
1,1,1,2-Tetrachloroethane		ND		62	310
1,1,2,2-Tetrachloroethane		ND		54	310
Tetrachloroethene		ND		34	310
Tetrahydrofuran		ND		150	1300
Toluene		ND		13	310
trans-1,2-Dichloroethene		ND		33	310
trans-1,3-Dichloropropene		ND		33	310
1,2,3-Trichlorobenzene		ND		49	310
1,2,4-Trichlorobenzene		ND		38	310
1,1,1-Trichloroethane		ND		53	310
1,1,2-Trichloroethane		ND		100	310
Trichloroethene		ND		49	310
Trichlorofluoromethane		ND		44	310
1,2,3-Trichloropropane		ND		130	310
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		53	310
1,2,4-Trimethylbenzene		ND		16	310
1,3,5-Trimethylbenzene		ND		19	310
Vinyl chloride		ND		70	310

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	80		26 - 141
Dibromofluoromethane (Surr)	87		30 - 122
1,2-Dichloroethane-d4 (Surr)	103		39 - 128
Toluene-d8 (Surr)	88		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-10_0-1(20150624)**

Lab Sample ID: 240-52462-10 Date Sampled: 06/24/2015 1345
Client Matrix: Solid % Moisture: 17.8 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143943.D
Dilution:	1.0			Initial Weight/Volume:	9.348 g
Analysis Date:	07/01/2015 1424			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		290	1300
Allyl chloride		ND		39	650
Benzene		ND		12	330
Bromobenzene		ND		17	330
Bromochloromethane		ND		91	330
Bromodichloromethane		ND		49	330
Bromoform		ND		79	330
Bromomethane		ND		66	330
2-Butanone (MEK)		ND		95	1300
Carbon disulfide		ND		73	330
Carbon tetrachloride		ND		62	330
Chlorobenzene		ND		53	330
Chlorodibromomethane		ND		60	330
Chloroethane		ND		66	330
Chloroform		ND		47	330
Chloromethane		ND		62	330
2-Chlorotoluene		ND		53	330
4-Chlorotoluene		ND		34	330
cis-1,2-Dichloroethene		ND		49	330
cis-1,3-Dichloropropene		ND		29	330
Cyclohexane		ND		39	650
1,2-Dibromo-3-Chloropropane		ND		92	650
1,2-Dibromoethane		ND		42	330
Dibromomethane		ND		65	330
1,2-Dichlorobenzene		ND		25	330
1,3-Dichlorobenzene		ND		39	330
1,4-Dichlorobenzene		ND		53	330
Dichlorodifluoromethane		ND		79	330
1,1-Dichloroethane		ND		46	330
1,2-Dichloroethane		ND		69	330
1,1-Dichloroethene		ND		39	330
Dichlorofluoromethane		ND		43	650
1,2-Dichloropropane		ND		42	330
1,3-Dichloropropane		ND		30	330
2,2-Dichloropropane		ND		68	330
1,1-Dichloropropene		ND		49	330
Ethylbenzene		ND		46	330
Ethyl ether		ND		130	650
Hexachlorobutadiene		ND		57	330
2-Hexanone		ND		110	1300
Isopropylbenzene		ND		17	330
Methyl acetate		630	J	72	650
Methylcyclohexane		ND		49	650
Methylene Chloride		ND		110	330
4-Methyl-2-pentanone (MIBK)		ND		73	1300
Methyl tert butyl ether		ND		39	330

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-10_0-1(20150624)**

Lab Sample ID: 240-52462-10 Date Sampled: 06/24/2015 1345
Client Matrix: Solid % Moisture: 17.8 Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143943.D
Dilution:	1.0			Initial Weight/Volume:	9.348 g
Analysis Date:	07/01/2015 1424			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		26	330
Naphthalene		ND		34	330
n-Butylbenzene		ND		27	330
N-Propylbenzene		ND		79	330
o-Xylene		ND		22	330
p-Isopropyltoluene		ND		33	330
sec-Butylbenzene		ND		21	330
Styrene		ND		35	330
tert-Butylbenzene		ND		44	330
1,1,1,2-Tetrachloroethane		ND		64	330
1,1,2,2-Tetrachloroethane		ND		56	330
Tetrachloroethene		ND		35	330
Tetrahydrofuran		ND		160	1300
Toluene		ND		13	330
trans-1,2-Dichloroethene		ND		34	330
trans-1,3-Dichloropropene		ND		34	330
1,2,3-Trichlorobenzene		ND		51	330
1,2,4-Trichlorobenzene		ND		39	330
1,1,1-Trichloroethane		ND		55	330
1,1,2-Trichloroethane		ND		110	330
Trichloroethene		ND		51	330
Trichlorofluoromethane		ND		46	330
1,2,3-Trichloropropane		ND		130	330
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		55	330
1,2,4-Trimethylbenzene		ND		17	330
1,3,5-Trimethylbenzene		ND		20	330
Vinyl chloride		ND		73	330

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	106		26 - 141
Dibromofluoromethane (Surr)	87		30 - 122
1,2-Dichloroethane-d4 (Surr)	107		39 - 128
Toluene-d8 (Surr)	96		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **MB-01(20150624)**

Lab Sample ID: 240-52462-11 Date Sampled: 06/24/2015 0000
Client Matrix: Solid Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143944.D
Dilution:	1.0			Initial Weight/Volume:	10 g
Analysis Date:	07/01/2015 1446			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		48	250
Chlorobenzene		ND		41	250
Chlorodibromomethane		ND		46	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		53	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **MB-01(20150624)**

Lab Sample ID: 240-52462-11 Date Sampled: 06/24/2015 0000
Client Matrix: Solid Date Received: 06/25/2015 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187043	Lab File ID:	143944.D
Dilution:	1.0			Initial Weight/Volume:	10 g
Analysis Date:	07/01/2015 1446			Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		43	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		42	250
1,1,2-Trichloroethane		ND		83	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		56	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	110		26 - 141
Dibromofluoromethane (Surr)	95		30 - 122
1,2-Dichloroethane-d4 (Surr)	119		39 - 128
Toluene-d8 (Surr)	106		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-03_0-0.5(20150624)**

Lab Sample ID: 240-52462-1 Date Sampled: 06/24/2015 0810
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708007.D
Dilution:	1.0			Initial Weight/Volume:	30.23 g
Analysis Date:	07/08/2015 1008			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		3.9	370
2,2'-oxybis[1-chloropropane]		ND		11	370
2,4,5-Trichlorophenol		ND		28	370
2,4,6-Trichlorophenol		ND		9.9	370
2,4-Dichlorophenol		ND		22	370
2,4-Dimethylphenol		ND		22	370
2,4-Dinitrophenol		ND		23	1800
2,4-Dinitrotoluene		ND		19	370
2,6-Dinitrotoluene		ND		23	370
2-Chloronaphthalene		ND		0.50	370
2-Chlorophenol		ND		9.1	370
2-Methylnaphthalene		15	J	0.56	370
2-Methylphenol		ND		12	370
2-Nitroaniline		ND		10	1800
2-Nitrophenol		ND		9.2	370
3,3'-Dichlorobenzidine		ND		20	1800
3-Nitroaniline		ND		18	1800
4,6-Dinitro-2-methylphenol		ND		10	1800
4-Bromophenyl phenyl ether		ND		14	370
4-Chloro-3-methylphenol		ND		23	370
4-Chloroaniline		ND		19	370
4-Chlorophenyl phenyl ether		ND		14	370
4-Nitroaniline		ND		29	1800
4-Nitrophenol		ND		19	1800
Acenaphthene		24	J	0.85	370
Acenaphthylene		100	J	0.39	370
Acetophenone		ND		10	370
Anthracene		77	J	0.87	370
Atrazine		ND		10	370
Benzaldehyde		14	J	13	370
Benzo[a]anthracene		480		0.70	370
Benzo[a]pyrene		470		0.71	370
Benzo[b]fluoranthene		730		0.66	370
Benzo[g,h,i]perylene		360	J	0.39	370
Benzo[k]fluoranthene		290	J	0.76	370
Bis(2-chloroethoxy)methane		ND		24	370
Bis(2-chloroethyl)ether		ND		2.2	370
Bis(2-ethylhexyl) phthalate		91	J	21	370
Butyl benzyl phthalate		ND		11	370
Caprolactam		ND		41	370
Carbazole		48	J	30	370
Chrysene		600		1.2	370
Dibenz(a,h)anthracene		92	J	0.73	370
Dibenzofuran		21	J	0.73	370
Diethyl phthalate		ND		18	370
Dimethyl phthalate		ND		19	370

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-03_0-0.5(20150624)**

Lab Sample ID: 240-52462-1 Date Sampled: 06/24/2015 0810
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708007.D
Dilution:	1.0			Initial Weight/Volume:	30.23 g
Analysis Date:	07/08/2015 1008			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		24	J	17	370
Di-n-octyl phthalate		ND		8.8	370
Fluoranthene		1100		0.61	370
Fluorene		28	J	0.59	370
Hexachlorobenzene		ND		2.3	370
Hexachlorobutadiene		ND		6.2	370
Hexachlorocyclopentadiene		ND		9.0	1800
Hexachloroethane		ND		10	370
Indeno[1,2,3-cd]pyrene		300	J	0.39	370
Isophorone		ND		14	370
Naphthalene		17	J	0.91	370
Nitrobenzene		ND		2.4	370
N-Nitrosodi-n-propylamine		ND		7.0	370
N-Nitrosodiphenylamine		ND		23	370
Pentachlorophenol		ND		10	370
Phenol		ND		8.1	370
Phenanthrene		480		0.81	370
Pyrene		910		0.49	370
3 & 4 Methylphenol		ND		22	450

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	69		24 - 110
2-Fluorophenol (Surr)	65		24 - 110
2,4,6-Tribromophenol (Surr)	36		10 - 110
Nitrobenzene-d5 (Surr)	57		20 - 110
Phenol-d5 (Surr)	72		26 - 110
Terphenyl-d14 (Surr)	71		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-02_0-0.5(20150624)**

Lab Sample ID: 240-52462-2 Date Sampled: 06/24/2015 0845
Client Matrix: Solid % Moisture: 18.6 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188473	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50709025.D
Dilution:	2.0			Initial Weight/Volume:	30.03 g
Analysis Date:	07/09/2015 1834			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		8.6	810
2,2'-oxybis[1-chloropropane]		ND		23	810
2,4,5-Trichlorophenol		ND		61	810
2,4,6-Trichlorophenol		ND		22	810
2,4-Dichlorophenol		ND		49	810
2,4-Dimethylphenol		ND		49	810
2,4-Dinitrophenol		ND		52	3900
2,4-Dinitrotoluene		ND		42	810
2,6-Dinitrotoluene		ND		52	810
2-Chloronaphthalene		ND		1.1	810
2-Chlorophenol		ND		20	810
2-Methylnaphthalene		37	J	1.2	810
2-Methylphenol		ND		27	810
2-Nitroaniline		ND		22	3900
2-Nitrophenol		ND		20	810
3,3'-Dichlorobenzidine		ND		44	3900
3-Nitroaniline		ND		39	3900
4,6-Dinitro-2-methylphenol		ND		23	3900
4-Bromophenyl phenyl ether		ND		32	810
4-Chloro-3-methylphenol		ND		52	810
4-Chloroaniline		ND		42	810
4-Chlorophenyl phenyl ether		ND		32	810
4-Nitroaniline		ND		64	3900
4-Nitrophenol		ND		42	3900
Acenaphthene		170	J	1.9	810
Acenaphthylene		16	J	0.86	810
Acetophenone		ND		23	810
Anthracene		280	J	1.9	810
Atrazine		ND		22	810
Benzaldehyde		ND		29	810
Benzo[a]anthracene		910		1.5	810
Benzo[a]pyrene		790	J	1.6	810
Benzo[b]fluoranthene		1200		1.4	810
Benzo[g,h,i]perylene		550	J	0.86	810
Benzo[k]fluoranthene		400	J	1.7	810
Bis(2-chloroethoxy)methane		ND		54	810
Bis(2-chloroethyl)ether		ND		4.9	810
Bis(2-ethylhexyl) phthalate		56	J	47	810
Butyl benzyl phthalate		ND		25	810
Caprolactam		ND		91	810
Carbazole		160	J	66	810
Chrysene		1000		2.7	810
Dibenz(a,h)anthracene		170	J	1.6	810
Dibenzofuran		78	J	1.6	810
Diethyl phthalate		ND		39	810
Dimethyl phthalate		ND		42	810

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-02_0-0.5(20150624)**

Lab Sample ID: 240-52462-2 Date Sampled: 06/24/2015 0845
Client Matrix: Solid % Moisture: 18.6 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188473	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50709025.D
Dilution:	2.0			Initial Weight/Volume:	30.03 g
Analysis Date:	07/09/2015 1834			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		37	810
Di-n-octyl phthalate		ND		19	810
Fluoranthene		1800		1.3	810
Fluorene		150	J	1.3	810
Hexachlorobenzene		ND		5.2	810
Hexachlorobutadiene		ND		14	810
Hexachlorocyclopentadiene		ND		20	3900
Hexachloroethane		ND		22	810
Indeno[1,2,3-cd]pyrene		450	J	0.86	810
Isophorone		ND		32	810
Naphthalene		40	J	2.0	810
Nitrobenzene		ND		5.4	810
N-Nitrosodi-n-propylamine		ND		15	810
N-Nitrosodiphenylamine		ND		52	810
Pentachlorophenol		ND		22	810
Phenol		ND		18	810
Phenanthrene		1200		1.8	810
Pyrene		1500		1.1	810
3 & 4 Methylphenol		ND		49	980

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	66		24 - 110
2-Fluorophenol (Surr)	62		24 - 110
2,4,6-Tribromophenol (Surr)	17		10 - 110
Nitrobenzene-d5 (Surr)	52		20 - 110
Phenol-d5 (Surr)	69		26 - 110
Terphenyl-d14 (Surr)	77		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-05_0-1(20150624)**

Lab Sample ID: 240-52462-3 Date Sampled: 06/24/2015 0915
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708017.D
Dilution:	1.0			Initial Weight/Volume:	29.92 g
Analysis Date:	07/08/2015 1422			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.0	380
2,2'-oxybis[1-chloropropane]		ND		11	380
2,4,5-Trichlorophenol		ND		29	380
2,4,6-Trichlorophenol		ND		10	380
2,4-Dichlorophenol		ND		23	380
2,4-Dimethylphenol		ND		23	380
2,4-Dinitrophenol		ND		24	1900
2,4-Dinitrotoluene		ND		20	380
2,6-Dinitrotoluene		ND		24	380
2-Chloronaphthalene		ND		0.52	380
2-Chlorophenol		ND		9.5	380
2-Methylnaphthalene		7.2	J	0.58	380
2-Methylphenol		ND		13	380
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		9.6	380
3,3'-Dichlorobenzidine		ND		21	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		15	380
4-Chloro-3-methylphenol		ND		24	380
4-Chloroaniline		ND		20	380
4-Chlorophenyl phenyl ether		ND		15	380
4-Nitroaniline		ND		30	1900
4-Nitrophenol		ND		20	1900
Acenaphthene		12	J	0.88	380
Acenaphthylene		31	J	0.40	380
Acetophenone		ND		11	380
Anthracene		42	J	0.90	380
Atrazine		ND		11	380
Benzaldehyde		28	J	14	380
Benzo[a]anthracene		170	J	0.73	380
Benzo[a]pyrene		140	J	0.74	380
Benzo[b]fluoranthene		250	J	0.68	380
Benzo[g,h,i]perylene		76	J	0.40	380
Benzo[k]fluoranthene		79	J	0.79	380
Bis(2-chloroethoxy)methane		ND		25	380
Bis(2-chloroethyl)ether		ND		2.3	380
Bis(2-ethylhexyl) phthalate		27	J	22	380
Butyl benzyl phthalate		ND		12	380
Caprolactam		ND		43	380
Carbazole		ND		31	380
Chrysene		190	J	1.3	380
Dibenz(a,h)anthracene		25	J	0.76	380
Dibenzofuran		8.3	J	0.76	380
Diethyl phthalate		ND		19	380
Dimethyl phthalate		ND		20	380

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-05_0-1(20150624)**

Lab Sample ID: 240-52462-3 Date Sampled: 06/24/2015 0915
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708017.D
Dilution:	1.0			Initial Weight/Volume:	29.92 g
Analysis Date:	07/08/2015 1422			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		17	380
Di-n-octyl phthalate		ND		9.1	380
Fluoranthene		370	J	0.64	380
Fluorene		15	J	0.61	380
Hexachlorobenzene		ND		2.4	380
Hexachlorobutadiene		ND		6.5	380
Hexachlorocyclopentadiene		ND		9.4	1900
Hexachloroethane		ND		10	380
Indeno[1,2,3-cd]pyrene		73	J	0.40	380
Isophorone		ND		15	380
Naphthalene		8.1	J	0.95	380
Nitrobenzene		ND		2.5	380
N-Nitrosodi-n-propylamine		ND		7.3	380
N-Nitrosodiphenylamine		ND		24	380
Pentachlorophenol		ND		11	380
Phenol		ND		8.4	380
Phenanthrene		200	J	0.84	380
Pyrene		310	J	0.51	380
3 & 4 Methylphenol		ND		23	460

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		24 - 110
2-Fluorophenol (Surr)	73		24 - 110
2,4,6-Tribromophenol (Surr)	13		10 - 110
Nitrobenzene-d5 (Surr)	62		20 - 110
Phenol-d5 (Surr)	80		26 - 110
Terphenyl-d14 (Surr)	75		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-01_0-1(20150624)**

Lab Sample ID: 240-52462-4 Date Sampled: 06/24/2015 1020
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708018.D
Dilution:	1.0			Initial Weight/Volume:	30.23 g
Analysis Date:	07/08/2015 1448			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.2	400
2,2'-oxybis[1-chloropropane]		ND		11	400
2,4,5-Trichlorophenol		ND		30	400
2,4,6-Trichlorophenol		ND		11	400
2,4-Dichlorophenol		ND		24	400
2,4-Dimethylphenol		ND		24	400
2,4-Dinitrophenol		ND		25	1900
2,4-Dinitrotoluene		ND		20	400
2,6-Dinitrotoluene		ND		25	400
2-Chloronaphthalene		ND		0.54	400
2-Chlorophenol		ND		9.8	400
2-Methylnaphthalene		19	J	0.60	400
2-Methylphenol		ND		13	400
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		10	400
3,3'-Dichlorobenzidine		ND		22	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		16	400
4-Chloro-3-methylphenol		ND		25	400
4-Chloroaniline		ND		20	400
4-Chlorophenyl phenyl ether		ND		16	400
4-Nitroaniline		ND		31	1900
4-Nitrophenol		ND		20	1900
Acenaphthene		32	J	0.91	400
Acenaphthylene		24	J	0.42	400
Acetophenone		ND		11	400
Anthracene		83	J	0.94	400
Atrazine		ND		11	400
Benzaldehyde		17	J	14	400
Benzo[a]anthracene		310	J	0.76	400
Benzo[a]pyrene		290	J	0.77	400
Benzo[b]fluoranthene		400		0.71	400
Benzo[g,h,i]perylene		120	J	0.42	400
Benzo[k]fluoranthene		170	J	0.82	400
Bis(2-chloroethoxy)methane		ND		26	400
Bis(2-chloroethyl)ether		ND		2.4	400
Bis(2-ethylhexyl) phthalate		77	J	23	400
Butyl benzyl phthalate		ND		12	400
Caprolactam		ND		44	400
Carbazole		54	J	32	400
Chrysene		370	J	1.3	400
Dibenz(a,h)anthracene		32	J	0.79	400
Dibenzofuran		23	J	0.79	400
Diethyl phthalate		ND		19	400
Dimethyl phthalate		ND		20	400

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-01_0-1(20150624)**

Lab Sample ID: 240-52462-4 Date Sampled: 06/24/2015 1020
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708018.D
Dilution:	1.0			Initial Weight/Volume:	30.23 g
Analysis Date:	07/08/2015 1448			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		31	J	18	400
Di-n-octyl phthalate		ND		9.5	400
Fluoranthene		670		0.66	400
Fluorene		35	J	0.64	400
Hexachlorobenzene		ND		2.5	400
Hexachlorobutadiene		ND		6.7	400
Hexachlorocyclopentadiene		ND		9.7	1900
Hexachloroethane		ND		11	400
Indeno[1,2,3-cd]pyrene		110	J	0.42	400
Isophorone		ND		16	400
Naphthalene		22	J	0.98	400
Nitrobenzene		ND		2.6	400
N-Nitrosodi-n-propylamine		ND		7.6	400
N-Nitrosodiphenylamine		ND		25	400
Pentachlorophenol		ND		11	400
Phenol		ND		8.8	400
Phenanthrene		390	J	0.88	400
Pyrene		560		0.53	400
3 & 4 Methylphenol		ND		24	480

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	70		24 - 110
2-Fluorophenol (Surr)	72		24 - 110
2,4,6-Tribromophenol (Surr)	28		10 - 110
Nitrobenzene-d5 (Surr)	62		20 - 110
Phenol-d5 (Surr)	77		26 - 110
Terphenyl-d14 (Surr)	74		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-04_0-1(20150624)**

Lab Sample ID: 240-52462-5 Date Sampled: 06/24/2015 1045
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708019.D
Dilution:	1.0			Initial Weight/Volume:	30.14 g
Analysis Date:	07/08/2015 1513			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.1	390
2,2'-oxybis[1-chloropropane]		ND		11	390
2,4,5-Trichlorophenol		ND		29	390
2,4,6-Trichlorophenol		ND		10	390
2,4-Dichlorophenol		ND		23	390
2,4-Dimethylphenol		ND		23	390
2,4-Dinitrophenol		ND		25	1900
2,4-Dinitrotoluene		ND		20	390
2,6-Dinitrotoluene		ND		25	390
2-Chloronaphthalene		ND		0.53	390
2-Chlorophenol		ND		9.6	390
2-Methylnaphthalene		11	J	0.59	390
2-Methylphenol		ND		13	390
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		9.7	390
3,3'-Dichlorobenzidine		ND		21	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		15	390
4-Chloro-3-methylphenol		ND		25	390
4-Chloroaniline		ND		20	390
4-Chlorophenyl phenyl ether		ND		15	390
4-Nitroaniline		ND		31	1900
4-Nitrophenol		ND		20	1900
Acenaphthene		22	J	0.89	390
Acenaphthylene		ND		0.41	390
Acetophenone		ND		11	390
Anthracene		40	J	0.92	390
Atrazine		ND		11	390
Benzaldehyde		24	J	14	390
Benzo[a]anthracene		98	J	0.74	390
Benzo[a]pyrene		98	J	0.75	390
Benzo[b]fluoranthene		140	J	0.69	390
Benzo[g,h,i]perylene		50	J	0.41	390
Benzo[k]fluoranthene		53	J	0.80	390
Bis(2-chloroethoxy)methane		ND		26	390
Bis(2-chloroethyl)ether		ND		2.3	390
Bis(2-ethylhexyl) phthalate		85	J	22	390
Butyl benzyl phthalate		ND		12	390
Caprolactam		ND		43	390
Carbazole		ND		32	390
Chrysene		110	J	1.3	390
Dibenz(a,h)anthracene		14	J	0.77	390
Dibenzofuran		14	J	0.77	390
Diethyl phthalate		ND		19	390
Dimethyl phthalate		ND		20	390

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-04_0-1(20150624)**

Lab Sample ID: 240-52462-5 Date Sampled: 06/24/2015 1045
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708019.D
Dilution:	1.0			Initial Weight/Volume:	30.14 g
Analysis Date:	07/08/2015 1513			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		30	J	18	390
Di-n-octyl phthalate		ND		9.3	390
Fluoranthene		190	J	0.65	390
Fluorene		23	J	0.62	390
Hexachlorobenzene		ND		2.5	390
Hexachlorobutadiene		ND		6.6	390
Hexachlorocyclopentadiene		ND		9.5	1900
Hexachloroethane		ND		11	390
Indeno[1,2,3-cd]pyrene		45	J	0.41	390
Isophorone		ND		15	390
Naphthalene		16	J	0.96	390
Nitrobenzene		ND		2.6	390
N-Nitrosodi-n-propylamine		ND		7.4	390
N-Nitrosodiphenylamine		ND		25	390
Pentachlorophenol		ND		11	390
Phenol		ND		8.6	390
Phenanthrene		150	J	0.86	390
Pyrene		160	J	0.52	390
3 & 4 Methylphenol		ND		23	470

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	72		24 - 110
2-Fluorophenol (Surr)	64		24 - 110
2,4,6-Tribromophenol (Surr)	16		10 - 110
Nitrobenzene-d5 (Surr)	62		20 - 110
Phenol-d5 (Surr)	70		26 - 110
Terphenyl-d14 (Surr)	73		36 - 110

Client Sample ID: **HA-07_0-1(20150624)**

Lab Sample ID: 240-52462-6 Date Sampled: 06/24/2015 1115
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708012.D
Dilution:	1.0			Initial Weight/Volume:	30.19 g
Analysis Date:	07/08/2015 1215			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.0	380
2,2'-oxybis[1-chloropropane]		ND		11	380
2,4,5-Trichlorophenol		ND		29	380
2,4,6-Trichlorophenol		ND		10	380
2,4-Dichlorophenol		ND		23	380
2,4-Dimethylphenol		ND		23	380
2,4-Dinitrophenol		ND		24	1800
2,4-Dinitrotoluene		ND		19	380
2,6-Dinitrotoluene		ND		24	380
2-Chloronaphthalene		ND		0.52	380
2-Chlorophenol		ND		9.4	380
2-Methylnaphthalene		4.1	J	0.57	380
2-Methylphenol		ND		13	380
2-Nitroaniline		ND		10	1800
2-Nitrophenol		ND		9.5	380
3,3'-Dichlorobenzidine		ND		21	1800
3-Nitroaniline		ND		18	1800
4,6-Dinitro-2-methylphenol		ND		11	1800
4-Bromophenyl phenyl ether		ND		15	380
4-Chloro-3-methylphenol		ND		24	380
4-Chloroaniline		ND		19	380
4-Chlorophenyl phenyl ether		ND		15	380
4-Nitroaniline		ND		30	1800
4-Nitrophenol		ND		19	1800
Acenaphthene		ND		0.87	380
Acenaphthylene		5.4	J	0.40	380
Acetophenone		ND		11	380
Anthracene		6.0	J	0.89	380
Atrazine		ND		10	380
Benzaldehyde		20	J	14	380
Benzo[a]anthracene		30	J	0.72	380
Benzo[a]pyrene		32	J	0.73	380
Benzo[b]fluoranthene		52	J	0.68	380
Benzo[g,h,i]perylene		20	J	0.40	380
Benzo[k]fluoranthene		14	J	0.78	380
Bis(2-chloroethoxy)methane		ND		25	380
Bis(2-chloroethyl)ether		ND		2.3	380
Bis(2-ethylhexyl) phthalate		61	J	22	380
Butyl benzyl phthalate		ND		11	380
Caprolactam		ND		42	380
Carbazole		ND		31	380
Chrysene		39	J	1.3	380
Dibenz(a,h)anthracene		ND		0.76	380
Dibenzofuran		ND		0.76	380
Diethyl phthalate		ND		18	380
Dimethyl phthalate		ND		19	380

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-07_0-1(20150624)**

Lab Sample ID: 240-52462-6 Date Sampled: 06/24/2015 1115
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708012.D
Dilution:	1.0			Initial Weight/Volume:	30.19 g
Analysis Date:	07/08/2015 1215			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		26	J	17	380
Di-n-octyl phthalate		ND		9.1	380
Fluoranthene		66	J	0.63	380
Fluorene		ND		0.61	380
Hexachlorobenzene		ND		2.4	380
Hexachlorobutadiene		ND		6.4	380
Hexachlorocyclopentadiene		ND		9.3	1800
Hexachloroethane		ND		10	380
Indeno[1,2,3-cd]pyrene		17	J	0.40	380
Isophorone		ND		15	380
Naphthalene		10	J	0.94	380
Nitrobenzene		ND		2.5	380
N-Nitrosodi-n-propylamine		ND		7.2	380
N-Nitrosodiphenylamine		ND		24	380
Pentachlorophenol		ND		10	380
Phenol		ND		8.4	380
Phenanthrene		31	J	0.84	380
Pyrene		55	J	0.50	380
3 & 4 Methylphenol		ND		23	460

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	65		24 - 110
2-Fluorophenol (Surr)	69		24 - 110
2,4,6-Tribromophenol (Surr)	45		10 - 110
Nitrobenzene-d5 (Surr)	60		20 - 110
Phenol-d5 (Surr)	71		26 - 110
Terphenyl-d14 (Surr)	66		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-06_0-1(20150624)**

Lab Sample ID: 240-52462-7 Date Sampled: 06/24/2015 1210
Client Matrix: Solid % Moisture: 13.8 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708022.D
Dilution:	2.5			Initial Weight/Volume:	30.01 g
Analysis Date:	07/08/2015 1630			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		15	J	10	960
2,2'-oxybis[1-chloropropane]		ND		28	960
2,4,5-Trichlorophenol		ND		73	960
2,4,6-Trichlorophenol		ND		26	960
2,4-Dichlorophenol		ND		58	960
2,4-Dimethylphenol		ND		58	960
2,4-Dinitrophenol		ND		61	4600
2,4-Dinitrotoluene		ND		49	960
2,6-Dinitrotoluene		ND		61	960
2-Chloronaphthalene		ND		1.3	960
2-Chlorophenol		ND		24	960
2-Methylnaphthalene		130	J	1.5	960
2-Methylphenol		ND		32	960
2-Nitroaniline		ND		26	4600
2-Nitrophenol		ND		24	960
3,3'-Dichlorobenzidine		ND		52	4600
3-Nitroaniline		ND		46	4600
4,6-Dinitro-2-methylphenol		ND		27	4600
4-Bromophenyl phenyl ether		ND		38	960
4-Chloro-3-methylphenol		ND		61	960
4-Chloroaniline		ND		49	960
4-Chlorophenyl phenyl ether		ND		38	960
4-Nitroaniline		ND		75	4600
4-Nitrophenol		ND		49	4600
Acenaphthene		120	J	2.2	960
Acenaphthylene		95	J	1.0	960
Acetophenone		ND		27	960
Anthracene		250	J	2.3	960
Atrazine		ND		26	960
Benzaldehyde		44	J	35	960
Benzo[a]anthracene		940	J	1.8	960
Benzo[a]pyrene		940	J	1.9	960
Benzo[b]fluoranthene		1500		1.7	960
Benzo[g,h,i]perylene		550	J	1.0	960
Benzo[k]fluoranthene		380	J	2.0	960
Bis(2-chloroethoxy)methane		ND		64	960
Bis(2-chloroethyl)ether		ND		5.8	960
Bis(2-ethylhexyl) phthalate		63	J	55	960
Butyl benzyl phthalate		ND		29	960
Caprolactam		ND		110	960
Carbazole		140	J	78	960
Chrysene		1100		3.2	960
Dibenz(a,h)anthracene		130	J	1.9	960
Dibenzofuran		55	J	1.9	960
Diethyl phthalate		ND		46	960
Dimethyl phthalate		ND		49	960

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-06_0-1(20150624)**

Lab Sample ID: 240-52462-7 Date Sampled: 06/24/2015 1210
Client Matrix: Solid % Moisture: 13.8 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708022.D
Dilution:	2.5			Initial Weight/Volume:	30.01 g
Analysis Date:	07/08/2015 1630			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		44	960
Di-n-octyl phthalate		ND		23	960
Fluoranthene		1800		1.6	960
Fluorene		120	J	1.5	960
Hexachlorobenzene		ND		6.1	960
Hexachlorobutadiene		ND		16	960
Hexachlorocyclopentadiene		ND		23	4600
Hexachloroethane		ND		26	960
Indeno[1,2,3-cd]pyrene		350	J	1.0	960
Isophorone		ND		38	960
Naphthalene		130	J	2.4	960
Nitrobenzene		ND		6.4	960
N-Nitrosodi-n-propylamine		ND		18	960
N-Nitrosodiphenylamine		ND		61	960
Pentachlorophenol		ND		26	960
Phenol		ND		21	960
Phenanthrene		930	J	2.1	960
Pyrene		1500		1.3	960
3 & 4 Methylphenol		ND		58	1200

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	76		24 - 110
2-Fluorophenol (Surr)	71		24 - 110
2,4,6-Tribromophenol (Surr)	71		10 - 110
Nitrobenzene-d5 (Surr)	67		20 - 110
Phenol-d5 (Surr)	79		26 - 110
Terphenyl-d14 (Surr)	75		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-08_0-1(20150624)**

Lab Sample ID: 240-52462-8 Date Sampled: 06/24/2015 1250
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708015.D
Dilution:	1.0			Initial Weight/Volume:	29.92 g
Analysis Date:	07/08/2015 1331			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.2	390
2,2'-oxybis[1-chloropropane]		ND		11	390
2,4,5-Trichlorophenol		ND		30	390
2,4,6-Trichlorophenol		ND		11	390
2,4-Dichlorophenol		ND		24	390
2,4-Dimethylphenol		ND		24	390
2,4-Dinitrophenol		ND		25	1900
2,4-Dinitrotoluene		ND		20	390
2,6-Dinitrotoluene		ND		25	390
2-Chloronaphthalene		ND		0.53	390
2-Chlorophenol		ND		9.7	390
2-Methylnaphthalene		8.0	J	0.59	390
2-Methylphenol		ND		13	390
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		9.9	390
3,3'-Dichlorobenzidine		ND		21	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		15	390
4-Chloro-3-methylphenol		ND		25	390
4-Chloroaniline		ND		20	390
4-Chlorophenyl phenyl ether		ND		15	390
4-Nitroaniline		ND		31	1900
4-Nitrophenol		ND		20	1900
Acenaphthene		11	J	0.90	390
Acenaphthylene		8.2	J	0.42	390
Acetophenone		11	J	11	390
Anthracene		29	J	0.93	390
Atrazine		ND		11	390
Benzaldehyde		30	J	14	390
Benzo[a]anthracene		130	J	0.75	390
Benzo[a]pyrene		130	J	0.76	390
Benzo[b]fluoranthene		170	J	0.70	390
Benzo[g,h,i]perylene		74	J	0.42	390
Benzo[k]fluoranthene		73	J	0.81	390
Bis(2-chloroethoxy)methane		ND		26	390
Bis(2-chloroethyl)ether		ND		2.4	390
Bis(2-ethylhexyl) phthalate		53	J	23	390
Butyl benzyl phthalate		ND		12	390
Caprolactam		ND		44	390
Carbazole		ND		32	390
Chrysene		150	J	1.3	390
Dibenz(a,h)anthracene		21	J	0.78	390
Dibenzofuran		8.6	J	0.78	390
Diethyl phthalate		ND		19	390
Dimethyl phthalate		ND		20	390

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-08_0-1(20150624)**

Lab Sample ID: 240-52462-8 Date Sampled: 06/24/2015 1250
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708015.D
Dilution:	1.0			Initial Weight/Volume:	29.92 g
Analysis Date:	07/08/2015 1331			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		20	J	18	390
Di-n-octyl phthalate		ND		9.4	390
Fluoranthene		280	J	0.65	390
Fluorene		9.0	J	0.63	390
Hexachlorobenzene		ND		2.5	390
Hexachlorobutadiene		ND		6.6	390
Hexachlorocyclopentadiene		ND		9.6	1900
Hexachloroethane		ND		11	390
Indeno[1,2,3-cd]pyrene		62	J	0.42	390
Isophorone		ND		15	390
Naphthalene		8.6	J	0.97	390
Nitrobenzene		ND		2.6	390
N-Nitrosodi-n-propylamine		ND		7.5	390
N-Nitrosodiphenylamine		ND		25	390
Pentachlorophenol		ND		11	390
Phenol		ND		8.7	390
Phenanthrene		130	J	0.87	390
Pyrene		230	J	0.52	390
3 & 4 Methylphenol		ND		24	470

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	75		24 - 110
2-Fluorophenol (Surr)	65		24 - 110
2,4,6-Tribromophenol (Surr)	23		10 - 110
Nitrobenzene-d5 (Surr)	58		20 - 110
Phenol-d5 (Surr)	73		26 - 110
Terphenyl-d14 (Surr)	81		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-09_0-0.5(20150624)**

Lab Sample ID: 240-52462-9 Date Sampled: 06/24/2015 1315
Client Matrix: Solid % Moisture: 23.2 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708016.D
Dilution:	1.0			Initial Weight/Volume:	29.92 g
Analysis Date:	07/08/2015 1357			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.6	430
2,2'-oxybis[1-chloropropane]		ND		12	430
2,4,5-Trichlorophenol		ND		33	430
2,4,6-Trichlorophenol		ND		12	430
2,4-Dichlorophenol		ND		26	430
2,4-Dimethylphenol		ND		26	430
2,4-Dinitrophenol		ND		27	2100
2,4-Dinitrotoluene		ND		22	430
2,6-Dinitrotoluene		ND		27	430
2-Chloronaphthalene		ND		0.59	430
2-Chlorophenol		ND		11	430
2-Methylnaphthalene		5.2	J	0.65	430
2-Methylphenol		ND		14	430
2-Nitroaniline		ND		12	2100
2-Nitrophenol		ND		11	430
3,3'-Dichlorobenzidine		ND		23	2100
3-Nitroaniline		ND		21	2100
4,6-Dinitro-2-methylphenol		ND		12	2100
4-Bromophenyl phenyl ether		ND		17	430
4-Chloro-3-methylphenol		ND		27	430
4-Chloroaniline		ND		22	430
4-Chlorophenyl phenyl ether		ND		17	430
4-Nitroaniline		ND		34	2100
4-Nitrophenol		ND		22	2100
Acenaphthene		8.7	J	0.99	430
Acenaphthylene		6.1	J	0.46	430
Acetophenone		ND		12	430
Anthracene		15	J	1.0	430
Atrazine		ND		12	430
Benzaldehyde		28	J	16	430
Benzo[a]anthracene		62	J	0.82	430
Benzo[a]pyrene		60	J	0.84	430
Benzo[b]fluoranthene		91	J	0.77	430
Benzo[g,h,i]perylene		34	J	0.46	430
Benzo[k]fluoranthene		36	J	0.89	430
Bis(2-chloroethoxy)methane		ND		29	430
Bis(2-chloroethyl)ether		ND		2.6	430
Bis(2-ethylhexyl) phthalate		34	J	25	430
Butyl benzyl phthalate		ND		13	430
Caprolactam		ND		48	430
Carbazole		ND		35	430
Chrysene		77	J	1.4	430
Dibenz(a,h)anthracene		ND		0.86	430
Dibenzofuran		ND		0.86	430
Diethyl phthalate		ND		21	430
Dimethyl phthalate		ND		22	430

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-09_0-0.5(20150624)**

Lab Sample ID: 240-52462-9 Date Sampled: 06/24/2015 1315
Client Matrix: Solid % Moisture: 23.2 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708016.D
Dilution:	1.0			Initial Weight/Volume:	29.92 g
Analysis Date:	07/08/2015 1357			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		20	430
Di-n-octyl phthalate		ND		10	430
Fluoranthene		140	J	0.72	430
Fluorene		7.6	J	0.69	430
Hexachlorobenzene		ND		2.7	430
Hexachlorobutadiene		ND		7.3	430
Hexachlorocyclopentadiene		ND		11	2100
Hexachloroethane		ND		12	430
Indeno[1,2,3-cd]pyrene		26	J	0.46	430
Isophorone		ND		17	430
Naphthalene		6.4	J	1.1	430
Nitrobenzene		ND		2.9	430
N-Nitrosodi-n-propylamine		ND		8.2	430
N-Nitrosodiphenylamine		ND		27	430
Pentachlorophenol		ND		12	430
Phenol		ND		9.5	430
Phenanthrene		72	J	0.95	430
Pyrene		110	J	0.57	430
3 & 4 Methylphenol		ND		26	520

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	76		24 - 110
2-Fluorophenol (Surr)	70		24 - 110
2,4,6-Tribromophenol (Surr)	8	X	10 - 110
Nitrobenzene-d5 (Surr)	61		20 - 110
Phenol-d5 (Surr)	78		26 - 110
Terphenyl-d14 (Surr)	79		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-09_0-0.5(20150624)**

Lab Sample ID: 240-52462-9 Date Sampled: 06/24/2015 1315
Client Matrix: Solid % Moisture: 23.2 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188787	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-188504	Lab File ID:	0711019.D
Dilution:	1.0			Initial Weight/Volume:	30.44 g
Analysis Date:	07/11/2015 1401	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/09/2015 1150			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	4.5	420
2,2'-oxybis[1-chloropropane]		ND	H	12	420
2,4,5-Trichlorophenol		ND	H	32	420
2,4,6-Trichlorophenol		ND	H	11	420
2,4-Dichlorophenol		ND	H	26	420
2,4-Dimethylphenol		ND	H	26	420
2,4-Dinitrophenol		ND	H	27	2100
2,4-Dinitrotoluene		ND	H	22	420
2,6-Dinitrotoluene		ND	H	27	420
2-Chloronaphthalene		ND	H	0.58	420
2-Chlorophenol		ND	H	11	420
2-Methylnaphthalene		ND	H	0.64	420
2-Methylphenol		ND	H	14	420
2-Nitroaniline		ND	H	12	2100
2-Nitrophenol		ND	H	11	420
3,3'-Dichlorobenzidine		ND	H	23	2100
3-Nitroaniline		ND	H	21	2100
4,6-Dinitro-2-methylphenol		ND	H	12	2100
4-Bromophenyl phenyl ether		ND	H	17	420
4-Chloro-3-methylphenol		ND	H	27	420
4-Chloroaniline		ND	H	22	420
4-Chlorophenyl phenyl ether		ND	H	17	420
4-Nitroaniline		ND	H	33	2100
4-Nitrophenol		ND	H	22	2100
Acenaphthene		ND	H	0.98	420
Acenaphthylene		ND	H	0.45	420
Acetophenone		ND	H	12	420
Anthracene		4.3	J H	1.0	420
Atrazine		ND	H	12	420
Benzaldehyde		ND	H	15	420
Benzo[a]anthracene		27	J H	0.81	420
Benzo[a]pyrene		32	J H	0.82	420
Benzo[b]fluoranthene		44	J H	0.76	420
Benzo[g,h,i]perylene		17	J H	0.45	420
Benzo[k]fluoranthene		25	J H	0.87	420
Bis(2-chloroethoxy)methane		ND	H	28	420
Bis(2-chloroethyl)ether		ND	H	2.6	420
Bis(2-ethylhexyl) phthalate		72	J H B	24	420
Butyl benzyl phthalate		ND	H	13	420
Caprolactam		ND	H	47	420
Carbazole		ND	H	35	420
Chrysene		37	J H	1.4	420
Dibenz(a,h)anthracene		ND	H	0.85	420
Dibenzofuran		ND	H	0.85	420
Diethyl phthalate		ND	H	21	420
Dimethyl phthalate		ND	H	22	420

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-09_0-0.5(20150624)

Lab Sample ID: 240-52462-9 Date Sampled: 06/24/2015 1315
Client Matrix: Solid % Moisture: 23.2 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188787	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-188504	Lab File ID:	0711019.D
Dilution:	1.0			Initial Weight/Volume:	30.44 g
Analysis Date:	07/11/2015 1401	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/09/2015 1150			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		22	J H B	19	420
Di-n-octyl phthalate		ND	H	10	420
Fluoranthene		60	J H	0.71	420
Fluorene		ND	H	0.68	420
Hexachlorobenzene		ND	H	2.7	420
Hexachlorobutadiene		ND	H	7.2	420
Hexachlorocyclopentadiene		ND	H	10	2100
Hexachloroethane		ND	H	12	420
Indeno[1,2,3-cd]pyrene		19	J H	0.45	420
Isophorone		ND	H	17	420
Naphthalene		ND	H	1.1	420
Nitrobenzene		ND	H	2.8	420
N-Nitrosodi-n-propylamine		ND	H	8.1	420
N-Nitrosodiphenylamine		ND	H	27	420
Pentachlorophenol		ND	H	12	420
Phenol		ND	H	9.4	420
Phenanthrene		26	J H	0.94	420
Pyrene		51	J H	0.56	420
3 & 4 Methylphenol		ND	H	26	510

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	49		24 - 110
2-Fluorophenol (Surr)	44		24 - 110
2,4,6-Tribromophenol (Surr)	13		10 - 110
Nitrobenzene-d5 (Surr)	40		20 - 110
Phenol-d5 (Surr)	37		26 - 110
Terphenyl-d14 (Surr)	54		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-10_0-1(20150624)**

Lab Sample ID: 240-52462-10 Date Sampled: 06/24/2015 1345
Client Matrix: Solid % Moisture: 17.8 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708014.D
Dilution:	1.0			Initial Weight/Volume:	29.88 g
Analysis Date:	07/08/2015 1306			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.3	400
2,2'-oxybis[1-chloropropane]		ND		12	400
2,4,5-Trichlorophenol		ND		31	400
2,4,6-Trichlorophenol		ND		11	400
2,4-Dichlorophenol		ND		24	400
2,4-Dimethylphenol		ND		24	400
2,4-Dinitrophenol		ND		26	2000
2,4-Dinitrotoluene		ND		21	400
2,6-Dinitrotoluene		ND		26	400
2-Chloronaphthalene		ND		0.55	400
2-Chlorophenol		ND		10	400
2-Methylnaphthalene		6.3	J	0.61	400
2-Methylphenol		ND		13	400
2-Nitroaniline		ND		11	2000
2-Nitrophenol		ND		10	400
3,3'-Dichlorobenzidine		ND		22	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		11	2000
4-Bromophenyl phenyl ether		ND		16	400
4-Chloro-3-methylphenol		ND		26	400
4-Chloroaniline		ND		21	400
4-Chlorophenyl phenyl ether		ND		16	400
4-Nitroaniline		ND		32	2000
4-Nitrophenol		ND		21	2000
Acenaphthene		5.5	J	0.93	400
Acenaphthylene		7.8	J	0.43	400
Acetophenone		13	J	11	400
Anthracene		15	J	0.95	400
Atrazine		ND		11	400
Benzaldehyde		41	J	15	400
Benzo[a]anthracene		72	J	0.77	400
Benzo[a]pyrene		70	J	0.78	400
Benzo[b]fluoranthene		110	J	0.72	400
Benzo[g,h,i]perylene		48	J	0.43	400
Benzo[k]fluoranthene		40	J	0.83	400
Bis(2-chloroethoxy)methane		ND		27	400
Bis(2-chloroethyl)ether		ND		2.4	400
Bis(2-ethylhexyl) phthalate		39	J	23	400
Butyl benzyl phthalate		ND		12	400
Caprolactam		ND		45	400
Carbazole		ND		33	400
Chrysene		86	J	1.3	400
Dibenz(a,h)anthracene		13	J	0.81	400
Dibenzofuran		ND		0.81	400
Diethyl phthalate		ND		20	400
Dimethyl phthalate		ND		21	400

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-10_0-1(20150624)**

Lab Sample ID: 240-52462-10 Date Sampled: 06/24/2015 1345
Client Matrix: Solid % Moisture: 17.8 Date Received: 06/25/2015 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187413	Lab File ID:	50708014.D
Dilution:	1.0			Initial Weight/Volume:	29.88 g
Analysis Date:	07/08/2015 1306			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		18	400
Di-n-octyl phthalate		ND		9.7	400
Fluoranthene		140	J	0.67	400
Fluorene		7.7	J	0.65	400
Hexachlorobenzene		ND		2.6	400
Hexachlorobutadiene		ND		6.8	400
Hexachlorocyclopentadiene		ND		9.9	2000
Hexachloroethane		ND		11	400
Indeno[1,2,3-cd]pyrene		39	J	0.43	400
Isophorone		ND		16	400
Naphthalene		21	J	1.0	400
Nitrobenzene		ND		2.7	400
N-Nitrosodi-n-propylamine		ND		7.7	400
N-Nitrosodiphenylamine		ND		26	400
Pentachlorophenol		ND		11	400
Phenol		ND		8.9	400
Phenanthrene		72	J	0.89	400
Pyrene		120	J	0.54	400
3 & 4 Methylphenol		ND		24	490

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	69		24 - 110
2-Fluorophenol (Surr)	64		24 - 110
2,4,6-Tribromophenol (Surr)	24		10 - 110
Nitrobenzene-d5 (Surr)	58		20 - 110
Phenol-d5 (Surr)	69		26 - 110
Terphenyl-d14 (Surr)	73		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-03_0-0.5(20150624)

Lab Sample ID: 240-52462-1 Date Sampled: 06/24/2015 0810
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062909.D
Dilution:	1.0			Initial Weight/Volume:	9.298 g
Analysis Date:	06/29/2015 1032			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		2.6	J	2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-02_0-0.5(20150624)

Lab Sample ID: 240-52462-2 Date Sampled: 06/24/2015 0845
Client Matrix: Solid % Moisture: 18.6 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062628.D
Dilution:	1.0			Initial Weight/Volume:	11.131 g
Analysis Date:	06/26/2015 2258			Final Weight/Volume:	11.1 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-05_0-1(20150624)

Lab Sample ID: 240-52462-3 Date Sampled: 06/24/2015 0915
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062910.D
Dilution:	1.0			Initial Weight/Volume:	9.482 g
Analysis Date:	06/29/2015 1106			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-01_0-1(20150624)**

Lab Sample ID: 240-52462-4 Date Sampled: 06/24/2015 1020
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062630.D
Dilution:	1.0			Initial Weight/Volume:	9.618 g
Analysis Date:	06/27/2015 0009			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	13

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-04_0-1(20150624)**

Lab Sample ID: 240-52462-5 Date Sampled: 06/24/2015 1045
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062631.D
Dilution:	1.0			Initial Weight/Volume:	9.483 g
Analysis Date:	06/27/2015 0043			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-07_0-1(20150624)**

Lab Sample ID: 240-52462-6 Date Sampled: 06/24/2015 1115
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062911.D
Dilution:	1.0			Initial Weight/Volume:	9.424 g
Analysis Date:	06/29/2015 1142			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-06_0-1(20150624)**

Lab Sample ID: 240-52462-7 Date Sampled: 06/24/2015 1210
Client Matrix: Solid % Moisture: 13.8 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187143	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062912.D
Dilution:	1.0			Initial Weight/Volume:	10.089 g
Analysis Date:	06/29/2015 1216			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.3	12

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-08_0-1(20150624)**

Lab Sample ID: 240-52462-8 Date Sampled: 06/24/2015 1250
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062634.D
Dilution:	1.0			Initial Weight/Volume:	9.646 g
Analysis Date:	06/27/2015 0229			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-09_0-0.5(20150624)

Lab Sample ID: 240-52462-9 Date Sampled: 06/24/2015 1315
Client Matrix: Solid % Moisture: 23.2 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062636.D
Dilution:	1.0			Initial Weight/Volume:	9.928 g
Analysis Date:	06/27/2015 0339			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.6	13

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-10_0-1(20150624)**

Lab Sample ID: 240-52462-10 Date Sampled: 06/24/2015 1345
Client Matrix: Solid % Moisture: 17.8 Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062637.D
Dilution:	1.0			Initial Weight/Volume:	9.865 g
Analysis Date:	06/27/2015 0415			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: MB-01(20150624)

Lab Sample ID: 240-52462-11 Date Sampled: 06/24/2015 0000
Client Matrix: Solid Date Received: 06/25/2015 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-186873	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-186853	Lab File ID:	Y0062638.D
Dilution:	1.0			Initial Weight/Volume:	0.127 g
Analysis Date:	06/27/2015 0451			Final Weight/Volume:	10 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		160	790

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-03_0-0.5(20150624)

Lab Sample ID: 240-52462-1 Date Sampled: 06/24/2015 0810
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187397	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R063012.D
Dilution:	1.0			Initial Weight/Volume:	26.34 g
Analysis Date:	06/30/2015 1532			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		33		1.3	10

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-02_0-0.5(20150624)

Lab Sample ID: 240-52462-2 Date Sampled: 06/24/2015 0845
Client Matrix: Solid % Moisture: 18.6 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R062916.D
Dilution:	1.0			Initial Weight/Volume:	30.15 g
Analysis Date:	06/29/2015 2030			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		48		1.2	9.8

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-05_0-1(20150624)**

Lab Sample ID: 240-52462-3 Date Sampled: 06/24/2015 0915
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R062917.D
Dilution:	1.0			Initial Weight/Volume:	26.37 g
Analysis Date:	06/29/2015 2057			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		12		1.3	10

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-01_0-1(20150624)

Lab Sample ID: 240-52462-4 Date Sampled: 06/24/2015 1020
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R062919.D
Dilution:	1.0			Initial Weight/Volume:	29.08 g
Analysis Date:	06/29/2015 2152			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		14		1.2	10

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-04_0-1(20150624)**

Lab Sample ID: 240-52462-5 Date Sampled: 06/24/2015 1045
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R062920.D
Dilution:	1.0			Initial Weight/Volume:	26.54 g
Analysis Date:	06/29/2015 2220			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		8.4	J	1.3	11

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-07_0-1(20150624)**

Lab Sample ID: 240-52462-6 Date Sampled: 06/24/2015 1115
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R062921.D
Dilution:	1.0			Initial Weight/Volume:	26.1 g
Analysis Date:	06/29/2015 2247			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		5.2	J	1.3	11

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-06_0-1(20150624)**

Lab Sample ID: 240-52462-7 Date Sampled: 06/24/2015 1210
Client Matrix: Solid % Moisture: 13.8 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187397	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R063013.D
Dilution:	5.0			Initial Weight/Volume:	28.05 g
Analysis Date:	06/30/2015 1600			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		220		6.1	50

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-08_0-1(20150624)**

Lab Sample ID: 240-52462-8 Date Sampled: 06/24/2015 1250
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R062923.D
Dilution:	1.0			Initial Weight/Volume:	28.05 g
Analysis Date:	06/29/2015 2342			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		14		1.2	10

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-09_0-0.5(20150624)

Lab Sample ID: 240-52462-9 Date Sampled: 06/24/2015 1315
Client Matrix: Solid % Moisture: 23.2 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R062924.D
Dilution:	1.0			Initial Weight/Volume:	28.26 g
Analysis Date:	06/30/2015 0010			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		13		1.4	11

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: **HA-10_0-1(20150624)**

Lab Sample ID: 240-52462-10 Date Sampled: 06/24/2015 1345
Client Matrix: Solid % Moisture: 17.8 Date Received: 06/25/2015 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-187060	Lab File ID:	P14R062925.D
Dilution:	1.0			Initial Weight/Volume:	27.66 g
Analysis Date:	06/30/2015 0037			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		15		1.3	11

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-03_0-0.5(20150624)

Lab Sample ID: 240-52462-1 Date Sampled: 06/24/2015 0810
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	06/30/2015 0702			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3000		5.6	19
Antimony		ND	F1	0.46	0.97
Barium		40	B	0.40	19
Beryllium		0.22	J	0.025	0.48
Calcium		29000		22	480
Cadmium		0.51		0.020	0.19
Cobalt		4.0	J	0.045	4.8
Chromium		9.4		0.073	0.48
Copper		11	F1 F2	0.22	2.4
Iron		8800		3.1	9.7
Potassium		560		6.0	480
Magnesium		10000	F1	5.0	480
Manganese		400	B	0.081	1.5
Silver		ND		0.061	0.48
Sodium		62	J	18	480
Nickel		11	B	0.077	3.9
Vanadium		13	B	0.19	4.8
Zinc		46	F1	0.54	1.9
Arsenic		3.0		0.40	0.97
Lead		18	F1	0.19	0.29
Selenium		ND		0.33	0.48
Thallium		ND		0.13	0.97

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.57 g
Analysis Date:	06/30/2015 0911			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.025	J	0.017	0.12

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-02_0-0.5(20150624)

Lab Sample ID: 240-52462-2 Date Sampled: 06/24/2015 0845
Client Matrix: Solid % Moisture: 18.6 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.21 g
Analysis Date:	06/30/2015 0730			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6600		5.9	20
Antimony		ND		0.49	1.0
Barium		45	B	0.42	20
Beryllium		0.31	J	0.026	0.51
Calcium		23000		23	510
Cadmium		0.12	J	0.021	0.20
Cobalt		11		0.048	5.1
Chromium		19		0.076	0.51
Copper		25		0.23	2.5
Iron		15000		3.2	10
Potassium		1200		6.3	510
Magnesium		11000		5.3	510
Manganese		410	B	0.085	1.5
Silver		ND		0.064	0.51
Sodium		57	J	19	510
Nickel		20	B	0.081	4.1
Vanadium		19	B	0.20	5.1
Zinc		52		0.57	2.0
Arsenic		4.6		0.42	1.0
Lead		13		0.20	0.30
Selenium		0.43	J	0.35	0.51
Thallium		ND		0.13	1.0

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	06/30/2015 0934			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.055	J	0.019	0.13

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-05_0-1(20150624)

Lab Sample ID: 240-52462-3 Date Sampled: 06/24/2015 0915
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.19 g
Analysis Date:	06/30/2015 0734			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4600		5.6	19
Antimony		ND		0.47	0.97
Barium		50	B	0.40	19
Beryllium		0.29	J	0.025	0.48
Calcium		16000		22	480
Cadmium		0.12	J	0.020	0.19
Cobalt		5.7		0.046	4.8
Chromium		9.3		0.073	0.48
Copper		11		0.22	2.4
Iron		9700		3.1	9.7
Potassium		690		6.0	480
Magnesium		6000		5.0	480
Manganese		450	B	0.081	1.5
Silver		ND		0.061	0.48
Sodium		54	J	18	480
Nickel		13	B	0.078	3.9
Vanadium		18	B	0.19	4.8
Zinc		28		0.54	1.9
Arsenic		2.6		0.40	0.97
Lead		7.7		0.19	0.29
Selenium		0.39	J	0.33	0.48
Thallium		ND		0.13	0.97

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.67 g
Analysis Date:	06/30/2015 0926			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.014	J	0.014	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-01_0-1(20150624)

Lab Sample ID: 240-52462-4 Date Sampled: 06/24/2015 1020
Client Matrix: Solid % Moisture: 17.3 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.30 g
Analysis Date:	06/30/2015 0820			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		9200		5.4	19
Antimony		ND		0.45	0.93
Barium		100	B	0.38	19
Beryllium		0.51		0.024	0.46
Calcium		4800		21	460
Cadmium		0.19		0.020	0.19
Cobalt		8.4		0.044	4.6
Chromium		15		0.070	0.46
Copper		16		0.21	2.3
Iron		14000		3.0	9.3
Potassium		1100		5.8	460
Magnesium		2900		4.8	460
Manganese		550	B	0.078	1.4
Silver		ND		0.059	0.46
Sodium		49	J	18	460
Nickel		17	B	0.074	3.7
Vanadium		29	B	0.19	4.6
Zinc		70		0.52	1.9
Arsenic		6.8		0.38	0.93
Lead		38		0.19	0.28
Thallium		ND		0.12	0.93

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.30 g
Analysis Date:	06/30/2015 1158			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		0.82		0.32	0.46

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.57 g
Analysis Date:	06/30/2015 0930			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.045	J	0.018	0.13

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-04_0-1(20150624)

Lab Sample ID: 240-52462-5 Date Sampled: 06/24/2015 1045
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.08 g
Analysis Date:	06/30/2015 0825			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6400		6.3	22
Antimony		ND		0.52	1.1
Barium		170	B	0.45	22
Beryllium		0.42	J	0.028	0.55
Calcium		16000		25	550
Cadmium		0.42		0.023	0.22
Cobalt		8.0		0.051	5.5
Chromium		13		0.082	0.55
Copper		15		0.25	2.7
Iron		13000		3.5	11
Potassium		940		6.8	550
Magnesium		6100		5.7	550
Manganese		1200	B	0.092	1.6
Silver		ND		0.069	0.55
Sodium		56	J	21	550
Nickel		28	B	0.087	4.4
Vanadium		24	B	0.22	5.5
Zinc		88		0.61	2.2
Arsenic		6.0		0.45	1.1
Lead		18		0.22	0.33
Selenium		0.58		0.37	0.55
Thallium		ND		0.14	1.1

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	06/30/2015 0932			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.045	J	0.018	0.13

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-07_0-1(20150624)

Lab Sample ID: 240-52462-6 Date Sampled: 06/24/2015 1115
Client Matrix: Solid % Moisture: 13.3 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.08 g
Analysis Date:	06/30/2015 0829			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3900		6.2	21
Antimony		ND		0.51	1.1
Barium		34	B	0.44	21
Beryllium		0.25	J	0.028	0.53
Calcium		5300		25	530
Cadmium		0.17	J	0.022	0.21
Cobalt		5.0	J	0.050	5.3
Chromium		7.9		0.080	0.53
Copper		5.7		0.25	2.7
Iron		6300		3.4	11
Potassium		420	J	6.6	530
Magnesium		2200		5.6	530
Manganese		190	B	0.090	1.6
Silver		ND		0.067	0.53
Sodium		27	J	20	530
Nickel		11	B	0.085	4.3
Vanadium		12	B	0.21	5.3
Zinc		32		0.60	2.1
Arsenic		2.5		0.44	1.1
Lead		5.1		0.21	0.32
Selenium		0.41	J	0.36	0.53
Thallium		ND		0.14	1.1

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	06/30/2015 0936			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.016	J	0.016	0.11

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-06_0-1(20150624)

Lab Sample ID: 240-52462-7 Date Sampled: 06/24/2015 1210
Client Matrix: Solid % Moisture: 13.8 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	06/30/2015 0833			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3800		5.8	20
Antimony		ND		0.48	1.0
Barium		39	B	0.41	20
Beryllium		0.21	J	0.026	0.50
Calcium		17000		23	500
Cadmium		0.53		0.021	0.20
Cobalt		4.2	J	0.047	5.0
Chromium		9.1		0.075	0.50
Copper		14		0.23	2.5
Iron		8900		3.2	10
Potassium		830		6.2	500
Magnesium		4900		5.2	500
Manganese		250	B	0.084	1.5
Silver		ND		0.063	0.50
Sodium		63	J	19	500
Nickel		11	B	0.080	4.0
Vanadium		16	B	0.20	5.0
Zinc		40		0.56	2.0
Arsenic		2.8		0.41	1.0
Lead		32		0.20	0.30
Selenium		ND		0.34	0.50
Thallium		ND		0.13	1.0

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	06/30/2015 0922			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.11		0.015	0.11

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-08_0-1(20150624)

Lab Sample ID: 240-52462-8 Date Sampled: 06/24/2015 1250
Client Matrix: Solid % Moisture: 15.5 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	06/30/2015 0837			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5400		6.2	21
Antimony		ND		0.51	1.1
Barium		46	B	0.44	21
Beryllium		0.33	J	0.028	0.53
Calcium		37000		25	530
Cadmium		0.31		0.022	0.21
Cobalt		8.4		0.050	5.3
Chromium		11		0.080	0.53
Copper		12		0.25	2.7
Iron		12000		3.4	11
Potassium		1900		6.6	530
Magnesium		8800		5.5	530
Manganese		490	B	0.090	1.6
Silver		ND		0.067	0.53
Sodium		71	J	20	530
Nickel		17	B	0.085	4.3
Vanadium		14	B	0.21	5.3
Zinc		49		0.60	2.1
Arsenic		4.0		0.44	1.1
Lead		14		0.21	0.32
Selenium		ND		0.36	0.53
Thallium		ND		0.14	1.1

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	06/30/2015 0924			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.022	J	0.018	0.13

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-09_0-0.5(20150624)

Lab Sample ID: 240-52462-9 Date Sampled: 06/24/2015 1315
Client Matrix: Solid % Moisture: 23.2 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.31 g
Analysis Date:	06/30/2015 0841			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6500		5.8	20
Antimony		ND		0.48	0.99
Barium		39	B	0.41	20
Beryllium		0.42	J	0.026	0.50
Calcium		15000		23	500
Cadmium		0.16	J	0.021	0.20
Cobalt		8.5		0.047	5.0
Chromium		12		0.075	0.50
Copper		9.9		0.23	2.5
Iron		12000		3.2	9.9
Potassium		2300		6.2	500
Magnesium		5200		5.2	500
Manganese		310	B	0.083	1.5
Silver		ND		0.063	0.50
Sodium		50	J	19	500
Nickel		17	B	0.080	4.0
Vanadium		14	B	0.20	5.0
Zinc		35		0.56	2.0
Arsenic		4.3		0.41	0.99
Lead		8.9		0.20	0.30
Selenium		0.39	J	0.34	0.50
Thallium		ND		0.13	0.99

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.51 g
Analysis Date:	06/30/2015 0938			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.027	J	0.021	0.15

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Client Sample ID: HA-10_0-1(20150624)

Lab Sample ID: 240-52462-10 Date Sampled: 06/24/2015 1345
Client Matrix: Solid % Moisture: 17.8 Date Received: 06/25/2015 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187366	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0			Initial Weight/Volume:	1.22 g
Analysis Date:	06/30/2015 0845			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7500		5.8	20
Antimony		ND		0.48	1.0
Barium		55	B	0.41	20
Beryllium		0.42	J	0.026	0.50
Calcium		19000		23	500
Cadmium		0.18	J	0.021	0.20
Cobalt		7.1		0.047	5.0
Chromium		13		0.075	0.50
Copper		11		0.23	2.5
Iron		19000		3.2	10
Potassium		2200		6.2	500
Magnesium		5800		5.2	500
Manganese		410	B	0.084	1.5
Silver		ND		0.063	0.50
Sodium		56	J	19	500
Nickel		16	B	0.080	4.0
Vanadium		16	B	0.20	5.0
Zinc		38		0.56	2.0
Arsenic		4.4		0.41	1.0
Lead		13		0.20	0.30
Selenium		ND		0.34	0.50
Thallium		ND		0.13	1.0

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187460	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.54 g
Analysis Date:	06/30/2015 0939			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.041	J	0.019	0.14

General Chemistry

Client Sample ID: **HA-03_0-0.5(20150624)**

Lab Sample ID: 240-52462-1 Date Sampled: 06/24/2015 0810
Client Matrix: Solid Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	89		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N
Percent Moisture	11		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-02_0-0.5(20150624)**

Lab Sample ID: 240-52462-2 Date Sampled: 06/24/2015 0845
Client Matrix: Solid Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	81		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N
Percent Moisture	19		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-05_0-1(20150624)**

Lab Sample ID: 240-52462-3 Date Sampled: 06/24/2015 0915
Client Matrix: Solid Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	87		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N
Percent Moisture	13		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-01_0-1(20150624)**

Lab Sample ID: 240-52462-4 Date Sampled: 06/24/2015 1020
Client Matrix: Solid Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	83		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N
Percent Moisture	17		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-04_0-1(20150624)**

Lab Sample ID: 240-52462-5 Date Sampled: 06/24/2015 1045
Client Matrix: Solid Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	85		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N
Percent Moisture	15		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-07_0-1(20150624)**

Lab Sample ID: 240-52462-6 Date Sampled: 06/24/2015 1115
Client Matrix: Solid Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	87		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N
Percent Moisture	13		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-06_0-1(20150624)**

Lab Sample ID: 240-52462-7 Date Sampled: 06/24/2015 1210
Client Matrix: Solid Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	86		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N
Percent Moisture	14		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-08_0-1(20150624)**

Lab Sample ID: 240-52462-8 Date Sampled: 06/24/2015 1250
Client Matrix: Solid Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	84		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N
Percent Moisture	16		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-09_0-0.5(20150624)**

Lab Sample ID: 240-52462-9 Date Sampled: 06/24/2015 1315
Client Matrix: Solid Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	77		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N
Percent Moisture	23		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-10_0-1(20150624)**

Lab Sample ID: 240-52462-10 Date Sampled: 06/24/2015 1345
Client Matrix: Solid Date Received: 06/25/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	82		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N
Percent Moisture	18		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-186917	Analysis Date: 06/26/2015 0940						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Section	Qualifier	Description
GC/MS VOA		
	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time
	X	Surrogate is outside control limits
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-187043					
LCS 240-187043/2-A	Lab Control Sample	T	Solid	5035	
MB 240-187043/1-A	Method Blank	T	Solid	5035	
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	5035	
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	5035	
240-52462-3	HA-05_0-1(20150624)	T	Solid	5035	
240-52462-4	HA-01_0-1(20150624)	T	Solid	5035	
240-52462-5	HA-04_0-1(20150624)	T	Solid	5035	
240-52462-6	HA-07_0-1(20150624)	T	Solid	5035	
240-52462-7	HA-06_0-1(20150624)	T	Solid	5035	
240-52462-8	HA-08_0-1(20150624)	T	Solid	5035	
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	5035	
240-52462-10	HA-10_0-1(20150624)	T	Solid	5035	
240-52462-11	MB-01(20150624)	T	Solid	5035	
Analysis Batch:240-187197					
LCS 240-187043/2-A	Lab Control Sample	T	Solid	8260B	240-187043
MB 240-187043/1-A	Method Blank	T	Solid	8260B	240-187043
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	8260B	240-187043
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	8260B	240-187043
240-52462-3	HA-05_0-1(20150624)	T	Solid	8260B	240-187043
240-52462-4	HA-01_0-1(20150624)	T	Solid	8260B	240-187043
240-52462-5	HA-04_0-1(20150624)	T	Solid	8260B	240-187043
Analysis Batch:240-187454					
240-52462-6	HA-07_0-1(20150624)	T	Solid	8260B	240-187043
240-52462-7	HA-06_0-1(20150624)	T	Solid	8260B	240-187043
240-52462-8	HA-08_0-1(20150624)	T	Solid	8260B	240-187043
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	8260B	240-187043
Analysis Batch:240-187606					
240-52462-10	HA-10_0-1(20150624)	T	Solid	8260B	240-187043
240-52462-11	MB-01(20150624)	T	Solid	8260B	240-187043

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-187413					
LCS 240-187413/24-A	Lab Control Sample	T	Solid	3540C	
MB 240-187413/23-A	Method Blank	T	Solid	3540C	
240-52442-AJ-4-J MS	Matrix Spike	T	Solid	3540C	
240-52442-AJ-4-K MSD	Matrix Spike Duplicate	T	Solid	3540C	
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	3540C	
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	3540C	
240-52462-3	HA-05_0-1(20150624)	T	Solid	3540C	
240-52462-4	HA-01_0-1(20150624)	T	Solid	3540C	
240-52462-5	HA-04_0-1(20150624)	T	Solid	3540C	
240-52462-6	HA-07_0-1(20150624)	T	Solid	3540C	
240-52462-7	HA-06_0-1(20150624)	T	Solid	3540C	
240-52462-8	HA-08_0-1(20150624)	T	Solid	3540C	
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	3540C	
240-52462-10	HA-10_0-1(20150624)	T	Solid	3540C	
Analysis Batch:240-187745					
LCS 240-187413/24-A	Lab Control Sample	T	Solid	8270C	240-187413
MB 240-187413/23-A	Method Blank	T	Solid	8270C	240-187413
Analysis Batch:240-188301					
240-52442-AJ-4-J MS	Matrix Spike	T	Solid	8270C	240-187413
240-52442-AJ-4-K MSD	Matrix Spike Duplicate	T	Solid	8270C	240-187413
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	8270C	240-187413
240-52462-3	HA-05_0-1(20150624)	T	Solid	8270C	240-187413
240-52462-4	HA-01_0-1(20150624)	T	Solid	8270C	240-187413
240-52462-5	HA-04_0-1(20150624)	T	Solid	8270C	240-187413
240-52462-6	HA-07_0-1(20150624)	T	Solid	8270C	240-187413
240-52462-7	HA-06_0-1(20150624)	T	Solid	8270C	240-187413
240-52462-8	HA-08_0-1(20150624)	T	Solid	8270C	240-187413
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	8270C	240-187413
240-52462-10	HA-10_0-1(20150624)	T	Solid	8270C	240-187413
Analysis Batch:240-188473					
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	8270C	240-187413
Prep Batch: 240-188504					
LCS 240-188504/18-A	Lab Control Sample	T	Solid	3540C	
MB 240-188504/17-A	Method Blank	T	Solid	3540C	
240-52462-9RE	HA-09_0-0.5(20150624)	T	Solid	3540C	
Analysis Batch:240-188787					
LCS 240-188504/18-A	Lab Control Sample	T	Solid	8270C	240-188504
MB 240-188504/17-A	Method Blank	T	Solid	8270C	240-188504
240-52462-9RE	HA-09_0-0.5(20150624)	T	Solid	8270C	240-188504

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Report Basis					
T = Total					
GC VOA					
Prep Batch: 240-186853					
LCS 240-186853/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-186853/18-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-186853/1-A	Method Blank	T	Solid	5035	
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	5035	
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	5035	
240-52462-3	HA-05_0-1(20150624)	T	Solid	5035	
240-52462-4	HA-01_0-1(20150624)	T	Solid	5035	
240-52462-5	HA-04_0-1(20150624)	T	Solid	5035	
240-52462-6	HA-07_0-1(20150624)	T	Solid	5035	
240-52462-7	HA-06_0-1(20150624)	T	Solid	5035	
240-52462-8	HA-08_0-1(20150624)	T	Solid	5035	
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	5035	
240-52462-10	HA-10_0-1(20150624)	T	Solid	5035	
240-52462-11	MB-01(20150624)	T	Solid	5035	
Analysis Batch:240-186873					
LCS 240-186853/2-A	Lab Control Sample	T	Solid	WI-GRO	240-186853
LCSD 240-186853/18-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-186853
MB 240-186853/1-A	Method Blank	T	Solid	WI-GRO	240-186853
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	WI-GRO	240-186853
240-52462-4	HA-01_0-1(20150624)	T	Solid	WI-GRO	240-186853
240-52462-5	HA-04_0-1(20150624)	T	Solid	WI-GRO	240-186853
240-52462-8	HA-08_0-1(20150624)	T	Solid	WI-GRO	240-186853
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	WI-GRO	240-186853
240-52462-10	HA-10_0-1(20150624)	T	Solid	WI-GRO	240-186853
240-52462-11	MB-01(20150624)	T	Solid	WI-GRO	240-186853
Analysis Batch:240-187143					
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	WI-GRO	240-186853
240-52462-3	HA-05_0-1(20150624)	T	Solid	WI-GRO	240-186853
240-52462-6	HA-07_0-1(20150624)	T	Solid	WI-GRO	240-186853
240-52462-7	HA-06_0-1(20150624)	T	Solid	WI-GRO	240-186853

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-187060					
LCS 240-187060/22-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-187060/23-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-187060/21-A	Method Blank	T	Solid	WI DRO PREP	
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	WI DRO PREP	
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	WI DRO PREP	
240-52462-3	HA-05_0-1(20150624)	T	Solid	WI DRO PREP	
240-52462-4	HA-01_0-1(20150624)	T	Solid	WI DRO PREP	
240-52462-5	HA-04_0-1(20150624)	T	Solid	WI DRO PREP	
240-52462-6	HA-07_0-1(20150624)	T	Solid	WI DRO PREP	
240-52462-7	HA-06_0-1(20150624)	T	Solid	WI DRO PREP	
240-52462-8	HA-08_0-1(20150624)	T	Solid	WI DRO PREP	
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	WI DRO PREP	
240-52462-10	HA-10_0-1(20150624)	T	Solid	WI DRO PREP	
Analysis Batch:240-187243					
LCS 240-187060/22-A	Lab Control Sample	T	Solid	WI-DRO	240-187060
LCSD 240-187060/23-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-187060
MB 240-187060/21-A	Method Blank	T	Solid	WI-DRO	240-187060
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	WI-DRO	240-187060
240-52462-3	HA-05_0-1(20150624)	T	Solid	WI-DRO	240-187060
240-52462-4	HA-01_0-1(20150624)	T	Solid	WI-DRO	240-187060
240-52462-5	HA-04_0-1(20150624)	T	Solid	WI-DRO	240-187060
240-52462-6	HA-07_0-1(20150624)	T	Solid	WI-DRO	240-187060
240-52462-8	HA-08_0-1(20150624)	T	Solid	WI-DRO	240-187060
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	WI-DRO	240-187060
240-52462-10	HA-10_0-1(20150624)	T	Solid	WI-DRO	240-187060
Analysis Batch:240-187397					
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	WI-DRO	240-187060
240-52462-7	HA-06_0-1(20150624)	T	Solid	WI-DRO	240-187060

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-186943					
LCS 240-186943/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-186943/1-A	Method Blank	T	Solid	3050B	
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	3050B	
240-52462-1MS	Matrix Spike	T	Solid	3050B	
240-52462-1MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	3050B	
240-52462-3	HA-05_0-1(20150624)	T	Solid	3050B	
240-52462-4	HA-01_0-1(20150624)	T	Solid	3050B	
240-52462-5	HA-04_0-1(20150624)	T	Solid	3050B	
240-52462-6	HA-07_0-1(20150624)	T	Solid	3050B	
240-52462-7	HA-06_0-1(20150624)	T	Solid	3050B	
240-52462-8	HA-08_0-1(20150624)	T	Solid	3050B	
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	3050B	
240-52462-10	HA-10_0-1(20150624)	T	Solid	3050B	
Prep Batch: 240-186944					
LCS 240-186944/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-186944/1-A	Method Blank	T	Solid	7471A	
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	7471A	
240-52462-1MS	Matrix Spike	T	Solid	7471A	
240-52462-1MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	7471A	
240-52462-3	HA-05_0-1(20150624)	T	Solid	7471A	
240-52462-4	HA-01_0-1(20150624)	T	Solid	7471A	
240-52462-5	HA-04_0-1(20150624)	T	Solid	7471A	
240-52462-6	HA-07_0-1(20150624)	T	Solid	7471A	
240-52462-7	HA-06_0-1(20150624)	T	Solid	7471A	
240-52462-8	HA-08_0-1(20150624)	T	Solid	7471A	
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	7471A	
240-52462-10	HA-10_0-1(20150624)	T	Solid	7471A	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-187366					
LCS 240-186943/2-A	Lab Control Sample	T	Solid	6010B	240-186943
MB 240-186943/1-A	Method Blank	T	Solid	6010B	240-186943
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	6010B	240-186943
240-52462-1MS	Matrix Spike	T	Solid	6010B	240-186943
240-52462-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-186943
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	6010B	240-186943
240-52462-3	HA-05_0-1(20150624)	T	Solid	6010B	240-186943
240-52462-4	HA-01_0-1(20150624)	T	Solid	6010B	240-186943
240-52462-5	HA-04_0-1(20150624)	T	Solid	6010B	240-186943
240-52462-6	HA-07_0-1(20150624)	T	Solid	6010B	240-186943
240-52462-7	HA-06_0-1(20150624)	T	Solid	6010B	240-186943
240-52462-8	HA-08_0-1(20150624)	T	Solid	6010B	240-186943
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	6010B	240-186943
240-52462-10	HA-10_0-1(20150624)	T	Solid	6010B	240-186943
Analysis Batch:240-187460					
LCS 240-186944/2-A	Lab Control Sample	T	Solid	7471A	240-186944
MB 240-186944/1-A	Method Blank	T	Solid	7471A	240-186944
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	7471A	240-186944
240-52462-1MS	Matrix Spike	T	Solid	7471A	240-186944
240-52462-1MSD	Matrix Spike Duplicate	T	Solid	7471A	240-186944
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	7471A	240-186944
240-52462-3	HA-05_0-1(20150624)	T	Solid	7471A	240-186944
240-52462-4	HA-01_0-1(20150624)	T	Solid	7471A	240-186944
240-52462-5	HA-04_0-1(20150624)	T	Solid	7471A	240-186944
240-52462-6	HA-07_0-1(20150624)	T	Solid	7471A	240-186944
240-52462-7	HA-06_0-1(20150624)	T	Solid	7471A	240-186944
240-52462-8	HA-08_0-1(20150624)	T	Solid	7471A	240-186944
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	7471A	240-186944
240-52462-10	HA-10_0-1(20150624)	T	Solid	7471A	240-186944

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-186917					
240-52462-1	HA-03_0-0.5(20150624)	T	Solid	Moisture	
240-52462-2	HA-02_0-0.5(20150624)	T	Solid	Moisture	
240-52462-3	HA-05_0-1(20150624)	T	Solid	Moisture	
240-52462-3DU	Duplicate	T	Solid	Moisture	
240-52462-4	HA-01_0-1(20150624)	T	Solid	Moisture	
240-52462-5	HA-04_0-1(20150624)	T	Solid	Moisture	
240-52462-6	HA-07_0-1(20150624)	T	Solid	Moisture	
240-52462-7	HA-06_0-1(20150624)	T	Solid	Moisture	
240-52462-7DU	Duplicate	T	Solid	Moisture	
240-52462-8	HA-08_0-1(20150624)	T	Solid	Moisture	
240-52462-9	HA-09_0-0.5(20150624)	T	Solid	Moisture	
240-52462-10	HA-10_0-1(20150624)	T	Solid	Moisture	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
MRL 240-187197/8		90	96	103	92

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	10-150
DBFM = Dibromofluoromethane (Surr)	10-150
DCA = 1,2-Dichloroethane-d4 (Surr)	10-150
TOL = Toluene-d8 (Surr)	10-150

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52462-1	HA-03_0-0.5(20150624)	89	93	105	92
240-52462-2	HA-02_0-0.5(20150624)	92	88	101	86
240-52462-3	HA-05_0-1(20150624)	84	96	108	93
240-52462-4	HA-01_0-1(20150624)	82	91	104	90
240-52462-5	HA-04_0-1(20150624)	85	96	109	93
240-52462-6	HA-07_0-1(20150624)	99	94	111	96
240-52462-7	HA-06_0-1(20150624)	87	90	100	88
240-52462-8	HA-08_0-1(20150624)	85	91	104	91
240-52462-9	HA-09_0-0.5(20150624)	80	87	103	88
240-52462-10	HA-10_0-1(20150624)	106	87	107	96
240-52462-11	MB-01(20150624)	110	95	119	106
MB 240-187043/1-A		88	101	110	95
LCS 240-187043/2-A		81	99	101	92

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52462-1	HA-03_0-0.5(20150624)	69	65	36	57	72	71
240-52462-2	HA-02_0-0.5(20150624)	66	62	17	52	69	77
240-52462-3	HA-05_0-1(20150624)	74	73	13	62	80	75
240-52462-4	HA-01_0-1(20150624)	70	72	28	62	77	74
240-52462-5	HA-04_0-1(20150624)	72	64	16	62	70	73
240-52462-6	HA-07_0-1(20150624)	65	69	45	60	71	66
240-52462-7	HA-06_0-1(20150624)	76	71	71	67	79	75
240-52462-8	HA-08_0-1(20150624)	75	65	23	58	73	81
240-52462-9 RE	HA-09_0-0.5(20150624) RE	49	44	13	40	37	54
240-52462-9	HA-09_0-0.5(20150624)	76	70	8X	61	78	79
240-52462-10	HA-10_0-1(20150624)	69	64	24	58	69	73
MB 240-187413/23-A		60	51	13	56	61	64
MB 240-188504/17-A		53	52	14	51	56	62
LCS 240-187413/24-A		66	68	58	65	70	74
LCS 240-188504/18-A		58	48	40	47	57	63
240-52442-AJ-4-J MS		76	77	62	76	81	76
240-52442-AJ-4-K MSD		78	74	59	80	83	78

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Method Blank - Batch: 240-187043

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-187043/1-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187043	Lab File ID:	143905.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 2108	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Benzene	ND		9.0	250
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Method Blank - Batch: 240-187043 **Method: 8260B**
Preparation: 5035

Lab Sample ID:	MB 240-187043/1-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187043	Lab File ID:	143905.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 2108	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	88	26 - 141
Dibromofluoromethane (Surr)	101	30 - 122
1,2-Dichloroethane-d4 (Surr)	110	39 - 128
Toluene-d8 (Surr)	95	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Control Sample - Batch: 240-187043

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-187043/2-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187043	Lab File ID:	143904.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 2046	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	1700	85	16 - 156	
Allyl chloride	1000	893	89	50 - 150	
Benzene	1000	970	97	70 - 120	
Bromobenzene	1000	816	82	72 - 120	
Bromochloromethane	1000	941	94	56 - 128	
Bromodichloromethane	1000	868	87	28 - 123	
Bromoform	1000	799	80	10 - 120	
Bromomethane	1000	476	48	10 - 120	
2-Butanone (MEK)	2000	1490	74	10 - 199	
Carbon disulfide	1000	778	78	10 - 132	
Carbon tetrachloride	1000	972	97	29 - 120	
Chlorobenzene	1000	916	92	71 - 120	
Chlorodibromomethane	1000	865	86	22 - 120	
Chloroethane	1000	726	73	10 - 120	
Chloroform	1000	1030	103	63 - 120	
Chloromethane	1000	784	78	25 - 120	
2-Chlorotoluene	1000	906	91	68 - 122	
4-Chlorotoluene	1000	846	85	68 - 122	
cis-1,2-Dichloroethene	1000	970	97	60 - 125	
cis-1,3-Dichloropropene	1000	840	84	25 - 120	
Cyclohexane	1000	868	87	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	834	83	10 - 129	
1,2-Dibromoethane	1000	910	91	47 - 123	
Dibromomethane	1000	930	93	68 - 120	
1,2-Dichlorobenzene	1000	886	89	68 - 120	
1,3-Dichlorobenzene	1000	859	86	66 - 121	
1,4-Dichlorobenzene	1000	875	88	65 - 120	
Dichlorodifluoromethane	1000	924	92	10 - 120	
1,1-Dichloroethane	1000	970	97	63 - 120	
1,2-Dichloroethane	1000	911	91	68 - 120	
1,1-Dichloroethene	1000	1020	102	44 - 143	
Dichlorofluoromethane	1000	1090	109	40 - 160	
1,2-Dichloropropane	1000	897	90	73 - 120	
1,3-Dichloropropane	1000	891	89	74 - 120	
2,2-Dichloropropane	1000	936	94	25 - 123	
1,1-Dichloropropene	1000	1070	107	60 - 123	
Ethylbenzene	1000	924	92	66 - 120	
Ethyl ether	1000	924	92	70 - 130	
Hexachlorobutadiene	1000	984	98	34 - 135	
2-Hexanone	2000	1120	56	43 - 130	
Isopropylbenzene	1000	991	99	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Control Sample - Batch: 240-187043

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-187043/2-A	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187043	Lab File ID:	143904.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	06/29/2015 2046	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	06/27/2015 0428				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	4090	82	44 - 173	
Methylcyclohexane	1000	1000	100	41 - 133	
Methylene Chloride	1000	1010	101	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1530	76	49 - 121	
Methyl tert butyl ether	1000	1000	100	34 - 157	
m-Xylene & p-Xylene	1000	932	93	67 - 120	
Naphthalene	1000	846	85	37 - 126	
n-Butylbenzene	1000	852	85	51 - 137	
N-Propylbenzene	1000	841	84	64 - 130	
o-Xylene	1000	1010	101	68 - 120	
p-Isopropyltoluene	1000	878	88	56 - 136	
sec-Butylbenzene	1000	911	91	58 - 131	
Styrene	1000	842	84	60 - 120	
tert-Butylbenzene	1000	884	88	58 - 128	
1,1,1,2-Tetrachloroethane	1000	1060	106	27 - 121	
1,1,2,2-Tetrachloroethane	1000	858	86	54 - 121	
Tetrachloroethene	1000	1010	101	58 - 131	
Tetrahydrofuran	2000	1650	83	70 - 130	
Toluene	1000	938	94	66 - 123	
trans-1,2-Dichloroethene	1000	988	99	58 - 121	
trans-1,3-Dichloropropene	1000	922	92	22 - 122	
1,2,3-Trichlorobenzene	1000	905	91	43 - 129	
1,2,4-Trichlorobenzene	1000	888	89	41 - 135	
1,1,1-Trichloroethane	1000	995	99	38 - 122	
1,1,2-Trichloroethane	1000	895	90	74 - 120	
Trichloroethene	1000	1000	100	59 - 124	
Trichlorofluoromethane	1000	1120	112	17 - 145	
1,2,3-Trichloropropane	1000	866	87	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	1030	103	48 - 151	
1,2,4-Trimethylbenzene	1000	860	86	62 - 133	
1,3,5-Trimethylbenzene	1000	882	88	60 - 130	
Vinyl chloride	1000	851	85	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	81	26 - 141
Dibromofluoromethane (Surr)	99	30 - 122
1,2-Dichloroethane-d4 (Surr)	101	39 - 128
Toluene-d8 (Surr)	92	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Method Reporting Limit Check - Batch: 240-187197 **Method: 8260B**
Preparation: N/A

Lab Sample ID:	MRL 240-187197/8	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	143885.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/29/2015 1359	Units:	ng/uL	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	0.0100	0.0183	183	10 - 150	^
Allyl chloride	0.00500	0.00462	92	10 - 150	
Benzene	0.00500	0.00474	95	10 - 150	
Bromobenzene	0.00500	0.00410	82	10 - 150	
Bromochloromethane	0.00500	0.00490	98	10 - 150	
Bromodichloromethane	0.00500	0.00445	89	10 - 150	
Bromoform	0.00500	0.00618	124	10 - 150	
Bromomethane	0.00500	0.00524	105	10 - 150	
2-Butanone (MEK)	0.0100	0.00711	71	10 - 150	J
Carbon disulfide	0.00500	0.00437	87	10 - 150	
Carbon tetrachloride	0.00500	0.00458	92	10 - 150	
Chlorobenzene	0.00500	0.00438	88	10 - 150	
Chlorodibromomethane	0.00500	0.00374	75	10 - 150	
Chloroethane	0.00500	0.00510	102	10 - 150	
Chloroform	0.00500	0.00489	98	10 - 150	
Chloromethane	0.00500	0.00473	95	10 - 150	
2-Chlorotoluene	0.00500	0.00412	82	10 - 150	
4-Chlorotoluene	0.00500	0.00443	89	10 - 150	
cis-1,2-Dichloroethene	0.00500	0.00469	94	10 - 150	
cis-1,3-Dichloropropene	0.00500	0.00380	76	10 - 150	
Cyclohexane	0.00500	0.00450	90	10 - 150	
1,2-Dibromo-3-Chloropropane	0.00500	0.00339	68	10 - 150	
1,2-Dibromoethane	0.00500	0.00448	90	10 - 150	
Dibromomethane	0.00500	0.00495	99	10 - 150	
1,2-Dichlorobenzene	0.00500	0.00434	87	10 - 150	
1,3-Dichlorobenzene	0.00500	0.00412	82	10 - 150	
1,4-Dichlorobenzene	0.00500	0.00405	81	10 - 150	
Dichlorodifluoromethane	0.00500	0.00640	128	10 - 150	
1,1-Dichloroethane	0.00500	0.00456	91	10 - 150	
1,2-Dichloroethane	0.00500	0.00447	89	10 - 150	
1,1-Dichloroethene	0.00500	0.00500	100	10 - 150	
Dichlorofluoromethane	0.00500	0.00521	104	10 - 150	
1,2-Dichloropropane	0.00500	0.00426	85	10 - 150	
1,3-Dichloropropane	0.00500	0.00458	92	10 - 150	
2,2-Dichloropropane	0.00500	0.00453	91	10 - 150	
1,1-Dichloropropene	0.00500	0.00464	93	10 - 150	
Ethylbenzene	0.00500	0.00431	86	10 - 150	
Ethyl ether	0.00500	0.00424	85	10 - 150	
Hexachlorobutadiene	0.00500	0.00424	85	10 - 150	
2-Hexanone	0.0100	0.00585	59	10 - 150	J
Isopropylbenzene	0.00500	0.00431	86	10 - 150	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Method Reporting Limit Check - Batch: 240-187197 **Method: 8260B**
Preparation: N/A

Lab Sample ID:	MRL 240-187197/8	Analysis Batch:	240-187197	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	143885.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/29/2015 1359	Units:	ng/uL	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	0.0250	0.0212	85	10 - 150	
Methylcyclohexane	0.00500	0.00494	99	10 - 150	
Methylene Chloride	0.00500	0.00259	52	10 - 150	
4-Methyl-2-pentanone (MIBK)	0.0100	0.00714	71	10 - 150	J
Methyl tert butyl ether	0.00500	0.00488	98	10 - 150	
m-Xylene & p-Xylene	0.00500	0.00446	89	10 - 150	
Naphthalene	0.00500	0.00397	79	10 - 150	
n-Butylbenzene	0.00500	0.00402	80	10 - 150	
N-Propylbenzene	0.00500	0.00412	82	10 - 150	
o-Xylene	0.00500	0.00451	90	10 - 150	
p-Isopropyltoluene	0.00500	0.00401	80	10 - 150	
sec-Butylbenzene	0.00500	0.00405	81	10 - 150	
Styrene	0.00500	0.00401	80	10 - 150	
tert-Butylbenzene	0.00500	0.00394	79	10 - 150	
1,1,1,2-Tetrachloroethane	0.00500	0.00481	96	10 - 150	
1,1,2,2-Tetrachloroethane	0.00500	0.00468	94	10 - 150	
Tetrachloroethene	0.00500	0.00450	90	10 - 150	
Tetrahydrofuran	0.0100	0.00740	74	10 - 150	
Toluene	0.00500	0.00435	87	10 - 150	
trans-1,2-Dichloroethene	0.00500	0.00479	96	10 - 150	
trans-1,3-Dichloropropene	0.00500	0.00381	76	10 - 150	
1,2,3-Trichlorobenzene	0.00500	0.00440	88	10 - 150	
1,2,4-Trichlorobenzene	0.00500	0.00449	90	10 - 150	
1,1,1-Trichloroethane	0.00500	0.00475	95	10 - 150	
1,1,2-Trichloroethane	0.00500	0.00416	83	10 - 150	
Trichloroethene	0.00500	0.00477	95	10 - 150	
Trichlorofluoromethane	0.00500	0.00563	113	10 - 150	
1,2,3-Trichloropropane	0.00500	0.00447	89	10 - 150	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.00500	0.00518	104	10 - 150	
1,2,4-Trimethylbenzene	0.00500	0.00411	82	10 - 150	
1,3,5-Trimethylbenzene	0.00500	0.00413	83	10 - 150	
Vinyl chloride	0.00500	0.00501	100	10 - 150	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	90	10 - 150
Dibromofluoromethane (Surr)	96	10 - 150
1,2-Dichloroethane-d4 (Surr)	103	10 - 150
Toluene-d8 (Surr)	92	10 - 150

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Method Blank - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187413/23-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1154	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4,5-Trichlorophenol	ND		25	330
2,4,6-Trichlorophenol	ND		8.9	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2-Chlorophenol	ND		8.2	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Method Blank - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187413/23-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1154	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	60	24 - 110
2-Fluorophenol (Surr)	51	24 - 110
2,4,6-Tribromophenol (Surr)	13	10 - 110
Nitrobenzene-d5 (Surr)	56	20 - 110
Phenol-d5 (Surr)	61	26 - 110
Terphenyl-d14 (Surr)	64	36 - 110

Lab Control Sample - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187413/24-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1217	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	432	65	35 - 110	
2,2'-oxybis[1-chloropropane]	667	408	61	29 - 110	
2,4,5-Trichlorophenol	667	356	53	25 - 110	
2,4,6-Trichlorophenol	667	379	57	12 - 110	
2,4-Dichlorophenol	667	434	65	39 - 110	
2,4-Dimethylphenol	667	428	64	29 - 110	
2,4-Dinitrophenol	1330	706	53	10 - 110	J
2,4-Dinitrotoluene	667	516	77	48 - 110	
2,6-Dinitrotoluene	667	501	75	45 - 110	
2-Chloronaphthalene	667	432	65	32 - 110	
2-Chlorophenol	667	412	62	37 - 110	
2-Methylnaphthalene	667	430	65	36 - 110	
2-Methylphenol	667	448	67	41 - 110	
2-Nitroaniline	667	506	76	45 - 110	J
2-Nitrophenol	667	404	61	34 - 110	
3,3'-Dichlorobenzidine	1330	718	54	28 - 110	J
3-Nitroaniline	667	490	73	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	828	62	10 - 110	J
4-Bromophenyl phenyl ether	667	465	70	39 - 110	
4-Chloro-3-methylphenol	667	485	73	48 - 110	
4-Chloroaniline	667	370	55	30 - 110	
4-Chlorophenyl phenyl ether	667	458	69	40 - 110	
4-Nitroaniline	667	501	75	48 - 110	J
4-Nitrophenol	1330	842	63	28 - 110	J
Acenaphthene	667	439	66	38 - 110	
Acenaphthylene	667	461	69	40 - 110	
Acetophenone	667	425	64	40 - 110	
Anthracene	667	491	74	48 - 110	
Atrazine	1330	1060	79	66 - 127	
Benzaldehyde	1330	887	67	32 - 110	
Benzo[a]anthracene	667	496	74	50 - 110	
Benzo[a]pyrene	667	490	74	44 - 110	
Benzo[b]fluoranthene	667	503	75	43 - 110	
Benzo[g,h,i]perylene	667	554	83	51 - 110	
Benzo[k]fluoranthene	667	533	80	38 - 105	
Bis(2-chloroethoxy)methane	667	426	64	32 - 110	
Bis(2-chloroethyl)ether	667	410	61	34 - 110	
Bis(2-ethylhexyl) phthalate	667	574	86	50 - 110	
Butyl benzyl phthalate	667	541	81	51 - 110	
Caprolactam	1330	1250	94	44 - 114	
Carbazole	667	495	74	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Control Sample - Batch: 240-187413

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187413/24-A	Analysis Batch:	240-187745	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	0702007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/02/2015 1217	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	513	77	50 - 110	
Dibenz(a,h)anthracene	667	509	76	51 - 110	
Dibenzofuran	667	453	68	43 - 110	
Diethyl phthalate	667	490	73	52 - 110	
Dimethyl phthalate	667	469	70	50 - 110	
Di-n-butyl phthalate	667	544	82	51 - 110	
Di-n-octyl phthalate	667	489	73	48 - 110	
Fluoranthene	667	514	77	51 - 110	
Fluorene	667	459	69	46 - 110	
Hexachlorobenzene	667	450	68	43 - 110	
Hexachlorobutadiene	667	379	57	29 - 110	
Hexachlorocyclopentadiene	667	177	27	12 - 110	J
Hexachloroethane	667	385	58	30 - 110	
Indeno[1,2,3-cd]pyrene	667	522	78	50 - 110	
Isophorone	667	442	66	36 - 110	
Naphthalene	667	400	60	36 - 110	
Nitrobenzene	667	421	63	32 - 110	
N-Nitrosodi-n-propylamine	667	442	66	38 - 110	
N-Nitrosodiphenylamine	1330	963	72	46 - 110	
Pentachlorophenol	1330	751	56	10 - 110	
Phenol	667	425	64	38 - 110	
Phenanthrene	667	469	70	49 - 110	
Pyrene	667	506	76	49 - 110	
3 & 4 Methylphenol	667	480	72	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	66	24 - 110
2-Fluorophenol (Surr)	68	24 - 110
2,4,6-Tribromophenol (Surr)	58	10 - 110
Nitrobenzene-d5 (Surr)	65	20 - 110
Phenol-d5 (Surr)	70	26 - 110
Terphenyl-d14 (Surr)	74	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187413

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-AJ-4-J MS	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708009.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.70 g
Analysis Date:	07/08/2015 1059			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-AJ-4-K MSD	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708010.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.88 g
Analysis Date:	07/08/2015 1124			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	69	75	32 - 110	6	32	J	J
2,2'-oxybis[1-chloropropane]	72	78	11 - 110	7	42	J	J
2,4,5-Trichlorophenol	75	69	10 - 117	10	99	J	J
2,4,6-Trichlorophenol	66	65	10 - 110	2	38	J	J
2,4-Dichlorophenol	77	81	10 - 110	4	34	J	J
2,4-Dimethylphenol	77	77	10 - 110	1	31	J	J
2,4-Dinitrophenol	34	34	10 - 110	0	99	J	J
2,4-Dinitrotoluene	67	71	32 - 110	6	30	J	J
2,6-Dinitrotoluene	69	75	35 - 110	8	30	J	J
2-Chloronaphthalene	73	82	28 - 110	11	30	J	J
2-Chlorophenol	72	80	10 - 110	9	47	J	J
2-Methylnaphthalene	70	73	10 - 133	3	42	J	J
2-Methylphenol	83	82	24 - 110	2	51	J	J
2-Nitroaniline	72	79	39 - 110	8	31	J	J
2-Nitrophenol	69	74	10 - 110	5	49	J	J
3,3'-Dichlorobenzidine	28	29	10 - 110	3	56	J	J
3-Nitroaniline	68	73	10 - 110	6	30	J	J
4,6-Dinitro-2-methylphenol	37	35	10 - 110	6	55	J	J
4-Bromophenyl phenyl ether	78	78	33 - 110	0	30	J	J
4-Chloro-3-methylphenol	75	80	25 - 110	6	54	J	J
4-Chloroaniline	59	59	10 - 110	1	36	J	J
4-Chlorophenyl phenyl ether	75	83	32 - 110	10	30	J	J
4-Nitroaniline	70	52	10 - 110	29	48	J	J
4-Nitrophenol	77	78	10 - 113	1	49	J	J
Acenaphthene	84	61	22 - 110	22	99	J	J
Acenaphthylene	70	73	24 - 110	4	99	J	J
Acetophenone	78	80	31 - 110	1	43	J	J
Anthracene	80	50	20 - 110	23	99	J	J
Atrazine	87	94	45 - 118	7	30	J	J
Benzaldehyde	85	86	23 - 110	0	42	J	J
Benzo[a]anthracene	78	27	10 - 122	19	99		
Benzo[a]pyrene	66	39	10 - 110	11	99		J

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187413

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-AJ-4-J MS	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708009.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.70 g
Analysis Date:	07/08/2015 1059			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-AJ-4-K MSD	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708010.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.88 g
Analysis Date:	07/08/2015 1124			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	40	24	12 - 118	5	99		
Benzo[g,h,i]perylene	51	38	10 - 117	8	99	J	J
Benzo[k]fluoranthene	52	58	10 - 121	3	99	J	J
Bis(2-chloroethoxy)methane	78	80	26 - 110	2	37	J	J
Bis(2-chloroethyl)ether	72	76	21 - 110	6	55	J	J
Bis(2-ethylhexyl) phthalate	68	107	40 - 110	32	30	J	J F2
Butyl benzyl phthalate	83	88	44 - 110	5	30	J	J
Caprolactam	91	93	10 - 134	2	32	J	J
Carbazole	75	63	34 - 110	11	30	J	J
Chrysene	66	35	10 - 125	10	99		
Dibenz(a,h)anthracene	55	59	14 - 113	4	99	J	J
Dibenzofuran	74	66	29 - 110	9	30	J	J
Diethyl phthalate	80	84	42 - 110	4	30	J	J
Dimethyl phthalate	81	80	41 - 110	2	30	J	J
Di-n-butyl phthalate	69	74	43 - 110	4	30	J	J
Di-n-octyl phthalate	76	81	24 - 119	6	30	J	J
Fluoranthene	84	-34	10 - 110	24	99	4	4
Fluorene	86	66	23 - 110	20	99	J	J
Hexachlorobenzene	68	68	34 - 110	1	30	J	J
Hexachlorobutadiene	75	78	25 - 110	4	34	J	J
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	59	53	12 - 110	10	50	J	J
Indeno[1,2,3-cd]pyrene	57	45	10 - 114	8	99	J	J
Isophorone	78	84	29 - 110	8	38	J	J
Naphthalene	52	51	10 - 111	2	99	J	J
Nitrobenzene	72	80	23 - 110	9	41	J	J
N-Nitrosodi-n-propylamine	74	83	26 - 110	10	42	J	J
N-Nitrosodiphenylamine	79	82	22 - 110	3	30	J	J
Phenol	76	85	17 - 110	11	53	J	J
Phenanthrene	91	-23	10 - 166	35	99		F1
Pyrene	83	7	10 - 147	17	99		F1
3 & 4 Methylphenol	78	82	25 - 110	5	50	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187413

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52442-AJ-4-J MS	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708009.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.70 g
Analysis Date:	07/08/2015 1059			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52442-AJ-4-K MSD	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187413	Lab File ID:	50708010.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	29.88 g
Analysis Date:	07/08/2015 1124			Final Weight/Volume:	2 mL
Prep Date:	06/30/2015 1037			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	76	78	24 - 110
2-Fluorophenol (Surr)	77	74	24 - 110
2,4,6-Tribromophenol (Surr)	62	59	10 - 110
Nitrobenzene-d5 (Surr)	76	80	20 - 110
Phenol-d5 (Surr)	81	83	26 - 110
Terphenyl-d14 (Surr)	76	78	36 - 110

Method Blank - Batch: 240-188504

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188504/17-A	Analysis Batch:	240-188787	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-188504	Lab File ID:	0711004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/11/2015 0833	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/09/2015 0931			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4,5-Trichlorophenol	ND		25	330
2,4,6-Trichlorophenol	ND		8.9	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2-Chlorophenol	ND		8.2	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	97.4	J	19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Method Blank - Batch: 240-188504

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188504/17-A	Analysis Batch:	240-188787	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-188504	Lab File ID:	0711004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/11/2015 0833	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/09/2015 0931			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	20.4	J	15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	53	24 - 110
2-Fluorophenol (Surr)	52	24 - 110
2,4,6-Tribromophenol (Surr)	14	10 - 110
Nitrobenzene-d5 (Surr)	51	20 - 110
Phenol-d5 (Surr)	56	26 - 110
Terphenyl-d14 (Surr)	62	36 - 110

Lab Control Sample - Batch: 240-188504

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188504/18-A	Analysis Batch:	240-188787	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-188504	Lab File ID:	0711005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/11/2015 0855	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/09/2015 0931			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	385	58	35 - 110	
2,2'-oxybis[1-chloropropane]	667	276	41	29 - 110	J
2,4,5-Trichlorophenol	667	240	36	25 - 110	J
2,4,6-Trichlorophenol	667	246	37	12 - 110	J
2,4-Dichlorophenol	667	381	57	39 - 110	
2,4-Dimethylphenol	667	407	61	29 - 110	
2,4-Dinitrophenol	1330	298	22	10 - 110	J
2,4-Dinitrotoluene	667	436	65	48 - 110	
2,6-Dinitrotoluene	667	464	70	45 - 110	
2-Chloronaphthalene	667	375	56	32 - 110	
2-Chlorophenol	667	333	50	37 - 110	
2-Methylnaphthalene	667	368	55	36 - 110	
2-Methylphenol	667	388	58	41 - 110	
2-Nitroaniline	667	417	63	45 - 110	J
2-Nitrophenol	667	335	50	34 - 110	
3,3'-Dichlorobenzidine	1330	710	53	28 - 110	J
3-Nitroaniline	667	472	71	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	407	31	10 - 110	J
4-Bromophenyl phenyl ether	667	442	66	39 - 110	
4-Chloro-3-methylphenol	667	472	71	48 - 110	
4-Chloroaniline	667	384	58	30 - 110	
4-Chlorophenyl phenyl ether	667	429	64	40 - 110	
4-Nitroaniline	667	473	71	48 - 110	J
4-Nitrophenol	1330	721	54	28 - 110	J
Acenaphthene	667	398	60	38 - 110	
Acenaphthylene	667	419	63	40 - 110	
Acetophenone	667	311	47	40 - 110	J
Anthracene	667	452	68	48 - 110	
Atrazine	1330	897	67	66 - 127	
Benzaldehyde	1330	548	41	32 - 110	
Benzo[a]anthracene	667	435	65	50 - 110	
Benzo[a]pyrene	667	427	64	44 - 110	
Benzo[b]fluoranthene	667	453	68	43 - 110	
Benzo[g,h,i]perylene	667	470	70	51 - 110	
Benzo[k]fluoranthene	667	473	71	38 - 105	
Bis(2-chloroethoxy)methane	667	355	53	32 - 110	
Bis(2-chloroethyl)ether	667	274	41	34 - 110	J
Bis(2-ethylhexyl) phthalate	667	572	86	50 - 110	
Butyl benzyl phthalate	667	451	68	51 - 110	
Caprolactam	1330	1060	80	44 - 114	
Carbazole	667	457	68	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Control Sample - Batch: 240-188504

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188504/18-A	Analysis Batch:	240-188787	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-188504	Lab File ID:	0711005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/11/2015 0855	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/09/2015 0931			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	447	67	50 - 110	
Dibenz(a,h)anthracene	667	435	65	51 - 110	
Dibenzofuran	667	429	64	43 - 110	
Diethyl phthalate	667	454	68	52 - 110	
Dimethyl phthalate	667	443	66	50 - 110	
Di-n-butyl phthalate	667	500	75	51 - 110	
Di-n-octyl phthalate	667	452	68	48 - 110	
Fluoranthene	667	463	69	51 - 110	
Fluorene	667	430	65	46 - 110	
Hexachlorobenzene	667	444	67	43 - 110	
Hexachlorobutadiene	667	275	41	29 - 110	J
Hexachlorocyclopentadiene	667	165	25	12 - 110	J
Hexachloroethane	667	236	35	30 - 110	J
Indeno[1,2,3-cd]pyrene	667	451	68	50 - 110	
Isophorone	667	368	55	36 - 110	
Naphthalene	667	319	48	36 - 110	J
Nitrobenzene	667	304	46	32 - 110	J
N-Nitrosodi-n-propylamine	667	336	50	38 - 110	
N-Nitrosodiphenylamine	1330	919	69	46 - 110	
Pentachlorophenol	1330	539	40	10 - 110	
Phenol	667	365	55	38 - 110	
Phenanthrene	667	453	68	49 - 110	
Pyrene	667	437	66	49 - 110	
3 & 4 Methylphenol	667	410	61	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	58	24 - 110
2-Fluorophenol (Surr)	48	24 - 110
2,4,6-Tribromophenol (Surr)	40	10 - 110
Nitrobenzene-d5 (Surr)	47	20 - 110
Phenol-d5 (Surr)	57	26 - 110
Terphenyl-d14 (Surr)	63	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Method Blank - Batch: 240-186853 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-186853/1-A	Analysis Batch:	240-186873	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186853	Lab File ID:	Y0062625.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/26/2015 2108	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-186853 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-186853/2-A	Analysis Batch:	240-186873	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186853	Lab File ID:	Y0062626.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/26/2015 2144	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-186853/18-A	Analysis Batch:	240-186873	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-186853	Lab File ID:	Y0062643.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/27/2015 0745	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/26/2015 0557			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	103	97	80 - 120	6	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Method Blank - Batch: 240-187060

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-187060/21-A	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-187060	Lab File ID:	P14R062908.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 1651	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-187060

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-187060/22-A	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-187060	Lab File ID:	P14R062909.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 1718	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-187060/23-A	Analysis Batch:	240-187243	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-187060	Lab File ID:	P14R062929.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/30/2015 0227	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0844			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	87	105	70 - 120	19	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Method Blank - Batch: 240-186943

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-186943/1-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/30/2015 0654	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	0.722	J	0.41	20
Beryllium	ND		0.026	0.50
Calcium	ND		23	500
Cadmium	ND		0.021	0.20
Cobalt	ND		0.047	5.0
Chromium	ND		0.075	0.50
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Potassium	ND		6.2	500
Magnesium	ND		5.2	500
Manganese	0.103	J	0.084	1.5
Silver	ND		0.063	0.50
Sodium	ND		19	500
Nickel	1.03	J	0.080	4.0
Vanadium	0.326	J	0.20	5.0
Zinc	ND		0.56	2.0
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Selenium	ND		0.34	0.50
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Lab Control Sample - Batch: 240-186943

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-186943/2-A	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	06/30/2015 0658	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	194	97	80 - 120	
Antimony	50.0	48.2	96	80 - 120	
Barium	200	188	94	80 - 120	
Beryllium	5.00	4.83	97	80 - 120	
Calcium	5000	4880	98	80 - 120	
Cadmium	5.00	4.87	97	80 - 120	
Cobalt	50.0	48.0	96	80 - 120	
Chromium	20.0	18.9	95	80 - 120	
Copper	25.0	24.1	96	80 - 120	
Iron	100	101	101	80 - 120	
Potassium	5000	4840	97	80 - 120	
Magnesium	5000	4830	97	80 - 120	
Manganese	50.0	48.4	97	80 - 120	
Silver	5.00	4.89	98	80 - 120	
Sodium	5000	4910	98	80 - 120	
Nickel	50.0	48.5	97	80 - 120	
Vanadium	50.0	47.8	96	80 - 120	
Zinc	50.0	48.9	98	80 - 120	
Arsenic	200	195	97	80 - 120	
Lead	50.0	47.0	94	80 - 120	
Selenium	200	192	96	80 - 120	
Thallium	200	190	95	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186943

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-52462-1	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.27 g
Analysis Date:	06/30/2015 0722			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52462-1	Analysis Batch:	240-187366	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-186943	Lab File ID:	I9063015A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.27 g
Analysis Date:	06/30/2015 0726			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1033				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	433	788	75 - 125	15	20	4	4
Antimony	52	57	75 - 125	9	20	F1	F1
Barium	80	83	75 - 125	4	20		
Beryllium	84	88	75 - 125	4	20		
Calcium	-228	-166	75 - 125	13	20	4	4
Cadmium	85	87	75 - 125	3	20		
Cobalt	89	98	75 - 125	9	20		
Chromium	75	81	75 - 125	5	20		
Copper	73	106	75 - 125	24	20	F1	F2
Iron	-1902	-1017	75 - 125	10	20	4	4
Potassium	88	94	75 - 125	6	20		
Magnesium	10	36	75 - 125	11	20	F1	F1
Manganese	-194	-56	75 - 125	17	20	4	4
Silver	90	93	75 - 125	3	20		
Sodium	88	92	75 - 125	5	20		
Nickel	85	98	75 - 125	11	20		
Vanadium	81	90	75 - 125	7	20		
Zinc	70	75	75 - 125	3	20	F1	
Arsenic	87	91	75 - 125	4	20		
Lead	72	72	75 - 125	0	20	F1	F1
Selenium	86	90	75 - 125	4	20		
Thallium	91	94	75 - 125	4	20		

Method Blank - Batch: 240-186944

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-186944/1-A	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 0907	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-186944

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-186944/2-A	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/30/2015 0909	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.819	98	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-186944

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52462-1	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.56 g
Analysis Date:	06/30/2015 0913			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52462-1	Analysis Batch:	240-187460	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-186944	Lab File ID:	063015AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.56 g
Analysis Date:	06/30/2015 0915			Final Weight/Volume:	100 mL
Prep Date:	06/26/2015 1545				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	114	108	80 - 120	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52462-1

Duplicate - Batch: 240-186917

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52462-3	Analysis Batch:	240-186917	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/26/2015 0940	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	87	87	0.2	20	
Percent Moisture	13	13	1	20	

Duplicate - Batch: 240-186917

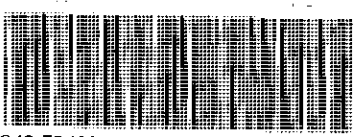
Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52462-7	Analysis Batch:	240-186917	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/26/2015 0940	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	86	86	0.4	20	
Percent Moisture	14	14	2	20	

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-52462 Chain of Custody

4101 Shuffel Street N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

3.4/C4.4
2.8/C3.8 1.6/C2.6 2.8/C3.8
3.8/C4.8 0.8/C1.8 2.2/C3.2 ~~[illegible]~~

Chain of Custody Record

085678

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact			
Company Name: ARCADIS	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/24
Address: 430 N. 1st Ave #720	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:
City/State/Zip: Minneapolis, MN, 55401	Analysis Turnaround Time: ☐ CALENDAR DAYS ☐ WORKING DAYS		
Phone: 612-339-9434	TAT if different from Below ____		
Fax: —	☒ 2 weeks		
Project Name: FORD TCAP	☐ 1 week		
Site:	☐ 2 days		
P O # MN000624.0001	☐ 1 day		

COC No: 1 of 1 COCs
Sampler: Lisa Weidemann
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.: 24006638

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOC	GRO	DRO	SVOC	TAL Metals	moisture content	Sample Specific Notes:
HA-03_0-0.5(20150624)	6/24	0810	G	SL	8	N	N	2	2	1	1	1	1	
HA-02_0-0.5(20150624)	6/24	0845	G	SL	8	N	N	2	2	1	1	1	1	
HA-05_0-1(20150624)	6/24	0915	G	SL	8	N	N	2	2	1	1	1	1	
HA-01_0-1(20150624)	6/24	1020	G	SL	8	N	N	2	2	1	1	1	1	
HA-04_0-1(20150624)	6/24	1045	G	SL	8	N	N	2	2	1	1	1	1	
HA-07_0-1(20150624)	6/24	1115	G	SL	8	N	N	2	2	1	1	1	1	
HA-06_0-1(20150624)	6/24	1210	G	SL	8	N	N	2	2	1	1	1	1	
HA-08_0-1(20150624)	6/24	1250	G	SL	8	N	N	2	2	1	1	1	1	
HA-09_0-0.5(20150624)	6/24	1315	G	SL	8	N	N	2	2	1	1	1	1	
HA-10_0-1(20150624)	6/24	1345	G	SL	8	N	N	2	2	1	1	1	1	
MB-01(20150624)	6/24	—	G	W	2	N	N	1	1					
								6	6	1	1	1	1	

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other MeOH

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Level IV

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
LISA Weidemann	ARCADIS	6/24 1550	[signature]	TAmi	6-24-15 1556
[signature]	TAmi	6-24-15 1911	[signature]	TA	6-25-15 900
			Received in Laboratory by:		

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 52462

Client Arcadis Site Name

Cooler unpacked by:

Cooler Received on 6-25-15 Opened on 6-25-15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   IR GUN# A (CF +1.0 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   ~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C~~
   ~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C~~
   IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   ☑ See Multiple Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 7	Yes	No
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Were sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC432654
12. Were VOAs on the COC?	Yes	No
13. Were air bubbles >6 mm in any VOA vials?	Yes	No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative Login # : 52462
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	A	3.4	4.4	ICE
		2.8	3.8	
		3.8	4.8	
		1.6	2.6	
		0.8	1.8	
		2.8	3.8	
		2.2	3.2	

July 14, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52462-1
Sample date: 2015-06-24
Report received by CADENA: 2015-07-13
Initial Data Verification completed by CADENA: 2015-07-14

The following minor QC exceptions or missing information were noted:

WI-GRO and WI-DRO QC batch did not include MS recovery data and surrogate recoveries were not available for samples or QC.

GCMS VOC QC batch 187043 did not include MS recovery data due to insufficient sample volume available for creating MS/MSD's according to laboratory submittal case narrative.

GCMS SVOC surrogate recoveries were outliers biased low and less than 10% for 1 out of 3 acid fraction surrogates for client sample -009. GCMS SVOC acid fraction analytes for client sample -009 original analysis should be considered to be unusable and qualified with R flags. Client sample -009 was re-analyzed for GCMS SVOC outside of the referenced holding time but with acceptable surrogate recoveries so these re-analysis results should be considered to be estimated and qualified with J flags if detected and UJ flags if non-detect. The original analysis unqualified base-neutral fraction GCMS SVOC analytes and re-analysis acid fraction GCMS SVOC analytes with UJ qualifiers should be considered to be the final reportable results for client sample -009.

GCMS SVOC QC batch MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

GCMS SVOC QC batch 188504 method blank had detections below the RL for bis-2-ethylhexylphthalate and di-n-butylphthalate. Qualification of client sample results was not required based on these method blank detections.

Metals method blanks had detections below the RL in QC batch 186943 for total barium, manganese, nickel and vanadium. Qualification of client sample results was not required based on these method blank detections.

Metals sample -001 MS/MSD recoveries were not considered to be statistically reliable due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule) so were not used to qualify results for aluminum, calcium, iron and manganese. MS and MSD recoveries were outliers biased low for antimony, magnesium and lead and MS or MSD recoveries but not both were outliers biased low along with the MS/MSD RPD for copper. Client sample -001 results for antimony, magnesium, lead and copper should be considered to be estimated and qualified with J flags if detected and UJ flags if non-detect. MS or MSD recoveries but not both were outliers for zinc so qualification was not required based on this QC outlier alone.

11 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other and Metals parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52462-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury in Solid Waste
240524621	HA-03_0-0.5(20150624)	6/24/2015	8:10:00	X	X	X	X	X	X
2405246210	HA-10_0-1(20150624)	6/24/2015	1:45:00	X	X	X	X	X	X
2405246211	MB-01(20150624)	6/24/2015	12:00:00	X		X			
240524622	HA-02_0-0.5(20150624)	6/24/2015	8:45:00	X	X	X	X	X	X
240524623	HA-05_0-1(20150624)	6/24/2015	9:15:00	X	X	X	X	X	X
240524624	HA-01_0-1(20150624)	6/24/2015	10:20:00	X	X	X	X	X	X
240524625	HA-04_0-1(20150624)	6/24/2015	10:45:00	X	X	X	X	X	X
240524626	HA-07_0-1(20150624)	6/24/2015	11:15:00	X	X	X	X	X	X
240524627	HA-06_0-1(20150624)	6/24/2015	12:10:00	X	X	X	X	X	X
240524628	HA-08_0-1(20150624)	6/24/2015	12:50:00	X	X	X	X	X	X
240524629	HA-09_0-0.5(20150624)	6/24/2015	1:15:00	X	X	X	X	X	X

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

		Sample Name:	HA-03_0-0.5(20150624)				HA-09_0-0.5(20150624)			
		Lab Sample ID:	240524621				240524629			
		Sample Date:	6/24/2015				6/24/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC										
	OSW-8270C									
	2,4,5-Trichlorophenol	95-95-4					ND	420	ug/kg	UJ
	2,4,6-Trichlorophenol	88-06-2					ND	420	ug/kg	UJ
	2,4-Dichlorophenol	120-83-2					ND	420	ug/kg	UJ
	2,4-Dimethylphenol	105-67-9					ND	420	ug/kg	UJ
	2,4-Dinitrophenol	51-28-5					ND	2100	ug/kg	UJ
	2-Chlorophenol	95-57-8					ND	420	ug/kg	UJ
	2-Methylphenol	95-48-7					ND	420	ug/kg	UJ
	2-Nitrophenol	88-75-5					ND	420	ug/kg	UJ
	3 & 4 Methylphenol	65794-96-9					ND	510	ug/kg	UJ
	4,6-Dinitro-2-methylphenol	534-52-1					ND	2100	ug/kg	UJ
	4-Chloro-3-methylphenol	59-50-7					ND	420	ug/kg	UJ
	4-Nitrophenol	100-02-7					ND	2100	ug/kg	UJ
	Pentachlorophenol	87-86-5					ND	420	ug/kg	UJ
	Phenol	108-95-2					ND	420	ug/kg	UJ
Metals										
	OSW-6010B									
	Antimony	7440-36-0	ND	0.97	mg/kg	UJ				
	Copper	7440-50-8	11	2.4	mg/kg	J				
	Lead	7439-92-1	18	0.29	mg/kg	J				
	Magnesium	7439-95-4	10000	480	mg/kg	J				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

		Sample Name:	HA-03_0-0.5(20150624)				HA-10_0-1(20150624)				MB-01(20150624)			
		Lab Sample ID:	240524621				2405246210				2405246211			
		Sample Date:	6/24/2015				6/24/2015				6/24/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	590	ug/kg	---	ND	650	ug/kg	---	ND	500	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1200	ug/kg	---	ND	1300	ug/kg	---	ND	1000	ug/kg	---
2-Chlorotoluene	95-49-8	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
2-Hexanone	591-78-6	ND	1200	ug/kg	---	ND	1300	ug/kg	---	ND	1000	ug/kg	---
4-Chlorotoluene	106-43-4	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1200	ug/kg	---	ND	1300	ug/kg	---	ND	1000	ug/kg	---
Acetone	67-64-1	ND	1200	ug/kg	---	ND	1300	ug/kg	---	ND	1000	ug/kg	---
Allyl chloride	107-05-1	ND	590	ug/kg	---	ND	650	ug/kg	---	ND	500	ug/kg	---
Benzene	71-43-2	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Bromobenzene	108-86-1	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Bromochloromethane	74-97-5	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Bromodichloromethane	75-27-4	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Bromoform	75-25-2	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Bromomethane	74-83-9	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Carbon disulfide	75-15-0	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Carbon tetrachloride	56-23-5	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Chlorobenzene	108-90-7	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Chlorodibromomethane	124-48-1	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Chloroethane	75-00-3	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Chloroform	67-66-3	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Chloromethane	74-87-3	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Cyclohexane	110-82-7	ND	590	ug/kg	---	ND	650	ug/kg	---	ND	500	ug/kg	---
Dibromomethane	74-95-3	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	590	ug/kg	---	ND	650	ug/kg	---	ND	500	ug/kg	---
Ethyl ether	60-29-7	ND	590	ug/kg	---	ND	650	ug/kg	---	ND	500	ug/kg	---
Ethylbenzene	100-41-4	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Isopropylbenzene	98-82-8	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Methyl acetate	79-20-9	130	590	ug/kg	J	630	650	ug/kg	J	ND	500	ug/kg	---
Methyl tert butyl ether	1634-04-4	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Methylcyclohexane	108-87-2	ND	590	ug/kg	---	ND	650	ug/kg	---	ND	500	ug/kg	---
Methylene Chloride	75-09-2	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
n-Butylbenzene	104-51-8	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
N-Propylbenzene	103-65-1	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Naphthalene	91-20-3	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
o-Xylene	95-47-6	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
sec-Butylbenzene	135-98-8	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Styrene	100-42-5	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
tert-Butylbenzene	98-06-6	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Tetrachloroethene	127-18-4	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1200	ug/kg	---	ND	1300	ug/kg	---	ND	1000	ug/kg	---
Toluene	108-88-3	14	290	ug/kg	J	ND	330	ug/kg	---	ND	250	ug/kg	---
trans-1,2-Dichloroethene	156-60-5	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Trichloroethene	79-01-6	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---
Vinyl chloride	75-01-4	ND	290	ug/kg	---	ND	330	ug/kg	---	ND	250	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

		Sample Name:	HA-03_0-0.5(20150624)				HA-10_0-1(20150624)				MB-01(20150624)			
		Lab Sample ID:	240524621				2405246210				2405246211			
		Sample Date:	6/24/2015				6/24/2015				6/24/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	370	ug/kg	---	ND	400	ug/kg	---				
2,2'-oxybis[1-chloropropane]	108-60-1	ND	370	ug/kg	---	ND	400	ug/kg	---				
2,4,5-Trichlorophenol	95-95-4	ND	370	ug/kg	---	ND	400	ug/kg	---				
2,4,6-Trichlorophenol	88-06-2	ND	370	ug/kg	---	ND	400	ug/kg	---				
2,4-Dichlorophenol	120-83-2	ND	370	ug/kg	---	ND	400	ug/kg	---				
2,4-Dimethylphenol	105-67-9	ND	370	ug/kg	---	ND	400	ug/kg	---				
2,4-Dinitrophenol	51-28-5	ND	1800	ug/kg	---	ND	2000	ug/kg	---				
2,4-Dinitrotoluene	121-14-2	ND	370	ug/kg	---	ND	400	ug/kg	---				
2,6-Dinitrotoluene	606-20-2	ND	370	ug/kg	---	ND	400	ug/kg	---				
2-Chloronaphthalene	91-58-7	ND	370	ug/kg	---	ND	400	ug/kg	---				
2-Chlorophenol	95-57-8	ND	370	ug/kg	---	ND	400	ug/kg	---				
2-Methylnaphthalene	91-57-6	15	370	ug/kg	J	6.3	400	ug/kg	J				
2-Methylphenol	95-48-7	ND	370	ug/kg	---	ND	400	ug/kg	---				
2-Nitroaniline	88-74-4	ND	1800	ug/kg	---	ND	2000	ug/kg	---				
2-Nitrophenol	88-75-5	ND	370	ug/kg	---	ND	400	ug/kg	---				
3 & 4 Methylphenol	65794-96-9	ND	450	ug/kg	---	ND	490	ug/kg	---				
3,3'-Dichlorobenzidine	91-94-1	ND	1800	ug/kg	---	ND	2000	ug/kg	---				
3-Nitroaniline	99-09-2	ND	1800	ug/kg	---	ND	2000	ug/kg	---				
4,6-Dinitro-2-methylphenol	534-52-1	ND	1800	ug/kg	---	ND	2000	ug/kg	---				
4-Bromophenyl phenyl ether	101-55-3	ND	370	ug/kg	---	ND	400	ug/kg	---				
4-Chloro-3-methylphenol	59-50-7	ND	370	ug/kg	---	ND	400	ug/kg	---				
4-Chloroaniline	106-47-8	ND	370	ug/kg	---	ND	400	ug/kg	---				
4-Chlorophenyl phenyl ether	7005-72-3	ND	370	ug/kg	---	ND	400	ug/kg	---				
4-Nitroaniline	100-01-6	ND	1800	ug/kg	---	ND	2000	ug/kg	---				
4-Nitrophenol	100-02-7	ND	1800	ug/kg	---	ND	2000	ug/kg	---				
Acenaphthene	83-32-9	24	370	ug/kg	J	5.5	400	ug/kg	J				
Acenaphthylene	208-96-8	100	370	ug/kg	J	7.8	400	ug/kg	J				
Acetophenone	98-86-2	ND	370	ug/kg	---	13	400	ug/kg	J				
Anthracene	120-12-7	77	370	ug/kg	J	15	400	ug/kg	J				
Atrazine	1912-24-9	ND	370	ug/kg	---	ND	400	ug/kg	---				
Benzaldehyde	100-52-7	14	370	ug/kg	J	41	400	ug/kg	J				
Benzo[a]anthracene	56-55-3	480	370	ug/kg	---	72	400	ug/kg	J				
Benzo[a]pyrene	50-32-8	470	370	ug/kg	---	70	400	ug/kg	J				
Benzo[b]fluoranthene	205-99-2	730	370	ug/kg	---	110	400	ug/kg	J				
Benzo[g,h,i]perylene	191-24-2	360	370	ug/kg	J	48	400	ug/kg	J				
Benzo[k]fluoranthene	207-08-9	290	370	ug/kg	J	40	400	ug/kg	J				
Bis(2-chloroethoxy)methane	111-91-1	ND	370	ug/kg	---	ND	400	ug/kg	---				
Bis(2-chloroethyl)ether	111-44-4	ND	370	ug/kg	---	ND	400	ug/kg	---				
Bis(2-ethylhexyl) phthalate	117-81-7	91	370	ug/kg	J	39	400	ug/kg	J				
Butyl benzyl phthalate	85-68-7	ND	370	ug/kg	---	ND	400	ug/kg	---				
Caprolactam	105-60-2	ND	370	ug/kg	---	ND	400	ug/kg	---				
Carbazole	86-74-8	48	370	ug/kg	J	ND	400	ug/kg	---				
Chrysene	218-01-9	600	370	ug/kg	---	86	400	ug/kg	J				
Di-n-butyl phthalate	84-74-2	24	370	ug/kg	J	ND	400	ug/kg	---				
Di-n-octyl phthalate	117-84-0	ND	370	ug/kg	---	ND	400	ug/kg	---				
Dibenz(a,h)anthracene	53-70-3	92	370	ug/kg	J	13	400	ug/kg	J				
Dibenzofuran	132-64-9	21	370	ug/kg	J	ND	400	ug/kg	---				
Diethyl phthalate	84-66-2	ND	370	ug/kg	---	ND	400	ug/kg	---				
Dimethyl phthalate	131-11-3	ND	370	ug/kg	---	ND	400	ug/kg	---				
Fluoranthene	206-44-0	1100	370	ug/kg	---	140	400	ug/kg	J				
Fluorene	86-73-7	28	370	ug/kg	J	7.7	400	ug/kg	J				
Hexachlorobenzene	118-74-1	ND	370	ug/kg	---	ND	400	ug/kg	---				
Hexachlorobutadiene	87-68-3	ND	370	ug/kg	---	ND	400	ug/kg	---				
Hexachlorocyclopentadiene	77-47-4	ND	1800	ug/kg	---	ND	2000	ug/kg	---				
Hexachloroethane	67-72-1	ND	370	ug/kg	---	ND	400	ug/kg	---				
Indeno[1,2,3-cd]pyrene	193-39-5	300	370	ug/kg	J	39	400	ug/kg	J				
Isophorone	78-59-1	ND	370	ug/kg	---	ND	400	ug/kg	---				
N-Nitrosodi-n-propylamine	621-64-7	ND	370	ug/kg	---	ND	400	ug/kg	---				
N-Nitrosodiphenylamine	86-30-6	ND	370	ug/kg	---	ND	400	ug/kg	---				
Naphthalene	91-20-3	17	370	ug/kg	J	21	400	ug/kg	J				
Nitrobenzene	98-95-3	ND	370	ug/kg	---	ND	400	ug/kg	---				
Pentachlorophenol	87-86-5	ND	370	ug/kg	---	ND	400	ug/kg	---				
Phenanthrene	85-01-8	480	370	ug/kg	---	72	400	ug/kg	J				
Phenol	108-95-2	ND	370	ug/kg	---	ND	400	ug/kg	---				
Pyrene	129-00-0	910	370	ug/kg	---	120	400	ug/kg	J				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

			Sample Name:	HA-03_0-0.5(20150624)				HA-10_0-1(20150624)				MB-01(20150624)			
			Lab Sample ID:	240524621				2405246210				2405246211			
			Sample Date:	6/24/2015				6/24/2015				6/24/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	2.6	12	mg/kg	J	ND	12	mg/kg	---	ND	790	mg/kg	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	33	10	mg/kg	---	15	11	mg/kg	---				
Metals														
	OSW-6010B													
	Aluminum	7429-90-5	3000	19	mg/kg	---	7500	20	mg/kg	---				
	Antimony	7440-36-0	ND	0.97	mg/kg	UJ	ND	1.0	mg/kg	---				
	Arsenic	7440-38-2	3.0	0.97	mg/kg	---	4.4	1.0	mg/kg	---				
	Barium	7440-39-3	40	19	mg/kg	---	55	20	mg/kg	---				
	Beryllium	7440-41-7	0.22	0.48	mg/kg	J	0.42	0.50	mg/kg	J				
	Cadmium	7440-43-9	0.51	0.19	mg/kg	---	0.18	0.20	mg/kg	J				
	Calcium	7440-70-2	29000	480	mg/kg	---	19000	500	mg/kg	---				
	Chromium	7440-47-3	9.4	0.48	mg/kg	---	13	0.50	mg/kg	---				
	Cobalt	7440-48-4	4.0	4.8	mg/kg	J	7.1	5.0	mg/kg	---				
	Copper	7440-50-8	11	2.4	mg/kg	J	11	2.5	mg/kg	---				
	Iron	7439-89-6	8800	9.7	mg/kg	---	19000	10	mg/kg	---				
	Lead	7439-92-1	18	0.29	mg/kg	J	13	0.30	mg/kg	---				
	Magnesium	7439-95-4	10000	480	mg/kg	J	5800	500	mg/kg	---				
	Manganese	7439-96-5	400	1.5	mg/kg	---	410	1.5	mg/kg	---				
	Nickel	7440-02-0	11	3.9	mg/kg	---	16	4.0	mg/kg	---				
	Potassium	7440-09-7	560	480	mg/kg	---	2200	500	mg/kg	---				
	Selenium	7782-49-2	ND	0.48	mg/kg	---	ND	0.50	mg/kg	---				
	Silver	7440-22-4	ND	0.48	mg/kg	---	ND	0.50	mg/kg	---				
	Sodium	7440-23-5	62	480	mg/kg	J	56	500	mg/kg	J				
	Thallium	7440-28-0	ND	0.97	mg/kg	---	ND	1.0	mg/kg	---				
	Vanadium	7440-62-2	13	4.8	mg/kg	---	16	5.0	mg/kg	---				
	Zinc	7440-66-6	46	1.9	mg/kg	---	38	2.0	mg/kg	---				
	OSW-7471A													
	Mercury	7439-97-6	0.025	0.12	mg/kg	J	0.041	0.14	mg/kg	J				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

		Sample Name:	HA-02_0-0.5(20150624)				HA-05_0-1(20150624)				HA-01_0-1(20150624)			
		Lab Sample ID:	240524622				240524623				240524624			
		Sample Date:	6/24/2015				6/24/2015				6/24/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	700	ug/kg	---	ND	560	ug/kg	---	ND	650	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1400	ug/kg	---	ND	1100	ug/kg	---	ND	1300	ug/kg	---
2-Chlorotoluene	95-49-8	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
2-Hexanone	591-78-6	ND	1400	ug/kg	---	ND	1100	ug/kg	---	ND	1300	ug/kg	---
4-Chlorotoluene	106-43-4	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1400	ug/kg	---	ND	1100	ug/kg	---	ND	1300	ug/kg	---
Acetone	67-64-1	ND	1400	ug/kg	---	ND	1100	ug/kg	---	ND	1300	ug/kg	---
Allyl chloride	107-05-1	ND	700	ug/kg	---	ND	560	ug/kg	---	ND	650	ug/kg	---
Benzene	71-43-2	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Bromobenzene	108-86-1	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Bromochloromethane	74-97-5	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Bromodichloromethane	75-27-4	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Bromoform	75-25-2	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Bromomethane	74-83-9	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Carbon disulfide	75-15-0	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Carbon tetrachloride	56-23-5	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Chlorobenzene	108-90-7	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Chlorodibromomethane	124-48-1	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Chloroethane	75-00-3	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Chloroform	67-66-3	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Chloromethane	74-87-3	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Cyclohexane	110-82-7	ND	700	ug/kg	---	ND	560	ug/kg	---	ND	650	ug/kg	---
Dibromomethane	74-95-3	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	700	ug/kg	---	ND	560	ug/kg	---	ND	650	ug/kg	---
Ethyl ether	60-29-7	ND	700	ug/kg	---	ND	560	ug/kg	---	ND	650	ug/kg	---
Ethylbenzene	100-41-4	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Isopropylbenzene	98-82-8	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	28	350	ug/kg	J	ND	280	ug/kg	---	ND	330	ug/kg	---
Methyl acetate	79-20-9	270	700	ug/kg	J	93	560	ug/kg	J	170	650	ug/kg	J
Methyl tert butyl ether	1634-04-4	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Methylcyclohexane	108-87-2	ND	700	ug/kg	---	ND	560	ug/kg	---	ND	650	ug/kg	---
Methylene Chloride	75-09-2	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
n-Butylbenzene	104-51-8	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
N-Propylbenzene	103-65-1	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Naphthalene	91-20-3	41	350	ug/kg	J	ND	280	ug/kg	---	ND	330	ug/kg	---
o-Xylene	95-47-6	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
sec-Butylbenzene	135-98-8	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Styrene	100-42-5	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
tert-Butylbenzene	98-06-6	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Tetrachloroethene	127-18-4	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1400	ug/kg	---	ND	1100	ug/kg	---	ND	1300	ug/kg	---
Toluene	108-88-3	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
trans-1,2-Dichloroethene	156-60-5	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Trichloroethene	79-01-6	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---
Vinyl chloride	75-01-4	ND	350	ug/kg	---	ND	280	ug/kg	---	ND	330	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

		Sample Name:	HA-02_0-0.5(20150624)				HA-05_0-1(20150624)				HA-01_0-1(20150624)			
		Lab Sample ID:	240524622				240524623				240524624			
		Sample Date:	6/24/2015				6/24/2015				6/24/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
2,4,5-Trichlorophenol	95-95-4	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
2,4,6-Trichlorophenol	88-06-2	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
2,4-Dichlorophenol	120-83-2	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
2,4-Dimethylphenol	105-67-9	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
2,4-Dinitrophenol	51-28-5	ND	3900	ug/kg	---	ND	1900	ug/kg	---	ND	1900	ug/kg	---
2,4-Dinitrotoluene	121-14-2	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
2,6-Dinitrotoluene	606-20-2	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
2-Chloronaphthalene	91-58-7	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
2-Chlorophenol	95-57-8	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
2-Methylnaphthalene	91-57-6	37	810	ug/kg	J	7.2	380	ug/kg	J	19	400	ug/kg	J
2-Methylphenol	95-48-7	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
2-Nitroaniline	88-74-4	ND	3900	ug/kg	---	ND	1900	ug/kg	---	ND	1900	ug/kg	---
2-Nitrophenol	88-75-5	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
3 & 4 Methylphenol	65794-96-9	ND	980	ug/kg	---	ND	460	ug/kg	---	ND	480	ug/kg	---
3,3'-Dichlorobenzidine	91-94-1	ND	3900	ug/kg	---	ND	1900	ug/kg	---	ND	1900	ug/kg	---
3-Nitroaniline	99-09-2	ND	3900	ug/kg	---	ND	1900	ug/kg	---	ND	1900	ug/kg	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	3900	ug/kg	---	ND	1900	ug/kg	---	ND	1900	ug/kg	---
4-Bromophenyl phenyl ether	101-55-3	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
4-Chloro-3-methylphenol	59-50-7	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
4-Chloroaniline	106-47-8	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
4-Nitroaniline	100-01-6	ND	3900	ug/kg	---	ND	1900	ug/kg	---	ND	1900	ug/kg	---
4-Nitrophenol	100-02-7	ND	3900	ug/kg	---	ND	1900	ug/kg	---	ND	1900	ug/kg	---
Acenaphthene	83-32-9	170	810	ug/kg	J	12	380	ug/kg	J	32	400	ug/kg	J
Acenaphthylene	208-96-8	16	810	ug/kg	J	31	380	ug/kg	J	24	400	ug/kg	J
Acetophenone	98-86-2	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Anthracene	120-12-7	280	810	ug/kg	J	42	380	ug/kg	J	83	400	ug/kg	J
Atrazine	1912-24-9	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Benzaldehyde	100-52-7	ND	810	ug/kg	---	28	380	ug/kg	J	17	400	ug/kg	J
Benzo[a]anthracene	56-55-3	910	810	ug/kg	---	170	380	ug/kg	J	310	400	ug/kg	J
Benzo[a]pyrene	50-32-8	790	810	ug/kg	J	140	380	ug/kg	J	290	400	ug/kg	J
Benzo[b]fluoranthene	205-99-2	1200	810	ug/kg	---	250	380	ug/kg	J	400	400	ug/kg	---
Benzo[g,h,i]perylene	191-24-2	550	810	ug/kg	J	76	380	ug/kg	J	120	400	ug/kg	J
Benzo[k]fluoranthene	207-08-9	400	810	ug/kg	J	79	380	ug/kg	J	170	400	ug/kg	J
Bis(2-chloroethoxy)methane	111-91-1	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Bis(2-chloroethyl)ether	111-44-4	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Bis(2-ethylhexyl) phthalate	117-81-7	56	810	ug/kg	J	27	380	ug/kg	J	77	400	ug/kg	J
Butyl benzyl phthalate	85-68-7	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Caprolactam	105-60-2	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Carbazole	86-74-8	160	810	ug/kg	J	ND	380	ug/kg	---	54	400	ug/kg	J
Chrysene	218-01-9	1000	810	ug/kg	---	190	380	ug/kg	J	370	400	ug/kg	J
Di-n-butyl phthalate	84-74-2	ND	810	ug/kg	---	ND	380	ug/kg	---	31	400	ug/kg	J
Di-n-octyl phthalate	117-84-0	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Dibenz(a,h)anthracene	53-70-3	170	810	ug/kg	J	25	380	ug/kg	J	32	400	ug/kg	J
Dibenzofuran	132-64-9	78	810	ug/kg	J	8.3	380	ug/kg	J	23	400	ug/kg	J
Diethyl phthalate	84-66-2	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Dimethyl phthalate	131-11-3	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Fluoranthene	206-44-0	1800	810	ug/kg	---	370	380	ug/kg	J	670	400	ug/kg	---
Fluorene	86-73-7	150	810	ug/kg	J	15	380	ug/kg	J	35	400	ug/kg	J
Hexachlorobenzene	118-74-1	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Hexachlorocyclopentadiene	77-47-4	ND	3900	ug/kg	---	ND	1900	ug/kg	---	ND	1900	ug/kg	---
Hexachloroethane	67-72-1	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Indeno[1,2,3-cd]pyrene	193-39-5	450	810	ug/kg	J	73	380	ug/kg	J	110	400	ug/kg	J
Isophorone	78-59-1	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
N-Nitrosodi-n-propylamine	621-64-7	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
N-Nitrosodiphenylamine	86-30-6	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Naphthalene	91-20-3	40	810	ug/kg	J	8.1	380	ug/kg	J	22	400	ug/kg	J
Nitrobenzene	98-95-3	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Pentachlorophenol	87-86-5	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Phenanthrene	85-01-8	1200	810	ug/kg	---	200	380	ug/kg	J	390	400	ug/kg	J
Phenol	108-95-2	ND	810	ug/kg	---	ND	380	ug/kg	---	ND	400	ug/kg	---
Pyrene	129-00-0	1500	810	ug/kg	---	310	380	ug/kg	J	560	400	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

			Sample Name:	HA-02_0-0.5(20150624)				HA-05_0-1(20150624)				HA-01_0-1(20150624)			
			Lab Sample ID:	240524622				240524623				240524624			
			Sample Date:	6/24/2015				6/24/2015				6/24/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	12	mg/kg	---	ND	12	mg/kg	---	ND	13	mg/kg	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	48	9.8	mg/kg	---	12	10	mg/kg	---	14	10	mg/kg	---
Metals														
	OSW-6010B													
	Aluminum	7429-90-5	6600	20	mg/kg	---	4600	19	mg/kg	---	9200	19	mg/kg	---
	Antimony	7440-36-0	ND	1.0	mg/kg	---	ND	0.97	mg/kg	---	ND	0.93	mg/kg	---
	Arsenic	7440-38-2	4.6	1.0	mg/kg	---	2.6	0.97	mg/kg	---	6.8	0.93	mg/kg	---
	Barium	7440-39-3	45	20	mg/kg	---	50	19	mg/kg	---	100	19	mg/kg	---
	Beryllium	7440-41-7	0.31	0.51	mg/kg	J	0.29	0.48	mg/kg	J	0.51	0.46	mg/kg	---
	Cadmium	7440-43-9	0.12	0.20	mg/kg	J	0.12	0.19	mg/kg	J	0.19	0.19	mg/kg	---
	Calcium	7440-70-2	23000	510	mg/kg	---	16000	480	mg/kg	---	4800	460	mg/kg	---
	Chromium	7440-47-3	19	0.51	mg/kg	---	9.3	0.48	mg/kg	---	15	0.46	mg/kg	---
	Cobalt	7440-48-4	11	5.1	mg/kg	---	5.7	4.8	mg/kg	---	8.4	4.6	mg/kg	---
	Copper	7440-50-8	25	2.5	mg/kg	---	11	2.4	mg/kg	---	16	2.3	mg/kg	---
	Iron	7439-89-6	15000	10	mg/kg	---	9700	9.7	mg/kg	---	14000	9.3	mg/kg	---
	Lead	7439-92-1	13	0.30	mg/kg	---	7.7	0.29	mg/kg	---	38	0.28	mg/kg	---
	Magnesium	7439-95-4	11000	510	mg/kg	---	6000	480	mg/kg	---	2900	460	mg/kg	---
	Manganese	7439-96-5	410	1.5	mg/kg	---	450	1.5	mg/kg	---	550	1.4	mg/kg	---
	Nickel	7440-02-0	20	4.1	mg/kg	---	13	3.9	mg/kg	---	17	3.7	mg/kg	---
	Potassium	7440-09-7	1200	510	mg/kg	---	690	480	mg/kg	---	1100	460	mg/kg	---
	Selenium	7782-49-2	0.43	0.51	mg/kg	J	0.39	0.48	mg/kg	J	0.82	0.46	mg/kg	---
	Silver	7440-22-4	ND	0.51	mg/kg	---	ND	0.48	mg/kg	---	ND	0.46	mg/kg	---
	Sodium	7440-23-5	57	510	mg/kg	J	54	480	mg/kg	J	49	460	mg/kg	J
	Thallium	7440-28-0	ND	1.0	mg/kg	---	ND	0.97	mg/kg	---	ND	0.93	mg/kg	---
	Vanadium	7440-62-2	19	5.1	mg/kg	---	18	4.8	mg/kg	---	29	4.6	mg/kg	---
	Zinc	7440-66-6	52	2.0	mg/kg	---	28	1.9	mg/kg	---	70	1.9	mg/kg	---
	OSW-7471A													
	Mercury	7439-97-6	0.055	0.13	mg/kg	J	0.014	0.10	mg/kg	J	0.045	0.13	mg/kg	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

		Sample Name:	HA-04_0-1(20150624)				HA-07_0-1(20150624)				HA-06_0-1(20150624)			
		Lab Sample ID:	240524625				240524626				240524627			
		Sample Date:	6/24/2015				6/24/2015				6/24/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	610	ug/kg	---	ND	680	ug/kg	---	ND	600	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1200	ug/kg	---	ND	1400	ug/kg	---	ND	1200	ug/kg	---
2-Chlorotoluene	95-49-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
2-Hexanone	591-78-6	ND	1200	ug/kg	---	ND	1400	ug/kg	---	ND	1200	ug/kg	---
4-Chlorotoluene	106-43-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1200	ug/kg	---	ND	1400	ug/kg	---	ND	1200	ug/kg	---
Acetone	67-64-1	ND	1200	ug/kg	---	ND	1400	ug/kg	---	ND	1200	ug/kg	---
Allyl chloride	107-05-1	ND	610	ug/kg	---	ND	680	ug/kg	---	ND	600	ug/kg	---
Benzene	71-43-2	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Bromobenzene	108-86-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Bromochloromethane	74-97-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Bromodichloromethane	75-27-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Bromoform	75-25-2	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Bromomethane	74-83-9	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Carbon disulfide	75-15-0	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Carbon tetrachloride	56-23-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Chlorobenzene	108-90-7	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Chlorodibromomethane	124-48-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Chloroethane	75-00-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Chloroform	67-66-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Chloromethane	74-87-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Cyclohexane	110-82-7	ND	610	ug/kg	---	ND	680	ug/kg	---	ND	600	ug/kg	---
Dibromomethane	74-95-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	610	ug/kg	---	ND	680	ug/kg	---	ND	600	ug/kg	---
Ethyl ether	60-29-7	ND	610	ug/kg	---	ND	680	ug/kg	---	ND	600	ug/kg	---
Ethylbenzene	100-41-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Isopropylbenzene	98-82-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Methyl acetate	79-20-9	170	610	ug/kg	J	180	680	ug/kg	J	170	600	ug/kg	J
Methyl tert butyl ether	1634-04-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Methylcyclohexane	108-87-2	ND	610	ug/kg	---	ND	680	ug/kg	---	ND	600	ug/kg	---
Methylene Chloride	75-09-2	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
n-Butylbenzene	104-51-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
N-Propylbenzene	103-65-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Naphthalene	91-20-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
o-Xylene	95-47-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
sec-Butylbenzene	135-98-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Styrene	100-42-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
tert-Butylbenzene	98-06-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Tetrachloroethene	127-18-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1200	ug/kg	---	ND	1400	ug/kg	---	ND	1200	ug/kg	---
Toluene	108-88-3	ND	310	ug/kg	---	ND	340	ug/kg	---	13	300	ug/kg	J
trans-1,2-Dichloroethene	156-60-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Trichloroethene	79-01-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---
Vinyl chloride	75-01-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	300	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

		Sample Name:	HA-04_0-1(20150624)				HA-07_0-1(20150624)				HA-06_0-1(20150624)			
		Lab Sample ID:	240524625				240524626				240524627			
		Sample Date:	6/24/2015				6/24/2015				6/24/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	390	ug/kg	---	ND	380	ug/kg	---	15	960	ug/kg	J
2,2'-oxybis[1-chloropropane]	108-60-1	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
2,4,5-Trichlorophenol	95-95-4	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
2,4,6-Trichlorophenol	88-06-2	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
2,4-Dichlorophenol	120-83-2	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
2,4-Dimethylphenol	105-67-9	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
2,4-Dinitrophenol	51-28-5	ND	1900	ug/kg	---	ND	1800	ug/kg	---	ND	4600	ug/kg	---
2,4-Dinitrotoluene	121-14-2	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
2,6-Dinitrotoluene	606-20-2	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
2-Chloronaphthalene	91-58-7	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
2-Chlorophenol	95-57-8	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
2-Methylnaphthalene	91-57-6	11	390	ug/kg	J	4.1	380	ug/kg	J	130	960	ug/kg	J
2-Methylphenol	95-48-7	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
2-Nitroaniline	88-74-4	ND	1900	ug/kg	---	ND	1800	ug/kg	---	ND	4600	ug/kg	---
2-Nitrophenol	88-75-5	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
3 & 4 Methylphenol	65794-96-9	ND	470	ug/kg	---	ND	460	ug/kg	---	ND	1200	ug/kg	---
3,3'-Dichlorobenzidine	91-94-1	ND	1900	ug/kg	---	ND	1800	ug/kg	---	ND	4600	ug/kg	---
3-Nitroaniline	99-09-2	ND	1900	ug/kg	---	ND	1800	ug/kg	---	ND	4600	ug/kg	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	1900	ug/kg	---	ND	1800	ug/kg	---	ND	4600	ug/kg	---
4-Bromophenyl phenyl ether	101-55-3	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
4-Chloro-3-methylphenol	59-50-7	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
4-Chloroaniline	106-47-8	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
4-Nitroaniline	100-01-6	ND	1900	ug/kg	---	ND	1800	ug/kg	---	ND	4600	ug/kg	---
4-Nitrophenol	100-02-7	ND	1900	ug/kg	---	ND	1800	ug/kg	---	ND	4600	ug/kg	---
Acenaphthene	83-32-9	22	390	ug/kg	J	ND	380	ug/kg	---	120	960	ug/kg	J
Acenaphthylene	208-96-8	ND	390	ug/kg	---	5.4	380	ug/kg	J	95	960	ug/kg	J
Acetophenone	98-86-2	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Anthracene	120-12-7	40	390	ug/kg	J	6.0	380	ug/kg	J	250	960	ug/kg	J
Atrazine	1912-24-9	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Benzaldehyde	100-52-7	24	390	ug/kg	J	20	380	ug/kg	J	44	960	ug/kg	J
Benzo[a]anthracene	56-55-3	98	390	ug/kg	J	30	380	ug/kg	J	940	960	ug/kg	J
Benzo[a]pyrene	50-32-8	98	390	ug/kg	J	32	380	ug/kg	J	940	960	ug/kg	J
Benzo[b]fluoranthene	205-99-2	140	390	ug/kg	J	52	380	ug/kg	J	1500	960	ug/kg	---
Benzo[g,h,i]perylene	191-24-2	50	390	ug/kg	J	20	380	ug/kg	J	550	960	ug/kg	J
Benzo[k]fluoranthene	207-08-9	53	390	ug/kg	J	14	380	ug/kg	J	380	960	ug/kg	J
Bis(2-chloroethoxy)methane	111-91-1	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Bis(2-chloroethyl)ether	111-44-4	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Bis(2-ethylhexyl) phthalate	117-81-7	85	390	ug/kg	J	61	380	ug/kg	J	63	960	ug/kg	J
Butyl benzyl phthalate	85-68-7	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Caprolactam	105-60-2	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Carbazole	86-74-8	ND	390	ug/kg	---	ND	380	ug/kg	---	140	960	ug/kg	J
Chrysene	218-01-9	110	390	ug/kg	J	39	380	ug/kg	J	1100	960	ug/kg	---
Di-n-butyl phthalate	84-74-2	30	390	ug/kg	J	26	380	ug/kg	J	ND	960	ug/kg	---
Di-n-octyl phthalate	117-84-0	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Dibenz(a,h)anthracene	53-70-3	14	390	ug/kg	J	ND	380	ug/kg	---	130	960	ug/kg	J
Dibenzofuran	132-64-9	14	390	ug/kg	J	ND	380	ug/kg	---	55	960	ug/kg	J
Diethyl phthalate	84-66-2	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Dimethyl phthalate	131-11-3	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Fluoranthene	206-44-0	190	390	ug/kg	J	66	380	ug/kg	J	1800	960	ug/kg	---
Fluorene	86-73-7	23	390	ug/kg	J	ND	380	ug/kg	---	120	960	ug/kg	J
Hexachlorobenzene	118-74-1	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Hexachlorocyclopentadiene	77-47-4	ND	1900	ug/kg	---	ND	1800	ug/kg	---	ND	4600	ug/kg	---
Hexachloroethane	67-72-1	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Indeno[1,2,3-cd]pyrene	193-39-5	45	390	ug/kg	J	17	380	ug/kg	J	350	960	ug/kg	J
Isophorone	78-59-1	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
N-Nitrosodi-n-propylamine	621-64-7	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
N-Nitrosodiphenylamine	86-30-6	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Naphthalene	91-20-3	16	390	ug/kg	J	10	380	ug/kg	J	130	960	ug/kg	J
Nitrobenzene	98-95-3	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Pentachlorophenol	87-86-5	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Phenanthrene	85-01-8	150	390	ug/kg	J	31	380	ug/kg	J	930	960	ug/kg	J
Phenol	108-95-2	ND	390	ug/kg	---	ND	380	ug/kg	---	ND	960	ug/kg	---
Pyrene	129-00-0	160	390	ug/kg	J	55	380	ug/kg	J	1500	960	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

			Sample Name:	HA-04_0-1(20150624)				HA-07_0-1(20150624)				HA-06_0-1(20150624)			
			Lab Sample ID:	240524625				240524626				240524627			
			Sample Date:	6/24/2015				6/24/2015				6/24/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	12	mg/kg	---	ND	12	mg/kg	---	ND	12	mg/kg	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	8.4	11	mg/kg	J	5.2	11	mg/kg	J	220	50	mg/kg	---
Metals														
	OSW-6010B													
	Aluminum	7429-90-5	6400	22	mg/kg	---	3900	21	mg/kg	---	3800	20	mg/kg	---
	Antimony	7440-36-0	ND	1.1	mg/kg	---	ND	1.1	mg/kg	---	ND	1.0	mg/kg	---
	Arsenic	7440-38-2	6.0	1.1	mg/kg	---	2.5	1.1	mg/kg	---	2.8	1.0	mg/kg	---
	Barium	7440-39-3	170	22	mg/kg	---	34	21	mg/kg	---	39	20	mg/kg	---
	Beryllium	7440-41-7	0.42	0.55	mg/kg	J	0.25	0.53	mg/kg	J	0.21	0.50	mg/kg	J
	Cadmium	7440-43-9	0.42	0.22	mg/kg	---	0.17	0.21	mg/kg	J	0.53	0.20	mg/kg	---
	Calcium	7440-70-2	16000	550	mg/kg	---	5300	530	mg/kg	---	17000	500	mg/kg	---
	Chromium	7440-47-3	13	0.55	mg/kg	---	7.9	0.53	mg/kg	---	9.1	0.50	mg/kg	---
	Cobalt	7440-48-4	8.0	5.5	mg/kg	---	5.0	5.3	mg/kg	J	4.2	5.0	mg/kg	J
	Copper	7440-50-8	15	2.7	mg/kg	---	5.7	2.7	mg/kg	---	14	2.5	mg/kg	---
	Iron	7439-89-6	13000	11	mg/kg	---	6300	11	mg/kg	---	8900	10	mg/kg	---
	Lead	7439-92-1	18	0.33	mg/kg	---	5.1	0.32	mg/kg	---	32	0.30	mg/kg	---
	Magnesium	7439-95-4	6100	550	mg/kg	---	2200	530	mg/kg	---	4900	500	mg/kg	---
	Manganese	7439-96-5	1200	1.6	mg/kg	---	190	1.6	mg/kg	---	250	1.5	mg/kg	---
	Nickel	7440-02-0	28	4.4	mg/kg	---	11	4.3	mg/kg	---	11	4.0	mg/kg	---
	Potassium	7440-09-7	940	550	mg/kg	---	420	530	mg/kg	J	830	500	mg/kg	---
	Selenium	7782-49-2	0.58	0.55	mg/kg	---	0.41	0.53	mg/kg	J	ND	0.50	mg/kg	---
	Silver	7440-22-4	ND	0.55	mg/kg	---	ND	0.53	mg/kg	---	ND	0.50	mg/kg	---
	Sodium	7440-23-5	56	550	mg/kg	J	27	530	mg/kg	J	63	500	mg/kg	J
	Thallium	7440-28-0	ND	1.1	mg/kg	---	ND	1.1	mg/kg	---	ND	1.0	mg/kg	---
	Vanadium	7440-62-2	24	5.5	mg/kg	---	12	5.3	mg/kg	---	16	5.0	mg/kg	---
	Zinc	7440-66-6	88	2.2	mg/kg	---	32	2.1	mg/kg	---	40	2.0	mg/kg	---
	OSW-7471A													
	Mercury	7439-97-6	0.045	0.13	mg/kg	J	0.016	0.11	mg/kg	J	0.11	0.11	mg/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

		Sample Name:	HA-08_0-1(20150624)				HA-09_0-0.5(20150624)			
		Lab Sample ID:	240524628				240524629			
		Sample Date:	6/24/2015				6/24/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC									
OSW-8260B									
1,1,1,2-Tetrachloroethane	630-20-6	ND	290	ug/kg	---	ND	310	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	290	ug/kg	---	ND	310	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	290	ug/kg	---	ND	310	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	290	ug/kg	---	ND	310	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	290	ug/kg	---	ND	310	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	290	ug/kg	---	ND	310	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	290	ug/kg	---	ND	310	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	290	ug/kg	---	ND	310	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	290	ug/kg	---	ND	310	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	290	ug/kg	---	ND	310	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	290	ug/kg	---	ND	310	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	ND	290	ug/kg	---	ND	310	ug/kg	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	590	ug/kg	---	ND	630	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	290	ug/kg	---	ND	310	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	290	ug/kg	---	ND	310	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	290	ug/kg	---	ND	310	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	290	ug/kg	---	ND	310	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	290	ug/kg	---	ND	310	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	290	ug/kg	---	ND	310	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	290	ug/kg	---	ND	310	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	290	ug/kg	---	ND	310	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	290	ug/kg	---	ND	310	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1200	ug/kg	---	ND	1300	ug/kg	---
2-Chlorotoluene	95-49-8	ND	290	ug/kg	---	ND	310	ug/kg	---
2-Hexanone	591-78-6	ND	1200	ug/kg	---	ND	1300	ug/kg	---
4-Chlorotoluene	106-43-4	ND	290	ug/kg	---	ND	310	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1200	ug/kg	---	ND	1300	ug/kg	---
Acetone	67-64-1	390	1200	ug/kg	J	360	1300	ug/kg	J
Allyl chloride	107-05-1	ND	590	ug/kg	---	ND	630	ug/kg	---
Benzene	71-43-2	ND	290	ug/kg	---	ND	310	ug/kg	---
Bromobenzene	108-86-1	ND	290	ug/kg	---	ND	310	ug/kg	---
Bromochloromethane	74-97-5	ND	290	ug/kg	---	ND	310	ug/kg	---
Bromodichloromethane	75-27-4	ND	290	ug/kg	---	ND	310	ug/kg	---
Bromoform	75-25-2	ND	290	ug/kg	---	ND	310	ug/kg	---
Bromomethane	74-83-9	ND	290	ug/kg	---	ND	310	ug/kg	---
Carbon disulfide	75-15-0	ND	290	ug/kg	---	ND	310	ug/kg	---
Carbon tetrachloride	56-23-5	ND	290	ug/kg	---	ND	310	ug/kg	---
Chlorobenzene	108-90-7	ND	290	ug/kg	---	ND	310	ug/kg	---
Chlorodibromomethane	124-48-1	ND	290	ug/kg	---	ND	310	ug/kg	---
Chloroethane	75-00-3	ND	290	ug/kg	---	ND	310	ug/kg	---
Chloroform	67-66-3	ND	290	ug/kg	---	ND	310	ug/kg	---
Chloromethane	74-87-3	ND	290	ug/kg	---	ND	310	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	290	ug/kg	---	ND	310	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	290	ug/kg	---	ND	310	ug/kg	---
Cyclohexane	110-82-7	ND	590	ug/kg	---	ND	630	ug/kg	---
Dibromomethane	74-95-3	ND	290	ug/kg	---	ND	310	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	290	ug/kg	---	ND	310	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	590	ug/kg	---	ND	630	ug/kg	---
Ethyl ether	60-29-7	ND	590	ug/kg	---	ND	630	ug/kg	---
Ethylbenzene	100-41-4	ND	290	ug/kg	---	ND	310	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	290	ug/kg	---	ND	310	ug/kg	---
Isopropylbenzene	98-82-8	ND	290	ug/kg	---	ND	310	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	290	ug/kg	---	ND	310	ug/kg	---
Methyl acetate	79-20-9	210	590	ug/kg	J	200	630	ug/kg	J
Methyl tert butyl ether	1634-04-4	ND	290	ug/kg	---	ND	310	ug/kg	---
Methylcyclohexane	108-87-2	ND	590	ug/kg	---	ND	630	ug/kg	---
Methylene Chloride	75-09-2	ND	290	ug/kg	---	ND	310	ug/kg	---
n-Butylbenzene	104-51-8	ND	290	ug/kg	---	ND	310	ug/kg	---
N-Propylbenzene	103-65-1	ND	290	ug/kg	---	ND	310	ug/kg	---
Naphthalene	91-20-3	ND	290	ug/kg	---	ND	310	ug/kg	---
o-Xylene	95-47-6	ND	290	ug/kg	---	ND	310	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	290	ug/kg	---	ND	310	ug/kg	---
sec-Butylbenzene	135-98-8	ND	290	ug/kg	---	ND	310	ug/kg	---
Styrene	100-42-5	ND	290	ug/kg	---	ND	310	ug/kg	---
tert-Butylbenzene	98-06-6	ND	290	ug/kg	---	ND	310	ug/kg	---
Tetrachloroethene	127-18-4	ND	290	ug/kg	---	ND	310	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1200	ug/kg	---	ND	1300	ug/kg	---
Toluene	108-88-3	ND	290	ug/kg	---	ND	310	ug/kg	---
trans-1,2-Dichloroethene	156-60-5	ND	290	ug/kg	---	ND	310	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	290	ug/kg	---	ND	310	ug/kg	---
Trichloroethene	79-01-6	ND	290	ug/kg	---	ND	310	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	290	ug/kg	---	ND	310	ug/kg	---
Vinyl chloride	75-01-4	ND	290	ug/kg	---	ND	310	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

		Sample Name:	HA-08_0-1(20150624)				HA-09_0-0.5(20150624)			
		Lab Sample ID:	240524628				240524629			
		Sample Date:	6/24/2015				6/24/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC									
OSW-8270C									
1,1'-Biphenyl	92-52-4	ND	390	ug/kg	---	ND	430	ug/kg	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	390	ug/kg	---	ND	430	ug/kg	---
2,4,5-Trichlorophenol	95-95-4	ND	390	ug/kg	---	ND	420	ug/kg	UJ
2,4,6-Trichlorophenol	88-06-2	ND	390	ug/kg	---	ND	420	ug/kg	UJ
2,4-Dichlorophenol	120-83-2	ND	390	ug/kg	---	ND	420	ug/kg	UJ
2,4-Dimethylphenol	105-67-9	ND	390	ug/kg	---	ND	420	ug/kg	UJ
2,4-Dinitrophenol	51-28-5	ND	1900	ug/kg	---	ND	2100	ug/kg	UJ
2,4-Dinitrotoluene	121-14-2	ND	390	ug/kg	---	ND	430	ug/kg	---
2,6-Dinitrotoluene	606-20-2	ND	390	ug/kg	---	ND	430	ug/kg	---
2-Chloronaphthalene	91-58-7	ND	390	ug/kg	---	ND	430	ug/kg	---
2-Chlorophenol	95-57-8	ND	390	ug/kg	---	ND	420	ug/kg	UJ
2-Methylnaphthalene	91-57-6	8.0	390	ug/kg	J	5.2	430	ug/kg	J
2-Methylphenol	95-48-7	ND	390	ug/kg	---	ND	420	ug/kg	UJ
2-Nitroaniline	88-74-4	ND	1900	ug/kg	---	ND	2100	ug/kg	---
2-Nitrophenol	88-75-5	ND	390	ug/kg	---	ND	420	ug/kg	UJ
3 & 4 Methylphenol	65794-96-9	ND	470	ug/kg	---	ND	510	ug/kg	UJ
3,3'-Dichlorobenzidine	91-94-1	ND	1900	ug/kg	---	ND	2100	ug/kg	---
3-Nitroaniline	99-09-2	ND	1900	ug/kg	---	ND	2100	ug/kg	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	1900	ug/kg	---	ND	2100	ug/kg	UJ
4-Bromophenyl phenyl ether	101-55-3	ND	390	ug/kg	---	ND	430	ug/kg	---
4-Chloro-3-methylphenol	59-50-7	ND	390	ug/kg	---	ND	420	ug/kg	UJ
4-Chloroaniline	106-47-8	ND	390	ug/kg	---	ND	430	ug/kg	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	390	ug/kg	---	ND	430	ug/kg	---
4-Nitroaniline	100-01-6	ND	1900	ug/kg	---	ND	2100	ug/kg	---
4-Nitrophenol	100-02-7	ND	1900	ug/kg	---	ND	2100	ug/kg	UJ
Acenaphthene	83-32-9	11	390	ug/kg	J	8.7	430	ug/kg	J
Acenaphthylene	208-96-8	8.2	390	ug/kg	J	6.1	430	ug/kg	J
Acetophenone	98-86-2	11	390	ug/kg	J	ND	430	ug/kg	---
Anthracene	120-12-7	29	390	ug/kg	J	15	430	ug/kg	J
Atrazine	1912-24-9	ND	390	ug/kg	---	ND	430	ug/kg	---
Benzaldehyde	100-52-7	30	390	ug/kg	J	28	430	ug/kg	J
Benzo[a]anthracene	56-55-3	130	390	ug/kg	J	62	430	ug/kg	J
Benzo[a]pyrene	50-32-8	130	390	ug/kg	J	60	430	ug/kg	J
Benzo[b]fluoranthene	205-99-2	170	390	ug/kg	J	91	430	ug/kg	J
Benzo[g,h,i]perylene	191-24-2	74	390	ug/kg	J	34	430	ug/kg	J
Benzo[k]fluoranthene	207-08-9	73	390	ug/kg	J	36	430	ug/kg	J
Bis(2-chloroethoxy)methane	111-91-1	ND	390	ug/kg	---	ND	430	ug/kg	---
Bis(2-chloroethyl)ether	111-44-4	ND	390	ug/kg	---	ND	430	ug/kg	---
Bis(2-ethylhexyl) phthalate	117-81-7	53	390	ug/kg	J	34	430	ug/kg	J
Butyl benzyl phthalate	85-68-7	ND	390	ug/kg	---	ND	430	ug/kg	---
Caprolactam	105-60-2	ND	390	ug/kg	---	ND	430	ug/kg	---
Carbazole	86-74-8	ND	390	ug/kg	---	ND	430	ug/kg	---
Chrysene	218-01-9	150	390	ug/kg	J	77	430	ug/kg	J
Di-n-butyl phthalate	84-74-2	20	390	ug/kg	J	ND	430	ug/kg	---
Di-n-octyl phthalate	117-84-0	ND	390	ug/kg	---	ND	430	ug/kg	---
Dibenz(a,h)anthracene	53-70-3	21	390	ug/kg	J	ND	430	ug/kg	---
Dibenzofuran	132-64-9	8.6	390	ug/kg	J	ND	430	ug/kg	---
Diethyl phthalate	84-66-2	ND	390	ug/kg	---	ND	430	ug/kg	---
Dimethyl phthalate	131-11-3	ND	390	ug/kg	---	ND	430	ug/kg	---
Fluoranthene	206-44-0	280	390	ug/kg	J	140	430	ug/kg	J
Fluorene	86-73-7	9.0	390	ug/kg	J	7.6	430	ug/kg	J
Hexachlorobenzene	118-74-1	ND	390	ug/kg	---	ND	430	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	390	ug/kg	---	ND	430	ug/kg	---
Hexachlorocyclopentadiene	77-47-4	ND	1900	ug/kg	---	ND	2100	ug/kg	---
Hexachloroethane	67-72-1	ND	390	ug/kg	---	ND	430	ug/kg	---
Indeno[1,2,3-cd]pyrene	193-39-5	62	390	ug/kg	J	26	430	ug/kg	J
Isophorone	78-59-1	ND	390	ug/kg	---	ND	430	ug/kg	---
N-Nitrosodi-n-propylamine	621-64-7	ND	390	ug/kg	---	ND	430	ug/kg	---
N-Nitrosodiphenylamine	86-30-6	ND	390	ug/kg	---	ND	430	ug/kg	---
Naphthalene	91-20-3	8.6	390	ug/kg	J	6.4	430	ug/kg	J
Nitrobenzene	98-95-3	ND	390	ug/kg	---	ND	430	ug/kg	---
Pentachlorophenol	87-86-5	ND	390	ug/kg	---	ND	420	ug/kg	UJ
Phenanthrene	85-01-8	130	390	ug/kg	J	72	430	ug/kg	J
Phenol	108-95-2	ND	390	ug/kg	---	ND	420	ug/kg	UJ
Pyrene	129-00-0	230	390	ug/kg	J	110	430	ug/kg	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52462-1

			Sample Name:	HA-08_0-1(20150624)			HA-09_0-0.5(20150624)			
			Lab Sample ID:	240524628			240524629			
			Sample Date:	6/24/2015			6/24/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC										
PUBL-SW-140										
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	12	mg/kg	---	ND	13	mg/kg	---
GC Other										
PUBL-SW-141										
	WI Diesel Range Organics (C10-C28)	E-1004	14	10	mg/kg	---	13	11	mg/kg	---
Metals										
OSW-6010B										
	Aluminum	7429-90-5	5400	21	mg/kg	---	6500	20	mg/kg	---
	Antimony	7440-36-0	ND	1.1	mg/kg	---	ND	0.99	mg/kg	---
	Arsenic	7440-38-2	4.0	1.1	mg/kg	---	4.3	0.99	mg/kg	---
	Barium	7440-39-3	46	21	mg/kg	---	39	20	mg/kg	---
	Beryllium	7440-41-7	0.33	0.53	mg/kg	J	0.42	0.50	mg/kg	J
	Cadmium	7440-43-9	0.31	0.21	mg/kg	---	0.16	0.20	mg/kg	J
	Calcium	7440-70-2	37000	530	mg/kg	---	15000	500	mg/kg	---
	Chromium	7440-47-3	11	0.53	mg/kg	---	12	0.50	mg/kg	---
	Cobalt	7440-48-4	8.4	5.3	mg/kg	---	8.5	5.0	mg/kg	---
	Copper	7440-50-8	12	2.7	mg/kg	---	9.9	2.5	mg/kg	---
	Iron	7439-89-6	12000	11	mg/kg	---	12000	9.9	mg/kg	---
	Lead	7439-92-1	14	0.32	mg/kg	---	8.9	0.30	mg/kg	---
	Magnesium	7439-95-4	8800	530	mg/kg	---	5200	500	mg/kg	---
	Manganese	7439-96-5	490	1.6	mg/kg	---	310	1.5	mg/kg	---
	Nickel	7440-02-0	17	4.3	mg/kg	---	17	4.0	mg/kg	---
	Potassium	7440-09-7	1900	530	mg/kg	---	2300	500	mg/kg	---
	Selenium	7782-49-2	ND	0.53	mg/kg	---	0.39	0.50	mg/kg	J
	Silver	7440-22-4	ND	0.53	mg/kg	---	ND	0.50	mg/kg	---
	Sodium	7440-23-5	71	530	mg/kg	J	50	500	mg/kg	J
	Thallium	7440-28-0	ND	1.1	mg/kg	---	ND	0.99	mg/kg	---
	Vanadium	7440-62-2	14	5.3	mg/kg	---	14	5.0	mg/kg	---
	Zinc	7440-66-6	49	2.1	mg/kg	---	35	2.0	mg/kg	---
OSW-7471A										
	Mercury	7439-97-6	0.022	0.13	mg/kg	J	0.027	0.15	mg/kg	J

ANALYTICAL REPORT

Job Number: 240-52525-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
John McFadden
Project Manager I
7/15/2015 10:52 PM

Designee for
Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
07/15/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52525-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/26/2015 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 4.2º C and 5.2º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples HA-27_0-1 (20150625) (240-52525-1), HA-28_0-1 (20150625) (240-52525-2), HA-29_0-1 (20150625) (240-52525-3), HA-30_0-1 (20150625) (240-52525-4), HA-31_0-1 (20150625) (240-52525-5), HA-19_0-0.5 (20150625) (240-52525-6), HA-20_0-1 (20150625) (240-52525-7), HA-22_0-1 (20150625) (240-52525-8), MB-1 (20150625) (240-52525-9), HA-23_0-1 (20150624) (240-52525-10), HA-24_0-1 (20150624) (240-52525-11), HA-25_0-1 (20150624) (240-52525-12) and HA-26_0-1 (20150624) (240-52525-13) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/29/2015 and analyzed on 07/01/2015.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-187301 and analytical batch 240-187606 on these samples HA-27_0-1 (20150625) (240-52525-1), HA-28_0-1 (20150625) (240-52525-2), HA-29_0-1 (20150625) (240-52525-3), HA-30_0-1 (20150625) (240-52525-4), HA-31_0-1 (20150625) (240-52525-5), HA-19_0-0.5 (20150625) (240-52525-6), HA-20_0-1 (20150625) (240-52525-7), HA-22_0-1 (20150625) (240-52525-8), MB-1 (20150625) (240-52525-9), HA-23_0-1 (20150624) (240-52525-10), HA-24_0-1 (20150624) (240-52525-11), HA-25_0-1 (20150624) (240-52525-12) and HA-26_0-1 (20150624) (240-52525-13) .

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples HA-27_0-1 (20150625) (240-52525-1), HA-28_0-1 (20150625) (240-52525-2), HA-29_0-1 (20150625) (240-52525-3), HA-30_0-1 (20150625) (240-52525-4), HA-31_0-1 (20150625) (240-52525-5), HA-19_0-0.5 (20150625) (240-52525-6), HA-20_0-1 (20150625) (240-52525-7), HA-22_0-1 (20150625) (240-52525-8), HA-23_0-1 (20150624) (240-52525-10), HA-24_0-1 (20150624) (240-52525-11), HA-25_0-1 (20150624) (240-52525-12) and HA-26_0-1 (20150624) (240-52525-13) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/01/2015, 07/02/2015, 07/08/2015, 07/10/2015 and 07/11/2015 and analyzed on 07/08/2015, 07/09/2015, 07/10/2015, 07/12/2015 and 07/14/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-187803/22-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-188303/4-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Caprolactam, Di-n-butyl phthalate, Isophorone and Phenol were detected in method blank MB 240-188303/4-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Bis(2-ethylhexyl) phthalate and Di-n-butyl phthalate were detected in method blank MB 240-188799/17-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

2,4,6-Tribromophenol (Surr) failed the surrogate recovery criteria low for HA-25_0-1 (20150624) (240-52525-12).

Bis(2-ethylhexyl) phthalate failed the recovery criteria high for LCS 240-188303/5-A.

Samples HA-27_0-1 (20150625) (240-52525-1)[6.67X], HA-28_0-1 (20150625) (240-52525-2)[4X], HA-29_0-1 (20150625) (240-52525-3) [2X], HA-30_0-1 (20150625) (240-52525-4)[2X], HA-31_0-1 (20150625) (240-52525-5)[6.67X], HA-19_0-0.5 (20150625) (240-52525-6) [2X] and HA-23_0-1 (20150624) (240-52525-10)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The following samples were diluted due to the nature of the sample matrix: HA-28_0-1 (20150625) (240-52525-2), HA-29_0-1 (20150625) (240-52525-3), HA-30_0-1 (20150625) (240-52525-4) and HA-19_0-0.5 (20150625) (240-52525-6). Elevated reporting limits (RLs) are provided.

Surrogate recovery for the following sample was outside control limits: HA-25_0-1 (20150624) (240-52525-12). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results. Both sets of data will be reported.

The Method Blank and Laboratory Control Sample (LCS) for batch 188303 associated with samples HA-23_0-1 (20150624) (240-52525-10) recovered outside control limits for Bis-2-ethylhexyl phthalate. Upon re-extraction and re-analysis all QC met acceptance criteria, however, sample holding times had been exceeded. Both sets of data will be reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples HA-27_0-1 (20150625) (240-52525-1), HA-28_0-1 (20150625) (240-52525-2), HA-29_0-1 (20150625) (240-52525-3), HA-30_0-1 (20150625) (240-52525-4), HA-31_0-1 (20150625) (240-52525-5), HA-19_0-0.5 (20150625) (240-52525-6), HA-20_0-1 (20150625) (240-52525-7), HA-22_0-1 (20150625) (240-52525-8), MB-1 (20150625) (240-52525-9), HA-23_0-1 (20150624) (240-52525-10), HA-24_0-1 (20150624) (240-52525-11), HA-25_0-1 (20150624) (240-52525-12) and HA-26_0-1 (20150624) (240-52525-13) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared and analyzed on 06/30/2015.

Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the Gasoline Range Organics (GRO) mix (i.e., Naphthalene): HA-27_0-1 (20150625) (240-52525-1) and HA-20_0-1 (20150625) (240-52525-7).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples HA-27_0-1 (20150625) (240-52525-1), HA-28_0-1 (20150625) (240-52525-2), HA-29_0-1 (20150625) (240-52525-3), HA-30_0-1 (20150625) (240-52525-4), HA-31_0-1 (20150625) (240-52525-5), HA-19_0-0.5 (20150625) (240-52525-6), HA-20_0-1 (20150625) (240-52525-7), HA-22_0-1 (20150625) (240-52525-8), HA-23_0-1 (20150624) (240-52525-10), HA-24_0-1 (20150624) (240-52525-11), HA-25_0-1 (20150624) (240-52525-12) and HA-26_0-1 (20150624) (240-52525-13) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/27/2015 and 07/02/2015 and analyzed on 06/29/2015, 06/30/2015 and 07/07/2015.

Samples HA-27_0-1 (20150625) (240-52525-1)[5X], HA-28_0-1 (20150625) (240-52525-2)[10X], HA-29_0-1 (20150625) (240-52525-3) [5X], HA-30_0-1 (20150625) (240-52525-4)[5X], HA-31_0-1 (20150625) (240-52525-5)[2X] and HA-19_0-0.5 (20150625) (240-52525-6) [2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WIS DRO Mix: HA-27_0-1 (20150625) (240-52525-1), HA-28_0-1 (20150625) (240-52525-2), HA-29_0-1 (20150625) (240-52525-3), HA-30_0-1 (20150625) (240-52525-4), HA-31_0-1 (20150625) (240-52525-5), HA-19_0-0.5 (20150625) (240-52525-6), HA-20_0-1 (20150625) (240-52525-7), HA-23_0-1 (20150624) (240-52525-10) and HA-24_0-1 (20150624) (240-52525-11).

The laboratory control sample duplicate (LCSD) for preparation batch 240-187816 and analytical batch 240-188039 recovered outside

acceptance limits for WI Diesel Range Organics (C10-C28). There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported.

The laboratory control sample duplicate (LCSD) for preparation batch 240-187816 and analytical batch 240-188186 recovered outside acceptance limits for WI Diesel Range Organics (C10-C28). There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported.

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 240-187816 recovered outside control limits for the following analytes: WI Diesel Range Organics (C10-C28).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples HA-27_0-1 (20150625) (240-52525-1), HA-28_0-1 (20150625) (240-52525-2), HA-29_0-1 (20150625) (240-52525-3), HA-30_0-1 (20150625) (240-52525-4), HA-31_0-1 (20150625) (240-52525-5), HA-19_0-0.5 (20150625) (240-52525-6), HA-20_0-1 (20150625) (240-52525-7), HA-22_0-1 (20150625) (240-52525-8), HA-23_0-1 (20150624) (240-52525-10), HA-24_0-1 (20150624) (240-52525-11), HA-25_0-1 (20150624) (240-52525-12) and HA-26_0-1 (20150624) (240-52525-13) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/30/2015 and 07/01/2015 and analyzed on 07/01/2015, 07/02/2015 and 07/06/2015.

Magnesium, Nickel and Zinc were detected in method blank MB 240-187368/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Magnesium was detected in method blank MB 240-187589/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Zinc was detected in method blank MB 240-187589/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples HA-27_0-1 (20150625) (240-52525-1), HA-28_0-1 (20150625) (240-52525-2), HA-29_0-1 (20150625) (240-52525-3), HA-30_0-1 (20150625) (240-52525-4), HA-31_0-1 (20150625) (240-52525-5), HA-19_0-0.5 (20150625) (240-52525-6), HA-20_0-1 (20150625) (240-52525-7), HA-22_0-1 (20150625) (240-52525-8), HA-23_0-1 (20150624) (240-52525-10), HA-24_0-1 (20150624) (240-52525-11), HA-25_0-1 (20150624) (240-52525-12) and HA-26_0-1 (20150624) (240-52525-13) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 06/30/2015 and 07/01/2015 and analyzed on 07/01/2015 and 07/02/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples HA-27_0-1 (20150625) (240-52525-1), HA-28_0-1 (20150625) (240-52525-2), HA-29_0-1 (20150625) (240-52525-3), HA-30_0-1 (20150625) (240-52525-4), HA-31_0-1 (20150625) (240-52525-5), HA-19_0-0.5 (20150625) (240-52525-6), HA-20_0-1 (20150625) (240-52525-7), HA-22_0-1 (20150625) (240-52525-8), HA-23_0-1 (20150624) (240-52525-10), HA-24_0-1 (20150624) (240-52525-11), HA-25_0-1 (20150624) (240-52525-12) and HA-26_0-1 (20150624) (240-52525-13) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/27/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52525-1	**HA-27_0-1 (20150625)**					
Methyl acetate		310	J	580	ug/Kg	8260B
Naphthalene		63	J	290	ug/Kg	8260B
2-Methylnaphthalene		81	J	2500	ug/Kg	8270C
Acenaphthene		500	J	2500	ug/Kg	8270C
Acenaphthylene		130	J	2500	ug/Kg	8270C
Anthracene		740	J	2500	ug/Kg	8270C
Benzo[a]anthracene		3400		2500	ug/Kg	8270C
Benzo[a]pyrene		2900		2500	ug/Kg	8270C
Benzo[b]fluoranthene		4300		2500	ug/Kg	8270C
Benzo[g,h,i]perylene		1900	J	2500	ug/Kg	8270C
Benzo[k]fluoranthene		1600	J	2500	ug/Kg	8270C
Carbazole		540	J	2500	ug/Kg	8270C
Chrysene		4000		2500	ug/Kg	8270C
Dibenz(a,h)anthracene		600	J	2500	ug/Kg	8270C
Dibenzofuran		200	J	2500	ug/Kg	8270C
Fluoranthene		6200		2500	ug/Kg	8270C
Fluorene		400	J	2500	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		1600	J	2500	ug/Kg	8270C
Naphthalene		110	J	2500	ug/Kg	8270C
Phenanthrene		3400		2500	ug/Kg	8270C
Pyrene		5400		2500	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		160		53	mg/Kg	WI-DRO
Aluminum		4700		21	mg/Kg	6010B
Antimony		0.73	J	1.0	mg/Kg	6010B
Barium		53		21	mg/Kg	6010B
Beryllium		0.29	J	0.52	mg/Kg	6010B
Calcium		31000		520	mg/Kg	6010B
Cadmium		0.31		0.21	mg/Kg	6010B
Cobalt		5.9		5.2	mg/Kg	6010B
Chromium		11		0.52	mg/Kg	6010B
Copper		15		2.6	mg/Kg	6010B
Iron		12000		10	mg/Kg	6010B
Potassium		1300		520	mg/Kg	6010B
Magnesium		14000	B	520	mg/Kg	6010B
Manganese		460		1.6	mg/Kg	6010B
Sodium		120	J	520	mg/Kg	6010B
Nickel		17	B	4.2	mg/Kg	6010B
Vanadium		14		5.2	mg/Kg	6010B
Zinc		65	B	2.1	mg/Kg	6010B
Arsenic		4.2		1.0	mg/Kg	6010B
Lead		55		0.31	mg/Kg	6010B
Mercury		0.040	J	0.11	mg/Kg	7471A
Percent Solids		86		0.10	%	Moisture
Percent Moisture		14		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52525-2	**HA-28_0-1 (20150625)**					
Methyl acetate		300	J	760	ug/Kg	8260B
Methylcyclohexane		68	J	760	ug/Kg	8260B
Naphthalene		64	J	380	ug/Kg	8260B
Toluene		22	J	380	ug/Kg	8260B
1,2,4-Trimethylbenzene		26	J	380	ug/Kg	8260B
1,1'-Biphenyl		35	J	1400	ug/Kg	8270C
2-Methylnaphthalene		550	J	1400	ug/Kg	8270C
Acenaphthene		22	J	1400	ug/Kg	8270C
Acenaphthylene		31	J	1400	ug/Kg	8270C
Acetophenone		55	J	1400	ug/Kg	8270C
Anthracene		57	J	1400	ug/Kg	8270C
Benzo[a]anthracene		220	J	1400	ug/Kg	8270C
Benzo[a]pyrene		200	J	1400	ug/Kg	8270C
Benzo[b]fluoranthene		270	J	1400	ug/Kg	8270C
Benzo[g,h,i]perylene		110	J	1400	ug/Kg	8270C
Benzo[k]fluoranthene		150	J	1400	ug/Kg	8270C
Chrysene		280	J	1400	ug/Kg	8270C
Dibenzofuran		120	J	1400	ug/Kg	8270C
Fluoranthene		400	J	1400	ug/Kg	8270C
Fluorene		28	J	1400	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		59	J	1400	ug/Kg	8270C
Naphthalene		300	J	1400	ug/Kg	8270C
Phenanthrene		350	J	1400	ug/Kg	8270C
Pyrene		400	J	1400	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		340		94	mg/Kg	WI-DRO
Aluminum		5400		19	mg/Kg	6010B
Barium		67		19	mg/Kg	6010B
Beryllium		0.38	J	0.47	mg/Kg	6010B
Calcium		8600		470	mg/Kg	6010B
Cadmium		0.33		0.19	mg/Kg	6010B
Cobalt		5.9		4.7	mg/Kg	6010B
Chromium		11		0.47	mg/Kg	6010B
Copper		13		2.3	mg/Kg	6010B
Iron		11000		9.3	mg/Kg	6010B
Potassium		940		470	mg/Kg	6010B
Magnesium		3100	B	470	mg/Kg	6010B
Manganese		480		1.4	mg/Kg	6010B
Sodium		82	J	470	mg/Kg	6010B
Nickel		15	B	3.7	mg/Kg	6010B
Vanadium		20		4.7	mg/Kg	6010B
Zinc		65	B	1.9	mg/Kg	6010B
Arsenic		4.2		0.93	mg/Kg	6010B
Lead		28		0.28	mg/Kg	6010B
Selenium		0.41	J	0.47	mg/Kg	6010B
Thallium		0.13	J	0.93	mg/Kg	6010B
Mercury		0.040	J	0.11	mg/Kg	7471A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Solids		91		0.10	%	Moisture
Percent Moisture		9.2		0.10	%	Moisture
240-52525-3	**HA-29_0-1 (20150625)**					
Methyl acetate		330	J	720	ug/Kg	8260B
Naphthalene		80	J	360	ug/Kg	8260B
1,2,4-Trimethylbenzene		19	J	360	ug/Kg	8260B
2-Methylnaphthalene		210	J	820	ug/Kg	8270C
Acenaphthene		11	J	820	ug/Kg	8270C
Acenaphthylene		20	J	820	ug/Kg	8270C
Anthracene		26	J	820	ug/Kg	8270C
Benzo[a]anthracene		86	J	820	ug/Kg	8270C
Benzo[a]pyrene		99	J	820	ug/Kg	8270C
Benzo[b]fluoranthene		140	J	820	ug/Kg	8270C
Benzo[g,h,i]perylene		94	J	820	ug/Kg	8270C
Benzo[k]fluoranthene		50	J	820	ug/Kg	8270C
Chrysene		130	J	820	ug/Kg	8270C
Dibenzofuran		24	J	820	ug/Kg	8270C
Fluoranthene		150	J	820	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		53	J	820	ug/Kg	8270C
Naphthalene		48	J	820	ug/Kg	8270C
Phenanthrene		140	J	820	ug/Kg	8270C
Pyrene		190	J	820	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		350		54	mg/Kg	WI-DRO
Aluminum		5400		21	mg/Kg	6010B
Barium		71		21	mg/Kg	6010B
Beryllium		0.40	J	0.54	mg/Kg	6010B
Calcium		11000		540	mg/Kg	6010B
Cadmium		0.34		0.21	mg/Kg	6010B
Cobalt		5.6		5.4	mg/Kg	6010B
Chromium		10		0.54	mg/Kg	6010B
Copper		13		2.7	mg/Kg	6010B
Iron		12000		11	mg/Kg	6010B
Potassium		900		540	mg/Kg	6010B
Magnesium		2800	B	540	mg/Kg	6010B
Manganese		440		1.6	mg/Kg	6010B
Sodium		67	J	540	mg/Kg	6010B
Nickel		15	B	4.3	mg/Kg	6010B
Vanadium		21		5.4	mg/Kg	6010B
Zinc		70	B	2.1	mg/Kg	6010B
Arsenic		3.9		1.1	mg/Kg	6010B
Lead		27		0.32	mg/Kg	6010B
Mercury		0.031	J	0.12	mg/Kg	7471A
Percent Solids		80		0.10	%	Moisture
Percent Moisture		20		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52525-4	**HA-30_0-1 (20150625)**					
Methyl acetate		330	J	590	ug/Kg	8260B
Naphthalene		31	J	300	ug/Kg	8260B
1,1'-Biphenyl		23	J	780	ug/Kg	8270C
2-Methylnaphthalene		190	J	780	ug/Kg	8270C
Acenaphthene		140	J	780	ug/Kg	8270C
Acenaphthylene		35	J	780	ug/Kg	8270C
Acetophenone		23	J	780	ug/Kg	8270C
Anthracene		320	J	780	ug/Kg	8270C
Benzaldehyde		58	J	780	ug/Kg	8270C
Benzo[a]anthracene		610	J	780	ug/Kg	8270C
Benzo[a]pyrene		530	J	780	ug/Kg	8270C
Benzo[b]fluoranthene		770	J	780	ug/Kg	8270C
Benzo[g,h,i]perylene		190	J	780	ug/Kg	8270C
Benzo[k]fluoranthene		280	J	780	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		53	J	780	ug/Kg	8270C
Carbazole		100	J	780	ug/Kg	8270C
Chrysene		670	J	780	ug/Kg	8270C
Dibenz(a,h)anthracene		64	J	780	ug/Kg	8270C
Dibenzofuran		110	J	780	ug/Kg	8270C
Fluoranthene		1400		780	ug/Kg	8270C
Fluorene		190	J	780	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		180	J	780	ug/Kg	8270C
Naphthalene		78	J	780	ug/Kg	8270C
Phenanthrene		1200		780	ug/Kg	8270C
Pyrene		1200		780	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		160		54	mg/Kg	WI-DRO
Aluminum		4400		18	mg/Kg	6010B
Barium		60		18	mg/Kg	6010B
Beryllium		0.32	J	0.44	mg/Kg	6010B
Calcium		6800		440	mg/Kg	6010B
Cadmium		0.41		0.18	mg/Kg	6010B
Cobalt		4.7		4.4	mg/Kg	6010B
Chromium		9.3		0.44	mg/Kg	6010B
Copper		12		2.2	mg/Kg	6010B
Iron		9600		8.9	mg/Kg	6010B
Potassium		870		440	mg/Kg	6010B
Magnesium		2400	B	440	mg/Kg	6010B
Manganese		390		1.3	mg/Kg	6010B
Sodium		52	J	440	mg/Kg	6010B
Nickel		12	B	3.5	mg/Kg	6010B
Vanadium		16		4.4	mg/Kg	6010B
Zinc		67	B	1.8	mg/Kg	6010B
Arsenic		2.8		0.89	mg/Kg	6010B
Lead		21		0.27	mg/Kg	6010B
Thallium		0.14	J	0.89	mg/Kg	6010B
Mercury		0.038	J	0.12	mg/Kg	7471A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Solids		85		0.10	%	Moisture
Percent Moisture		15		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52525-5	**HA-31_0-1 (20150625)**					
Methyl acetate		300	J	600	ug/Kg	8260B
Naphthalene		74	J	300	ug/Kg	8260B
Toluene		13	J	300	ug/Kg	8260B
2-Methylnaphthalene		140	J	2600	ug/Kg	8270C
Acenaphthene		430	J	2600	ug/Kg	8270C
Acenaphthylene		59	J	2600	ug/Kg	8270C
Anthracene		700	J	2600	ug/Kg	8270C
Benzo[a]anthracene		3400		2600	ug/Kg	8270C
Benzo[a]pyrene		2400	J	2600	ug/Kg	8270C
Benzo[b]fluoranthene		3900		2600	ug/Kg	8270C
Benzo[g,h,i]perylene		1400	J	2600	ug/Kg	8270C
Benzo[k]fluoranthene		1500	J	2600	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		210	J	2600	ug/Kg	8270C
Carbazole		730	J	2600	ug/Kg	8270C
Chrysene		3800		2600	ug/Kg	8270C
Dibenz(a,h)anthracene		480	J	2600	ug/Kg	8270C
Dibenzofuran		180	J	2600	ug/Kg	8270C
Fluoranthene		6300		2600	ug/Kg	8270C
Fluorene		340	J	2600	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		1200	J	2600	ug/Kg	8270C
Naphthalene		180	J	2600	ug/Kg	8270C
Phenanthrene		3400		2600	ug/Kg	8270C
Pyrene		5200		2600	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		140		22	mg/Kg	WI-DRO
Aluminum		4600		19	mg/Kg	6010B
Antimony		0.54	J	0.95	mg/Kg	6010B
Barium		180		19	mg/Kg	6010B
Beryllium		0.26	J	0.48	mg/Kg	6010B
Calcium		12000		480	mg/Kg	6010B
Cadmium		0.51		0.19	mg/Kg	6010B
Cobalt		5.2		4.8	mg/Kg	6010B
Chromium		13		0.48	mg/Kg	6010B
Copper		16		2.4	mg/Kg	6010B
Iron		11000		9.5	mg/Kg	6010B
Potassium		800		480	mg/Kg	6010B
Magnesium		4600	B	480	mg/Kg	6010B
Manganese		360		1.4	mg/Kg	6010B
Sodium		73	J	480	mg/Kg	6010B
Nickel		14	B	3.8	mg/Kg	6010B
Vanadium		16		4.8	mg/Kg	6010B
Zinc		61	B	1.9	mg/Kg	6010B
Arsenic		3.7		0.95	mg/Kg	6010B
Lead		71		0.29	mg/Kg	6010B
Selenium		0.32	J	0.48	mg/Kg	6010B
Mercury		0.087	J	0.11	mg/Kg	7471A
Percent Solids		83		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Moisture		17		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52525-6	**HA-19_0-0.5 (20150625)**					
Methyl acetate		1500		760	ug/Kg	8260B
2-Methylnaphthalene		26	J	890	ug/Kg	8270C
2-Methylphenol		60	J	890	ug/Kg	8270C
Acenaphthene		52	J	890	ug/Kg	8270C
Acenaphthylene		20	J	890	ug/Kg	8270C
Anthracene		85	J	890	ug/Kg	8270C
Benzaldehyde		120	J	890	ug/Kg	8270C
Benzo[a]anthracene		350	J	890	ug/Kg	8270C
Benzo[a]pyrene		420	J	890	ug/Kg	8270C
Benzo[b]fluoranthene		770	J	890	ug/Kg	8270C
Benzo[g,h,i]perylene		160	J	890	ug/Kg	8270C
Benzo[k]fluoranthene		320	J	890	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		100	J	890	ug/Kg	8270C
Chrysene		500	J	890	ug/Kg	8270C
Dibenz(a,h)anthracene		46	J	890	ug/Kg	8270C
Dibenzofuran		81	J	890	ug/Kg	8270C
Fluoranthene		630	J	890	ug/Kg	8270C
Fluorene		52	J	890	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		160	J	890	ug/Kg	8270C
Naphthalene		21	J	890	ug/Kg	8270C
Phenol		22	J	890	ug/Kg	8270C
Phenanthrene		360	J	890	ug/Kg	8270C
Pyrene		530	J	890	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		120		25	mg/Kg	WI-DRO
Aluminum		3800		23	mg/Kg	6010B
Barium		91		23	mg/Kg	6010B
Beryllium		0.23	J	0.58	mg/Kg	6010B
Calcium		41000		580	mg/Kg	6010B
Cadmium		0.41		0.23	mg/Kg	6010B
Cobalt		3.8	J	5.8	mg/Kg	6010B
Chromium		13		0.58	mg/Kg	6010B
Copper		22		2.9	mg/Kg	6010B
Iron		8600		12	mg/Kg	6010B
Potassium		1300		580	mg/Kg	6010B
Magnesium		14000	F1 B	580	mg/Kg	6010B
Manganese		490		1.7	mg/Kg	6010B
Sodium		99	J	580	mg/Kg	6010B
Nickel		10		4.7	mg/Kg	6010B
Vanadium		13		5.8	mg/Kg	6010B
Zinc		91	B	2.3	mg/Kg	6010B
Arsenic		3.3		1.2	mg/Kg	6010B
Lead		27		0.35	mg/Kg	6010B
Selenium		0.54	J	0.58	mg/Kg	6010B
Mercury		0.051	J	0.15	mg/Kg	7471A
Percent Solids		73		0.10	%	Moisture
Percent Moisture		27		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52525-7	**HA-20_0-1 (20150625)**					
Methyl acetate		420	J	590	ug/Kg	8260B
2-Methylnaphthalene		6.5	J	410	ug/Kg	8270C
Acenaphthene		15	J	410	ug/Kg	8270C
Acenaphthylene		8.3	J	410	ug/Kg	8270C
Acetophenone		15	J	410	ug/Kg	8270C
Anthracene		28	J	410	ug/Kg	8270C
Benzaldehyde		34	J	410	ug/Kg	8270C
Benzo[a]anthracene		140	J	410	ug/Kg	8270C
Benzo[a]pyrene		160	J	410	ug/Kg	8270C
Benzo[b]fluoranthene		280	J	410	ug/Kg	8270C
Benzo[g,h,i]perylene		87	J	410	ug/Kg	8270C
Benzo[k]fluoranthene		96	J	410	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		93	J	410	ug/Kg	8270C
Butyl benzyl phthalate		18	J	410	ug/Kg	8270C
Carbazole		40	J	410	ug/Kg	8270C
Chrysene		210	J	410	ug/Kg	8270C
Dibenz(a,h)anthracene		23	J	410	ug/Kg	8270C
Dibenzofuran		13	J	410	ug/Kg	8270C
Di-n-butyl phthalate		36	J	410	ug/Kg	8270C
Fluoranthene		370	J	410	ug/Kg	8270C
Fluorene		13	J	410	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		81	J	410	ug/Kg	8270C
Naphthalene		8.0	J	410	ug/Kg	8270C
Phenanthrene		180	J	410	ug/Kg	8270C
Pyrene		270	J	410	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		40		11	mg/Kg	WI-DRO
Aluminum		9900		22	mg/Kg	6010B
Barium		150		22	mg/Kg	6010B
Beryllium		0.58		0.55	mg/Kg	6010B
Calcium		24000		550	mg/Kg	6010B
Cadmium		0.39		0.22	mg/Kg	6010B
Cobalt		9.2		5.5	mg/Kg	6010B
Chromium		16		0.55	mg/Kg	6010B
Copper		18		2.8	mg/Kg	6010B
Iron		16000		11	mg/Kg	6010B
Potassium		870		550	mg/Kg	6010B
Magnesium		7700	B	550	mg/Kg	6010B
Manganese		640		1.7	mg/Kg	6010B
Sodium		110	J	550	mg/Kg	6010B
Nickel		17		4.4	mg/Kg	6010B
Vanadium		28		5.5	mg/Kg	6010B
Zinc		60	B	2.2	mg/Kg	6010B
Arsenic		4.8		1.1	mg/Kg	6010B
Lead		23		0.33	mg/Kg	6010B
Selenium		0.54	J	0.55	mg/Kg	6010B
Mercury		0.044	J	0.12	mg/Kg	7471A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Solids		82		0.10	%	Moisture
Percent Moisture		18		0.10	%	Moisture
240-52525-8	**HA-22_0-1 (20150625)**					
Methyl acetate		880		730	ug/Kg	8260B
Anthracene		8.0	J	470	ug/Kg	8270C
Benzaldehyde		28	J	470	ug/Kg	8270C
Benzo[a]anthracene		48	J	470	ug/Kg	8270C
Benzo[a]pyrene		50	J	470	ug/Kg	8270C
Benzo[b]fluoranthene		95	J	470	ug/Kg	8270C
Benzo[g,h,i]perylene		26	J	470	ug/Kg	8270C
Benzo[k]fluoranthene		23	J	470	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		60	J	470	ug/Kg	8270C
Chrysene		64	J	470	ug/Kg	8270C
Di-n-butyl phthalate		30	J	470	ug/Kg	8270C
Fluoranthene		110	J	470	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		24	J	470	ug/Kg	8270C
Phenanthrene		47	J	470	ug/Kg	8270C
Pyrene		90	J	470	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		7.1	J	12	mg/Kg	WI-DRO
Aluminum		8300		25	mg/Kg	6010B
Barium		100		25	mg/Kg	6010B
Beryllium		0.44	J	0.61	mg/Kg	6010B
Calcium		20000		610	mg/Kg	6010B
Cadmium		0.27		0.25	mg/Kg	6010B
Cobalt		4.5	J	6.1	mg/Kg	6010B
Chromium		12		0.61	mg/Kg	6010B
Copper		13		3.1	mg/Kg	6010B
Iron		12000		12	mg/Kg	6010B
Potassium		930		610	mg/Kg	6010B
Magnesium		5100	B	610	mg/Kg	6010B
Manganese		320		1.8	mg/Kg	6010B
Sodium		180	J	610	mg/Kg	6010B
Nickel		12		4.9	mg/Kg	6010B
Vanadium		21		6.1	mg/Kg	6010B
Zinc		48	B	2.5	mg/Kg	6010B
Arsenic		4.0		1.2	mg/Kg	6010B
Lead		18		0.37	mg/Kg	6010B
Selenium		0.47	J	0.61	mg/Kg	6010B
Mercury		0.054	J	0.14	mg/Kg	7471A
Percent Solids		71		0.10	%	Moisture
Percent Moisture		29		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52525-10	**HA-23_0-1 (20150624)**					
Methyl acetate		300	J	620	ug/Kg	8260B
Toluene		18	J	310	ug/Kg	8260B
1,1'-Biphenyl		18	J	750	ug/Kg	8270C
2-Methylnaphthalene		85	J	750	ug/Kg	8270C
Acenaphthene		250	J	750	ug/Kg	8270C
Acenaphthylene		31	J	750	ug/Kg	8270C
Anthracene		530	J	750	ug/Kg	8270C
Benzo[a]anthracene		940		750	ug/Kg	8270C
Benzo[a]pyrene		770		750	ug/Kg	8270C
Benzo[b]fluoranthene		1100		750	ug/Kg	8270C
Benzo[g,h,i]perylene		460	J	750	ug/Kg	8270C
Benzo[k]fluoranthene		330	J	750	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		340	J B *	750	ug/Kg	8270C
Carbazole		100	J	750	ug/Kg	8270C
Chrysene		910		750	ug/Kg	8270C
Dibenz(a,h)anthracene		120	J	750	ug/Kg	8270C
Dibenzofuran		130	J	750	ug/Kg	8270C
Fluoranthene		2100		750	ug/Kg	8270C
Fluorene		250	J	750	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		390	J	750	ug/Kg	8270C
Naphthalene		38	J	750	ug/Kg	8270C
Phenanthrene		1700		750	ug/Kg	8270C
Pyrene		1700		750	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		63	*	10	mg/Kg	WI-DRO
Aluminum		5700		17	mg/Kg	6010B
Barium		46		17	mg/Kg	6010B
Beryllium		0.32	J	0.43	mg/Kg	6010B
Calcium		39000		430	mg/Kg	6010B
Cadmium		0.24		0.17	mg/Kg	6010B
Cobalt		5.6		4.3	mg/Kg	6010B
Chromium		12		0.43	mg/Kg	6010B
Copper		11		2.2	mg/Kg	6010B
Iron		12000		8.6	mg/Kg	6010B
Potassium		1400		430	mg/Kg	6010B
Magnesium		18000	B	430	mg/Kg	6010B
Manganese		430		1.3	mg/Kg	6010B
Sodium		92	J	430	mg/Kg	6010B
Nickel		14		3.4	mg/Kg	6010B
Vanadium		17		4.3	mg/Kg	6010B
Zinc		37	B	1.7	mg/Kg	6010B
Arsenic		3.2		0.86	mg/Kg	6010B
Lead		13		0.26	mg/Kg	6010B
Percent Solids		87		0.10	%	Moisture
Percent Moisture		13		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52525-11	**HA-24_0-1 (20150624)**					
Methyl acetate		1100		600	ug/Kg	8260B
2-Methylnaphthalene		40	J	410	ug/Kg	8270C
Acenaphthene		9.3	J	410	ug/Kg	8270C
Acenaphthylene		7.0	J	410	ug/Kg	8270C
Anthracene		37	J	410	ug/Kg	8270C
Benzaldehyde		37	J	410	ug/Kg	8270C
Benzo[a]anthracene		270	J	410	ug/Kg	8270C
Benzo[a]pyrene		270	J *	410	ug/Kg	8270C
Benzo[b]fluoranthene		500	*	410	ug/Kg	8270C
Benzo[g,h,i]perylene		140	J *	410	ug/Kg	8270C
Benzo[k]fluoranthene		220	J *	410	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		140	J B	410	ug/Kg	8270C
Chrysene		300	J	410	ug/Kg	8270C
Dibenzofuran		18	J	410	ug/Kg	8270C
Fluoranthene		430		410	ug/Kg	8270C
Fluorene		8.7	J	410	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		110	J *	410	ug/Kg	8270C
Naphthalene		24	J	410	ug/Kg	8270C
Phenanthrene		140	J	410	ug/Kg	8270C
Pyrene		540		410	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		21	*	11	mg/Kg	WI-DRO
Aluminum		8800		17	mg/Kg	6010B
Barium		42		17	mg/Kg	6010B
Beryllium		0.50		0.43	mg/Kg	6010B
Calcium		18000		430	mg/Kg	6010B
Cadmium		0.22		0.17	mg/Kg	6010B
Cobalt		9.3		4.3	mg/Kg	6010B
Chromium		16		0.43	mg/Kg	6010B
Copper		16		2.2	mg/Kg	6010B
Iron		16000		8.7	mg/Kg	6010B
Potassium		3400		430	mg/Kg	6010B
Magnesium		6500	B	430	mg/Kg	6010B
Manganese		300		1.3	mg/Kg	6010B
Sodium		140	J	430	mg/Kg	6010B
Nickel		22		3.5	mg/Kg	6010B
Vanadium		13		4.3	mg/Kg	6010B
Zinc		49	B	1.7	mg/Kg	6010B
Arsenic		4.6		0.87	mg/Kg	6010B
Lead		18		0.26	mg/Kg	6010B
Selenium		0.34	J	0.43	mg/Kg	6010B
Mercury		0.021	J	0.14	mg/Kg	7471A
Percent Solids		81		0.10	%	Moisture
Percent Moisture		19		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52525-12	**HA-25_0-1 (20150624)**					
Methyl acetate		270	J	610	ug/Kg	8260B
Anthracene		6.9	J	410	ug/Kg	8270C
Benzo[a]anthracene		54	J	410	ug/Kg	8270C
Benzo[a]pyrene		50	J	410	ug/Kg	8270C
Benzo[b]fluoranthene		71	J	410	ug/Kg	8270C
Benzo[g,h,i]perylene		28	J	410	ug/Kg	8270C
Benzo[k]fluoranthene		41	J	410	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		80	J B	410	ug/Kg	8270C
Chrysene		61	J	410	ug/Kg	8270C
Fluoranthene		89	J	410	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		28	J	410	ug/Kg	8270C
Phenanthrene		25	J	410	ug/Kg	8270C
Pyrene		91	J	410	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		13	*	11	mg/Kg	WI-DRO
Aluminum		9000		19	mg/Kg	6010B
Barium		58		19	mg/Kg	6010B
Beryllium		0.34	J	0.47	mg/Kg	6010B
Calcium		2200		470	mg/Kg	6010B
Cadmium		0.080	J	0.19	mg/Kg	6010B
Cobalt		5.6		4.7	mg/Kg	6010B
Chromium		21		0.47	mg/Kg	6010B
Copper		14		2.4	mg/Kg	6010B
Iron		15000		9.5	mg/Kg	6010B
Potassium		840		470	mg/Kg	6010B
Magnesium		2200	B	470	mg/Kg	6010B
Manganese		280		1.4	mg/Kg	6010B
Sodium		63	J	470	mg/Kg	6010B
Nickel		15		3.8	mg/Kg	6010B
Vanadium		34		4.7	mg/Kg	6010B
Zinc		33	B	1.9	mg/Kg	6010B
Arsenic		2.3		0.95	mg/Kg	6010B
Lead		6.4		0.28	mg/Kg	6010B
Selenium		0.43	J	0.47	mg/Kg	6010B
Percent Solids		80		0.10	%	Moisture
Percent Moisture		20		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52525-13	**HA-26_0-1 (20150624)**					
Methyl acetate		310	J	680	ug/Kg	8260B
Anthracene		5.0	J	420	ug/Kg	8270C
Benzaldehyde		23	J	420	ug/Kg	8270C
Benzo[a]anthracene		29	J	420	ug/Kg	8270C
Benzo[a]pyrene		33	J	420	ug/Kg	8270C
Benzo[b]fluoranthene		52	J	420	ug/Kg	8270C
Benzo[g,h,i]perylene		21	J	420	ug/Kg	8270C
Benzo[k]fluoranthene		26	J	420	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		80	J B	420	ug/Kg	8270C
Chrysene		37	J	420	ug/Kg	8270C
Fluoranthene		60	J	420	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		21	J	420	ug/Kg	8270C
Phenanthrene		29	J	420	ug/Kg	8270C
Pyrene		57	J	420	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		3.8	J *	11	mg/Kg	WI-DRO
Aluminum		8500		21	mg/Kg	6010B
Antimony		1.9		1.1	mg/Kg	6010B
Barium		180		21	mg/Kg	6010B
Beryllium		0.36	J	0.53	mg/Kg	6010B
Calcium		3400		530	mg/Kg	6010B
Cadmium		1.5		0.21	mg/Kg	6010B
Cobalt		6.2		5.3	mg/Kg	6010B
Chromium		19		0.53	mg/Kg	6010B
Copper		21		2.7	mg/Kg	6010B
Iron		15000		11	mg/Kg	6010B
Potassium		1000		530	mg/Kg	6010B
Magnesium		2000	B	530	mg/Kg	6010B
Manganese		540		1.6	mg/Kg	6010B
Sodium		65	J	530	mg/Kg	6010B
Nickel		16		4.3	mg/Kg	6010B
Vanadium		30		5.3	mg/Kg	6010B
Zinc		100	B	2.1	mg/Kg	6010B
Arsenic		3.6		1.1	mg/Kg	6010B
Lead		110		0.32	mg/Kg	6010B
Selenium		0.63		0.53	mg/Kg	6010B
Mercury		0.031	J	0.13	mg/Kg	7471A
Percent Solids		78		0.10	%	Moisture
Percent Moisture		22		0.10	%	Moisture

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method	Analyst	Analyst ID
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
SW846 8270C	Hula, Tom	TMH
SW846 8270C	Ulman, Mark	MRU
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Martin, Aaron	AMM2
SW846 7471A	Walpole, Barbara	BW
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52525-1	HA-27_0-1 (20150625)	Solid	06/25/2015 0845	06/26/2015 0920
240-52525-2	HA-28_0-1 (20150625)	Solid	06/25/2015 0905	06/26/2015 0920
240-52525-3	HA-29_0-1 (20150625)	Solid	06/25/2015 0930	06/26/2015 0920
240-52525-4	HA-30_0-1 (20150625)	Solid	06/25/2015 1010	06/26/2015 0920
240-52525-5	HA-31_0-1 (20150625)	Solid	06/25/2015 1035	06/26/2015 0920
240-52525-6	HA-19_0-0.5 (20150625)	Solid	06/25/2015 1120	06/26/2015 0920
240-52525-7	HA-20_0-1 (20150625)	Solid	06/25/2015 1150	06/26/2015 0920
240-52525-8	HA-22_0-1 (20150625)	Solid	06/25/2015 1215	06/26/2015 0920
240-52525-9	MB-1 (20150625)	Solid	06/25/2015 0000	06/26/2015 0920
240-52525-10	HA-23_0-1 (20150624)	Solid	06/24/2015 1645	06/26/2015 0920
240-52525-11	HA-24_0-1 (20150624)	Solid	06/24/2015 1700	06/26/2015 0920
240-52525-12	HA-25_0-1 (20150624)	Solid	06/24/2015 1720	06/26/2015 0920
240-52525-13	HA-26_0-1 (20150624)	Solid	06/24/2015 1745	06/26/2015 0920

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-27_0-1 (20150625)

Lab Sample ID: 240-52525-1 Date Sampled: 06/25/2015 0845
Client Matrix: Solid % Moisture: 14.0 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143955.D
Dilution:	1.0			Initial Weight/Volume:	9.966 g
Analysis Date:	07/01/2015 1842			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		260	1200
Allyl chloride		ND		35	580
Benzene		ND		11	290
Bromobenzene		ND		15	290
Bromochloromethane		ND		82	290
Bromodichloromethane		ND		44	290
Bromoform		ND		71	290
Bromomethane		ND		60	290
2-Butanone (MEK)		ND		85	1200
Carbon disulfide		ND		65	290
Carbon tetrachloride		ND		56	290
Chlorobenzene		ND		48	290
Chlorodibromomethane		ND		54	290
Chloroethane		ND		60	290
Chloroform		ND		42	290
Chloromethane		ND		56	290
2-Chlorotoluene		ND		48	290
4-Chlorotoluene		ND		30	290
cis-1,2-Dichloroethene		ND		44	290
cis-1,3-Dichloropropene		ND		26	290
Cyclohexane		ND		35	580
1,2-Dibromo-3-Chloropropane		ND		83	580
1,2-Dibromoethane		ND		37	290
Dibromomethane		ND		58	290
1,2-Dichlorobenzene		ND		22	290
1,3-Dichlorobenzene		ND		35	290
1,4-Dichlorobenzene		ND		48	290
Dichlorodifluoromethane		ND		71	290
1,1-Dichloroethane		ND		41	290
1,2-Dichloroethane		ND		62	290
1,1-Dichloroethene		ND		35	290
Dichlorofluoromethane		ND		39	580
1,2-Dichloropropane		ND		37	290
1,3-Dichloropropane		ND		27	290
2,2-Dichloropropane		ND		61	290
1,1-Dichloropropene		ND		44	290
Ethylbenzene		ND		41	290
Ethyl ether		ND		110	580
Hexachlorobutadiene		ND		51	290
2-Hexanone		ND		98	1200
Isopropylbenzene		ND		15	290
Methyl acetate		310	J	64	580
Methylcyclohexane		ND		44	580
Methylene Chloride		ND		99	290
4-Methyl-2-pentanone (MIBK)		ND		65	1200
Methyl tert butyl ether		ND		35	290

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-27_0-1 (20150625)

Lab Sample ID: 240-52525-1 Date Sampled: 06/25/2015 0845
Client Matrix: Solid % Moisture: 14.0 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143955.D
Dilution:	1.0			Initial Weight/Volume:	9.966 g
Analysis Date:	07/01/2015 1842			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		23	290
Naphthalene		63	J	30	290
n-Butylbenzene		ND		25	290
N-Propylbenzene		ND		71	290
o-Xylene		ND		20	290
p-Isopropyltoluene		ND		29	290
sec-Butylbenzene		ND		19	290
Styrene		ND		32	290
tert-Butylbenzene		ND		40	290
1,1,1,2-Tetrachloroethane		ND		57	290
1,1,2,2-Tetrachloroethane		ND		50	290
Tetrachloroethene		ND		32	290
Tetrahydrofuran		ND		140	1200
Toluene		ND		12	290
trans-1,2-Dichloroethene		ND		30	290
trans-1,3-Dichloropropene		ND		30	290
1,2,3-Trichlorobenzene		ND		46	290
1,2,4-Trichlorobenzene		ND		35	290
1,1,1-Trichloroethane		ND		49	290
1,1,2-Trichloroethane		ND		97	290
Trichloroethene		ND		46	290
Trichlorofluoromethane		ND		41	290
1,2,3-Trichloropropane		ND		120	290
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		49	290
1,2,4-Trimethylbenzene		ND		15	290
1,3,5-Trimethylbenzene		ND		18	290
Vinyl chloride		ND		65	290

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	105		26 - 141
Dibromofluoromethane (Surr)	82		30 - 122
1,2-Dichloroethane-d4 (Surr)	109		39 - 128
Toluene-d8 (Surr)	95		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-28_0-1 (20150625)**

Lab Sample ID: 240-52525-2 Date Sampled: 06/25/2015 0905
Client Matrix: Solid % Moisture: 9.2 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143956.D
Dilution:	1.0			Initial Weight/Volume:	7.268 g
Analysis Date:	07/01/2015 1903			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		340	1500
Allyl chloride		ND		45	760
Benzene		ND		14	380
Bromobenzene		ND		20	380
Bromochloromethane		ND		110	380
Bromodichloromethane		ND		58	380
Bromoform		ND		92	380
Bromomethane		ND		77	380
2-Butanone (MEK)		ND		110	1500
Carbon disulfide		ND		85	380
Carbon tetrachloride		ND		73	380
Chlorobenzene		ND		62	380
Chlorodibromomethane		ND		70	380
Chloroethane		ND		77	380
Chloroform		ND		55	380
Chloromethane		ND		73	380
2-Chlorotoluene		ND		62	380
4-Chlorotoluene		ND		39	380
cis-1,2-Dichloroethene		ND		58	380
cis-1,3-Dichloropropene		ND		33	380
Cyclohexane		ND		45	760
1,2-Dibromo-3-Chloropropane		ND		110	760
1,2-Dibromoethane		ND		48	380
Dibromomethane		ND		76	380
1,2-Dichlorobenzene		ND		29	380
1,3-Dichlorobenzene		ND		45	380
1,4-Dichlorobenzene		ND		62	380
Dichlorodifluoromethane		ND		92	380
1,1-Dichloroethane		ND		53	380
1,2-Dichloroethane		ND		80	380
1,1-Dichloroethene		ND		45	380
Dichlorofluoromethane		ND		50	760
1,2-Dichloropropane		ND		48	380
1,3-Dichloropropane		ND		35	380
2,2-Dichloropropane		ND		79	380
1,1-Dichloropropene		ND		58	380
Ethylbenzene		ND		53	380
Ethyl ether		ND		150	760
Hexachlorobutadiene		ND		67	380
2-Hexanone		ND		130	1500
Isopropylbenzene		ND		20	380
Methyl acetate		300	J	83	760
Methylcyclohexane		68	J	58	760
Methylene Chloride		ND		130	380
4-Methyl-2-pentanone (MIBK)		ND		85	1500
Methyl tert butyl ether		ND		45	380

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-28_0-1 (20150625)

Lab Sample ID: 240-52525-2 Date Sampled: 06/25/2015 0905
Client Matrix: Solid % Moisture: 9.2 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143956.D
Dilution:	1.0			Initial Weight/Volume:	7.268 g
Analysis Date:	07/01/2015 1903			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		30	380
Naphthalene		64	J	39	380
n-Butylbenzene		ND		32	380
N-Propylbenzene		ND		92	380
o-Xylene		ND		26	380
p-Isopropyltoluene		ND		38	380
sec-Butylbenzene		ND		24	380
Styrene		ND		41	380
tert-Butylbenzene		ND		52	380
1,1,1,2-Tetrachloroethane		ND		74	380
1,1,2,2-Tetrachloroethane		ND		65	380
Tetrachloroethene		ND		41	380
Tetrahydrofuran		ND		180	1500
Toluene		22	J	15	380
trans-1,2-Dichloroethene		ND		39	380
trans-1,3-Dichloropropene		ND		39	380
1,2,3-Trichlorobenzene		ND		59	380
1,2,4-Trichlorobenzene		ND		45	380
1,1,1-Trichloroethane		ND		64	380
1,1,2-Trichloroethane		ND		130	380
Trichloroethene		ND		59	380
Trichlorofluoromethane		ND		53	380
1,2,3-Trichloropropane		ND		160	380
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		64	380
1,2,4-Trimethylbenzene		26	J	20	380
1,3,5-Trimethylbenzene		ND		23	380
Vinyl chloride		ND		85	380

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	120		26 - 141
Dibromofluoromethane (Surr)	89		30 - 122
1,2-Dichloroethane-d4 (Surr)	118		39 - 128
Toluene-d8 (Surr)	105		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-29_0-1 (20150625)**

Lab Sample ID: 240-52525-3 Date Sampled: 06/25/2015 0930
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143957.D
Dilution:	1.0			Initial Weight/Volume:	8.658 g
Analysis Date:	07/01/2015 1924			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		320	1400
Allyl chloride		ND		43	720
Benzene		ND		13	360
Bromobenzene		ND		19	360
Bromochloromethane		ND		100	360
Bromodichloromethane		ND		55	360
Bromoform		ND		88	360
Bromomethane		ND		73	360
2-Butanone (MEK)		ND		100	1400
Carbon disulfide		ND		81	360
Carbon tetrachloride		ND		69	360
Chlorobenzene		ND		59	360
Chlorodibromomethane		ND		66	360
Chloroethane		ND		73	360
Chloroform		ND		52	360
Chloromethane		ND		69	360
2-Chlorotoluene		ND		59	360
4-Chlorotoluene		ND		37	360
cis-1,2-Dichloroethene		ND		55	360
cis-1,3-Dichloropropene		ND		32	360
Cyclohexane		ND		43	720
1,2-Dibromo-3-Chloropropane		ND		100	720
1,2-Dibromoethane		ND		46	360
Dibromomethane		ND		72	360
1,2-Dichlorobenzene		ND		27	360
1,3-Dichlorobenzene		ND		43	360
1,4-Dichlorobenzene		ND		59	360
Dichlorodifluoromethane		ND		88	360
1,1-Dichloroethane		ND		50	360
1,2-Dichloroethane		ND		76	360
1,1-Dichloroethene		ND		43	360
Dichlorofluoromethane		ND		47	720
1,2-Dichloropropane		ND		46	360
1,3-Dichloropropane		ND		33	360
2,2-Dichloropropane		ND		75	360
1,1-Dichloropropene		ND		55	360
Ethylbenzene		ND		50	360
Ethyl ether		ND		140	720
Hexachlorobutadiene		ND		63	360
2-Hexanone		ND		120	1400
Isopropylbenzene		ND		19	360
Methyl acetate		330	J	79	720
Methylcyclohexane		ND		55	720
Methylene Chloride		ND		120	360
4-Methyl-2-pentanone (MIBK)		ND		81	1400
Methyl tert butyl ether		ND		43	360

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-29_0-1 (20150625)

Lab Sample ID: 240-52525-3 Date Sampled: 06/25/2015 0930
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143957.D
Dilution:	1.0			Initial Weight/Volume:	8.658 g
Analysis Date:	07/01/2015 1924			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		29	360
Naphthalene		80	J	37	360
n-Butylbenzene		ND		30	360
N-Propylbenzene		ND		88	360
o-Xylene		ND		24	360
p-Isopropyltoluene		ND		36	360
sec-Butylbenzene		ND		23	360
Styrene		ND		39	360
tert-Butylbenzene		ND		49	360
1,1,1,2-Tetrachloroethane		ND		70	360
1,1,2,2-Tetrachloroethane		ND		62	360
Tetrachloroethene		ND		39	360
Tetrahydrofuran		ND		170	1400
Toluene		ND		14	360
trans-1,2-Dichloroethene		ND		37	360
trans-1,3-Dichloropropene		ND		37	360
1,2,3-Trichlorobenzene		ND		56	360
1,2,4-Trichlorobenzene		ND		43	360
1,1,1-Trichloroethane		ND		60	360
1,1,2-Trichloroethane		ND		120	360
Trichloroethene		ND		56	360
Trichlorofluoromethane		ND		50	360
1,2,3-Trichloropropane		ND		150	360
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		60	360
1,2,4-Trimethylbenzene		19	J	19	360
1,3,5-Trimethylbenzene		ND		22	360
Vinyl chloride		ND		81	360

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	102		26 - 141
Dibromofluoromethane (Surr)	83		30 - 122
1,2-Dichloroethane-d4 (Surr)	108		39 - 128
Toluene-d8 (Surr)	94		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-30_0-1 (20150625)**

Lab Sample ID: 240-52525-4 Date Sampled: 06/25/2015 1010
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143958.D
Dilution:	1.0			Initial Weight/Volume:	9.951 g
Analysis Date:	07/01/2015 1946			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		270	1200
Allyl chloride		ND		36	590
Benzene		ND		11	300
Bromobenzene		ND		15	300
Bromochloromethane		ND		83	300
Bromodichloromethane		ND		45	300
Bromoform		ND		72	300
Bromomethane		ND		60	300
2-Butanone (MEK)		ND		87	1200
Carbon disulfide		ND		66	300
Carbon tetrachloride		ND		57	300
Chlorobenzene		ND		49	300
Chlorodibromomethane		ND		55	300
Chloroethane		ND		60	300
Chloroform		ND		43	300
Chloromethane		ND		57	300
2-Chlorotoluene		ND		49	300
4-Chlorotoluene		ND		31	300
cis-1,2-Dichloroethene		ND		45	300
cis-1,3-Dichloropropene		ND		26	300
Cyclohexane		ND		36	590
1,2-Dibromo-3-Chloropropane		ND		84	590
1,2-Dibromoethane		ND		38	300
Dibromomethane		ND		59	300
1,2-Dichlorobenzene		ND		23	300
1,3-Dichlorobenzene		ND		36	300
1,4-Dichlorobenzene		ND		49	300
Dichlorodifluoromethane		ND		72	300
1,1-Dichloroethane		ND		41	300
1,2-Dichloroethane		ND		63	300
1,1-Dichloroethene		ND		36	300
Dichlorofluoromethane		ND		39	590
1,2-Dichloropropane		ND		38	300
1,3-Dichloropropane		ND		27	300
2,2-Dichloropropane		ND		62	300
1,1-Dichloropropene		ND		45	300
Ethylbenzene		ND		41	300
Ethyl ether		ND		120	590
Hexachlorobutadiene		ND		52	300
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		15	300
Methyl acetate		330	J	65	590
Methylcyclohexane		ND		45	590
Methylene Chloride		ND		100	300
4-Methyl-2-pentanone (MIBK)		ND		66	1200
Methyl tert butyl ether		ND		36	300

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-30_0-1 (20150625)

Lab Sample ID: 240-52525-4 Date Sampled: 06/25/2015 1010
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143958.D
Dilution:	1.0			Initial Weight/Volume:	9.951 g
Analysis Date:	07/01/2015 1946			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		24	300
Naphthalene		31	J	31	300
n-Butylbenzene		ND		25	300
N-Propylbenzene		ND		72	300
o-Xylene		ND		20	300
p-Isopropyltoluene		ND		30	300
sec-Butylbenzene		ND		19	300
Styrene		ND		32	300
tert-Butylbenzene		ND		40	300
1,1,1,2-Tetrachloroethane		ND		58	300
1,1,2,2-Tetrachloroethane		ND		51	300
Tetrachloroethene		ND		32	300
Tetrahydrofuran		ND		140	1200
Toluene		ND		12	300
trans-1,2-Dichloroethene		ND		31	300
trans-1,3-Dichloropropene		ND		31	300
1,2,3-Trichlorobenzene		ND		46	300
1,2,4-Trichlorobenzene		ND		36	300
1,1,1-Trichloroethane		ND		50	300
1,1,2-Trichloroethane		ND		98	300
Trichloroethene		ND		46	300
Trichlorofluoromethane		ND		41	300
1,2,3-Trichloropropane		ND		120	300
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		50	300
1,2,4-Trimethylbenzene		ND		15	300
1,3,5-Trimethylbenzene		ND		18	300
Vinyl chloride		ND		66	300

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	96		26 - 141
Dibromofluoromethane (Surr)	80		30 - 122
1,2-Dichloroethane-d4 (Surr)	106		39 - 128
Toluene-d8 (Surr)	89		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-31_0-1 (20150625)**

Lab Sample ID: 240-52525-5 Date Sampled: 06/25/2015 1035
Client Matrix: Solid % Moisture: 16.6 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143959.D
Dilution:	1.0			Initial Weight/Volume:	10.035 g
Analysis Date:	07/01/2015 2007			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		270	1200
Allyl chloride		ND		36	600
Benzene		ND		11	300
Bromobenzene		ND		16	300
Bromochloromethane		ND		84	300
Bromodichloromethane		ND		45	300
Bromoform		ND		73	300
Bromomethane		ND		61	300
2-Butanone (MEK)		ND		87	1200
Carbon disulfide		ND		67	300
Carbon tetrachloride		ND		57	300
Chlorobenzene		ND		49	300
Chlorodibromomethane		ND		55	300
Chloroethane		ND		61	300
Chloroform		ND		43	300
Chloromethane		ND		57	300
2-Chlorotoluene		ND		49	300
4-Chlorotoluene		ND		31	300
cis-1,2-Dichloroethene		ND		45	300
cis-1,3-Dichloropropene		ND		26	300
Cyclohexane		ND		36	600
1,2-Dibromo-3-Chloropropane		ND		85	600
1,2-Dibromoethane		ND		38	300
Dibromomethane		ND		60	300
1,2-Dichlorobenzene		ND		23	300
1,3-Dichlorobenzene		ND		36	300
1,4-Dichlorobenzene		ND		49	300
Dichlorodifluoromethane		ND		73	300
1,1-Dichloroethane		ND		42	300
1,2-Dichloroethane		ND		63	300
1,1-Dichloroethene		ND		36	300
Dichlorofluoromethane		ND		39	600
1,2-Dichloropropane		ND		38	300
1,3-Dichloropropane		ND		27	300
2,2-Dichloropropane		ND		62	300
1,1-Dichloropropene		ND		45	300
Ethylbenzene		ND		42	300
Ethyl ether		ND		120	600
Hexachlorobutadiene		ND		53	300
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		16	300
Methyl acetate		300	J	66	600
Methylcyclohexane		ND		45	600
Methylene Chloride		ND		100	300
4-Methyl-2-pentanone (MIBK)		ND		67	1200
Methyl tert butyl ether		ND		36	300

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-31_0-1 (20150625)**

Lab Sample ID: 240-52525-5 Date Sampled: 06/25/2015 1035
Client Matrix: Solid % Moisture: 16.6 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143959.D
Dilution:	1.0			Initial Weight/Volume:	10.035 g
Analysis Date:	07/01/2015 2007			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		24	300
Naphthalene		74	J	31	300
n-Butylbenzene		ND		25	300
N-Propylbenzene		ND		73	300
o-Xylene		ND		20	300
p-Isopropyltoluene		ND		30	300
sec-Butylbenzene		ND		19	300
Styrene		ND		32	300
tert-Butylbenzene		ND		41	300
1,1,1,2-Tetrachloroethane		ND		59	300
1,1,2,2-Tetrachloroethane		ND		51	300
Tetrachloroethene		ND		32	300
Tetrahydrofuran		ND		140	1200
Toluene		13	J	12	300
trans-1,2-Dichloroethene		ND		31	300
trans-1,3-Dichloropropene		ND		31	300
1,2,3-Trichlorobenzene		ND		47	300
1,2,4-Trichlorobenzene		ND		36	300
1,1,1-Trichloroethane		ND		50	300
1,1,2-Trichloroethane		ND		99	300
Trichloroethene		ND		47	300
Trichlorofluoromethane		ND		42	300
1,2,3-Trichloropropane		ND		120	300
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		50	300
1,2,4-Trimethylbenzene		ND		16	300
1,3,5-Trimethylbenzene		ND		18	300
Vinyl chloride		ND		67	300

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	98		26 - 141
Dibromofluoromethane (Surr)	77		30 - 122
1,2-Dichloroethane-d4 (Surr)	103		39 - 128
Toluene-d8 (Surr)	89		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-19_0-0.5 (20150625)**

Lab Sample ID: 240-52525-6 Date Sampled: 06/25/2015 1120
Client Matrix: Solid % Moisture: 26.7 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143960.D
Dilution:	1.0			Initial Weight/Volume:	8.96 g
Analysis Date:	07/01/2015 2029			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		340	1500
Allyl chloride		ND		46	760
Benzene		ND		14	380
Bromobenzene		ND		20	380
Bromochloromethane		ND		110	380
Bromodichloromethane		ND		58	380
Bromoform		ND		93	380
Bromomethane		ND		78	380
2-Butanone (MEK)		ND		110	1500
Carbon disulfide		ND		85	380
Carbon tetrachloride		ND		73	380
Chlorobenzene		ND		62	380
Chlorodibromomethane		ND		70	380
Chloroethane		ND		78	380
Chloroform		ND		55	380
Chloromethane		ND		73	380
2-Chlorotoluene		ND		62	380
4-Chlorotoluene		ND		40	380
cis-1,2-Dichloroethene		ND		58	380
cis-1,3-Dichloropropene		ND		34	380
Cyclohexane		ND		46	760
1,2-Dibromo-3-Chloropropane		ND		110	760
1,2-Dibromoethane		ND		49	380
Dibromomethane		ND		76	380
1,2-Dichlorobenzene		ND		29	380
1,3-Dichlorobenzene		ND		46	380
1,4-Dichlorobenzene		ND		62	380
Dichlorodifluoromethane		ND		93	380
1,1-Dichloroethane		ND		53	380
1,2-Dichloroethane		ND		81	380
1,1-Dichloroethene		ND		46	380
Dichlorofluoromethane		ND		50	760
1,2-Dichloropropane		ND		49	380
1,3-Dichloropropane		ND		35	380
2,2-Dichloropropane		ND		79	380
1,1-Dichloropropene		ND		58	380
Ethylbenzene		ND		53	380
Ethyl ether		ND		150	760
Hexachlorobutadiene		ND		67	380
2-Hexanone		ND		130	1500
Isopropylbenzene		ND		20	380
Methyl acetate		1500		84	760
Methylcyclohexane		ND		58	760
Methylene Chloride		ND		130	380
4-Methyl-2-pentanone (MIBK)		ND		85	1500
Methyl tert butyl ether		ND		46	380

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-19_0-0.5 (20150625)

Lab Sample ID: 240-52525-6 Date Sampled: 06/25/2015 1120
Client Matrix: Solid % Moisture: 26.7 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143960.D
Dilution:	1.0			Initial Weight/Volume:	8.96 g
Analysis Date:	07/01/2015 2029			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		30	380
Naphthalene		ND		40	380
n-Butylbenzene		ND		32	380
N-Propylbenzene		ND		93	380
o-Xylene		ND		26	380
p-Isopropyltoluene		ND		38	380
sec-Butylbenzene		ND		24	380
Styrene		ND		41	380
tert-Butylbenzene		ND		52	380
1,1,1,2-Tetrachloroethane		ND		75	380
1,1,2,2-Tetrachloroethane		ND		65	380
Tetrachloroethene		ND		41	380
Tetrahydrofuran		ND		180	1500
Toluene		ND		15	380
trans-1,2-Dichloroethene		ND		40	380
trans-1,3-Dichloropropene		ND		40	380
1,2,3-Trichlorobenzene		ND		59	380
1,2,4-Trichlorobenzene		ND		46	380
1,1,1-Trichloroethane		ND		64	380
1,1,2-Trichloroethane		ND		130	380
Trichloroethene		ND		59	380
Trichlorofluoromethane		ND		53	380
1,2,3-Trichloropropane		ND		160	380
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		64	380
1,2,4-Trimethylbenzene		ND		20	380
1,3,5-Trimethylbenzene		ND		23	380
Vinyl chloride		ND		85	380

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	89		26 - 141
Dibromofluoromethane (Surr)	75		30 - 122
1,2-Dichloroethane-d4 (Surr)	101		39 - 128
Toluene-d8 (Surr)	86		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-20_0-1 (20150625)

Lab Sample ID: 240-52525-7 Date Sampled: 06/25/2015 1150
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143961.D
Dilution:	1.0			Initial Weight/Volume:	10.33 g
Analysis Date:	07/01/2015 2050			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		270	1200
Allyl chloride		ND		36	590
Benzene		ND		11	300
Bromobenzene		ND		15	300
Bromochloromethane		ND		83	300
Bromodichloromethane		ND		45	300
Bromoform		ND		72	300
Bromomethane		ND		60	300
2-Butanone (MEK)		ND		86	1200
Carbon disulfide		ND		66	300
Carbon tetrachloride		ND		57	300
Chlorobenzene		ND		49	300
Chlorodibromomethane		ND		54	300
Chloroethane		ND		60	300
Chloroform		ND		43	300
Chloromethane		ND		57	300
2-Chlorotoluene		ND		49	300
4-Chlorotoluene		ND		31	300
cis-1,2-Dichloroethene		ND		45	300
cis-1,3-Dichloropropene		ND		26	300
Cyclohexane		ND		36	590
1,2-Dibromo-3-Chloropropane		ND		84	590
1,2-Dibromoethane		ND		38	300
Dibromomethane		ND		59	300
1,2-Dichlorobenzene		ND		23	300
1,3-Dichlorobenzene		ND		36	300
1,4-Dichlorobenzene		ND		49	300
Dichlorodifluoromethane		ND		72	300
1,1-Dichloroethane		ND		41	300
1,2-Dichloroethane		ND		63	300
1,1-Dichloroethene		ND		36	300
Dichlorofluoromethane		ND		39	590
1,2-Dichloropropane		ND		38	300
1,3-Dichloropropane		ND		27	300
2,2-Dichloropropane		ND		62	300
1,1-Dichloropropene		ND		45	300
Ethylbenzene		ND		41	300
Ethyl ether		ND		120	590
Hexachlorobutadiene		ND		52	300
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		15	300
Methyl acetate		420	J	65	590
Methylcyclohexane		ND		45	590
Methylene Chloride		ND		100	300
4-Methyl-2-pentanone (MIBK)		ND		66	1200
Methyl tert butyl ether		ND		36	300

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-20_0-1 (20150625)

Lab Sample ID: 240-52525-7 Date Sampled: 06/25/2015 1150
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143961.D
Dilution:	1.0			Initial Weight/Volume:	10.33 g
Analysis Date:	07/01/2015 2050			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		24	300
Naphthalene		ND		31	300
n-Butylbenzene		ND		25	300
N-Propylbenzene		ND		72	300
o-Xylene		ND		20	300
p-Isopropyltoluene		ND		30	300
sec-Butylbenzene		ND		19	300
Styrene		ND		32	300
tert-Butylbenzene		ND		40	300
1,1,1,2-Tetrachloroethane		ND		58	300
1,1,2,2-Tetrachloroethane		ND		51	300
Tetrachloroethene		ND		32	300
Tetrahydrofuran		ND		140	1200
Toluene		ND		12	300
trans-1,2-Dichloroethene		ND		31	300
trans-1,3-Dichloropropene		ND		31	300
1,2,3-Trichlorobenzene		ND		46	300
1,2,4-Trichlorobenzene		ND		36	300
1,1,1-Trichloroethane		ND		50	300
1,1,2-Trichloroethane		ND		98	300
Trichloroethene		ND		46	300
Trichlorofluoromethane		ND		41	300
1,2,3-Trichloropropane		ND		120	300
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		50	300
1,2,4-Trimethylbenzene		ND		15	300
1,3,5-Trimethylbenzene		ND		18	300
Vinyl chloride		ND		66	300

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	97		26 - 141
Dibromofluoromethane (Surr)	80		30 - 122
1,2-Dichloroethane-d4 (Surr)	103		39 - 128
Toluene-d8 (Surr)	90		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-22_0-1 (20150625)**

Lab Sample ID: 240-52525-8 Date Sampled: 06/25/2015 1215
Client Matrix: Solid % Moisture: 29.3 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143962.D
Dilution:	1.0			Initial Weight/Volume:	9.683 g
Analysis Date:	07/01/2015 2111			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		330	1500
Allyl chloride		ND		44	730
Benzene		ND		13	360
Bromobenzene		ND		19	360
Bromochloromethane		ND		100	360
Bromodichloromethane		ND		55	360
Bromoform		ND		89	360
Bromomethane		ND		74	360
2-Butanone (MEK)		ND		110	1500
Carbon disulfide		ND		82	360
Carbon tetrachloride		ND		70	360
Chlorobenzene		ND		60	360
Chlorodibromomethane		ND		67	360
Chloroethane		ND		74	360
Chloroform		ND		53	360
Chloromethane		ND		70	360
2-Chlorotoluene		ND		60	360
4-Chlorotoluene		ND		38	360
cis-1,2-Dichloroethene		ND		55	360
cis-1,3-Dichloropropene		ND		32	360
Cyclohexane		ND		44	730
1,2-Dibromo-3-Chloropropane		ND		100	730
1,2-Dibromoethane		ND		47	360
Dibromomethane		ND		73	360
1,2-Dichlorobenzene		ND		28	360
1,3-Dichlorobenzene		ND		44	360
1,4-Dichlorobenzene		ND		60	360
Dichlorodifluoromethane		ND		89	360
1,1-Dichloroethane		ND		51	360
1,2-Dichloroethane		ND		77	360
1,1-Dichloroethene		ND		44	360
Dichlorofluoromethane		ND		48	730
1,2-Dichloropropane		ND		47	360
1,3-Dichloropropane		ND		34	360
2,2-Dichloropropane		ND		76	360
1,1-Dichloropropene		ND		55	360
Ethylbenzene		ND		51	360
Ethyl ether		ND		140	730
Hexachlorobutadiene		ND		64	360
2-Hexanone		ND		120	1500
Isopropylbenzene		ND		19	360
Methyl acetate		880		80	730
Methylcyclohexane		ND		55	730
Methylene Chloride		ND		120	360
4-Methyl-2-pentanone (MIBK)		ND		82	1500
Methyl tert butyl ether		ND		44	360

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-22_0-1 (20150625)

Lab Sample ID: 240-52525-8 Date Sampled: 06/25/2015 1215
Client Matrix: Solid % Moisture: 29.3 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143962.D
Dilution:	1.0			Initial Weight/Volume:	9.683 g
Analysis Date:	07/01/2015 2111			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		29	360
Naphthalene		ND		38	360
n-Butylbenzene		ND		31	360
N-Propylbenzene		ND		89	360
o-Xylene		ND		25	360
p-Isopropyltoluene		ND		36	360
sec-Butylbenzene		ND		23	360
Styrene		ND		39	360
tert-Butylbenzene		ND		50	360
1,1,1,2-Tetrachloroethane		ND		72	360
1,1,2,2-Tetrachloroethane		ND		63	360
Tetrachloroethene		ND		39	360
Tetrahydrofuran		ND		180	1500
Toluene		ND		15	360
trans-1,2-Dichloroethene		ND		38	360
trans-1,3-Dichloropropene		ND		38	360
1,2,3-Trichlorobenzene		ND		57	360
1,2,4-Trichlorobenzene		ND		44	360
1,1,1-Trichloroethane		ND		61	360
1,1,2-Trichloroethane		ND		120	360
Trichloroethene		ND		57	360
Trichlorofluoromethane		ND		51	360
1,2,3-Trichloropropane		ND		150	360
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		61	360
1,2,4-Trimethylbenzene		ND		19	360
1,3,5-Trimethylbenzene		ND		22	360
Vinyl chloride		ND		82	360

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	92		26 - 141
Dibromofluoromethane (Surr)	72		30 - 122
1,2-Dichloroethane-d4 (Surr)	96		39 - 128
Toluene-d8 (Surr)	84		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **MB-1 (20150625)**

Lab Sample ID: 240-52525-9 Date Sampled: 06/25/2015 0000
Client Matrix: Solid Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143963.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	07/01/2015 2133			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		48	250
Chlorobenzene		ND		41	250
Chlorodibromomethane		ND		46	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		53	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: MB-1 (20150625)

Lab Sample ID: 240-52525-9 Date Sampled: 06/25/2015 0000
Client Matrix: Solid Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143963.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	07/01/2015 2133			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		43	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		42	250
1,1,2-Trichloroethane		ND		83	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		56	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	109		26 - 141
Dibromofluoromethane (Surr)	92		30 - 122
1,2-Dichloroethane-d4 (Surr)	120		39 - 128
Toluene-d8 (Surr)	100		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-23_0-1 (20150624)**

Lab Sample ID: 240-52525-10 Date Sampled: 06/24/2015 1645
Client Matrix: Solid % Moisture: 12.7 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143964.D
Dilution:	1.0			Initial Weight/Volume:	9.299 g
Analysis Date:	07/01/2015 2154			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		280	1200
Allyl chloride		ND		37	620
Benzene		ND		11	310
Bromobenzene		ND		16	310
Bromochloromethane		ND		86	310
Bromodichloromethane		ND		47	310
Bromoform		ND		75	310
Bromomethane		ND		63	310
2-Butanone (MEK)		ND		90	1200
Carbon disulfide		ND		69	310
Carbon tetrachloride		ND		59	310
Chlorobenzene		ND		51	310
Chlorodibromomethane		ND		57	310
Chloroethane		ND		63	310
Chloroform		ND		44	310
Chloromethane		ND		59	310
2-Chlorotoluene		ND		51	310
4-Chlorotoluene		ND		32	310
cis-1,2-Dichloroethene		ND		47	310
cis-1,3-Dichloropropene		ND		27	310
Cyclohexane		ND		37	620
1,2-Dibromo-3-Chloropropane		ND		88	620
1,2-Dibromoethane		ND		39	310
Dibromomethane		ND		62	310
1,2-Dichlorobenzene		ND		23	310
1,3-Dichlorobenzene		ND		37	310
1,4-Dichlorobenzene		ND		51	310
Dichlorodifluoromethane		ND		75	310
1,1-Dichloroethane		ND		43	310
1,2-Dichloroethane		ND		65	310
1,1-Dichloroethene		ND		37	310
Dichlorofluoromethane		ND		41	620
1,2-Dichloropropane		ND		39	310
1,3-Dichloropropane		ND		28	310
2,2-Dichloropropane		ND		64	310
1,1-Dichloropropene		ND		47	310
Ethylbenzene		ND		43	310
Ethyl ether		ND		120	620
Hexachlorobutadiene		ND		54	310
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		16	310
Methyl acetate		300	J	68	620
Methylcyclohexane		ND		47	620
Methylene Chloride		ND		100	310
4-Methyl-2-pentanone (MIBK)		ND		69	1200
Methyl tert butyl ether		ND		37	310

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-23_0-1 (20150624)

Lab Sample ID: 240-52525-10 Date Sampled: 06/24/2015 1645
Client Matrix: Solid % Moisture: 12.7 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143964.D
Dilution:	1.0			Initial Weight/Volume:	9.299 g
Analysis Date:	07/01/2015 2154			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		25	310
Naphthalene		ND		32	310
n-Butylbenzene		ND		26	310
N-Propylbenzene		ND		75	310
o-Xylene		ND		21	310
p-Isopropyltoluene		ND		31	310
sec-Butylbenzene		ND		20	310
Styrene		ND		33	310
tert-Butylbenzene		ND		42	310
1,1,1,2-Tetrachloroethane		ND		60	310
1,1,2,2-Tetrachloroethane		ND		53	310
Tetrachloroethene		ND		33	310
Tetrahydrofuran		ND		150	1200
Toluene		18	J	12	310
trans-1,2-Dichloroethene		ND		32	310
trans-1,3-Dichloropropene		ND		32	310
1,2,3-Trichlorobenzene		ND		48	310
1,2,4-Trichlorobenzene		ND		37	310
1,1,1-Trichloroethane		ND		52	310
1,1,2-Trichloroethane		ND		100	310
Trichloroethene		ND		48	310
Trichlorofluoromethane		ND		43	310
1,2,3-Trichloropropane		ND		130	310
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		52	310
1,2,4-Trimethylbenzene		ND		16	310
1,3,5-Trimethylbenzene		ND		18	310
Vinyl chloride		ND		69	310

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	95		26 - 141
Dibromofluoromethane (Surr)	83		30 - 122
1,2-Dichloroethane-d4 (Surr)	105		39 - 128
Toluene-d8 (Surr)	90		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-24_0-1 (20150624)

Lab Sample ID: 240-52525-11 Date Sampled: 06/24/2015 1700
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143965.D
Dilution:	1.0			Initial Weight/Volume:	10.256 g
Analysis Date:	07/01/2015 2216			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		270	1200
Allyl chloride		ND		36	600
Benzene		ND		11	300
Bromobenzene		ND		16	300
Bromochloromethane		ND		84	300
Bromodichloromethane		ND		46	300
Bromoform		ND		73	300
Bromomethane		ND		61	300
2-Butanone (MEK)		ND		88	1200
Carbon disulfide		ND		67	300
Carbon tetrachloride		ND		58	300
Chlorobenzene		ND		49	300
Chlorodibromomethane		ND		55	300
Chloroethane		ND		61	300
Chloroform		ND		43	300
Chloromethane		ND		58	300
2-Chlorotoluene		ND		49	300
4-Chlorotoluene		ND		31	300
cis-1,2-Dichloroethene		ND		46	300
cis-1,3-Dichloropropene		ND		26	300
Cyclohexane		ND		36	600
1,2-Dibromo-3-Chloropropane		ND		85	600
1,2-Dibromoethane		ND		38	300
Dibromomethane		ND		60	300
1,2-Dichlorobenzene		ND		23	300
1,3-Dichlorobenzene		ND		36	300
1,4-Dichlorobenzene		ND		49	300
Dichlorodifluoromethane		ND		73	300
1,1-Dichloroethane		ND		42	300
1,2-Dichloroethane		ND		64	300
1,1-Dichloroethene		ND		36	300
Dichlorofluoromethane		ND		40	600
1,2-Dichloropropane		ND		38	300
1,3-Dichloropropane		ND		28	300
2,2-Dichloropropane		ND		63	300
1,1-Dichloropropene		ND		46	300
Ethylbenzene		ND		42	300
Ethyl ether		ND		120	600
Hexachlorobutadiene		ND		53	300
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		16	300
Methyl acetate		1100		66	600
Methylcyclohexane		ND		46	600
Methylene Chloride		ND		100	300
4-Methyl-2-pentanone (MIBK)		ND		67	1200
Methyl tert butyl ether		ND		36	300

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-24_0-1 (20150624)

Lab Sample ID: 240-52525-11 Date Sampled: 06/24/2015 1700
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143965.D
Dilution:	1.0			Initial Weight/Volume:	10.256 g
Analysis Date:	07/01/2015 2216			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		24	300
Naphthalene		ND		31	300
n-Butylbenzene		ND		25	300
N-Propylbenzene		ND		73	300
o-Xylene		ND		20	300
p-Isopropyltoluene		ND		30	300
sec-Butylbenzene		ND		19	300
Styrene		ND		32	300
tert-Butylbenzene		ND		41	300
1,1,1,2-Tetrachloroethane		ND		59	300
1,1,2,2-Tetrachloroethane		ND		52	300
Tetrachloroethene		ND		32	300
Tetrahydrofuran		ND		140	1200
Toluene		ND		12	300
trans-1,2-Dichloroethene		ND		31	300
trans-1,3-Dichloropropene		ND		31	300
1,2,3-Trichlorobenzene		ND		47	300
1,2,4-Trichlorobenzene		ND		36	300
1,1,1-Trichloroethane		ND		50	300
1,1,2-Trichloroethane		ND		100	300
Trichloroethene		ND		47	300
Trichlorofluoromethane		ND		42	300
1,2,3-Trichloropropane		ND		120	300
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		50	300
1,2,4-Trimethylbenzene		ND		16	300
1,3,5-Trimethylbenzene		ND		18	300
Vinyl chloride		ND		67	300

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	94		26 - 141
Dibromofluoromethane (Surr)	78		30 - 122
1,2-Dichloroethane-d4 (Surr)	101		39 - 128
Toluene-d8 (Surr)	85		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-25_0-1 (20150624)

Lab Sample ID: 240-52525-12 Date Sampled: 06/24/2015 1720
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143966.D
Dilution:	1.0			Initial Weight/Volume:	10.27 g
Analysis Date:	07/01/2015 2237			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		280	1200
Allyl chloride		ND		37	610
Benzene		ND		11	310
Bromobenzene		ND		16	310
Bromochloromethane		ND		85	310
Bromodichloromethane		ND		46	310
Bromoform		ND		74	310
Bromomethane		ND		62	310
2-Butanone (MEK)		ND		89	1200
Carbon disulfide		ND		68	310
Carbon tetrachloride		ND		59	310
Chlorobenzene		ND		50	310
Chlorodibromomethane		ND		56	310
Chloroethane		ND		62	310
Chloroform		ND		44	310
Chloromethane		ND		59	310
2-Chlorotoluene		ND		50	310
4-Chlorotoluene		ND		32	310
cis-1,2-Dichloroethene		ND		46	310
cis-1,3-Dichloropropene		ND		27	310
Cyclohexane		ND		37	610
1,2-Dibromo-3-Chloropropane		ND		87	610
1,2-Dibromoethane		ND		39	310
Dibromomethane		ND		61	310
1,2-Dichlorobenzene		ND		23	310
1,3-Dichlorobenzene		ND		37	310
1,4-Dichlorobenzene		ND		50	310
Dichlorodifluoromethane		ND		74	310
1,1-Dichloroethane		ND		43	310
1,2-Dichloroethane		ND		65	310
1,1-Dichloroethene		ND		37	310
Dichlorofluoromethane		ND		40	610
1,2-Dichloropropane		ND		39	310
1,3-Dichloropropane		ND		28	310
2,2-Dichloropropane		ND		63	310
1,1-Dichloropropene		ND		46	310
Ethylbenzene		ND		43	310
Ethyl ether		ND		120	610
Hexachlorobutadiene		ND		54	310
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		16	310
Methyl acetate		270	J	67	610
Methylcyclohexane		ND		46	610
Methylene Chloride		ND		100	310
4-Methyl-2-pentanone (MIBK)		ND		68	1200
Methyl tert butyl ether		ND		37	310

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-25_0-1 (20150624)

Lab Sample ID: 240-52525-12 Date Sampled: 06/24/2015 1720
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143966.D
Dilution:	1.0			Initial Weight/Volume:	10.27 g
Analysis Date:	07/01/2015 2237			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		24	310
Naphthalene		ND		32	310
n-Butylbenzene		ND		26	310
N-Propylbenzene		ND		74	310
o-Xylene		ND		21	310
p-Isopropyltoluene		ND		31	310
sec-Butylbenzene		ND		20	310
Styrene		ND		33	310
tert-Butylbenzene		ND		41	310
1,1,1,2-Tetrachloroethane		ND		60	310
1,1,2,2-Tetrachloroethane		ND		52	310
Tetrachloroethene		ND		33	310
Tetrahydrofuran		ND		150	1200
Toluene		ND		12	310
trans-1,2-Dichloroethene		ND		32	310
trans-1,3-Dichloropropene		ND		32	310
1,2,3-Trichlorobenzene		ND		48	310
1,2,4-Trichlorobenzene		ND		37	310
1,1,1-Trichloroethane		ND		51	310
1,1,2-Trichloroethane		ND		100	310
Trichloroethene		ND		48	310
Trichlorofluoromethane		ND		43	310
1,2,3-Trichloropropane		ND		130	310
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		51	310
1,2,4-Trimethylbenzene		ND		16	310
1,3,5-Trimethylbenzene		ND		18	310
Vinyl chloride		ND		68	310

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	94		26 - 141
Dibromofluoromethane (Surr)	79		30 - 122
1,2-Dichloroethane-d4 (Surr)	101		39 - 128
Toluene-d8 (Surr)	88		33 - 134

Client Sample ID: **HA-26_0-1 (20150624)**

Lab Sample ID: 240-52525-13 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 21.7 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143967.D
Dilution:	1.0			Initial Weight/Volume:	9.428 g
Analysis Date:	07/01/2015 2258			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		310	1400
Allyl chloride		ND		41	680
Benzene		ND		12	340
Bromobenzene		ND		18	340
Bromochloromethane		ND		95	340
Bromodichloromethane		ND		51	340
Bromoform		ND		83	340
Bromomethane		ND		69	340
2-Butanone (MEK)		ND		99	1400
Carbon disulfide		ND		76	340
Carbon tetrachloride		ND		65	340
Chlorobenzene		ND		56	340
Chlorodibromomethane		ND		62	340
Chloroethane		ND		69	340
Chloroform		ND		49	340
Chloromethane		ND		65	340
2-Chlorotoluene		ND		56	340
4-Chlorotoluene		ND		35	340
cis-1,2-Dichloroethene		ND		51	340
cis-1,3-Dichloropropene		ND		30	340
Cyclohexane		ND		41	680
1,2-Dibromo-3-Chloropropane		ND		96	680
1,2-Dibromoethane		ND		43	340
Dibromomethane		ND		68	340
1,2-Dichlorobenzene		ND		26	340
1,3-Dichlorobenzene		ND		41	340
1,4-Dichlorobenzene		ND		56	340
Dichlorodifluoromethane		ND		83	340
1,1-Dichloroethane		ND		47	340
1,2-Dichloroethane		ND		72	340
1,1-Dichloroethene		ND		41	340
Dichlorofluoromethane		ND		45	680
1,2-Dichloropropane		ND		43	340
1,3-Dichloropropane		ND		31	340
2,2-Dichloropropane		ND		70	340
1,1-Dichloropropene		ND		51	340
Ethylbenzene		ND		47	340
Ethyl ether		ND		130	680
Hexachlorobutadiene		ND		60	340
2-Hexanone		ND		110	1400
Isopropylbenzene		ND		18	340
Methyl acetate		310	J	74	680
Methylcyclohexane		ND		51	680
Methylene Chloride		ND		120	340
4-Methyl-2-pentanone (MIBK)		ND		76	1400
Methyl tert butyl ether		ND		41	340

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-26_0-1 (20150624)

Lab Sample ID: 240-52525-13 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 21.7 Date Received: 06/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187606	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-187301	Lab File ID:	143967.D
Dilution:	1.0			Initial Weight/Volume:	9.428 g
Analysis Date:	07/01/2015 2258			Final Weight/Volume:	10 mL
Prep Date:	06/29/2015 1621				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		27	340
Naphthalene		ND		35	340
n-Butylbenzene		ND		28	340
N-Propylbenzene		ND		83	340
o-Xylene		ND		23	340
p-Isopropyltoluene		ND		34	340
sec-Butylbenzene		ND		22	340
Styrene		ND		37	340
tert-Butylbenzene		ND		46	340
1,1,1,2-Tetrachloroethane		ND		66	340
1,1,2,2-Tetrachloroethane		ND		58	340
Tetrachloroethene		ND		37	340
Tetrahydrofuran		ND		160	1400
Toluene		ND		14	340
trans-1,2-Dichloroethene		ND		35	340
trans-1,3-Dichloropropene		ND		35	340
1,2,3-Trichlorobenzene		ND		53	340
1,2,4-Trichlorobenzene		ND		41	340
1,1,1-Trichloroethane		ND		57	340
1,1,2-Trichloroethane		ND		110	340
Trichloroethene		ND		53	340
Trichlorofluoromethane		ND		47	340
1,2,3-Trichloropropane		ND		140	340
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		57	340
1,2,4-Trimethylbenzene		ND		18	340
1,3,5-Trimethylbenzene		ND		20	340
Vinyl chloride		ND		76	340

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	92		26 - 141
Dibromofluoromethane (Surr)	77		30 - 122
1,2-Dichloroethane-d4 (Surr)	95		39 - 128
Toluene-d8 (Surr)	89		33 - 134

Client Sample ID: **HA-27_0-1 (20150625)**

Lab Sample ID: 240-52525-1 Date Sampled: 06/25/2015 0845
Client Matrix: Solid % Moisture: 14.0 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188473	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50709026.D
Dilution:	6.667			Initial Weight/Volume:	30.43 g
Analysis Date:	07/09/2015 1900			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		27	2500
2,2'-oxybis[1-chloropropane]		ND		73	2500
2,4,5-Trichlorophenol		ND		190	2500
2,4,6-Trichlorophenol		ND		68	2500
2,4-Dichlorophenol		ND		150	2500
2,4-Dimethylphenol		ND		150	2500
2,4-Dinitrophenol		ND		160	12000
2,4-Dinitrotoluene		ND		130	2500
2,6-Dinitrotoluene		ND		160	2500
2-Chloronaphthalene		ND		3.4	2500
2-Chlorophenol		ND		63	2500
2-Methylnaphthalene		81	J	3.8	2500
2-Methylphenol		ND		84	2500
2-Nitroaniline		ND		70	12000
2-Nitrophenol		ND		63	2500
3,3'-Dichlorobenzidine		ND		140	12000
3-Nitroaniline		ND		120	12000
4,6-Dinitro-2-methylphenol		ND		70	12000
4-Bromophenyl phenyl ether		ND		99	2500
4-Chloro-3-methylphenol		ND		160	2500
4-Chloroaniline		ND		130	2500
4-Chlorophenyl phenyl ether		ND		99	2500
4-Nitroaniline		ND		200	12000
4-Nitrophenol		ND		130	12000
Acenaphthene		500	J	5.8	2500
Acenaphthylene		130	J	2.7	2500
Acetophenone		ND		70	2500
Anthracene		740	J	6.0	2500
Atrazine		ND		70	2500
Benzaldehyde		ND		92	2500
Benzo[a]anthracene		3400		4.8	2500
Benzo[a]pyrene		2900		4.9	2500
Benzo[b]fluoranthene		4300		4.5	2500
Benzo[g,h,i]perylene		1900	J	2.7	2500
Benzo[k]fluoranthene		1600	J	5.2	2500
Bis(2-chloroethoxy)methane		ND		170	2500
Bis(2-chloroethyl)ether		ND		15	2500
Bis(2-ethylhexyl) phthalate		ND		150	2500
Butyl benzyl phthalate		ND		76	2500
Caprolactam		ND		280	2500
Carbazole		540	J	210	2500
Chrysene		4000		8.4	2500
Dibenz(a,h)anthracene		600	J	5.0	2500
Dibenzofuran		200	J	5.0	2500
Diethyl phthalate		ND		120	2500
Dimethyl phthalate		ND		130	2500

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-27_0-1 (20150625)

Lab Sample ID: 240-52525-1 Date Sampled: 06/25/2015 0845
Client Matrix: Solid % Moisture: 14.0 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188473	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50709026.D
Dilution:	6.667			Initial Weight/Volume:	30.43 g
Analysis Date:	07/09/2015 1900			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		110	2500
Di-n-octyl phthalate		ND		60	2500
Fluoranthene		6200		4.2	2500
Fluorene		400	J	4.1	2500
Hexachlorobenzene		ND		16	2500
Hexachlorobutadiene		ND		43	2500
Hexachlorocyclopentadiene		ND		62	12000
Hexachloroethane		ND		69	2500
Indeno[1,2,3-cd]pyrene		1600	J	2.7	2500
Isophorone		ND		99	2500
Naphthalene		110	J	6.3	2500
Nitrobenzene		ND		17	2500
N-Nitrosodi-n-propylamine		ND		48	2500
N-Nitrosodiphenylamine		ND		160	2500
Pentachlorophenol		ND		70	2500
Phenol		ND		56	2500
Phenanthrene		3400		5.6	2500
Pyrene		5400		3.4	2500
3 & 4 Methylphenol		ND		150	3100

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	75		24 - 110
2-Fluorophenol (Surr)	65		24 - 110
2,4,6-Tribromophenol (Surr)	47		10 - 110
Nitrobenzene-d5 (Surr)	61		20 - 110
Phenol-d5 (Surr)	75		26 - 110
Terphenyl-d14 (Surr)	85		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-28_0-1 (20150625)**

Lab Sample ID: 240-52525-2 Date Sampled: 06/25/2015 0905
Client Matrix: Solid % Moisture: 9.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50708028.D
Dilution:	4.0			Initial Weight/Volume:	30.47 g
Analysis Date:	07/08/2015 1903			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		35	J	15	1400
2,2'-oxybis[1-chloropropane]		ND		41	1400
2,4,5-Trichlorophenol		ND		110	1400
2,4,6-Trichlorophenol		ND		39	1400
2,4-Dichlorophenol		ND		87	1400
2,4-Dimethylphenol		ND		87	1400
2,4-Dinitrophenol		ND		91	6900
2,4-Dinitrotoluene		ND		74	1400
2,6-Dinitrotoluene		ND		91	1400
2-Chloronaphthalene		ND		2.0	1400
2-Chlorophenol		ND		36	1400
2-Methylnaphthalene		550	J	2.2	1400
2-Methylphenol		ND		48	1400
2-Nitroaniline		ND		39	6900
2-Nitrophenol		ND		36	1400
3,3'-Dichlorobenzidine		ND		78	6900
3-Nitroaniline		ND		69	6900
4,6-Dinitro-2-methylphenol		ND		40	6900
4-Bromophenyl phenyl ether		ND		56	1400
4-Chloro-3-methylphenol		ND		91	1400
4-Chloroaniline		ND		74	1400
4-Chlorophenyl phenyl ether		ND		56	1400
4-Nitroaniline		ND		110	6900
4-Nitrophenol		ND		74	6900
Acenaphthene		22	J	3.3	1400
Acenaphthylene		31	J	1.5	1400
Acetophenone		55	J	40	1400
Anthracene		57	J	3.4	1400
Atrazine		ND		39	1400
Benzaldehyde		ND		52	1400
Benzo[a]anthracene		220	J	2.7	1400
Benzo[a]pyrene		200	J	2.8	1400
Benzo[b]fluoranthene		270	J	2.6	1400
Benzo[g,h,i]perylene		110	J	1.5	1400
Benzo[k]fluoranthene		150	J	2.9	1400
Bis(2-chloroethoxy)methane		ND		95	1400
Bis(2-chloroethyl)ether		ND		8.7	1400
Bis(2-ethylhexyl) phthalate		ND		82	1400
Butyl benzyl phthalate		ND		43	1400
Caprolactam		ND		160	1400
Carbazole		ND		120	1400
Chrysene		280	J	4.8	1400
Dibenz(a,h)anthracene		ND		2.9	1400
Dibenzofuran		120	J	2.9	1400
Diethyl phthalate		ND		69	1400
Dimethyl phthalate		ND		74	1400

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-28_0-1 (20150625)

Lab Sample ID: 240-52525-2 Date Sampled: 06/25/2015 0905
Client Matrix: Solid % Moisture: 9.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50708028.D
Dilution:	4.0			Initial Weight/Volume:	30.47 g
Analysis Date:	07/08/2015 1903			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		65	1400
Di-n-octyl phthalate		ND		34	1400
Fluoranthene		400	J	2.4	1400
Fluorene		28	J	2.3	1400
Hexachlorobenzene		ND		9.1	1400
Hexachlorobutadiene		ND		24	1400
Hexachlorocyclopentadiene		ND		35	6900
Hexachloroethane		ND		39	1400
Indeno[1,2,3-cd]pyrene		59	J	1.5	1400
Isophorone		ND		56	1400
Naphthalene		300	J	3.6	1400
Nitrobenzene		ND		9.5	1400
N-Nitrosodi-n-propylamine		ND		27	1400
N-Nitrosodiphenylamine		ND		91	1400
Pentachlorophenol		ND		39	1400
Phenol		ND		32	1400
Phenanthrene		350	J	3.2	1400
Pyrene		400	J	1.9	1400
3 & 4 Methylphenol		ND		87	1700

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	76		24 - 110
2-Fluorophenol (Surr)	68		24 - 110
2,4,6-Tribromophenol (Surr)	78		10 - 110
Nitrobenzene-d5 (Surr)	62		20 - 110
Phenol-d5 (Surr)	76		26 - 110
Terphenyl-d14 (Surr)	71		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-29_0-1 (20150625)

Lab Sample ID: 240-52525-3 Date Sampled: 06/25/2015 0930
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188473	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50709028.D
Dilution:	2.0			Initial Weight/Volume:	29.95 g
Analysis Date:	07/09/2015 1950			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		8.7	820
2,2'-oxybis[1-chloropropane]		ND		24	820
2,4,5-Trichlorophenol		ND		62	820
2,4,6-Trichlorophenol		ND		22	820
2,4-Dichlorophenol		ND		50	820
2,4-Dimethylphenol		ND		50	820
2,4-Dinitrophenol		ND		52	4000
2,4-Dinitrotoluene		ND		42	820
2,6-Dinitrotoluene		ND		52	820
2-Chloronaphthalene		ND		1.1	820
2-Chlorophenol		ND		20	820
2-Methylnaphthalene		210	J	1.2	820
2-Methylphenol		ND		27	820
2-Nitroaniline		ND		23	4000
2-Nitrophenol		ND		21	820
3,3'-Dichlorobenzidine		ND		45	4000
3-Nitroaniline		ND		40	4000
4,6-Dinitro-2-methylphenol		ND		23	4000
4-Bromophenyl phenyl ether		ND		32	820
4-Chloro-3-methylphenol		ND		52	820
4-Chloroaniline		ND		42	820
4-Chlorophenyl phenyl ether		ND		32	820
4-Nitroaniline		ND		65	4000
4-Nitrophenol		ND		42	4000
Acenaphthene		11	J	1.9	820
Acenaphthylene		20	J	0.87	820
Acetophenone		ND		23	820
Anthracene		26	J	1.9	820
Atrazine		ND		23	820
Benzaldehyde		ND		30	820
Benzo[a]anthracene		86	J	1.6	820
Benzo[a]pyrene		99	J	1.6	820
Benzo[b]fluoranthene		140	J	1.5	820
Benzo[g,h,i]perylene		94	J	0.87	820
Benzo[k]fluoranthene		50	J	1.7	820
Bis(2-chloroethoxy)methane		ND		55	820
Bis(2-chloroethyl)ether		ND		5.0	820
Bis(2-ethylhexyl) phthalate		ND		47	820
Butyl benzyl phthalate		ND		25	820
Caprolactam		ND		92	820
Carbazole		ND		67	820
Chrysene		130	J	2.7	820
Dibenz(a,h)anthracene		ND		1.6	820
Dibenzofuran		24	J	1.6	820
Diethyl phthalate		ND		40	820
Dimethyl phthalate		ND		42	820

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-29_0-1 (20150625)

Lab Sample ID: 240-52525-3 Date Sampled: 06/25/2015 0930
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188473	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50709028.D
Dilution:	2.0			Initial Weight/Volume:	29.95 g
Analysis Date:	07/09/2015 1950			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		37	820
Di-n-octyl phthalate		ND		20	820
Fluoranthene		150	J	1.4	820
Fluorene		ND		1.3	820
Hexachlorobenzene		ND		5.2	820
Hexachlorobutadiene		ND		14	820
Hexachlorocyclopentadiene		ND		20	4000
Hexachloroethane		ND		22	820
Indeno[1,2,3-cd]pyrene		53	J	0.87	820
Isophorone		ND		32	820
Naphthalene		48	J	2.0	820
Nitrobenzene		ND		5.5	820
N-Nitrosodi-n-propylamine		ND		16	820
N-Nitrosodiphenylamine		ND		52	820
Pentachlorophenol		ND		23	820
Phenol		ND		18	820
Phenanthrene		140	J	1.8	820
Pyrene		190	J	1.1	820
3 & 4 Methylphenol		ND		50	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	64		24 - 110
2-Fluorophenol (Surr)	60		24 - 110
2,4,6-Tribromophenol (Surr)	66		10 - 110
Nitrobenzene-d5 (Surr)	54		20 - 110
Phenol-d5 (Surr)	63		26 - 110
Terphenyl-d14 (Surr)	60		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-30_0-1 (20150625)

Lab Sample ID: 240-52525-4 Date Sampled: 06/25/2015 1010
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50710027.D
Dilution:	2.0			Initial Weight/Volume:	29.86 g
Analysis Date:	07/10/2015 1840			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		23	J	8.3	780
2,2'-oxybis[1-chloropropane]		ND		23	780
2,4,5-Trichlorophenol		ND		59	780
2,4,6-Trichlorophenol		ND		21	780
2,4-Dichlorophenol		ND		47	780
2,4-Dimethylphenol		ND		47	780
2,4-Dinitrophenol		ND		50	3800
2,4-Dinitrotoluene		ND		40	780
2,6-Dinitrotoluene		ND		50	780
2-Chloronaphthalene		ND		1.1	780
2-Chlorophenol		ND		19	780
2-Methylnaphthalene		190	J	1.2	780
2-Methylphenol		ND		26	780
2-Nitroaniline		ND		22	3800
2-Nitrophenol		ND		20	780
3,3'-Dichlorobenzidine		ND		43	3800
3-Nitroaniline		ND		38	3800
4,6-Dinitro-2-methylphenol		ND		22	3800
4-Bromophenyl phenyl ether		ND		31	780
4-Chloro-3-methylphenol		ND		50	780
4-Chloroaniline		ND		40	780
4-Chlorophenyl phenyl ether		ND		31	780
4-Nitroaniline		ND		62	3800
4-Nitrophenol		ND		40	3800
Acenaphthene		140	J	1.8	780
Acenaphthylene		35	J	0.83	780
Acetophenone		23	J	22	780
Anthracene		320	J	1.8	780
Atrazine		ND		22	780
Benzaldehyde		58	J	28	780
Benzo[a]anthracene		610	J	1.5	780
Benzo[a]pyrene		530	J	1.5	780
Benzo[b]fluoranthene		770	J	1.4	780
Benzo[g,h,i]perylene		190	J	0.83	780
Benzo[k]fluoranthene		280	J	1.6	780
Bis(2-chloroethoxy)methane		ND		52	780
Bis(2-chloroethyl)ether		ND		4.7	780
Bis(2-ethylhexyl) phthalate		53	J	45	780
Butyl benzyl phthalate		ND		24	780
Caprolactam		ND		88	780
Carbazole		100	J	64	780
Chrysene		670	J	2.6	780
Dibenz(a,h)anthracene		64	J	1.6	780
Dibenzofuran		110	J	1.6	780
Diethyl phthalate		ND		38	780
Dimethyl phthalate		ND		40	780

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-30_0-1 (20150625)

Lab Sample ID: 240-52525-4 Date Sampled: 06/25/2015 1010
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50710027.D
Dilution:	2.0			Initial Weight/Volume:	29.86 g
Analysis Date:	07/10/2015 1840			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		36	780
Di-n-octyl phthalate		ND		19	780
Fluoranthene		1400		1.3	780
Fluorene		190	J	1.3	780
Hexachlorobenzene		ND		5.0	780
Hexachlorobutadiene		ND		13	780
Hexachlorocyclopentadiene		ND		19	3800
Hexachloroethane		ND		21	780
Indeno[1,2,3-cd]pyrene		180	J	0.83	780
Isophorone		ND		31	780
Naphthalene		78	J	1.9	780
Nitrobenzene		ND		5.2	780
N-Nitrosodi-n-propylamine		ND		15	780
N-Nitrosodiphenylamine		ND		50	780
Pentachlorophenol		ND		22	780
Phenol		ND		17	780
Phenanthrene		1200		1.7	780
Pyrene		1200		1.0	780
3 & 4 Methylphenol		ND		47	950

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	81		24 - 110
2-Fluorophenol (Surr)	79		24 - 110
2,4,6-Tribromophenol (Surr)	82		10 - 110
Nitrobenzene-d5 (Surr)	71		20 - 110
Phenol-d5 (Surr)	79		26 - 110
Terphenyl-d14 (Surr)	81		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-31_0-1 (20150625)**

Lab Sample ID: 240-52525-5 Date Sampled: 06/25/2015 1035
Client Matrix: Solid % Moisture: 16.6 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188473	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50709027.D
Dilution:	6.667			Initial Weight/Volume:	29.96 g
Analysis Date:	07/09/2015 1925			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		28	2600
2,2'-oxybis[1-chloropropane]		ND		76	2600
2,4,5-Trichlorophenol		ND		200	2600
2,4,6-Trichlorophenol		ND		71	2600
2,4-Dichlorophenol		ND		160	2600
2,4-Dimethylphenol		ND		160	2600
2,4-Dinitrophenol		ND		170	13000
2,4-Dinitrotoluene		ND		140	2600
2,6-Dinitrotoluene		ND		170	2600
2-Chloronaphthalene		ND		3.6	2600
2-Chlorophenol		ND		66	2600
2-Methylnaphthalene		140	J	4.0	2600
2-Methylphenol		ND		88	2600
2-Nitroaniline		ND		73	13000
2-Nitrophenol		ND		66	2600
3,3'-Dichlorobenzidine		ND		140	13000
3-Nitroaniline		ND		130	13000
4,6-Dinitro-2-methylphenol		ND		74	13000
4-Bromophenyl phenyl ether		ND		100	2600
4-Chloro-3-methylphenol		ND		170	2600
4-Chloroaniline		ND		140	2600
4-Chlorophenyl phenyl ether		ND		100	2600
4-Nitroaniline		ND		210	13000
4-Nitrophenol		ND		140	13000
Acenaphthene		430	J	6.1	2600
Acenaphthylene		59	J	2.8	2600
Acetophenone		ND		74	2600
Anthracene		700	J	6.2	2600
Atrazine		ND		73	2600
Benzaldehyde		ND		96	2600
Benzo[a]anthracene		3400		5.0	2600
Benzo[a]pyrene		2400	J	5.1	2600
Benzo[b]fluoranthene		3900		4.7	2600
Benzo[g,h,i]perylene		1400	J	2.8	2600
Benzo[k]fluoranthene		1500	J	5.4	2600
Bis(2-chloroethoxy)methane		ND		180	2600
Bis(2-chloroethyl)ether		ND		16	2600
Bis(2-ethylhexyl) phthalate		210	J	150	2600
Butyl benzyl phthalate		ND		80	2600
Caprolactam		ND		300	2600
Carbazole		730	J	220	2600
Chrysene		3800		8.8	2600
Dibenz(a,h)anthracene		480	J	5.3	2600
Dibenzofuran		180	J	5.3	2600
Diethyl phthalate		ND		130	2600
Dimethyl phthalate		ND		140	2600

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-31_0-1 (20150625)

Lab Sample ID: 240-52525-5 Date Sampled: 06/25/2015 1035
Client Matrix: Solid % Moisture: 16.6 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188473	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50709027.D
Dilution:	6.667			Initial Weight/Volume:	29.96 g
Analysis Date:	07/09/2015 1925			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		120	2600
Di-n-octyl phthalate		ND		63	2600
Fluoranthene		6300		4.4	2600
Fluorene		340	J	4.2	2600
Hexachlorobenzene		ND		17	2600
Hexachlorobutadiene		ND		45	2600
Hexachlorocyclopentadiene		ND		65	13000
Hexachloroethane		ND		72	2600
Indeno[1,2,3-cd]pyrene		1200	J	2.8	2600
Isophorone		ND		100	2600
Naphthalene		180	J	6.6	2600
Nitrobenzene		ND		18	2600
N-Nitrosodi-n-propylamine		ND		50	2600
N-Nitrosodiphenylamine		ND		170	2600
Pentachlorophenol		ND		73	2600
Phenol		ND		58	2600
Phenanthrene		3400		5.8	2600
Pyrene		5200		3.5	2600
3 & 4 Methylphenol		ND		160	3200

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	71		24 - 110
2-Fluorophenol (Surr)	62		24 - 110
2,4,6-Tribromophenol (Surr)	38		10 - 110
Nitrobenzene-d5 (Surr)	64		20 - 110
Phenol-d5 (Surr)	69		26 - 110
Terphenyl-d14 (Surr)	74		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-19_0-0.5 (20150625)

Lab Sample ID: 240-52525-6 Date Sampled: 06/25/2015 1120
Client Matrix: Solid % Moisture: 26.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50710028.D
Dilution:	2.0			Initial Weight/Volume:	30.27 g
Analysis Date:	07/10/2015 1905			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		9.5	890
2,2'-oxybis[1-chloropropane]		ND		26	890
2,4,5-Trichlorophenol		ND		68	890
2,4,6-Trichlorophenol		ND		24	890
2,4-Dichlorophenol		ND		54	890
2,4-Dimethylphenol		ND		54	890
2,4-Dinitrophenol		ND		57	4300
2,4-Dinitrotoluene		ND		46	890
2,6-Dinitrotoluene		ND		57	890
2-Chloronaphthalene		ND		1.2	890
2-Chlorophenol		ND		22	890
2-Methylnaphthalene		26	J	1.4	890
2-Methylphenol		60	J	30	890
2-Nitroaniline		ND		25	4300
2-Nitrophenol		ND		22	890
3,3'-Dichlorobenzidine		ND		49	4300
3-Nitroaniline		ND		43	4300
4,6-Dinitro-2-methylphenol		ND		25	4300
4-Bromophenyl phenyl ether		ND		35	890
4-Chloro-3-methylphenol		ND		57	890
4-Chloroaniline		ND		46	890
4-Chlorophenyl phenyl ether		ND		35	890
4-Nitroaniline		ND		70	4300
4-Nitrophenol		ND		46	4300
Acenaphthene		52	J	2.1	890
Acenaphthylene		20	J	0.95	890
Acetophenone		ND		25	890
Anthracene		85	J	2.1	890
Atrazine		ND		25	890
Benzaldehyde		120	J	32	890
Benzo[a]anthracene		350	J	1.7	890
Benzo[a]pyrene		420	J	1.7	890
Benzo[b]fluoranthene		770	J	1.6	890
Benzo[g,h,i]perylene		160	J	0.95	890
Benzo[k]fluoranthene		320	J	1.8	890
Bis(2-chloroethoxy)methane		ND		60	890
Bis(2-chloroethyl)ether		ND		5.4	890
Bis(2-ethylhexyl) phthalate		100	J	51	890
Butyl benzyl phthalate		ND		27	890
Caprolactam		ND		100	890
Carbazole		ND		73	890
Chrysene		500	J	3.0	890
Dibenz(a,h)anthracene		46	J	1.8	890
Dibenzofuran		81	J	1.8	890
Diethyl phthalate		ND		43	890
Dimethyl phthalate		ND		46	890

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-19_0-0.5 (20150625)

Lab Sample ID: 240-52525-6 Date Sampled: 06/25/2015 1120
Client Matrix: Solid % Moisture: 26.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50710028.D
Dilution:	2.0			Initial Weight/Volume:	30.27 g
Analysis Date:	07/10/2015 1905			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		41	890
Di-n-octyl phthalate		ND		21	890
Fluoranthene		630	J	1.5	890
Fluorene		52	J	1.4	890
Hexachlorobenzene		ND		5.7	890
Hexachlorobutadiene		ND		15	890
Hexachlorocyclopentadiene		ND		22	4300
Hexachloroethane		ND		24	890
Indeno[1,2,3-cd]pyrene		160	J	0.95	890
Isophorone		ND		35	890
Naphthalene		21	J	2.2	890
Nitrobenzene		ND		6.0	890
N-Nitrosodi-n-propylamine		ND		17	890
N-Nitrosodiphenylamine		ND		57	890
Pentachlorophenol		ND		25	890
Phenol		22	J	20	890
Phenanthrene		360	J	2.0	890
Pyrene		530	J	1.2	890
3 & 4 Methylphenol		ND		54	1100

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	78		24 - 110
2-Fluorophenol (Surr)	68		24 - 110
2,4,6-Tribromophenol (Surr)	97		10 - 110
Nitrobenzene-d5 (Surr)	56		20 - 110
Phenol-d5 (Surr)	81		26 - 110
Terphenyl-d14 (Surr)	89		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-20_0-1 (20150625)

Lab Sample ID: 240-52525-7 Date Sampled: 06/25/2015 1150
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50708024.D
Dilution:	1.0			Initial Weight/Volume:	29.54 g
Analysis Date:	07/08/2015 1721			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.4	410
2,2'-oxybis[1-chloropropane]		ND		12	410
2,4,5-Trichlorophenol		ND		31	410
2,4,6-Trichlorophenol		ND		11	410
2,4-Dichlorophenol		ND		25	410
2,4-Dimethylphenol		ND		25	410
2,4-Dinitrophenol		ND		26	2000
2,4-Dinitrotoluene		ND		21	410
2,6-Dinitrotoluene		ND		26	410
2-Chloronaphthalene		ND		0.56	410
2-Chlorophenol		ND		10	410
2-Methylnaphthalene		6.5	J	0.62	410
2-Methylphenol		ND		14	410
2-Nitroaniline		ND		11	2000
2-Nitrophenol		ND		10	410
3,3'-Dichlorobenzidine		ND		22	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		11	2000
4-Bromophenyl phenyl ether		ND		16	410
4-Chloro-3-methylphenol		ND		26	410
4-Chloroaniline		ND		21	410
4-Chlorophenyl phenyl ether		ND		16	410
4-Nitroaniline		ND		32	2000
4-Nitrophenol		ND		21	2000
Acenaphthene		15	J	0.94	410
Acenaphthylene		8.3	J	0.44	410
Acetophenone		15	J	11	410
Anthracene		28	J	0.97	410
Atrazine		ND		11	410
Benzaldehyde		34	J	15	410
Benzo[a]anthracene		140	J	0.78	410
Benzo[a]pyrene		160	J	0.80	410
Benzo[b]fluoranthene		280	J	0.73	410
Benzo[g,h,i]perylene		87	J	0.44	410
Benzo[k]fluoranthene		96	J	0.85	410
Bis(2-chloroethoxy)methane		ND		27	410
Bis(2-chloroethyl)ether		ND		2.5	410
Bis(2-ethylhexyl) phthalate		93	J	24	410
Butyl benzyl phthalate		18	J	12	410
Caprolactam		ND		46	410
Carbazole		40	J	34	410
Chrysene		210	J	1.4	410
Dibenz(a,h)anthracene		23	J	0.82	410
Dibenzofuran		13	J	0.82	410
Diethyl phthalate		ND		20	410
Dimethyl phthalate		ND		21	410

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-20_0-1 (20150625)

Lab Sample ID: 240-52525-7 Date Sampled: 06/25/2015 1150
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50708024.D
Dilution:	1.0			Initial Weight/Volume:	29.54 g
Analysis Date:	07/08/2015 1721			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		36	J	19	410
Di-n-octyl phthalate		ND		9.8	410
Fluoranthene		370	J	0.68	410
Fluorene		13	J	0.66	410
Hexachlorobenzene		ND		2.6	410
Hexachlorobutadiene		ND		7.0	410
Hexachlorocyclopentadiene		ND		10	2000
Hexachloroethane		ND		11	410
Indeno[1,2,3-cd]pyrene		81	J	0.44	410
Isophorone		ND		16	410
Naphthalene		8.0	J	1.0	410
Nitrobenzene		ND		2.7	410
N-Nitrosodi-n-propylamine		ND		7.8	410
N-Nitrosodiphenylamine		ND		26	410
Pentachlorophenol		ND		11	410
Phenol		ND		9.1	410
Phenanthrene		180	J	0.91	410
Pyrene		270	J	0.55	410
3 & 4 Methylphenol		ND		25	500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		24 - 110
2-Fluorophenol (Surr)	63		24 - 110
2,4,6-Tribromophenol (Surr)	59		10 - 110
Nitrobenzene-d5 (Surr)	55		20 - 110
Phenol-d5 (Surr)	73		26 - 110
Terphenyl-d14 (Surr)	77		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-22_0-1 (20150625)

Lab Sample ID: 240-52525-8 Date Sampled: 06/25/2015 1215
Client Matrix: Solid % Moisture: 29.3 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50708025.D
Dilution:	1.0			Initial Weight/Volume:	29.72 g
Analysis Date:	07/08/2015 1746			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		5.0	470
2,2'-oxybis[1-chloropropane]		ND		14	470
2,4,5-Trichlorophenol		ND		36	470
2,4,6-Trichlorophenol		ND		13	470
2,4-Dichlorophenol		ND		29	470
2,4-Dimethylphenol		ND		29	470
2,4-Dinitrophenol		ND	F1	30	2300
2,4-Dinitrotoluene		ND		24	470
2,6-Dinitrotoluene		ND		30	470
2-Chloronaphthalene		ND		0.64	470
2-Chlorophenol		ND		12	470
2-Methylnaphthalene		ND		0.71	470
2-Methylphenol		ND		16	470
2-Nitroaniline		ND		13	2300
2-Nitrophenol		ND		12	470
3,3'-Dichlorobenzidine		ND		26	2300
3-Nitroaniline		ND		23	2300
4,6-Dinitro-2-methylphenol		ND	F1	13	2300
4-Bromophenyl phenyl ether		ND		19	470
4-Chloro-3-methylphenol		ND		30	470
4-Chloroaniline		ND		24	470
4-Chlorophenyl phenyl ether		ND		19	470
4-Nitroaniline		ND		37	2300
4-Nitrophenol		ND		24	2300
Acenaphthene		ND		1.1	470
Acenaphthylene		ND		0.50	470
Acetophenone		ND		13	470
Anthracene		8.0	J	1.1	470
Atrazine		ND		13	470
Benzaldehyde		28	J	17	470
Benzo[a]anthracene		48	J	0.90	470
Benzo[a]pyrene		50	J	0.91	470
Benzo[b]fluoranthene		95	J	0.84	470
Benzo[g,h,i]perylene		26	J	0.50	470
Benzo[k]fluoranthene		23	J	0.97	470
Bis(2-chloroethoxy)methane		ND		31	470
Bis(2-chloroethyl)ether		ND		2.9	470
Bis(2-ethylhexyl) phthalate		60	J	27	470
Butyl benzyl phthalate		ND		14	470
Caprolactam		ND		53	470
Carbazole		ND		39	470
Chrysene		64	J	1.6	470
Dibenz(a,h)anthracene		ND		0.94	470
Dibenzofuran		ND		0.94	470
Diethyl phthalate		ND		23	470
Dimethyl phthalate		ND		24	470

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-22_0-1 (20150625)

Lab Sample ID: 240-52525-8 Date Sampled: 06/25/2015 1215
Client Matrix: Solid % Moisture: 29.3 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-187612	Lab File ID:	50708025.D
Dilution:	1.0			Initial Weight/Volume:	29.72 g
Analysis Date:	07/08/2015 1746			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		30	J	21	470
Di-n-octyl phthalate		ND		11	470
Fluoranthene		110	J	0.78	470
Fluorene		ND		0.76	470
Hexachlorobenzene		ND		3.0	470
Hexachlorobutadiene		ND		8.0	470
Hexachlorocyclopentadiene		ND	F1	12	2300
Hexachloroethane		ND	F1 F2	13	470
Indeno[1,2,3-cd]pyrene		24	J	0.50	470
Isophorone		ND		19	470
Naphthalene		ND		1.2	470
Nitrobenzene		ND		3.1	470
N-Nitrosodi-n-propylamine		ND		9.0	470
N-Nitrosodiphenylamine		ND		30	470
Pentachlorophenol		ND	F2	13	470
Phenol		ND		10	470
Phenanthrene		47	J	1.0	470
Pyrene		90	J	0.63	470
3 & 4 Methylphenol		ND		29	570

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	67		24 - 110
2-Fluorophenol (Surr)	61		24 - 110
2,4,6-Tribromophenol (Surr)	36		10 - 110
Nitrobenzene-d5 (Surr)	57		20 - 110
Phenol-d5 (Surr)	65		26 - 110
Terphenyl-d14 (Surr)	79		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-23_0-1 (20150624)

Lab Sample ID: 240-52525-10 Date Sampled: 06/24/2015 1645
Client Matrix: Solid % Moisture: 12.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714008.D
Dilution:	1.0			Initial Weight/Volume:	29.59 g
Analysis Date:	07/14/2015 1447	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	4.1	380
2,2'-oxybis[1-chloropropane]		ND	H	11	380
2,4,5-Trichlorophenol		ND	H	29	380
2,4,6-Trichlorophenol		ND	H	10	380
2,4-Dichlorophenol		ND	H	23	380
2,4-Dimethylphenol		ND	H	23	380
2,4-Dinitrophenol		ND	H	24	1900
2,4-Dinitrotoluene		ND	H	20	380
2,6-Dinitrotoluene		ND	H	24	380
2-Chloronaphthalene		ND	H	0.52	380
2-Chlorophenol		ND	H	9.5	380
2-Methylnaphthalene		40	J H	0.58	380
2-Methylphenol		ND	H	13	380
2-Nitroaniline		ND	H	11	1900
2-Nitrophenol		ND	H	9.6	380
3,3'-Dichlorobenzidine		ND	H	21	1900
3-Nitroaniline		ND	H	19	1900
4,6-Dinitro-2-methylphenol		ND	H	11	1900
4-Bromophenyl phenyl ether		ND	H	15	380
4-Chloro-3-methylphenol		ND	H	24	380
4-Chloroaniline		ND	H	20	380
4-Chlorophenyl phenyl ether		ND	H	15	380
4-Nitroaniline		ND	H	30	1900
4-Nitrophenol		ND	H	20	1900
Acenaphthene		66	J H	0.88	380
Acenaphthylene		24	J H	0.41	380
Acetophenone		ND	H	11	380
Anthracene		240	J H	0.91	380
Atrazine		ND	H	11	380
Benzaldehyde		ND	H	14	380
Benzo[a]anthracene		550	H	0.73	380
Benzo[a]pyrene		470	H	0.74	380
Benzo[b]fluoranthene		630	H	0.69	380
Benzo[g,h,i]perylene		190	J H	0.41	380
Benzo[k]fluoranthene		290	J H	0.79	380
Bis(2-chloroethoxy)methane		ND	H	26	380
Bis(2-chloroethyl)ether		ND	H	2.3	380
Bis(2-ethylhexyl) phthalate		58	J H B	22	380
Butyl benzyl phthalate		ND	H	12	380
Caprolactam		ND	H	43	380
Carbazole		59	J H	31	380
Chrysene		590	H	1.3	380
Dibenz(a,h)anthracene		69	J H	0.77	380
Dibenzofuran		34	J H	0.77	380
Diethyl phthalate		ND	H	19	380
Dimethyl phthalate		ND	H	20	380

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-23_0-1 (20150624)

Lab Sample ID: 240-52525-10 Date Sampled: 06/24/2015 1645
Client Matrix: Solid % Moisture: 12.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188799	Lab File ID:	50714008.D
Dilution:	1.0			Initial Weight/Volume:	29.59 g
Analysis Date:	07/14/2015 1447	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND	H	17	380
Di-n-octyl phthalate		ND	H	9.2	380
Fluoranthene		1100	H	0.64	380
Fluorene		73	J H	0.62	380
Hexachlorobenzene		ND	H	2.4	380
Hexachlorobutadiene		ND	H	6.5	380
Hexachlorocyclopentadiene		ND	H	9.4	1900
Hexachloroethane		ND	H	10	380
Indeno[1,2,3-cd]pyrene		170	J H	0.41	380
Isophorone		ND	H	15	380
Naphthalene		17	J H	0.95	380
Nitrobenzene		ND	H	2.6	380
N-Nitrosodi-n-propylamine		ND	H	7.3	380
N-Nitrosodiphenylamine		ND	H	24	380
Pentachlorophenol		ND	H	11	380
Phenol		ND	H	8.5	380
Phenanthrene		730	H	0.85	380
Pyrene		890	H	0.51	380
3 & 4 Methylphenol		ND	H	23	460

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	66		24 - 110
2-Fluorophenol (Surr)	60		24 - 110
2,4,6-Tribromophenol (Surr)	39		10 - 110
Nitrobenzene-d5 (Surr)	56		20 - 110
Phenol-d5 (Surr)	66		26 - 110
Terphenyl-d14 (Surr)	72		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-23_0-1 (20150624)**

Lab Sample ID: 240-52525-10 Date Sampled: 06/24/2015 1645
Client Matrix: Solid % Moisture: 12.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710012.D
Dilution:	2.0			Initial Weight/Volume:	30.06 g
Analysis Date:	07/10/2015 1221			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		18	J	8.0	750
2,2'-oxybis[1-chloropropane]		ND		22	750
2,4,5-Trichlorophenol		ND		57	750
2,4,6-Trichlorophenol		ND		20	750
2,4-Dichlorophenol		ND		46	750
2,4-Dimethylphenol		ND		46	750
2,4-Dinitrophenol		ND		48	3700
2,4-Dinitrotoluene		ND		39	750
2,6-Dinitrotoluene		ND		48	750
2-Chloronaphthalene		ND		1.0	750
2-Chlorophenol		ND		19	750
2-Methylnaphthalene		85	J	1.1	750
2-Methylphenol		ND		25	750
2-Nitroaniline		ND		21	3700
2-Nitrophenol		ND		19	750
3,3'-Dichlorobenzidine		ND		41	3700
3-Nitroaniline		ND		37	3700
4,6-Dinitro-2-methylphenol		ND		21	3700
4-Bromophenyl phenyl ether		ND		30	750
4-Chloro-3-methylphenol		ND		48	750
4-Chloroaniline		ND		39	750
4-Chlorophenyl phenyl ether		ND		30	750
4-Nitroaniline		ND		59	3700
4-Nitrophenol		ND		39	3700
Acenaphthene		250	J	1.7	750
Acenaphthylene		31	J	0.80	750
Acetophenone		ND		21	750
Anthracene		530	J	1.8	750
Atrazine		ND		21	750
Benzaldehyde		ND		27	750
Benzo[a]anthracene		940		1.4	750
Benzo[a]pyrene		770		1.5	750
Benzo[b]fluoranthene		1100		1.3	750
Benzo[g,h,i]perylene		460	J	0.80	750
Benzo[k]fluoranthene		330	J	1.6	750
Bis(2-chloroethoxy)methane		ND		50	750
Bis(2-chloroethyl)ether		ND		4.6	750
Bis(2-ethylhexyl) phthalate		340	J B *	43	750
Butyl benzyl phthalate		ND		23	750
Caprolactam		ND		85	750
Carbazole		100	J	62	750
Chrysene		910		2.5	750
Dibenz(a,h)anthracene		120	J	1.5	750
Dibenzofuran		130	J	1.5	750
Diethyl phthalate		ND		37	750
Dimethyl phthalate		ND		39	750

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-23_0-1 (20150624)

Lab Sample ID: 240-52525-10 Date Sampled: 06/24/2015 1645
Client Matrix: Solid % Moisture: 12.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Prep Method:	3540C	Prep Batch:	240-188303	Lab File ID:	50710012.D
Dilution:	2.0			Initial Weight/Volume:	30.06 g
Analysis Date:	07/10/2015 1221			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 1501			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		34	750
Di-n-octyl phthalate		ND		18	750
Fluoranthene		2100		1.3	750
Fluorene		250	J	1.2	750
Hexachlorobenzene		ND		4.8	750
Hexachlorobutadiene		ND		13	750
Hexachlorocyclopentadiene		ND		19	3700
Hexachloroethane		ND		21	750
Indeno[1,2,3-cd]pyrene		390	J	0.80	750
Isophorone		ND		30	750
Naphthalene		38	J	1.9	750
Nitrobenzene		ND		5.0	750
N-Nitrosodi-n-propylamine		ND		14	750
N-Nitrosodiphenylamine		ND		48	750
Pentachlorophenol		ND		21	750
Phenol		ND		17	750
Phenanthrene		1700		1.7	750
Pyrene		1700		1.0	750
3 & 4 Methylphenol		ND		46	920

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	69		24 - 110
2-Fluorophenol (Surr)	65		24 - 110
2,4,6-Tribromophenol (Surr)	63		10 - 110
Nitrobenzene-d5 (Surr)	57		20 - 110
Phenol-d5 (Surr)	67		26 - 110
Terphenyl-d14 (Surr)	72		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-24_0-1 (20150624)

Lab Sample ID: 240-52525-11 Date Sampled: 06/24/2015 1700
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188630	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187803	Lab File ID:	0710019.D
Dilution:	1.0			Initial Weight/Volume:	29.51 g
Analysis Date:	07/10/2015 1255			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.4	410
2,2'-oxybis[1-chloropropane]		ND		12	410
2,4,5-Trichlorophenol		ND		31	410
2,4,6-Trichlorophenol		ND		11	410
2,4-Dichlorophenol		ND		25	410
2,4-Dimethylphenol		ND		25	410
2,4-Dinitrophenol		ND		26	2000
2,4-Dinitrotoluene		ND		21	410
2,6-Dinitrotoluene		ND		26	410
2-Chloronaphthalene		ND		0.56	410
2-Chlorophenol		ND		10	410
2-Methylnaphthalene		40	J	0.63	410
2-Methylphenol		ND		14	410
2-Nitroaniline		ND		11	2000
2-Nitrophenol		ND		10	410
3,3'-Dichlorobenzidine		ND		23	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		12	2000
4-Bromophenyl phenyl ether		ND		16	410
4-Chloro-3-methylphenol		ND		26	410
4-Chloroaniline		ND		21	410
4-Chlorophenyl phenyl ether		ND		16	410
4-Nitroaniline		ND		33	2000
4-Nitrophenol		ND		21	2000
Acenaphthene		9.3	J	0.95	410
Acenaphthylene		7.0	J	0.44	410
Acetophenone		ND		12	410
Anthracene		37	J	0.98	410
Atrazine		ND		11	410
Benzaldehyde		37	J	15	410
Benzo[a]anthracene		270	J	0.79	410
Benzo[a]pyrene		270	J *	0.80	410
Benzo[b]fluoranthene		500	*	0.74	410
Benzo[g,h,i]perylene		140	J *	0.44	410
Benzo[k]fluoranthene		220	J *	0.85	410
Bis(2-chloroethoxy)methane		ND		28	410
Bis(2-chloroethyl)ether		ND		2.5	410
Bis(2-ethylhexyl) phthalate		140	J B	24	410
Butyl benzyl phthalate		ND		13	410
Caprolactam		ND		46	410
Carbazole		ND		34	410
Chrysene		300	J	1.4	410
Dibenz(a,h)anthracene		ND	*	0.83	410
Dibenzofuran		18	J	0.83	410
Diethyl phthalate		ND		20	410
Dimethyl phthalate		ND		21	410

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-24_0-1 (20150624)

Lab Sample ID: 240-52525-11 Date Sampled: 06/24/2015 1700
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188630	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187803	Lab File ID:	0710019.D
Dilution:	1.0			Initial Weight/Volume:	29.51 g
Analysis Date:	07/10/2015 1255			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		19	410
Di-n-octyl phthalate		ND	*	9.9	410
Fluoranthene		430		0.69	410
Fluorene		8.7	J	0.66	410
Hexachlorobenzene		ND		2.6	410
Hexachlorobutadiene		ND		7.0	410
Hexachlorocyclopentadiene		ND		10	2000
Hexachloroethane		ND		11	410
Indeno[1,2,3-cd]pyrene		110	J *	0.44	410
Isophorone		ND		16	410
Naphthalene		24	J	1.0	410
Nitrobenzene		ND		2.8	410
N-Nitrosodi-n-propylamine		ND		7.9	410
N-Nitrosodiphenylamine		ND		26	410
Pentachlorophenol		ND		11	410
Phenol		ND		9.2	410
Phenanthrene		140	J	0.92	410
Pyrene		540		0.55	410
3 & 4 Methylphenol		ND		25	500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	58		24 - 110
2-Fluorophenol (Surr)	52		24 - 110
2,4,6-Tribromophenol (Surr)	22		10 - 110
Nitrobenzene-d5 (Surr)	46		20 - 110
Phenol-d5 (Surr)	59		26 - 110
Terphenyl-d14 (Surr)	92		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-25_0-1 (20150624)

Lab Sample ID: 240-52525-12 Date Sampled: 06/24/2015 1720
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188630	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187803	Lab File ID:	0710018.D
Dilution:	1.0			Initial Weight/Volume:	30.09 g
Analysis Date:	07/10/2015 1233			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.4	410
2,2'-oxybis[1-chloropropane]		ND		12	410
2,4,5-Trichlorophenol		ND		31	410
2,4,6-Trichlorophenol		ND		11	410
2,4-Dichlorophenol		ND		25	410
2,4-Dimethylphenol		ND		25	410
2,4-Dinitrophenol		ND		26	2000
2,4-Dinitrotoluene		ND		21	410
2,6-Dinitrotoluene		ND		26	410
2-Chloronaphthalene		ND		0.56	410
2-Chlorophenol		ND		10	410
2-Methylnaphthalene		ND		0.62	410
2-Methylphenol		ND		14	410
2-Nitroaniline		ND		11	2000
2-Nitrophenol		ND		10	410
3,3'-Dichlorobenzidine		ND		22	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		11	2000
4-Bromophenyl phenyl ether		ND		16	410
4-Chloro-3-methylphenol		ND		26	410
4-Chloroaniline		ND		21	410
4-Chlorophenyl phenyl ether		ND		16	410
4-Nitroaniline		ND		32	2000
4-Nitrophenol		ND		21	2000
Acenaphthene		ND		0.95	410
Acenaphthylene		ND		0.44	410
Acetophenone		ND		11	410
Anthracene		6.9	J	0.97	410
Atrazine		ND		11	410
Benzaldehyde		ND		15	410
Benzo[a]anthracene		54	J	0.79	410
Benzo[a]pyrene		50	J	0.80	410
Benzo[b]fluoranthene		71	J	0.74	410
Benzo[g,h,i]perylene		28	J	0.44	410
Benzo[k]fluoranthene		41	J	0.85	410
Bis(2-chloroethoxy)methane		ND		27	410
Bis(2-chloroethyl)ether		ND		2.5	410
Bis(2-ethylhexyl) phthalate		80	J B	24	410
Butyl benzyl phthalate		ND		12	410
Caprolactam		ND		46	410
Carbazole		ND		34	410
Chrysene		61	J	1.4	410
Dibenz(a,h)anthracene		ND		0.82	410
Dibenzofuran		ND		0.82	410
Diethyl phthalate		ND		20	410
Dimethyl phthalate		ND		21	410

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-25_0-1 (20150624)

Lab Sample ID: 240-52525-12 Date Sampled: 06/24/2015 1720
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188630	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187803	Lab File ID:	0710018.D
Dilution:	1.0			Initial Weight/Volume:	30.09 g
Analysis Date:	07/10/2015 1233			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		19	410
Di-n-octyl phthalate		ND		9.9	410
Fluoranthene		89	J	0.69	410
Fluorene		ND		0.66	410
Hexachlorobenzene		ND		2.6	410
Hexachlorobutadiene		ND		7.0	410
Hexachlorocyclopentadiene		ND		10	2000
Hexachloroethane		ND		11	410
Indeno[1,2,3-cd]pyrene		28	J	0.44	410
Isophorone		ND		16	410
Naphthalene		ND		1.0	410
Nitrobenzene		ND		2.7	410
N-Nitrosodi-n-propylamine		ND		7.9	410
N-Nitrosodiphenylamine		ND		26	410
Pentachlorophenol		ND		11	410
Phenol		ND		9.1	410
Phenanthrene		25	J	0.91	410
Pyrene		91	J	0.55	410
3 & 4 Methylphenol		ND		25	500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	58		24 - 110
2-Fluorophenol (Surr)	58		24 - 110
2,4,6-Tribromophenol (Surr)	5	X	10 - 110
Nitrobenzene-d5 (Surr)	52		20 - 110
Phenol-d5 (Surr)	61		26 - 110
Terphenyl-d14 (Surr)	74		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-25_0-1 (20150624)

Lab Sample ID: 240-52525-12 Date Sampled: 06/24/2015 1720
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188744	Lab File ID:	50712010.D
Dilution:	1.0			Initial Weight/Volume:	30.21 g
Analysis Date:	07/12/2015 1240	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1337			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	4.4	410
2,2'-oxybis[1-chloropropane]		ND	H	12	410
2,4,5-Trichlorophenol		ND	H	31	410
2,4,6-Trichlorophenol		ND	H	11	410
2,4-Dichlorophenol		ND	H	25	410
2,4-Dimethylphenol		ND	H	25	410
2,4-Dinitrophenol		ND	H	26	2000
2,4-Dinitrotoluene		ND	H	21	410
2,6-Dinitrotoluene		ND	H	26	410
2-Chloronaphthalene		ND	H	0.56	410
2-Chlorophenol		ND	H	10	410
2-Methylnaphthalene		ND	H	0.62	410
2-Methylphenol		ND	H	14	410
2-Nitroaniline		ND	H	11	2000
2-Nitrophenol		ND	H	10	410
3,3'-Dichlorobenzidine		ND	H	22	2000
3-Nitroaniline		ND	H	20	2000
4,6-Dinitro-2-methylphenol		ND	H	11	2000
4-Bromophenyl phenyl ether		ND	H	16	410
4-Chloro-3-methylphenol		ND	H	26	410
4-Chloroaniline		ND	H	21	410
4-Chlorophenyl phenyl ether		ND	H	16	410
4-Nitroaniline		ND	H	32	2000
4-Nitrophenol		ND	H	21	2000
Acenaphthene		ND	H	0.95	410
Acenaphthylene		ND	H	0.44	410
Acetophenone		ND	H	11	410
Anthracene		6.1	J H	0.97	410
Atrazine		ND	H	11	410
Benzaldehyde		ND	H	15	410
Benzo[a]anthracene		57	J H	0.78	410
Benzo[a]pyrene		59	J H	0.80	410
Benzo[b]fluoranthene		70	J H	0.73	410
Benzo[g,h,i]perylene		32	J H	0.44	410
Benzo[k]fluoranthene		24	J H	0.85	410
Bis(2-chloroethoxy)methane		ND	H	27	410
Bis(2-chloroethyl)ether		ND	H	2.5	410
Bis(2-ethylhexyl) phthalate		34	J H	24	410
Butyl benzyl phthalate		ND	H	12	410
Caprolactam		ND	H	46	410
Carbazole		ND	H	34	410
Chrysene		62	J H	1.4	410
Dibenz(a,h)anthracene		ND	H	0.82	410
Dibenzofuran		ND	H	0.82	410
Diethyl phthalate		ND	H	20	410
Dimethyl phthalate		ND	H	21	410

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-25_0-1 (20150624)

Lab Sample ID: 240-52525-12 Date Sampled: 06/24/2015 1720
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188744	Lab File ID:	50712010.D
Dilution:	1.0			Initial Weight/Volume:	30.21 g
Analysis Date:	07/12/2015 1240	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1337			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		24	J H	19	410
Di-n-octyl phthalate		ND	H	9.8	410
Fluoranthene		88	J H	0.68	410
Fluorene		ND	H	0.66	410
Hexachlorobenzene		ND	H	2.6	410
Hexachlorobutadiene		ND	H	7.0	410
Hexachlorocyclopentadiene		ND	H	10	2000
Hexachloroethane		ND	H	11	410
Indeno[1,2,3-cd]pyrene		32	J H	0.44	410
Isophorone		ND	H	16	410
Naphthalene		ND	H	1.0	410
Nitrobenzene		ND	H	2.7	410
N-Nitrosodi-n-propylamine		ND	H	7.8	410
N-Nitrosodiphenylamine		ND	H	26	410
Pentachlorophenol		ND	H	11	410
Phenol		ND	H	9.1	410
Phenanthrene		20	J H	0.91	410
Pyrene		77	J H	0.55	410
3 & 4 Methylphenol		ND	H	25	500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	73		24 - 110
2-Fluorophenol (Surr)	71		24 - 110
2,4,6-Tribromophenol (Surr)	52		10 - 110
Nitrobenzene-d5 (Surr)	66		20 - 110
Phenol-d5 (Surr)	71		26 - 110
Terphenyl-d14 (Surr)	84		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: **HA-26_0-1 (20150624)**

Lab Sample ID: 240-52525-13 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 21.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188630	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187803	Lab File ID:	0710017.D
Dilution:	1.0			Initial Weight/Volume:	30.29 g
Analysis Date:	07/10/2015 1212			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.4	420
2,2'-oxybis[1-chloropropane]		ND		12	420
2,4,5-Trichlorophenol		ND		32	420
2,4,6-Trichlorophenol		ND		11	420
2,4-Dichlorophenol		ND		25	420
2,4-Dimethylphenol		ND		25	420
2,4-Dinitrophenol		ND		27	2000
2,4-Dinitrotoluene		ND		21	420
2,6-Dinitrotoluene		ND		27	420
2-Chloronaphthalene		ND		0.57	420
2-Chlorophenol		ND		10	420
2-Methylnaphthalene		ND		0.63	420
2-Methylphenol		ND		14	420
2-Nitroaniline		ND		12	2000
2-Nitrophenol		ND		10	420
3,3'-Dichlorobenzidine		ND		23	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		12	2000
4-Bromophenyl phenyl ether		ND		16	420
4-Chloro-3-methylphenol		ND		27	420
4-Chloroaniline		ND		21	420
4-Chlorophenyl phenyl ether		ND		16	420
4-Nitroaniline		ND		33	2000
4-Nitrophenol		ND		21	2000
Acenaphthene		ND		0.96	420
Acenaphthylene		ND		0.44	420
Acetophenone		ND		12	420
Anthracene		5.0	J	0.99	420
Atrazine		ND		12	420
Benzaldehyde		23	J	15	420
Benzo[a]anthracene		29	J	0.80	420
Benzo[a]pyrene		33	J	0.81	420
Benzo[b]fluoranthene		52	J	0.75	420
Benzo[g,h,i]perylene		21	J	0.44	420
Benzo[k]fluoranthene		26	J	0.86	420
Bis(2-chloroethoxy)methane		ND		28	420
Bis(2-chloroethyl)ether		ND		2.5	420
Bis(2-ethylhexyl) phthalate		80	J B	24	420
Butyl benzyl phthalate		ND		13	420
Caprolactam		ND		47	420
Carbazole		ND		34	420
Chrysene		37	J	1.4	420
Dibenz(a,h)anthracene		ND		0.83	420
Dibenzofuran		ND		0.83	420
Diethyl phthalate		ND		20	420
Dimethyl phthalate		ND		21	420

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-26_0-1 (20150624)

Lab Sample ID: 240-52525-13 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 21.7 Date Received: 06/26/2015 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188630	Instrument ID:	A4AG2
Prep Method:	3540C	Prep Batch:	240-187803	Lab File ID:	0710017.D
Dilution:	1.0			Initial Weight/Volume:	30.29 g
Analysis Date:	07/10/2015 1212			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		19	420
Di-n-octyl phthalate		ND		10	420
Fluoranthene		60	J	0.70	420
Fluorene		ND		0.67	420
Hexachlorobenzene		ND		2.7	420
Hexachlorobutadiene		ND		7.1	420
Hexachlorocyclopentadiene		ND		10	2000
Hexachloroethane		ND		11	420
Indeno[1,2,3-cd]pyrene		21	J	0.44	420
Isophorone		ND		16	420
Naphthalene		ND		1.0	420
Nitrobenzene		ND		2.8	420
N-Nitrosodi-n-propylamine		ND		8.0	420
N-Nitrosodiphenylamine		ND		27	420
Pentachlorophenol		ND		12	420
Phenol		ND		9.2	420
Phenanthrene		29	J	0.92	420
Pyrene		57	J	0.56	420
3 & 4 Methylphenol		ND		25	510

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	51		24 - 110
2-Fluorophenol (Surr)	52		24 - 110
2,4,6-Tribromophenol (Surr)	20		10 - 110
Nitrobenzene-d5 (Surr)	46		20 - 110
Phenol-d5 (Surr)	54		26 - 110
Terphenyl-d14 (Surr)	71		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-27_0-1 (20150625)

Lab Sample ID: 240-52525-1 Date Sampled: 06/25/2015 0845
Client Matrix: Solid % Moisture: 14.0 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062908.D
Dilution:	1.0			Initial Weight/Volume:	9.259 g
Analysis Date:	06/30/2015 1121			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	13

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-28_0-1 (20150625)

Lab Sample ID: 240-52525-2 Date Sampled: 06/25/2015 0905
Client Matrix: Solid % Moisture: 9.2 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062909.D
Dilution:	1.0			Initial Weight/Volume:	9.989 g
Analysis Date:	06/30/2015 1158			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.2	11

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-29_0-1 (20150625)

Lab Sample ID: 240-52525-3 Date Sampled: 06/25/2015 0930
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062910.D
Dilution:	1.0			Initial Weight/Volume:	9.207 g
Analysis Date:	06/30/2015 1232			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.7	14

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-30_0-1 (20150625)

Lab Sample ID: 240-52525-4 Date Sampled: 06/25/2015 1010
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062911.D
Dilution:	1.0			Initial Weight/Volume:	10.202 g
Analysis Date:	06/30/2015 1308			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.3	12

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-31_0-1 (20150625)

Lab Sample ID: 240-52525-5 Date Sampled: 06/25/2015 1035
Client Matrix: Solid % Moisture: 16.6 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062912.D
Dilution:	1.0			Initial Weight/Volume:	10.025 g
Analysis Date:	06/30/2015 1345			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-19_0-0.5 (20150625)

Lab Sample ID: 240-52525-6 Date Sampled: 06/25/2015 1120
Client Matrix: Solid % Moisture: 26.7 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062913.D
Dilution:	1.0			Initial Weight/Volume:	9.211 g
Analysis Date:	06/30/2015 1421			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		3.0	15

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-20_0-1 (20150625)

Lab Sample ID: 240-52525-7 Date Sampled: 06/25/2015 1150
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062914.D
Dilution:	1.0			Initial Weight/Volume:	9.828 g
Analysis Date:	06/30/2015 1456			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-22_0-1 (20150625)

Lab Sample ID: 240-52525-8 Date Sampled: 06/25/2015 1215
Client Matrix: Solid % Moisture: 29.3 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062915.D
Dilution:	1.0			Initial Weight/Volume:	9.816 g
Analysis Date:	06/30/2015 1532			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.9	14

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: MB-1 (20150625)

Lab Sample ID: 240-52525-9 Date Sampled: 06/25/2015 0000
Client Matrix: Solid Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062917.D
Dilution:	1.0			Initial Weight/Volume:	0.258 g
Analysis Date:	06/30/2015 1642			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		78	390

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-23_0-1 (20150624)

Lab Sample ID: 240-52525-10 Date Sampled: 06/24/2015 1645
Client Matrix: Solid % Moisture: 12.7 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062918.D
Dilution:	1.0			Initial Weight/Volume:	9.721 g
Analysis Date:	06/30/2015 1716			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-24_0-1 (20150624)

Lab Sample ID: 240-52525-11 Date Sampled: 06/24/2015 1700
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062919.D
Dilution:	1.0			Initial Weight/Volume:	9.736 g
Analysis Date:	06/30/2015 1752			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	13

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-25_0-1 (20150624)

Lab Sample ID: 240-52525-12 Date Sampled: 06/24/2015 1720
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062920.D
Dilution:	1.0			Initial Weight/Volume:	9.452 g
Analysis Date:	06/30/2015 1826			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.7	13

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-26_0-1 (20150624)

Lab Sample ID: 240-52525-13 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 21.7 Date Received: 06/26/2015 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187341	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187336	Lab File ID:	Y0062921.D
Dilution:	1.0			Initial Weight/Volume:	9.369 g
Analysis Date:	06/30/2015 1903			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.7	14

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-27_0-1 (20150625)

Lab Sample ID: 240-52525-1 Date Sampled: 06/25/2015 0845
Client Matrix: Solid % Moisture: 14.0 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187400	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F063008.D
Dilution:	5.0			Initial Weight/Volume:	26.1 g
Analysis Date:	06/30/2015 1343			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		160		6.6	53

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-28_0-1 (20150625)

Lab Sample ID: 240-52525-2 Date Sampled: 06/25/2015 0905
Client Matrix: Solid % Moisture: 9.2 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187400	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F063009.D
Dilution:	10			Initial Weight/Volume:	28.11 g
Analysis Date:	06/30/2015 1410			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		340		12	94

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-29_0-1 (20150625)

Lab Sample ID: 240-52525-3 Date Sampled: 06/25/2015 0930
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187400	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F063010.D
Dilution:	5.0			Initial Weight/Volume:	27.69 g
Analysis Date:	06/30/2015 1438			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		350		6.6	54

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-30_0-1 (20150625)

Lab Sample ID: 240-52525-4 Date Sampled: 06/25/2015 1010
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187400	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F063011.D
Dilution:	5.0			Initial Weight/Volume:	26.12 g
Analysis Date:	06/30/2015 1505			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		160		6.6	54

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-31_0-1 (20150625)

Lab Sample ID: 240-52525-5 Date Sampled: 06/25/2015 1035
Client Matrix: Solid % Moisture: 16.6 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187400	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F063012.D
Dilution:	2.0			Initial Weight/Volume:	26.33 g
Analysis Date:	06/30/2015 1532			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		140		2.7	22

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-19_0-0.5 (20150625)

Lab Sample ID: 240-52525-6 Date Sampled: 06/25/2015 1120
Client Matrix: Solid % Moisture: 26.7 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187400	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F063013.D
Dilution:	2.0			Initial Weight/Volume:	25.78 g
Analysis Date:	06/30/2015 1600			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		120		3.1	25

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-20_0-1 (20150625)

Lab Sample ID: 240-52525-7 Date Sampled: 06/25/2015 1150
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187400	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F063014.D
Dilution:	1.0			Initial Weight/Volume:	27.5 g
Analysis Date:	06/30/2015 1627			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		40		1.3	11

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-22_0-1 (20150625)

Lab Sample ID: 240-52525-8 Date Sampled: 06/25/2015 1215
Client Matrix: Solid % Moisture: 29.3 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-187239	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187058	Lab File ID:	P14F062917.D
Dilution:	1.0			Initial Weight/Volume:	27.69 g
Analysis Date:	06/29/2015 2057			Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		7.1	J	1.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-23_0-1 (20150624)

Lab Sample ID: 240-52525-10 Date Sampled: 06/24/2015 1645
Client Matrix: Solid % Moisture: 12.7 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188186	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070717.D
Dilution:	1.0			Initial Weight/Volume:	26.8 g
Analysis Date:	07/07/2015 1938			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		63	*	1.3	10

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-24_0-1 (20150624)

Lab Sample ID: 240-52525-11 Date Sampled: 06/24/2015 1700
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070628.D
Dilution:	1.0			Initial Weight/Volume:	26.68 g
Analysis Date:	07/07/2015 0131			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		21	*	1.4	11

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-25_0-1 (20150624)

Lab Sample ID: 240-52525-12 Date Sampled: 06/24/2015 1720
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070629.D
Dilution:	1.0			Initial Weight/Volume:	26.63 g
Analysis Date:	07/07/2015 0158			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		13	*	1.4	11

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-26_0-1 (20150624)

Lab Sample ID: 240-52525-13 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 21.7 Date Received: 06/26/2015 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070630.D
Dilution:	1.0			Initial Weight/Volume:	28.23 g
Analysis Date:	07/07/2015 0225			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		3.8	J *	1.3	11

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-27_0-1 (20150625)

Lab Sample ID: 240-52525-1 Date Sampled: 06/25/2015 0845
Client Matrix: Solid % Moisture: 14.0 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Analysis Date:	07/01/2015 1811			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4700		6.0	21
Antimony		0.73	J	0.50	1.0
Barium		53		0.43	21
Beryllium		0.29	J	0.027	0.52
Calcium		31000		24	520
Cadmium		0.31		0.022	0.21
Cobalt		5.9		0.049	5.2
Chromium		11		0.078	0.52
Copper		15		0.24	2.6
Iron		12000		3.3	10
Potassium		1300		6.4	520
Magnesium		14000	B	5.4	520
Manganese		460		0.087	1.6
Silver		ND		0.065	0.52
Sodium		120	J	20	520
Nickel		17	B	0.083	4.2
Vanadium		14		0.21	5.2
Zinc		65	B	0.58	2.1
Arsenic		4.2		0.43	1.0
Lead		55		0.21	0.31
Selenium		ND		0.35	0.52
Thallium		ND		0.14	1.0

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.65 g
Analysis Date:	07/01/2015 1026			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.040	J	0.015	0.11

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-28_0-1 (20150625)

Lab Sample ID: 240-52525-2 Date Sampled: 06/25/2015 0905
Client Matrix: Solid % Moisture: 9.2 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.18 g
Analysis Date:	07/01/2015 1815			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5400		5.4	19
Antimony		ND		0.45	0.93
Barium		67		0.38	19
Beryllium		0.38	J	0.024	0.47
Calcium		8600		21	470
Cadmium		0.33		0.020	0.19
Cobalt		5.9		0.044	4.7
Chromium		11		0.070	0.47
Copper		13		0.21	2.3
Iron		11000		3.0	9.3
Potassium		940		5.8	470
Magnesium		3100	B	4.9	470
Manganese		480		0.078	1.4
Silver		ND		0.059	0.47
Sodium		82	J	18	470
Nickel		15	B	0.075	3.7
Vanadium		20		0.19	4.7
Zinc		65	B	0.52	1.9
Arsenic		4.2		0.38	0.93
Lead		28		0.19	0.28
Selenium		0.41	J	0.32	0.47
Thallium		0.13	J	0.12	0.93

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	07/01/2015 1029			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.040	J	0.015	0.11

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-29_0-1 (20150625)

Lab Sample ID: 240-52525-3 Date Sampled: 06/25/2015 0930
Client Matrix: Solid % Moisture: 19.7 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	07/01/2015 1827			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5400		6.2	21
Antimony		ND		0.52	1.1
Barium		71		0.44	21
Beryllium		0.40	J	0.028	0.54
Calcium		11000		25	540
Cadmium		0.34		0.023	0.21
Cobalt		5.6		0.050	5.4
Chromium		10		0.080	0.54
Copper		13		0.25	2.7
Iron		12000		3.4	11
Potassium		900		6.7	540
Magnesium		2800	B	5.6	540
Manganese		440		0.090	1.6
Silver		ND		0.068	0.54
Sodium		67	J	20	540
Nickel		15	B	0.086	4.3
Vanadium		21		0.21	5.4
Zinc		70	B	0.60	2.1
Arsenic		3.9		0.44	1.1
Lead		27		0.21	0.32
Selenium		ND		0.36	0.54
Thallium		ND		0.14	1.1

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	07/01/2015 1030			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.031	J	0.017	0.12

Client Sample ID: **HA-30_0-1 (20150625)**

Lab Sample ID: 240-52525-4 Date Sampled: 06/25/2015 1010
Client Matrix: Solid % Moisture: 15.2 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.33 g
Analysis Date:	07/01/2015 1831			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4400		5.1	18
Antimony		ND		0.43	0.89
Barium		60		0.36	18
Beryllium		0.32	J	0.023	0.44
Calcium		6800		20	440
Cadmium		0.41		0.019	0.18
Cobalt		4.7		0.042	4.4
Chromium		9.3		0.066	0.44
Copper		12		0.20	2.2
Iron		9600		2.8	8.9
Potassium		870		5.5	440
Magnesium		2400	B	4.6	440
Manganese		390		0.074	1.3
Silver		ND		0.056	0.44
Sodium		52	J	17	440
Nickel		12	B	0.071	3.5
Vanadium		16		0.18	4.4
Zinc		67	B	0.50	1.8
Arsenic		2.8		0.36	0.89
Lead		21		0.18	0.27
Thallium		0.14	J	0.12	0.89

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070615A.asc
Dilution:	1.0			Initial Weight/Volume:	1.33 g
Analysis Date:	07/06/2015 1419			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		ND		0.30	0.44

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	07/01/2015 1032			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.038	J	0.016	0.12

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-31_0-1 (20150625)

Lab Sample ID: 240-52525-5 Date Sampled: 06/25/2015 1035
Client Matrix: Solid % Moisture: 16.6 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187776	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0			Initial Weight/Volume:	1.26 g
Analysis Date:	07/01/2015 1835			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4600		5.5	19
Antimony		0.54	J	0.46	0.95
Barium		180		0.39	19
Beryllium		0.26	J	0.025	0.48
Calcium		12000		22	480
Cadmium		0.51		0.020	0.19
Cobalt		5.2		0.045	4.8
Chromium		13		0.071	0.48
Copper		16		0.22	2.4
Iron		11000		3.0	9.5
Potassium		800		5.9	480
Magnesium		4600	B	4.9	480
Manganese		360		0.080	1.4
Silver		ND		0.060	0.48
Sodium		73	J	18	480
Nickel		14	B	0.076	3.8
Vanadium		16		0.19	4.8
Zinc		61	B	0.53	1.9
Arsenic		3.7		0.39	0.95
Lead		71		0.19	0.29
Selenium		0.32	J	0.32	0.48
Thallium		ND		0.12	0.95

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187628	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	07/01/2015 1038			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.087	J	0.015	0.11

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-19_0-0.5 (20150625)

Lab Sample ID: 240-52525-6 Date Sampled: 06/25/2015 1120
Client Matrix: Solid % Moisture: 26.7 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.17 g
Analysis Date:	07/02/2015 1351			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3800		6.8	23
Antimony		ND	F1	0.56	1.2
Barium		91		0.48	23
Beryllium		0.23	J	0.030	0.58
Calcium		41000		27	580
Cadmium		0.41		0.024	0.23
Cobalt		3.8	J	0.055	5.8
Chromium		13		0.087	0.58
Copper		22		0.27	2.9
Iron		8600		3.7	12
Potassium		1300		7.2	580
Magnesium		14000	F1 B	6.1	580
Manganese		490		0.098	1.7
Silver		ND		0.073	0.58
Sodium		99	J	22	580
Nickel		10		0.093	4.7
Vanadium		13		0.23	5.8
Zinc		91	B	0.65	2.3
Arsenic		3.3		0.48	1.2
Lead		27		0.23	0.35
Selenium		0.54	J	0.40	0.58
Thallium		ND		0.15	1.2

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.53 g
Analysis Date:	07/02/2015 0833			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.051	J	0.022	0.15

Client Sample ID: **HA-20_0-1 (20150625)**

Lab Sample ID: 240-52525-7 Date Sampled: 06/25/2015 1150
Client Matrix: Solid % Moisture: 18.3 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	07/02/2015 1412			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		9900		6.4	22
Antimony		ND		0.53	1.1
Barium		150		0.45	22
Beryllium		0.58		0.029	0.55
Calcium		24000		25	550
Cadmium		0.39		0.023	0.22
Cobalt		9.2		0.052	5.5
Chromium		16		0.083	0.55
Copper		18		0.25	2.8
Iron		16000		3.5	11
Potassium		870		6.8	550
Magnesium		7700	B	5.7	550
Manganese		640		0.093	1.7
Silver		ND		0.069	0.55
Sodium		110	J	21	550
Nickel		17		0.088	4.4
Vanadium		28		0.22	5.5
Zinc		60	B	0.62	2.2
Arsenic		4.8		0.45	1.1
Lead		23		0.22	0.33
Thallium		ND		0.14	1.1

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070615A.asc
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	07/06/2015 1655			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		0.54	J	0.37	0.55

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	07/02/2015 0840			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.044	J	0.017	0.12

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-22_0-1 (20150625)

Lab Sample ID: 240-52525-8 Date Sampled: 06/25/2015 1215
Client Matrix: Solid % Moisture: 29.3 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	07/02/2015 1416			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		8300		7.1	25
Antimony		ND		0.59	1.2
Barium		100		0.50	25
Beryllium		0.44	J	0.032	0.61
Calcium		20000		28	610
Cadmium		0.27		0.026	0.25
Cobalt		4.5	J	0.058	6.1
Chromium		12		0.092	0.61
Copper		13		0.28	3.1
Iron		12000		3.9	12
Potassium		930		7.6	610
Magnesium		5100	B	6.4	610
Manganese		320		0.10	1.8
Silver		ND		0.077	0.61
Sodium		180	J	23	610
Nickel		12		0.098	4.9
Vanadium		21		0.25	6.1
Zinc		48	B	0.69	2.5
Arsenic		4.0		0.50	1.2
Lead		18		0.25	0.37
Selenium		0.47	J	0.42	0.61
Thallium		ND		0.16	1.2

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	07/02/2015 0841			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.054	J	0.019	0.14

Client Sample ID: HA-23_0-1 (20150624)

Lab Sample ID: 240-52525-10 Date Sampled: 06/24/2015 1645
Client Matrix: Solid % Moisture: 12.7 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.33 g
Analysis Date:	07/02/2015 1420			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5700		5.0	17
Antimony		ND		0.41	0.86
Barium		46		0.35	17
Beryllium		0.32	J	0.022	0.43
Calcium		39000		20	430
Cadmium		0.24		0.018	0.17
Cobalt		5.6		0.041	4.3
Chromium		12		0.065	0.43
Copper		11		0.20	2.2
Iron		12000		2.8	8.6
Potassium		1400		5.3	430
Magnesium		18000	B	4.5	430
Manganese		430		0.072	1.3
Silver		ND		0.054	0.43
Sodium		92	J	16	430
Nickel		14		0.069	3.4
Vanadium		17		0.17	4.3
Zinc		37	B	0.48	1.7
Arsenic		3.2		0.35	0.86
Lead		13		0.17	0.26
Thallium		ND		0.11	0.86

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070615A.asc
Dilution:	1.0			Initial Weight/Volume:	1.33 g
Analysis Date:	07/06/2015 1659			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		ND		0.29	0.43

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.68 g
Analysis Date:	07/02/2015 0844			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.014	0.10

Client Sample ID: **HA-24_0-1 (20150624)**

Lab Sample ID: 240-52525-11 Date Sampled: 06/24/2015 1700
Client Matrix: Solid % Moisture: 18.9 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.42 g
Analysis Date:	07/02/2015 1424			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		8800		5.0	17
Antimony		ND		0.42	0.87
Barium		42		0.36	17
Beryllium		0.50		0.023	0.43
Calcium		18000		20	430
Cadmium		0.22		0.018	0.17
Cobalt		9.3		0.041	4.3
Chromium		16		0.065	0.43
Copper		16		0.20	2.2
Iron		16000		2.8	8.7
Potassium		3400		5.4	430
Magnesium		6500	B	4.5	430
Manganese		300		0.073	1.3
Silver		ND		0.055	0.43
Sodium		140	J	16	430
Nickel		22		0.069	3.5
Vanadium		13		0.17	4.3
Zinc		49	B	0.49	1.7
Arsenic		4.6		0.36	0.87
Lead		18		0.17	0.26
Thallium		ND		0.11	0.87

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070615A.asc
Dilution:	1.0			Initial Weight/Volume:	1.42 g
Analysis Date:	07/06/2015 1703			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		0.34	J	0.30	0.43

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.52 g
Analysis Date:	07/02/2015 0845			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.021	J	0.020	0.14

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-25_0-1 (20150624)

Lab Sample ID: 240-52525-12 Date Sampled: 06/24/2015 1720
Client Matrix: Solid % Moisture: 20.2 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.32 g
Analysis Date:	07/02/2015 1436			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		9000		5.5	19
Antimony		ND		0.46	0.95
Barium		58		0.39	19
Beryllium		0.34	J	0.025	0.47
Calcium		2200		22	470
Cadmium		0.080	J	0.020	0.19
Cobalt		5.6		0.045	4.7
Chromium		21		0.071	0.47
Copper		14		0.22	2.4
Iron		15000		3.0	9.5
Potassium		840		5.9	470
Magnesium		2200	B	4.9	470
Manganese		280		0.080	1.4
Silver		ND		0.060	0.47
Sodium		63	J	18	470
Nickel		15		0.076	3.8
Vanadium		34		0.19	4.7
Zinc		33	B	0.53	1.9
Arsenic		2.3		0.39	0.95
Lead		6.4		0.19	0.28
Selenium		0.43	J	0.32	0.47
Thallium		ND		0.12	0.95

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.68 g
Analysis Date:	07/02/2015 0847			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.015	0.11

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Client Sample ID: HA-26_0-1 (20150624)

Lab Sample ID: 240-52525-13 Date Sampled: 06/24/2015 1745
Client Matrix: Solid % Moisture: 21.7 Date Received: 06/26/2015 0920

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.20 g
Analysis Date:	07/02/2015 1440			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		8500		6.2	21
Antimony		1.9		0.51	1.1
Barium		180		0.44	21
Beryllium		0.36	J	0.028	0.53
Calcium		3400		24	530
Cadmium		1.5		0.022	0.21
Cobalt		6.2		0.050	5.3
Chromium		19		0.080	0.53
Copper		21		0.24	2.7
Iron		15000		3.4	11
Potassium		1000		6.6	530
Magnesium		2000	B	5.5	530
Manganese		540		0.089	1.6
Silver		ND		0.067	0.53
Sodium		65	J	20	530
Nickel		16		0.085	4.3
Vanadium		30		0.21	5.3
Zinc		100	B	0.60	2.1
Arsenic		3.6		0.44	1.1
Lead		110		0.21	0.32
Selenium		0.63		0.36	0.53
Thallium		ND		0.14	1.1

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	07/02/2015 0854			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.031	J	0.018	0.13

General Chemistry

Client Sample ID: **HA-27_0-1 (20150625)**

Lab Sample ID: 240-52525-1 Date Sampled: 06/25/2015 0845
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	86		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	14		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-28_0-1 (20150625)**

Lab Sample ID: 240-52525-2 Date Sampled: 06/25/2015 0905
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	91		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	9.2		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-29_0-1 (20150625)**

Lab Sample ID: 240-52525-3 Date Sampled: 06/25/2015 0930
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	80		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	20		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-30_0-1 (20150625)**

Lab Sample ID: 240-52525-4 Date Sampled: 06/25/2015 1010
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	85		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	15		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-31_0-1 (20150625)**

Lab Sample ID: 240-52525-5 Date Sampled: 06/25/2015 1035
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	83		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	17		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-19_0-0.5 (20150625)**

Lab Sample ID: 240-52525-6 Date Sampled: 06/25/2015 1120
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	73		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	27		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-20_0-1 (20150625)**

Lab Sample ID: 240-52525-7 Date Sampled: 06/25/2015 1150
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	82		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	18		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-22_0-1 (20150625)**

Lab Sample ID: 240-52525-8 Date Sampled: 06/25/2015 1215
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	71		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	29		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-23_0-1 (20150624)**

Lab Sample ID: 240-52525-10 Date Sampled: 06/24/2015 1645
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	87		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	13		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-24_0-1 (20150624)**

Lab Sample ID: 240-52525-11 Date Sampled: 06/24/2015 1700
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	81		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	19		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-25_0-1 (20150624)**

Lab Sample ID: 240-52525-12 Date Sampled: 06/24/2015 1720
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	80		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	20		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-26_0-1 (20150624)**

Lab Sample ID: 240-52525-13 Date Sampled: 06/24/2015 1745
Client Matrix: Solid Date Received: 06/26/2015 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	78		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N
Percent Moisture	22		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187091	Analysis Date: 06/27/2015 1236						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	B	Compound was found in the blank and sample.
	*	ISTD response or retention time outside acceptable limits
	*	LCS or LCSD is outside acceptance limits.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time
	X	Surrogate is outside control limits
GC Semi VOA		
	*	LCS or LCSD is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	*	RPD of the LCS and LCSD exceeds the control limits
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-187301					
LCS 240-187301/2-A	Lab Control Sample	T	Solid	5035	
MB 240-187301/1-A	Method Blank	T	Solid	5035	
240-52525-1	HA-27_0-1 (20150625)	T	Solid	5035	
240-52525-2	HA-28_0-1 (20150625)	T	Solid	5035	
240-52525-3	HA-29_0-1 (20150625)	T	Solid	5035	
240-52525-4	HA-30_0-1 (20150625)	T	Solid	5035	
240-52525-5	HA-31_0-1 (20150625)	T	Solid	5035	
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	5035	
240-52525-7	HA-20_0-1 (20150625)	T	Solid	5035	
240-52525-8	HA-22_0-1 (20150625)	T	Solid	5035	
240-52525-9	MB-1 (20150625)	T	Solid	5035	
240-52525-10	HA-23_0-1 (20150624)	T	Solid	5035	
240-52525-11	HA-24_0-1 (20150624)	T	Solid	5035	
240-52525-12	HA-25_0-1 (20150624)	T	Solid	5035	
240-52525-13	HA-26_0-1 (20150624)	T	Solid	5035	
Analysis Batch:240-187454					
LCS 240-187301/2-A	Lab Control Sample	T	Solid	8260B	240-187301
MB 240-187301/1-A	Method Blank	T	Solid	8260B	240-187301
Analysis Batch:240-187606					
240-52525-1	HA-27_0-1 (20150625)	T	Solid	8260B	240-187301
240-52525-2	HA-28_0-1 (20150625)	T	Solid	8260B	240-187301
240-52525-3	HA-29_0-1 (20150625)	T	Solid	8260B	240-187301
240-52525-4	HA-30_0-1 (20150625)	T	Solid	8260B	240-187301
240-52525-5	HA-31_0-1 (20150625)	T	Solid	8260B	240-187301
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	8260B	240-187301
240-52525-7	HA-20_0-1 (20150625)	T	Solid	8260B	240-187301
240-52525-8	HA-22_0-1 (20150625)	T	Solid	8260B	240-187301
240-52525-9	MB-1 (20150625)	T	Solid	8260B	240-187301
240-52525-10	HA-23_0-1 (20150624)	T	Solid	8260B	240-187301
240-52525-11	HA-24_0-1 (20150624)	T	Solid	8260B	240-187301
240-52525-12	HA-25_0-1 (20150624)	T	Solid	8260B	240-187301
240-52525-13	HA-26_0-1 (20150624)	T	Solid	8260B	240-187301

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-187612					
LCS 240-187612/18-A	Lab Control Sample	T	Solid	3540C	
MB 240-187612/17-A	Method Blank	T	Solid	3540C	
240-52525-1	HA-27_0-1 (20150625)	T	Solid	3540C	
240-52525-2	HA-28_0-1 (20150625)	T	Solid	3540C	
240-52525-3	HA-29_0-1 (20150625)	T	Solid	3540C	
240-52525-4	HA-30_0-1 (20150625)	T	Solid	3540C	
240-52525-5	HA-31_0-1 (20150625)	T	Solid	3540C	
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	3540C	
240-52525-7	HA-20_0-1 (20150625)	T	Solid	3540C	
240-52525-8	HA-22_0-1 (20150625)	T	Solid	3540C	
240-52525-8MS	Matrix Spike	T	Solid	3540C	
240-52525-8MSD	Matrix Spike Duplicate	T	Solid	3540C	
Prep Batch: 240-187803					
LCS 240-187803/23-A	Lab Control Sample	T	Solid	3540C	
MB 240-187803/22-A	Method Blank	T	Solid	3540C	
240-52525-11	HA-24_0-1 (20150624)	T	Solid	3540C	
240-52525-12	HA-25_0-1 (20150624)	T	Solid	3540C	
240-52525-13	HA-26_0-1 (20150624)	T	Solid	3540C	
240-52564-C-2-K MS	Matrix Spike	T	Solid	3540C	
240-52564-C-2-L MSD	Matrix Spike Duplicate	T	Solid	3540C	
Analysis Batch:240-188301					
LCS 240-187612/18-A	Lab Control Sample	T	Solid	8270C	240-187612
MB 240-187612/17-A	Method Blank	T	Solid	8270C	240-187612
240-52525-2	HA-28_0-1 (20150625)	T	Solid	8270C	240-187612
240-52525-7	HA-20_0-1 (20150625)	T	Solid	8270C	240-187612
240-52525-8	HA-22_0-1 (20150625)	T	Solid	8270C	240-187612
240-52525-8MS	Matrix Spike	T	Solid	8270C	240-187612
240-52525-8MSD	Matrix Spike Duplicate	T	Solid	8270C	240-187612
Prep Batch: 240-188303					
LCS 240-188303/5-A	Lab Control Sample	T	Solid	3540C	
MB 240-188303/4-A	Method Blank	T	Solid	3540C	
240-52525-10	HA-23_0-1 (20150624)	T	Solid	3540C	
240-52680-J-1-C MS	Matrix Spike	T	Solid	3540C	
240-52680-J-1-D MSD	Matrix Spike Duplicate	T	Solid	3540C	
Analysis Batch:240-188453					
LCS 240-187803/23-A	Lab Control Sample	T	Solid	8270C	240-187803
MB 240-187803/22-A	Method Blank	T	Solid	8270C	240-187803
240-52564-C-2-K MS	Matrix Spike	T	Solid	8270C	240-187803
240-52564-C-2-L MSD	Matrix Spike Duplicate	T	Solid	8270C	240-187803

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:240-188473					
240-52525-1	HA-27_0-1 (20150625)	T	Solid	8270C	240-187612
240-52525-3	HA-29_0-1 (20150625)	T	Solid	8270C	240-187612
240-52525-5	HA-31_0-1 (20150625)	T	Solid	8270C	240-187612
Analysis Batch:240-188630					
240-52525-11	HA-24_0-1 (20150624)	T	Solid	8270C	240-187803
240-52525-12	HA-25_0-1 (20150624)	T	Solid	8270C	240-187803
240-52525-13	HA-26_0-1 (20150624)	T	Solid	8270C	240-187803
Analysis Batch:240-188645					
LCS 240-188303/5-A	Lab Control Sample	T	Solid	8270C	240-188303
MB 240-188303/4-A	Method Blank	T	Solid	8270C	240-188303
240-52525-4	HA-30_0-1 (20150625)	T	Solid	8270C	240-187612
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	8270C	240-187612
240-52525-10	HA-23_0-1 (20150624)	T	Solid	8270C	240-188303
240-52680-J-1-C MS	Matrix Spike	T	Solid	8270C	240-188303
240-52680-J-1-D MSD	Matrix Spike Duplicate	T	Solid	8270C	240-188303
Prep Batch: 240-188744					
LCS 240-188744/18-A	Lab Control Sample	T	Solid	3540C	
MB 240-188744/17-A	Method Blank	T	Solid	3540C	
240-52525-12RE	HA-25_0-1 (20150624)	T	Solid	3540C	
240-52811-C-4-F MS	Matrix Spike	T	Solid	3540C	
240-52811-C-4-G MSD	Matrix Spike Duplicate	T	Solid	3540C	
Prep Batch: 240-188799					
LCS 240-188799/18-A	Lab Control Sample	T	Solid	3540C	
MB 240-188799/17-A	Method Blank	T	Solid	3540C	
240-52525-10RE	HA-23_0-1 (20150624)	T	Solid	3540C	
Analysis Batch:240-188809					
MB 240-188744/17-A	Method Blank	T	Solid	8270C	240-188744
240-52525-12RE	HA-25_0-1 (20150624)	T	Solid	8270C	240-188744
240-52811-C-4-F MS	Matrix Spike	T	Solid	8270C	240-188744
240-52811-C-4-G MSD	Matrix Spike Duplicate	T	Solid	8270C	240-188744
Analysis Batch:240-188868					
LCS 240-188744/18-A	Lab Control Sample	T	Solid	8270C	240-188744
Analysis Batch:240-189030					
LCS 240-188799/18-A	Lab Control Sample	T	Solid	8270C	240-188799
MB 240-188799/17-A	Method Blank	T	Solid	8270C	240-188799
240-52525-10RE	HA-23_0-1 (20150624)	T	Solid	8270C	240-188799

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Report Basis					
T = Total					
GC VOA					
Prep Batch: 240-187336					
LCS 240-187336/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-187336/16-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-187336/1-A	Method Blank	T	Solid	5035	
240-52525-1	HA-27_0-1 (20150625)	T	Solid	5035	
240-52525-2	HA-28_0-1 (20150625)	T	Solid	5035	
240-52525-3	HA-29_0-1 (20150625)	T	Solid	5035	
240-52525-4	HA-30_0-1 (20150625)	T	Solid	5035	
240-52525-5	HA-31_0-1 (20150625)	T	Solid	5035	
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	5035	
240-52525-7	HA-20_0-1 (20150625)	T	Solid	5035	
240-52525-8	HA-22_0-1 (20150625)	T	Solid	5035	
240-52525-9	MB-1 (20150625)	T	Solid	5035	
240-52525-10	HA-23_0-1 (20150624)	T	Solid	5035	
240-52525-11	HA-24_0-1 (20150624)	T	Solid	5035	
240-52525-12	HA-25_0-1 (20150624)	T	Solid	5035	
240-52525-13	HA-26_0-1 (20150624)	T	Solid	5035	
Analysis Batch:240-187341					
LCS 240-187336/2-A	Lab Control Sample	T	Solid	WI-GRO	240-187336
LCSD 240-187336/16-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-187336
MB 240-187336/1-A	Method Blank	T	Solid	WI-GRO	240-187336
240-52525-1	HA-27_0-1 (20150625)	T	Solid	WI-GRO	240-187336
240-52525-2	HA-28_0-1 (20150625)	T	Solid	WI-GRO	240-187336
240-52525-3	HA-29_0-1 (20150625)	T	Solid	WI-GRO	240-187336
240-52525-4	HA-30_0-1 (20150625)	T	Solid	WI-GRO	240-187336
240-52525-5	HA-31_0-1 (20150625)	T	Solid	WI-GRO	240-187336
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	WI-GRO	240-187336
240-52525-7	HA-20_0-1 (20150625)	T	Solid	WI-GRO	240-187336
240-52525-8	HA-22_0-1 (20150625)	T	Solid	WI-GRO	240-187336
240-52525-9	MB-1 (20150625)	T	Solid	WI-GRO	240-187336
240-52525-10	HA-23_0-1 (20150624)	T	Solid	WI-GRO	240-187336
240-52525-11	HA-24_0-1 (20150624)	T	Solid	WI-GRO	240-187336
240-52525-12	HA-25_0-1 (20150624)	T	Solid	WI-GRO	240-187336
240-52525-13	HA-26_0-1 (20150624)	T	Solid	WI-GRO	240-187336

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-187058					
LCS 240-187058/15-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-187058/16-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-187058/14-A	Method Blank	T	Solid	WI DRO PREP	
240-52525-1	HA-27_0-1 (20150625)	T	Solid	WI DRO PREP	
240-52525-2	HA-28_0-1 (20150625)	T	Solid	WI DRO PREP	
240-52525-3	HA-29_0-1 (20150625)	T	Solid	WI DRO PREP	
240-52525-4	HA-30_0-1 (20150625)	T	Solid	WI DRO PREP	
240-52525-5	HA-31_0-1 (20150625)	T	Solid	WI DRO PREP	
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	WI DRO PREP	
240-52525-7	HA-20_0-1 (20150625)	T	Solid	WI DRO PREP	
240-52525-8	HA-22_0-1 (20150625)	T	Solid	WI DRO PREP	
Analysis Batch:240-187239					
LCS 240-187058/15-A	Lab Control Sample	T	Solid	WI-DRO	240-187058
LCSD 240-187058/16-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-187058
MB 240-187058/14-A	Method Blank	T	Solid	WI-DRO	240-187058
240-52525-8	HA-22_0-1 (20150625)	T	Solid	WI-DRO	240-187058
Analysis Batch:240-187400					
240-52525-1	HA-27_0-1 (20150625)	T	Solid	WI-DRO	240-187058
240-52525-2	HA-28_0-1 (20150625)	T	Solid	WI-DRO	240-187058
240-52525-3	HA-29_0-1 (20150625)	T	Solid	WI-DRO	240-187058
240-52525-4	HA-30_0-1 (20150625)	T	Solid	WI-DRO	240-187058
240-52525-5	HA-31_0-1 (20150625)	T	Solid	WI-DRO	240-187058
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	WI-DRO	240-187058
240-52525-7	HA-20_0-1 (20150625)	T	Solid	WI-DRO	240-187058
Prep Batch: 240-187816					
LCS 240-187816/22-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-187816/23-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-187816/21-A	Method Blank	T	Solid	WI DRO PREP	
240-52525-10	HA-23_0-1 (20150624)	T	Solid	WI DRO PREP	
240-52525-11	HA-24_0-1 (20150624)	T	Solid	WI DRO PREP	
240-52525-12	HA-25_0-1 (20150624)	T	Solid	WI DRO PREP	
240-52525-13	HA-26_0-1 (20150624)	T	Solid	WI DRO PREP	
Analysis Batch:240-188039					
LCS 240-187816/22-A	Lab Control Sample	T	Solid	WI-DRO	240-187816
LCSD 240-187816/23-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-187816
MB 240-187816/21-A	Method Blank	T	Solid	WI-DRO	240-187816
240-52525-11	HA-24_0-1 (20150624)	T	Solid	WI-DRO	240-187816
240-52525-12	HA-25_0-1 (20150624)	T	Solid	WI-DRO	240-187816
240-52525-13	HA-26_0-1 (20150624)	T	Solid	WI-DRO	240-187816

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:240-188186					
240-52525-10	HA-23_0-1 (20150624)	T	Solid	WI-DRO	240-187816

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187368					
LCS 240-187368/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-187368/1-A	Method Blank	T	Solid	3050B	
240-52477-C-51-B MS	Matrix Spike	T	Solid	3050B	
240-52477-C-51-C MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52525-1	HA-27_0-1 (20150625)	T	Solid	3050B	
240-52525-2	HA-28_0-1 (20150625)	T	Solid	3050B	
240-52525-3	HA-29_0-1 (20150625)	T	Solid	3050B	
240-52525-4	HA-30_0-1 (20150625)	T	Solid	3050B	
240-52525-5	HA-31_0-1 (20150625)	T	Solid	3050B	
Prep Batch: 240-187370					
LCS 240-187370/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-187370/1-A	Method Blank	T	Solid	7471A	
240-52477-C-51-E MS	Matrix Spike	T	Solid	7471A	
240-52477-C-51-F MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-52525-1	HA-27_0-1 (20150625)	T	Solid	7471A	
240-52525-2	HA-28_0-1 (20150625)	T	Solid	7471A	
240-52525-3	HA-29_0-1 (20150625)	T	Solid	7471A	
240-52525-4	HA-30_0-1 (20150625)	T	Solid	7471A	
240-52525-5	HA-31_0-1 (20150625)	T	Solid	7471A	
Prep Batch: 240-187589					
LCS 240-187589/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-187589/1-A	Method Blank	T	Solid	3050B	
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	3050B	
240-52525-6MS	Matrix Spike	T	Solid	3050B	
240-52525-6MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52525-7	HA-20_0-1 (20150625)	T	Solid	3050B	
240-52525-8	HA-22_0-1 (20150625)	T	Solid	3050B	
240-52525-10	HA-23_0-1 (20150624)	T	Solid	3050B	
240-52525-11	HA-24_0-1 (20150624)	T	Solid	3050B	
240-52525-12	HA-25_0-1 (20150624)	T	Solid	3050B	
240-52525-13	HA-26_0-1 (20150624)	T	Solid	3050B	

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187598					
LCS 240-187598/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-187598/1-A	Method Blank	T	Solid	7471A	
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	7471A	
240-52525-6MS	Matrix Spike	T	Solid	7471A	
240-52525-6MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-52525-7	HA-20_0-1 (20150625)	T	Solid	7471A	
240-52525-8	HA-22_0-1 (20150625)	T	Solid	7471A	
240-52525-10	HA-23_0-1 (20150624)	T	Solid	7471A	
240-52525-11	HA-24_0-1 (20150624)	T	Solid	7471A	
240-52525-12	HA-25_0-1 (20150624)	T	Solid	7471A	
240-52525-13	HA-26_0-1 (20150624)	T	Solid	7471A	
Analysis Batch:240-187628					
LCS 240-187370/2-A	Lab Control Sample	T	Solid	7471A	240-187370
MB 240-187370/1-A	Method Blank	T	Solid	7471A	240-187370
240-52477-C-51-E MS	Matrix Spike	T	Solid	7471A	240-187370
240-52477-C-51-F MSD	Matrix Spike Duplicate	T	Solid	7471A	240-187370
240-52525-1	HA-27_0-1 (20150625)	T	Solid	7471A	240-187370
240-52525-2	HA-28_0-1 (20150625)	T	Solid	7471A	240-187370
240-52525-3	HA-29_0-1 (20150625)	T	Solid	7471A	240-187370
240-52525-4	HA-30_0-1 (20150625)	T	Solid	7471A	240-187370
240-52525-5	HA-31_0-1 (20150625)	T	Solid	7471A	240-187370
Analysis Batch:240-187776					
LCS 240-187368/2-A	Lab Control Sample	T	Solid	6010B	240-187368
MB 240-187368/1-A	Method Blank	T	Solid	6010B	240-187368
240-52477-C-51-B MS	Matrix Spike	T	Solid	6010B	240-187368
240-52477-C-51-C MSD	Matrix Spike Duplicate	T	Solid	6010B	240-187368
240-52525-1	HA-27_0-1 (20150625)	T	Solid	6010B	240-187368
240-52525-2	HA-28_0-1 (20150625)	T	Solid	6010B	240-187368
240-52525-3	HA-29_0-1 (20150625)	T	Solid	6010B	240-187368
240-52525-4	HA-30_0-1 (20150625)	T	Solid	6010B	240-187368
240-52525-5	HA-31_0-1 (20150625)	T	Solid	6010B	240-187368

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-187808					
LCS 240-187598/2-A	Lab Control Sample	T	Solid	7471A	240-187598
MB 240-187598/1-A	Method Blank	T	Solid	7471A	240-187598
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	7471A	240-187598
240-52525-6MS	Matrix Spike	T	Solid	7471A	240-187598
240-52525-6MSD	Matrix Spike Duplicate	T	Solid	7471A	240-187598
240-52525-7	HA-20_0-1 (20150625)	T	Solid	7471A	240-187598
240-52525-8	HA-22_0-1 (20150625)	T	Solid	7471A	240-187598
240-52525-10	HA-23_0-1 (20150624)	T	Solid	7471A	240-187598
240-52525-11	HA-24_0-1 (20150624)	T	Solid	7471A	240-187598
240-52525-12	HA-25_0-1 (20150624)	T	Solid	7471A	240-187598
240-52525-13	HA-26_0-1 (20150624)	T	Solid	7471A	240-187598
Analysis Batch:240-187870					
LCS 240-187589/2-A	Lab Control Sample	T	Solid	6010B	240-187589
MB 240-187589/1-A	Method Blank	T	Solid	6010B	240-187589
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	6010B	240-187589
240-52525-6MS	Matrix Spike	T	Solid	6010B	240-187589
240-52525-6MSD	Matrix Spike Duplicate	T	Solid	6010B	240-187589
240-52525-7	HA-20_0-1 (20150625)	T	Solid	6010B	240-187589
240-52525-8	HA-22_0-1 (20150625)	T	Solid	6010B	240-187589
240-52525-10	HA-23_0-1 (20150624)	T	Solid	6010B	240-187589
240-52525-11	HA-24_0-1 (20150624)	T	Solid	6010B	240-187589
240-52525-12	HA-25_0-1 (20150624)	T	Solid	6010B	240-187589
240-52525-13	HA-26_0-1 (20150624)	T	Solid	6010B	240-187589
Analysis Batch:240-188177					
240-52525-4	HA-30_0-1 (20150625)	T	Solid	6010B	240-187368
240-52525-7	HA-20_0-1 (20150625)	T	Solid	6010B	240-187589
240-52525-10	HA-23_0-1 (20150624)	T	Solid	6010B	240-187589
240-52525-11	HA-24_0-1 (20150624)	T	Solid	6010B	240-187589
240-52525-13	HA-26_0-1 (20150624)	T	Solid	6010B	240-187589

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-187091					
240-52525-1	HA-27_0-1 (20150625)	T	Solid	Moisture	
240-52525-2	HA-28_0-1 (20150625)	T	Solid	Moisture	
240-52525-3	HA-29_0-1 (20150625)	T	Solid	Moisture	
240-52525-4	HA-30_0-1 (20150625)	T	Solid	Moisture	
240-52525-5	HA-31_0-1 (20150625)	T	Solid	Moisture	
240-52525-6	HA-19_0-0.5 (20150625)	T	Solid	Moisture	
240-52525-7	HA-20_0-1 (20150625)	T	Solid	Moisture	
240-52525-7DU	Duplicate	T	Solid	Moisture	
240-52525-8	HA-22_0-1 (20150625)	T	Solid	Moisture	
240-52525-10	HA-23_0-1 (20150624)	T	Solid	Moisture	
240-52525-11	HA-24_0-1 (20150624)	T	Solid	Moisture	
240-52525-11DU	Duplicate	T	Solid	Moisture	
240-52525-12	HA-25_0-1 (20150624)	T	Solid	Moisture	
240-52525-13	HA-26_0-1 (20150624)	T	Solid	Moisture	

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52525-1	HA-27_0-1 (20150625)	105	82	109	95
240-52525-2	HA-28_0-1 (20150625)	120	89	118	105
240-52525-3	HA-29_0-1 (20150625)	102	83	108	94
240-52525-4	HA-30_0-1 (20150625)	96	80	106	89
240-52525-5	HA-31_0-1 (20150625)	98	77	103	89
240-52525-6	HA-19_0-0.5 (20150625)	89	75	101	86
240-52525-7	HA-20_0-1 (20150625)	97	80	103	90
240-52525-8	HA-22_0-1 (20150625)	92	72	96	84
240-52525-9	MB-1 (20150625)	109	92	120	100
240-52525-10	HA-23_0-1 (20150624)	95	83	105	90
240-52525-11	HA-24_0-1 (20150624)	94	78	101	85
240-52525-12	HA-25_0-1 (20150624)	94	79	101	88
240-52525-13	HA-26_0-1 (20150624)	92	77	95	89
MB 240-187301/1-A		87	91	103	85
LCS 240-187301/2-A		84	98	101	88

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52525-1	HA-27_0-1 (20150625)	75	65	47	61	75	85
240-52525-2	HA-28_0-1 (20150625)	76	68	78	62	76	71
240-52525-3	HA-29_0-1 (20150625)	64	60	66	54	63	60
240-52525-4	HA-30_0-1 (20150625)	81	79	82	71	79	81
240-52525-5	HA-31_0-1 (20150625)	71	62	38	64	69	74
240-52525-6	HA-19_0-0.5 (20150625)	78	68	97	56	81	89
240-52525-7	HA-20_0-1 (20150625)	74	63	59	55	73	77
240-52525-8	HA-22_0-1 (20150625)	67	61	36	57	65	79
240-52525-10 RE	HA-23_0-1 (20150624) RE	66	60	39	56	66	72
240-52525-10	HA-23_0-1 (20150624)	69	65	63	57	67	72
240-52525-11	HA-24_0-1 (20150624)	58	52	22	46	59	92
240-52525-12	HA-25_0-1 (20150624)	58	58	5X	52	61	74
240-52525-12 RE	HA-25_0-1 (20150624) RE	73	71	52	66	71	84
240-52525-13	HA-26_0-1 (20150624)	51	52	20	46	54	71
MB 240-187612/17-A		71	61	12	63	70	73
MB 240-187803/22-A		64	60	10	59	66	71
MB 240-188303/4-A		78	77	59	70	80	85
MB 240-188744/17-A		74	72	16	72	77	82
MB 240-188799/17-A		56	52	23	51	57	78
LCS 240-187612/18-A		73	67	42	75	75	84
LCS 240-187803/23-A		72	70	26	70	70	74

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
LCS 240-188303/5-A		74	74	54	76	74	81
LCS 240-188744/18-A		83	84	38	82	84	83
LCS 240-188799/18-A		53	53	44	62	57	72
240-52525-8 MS	HA-22_0-1 (20150625) MS	57	46	56	42	55	75
240-52564-C-2-K MS		60	58	28	55	60	93
240-52680-J-1-C MS		64	78	77	60	81	66
240-52811-C-4-F MS		66	65	67	59	68	69
240-52525-8 MSD	HA-22_0-1 (20150625) MSD	61	49	41	49	56	71
240-52564-C-2-L MSD		67	68	32	64	67	104
240-52680-J-1-D MSD		69	72	64	72	71	75
240-52811-C-4-G MSD		78	76	75	70	81	81

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Method Blank - Batch: 240-187301

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-187301/1-A	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187301	Lab File ID:	143920.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/30/2015 1643	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/29/2015 1621				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Benzene	ND		9.0	250
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-187301 **Method: 8260B**
Preparation: 5035

Lab Sample ID:	MB 240-187301/1-A	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187301	Lab File ID:	143920.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/30/2015 1643	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/29/2015 1621				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	87	26 - 141
Dibromofluoromethane (Surr)	91	30 - 122
1,2-Dichloroethane-d4 (Surr)	103	39 - 128
Toluene-d8 (Surr)	85	33 - 134

Lab Control Sample - Batch: 240-187301

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-187301/2-A	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187301	Lab File ID:	143919.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/30/2015 1622	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/29/2015 1621				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	2380	119	16 - 156	
Allyl chloride	1000	874	87	50 - 150	
Benzene	1000	959	96	70 - 120	
Bromobenzene	1000	811	81	72 - 120	
Bromochloromethane	1000	999	100	56 - 128	
Bromodichloromethane	1000	938	94	28 - 123	
Bromoform	1000	802	80	10 - 120	
Bromomethane	1000	463	46	10 - 120	
2-Butanone (MEK)	2000	1840	92	10 - 199	
Carbon disulfide	1000	735	74	10 - 132	
Carbon tetrachloride	1000	995	99	29 - 120	
Chlorobenzene	1000	918	92	71 - 120	
Chlorodibromomethane	1000	844	84	22 - 120	
Chloroethane	1000	503	50	10 - 120	
Chloroform	1000	1060	106	63 - 120	
Chloromethane	1000	633	63	25 - 120	
2-Chlorotoluene	1000	908	91	68 - 122	
4-Chlorotoluene	1000	930	93	68 - 122	
cis-1,2-Dichloroethene	1000	951	95	60 - 125	
cis-1,3-Dichloropropene	1000	919	92	25 - 120	
Cyclohexane	1000	860	86	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	859	86	10 - 129	
1,2-Dibromoethane	1000	964	96	47 - 123	
Dibromomethane	1000	1010	101	68 - 120	
1,2-Dichlorobenzene	1000	913	91	68 - 120	
1,3-Dichlorobenzene	1000	892	89	66 - 121	
1,4-Dichlorobenzene	1000	888	89	65 - 120	
Dichlorodifluoromethane	1000	597	60	10 - 120	
1,1-Dichloroethane	1000	966	97	63 - 120	
1,2-Dichloroethane	1000	989	99	68 - 120	
1,1-Dichloroethene	1000	970	97	44 - 143	
Dichlorofluoromethane	1000	1050	105	40 - 160	
1,2-Dichloropropane	1000	953	95	73 - 120	
1,3-Dichloropropane	1000	948	95	74 - 120	
2,2-Dichloropropane	1000	875	88	25 - 123	
1,1-Dichloropropene	1000	1100	110	60 - 123	
Ethylbenzene	1000	914	91	66 - 120	
Ethyl ether	1000	981	98	70 - 130	
Hexachlorobutadiene	1000	885	89	34 - 135	
2-Hexanone	2000	1350	68	43 - 130	
Isopropylbenzene	1000	963	96	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-187301

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-187301/2-A	Analysis Batch:	240-187454	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-187301	Lab File ID:	143919.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	06/30/2015 1622	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/29/2015 1621				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	4460	89	44 - 173	
Methylcyclohexane	1000	1010	101	41 - 133	
Methylene Chloride	1000	1060	106	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1700	85	49 - 121	
Methyl tert butyl ether	1000	1080	108	34 - 157	
m-Xylene & p-Xylene	1000	942	94	67 - 120	
Naphthalene	1000	852	85	37 - 126	
n-Butylbenzene	1000	890	89	51 - 137	
N-Propylbenzene	1000	842	84	64 - 130	
o-Xylene	1000	961	96	68 - 120	
p-Isopropyltoluene	1000	860	86	56 - 136	
sec-Butylbenzene	1000	908	91	58 - 131	
Styrene	1000	854	85	60 - 120	
tert-Butylbenzene	1000	859	86	58 - 128	
1,1,1,2-Tetrachloroethane	1000	1010	101	27 - 121	
1,1,2,2-Tetrachloroethane	1000	985	99	54 - 121	
Tetrachloroethene	1000	927	93	58 - 131	
Tetrahydrofuran	2000	1970	98	70 - 130	
Toluene	1000	915	91	66 - 123	
trans-1,2-Dichloroethene	1000	988	99	58 - 121	
trans-1,3-Dichloropropene	1000	1020	102	22 - 122	
1,2,3-Trichlorobenzene	1000	893	89	43 - 129	
1,2,4-Trichlorobenzene	1000	905	91	41 - 135	
1,1,1-Trichloroethane	1000	972	97	38 - 122	
1,1,2-Trichloroethane	1000	915	91	74 - 120	
Trichloroethene	1000	1000	100	59 - 124	
Trichlorofluoromethane	1000	1060	106	17 - 145	
1,2,3-Trichloropropane	1000	1010	101	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	1050	105	48 - 151	
1,2,4-Trimethylbenzene	1000	893	89	62 - 133	
1,3,5-Trimethylbenzene	1000	881	88	60 - 130	
Vinyl chloride	1000	679	68	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	84	26 - 141
Dibromofluoromethane (Surr)	98	30 - 122
1,2-Dichloroethane-d4 (Surr)	101	39 - 128
Toluene-d8 (Surr)	88	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-187612

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187612/17-A	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187612	Lab File ID:	50708004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/08/2015 0851	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4,5-Trichlorophenol	ND		25	330
2,4,6-Trichlorophenol	ND		8.9	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2-Chlorophenol	ND		8.2	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-187612

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187612/17-A	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187612	Lab File ID:	50708004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/08/2015 0851	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	71	24 - 110
2-Fluorophenol (Surr)	61	24 - 110
2,4,6-Tribromophenol (Surr)	12	10 - 110
Nitrobenzene-d5 (Surr)	63	20 - 110
Phenol-d5 (Surr)	70	26 - 110
Terphenyl-d14 (Surr)	73	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-187612

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187612/18-A	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187612	Lab File ID:	50708005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/08/2015 0917	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	471	71	35 - 110	
2,2'-oxybis[1-chloropropane]	667	470	71	29 - 110	
2,4,5-Trichlorophenol	667	179	27	25 - 110	J
2,4,6-Trichlorophenol	667	226	34	12 - 110	J
2,4-Dichlorophenol	667	288	43	39 - 110	J
2,4-Dimethylphenol	667	476	71	29 - 110	
2,4-Dinitrophenol	1330	317	24	10 - 110	J
2,4-Dinitrotoluene	667	507	76	48 - 110	
2,6-Dinitrotoluene	667	500	75	45 - 110	
2-Chloronaphthalene	667	486	73	32 - 110	
2-Chlorophenol	667	431	65	37 - 110	
2-Methylnaphthalene	667	477	72	36 - 110	
2-Methylphenol	667	484	73	41 - 110	
2-Nitroaniline	667	481	72	45 - 110	J
2-Nitrophenol	667	397	60	34 - 110	
3,3'-Dichlorobenzidine	1330	1100	82	28 - 110	J
3-Nitroaniline	667	518	78	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	649	49	10 - 110	J
4-Bromophenyl phenyl ether	667	535	80	39 - 110	
4-Chloro-3-methylphenol	667	489	73	48 - 110	
4-Chloroaniline	667	468	70	30 - 110	
4-Chlorophenyl phenyl ether	667	489	73	40 - 110	
4-Nitroaniline	667	495	74	48 - 110	J
4-Nitrophenol	1330	800	60	28 - 110	J
Acenaphthene	667	470	71	38 - 110	
Acenaphthylene	667	472	71	40 - 110	
Acetophenone	667	480	72	40 - 110	
Anthracene	667	525	79	48 - 110	
Atrazine	1330	1230	93	66 - 127	
Benzaldehyde	1330	1060	79	32 - 110	
Benzo[a]anthracene	667	536	80	50 - 110	
Benzo[a]pyrene	667	549	82	44 - 110	
Benzo[b]fluoranthene	667	567	85	43 - 110	
Benzo[g,h,i]perylene	667	595	89	51 - 110	
Benzo[k]fluoranthene	667	544	82	38 - 105	
Bis(2-chloroethoxy)methane	667	501	75	32 - 110	
Bis(2-chloroethyl)ether	667	484	73	34 - 110	
Bis(2-ethylhexyl) phthalate	667	555	83	50 - 110	
Butyl benzyl phthalate	667	557	84	51 - 110	
Caprolactam	1330	1130	85	44 - 114	
Carbazole	667	566	85	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-187612

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187612/18-A	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187612	Lab File ID:	50708005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/08/2015 0917	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	563	85	50 - 110	
Dibenz(a,h)anthracene	667	562	84	51 - 110	
Dibenzofuran	667	489	73	43 - 110	
Diethyl phthalate	667	516	77	52 - 110	
Dimethyl phthalate	667	514	77	50 - 110	
Di-n-butyl phthalate	667	603	90	51 - 110	
Di-n-octyl phthalate	667	515	77	48 - 110	
Fluoranthene	667	569	85	51 - 110	
Fluorene	667	486	73	46 - 110	
Hexachlorobenzene	667	503	75	43 - 110	
Hexachlorobutadiene	667	468	70	29 - 110	
Hexachlorocyclopentadiene	667	202	30	12 - 110	J
Hexachloroethane	667	443	66	30 - 110	
Indeno[1,2,3-cd]pyrene	667	576	86	50 - 110	
Isophorone	667	503	75	36 - 110	
Naphthalene	667	478	72	36 - 110	
Nitrobenzene	667	514	77	32 - 110	
N-Nitrosodi-n-propylamine	667	492	74	38 - 110	
N-Nitrosodiphenylamine	1330	1090	82	46 - 110	
Pentachlorophenol	1330	722	54	10 - 110	
Phenol	667	495	74	38 - 110	
Phenanthrene	667	513	77	49 - 110	
Pyrene	667	569	85	49 - 110	
3 & 4 Methylphenol	667	489	73	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	73	24 - 110
2-Fluorophenol (Surr)	67	24 - 110
2,4,6-Tribromophenol (Surr)	42	10 - 110
Nitrobenzene-d5 (Surr)	75	20 - 110
Phenol-d5 (Surr)	75	26 - 110
Terphenyl-d14 (Surr)	84	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187612

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52525-8	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187612	Lab File ID:	50708026.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.23 g
Analysis Date:	07/08/2015 1812			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52525-8	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187612	Lab File ID:	50708027.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.55 g
Analysis Date:	07/08/2015 1837			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	55	59	32 - 110	9	32		
2,2'-oxybis[1-chloropropane]	40	45	11 - 110	16	42	J	J
2,4,5-Trichlorophenol	56	48	10 - 117	15	99		J
2,4,6-Trichlorophenol	49	41	10 - 110	16	38		J
2,4-Dichlorophenol	64	67	10 - 110	6	34		
2,4-Dimethylphenol	61	66	10 - 110	9	31		
2,4-Dinitrophenol	7	9	10 - 110	31	99	J F1	J F1
2,4-Dinitrotoluene	60	58	32 - 110	0	30		
2,6-Dinitrotoluene	64	63	35 - 110	2	30		
2-Chloronaphthalene	57	61	28 - 110	8	30		
2-Chlorophenol	45	50	10 - 110	11	47	J	
2-Methylnaphthalene	50	56	10 - 133	14	42		
2-Methylphenol	55	59	24 - 110	10	51		
2-Nitroaniline	72	74	39 - 110	6	31	J	J
2-Nitrophenol	28	37	10 - 110	30	49	J	J
3,3'-Dichlorobenzidine	41	44	10 - 110	11	56	J	J
3-Nitroaniline	65	67	10 - 110	4	30	J	J
4,6-Dinitro-2-methylphenol	8	11	10 - 110	28	55	J F1	J
4-Bromophenyl phenyl ether	77	77	33 - 110	2	30		
4-Chloro-3-methylphenol	78	78	25 - 110	2	54		
4-Chloroaniline	53	55	10 - 110	5	36		
4-Chlorophenyl phenyl ether	72	70	32 - 110	0	30		
4-Nitroaniline	43	59	10 - 110	34	48	J	J
4-Nitrophenol	75	73	10 - 113	0	49	J	J
Acenaphthene	63	67	22 - 110	8	99		
Acenaphthylene	63	65	24 - 110	6	99		
Acetophenone	43	47	31 - 110	11	43	J	J
Anthracene	72	72	20 - 110	3	99		
Atrazine	87	84	45 - 118	1	30		
Benzaldehyde	40	43	23 - 110	10	42		
Benzo[a]anthracene	76	73	10 - 122	2	99		
Benzo[a]pyrene	72	70	10 - 110	0	99		

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187612

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52525-8	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187612	Lab File ID:	50708026.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.23 g
Analysis Date:	07/08/2015 1812			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52525-8	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187612	Lab File ID:	50708027.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.55 g
Analysis Date:	07/08/2015 1837			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	79	73	12 - 118	5	99		
Benzo[g,h,i]perylene	39	40	10 - 117	3	99	J	J
Benzo[k]fluoranthene	74	77	10 - 121	7	99		
Bis(2-chloroethoxy)methane	46	53	26 - 110	16	37	J	
Bis(2-chloroethyl)ether	38	49	21 - 110	27	55	J	J
Bis(2-ethylhexyl) phthalate	75	74	40 - 110	1	30		
Butyl benzyl phthalate	78	78	44 - 110	2	30		
Caprolactam	85	84	10 - 134	2	32		
Carbazole	76	78	34 - 110	5	30		
Chrysene	76	77	10 - 125	3	99		
Dibenz(a,h)anthracene	49	51	14 - 113	5	99		
Dibenzofuran	70	70	29 - 110	3	30		
Diethyl phthalate	73	74	42 - 110	4	30		
Dimethyl phthalate	73	73	41 - 110	2	30		
Di-n-butyl phthalate	82	83	43 - 110	4	30		
Di-n-octyl phthalate	86	87	24 - 119	3	30		
Fluoranthene	81	82	10 - 110	4	99		
Fluorene	70	72	23 - 110	4	99		
Hexachlorobenzene	73	72	34 - 110	2	30		
Hexachlorobutadiene	41	50	25 - 110	21	34	J	
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	9	14	12 - 110	51	50	J F1	J F2
Indeno[1,2,3-cd]pyrene	46	48	10 - 114	6	99	J	
Isophorone	47	55	29 - 110	16	38	J	
Naphthalene	42	49	10 - 111	17	99	J	
Nitrobenzene	44	51	23 - 110	16	41	J	
N-Nitrosodi-n-propylamine	45	49	26 - 110	12	42	J	
N-Nitrosodiphenylamine	73	74	22 - 110	3	30		
Pentachlorophenol	39	20	10 - 110	61	50		J F2
Phenol	52	54	17 - 110	8	53		
Phenanthrene	72	74	10 - 166	5	99		
Pyrene	77	75	10 - 147	0	99		

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187612

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52525-8	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187612	Lab File ID:	50708026.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.23 g
Analysis Date:	07/08/2015 1812			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52525-8	Analysis Batch:	240-188301	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-187612	Lab File ID:	50708027.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.55 g
Analysis Date:	07/08/2015 1837			Final Weight/Volume:	2 mL
Prep Date:	07/01/2015 1057			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
3 & 4 Methylphenol	61	63	25 - 110	6	50		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	57	61	24 - 110
2-Fluorophenol (Surr)	46	49	24 - 110
2,4,6-Tribromophenol (Surr)	56	41	10 - 110
Nitrobenzene-d5 (Surr)	42	49	20 - 110
Phenol-d5 (Surr)	55	56	26 - 110
Terphenyl-d14 (Surr)	75	71	36 - 110

Method Blank - Batch: 240-187803

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187803/22-A	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187803	Lab File ID:	0709014.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 1245	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4,5-Trichlorophenol	ND		25	330
2,4,6-Trichlorophenol	ND		8.9	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2-Chlorophenol	ND		8.2	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	56.9	J	19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-187803

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-187803/22-A	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187803	Lab File ID:	0709014.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 1245	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	64	24 - 110
2-Fluorophenol (Surr)	60	24 - 110
2,4,6-Tribromophenol (Surr)	10	10 - 110
Nitrobenzene-d5 (Surr)	59	20 - 110
Phenol-d5 (Surr)	66	26 - 110
Terphenyl-d14 (Surr)	71	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-187803

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187803/23-A	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187803	Lab File ID:	0709015.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 1307	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	471	71	35 - 110	
2,2'-oxybis[1-chloropropane]	667	455	68	29 - 110	
2,4,5-Trichlorophenol	667	204	31	25 - 110	J
2,4,6-Trichlorophenol	667	175	26	12 - 110	J
2,4-Dichlorophenol	667	399	60	39 - 110	
2,4-Dimethylphenol	667	462	69	29 - 110	
2,4-Dinitrophenol	1330	242	18	10 - 110	J
2,4-Dinitrotoluene	667	457	69	48 - 110	
2,6-Dinitrotoluene	667	521	78	45 - 110	
2-Chloronaphthalene	667	469	70	32 - 110	
2-Chlorophenol	667	442	66	37 - 110	
2-Methylnaphthalene	667	484	73	36 - 110	
2-Methylphenol	667	470	71	41 - 110	
2-Nitroaniline	667	455	68	45 - 110	J
2-Nitrophenol	667	411	62	34 - 110	
3,3'-Dichlorobenzidine	1330	708	53	28 - 110	J
3-Nitroaniline	667	506	76	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	330	25	10 - 110	J
4-Bromophenyl phenyl ether	667	489	73	39 - 110	
4-Chloro-3-methylphenol	667	504	76	48 - 110	
4-Chloroaniline	667	420	63	30 - 110	
4-Chlorophenyl phenyl ether	667	482	72	40 - 110	
4-Nitroaniline	667	517	78	48 - 110	J
4-Nitrophenol	1330	679	51	28 - 110	J
Acenaphthene	667	475	71	38 - 110	
Acenaphthylene	667	502	75	40 - 110	
Acetophenone	667	465	70	40 - 110	
Anthracene	667	520	78	48 - 110	
Atrazine	1330	1070	80	66 - 127	
Benzaldehyde	1330	1020	77	32 - 110	
Benzo[a]anthracene	667	502	75	50 - 110	
Benzo[a]pyrene	667	480	72	44 - 110	
Benzo[b]fluoranthene	667	535	80	43 - 110	
Benzo[g,h,i]perylene	667	471	71	51 - 110	
Benzo[k]fluoranthene	667	581	87	38 - 105	
Bis(2-chloroethoxy)methane	667	467	70	32 - 110	
Bis(2-chloroethyl)ether	667	453	68	34 - 110	
Bis(2-ethylhexyl) phthalate	667	584	88	50 - 110	
Butyl benzyl phthalate	667	514	77	51 - 110	
Caprolactam	1330	1160	87	44 - 114	
Carbazole	667	528	79	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-187803

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-187803/23-A	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187803	Lab File ID:	0709015.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 1307	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	518	78	50 - 110	
Dibenz(a,h)anthracene	667	430	64	51 - 110	
Dibenzofuran	667	496	74	43 - 110	
Diethyl phthalate	667	506	76	52 - 110	
Dimethyl phthalate	667	492	74	50 - 110	
Di-n-butyl phthalate	667	571	86	51 - 110	
Di-n-octyl phthalate	667	449	67	48 - 110	
Fluoranthene	667	528	79	51 - 110	
Fluorene	667	485	73	46 - 110	
Hexachlorobenzene	667	490	73	43 - 110	
Hexachlorobutadiene	667	447	67	29 - 110	
Hexachlorocyclopentadiene	667	307	46	12 - 110	J
Hexachloroethane	667	426	64	30 - 110	
Indeno[1,2,3-cd]pyrene	667	452	68	50 - 110	
Isophorone	667	486	73	36 - 110	
Naphthalene	667	493	74	36 - 110	
Nitrobenzene	667	468	70	32 - 110	
N-Nitrosodi-n-propylamine	667	473	71	38 - 110	
N-Nitrosodiphenylamine	1330	1030	77	46 - 110	
Pentachlorophenol	1330	347	26	10 - 110	
Phenol	667	458	69	38 - 110	
Phenanthrene	667	504	76	49 - 110	
Pyrene	667	516	77	49 - 110	
3 & 4 Methylphenol	667	473	71	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	72	24 - 110
2-Fluorophenol (Surr)	70	24 - 110
2,4,6-Tribromophenol (Surr)	26	10 - 110
Nitrobenzene-d5 (Surr)	70	20 - 110
Phenol-d5 (Surr)	70	26 - 110
Terphenyl-d14 (Surr)	74	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187803

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52564-C-2-K MS	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187803	Lab File ID:	0709024.D
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	29.78 g
Analysis Date:	07/09/2015 1625			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52564-C-2-L MSD	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187803	Lab File ID:	0709025.D
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	30.37 g
Analysis Date:	07/09/2015 1647			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	63	70	32 - 110	8	32	J	J
2,2'-oxybis[1-chloropropane]	55	65	11 - 110	15	42	J	J
2,4,5-Trichlorophenol	50	53	10 - 117	3	99	J	J
2,4,6-Trichlorophenol	39	44	10 - 110	9	38	J	J
2,4-Dichlorophenol	60	64	10 - 110	4	34	J	J
2,4-Dimethylphenol	57	59	10 - 110	1	31	J	J
2,4-Dinitrophenol	49	49	10 - 110	4	99	J	J
2,4-Dinitrotoluene	59	64	32 - 110	6	30	J	J
2,6-Dinitrotoluene	61	65	35 - 110	3	30	J	J
2-Chloronaphthalene	59	65	28 - 110	8	30	J	J
2-Chlorophenol	56	65	10 - 110	12	47	J	J
2-Methylnaphthalene	69	74	10 - 133	5	42	J	J
2-Methylphenol	62	68	24 - 110	7	51	J	J
2-Nitroaniline	62	69	39 - 110	9	31	J	J
2-Nitrophenol	55	61	10 - 110	9	49	J	J
3,3'-Dichlorobenzidine	34	35	10 - 110	1	56	J	J
3-Nitroaniline	60	65	10 - 110	7	30	J	J
4,6-Dinitro-2-methylphenol	36	36	10 - 110	3	55	J	J
4-Bromophenyl phenyl ether	63	66	33 - 110	3	30	J	J
4-Chloro-3-methylphenol	63	69	25 - 110	6	54	J	J
4-Chloroaniline	48	54	10 - 110	9	36	J	J
4-Chlorophenyl phenyl ether	62	67	32 - 110	6	30	J	J
4-Nitroaniline	63	68	10 - 110	6	48	J	J
4-Nitrophenol	52	56	10 - 113	4	49	J	J
Acenaphthene	101	97	22 - 110	5	99	J	J
Acenaphthylene	63	68	24 - 110	6	99	J	J
Acetophenone	58	67	31 - 110	13	43	J	J
Anthracene	181	162	20 - 110	10	99	F1	F1
Atrazine	63	70	45 - 118	8	30	J	J
Benzaldehyde	57	71	23 - 110	20	42	J	J
Benzo[a]anthracene	268	239	10 - 122	9	99	F1	F1
Benzo[a]pyrene	212	196	10 - 110	6	99	* F1	* F1

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187803

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52564-C-2-K MS	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187803	Lab File ID:	0709024.D
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	29.78 g
Analysis Date:	07/09/2015 1625			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52564-C-2-L MSD	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187803	Lab File ID:	0709025.D
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	30.37 g
Analysis Date:	07/09/2015 1647			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	374	329	12 - 118	10	99	* F1	* F1
Benzo[g,h,i]perylene	99	100	10 - 117	1	99	J *	J *
Benzo[k]fluoranthene	181	219	10 - 121	11	99	* F1	* F1
Bis(2-chloroethoxy)methane	61	67	26 - 110	7	37	J	J
Bis(2-chloroethyl)ether	53	63	21 - 110	16	55	J	J
Bis(2-ethylhexyl) phthalate	91	102	40 - 110	9	30	J	J
Butyl benzyl phthalate	91	101	44 - 110	9	30	J	J
Caprolactam	77	86	10 - 134	9	32	J	J
Carbazole	104	103	34 - 110	3	30	J	J
Chrysene	255	216	10 - 125	12	99	F1	F1
Dibenz(a,h)anthracene	57	56	14 - 113	4	99	J *	J *
Dibenzofuran	92	92	29 - 110	1	30	J	J
Diethyl phthalate	64	71	42 - 110	8	30	J	J
Dimethyl phthalate	64	68	41 - 110	5	30	J	J
Di-n-butyl phthalate	71	75	43 - 110	4	30	J	J
Di-n-octyl phthalate	140	167	24 - 119	16	30	J * F1	J * F1
Fluoranthene	420	404	10 - 110	3	99	F1	F1
Fluorene	114	108	23 - 110	6	99	J F1	J
Hexachlorobenzene	60	63	34 - 110	3	30	J	J
Hexachlorobutadiene	50	61	25 - 110	18	34	J	J
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	31	42	12 - 110	28	50	J	J
Indeno[1,2,3-cd]pyrene	90	83	10 - 114	6	99	J *	J *
Isophorone	61	67	29 - 110	8	38	J	J
Naphthalene	66	73	10 - 111	8	99	J	J
Nitrobenzene	55	63	23 - 110	12	41	J	J
N-Nitrosodi-n-propylamine	61	69	26 - 110	10	42	J	J
N-Nitrosodiphenylamine	64	68	22 - 110	5	30	J	J
Pentachlorophenol	28	29	10 - 110	0	50	J	J
Phenol	56	64	17 - 110	11	53	J	J
Phenanthrene	414	400	10 - 166	3	99	F1	F1
Pyrene	636	606	10 - 147	4	99	E 4	E 4

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187803

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52564-C-2-K MS	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187803	Lab File ID:	0709024.D
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	29.78 g
Analysis Date:	07/09/2015 1625			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52564-C-2-L MSD	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-187803	Lab File ID:	0709025.D
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	30.37 g
Analysis Date:	07/09/2015 1647			Final Weight/Volume:	2 mL
Prep Date:	07/02/2015 1036			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
3 & 4 Methylphenol	63	68	25 - 110	7	50	J	J

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	60	67	24 - 110
2-Fluorophenol (Surr)	58	68	24 - 110
2,4,6-Tribromophenol (Surr)	28	32	10 - 110
Nitrobenzene-d5 (Surr)	55	64	20 - 110
Phenol-d5 (Surr)	60	67	26 - 110
Terphenyl-d14 (Surr)	93	104	36 - 110

Method Blank - Batch: 240-188303

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188303/4-A	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/10/2015 0923	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4,5-Trichlorophenol	ND		25	330
2,4,6-Trichlorophenol	ND		8.9	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2-Chlorophenol	ND		8.2	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	583		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	43.0	J	37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-188303

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188303/4-A	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/10/2015 0923	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	33.9	J	15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	14.5	J	13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	17.0	J	7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	78	24 - 110
2-Fluorophenol (Surr)	77	24 - 110
2,4,6-Tribromophenol (Surr)	59	10 - 110
Nitrobenzene-d5 (Surr)	70	20 - 110
Phenol-d5 (Surr)	80	26 - 110
Terphenyl-d14 (Surr)	85	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-188303

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188303/5-A	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/10/2015 0949	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	468	70	35 - 110	
2,2'-oxybis[1-chloropropane]	667	452	68	29 - 110	
2,4,5-Trichlorophenol	667	421	63	25 - 110	
2,4,6-Trichlorophenol	667	377	57	12 - 110	
2,4-Dichlorophenol	667	490	73	39 - 110	
2,4-Dimethylphenol	667	523	78	29 - 110	
2,4-Dinitrophenol	1330	267	20	10 - 110	J
2,4-Dinitrotoluene	667	510	76	48 - 110	
2,6-Dinitrotoluene	667	522	78	45 - 110	
2-Chloronaphthalene	667	481	72	32 - 110	
2-Chlorophenol	667	467	70	37 - 110	
2-Methylnaphthalene	667	502	75	36 - 110	
2-Methylphenol	667	487	73	41 - 110	
2-Nitroaniline	667	518	78	45 - 110	J
2-Nitrophenol	667	512	77	34 - 110	
3,3'-Dichlorobenzidine	1330	994	75	28 - 110	J
3-Nitroaniline	667	509	76	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	638	48	10 - 110	J
4-Bromophenyl phenyl ether	667	536	80	39 - 110	
4-Chloro-3-methylphenol	667	533	80	48 - 110	
4-Chloroaniline	667	427	64	30 - 110	
4-Chlorophenyl phenyl ether	667	505	76	40 - 110	
4-Nitroaniline	667	509	76	48 - 110	J
4-Nitrophenol	1330	922	69	28 - 110	J
Acenaphthene	667	483	73	38 - 110	
Acenaphthylene	667	489	73	40 - 110	
Acetophenone	667	465	70	40 - 110	
Anthracene	667	505	76	48 - 110	
Atrazine	1330	1180	89	66 - 127	
Benzaldehyde	1330	1070	80	32 - 110	
Benzo[a]anthracene	667	523	78	50 - 110	
Benzo[a]pyrene	667	511	77	44 - 110	
Benzo[b]fluoranthene	667	518	78	43 - 110	
Benzo[g,h,i]perylene	667	558	84	51 - 110	
Benzo[k]fluoranthene	667	514	77	38 - 105	
Bis(2-chloroethoxy)methane	667	496	74	32 - 110	
Bis(2-chloroethyl)ether	667	481	72	34 - 110	
Bis(2-ethylhexyl) phthalate	667	1070	160	50 - 110	*
Butyl benzyl phthalate	667	547	82	51 - 110	
Caprolactam	1330	1100	83	44 - 114	
Carbazole	667	551	83	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-188303

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188303/5-A	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/10/2015 0949	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	537	81	50 - 110	
Dibenz(a,h)anthracene	667	537	81	51 - 110	
Dibenzofuran	667	498	75	43 - 110	
Diethyl phthalate	667	493	74	52 - 110	
Dimethyl phthalate	667	509	76	50 - 110	
Di-n-butyl phthalate	667	606	91	51 - 110	
Di-n-octyl phthalate	667	515	77	48 - 110	
Fluoranthene	667	548	82	51 - 110	
Fluorene	667	497	75	46 - 110	
Hexachlorobenzene	667	539	81	43 - 110	
Hexachlorobutadiene	667	522	78	29 - 110	
Hexachlorocyclopentadiene	667	349	52	12 - 110	J
Hexachloroethane	667	441	66	30 - 110	
Indeno[1,2,3-cd]pyrene	667	542	81	50 - 110	
Isophorone	667	510	77	36 - 110	
Naphthalene	667	480	72	36 - 110	
Nitrobenzene	667	508	76	32 - 110	
N-Nitrosodi-n-propylamine	667	473	71	38 - 110	
N-Nitrosodiphenylamine	1330	1050	79	46 - 110	
Pentachlorophenol	1330	637	48	10 - 110	
Phenol	667	493	74	38 - 110	
Phenanthrene	667	498	75	49 - 110	
Pyrene	667	554	83	49 - 110	
3 & 4 Methylphenol	667	473	71	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	74	24 - 110
2-Fluorophenol (Surr)	74	24 - 110
2,4,6-Tribromophenol (Surr)	54	10 - 110
Nitrobenzene-d5 (Surr)	76	20 - 110
Phenol-d5 (Surr)	74	26 - 110
Terphenyl-d14 (Surr)	81	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-188303

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52680-J-1-C MS	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.00 g
Analysis Date:	07/10/2015 1518			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52680-J-1-D MSD	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.41 g
Analysis Date:	07/10/2015 1543			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	61	65	32 - 110	5	32		
2,2'-oxybis[1-chloropropane]	46	67	11 - 110	35	42	J	
2,4,5-Trichlorophenol	74	66	10 - 117	13	99		
2,4,6-Trichlorophenol	78	65	10 - 110	19	38		
2,4-Dichlorophenol	83	73	10 - 110	14	34		
2,4-Dimethylphenol	83	73	10 - 110	14	31		
2,4-Dinitrophenol	22	20	10 - 110	11	99	J	J
2,4-Dinitrotoluene	80	75	32 - 110	8	30		
2,6-Dinitrotoluene	85	70	35 - 110	20	30		
2-Chloronaphthalene	63	68	28 - 110	7	30		
2-Chlorophenol	78	71	10 - 110	11	47		
2-Methylnaphthalene	55	70	10 - 133	22	42		
2-Methylphenol	82	73	24 - 110	14	51		
2-Nitroaniline	85	74	39 - 110	16	31	J	J
2-Nitrophenol	73	73	10 - 110	1	49		
3,3'-Dichlorobenzidine	90	77	10 - 110	17	56	J	J
3-Nitroaniline	83	66	10 - 110	25	30	J	J
4,6-Dinitro-2-methylphenol	39	36	10 - 110	10	55	J	J
4-Bromophenyl phenyl ether	69	83	33 - 110	17	30		
4-Chloro-3-methylphenol	85	76	25 - 110	12	54		
4-Chloroaniline	64	57	10 - 110	13	36		
4-Chlorophenyl phenyl ether	65	74	32 - 110	11	30		
4-Nitroaniline	82	69	10 - 110	18	48	J	J
4-Nitrophenol	82	72	10 - 113	14	49	J	J
Acenaphthene	68	67	22 - 110	3	99		
Acenaphthylene	70	67	24 - 110	5	99		
Acetophenone	73	68	31 - 110	9	43		
Anthracene	72	76	20 - 110	3	99		
Atrazine	97	90	45 - 118	8	30		
Benzaldehyde	63	77	23 - 110	19	42		
Benzo[a]anthracene	70	76	10 - 122	7	99		
Benzo[a]pyrene	62	75	10 - 110	18	99		

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-188303

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52680-J-1-C MS	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.00 g
Analysis Date:	07/10/2015 1518			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52680-J-1-D MSD	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.41 g
Analysis Date:	07/10/2015 1543			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	60	75	12 - 118	21	99		
Benzo[g,h,i]perylene	66	83	10 - 117	21	99		
Benzo[k]fluoranthene	62	72	10 - 121	13	99		
Bis(2-chloroethoxy)methane	78	70	26 - 110	12	37		
Bis(2-chloroethyl)ether	60	71	21 - 110	15	55		
Bis(2-ethylhexyl) phthalate	48	89	40 - 110	28	30		
Butyl benzyl phthalate	79	80	44 - 110	1	30		
Caprolactam	51	86	10 - 134	50	32		F2
Carbazole	87	84	34 - 110	5	30		
Chrysene	70	75	10 - 125	5	99		
Dibenz(a,h)anthracene	64	79	14 - 113	19	99		
Dibenzofuran	70	70	29 - 110	2	30		
Diethyl phthalate	82	71	42 - 110	15	30		
Dimethyl phthalate	85	73	41 - 110	17	30		
Di-n-butyl phthalate	81	90	43 - 110	8	30		
Di-n-octyl phthalate	54	75	24 - 119	31	30		F2
Fluoranthene	73	81	10 - 110	10	99		
Fluorene	71	70	23 - 110	3	99		
Hexachlorobenzene	60	79	34 - 110	25	30		
Hexachlorobutadiene	31	73	25 - 110	79	34	J	F2
Hexachlorocyclopentadiene	4	12	10 - 110	98	79	J F1	J F2
Hexachloroethane	12	61	12 - 110	132	50	J	F2
Indeno[1,2,3-cd]pyrene	65	81	10 - 114	20	99		
Isophorone	82	74	29 - 110	12	38		
Naphthalene	46	67	10 - 111	35	99	J	
Nitrobenzene	66	71	23 - 110	6	41		
N-Nitrosodi-n-propylamine	77	68	26 - 110	13	42		
N-Nitrosodiphenylamine	88	81	22 - 110	9	30		
Pentachlorophenol	60	60	10 - 110	1	50		
Phenol	78	72	17 - 110	10	53		
Phenanthrene	71	69	10 - 166	3	99		
Pyrene	77	75	10 - 147	4	99		

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-188303

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52680-J-1-C MS	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.00 g
Analysis Date:	07/10/2015 1518			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52680-J-1-D MSD	Analysis Batch:	240-188645	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-188303	Lab File ID:	50710020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.41 g
Analysis Date:	07/10/2015 1543			Final Weight/Volume:	2 mL
Prep Date:	07/08/2015 0749			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
3 & 4 Methylphenol	80	69	25 - 110	15	50		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	64	69	24 - 110
2-Fluorophenol (Surr)	78	72	24 - 110
2,4,6-Tribromophenol (Surr)	77	64	10 - 110
Nitrobenzene-d5 (Surr)	60	72	20 - 110
Phenol-d5 (Surr)	81	71	26 - 110
Terphenyl-d14 (Surr)	66	75	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-188744

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188744/17-A	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188744	Lab File ID:	50712006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/12/2015 1105	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1244			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4,5-Trichlorophenol	ND		25	330
2,4,6-Trichlorophenol	ND		8.9	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2-Chlorophenol	ND		8.2	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-188744

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188744/17-A	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188744	Lab File ID:	50712006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/12/2015 1105	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1244			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	74	24 - 110
2-Fluorophenol (Surr)	72	24 - 110
2,4,6-Tribromophenol (Surr)	16	10 - 110
Nitrobenzene-d5 (Surr)	72	20 - 110
Phenol-d5 (Surr)	77	26 - 110
Terphenyl-d14 (Surr)	82	36 - 110

Lab Control Sample - Batch: 240-188744

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188744/18-A	Analysis Batch:	240-188868	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188744	Lab File ID:	50713022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/13/2015 1312	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1244			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	529	79	35 - 110	
2,2'-oxybis[1-chloropropane]	667	538	81	29 - 110	
2,4,5-Trichlorophenol	667	195	29	25 - 110	J
2,4,6-Trichlorophenol	667	230	35	12 - 110	J
2,4-Dichlorophenol	667	443	67	39 - 110	
2,4-Dimethylphenol	667	548	82	29 - 110	
2,4-Dinitrophenol	1330	326	24	10 - 110	J
2,4-Dinitrotoluene	667	588	88	48 - 110	
2,6-Dinitrotoluene	667	590	88	45 - 110	
2-Chloronaphthalene	667	529	79	32 - 110	
2-Chlorophenol	667	525	79	37 - 110	
2-Methylnaphthalene	667	556	83	36 - 110	
2-Methylphenol	667	559	84	41 - 110	
2-Nitroaniline	667	586	88	45 - 110	J
2-Nitrophenol	667	547	82	34 - 110	
3,3'-Dichlorobenzidine	1330	1000	75	28 - 110	J
3-Nitroaniline	667	596	89	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	584	44	10 - 110	J
4-Bromophenyl phenyl ether	667	565	85	39 - 110	
4-Chloro-3-methylphenol	667	585	88	48 - 110	
4-Chloroaniline	667	541	81	30 - 110	
4-Chlorophenyl phenyl ether	667	532	80	40 - 110	
4-Nitroaniline	667	619	93	48 - 110	J
4-Nitrophenol	1330	774	58	28 - 110	J
Acenaphthene	667	520	78	38 - 110	
Acenaphthylene	667	543	82	40 - 110	
Acetophenone	667	535	80	40 - 110	
Anthracene	667	561	84	48 - 110	
Atrazine	1330	1230	92	66 - 127	
Benzaldehyde	1330	1240	93	32 - 110	
Benzo[a]anthracene	667	560	84	50 - 110	
Benzo[a]pyrene	667	525	79	44 - 110	
Benzo[b]fluoranthene	667	552	83	43 - 110	
Benzo[g,h,i]perylene	667	536	80	51 - 110	
Benzo[k]fluoranthene	667	544	82	38 - 105	
Bis(2-chloroethoxy)methane	667	557	84	32 - 110	
Bis(2-chloroethyl)ether	667	514	77	34 - 110	
Bis(2-ethylhexyl) phthalate	667	622	93	50 - 110	
Butyl benzyl phthalate	667	607	91	51 - 110	
Caprolactam	1330	1330	100	44 - 114	
Carbazole	667	556	83	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-188744

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188744/18-A	Analysis Batch:	240-188868	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188744	Lab File ID:	50713022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/13/2015 1312	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1244			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	556	83	50 - 110	
Dibenz(a,h)anthracene	667	526	79	51 - 110	
Dibenzofuran	667	550	82	43 - 110	
Diethyl phthalate	667	580	87	52 - 110	
Dimethyl phthalate	667	553	83	50 - 110	
Di-n-butyl phthalate	667	621	93	51 - 110	
Di-n-octyl phthalate	667	537	81	48 - 110	
Fluoranthene	667	572	86	51 - 110	
Fluorene	667	541	81	46 - 110	
Hexachlorobenzene	667	532	80	43 - 110	
Hexachlorobutadiene	667	539	81	29 - 110	
Hexachlorocyclopentadiene	667	302	45	12 - 110	J
Hexachloroethane	667	484	73	30 - 110	
Indeno[1,2,3-cd]pyrene	667	519	78	50 - 110	
Isophorone	667	591	89	36 - 110	
Naphthalene	667	540	81	36 - 110	
Nitrobenzene	667	545	82	32 - 110	
N-Nitrosodi-n-propylamine	667	579	87	38 - 110	
N-Nitrosodiphenylamine	1330	1100	83	46 - 110	
Pentachlorophenol	1330	662	50	10 - 110	
Phenol	667	558	84	38 - 110	
Phenanthrene	667	524	79	49 - 110	
Pyrene	667	543	81	49 - 110	
3 & 4 Methylphenol	667	569	85	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	83	24 - 110
2-Fluorophenol (Surr)	84	24 - 110
2,4,6-Tribromophenol (Surr)	38	10 - 110
Nitrobenzene-d5 (Surr)	82	20 - 110
Phenol-d5 (Surr)	84	26 - 110
Terphenyl-d14 (Surr)	83	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-188744

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52811-C-4-F MS	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188744	Lab File ID:	50712015.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.81 g
Analysis Date:	07/12/2015 1440			Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1244			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52811-C-4-G MSD	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188744	Lab File ID:	50712016.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.23 g
Analysis Date:	07/12/2015 1503			Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1244			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	65	76	32 - 110	15	32		
2,2'-oxybis[1-chloropropane]	57	68	11 - 110	16	42		
2,4,5-Trichlorophenol	73	81	10 - 117	9	99		
2,4,6-Trichlorophenol	69	81	10 - 110	14	38		
2,4-Dichlorophenol	73	86	10 - 110	15	34		
2,4-Dimethylphenol	71	86	10 - 110	18	31		
2,4-Dinitrophenol	16	14	10 - 110	13	99	J	J
2,4-Dinitrotoluene	70	75	32 - 110	6	30		
2,6-Dinitrotoluene	69	82	35 - 110	16	30		
2-Chloronaphthalene	64	76	28 - 110	15	30		
2-Chlorophenol	63	78	10 - 110	19	47		
2-Methylnaphthalene	69	81	10 - 133	14	42		
2-Methylphenol	71	80	24 - 110	11	51		
2-Nitroaniline	78	89	39 - 110	12	31	J	J
2-Nitrophenol	67	83	10 - 110	21	49		
3,3'-Dichlorobenzidine	5	3	10 - 110	44	56	J F1	J F1
3-Nitroaniline	29	63	10 - 110	73	30	J	J F2
4,6-Dinitro-2-methylphenol	18	15	10 - 110	18	55	J	J
4-Bromophenyl phenyl ether	70	81	33 - 110	13	30		
4-Chloro-3-methylphenol	79	91	25 - 110	13	54		
4-Chloroaniline	14	10	10 - 110	31	36	J	J
4-Chlorophenyl phenyl ether	67	79	32 - 110	15	30		
4-Nitroaniline	16	15	10 - 110	5	48	J	J
4-Nitrophenol	71	84	10 - 113	16	49	J	J
Acenaphthene	66	77	22 - 110	13	99		
Acenaphthylene	69	80	24 - 110	13	99		
Acetophenone	59	69	31 - 110	14	43		
Anthracene	72	85	20 - 110	15	99		
Atrazine	71	79	45 - 118	9	30		
Benzaldehyde	58	72	23 - 110	19	42		
Benzo[a]anthracene	70	82	10 - 122	13	99		
Benzo[a]pyrene	63	73	10 - 110	11	99		

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-188744

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52811-C-4-F MS	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188744	Lab File ID:	50712015.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.81 g
Analysis Date:	07/12/2015 1440			Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1244			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52811-C-4-G MSD	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188744	Lab File ID:	50712016.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.23 g
Analysis Date:	07/12/2015 1503			Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1244			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	68	90	12 - 118	21	99		
Benzo[g,h,i]perylene	31	36	10 - 117	10	99	J	J
Benzo[k]fluoranthene	74	84	10 - 121	10	99		
Bis(2-chloroethoxy)methane	65	79	26 - 110	18	37		
Bis(2-chloroethyl)ether	55	67	21 - 110	18	55		
Bis(2-ethylhexyl) phthalate	79	99	40 - 110	20	30		
Butyl benzyl phthalate	80	102	44 - 110	23	30		
Caprolactam	82	90	10 - 134	8	32		
Carbazole	71	80	34 - 110	11	30		
Chrysene	67	79	10 - 125	13	99		
Dibenz(a,h)anthracene	41	44	14 - 113	5	99	J	J
Dibenzofuran	65	77	29 - 110	14	30		
Diethyl phthalate	71	82	42 - 110	13	30		
Dimethyl phthalate	69	80	41 - 110	13	30		
Di-n-butyl phthalate	74	87	43 - 110	14	30		
Di-n-octyl phthalate	96	123	24 - 119	23	30		F1
Fluoranthene	73	82	10 - 110	8	99		
Fluorene	69	80	23 - 110	13	99		
Hexachlorobenzene	64	77	34 - 110	17	30		
Hexachlorobutadiene	56	67	25 - 110	17	34		
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	11	10	12 - 110	14	50	J F1	J F1
Indeno[1,2,3-cd]pyrene	37	42	10 - 114	9	99	J	J
Isophorone	70	83	29 - 110	16	38		
Naphthalene	58	72	10 - 111	19	99		
Nitrobenzene	61	73	23 - 110	16	41		
N-Nitrosodi-n-propylamine	68	76	26 - 110	9	42		
N-Nitrosodiphenylamine	67	77	22 - 110	12	30		
Pentachlorophenol	52	60	10 - 110	15	50		
Phenol	67	79	17 - 110	14	53		
Phenanthrene	67	75	10 - 166	9	99		
Pyrene	67	80	10 - 147	13	99		

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-188744

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-52811-C-4-F MS	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188744	Lab File ID:	50712015.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.81 g
Analysis Date:	07/12/2015 1440			Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1244			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52811-C-4-G MSD	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188744	Lab File ID:	50712016.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.23 g
Analysis Date:	07/12/2015 1503			Final Weight/Volume:	2 mL
Prep Date:	07/10/2015 1244			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
3 & 4 Methylphenol	72	82	25 - 110	12	50		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	66	78	24 - 110
2-Fluorophenol (Surr)	65	76	24 - 110
2,4,6-Tribromophenol (Surr)	67	75	10 - 110
Nitrobenzene-d5 (Surr)	59	70	20 - 110
Phenol-d5 (Surr)	68	81	26 - 110
Terphenyl-d14 (Surr)	69	81	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-188799

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188799/17-A	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188799	Lab File ID:	50714005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/14/2015 1311	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4,5-Trichlorophenol	ND		25	330
2,4,6-Trichlorophenol	ND		8.9	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2-Chlorophenol	ND		8.2	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	30.5	J	19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-188799

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188799/17-A	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188799	Lab File ID:	50714005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/14/2015 1311	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	16.0	J	15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	56	24 - 110
2-Fluorophenol (Surr)	52	24 - 110
2,4,6-Tribromophenol (Surr)	23	10 - 110
Nitrobenzene-d5 (Surr)	51	20 - 110
Phenol-d5 (Surr)	57	26 - 110
Terphenyl-d14 (Surr)	78	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-188799

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188799/18-A	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188799	Lab File ID:	50714025.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/14/2015 1423	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	345	52	35 - 110	
2,2'-oxybis[1-chloropropane]	667	351	53	29 - 110	
2,4,5-Trichlorophenol	667	318	48	25 - 110	J
2,4,6-Trichlorophenol	667	250	37	12 - 110	J
2,4-Dichlorophenol	667	347	52	39 - 110	
2,4-Dimethylphenol	667	350	52	29 - 110	
2,4-Dinitrophenol	1330	437	33	10 - 110	J
2,4-Dinitrotoluene	667	481	72	48 - 110	
2,6-Dinitrotoluene	667	445	67	45 - 110	
2-Chloronaphthalene	667	343	51	32 - 110	
2-Chlorophenol	667	341	51	37 - 110	
2-Methylnaphthalene	667	353	53	36 - 110	
2-Methylphenol	667	371	56	41 - 110	
2-Nitroaniline	667	464	70	45 - 110	J
2-Nitrophenol	667	363	55	34 - 110	
3,3'-Dichlorobenzidine	1330	877	66	28 - 110	J
3-Nitroaniline	667	493	74	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	646	48	10 - 110	J
4-Bromophenyl phenyl ether	667	454	68	39 - 110	
4-Chloro-3-methylphenol	667	453	68	48 - 110	
4-Chloroaniline	667	348	52	30 - 110	
4-Chlorophenyl phenyl ether	667	394	59	40 - 110	
4-Nitroaniline	667	523	78	48 - 110	J
4-Nitrophenol	1330	873	65	28 - 110	J
Acenaphthene	667	354	53	38 - 110	
Acenaphthylene	667	365	55	40 - 110	
Acetophenone	667	336	50	40 - 110	
Anthracene	667	472	71	48 - 110	
Atrazine	1330	1060	80	66 - 127	
Benzaldehyde	1330	759	57	32 - 110	
Benzo[a]anthracene	667	474	71	50 - 110	
Benzo[a]pyrene	667	451	68	44 - 110	
Benzo[b]fluoranthene	667	451	68	43 - 110	
Benzo[g,h,i]perylene	667	445	67	51 - 110	
Benzo[k]fluoranthene	667	448	67	38 - 105	
Bis(2-chloroethoxy)methane	667	347	52	32 - 110	
Bis(2-chloroethyl)ether	667	323	48	34 - 110	J
Bis(2-ethylhexyl) phthalate	667	561	84	50 - 110	
Butyl benzyl phthalate	667	518	78	51 - 110	
Caprolactam	1330	1110	83	44 - 114	
Carbazole	667	483	72	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-188799

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188799/18-A	Analysis Batch:	240-189030	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-188799	Lab File ID:	50714025.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/14/2015 1423	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/11/2015 1012			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	481	72	50 - 110	
Dibenz(a,h)anthracene	667	448	67	51 - 110	
Dibenzofuran	667	369	55	43 - 110	
Diethyl phthalate	667	475	71	52 - 110	
Dimethyl phthalate	667	440	66	50 - 110	
Di-n-butyl phthalate	667	515	77	51 - 110	
Di-n-octyl phthalate	667	466	70	48 - 110	
Fluoranthene	667	491	74	51 - 110	
Fluorene	667	395	59	46 - 110	
Hexachlorobenzene	667	443	66	43 - 110	
Hexachlorobutadiene	667	326	49	29 - 110	J
Hexachlorocyclopentadiene	667	161	24	12 - 110	J
Hexachloroethane	667	308	46	30 - 110	J
Indeno[1,2,3-cd]pyrene	667	442	66	50 - 110	
Isophorone	667	366	55	36 - 110	
Naphthalene	667	322	48	36 - 110	J
Nitrobenzene	667	331	50	32 - 110	
N-Nitrosodi-n-propylamine	667	382	57	38 - 110	
N-Nitrosodiphenylamine	1330	903	68	46 - 110	
Pentachlorophenol	1330	655	49	10 - 110	
Phenol	667	362	54	38 - 110	
Phenanthrene	667	446	67	49 - 110	
Pyrene	667	467	70	49 - 110	
3 & 4 Methylphenol	667	389	58	40 - 110	J

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	53	24 - 110
2-Fluorophenol (Surr)	53	24 - 110
2,4,6-Tribromophenol (Surr)	44	10 - 110
Nitrobenzene-d5 (Surr)	62	20 - 110
Phenol-d5 (Surr)	57	26 - 110
Terphenyl-d14 (Surr)	72	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-187336 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-187336/1-A	Analysis Batch:	240-187341	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-187336	Lab File ID:	Y0062906.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/30/2015 1011	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-187336 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-187336/2-A	Analysis Batch:	240-187341	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-187336	Lab File ID:	Y0062907.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/30/2015 1045	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-187336/16-A	Analysis Batch:	240-187341	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-187336	Lab File ID:	Y0062922.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/30/2015 1937	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 0612			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	111	91	80 - 120	20	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-187058

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-187058/14-A	Analysis Batch:	240-187239	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187058	Lab File ID:	P14F062908.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 1651	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-187058

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-187058/15-A	Analysis Batch:	240-187239	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187058	Lab File ID:	P14F062909.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 1718	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-187058/16-A	Analysis Batch:	240-187239	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187058	Lab File ID:	P14F062923.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/29/2015 2342	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/27/2015 0836			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	91	109	70 - 120	18	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-187816

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-187816/21-A	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187816	Lab File ID:	P14F070608.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/06/2015 1627	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-187816

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-187816/22-A	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187816	Lab File ID:	P14F070609.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/06/2015 1654	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-187816/23-A	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187816	Lab File ID:	P14F070631.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/07/2015 0252	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	105	130	70 - 120	21	20		*

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-187368

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-187368/1-A	Analysis Batch:	240-187776	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	07/01/2015 1630	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Calcium	ND		23	500
Cadmium	ND		0.021	0.20
Cobalt	ND		0.047	5.0
Chromium	ND		0.075	0.50
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Potassium	ND		6.2	500
Magnesium	6.97	J	5.2	500
Manganese	ND		0.084	1.5
Silver	ND		0.063	0.50
Sodium	ND		19	500
Nickel	0.124	J	0.080	4.0
Vanadium	ND		0.20	5.0
Zinc	1.18	J	0.56	2.0
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Selenium	ND		0.34	0.50
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-187368

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-187368/2-A	Analysis Batch:	240-187776	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	07/01/2015 1634	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	189	94	80 - 120	
Antimony	50.0	47.6	95	80 - 120	
Barium	200	190	95	80 - 120	
Beryllium	5.00	4.76	95	80 - 120	
Calcium	5000	4950	99	80 - 120	
Cadmium	5.00	4.95	99	80 - 120	
Cobalt	50.0	47.7	95	80 - 120	
Chromium	20.0	19.6	98	80 - 120	
Copper	25.0	24.0	96	80 - 120	
Iron	100	100	100	80 - 120	
Potassium	5000	4760	95	80 - 120	
Magnesium	5000	4850	97	80 - 120	
Manganese	50.0	49.7	99	80 - 120	
Silver	5.00	4.92	98	80 - 120	
Sodium	5000	4850	97	80 - 120	
Nickel	50.0	48.4	97	80 - 120	
Vanadium	50.0	48.3	97	80 - 120	
Zinc	50.0	50.4	101	80 - 120	
Arsenic	200	193	97	80 - 120	
Lead	50.0	47.3	95	80 - 120	
Selenium	200	191	95	80 - 120	
Thallium	200	190	95	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187368

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-52477-C-51-B MS	Analysis Batch:	240-187776	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.26 g
Analysis Date:	07/01/2015 1658			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52477-C-51-C MSD	Analysis Batch:	240-187776	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187368	Lab File ID:	I12070115.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.26 g
Analysis Date:	07/01/2015 1702			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 0830				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	1153	1249	75 - 125	2	20	4	4
Antimony	40	42	75 - 125	3	20	F1	F1
Barium	84	84	75 - 125	0	20		
Beryllium	81	81	75 - 125	1	20		
Calcium	78	119	75 - 125	13	20		
Cadmium	84	84	75 - 125	0	20		
Cobalt	96	100	75 - 125	3	20		
Chromium	84	88	75 - 125	2	20		
Copper	80	78	75 - 125	1	20		
Iron	-93	-310	75 - 125	1	20	4	4
Potassium	90	88	75 - 125	1	20		
Magnesium	85	95	75 - 125	5	20		
Manganese	56	136	75 - 125	13	20	4	4
Silver	84	84	75 - 125	1	20		
Sodium	85	85	75 - 125	0	20		
Nickel	97	101	75 - 125	3	20		
Vanadium	86	80	75 - 125	4	20		
Zinc	97	107	75 - 125	4	20		
Arsenic	82	82	75 - 125	1	20		
Lead	80	90	75 - 125	8	20		
Selenium	79	80	75 - 125	0	20		
Thallium	92	93	75 - 125	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-187589

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-187589/1-A	Analysis Batch:	240-187870	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	07/02/2015 1335	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Calcium	ND		23	500
Cadmium	ND		0.021	0.20
Cobalt	ND		0.047	5.0
Chromium	ND		0.075	0.50
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Potassium	ND		6.2	500
Magnesium	6.10	J	5.2	500
Manganese	ND		0.084	1.5
Silver	ND		0.063	0.50
Sodium	ND		19	500
Nickel	ND		0.080	4.0
Vanadium	ND		0.20	5.0
Zinc	0.586	J	0.56	2.0
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Selenium	ND		0.34	0.50
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Lab Control Sample - Batch: 240-187589

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-187589/2-A	Analysis Batch:	240-187870	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	07/02/2015 1347	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	196	98	80 - 120	
Antimony	50.0	50.7	101	80 - 120	
Barium	200	198	99	80 - 120	
Beryllium	5.00	4.85	97	80 - 120	
Calcium	5000	5010	100	80 - 120	
Cadmium	5.00	5.07	101	80 - 120	
Cobalt	50.0	48.7	97	80 - 120	
Chromium	20.0	20.0	100	80 - 120	
Copper	25.0	24.7	99	80 - 120	
Iron	100	102	102	80 - 120	
Potassium	5000	4840	97	80 - 120	
Magnesium	5000	4910	98	80 - 120	
Manganese	50.0	50.0	100	80 - 120	
Silver	5.00	5.04	101	80 - 120	
Sodium	5000	4990	100	80 - 120	
Nickel	50.0	49.2	98	80 - 120	
Vanadium	50.0	50.0	100	80 - 120	
Zinc	50.0	49.3	99	80 - 120	
Arsenic	200	199	100	80 - 120	
Lead	50.0	48.3	97	80 - 120	
Selenium	200	198	99	80 - 120	
Thallium	200	194	97	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187589

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-52525-6
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/02/2015 1404
Prep Date: 07/01/2015 0950
Leach Date: N/A

Analysis Batch: 240-187870
Prep Batch: 240-187589
Leach Batch: N/A

Instrument ID: I12
Lab File ID: I12070215A.asc
Initial Weight/Volume: 1.20 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-52525-6
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/02/2015 1408
Prep Date: 07/01/2015 0950
Leach Date: N/A

Analysis Batch: 240-187870
Prep Batch: 240-187589
Leach Batch: N/A

Instrument ID: I12
Lab File ID: I12070215A.asc
Initial Weight/Volume: 1.20 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	919	1033	75 - 125	4	20	4	4
Antimony	62	62	75 - 125	0	20	F1	F1
Barium	93	93	75 - 125	0	20		
Beryllium	92	93	75 - 125	0	20		
Calcium	42	-13	75 - 125	8	20	4	4
Cadmium	98	98	75 - 125	0	20		
Cobalt	98	99	75 - 125	1	20		
Chromium	100	101	75 - 125	0	20		
Copper	100	101	75 - 125	1	20		
Iron	680	1132	75 - 125	5	20	4	4
Potassium	104	106	75 - 125	2	20		
Magnesium	84	52	75 - 125	10	20		F1
Manganese	64	145	75 - 125	8	20	4	4
Silver	96	96	75 - 125	1	20		
Sodium	97	97	75 - 125	0	20		
Nickel	101	101	75 - 125	0	20		
Vanadium	99	102	75 - 125	3	20		
Zinc	104	113	75 - 125	3	20		
Arsenic	97	97	75 - 125	0	20		
Lead	84	84	75 - 125	0	20		
Selenium	97	97	75 - 125	0	20		
Thallium	95	95	75 - 125	0	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-187370

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-187370/1-A	Analysis Batch:	240-187628	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	07/01/2015 0940	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-187370

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-187370/2-A	Analysis Batch:	240-187628	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	07/01/2015 0942	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.827	99	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187370

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52477-C-51-E MS	Analysis Batch:	240-187628	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.52 g
Analysis Date:	07/01/2015 0950			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52477-C-51-F MSD	Analysis Batch:	240-187628	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187370	Lab File ID:	070115AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.52 g
Analysis Date:	07/01/2015 0952			Final Weight/Volume:	100 mL
Prep Date:	06/30/2015 1330				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	149	133	80 - 120	8	20	F1	F1

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Method Blank - Batch: 240-187598

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-187598/1-A	Analysis Batch:	240-187808	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	07/02/2015 0828	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-187598

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-187598/2-A	Analysis Batch:	240-187808	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	07/02/2015 0831	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.843	101	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187598

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52525-6	Analysis Batch:	240-187808	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.50 g
Analysis Date:	07/02/2015 0835			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52525-6	Analysis Batch:	240-187808	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.50 g
Analysis Date:	07/02/2015 0838			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	110	114	80 - 120	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52525-1

Duplicate - Batch: 240-187091

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52525-11	Analysis Batch:	240-187091	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/27/2015 1236	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	81	82		20	
Percent Moisture	19	18		20	

Duplicate - Batch: 240-187091

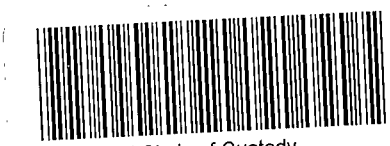
Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52525-7	Analysis Batch:	240-187091	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/27/2015 1236	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	82	81		20	
Percent Moisture	18	19		20	

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-52525 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica Canton

4101 Shuffel Street, N. N.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.2

3.2/C4.2
4.2/C5.2

Chain of Custody Record

103952

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinsley	Site Contact: Kelly Hoehn	Date: 6/25	COC No:
Company Name: ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier: Clary	1 of 2 COCs
Address: 430 N. 1st Ave #720	Analysis Turnaround Time			Sampler: Lisa Weidenaar
City/State/Zip: Minneapolis, MN, 55401	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612 339 9434	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: FORD TCAP	☐ 1 week			Job / SDG No.:
Site:	☐ 2 days			
PO# MN0000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	VOC	GRO	DRO	SVOC	TAL Metals	moisture content	Sample Specific Notes:
HA-27_0-1(20150625)	6/25	0845	G	SL	8			2	2	1	1	1	1	
HA-28_0-1(20150625)	6/25	0905	G	SL	8			2	2	1	1	1	1	
HA-29_0-1(20150625)	6/25	0930	G	SL	8			2	2	1	1	1	1	
HA-30_0-1(20150625)	6/25	1010	G	SL	8			2	2	1	1	1	1	
HA-31_0-1(20150625)	6/25	1035	G	SL	8			2	2	1	1	1	1	
HA-19_0-0.5(20150625)	6/25	1120	G	SL	8			2	2	1	1	1	1	
HA-20_0-1(20150625)	6/25	1150	G	SL	8			2	2	1	1	1	1	
HA-22_0-1(20150625)	6/25	1215	G	SL	8			2	2	1	1	1	1	
MB-1(20150625)	6/25	—	G	—	2			1	1					
								66	11	11	11	11		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____		Therm ID No.: _____	
Relinquished by: Lisa Weidenaar	Company: ARCADIS	Date/Time: 6/25 1100	Received by:	Company: TAmsa	Date/Time: 6-25-15 1100
Relinquished by:	Company: TAmsa	Date/Time: 6-25-15 1900	Received by:	Company: TA	Date/Time: 6/26/15 920
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton
4101 Shuffel Street, N. N.

North Canton, OH 44720
Phone: 330 497 9396 Fax: 330 497 ?

Chain of Custody Record

103953

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager:	Site Contact:	Date:	COC No:
Company Name: See pg 1	Tel/Fax:	Lab Contact:	Carrier:	2 of 2 COCs
Address:	Analysis Turnaround Time			Sampler:
City/State/Zip:	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below _____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name:	☐ 1 week			
Site:	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	VOC	GRO	DRO	SVOC	TAL Metals	moisture content	Sample Specific Notes:
HA-23_0-1(20150624)	6/24	1645	G	SL	8			2	2	1	1	1	1	
HA-24_0-1(20150624)	6/24	1700	G	SL	8			2	2	1	1	1	1	
HA-25_0-1(20150624)	6/24	1720	G	SL	8			2	2	1	1	1	1	
HA-26_0-1(20150624)	6/24	1745	G	SL	8			2	2	1	1	1	1	

Page 192 of 194

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other HCOH

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____		
Relinquished by: Lisa Weidenman	Company: ARCADIS	Date/Time: 6/25 1600	Received by:	Company: TA	Date/Time: 6-25-15 1600
Relinquished by:	Company: TA	Date/Time: 6-25-15 1900	Received by:	Company: TA	Date/Time: 6-26-15 920
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative Login # : 52525
Canton Facility

Client Arcadis Site Name

Cooler unpacked by:

Cooler Received on 6-26-15 Opened on 6-26-15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A (CF +1.0 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~

~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~

☑ See Multiple Cooler Form

IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. ~~Shippers' packing slip attached to the cooler(s)?~~ Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC432654
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # Yes No

Contacted PM Date by via Verbal Voice Mail Other
Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

TestAmerica Multiple Cooler Receipt Form/Narrative — Login # : 57525
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	A	3.2	4.2	ICE
1	1	4.2	5.2	1

July 17, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52525-1
Sample date: 2015-06-25 2015-06-24
Report received by CADENA: 2015-07-15
Initial Data Verification completed by CADENA: 2015-07-17

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch 187301 did not include MS recovery data due to insufficient sample volume available according to the laboratory submittal case narrative.

WI-GRO and WI-DRO QC batch did not include MS recovery data and surrogate recoveries were not available for samples or QC.

WI-DRO QC batch LCS duplicate recovery as an outlier biased high along with an outlier for the LCS/LCSD RPD. Client samples -010, -011, -012 and -013 WI-DRO results should be considered to be estimated and qualified with J flags.

GCMS SVOC method blanks had detections below the RL for bis-2-ethylhexylphthalate and di-n-butylphthalate in QC batch 188799 and for bis-2-ethylhexylphthalate in QC batch 187803 and for bis-2-ethylhexylphthalate, caprolactam, di-n-butylphthalate, isophorone and phenol in QC batch 188303. Client samples -010, -011, -012 and -013 bis-2-ethylhexylphthalate results should be considered to be non-detect at the RL and qualified with UB flags.

GCMS SVOC QC batch 188303 LCS recoveries were outliers biased high for bis-2-ethylhexylphthalate. Client samples -010 and -012 were re-analyzed outside of the referenced holding time in response to this LCS outlier or surrogate recovery outliers. Re-analysis QC batch LCS recovery for this analyte was acceptable. Client sample re-analysis results should all be considered to be estimated and qualified with UJ flags based on the holding time exceedance and the bis-2-ethylhexylphthalate results are also qualified as non-detect as noted above due to associated method blank detections. The original GCMS SVOC sample results were all considered to be the final reportable values with the exception of the bis-2-ethylhexylphthalate for client samples -010 and -012 and the acid fraction analyte results for sample -012 (see surrogate recovery outliers qualifications below) which were reported from the re-analyses results.

GCMS SVOC sample -012 surrogate recoveries were outliers biased low and less than 10% for 1 out of 3 acid fraction surrogates in the original sample analysis. The GCMS SVOC acid fraction analyte results in the original analysis would all be considered to be unusable and qualified with R flags if non-detect and estimated with J flags if detected. The sample was re-analyzed as noted above with acceptable surrogate recoveries and these acid fraction results are considered to be estimated with UJ flags if non-detect and J flags if detected.

GCMS SVOC client sample -008 MS/MSD recoveries were outliers biased low for hexachlorocyclopentadiene and 2,4-dinitrophenol and the MS or MSD recovery but not both along with the MS/MSD RPD were outliers with the recovery biased low for hexachloroethane. Client sample -008 result for these analytes should be considered to be estimated and qualified with a J flag if detected and UJ flag if non-detect. MS or MSD recoveries but not both was an outlier biased low for 4,6-dinitro-2-methylphenol and the MS/MSD RPD was an outlier for pentachlorophenol. Qualification of client sample results was not required based on these QC outliers alone.

GCMS SVOC QC batch 187803, 188303 and 188744 and Metals QC batch 187370 and 187368 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on this sample-specific QC outlier.

Metals sample -006 MS/MSD recoveries were outliers biased low for antimony. Client sample -006 antimony results should be considered to be estimated and qualified with a J flag. MS/MSD recoveries were not considered to be reliable so were not used to qualify results due to elevated levels of target analyte relative to the amount spiked (4X rule) for aluminum, calcium, iron and manganese. MS or MSD recoveries but not both were outliers biased low for magnesium so qualification was not required based on this QC outlier alone.

Metals method blanks had detections below the RL in QC batch 187368 for magnesium, nickel and zinc and in QC batch 187589 for magnesium and zinc. Qualification of client sample results was not required based on these method blank detections.

13 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other and Metals parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52525-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury in Solid Waste
240525251	HA-27_0-1 (20150625)	6/25/2015	8:45:00	X	X	X	X	X	X
2405252510	HA-23_0-1 (20150624)	6/24/2015	4:45:00	X	X	X	X	X	X
2405252511	HA-24_0-1 (20150624)	6/24/2015	5:00:00	X	X	X	X	X	X
2405252512	HA-25_0-1 (20150624)	6/24/2015	5:20:00	X	X	X	X	X	X
2405252513	HA-26_0-1 (20150624)	6/24/2015	5:45:00	X	X	X	X	X	X
240525252	HA-28_0-1 (20150625)	6/25/2015	9:05:00	X	X	X	X	X	X
240525253	HA-29_0-1 (20150625)	6/25/2015	9:30:00	X	X	X	X	X	X
240525254	HA-30_0-1 (20150625)	6/25/2015	10:10:00	X	X	X	X	X	X
240525255	HA-31_0-1 (20150625)	6/25/2015	10:35:00	X	X	X	X	X	X
240525256	HA-19_0-0.5 (20150625)	6/25/2015	11:20:00	X	X	X	X	X	X
240525257	HA-20_0-1 (20150625)	6/25/2015	11:50:00	X	X	X	X	X	X
240525258	HA-22_0-1 (20150625)	6/25/2015	12:15:00	X	X	X	X	X	X
240525259	MB-1 (20150625)	6/25/2015	12:00:00	X		X			

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

		Sample Name:	HA-23_0-1 (20150624)				HA-24_0-1 (20150624)				HA-25_0-1 (20150624)				HA-26_0-1 (20150624)				HA-19_0-0.5 (20150625)				HA-22_0-1 (20150625)			
		Lab Sample ID:	2405252510				2405252511				2405252512				2405252513				240525256				240525258			
		Sample Date:	6/24/2015				6/24/2015				6/24/2015				6/24/2015				6/25/2015				6/25/2015			
Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC																										
OSW-8270C																										
2,4,5-Trichlorophenol	95-95-4										ND	410	ug/kg	UJ												
2,4,6-Trichlorophenol	88-06-2										ND	410	ug/kg	UJ												
2,4-Dichlorophenol	120-83-2										ND	410	ug/kg	UJ												
2,4-Dimethylphenol	105-67-9										ND	410	ug/kg	UJ												
2,4-Dinitrophenol	51-28-5										ND	2000	ug/kg	UJ									ND	2300	ug/kg	UJ
2-Chlorophenol	95-57-8										ND	410	ug/kg	UJ												
2-Methylphenol	95-48-7										ND	410	ug/kg	UJ												
2-Nitrophenol	88-75-5										ND	410	ug/kg	UJ												
3 & 4 Methylphenol	65794-96-9										ND	500	ug/kg	UJ												
4,6-Dinitro-2-methylphenol	534-52-1										ND	2000	ug/kg	UJ												
4-Chloro-3-methylphenol	59-50-7										ND	410	ug/kg	UJ												
4-Nitrophenol	100-02-7										ND	2000	ug/kg	UJ												
Bis(2-ethylhexyl) phthalate	117-81-7		58	380	ug/kg	UB	140	410	ug/kg	UB	34	410	ug/kg	UB	80	420	ug/kg	UB								
Hexachlorocyclopentadiene	77-47-4																						ND	2300	ug/kg	UJ
Hexachloroethane	67-72-1																						ND	470	ug/kg	UJ
Pentachlorophenol	87-86-5										ND	410	ug/kg	UJ												
Phenol	108-95-2										ND	410	ug/kg	UJ												
GC Other																										
PUBL-SW-141																										
WI Diesel Range Organics (C10-C28)	E-1004		63	10	mg/kg	J	21	11	mg/kg	J	13	11	mg/kg	J	3.8	11	mg/kg	J								
Metals																										
OSW-6010B																										
Antimony	7440-36-0																		ND	1.2	mg/kg	UJ				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

		Sample Name:	HA-27_0-1 (20150625)				HA-23_0-1 (20150624)				HA-24_0-1 (20150624)			
		Lab Sample ID:	240525251				2405252510				2405252511			
		Sample Date:	6/25/2015				6/24/2015				6/24/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	580	ug/kg	---	ND	620	ug/kg	---	ND	600	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1200	ug/kg	---	ND	1200	ug/kg	---	ND	1200	ug/kg	---
2-Chlorotoluene	95-49-8	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
2-Hexanone	591-78-6	ND	1200	ug/kg	---	ND	1200	ug/kg	---	ND	1200	ug/kg	---
4-Chlorotoluene	106-43-4	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1200	ug/kg	---	ND	1200	ug/kg	---	ND	1200	ug/kg	---
Acetone	67-64-1	ND	1200	ug/kg	---	ND	1200	ug/kg	---	ND	1200	ug/kg	---
Allyl chloride	107-05-1	ND	580	ug/kg	---	ND	620	ug/kg	---	ND	600	ug/kg	---
Benzene	71-43-2	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Bromobenzene	108-86-1	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Bromochloromethane	74-97-5	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Bromodichloromethane	75-27-4	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Bromoform	75-25-2	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Bromomethane	74-83-9	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Carbon disulfide	75-15-0	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Carbon tetrachloride	56-23-5	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Chlorobenzene	108-90-7	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Chlorodibromomethane	124-48-1	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Chloroethane	75-00-3	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Chloroform	67-66-3	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Chloromethane	74-87-3	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Cyclohexane	110-82-7	ND	580	ug/kg	---	ND	620	ug/kg	---	ND	600	ug/kg	---
Dibromomethane	74-95-3	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	580	ug/kg	---	ND	620	ug/kg	---	ND	600	ug/kg	---
Ethyl ether	60-29-7	ND	580	ug/kg	---	ND	620	ug/kg	---	ND	600	ug/kg	---
Ethylbenzene	100-41-4	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Isopropylbenzene	98-82-8	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Methyl acetate	79-20-9	310	580	ug/kg	J	300	620	ug/kg	J	1100	600	ug/kg	---
Methyl tert butyl ether	1634-04-4	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Methylcyclohexane	108-87-2	ND	580	ug/kg	---	ND	620	ug/kg	---	ND	600	ug/kg	---
Methylene Chloride	75-09-2	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
n-Butylbenzene	104-51-8	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
N-Propylbenzene	103-65-1	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Naphthalene	91-20-3	63	290	ug/kg	J	ND	310	ug/kg	---	ND	300	ug/kg	---
o-Xylene	95-47-6	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
sec-Butylbenzene	135-98-8	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Styrene	100-42-5	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
tert-Butylbenzene	98-06-6	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Tetrachloroethene	127-18-4	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1200	ug/kg	---	ND	1200	ug/kg	---	ND	1200	ug/kg	---
Toluene	108-88-3	ND	290	ug/kg	---	18	310	ug/kg	J	ND	300	ug/kg	---
trans-1,2-Dichloroethene	156-60-5	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Trichloroethene	79-01-6	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---
Vinyl chloride	75-01-4	ND	290	ug/kg	---	ND	310	ug/kg	---	ND	300	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

		Sample Name:	HA-27_0-1 (20150625)				HA-23_0-1 (20150624)				HA-24_0-1 (20150624)			
		Lab Sample ID:	240525251				2405252510				2405252511			
		Sample Date:	6/25/2015				6/24/2015				6/24/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	2500	ug/kg	---	18	750	ug/kg	J	ND	410	ug/kg	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
2,4,5-Trichlorophenol	95-95-4	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
2,4,6-Trichlorophenol	88-06-2	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
2,4-Dichlorophenol	120-83-2	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
2,4-Dimethylphenol	105-67-9	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
2,4-Dinitrophenol	51-28-5	ND	12000	ug/kg	---	ND	3700	ug/kg	---	ND	2000	ug/kg	---
2,4-Dinitrotoluene	121-14-2	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
2,6-Dinitrotoluene	606-20-2	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
2-Chloronaphthalene	91-58-7	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
2-Chlorophenol	95-57-8	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
2-Methylnaphthalene	91-57-6	81	2500	ug/kg	J	85	750	ug/kg	J	40	410	ug/kg	J
2-Methylphenol	95-48-7	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
2-Nitroaniline	88-74-4	ND	12000	ug/kg	---	ND	3700	ug/kg	---	ND	2000	ug/kg	---
2-Nitrophenol	88-75-5	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
3 & 4 Methylphenol	65794-96-9	ND	3100	ug/kg	---	ND	920	ug/kg	---	ND	500	ug/kg	---
3,3'-Dichlorobenzidine	91-94-1	ND	12000	ug/kg	---	ND	3700	ug/kg	---	ND	2000	ug/kg	---
3-Nitroaniline	99-09-2	ND	12000	ug/kg	---	ND	3700	ug/kg	---	ND	2000	ug/kg	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	12000	ug/kg	---	ND	3700	ug/kg	---	ND	2000	ug/kg	---
4-Bromophenyl phenyl ether	101-55-3	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
4-Chloro-3-methylphenol	59-50-7	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
4-Chloroaniline	106-47-8	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
4-Nitroaniline	100-01-6	ND	12000	ug/kg	---	ND	3700	ug/kg	---	ND	2000	ug/kg	---
4-Nitrophenol	100-02-7	ND	12000	ug/kg	---	ND	3700	ug/kg	---	ND	2000	ug/kg	---
Acenaphthene	83-32-9	500	2500	ug/kg	J	250	750	ug/kg	J	9.3	410	ug/kg	J
Acenaphthylene	208-96-8	130	2500	ug/kg	J	31	750	ug/kg	J	7.0	410	ug/kg	J
Acetophenone	98-86-2	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Anthracene	120-12-7	740	2500	ug/kg	J	530	750	ug/kg	J	37	410	ug/kg	J
Atrazine	1912-24-9	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Benzaldehyde	100-52-7	ND	2500	ug/kg	---	ND	750	ug/kg	---	37	410	ug/kg	J
Benzo[a]anthracene	56-55-3	3400	2500	ug/kg	---	940	750	ug/kg	---	270	410	ug/kg	J
Benzo[a]pyrene	50-32-8	2900	2500	ug/kg	---	770	750	ug/kg	---	270	410	ug/kg	J
Benzo[b]fluoranthene	205-99-2	4300	2500	ug/kg	---	1100	750	ug/kg	---	500	410	ug/kg	---
Benzo[g,h,i]perylene	191-24-2	1900	2500	ug/kg	J	460	750	ug/kg	J	140	410	ug/kg	J
Benzo[k]fluoranthene	207-08-9	1600	2500	ug/kg	J	330	750	ug/kg	J	220	410	ug/kg	J
Bis(2-chloroethoxy)methane	111-91-1	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Bis(2-chloroethyl)ether	111-44-4	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Bis(2-ethylhexyl) phthalate	117-81-7	ND	2500	ug/kg	---	58	380	ug/kg	UB	140	410	ug/kg	UB
Butyl benzyl phthalate	85-68-7	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Caprolactam	105-60-2	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Carbazole	86-74-8	540	2500	ug/kg	J	100	750	ug/kg	J	ND	410	ug/kg	---
Chrysene	218-01-9	4000	2500	ug/kg	---	910	750	ug/kg	---	300	410	ug/kg	J
Di-n-butyl phthalate	84-74-2	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Di-n-octyl phthalate	117-84-0	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Dibenz(a,h)anthracene	53-70-3	600	2500	ug/kg	J	120	750	ug/kg	J	ND	410	ug/kg	---
Dibenzofuran	132-64-9	200	2500	ug/kg	J	130	750	ug/kg	J	18	410	ug/kg	J
Diethyl phthalate	84-66-2	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Dimethyl phthalate	131-11-3	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Fluoranthene	206-44-0	6200	2500	ug/kg	---	2100	750	ug/kg	---	430	410	ug/kg	---
Fluorene	86-73-7	400	2500	ug/kg	J	250	750	ug/kg	J	8.7	410	ug/kg	J
Hexachlorobenzene	118-74-1	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Hexachlorocyclopentadiene	77-47-4	ND	12000	ug/kg	---	ND	3700	ug/kg	---	ND	2000	ug/kg	---
Hexachloroethane	67-72-1	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Indeno[1,2,3-cd]pyrene	193-39-5	1600	2500	ug/kg	J	390	750	ug/kg	J	110	410	ug/kg	J
Isophorone	78-59-1	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
N-Nitrosodi-n-propylamine	621-64-7	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
N-Nitrosodiphenylamine	86-30-6	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Naphthalene	91-20-3	110	2500	ug/kg	J	38	750	ug/kg	J	24	410	ug/kg	J
Nitrobenzene	98-95-3	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Pentachlorophenol	87-86-5	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Phenanthrene	85-01-8	3400	2500	ug/kg	---	1700	750	ug/kg	---	140	410	ug/kg	J
Phenol	108-95-2	ND	2500	ug/kg	---	ND	750	ug/kg	---	ND	410	ug/kg	---
Pyrene	129-00-0	5400	2500	ug/kg	---	1700	750	ug/kg	---	540	410	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

			Sample Name:	HA-27_0-1 (20150625)				HA-23_0-1 (20150624)				HA-24_0-1 (20150624)			
			Lab Sample ID:	240525251				2405252510				2405252511			
			Sample Date:	6/25/2015				6/24/2015				6/24/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	13	mg/kg	---	ND	12	mg/kg	---	ND	13	mg/kg	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	160	53	mg/kg	---	63	10	mg/kg	J	21	11	mg/kg	J
Metals														
	OSW-6010B													
	Aluminum	7429-90-5	4700	21	mg/kg	---	5700	17	mg/kg	---	8800	17	mg/kg	---
	Antimony	7440-36-0	0.73	1.0	mg/kg	J	ND	0.86	mg/kg	---	ND	0.87	mg/kg	---
	Arsenic	7440-38-2	4.2	1.0	mg/kg	---	3.2	0.86	mg/kg	---	4.6	0.87	mg/kg	---
	Barium	7440-39-3	53	21	mg/kg	---	46	17	mg/kg	---	42	17	mg/kg	---
	Beryllium	7440-41-7	0.29	0.52	mg/kg	J	0.32	0.43	mg/kg	J	0.50	0.43	mg/kg	---
	Cadmium	7440-43-9	0.31	0.21	mg/kg	---	0.24	0.17	mg/kg	---	0.22	0.17	mg/kg	---
	Calcium	7440-70-2	31000	520	mg/kg	---	39000	430	mg/kg	---	18000	430	mg/kg	---
	Chromium	7440-47-3	11	0.52	mg/kg	---	12	0.43	mg/kg	---	16	0.43	mg/kg	---
	Cobalt	7440-48-4	5.9	5.2	mg/kg	---	5.6	4.3	mg/kg	---	9.3	4.3	mg/kg	---
	Copper	7440-50-8	15	2.6	mg/kg	---	11	2.2	mg/kg	---	16	2.2	mg/kg	---
	Iron	7439-89-6	12000	10	mg/kg	---	12000	8.6	mg/kg	---	16000	8.7	mg/kg	---
	Lead	7439-92-1	55	0.31	mg/kg	---	13	0.26	mg/kg	---	18	0.26	mg/kg	---
	Magnesium	7439-95-4	14000	520	mg/kg	---	18000	430	mg/kg	---	6500	430	mg/kg	---
	Manganese	7439-96-5	460	1.6	mg/kg	---	430	1.3	mg/kg	---	300	1.3	mg/kg	---
	Nickel	7440-02-0	17	4.2	mg/kg	---	14	3.4	mg/kg	---	22	3.5	mg/kg	---
	Potassium	7440-09-7	1300	520	mg/kg	---	1400	430	mg/kg	---	3400	430	mg/kg	---
	Selenium	7782-49-2	ND	0.52	mg/kg	---	ND	0.43	mg/kg	---	0.34	0.43	mg/kg	J
	Silver	7440-22-4	ND	0.52	mg/kg	---	ND	0.43	mg/kg	---	ND	0.43	mg/kg	---
	Sodium	7440-23-5	120	520	mg/kg	J	92	430	mg/kg	J	140	430	mg/kg	J
	Thallium	7440-28-0	ND	1.0	mg/kg	---	ND	0.86	mg/kg	---	ND	0.87	mg/kg	---
	Vanadium	7440-62-2	14	5.2	mg/kg	---	17	4.3	mg/kg	---	13	4.3	mg/kg	---
	Zinc	7440-66-6	65	2.1	mg/kg	---	37	1.7	mg/kg	---	49	1.7	mg/kg	---
	OSW-7471A													
	Mercury	7439-97-6	0.040	0.11	mg/kg	J	ND	0.10	mg/kg	---	0.021	0.14	mg/kg	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

		Sample Name:	HA-25_0-1 (20150624)				HA-26_0-1 (20150624)				HA-28_0-1 (20150625)			
		Lab Sample ID:	2405252512				2405252513				240525252			
		Sample Date:	6/24/2015				6/24/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	ND	310	ug/kg	---	ND	340	ug/kg	---	26	380	ug/kg	J
1,2-Dibromo-3-Chloropropane	96-12-8	ND	610	ug/kg	---	ND	680	ug/kg	---	ND	760	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1200	ug/kg	---	ND	1400	ug/kg	---	ND	1500	ug/kg	---
2-Chlorotoluene	95-49-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
2-Hexanone	591-78-6	ND	1200	ug/kg	---	ND	1400	ug/kg	---	ND	1500	ug/kg	---
4-Chlorotoluene	106-43-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1200	ug/kg	---	ND	1400	ug/kg	---	ND	1500	ug/kg	---
Acetone	67-64-1	ND	1200	ug/kg	---	ND	1400	ug/kg	---	ND	1500	ug/kg	---
Allyl chloride	107-05-1	ND	610	ug/kg	---	ND	680	ug/kg	---	ND	760	ug/kg	---
Benzene	71-43-2	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Bromobenzene	108-86-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Bromochloromethane	74-97-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Bromodichloromethane	75-27-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Bromoform	75-25-2	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Bromomethane	74-83-9	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Carbon disulfide	75-15-0	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Carbon tetrachloride	56-23-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Chlorobenzene	108-90-7	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Chlorodibromomethane	124-48-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Chloroethane	75-00-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Chloroform	67-66-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Chloromethane	74-87-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Cyclohexane	110-82-7	ND	610	ug/kg	---	ND	680	ug/kg	---	ND	760	ug/kg	---
Dibromomethane	74-95-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	610	ug/kg	---	ND	680	ug/kg	---	ND	760	ug/kg	---
Ethyl ether	60-29-7	ND	610	ug/kg	---	ND	680	ug/kg	---	ND	760	ug/kg	---
Ethylbenzene	100-41-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Isopropylbenzene	98-82-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Methyl acetate	79-20-9	270	610	ug/kg	J	310	680	ug/kg	J	300	760	ug/kg	J
Methyl tert butyl ether	1634-04-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Methylcyclohexane	108-87-2	ND	610	ug/kg	---	ND	680	ug/kg	---	68	760	ug/kg	J
Methylene Chloride	75-09-2	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
n-Butylbenzene	104-51-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
N-Propylbenzene	103-65-1	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Naphthalene	91-20-3	ND	310	ug/kg	---	ND	340	ug/kg	---	64	380	ug/kg	J
o-Xylene	95-47-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
sec-Butylbenzene	135-98-8	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Styrene	100-42-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
tert-Butylbenzene	98-06-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Tetrachloroethene	127-18-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1200	ug/kg	---	ND	1400	ug/kg	---	ND	1500	ug/kg	---
Toluene	108-88-3	ND	310	ug/kg	---	ND	340	ug/kg	---	22	380	ug/kg	J
trans-1,2-Dichloroethene	156-60-5	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Trichloroethene	79-01-6	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---
Vinyl chloride	75-01-4	ND	310	ug/kg	---	ND	340	ug/kg	---	ND	380	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

		Sample Name:	HA-25_0-1 (20150624)				HA-26_0-1 (20150624)				HA-28_0-1 (20150625)			
		Lab Sample ID:	2405252512				2405252513				240525252			
		Sample Date:	6/24/2015				6/24/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	410	ug/kg	---	ND	420	ug/kg	---	35	1400	ug/kg	J
2,2'-oxybis[1-chloropropane]	108-60-1	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
2,4,5-Trichlorophenol	95-95-4	ND	410	ug/kg	UJ	ND	420	ug/kg	---	ND	1400	ug/kg	---
2,4,6-Trichlorophenol	88-06-2	ND	410	ug/kg	UJ	ND	420	ug/kg	---	ND	1400	ug/kg	---
2,4-Dichlorophenol	120-83-2	ND	410	ug/kg	UJ	ND	420	ug/kg	---	ND	1400	ug/kg	---
2,4-Dimethylphenol	105-67-9	ND	410	ug/kg	UJ	ND	420	ug/kg	---	ND	1400	ug/kg	---
2,4-Dinitrophenol	51-28-5	ND	2000	ug/kg	UJ	ND	2000	ug/kg	---	ND	6900	ug/kg	---
2,4-Dinitrotoluene	121-14-2	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
2,6-Dinitrotoluene	606-20-2	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
2-Chloronaphthalene	91-58-7	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
2-Chlorophenol	95-57-8	ND	410	ug/kg	UJ	ND	420	ug/kg	---	ND	1400	ug/kg	---
2-Methylnaphthalene	91-57-6	ND	410	ug/kg	---	ND	420	ug/kg	---	550	1400	ug/kg	J
2-Methylphenol	95-48-7	ND	410	ug/kg	UJ	ND	420	ug/kg	---	ND	1400	ug/kg	---
2-Nitroaniline	88-74-4	ND	2000	ug/kg	---	ND	2000	ug/kg	---	ND	6900	ug/kg	---
2-Nitrophenol	88-75-5	ND	410	ug/kg	UJ	ND	420	ug/kg	---	ND	1400	ug/kg	---
3 & 4 Methylphenol	65794-96-9	ND	500	ug/kg	UJ	ND	510	ug/kg	---	ND	1700	ug/kg	---
3,3'-Dichlorobenzidine	91-94-1	ND	2000	ug/kg	---	ND	2000	ug/kg	---	ND	6900	ug/kg	---
3-Nitroaniline	99-09-2	ND	2000	ug/kg	---	ND	2000	ug/kg	---	ND	6900	ug/kg	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	2000	ug/kg	UJ	ND	2000	ug/kg	---	ND	6900	ug/kg	---
4-Bromophenyl phenyl ether	101-55-3	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
4-Chloro-3-methylphenol	59-50-7	ND	410	ug/kg	UJ	ND	420	ug/kg	---	ND	1400	ug/kg	---
4-Chloroaniline	106-47-8	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
4-Nitroaniline	100-01-6	ND	2000	ug/kg	---	ND	2000	ug/kg	---	ND	6900	ug/kg	---
4-Nitrophenol	100-02-7	ND	2000	ug/kg	UJ	ND	2000	ug/kg	---	ND	6900	ug/kg	---
Acenaphthene	83-32-9	ND	410	ug/kg	---	ND	420	ug/kg	---	22	1400	ug/kg	J
Acenaphthylene	208-96-8	ND	410	ug/kg	---	ND	420	ug/kg	---	31	1400	ug/kg	J
Acetophenone	98-86-2	ND	410	ug/kg	---	ND	420	ug/kg	---	55	1400	ug/kg	J
Anthracene	120-12-7	6.9	410	ug/kg	J	5.0	420	ug/kg	J	57	1400	ug/kg	J
Atrazine	1912-24-9	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Benzaldehyde	100-52-7	ND	410	ug/kg	---	23	420	ug/kg	J	ND	1400	ug/kg	---
Benzo[a]anthracene	56-55-3	54	410	ug/kg	J	29	420	ug/kg	J	220	1400	ug/kg	J
Benzo[a]pyrene	50-32-8	50	410	ug/kg	J	33	420	ug/kg	J	200	1400	ug/kg	J
Benzo[b]fluoranthene	205-99-2	71	410	ug/kg	J	52	420	ug/kg	J	270	1400	ug/kg	J
Benzo[g,h,i]perylene	191-24-2	28	410	ug/kg	J	21	420	ug/kg	J	110	1400	ug/kg	J
Benzo[k]fluoranthene	207-08-9	41	410	ug/kg	J	26	420	ug/kg	J	150	1400	ug/kg	J
Bis(2-chloroethoxy)methane	111-91-1	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Bis(2-chloroethyl)ether	111-44-4	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Bis(2-ethylhexyl) phthalate	117-81-7	34	410	ug/kg	UB	80	420	ug/kg	UB	ND	1400	ug/kg	---
Butyl benzyl phthalate	85-68-7	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Caprolactam	105-60-2	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Carbazole	86-74-8	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Chrysene	218-01-9	61	410	ug/kg	J	37	420	ug/kg	J	280	1400	ug/kg	J
Di-n-butyl phthalate	84-74-2	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Di-n-octyl phthalate	117-84-0	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Dibenz(a,h)anthracene	53-70-3	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Dibenzofuran	132-64-9	ND	410	ug/kg	---	ND	420	ug/kg	---	120	1400	ug/kg	J
Diethyl phthalate	84-66-2	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Dimethyl phthalate	131-11-3	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Fluoranthene	206-44-0	89	410	ug/kg	J	60	420	ug/kg	J	400	1400	ug/kg	J
Fluorene	86-73-7	ND	410	ug/kg	---	ND	420	ug/kg	---	28	1400	ug/kg	J
Hexachlorobenzene	118-74-1	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Hexachlorocyclopentadiene	77-47-4	ND	2000	ug/kg	---	ND	2000	ug/kg	---	ND	6900	ug/kg	---
Hexachloroethane	67-72-1	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Indeno[1,2,3-cd]pyrene	193-39-5	28	410	ug/kg	J	21	420	ug/kg	J	59	1400	ug/kg	J
Isophorone	78-59-1	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
N-Nitrosodi-n-propylamine	621-64-7	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
N-Nitrosodiphenylamine	86-30-6	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Naphthalene	91-20-3	ND	410	ug/kg	---	ND	420	ug/kg	---	300	1400	ug/kg	J
Nitrobenzene	98-95-3	ND	410	ug/kg	---	ND	420	ug/kg	---	ND	1400	ug/kg	---
Pentachlorophenol	87-86-5	ND	410	ug/kg	UJ	ND	420	ug/kg	---	ND	1400	ug/kg	---
Phenanthrene	85-01-8	25	410	ug/kg	J	29	420	ug/kg	J	350	1400	ug/kg	J
Phenol	108-95-2	ND	410	ug/kg	UJ	ND	420	ug/kg	---	ND	1400	ug/kg	---
Pyrene	129-00-0	91	410	ug/kg	J	57	420	ug/kg	J	400	1400	ug/kg	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

			Sample Name:	HA-25_0-1 (20150624)				HA-26_0-1 (20150624)				HA-28_0-1 (20150625)			
			Lab Sample ID:	2405252512				2405252513				240525252			
			Sample Date:	6/24/2015				6/24/2015				6/25/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	13	mg/kg	---	ND	14	mg/kg	---	ND	11	mg/kg	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	13	11	mg/kg	J	3.8	11	mg/kg	J	340	94	mg/kg	---
Metals														
	OSW-6010B													
	Aluminum	7429-90-5	9000	19	mg/kg	---	8500	21	mg/kg	---	5400	19	mg/kg	---
	Antimony	7440-36-0	ND	0.95	mg/kg	---	1.9	1.1	mg/kg	---	ND	0.93	mg/kg	---
	Arsenic	7440-38-2	2.3	0.95	mg/kg	---	3.6	1.1	mg/kg	---	4.2	0.93	mg/kg	---
	Barium	7440-39-3	58	19	mg/kg	---	180	21	mg/kg	---	67	19	mg/kg	---
	Beryllium	7440-41-7	0.34	0.47	mg/kg	J	0.36	0.53	mg/kg	J	0.38	0.47	mg/kg	J
	Cadmium	7440-43-9	0.080	0.19	mg/kg	J	1.5	0.21	mg/kg	---	0.33	0.19	mg/kg	---
	Calcium	7440-70-2	2200	470	mg/kg	---	3400	530	mg/kg	---	8600	470	mg/kg	---
	Chromium	7440-47-3	21	0.47	mg/kg	---	19	0.53	mg/kg	---	11	0.47	mg/kg	---
	Cobalt	7440-48-4	5.6	4.7	mg/kg	---	6.2	5.3	mg/kg	---	5.9	4.7	mg/kg	---
	Copper	7440-50-8	14	2.4	mg/kg	---	21	2.7	mg/kg	---	13	2.3	mg/kg	---
	Iron	7439-89-6	15000	9.5	mg/kg	---	15000	11	mg/kg	---	11000	9.3	mg/kg	---
	Lead	7439-92-1	6.4	0.28	mg/kg	---	110	0.32	mg/kg	---	28	0.28	mg/kg	---
	Magnesium	7439-95-4	2200	470	mg/kg	---	2000	530	mg/kg	---	3100	470	mg/kg	---
	Manganese	7439-96-5	280	1.4	mg/kg	---	540	1.6	mg/kg	---	480	1.4	mg/kg	---
	Nickel	7440-02-0	15	3.8	mg/kg	---	16	4.3	mg/kg	---	15	3.7	mg/kg	---
	Potassium	7440-09-7	840	470	mg/kg	---	1000	530	mg/kg	---	940	470	mg/kg	---
	Selenium	7782-49-2	0.43	0.47	mg/kg	J	0.63	0.53	mg/kg	---	0.41	0.47	mg/kg	J
	Silver	7440-22-4	ND	0.47	mg/kg	---	ND	0.53	mg/kg	---	ND	0.47	mg/kg	---
	Sodium	7440-23-5	63	470	mg/kg	J	65	530	mg/kg	J	82	470	mg/kg	J
	Thallium	7440-28-0	ND	0.95	mg/kg	---	ND	1.1	mg/kg	---	0.13	0.93	mg/kg	J
	Vanadium	7440-62-2	34	4.7	mg/kg	---	30	5.3	mg/kg	---	20	4.7	mg/kg	---
	Zinc	7440-66-6	33	1.9	mg/kg	---	100	2.1	mg/kg	---	65	1.9	mg/kg	---
	OSW-7471A													
	Mercury	7439-97-6	ND	0.11	mg/kg	---	0.031	0.13	mg/kg	J	0.040	0.11	mg/kg	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

		Sample Name:	HA-29_0-1 (20150625)				HA-30_0-1 (20150625)				HA-31_0-1 (20150625)			
		Lab Sample ID:	240525253				240525254				240525255			
		Sample Date:	6/25/2015				6/25/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	19	360	ug/kg	J	ND	300	ug/kg	---	ND	300	ug/kg	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	720	ug/kg	---	ND	590	ug/kg	---	ND	600	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1400	ug/kg	---	ND	1200	ug/kg	---	ND	1200	ug/kg	---
2-Chlorotoluene	95-49-8	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
2-Hexanone	591-78-6	ND	1400	ug/kg	---	ND	1200	ug/kg	---	ND	1200	ug/kg	---
4-Chlorotoluene	106-43-4	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1400	ug/kg	---	ND	1200	ug/kg	---	ND	1200	ug/kg	---
Acetone	67-64-1	ND	1400	ug/kg	---	ND	1200	ug/kg	---	ND	1200	ug/kg	---
Allyl chloride	107-05-1	ND	720	ug/kg	---	ND	590	ug/kg	---	ND	600	ug/kg	---
Benzene	71-43-2	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Bromobenzene	108-86-1	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Bromochloromethane	74-97-5	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Bromodichloromethane	75-27-4	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Bromoform	75-25-2	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Bromomethane	74-83-9	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Carbon disulfide	75-15-0	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Carbon tetrachloride	56-23-5	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Chlorobenzene	108-90-7	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Chlorodibromomethane	124-48-1	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Chloroethane	75-00-3	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Chloroform	67-66-3	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Chloromethane	74-87-3	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Cyclohexane	110-82-7	ND	720	ug/kg	---	ND	590	ug/kg	---	ND	600	ug/kg	---
Dibromomethane	74-95-3	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	720	ug/kg	---	ND	590	ug/kg	---	ND	600	ug/kg	---
Ethyl ether	60-29-7	ND	720	ug/kg	---	ND	590	ug/kg	---	ND	600	ug/kg	---
Ethylbenzene	100-41-4	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Isopropylbenzene	98-82-8	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Methyl acetate	79-20-9	330	720	ug/kg	J	330	590	ug/kg	J	300	600	ug/kg	J
Methyl tert butyl ether	1634-04-4	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Methylcyclohexane	108-87-2	ND	720	ug/kg	---	ND	590	ug/kg	---	ND	600	ug/kg	---
Methylene Chloride	75-09-2	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
n-Butylbenzene	104-51-8	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
N-Propylbenzene	103-65-1	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Naphthalene	91-20-3	80	360	ug/kg	J	31	300	ug/kg	J	74	300	ug/kg	J
o-Xylene	95-47-6	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
sec-Butylbenzene	135-98-8	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Styrene	100-42-5	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
tert-Butylbenzene	98-06-6	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Tetrachloroethene	127-18-4	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1400	ug/kg	---	ND	1200	ug/kg	---	ND	1200	ug/kg	---
Toluene	108-88-3	ND	360	ug/kg	---	ND	300	ug/kg	---	13	300	ug/kg	J
trans-1,2-Dichloroethene	156-60-5	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Trichloroethene	79-01-6	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---
Vinyl chloride	75-01-4	ND	360	ug/kg	---	ND	300	ug/kg	---	ND	300	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

		Sample Name:	HA-29_0-1 (20150625)				HA-30_0-1 (20150625)				HA-31_0-1 (20150625)			
		Lab Sample ID:	240525253				240525254				240525255			
		Sample Date:	6/25/2015				6/25/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	820	ug/kg	---	23	780	ug/kg	J	ND	2600	ug/kg	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
2,4,5-Trichlorophenol	95-95-4	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
2,4,6-Trichlorophenol	88-06-2	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
2,4-Dichlorophenol	120-83-2	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
2,4-Dimethylphenol	105-67-9	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
2,4-Dinitrophenol	51-28-5	ND	4000	ug/kg	---	ND	3800	ug/kg	---	ND	13000	ug/kg	---
2,4-Dinitrotoluene	121-14-2	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
2,6-Dinitrotoluene	606-20-2	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
2-Chloronaphthalene	91-58-7	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
2-Chlorophenol	95-57-8	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
2-Methylnaphthalene	91-57-6	210	820	ug/kg	J	190	780	ug/kg	J	140	2600	ug/kg	J
2-Methylphenol	95-48-7	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
2-Nitroaniline	88-74-4	ND	4000	ug/kg	---	ND	3800	ug/kg	---	ND	13000	ug/kg	---
2-Nitrophenol	88-75-5	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
3 & 4 Methylphenol	65794-96-9	ND	1000	ug/kg	---	ND	950	ug/kg	---	ND	3200	ug/kg	---
3,3'-Dichlorobenzidine	91-94-1	ND	4000	ug/kg	---	ND	3800	ug/kg	---	ND	13000	ug/kg	---
3-Nitroaniline	99-09-2	ND	4000	ug/kg	---	ND	3800	ug/kg	---	ND	13000	ug/kg	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	4000	ug/kg	---	ND	3800	ug/kg	---	ND	13000	ug/kg	---
4-Bromophenyl phenyl ether	101-55-3	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
4-Chloro-3-methylphenol	59-50-7	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
4-Chloroaniline	106-47-8	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
4-Nitroaniline	100-01-6	ND	4000	ug/kg	---	ND	3800	ug/kg	---	ND	13000	ug/kg	---
4-Nitrophenol	100-02-7	ND	4000	ug/kg	---	ND	3800	ug/kg	---	ND	13000	ug/kg	---
Acenaphthene	83-32-9	11	820	ug/kg	J	140	780	ug/kg	J	430	2600	ug/kg	J
Acenaphthylene	208-96-8	20	820	ug/kg	J	35	780	ug/kg	J	59	2600	ug/kg	J
Acetophenone	98-86-2	ND	820	ug/kg	---	23	780	ug/kg	J	ND	2600	ug/kg	---
Anthracene	120-12-7	26	820	ug/kg	J	320	780	ug/kg	J	700	2600	ug/kg	J
Atrazine	1912-24-9	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Benzaldehyde	100-52-7	ND	820	ug/kg	---	58	780	ug/kg	J	ND	2600	ug/kg	---
Benzo[a]anthracene	56-55-3	86	820	ug/kg	J	610	780	ug/kg	J	3400	2600	ug/kg	---
Benzo[a]pyrene	50-32-8	99	820	ug/kg	J	530	780	ug/kg	J	2400	2600	ug/kg	J
Benzo[b]fluoranthene	205-99-2	140	820	ug/kg	J	770	780	ug/kg	J	3900	2600	ug/kg	---
Benzo[g,h,i]perylene	191-24-2	94	820	ug/kg	J	190	780	ug/kg	J	1400	2600	ug/kg	J
Benzo[k]fluoranthene	207-08-9	50	820	ug/kg	J	280	780	ug/kg	J	1500	2600	ug/kg	J
Bis(2-chloroethoxy)methane	111-91-1	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Bis(2-chloroethyl)ether	111-44-4	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Bis(2-ethylhexyl) phthalate	117-81-7	ND	820	ug/kg	---	53	780	ug/kg	J	210	2600	ug/kg	J
Butyl benzyl phthalate	85-68-7	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Caprolactam	105-60-2	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Carbazole	86-74-8	ND	820	ug/kg	---	100	780	ug/kg	J	730	2600	ug/kg	J
Chrysene	218-01-9	130	820	ug/kg	J	670	780	ug/kg	J	3800	2600	ug/kg	---
Di-n-butyl phthalate	84-74-2	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Di-n-octyl phthalate	117-84-0	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Dibenz(a,h)anthracene	53-70-3	ND	820	ug/kg	---	64	780	ug/kg	J	480	2600	ug/kg	J
Dibenzofuran	132-64-9	24	820	ug/kg	J	110	780	ug/kg	J	180	2600	ug/kg	J
Diethyl phthalate	84-66-2	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Dimethyl phthalate	131-11-3	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Fluoranthene	206-44-0	150	820	ug/kg	J	1400	780	ug/kg	---	6300	2600	ug/kg	---
Fluorene	86-73-7	ND	820	ug/kg	---	190	780	ug/kg	J	340	2600	ug/kg	J
Hexachlorobenzene	118-74-1	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Hexachlorocyclopentadiene	77-47-4	ND	4000	ug/kg	---	ND	3800	ug/kg	---	ND	13000	ug/kg	---
Hexachloroethane	67-72-1	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Indeno[1,2,3-cd]pyrene	193-39-5	53	820	ug/kg	J	180	780	ug/kg	J	1200	2600	ug/kg	J
Isophorone	78-59-1	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
N-Nitrosodi-n-propylamine	621-64-7	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
N-Nitrosodiphenylamine	86-30-6	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Naphthalene	91-20-3	48	820	ug/kg	J	78	780	ug/kg	J	180	2600	ug/kg	J
Nitrobenzene	98-95-3	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Pentachlorophenol	87-86-5	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Phenanthrene	85-01-8	140	820	ug/kg	J	1200	780	ug/kg	---	3400	2600	ug/kg	---
Phenol	108-95-2	ND	820	ug/kg	---	ND	780	ug/kg	---	ND	2600	ug/kg	---
Pyrene	129-00-0	190	820	ug/kg	J	1200	780	ug/kg	---	5200	2600	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

			Sample Name:	HA-29_0-1 (20150625)				HA-30_0-1 (20150625)				HA-31_0-1 (20150625)			
			Lab Sample ID:	240525253				240525254				240525255			
			Sample Date:	6/25/2015				6/25/2015				6/25/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	14	mg/kg	---	ND	12	mg/kg	---	ND	12	mg/kg	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	350	54	mg/kg	---	160	54	mg/kg	---	140	22	mg/kg	---
Metals														
	OSW-6010B													
	Aluminum	7429-90-5	5400	21	mg/kg	---	4400	18	mg/kg	---	4600	19	mg/kg	---
	Antimony	7440-36-0	ND	1.1	mg/kg	---	ND	0.89	mg/kg	---	0.54	0.95	mg/kg	J
	Arsenic	7440-38-2	3.9	1.1	mg/kg	---	2.8	0.89	mg/kg	---	3.7	0.95	mg/kg	---
	Barium	7440-39-3	71	21	mg/kg	---	60	18	mg/kg	---	180	19	mg/kg	---
	Beryllium	7440-41-7	0.40	0.54	mg/kg	J	0.32	0.44	mg/kg	J	0.26	0.48	mg/kg	J
	Cadmium	7440-43-9	0.34	0.21	mg/kg	---	0.41	0.18	mg/kg	---	0.51	0.19	mg/kg	---
	Calcium	7440-70-2	11000	540	mg/kg	---	6800	440	mg/kg	---	12000	480	mg/kg	---
	Chromium	7440-47-3	10	0.54	mg/kg	---	9.3	0.44	mg/kg	---	13	0.48	mg/kg	---
	Cobalt	7440-48-4	5.6	5.4	mg/kg	---	4.7	4.4	mg/kg	---	5.2	4.8	mg/kg	---
	Copper	7440-50-8	13	2.7	mg/kg	---	12	2.2	mg/kg	---	16	2.4	mg/kg	---
	Iron	7439-89-6	12000	11	mg/kg	---	9600	8.9	mg/kg	---	11000	9.5	mg/kg	---
	Lead	7439-92-1	27	0.32	mg/kg	---	21	0.27	mg/kg	---	71	0.29	mg/kg	---
	Magnesium	7439-95-4	2800	540	mg/kg	---	2400	440	mg/kg	---	4600	480	mg/kg	---
	Manganese	7439-96-5	440	1.6	mg/kg	---	390	1.3	mg/kg	---	360	1.4	mg/kg	---
	Nickel	7440-02-0	15	4.3	mg/kg	---	12	3.5	mg/kg	---	14	3.8	mg/kg	---
	Potassium	7440-09-7	900	540	mg/kg	---	870	440	mg/kg	---	800	480	mg/kg	---
	Selenium	7782-49-2	ND	0.54	mg/kg	---	ND	0.44	mg/kg	---	0.32	0.48	mg/kg	J
	Silver	7440-22-4	ND	0.54	mg/kg	---	ND	0.44	mg/kg	---	ND	0.48	mg/kg	---
	Sodium	7440-23-5	67	540	mg/kg	J	52	440	mg/kg	J	73	480	mg/kg	J
	Thallium	7440-28-0	ND	1.1	mg/kg	---	0.14	0.89	mg/kg	J	ND	0.95	mg/kg	---
	Vanadium	7440-62-2	21	5.4	mg/kg	---	16	4.4	mg/kg	---	16	4.8	mg/kg	---
	Zinc	7440-66-6	70	2.1	mg/kg	---	67	1.8	mg/kg	---	61	1.9	mg/kg	---
	OSW-7471A													
	Mercury	7439-97-6	0.031	0.12	mg/kg	J	0.038	0.12	mg/kg	J	0.087	0.11	mg/kg	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

		Sample Name:	HA-19_0-0.5 (20150625)				HA-20_0-1 (20150625)				HA-22_0-1 (20150625)			
		Lab Sample ID:	240525256				240525257				240525258			
		Sample Date:	6/25/2015				6/25/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	760	ug/kg	---	ND	590	ug/kg	---	ND	730	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1500	ug/kg	---	ND	1200	ug/kg	---	ND	1500	ug/kg	---
2-Chlorotoluene	95-49-8	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
2-Hexanone	591-78-6	ND	1500	ug/kg	---	ND	1200	ug/kg	---	ND	1500	ug/kg	---
4-Chlorotoluene	106-43-4	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1500	ug/kg	---	ND	1200	ug/kg	---	ND	1500	ug/kg	---
Acetone	67-64-1	ND	1500	ug/kg	---	ND	1200	ug/kg	---	ND	1500	ug/kg	---
Allyl chloride	107-05-1	ND	760	ug/kg	---	ND	590	ug/kg	---	ND	730	ug/kg	---
Benzene	71-43-2	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Bromobenzene	108-86-1	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Bromochloromethane	74-97-5	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Bromodichloromethane	75-27-4	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Bromoform	75-25-2	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Bromomethane	74-83-9	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Carbon disulfide	75-15-0	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Carbon tetrachloride	56-23-5	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Chlorobenzene	108-90-7	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Chlorodibromomethane	124-48-1	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Chloroethane	75-00-3	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Chloroform	67-66-3	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Chloromethane	74-87-3	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Cyclohexane	110-82-7	ND	760	ug/kg	---	ND	590	ug/kg	---	ND	730	ug/kg	---
Dibromomethane	74-95-3	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	760	ug/kg	---	ND	590	ug/kg	---	ND	730	ug/kg	---
Ethyl ether	60-29-7	ND	760	ug/kg	---	ND	590	ug/kg	---	ND	730	ug/kg	---
Ethylbenzene	100-41-4	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Isopropylbenzene	98-82-8	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Methyl acetate	79-20-9	1500	760	ug/kg	---	420	590	ug/kg	J	880	730	ug/kg	---
Methyl tert butyl ether	1634-04-4	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Methylcyclohexane	108-87-2	ND	760	ug/kg	---	ND	590	ug/kg	---	ND	730	ug/kg	---
Methylene Chloride	75-09-2	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
n-Butylbenzene	104-51-8	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
N-Propylbenzene	103-65-1	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Naphthalene	91-20-3	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
o-Xylene	95-47-6	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
sec-Butylbenzene	135-98-8	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Styrene	100-42-5	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
tert-Butylbenzene	98-06-6	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Tetrachloroethene	127-18-4	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1500	ug/kg	---	ND	1200	ug/kg	---	ND	1500	ug/kg	---
Toluene	108-88-3	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
trans-1,2-Dichloroethene	156-60-5	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Trichloroethene	79-01-6	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---
Vinyl chloride	75-01-4	ND	380	ug/kg	---	ND	300	ug/kg	---	ND	360	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

		Sample Name:	HA-19_0-0.5 (20150625)				HA-20_0-1 (20150625)				HA-22_0-1 (20150625)			
		Lab Sample ID:	240525256				240525257				240525258			
		Sample Date:	6/25/2015				6/25/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
2,4,5-Trichlorophenol	95-95-4	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
2,4,6-Trichlorophenol	88-06-2	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
2,4-Dichlorophenol	120-83-2	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
2,4-Dimethylphenol	105-67-9	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
2,4-Dinitrophenol	51-28-5	ND	4300	ug/kg	---	ND	2000	ug/kg	---	ND	2300	ug/kg	UJ
2,4-Dinitrotoluene	121-14-2	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
2,6-Dinitrotoluene	606-20-2	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
2-Chloronaphthalene	91-58-7	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
2-Chlorophenol	95-57-8	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
2-Methylnaphthalene	91-57-6	26	890	ug/kg	J	6.5	410	ug/kg	J	ND	470	ug/kg	---
2-Methylphenol	95-48-7	60	890	ug/kg	J	ND	410	ug/kg	---	ND	470	ug/kg	---
2-Nitroaniline	88-74-4	ND	4300	ug/kg	---	ND	2000	ug/kg	---	ND	2300	ug/kg	---
2-Nitrophenol	88-75-5	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
3 & 4 Methylphenol	65794-96-9	ND	1100	ug/kg	---	ND	500	ug/kg	---	ND	570	ug/kg	---
3,3'-Dichlorobenzidine	91-94-1	ND	4300	ug/kg	---	ND	2000	ug/kg	---	ND	2300	ug/kg	---
3-Nitroaniline	99-09-2	ND	4300	ug/kg	---	ND	2000	ug/kg	---	ND	2300	ug/kg	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	4300	ug/kg	---	ND	2000	ug/kg	---	ND	2300	ug/kg	---
4-Bromophenyl phenyl ether	101-55-3	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
4-Chloro-3-methylphenol	59-50-7	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
4-Chloroaniline	106-47-8	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
4-Nitroaniline	100-01-6	ND	4300	ug/kg	---	ND	2000	ug/kg	---	ND	2300	ug/kg	---
4-Nitrophenol	100-02-7	ND	4300	ug/kg	---	ND	2000	ug/kg	---	ND	2300	ug/kg	---
Acenaphthene	83-32-9	52	890	ug/kg	J	15	410	ug/kg	J	ND	470	ug/kg	---
Acenaphthylene	208-96-8	20	890	ug/kg	J	8.3	410	ug/kg	J	ND	470	ug/kg	---
Acetophenone	98-86-2	ND	890	ug/kg	---	15	410	ug/kg	J	ND	470	ug/kg	---
Anthracene	120-12-7	85	890	ug/kg	J	28	410	ug/kg	J	8.0	470	ug/kg	J
Atrazine	1912-24-9	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Benzaldehyde	100-52-7	120	890	ug/kg	J	34	410	ug/kg	J	28	470	ug/kg	J
Benzo[a]anthracene	56-55-3	350	890	ug/kg	J	140	410	ug/kg	J	48	470	ug/kg	J
Benzo[a]pyrene	50-32-8	420	890	ug/kg	J	160	410	ug/kg	J	50	470	ug/kg	J
Benzo[b]fluoranthene	205-99-2	770	890	ug/kg	J	280	410	ug/kg	J	95	470	ug/kg	J
Benzo[g,h,i]perylene	191-24-2	160	890	ug/kg	J	87	410	ug/kg	J	26	470	ug/kg	J
Benzo[k]fluoranthene	207-08-9	320	890	ug/kg	J	96	410	ug/kg	J	23	470	ug/kg	J
Bis(2-chloroethoxy)methane	111-91-1	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Bis(2-chloroethyl)ether	111-44-4	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Bis(2-ethylhexyl) phthalate	117-81-7	100	890	ug/kg	J	93	410	ug/kg	J	60	470	ug/kg	J
Butyl benzyl phthalate	85-68-7	ND	890	ug/kg	---	18	410	ug/kg	J	ND	470	ug/kg	---
Caprolactam	105-60-2	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Carbazole	86-74-8	ND	890	ug/kg	---	40	410	ug/kg	J	ND	470	ug/kg	---
Chrysene	218-01-9	500	890	ug/kg	J	210	410	ug/kg	J	64	470	ug/kg	J
Di-n-butyl phthalate	84-74-2	ND	890	ug/kg	---	36	410	ug/kg	J	30	470	ug/kg	J
Di-n-octyl phthalate	117-84-0	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Dibenz(a,h)anthracene	53-70-3	46	890	ug/kg	J	23	410	ug/kg	J	ND	470	ug/kg	---
Dibenzofuran	132-64-9	81	890	ug/kg	J	13	410	ug/kg	J	ND	470	ug/kg	---
Diethyl phthalate	84-66-2	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Dimethyl phthalate	131-11-3	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Fluoranthene	206-44-0	630	890	ug/kg	J	370	410	ug/kg	J	110	470	ug/kg	J
Fluorene	86-73-7	52	890	ug/kg	J	13	410	ug/kg	J	ND	470	ug/kg	---
Hexachlorobenzene	118-74-1	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Hexachlorocyclopentadiene	77-47-4	ND	4300	ug/kg	---	ND	2000	ug/kg	---	ND	2300	ug/kg	UJ
Hexachloroethane	67-72-1	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	UJ
Indeno[1,2,3-cd]pyrene	193-39-5	160	890	ug/kg	J	81	410	ug/kg	J	24	470	ug/kg	J
Isophorone	78-59-1	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
N-Nitrosodi-n-propylamine	621-64-7	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
N-Nitrosodiphenylamine	86-30-6	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Naphthalene	91-20-3	21	890	ug/kg	J	8.0	410	ug/kg	J	ND	470	ug/kg	---
Nitrobenzene	98-95-3	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Pentachlorophenol	87-86-5	ND	890	ug/kg	---	ND	410	ug/kg	---	ND	470	ug/kg	---
Phenanthrene	85-01-8	360	890	ug/kg	J	180	410	ug/kg	J	47	470	ug/kg	J
Phenol	108-95-2	22	890	ug/kg	J	ND	410	ug/kg	---	ND	470	ug/kg	---
Pyrene	129-00-0	530	890	ug/kg	J	270	410	ug/kg	J	90	470	ug/kg	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

			Sample Name:	HA-19_0-0.5 (20150625)				HA-20_0-1 (20150625)				HA-22_0-1 (20150625)			
			Lab Sample ID:	240525256				240525257				240525258			
			Sample Date:	6/25/2015				6/25/2015				6/25/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	15	mg/kg	---	ND	12	mg/kg	---	ND	14	mg/kg	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	120	25	mg/kg	---	40	11	mg/kg	---	7.1	12	mg/kg	J
Metals														
	OSW-6010B													
	Aluminum	7429-90-5	3800	23	mg/kg	---	9900	22	mg/kg	---	8300	25	mg/kg	---
	Antimony	7440-36-0	ND	1.2	mg/kg	UJ	ND	1.1	mg/kg	---	ND	1.2	mg/kg	---
	Arsenic	7440-38-2	3.3	1.2	mg/kg	---	4.8	1.1	mg/kg	---	4.0	1.2	mg/kg	---
	Barium	7440-39-3	91	23	mg/kg	---	150	22	mg/kg	---	100	25	mg/kg	---
	Beryllium	7440-41-7	0.23	0.58	mg/kg	J	0.58	0.55	mg/kg	---	0.44	0.61	mg/kg	J
	Cadmium	7440-43-9	0.41	0.23	mg/kg	---	0.39	0.22	mg/kg	---	0.27	0.25	mg/kg	---
	Calcium	7440-70-2	41000	580	mg/kg	---	24000	550	mg/kg	---	20000	610	mg/kg	---
	Chromium	7440-47-3	13	0.58	mg/kg	---	16	0.55	mg/kg	---	12	0.61	mg/kg	---
	Cobalt	7440-48-4	3.8	5.8	mg/kg	J	9.2	5.5	mg/kg	---	4.5	6.1	mg/kg	J
	Copper	7440-50-8	22	2.9	mg/kg	---	18	2.8	mg/kg	---	13	3.1	mg/kg	---
	Iron	7439-89-6	8600	12	mg/kg	---	16000	11	mg/kg	---	12000	12	mg/kg	---
	Lead	7439-92-1	27	0.35	mg/kg	---	23	0.33	mg/kg	---	18	0.37	mg/kg	---
	Magnesium	7439-95-4	14000	580	mg/kg	---	7700	550	mg/kg	---	5100	610	mg/kg	---
	Manganese	7439-96-5	490	1.7	mg/kg	---	640	1.7	mg/kg	---	320	1.8	mg/kg	---
	Nickel	7440-02-0	10	4.7	mg/kg	---	17	4.4	mg/kg	---	12	4.9	mg/kg	---
	Potassium	7440-09-7	1300	580	mg/kg	---	870	550	mg/kg	---	930	610	mg/kg	---
	Selenium	7782-49-2	0.54	0.58	mg/kg	J	0.54	0.55	mg/kg	J	0.47	0.61	mg/kg	J
	Silver	7440-22-4	ND	0.58	mg/kg	---	ND	0.55	mg/kg	---	ND	0.61	mg/kg	---
	Sodium	7440-23-5	99	580	mg/kg	J	110	550	mg/kg	J	180	610	mg/kg	J
	Thallium	7440-28-0	ND	1.2	mg/kg	---	ND	1.1	mg/kg	---	ND	1.2	mg/kg	---
	Vanadium	7440-62-2	13	5.8	mg/kg	---	28	5.5	mg/kg	---	21	6.1	mg/kg	---
	Zinc	7440-66-6	91	2.3	mg/kg	---	60	2.2	mg/kg	---	48	2.5	mg/kg	---
	OSW-7471A													
	Mercury	7439-97-6	0.051	0.15	mg/kg	J	0.044	0.12	mg/kg	J	0.054	0.14	mg/kg	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

Sample Name: MB-1 (20150625)
Lab Sample ID: 240525259
Sample Date: 6/25/2015

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC					
OSW-8260B					
1,1,1,2-Tetrachloroethane	630-20-6	ND	250	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	250	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	250	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	250	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	250	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	250	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	250	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	250	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	250	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	250	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	250	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	ND	250	ug/kg	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	500	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	250	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	250	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	250	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	250	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	250	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	250	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	250	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	250	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	250	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1000	ug/kg	---
2-Chlorotoluene	95-49-8	ND	250	ug/kg	---
2-Hexanone	591-78-6	ND	1000	ug/kg	---
4-Chlorotoluene	106-43-4	ND	250	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1000	ug/kg	---
Acetone	67-64-1	ND	1000	ug/kg	---
Allyl chloride	107-05-1	ND	500	ug/kg	---
Benzene	71-43-2	ND	250	ug/kg	---
Bromobenzene	108-86-1	ND	250	ug/kg	---
Bromochloromethane	74-97-5	ND	250	ug/kg	---
Bromodichloromethane	75-27-4	ND	250	ug/kg	---
Bromoform	75-25-2	ND	250	ug/kg	---
Bromomethane	74-83-9	ND	250	ug/kg	---
Carbon disulfide	75-15-0	ND	250	ug/kg	---
Carbon tetrachloride	56-23-5	ND	250	ug/kg	---
Chlorobenzene	108-90-7	ND	250	ug/kg	---
Chlorodibromomethane	124-48-1	ND	250	ug/kg	---
Chloroethane	75-00-3	ND	250	ug/kg	---
Chloroform	67-66-3	ND	250	ug/kg	---
Chloromethane	74-87-3	ND	250	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	250	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	250	ug/kg	---
Cyclohexane	110-82-7	ND	500	ug/kg	---
Dibromomethane	74-95-3	ND	250	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	250	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	500	ug/kg	---
Ethyl ether	60-29-7	ND	500	ug/kg	---
Ethylbenzene	100-41-4	ND	250	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	250	ug/kg	---
Isopropylbenzene	98-82-8	ND	250	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	250	ug/kg	---
Methyl acetate	79-20-9	ND	500	ug/kg	---
Methyl tert butyl ether	1634-04-4	ND	250	ug/kg	---
Methylcyclohexane	108-87-2	ND	500	ug/kg	---
Methylene Chloride	75-09-2	ND	250	ug/kg	---
n-Butylbenzene	104-51-8	ND	250	ug/kg	---
N-Propylbenzene	103-65-1	ND	250	ug/kg	---
Naphthalene	91-20-3	ND	250	ug/kg	---
o-Xylene	95-47-6	ND	250	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	250	ug/kg	---
sec-Butylbenzene	135-98-8	ND	250	ug/kg	---
Styrene	100-42-5	ND	250	ug/kg	---
tert-Butylbenzene	98-06-6	ND	250	ug/kg	---
Tetrachloroethene	127-18-4	ND	250	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1000	ug/kg	---
Toluene	108-88-3	ND	250	ug/kg	---
trans-1,2-Dichloroethene	156-60-5	ND	250	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	250	ug/kg	---
Trichloroethene	79-01-6	ND	250	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	250	ug/kg	---
Vinyl chloride	75-01-4	ND	250	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

Sample Name: MB-1 (20150625)
Lab Sample ID: 240525259
Sample Date: 6/25/2015

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC					
OSW-8270C					
1,1'-Biphenyl	92-52-4				
2,2'-oxybis[1-chloropropane]	108-60-1				
2,4,5-Trichlorophenol	95-95-4				
2,4,6-Trichlorophenol	88-06-2				
2,4-Dichlorophenol	120-83-2				
2,4-Dimethylphenol	105-67-9				
2,4-Dinitrophenol	51-28-5				
2,4-Dinitrotoluene	121-14-2				
2,6-Dinitrotoluene	606-20-2				
2-Chloronaphthalene	91-58-7				
2-Chlorophenol	95-57-8				
2-Methylnaphthalene	91-57-6				
2-Methylphenol	95-48-7				
2-Nitroaniline	88-74-4				
2-Nitrophenol	88-75-5				
3 & 4 Methylphenol	65794-96-9				
3,3'-Dichlorobenzidine	91-94-1				
3-Nitroaniline	99-09-2				
4,6-Dinitro-2-methylphenol	534-52-1				
4-Bromophenyl phenyl ether	101-55-3				
4-Chloro-3-methylphenol	59-50-7				
4-Chloroaniline	106-47-8				
4-Chlorophenyl phenyl ether	7005-72-3				
4-Nitroaniline	100-01-6				
4-Nitrophenol	100-02-7				
Acenaphthene	83-32-9				
Acenaphthylene	208-96-8				
Acetophenone	98-86-2				
Anthracene	120-12-7				
Atrazine	1912-24-9				
Benzaldehyde	100-52-7				
Benzo[a]anthracene	56-55-3				
Benzo[a]pyrene	50-32-8				
Benzo[b]fluoranthene	205-99-2				
Benzo[g,h,i]perylene	191-24-2				
Benzo[k]fluoranthene	207-08-9				
Bis(2-chloroethoxy)methane	111-91-1				
Bis(2-chloroethyl)ether	111-44-4				
Bis(2-ethylhexyl) phthalate	117-81-7				
Butyl benzyl phthalate	85-68-7				
Caprolactam	105-60-2				
Carbazole	86-74-8				
Chrysene	218-01-9				
Di-n-butyl phthalate	84-74-2				
Di-n-octyl phthalate	117-84-0				
Dibenz(a,h)anthracene	53-70-3				
Dibenzofuran	132-64-9				
Diethyl phthalate	84-66-2				
Dimethyl phthalate	131-11-3				
Fluoranthene	206-44-0				
Fluorene	86-73-7				
Hexachlorobenzene	118-74-1				
Hexachlorobutadiene	87-68-3				
Hexachlorocyclopentadiene	77-47-4				
Hexachloroethane	67-72-1				
Indeno[1,2,3-cd]pyrene	193-39-5				
Isophorone	78-59-1				
N-Nitrosodi-n-propylamine	621-64-7				
N-Nitrosodiphenylamine	86-30-6				
Naphthalene	91-20-3				
Nitrobenzene	98-95-3				
Pentachlorophenol	87-86-5				
Phenanthrene	85-01-8				
Phenol	108-95-2				
Pyrene	129-00-0				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52525-1

Sample Name: MB-1 (20150625)
Lab Sample ID: 240525259
Sample Date: 6/25/2015

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC VOC					
PUBL-SW-140					
WI Gasoline Range Organics (C6-C10)	E-1005	ND	390	mg/kg	---
GC Other					
PUBL-SW-141					
WI Diesel Range Organics (C10-C28)	E-1004				
Metals					
OSW-6010B					
Aluminum	7429-90-5				
Antimony	7440-36-0				
Arsenic	7440-38-2				
Barium	7440-39-3				
Beryllium	7440-41-7				
Cadmium	7440-43-9				
Calcium	7440-70-2				
Chromium	7440-47-3				
Cobalt	7440-48-4				
Copper	7440-50-8				
Iron	7439-89-6				
Lead	7439-92-1				
Magnesium	7439-95-4				
Manganese	7439-96-5				
Nickel	7440-02-0				
Potassium	7440-09-7				
Selenium	7782-49-2				
Silver	7440-22-4				
Sodium	7440-23-5				
Thallium	7440-28-0				
Vanadium	7440-62-2				
Zinc	7440-66-6				
OSW-7471A					
Mercury	7439-97-6				

ANALYTICAL REPORT

Job Number: 240-52618-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
John McFadden
Project Manager I
7/16/2015 11:10 AM

Designee for
Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
07/16/2015

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CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-52618-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/27/2015 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.2º C and 4.0º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples HA-11_0-1(20150625) (240-52618-1), HA-12_0-1(20150625) (240-52618-2), HA-13_0-1(20150625) (240-52618-3), HA-14_0-1(20150625) (240-52618-4), HA-15_0-1(20150625) (240-52618-5), HA-16_0-0.5(20150625) (240-52618-6), HA-17_0-1(20150625) (240-52618-7), HA-18_0-1(20150625) (240-52618-8) and MB_01(20150625) (240-52618-9) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/30/2015 and analyzed on 07/01/2015, 07/06/2015 and 07/07/2015.

A MS/MSD was prepared for batch 187478, but was analyzed in a different analytical batch. Batch includes HA-14_0-1(20150625) (240-52618-4) and HA-15_0-1(20150625) (240-52618-5), HA-16_0-0.5(20150625) (240-52618-6), HA-17_0-1(20150625) (240-52618-7), HA-18_0-1(20150625) (240-52618-8) and MB_01(20150625) (240-52618-9).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples HA-11_0-1(20150625) (240-52618-1), HA-12_0-1(20150625) (240-52618-2), HA-13_0-1(20150625) (240-52618-3), HA-14_0-1(20150625) (240-52618-4), HA-15_0-1(20150625) (240-52618-5), HA-16_0-0.5(20150625) (240-52618-6), HA-17_0-1(20150625) (240-52618-7) and HA-18_0-1(20150625) (240-52618-8) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/06/2015 and 07/13/2015 and analyzed on 07/12/2015 and 07/15/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate and Di-n-butyl phthalate were detected in method blank MB 240-188010/21-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-188889/11-A at a level exceeding the reporting limit. If the associated

sample reported a result above the MDL and/or RL, the result has been flagged.

Bis(2-ethylhexyl) phthalate failed the recovery criteria high for LCS 240-188010/22-A.

Samples HA-13_0-1(20150625) (240-52618-3)[2X], HA-13_0-1(20150625) (240-52618-3)[2.5X], HA-16_0-0.5(20150625) (240-52618-6) [10X] and HA-16_0-0.5(20150625) (240-52618-6)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The Method Blank and laboratory Control Sample (LCS) for batch 188453 associated with samples HA-11_0-1(20150625) (240-52618-1), HA-12_0-1(20150625) (240-52618-2), HA-13_0-1(20150625) (240-52618-3), HA-14_0-1(20150625) (240-52618-4), HA-15_0-1(20150625) (240-52618-5), HA-16_0-0.5(20150625) (240-52618-6), HA-17_0-1(20150625) (240-52618-7) and HA-18_0-1(20150625) (240-52618-8) had Bis(2-ethylhexyl) phthalate out of control. Upon re-extraction and re-analysis all QC met acceptance criteria, however, sample holding times had been exceeded. both sets of data will be reported.

The continuing calibration verification (CCV) associated with batch 189174 recovered above the upper control limit for N-Nitrosodiphenylamine and Pentachlorophenol. The samples associated with this CCV were non-detect for the affected analytes; therefore, the data have been reported. The following samples are impacted: HA-11_0-1(20150625) (240-52618-1), HA-12_0-1(20150625) (240-52618-2), HA-13_0-1(20150625) (240-52618-3), HA-14_0-1(20150625) (240-52618-4), HA-15_0-1(20150625) (240-52618-5), HA-16_0-0.5(20150625) (240-52618-6), HA-17_0-1(20150625) (240-52618-7) and HA-18_0-1(20150625) (240-52618-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples HA-11_0-1(20150625) (240-52618-1), HA-12_0-1(20150625) (240-52618-2), HA-13_0-1(20150625) (240-52618-3), HA-14_0-1(20150625) (240-52618-4), HA-15_0-1(20150625) (240-52618-5), HA-16_0-0.5(20150625) (240-52618-6), HA-17_0-1(20150625) (240-52618-7), HA-18_0-1(20150625) (240-52618-8) and MB_01(20150625) (240-52618-9) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared and analyzed on 07/01/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples HA-11_0-1(20150625) (240-52618-1), HA-12_0-1(20150625) (240-52618-2), HA-13_0-1(20150625) (240-52618-3), HA-14_0-1(20150625) (240-52618-4), HA-15_0-1(20150625) (240-52618-5), HA-16_0-0.5(20150625) (240-52618-6), HA-17_0-1(20150625) (240-52618-7) and HA-18_0-1(20150625) (240-52618-8) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 07/02/2015 and analyzed on 07/06/2015 and 07/07/2015.

WI Diesel Range Organics (C10-C28) failed the recovery criteria high for LCSD 240-187816/23-A. WI Diesel Range Organics (C10-C28) exceeded the RPD limit.

Sample HA-16_0-0.5(20150625) (240-52618-6)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) : HA-11_0-1(20150625) (240-52618-1), HA-12_0-1(20150625) (240-52618-2), HA-13_0-1(20150625) (240-52618-3), HA-16_0-0.5(20150625) (240-52618-6), HA-17_0-1(20150625) (240-52618-7) and HA-18_0-1(20150625) (240-52618-8).

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 240-187816 recovered outside control limits for the following analytes: WI Diesel Range Organics (C10-C28).

The laboratory control sample duplicate (LCSD) for preparation batch 240-187816 and analytical batch 240-188186 recovered outside acceptance limits for WI Diesel Range Organics (C10-C28). There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported.

The laboratory control sample duplicate (LCSD) for preparation batch 240-187816 and analytical batch 240-188039 recovered outside acceptance limits for WI Diesel Range Organics (C10-C28). There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples HA-11_0-1(20150625) (240-52618-1), HA-12_0-1(20150625) (240-52618-2), HA-13_0-1(20150625) (240-52618-3), HA-14_0-1(20150625) (240-52618-4), HA-15_0-1(20150625) (240-52618-5), HA-16_0-0.5(20150625) (240-52618-6), HA-17_0-1(20150625) (240-52618-7) and HA-18_0-1(20150625) (240-52618-8) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 07/01/2015 and analyzed on 07/02/2015 and 07/06/2015.

Magnesium and Zinc were detected in method blank MB 240-187589/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above

the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples HA-11_0-1(20150625) (240-52618-1), HA-12_0-1(20150625) (240-52618-2), HA-13_0-1(20150625) (240-52618-3), HA-14_0-1(20150625) (240-52618-4), HA-15_0-1(20150625) (240-52618-5), HA-16_0-0.5(20150625) (240-52618-6), HA-17_0-1(20150625) (240-52618-7) and HA-18_0-1(20150625) (240-52618-8) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 07/01/2015 and analyzed on 07/02/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples HA-11_0-1(20150625) (240-52618-1), HA-12_0-1(20150625) (240-52618-2), HA-13_0-1(20150625) (240-52618-3), HA-14_0-1(20150625) (240-52618-4), HA-15_0-1(20150625) (240-52618-5), HA-16_0-0.5(20150625) (240-52618-6), HA-17_0-1(20150625) (240-52618-7) and HA-18_0-1(20150625) (240-52618-8) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 06/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52618-1	**HA-11_0-1(20150625)**					
Methyl acetate		1100		760	ug/Kg	8260B
Naphthalene		64	J	380	ug/Kg	8260B
2-Methylnaphthalene		8.4	J	490	ug/Kg	8270C
Acenaphthene		20	J	490	ug/Kg	8270C
Acenaphthylene		18	J	490	ug/Kg	8270C
Acetophenone		23	J	490	ug/Kg	8270C
Anthracene		55	J	490	ug/Kg	8270C
Benzaldehyde		120	J	490	ug/Kg	8270C
Benzo[a]anthracene		200	J	490	ug/Kg	8270C
Benzo[a]pyrene		190	J	490	ug/Kg	8270C
Benzo[b]fluoranthene		390	J	490	ug/Kg	8270C
Benzo[g,h,i]perylene		93	J	490	ug/Kg	8270C
Benzo[k]fluoranthene		120	J	490	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		320	J B *	490	ug/Kg	8270C
Chrysene		250	J	490	ug/Kg	8270C
Dibenzofuran		56	J	490	ug/Kg	8270C
Di-n-butyl phthalate		31	J B	490	ug/Kg	8270C
Fluoranthene		400	J	490	ug/Kg	8270C
Fluorene		17	J	490	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		80	J	490	ug/Kg	8270C
Phenol		31	J	490	ug/Kg	8270C
Phenanthrene		220	J	490	ug/Kg	8270C
Pyrene		320	J	490	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		48	*	12	mg/Kg	WI-DRO
Aluminum		4500		23	mg/Kg	6010B
Barium		65		23	mg/Kg	6010B
Beryllium		0.24	J	0.58	mg/Kg	6010B
Calcium		31000		580	mg/Kg	6010B
Cadmium		0.33		0.23	mg/Kg	6010B
Cobalt		4.6	J	5.8	mg/Kg	6010B
Chromium		12		0.58	mg/Kg	6010B
Copper		17		2.9	mg/Kg	6010B
Iron		9100		12	mg/Kg	6010B
Potassium		1300		580	mg/Kg	6010B
Magnesium		10000	B	580	mg/Kg	6010B
Manganese		380		1.7	mg/Kg	6010B
Sodium		75	J	580	mg/Kg	6010B
Nickel		11		4.7	mg/Kg	6010B
Vanadium		15		5.8	mg/Kg	6010B
Zinc		62	B	2.3	mg/Kg	6010B
Arsenic		3.1		1.2	mg/Kg	6010B
Lead		19		0.35	mg/Kg	6010B
Mercury		0.043	J	0.13	mg/Kg	7471A
Percent Solids		69		0.10	%	Moisture
Percent Moisture		31		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52618-2	**HA-12_0-1(20150625)**					
Methyl acetate		240	J	560	ug/Kg	8260B
Acenaphthene		21	J	370	ug/Kg	8270C
Acenaphthylene		6.6	J	370	ug/Kg	8270C
Anthracene		67	J	370	ug/Kg	8270C
Benzaldehyde		24	J	370	ug/Kg	8270C
Benzo[a]anthracene		290	J	370	ug/Kg	8270C
Benzo[a]pyrene		270	J	370	ug/Kg	8270C
Benzo[b]fluoranthene		480		370	ug/Kg	8270C
Benzo[g,h,i]perylene		99	J	370	ug/Kg	8270C
Benzo[k]fluoranthene		160	J	370	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		320	J B *	370	ug/Kg	8270C
Carbazole		76	J	370	ug/Kg	8270C
Chrysene		350	J	370	ug/Kg	8270C
Dibenz(a,h)anthracene		38	J	370	ug/Kg	8270C
Dibenzofuran		13	J	370	ug/Kg	8270C
Di-n-butyl phthalate		27	J B	370	ug/Kg	8270C
Fluoranthene		760		370	ug/Kg	8270C
Fluorene		25	J	370	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		100	J	370	ug/Kg	8270C
Phenol		15	J	370	ug/Kg	8270C
Phenanthrene		450		370	ug/Kg	8270C
Pyrene		570		370	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		15	*	9.6	mg/Kg	WI-DRO
Aluminum		5100		21	mg/Kg	6010B
Barium		30		21	mg/Kg	6010B
Beryllium		0.26	J	0.53	mg/Kg	6010B
Calcium		31000		530	mg/Kg	6010B
Cadmium		0.32		0.21	mg/Kg	6010B
Cobalt		5.1	J	5.3	mg/Kg	6010B
Chromium		11		0.53	mg/Kg	6010B
Copper		15		2.6	mg/Kg	6010B
Iron		10000		11	mg/Kg	6010B
Potassium		1500		530	mg/Kg	6010B
Magnesium		13000	B	530	mg/Kg	6010B
Manganese		190		1.6	mg/Kg	6010B
Sodium		94	J	530	mg/Kg	6010B
Nickel		12		4.2	mg/Kg	6010B
Vanadium		13		5.3	mg/Kg	6010B
Zinc		30	B	2.1	mg/Kg	6010B
Arsenic		2.2		1.1	mg/Kg	6010B
Lead		11		0.32	mg/Kg	6010B
Selenium		0.51	J	0.53	mg/Kg	6010B
Percent Solids		89		0.10	%	Moisture
Percent Moisture		11		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52618-3	**HA-13_0-1(20150625)**					
Methyl acetate		310	J	640	ug/Kg	8260B
2-Methylnaphthalene		15	J	980	ug/Kg	8270C
Acenaphthene		150	J	980	ug/Kg	8270C
Acenaphthylene		29	J	980	ug/Kg	8270C
Anthracene		340	J	980	ug/Kg	8270C
Benzaldehyde		59	J	980	ug/Kg	8270C
Benzo[a]anthracene		1400		980	ug/Kg	8270C
Benzo[a]pyrene		1300		980	ug/Kg	8270C
Benzo[b]fluoranthene		2400		980	ug/Kg	8270C
Benzo[g,h,i]perylene		480	J	980	ug/Kg	8270C
Benzo[k]fluoranthene		1100		980	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		440	J B *	980	ug/Kg	8270C
Carbazole		450	J	980	ug/Kg	8270C
Chrysene		1900		980	ug/Kg	8270C
Dibenz(a,h)anthracene		150	J	980	ug/Kg	8270C
Dibenzofuran		93	J	980	ug/Kg	8270C
Fluoranthene		3900		980	ug/Kg	8270C
Fluorene		190	J	980	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		490	J	980	ug/Kg	8270C
Naphthalene		27	J	980	ug/Kg	8270C
Phenol		100	J	980	ug/Kg	8270C
Phenanthrene		2600		980	ug/Kg	8270C
Pyrene		3100		980	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		67	*	9.8	mg/Kg	WI-DRO
Aluminum		4200		19	mg/Kg	6010B
Antimony		0.97		0.93	mg/Kg	6010B
Barium		39		19	mg/Kg	6010B
Beryllium		0.26	J	0.46	mg/Kg	6010B
Calcium		24000		460	mg/Kg	6010B
Cadmium		0.88		0.19	mg/Kg	6010B
Cobalt		5.1		4.6	mg/Kg	6010B
Chromium		12		0.46	mg/Kg	6010B
Copper		16		2.3	mg/Kg	6010B
Iron		11000		9.3	mg/Kg	6010B
Potassium		1200		460	mg/Kg	6010B
Magnesium		6700	B	460	mg/Kg	6010B
Manganese		270		1.4	mg/Kg	6010B
Sodium		62	J	460	mg/Kg	6010B
Nickel		12		3.7	mg/Kg	6010B
Vanadium		14		4.6	mg/Kg	6010B
Zinc		61	B	1.9	mg/Kg	6010B
Arsenic		3.2		0.93	mg/Kg	6010B
Lead		71		0.28	mg/Kg	6010B
Mercury		0.025	J	0.12	mg/Kg	7471A
Percent Solids		85		0.10	%	Moisture
Percent Moisture		15		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52618-4	**HA-14_0-1(20150625)**					
Methyl acetate		290	J	550	ug/Kg	8260B
Methylene Chloride		240	J	280	ug/Kg	8260B
2-Methylnaphthalene		6.1	J	390	ug/Kg	8270C
Acenaphthene		17	J	390	ug/Kg	8270C
Acenaphthylene		7.1	J	390	ug/Kg	8270C
Anthracene		34	J	390	ug/Kg	8270C
Benzaldehyde		35	J	390	ug/Kg	8270C
Benzo[a]anthracene		160	J	390	ug/Kg	8270C
Benzo[a]pyrene		160	J	390	ug/Kg	8270C
Benzo[b]fluoranthene		260	J	390	ug/Kg	8270C
Benzo[g,h,i]perylene		62	J	390	ug/Kg	8270C
Benzo[k]fluoranthene		110	J	390	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		380	J B *	390	ug/Kg	8270C
Chrysene		190	J	390	ug/Kg	8270C
Dibenz(a,h)anthracene		28	J	390	ug/Kg	8270C
Di-n-butyl phthalate		31	J B	390	ug/Kg	8270C
Fluoranthene		340	J	390	ug/Kg	8270C
Fluorene		14	J	390	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		64	J	390	ug/Kg	8270C
Phenanthrene		170	J	390	ug/Kg	8270C
Pyrene		270	J	390	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		8.6	J *	10	mg/Kg	WI-DRO
Aluminum		6500		16	mg/Kg	6010B
Antimony		1.1		0.80	mg/Kg	6010B
Barium		47		16	mg/Kg	6010B
Beryllium		0.35	J	0.40	mg/Kg	6010B
Calcium		11000		400	mg/Kg	6010B
Cadmium		0.23		0.16	mg/Kg	6010B
Cobalt		7.6		4.0	mg/Kg	6010B
Chromium		14		0.40	mg/Kg	6010B
Copper		13		2.0	mg/Kg	6010B
Iron		13000		8.0	mg/Kg	6010B
Potassium		1900		400	mg/Kg	6010B
Magnesium		4000	B	400	mg/Kg	6010B
Manganese		360		1.2	mg/Kg	6010B
Sodium		58	J	400	mg/Kg	6010B
Nickel		16		3.2	mg/Kg	6010B
Vanadium		16		4.0	mg/Kg	6010B
Zinc		56	B	1.6	mg/Kg	6010B
Arsenic		8.0		0.80	mg/Kg	6010B
Lead		62		0.24	mg/Kg	6010B
Selenium		0.27	J	0.40	mg/Kg	6010B
Mercury		0.031	J	0.11	mg/Kg	7471A
Percent Solids		85		0.10	%	Moisture
Percent Moisture		15		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52618-5	**HA-15_0-1(20150625)**					
Methyl acetate		120	J	580	ug/Kg	8260B
Methylene Chloride		280	J	290	ug/Kg	8260B
2-Methylnaphthalene		4.2	J	390	ug/Kg	8270C
Acenaphthene		9.8	J	390	ug/Kg	8270C
Acenaphthylene		4.1	J	390	ug/Kg	8270C
Anthracene		12	J	390	ug/Kg	8270C
Benzaldehyde		19	J	390	ug/Kg	8270C
Benzo[a]anthracene		59	J	390	ug/Kg	8270C
Benzo[a]pyrene		62	J	390	ug/Kg	8270C
Benzo[b]fluoranthene		120	J	390	ug/Kg	8270C
Benzo[g,h,i]perylene		27	J	390	ug/Kg	8270C
Benzo[k]fluoranthene		29	J	390	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		350	J B *	390	ug/Kg	8270C
Chrysene		75	J	390	ug/Kg	8270C
Dibenzofuran		10	J	390	ug/Kg	8270C
Di-n-butyl phthalate		25	J B	390	ug/Kg	8270C
Fluoranthene		110	J	390	ug/Kg	8270C
Fluorene		9.2	J	390	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		30	J	390	ug/Kg	8270C
Phenol		11	J	390	ug/Kg	8270C
Phenanthrene		65	J	390	ug/Kg	8270C
Pyrene		92	J	390	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		7.9	J *	10	mg/Kg	WI-DRO
Aluminum		4500		17	mg/Kg	6010B
Barium		42		17	mg/Kg	6010B
Beryllium		0.19	J	0.43	mg/Kg	6010B
Calcium		6900		430	mg/Kg	6010B
Cadmium		0.12	J	0.17	mg/Kg	6010B
Cobalt		2.0	J	4.3	mg/Kg	6010B
Chromium		8.4		0.43	mg/Kg	6010B
Copper		6.0		2.1	mg/Kg	6010B
Iron		5000		8.6	mg/Kg	6010B
Potassium		400	J	430	mg/Kg	6010B
Magnesium		1600	B	430	mg/Kg	6010B
Manganese		170		1.3	mg/Kg	6010B
Sodium		38	J	430	mg/Kg	6010B
Nickel		5.5		3.4	mg/Kg	6010B
Vanadium		11		4.3	mg/Kg	6010B
Zinc		22	B	1.7	mg/Kg	6010B
Arsenic		1.8		0.86	mg/Kg	6010B
Lead		6.2		0.26	mg/Kg	6010B
Selenium		0.42	J	0.43	mg/Kg	6010B
Percent Solids		85		0.10	%	Moisture
Percent Moisture		15		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52618-6	**HA-16_0-0.5(20150625)**					
Ethylbenzene		98	J	340	ug/Kg	8260B
Methyl acetate		390	J	670	ug/Kg	8260B
m-Xylene & p-Xylene		29	J	340	ug/Kg	8260B
Naphthalene		92	J	340	ug/Kg	8260B
1,2,4-Trimethylbenzene		64	J	340	ug/Kg	8260B
1,3,5-Trimethylbenzene		20	J	340	ug/Kg	8260B
2-Methylnaphthalene		150	J	7300	ug/Kg	8270C
Acenaphthene		1100	J	7300	ug/Kg	8270C
Acenaphthylene		1100	J	7300	ug/Kg	8270C
Anthracene		4200	J	7300	ug/Kg	8270C
Benzo[a]anthracene		12000		7300	ug/Kg	8270C
Benzo[a]pyrene		11000		7300	ug/Kg	8270C
Benzo[b]fluoranthene		17000		7300	ug/Kg	8270C
Benzo[g,h,i]perylene		3500	J	7300	ug/Kg	8270C
Benzo[k]fluoranthene		5900	J	7300	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		730	J B *	7300	ug/Kg	8270C
Chrysene		12000		7300	ug/Kg	8270C
Dibenz(a,h)anthracene		1200	J	7300	ug/Kg	8270C
Dibenzofuran		500	J	7300	ug/Kg	8270C
Fluoranthene		23000		7300	ug/Kg	8270C
Fluorene		1300	J	7300	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		3400	J	7300	ug/Kg	8270C
Naphthalene		190	J	7300	ug/Kg	8270C
Phenanthrene		12000		7300	ug/Kg	8270C
Pyrene		23000		7300	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		2300	*	490	mg/Kg	WI-DRO
Aluminum		5400		16	mg/Kg	6010B
Barium		38		16	mg/Kg	6010B
Beryllium		0.26	J	0.39	mg/Kg	6010B
Calcium		24000		390	mg/Kg	6010B
Cadmium		0.48		0.16	mg/Kg	6010B
Cobalt		5.1		3.9	mg/Kg	6010B
Chromium		12		0.39	mg/Kg	6010B
Copper		12		1.9	mg/Kg	6010B
Iron		10000		7.8	mg/Kg	6010B
Potassium		1200		390	mg/Kg	6010B
Magnesium		5600	B	390	mg/Kg	6010B
Manganese		340		1.2	mg/Kg	6010B
Sodium		96	J	390	mg/Kg	6010B
Nickel		12		3.1	mg/Kg	6010B
Vanadium		16		3.9	mg/Kg	6010B
Zinc		37	B	1.6	mg/Kg	6010B
Arsenic		3.3		0.78	mg/Kg	6010B
Lead		17		0.23	mg/Kg	6010B
Selenium		0.33	J	0.39	mg/Kg	6010B
Mercury		0.022	J	0.12	mg/Kg	7471A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Solids		89		0.10	%	Moisture
Percent Moisture		11		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52618-7	**HA-17_0-1(20150625)**					
Ethylbenzene		74	J	360	ug/Kg	8260B
Methyl acetate		1000		710	ug/Kg	8260B
Naphthalene		41	J	360	ug/Kg	8260B
1,2,4-Trimethylbenzene		44	J	360	ug/Kg	8260B
2-Methylnaphthalene		11	J	450	ug/Kg	8270C
Acenaphthene		29	J	450	ug/Kg	8270C
Acenaphthylene		78	J	450	ug/Kg	8270C
Acetophenone		16	J	450	ug/Kg	8270C
Anthracene		160	J	450	ug/Kg	8270C
Benzaldehyde		91	J	450	ug/Kg	8270C
Benzo[a]anthracene		720		450	ug/Kg	8270C
Benzo[a]pyrene		680		450	ug/Kg	8270C
Benzo[b]fluoranthene		1100		450	ug/Kg	8270C
Benzo[g,h,i]perylene		220	J	450	ug/Kg	8270C
Benzo[k]fluoranthene		400	J	450	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		290	J B *	450	ug/Kg	8270C
Chrysene		760		450	ug/Kg	8270C
Dibenz(a,h)anthracene		83	J	450	ug/Kg	8270C
Dibenzofuran		23	J	450	ug/Kg	8270C
Di-n-butyl phthalate		75	J B	450	ug/Kg	8270C
Fluoranthene		1300		450	ug/Kg	8270C
Fluorene		27	J	450	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		220	J	450	ug/Kg	8270C
Naphthalene		17	J	450	ug/Kg	8270C
Phenol		33	J	450	ug/Kg	8270C
Phenanthrene		450		450	ug/Kg	8270C
Pyrene		1300		450	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		42	*	12	mg/Kg	WI-DRO
Aluminum		7000		25	mg/Kg	6010B
Antimony		0.73	J	1.2	mg/Kg	6010B
Barium		71		25	mg/Kg	6010B
Beryllium		0.35	J	0.61	mg/Kg	6010B
Calcium		18000		610	mg/Kg	6010B
Cadmium		0.32		0.25	mg/Kg	6010B
Cobalt		6.1		6.1	mg/Kg	6010B
Chromium		13		0.61	mg/Kg	6010B
Copper		17		3.1	mg/Kg	6010B
Iron		12000		12	mg/Kg	6010B
Potassium		1300		610	mg/Kg	6010B
Magnesium		5300	B	610	mg/Kg	6010B
Manganese		460		1.8	mg/Kg	6010B
Sodium		59	J	610	mg/Kg	6010B
Nickel		12		4.9	mg/Kg	6010B
Vanadium		20		6.1	mg/Kg	6010B
Zinc		56	B	2.5	mg/Kg	6010B
Arsenic		3.7		1.2	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Lead		28		0.37	mg/Kg	6010B
Mercury		0.036	J	0.12	mg/Kg	7471A
Percent Solids		74		0.10	%	Moisture
Percent Moisture		26		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52618-8	**HA-18_0-1(20150625)**					
Ethylbenzene		48	J	340	ug/Kg	8260B
Methyl acetate		430	J	680	ug/Kg	8260B
1,2,4-Trimethylbenzene		26	J	340	ug/Kg	8260B
2-Methylnaphthalene		6.4	J	410	ug/Kg	8270C
Acenaphthene		4.5	J	410	ug/Kg	8270C
Acenaphthylene		13	J	410	ug/Kg	8270C
Acetophenone		13	J	410	ug/Kg	8270C
Anthracene		18	J	410	ug/Kg	8270C
Benzaldehyde		41	J	410	ug/Kg	8270C
Benzo[a]anthracene		78	J	410	ug/Kg	8270C
Benzo[a]pyrene		79	J	410	ug/Kg	8270C
Benzo[b]fluoranthene		110	J	410	ug/Kg	8270C
Benzo[g,h,i]perylene		31	J	410	ug/Kg	8270C
Benzo[k]fluoranthene		54	J	410	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		310	J B *	410	ug/Kg	8270C
Chrysene		86	J	410	ug/Kg	8270C
Di-n-butyl phthalate		36	J B	410	ug/Kg	8270C
Fluoranthene		130	J	410	ug/Kg	8270C
Fluorene		4.8	J	410	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		34	J	410	ug/Kg	8270C
Naphthalene		7.3	J	410	ug/Kg	8270C
Phenanthrene		56	J	410	ug/Kg	8270C
Pyrene		120	J	410	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		14	*	8.6	mg/Kg	WI-DRO
Aluminum		8700		19	mg/Kg	6010B
Antimony		1.3		0.95	mg/Kg	6010B
Barium		76		19	mg/Kg	6010B
Beryllium		0.46	J	0.47	mg/Kg	6010B
Calcium		10000		470	mg/Kg	6010B
Cadmium		0.32		0.19	mg/Kg	6010B
Cobalt		6.8		4.7	mg/Kg	6010B
Chromium		15		0.47	mg/Kg	6010B
Copper		14		2.4	mg/Kg	6010B
Iron		14000		9.5	mg/Kg	6010B
Potassium		1900		470	mg/Kg	6010B
Magnesium		4200	B	470	mg/Kg	6010B
Manganese		390		1.4	mg/Kg	6010B
Sodium		54	J	470	mg/Kg	6010B
Nickel		15		3.8	mg/Kg	6010B
Vanadium		21		4.7	mg/Kg	6010B
Zinc		53	B	1.9	mg/Kg	6010B
Arsenic		4.5		0.95	mg/Kg	6010B
Lead		27		0.28	mg/Kg	6010B
Mercury		0.019	J	0.13	mg/Kg	7471A
Percent Solids		82		0.10	%	Moisture
Percent Moisture		18		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-52618-9TB	**MB_01(20150625)**					
1,2,4-Trimethylbenzene		14	J	250	ug/Kg	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Method	Analyst	Analyst ID
SW846 8260B	Lata, Todd	TJL2
SW846 8270C	Gruber, John	JMG
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Martin, Aaron	AMM2
SW846 7471A	Walpole, Barbara	BW
EPA Moisture	Ilinkoski, Ashley	AI

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-52618-1	HA-11_0-1(20150625)	Solid	06/25/2015 1730	06/27/2015 1000
240-52618-2	HA-12_0-1(20150625)	Solid	06/25/2015 1750	06/27/2015 1000
240-52618-3	HA-13_0-1(20150625)	Solid	06/25/2015 1815	06/27/2015 1000
240-52618-4	HA-14_0-1(20150625)	Solid	06/25/2015 1830	06/27/2015 1000
240-52618-5	HA-15_0-1(20150625)	Solid	06/25/2015 1540	06/27/2015 1000
240-52618-6	HA-16_0-0.5(20150625)	Solid	06/25/2015 1600	06/27/2015 1000
240-52618-7	HA-17_0-1(20150625)	Solid	06/25/2015 1645	06/27/2015 1000
240-52618-8	HA-18_0-1(20150625)	Solid	06/25/2015 1700	06/27/2015 1000
240-52618-9TB	MB_01(20150625)	Solid	06/25/2015 0000	06/27/2015 1000

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-11_0-1(20150625)**

Lab Sample ID: 240-52618-1 Date Sampled: 06/25/2015 1730
Client Matrix: Solid % Moisture: 31.4 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88237.D
Dilution:	1.0			Initial Weight/Volume:	9.623 g
Analysis Date:	07/01/2015 1040			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		340	1500
Allyl chloride		ND		45	760
Benzene		ND		14	380
Bromobenzene		ND		20	380
Bromochloromethane		ND		110	380
Bromodichloromethane		ND		58	380
Bromoform		ND		92	380
Bromomethane		ND		77	380
2-Butanone (MEK)		ND		110	1500
Carbon disulfide		ND		85	380
Carbon tetrachloride		ND		73	380
Chlorobenzene		ND		62	380
Chlorodibromomethane		ND		70	380
Chloroethane		ND		77	380
Chloroform		ND		54	380
Chloromethane		ND		73	380
2-Chlorotoluene		ND		62	380
4-Chlorotoluene		ND		39	380
cis-1,2-Dichloroethene		ND		58	380
cis-1,3-Dichloropropene		ND		33	380
Cyclohexane		ND		45	760
1,2-Dibromo-3-Chloropropane		ND		110	760
1,2-Dibromoethane		ND		48	380
Dibromomethane		ND		76	380
1,2-Dichlorobenzene		ND		29	380
1,3-Dichlorobenzene		ND		45	380
1,4-Dichlorobenzene		ND		62	380
Dichlorodifluoromethane		ND		92	380
1,1-Dichloroethane		ND		53	380
1,2-Dichloroethane		ND		80	380
1,1-Dichloroethene		ND		45	380
Dichlorofluoromethane		ND		50	760
1,2-Dichloropropane		ND		48	380
1,3-Dichloropropane		ND		35	380
2,2-Dichloropropane		ND		79	380
1,1-Dichloropropene		ND		58	380
Ethylbenzene		ND		53	380
Ethyl ether		ND		150	760
Hexachlorobutadiene		ND		67	380
2-Hexanone		ND		130	1500
Isopropylbenzene		ND		20	380
Methyl acetate		1100		83	760
Methylcyclohexane		ND		58	760
Methylene Chloride		ND		130	380
4-Methyl-2-pentanone (MIBK)		ND		85	1500
Methyl tert butyl ether		ND		45	380

Client Sample ID: **HA-11_0-1(20150625)**

Lab Sample ID: 240-52618-1 Date Sampled: 06/25/2015 1730
Client Matrix: Solid % Moisture: 31.4 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88237.D
Dilution:	1.0			Initial Weight/Volume:	9.623 g
Analysis Date:	07/01/2015 1040			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		30	380
Naphthalene		64	J	39	380
n-Butylbenzene		ND		32	380
N-Propylbenzene		ND		92	380
o-Xylene		ND		26	380
p-Isopropyltoluene		ND		38	380
sec-Butylbenzene		ND		24	380
Styrene		ND		41	380
tert-Butylbenzene		ND		51	380
1,1,1,2-Tetrachloroethane		ND		74	380
1,1,2,2-Tetrachloroethane		ND		65	380
Tetrachloroethene		ND		41	380
Tetrahydrofuran		ND		180	1500
Toluene		ND		15	380
trans-1,2-Dichloroethene		ND		39	380
trans-1,3-Dichloropropene		ND		39	380
1,2,3-Trichlorobenzene		ND		59	380
1,2,4-Trichlorobenzene		ND		45	380
1,1,1-Trichloroethane		ND		64	380
1,1,2-Trichloroethane		ND		130	380
Trichloroethene		ND		59	380
Trichlorofluoromethane		ND		53	380
1,2,3-Trichloropropane		ND		160	380
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		64	380
1,2,4-Trimethylbenzene		ND		20	380
1,3,5-Trimethylbenzene		ND		23	380
Vinyl chloride		ND		85	380

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	83		26 - 141
Dibromofluoromethane (Surr)	69		30 - 122
1,2-Dichloroethane-d4 (Surr)	88		39 - 128
Toluene-d8 (Surr)	85		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-12_0-1(20150625)**

Lab Sample ID: 240-52618-2 Date Sampled: 06/25/2015 1750
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88238.D
Dilution:	1.0			Initial Weight/Volume:	9.999 g
Analysis Date:	07/01/2015 1102			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		250	1100
Allyl chloride		ND		34	560
Benzene		ND		10	280
Bromobenzene		ND		15	280
Bromochloromethane		ND		79	280
Bromodichloromethane		ND		43	280
Bromoform		ND		68	280
Bromomethane		ND		57	280
2-Butanone (MEK)		ND		82	1100
Carbon disulfide		ND		63	280
Carbon tetrachloride		ND		54	280
Chlorobenzene		ND		46	280
Chlorodibromomethane		ND		52	280
Chloroethane		ND		57	280
Chloroform		ND		40	280
Chloromethane		ND		54	280
2-Chlorotoluene		ND		46	280
4-Chlorotoluene		ND		29	280
cis-1,2-Dichloroethene		ND		43	280
cis-1,3-Dichloropropene		ND		25	280
Cyclohexane		ND		34	560
1,2-Dibromo-3-Chloropropane		ND		80	560
1,2-Dibromoethane		ND		36	280
Dibromomethane		ND		56	280
1,2-Dichlorobenzene		ND		21	280
1,3-Dichlorobenzene		ND		34	280
1,4-Dichlorobenzene		ND		46	280
Dichlorodifluoromethane		ND		68	280
1,1-Dichloroethane		ND		39	280
1,2-Dichloroethane		ND		59	280
1,1-Dichloroethene		ND		34	280
Dichlorofluoromethane		ND		37	560
1,2-Dichloropropane		ND		36	280
1,3-Dichloropropane		ND		26	280
2,2-Dichloropropane		ND		58	280
1,1-Dichloropropene		ND		43	280
Ethylbenzene		ND		39	280
Ethyl ether		ND		110	560
Hexachlorobutadiene		ND		49	280
2-Hexanone		ND		94	1100
Isopropylbenzene		ND		15	280
Methyl acetate		240	J	62	560
Methylcyclohexane		ND		43	560
Methylene Chloride		ND		95	280
4-Methyl-2-pentanone (MIBK)		ND		63	1100
Methyl tert butyl ether		ND		34	280

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-12_0-1(20150625)**

Lab Sample ID: 240-52618-2 Date Sampled: 06/25/2015 1750
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88238.D
Dilution:	1.0			Initial Weight/Volume:	9.999 g
Analysis Date:	07/01/2015 1102			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		22	280
Naphthalene		ND		29	280
n-Butylbenzene		ND		24	280
N-Propylbenzene		ND		68	280
o-Xylene		ND		19	280
p-Isopropyltoluene		ND		28	280
sec-Butylbenzene		ND		18	280
Styrene		ND		30	280
tert-Butylbenzene		ND		38	280
1,1,1,2-Tetrachloroethane		ND		55	280
1,1,2,2-Tetrachloroethane		ND		48	280
Tetrachloroethene		ND		30	280
Tetrahydrofuran		ND		130	1100
Toluene		ND		11	280
trans-1,2-Dichloroethene		ND		29	280
trans-1,3-Dichloropropene		ND		29	280
1,2,3-Trichlorobenzene		ND		44	280
1,2,4-Trichlorobenzene		ND		34	280
1,1,1-Trichloroethane		ND		47	280
1,1,2-Trichloroethane		ND		93	280
Trichloroethene		ND		44	280
Trichlorofluoromethane		ND		39	280
1,2,3-Trichloropropane		ND		120	280
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		47	280
1,2,4-Trimethylbenzene		ND		15	280
1,3,5-Trimethylbenzene		ND		17	280
Vinyl chloride		ND		63	280

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	104		26 - 141
Dibromofluoromethane (Surr)	81		30 - 122
1,2-Dichloroethane-d4 (Surr)	107		39 - 128
Toluene-d8 (Surr)	103		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-13_0-1(20150625)**

Lab Sample ID: 240-52618-3 Date Sampled: 06/25/2015 1815
Client Matrix: Solid % Moisture: 15.1 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88239.D
Dilution:	1.0			Initial Weight/Volume:	9.164 g
Analysis Date:	07/01/2015 1123			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		290	1300
Allyl chloride		ND		39	640
Benzene		ND		12	320
Bromobenzene		ND		17	320
Bromochloromethane		ND		90	320
Bromodichloromethane		ND		49	320
Bromoform		ND		78	320
Bromomethane		ND		66	320
2-Butanone (MEK)		ND		94	1300
Carbon disulfide		ND		72	320
Carbon tetrachloride		ND		62	320
Chlorobenzene		ND		53	320
Chlorodibromomethane		ND		59	320
Chloroethane		ND		66	320
Chloroform		ND		46	320
Chloromethane		ND		62	320
2-Chlorotoluene		ND		53	320
4-Chlorotoluene		ND		33	320
cis-1,2-Dichloroethene		ND		49	320
cis-1,3-Dichloropropene		ND		28	320
Cyclohexane		ND		39	640
1,2-Dibromo-3-Chloropropane		ND		91	640
1,2-Dibromoethane		ND		41	320
Dibromomethane		ND		64	320
1,2-Dichlorobenzene		ND		24	320
1,3-Dichlorobenzene		ND		39	320
1,4-Dichlorobenzene		ND		53	320
Dichlorodifluoromethane		ND		78	320
1,1-Dichloroethane		ND		45	320
1,2-Dichloroethane		ND		68	320
1,1-Dichloroethene		ND		39	320
Dichlorofluoromethane		ND		42	640
1,2-Dichloropropane		ND		41	320
1,3-Dichloropropane		ND		30	320
2,2-Dichloropropane		ND		67	320
1,1-Dichloropropene		ND		49	320
Ethylbenzene		ND		45	320
Ethyl ether		ND		130	640
Hexachlorobutadiene		ND		57	320
2-Hexanone		ND		110	1300
Isopropylbenzene		ND		17	320
Methyl acetate		310	J	71	640
Methylcyclohexane		ND		49	640
Methylene Chloride		ND		110	320
4-Methyl-2-pentanone (MIBK)		ND		72	1300
Methyl tert butyl ether		ND		39	320

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-13_0-1(20150625)**

Lab Sample ID: 240-52618-3 Date Sampled: 06/25/2015 1815
Client Matrix: Solid % Moisture: 15.1 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88239.D
Dilution:	1.0			Initial Weight/Volume:	9.164 g
Analysis Date:	07/01/2015 1123			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		26	320
Naphthalene		ND		33	320
n-Butylbenzene		ND		27	320
N-Propylbenzene		ND		78	320
o-Xylene		ND		22	320
p-Isopropyltoluene		ND		32	320
sec-Butylbenzene		ND		21	320
Styrene		ND		35	320
tert-Butylbenzene		ND		44	320
1,1,1,2-Tetrachloroethane		ND		63	320
1,1,2,2-Tetrachloroethane		ND		55	320
Tetrachloroethene		ND		35	320
Tetrahydrofuran		ND		150	1300
Toluene		ND		13	320
trans-1,2-Dichloroethene		ND		33	320
trans-1,3-Dichloropropene		ND		33	320
1,2,3-Trichlorobenzene		ND		50	320
1,2,4-Trichlorobenzene		ND		39	320
1,1,1-Trichloroethane		ND		54	320
1,1,2-Trichloroethane		ND		110	320
Trichloroethene		ND		50	320
Trichlorofluoromethane		ND		45	320
1,2,3-Trichloropropane		ND		130	320
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		54	320
1,2,4-Trimethylbenzene		ND		17	320
1,3,5-Trimethylbenzene		ND		19	320
Vinyl chloride		ND		72	320

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	97		26 - 141
Dibromofluoromethane (Surr)	74		30 - 122
1,2-Dichloroethane-d4 (Surr)	100		39 - 128
Toluene-d8 (Surr)	100		33 - 134

Client Sample ID: **HA-14_0-1(20150625)**

Lab Sample ID: 240-52618-4 Date Sampled: 06/25/2015 1830
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-188101	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88384.D
Dilution:	1.0			Initial Weight/Volume:	10.652 g
Analysis Date:	07/07/2015 0833			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		250	1100
Allyl chloride		ND		33	550
Benzene		ND		9.9	280
Bromobenzene		ND		14	280
Bromochloromethane		ND		77	280
Bromodichloromethane		ND		42	280
Bromoform		ND		67	280
Bromomethane		ND		56	280
2-Butanone (MEK)		ND		80	1100
Carbon disulfide		ND		62	280
Carbon tetrachloride		ND		53	280
Chlorobenzene		ND		45	280
Chlorodibromomethane		ND		51	280
Chloroethane		ND		56	280
Chloroform		ND		40	280
Chloromethane		ND		53	280
2-Chlorotoluene		ND		45	280
4-Chlorotoluene		ND		29	280
cis-1,2-Dichloroethene		ND		42	280
cis-1,3-Dichloropropene		ND		24	280
Cyclohexane		ND		33	550
1,2-Dibromo-3-Chloropropane		ND		78	550
1,2-Dibromoethane		ND		35	280
Dibromomethane		ND		55	280
1,2-Dichlorobenzene		ND		21	280
1,3-Dichlorobenzene		ND		33	280
1,4-Dichlorobenzene		ND		45	280
Dichlorodifluoromethane		ND		67	280
1,1-Dichloroethane		ND		39	280
1,2-Dichloroethane		ND		58	280
1,1-Dichloroethene		ND		33	280
Dichlorofluoromethane		ND		36	550
1,2-Dichloropropane		ND		35	280
1,3-Dichloropropane		ND		25	280
2,2-Dichloropropane		ND		57	280
1,1-Dichloropropene		ND		42	280
Ethylbenzene		ND		39	280
Ethyl ether		ND		110	550
Hexachlorobutadiene		ND		48	280
2-Hexanone		ND		93	1100
Isopropylbenzene		ND		14	280
Methyl acetate		290	J	61	550
Methylcyclohexane		ND		42	550
Methylene Chloride		240	J	94	280
4-Methyl-2-pentanone (MIBK)		ND		62	1100
Methyl tert butyl ether		ND		33	280

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-14_0-1(20150625)**

Lab Sample ID: 240-52618-4 Date Sampled: 06/25/2015 1830
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-188101	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88384.D
Dilution:	1.0			Initial Weight/Volume:	10.652 g
Analysis Date:	07/07/2015 0833			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		22	280
Naphthalene		ND		29	280
n-Butylbenzene		ND		23	280
N-Propylbenzene		ND		67	280
o-Xylene		ND		19	280
p-Isopropyltoluene		ND		28	280
sec-Butylbenzene		ND		18	280
Styrene		ND		30	280
tert-Butylbenzene		ND		37	280
1,1,1,2-Tetrachloroethane		ND		54	280
1,1,2,2-Tetrachloroethane		ND		47	280
Tetrachloroethene		ND		30	280
Tetrahydrofuran		ND		130	1100
Toluene		ND		11	280
trans-1,2-Dichloroethene		ND		29	280
trans-1,3-Dichloropropene		ND		29	280
1,2,3-Trichlorobenzene		ND		43	280
1,2,4-Trichlorobenzene		ND		33	280
1,1,1-Trichloroethane		ND		46	280
1,1,2-Trichloroethane		ND		91	280
Trichloroethene		ND		43	280
Trichlorofluoromethane		ND		39	280
1,2,3-Trichloropropane		ND		110	280
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		46	280
1,2,4-Trimethylbenzene		ND		14	280
1,3,5-Trimethylbenzene		ND		17	280
Vinyl chloride		ND		62	280

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	103		26 - 141
Dibromofluoromethane (Surr)	86		30 - 122
1,2-Dichloroethane-d4 (Surr)	99		39 - 128
Toluene-d8 (Surr)	93		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: HA-15_0-1(20150625)

Lab Sample ID: 240-52618-5 Date Sampled: 06/25/2015 1540
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-188101	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88385.D
Dilution:	1.0			Initial Weight/Volume:	10.19 g
Analysis Date:	07/07/2015 0855			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		260	1200
Allyl chloride		ND		35	580
Benzene		ND		10	290
Bromobenzene		ND		15	290
Bromochloromethane		ND		81	290
Bromodichloromethane		ND		44	290
Bromoform		ND		70	290
Bromomethane		ND		59	290
2-Butanone (MEK)		ND		84	1200
Carbon disulfide		ND		65	290
Carbon tetrachloride		ND		55	290
Chlorobenzene		ND		47	290
Chlorodibromomethane		ND		53	290
Chloroethane		ND		59	290
Chloroform		ND		41	290
Chloromethane		ND		55	290
2-Chlorotoluene		ND		47	290
4-Chlorotoluene		ND		30	290
cis-1,2-Dichloroethene		ND		44	290
cis-1,3-Dichloropropene		ND		25	290
Cyclohexane		ND		35	580
1,2-Dibromo-3-Chloropropane		ND		82	580
1,2-Dibromoethane		ND		37	290
Dibromomethane		ND		58	290
1,2-Dichlorobenzene		ND		22	290
1,3-Dichlorobenzene		ND		35	290
1,4-Dichlorobenzene		ND		47	290
Dichlorodifluoromethane		ND		70	290
1,1-Dichloroethane		ND		40	290
1,2-Dichloroethane		ND		61	290
1,1-Dichloroethene		ND		35	290
Dichlorofluoromethane		ND		38	580
1,2-Dichloropropane		ND		37	290
1,3-Dichloropropane		ND		26	290
2,2-Dichloropropane		ND		60	290
1,1-Dichloropropene		ND		44	290
Ethylbenzene		ND		40	290
Ethyl ether		ND		110	580
Hexachlorobutadiene		ND		51	290
2-Hexanone		ND		97	1200
Isopropylbenzene		ND		15	290
Methyl acetate		120	J	63	580
Methylcyclohexane		ND		44	580
Methylene Chloride		280	J	98	290
4-Methyl-2-pentanone (MIBK)		ND		65	1200
Methyl tert butyl ether		ND		35	290

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-15_0-1(20150625)**

Lab Sample ID: 240-52618-5 Date Sampled: 06/25/2015 1540
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-188101	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88385.D
Dilution:	1.0			Initial Weight/Volume:	10.19 g
Analysis Date:	07/07/2015 0855			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		23	290
Naphthalene		ND		30	290
n-Butylbenzene		ND		24	290
N-Propylbenzene		ND		70	290
o-Xylene		ND		20	290
p-Isopropyltoluene		ND		29	290
sec-Butylbenzene		ND		18	290
Styrene		ND		31	290
tert-Butylbenzene		ND		39	290
1,1,1,2-Tetrachloroethane		ND		56	290
1,1,2,2-Tetrachloroethane		ND		50	290
Tetrachloroethene		ND		31	290
Tetrahydrofuran		ND		140	1200
Toluene		ND		12	290
trans-1,2-Dichloroethene		ND		30	290
trans-1,3-Dichloropropene		ND		30	290
1,2,3-Trichlorobenzene		ND		45	290
1,2,4-Trichlorobenzene		ND		35	290
1,1,1-Trichloroethane		ND		48	290
1,1,2-Trichloroethane		ND		96	290
Trichloroethene		ND		45	290
Trichlorofluoromethane		ND		40	290
1,2,3-Trichloropropane		ND		120	290
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		48	290
1,2,4-Trimethylbenzene		ND		15	290
1,3,5-Trimethylbenzene		ND		17	290
Vinyl chloride		ND		65	290

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	99		26 - 141
Dibromofluoromethane (Surr)	86		30 - 122
1,2-Dichloroethane-d4 (Surr)	101		39 - 128
Toluene-d8 (Surr)	90		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-16_0-0.5(20150625)**

Lab Sample ID: 240-52618-6 Date Sampled: 06/25/2015 1600
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187929	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88347.D
Dilution:	1.0			Initial Weight/Volume:	8.318 g
Analysis Date:	07/06/2015 0643			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		310	1300
Allyl chloride		ND		40	670
Benzene		ND		12	340
Bromobenzene		ND		18	340
Bromochloromethane		ND		94	340
Bromodichloromethane		ND		51	340
Bromoform		ND		82	340
Bromomethane		ND		69	340
2-Butanone (MEK)		ND		99	1300
Carbon disulfide		ND		76	340
Carbon tetrachloride		ND		65	340
Chlorobenzene		ND		55	340
Chlorodibromomethane		ND		62	340
Chloroethane		ND		69	340
Chloroform		ND		49	340
Chloromethane		ND		65	340
2-Chlorotoluene		ND		55	340
4-Chlorotoluene		ND		35	340
cis-1,2-Dichloroethene		ND		51	340
cis-1,3-Dichloropropene		ND		30	340
Cyclohexane		ND		40	670
1,2-Dibromo-3-Chloropropane		ND		96	670
1,2-Dibromoethane		ND		43	340
Dibromomethane		ND		67	340
1,2-Dichlorobenzene		ND		26	340
1,3-Dichlorobenzene		ND		40	340
1,4-Dichlorobenzene		ND		55	340
Dichlorodifluoromethane		ND		82	340
1,1-Dichloroethane		ND		47	340
1,2-Dichloroethane		ND		72	340
1,1-Dichloroethene		ND		40	340
Dichlorofluoromethane		ND		45	670
1,2-Dichloropropane		ND		43	340
1,3-Dichloropropane		ND		31	340
2,2-Dichloropropane		ND		70	340
1,1-Dichloropropene		ND		51	340
Ethylbenzene		98	J	47	340
Ethyl ether		ND		130	670
Hexachlorobutadiene		ND		59	340
2-Hexanone		ND		110	1300
Isopropylbenzene		ND		18	340
Methyl acetate		390	J	74	670
Methylcyclohexane		ND		51	670
Methylene Chloride		ND		110	340
4-Methyl-2-pentanone (MIBK)		ND		76	1300
Methyl tert butyl ether		ND		40	340

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-16_0-0.5(20150625)**

Lab Sample ID: 240-52618-6 Date Sampled: 06/25/2015 1600
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187929	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88347.D
Dilution:	1.0			Initial Weight/Volume:	8.318 g
Analysis Date:	07/06/2015 0643			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		29	J	27	340
Naphthalene		92	J	35	340
n-Butylbenzene		ND		28	340
N-Propylbenzene		ND		82	340
o-Xylene		ND		23	340
p-Isopropyltoluene		ND		34	340
sec-Butylbenzene		ND		22	340
Styrene		ND		36	340
tert-Butylbenzene		ND		46	340
1,1,1,2-Tetrachloroethane		ND		66	340
1,1,2,2-Tetrachloroethane		ND		58	340
Tetrachloroethene		ND		36	340
Tetrahydrofuran		ND		160	1300
Toluene		ND		13	340
trans-1,2-Dichloroethene		ND		35	340
trans-1,3-Dichloropropene		ND		35	340
1,2,3-Trichlorobenzene		ND		53	340
1,2,4-Trichlorobenzene		ND		40	340
1,1,1-Trichloroethane		ND		57	340
1,1,2-Trichloroethane		ND		110	340
Trichloroethene		ND		53	340
Trichlorofluoromethane		ND		47	340
1,2,3-Trichloropropane		ND		140	340
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		57	340
1,2,4-Trimethylbenzene		64	J	18	340
1,3,5-Trimethylbenzene		20	J	20	340
Vinyl chloride		ND		76	340

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	112		26 - 141
Dibromofluoromethane (Surr)	96		30 - 122
1,2-Dichloroethane-d4 (Surr)	107		39 - 128
Toluene-d8 (Surr)	104		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-17_0-1(20150625)**

Lab Sample ID: 240-52618-7 Date Sampled: 06/25/2015 1645
Client Matrix: Solid % Moisture: 26.0 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187929	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88348.D
Dilution:	1.0			Initial Weight/Volume:	9.499 g
Analysis Date:	07/06/2015 0705			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		320	1400
Allyl chloride		ND		43	710
Benzene		ND		13	360
Bromobenzene		ND		18	360
Bromochloromethane		ND		100	360
Bromodichloromethane		ND		54	360
Bromoform		ND		87	360
Bromomethane		ND		73	360
2-Butanone (MEK)		ND		100	1400
Carbon disulfide		ND		80	360
Carbon tetrachloride		ND		68	360
Chlorobenzene		ND		58	360
Chlorodibromomethane		ND		65	360
Chloroethane		ND		73	360
Chloroform		ND		51	360
Chloromethane		ND		68	360
2-Chlorotoluene		ND		58	360
4-Chlorotoluene		ND		37	360
cis-1,2-Dichloroethene		ND		54	360
cis-1,3-Dichloropropene		ND		31	360
Cyclohexane		ND		43	710
1,2-Dibromo-3-Chloropropane		ND		100	710
1,2-Dibromoethane		ND		46	360
Dibromomethane		ND		71	360
1,2-Dichlorobenzene		ND		27	360
1,3-Dichlorobenzene		ND		43	360
1,4-Dichlorobenzene		ND		58	360
Dichlorodifluoromethane		ND		87	360
1,1-Dichloroethane		ND		50	360
1,2-Dichloroethane		ND		75	360
1,1-Dichloroethene		ND		43	360
Dichlorofluoromethane		ND		47	710
1,2-Dichloropropane		ND		46	360
1,3-Dichloropropane		ND		33	360
2,2-Dichloropropane		ND		74	360
1,1-Dichloropropene		ND		54	360
Ethylbenzene		74	J	50	360
Ethyl ether		ND		140	710
Hexachlorobutadiene		ND		63	360
2-Hexanone		ND		120	1400
Isopropylbenzene		ND		18	360
Methyl acetate		1000		78	710
Methylcyclohexane		ND		54	710
Methylene Chloride		ND		120	360
4-Methyl-2-pentanone (MIBK)		ND		80	1400
Methyl tert butyl ether		ND		43	360

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-17_0-1(20150625)**

Lab Sample ID: 240-52618-7 Date Sampled: 06/25/2015 1645
Client Matrix: Solid % Moisture: 26.0 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187929	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88348.D
Dilution:	1.0			Initial Weight/Volume:	9.499 g
Analysis Date:	07/06/2015 0705			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		28	360
Naphthalene		41	J	37	360
n-Butylbenzene		ND		30	360
N-Propylbenzene		ND		87	360
o-Xylene		ND		24	360
p-Isopropyltoluene		ND		36	360
sec-Butylbenzene		ND		23	360
Styrene		ND		38	360
tert-Butylbenzene		ND		48	360
1,1,1,2-Tetrachloroethane		ND		70	360
1,1,2,2-Tetrachloroethane		ND		61	360
Tetrachloroethene		ND		38	360
Tetrahydrofuran		ND		170	1400
Toluene		ND		14	360
trans-1,2-Dichloroethene		ND		37	360
trans-1,3-Dichloropropene		ND		37	360
1,2,3-Trichlorobenzene		ND		55	360
1,2,4-Trichlorobenzene		ND		43	360
1,1,1-Trichloroethane		ND		60	360
1,1,2-Trichloroethane		ND		120	360
Trichloroethene		ND		55	360
Trichlorofluoromethane		ND		50	360
1,2,3-Trichloropropane		ND		150	360
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		60	360
1,2,4-Trimethylbenzene		44	J	18	360
1,3,5-Trimethylbenzene		ND		21	360
Vinyl chloride		ND		80	360

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	94		26 - 141
Dibromofluoromethane (Surr)	83		30 - 122
1,2-Dichloroethane-d4 (Surr)	91		39 - 128
Toluene-d8 (Surr)	89		33 - 134

Client Sample ID: **HA-18_0-1(20150625)**

Lab Sample ID: 240-52618-8 Date Sampled: 06/25/2015 1700
Client Matrix: Solid % Moisture: 18.2 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187929	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88349.D
Dilution:	1.0			Initial Weight/Volume:	9.005 g
Analysis Date:	07/06/2015 0726			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		310	1400
Allyl chloride		ND		41	680
Benzene		ND		12	340
Bromobenzene		ND		18	340
Bromochloromethane		ND		95	340
Bromodichloromethane		ND		52	340
Bromoform		ND		83	340
Bromomethane		ND		69	340
2-Butanone (MEK)		ND		99	1400
Carbon disulfide		ND		76	340
Carbon tetrachloride		ND		65	340
Chlorobenzene		ND		56	340
Chlorodibromomethane		ND		62	340
Chloroethane		ND		69	340
Chloroform		ND		49	340
Chloromethane		ND		65	340
2-Chlorotoluene		ND		56	340
4-Chlorotoluene		ND		35	340
cis-1,2-Dichloroethene		ND		52	340
cis-1,3-Dichloropropene		ND		30	340
Cyclohexane		ND		41	680
1,2-Dibromo-3-Chloropropane		ND		96	680
1,2-Dibromoethane		ND		43	340
Dibromomethane		ND		68	340
1,2-Dichlorobenzene		ND		26	340
1,3-Dichlorobenzene		ND		41	340
1,4-Dichlorobenzene		ND		56	340
Dichlorodifluoromethane		ND		83	340
1,1-Dichloroethane		ND		48	340
1,2-Dichloroethane		ND		72	340
1,1-Dichloroethene		ND		41	340
Dichlorofluoromethane		ND		45	680
1,2-Dichloropropane		ND		43	340
1,3-Dichloropropane		ND		31	340
2,2-Dichloropropane		ND		71	340
1,1-Dichloropropene		ND		52	340
Ethylbenzene		48	J	48	340
Ethyl ether		ND		130	680
Hexachlorobutadiene		ND		60	340
2-Hexanone		ND		110	1400
Isopropylbenzene		ND		18	340
Methyl acetate		430	J	75	680
Methylcyclohexane		ND		52	680
Methylene Chloride		ND		120	340
4-Methyl-2-pentanone (MIBK)		ND		76	1400
Methyl tert butyl ether		ND		41	340

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-18_0-1(20150625)**

Lab Sample ID: 240-52618-8 Date Sampled: 06/25/2015 1700
Client Matrix: Solid % Moisture: 18.2 Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187929	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88349.D
Dilution:	1.0			Initial Weight/Volume:	9.005 g
Analysis Date:	07/06/2015 0726			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		27	340
Naphthalene		ND		35	340
n-Butylbenzene		ND		29	340
N-Propylbenzene		ND		83	340
o-Xylene		ND		23	340
p-Isopropyltoluene		ND		34	340
sec-Butylbenzene		ND		22	340
Styrene		ND		37	340
tert-Butylbenzene		ND		46	340
1,1,1,2-Tetrachloroethane		ND		67	340
1,1,2,2-Tetrachloroethane		ND		58	340
Tetrachloroethene		ND		37	340
Tetrahydrofuran		ND		160	1400
Toluene		ND		14	340
trans-1,2-Dichloroethene		ND		35	340
trans-1,3-Dichloropropene		ND		35	340
1,2,3-Trichlorobenzene		ND		53	340
1,2,4-Trichlorobenzene		ND		41	340
1,1,1-Trichloroethane		ND		57	340
1,1,2-Trichloroethane		ND		110	340
Trichloroethene		ND		53	340
Trichlorofluoromethane		ND		48	340
1,2,3-Trichloropropane		ND		140	340
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		57	340
1,2,4-Trimethylbenzene		26	J	18	340
1,3,5-Trimethylbenzene		ND		20	340
Vinyl chloride		ND		76	340

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	103		26 - 141
Dibromofluoromethane (Surr)	87		30 - 122
1,2-Dichloroethane-d4 (Surr)	103		39 - 128
Toluene-d8 (Surr)	98		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **MB_01(20150625)**

Lab Sample ID: 240-52618-9TB
Client Matrix: Solid

Date Sampled: 06/25/2015 0000
Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187929	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88350.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	07/06/2015 0747			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		48	250
Chlorobenzene		ND		41	250
Chlorodibromomethane		ND		46	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		53	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client Sample ID: **MB_01(20150625)**

Lab Sample ID: 240-52618-9TB
Client Matrix: Solid

Date Sampled: 06/25/2015 0000
Date Received: 06/27/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-187929	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-187478	Lab File ID:	UX88350.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	07/06/2015 0747			Final Weight/Volume:	10 mL
Prep Date:	06/30/2015 1419				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		43	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		42	250
1,1,2-Trichloroethane		ND		83	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		14	J	13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		56	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	106		26 - 141
Dibromofluoromethane (Surr)	89		30 - 122
1,2-Dichloroethane-d4 (Surr)	105		39 - 128
Toluene-d8 (Surr)	103		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-11_0-1(20150625)**

Lab Sample ID: 240-52618-1 Date Sampled: 06/25/2015 1730
Client Matrix: Solid % Moisture: 31.4 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712024.D
Dilution:	1.0			Initial Weight/Volume:	29.67 g
Analysis Date:	07/12/2015 1814			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		5.2	490
2,2'-oxybis[1-chloropropane]		ND		14	490
2,4,5-Trichlorophenol		ND		37	490
2,4,6-Trichlorophenol		ND		13	490
2,4-Dichlorophenol		ND		29	490
2,4-Dimethylphenol		ND		29	490
2,4-Dinitrophenol		ND		31	2400
2,4-Dinitrotoluene		ND		25	490
2,6-Dinitrotoluene		ND		31	490
2-Chloronaphthalene		ND		0.66	490
2-Chlorophenol		ND		12	490
2-Methylnaphthalene		8.4	J	0.74	490
2-Methylphenol		ND		16	490
2-Nitroaniline		ND		13	2400
2-Nitrophenol		ND		12	490
3,3'-Dichlorobenzidine		ND		27	2400
3-Nitroaniline		ND		24	2400
4,6-Dinitro-2-methylphenol		ND		14	2400
4-Bromophenyl phenyl ether		ND		19	490
4-Chloro-3-methylphenol		ND		31	490
4-Chloroaniline		ND		25	490
4-Chlorophenyl phenyl ether		ND		19	490
4-Nitroaniline		ND		38	2400
4-Nitrophenol		ND		25	2400
Acenaphthene		20	J	1.1	490
Acenaphthylene		18	J	0.52	490
Acetophenone		23	J	14	490
Anthracene		55	J	1.1	490
Atrazine		ND		13	490
Benzaldehyde		120	J	18	490
Benzo[a]anthracene		200	J	0.93	490
Benzo[a]pyrene		190	J	0.94	490
Benzo[b]fluoranthene		390	J	0.87	490
Benzo[g,h,i]perylene		93	J	0.52	490
Benzo[k]fluoranthene		120	J	1.0	490
Bis(2-chloroethoxy)methane		ND		32	490
Bis(2-chloroethyl)ether		ND		2.9	490
Bis(2-ethylhexyl) phthalate		320	J B *	28	490
Butyl benzyl phthalate		ND		15	490
Caprolactam		ND		54	490
Carbazole		ND		40	490
Chrysene		250	J	1.6	490
Dibenz(a,h)anthracene		ND		0.97	490
Dibenzofuran		56	J	0.97	490
Diethyl phthalate		ND		24	490
Dimethyl phthalate		ND		25	490

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-11_0-1(20150625)**

Lab Sample ID: 240-52618-1 Date Sampled: 06/25/2015 1730
Client Matrix: Solid % Moisture: 31.4 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712024.D
Dilution:	1.0			Initial Weight/Volume:	29.67 g
Analysis Date:	07/12/2015 1814			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		31	J B	22	490
Di-n-octyl phthalate		ND		12	490
Fluoranthene		400	J	0.81	490
Fluorene		17	J	0.78	490
Hexachlorobenzene		ND		3.1	490
Hexachlorobutadiene		ND		8.2	490
Hexachlorocyclopentadiene		ND		12	2400
Hexachloroethane		ND		13	490
Indeno[1,2,3-cd]pyrene		80	J	0.52	490
Isophorone		ND		19	490
Naphthalene		ND		1.2	490
Nitrobenzene		ND		3.2	490
N-Nitrosodi-n-propylamine		ND		9.3	490
N-Nitrosodiphenylamine		ND		31	490
Pentachlorophenol		ND		13	490
Phenol		31	J	11	490
Phenanthrene		220	J	1.1	490
Pyrene		320	J	0.65	490
3 & 4 Methylphenol		ND		29	590

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	76		24 - 110
2-Fluorophenol (Surr)	69		24 - 110
2,4,6-Tribromophenol (Surr)	66		10 - 110
Nitrobenzene-d5 (Surr)	57		20 - 110
Phenol-d5 (Surr)	79		26 - 110
Terphenyl-d14 (Surr)	83		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-11_0-1(20150625)**

Lab Sample ID: 240-52618-1 Date Sampled: 06/25/2015 1730
Client Matrix: Solid % Moisture: 31.4 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715008.D
Dilution:	1.0			Initial Weight/Volume:	29.79 g
Analysis Date:	07/15/2015 1145	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	5.1	480
2,2'-oxybis[1-chloropropane]		ND	H	14	480
2,4,5-Trichlorophenol		ND	H	37	480
2,4,6-Trichlorophenol		ND	H	13	480
2,4-Dichlorophenol		ND	H	29	480
2,4-Dimethylphenol		ND	H	29	480
2,4-Dinitrophenol		ND	H	31	2300
2,4-Dinitrotoluene		ND	H	25	480
2,6-Dinitrotoluene		ND	H	31	480
2-Chloronaphthalene		ND	H	0.66	480
2-Chlorophenol		ND	H	12	480
2-Methylnaphthalene		9.5	J H	0.73	480
2-Methylphenol		ND	H	16	480
2-Nitroaniline		ND	H	13	2300
2-Nitrophenol		ND	H	12	480
3,3'-Dichlorobenzidine		ND	H	26	2300
3-Nitroaniline		ND	H	23	2300
4,6-Dinitro-2-methylphenol		ND	H	13	2300
4-Bromophenyl phenyl ether		ND	H	19	480
4-Chloro-3-methylphenol		ND	H	31	480
4-Chloroaniline		ND	H	25	480
4-Chlorophenyl phenyl ether		ND	H	19	480
4-Nitroaniline		ND	H	38	2300
4-Nitrophenol		ND	H	25	2300
Acenaphthene		20	J H	1.1	480
Acenaphthylene		18	J H	0.51	480
Acetophenone		ND	H	13	480
Anthracene		48	J H	1.1	480
Atrazine		ND	H	13	480
Benzaldehyde		150	J H	18	480
Benzo[a]anthracene		250	J H	0.92	480
Benzo[a]pyrene		290	J H	0.94	480
Benzo[b]fluoranthene		520	H	0.87	480
Benzo[g,h,i]perylene		180	J H	0.51	480
Benzo[k]fluoranthene		150	J H	1.0	480
Bis(2-chloroethoxy)methane		ND	H	32	480
Bis(2-chloroethyl)ether		ND	H	2.9	480
Bis(2-ethylhexyl) phthalate		48	J H B	28	480
Butyl benzyl phthalate		ND	H	15	480
Caprolactam		ND	H	54	480
Carbazole		ND	H	40	480
Chrysene		330	J H	1.6	480
Dibenz(a,h)anthracene		45	J H	0.97	480
Dibenzofuran		13	J H	0.97	480
Diethyl phthalate		ND	H	23	480
Dimethyl phthalate		ND	H	25	480

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-11_0-1(20150625)**

Lab Sample ID: 240-52618-1 Date Sampled: 06/25/2015 1730
Client Matrix: Solid % Moisture: 31.4 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715008.D
Dilution:	1.0			Initial Weight/Volume:	29.79 g
Analysis Date:	07/15/2015 1145	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		24	J H	22	480
Di-n-octyl phthalate		ND	H	12	480
Fluoranthene		480	H	0.81	480
Fluorene		28	J H	0.78	480
Hexachlorobenzene		ND	H	3.1	480
Hexachlorobutadiene		ND	H	8.2	480
Hexachlorocyclopentadiene		ND	H	12	2300
Hexachloroethane		ND	H	13	480
Indeno[1,2,3-cd]pyrene		150	J H	0.51	480
Isophorone		ND	H	19	480
Naphthalene		10	J H	1.2	480
Nitrobenzene		ND	H	3.2	480
N-Nitrosodi-n-propylamine		ND	H	9.2	480
N-Nitrosodiphenylamine		ND	H	31	480
Pentachlorophenol		ND	H	13	480
Phenol		ND	H	11	480
Phenanthrene		220	J H	1.1	480
Pyrene		530	H	0.65	480
3 & 4 Methylphenol		ND	H	29	590

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	63		24 - 110
2-Fluorophenol (Surr)	61		24 - 110
2,4,6-Tribromophenol (Surr)	65		10 - 110
Nitrobenzene-d5 (Surr)	60		20 - 110
Phenol-d5 (Surr)	67		26 - 110
Terphenyl-d14 (Surr)	66		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-12_0-1(20150625)**

Lab Sample ID: 240-52618-2 Date Sampled: 06/25/2015 1750
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712025.D
Dilution:	1.0			Initial Weight/Volume:	30.08 g
Analysis Date:	07/12/2015 1837			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		3.9	370
2,2'-oxybis[1-chloropropane]		ND		11	370
2,4,5-Trichlorophenol		ND		28	370
2,4,6-Trichlorophenol		ND		10	370
2,4-Dichlorophenol		ND		22	370
2,4-Dimethylphenol		ND		22	370
2,4-Dinitrophenol		ND		24	1800
2,4-Dinitrotoluene		ND		19	370
2,6-Dinitrotoluene		ND		24	370
2-Chloronaphthalene		ND		0.50	370
2-Chlorophenol		ND		9.2	370
2-Methylnaphthalene		ND		0.56	370
2-Methylphenol		ND		12	370
2-Nitroaniline		ND		10	1800
2-Nitrophenol		ND		9.3	370
3,3'-Dichlorobenzidine		ND		20	1800
3-Nitroaniline		ND		18	1800
4,6-Dinitro-2-methylphenol		ND		10	1800
4-Bromophenyl phenyl ether		ND		15	370
4-Chloro-3-methylphenol		ND		24	370
4-Chloroaniline		ND		19	370
4-Chlorophenyl phenyl ether		ND		15	370
4-Nitroaniline		ND		29	1800
4-Nitrophenol		ND		19	1800
Acenaphthene		21	J	0.85	370
Acenaphthylene		6.6	J	0.39	370
Acetophenone		ND		10	370
Anthracene		67	J	0.87	370
Atrazine		ND		10	370
Benzaldehyde		24	J	13	370
Benzo[a]anthracene		290	J	0.71	370
Benzo[a]pyrene		270	J	0.72	370
Benzo[b]fluoranthene		480		0.66	370
Benzo[g,h,i]perylene		99	J	0.39	370
Benzo[k]fluoranthene		160	J	0.76	370
Bis(2-chloroethoxy)methane		ND		25	370
Bis(2-chloroethyl)ether		ND		2.2	370
Bis(2-ethylhexyl) phthalate		320	J B *	21	370
Butyl benzyl phthalate		ND		11	370
Caprolactam		ND		41	370
Carbazole		76	J	30	370
Chrysene		350	J	1.2	370
Dibenz(a,h)anthracene		38	J	0.74	370
Dibenzofuran		13	J	0.74	370
Diethyl phthalate		ND		18	370
Dimethyl phthalate		ND		19	370

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-12_0-1(20150625)**

Lab Sample ID: 240-52618-2 Date Sampled: 06/25/2015 1750
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712025.D
Dilution:	1.0			Initial Weight/Volume:	30.08 g
Analysis Date:	07/12/2015 1837			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		27	J B	17	370
Di-n-octyl phthalate		ND		8.8	370
Fluoranthene		760		0.62	370
Fluorene		25	J	0.59	370
Hexachlorobenzene		ND		2.4	370
Hexachlorobutadiene		ND		6.3	370
Hexachlorocyclopentadiene		ND		9.1	1800
Hexachloroethane		ND		10	370
Indeno[1,2,3-cd]pyrene		100	J	0.39	370
Isophorone		ND		15	370
Naphthalene		ND		0.92	370
Nitrobenzene		ND		2.5	370
N-Nitrosodi-n-propylamine		ND		7.1	370
N-Nitrosodiphenylamine		ND		24	370
Pentachlorophenol		ND		10	370
Phenol		15	J	8.2	370
Phenanthrene		450		0.82	370
Pyrene		570		0.49	370
3 & 4 Methylphenol		ND		22	450

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	69		24 - 110
2-Fluorophenol (Surr)	61		24 - 110
2,4,6-Tribromophenol (Surr)	28		10 - 110
Nitrobenzene-d5 (Surr)	54		20 - 110
Phenol-d5 (Surr)	69		26 - 110
Terphenyl-d14 (Surr)	80		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: HA-12_0-1(20150625)

Lab Sample ID: 240-52618-2 Date Sampled: 06/25/2015 1750
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715009.D
Dilution:	1.0			Initial Weight/Volume:	30.41 g
Analysis Date:	07/15/2015 1210	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	3.9	370
2,2'-oxybis[1-chloropropane]		ND	H	11	370
2,4,5-Trichlorophenol		ND	H	28	370
2,4,6-Trichlorophenol		ND	H	9.9	370
2,4-Dichlorophenol		ND	H	22	370
2,4-Dimethylphenol		ND	H	22	370
2,4-Dinitrophenol		ND	H	23	1800
2,4-Dinitrotoluene		ND	H	19	370
2,6-Dinitrotoluene		ND	H	23	370
2-Chloronaphthalene		ND	H	0.50	370
2-Chlorophenol		ND	H	9.1	370
2-Methylnaphthalene		4.8	J H	0.55	370
2-Methylphenol		ND	H	12	370
2-Nitroaniline		ND	H	10	1800
2-Nitrophenol		ND	H	9.2	370
3,3'-Dichlorobenzidine		ND	H	20	1800
3-Nitroaniline		ND	H	18	1800
4,6-Dinitro-2-methylphenol		ND	H	10	1800
4-Bromophenyl phenyl ether		ND	H	14	370
4-Chloro-3-methylphenol		ND	H	23	370
4-Chloroaniline		ND	H	19	370
4-Chlorophenyl phenyl ether		ND	H	14	370
4-Nitroaniline		ND	H	29	1800
4-Nitrophenol		ND	H	19	1800
Acenaphthene		13	J H	0.84	370
Acenaphthylene		ND	H	0.39	370
Acetophenone		ND	H	10	370
Anthracene		20	J H	0.86	370
Atrazine		ND	H	10	370
Benzaldehyde		ND	H	13	370
Benzo[a]anthracene		110	J H	0.70	370
Benzo[a]pyrene		120	J H	0.71	370
Benzo[b]fluoranthene		200	J H	0.65	370
Benzo[g,h,i]perylene		91	J H	0.39	370
Benzo[k]fluoranthene		76	J H	0.75	370
Bis(2-chloroethoxy)methane		ND	H	24	370
Bis(2-chloroethyl)ether		ND	H	2.2	370
Bis(2-ethylhexyl) phthalate		38	J H B	21	370
Butyl benzyl phthalate		ND	H	11	370
Caprolactam		ND	H	41	370
Carbazole		ND	H	30	370
Chrysene		160	J H	1.2	370
Dibenz(a,h)anthracene		21	J H	0.73	370
Dibenzofuran		ND	H	0.73	370
Diethyl phthalate		ND	H	18	370
Dimethyl phthalate		ND	H	19	370

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-12_0-1(20150625)**

Lab Sample ID: 240-52618-2 Date Sampled: 06/25/2015 1750
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715009.D
Dilution:	1.0			Initial Weight/Volume:	30.41 g
Analysis Date:	07/15/2015 1210	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		21	J H	17	370
Di-n-octyl phthalate		ND	H	8.7	370
Fluoranthene		290	J H	0.61	370
Fluorene		12	J H	0.59	370
Hexachlorobenzene		ND	H	2.3	370
Hexachlorobutadiene		ND	H	6.2	370
Hexachlorocyclopentadiene		ND	H	9.0	1800
Hexachloroethane		ND	H	10	370
Indeno[1,2,3-cd]pyrene		79	J H	0.39	370
Isophorone		ND	H	14	370
Naphthalene		7.5	J H	0.91	370
Nitrobenzene		ND	H	2.4	370
N-Nitrosodi-n-propylamine		ND	H	7.0	370
N-Nitrosodiphenylamine		ND	H	23	370
Pentachlorophenol		ND	H	10	370
Phenol		ND	H	8.1	370
Phenanthrene		150	J H	0.81	370
Pyrene		240	J H	0.49	370
3 & 4 Methylphenol		ND	H	22	440

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	66		24 - 110
2-Fluorophenol (Surr)	66		24 - 110
2,4,6-Tribromophenol (Surr)	26		10 - 110
Nitrobenzene-d5 (Surr)	60		20 - 110
Phenol-d5 (Surr)	69		26 - 110
Terphenyl-d14 (Surr)	67		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: HA-13_0-1(20150625)

Lab Sample ID: 240-52618-3 Date Sampled: 06/25/2015 1815
Client Matrix: Solid % Moisture: 15.1 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715015.D
Dilution:	2.0			Initial Weight/Volume:	30.04 g
Analysis Date:	07/15/2015 1503	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	8.2	780
2,2'-oxybis[1-chloropropane]		ND	H	22	780
2,4,5-Trichlorophenol		ND	H	59	780
2,4,6-Trichlorophenol		ND	H	21	780
2,4-Dichlorophenol		ND	H	47	780
2,4-Dimethylphenol		ND	H	47	780
2,4-Dinitrophenol		ND	H	49	3800
2,4-Dinitrotoluene		ND	H	40	780
2,6-Dinitrotoluene		ND	H	49	780
2-Chloronaphthalene		ND	H	1.1	780
2-Chlorophenol		ND	H	19	780
2-Methylnaphthalene		9.5	J H	1.2	780
2-Methylphenol		ND	H	26	780
2-Nitroaniline		ND	H	21	3800
2-Nitrophenol		ND	H	20	780
3,3'-Dichlorobenzidine		ND	H	42	3800
3-Nitroaniline		ND	H	38	3800
4,6-Dinitro-2-methylphenol		ND	H	22	3800
4-Bromophenyl phenyl ether		ND	H	31	780
4-Chloro-3-methylphenol		ND	H	49	780
4-Chloroaniline		ND	H	40	780
4-Chlorophenyl phenyl ether		ND	H	31	780
4-Nitroaniline		ND	H	61	3800
4-Nitrophenol		ND	H	40	3800
Acenaphthene		57	J H	1.8	780
Acenaphthylene		14	J H	0.82	780
Acetophenone		30	J H	22	780
Anthracene		120	J H	1.8	780
Atrazine		ND	H	21	780
Benzaldehyde		51	J H	28	780
Benzo[a]anthracene		640	J H	1.5	780
Benzo[a]pyrene		680	J H	1.5	780
Benzo[b]fluoranthene		1200	H	1.4	780
Benzo[g,h,i]perylene		380	J H	0.82	780
Benzo[k]fluoranthene		390	J H	1.6	780
Bis(2-chloroethoxy)methane		ND	H	52	780
Bis(2-chloroethyl)ether		ND	H	4.7	780
Bis(2-ethylhexyl) phthalate		74	J H B	45	780
Butyl benzyl phthalate		ND	H	24	780
Caprolactam		ND	H	87	780
Carbazole		160	J H	64	780
Chrysene		910	H	2.6	780
Dibenz(a,h)anthracene		110	J H	1.6	780
Dibenzofuran		33	J H	1.6	780
Diethyl phthalate		ND	H	38	780
Dimethyl phthalate		ND	H	40	780

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-13_0-1(20150625)**

Lab Sample ID: 240-52618-3 Date Sampled: 06/25/2015 1815
Client Matrix: Solid % Moisture: 15.1 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715015.D
Dilution:	2.0			Initial Weight/Volume:	30.04 g
Analysis Date:	07/15/2015 1503	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND	H	35	780
Di-n-octyl phthalate		ND	H	19	780
Fluoranthene		1800	H	1.3	780
Fluorene		69	J H	1.2	780
Hexachlorobenzene		ND	H	4.9	780
Hexachlorobutadiene		ND	H	13	780
Hexachlorocyclopentadiene		ND	H	19	3800
Hexachloroethane		ND	H	21	780
Indeno[1,2,3-cd]pyrene		350	J H	0.82	780
Isophorone		ND	H	31	780
Naphthalene		16	J H	1.9	780
Nitrobenzene		ND	H	5.2	780
N-Nitrosodi-n-propylamine		ND	H	15	780
N-Nitrosodiphenylamine		ND	H	49	780
Pentachlorophenol		ND	H	21	780
Phenol		ND	H	17	780
Phenanthrene		1000	H	1.7	780
Pyrene		1400	H	1.0	780
3 & 4 Methylphenol		ND	H	47	940

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	75		24 - 110
2-Fluorophenol (Surr)	77		24 - 110
2,4,6-Tribromophenol (Surr)	50		10 - 110
Nitrobenzene-d5 (Surr)	69		20 - 110
Phenol-d5 (Surr)	83		26 - 110
Terphenyl-d14 (Surr)	77		36 - 110

Client Sample ID: **HA-13_0-1(20150625)**

Lab Sample ID: 240-52618-3 Date Sampled: 06/25/2015 1815
Client Matrix: Solid % Moisture: 15.1 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712029.D
Dilution:	2.5			Initial Weight/Volume:	29.76 g
Analysis Date:	07/12/2015 2012			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		10	980
2,2'-oxybis[1-chloropropane]		ND		28	980
2,4,5-Trichlorophenol		ND		74	980
2,4,6-Trichlorophenol		ND		26	980
2,4-Dichlorophenol		ND		59	980
2,4-Dimethylphenol		ND		59	980
2,4-Dinitrophenol		ND		62	4700
2,4-Dinitrotoluene		ND		50	980
2,6-Dinitrotoluene		ND		62	980
2-Chloronaphthalene		ND		1.3	980
2-Chlorophenol		ND		24	980
2-Methylnaphthalene		15	J	1.5	980
2-Methylphenol		ND		33	980
2-Nitroaniline		ND		27	4700
2-Nitrophenol		ND		25	980
3,3'-Dichlorobenzidine		ND		53	4700
3-Nitroaniline		ND		47	4700
4,6-Dinitro-2-methylphenol		ND		27	4700
4-Bromophenyl phenyl ether		ND		39	980
4-Chloro-3-methylphenol		ND		62	980
4-Chloroaniline		ND		50	980
4-Chlorophenyl phenyl ether		ND		39	980
4-Nitroaniline		ND		77	4700
4-Nitrophenol		ND		50	4700
Acenaphthene		150	J	2.3	980
Acenaphthylene		29	J	1.0	980
Acetophenone		ND		27	980
Anthracene		340	J	2.3	980
Atrazine		ND		27	980
Benzaldehyde		59	J	36	980
Benzo[a]anthracene		1400		1.9	980
Benzo[a]pyrene		1300		1.9	980
Benzo[b]fluoranthene		2400		1.8	980
Benzo[g,h,i]perylene		480	J	1.0	980
Benzo[k]fluoranthene		1100		2.0	980
Bis(2-chloroethoxy)methane		ND		65	980
Bis(2-chloroethyl)ether		ND		5.9	980
Bis(2-ethylhexyl) phthalate		440	J B *	56	980
Butyl benzyl phthalate		ND		30	980
Caprolactam		ND		110	980
Carbazole		450	J	80	980
Chrysene		1900		3.3	980
Dibenz(a,h)anthracene		150	J	2.0	980
Dibenzofuran		93	J	2.0	980
Diethyl phthalate		ND		47	980
Dimethyl phthalate		ND		50	980

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-13_0-1(20150625)**

Lab Sample ID: 240-52618-3 Date Sampled: 06/25/2015 1815
Client Matrix: Solid % Moisture: 15.1 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712029.D
Dilution:	2.5			Initial Weight/Volume:	29.76 g
Analysis Date:	07/12/2015 2012			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		45	980
Di-n-octyl phthalate		ND		23	980
Fluoranthene		3900		1.6	980
Fluorene		190	J	1.6	980
Hexachlorobenzene		ND		6.2	980
Hexachlorobutadiene		ND		17	980
Hexachlorocyclopentadiene		ND		24	4700
Hexachloroethane		ND		27	980
Indeno[1,2,3-cd]pyrene		490	J	1.0	980
Isophorone		ND		39	980
Naphthalene		27	J	2.4	980
Nitrobenzene		ND		6.5	980
N-Nitrosodi-n-propylamine		ND		19	980
N-Nitrosodiphenylamine		ND		62	980
Pentachlorophenol		ND		27	980
Phenol		100	J	22	980
Phenanthrene		2600		2.2	980
Pyrene		3100		1.3	980
3 & 4 Methylphenol		ND		59	1200

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	62		24 - 110
2-Fluorophenol (Surr)	59		24 - 110
2,4,6-Tribromophenol (Surr)	47		10 - 110
Nitrobenzene-d5 (Surr)	53		20 - 110
Phenol-d5 (Surr)	66		26 - 110
Terphenyl-d14 (Surr)	76		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-14_0-1(20150625)**

Lab Sample ID: 240-52618-4 Date Sampled: 06/25/2015 1830
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712026.D
Dilution:	1.0			Initial Weight/Volume:	29.94 g
Analysis Date:	07/12/2015 1901			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.1	390
2,2'-oxybis[1-chloropropane]		ND		11	390
2,4,5-Trichlorophenol		ND		29	390
2,4,6-Trichlorophenol		ND		10	390
2,4-Dichlorophenol		ND		24	390
2,4-Dimethylphenol		ND		24	390
2,4-Dinitrophenol		ND		25	1900
2,4-Dinitrotoluene		ND		20	390
2,6-Dinitrotoluene		ND		25	390
2-Chloronaphthalene		ND		0.53	390
2-Chlorophenol		ND		9.6	390
2-Methylnaphthalene		6.1	J	0.59	390
2-Methylphenol		ND		13	390
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		9.8	390
3,3'-Dichlorobenzidine		ND		21	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		15	390
4-Chloro-3-methylphenol		ND		25	390
4-Chloroaniline		ND		20	390
4-Chlorophenyl phenyl ether		ND		15	390
4-Nitroaniline		ND		31	1900
4-Nitrophenol		ND		20	1900
Acenaphthene		17	J	0.89	390
Acenaphthylene		7.1	J	0.41	390
Acetophenone		ND		11	390
Anthracene		34	J	0.92	390
Atrazine		ND		11	390
Benzaldehyde		35	J	14	390
Benzo[a]anthracene		160	J	0.74	390
Benzo[a]pyrene		160	J	0.75	390
Benzo[b]fluoranthene		260	J	0.69	390
Benzo[g,h,i]perylene		62	J	0.41	390
Benzo[k]fluoranthene		110	J	0.80	390
Bis(2-chloroethoxy)methane		ND		26	390
Bis(2-chloroethyl)ether		ND		2.4	390
Bis(2-ethylhexyl) phthalate		380	J B *	22	390
Butyl benzyl phthalate		ND		12	390
Caprolactam		ND		44	390
Carbazole		ND		32	390
Chrysene		190	J	1.3	390
Dibenz(a,h)anthracene		28	J	0.78	390
Dibenzofuran		ND		0.78	390
Diethyl phthalate		ND		19	390
Dimethyl phthalate		ND		20	390

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-14_0-1(20150625)**

Lab Sample ID: 240-52618-4 Date Sampled: 06/25/2015 1830
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712026.D
Dilution:	1.0			Initial Weight/Volume:	29.94 g
Analysis Date:	07/12/2015 1901			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		31	J B	18	390
Di-n-octyl phthalate		ND		9.3	390
Fluoranthene		340	J	0.65	390
Fluorene		14	J	0.62	390
Hexachlorobenzene		ND		2.5	390
Hexachlorobutadiene		ND		6.6	390
Hexachlorocyclopentadiene		ND		9.5	1900
Hexachloroethane		ND		11	390
Indeno[1,2,3-cd]pyrene		64	J	0.41	390
Isophorone		ND		15	390
Naphthalene		ND		0.96	390
Nitrobenzene		ND		2.6	390
N-Nitrosodi-n-propylamine		ND		7.4	390
N-Nitrosodiphenylamine		ND		25	390
Pentachlorophenol		ND		11	390
Phenol		ND		8.6	390
Phenanthrene		170	J	0.86	390
Pyrene		270	J	0.52	390
3 & 4 Methylphenol		ND		24	470

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	65		24 - 110
2-Fluorophenol (Surr)	62		24 - 110
2,4,6-Tribromophenol (Surr)	26		10 - 110
Nitrobenzene-d5 (Surr)	53		20 - 110
Phenol-d5 (Surr)	69		26 - 110
Terphenyl-d14 (Surr)	80		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-14_0-1(20150625)**

Lab Sample ID: 240-52618-4 Date Sampled: 06/25/2015 1830
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715010.D
Dilution:	1.0			Initial Weight/Volume:	30.31 g
Analysis Date:	07/15/2015 1235	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	4.1	380
2,2'-oxybis[1-chloropropane]		ND	H	11	380
2,4,5-Trichlorophenol		ND	H	29	380
2,4,6-Trichlorophenol		ND	H	10	380
2,4-Dichlorophenol		ND	H	23	380
2,4-Dimethylphenol		ND	H	23	380
2,4-Dinitrophenol		ND	H	24	1900
2,4-Dinitrotoluene		ND	H	20	380
2,6-Dinitrotoluene		ND	H	24	380
2-Chloronaphthalene		ND	H	0.52	380
2-Chlorophenol		ND	H	9.5	380
2-Methylnaphthalene		5.2	J H	0.58	380
2-Methylphenol		ND	H	13	380
2-Nitroaniline		ND	H	11	1900
2-Nitrophenol		ND	H	9.6	380
3,3'-Dichlorobenzidine		ND	H	21	1900
3-Nitroaniline		ND	H	19	1900
4,6-Dinitro-2-methylphenol		ND	H	11	1900
4-Bromophenyl phenyl ether		ND	H	15	380
4-Chloro-3-methylphenol		ND	H	24	380
4-Chloroaniline		ND	H	20	380
4-Chlorophenyl phenyl ether		ND	H	15	380
4-Nitroaniline		ND	H	30	1900
4-Nitrophenol		ND	H	20	1900
Acenaphthene		11	J H	0.88	380
Acenaphthylene		4.3	J H	0.41	380
Acetophenone		ND	H	11	380
Anthracene		23	J H	0.91	380
Atrazine		ND	H	11	380
Benzaldehyde		14	J H	14	380
Benzo[a]anthracene		120	J H	0.73	380
Benzo[a]pyrene		120	J H	0.74	380
Benzo[b]fluoranthene		190	J H	0.69	380
Benzo[g,h,i]perylene		74	J H	0.41	380
Benzo[k]fluoranthene		63	J H	0.79	380
Bis(2-chloroethoxy)methane		ND	H	26	380
Bis(2-chloroethyl)ether		ND	H	2.3	380
Bis(2-ethylhexyl) phthalate		110	J H B	22	380
Butyl benzyl phthalate		ND	H	12	380
Caprolactam		ND	H	43	380
Carbazole		ND	H	31	380
Chrysene		140	J H	1.3	380
Dibenz(a,h)anthracene		23	J H	0.77	380
Dibenzofuran		ND	H	0.77	380
Diethyl phthalate		ND	H	19	380
Dimethyl phthalate		ND	H	20	380

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-14_0-1(20150625)**

Lab Sample ID: 240-52618-4 Date Sampled: 06/25/2015 1830
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715010.D
Dilution:	1.0			Initial Weight/Volume:	30.31 g
Analysis Date:	07/15/2015 1235	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		25	J H	17	380
Di-n-octyl phthalate		ND	H	9.2	380
Fluoranthene		260	J H	0.64	380
Fluorene		10	J H	0.62	380
Hexachlorobenzene		ND	H	2.4	380
Hexachlorobutadiene		ND	H	6.5	380
Hexachlorocyclopentadiene		ND	H	9.4	1900
Hexachloroethane		ND	H	10	380
Indeno[1,2,3-cd]pyrene		66	J H	0.41	380
Isophorone		ND	H	15	380
Naphthalene		5.3	J H	0.95	380
Nitrobenzene		ND	H	2.6	380
N-Nitrosodi-n-propylamine		ND	H	7.3	380
N-Nitrosodiphenylamine		ND	H	24	380
Pentachlorophenol		ND	H	11	380
Phenol		ND	H	8.5	380
Phenanthrene		120	J H	0.85	380
Pyrene		210	J H	0.51	380
3 & 4 Methylphenol		ND	H	23	460

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	69		24 - 110
2-Fluorophenol (Surr)	56		24 - 110
2,4,6-Tribromophenol (Surr)	22		10 - 110
Nitrobenzene-d5 (Surr)	50		20 - 110
Phenol-d5 (Surr)	70		26 - 110
Terphenyl-d14 (Surr)	74		36 - 110

Client Sample ID: **HA-15_0-1(20150625)**

Lab Sample ID: 240-52618-5 Date Sampled: 06/25/2015 1540
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712027.D
Dilution:	1.0			Initial Weight/Volume:	30.04 g
Analysis Date:	07/12/2015 1925			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.1	390
2,2'-oxybis[1-chloropropane]		ND		11	390
2,4,5-Trichlorophenol		ND		29	390
2,4,6-Trichlorophenol		ND		10	390
2,4-Dichlorophenol		ND		23	390
2,4-Dimethylphenol		ND		23	390
2,4-Dinitrophenol		ND		25	1900
2,4-Dinitrotoluene		ND		20	390
2,6-Dinitrotoluene		ND		25	390
2-Chloronaphthalene		ND		0.53	390
2-Chlorophenol		ND		9.6	390
2-Methylnaphthalene		4.2	J	0.59	390
2-Methylphenol		ND		13	390
2-Nitroaniline		ND		11	1900
2-Nitrophenol		ND		9.7	390
3,3'-Dichlorobenzidine		ND		21	1900
3-Nitroaniline		ND		19	1900
4,6-Dinitro-2-methylphenol		ND		11	1900
4-Bromophenyl phenyl ether		ND		15	390
4-Chloro-3-methylphenol		ND		25	390
4-Chloroaniline		ND		20	390
4-Chlorophenyl phenyl ether		ND		15	390
4-Nitroaniline		ND		30	1900
4-Nitrophenol		ND		20	1900
Acenaphthene		9.8	J	0.89	390
Acenaphthylene		4.1	J	0.41	390
Acetophenone		ND		11	390
Anthracene		12	J	0.91	390
Atrazine		ND		11	390
Benzaldehyde		19	J	14	390
Benzo[a]anthracene		59	J	0.74	390
Benzo[a]pyrene		62	J	0.75	390
Benzo[b]fluoranthene		120	J	0.69	390
Benzo[g,h,i]perylene		27	J	0.41	390
Benzo[k]fluoranthene		29	J	0.80	390
Bis(2-chloroethoxy)methane		ND		26	390
Bis(2-chloroethyl)ether		ND		2.3	390
Bis(2-ethylhexyl) phthalate		350	J B *	22	390
Butyl benzyl phthalate		ND		12	390
Caprolactam		ND		43	390
Carbazole		ND		32	390
Chrysene		75	J	1.3	390
Dibenz(a,h)anthracene		ND		0.77	390
Dibenzofuran		10	J	0.77	390
Diethyl phthalate		ND		19	390
Dimethyl phthalate		ND		20	390

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-15_0-1(20150625)**

Lab Sample ID: 240-52618-5 Date Sampled: 06/25/2015 1540
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712027.D
Dilution:	1.0			Initial Weight/Volume:	30.04 g
Analysis Date:	07/12/2015 1925			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		25	J B	18	390
Di-n-octyl phthalate		ND		9.3	390
Fluoranthene		110	J	0.64	390
Fluorene		9.2	J	0.62	390
Hexachlorobenzene		ND		2.5	390
Hexachlorobutadiene		ND		6.6	390
Hexachlorocyclopentadiene		ND		9.5	1900
Hexachloroethane		ND		11	390
Indeno[1,2,3-cd]pyrene		30	J	0.41	390
Isophorone		ND		15	390
Naphthalene		ND		0.96	390
Nitrobenzene		ND		2.6	390
N-Nitrosodi-n-propylamine		ND		7.4	390
N-Nitrosodiphenylamine		ND		25	390
Pentachlorophenol		ND		11	390
Phenol		11	J	8.6	390
Phenanthrene		65	J	0.86	390
Pyrene		92	J	0.52	390
3 & 4 Methylphenol		ND		23	470

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	62		24 - 110
2-Fluorophenol (Surr)	56		24 - 110
2,4,6-Tribromophenol (Surr)	38		10 - 110
Nitrobenzene-d5 (Surr)	49		20 - 110
Phenol-d5 (Surr)	64		26 - 110
Terphenyl-d14 (Surr)	76		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-15_0-1(20150625)**

Lab Sample ID: 240-52618-5 Date Sampled: 06/25/2015 1540
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715011.D
Dilution:	1.0			Initial Weight/Volume:	30.03 g
Analysis Date:	07/15/2015 1259	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	4.1	390
2,2'-oxybis[1-chloropropane]		ND	H	11	390
2,4,5-Trichlorophenol		ND	H	29	390
2,4,6-Trichlorophenol		ND	H	10	390
2,4-Dichlorophenol		ND	H	23	390
2,4-Dimethylphenol		ND	H	23	390
2,4-Dinitrophenol		ND	H	25	1900
2,4-Dinitrotoluene		ND	H	20	390
2,6-Dinitrotoluene		ND	H	25	390
2-Chloronaphthalene		ND	H	0.53	390
2-Chlorophenol		ND	H	9.6	390
2-Methylnaphthalene		ND	H	0.59	390
2-Methylphenol		ND	H	13	390
2-Nitroaniline		ND	H	11	1900
2-Nitrophenol		ND	H	9.7	390
3,3'-Dichlorobenzidine		ND	H	21	1900
3-Nitroaniline		ND	H	19	1900
4,6-Dinitro-2-methylphenol		ND	H	11	1900
4-Bromophenyl phenyl ether		ND	H	15	390
4-Chloro-3-methylphenol		ND	H	25	390
4-Chloroaniline		ND	H	20	390
4-Chlorophenyl phenyl ether		ND	H	15	390
4-Nitroaniline		ND	H	30	1900
4-Nitrophenol		ND	H	20	1900
Acenaphthene		7.0	J H	0.89	390
Acenaphthylene		ND	H	0.41	390
Acetophenone		ND	H	11	390
Anthracene		8.6	J H	0.91	390
Atrazine		ND	H	11	390
Benzaldehyde		14	J H	14	390
Benzo[a]anthracene		42	J H	0.74	390
Benzo[a]pyrene		42	J H	0.75	390
Benzo[b]fluoranthene		70	J H	0.69	390
Benzo[g,h,i]perylene		24	J H	0.41	390
Benzo[k]fluoranthene		23	J H	0.80	390
Bis(2-chloroethoxy)methane		ND	H	26	390
Bis(2-chloroethyl)ether		ND	H	2.3	390
Bis(2-ethylhexyl) phthalate		290	J H B	22	390
Butyl benzyl phthalate		ND	H	12	390
Caprolactam		ND	H	43	390
Carbazole		ND	H	32	390
Chrysene		56	J H	1.3	390
Dibenz(a,h)anthracene		8.6	J H	0.77	390
Dibenzofuran		ND	H	0.77	390
Diethyl phthalate		ND	H	19	390
Dimethyl phthalate		ND	H	20	390

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-15_0-1(20150625)**

Lab Sample ID: 240-52618-5 Date Sampled: 06/25/2015 1540
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715011.D
Dilution:	1.0			Initial Weight/Volume:	30.03 g
Analysis Date:	07/15/2015 1259	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		28	J H	18	390
Di-n-octyl phthalate		ND	H	9.3	390
Fluoranthene		89	J H	0.65	390
Fluorene		7.4	J H	0.62	390
Hexachlorobenzene		ND	H	2.5	390
Hexachlorobutadiene		ND	H	6.6	390
Hexachlorocyclopentadiene		ND	H	9.5	1900
Hexachloroethane		ND	H	11	390
Indeno[1,2,3-cd]pyrene		21	J H	0.41	390
Isophorone		ND	H	15	390
Naphthalene		ND	H	0.96	390
Nitrobenzene		ND	H	2.6	390
N-Nitrosodi-n-propylamine		ND	H	7.4	390
N-Nitrosodiphenylamine		ND	H	25	390
Pentachlorophenol		ND	H	11	390
Phenol		ND	H	8.6	390
Phenanthrene		51	J H	0.86	390
Pyrene		71	J H	0.52	390
3 & 4 Methylphenol		ND	H	23	470

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	61		24 - 110
2-Fluorophenol (Surr)	58		24 - 110
2,4,6-Tribromophenol (Surr)	38		10 - 110
Nitrobenzene-d5 (Surr)	53		20 - 110
Phenol-d5 (Surr)	65		26 - 110
Terphenyl-d14 (Surr)	67		36 - 110

Client Sample ID: **HA-16_0-0.5(20150625)**

Lab Sample ID: 240-52618-6 Date Sampled: 06/25/2015 1600
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715014.D
Dilution:	10			Initial Weight/Volume:	29.89 g
Analysis Date:	07/15/2015 1413	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	39	3700
2,2'-oxybis[1-chloropropane]		ND	H	110	3700
2,4,5-Trichlorophenol		ND	H	280	3700
2,4,6-Trichlorophenol		ND	H	100	3700
2,4-Dichlorophenol		ND	H	230	3700
2,4-Dimethylphenol		ND	H	230	3700
2,4-Dinitrophenol		ND	H	240	18000
2,4-Dinitrotoluene		ND	H	190	3700
2,6-Dinitrotoluene		ND	H	240	3700
2-Chloronaphthalene		ND	H	5.1	3700
2-Chlorophenol		ND	H	92	3700
2-Methylnaphthalene		51	J H	5.6	3700
2-Methylphenol		ND	H	120	3700
2-Nitroaniline		ND	H	100	18000
2-Nitrophenol		ND	H	94	3700
3,3'-Dichlorobenzidine		ND	H	200	18000
3-Nitroaniline		ND	H	180	18000
4,6-Dinitro-2-methylphenol		ND	H	100	18000
4-Bromophenyl phenyl ether		ND	H	150	3700
4-Chloro-3-methylphenol		ND	H	240	3700
4-Chloroaniline		ND	H	190	3700
4-Chlorophenyl phenyl ether		ND	H	150	3700
4-Nitroaniline		ND	H	290	18000
4-Nitrophenol		ND	H	190	18000
Acenaphthene		180	J H	8.6	3700
Acenaphthylene		510	J H	3.9	3700
Acetophenone		ND	H	100	3700
Anthracene		920	J H	8.8	3700
Atrazine		ND	H	100	3700
Benzaldehyde		ND	H	140	3700
Benzo[a]anthracene		6300	H	7.1	3700
Benzo[a]pyrene		6400	H	7.2	3700
Benzo[b]fluoranthene		8400	H	6.6	3700
Benzo[g,h,i]perylene		3100	J H	3.9	3700
Benzo[k]fluoranthene		3300	J H	7.7	3700
Bis(2-chloroethoxy)methane		ND	H	250	3700
Bis(2-chloroethyl)ether		ND	H	23	3700
Bis(2-ethylhexyl) phthalate		ND	H	210	3700
Butyl benzyl phthalate		ND	H	110	3700
Caprolactam		ND	H	420	3700
Carbazole		ND	H	300	3700
Chrysene		6700	H	12	3700
Dibenz(a,h)anthracene		910	J H	7.4	3700
Dibenzofuran		93	J H	7.4	3700
Diethyl phthalate		ND	H	180	3700
Dimethyl phthalate		ND	H	190	3700

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-16_0-0.5(20150625)**

Lab Sample ID: 240-52618-6 Date Sampled: 06/25/2015 1600
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715014.D
Dilution:	10			Initial Weight/Volume:	29.89 g
Analysis Date:	07/15/2015 1413	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND	H	170	3700
Di-n-octyl phthalate		ND	H	89	3700
Fluoranthene		10000	H	6.2	3700
Fluorene		180	J H	6.0	3700
Hexachlorobenzene		ND	H	24	3700
Hexachlorobutadiene		ND	H	63	3700
Hexachlorocyclopentadiene		ND	H	91	18000
Hexachloroethane		ND	H	100	3700
Indeno[1,2,3-cd]pyrene		3000	J H	3.9	3700
Isophorone		ND	H	150	3700
Naphthalene		130	J H	9.2	3700
Nitrobenzene		ND	H	25	3700
N-Nitrosodi-n-propylamine		ND	H	71	3700
N-Nitrosodiphenylamine		ND	H	240	3700
Pentachlorophenol		ND	H	100	3700
Phenol		ND	H	82	3700
Phenanthrene		3000	J H	8.2	3700
Pyrene		10000	H	5.0	3700
3 & 4 Methylphenol		ND	H	230	4500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	72		24 - 110
2-Fluorophenol (Surr)	69		24 - 110
2,4,6-Tribromophenol (Surr)	73		10 - 110
Nitrobenzene-d5 (Surr)	63		20 - 110
Phenol-d5 (Surr)	72		26 - 110
Terphenyl-d14 (Surr)	70		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-16_0-0.5(20150625)**

Lab Sample ID: 240-52618-6 Date Sampled: 06/25/2015 1600
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712030.D
Dilution:	20			Initial Weight/Volume:	30.37 g
Analysis Date:	07/12/2015 2036			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		78	7300
2,2'-oxybis[1-chloropropane]		ND		210	7300
2,4,5-Trichlorophenol		ND		550	7300
2,4,6-Trichlorophenol		ND		200	7300
2,4-Dichlorophenol		ND		440	7300
2,4-Dimethylphenol		ND		440	7300
2,4-Dinitrophenol		ND		470	35000
2,4-Dinitrotoluene		ND		380	7300
2,6-Dinitrotoluene		ND		470	7300
2-Chloronaphthalene		ND		10	7300
2-Chlorophenol		ND		180	7300
2-Methylnaphthalene		150	J	11	7300
2-Methylphenol		ND		240	7300
2-Nitroaniline		ND		200	35000
2-Nitrophenol		ND		180	7300
3,3'-Dichlorobenzidine		ND		400	35000
3-Nitroaniline		ND		350	35000
4,6-Dinitro-2-methylphenol		ND		200	35000
4-Bromophenyl phenyl ether		ND		290	7300
4-Chloro-3-methylphenol		ND		470	7300
4-Chloroaniline		ND		380	7300
4-Chlorophenyl phenyl ether		ND		290	7300
4-Nitroaniline		ND		580	35000
4-Nitrophenol		ND		380	35000
Acenaphthene		1100	J	17	7300
Acenaphthylene		1100	J	7.8	7300
Acetophenone		ND		200	7300
Anthracene		4200	J	17	7300
Atrazine		ND		200	7300
Benzaldehyde		ND		270	7300
Benzo[a]anthracene		12000		14	7300
Benzo[a]pyrene		11000		14	7300
Benzo[b]fluoranthene		17000		13	7300
Benzo[g,h,i]perylene		3500	J	7.8	7300
Benzo[k]fluoranthene		5900	J	15	7300
Bis(2-chloroethoxy)methane		ND		490	7300
Bis(2-chloroethyl)ether		ND		44	7300
Bis(2-ethylhexyl) phthalate		730	J B *	420	7300
Butyl benzyl phthalate		ND		220	7300
Caprolactam		ND		820	7300
Carbazole		ND		600	7300
Chrysene		12000		24	7300
Dibenz(a,h)anthracene		1200	J	15	7300
Dibenzofuran		500	J	15	7300
Diethyl phthalate		ND		350	7300
Dimethyl phthalate		ND		380	7300

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-16_0-0.5(20150625)**

Lab Sample ID: 240-52618-6 Date Sampled: 06/25/2015 1600
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712030.D
Dilution:	20			Initial Weight/Volume:	30.37 g
Analysis Date:	07/12/2015 2036			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		330	7300
Di-n-octyl phthalate		ND		180	7300
Fluoranthene		23000		12	7300
Fluorene		1300	J	12	7300
Hexachlorobenzene		ND		47	7300
Hexachlorobutadiene		ND		120	7300
Hexachlorocyclopentadiene		ND		180	35000
Hexachloroethane		ND		200	7300
Indeno[1,2,3-cd]pyrene		3400	J	7.8	7300
Isophorone		ND		290	7300
Naphthalene		190	J	18	7300
Nitrobenzene		ND		49	7300
N-Nitrosodi-n-propylamine		ND		140	7300
N-Nitrosodiphenylamine		ND		470	7300
Pentachlorophenol		ND		200	7300
Phenol		ND		160	7300
Phenanthrene		12000		16	7300
Pyrene		23000		9.8	7300
3 & 4 Methylphenol		ND		440	8900

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		24 - 110
2-Fluorophenol (Surr)	73		24 - 110
2,4,6-Tribromophenol (Surr)	63		10 - 110
Nitrobenzene-d5 (Surr)	56		20 - 110
Phenol-d5 (Surr)	70		26 - 110
Terphenyl-d14 (Surr)	82		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-17_0-1(20150625)**

Lab Sample ID: 240-52618-7 Date Sampled: 06/25/2015 1645
Client Matrix: Solid % Moisture: 26.0 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712028.D
Dilution:	1.0			Initial Weight/Volume:	29.83 g
Analysis Date:	07/12/2015 1949			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.8	450
2,2'-oxybis[1-chloropropane]		ND		13	450
2,4,5-Trichlorophenol		ND		34	450
2,4,6-Trichlorophenol		ND		12	450
2,4-Dichlorophenol		ND		27	450
2,4-Dimethylphenol		ND		27	450
2,4-Dinitrophenol		ND		29	2200
2,4-Dinitrotoluene		ND		23	450
2,6-Dinitrotoluene		ND		29	450
2-Chloronaphthalene		ND		0.61	450
2-Chlorophenol		ND		11	450
2-Methylnaphthalene		11	J	0.68	450
2-Methylphenol		ND		15	450
2-Nitroaniline		ND		12	2200
2-Nitrophenol		ND		11	450
3,3'-Dichlorobenzidine		ND		24	2200
3-Nitroaniline		ND		22	2200
4,6-Dinitro-2-methylphenol		ND		12	2200
4-Bromophenyl phenyl ether		ND		18	450
4-Chloro-3-methylphenol		ND		29	450
4-Chloroaniline		ND		23	450
4-Chlorophenyl phenyl ether		ND		18	450
4-Nitroaniline		ND		35	2200
4-Nitrophenol		ND		23	2200
Acenaphthene		29	J	1.0	450
Acenaphthylene		78	J	0.48	450
Acetophenone		16	J	12	450
Anthracene		160	J	1.1	450
Atrazine		ND		12	450
Benzaldehyde		91	J	16	450
Benzo[a]anthracene		720		0.86	450
Benzo[a]pyrene		680		0.87	450
Benzo[b]fluoranthene		1100		0.80	450
Benzo[g,h,i]perylene		220	J	0.48	450
Benzo[k]fluoranthene		400	J	0.92	450
Bis(2-chloroethoxy)methane		ND		30	450
Bis(2-chloroethyl)ether		ND		2.7	450
Bis(2-ethylhexyl) phthalate		290	J B *	26	450
Butyl benzyl phthalate		ND		14	450
Caprolactam		ND		50	450
Carbazole		ND		37	450
Chrysene		760		1.5	450
Dibenz(a,h)anthracene		83	J	0.90	450
Dibenzofuran		23	J	0.90	450
Diethyl phthalate		ND		22	450
Dimethyl phthalate		ND		23	450

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-17_0-1(20150625)**

Lab Sample ID: 240-52618-7 Date Sampled: 06/25/2015 1645
Client Matrix: Solid % Moisture: 26.0 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712028.D
Dilution:	1.0			Initial Weight/Volume:	29.83 g
Analysis Date:	07/12/2015 1949			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		75	J B	20	450
Di-n-octyl phthalate		ND		11	450
Fluoranthene		1300		0.75	450
Fluorene		27	J	0.72	450
Hexachlorobenzene		ND		2.9	450
Hexachlorobutadiene		ND		7.6	450
Hexachlorocyclopentadiene		ND		11	2200
Hexachloroethane		ND		12	450
Indeno[1,2,3-cd]pyrene		220	J	0.48	450
Isophorone		ND		18	450
Naphthalene		17	J	1.1	450
Nitrobenzene		ND		3.0	450
N-Nitrosodi-n-propylamine		ND		8.6	450
N-Nitrosodiphenylamine		ND		29	450
Pentachlorophenol		ND		12	450
Phenol		33	J	9.9	450
Phenanthrene		450		0.99	450
Pyrene		1300		0.60	450
3 & 4 Methylphenol		ND		27	540

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	64		24 - 110
2-Fluorophenol (Surr)	58		24 - 110
2,4,6-Tribromophenol (Surr)	48		10 - 110
Nitrobenzene-d5 (Surr)	51		20 - 110
Phenol-d5 (Surr)	69		26 - 110
Terphenyl-d14 (Surr)	78		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-17_0-1(20150625)**

Lab Sample ID: 240-52618-7 Date Sampled: 06/25/2015 1645
Client Matrix: Solid % Moisture: 26.0 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715013.D
Dilution:	1.0			Initial Weight/Volume:	30.07 g
Analysis Date:	07/15/2015 1349	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	4.7	440
2,2'-oxybis[1-chloropropane]		ND	H	13	440
2,4,5-Trichlorophenol		ND	H	34	440
2,4,6-Trichlorophenol		ND	H	12	440
2,4-Dichlorophenol		ND	H	27	440
2,4-Dimethylphenol		ND	H	27	440
2,4-Dinitrophenol		ND	H	28	2200
2,4-Dinitrotoluene		ND	H	23	440
2,6-Dinitrotoluene		ND	H	28	440
2-Chloronaphthalene		ND	H	0.61	440
2-Chlorophenol		ND	H	11	440
2-Methylnaphthalene		11	J H	0.67	440
2-Methylphenol		ND	H	15	440
2-Nitroaniline		ND	H	12	2200
2-Nitrophenol		ND	H	11	440
3,3'-Dichlorobenzidine		ND	H	24	2200
3-Nitroaniline		ND	H	22	2200
4,6-Dinitro-2-methylphenol		ND	H	12	2200
4-Bromophenyl phenyl ether		ND	H	18	440
4-Chloro-3-methylphenol		ND	H	28	440
4-Chloroaniline		ND	H	23	440
4-Chlorophenyl phenyl ether		ND	H	18	440
4-Nitroaniline		ND	H	35	2200
4-Nitrophenol		ND	H	23	2200
Acenaphthene		32	J H	1.0	440
Acenaphthylene		60	J H	0.47	440
Acetophenone		15	J H	12	440
Anthracene		110	J H	1.1	440
Atrazine		ND	H	12	440
Benzaldehyde		66	J H	16	440
Benzo[a]anthracene		650	H	0.85	440
Benzo[a]pyrene		690	H	0.86	440
Benzo[b]fluoranthene		930	H	0.80	440
Benzo[g,h,i]perylene		300	J H	0.47	440
Benzo[k]fluoranthene		390	J H	0.92	440
Bis(2-chloroethoxy)methane		ND	H	30	440
Bis(2-chloroethyl)ether		ND	H	2.7	440
Bis(2-ethylhexyl) phthalate		86	J H B	26	440
Butyl benzyl phthalate		ND	H	13	440
Caprolactam		ND	H	50	440
Carbazole		ND	H	36	440
Chrysene		730	H	1.5	440
Dibenz(a,h)anthracene		87	J H	0.89	440
Dibenzofuran		13	J H	0.89	440
Diethyl phthalate		ND	H	22	440
Dimethyl phthalate		ND	H	23	440

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-17_0-1(20150625)**

Lab Sample ID: 240-52618-7 Date Sampled: 06/25/2015 1645
Client Matrix: Solid % Moisture: 26.0 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715013.D
Dilution:	1.0			Initial Weight/Volume:	30.07 g
Analysis Date:	07/15/2015 1349	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		71	J H	20	440
Di-n-octyl phthalate		ND	H	11	440
Fluoranthene		1100	H	0.74	440
Fluorene		32	J H	0.71	440
Hexachlorobenzene		ND	H	2.8	440
Hexachlorobutadiene		ND	H	7.5	440
Hexachlorocyclopentadiene		ND	H	11	2200
Hexachloroethane		ND	H	12	440
Indeno[1,2,3-cd]pyrene		280	J H	0.47	440
Isophorone		ND	H	18	440
Naphthalene		19	J H	1.1	440
Nitrobenzene		ND	H	3.0	440
N-Nitrosodi-n-propylamine		ND	H	8.5	440
N-Nitrosodiphenylamine		ND	H	28	440
Pentachlorophenol		ND	H	12	440
Phenol		21	J H	9.8	440
Phenanthrene		380	J H	0.98	440
Pyrene		1100	H	0.59	440
3 & 4 Methylphenol		ND	H	27	540

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	77		24 - 110
2-Fluorophenol (Surr)	76		24 - 110
2,4,6-Tribromophenol (Surr)	58		10 - 110
Nitrobenzene-d5 (Surr)	70		20 - 110
Phenol-d5 (Surr)	81		26 - 110
Terphenyl-d14 (Surr)	78		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-18_0-1(20150625)**

Lab Sample ID: 240-52618-8 Date Sampled: 06/25/2015 1700
Client Matrix: Solid % Moisture: 18.2 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712023.D
Dilution:	1.0			Initial Weight/Volume:	29.77 g
Analysis Date:	07/12/2015 1750			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.3	410
2,2'-oxybis[1-chloropropane]		ND		12	410
2,4,5-Trichlorophenol		ND		31	410
2,4,6-Trichlorophenol		ND		11	410
2,4-Dichlorophenol		ND		25	410
2,4-Dimethylphenol		ND		25	410
2,4-Dinitrophenol		ND		26	2000
2,4-Dinitrotoluene		ND		21	410
2,6-Dinitrotoluene		ND		26	410
2-Chloronaphthalene		ND		0.55	410
2-Chlorophenol		ND		10	410
2-Methylnaphthalene		6.4	J	0.62	410
2-Methylphenol		ND		14	410
2-Nitroaniline		ND		11	2000
2-Nitrophenol		ND		10	410
3,3'-Dichlorobenzidine		ND		22	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		11	2000
4-Bromophenyl phenyl ether		ND		16	410
4-Chloro-3-methylphenol		ND		26	410
4-Chloroaniline		ND		21	410
4-Chlorophenyl phenyl ether		ND		16	410
4-Nitroaniline		ND		32	2000
4-Nitrophenol		ND		21	2000
Acenaphthene		4.5	J	0.94	410
Acenaphthylene		13	J	0.43	410
Acetophenone		13	J	11	410
Anthracene		18	J	0.96	410
Atrazine		ND		11	410
Benzaldehyde		41	J	15	410
Benzo[a]anthracene		78	J	0.78	410
Benzo[a]pyrene		79	J	0.79	410
Benzo[b]fluoranthene		110	J	0.73	410
Benzo[g,h,i]perylene		31	J	0.43	410
Benzo[k]fluoranthene		54	J	0.84	410
Bis(2-chloroethoxy)methane		ND		27	410
Bis(2-chloroethyl)ether		ND		2.5	410
Bis(2-ethylhexyl) phthalate		310	J B *	23	410
Butyl benzyl phthalate		ND		12	410
Caprolactam		ND		46	410
Carbazole		ND		33	410
Chrysene		86	J	1.4	410
Dibenz(a,h)anthracene		ND		0.81	410
Dibenzofuran		ND		0.81	410
Diethyl phthalate		ND		20	410
Dimethyl phthalate		ND		21	410

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-18_0-1(20150625)**

Lab Sample ID: 240-52618-8 Date Sampled: 06/25/2015 1700
Client Matrix: Solid % Moisture: 18.2 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-188809	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-188010	Lab File ID:	50712023.D
Dilution:	1.0			Initial Weight/Volume:	29.77 g
Analysis Date:	07/12/2015 1750			Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		36	J B	18	410
Di-n-octyl phthalate		ND		9.7	410
Fluoranthene		130	J	0.68	410
Fluorene		4.8	J	0.65	410
Hexachlorobenzene		ND		2.6	410
Hexachlorobutadiene		ND		6.9	410
Hexachlorocyclopentadiene		ND		10	2000
Hexachloroethane		ND		11	410
Indeno[1,2,3-cd]pyrene		34	J	0.43	410
Isophorone		ND		16	410
Naphthalene		7.3	J	1.0	410
Nitrobenzene		ND		2.7	410
N-Nitrosodi-n-propylamine		ND		7.8	410
N-Nitrosodiphenylamine		ND		26	410
Pentachlorophenol		ND		11	410
Phenol		ND		9.0	410
Phenanthrene		56	J	0.90	410
Pyrene		120	J	0.54	410
3 & 4 Methylphenol		ND		25	490

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	64		24 - 110
2-Fluorophenol (Surr)	61		24 - 110
2,4,6-Tribromophenol (Surr)	33		10 - 110
Nitrobenzene-d5 (Surr)	52		20 - 110
Phenol-d5 (Surr)	66		26 - 110
Terphenyl-d14 (Surr)	78		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-18_0-1(20150625)**

Lab Sample ID: 240-52618-8 Date Sampled: 06/25/2015 1700
Client Matrix: Solid % Moisture: 18.2 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715012.D
Dilution:	1.0			Initial Weight/Volume:	30.10 g
Analysis Date:	07/15/2015 1324	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	H	4.3	400
2,2'-oxybis[1-chloropropane]		ND	H	12	400
2,4,5-Trichlorophenol		ND	H	30	400
2,4,6-Trichlorophenol		ND	H	11	400
2,4-Dichlorophenol		ND	H	24	400
2,4-Dimethylphenol		ND	H	24	400
2,4-Dinitrophenol		ND	H	26	1900
2,4-Dinitrotoluene		ND	H	21	400
2,6-Dinitrotoluene		ND	H	26	400
2-Chloronaphthalene		ND	H	0.55	400
2-Chlorophenol		ND	H	10	400
2-Methylnaphthalene		11	J H	0.61	400
2-Methylphenol		ND	H	13	400
2-Nitroaniline		ND	H	11	1900
2-Nitrophenol		ND	H	10	400
3,3'-Dichlorobenzidine		ND	H	22	1900
3-Nitroaniline		ND	H	19	1900
4,6-Dinitro-2-methylphenol		ND	H	11	1900
4-Bromophenyl phenyl ether		ND	H	16	400
4-Chloro-3-methylphenol		ND	H	26	400
4-Chloroaniline		ND	H	21	400
4-Chlorophenyl phenyl ether		ND	H	16	400
4-Nitroaniline		ND	H	32	1900
4-Nitrophenol		ND	H	21	1900
Acenaphthene		ND	H	0.93	400
Acenaphthylene		9.2	J H	0.43	400
Acetophenone		ND	H	11	400
Anthracene		9.6	J H	0.95	400
Atrazine		ND	H	11	400
Benzaldehyde		28	J H	15	400
Benzo[a]anthracene		53	J H	0.77	400
Benzo[a]pyrene		54	J H	0.78	400
Benzo[b]fluoranthene		81	J H	0.72	400
Benzo[g,h,i]perylene		29	J H	0.43	400
Benzo[k]fluoranthene		29	J H	0.83	400
Bis(2-chloroethoxy)methane		ND	H	27	400
Bis(2-chloroethyl)ether		ND	H	2.4	400
Bis(2-ethylhexyl) phthalate		53	J H B	23	400
Butyl benzyl phthalate		ND	H	12	400
Caprolactam		ND	H	45	400
Carbazole		ND	H	33	400
Chrysene		60	J H	1.3	400
Dibenz(a,h)anthracene		8.9	J H	0.80	400
Dibenzofuran		ND	H	0.80	400
Diethyl phthalate		ND	H	19	400
Dimethyl phthalate		ND	H	21	400

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-18_0-1(20150625)**

Lab Sample ID: 240-52618-8 Date Sampled: 06/25/2015 1700
Client Matrix: Solid % Moisture: 18.2 Date Received: 06/27/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-188889	Lab File ID:	50715012.D
Dilution:	1.0			Initial Weight/Volume:	30.10 g
Analysis Date:	07/15/2015 1324	Run Type:	RE	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 1236			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		24	J H	18	400
Di-n-octyl phthalate		ND	H	9.6	400
Fluoranthene		96	J H	0.67	400
Fluorene		ND	H	0.65	400
Hexachlorobenzene		ND	H	2.6	400
Hexachlorobutadiene		ND	H	6.8	400
Hexachlorocyclopentadiene		ND	H	9.9	1900
Hexachloroethane		ND	H	11	400
Indeno[1,2,3-cd]pyrene		29	J H	0.43	400
Isophorone		ND	H	16	400
Naphthalene		5.6	J H	1.0	400
Nitrobenzene		ND	H	2.7	400
N-Nitrosodi-n-propylamine		ND	H	7.7	400
N-Nitrosodiphenylamine		ND	H	26	400
Pentachlorophenol		ND	H	11	400
Phenol		ND	H	8.9	400
Phenanthrene		45	J H	0.89	400
Pyrene		92	J H	0.54	400
3 & 4 Methylphenol		ND	H	24	490

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	59		24 - 110
2-Fluorophenol (Surr)	53		24 - 110
2,4,6-Tribromophenol (Surr)	26		10 - 110
Nitrobenzene-d5 (Surr)	48		20 - 110
Phenol-d5 (Surr)	63		26 - 110
Terphenyl-d14 (Surr)	68		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-11_0-1(20150625)**

Lab Sample ID: 240-52618-1 Date Sampled: 06/25/2015 1730
Client Matrix: Solid % Moisture: 31.4 Date Received: 06/27/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187529	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187525	Lab File ID:	Y0062908.D
Dilution:	1.0			Initial Weight/Volume:	8.346 g
Analysis Date:	07/01/2015 1104			Final Weight/Volume:	10 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		3.5	17

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-12_0-1(20150625)**

Lab Sample ID: 240-52618-2 Date Sampled: 06/25/2015 1750
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187529	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187525	Lab File ID:	Y0062909.D
Dilution:	1.0			Initial Weight/Volume:	10.076 g
Analysis Date:	07/01/2015 1140			Final Weight/Volume:	10 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.2	11

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-13_0-1(20150625)**

Lab Sample ID: 240-52618-3 Date Sampled: 06/25/2015 1815
Client Matrix: Solid % Moisture: 15.1 Date Received: 06/27/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187529	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187525	Lab File ID:	Y0062910.D
Dilution:	1.0			Initial Weight/Volume:	9.545 g
Analysis Date:	07/01/2015 1214			Final Weight/Volume:	10 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-14_0-1(20150625)**

Lab Sample ID: 240-52618-4 Date Sampled: 06/25/2015 1830
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187529	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187525	Lab File ID:	Y0062911.D
Dilution:	1.0			Initial Weight/Volume:	10.751 g
Analysis Date:	07/01/2015 1250			Final Weight/Volume:	10 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.2	11

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-15_0-1(20150625)**

Lab Sample ID: 240-52618-5 Date Sampled: 06/25/2015 1540
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187529	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187525	Lab File ID:	Y0062912.D
Dilution:	1.0			Initial Weight/Volume:	9.578 g
Analysis Date:	07/01/2015 1324			Final Weight/Volume:	10 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-16_0-0.5(20150625)**

Lab Sample ID: 240-52618-6 Date Sampled: 06/25/2015 1600
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187529	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187525	Lab File ID:	Y0062913.D
Dilution:	1.0			Initial Weight/Volume:	9.855 g
Analysis Date:	07/01/2015 1400			Final Weight/Volume:	10 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.3	11

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-17_0-1(20150625)**

Lab Sample ID: 240-52618-7 Date Sampled: 06/25/2015 1645
Client Matrix: Solid % Moisture: 26.0 Date Received: 06/27/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187529	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187525	Lab File ID:	Y0062914.D
Dilution:	1.0			Initial Weight/Volume:	9.64 g
Analysis Date:	07/01/2015 1435			Final Weight/Volume:	10 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.8	14

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-18_0-1(20150625)**

Lab Sample ID: 240-52618-8 Date Sampled: 06/25/2015 1700
Client Matrix: Solid % Moisture: 18.2 Date Received: 06/27/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187529	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187525	Lab File ID:	Y0062915.D
Dilution:	1.0			Initial Weight/Volume:	9.952 g
Analysis Date:	07/01/2015 1511			Final Weight/Volume:	10 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **MB_01(20150625)**

Lab Sample ID: 240-52618-9TB
Client Matrix: Solid

Date Sampled: 06/25/2015 0000
Date Received: 06/27/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-187529	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-187525	Lab File ID:	Y0062917.D
Dilution:	1.0			Initial Weight/Volume:	0.273 g
Analysis Date:	07/01/2015 1621			Final Weight/Volume:	10 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		73	370

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: HA-11_0-1(20150625)

Lab Sample ID: 240-52618-1 Date Sampled: 06/25/2015 1730
Client Matrix: Solid % Moisture: 31.4 Date Received: 06/27/2015 1000

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188186	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070712.D
Dilution:	1.0			Initial Weight/Volume:	28.14 g
Analysis Date:	07/07/2015 1721			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		48	*	1.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-12_0-1(20150625)**

Lab Sample ID: 240-52618-2 Date Sampled: 06/25/2015 1750
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188186	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070713.D
Dilution:	1.0			Initial Weight/Volume:	27.98 g
Analysis Date:	07/07/2015 1749			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		15	*	1.2	9.6

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: HA-13_0-1(20150625)

Lab Sample ID: 240-52618-3 Date Sampled: 06/25/2015 1815
Client Matrix: Solid % Moisture: 15.1 Date Received: 06/27/2015 1000

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188186	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070714.D
Dilution:	1.0			Initial Weight/Volume:	28.75 g
Analysis Date:	07/07/2015 1816			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		67	*	1.2	9.8

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-14_0-1(20150625)**

Lab Sample ID: 240-52618-4 Date Sampled: 06/25/2015 1830
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070622.D
Dilution:	1.0			Initial Weight/Volume:	27.07 g
Analysis Date:	07/06/2015 2248			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		8.6	J *	1.3	10

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-15_0-1(20150625)**

Lab Sample ID: 240-52618-5 Date Sampled: 06/25/2015 1540
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070623.D
Dilution:	1.0			Initial Weight/Volume:	27.63 g
Analysis Date:	07/06/2015 2315			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		7.9	J *	1.2	10

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: HA-16_0-0.5(20150625)

Lab Sample ID: 240-52618-6 Date Sampled: 06/25/2015 1600
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188186	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070715.D
Dilution:	50			Initial Weight/Volume:	27.29 g
Analysis Date:	07/07/2015 1843			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		2300	*	60	490

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-17_0-1(20150625)**

Lab Sample ID: 240-52618-7 Date Sampled: 06/25/2015 1645
Client Matrix: Solid % Moisture: 26.0 Date Received: 06/27/2015 1000

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188186	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070716.D
Dilution:	1.0			Initial Weight/Volume:	27.64 g
Analysis Date:	07/07/2015 1910			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		42	*	1.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-18_0-1(20150625)**

Lab Sample ID: 240-52618-8 Date Sampled: 06/25/2015 1700
Client Matrix: Solid % Moisture: 18.2 Date Received: 06/27/2015 1000

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Prep Method:	WI DRO PREP	Prep Batch:	240-187816	Lab File ID:	P14F070626.D
Dilution:	1.0			Initial Weight/Volume:	33.95 g
Analysis Date:	07/07/2015 0036			Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		14	*	1.1	8.6

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: HA-11_0-1(20150625)

Lab Sample ID: 240-52618-1 Date Sampled: 06/25/2015 1730
Client Matrix: Solid % Moisture: 31.4 Date Received: 06/27/2015 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.25 g
Analysis Date:	07/02/2015 1444			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4500		6.8	23
Antimony		ND		0.56	1.2
Barium		65		0.48	23
Beryllium		0.24	J	0.030	0.58
Calcium		31000		27	580
Cadmium		0.33		0.024	0.23
Cobalt		4.6	J	0.055	5.8
Chromium		12		0.087	0.58
Copper		17		0.27	2.9
Iron		9100		3.7	12
Potassium		1300		7.2	580
Magnesium		10000	B	6.1	580
Manganese		380		0.098	1.7
Silver		ND		0.073	0.58
Sodium		75	J	22	580
Nickel		11		0.093	4.7
Vanadium		15		0.23	5.8
Zinc		62	B	0.65	2.3
Arsenic		3.1		0.48	1.2
Lead		19		0.23	0.35
Selenium		ND		0.40	0.58
Thallium		ND		0.15	1.2

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	07/02/2015 0856			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.043	J	0.019	0.13

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: **HA-12_0-1(20150625)**

Lab Sample ID: 240-52618-2 Date Sampled: 06/25/2015 1750
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.06 g
Analysis Date:	07/02/2015 1448			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5100		6.1	21
Antimony		ND		0.51	1.1
Barium		30		0.43	21
Beryllium		0.26	J	0.028	0.53
Calcium		31000		24	530
Cadmium		0.32		0.022	0.21
Cobalt		5.1	J	0.050	5.3
Chromium		11		0.079	0.53
Copper		15		0.24	2.6
Iron		10000		3.4	11
Potassium		1500		6.6	530
Magnesium		13000	B	5.5	530
Manganese		190		0.089	1.6
Silver		ND		0.067	0.53
Sodium		94	J	20	530
Nickel		12		0.085	4.2
Vanadium		13		0.21	5.3
Zinc		30	B	0.59	2.1
Arsenic		2.2		0.43	1.1
Lead		11		0.21	0.32
Selenium		0.51	J	0.36	0.53
Thallium		ND		0.14	1.1

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.57 g
Analysis Date:	07/02/2015 0858			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.017	0.12

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: HA-13_0-1(20150625)

Lab Sample ID: 240-52618-3 Date Sampled: 06/25/2015 1815
Client Matrix: Solid % Moisture: 15.1 Date Received: 06/27/2015 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.27 g
Analysis Date:	07/02/2015 1452			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4200		5.4	19
Antimony		0.97		0.45	0.93
Barium		39		0.38	19
Beryllium		0.26	J	0.024	0.46
Calcium		24000		21	460
Cadmium		0.88		0.019	0.19
Cobalt		5.1		0.044	4.6
Chromium		12		0.070	0.46
Copper		16		0.21	2.3
Iron		11000		3.0	9.3
Potassium		1200		5.7	460
Magnesium		6700	B	4.8	460
Manganese		270		0.078	1.4
Silver		ND		0.058	0.46
Sodium		62	J	18	460
Nickel		12		0.074	3.7
Vanadium		14		0.19	4.6
Zinc		61	B	0.52	1.9
Arsenic		3.2		0.38	0.93
Lead		71		0.19	0.28
Selenium		ND		0.32	0.46
Thallium		ND		0.12	0.93

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.58 g
Analysis Date:	07/02/2015 0900			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.025	J	0.017	0.12

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: HA-14_0-1(20150625)

Lab Sample ID: 240-52618-4 Date Sampled: 06/25/2015 1830
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.47 g
Analysis Date:	07/02/2015 1456			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6500		4.6	16
Antimony		1.1		0.38	0.80
Barium		47		0.33	16
Beryllium		0.35	J	0.021	0.40
Calcium		11000		18	400
Cadmium		0.23		0.017	0.16
Cobalt		7.6		0.038	4.0
Chromium		14		0.060	0.40
Copper		13		0.18	2.0
Iron		13000		2.6	8.0
Potassium		1900		5.0	400
Magnesium		4000	B	4.2	400
Manganese		360		0.067	1.2
Silver		ND		0.050	0.40
Sodium		58	J	15	400
Nickel		16		0.064	3.2
Vanadium		16		0.16	4.0
Zinc		56	B	0.45	1.6
Arsenic		8.0		0.33	0.80
Lead		62		0.16	0.24
Selenium		0.27	J	0.27	0.40
Thallium		ND		0.10	0.80

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.65 g
Analysis Date:	07/02/2015 0903			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.031	J	0.015	0.11

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: HA-15_0-1(20150625)

Lab Sample ID: 240-52618-5 Date Sampled: 06/25/2015 1540
Client Matrix: Solid % Moisture: 14.8 Date Received: 06/27/2015 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.37 g
Analysis Date:	07/02/2015 1500			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4500		5.0	17
Antimony		ND		0.41	0.86
Barium		42		0.35	17
Beryllium		0.19	J	0.022	0.43
Calcium		6900		20	430
Cadmium		0.12	J	0.018	0.17
Cobalt		2.0	J	0.040	4.3
Chromium		8.4		0.064	0.43
Copper		6.0		0.20	2.1
Iron		5000		2.7	8.6
Potassium		400	J	5.3	430
Magnesium		1600	B	4.5	430
Manganese		170		0.072	1.3
Silver		ND		0.054	0.43
Sodium		38	J	16	430
Nickel		5.5		0.069	3.4
Vanadium		11		0.17	4.3
Zinc		22	B	0.48	1.7
Arsenic		1.8		0.35	0.86
Lead		6.2		0.17	0.26
Selenium		0.42	J	0.29	0.43
Thallium		ND		0.11	0.86

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	07/02/2015 0904			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.016	0.11

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Client Sample ID: HA-16_0-0.5(20150625)

Lab Sample ID: 240-52618-6 Date Sampled: 06/25/2015 1600
Client Matrix: Solid % Moisture: 10.9 Date Received: 06/27/2015 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.44 g
Analysis Date:	07/02/2015 1505			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5400		4.5	16
Antimony		ND		0.37	0.78
Barium		38		0.32	16
Beryllium		0.26	J	0.020	0.39
Calcium		24000		18	390
Cadmium		0.48		0.016	0.16
Cobalt		5.1		0.037	3.9
Chromium		12		0.058	0.39
Copper		12		0.18	1.9
Iron		10000		2.5	7.8
Potassium		1200		4.8	390
Magnesium		5600	B	4.1	390
Manganese		340		0.065	1.2
Silver		ND		0.049	0.39
Sodium		96	J	15	390
Nickel		12		0.062	3.1
Vanadium		16		0.16	3.9
Zinc		37	B	0.44	1.6
Arsenic		3.3		0.32	0.78
Lead		17		0.16	0.23
Selenium		0.33	J	0.27	0.39
Thallium		ND		0.10	0.78

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	07/02/2015 0906			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.022	J	0.017	0.12

Client Sample ID: **HA-17_0-1(20150625)**

Lab Sample ID: 240-52618-7 Date Sampled: 06/25/2015 1645
Client Matrix: Solid % Moisture: 26.0 Date Received: 06/27/2015 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.10 g
Analysis Date:	07/02/2015 1509			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7000		7.1	25
Antimony		0.73	J	0.59	1.2
Barium		71		0.50	25
Beryllium		0.35	J	0.032	0.61
Calcium		18000		28	610
Cadmium		0.32		0.026	0.25
Cobalt		6.1		0.058	6.1
Chromium		13		0.092	0.61
Copper		17		0.28	3.1
Iron		12000		3.9	12
Potassium		1300		7.6	610
Magnesium		5300	B	6.4	610
Manganese		460		0.10	1.8
Silver		ND		0.077	0.61
Sodium		59	J	23	610
Nickel		12		0.098	4.9
Vanadium		20		0.25	6.1
Zinc		56	B	0.69	2.5
Arsenic		3.7		0.50	1.2
Lead		28		0.25	0.37
Thallium		ND		0.16	1.2

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070615A.asc
Dilution:	1.0			Initial Weight/Volume:	1.10 g
Analysis Date:	07/06/2015 1711			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		ND		0.42	0.61

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	07/02/2015 0908			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.036	J	0.017	0.12

Client Sample ID: **HA-18_0-1(20150625)**

Lab Sample ID: 240-52618-8 Date Sampled: 06/25/2015 1700
Client Matrix: Solid % Moisture: 18.2 Date Received: 06/27/2015 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-187870	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.29 g
Analysis Date:	07/02/2015 1513			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		8700		5.5	19
Antimony		1.3		0.45	0.95
Barium		76		0.39	19
Beryllium		0.46	J	0.025	0.47
Calcium		10000		22	470
Cadmium		0.32		0.020	0.19
Cobalt		6.8		0.045	4.7
Chromium		15		0.071	0.47
Copper		14		0.22	2.4
Iron		14000		3.0	9.5
Potassium		1900		5.9	470
Magnesium		4200	B	4.9	470
Manganese		390		0.080	1.4
Silver		ND		0.060	0.47
Sodium		54	J	18	470
Nickel		15		0.076	3.8
Vanadium		21		0.19	4.7
Zinc		53	B	0.53	1.9
Arsenic		4.5		0.39	0.95
Lead		27		0.19	0.28
Thallium		ND		0.12	0.95

Analysis Method:	6010B	Analysis Batch:	240-188177	Instrument ID:	I12
Prep Method:	3050B	Prep Batch:	240-187589	Lab File ID:	I12070615A.asc
Dilution:	1.0			Initial Weight/Volume:	1.29 g
Analysis Date:	07/06/2015 1724			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Selenium		ND		0.32	0.47

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-187808	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	07/02/2015 0911			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.019	J	0.018	0.13

General Chemistry

Client Sample ID: **HA-11_0-1(20150625)**

Lab Sample ID: 240-52618-1 Date Sampled: 06/25/2015 1730
Client Matrix: Solid Date Received: 06/27/2015 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	69		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N
Percent Moisture	31		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-12_0-1(20150625)**

Lab Sample ID: 240-52618-2 Date Sampled: 06/25/2015 1750
Client Matrix: Solid Date Received: 06/27/2015 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	89		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N
Percent Moisture	11		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-13_0-1(20150625)**

Lab Sample ID: 240-52618-3 Date Sampled: 06/25/2015 1815
Client Matrix: Solid Date Received: 06/27/2015 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	85		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N
Percent Moisture	15		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-14_0-1(20150625)**

Lab Sample ID: 240-52618-4 Date Sampled: 06/25/2015 1830
Client Matrix: Solid Date Received: 06/27/2015 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	85		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N
Percent Moisture	15		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-15_0-1(20150625)**

Lab Sample ID: 240-52618-5 Date Sampled: 06/25/2015 1540
Client Matrix: Solid Date Received: 06/27/2015 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	85		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N
Percent Moisture	15		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-16_0-0.5(20150625)**

Lab Sample ID: 240-52618-6 Date Sampled: 06/25/2015 1600
Client Matrix: Solid Date Received: 06/27/2015 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	89		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N
Percent Moisture	11		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-17_0-1(20150625)**

Lab Sample ID: 240-52618-7 Date Sampled: 06/25/2015 1645
Client Matrix: Solid Date Received: 06/27/2015 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	74		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N
Percent Moisture	26		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-18_0-1(20150625)**

Lab Sample ID: 240-52618-8 Date Sampled: 06/25/2015 1700
Client Matrix: Solid Date Received: 06/27/2015 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	82		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N
Percent Moisture	18		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-187458	Analysis Date: 06/30/2015 1300						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Section	Qualifier	Description
GC/MS VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	B	Compound was found in the blank and sample.
	*	LCS or LCSD is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time
GC Semi VOA		
	*	LCS or LCSD is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	*	RPD of the LCS and LCSD exceeds the control limits
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-187478					
LCS 240-187478/2-A	Lab Control Sample	T	Solid	5035	
MB 240-187478/1-A	Method Blank	T	Solid	5035	
240-52540-C-1-D MS	Matrix Spike	T	Solid	5035	
240-52540-C-1-E MSD	Matrix Spike Duplicate	T	Solid	5035	
240-52618-1	HA-11_0-1(20150625)	T	Solid	5035	
240-52618-2	HA-12_0-1(20150625)	T	Solid	5035	
240-52618-3	HA-13_0-1(20150625)	T	Solid	5035	
240-52618-4	HA-14_0-1(20150625)	T	Solid	5035	
240-52618-5	HA-15_0-1(20150625)	T	Solid	5035	
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	5035	
240-52618-7	HA-17_0-1(20150625)	T	Solid	5035	
240-52618-8	HA-18_0-1(20150625)	T	Solid	5035	
240-52618-9TB	MB_01(20150625)	T	Solid	5035	
Analysis Batch:240-187502					
LCS 240-187478/2-A	Lab Control Sample	T	Solid	8260B	240-187478
MB 240-187478/1-A	Method Blank	T	Solid	8260B	240-187478
240-52540-C-1-D MS	Matrix Spike	T	Solid	8260B	240-187478
240-52540-C-1-E MSD	Matrix Spike Duplicate	T	Solid	8260B	240-187478
240-52618-1	HA-11_0-1(20150625)	T	Solid	8260B	240-187478
240-52618-2	HA-12_0-1(20150625)	T	Solid	8260B	240-187478
240-52618-3	HA-13_0-1(20150625)	T	Solid	8260B	240-187478
Analysis Batch:240-187929					
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	8260B	240-187478
240-52618-7	HA-17_0-1(20150625)	T	Solid	8260B	240-187478
240-52618-8	HA-18_0-1(20150625)	T	Solid	8260B	240-187478
240-52618-9TB	MB_01(20150625)	T	Solid	8260B	240-187478
Analysis Batch:240-188101					
240-52618-4	HA-14_0-1(20150625)	T	Solid	8260B	240-187478
240-52618-5	HA-15_0-1(20150625)	T	Solid	8260B	240-187478

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-188010					
LCS 240-188010/22-A	Lab Control Sample	T	Solid	3540C	
MB 240-188010/21-A	Method Blank	T	Solid	3540C	
240-52618-1	HA-11_0-1(20150625)	T	Solid	3540C	
240-52618-2	HA-12_0-1(20150625)	T	Solid	3540C	
240-52618-3	HA-13_0-1(20150625)	T	Solid	3540C	
240-52618-4	HA-14_0-1(20150625)	T	Solid	3540C	
240-52618-5	HA-15_0-1(20150625)	T	Solid	3540C	
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	3540C	
240-52618-7	HA-17_0-1(20150625)	T	Solid	3540C	
240-52618-8	HA-18_0-1(20150625)	T	Solid	3540C	
Analysis Batch:240-188453					
LCS 240-188010/22-A	Lab Control Sample	T	Solid	8270C	240-188010
MB 240-188010/21-A	Method Blank	T	Solid	8270C	240-188010
Analysis Batch:240-188809					
240-52618-1	HA-11_0-1(20150625)	T	Solid	8270C	240-188010
240-52618-2	HA-12_0-1(20150625)	T	Solid	8270C	240-188010
240-52618-3	HA-13_0-1(20150625)	T	Solid	8270C	240-188010
240-52618-4	HA-14_0-1(20150625)	T	Solid	8270C	240-188010
240-52618-5	HA-15_0-1(20150625)	T	Solid	8270C	240-188010
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	8270C	240-188010
240-52618-7	HA-17_0-1(20150625)	T	Solid	8270C	240-188010
240-52618-8	HA-18_0-1(20150625)	T	Solid	8270C	240-188010
Prep Batch: 240-188889					
LCS 240-188889/12-A	Lab Control Sample	T	Solid	3540C	
MB 240-188889/11-A	Method Blank	T	Solid	3540C	
240-52618-1RE	HA-11_0-1(20150625)	T	Solid	3540C	
240-52618-2RE	HA-12_0-1(20150625)	T	Solid	3540C	
240-52618-3RE	HA-13_0-1(20150625)	T	Solid	3540C	
240-52618-4RE	HA-14_0-1(20150625)	T	Solid	3540C	
240-52618-5RE	HA-15_0-1(20150625)	T	Solid	3540C	
240-52618-6RE	HA-16_0-0.5(20150625)	T	Solid	3540C	
240-52618-7RE	HA-17_0-1(20150625)	T	Solid	3540C	
240-52618-8RE	HA-18_0-1(20150625)	T	Solid	3540C	

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:240-189174					
LCS 240-188889/12-A	Lab Control Sample	T	Solid	8270C	240-188889
MB 240-188889/11-A	Method Blank	T	Solid	8270C	240-188889
240-52618-1RE	HA-11_0-1(20150625)	T	Solid	8270C	240-188889
240-52618-2RE	HA-12_0-1(20150625)	T	Solid	8270C	240-188889
240-52618-3RE	HA-13_0-1(20150625)	T	Solid	8270C	240-188889
240-52618-4RE	HA-14_0-1(20150625)	T	Solid	8270C	240-188889
240-52618-5RE	HA-15_0-1(20150625)	T	Solid	8270C	240-188889
240-52618-6RE	HA-16_0-0.5(20150625)	T	Solid	8270C	240-188889
240-52618-7RE	HA-17_0-1(20150625)	T	Solid	8270C	240-188889
240-52618-8RE	HA-18_0-1(20150625)	T	Solid	8270C	240-188889

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Prep Batch: 240-187525					
LCS 240-187525/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-187525/14-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-187525/1-A	Method Blank	T	Solid	5035	
240-52618-1	HA-11_0-1(20150625)	T	Solid	5035	
240-52618-2	HA-12_0-1(20150625)	T	Solid	5035	
240-52618-3	HA-13_0-1(20150625)	T	Solid	5035	
240-52618-4	HA-14_0-1(20150625)	T	Solid	5035	
240-52618-5	HA-15_0-1(20150625)	T	Solid	5035	
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	5035	
240-52618-7	HA-17_0-1(20150625)	T	Solid	5035	
240-52618-8	HA-18_0-1(20150625)	T	Solid	5035	
240-52618-9TB	MB_01(20150625)	T	Solid	5035	
Analysis Batch:240-187529					
LCS 240-187525/2-A	Lab Control Sample	T	Solid	WI-GRO	240-187525
LCSD 240-187525/14-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-187525
MB 240-187525/1-A	Method Blank	T	Solid	WI-GRO	240-187525
240-52618-1	HA-11_0-1(20150625)	T	Solid	WI-GRO	240-187525
240-52618-2	HA-12_0-1(20150625)	T	Solid	WI-GRO	240-187525
240-52618-3	HA-13_0-1(20150625)	T	Solid	WI-GRO	240-187525
240-52618-4	HA-14_0-1(20150625)	T	Solid	WI-GRO	240-187525
240-52618-5	HA-15_0-1(20150625)	T	Solid	WI-GRO	240-187525
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	WI-GRO	240-187525
240-52618-7	HA-17_0-1(20150625)	T	Solid	WI-GRO	240-187525
240-52618-8	HA-18_0-1(20150625)	T	Solid	WI-GRO	240-187525
240-52618-9TB	MB_01(20150625)	T	Solid	WI-GRO	240-187525

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-187816					
LCS 240-187816/22-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-187816/23-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-187816/21-A	Method Blank	T	Solid	WI DRO PREP	
240-52618-1	HA-11_0-1(20150625)	T	Solid	WI DRO PREP	
240-52618-2	HA-12_0-1(20150625)	T	Solid	WI DRO PREP	
240-52618-3	HA-13_0-1(20150625)	T	Solid	WI DRO PREP	
240-52618-4	HA-14_0-1(20150625)	T	Solid	WI DRO PREP	
240-52618-5	HA-15_0-1(20150625)	T	Solid	WI DRO PREP	
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	WI DRO PREP	
240-52618-7	HA-17_0-1(20150625)	T	Solid	WI DRO PREP	
240-52618-8	HA-18_0-1(20150625)	T	Solid	WI DRO PREP	
Analysis Batch:240-188039					
LCS 240-187816/22-A	Lab Control Sample	T	Solid	WI-DRO	240-187816
LCSD 240-187816/23-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-187816
MB 240-187816/21-A	Method Blank	T	Solid	WI-DRO	240-187816
240-52618-4	HA-14_0-1(20150625)	T	Solid	WI-DRO	240-187816
240-52618-5	HA-15_0-1(20150625)	T	Solid	WI-DRO	240-187816
240-52618-8	HA-18_0-1(20150625)	T	Solid	WI-DRO	240-187816
Analysis Batch:240-188186					
240-52618-1	HA-11_0-1(20150625)	T	Solid	WI-DRO	240-187816
240-52618-2	HA-12_0-1(20150625)	T	Solid	WI-DRO	240-187816
240-52618-3	HA-13_0-1(20150625)	T	Solid	WI-DRO	240-187816
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	WI-DRO	240-187816
240-52618-7	HA-17_0-1(20150625)	T	Solid	WI-DRO	240-187816

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-187589					
LCS 240-187589/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-187589/1-A	Method Blank	T	Solid	3050B	
240-52525-F-6-B MS	Matrix Spike	T	Solid	3050B	
240-52525-F-6-C MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-52618-1	HA-11_0-1(20150625)	T	Solid	3050B	
240-52618-2	HA-12_0-1(20150625)	T	Solid	3050B	
240-52618-3	HA-13_0-1(20150625)	T	Solid	3050B	
240-52618-4	HA-14_0-1(20150625)	T	Solid	3050B	
240-52618-5	HA-15_0-1(20150625)	T	Solid	3050B	
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	3050B	
240-52618-7	HA-17_0-1(20150625)	T	Solid	3050B	
240-52618-8	HA-18_0-1(20150625)	T	Solid	3050B	
Prep Batch: 240-187598					
LCS 240-187598/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-187598/1-A	Method Blank	T	Solid	7471A	
240-52525-F-6-E MS	Matrix Spike	T	Solid	7471A	
240-52525-F-6-F MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-52618-1	HA-11_0-1(20150625)	T	Solid	7471A	
240-52618-2	HA-12_0-1(20150625)	T	Solid	7471A	
240-52618-3	HA-13_0-1(20150625)	T	Solid	7471A	
240-52618-4	HA-14_0-1(20150625)	T	Solid	7471A	
240-52618-5	HA-15_0-1(20150625)	T	Solid	7471A	
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	7471A	
240-52618-7	HA-17_0-1(20150625)	T	Solid	7471A	
240-52618-8	HA-18_0-1(20150625)	T	Solid	7471A	
Analysis Batch:240-187808					
LCS 240-187598/2-A	Lab Control Sample	T	Solid	7471A	240-187598
MB 240-187598/1-A	Method Blank	T	Solid	7471A	240-187598
240-52525-F-6-E MS	Matrix Spike	T	Solid	7471A	240-187598
240-52525-F-6-F MSD	Matrix Spike Duplicate	T	Solid	7471A	240-187598
240-52618-1	HA-11_0-1(20150625)	T	Solid	7471A	240-187598
240-52618-2	HA-12_0-1(20150625)	T	Solid	7471A	240-187598
240-52618-3	HA-13_0-1(20150625)	T	Solid	7471A	240-187598
240-52618-4	HA-14_0-1(20150625)	T	Solid	7471A	240-187598
240-52618-5	HA-15_0-1(20150625)	T	Solid	7471A	240-187598
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	7471A	240-187598
240-52618-7	HA-17_0-1(20150625)	T	Solid	7471A	240-187598
240-52618-8	HA-18_0-1(20150625)	T	Solid	7471A	240-187598

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-187870					
LCS 240-187589/2-A	Lab Control Sample	T	Solid	6010B	240-187589
MB 240-187589/1-A	Method Blank	T	Solid	6010B	240-187589
240-52525-F-6-B MS	Matrix Spike	T	Solid	6010B	240-187589
240-52525-F-6-C MSD	Matrix Spike Duplicate	T	Solid	6010B	240-187589
240-52618-1	HA-11_0-1(20150625)	T	Solid	6010B	240-187589
240-52618-2	HA-12_0-1(20150625)	T	Solid	6010B	240-187589
240-52618-3	HA-13_0-1(20150625)	T	Solid	6010B	240-187589
240-52618-4	HA-14_0-1(20150625)	T	Solid	6010B	240-187589
240-52618-5	HA-15_0-1(20150625)	T	Solid	6010B	240-187589
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	6010B	240-187589
240-52618-7	HA-17_0-1(20150625)	T	Solid	6010B	240-187589
240-52618-8	HA-18_0-1(20150625)	T	Solid	6010B	240-187589
Analysis Batch:240-188177					
240-52618-7	HA-17_0-1(20150625)	T	Solid	6010B	240-187589
240-52618-8	HA-18_0-1(20150625)	T	Solid	6010B	240-187589

Report Basis
T = Total

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-187458					
240-52470-A-166 DU	Duplicate	T	Solid	Moisture	
240-52618-1	HA-11_0-1(20150625)	T	Solid	Moisture	
240-52618-2	HA-12_0-1(20150625)	T	Solid	Moisture	
240-52618-3	HA-13_0-1(20150625)	T	Solid	Moisture	
240-52618-4	HA-14_0-1(20150625)	T	Solid	Moisture	
240-52618-5	HA-15_0-1(20150625)	T	Solid	Moisture	
240-52618-6	HA-16_0-0.5(20150625)	T	Solid	Moisture	
240-52618-7	HA-17_0-1(20150625)	T	Solid	Moisture	
240-52618-8	HA-18_0-1(20150625)	T	Solid	Moisture	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-52618-1	HA-11_0-1(20150625)	83	69	88	85
240-52618-2	HA-12_0-1(20150625)	104	81	107	103
240-52618-3	HA-13_0-1(20150625)	97	74	100	100
240-52618-4	HA-14_0-1(20150625)	103	86	99	93
240-52618-5	HA-15_0-1(20150625)	99	86	101	90
240-52618-6	HA-16_0-0.5(20150625)	112	96	107	104
240-52618-7	HA-17_0-1(20150625)	94	83	91	89
240-52618-8	HA-18_0-1(20150625)	103	87	103	98
240-52618-9	MB_01(20150625)	106	89	105	103
MB 240-187478/1-A		92	73	94	92
LCS 240-187478/2-A		96	83	101	95
240-52540-C-1-D MS		84	68	81	82
240-52540-C-1-E MSD		83	69	86	81

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-52618-1	HA-11_0-1(20150625)	76	69	66	57	79	83
240-52618-1 RE	HA-11_0-1(20150625) RE	63	61	65	60	67	66
240-52618-2	HA-12_0-1(20150625)	69	61	28	54	69	80
240-52618-2 RE	HA-12_0-1(20150625) RE	66	66	26	60	69	67
240-52618-3	HA-13_0-1(20150625)	62	59	47	53	66	76
240-52618-3 RE	HA-13_0-1(20150625) RE	75	77	50	69	83	77
240-52618-4	HA-14_0-1(20150625)	65	62	26	53	69	80
240-52618-4 RE	HA-14_0-1(20150625) RE	69	56	22	50	70	74
240-52618-5	HA-15_0-1(20150625)	62	56	38	49	64	76
240-52618-5 RE	HA-15_0-1(20150625) RE	61	58	38	53	65	67
240-52618-6	HA-16_0-0.5(20150625)	74	73	63	56	70	82
240-52618-6 RE	HA-16_0-0.5(20150625) RE	72	69	73	63	72	70
240-52618-7	HA-17_0-1(20150625)	64	58	48	51	69	78
240-52618-7 RE	HA-17_0-1(20150625) RE	77	76	58	70	81	78
240-52618-8	HA-18_0-1(20150625)	64	61	33	52	66	78
240-52618-8 RE	HA-18_0-1(20150625) RE	59	53	26	48	63	68
MB 240-188010/21-A		60	55	19	57	62	72
MB 240-188889/11-A		70	63	29	67	69	71
LCS 240-188010/22-A		64	66	41	66	68	69
LCS 240-188889/12-A		78	80	47	77	82	81

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Method Blank - Batch: 240-187478

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-187478/1-A	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187478	Lab File ID:	UX88232.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	07/01/2015 0854	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 1419				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Benzene	ND		9.0	250
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		48	250
Chlorobenzene	ND		41	250
Chlorodibromomethane	ND		46	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		53	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Method Blank - Batch: 240-187478

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-187478/1-A	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187478	Lab File ID:	UX88232.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	07/01/2015 0854	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 1419				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		43	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		42	250
1,1,2-Trichloroethane	ND		83	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		56	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	92	26 - 141
Dibromofluoromethane (Surr)	73	30 - 122
1,2-Dichloroethane-d4 (Surr)	94	39 - 128
Toluene-d8 (Surr)	92	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Control Sample - Batch: 240-187478

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-187478/2-A	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187478	Lab File ID:	UX88233.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	07/01/2015 0915	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 1419				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	1610	81	16 - 156	
Allyl chloride	1000	596	60	50 - 150	
Benzene	1000	869	87	70 - 120	
Bromobenzene	1000	927	93	72 - 120	
Bromochloromethane	1000	906	91	56 - 128	
Bromodichloromethane	1000	685	68	28 - 123	
Bromoform	1000	604	60	10 - 120	
Bromomethane	1000	699	70	10 - 120	
2-Butanone (MEK)	2000	1800	90	10 - 199	
Carbon disulfide	1000	561	56	10 - 132	
Carbon tetrachloride	1000	484	48	29 - 120	
Chlorobenzene	1000	894	89	71 - 120	
Chlorodibromomethane	1000	687	69	22 - 120	
Chloroethane	1000	612	61	10 - 120	
Chloroform	1000	868	87	63 - 120	
Chloromethane	1000	715	72	25 - 120	
2-Chlorotoluene	1000	902	90	68 - 122	
4-Chlorotoluene	1000	897	90	68 - 122	
cis-1,2-Dichloroethene	1000	880	88	60 - 125	
cis-1,3-Dichloropropene	1000	650	65	25 - 120	
Cyclohexane	1000	878	88	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	527	53	10 - 129	
1,2-Dibromoethane	1000	818	82	47 - 123	
Dibromomethane	1000	902	90	68 - 120	
1,2-Dichlorobenzene	1000	915	91	68 - 120	
1,3-Dichlorobenzene	1000	860	86	66 - 121	
1,4-Dichlorobenzene	1000	854	85	65 - 120	
Dichlorodifluoromethane	1000	414	41	10 - 120	
1,1-Dichloroethane	1000	948	95	63 - 120	
1,2-Dichloroethane	1000	1010	101	68 - 120	
1,1-Dichloroethene	1000	751	75	44 - 143	
Dichlorofluoromethane	1000	1020	102	40 - 160	
1,2-Dichloropropane	1000	1050	105	73 - 120	
1,3-Dichloropropane	1000	993	99	74 - 120	
2,2-Dichloropropane	1000	453	45	25 - 123	
1,1-Dichloropropene	1000	872	87	60 - 123	
Ethylbenzene	1000	856	86	66 - 120	
Ethyl ether	1000	1230	123	70 - 130	
Hexachlorobutadiene	1000	837	84	34 - 135	
2-Hexanone	2000	1880	94	43 - 130	
Isopropylbenzene	1000	875	88	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Control Sample - Batch: 240-187478

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-187478/2-A	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187478	Lab File ID:	UX88233.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	07/01/2015 0915	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 1419				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	4590	92	44 - 173	
Methylcyclohexane	1000	812	81	41 - 133	
Methylene Chloride	1000	776	78	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1860	93	49 - 121	
Methyl tert butyl ether	1000	903	90	34 - 157	
m-Xylene & p-Xylene	1000	894	89	67 - 120	
Naphthalene	1000	819	82	37 - 126	
n-Butylbenzene	1000	856	86	51 - 137	
N-Propylbenzene	1000	867	87	64 - 130	
o-Xylene	1000	944	94	68 - 120	
p-Isopropyltoluene	1000	900	90	56 - 136	
sec-Butylbenzene	1000	856	86	58 - 131	
Styrene	1000	866	87	60 - 120	
tert-Butylbenzene	1000	904	90	58 - 128	
1,1,1,2-Tetrachloroethane	1000	541	54	27 - 121	
1,1,2,2-Tetrachloroethane	1000	920	92	54 - 121	
Tetrachloroethene	1000	870	87	58 - 131	
Tetrahydrofuran	2000	1850	93	70 - 130	
Toluene	1000	951	95	66 - 123	
trans-1,2-Dichloroethene	1000	816	82	58 - 121	
trans-1,3-Dichloropropene	1000	569	57	22 - 122	
1,2,3-Trichlorobenzene	1000	810	81	43 - 129	
1,2,4-Trichlorobenzene	1000	796	80	41 - 135	
1,1,1-Trichloroethane	1000	651	65	38 - 122	
1,1,2-Trichloroethane	1000	1010	101	74 - 120	
Trichloroethene	1000	840	84	59 - 124	
Trichlorofluoromethane	1000	693	69	17 - 145	
1,2,3-Trichloropropane	1000	954	95	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	730	73	48 - 151	
1,2,4-Trimethylbenzene	1000	854	85	62 - 133	
1,3,5-Trimethylbenzene	1000	878	88	60 - 130	
Vinyl chloride	1000	899	90	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	96	26 - 141
Dibromofluoromethane (Surr)	83	30 - 122
1,2-Dichloroethane-d4 (Surr)	101	39 - 128
Toluene-d8 (Surr)	95	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187478

Method: 8260B
Preparation: 5035

MS Lab Sample ID:	240-52540-C-1-D MS	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187478	Lab File ID:	UX88235.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.11 g
Analysis Date:	07/01/2015 0958			Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 1419				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52540-C-1-E MSD	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187478	Lab File ID:	UX88236.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.96 g
Analysis Date:	07/01/2015 1019			Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 1419				5 mL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acetone	58	69	10 - 142	2	30		
Allyl chloride	48	54	50 - 150	4	30	J F1	
Benzene	73	76	10 - 199	12	30		
Bromobenzene	84	83	49 - 120	16	30		
Bromochloromethane	73	81	42 - 123	5	30		
Bromodichloromethane	53	57	18 - 133	9	30		
Bromoform	49	53	10 - 147	8	30		
Bromomethane	57	60	10 - 151	11	30		
2-Butanone (MEK)	69	79	10 - 172	1	30		
Carbon disulfide	44	47	10 - 155	8	30		
Carbon tetrachloride	37	40	12 - 135	6	30		
Chlorobenzene	78	79	47 - 120	15	30		
Chlorodibromomethane	55	57	10 - 128	12	30		
Chloroethane	71	61	10 - 168	31	30		F2
Chloroform	72	74	51 - 120	12	30		
Chloromethane	56	59	16 - 120	11	30		
2-Chlorotoluene	80	79	51 - 120	16	30		
4-Chlorotoluene	80	81	43 - 120	14	30		
cis-1,2-Dichloroethene	73	76	34 - 137	11	30		
cis-1,3-Dichloropropene	54	57	19 - 121	10	30		
Cyclohexane	74	79	10 - 154	9	30		
1,2-Dibromo-3-Chloropropane	40	44	10 - 137	6	30	J	J
1,2-Dibromoethane	65	72	32 - 127	5	30		
Dibromomethane	73	78	45 - 121	9	30		
1,2-Dichlorobenzene	79	81	27 - 126	13	30		
1,3-Dichlorobenzene	77	76	29 - 124	17	30		
1,4-Dichlorobenzene	76	76	30 - 123	16	30		
Dichlorodifluoromethane	25	26	10 - 120	14	30		
1,1-Dichloroethane	79	82	18 - 160	11	30		
1,2-Dichloroethane	83	87	25 - 150	10	30		
1,1-Dichloroethene	60	63	10 - 179	12	30		
Dichlorofluoromethane	85	88	10 - 160	12	30		

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187478

Method: 8260B
Preparation: 5035

MS Lab Sample ID:	240-52540-C-1-D MS	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187478	Lab File ID:	UX88235.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.11 g
Analysis Date:	07/01/2015 0958			Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 1419				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52540-C-1-E MSD	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187478	Lab File ID:	UX88236.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.96 g
Analysis Date:	07/01/2015 1019			Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 1419				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,2-Dichloropropane	87	91	58 - 120	11	30		
1,3-Dichloropropane	83	88	58 - 120	9	30		
2,2-Dichloropropane	39	44	26 - 127	5	30		
1,1-Dichloropropene	72	75	42 - 126	12	30		
Ethylbenzene	75	84	27 - 143	4	30		
Ethyl ether	99	106	70 - 130	8	30		
Hexachlorobutadiene	78	77	10 - 134	16	30		
2-Hexanone	71	83	21 - 141	0	30		
Isopropylbenzene	79	80	39 - 126	13	30		
Methyl acetate	68	79	10 - 175	0	30		
Methylcyclohexane	69	75	11 - 156	6	30		
Methylene Chloride	59	66	10 - 148	4	30		
4-Methyl-2-pentanone (MIBK)	73	84	19 - 151	1	30		
Methyl tert butyl ether	75	81	26 - 159	7	30		
m-Xylene & p-Xylene	122	179	14 - 151	11	30		F1
Naphthalene	71	80	10 - 199	4	30		
n-Butylbenzene	82	80	13 - 154	17	30		
N-Propylbenzene	86	87	41 - 135	15	30		
o-Xylene	96	120	18 - 151	4	30		
p-Isopropyltoluene	82	81	33 - 139	16	30		
sec-Butylbenzene	80	79	41 - 133	16	30		
Styrene	79	81	31 - 137	14	30		
tert-Butylbenzene	80	78	45 - 132	17	30		
1,1,1,2-Tetrachloroethane	43	46	19 - 124	7	30		
1,1,2,2-Tetrachloroethane	69	79	16 - 158	2	30		
Tetrachloroethene	78	78	19 - 153	16	30		
Tetrahydrofuran	69	81	70 - 130	2	30	F1	
Toluene	92	124	10 - 168	9	30		
trans-1,2-Dichloroethene	67	71	40 - 126	10	30		
trans-1,3-Dichloropropene	48	53	10 - 136	5	30		
1,2,3-Trichlorobenzene	70	75	10 - 123	9	30		
1,2,4-Trichlorobenzene	73	74	10 - 136	14	30		

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187478

Method: 8260B
Preparation: 5035

MS Lab Sample ID:	240-52540-C-1-D MS	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187478	Lab File ID:	UX88235.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.11 g
Analysis Date:	07/01/2015 0958			Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 1419				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-52540-C-1-E MSD	Analysis Batch:	240-187502	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-187478	Lab File ID:	UX88236.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.96 g
Analysis Date:	07/01/2015 1019			Final Weight/Volume:	5 mL
Prep Date:	06/30/2015 1419				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	53	56	10 - 159	9	30		
1,1,2-Trichloroethane	90	93	34 - 152	12	30		
Trichloroethene	72	74	10 - 193	13	30		
Trichlorofluoromethane	56	56	10 - 157	15	30		
1,2,3-Trichloropropane	81	84	54 - 142	11	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	60	62	23 - 168	13	30		
1,2,4-Trimethylbenzene	105	106	10 - 199	9	30		
1,3,5-Trimethylbenzene	90	93	10 - 173	9	30		
Vinyl chloride	69	73	15 - 123	9	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	84	83	26 - 141
Dibromofluoromethane (Surr)	68	69	30 - 122
1,2-Dichloroethane-d4 (Surr)	81	86	39 - 128
Toluene-d8 (Surr)	82	81	33 - 134

Method Blank - Batch: 240-188010

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188010/21-A	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-188010	Lab File ID:	0709012.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 1201	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4,5-Trichlorophenol	ND		25	330
2,4,6-Trichlorophenol	ND		8.9	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2-Chlorophenol	ND		8.2	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	301	J	19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Method Blank - Batch: 240-188010

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188010/21-A	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-188010	Lab File ID:	0709012.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 1201	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	20.8	J	15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	60	24 - 110
2-Fluorophenol (Surr)	55	24 - 110
2,4,6-Tribromophenol (Surr)	19	10 - 110
Nitrobenzene-d5 (Surr)	57	20 - 110
Phenol-d5 (Surr)	62	26 - 110
Terphenyl-d14 (Surr)	72	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Control Sample - Batch: 240-188010

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188010/22-A	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-188010	Lab File ID:	0709013.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 1223	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	425	64	35 - 110	
2,2'-oxybis[1-chloropropane]	667	424	64	29 - 110	
2,4,5-Trichlorophenol	667	268	40	25 - 110	J
2,4,6-Trichlorophenol	667	260	39	12 - 110	J
2,4-Dichlorophenol	667	409	61	39 - 110	
2,4-Dimethylphenol	667	412	62	29 - 110	
2,4-Dinitrophenol	1330	651	49	10 - 110	J
2,4-Dinitrotoluene	667	434	65	48 - 110	
2,6-Dinitrotoluene	667	476	71	45 - 110	
2-Chloronaphthalene	667	417	63	32 - 110	
2-Chlorophenol	667	426	64	37 - 110	
2-Methylnaphthalene	667	444	67	36 - 110	
2-Methylphenol	667	442	66	41 - 110	
2-Nitroaniline	667	411	62	45 - 110	J
2-Nitrophenol	667	392	59	34 - 110	
3,3'-Dichlorobenzidine	1330	696	52	28 - 110	J
3-Nitroaniline	667	465	70	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	717	54	10 - 110	J
4-Bromophenyl phenyl ether	667	440	66	39 - 110	
4-Chloro-3-methylphenol	667	457	69	48 - 110	
4-Chloroaniline	667	389	58	30 - 110	
4-Chlorophenyl phenyl ether	667	422	63	40 - 110	
4-Nitroaniline	667	478	72	48 - 110	J
4-Nitrophenol	1330	767	57	28 - 110	J
Acenaphthene	667	429	64	38 - 110	
Acenaphthylene	667	448	67	40 - 110	
Acetophenone	667	434	65	40 - 110	
Anthracene	667	472	71	48 - 110	
Atrazine	1330	970	73	66 - 127	
Benzaldehyde	1330	945	71	32 - 110	
Benzo[a]anthracene	667	470	71	50 - 110	
Benzo[a]pyrene	667	450	68	44 - 110	
Benzo[b]fluoranthene	667	489	73	43 - 110	
Benzo[g,h,i]perylene	667	428	64	51 - 110	
Benzo[k]fluoranthene	667	536	80	38 - 105	
Bis(2-chloroethoxy)methane	667	439	66	32 - 110	
Bis(2-chloroethyl)ether	667	425	64	34 - 110	
Bis(2-ethylhexyl) phthalate	667	860	129	50 - 110	*
Butyl benzyl phthalate	667	497	75	51 - 110	
Caprolactam	1330	1070	81	44 - 114	
Carbazole	667	483	72	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Control Sample - Batch: 240-188010

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188010/22-A	Analysis Batch:	240-188453	Instrument ID:	A4AG2
Client Matrix:	Solid	Prep Batch:	240-188010	Lab File ID:	0709013.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/09/2015 1223	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/06/2015 1045			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	485	73	50 - 110	
Dibenz(a,h)anthracene	667	387	58	51 - 110	
Dibenzofuran	667	438	66	43 - 110	
Diethyl phthalate	667	468	70	52 - 110	
Dimethyl phthalate	667	451	68	50 - 110	
Di-n-butyl phthalate	667	555	83	51 - 110	
Di-n-octyl phthalate	667	418	63	48 - 110	
Fluoranthene	667	498	75	51 - 110	
Fluorene	667	435	65	46 - 110	
Hexachlorobenzene	667	439	66	43 - 110	
Hexachlorobutadiene	667	413	62	29 - 110	
Hexachlorocyclopentadiene	667	255	38	12 - 110	J
Hexachloroethane	667	400	60	30 - 110	
Indeno[1,2,3-cd]pyrene	667	414	62	50 - 110	
Isophorone	667	452	68	36 - 110	
Naphthalene	667	454	68	36 - 110	
Nitrobenzene	667	428	64	32 - 110	
N-Nitrosodi-n-propylamine	667	447	67	38 - 110	
N-Nitrosodiphenylamine	1330	956	72	46 - 110	
Pentachlorophenol	1330	605	45	10 - 110	
Phenol	667	437	66	38 - 110	
Phenanthrene	667	477	72	49 - 110	
Pyrene	667	486	73	49 - 110	
3 & 4 Methylphenol	667	443	66	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	64	24 - 110
2-Fluorophenol (Surr)	66	24 - 110
2,4,6-Tribromophenol (Surr)	41	10 - 110
Nitrobenzene-d5 (Surr)	66	20 - 110
Phenol-d5 (Surr)	68	26 - 110
Terphenyl-d14 (Surr)	69	36 - 110

Method Blank - Batch: 240-188889

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188889/11-A	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-188889	Lab File ID:	50715004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/15/2015 1006	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 0928			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4,5-Trichlorophenol	ND		25	330
2,4,6-Trichlorophenol	ND		8.9	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2-Chlorophenol	ND		8.2	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	89.4	J	19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Method Blank - Batch: 240-188889

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-188889/11-A	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-188889	Lab File ID:	50715004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/15/2015 1006	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 0928			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	70	24 - 110
2-Fluorophenol (Surr)	63	24 - 110
2,4,6-Tribromophenol (Surr)	29	10 - 110
Nitrobenzene-d5 (Surr)	67	20 - 110
Phenol-d5 (Surr)	69	26 - 110
Terphenyl-d14 (Surr)	71	36 - 110

Lab Control Sample - Batch: 240-188889

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188889/12-A	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-188889	Lab File ID:	50715005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/15/2015 1031	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 0928			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	507	76	35 - 110	
2,2'-oxybis[1-chloropropane]	667	542	81	29 - 110	
2,4,5-Trichlorophenol	667	339	51	25 - 110	
2,4,6-Trichlorophenol	667	312	47	12 - 110	J
2,4-Dichlorophenol	667	480	72	39 - 110	
2,4-Dimethylphenol	667	451	68	29 - 110	
2,4-Dinitrophenol	1330	545	41	10 - 110	J
2,4-Dinitrotoluene	667	525	79	48 - 110	
2,6-Dinitrotoluene	667	569	85	45 - 110	
2-Chloronaphthalene	667	506	76	32 - 110	
2-Chlorophenol	667	494	74	37 - 110	
2-Methylnaphthalene	667	524	79	36 - 110	
2-Methylphenol	667	553	83	41 - 110	
2-Nitroaniline	667	518	78	45 - 110	J
2-Nitrophenol	667	501	75	34 - 110	
3,3'-Dichlorobenzidine	1330	915	69	28 - 110	J
3-Nitroaniline	667	512	77	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	930	70	10 - 110	J
4-Bromophenyl phenyl ether	667	580	87	39 - 110	
4-Chloro-3-methylphenol	667	522	78	48 - 110	
4-Chloroaniline	667	462	69	30 - 110	
4-Chlorophenyl phenyl ether	667	535	80	40 - 110	
4-Nitroaniline	667	554	83	48 - 110	J
4-Nitrophenol	1330	689	52	28 - 110	J
Acenaphthene	667	513	77	38 - 110	
Acenaphthylene	667	505	76	40 - 110	
Acetophenone	667	536	80	40 - 110	
Anthracene	667	541	81	48 - 110	
Atrazine	1330	1350	101	66 - 127	
Benzaldehyde	1330	1120	84	32 - 110	
Benzo[a]anthracene	667	532	80	50 - 110	
Benzo[a]pyrene	667	531	80	44 - 110	
Benzo[b]fluoranthene	667	541	81	43 - 110	
Benzo[g,h,i]perylene	667	535	80	51 - 110	
Benzo[k]fluoranthene	667	544	82	38 - 105	
Bis(2-chloroethoxy)methane	667	525	79	32 - 110	
Bis(2-chloroethyl)ether	667	525	79	34 - 110	
Bis(2-ethylhexyl) phthalate	667	573	86	50 - 110	
Butyl benzyl phthalate	667	545	82	51 - 110	
Caprolactam	1330	1210	91	44 - 114	
Carbazole	667	607	91	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Control Sample - Batch: 240-188889

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-188889/12-A	Analysis Batch:	240-189174	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-188889	Lab File ID:	50715005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/15/2015 1031	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	07/13/2015 0928			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	547	82	50 - 110	
Dibenz(a,h)anthracene	667	548	82	51 - 110	
Dibenzofuran	667	514	77	43 - 110	
Diethyl phthalate	667	522	78	52 - 110	
Dimethyl phthalate	667	552	83	50 - 110	
Di-n-butyl phthalate	667	668	100	51 - 110	
Di-n-octyl phthalate	667	586	88	48 - 110	
Fluoranthene	667	630	95	51 - 110	
Fluorene	667	534	80	46 - 110	
Hexachlorobenzene	667	546	82	43 - 110	
Hexachlorobutadiene	667	473	71	29 - 110	
Hexachlorocyclopentadiene	667	296	44	12 - 110	J
Hexachloroethane	667	459	69	30 - 110	
Indeno[1,2,3-cd]pyrene	667	546	82	50 - 110	
Isophorone	667	529	79	36 - 110	
Naphthalene	667	515	77	36 - 110	
Nitrobenzene	667	498	75	32 - 110	
N-Nitrosodi-n-propylamine	667	542	81	38 - 110	
N-Nitrosodiphenylamine	1330	1270	95	46 - 110	
Pentachlorophenol	1330	913	68	10 - 110	
Phenol	667	523	78	38 - 110	
Phenanthrene	667	543	81	49 - 110	
Pyrene	667	552	83	49 - 110	
3 & 4 Methylphenol	667	550	82	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	78	24 - 110
2-Fluorophenol (Surr)	80	24 - 110
2,4,6-Tribromophenol (Surr)	47	10 - 110
Nitrobenzene-d5 (Surr)	77	20 - 110
Phenol-d5 (Surr)	82	26 - 110
Terphenyl-d14 (Surr)	81	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Method Blank - Batch: 240-187525 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-187525/1-A	Analysis Batch:	240-187529	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-187525	Lab File ID:	Y0062906.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	07/01/2015 0955	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-187525 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-187525/2-A	Analysis Batch:	240-187529	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-187525	Lab File ID:	Y0062907.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	07/01/2015 1029	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-187525/14-A	Analysis Batch:	240-187529	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-187525	Lab File ID:	Y0062920.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	07/01/2015 1807	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/01/2015 0608			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	100	94	80 - 120	7	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Method Blank - Batch: 240-187816

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-187816/21-A	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187816	Lab File ID:	P14F070608.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/06/2015 1627	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-187816

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-187816/22-A	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187816	Lab File ID:	P14F070609.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/06/2015 1654	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-187816/23-A	Analysis Batch:	240-188039	Instrument ID:	A2HP14F
Client Matrix:	Solid	Prep Batch:	240-187816	Lab File ID:	P14F070631.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	07/07/2015 0252	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/02/2015 1139			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	105	130	70 - 120	21	20		*

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Method Blank - Batch: 240-187589

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-187589/1-A	Analysis Batch:	240-187870	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	07/02/2015 1335	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Calcium	ND		23	500
Cadmium	ND		0.021	0.20
Cobalt	ND		0.047	5.0
Chromium	ND		0.075	0.50
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Potassium	ND		6.2	500
Magnesium	6.10	J	5.2	500
Manganese	ND		0.084	1.5
Silver	ND		0.063	0.50
Sodium	ND		19	500
Nickel	ND		0.080	4.0
Vanadium	ND		0.20	5.0
Zinc	0.586	J	0.56	2.0
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Selenium	ND		0.34	0.50
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Lab Control Sample - Batch: 240-187589

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-187589/2-A	Analysis Batch:	240-187870	Instrument ID:	I12
Client Matrix:	Solid	Prep Batch:	240-187589	Lab File ID:	I12070215A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	07/02/2015 1347	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 0950				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	196	98	80 - 120	
Antimony	50.0	50.7	101	80 - 120	
Barium	200	198	99	80 - 120	
Beryllium	5.00	4.85	97	80 - 120	
Calcium	5000	5010	100	80 - 120	
Cadmium	5.00	5.07	101	80 - 120	
Cobalt	50.0	48.7	97	80 - 120	
Chromium	20.0	20.0	100	80 - 120	
Copper	25.0	24.7	99	80 - 120	
Iron	100	102	102	80 - 120	
Potassium	5000	4840	97	80 - 120	
Magnesium	5000	4910	98	80 - 120	
Manganese	50.0	50.0	100	80 - 120	
Silver	5.00	5.04	101	80 - 120	
Sodium	5000	4990	100	80 - 120	
Nickel	50.0	49.2	98	80 - 120	
Vanadium	50.0	50.0	100	80 - 120	
Zinc	50.0	49.3	99	80 - 120	
Arsenic	200	199	100	80 - 120	
Lead	50.0	48.3	97	80 - 120	
Selenium	200	198	99	80 - 120	
Thallium	200	194	97	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187589

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-52525-F-6-B MS
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/02/2015 1404
Prep Date: 07/01/2015 0950
Leach Date: N/A

Analysis Batch: 240-187870
Prep Batch: 240-187589
Leach Batch: N/A

Instrument ID: I12
Lab File ID: I12070215A.asc
Initial Weight/Volume: 1.20 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-52525-F-6-C MSD
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/02/2015 1408
Prep Date: 07/01/2015 0950
Leach Date: N/A

Analysis Batch: 240-187870
Prep Batch: 240-187589
Leach Batch: N/A

Instrument ID: I12
Lab File ID: I12070215A.asc
Initial Weight/Volume: 1.20 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	919	1033	75 - 125	4	20	4	4
Antimony	62	62	75 - 125	0	20	F1	F1
Barium	93	93	75 - 125	0	20		
Beryllium	92	93	75 - 125	0	20		
Calcium	42	-13	75 - 125	8	20	4	4
Cadmium	98	98	75 - 125	0	20		
Cobalt	98	99	75 - 125	1	20		
Chromium	100	101	75 - 125	0	20		
Copper	100	101	75 - 125	1	20		
Iron	680	1132	75 - 125	5	20	4	4
Potassium	104	106	75 - 125	2	20		
Magnesium	84	52	75 - 125	10	20		F1
Manganese	64	145	75 - 125	8	20	4	4
Silver	96	96	75 - 125	1	20		
Sodium	97	97	75 - 125	0	20		
Nickel	101	101	75 - 125	0	20		
Vanadium	99	102	75 - 125	3	20		
Zinc	104	113	75 - 125	3	20		
Arsenic	97	97	75 - 125	0	20		
Lead	84	84	75 - 125	0	20		
Selenium	97	97	75 - 125	0	20		
Thallium	95	95	75 - 125	0	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Method Blank - Batch: 240-187598

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-187598/1-A	Analysis Batch:	240-187808	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	07/02/2015 0828	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-187598

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-187598/2-A	Analysis Batch:	240-187808	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	07/02/2015 0831	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.843	101	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-187598

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-52525-F-6-E MS	Analysis Batch:	240-187808	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.50 g
Analysis Date:	07/02/2015 0835			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				
Leach Date:	N/A				

MSD Lab Sample ID:	240-52525-F-6-F MSD	Analysis Batch:	240-187808	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-187598	Lab File ID:	070215AHG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.50 g
Analysis Date:	07/02/2015 0838			Final Weight/Volume:	100 mL
Prep Date:	07/01/2015 1330				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	110	114	80 - 120	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-52618-1

Duplicate - Batch: 240-187458

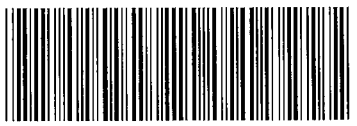
Method: Moisture
Preparation: N/A

Lab Sample ID:	240-52470-A-166 DU	Analysis Batch:	240-187458	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/30/2015 1300	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	76	76		20	
Percent Moisture	24	24		20	

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-52618 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

TestAmerica Canton
4101 Shuffel Street, N. W.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

3.0 | C4.0
2.4 | C3.4

Chain of Custody Record

031688

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210 (0713)

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/26/15	COC No:
Company Name: ARCADIS	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:	1 of ____ COCs
Address: 430 first Ave. N Ste 720	Analysis Turnaround Time			Sampler:
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612 339 9434	TAT if different from Below ____			Walk-in Client:
Fax:	☒ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			Lab Sampling:
Project Name: Ford TCAP				Job / SDG No.:
Site: St. Paul MN				
PO# MN000624.0001				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs	GRO's	DRO	SVOC	TAL metals	moisture	Sample Specific Notes:
HA-11_0-1(20150625)	6/25/15	1730	G	So	8			2	2	1	1	1	1	
HA-12_0-1(20150625)	6/25/15	1750	G	So	8			2	2	1	1	1	1	
HA-13_0-1(20150625)	6/25/15	1815	G	So	8			2	2	1	1	1	1	
HA-14_0-1(20150625)	6/25/15	1830	G	So	8			2	2	1	1	1	1	
HA-15_0-1(20150625)	6/25/15	1540	G	So	8			2	2	1	1	1	1	
HA-16_0-0.5(20150625)	6/25/15	1600	G	So	8			2	2	1	1	1	1	
HA-17_0-1(20150625)	6/25/15	1645	G	So	8			2	2	1	1	1	1	
HA-18_0-1(20150625)	6/25/15	1700	G	So	8			2	2	1	1	1	1	
MB_01(20150625)	6/25/15	—	G	L	2			1	1					

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Lindsey Kenyon	ARCADIS	6/26/15		TAmerica	6-26-15 1530
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAmerica	6-26-15 1900		TA	6/27/15 1000
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative Login # : 57618
Canton Facility

Client Arcadis Site Name

Cooler unpacked by:

Cooler Received on 6-27-15 Opened on 6-29-15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   IR GUN# A (CF +1.0 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   ~~IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C~~
   ~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C~~
   IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

☑ See Multiple Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC432654
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other
Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative
Canton Facility

Login # : 52618

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
client	A	3.0	4.0	ice
1	1	2.4	3.4	1

July 17, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 52618-1
Sample date: 2015-06-25
Report received by CADENA: 2015-07-16
Initial Data Verification completed by CADENA: 2015-07-17

The following minor QC exceptions or missing information were noted:

GCMS VOC CCV response outliers as noted in the laboratory submittal case narrative were not used to qualify results as part of this level 2 verification review.

GCMS VOC QC batch 187478 and Metals batch 187589 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

GCMS VOC trip blank had a detection below the RL for 1,2,4-trimethylbenzene. Client samples -006, -007 and -008 results for this analyte should be considered to be non-detect at the RL and qualified with UB flags.

WI-GRO and WI-DRO QC batch did not include MS recovery data and surrogate recoveries were not available for samples or QC.

WI-DRO QC batch LCS duplicate recovery as an outlier biased high along with an outlier for the LCS/LCSD RPD. Client samples -001, -002, -003, -004, -005, -006, -007 and -008 WI-DRO results should be considered to be estimated and qualified with J flags.

GCMS SVOC method blanks had detections below the RL for bis-2-ethylhexylphthalate and di-n-butylphthalate in QC batch 188010 and for bis-2-ethylhexylphthalte in QC batch 188889. Client samples -001, -002, -003, -004, -005, -006, -007 and -008 bis-2-ethylhexylphthalate and samples -001, -002, -004, -005, -007 and -008 di-n-butylphthalate results should be considered to be non-detect at the RL and qualified with UB flags.

GCMS VOC QC batch 188010 LCS recoveries were outliers biased high for bis-2-ethylhexylphthalte. All associated client samples were re-analyzed outside of the referenced holding time in response to this LCS outlier. Re-analysis QC batch LCS recovery for this analyte was acceptable. Client sample re-analysis results should all be considered to be estimated and qualified with UJ flags based on the holding time exceedance and the bis-2-ethylhexylphthalate results are also qualified as non-detect as noted above due to associated method blank detections. The original GCMS SVOC sample results were all considered to be the final reportable values with the exception of the bis-2-ethylhexylphthalate which was reported from the re-analyses results.

Metals method blanks had detections below the RL in QC batch 187589 for magnesium and zinc. Qualification of client sample results was not required based on these method blank detections.

8 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other and Metals parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 52618-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury in Solid Waste
240526181	HA-11_0-1(20150625)	6/25/2015	5:30:00	X	X	X	X	X	X
240526182	HA-12_0-1(20150625)	6/25/2015	5:50:00	X	X	X	X	X	X
240526183	HA-13_0-1(20150625)	6/25/2015	6:15:00	X	X	X	X	X	X
240526184	HA-14_0-1(20150625)	6/25/2015	6:30:00	X	X	X	X	X	X
240526185	HA-15_0-1(20150625)	6/25/2015	3:40:00	X	X	X	X	X	X
240526186	HA-16_0-0.5(20150625)	6/25/2015	4:00:00	X	X	X	X	X	X
240526187	HA-17_0-1(20150625)	6/25/2015	4:45:00	X	X	X	X	X	X
240526188	HA-18_0-1(20150625)	6/25/2015	5:00:00	X	X	X	X	X	X
240526189	MB_01(20150625)	6/25/2015	12:00:00	X		X			

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52618-1

		Sample Name:	HA-11_0-1(20150625)				HA-12_0-1(20150625)				HA-13_0-1(20150625)				HA-14_0-1(20150625)				HA-15_0-1(20150625)				HA-16_0-0.5(20150625)				HA-17_0-1(20150625)				HA-18_0-1(20150625)			
		Lab Sample ID:	240526181				240526182				240526183				240526184				240526185				240526186				240526187				240526188			
		Sample Date:	6/25/2015				6/25/2015				6/25/2015				6/25/2015				6/25/2015				6/25/2015				6/25/2015				6/25/2015			
Analyte	**Cas No.**		**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC																																		
OSW-8260B																																		
1,2,4-Trimethylbenzene	95-63-6																						64	340	ug/kg	UB	44	360	ug/kg	UB	26	340	ug/kg	UB
GC/MS SVOC																																		
OSW-8270C																																		
Bis(2-ethylhexyl) phthalate	117-81-7		48	480	ug/kg	UB	38	370	ug/kg	UB	74	780	ug/kg	UB	110	380	ug/kg	UB	290	390	ug/kg	UB	<3700	3700	ug/kg	UB	86	440	ug/kg	UB	53	400	ug/kg	UB
Di-n-butyl phthalate	84-74-2		31	490	ug/kg	UB	27	370	ug/kg	UB					31	390	ug/kg	UB	25	390	ug/kg	UB					75	450	ug/kg	UB	36	410	ug/kg	UB
GC Other																																		
PUBL-SW-141																																		
WI Diesel Range Organics (C10-C28)	E-1004		48	12	mg/kg	J	15	9.6	mg/kg	J	67	9.8	mg/kg	J	8.6	10	mg/kg	J	7.9	10	mg/kg	J	2300	490	mg/kg	J	42	12	mg/kg	J	14	8.6	mg/kg	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52618-1

		Sample Name:	HA-11_0-1(20150625)				HA-12_0-1(20150625)				HA-13_0-1(20150625)			
		Lab Sample ID:	240526181				240526182				240526183			
		Sample Date:	6/25/2015				6/25/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	760	ug/kg	---	ND	560	ug/kg	---	ND	640	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1500	ug/kg	---	ND	1100	ug/kg	---	ND	1300	ug/kg	---
2-Chlorotoluene	95-49-8	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
2-Hexanone	591-78-6	ND	1500	ug/kg	---	ND	1100	ug/kg	---	ND	1300	ug/kg	---
4-Chlorotoluene	106-43-4	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1500	ug/kg	---	ND	1100	ug/kg	---	ND	1300	ug/kg	---
Acetone	67-64-1	ND	1500	ug/kg	---	ND	1100	ug/kg	---	ND	1300	ug/kg	---
Allyl chloride	107-05-1	ND	760	ug/kg	---	ND	560	ug/kg	---	ND	640	ug/kg	---
Benzene	71-43-2	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Bromobenzene	108-86-1	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Bromochloromethane	74-97-5	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Bromodichloromethane	75-27-4	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Bromoform	75-25-2	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Bromomethane	74-83-9	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Carbon disulfide	75-15-0	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Carbon tetrachloride	56-23-5	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Chlorobenzene	108-90-7	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Chlorodibromomethane	124-48-1	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Chloroethane	75-00-3	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Chloroform	67-66-3	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Chloromethane	74-87-3	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Cyclohexane	110-82-7	ND	760	ug/kg	---	ND	560	ug/kg	---	ND	640	ug/kg	---
Dibromomethane	74-95-3	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	760	ug/kg	---	ND	560	ug/kg	---	ND	640	ug/kg	---
Ethyl ether	60-29-7	ND	760	ug/kg	---	ND	560	ug/kg	---	ND	640	ug/kg	---
Ethylbenzene	100-41-4	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Isopropylbenzene	98-82-8	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Methyl acetate	79-20-9	1100	760	ug/kg	---	240	560	ug/kg	J	310	640	ug/kg	J
Methyl tert butyl ether	1634-04-4	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Methylcyclohexane	108-87-2	ND	760	ug/kg	---	ND	560	ug/kg	---	ND	640	ug/kg	---
Methylene Chloride	75-09-2	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
n-Butylbenzene	104-51-8	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
N-Propylbenzene	103-65-1	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Naphthalene	91-20-3	64	380	ug/kg	J	ND	280	ug/kg	---	ND	320	ug/kg	---
o-Xylene	95-47-6	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
sec-Butylbenzene	135-98-8	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Styrene	100-42-5	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
tert-Butylbenzene	98-06-6	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Tetrachloroethene	127-18-4	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1500	ug/kg	---	ND	1100	ug/kg	---	ND	1300	ug/kg	---
Toluene	108-88-3	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
trans-1,2-Dichloroethene	156-60-5	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Trichloroethene	79-01-6	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---
Vinyl chloride	75-01-4	ND	380	ug/kg	---	ND	280	ug/kg	---	ND	320	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52618-1

		Sample Name:	HA-11_0-1(20150625)				HA-12_0-1(20150625)				HA-13_0-1(20150625)			
		Lab Sample ID:	240526181				240526182				240526183			
		Sample Date:	6/25/2015				6/25/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
2,4,5-Trichlorophenol	95-95-4	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
2,4,6-Trichlorophenol	88-06-2	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
2,4-Dichlorophenol	120-83-2	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
2,4-Dimethylphenol	105-67-9	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
2,4-Dinitrophenol	51-28-5	ND	2400	ug/kg	---	ND	1800	ug/kg	---	ND	4700	ug/kg	---
2,4-Dinitrotoluene	121-14-2	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
2,6-Dinitrotoluene	606-20-2	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
2-Chloronaphthalene	91-58-7	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
2-Chlorophenol	95-57-8	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
2-Methylnaphthalene	91-57-6	8.4	490	ug/kg	J	ND	370	ug/kg	---	15	980	ug/kg	J
2-Methylphenol	95-48-7	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
2-Nitroaniline	88-74-4	ND	2400	ug/kg	---	ND	1800	ug/kg	---	ND	4700	ug/kg	---
2-Nitrophenol	88-75-5	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
3 & 4 Methylphenol	65794-96-9	ND	590	ug/kg	---	ND	450	ug/kg	---	ND	1200	ug/kg	---
3,3'-Dichlorobenzidine	91-94-1	ND	2400	ug/kg	---	ND	1800	ug/kg	---	ND	4700	ug/kg	---
3-Nitroaniline	99-09-2	ND	2400	ug/kg	---	ND	1800	ug/kg	---	ND	4700	ug/kg	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	2400	ug/kg	---	ND	1800	ug/kg	---	ND	4700	ug/kg	---
4-Bromophenyl phenyl ether	101-55-3	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
4-Chloro-3-methylphenol	59-50-7	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
4-Chloroaniline	106-47-8	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
4-Nitroaniline	100-01-6	ND	2400	ug/kg	---	ND	1800	ug/kg	---	ND	4700	ug/kg	---
4-Nitrophenol	100-02-7	ND	2400	ug/kg	---	ND	1800	ug/kg	---	ND	4700	ug/kg	---
Acenaphthene	83-32-9	20	490	ug/kg	J	21	370	ug/kg	J	150	980	ug/kg	J
Acenaphthylene	208-96-8	18	490	ug/kg	J	6.6	370	ug/kg	J	29	980	ug/kg	J
Acetophenone	98-86-2	23	490	ug/kg	J	ND	370	ug/kg	---	ND	980	ug/kg	---
Anthracene	120-12-7	55	490	ug/kg	J	67	370	ug/kg	J	340	980	ug/kg	J
Atrazine	1912-24-9	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Benzaldehyde	100-52-7	120	490	ug/kg	J	24	370	ug/kg	J	59	980	ug/kg	J
Benzo[a]anthracene	56-55-3	200	490	ug/kg	J	290	370	ug/kg	J	1400	980	ug/kg	---
Benzo[a]pyrene	50-32-8	190	490	ug/kg	J	270	370	ug/kg	J	1300	980	ug/kg	---
Benzo[b]fluoranthene	205-99-2	390	490	ug/kg	J	480	370	ug/kg	---	2400	980	ug/kg	---
Benzo[g,h,i]perylene	191-24-2	93	490	ug/kg	J	99	370	ug/kg	J	480	980	ug/kg	J
Benzo[k]fluoranthene	207-08-9	120	490	ug/kg	J	160	370	ug/kg	J	1100	980	ug/kg	---
Bis(2-chloroethoxy)methane	111-91-1	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Bis(2-chloroethyl)ether	111-44-4	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Bis(2-ethylhexyl) phthalate	117-81-7	48	480	ug/kg	UB	38	370	ug/kg	UB	74	780	ug/kg	UB
Butyl benzyl phthalate	85-68-7	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Caprolactam	105-60-2	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Carbazole	86-74-8	ND	490	ug/kg	---	76	370	ug/kg	J	450	980	ug/kg	J
Chrysene	218-01-9	250	490	ug/kg	J	350	370	ug/kg	J	1900	980	ug/kg	---
Di-n-butyl phthalate	84-74-2	31	490	ug/kg	UB	27	370	ug/kg	UB	ND	980	ug/kg	---
Di-n-octyl phthalate	117-84-0	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Dibenz(a,h)anthracene	53-70-3	ND	490	ug/kg	---	38	370	ug/kg	J	150	980	ug/kg	J
Dibenzofuran	132-64-9	56	490	ug/kg	J	13	370	ug/kg	J	93	980	ug/kg	J
Diethyl phthalate	84-66-2	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Dimethyl phthalate	131-11-3	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Fluoranthene	206-44-0	400	490	ug/kg	J	760	370	ug/kg	---	3900	980	ug/kg	---
Fluorene	86-73-7	17	490	ug/kg	J	25	370	ug/kg	J	190	980	ug/kg	J
Hexachlorobenzene	118-74-1	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Hexachlorocyclopentadiene	77-47-4	ND	2400	ug/kg	---	ND	1800	ug/kg	---	ND	4700	ug/kg	---
Hexachloroethane	67-72-1	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Indeno[1,2,3-cd]pyrene	193-39-5	80	490	ug/kg	J	100	370	ug/kg	J	490	980	ug/kg	J
Isophorone	78-59-1	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
N-Nitrosodi-n-propylamine	621-64-7	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
N-Nitrosodiphenylamine	86-30-6	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Naphthalene	91-20-3	ND	490	ug/kg	---	ND	370	ug/kg	---	27	980	ug/kg	J
Nitrobenzene	98-95-3	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Pentachlorophenol	87-86-5	ND	490	ug/kg	---	ND	370	ug/kg	---	ND	980	ug/kg	---
Phenanthrene	85-01-8	220	490	ug/kg	J	450	370	ug/kg	---	2600	980	ug/kg	---
Phenol	108-95-2	31	490	ug/kg	J	15	370	ug/kg	J	100	980	ug/kg	J
Pyrene	129-00-0	320	490	ug/kg	J	570	370	ug/kg	---	3100	980	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52618-1

			Sample Name:	HA-11_0-1(20150625)				HA-12_0-1(20150625)				HA-13_0-1(20150625)			
			Lab Sample ID:	240526181				240526182				240526183			
			Sample Date:	6/25/2015				6/25/2015				6/25/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	17	mg/kg	---	ND	11	mg/kg	---	ND	12	mg/kg	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	48	12	mg/kg	J	15	9.6	mg/kg	J	67	9.8	mg/kg	J
Metals														
	OSW-6010B													
	Aluminum	7429-90-5	4500	23	mg/kg	---	5100	21	mg/kg	---	4200	19	mg/kg	---
	Antimony	7440-36-0	ND	1.2	mg/kg	---	ND	1.1	mg/kg	---	0.97	0.93	mg/kg	---
	Arsenic	7440-38-2	3.1	1.2	mg/kg	---	2.2	1.1	mg/kg	---	3.2	0.93	mg/kg	---
	Barium	7440-39-3	65	23	mg/kg	---	30	21	mg/kg	---	39	19	mg/kg	---
	Beryllium	7440-41-7	0.24	0.58	mg/kg	J	0.26	0.53	mg/kg	J	0.26	0.46	mg/kg	J
	Cadmium	7440-43-9	0.33	0.23	mg/kg	---	0.32	0.21	mg/kg	---	0.88	0.19	mg/kg	---
	Calcium	7440-70-2	31000	580	mg/kg	---	31000	530	mg/kg	---	24000	460	mg/kg	---
	Chromium	7440-47-3	12	0.58	mg/kg	---	11	0.53	mg/kg	---	12	0.46	mg/kg	---
	Cobalt	7440-48-4	4.6	5.8	mg/kg	J	5.1	5.3	mg/kg	J	5.1	4.6	mg/kg	---
	Copper	7440-50-8	17	2.9	mg/kg	---	15	2.6	mg/kg	---	16	2.3	mg/kg	---
	Iron	7439-89-6	9100	12	mg/kg	---	10000	11	mg/kg	---	11000	9.3	mg/kg	---
	Lead	7439-92-1	19	0.35	mg/kg	---	11	0.32	mg/kg	---	71	0.28	mg/kg	---
	Magnesium	7439-95-4	10000	580	mg/kg	---	13000	530	mg/kg	---	6700	460	mg/kg	---
	Manganese	7439-96-5	380	1.7	mg/kg	---	190	1.6	mg/kg	---	270	1.4	mg/kg	---
	Nickel	7440-02-0	11	4.7	mg/kg	---	12	4.2	mg/kg	---	12	3.7	mg/kg	---
	Potassium	7440-09-7	1300	580	mg/kg	---	1500	530	mg/kg	---	1200	460	mg/kg	---
	Selenium	7782-49-2	ND	0.58	mg/kg	---	0.51	0.53	mg/kg	J	ND	0.46	mg/kg	---
	Silver	7440-22-4	ND	0.58	mg/kg	---	ND	0.53	mg/kg	---	ND	0.46	mg/kg	---
	Sodium	7440-23-5	75	580	mg/kg	J	94	530	mg/kg	J	62	460	mg/kg	J
	Thallium	7440-28-0	ND	1.2	mg/kg	---	ND	1.1	mg/kg	---	ND	0.93	mg/kg	---
	Vanadium	7440-62-2	15	5.8	mg/kg	---	13	5.3	mg/kg	---	14	4.6	mg/kg	---
	Zinc	7440-66-6	62	2.3	mg/kg	---	30	2.1	mg/kg	---	61	1.9	mg/kg	---
	OSW-7471A													
	Mercury	7439-97-6	0.043	0.13	mg/kg	J	ND	0.12	mg/kg	---	0.025	0.12	mg/kg	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52618-1

		Sample Name:	HA-14_0-1(20150625)				HA-15_0-1(20150625)				HA-16_0-0.5(20150625)			
		Lab Sample ID:	240526184				240526185				240526186			
		Sample Date:	6/25/2015				6/25/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	ND	280	ug/kg	---	ND	290	ug/kg	---	64	340	ug/kg	UB
1,2-Dibromo-3-Chloropropane	96-12-8	ND	550	ug/kg	---	ND	580	ug/kg	---	ND	670	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	280	ug/kg	---	ND	290	ug/kg	---	20	340	ug/kg	J
1,3-Dichlorobenzene	541-73-1	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1100	ug/kg	---	ND	1200	ug/kg	---	ND	1300	ug/kg	---
2-Chlorotoluene	95-49-8	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
2-Hexanone	591-78-6	ND	1100	ug/kg	---	ND	1200	ug/kg	---	ND	1300	ug/kg	---
4-Chlorotoluene	106-43-4	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1100	ug/kg	---	ND	1200	ug/kg	---	ND	1300	ug/kg	---
Acetone	67-64-1	ND	1100	ug/kg	---	ND	1200	ug/kg	---	ND	1300	ug/kg	---
Allyl chloride	107-05-1	ND	550	ug/kg	---	ND	580	ug/kg	---	ND	670	ug/kg	---
Benzene	71-43-2	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Bromobenzene	108-86-1	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Bromochloromethane	74-97-5	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Bromodichloromethane	75-27-4	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Bromoform	75-25-2	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Bromomethane	74-83-9	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Carbon disulfide	75-15-0	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Carbon tetrachloride	56-23-5	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Chlorobenzene	108-90-7	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Chlorodibromomethane	124-48-1	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Chloroethane	75-00-3	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Chloroform	67-66-3	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Chloromethane	74-87-3	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Cyclohexane	110-82-7	ND	550	ug/kg	---	ND	580	ug/kg	---	ND	670	ug/kg	---
Dibromomethane	74-95-3	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	550	ug/kg	---	ND	580	ug/kg	---	ND	670	ug/kg	---
Ethyl ether	60-29-7	ND	550	ug/kg	---	ND	580	ug/kg	---	ND	670	ug/kg	---
Ethylbenzene	100-41-4	ND	280	ug/kg	---	ND	290	ug/kg	---	98	340	ug/kg	J
Hexachlorobutadiene	87-68-3	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Isopropylbenzene	98-82-8	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	280	ug/kg	---	ND	290	ug/kg	---	29	340	ug/kg	J
Methyl acetate	79-20-9	290	550	ug/kg	J	120	580	ug/kg	J	390	670	ug/kg	J
Methyl tert butyl ether	1634-04-4	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Methylcyclohexane	108-87-2	ND	550	ug/kg	---	ND	580	ug/kg	---	ND	670	ug/kg	---
Methylene Chloride	75-09-2	240	280	ug/kg	J	280	290	ug/kg	J	ND	340	ug/kg	---
n-Butylbenzene	104-51-8	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
N-Propylbenzene	103-65-1	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Naphthalene	91-20-3	ND	280	ug/kg	---	ND	290	ug/kg	---	92	340	ug/kg	J
o-Xylene	95-47-6	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
sec-Butylbenzene	135-98-8	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Styrene	100-42-5	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
tert-Butylbenzene	98-06-6	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Tetrachloroethene	127-18-4	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1100	ug/kg	---	ND	1200	ug/kg	---	ND	1300	ug/kg	---
Toluene	108-88-3	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
trans-1,2-Dichloroethene	156-60-5	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Trichloroethene	79-01-6	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---
Vinyl chloride	75-01-4	ND	280	ug/kg	---	ND	290	ug/kg	---	ND	340	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52618-1

		Sample Name:	HA-14_0-1(20150625)				HA-15_0-1(20150625)				HA-16_0-0.5(20150625)			
		Lab Sample ID:	240526184				240526185				240526186			
		Sample Date:	6/25/2015				6/25/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
2,4,5-Trichlorophenol	95-95-4	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
2,4,6-Trichlorophenol	88-06-2	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
2,4-Dichlorophenol	120-83-2	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
2,4-Dimethylphenol	105-67-9	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
2,4-Dinitrophenol	51-28-5	ND	1900	ug/kg	---	ND	1900	ug/kg	---	ND	35000	ug/kg	---
2,4-Dinitrotoluene	121-14-2	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
2,6-Dinitrotoluene	606-20-2	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
2-Chloronaphthalene	91-58-7	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
2-Chlorophenol	95-57-8	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
2-Methylnaphthalene	91-57-6	6.1	390	ug/kg	J	4.2	390	ug/kg	J	150	7300	ug/kg	J
2-Methylphenol	95-48-7	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
2-Nitroaniline	88-74-4	ND	1900	ug/kg	---	ND	1900	ug/kg	---	ND	35000	ug/kg	---
2-Nitrophenol	88-75-5	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
3 & 4 Methylphenol	65794-96-9	ND	470	ug/kg	---	ND	470	ug/kg	---	ND	8900	ug/kg	---
3,3'-Dichlorobenzidine	91-94-1	ND	1900	ug/kg	---	ND	1900	ug/kg	---	ND	35000	ug/kg	---
3-Nitroaniline	99-09-2	ND	1900	ug/kg	---	ND	1900	ug/kg	---	ND	35000	ug/kg	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	1900	ug/kg	---	ND	1900	ug/kg	---	ND	35000	ug/kg	---
4-Bromophenyl phenyl ether	101-55-3	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
4-Chloro-3-methylphenol	59-50-7	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
4-Chloroaniline	106-47-8	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
4-Nitroaniline	100-01-6	ND	1900	ug/kg	---	ND	1900	ug/kg	---	ND	35000	ug/kg	---
4-Nitrophenol	100-02-7	ND	1900	ug/kg	---	ND	1900	ug/kg	---	ND	35000	ug/kg	---
Acenaphthene	83-32-9	17	390	ug/kg	J	9.8	390	ug/kg	J	1100	7300	ug/kg	J
Acenaphthylene	208-96-8	7.1	390	ug/kg	J	4.1	390	ug/kg	J	1100	7300	ug/kg	J
Acetophenone	98-86-2	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Anthracene	120-12-7	34	390	ug/kg	J	12	390	ug/kg	J	4200	7300	ug/kg	J
Atrazine	1912-24-9	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Benzaldehyde	100-52-7	35	390	ug/kg	J	19	390	ug/kg	J	ND	7300	ug/kg	---
Benzo[a]anthracene	56-55-3	160	390	ug/kg	J	59	390	ug/kg	J	12000	7300	ug/kg	---
Benzo[a]pyrene	50-32-8	160	390	ug/kg	J	62	390	ug/kg	J	11000	7300	ug/kg	---
Benzo[b]fluoranthene	205-99-2	260	390	ug/kg	J	120	390	ug/kg	J	17000	7300	ug/kg	---
Benzo[g,h,i]perylene	191-24-2	62	390	ug/kg	J	27	390	ug/kg	J	3500	7300	ug/kg	J
Benzo[k]fluoranthene	207-08-9	110	390	ug/kg	J	29	390	ug/kg	J	5900	7300	ug/kg	J
Bis(2-chloroethoxy)methane	111-91-1	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Bis(2-chloroethyl)ether	111-44-4	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Bis(2-ethylhexyl) phthalate	117-81-7	110	380	ug/kg	UB	290	390	ug/kg	UB	ND	3700	ug/kg	UB
Butyl benzyl phthalate	85-68-7	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Caprolactam	105-60-2	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Carbazole	86-74-8	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Chrysene	218-01-9	190	390	ug/kg	J	75	390	ug/kg	J	12000	7300	ug/kg	---
Di-n-butyl phthalate	84-74-2	31	390	ug/kg	UB	25	390	ug/kg	UB	ND	7300	ug/kg	---
Di-n-octyl phthalate	117-84-0	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Dibenz(a,h)anthracene	53-70-3	28	390	ug/kg	J	ND	390	ug/kg	---	1200	7300	ug/kg	J
Dibenzofuran	132-64-9	ND	390	ug/kg	---	10	390	ug/kg	J	500	7300	ug/kg	J
Diethyl phthalate	84-66-2	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Dimethyl phthalate	131-11-3	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Fluoranthene	206-44-0	340	390	ug/kg	J	110	390	ug/kg	J	23000	7300	ug/kg	---
Fluorene	86-73-7	14	390	ug/kg	J	9.2	390	ug/kg	J	1300	7300	ug/kg	J
Hexachlorobenzene	118-74-1	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Hexachlorocyclopentadiene	77-47-4	ND	1900	ug/kg	---	ND	1900	ug/kg	---	ND	35000	ug/kg	---
Hexachloroethane	67-72-1	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Indeno[1,2,3-cd]pyrene	193-39-5	64	390	ug/kg	J	30	390	ug/kg	J	3400	7300	ug/kg	J
Isophorone	78-59-1	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
N-Nitrosodi-n-propylamine	621-64-7	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
N-Nitrosodiphenylamine	86-30-6	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Naphthalene	91-20-3	ND	390	ug/kg	---	ND	390	ug/kg	---	190	7300	ug/kg	J
Nitrobenzene	98-95-3	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Pentachlorophenol	87-86-5	ND	390	ug/kg	---	ND	390	ug/kg	---	ND	7300	ug/kg	---
Phenanthrene	85-01-8	170	390	ug/kg	J	65	390	ug/kg	J	12000	7300	ug/kg	---
Phenol	108-95-2	ND	390	ug/kg	---	11	390	ug/kg	J	ND	7300	ug/kg	---
Pyrene	129-00-0	270	390	ug/kg	J	92	390	ug/kg	J	23000	7300	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52618-1

			Sample Name:	HA-14_0-1(20150625)				HA-15_0-1(20150625)				HA-16_0-0.5(20150625)			
			Lab Sample ID:	240526184				240526185				240526186			
			Sample Date:	6/25/2015				6/25/2015				6/25/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	11	mg/kg	---	ND	12	mg/kg	---	ND	11	mg/kg	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	8.6	10	mg/kg	J	7.9	10	mg/kg	J	2300	490	mg/kg	J
Metals														
	OSW-6010B													
	Aluminum	7429-90-5	6500	16	mg/kg	---	4500	17	mg/kg	---	5400	16	mg/kg	---
	Antimony	7440-36-0	1.1	0.80	mg/kg	---	ND	0.86	mg/kg	---	ND	0.78	mg/kg	---
	Arsenic	7440-38-2	8.0	0.80	mg/kg	---	1.8	0.86	mg/kg	---	3.3	0.78	mg/kg	---
	Barium	7440-39-3	47	16	mg/kg	---	42	17	mg/kg	---	38	16	mg/kg	---
	Beryllium	7440-41-7	0.35	0.40	mg/kg	J	0.19	0.43	mg/kg	J	0.26	0.39	mg/kg	J
	Cadmium	7440-43-9	0.23	0.16	mg/kg	---	0.12	0.17	mg/kg	J	0.48	0.16	mg/kg	---
	Calcium	7440-70-2	11000	400	mg/kg	---	6900	430	mg/kg	---	24000	390	mg/kg	---
	Chromium	7440-47-3	14	0.40	mg/kg	---	8.4	0.43	mg/kg	---	12	0.39	mg/kg	---
	Cobalt	7440-48-4	7.6	4.0	mg/kg	---	2.0	4.3	mg/kg	J	5.1	3.9	mg/kg	---
	Copper	7440-50-8	13	2.0	mg/kg	---	6.0	2.1	mg/kg	---	12	1.9	mg/kg	---
	Iron	7439-89-6	13000	8.0	mg/kg	---	5000	8.6	mg/kg	---	10000	7.8	mg/kg	---
	Lead	7439-92-1	62	0.24	mg/kg	---	6.2	0.26	mg/kg	---	17	0.23	mg/kg	---
	Magnesium	7439-95-4	4000	400	mg/kg	---	1600	430	mg/kg	---	5600	390	mg/kg	---
	Manganese	7439-96-5	360	1.2	mg/kg	---	170	1.3	mg/kg	---	340	1.2	mg/kg	---
	Nickel	7440-02-0	16	3.2	mg/kg	---	5.5	3.4	mg/kg	---	12	3.1	mg/kg	---
	Potassium	7440-09-7	1900	400	mg/kg	---	400	430	mg/kg	J	1200	390	mg/kg	---
	Selenium	7782-49-2	0.27	0.40	mg/kg	J	0.42	0.43	mg/kg	J	0.33	0.39	mg/kg	J
	Silver	7440-22-4	ND	0.40	mg/kg	---	ND	0.43	mg/kg	---	ND	0.39	mg/kg	---
	Sodium	7440-23-5	58	400	mg/kg	J	38	430	mg/kg	J	96	390	mg/kg	J
	Thallium	7440-28-0	ND	0.80	mg/kg	---	ND	0.86	mg/kg	---	ND	0.78	mg/kg	---
	Vanadium	7440-62-2	16	4.0	mg/kg	---	11	4.3	mg/kg	---	16	3.9	mg/kg	---
	Zinc	7440-66-6	56	1.6	mg/kg	---	22	1.7	mg/kg	---	37	1.6	mg/kg	---
	OSW-7471A													
	Mercury	7439-97-6	0.031	0.11	mg/kg	J	ND	0.11	mg/kg	---	0.022	0.12	mg/kg	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52618-1

		Sample Name:	HA-17_0-1(20150625)				HA-18_0-1(20150625)				MB_01(20150625)			
		Lab Sample ID:	240526187				240526188				240526189			
		Sample Date:	6/25/2015				6/25/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,1,1-Trichloroethane	71-55-6	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,1,2-Trichloroethane	79-00-5	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,1-Dichloroethane	75-34-3	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,1-Dichloroethene	75-35-4	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,1-Dichloropropene	563-58-6	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,2,3-Trichlorobenzene	87-61-6	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,2,3-Trichloropropane	96-18-4	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,2,4-Trichlorobenzene	120-82-1	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,2,4-Trimethylbenzene	95-63-6	44	360	ug/kg	UB	26	340	ug/kg	UB	14	250	ug/kg	J
1,2-Dibromo-3-Chloropropane	96-12-8	ND	710	ug/kg	---	ND	680	ug/kg	---	ND	500	ug/kg	---
1,2-Dibromoethane	106-93-4	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,2-Dichlorobenzene	95-50-1	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,2-Dichloroethane	107-06-2	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,2-Dichloropropane	78-87-5	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,3,5-Trimethylbenzene	108-67-8	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,3-Dichlorobenzene	541-73-1	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,3-Dichloropropane	142-28-9	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
1,4-Dichlorobenzene	106-46-7	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
2,2-Dichloropropane	594-20-7	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
2-Butanone (MEK)	78-93-3	ND	1400	ug/kg	---	ND	1400	ug/kg	---	ND	1000	ug/kg	---
2-Chlorotoluene	95-49-8	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
2-Hexanone	591-78-6	ND	1400	ug/kg	---	ND	1400	ug/kg	---	ND	1000	ug/kg	---
4-Chlorotoluene	106-43-4	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1400	ug/kg	---	ND	1400	ug/kg	---	ND	1000	ug/kg	---
Acetone	67-64-1	ND	1400	ug/kg	---	ND	1400	ug/kg	---	ND	1000	ug/kg	---
Allyl chloride	107-05-1	ND	710	ug/kg	---	ND	680	ug/kg	---	ND	500	ug/kg	---
Benzene	71-43-2	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Bromobenzene	108-86-1	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Bromochloromethane	74-97-5	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Bromodichloromethane	75-27-4	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Bromoform	75-25-2	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Bromomethane	74-83-9	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Carbon disulfide	75-15-0	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Carbon tetrachloride	56-23-5	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Chlorobenzene	108-90-7	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Chlorodibromomethane	124-48-1	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Chloroethane	75-00-3	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Chloroform	67-66-3	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Chloromethane	74-87-3	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
cis-1,2-Dichloroethene	156-59-2	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
cis-1,3-Dichloropropene	10061-01-5	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Cyclohexane	110-82-7	ND	710	ug/kg	---	ND	680	ug/kg	---	ND	500	ug/kg	---
Dibromomethane	74-95-3	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Dichlorodifluoromethane	75-71-8	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Dichlorofluoromethane	75-43-4	ND	710	ug/kg	---	ND	680	ug/kg	---	ND	500	ug/kg	---
Ethyl ether	60-29-7	ND	710	ug/kg	---	ND	680	ug/kg	---	ND	500	ug/kg	---
Ethylbenzene	100-41-4	74	360	ug/kg	J	48	340	ug/kg	J	ND	250	ug/kg	---
Hexachlorobutadiene	87-68-3	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Isopropylbenzene	98-82-8	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
m-Xylene & p-Xylene	179601-23-1	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Methyl acetate	79-20-9	1000	710	ug/kg	---	430	680	ug/kg	J	ND	500	ug/kg	---
Methyl tert butyl ether	1634-04-4	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Methylcyclohexane	108-87-2	ND	710	ug/kg	---	ND	680	ug/kg	---	ND	500	ug/kg	---
Methylene Chloride	75-09-2	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
n-Butylbenzene	104-51-8	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
N-Propylbenzene	103-65-1	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Naphthalene	91-20-3	41	360	ug/kg	J	ND	340	ug/kg	---	ND	250	ug/kg	---
o-Xylene	95-47-6	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
p-Isopropyltoluene	99-87-6	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
sec-Butylbenzene	135-98-8	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Styrene	100-42-5	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
tert-Butylbenzene	98-06-6	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Tetrachloroethene	127-18-4	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Tetrahydrofuran	109-99-9	ND	1400	ug/kg	---	ND	1400	ug/kg	---	ND	1000	ug/kg	---
Toluene	108-88-3	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
trans-1,2-Dichloroethene	156-60-5	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
trans-1,3-Dichloropropene	10061-02-6	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Trichloroethene	79-01-6	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Trichlorofluoromethane	75-69-4	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---
Vinyl chloride	75-01-4	ND	360	ug/kg	---	ND	340	ug/kg	---	ND	250	ug/kg	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52618-1

		Sample Name:	HA-17_0-1(20150625)				HA-18_0-1(20150625)				MB_01(20150625)			
		Lab Sample ID:	240526187				240526188				240526189			
		Sample Date:	6/25/2015				6/25/2015				6/25/2015			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	450	ug/kg	---	ND	410	ug/kg	---				
2,2'-oxybis[1-chloropropane]	108-60-1	ND	450	ug/kg	---	ND	410	ug/kg	---				
2,4,5-Trichlorophenol	95-95-4	ND	450	ug/kg	---	ND	410	ug/kg	---				
2,4,6-Trichlorophenol	88-06-2	ND	450	ug/kg	---	ND	410	ug/kg	---				
2,4-Dichlorophenol	120-83-2	ND	450	ug/kg	---	ND	410	ug/kg	---				
2,4-Dimethylphenol	105-67-9	ND	450	ug/kg	---	ND	410	ug/kg	---				
2,4-Dinitrophenol	51-28-5	ND	2200	ug/kg	---	ND	2000	ug/kg	---				
2,4-Dinitrotoluene	121-14-2	ND	450	ug/kg	---	ND	410	ug/kg	---				
2,6-Dinitrotoluene	606-20-2	ND	450	ug/kg	---	ND	410	ug/kg	---				
2-Chloronaphthalene	91-58-7	ND	450	ug/kg	---	ND	410	ug/kg	---				
2-Chlorophenol	95-57-8	ND	450	ug/kg	---	ND	410	ug/kg	---				
2-Methylnaphthalene	91-57-6	11	450	ug/kg	J	6.4	410	ug/kg	J				
2-Methylphenol	95-48-7	ND	450	ug/kg	---	ND	410	ug/kg	---				
2-Nitroaniline	88-74-4	ND	2200	ug/kg	---	ND	2000	ug/kg	---				
2-Nitrophenol	88-75-5	ND	450	ug/kg	---	ND	410	ug/kg	---				
3 & 4 Methylphenol	65794-96-9	ND	540	ug/kg	---	ND	490	ug/kg	---				
3,3'-Dichlorobenzidine	91-94-1	ND	2200	ug/kg	---	ND	2000	ug/kg	---				
3-Nitroaniline	99-09-2	ND	2200	ug/kg	---	ND	2000	ug/kg	---				
4,6-Dinitro-2-methylphenol	534-52-1	ND	2200	ug/kg	---	ND	2000	ug/kg	---				
4-Bromophenyl phenyl ether	101-55-3	ND	450	ug/kg	---	ND	410	ug/kg	---				
4-Chloro-3-methylphenol	59-50-7	ND	450	ug/kg	---	ND	410	ug/kg	---				
4-Chloroaniline	106-47-8	ND	450	ug/kg	---	ND	410	ug/kg	---				
4-Chlorophenyl phenyl ether	7005-72-3	ND	450	ug/kg	---	ND	410	ug/kg	---				
4-Nitroaniline	100-01-6	ND	2200	ug/kg	---	ND	2000	ug/kg	---				
4-Nitrophenol	100-02-7	ND	2200	ug/kg	---	ND	2000	ug/kg	---				
Acenaphthene	83-32-9	29	450	ug/kg	J	4.5	410	ug/kg	J				
Acenaphthylene	208-96-8	78	450	ug/kg	J	13	410	ug/kg	J				
Acetophenone	98-86-2	16	450	ug/kg	J	13	410	ug/kg	J				
Anthracene	120-12-7	160	450	ug/kg	J	18	410	ug/kg	J				
Atrazine	1912-24-9	ND	450	ug/kg	---	ND	410	ug/kg	---				
Benzaldehyde	100-52-7	91	450	ug/kg	J	41	410	ug/kg	J				
Benzo[a]anthracene	56-55-3	720	450	ug/kg	---	78	410	ug/kg	J				
Benzo[a]pyrene	50-32-8	680	450	ug/kg	---	79	410	ug/kg	J				
Benzo[b]fluoranthene	205-99-2	1100	450	ug/kg	---	110	410	ug/kg	J				
Benzo[g,h,i]perylene	191-24-2	220	450	ug/kg	J	31	410	ug/kg	J				
Benzo[k]fluoranthene	207-08-9	400	450	ug/kg	J	54	410	ug/kg	J				
Bis(2-chloroethoxy)methane	111-91-1	ND	450	ug/kg	---	ND	410	ug/kg	---				
Bis(2-chloroethyl)ether	111-44-4	ND	450	ug/kg	---	ND	410	ug/kg	---				
Bis(2-ethylhexyl) phthalate	117-81-7	86	440	ug/kg	UB	53	400	ug/kg	UB				
Butyl benzyl phthalate	85-68-7	ND	450	ug/kg	---	ND	410	ug/kg	---				
Caprolactam	105-60-2	ND	450	ug/kg	---	ND	410	ug/kg	---				
Carbazole	86-74-8	ND	450	ug/kg	---	ND	410	ug/kg	---				
Chrysene	218-01-9	760	450	ug/kg	---	86	410	ug/kg	J				
Di-n-butyl phthalate	84-74-2	75	450	ug/kg	UB	36	410	ug/kg	UB				
Di-n-octyl phthalate	117-84-0	ND	450	ug/kg	---	ND	410	ug/kg	---				
Dibenz(a,h)anthracene	53-70-3	83	450	ug/kg	J	ND	410	ug/kg	---				
Dibenzofuran	132-64-9	23	450	ug/kg	J	ND	410	ug/kg	---				
Diethyl phthalate	84-66-2	ND	450	ug/kg	---	ND	410	ug/kg	---				
Dimethyl phthalate	131-11-3	ND	450	ug/kg	---	ND	410	ug/kg	---				
Fluoranthene	206-44-0	1300	450	ug/kg	---	130	410	ug/kg	J				
Fluorene	86-73-7	27	450	ug/kg	J	4.8	410	ug/kg	J				
Hexachlorobenzene	118-74-1	ND	450	ug/kg	---	ND	410	ug/kg	---				
Hexachlorobutadiene	87-68-3	ND	450	ug/kg	---	ND	410	ug/kg	---				
Hexachlorocyclopentadiene	77-47-4	ND	2200	ug/kg	---	ND	2000	ug/kg	---				
Hexachloroethane	67-72-1	ND	450	ug/kg	---	ND	410	ug/kg	---				
Indeno[1,2,3-cd]pyrene	193-39-5	220	450	ug/kg	J	34	410	ug/kg	J				
Isophorone	78-59-1	ND	450	ug/kg	---	ND	410	ug/kg	---				
N-Nitrosodi-n-propylamine	621-64-7	ND	450	ug/kg	---	ND	410	ug/kg	---				
N-Nitrosodiphenylamine	86-30-6	ND	450	ug/kg	---	ND	410	ug/kg	---				
Naphthalene	91-20-3	17	450	ug/kg	J	7.3	410	ug/kg	J				
Nitrobenzene	98-95-3	ND	450	ug/kg	---	ND	410	ug/kg	---				
Pentachlorophenol	87-86-5	ND	450	ug/kg	---	ND	410	ug/kg	---				
Phenanthrene	85-01-8	450	450	ug/kg	---	56	410	ug/kg	J				
Phenol	108-95-2	33	450	ug/kg	J	ND	410	ug/kg	---				
Pyrene	129-00-0	1300	450	ug/kg	---	120	410	ug/kg	J				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 52618-1

			Sample Name:	HA-17_0-1(20150625)				HA-18_0-1(20150625)				MB_01(20150625)			
			Lab Sample ID:	240526187				240526188				240526189			
			Sample Date:	6/25/2015				6/25/2015				6/25/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	14	mg/kg	---	ND	12	mg/kg	---	ND	370	mg/kg	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	42	12	mg/kg	J	14	8.6	mg/kg	J				
Metals														
	OSW-6010B													
	Aluminum	7429-90-5	7000	25	mg/kg	---	8700	19	mg/kg	---				
	Antimony	7440-36-0	0.73	1.2	mg/kg	J	1.3	0.95	mg/kg	---				
	Arsenic	7440-38-2	3.7	1.2	mg/kg	---	4.5	0.95	mg/kg	---				
	Barium	7440-39-3	71	25	mg/kg	---	76	19	mg/kg	---				
	Beryllium	7440-41-7	0.35	0.61	mg/kg	J	0.46	0.47	mg/kg	J				
	Cadmium	7440-43-9	0.32	0.25	mg/kg	---	0.32	0.19	mg/kg	---				
	Calcium	7440-70-2	18000	610	mg/kg	---	10000	470	mg/kg	---				
	Chromium	7440-47-3	13	0.61	mg/kg	---	15	0.47	mg/kg	---				
	Cobalt	7440-48-4	6.1	6.1	mg/kg	---	6.8	4.7	mg/kg	---				
	Copper	7440-50-8	17	3.1	mg/kg	---	14	2.4	mg/kg	---				
	Iron	7439-89-6	12000	12	mg/kg	---	14000	9.5	mg/kg	---				
	Lead	7439-92-1	28	0.37	mg/kg	---	27	0.28	mg/kg	---				
	Magnesium	7439-95-4	5300	610	mg/kg	---	4200	470	mg/kg	---				
	Manganese	7439-96-5	460	1.8	mg/kg	---	390	1.4	mg/kg	---				
	Nickel	7440-02-0	12	4.9	mg/kg	---	15	3.8	mg/kg	---				
	Potassium	7440-09-7	1300	610	mg/kg	---	1900	470	mg/kg	---				
	Selenium	7782-49-2	ND	0.61	mg/kg	---	ND	0.47	mg/kg	---				
	Silver	7440-22-4	ND	0.61	mg/kg	---	ND	0.47	mg/kg	---				
	Sodium	7440-23-5	59	610	mg/kg	J	54	470	mg/kg	J				
	Thallium	7440-28-0	ND	1.2	mg/kg	---	ND	0.95	mg/kg	---				
	Vanadium	7440-62-2	20	6.1	mg/kg	---	21	4.7	mg/kg	---				
	Zinc	7440-66-6	56	2.5	mg/kg	---	53	1.9	mg/kg	---				
	OSW-7471A													
	Mercury	7439-97-6	0.036	0.12	mg/kg	J	0.019	0.13	mg/kg	J				

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

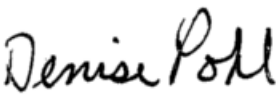
ANALYTICAL REPORT

Job Number: 240-59162-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey



Approved for release.
Denise Pohl
Project Manager II
12/30/2015 3:17 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
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12/30/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-59162-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 12/16/2015 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

At the request of the client by email 12/16/2015, the PCBs were cancelled.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)

Sample AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) was analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 12/16/2015 and analyzed on 12/17/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILES ORGANICS COMPOUNDS (GCMS) WITH PARTICLE SIZE REDUCTION

Sample AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) was analyzed for volatiles organics compounds (GCMS) with particle size reduction in accordance with EPA SW846 Methods 1311/8260B. The samples were leached on 12/17/2015 and analyzed on 12/21/2015.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-211311 and analytical batch 240-211549 on these samples AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) and TRIP BLANK (240-59162-3) .

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1), AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) and TRIP BLANK (240-59162-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 12/17/2015 and analyzed on 12/19/2015 and 12/22/2015.

Acetone was detected in method blank MB 240-211311/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Methylene Chloride was detected in method blank MB 240-211311/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for

details.

Allyl chloride and Methyl acetate exceeded the RPD limit for LCSD 240-211311/3-A. Refer to the QC report for details.

Sample AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: The laboratory control sample (LCS) for preparation batch 240-211311 and analytical batch 240-211919 recovered outside acceptance limits for Methyl Acetate and 3-Chloro-1-propene. There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-211311 and analytical batch 240-211919 on this sample AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) .

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Sample AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) was analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 12/17/2015, prepared on 12/18/2015 and analyzed on 12/21/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP GC/MS SEMIVOLATILES WITH PARTICLE SIZE REDUCTION

Sample AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) was analyzed for GC/MS Semivolatiles in accordance with SW-846 Method 8270C. The samples were leached on 12/17/2015, prepared on 12/18/2015 and analyzed on 12/21/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) and AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 12/17/2015 and analyzed on 12/20/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2,4,6-Tribromophenol (Surr) and 2-Fluorophenol (Surr) failed the surrogate recovery criteria low for AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1). Nitrobenzene-d5 (Surr) failed the surrogate recovery criteria high. Refer to the QC report for details.

Hexachlorocyclopentadiene failed the recovery criteria low for the MS of sample AREA-C-TRENCH-1_010_5-6(20151215)MS (240-59162-2) in batch 240-211630.

For the MSD of sample AREA-C-TRENCH-1_010_5-6(20151215)MSD (240-59162-2) in batch 240-211630, Hexachlorocyclopentadiene failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, Carbazole exceeded the RPD limit.

Refer to the QC report for details.

Sample AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: The following sample was diluted due to the nature of the sample matrix: AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1). Elevated reporting limits (RLs) are provided.

Method(s) 3540C: Due to the matrix, the following sample could not be concentrated to the final method required volume: AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1). The reporting limits (RLs) are elevated proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1), AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) and TRIP BLANK (240-59162-3) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared and analyzed on 12/18/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) and AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 12/18/2015 and analyzed on 12/22/2015.

WI Diesel Range Organics (C10-C28) was detected in method blank MB 240-211439/5-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Samples AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1)[100X] and AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) [5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) mix : AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) and AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)

Sample AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 12/17/2015, prepared on 12/18/2015 and analyzed on 12/22/2015.

Potassium was detected in method blank MB 240-211510/2-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Arsenic, Chromium, Copper, Nickel and Potassium were detected in method blank LB 240-211400/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Calcium failed the recovery criteria low for the MSD of sample 240-59175-1 in batch 240-211881. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS ICP WITH PARTICLE SIZE REDUCTION

Sample AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) was analyzed for Metals ICP in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 12/17/2015, prepared on 12/18/2015 and analyzed on 12/22/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) and AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 12/17/2015 and analyzed on 12/18/2015 and 12/22/2015.

Chromium was detected in method blank MB 240-211321/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample AREA-C-TRENCH-1_010_4-5(20151215)MS (240-59162-1) in batch 240-212068. Several analytes failed the recovery criteria high.

For the MSD of sample AREA-C-TRENCH-1_010_4-5(20151215)MSD (240-59162-1) in batch 240-212068, Barium, Calcium, Iron and Manganese failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, Barium and Iron exceeded the RPD limit.

Refer to the QC report for details.

Sample AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY

Sample AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 12/17/2015, prepared on 12/18/2015 and analyzed on 12/21/2015.

Mercury was detected in method blank LB 240-211400/1-C at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY WITH PARTICLE SIZE REDUCTION

Sample AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) was analyzed for Mercury with particle size reduction in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 12/17/2015, prepared on 12/18/2015 and analyzed on 12/21/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) and AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 12/17/2015 and analyzed on 12/18/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM

Samples AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) and AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 12/23/2015 and analyzed on 12/24/2015.

Samples AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1)[5X] and AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 7196A: The following sample was diluted due to the nature of the sample matrix: AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM

Samples AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) and AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 12/22/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples AREA-C-TRENCH-1_010_4-5(20151215) (240-59162-1) and AREA-C-TRENCH-1_010_5-6(20151215) (240-59162-2) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 12/16/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59162-1	**AREA-C-TRENCH-1_010_4-5(20151215)**					
Acetone		870	J B	3000	ug/Kg	8260B
Isopropylbenzene		210	J	750	ug/Kg	8260B
Methyl acetate		320	J *	1500	ug/Kg	8260B
Methylene Chloride		650	J B	750	ug/Kg	8260B
m-Xylene & p-Xylene		670	J	750	ug/Kg	8260B
Naphthalene		14000		750	ug/Kg	8260B
n-Butylbenzene		6700		750	ug/Kg	8260B
N-Propylbenzene		370	J	750	ug/Kg	8260B
o-Xylene		1200		750	ug/Kg	8260B
p-Isopropyltoluene		330	J	750	ug/Kg	8260B
sec-Butylbenzene		770		750	ug/Kg	8260B
1,2,4-Trimethylbenzene		14000		750	ug/Kg	8260B
1,3,5-Trimethylbenzene		7500		750	ug/Kg	8260B
2-Methylnaphthalene		1900	J	56000	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		52000	J	56000	ug/Kg	8270C
Fluoranthene		2100	J	56000	ug/Kg	8270C
Naphthalene		9100	J	56000	ug/Kg	8270C
Phenol		1700	J	56000	ug/Kg	8270C
Phenanthrene		2200	J	56000	ug/Kg	8270C
Pyrene		2900	J	56000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		42		16	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		6000	B	1200	mg/Kg	WI-DRO
Aluminum		9900		26	mg/Kg	6010B
Antimony		43	F1	1.3	mg/Kg	6010B
Barium		1400	F2	26	mg/Kg	6010B
Calcium		3200	F1	640	mg/Kg	6010B
Cadmium		1.5		0.26	mg/Kg	6010B
Cobalt		1.2	J	6.4	mg/Kg	6010B
Chromium		1500	B	0.64	mg/Kg	6010B
Copper		150		3.2	mg/Kg	6010B
Iron		4100	F2	13	mg/Kg	6010B
Potassium		200	J	640	mg/Kg	6010B
Magnesium		810		640	mg/Kg	6010B
Manganese		73	F1	1.9	mg/Kg	6010B
Silver		0.11	J	0.64	mg/Kg	6010B
Sodium		500	J	640	mg/Kg	6010B
Nickel		19		5.1	mg/Kg	6010B
Vanadium		3.3	J	6.4	mg/Kg	6010B
Zinc		330		2.6	mg/Kg	6010B
Lead		9500		3.8	mg/Kg	6010B
Selenium		0.61	J	0.64	mg/Kg	6010B
Cr (VI)		130		5.4	mg/Kg	7196A
Cr (III)		1900		2.7	mg/Kg	7196A
Percent Solids		74		0.10	%	Moisture
Percent Moisture		26		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
TCLP						
2-Methylphenol		0.0038	J	0.0040	mg/L	8270C
3 & 4 Methylphenol		0.0092		0.0040	mg/L	8270C
Aluminum		0.26		0.20	mg/L	6010B
Arsenic		0.0072	J B	0.50	mg/L	6010B
Barium		1.9	J	10	mg/L	6010B
Calcium		110		5.0	mg/L	6010B
Cadmium		0.0024	J	0.10	mg/L	6010B
Cobalt		0.017	J	0.050	mg/L	6010B
Chromium		0.15	J B	0.50	mg/L	6010B
Copper		0.0080	J B	1.0	mg/L	6010B
Iron		0.10		0.10	mg/L	6010B
Potassium		5.3	B	5.0	mg/L	6010B
Magnesium		7.3		5.0	mg/L	6010B
Manganese		1.1		0.015	mg/L	6010B
Nickel		0.11	B	0.040	mg/L	6010B
Lead		3.4		0.50	mg/L	6010B
Antimony		0.063	J	0.30	mg/L	6010B
Vanadium		0.0026	J	0.050	mg/L	6010B
Zinc		1.5		1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59162-2	**AREA-C-TRENCH-1_010_5-6(20151215)**					
Methylene Chloride		180	J B	310	ug/Kg	8260B
1,1'-Biphenyl		6.4	J	400	ug/Kg	8270C
2-Methylnaphthalene		70	J	400	ug/Kg	8270C
Acenaphthene		34	J	400	ug/Kg	8270C
Acenaphthylene		16	J	400	ug/Kg	8270C
Acetophenone		22	J	400	ug/Kg	8270C
Anthracene		82	J F1	400	ug/Kg	8270C
Benzo[a]anthracene		350	J F1	400	ug/Kg	8270C
Benzo[a]pyrene		320	J F1	400	ug/Kg	8270C
Benzo[b]fluoranthene		510	F1	400	ug/Kg	8270C
Benzo[g,h,i]perylene		150	J	400	ug/Kg	8270C
Benzo[k]fluoranthene		150	J F1	400	ug/Kg	8270C
Carbazole		50	J F2	400	ug/Kg	8270C
Chrysene		410	F1	400	ug/Kg	8270C
Dibenz(a,h)anthracene		61	J	400	ug/Kg	8270C
Dibenzofuran		28	J	400	ug/Kg	8270C
Di-n-butyl phthalate		26	J	400	ug/Kg	8270C
Fluoranthene		660	F1	400	ug/Kg	8270C
Fluorene		32	J	400	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		140	J	400	ug/Kg	8270C
Naphthalene		51	J	400	ug/Kg	8270C
Phenanthrene		360	J F1	400	ug/Kg	8270C
Pyrene		560	F1	400	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		2.8	J	12	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		71	B	50	mg/Kg	WI-DRO
Aluminum		7600		20	mg/Kg	6010B
Antimony		0.98	J	1.0	mg/Kg	6010B
Barium		180		20	mg/Kg	6010B
Beryllium		0.54		0.50	mg/Kg	6010B
Calcium		11000		500	mg/Kg	6010B
Cadmium		0.24		0.20	mg/Kg	6010B
Cobalt		7.3		5.0	mg/Kg	6010B
Chromium		15	B	0.50	mg/Kg	6010B
Copper		14		2.5	mg/Kg	6010B
Iron		15000		10	mg/Kg	6010B
Potassium		900		500	mg/Kg	6010B
Magnesium		4400		500	mg/Kg	6010B
Manganese		430		1.5	mg/Kg	6010B
Sodium		67	J	500	mg/Kg	6010B
Nickel		17		4.0	mg/Kg	6010B
Vanadium		24		5.0	mg/Kg	6010B
Zinc		46		2.0	mg/Kg	6010B
Arsenic		5.1		1.0	mg/Kg	6010B
Lead		20		0.30	mg/Kg	6010B
Selenium		0.58		0.50	mg/Kg	6010B
Thallium		0.15	J	1.0	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Mercury		0.046	J	0.12	mg/Kg	7471A
Cr (III)		18		2.4	mg/Kg	7196A
Percent Solids		82		0.10	%	Moisture
Percent Moisture		18		0.10	%	Moisture
TCLP						
Arsenic		0.0089	J B	0.50	mg/L	6010B
Barium		1.2	J	10	mg/L	6010B
Cadmium		0.0012	J	0.10	mg/L	6010B
Calcium		500		5.0	mg/L	6010B
Chromium		0.0023	J B	0.50	mg/L	6010B
Cobalt		0.0052	J	0.050	mg/L	6010B
Copper		0.0031	J B	1.0	mg/L	6010B
Magnesium		63		5.0	mg/L	6010B
Manganese		2.7		0.015	mg/L	6010B
Nickel		0.013	J B	0.040	mg/L	6010B
Potassium		7.7	B	5.0	mg/L	6010B
Zinc		0.058	J	1.0	mg/L	6010B
240-59162-3	**TRIP BLANK**					
Methylene Chloride		190	J B	260	ug/Kg	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Particle Size Reduction Preparation	TAL CAN		Part Size Red
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction	TAL CAN		SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Particle Size Reduction Preparation	TAL CAN		Part Size Red
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Metals (ICP)	TAL CAN	SW846 6010B	
Particle Size Reduction Preparation	TAL CAN		Part Size Red
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7470A	
Particle Size Reduction Preparation	TAL CAN		Part Size Red
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Description	Lab Location	Method	Preparation Method

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Method	Analyst	Analyst ID
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Lecorchick, Willis A	WAL
SW846 7471A	Lecorchick, Willis A	WAL
SW846 7196A	Counts, Karen	KLC
SW846 7196A	Grossman, Lucas	LKG
EPA Moisture	Woodward, Bruce	BLW

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	Solid	12/15/2015 1400	12/16/2015 0930
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	Solid	12/15/2015 1427	12/16/2015 0930
240-59162-3	TRIP BLANK	Solid	12/15/2015 0000	12/16/2015 0930

SAMPLE RESULTS

Client Sample ID: **AREA-C-TRENCH-1_010_4-5(20151215)**

Lab Sample ID: 240-59162-1 Date Sampled: 12/15/2015 1400
Client Matrix: Solid % Moisture: 26.0 Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211311	Lab File ID:	147193.D
Dilution:	2.0			Initial Weight/Volume:	9.038 g
Analysis Date:	12/22/2015 1236			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 1054				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		870	J B	680	3000
Allyl chloride		ND	*	90	1500
Benzene		ND		27	750
Bromobenzene		ND		39	750
Bromochloromethane		ND		210	750
Bromodichloromethane		ND		110	750
Bromoform		ND		180	750
Bromomethane		ND		150	750
2-Butanone (MEK)		ND		220	3000
Carbon disulfide		ND		170	750
Carbon tetrachloride		ND		54	750
Chlorobenzene		ND		39	750
Chlorodibromomethane		ND		60	750
Chloroethane		ND		150	750
Chloroform		ND		110	750
Chloromethane		ND		140	750
2-Chlorotoluene		ND		120	750
4-Chlorotoluene		ND		78	750
cis-1,2-Dichloroethene		ND		110	750
cis-1,3-Dichloropropene		ND		66	750
Cyclohexane		ND		90	1500
1,2-Dibromo-3-Chloropropane		ND		210	1500
1,2-Dibromoethane		ND		96	750
Dibromomethane		ND		150	750
1,2-Dichlorobenzene		ND		57	750
1,3-Dichlorobenzene		ND		90	750
1,4-Dichlorobenzene		ND		120	750
Dichlorodifluoromethane		ND		180	750
1,1-Dichloroethane		ND		100	750
1,2-Dichloroethane		ND		30	750
1,1-Dichloroethene		ND		90	750
Dichlorofluoromethane		ND		99	1500
1,2-Dichloropropane		ND		96	750
1,3-Dichloropropane		ND		69	750
2,2-Dichloropropane		ND		160	750
1,1-Dichloropropene		ND		110	750
Ethylbenzene		ND		100	750
Ethyl ether		ND		290	1500
Hexachlorobutadiene		ND		130	750
2-Hexanone		ND		250	3000
Isopropylbenzene		210	J	39	750
Methyl acetate		320	J *	160	1500
Methylcyclohexane		ND		110	1500
Methylene Chloride		650	J B	250	750
4-Methyl-2-pentanone (MIBK)		ND		170	3000
Methyl tert butyl ether		ND		90	750

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_4-5(20151215)**

Lab Sample ID: 240-59162-1 Date Sampled: 12/15/2015 1400
Client Matrix: Solid % Moisture: 26.0 Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211311	Lab File ID:	147193.D
Dilution:	2.0			Initial Weight/Volume:	9.038 g
Analysis Date:	12/22/2015 1236			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 1054				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		670	J	60	750
Naphthalene		14000		78	750
n-Butylbenzene		6700		63	750
N-Propylbenzene		370	J	180	750
o-Xylene		1200		51	750
p-Isopropyltoluene		330	J	75	750
sec-Butylbenzene		770		48	750
Styrene		ND		81	750
tert-Butylbenzene		ND		100	750
1,1,1,2-Tetrachloroethane		ND		150	750
1,1,2,2-Tetrachloroethane		ND		75	750
Tetrachloroethene		ND		81	750
Tetrahydrofuran		ND		360	3000
Toluene		ND		30	750
trans-1,2-Dichloroethene		ND		78	750
trans-1,3-Dichloropropene		ND		78	750
1,2,3-Trichlorobenzene		ND		120	750
1,2,4-Trichlorobenzene		ND		90	750
1,1,1-Trichloroethane		ND		81	750
1,1,2-Trichloroethane		ND		57	750
Trichloroethene		ND		120	750
Trichlorofluoromethane		ND		100	750
1,2,3-Trichloropropane		ND		310	750
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		130	750
1,2,4-Trimethylbenzene		14000		39	750
1,3,5-Trimethylbenzene		7500		45	750
Vinyl chloride		ND		51	750

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	44		26 - 141
Dibromofluoromethane (Surr)	54		30 - 122
1,2-Dichloroethane-d4 (Surr)	60		39 - 128
Toluene-d8 (Surr)	45		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_4-5(20151215)**

Lab Sample ID: 240-59162-1 Date Sampled: 12/15/2015 1400
Client Matrix: Solid Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248420.D
Dilution:	1.0	Leach Batch:	240-211351	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 2043			Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 2043				
Leach Date:	12/17/2015 0930				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Benzene		ND		0.0065	0.025
2-Butanone (MEK)		ND		0.029	0.25
Carbon tetrachloride		ND		0.0065	0.025
Chlorobenzene		ND		0.0075	0.025
Chloroform		ND		0.0080	0.025
1,2-Dichloroethane		ND		0.011	0.025
1,1-Dichloroethene		ND		0.0095	0.025
Tetrachloroethene		ND		0.015	0.025
Trichloroethene		ND		0.0085	0.025
Vinyl chloride		ND		0.011	0.025

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	80		70 - 124
Dibromofluoromethane (Surr)	90		80 - 128
1,2-Dichloroethane-d4 (Surr)	86		80 - 121
Toluene-d8 (Surr)	95		80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_5-6(20151215)**

Lab Sample ID: 240-59162-2 Date Sampled: 12/15/2015 1427
Client Matrix: Solid % Moisture: 17.8 Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211549	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211311	Lab File ID:	147149.D
Dilution:	1.0			Initial Weight/Volume:	9.743 g
Analysis Date:	12/19/2015 0030			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 1054				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		280	1200
Allyl chloride		ND	*	37	620
Benzene		ND		11	310
Bromobenzene		ND		16	310
Bromochloromethane		ND		87	310
Bromodichloromethane		ND		47	310
Bromoform		ND		76	310
Bromomethane		ND		64	310
2-Butanone (MEK)		ND		91	1200
Carbon disulfide		ND		70	310
Carbon tetrachloride		ND		22	310
Chlorobenzene		ND		16	310
Chlorodibromomethane		ND		25	310
Chloroethane		ND		64	310
Chloroform		ND		45	310
Chloromethane		ND		60	310
2-Chlorotoluene		ND		51	310
4-Chlorotoluene		ND		32	310
cis-1,2-Dichloroethene		ND		47	310
cis-1,3-Dichloropropene		ND		27	310
Cyclohexane		ND		37	620
1,2-Dibromo-3-Chloropropane		ND		89	620
1,2-Dibromoethane		ND		40	310
Dibromomethane		ND		62	310
1,2-Dichlorobenzene		ND		24	310
1,3-Dichlorobenzene		ND		37	310
1,4-Dichlorobenzene		ND		51	310
Dichlorodifluoromethane		ND		76	310
1,1-Dichloroethane		ND		44	310
1,2-Dichloroethane		ND		12	310
1,1-Dichloroethene		ND		37	310
Dichlorofluoromethane		ND		41	620
1,2-Dichloropropane		ND		40	310
1,3-Dichloropropane		ND		29	310
2,2-Dichloropropane		ND		65	310
1,1-Dichloropropene		ND		47	310
Ethylbenzene		ND		44	310
Ethyl ether		ND		120	620
Hexachlorobutadiene		ND		55	310
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		16	310
Methyl acetate		ND	*	69	620
Methylcyclohexane		ND		47	620
Methylene Chloride		180	J B	110	310
4-Methyl-2-pentanone (MIBK)		ND		70	1200
Methyl tert butyl ether		ND		37	310

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_5-6(20151215)**

Lab Sample ID: 240-59162-2 Date Sampled: 12/15/2015 1427
Client Matrix: Solid % Moisture: 17.8 Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211549	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211311	Lab File ID:	147149.D
Dilution:	1.0			Initial Weight/Volume:	9.743 g
Analysis Date:	12/19/2015 0030			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 1054				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		25	310
Naphthalene		ND		32	310
n-Butylbenzene		ND		26	310
N-Propylbenzene		ND		76	310
o-Xylene		ND		21	310
p-Isopropyltoluene		ND		31	310
sec-Butylbenzene		ND		20	310
Styrene		ND		34	310
tert-Butylbenzene		ND		42	310
1,1,1,2-Tetrachloroethane		ND		61	310
1,1,2,2-Tetrachloroethane		ND		31	310
Tetrachloroethene		ND		34	310
Tetrahydrofuran		ND		150	1200
Toluene		ND		12	310
trans-1,2-Dichloroethene		ND		32	310
trans-1,3-Dichloropropene		ND		32	310
1,2,3-Trichlorobenzene		ND		49	310
1,2,4-Trichlorobenzene		ND		37	310
1,1,1-Trichloroethane		ND		34	310
1,1,2-Trichloroethane		ND		24	310
Trichloroethene		ND		49	310
Trichlorofluoromethane		ND		44	310
1,2,3-Trichloropropane		ND		130	310
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		52	310
1,2,4-Trimethylbenzene		ND		16	310
1,3,5-Trimethylbenzene		ND		19	310
Vinyl chloride		ND		21	310

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	77		26 - 141
Dibromofluoromethane (Surr)	78		30 - 122
1,2-Dichloroethane-d4 (Surr)	81		39 - 128
Toluene-d8 (Surr)	86		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_5-6(20151215)**

Lab Sample ID: 240-59162-2 Date Sampled: 12/15/2015 1427
Client Matrix: Solid Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-211382	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248343.D
Dilution:	1.0	Leach Batch:	240-211257	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/17/2015 2007			Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 2007				
Leach Date:	12/16/2015 2000				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87		80 - 121
4-Bromofluorobenzene (Surr)	82		70 - 124
Toluene-d8 (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	96		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-59162-3 Date Sampled: 12/15/2015 0000
Client Matrix: Solid Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211549	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211311	Lab File ID:	147150.D
Dilution:	1.0			Initial Weight/Volume:	9.762 g
Analysis Date:	12/19/2015 0052			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 1054				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND	*	31	510
Benzene		ND		9.2	260
Bromobenzene		ND		13	260
Bromochloromethane		ND		72	260
Bromodichloromethane		ND		39	260
Bromoform		ND		62	260
Bromomethane		ND		52	260
2-Butanone (MEK)		ND		75	1000
Carbon disulfide		ND		57	260
Carbon tetrachloride		ND		18	260
Chlorobenzene		ND		13	260
Chlorodibromomethane		ND		20	260
Chloroethane		ND		52	260
Chloroform		ND		37	260
Chloromethane		ND		49	260
2-Chlorotoluene		ND		42	260
4-Chlorotoluene		ND		27	260
cis-1,2-Dichloroethene		ND		39	260
cis-1,3-Dichloropropene		ND		23	260
Cyclohexane		ND		31	510
1,2-Dibromo-3-Chloropropane		ND		73	510
1,2-Dibromoethane		ND		33	260
Dibromomethane		ND		51	260
1,2-Dichlorobenzene		ND		19	260
1,3-Dichlorobenzene		ND		31	260
1,4-Dichlorobenzene		ND		42	260
Dichlorodifluoromethane		ND		62	260
1,1-Dichloroethane		ND		36	260
1,2-Dichloroethane		ND		10	260
1,1-Dichloroethene		ND		31	260
Dichlorofluoromethane		ND		34	510
1,2-Dichloropropane		ND		33	260
1,3-Dichloropropane		ND		24	260
2,2-Dichloropropane		ND		53	260
1,1-Dichloropropene		ND		39	260
Ethylbenzene		ND		36	260
Ethyl ether		ND		100	510
Hexachlorobutadiene		ND		45	260
2-Hexanone		ND		86	1000
Isopropylbenzene		ND		13	260
Methyl acetate		ND	*	56	510
Methylcyclohexane		ND		39	510
Methylene Chloride		190	J B	87	260
4-Methyl-2-pentanone (MIBK)		ND		57	1000
Methyl tert butyl ether		ND		31	260

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-59162-3 Date Sampled: 12/15/2015 0000
Client Matrix: Solid Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211549	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211311	Lab File ID:	147150.D
Dilution:	1.0			Initial Weight/Volume:	9.762 g
Analysis Date:	12/19/2015 0052			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 1054				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	260
Naphthalene		ND		27	260
n-Butylbenzene		ND		22	260
N-Propylbenzene		ND		62	260
o-Xylene		ND		17	260
p-Isopropyltoluene		ND		26	260
sec-Butylbenzene		ND		16	260
Styrene		ND		28	260
tert-Butylbenzene		ND		35	260
1,1,1,2-Tetrachloroethane		ND		50	260
1,1,2,2-Tetrachloroethane		ND		26	260
Tetrachloroethene		ND		28	260
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	260
trans-1,2-Dichloroethene		ND		27	260
trans-1,3-Dichloropropene		ND		27	260
1,2,3-Trichlorobenzene		ND		40	260
1,2,4-Trichlorobenzene		ND		31	260
1,1,1-Trichloroethane		ND		28	260
1,1,2-Trichloroethane		ND		19	260
Trichloroethene		ND		40	260
Trichlorofluoromethane		ND		36	260
1,2,3-Trichloropropane		ND		110	260
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		43	260
1,2,4-Trimethylbenzene		ND		13	260
1,3,5-Trimethylbenzene		ND		15	260
Vinyl chloride		ND		17	260

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	86		26 - 141
Dibromofluoromethane (Surr)	93		30 - 122
1,2-Dichloroethane-d4 (Surr)	99		39 - 128
Toluene-d8 (Surr)	85		33 - 134

Client Sample ID: **AREA-C-TRENCH-1_010_4-5(20151215)**

Lab Sample ID: 240-59162-1 Date Sampled: 12/15/2015 1400
Client Matrix: Solid % Moisture: 26.0 Date Received: 12/16/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211212	Lab File ID:	51220030.D
Dilution:	50			Initial Weight/Volume:	29.63 g
Analysis Date:	12/20/2015 2122			Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		600	56000
2,2'-oxybis[1-chloropropane]		ND		1600	56000
2,4,5-Trichlorophenol		ND		4300	56000
2,4,6-Trichlorophenol		ND		1500	56000
2,4-Dichlorophenol		ND		3400	56000
2,4-Dimethylphenol		ND		3400	56000
2,4-Dinitrophenol		ND		3600	270000
2,4-Dinitrotoluene		ND		2900	56000
2,6-Dinitrotoluene		ND		3600	56000
2-Chloronaphthalene		ND		77	56000
2-Chlorophenol		ND		1400	56000
2-Methylnaphthalene		1900	J	86	56000
2-Methylphenol		ND		1900	56000
2-Nitroaniline		ND		1600	270000
2-Nitrophenol		ND		1400	56000
3,3'-Dichlorobenzidine		ND		3100	270000
3-Nitroaniline		ND		2700	270000
4,6-Dinitro-2-methylphenol		ND		1600	270000
4-Bromophenyl phenyl ether		ND		2200	56000
4-Chloro-3-methylphenol		ND		3600	56000
4-Chloroaniline		ND		2900	56000
4-Chlorophenyl phenyl ether		ND		2200	56000
4-Nitroaniline		ND		4400	270000
4-Nitrophenol		ND		2900	270000
Acenaphthene		ND		130	56000
Acenaphthylene		ND		60	56000
Acetophenone		ND		1600	56000
Anthracene		ND		130	56000
Atrazine		ND		1600	56000
Benzaldehyde		ND		2100	56000
Benzo[a]anthracene		ND		110	56000
Benzo[a]pyrene		ND		110	56000
Benzo[b]fluoranthene		ND		100	56000
Benzo[g,h,i]perylene		ND		60	56000
Benzo[k]fluoranthene		ND		120	56000
Bis(2-chloroethoxy)methane		ND		3800	56000
Bis(2-chloroethyl)ether		ND		340	56000
Bis(2-ethylhexyl) phthalate		52000	J	3300	56000
Butyl benzyl phthalate		ND		1700	56000
Caprolactam		ND		6300	56000
Carbazole		ND		4600	56000
Chrysene		ND		190	56000
Dibenz(a,h)anthracene		ND		110	56000
Dibenzofuran		ND		110	56000
Diethyl phthalate		ND		2700	56000
Dimethyl phthalate		ND		2900	56000

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: AREA-C-TRENCH-1_010_4-5(20151215)

Lab Sample ID: 240-59162-1 Date Sampled: 12/15/2015 1400
Client Matrix: Solid % Moisture: 26.0 Date Received: 12/16/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211212	Lab File ID:	51220030.D
Dilution:	50			Initial Weight/Volume:	29.63 g
Analysis Date:	12/20/2015 2122			Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		2600	56000
Di-n-octyl phthalate		ND		1400	56000
Fluoranthene		2100	J	94	56000
Fluorene		ND		91	56000
Hexachlorobenzene		ND		360	56000
Hexachlorobutadiene		ND		960	56000
Hexachlorocyclopentadiene		ND		1400	270000
Hexachloroethane		ND		1500	56000
Indeno[1,2,3-cd]pyrene		ND		60	56000
Isophorone		ND		2200	56000
Naphthalene		9100	J	140	56000
Nitrobenzene		ND		380	56000
N-Nitrosodi-n-propylamine		ND		1100	56000
N-Nitrosodiphenylamine		ND		3600	56000
Pentachlorophenol		ND		1600	56000
Phenol		1700	J	1200	56000
Phenanthrene		2200	J	120	56000
Pyrene		2900	J	75	56000
3 & 4 Methylphenol		ND		3400	68000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	86		24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	132	X	20 - 110
Phenol-d5 (Surr)	89		26 - 110
Terphenyl-d14 (Surr)	96		36 - 110

Client Sample ID: **AREA-C-TRENCH-1_010_4-5(20151215)**

Lab Sample ID: 240-59162-1 Date Sampled: 12/15/2015 1400
Client Matrix: Solid Date Received: 12/16/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-211751	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-211507	Lab File ID:	51221013.D
Dilution:	1.0	Leach Batch:	240-211351	Initial Weight/Volume:	250 mL
Analysis Date:	12/21/2015 1500			Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 1029			Injection Volume:	1 uL
Leach Date:	12/17/2015 0930				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		0.0038	J	0.00017	0.0040
3 & 4 Methylphenol		0.0092		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.016
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		30 - 110
2-Fluorophenol (Surr)	43		20 - 110
Nitrobenzene-d5 (Surr)	72		28 - 110
Phenol-d5 (Surr)	27		21 - 110
Terphenyl-d14 (Surr)	67		48 - 110
2,4,6-Tribromophenol (Surr)	77		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_5-6(20151215)**

Lab Sample ID: 240-59162-2 Date Sampled: 12/15/2015 1427
Client Matrix: Solid % Moisture: 17.8 Date Received: 12/16/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211212	Lab File ID:	51220020.D
Dilution:	1.0			Initial Weight/Volume:	29.87 g
Analysis Date:	12/20/2015 1725			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		6.4	J	4.3	400
2,2'-oxybis[1-chloropropane]		ND		12	400
2,4,5-Trichlorophenol		ND		31	400
2,4,6-Trichlorophenol		ND		11	400
2,4-Dichlorophenol		ND		24	400
2,4-Dimethylphenol		ND		24	400
2,4-Dinitrophenol		ND		26	2000
2,4-Dinitrotoluene		ND		21	400
2,6-Dinitrotoluene		ND		26	400
2-Chloronaphthalene		ND		0.55	400
2-Chlorophenol		ND		10	400
2-Methylnaphthalene		70	J	0.61	400
2-Methylphenol		ND		13	400
2-Nitroaniline		ND		11	2000
2-Nitrophenol		ND		10	400
3,3'-Dichlorobenzidine		ND		22	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		11	2000
4-Bromophenyl phenyl ether		ND		16	400
4-Chloro-3-methylphenol		ND		26	400
4-Chloroaniline		ND		21	400
4-Chlorophenyl phenyl ether		ND		16	400
4-Nitroaniline		ND		32	2000
4-Nitrophenol		ND		21	2000
Acenaphthene		34	J	0.93	400
Acenaphthylene		16	J	0.43	400
Acetophenone		22	J	11	400
Anthracene		82	J F1	0.95	400
Atrazine		ND		11	400
Benzaldehyde		ND		15	400
Benzo[a]anthracene		350	J F1	0.77	400
Benzo[a]pyrene		320	J F1	0.78	400
Benzo[b]fluoranthene		510	F1	0.72	400
Benzo[g,h,i]perylene		150	J	0.43	400
Benzo[k]fluoranthene		150	J F1	0.83	400
Bis(2-chloroethoxy)methane		ND		27	400
Bis(2-chloroethyl)ether		ND		2.4	400
Bis(2-ethylhexyl) phthalate		ND		23	400
Butyl benzyl phthalate		ND		12	400
Caprolactam		ND		45	400
Carbazole		50	J F2	33	400
Chrysene		410	F1	1.3	400
Dibenz(a,h)anthracene		61	J	0.81	400
Dibenzofuran		28	J	0.81	400
Diethyl phthalate		ND		20	400
Dimethyl phthalate		ND		21	400

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: AREA-C-TRENCH-1_010_5-6(20151215)

Lab Sample ID: 240-59162-2 Date Sampled: 12/15/2015 1427
Client Matrix: Solid % Moisture: 17.8 Date Received: 12/16/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211212	Lab File ID:	51220020.D
Dilution:	1.0			Initial Weight/Volume:	29.87 g
Analysis Date:	12/20/2015 1725			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		26	J	18	400
Di-n-octyl phthalate		ND		9.6	400
Fluoranthene		660	F1	0.67	400
Fluorene		32	J	0.65	400
Hexachlorobenzene		ND		2.6	400
Hexachlorobutadiene		ND		6.8	400
Hexachlorocyclopentadiene		ND	F1	9.9	2000
Hexachloroethane		ND		11	400
Indeno[1,2,3-cd]pyrene		140	J	0.43	400
Isophorone		ND		16	400
Naphthalene		51	J	1.0	400
Nitrobenzene		ND		2.7	400
N-Nitrosodi-n-propylamine		ND		7.7	400
N-Nitrosodiphenylamine		ND		26	400
Pentachlorophenol		ND		11	400
Phenol		ND		8.9	400
Phenanthrene		360	J F1	0.89	400
Pyrene		560	F1	0.54	400
3 & 4 Methylphenol		ND		24	490

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		24 - 110
2-Fluorophenol (Surr)	72		24 - 110
2,4,6-Tribromophenol (Surr)	42		10 - 110
Nitrobenzene-d5 (Surr)	66		20 - 110
Phenol-d5 (Surr)	81		26 - 110
Terphenyl-d14 (Surr)	78		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_5-6(20151215)**

Lab Sample ID: 240-59162-2 Date Sampled: 12/15/2015 1427
Client Matrix: Solid Date Received: 12/16/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-211751	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-211507	Lab File ID:	51221010.D
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	250 mL
Analysis Date:	12/21/2015 1350			Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 1029			Injection Volume:	1 uL
Leach Date:	12/17/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.016
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	70		30 - 110
2-Fluorophenol (Surr)	63		20 - 110
Nitrobenzene-d5 (Surr)	75		28 - 110
Phenol-d5 (Surr)	52		21 - 110
Terphenyl-d14 (Surr)	70		48 - 110
2,4,6-Tribromophenol (Surr)	71		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_4-5(20151215)**

Lab Sample ID: 240-59162-1 Date Sampled: 12/15/2015 1400
Client Matrix: Solid % Moisture: 26.0 Date Received: 12/16/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-211457	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-211449	Lab File ID:	Y0121811.D
Dilution:	1.0			Initial Weight/Volume:	8.549 g
Analysis Date:	12/18/2015 1352			Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		42		3.2	16

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_5-6(20151215)**

Lab Sample ID: 240-59162-2 Date Sampled: 12/15/2015 1427
Client Matrix: Solid % Moisture: 17.8 Date Received: 12/16/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-211457	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-211449	Lab File ID:	Y0121812.D
Dilution:	1.0			Initial Weight/Volume:	10.365 g
Analysis Date:	12/18/2015 1426			Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		2.8	J	2.3	12

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-59162-3 Date Sampled: 12/15/2015 0000
Client Matrix: Solid Date Received: 12/16/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-211457	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-211449	Lab File ID:	Y0121813.D
Dilution:	1.0			Initial Weight/Volume:	0.24 g
Analysis Date:	12/18/2015 1500			Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		83	420

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: AREA-C-TRENCH-1_010_4-5(20151215)

Lab Sample ID: 240-59162-1 Date Sampled: 12/15/2015 1400
Client Matrix: Solid % Moisture: 26.0 Date Received: 12/16/2015 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-211963	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-211439	Lab File ID:	P14R122209.D
Dilution:	100			Initial Weight/Volume:	26.75 g
Analysis Date:	12/22/2015 1632			Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		6000	B	150	1200

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_5-6(20151215)**

Lab Sample ID: 240-59162-2 Date Sampled: 12/15/2015 1427
Client Matrix: Solid % Moisture: 17.8 Date Received: 12/16/2015 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-211963	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-211439	Lab File ID:	P14R122213.D
Dilution:	5.0			Initial Weight/Volume:	29.06 g
Analysis Date:	12/22/2015 1822			Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		71	B	6.2	50

Client Sample ID: **AREA-C-TRENCH-1_010_4-5(20151215)**

Lab Sample ID: 240-59162-1 Date Sampled: 12/15/2015 1400
Client Matrix: Solid % Moisture: 26.0 Date Received: 12/16/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-211528	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-211321	Lab File ID:	I9121815A.asc
Dilution:	1.0			Initial Weight/Volume:	1.06 g
Analysis Date:	12/18/2015 1343			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		9900		7.4	26
Antimony		43	F1	0.61	1.3
Barium		1400	F2	0.52	26
Beryllium		ND		0.033	0.64
Calcium		3200	F1	29	640
Cadmium		1.5		0.027	0.26
Cobalt		1.2	J	0.060	6.4
Chromium		1500	B	0.096	0.64
Copper		150		0.29	3.2
Iron		4100	F2	4.1	13
Potassium		200	J	7.9	640
Magnesium		810		6.6	640
Manganese		73	F1	0.11	1.9
Silver		0.11	J	0.080	0.64
Sodium		500	J	24	640
Nickel		19		0.10	5.1
Vanadium		3.3	J	0.26	6.4
Zinc		330		0.71	2.6
Arsenic		ND	F1	0.52	1.3
Selenium		0.61	J	0.43	0.64
Thallium		ND		0.17	1.3

Analysis Method:	6010B	Analysis Batch:	240-212068	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-211321	Lab File ID:	I9122215A.asc
Dilution:	10			Initial Weight/Volume:	1.06 g
Analysis Date:	12/22/2015 1712			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lead		9500		2.6	3.8

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-211881	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-211510	Lab File ID:	I9122115A.asc
Dilution:	1.0	Leach Batch:	240-211351	Initial Weight/Volume:	50 mL
Analysis Date:	12/22/2015 0440			Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1041				
Leach Date:	12/17/2015 930				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Silver		ND		0.00092	0.50
Aluminum		0.26		0.040	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_4-5(20151215)**

Lab Sample ID: 240-59162-1 Date Sampled: 12/15/2015 1400
Client Matrix: Solid Date Received: 12/16/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.0072	J B	0.0029	0.50
Barium		1.9	J	0.0010	10
Beryllium		ND		0.00013	0.0050
Calcium		110		0.26	5.0
Cadmium		0.0024	J	0.00014	0.10
Cobalt		0.017	J	0.00056	0.050
Chromium		0.15	J B	0.00055	0.50
Copper		0.0080	J B	0.0019	1.0
Iron		0.10		0.013	0.10
Potassium		5.3	B	0.070	5.0
Magnesium		7.3		0.055	5.0
Manganese		1.1		0.00046	0.015
Nickel		0.11	B	0.00076	0.040
Lead		3.4		0.0019	0.50
Antimony		0.063	J	0.0024	0.30
Selenium		ND		0.0040	0.25
Thallium		ND		0.0017	2.0
Vanadium		0.0026	J	0.0024	0.050
Zinc		1.5		0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-211887	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	240-211351	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1431			Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	12/17/2015 930				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-211442	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-211344	Lab File ID:	121815AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	12/18/2015 0613			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1455				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.020	0.14

Client Sample ID: **AREA-C-TRENCH-1_010_5-6(20151215)**

Lab Sample ID: 240-59162-2 Date Sampled: 12/15/2015 1427
Client Matrix: Solid % Moisture: 17.8 Date Received: 12/16/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-211528	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-211321	Lab File ID:	I9121815A.asc
Dilution:	1.0			Initial Weight/Volume:	1.22 g
Analysis Date:	12/18/2015 1403			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7600		5.8	20
Antimony		0.98	J	0.48	1.0
Barium		180		0.41	20
Beryllium		0.54		0.026	0.50
Calcium		11000		23	500
Cadmium		0.24		0.021	0.20
Cobalt		7.3		0.047	5.0
Chromium		15	B	0.075	0.50
Copper		14		0.23	2.5
Iron		15000		3.2	10
Potassium		900		6.2	500
Magnesium		4400		5.2	500
Manganese		430		0.084	1.5
Silver		ND		0.063	0.50
Sodium		67	J	19	500
Nickel		17		0.080	4.0
Vanadium		24		0.20	5.0
Zinc		46		0.56	2.0
Arsenic		5.1		0.41	1.0
Lead		20		0.20	0.30
Selenium		0.58		0.34	0.50
Thallium		0.15	J	0.13	1.0

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-211881	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-211510	Lab File ID:	I9122115A.asc
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/22/2015 0428			Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1041				
Leach Date:	12/17/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0089	J B	0.0029	0.50
Barium		1.2	J	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0012	J	0.00014	0.10
Calcium		500		0.26	5.0
Chromium		0.0023	J B	0.00055	0.50
Cobalt		0.0052	J	0.00056	0.050
Copper		0.0031	J B	0.0019	1.0
Iron		ND		0.013	0.10
Lead		ND		0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Client Sample ID: **AREA-C-TRENCH-1_010_5-6(20151215)**

Lab Sample ID: 240-59162-2 Date Sampled: 12/15/2015 1427
Client Matrix: Solid Date Received: 12/16/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		63		0.055	5.0
Manganese		2.7		0.00046	0.015
Nickel		0.013	J B	0.00076	0.040
Potassium		7.7	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.058	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-211887	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1430			Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	12/17/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-211442	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-211344	Lab File ID:	121815AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	12/18/2015 0615			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1455				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.046	J	0.016	0.12

General Chemistry

Client Sample ID: **AREA-C-TRENCH-1_010_4-5(20151215)**

Lab Sample ID: 240-59162-1 Date Sampled: 12/15/2015 1400
Client Matrix: Solid % Moisture: 26.0 Date Received: 12/16/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	130		mg/Kg	1.8	5.4	5.0	7196A
Analysis Batch: 240-212243	Analysis Date: 12/24/2015 0614						DryWt Corrected: Y
Prep Batch: 240-212149	Prep Date: 12/23/2015 1049						
Cr (III)	1900		mg/Kg	0.18	2.7	1.0	7196A
Analysis Batch: 240-212001	Analysis Date: 12/22/2015 1445						DryWt Corrected: Y
Percent Solids	74		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211066	Analysis Date: 12/16/2015 1557						DryWt Corrected: N
Percent Moisture	26		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211066	Analysis Date: 12/16/2015 1557						DryWt Corrected: N

General Chemistry

Client Sample ID: **AREA-C-TRENCH-1_010_5-6(20151215)**

Lab Sample ID: 240-59162-2 Date Sampled: 12/15/2015 1427
Client Matrix: Solid % Moisture: 17.8 Date Received: 12/16/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	1.6	4.9	5.0	7196A
Analysis Batch: 240-212243	Analysis Date: 12/24/2015 0614					DryWt Corrected: Y	
Prep Batch: 240-212149	Prep Date: 12/23/2015 1049						
Cr (III)	18		mg/Kg	0.16	2.4	1.0	7196A
Analysis Batch: 240-212001	Analysis Date: 12/22/2015 1445					DryWt Corrected: Y	
Percent Solids	82		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211066	Analysis Date: 12/16/2015 1557					DryWt Corrected: N	
Percent Moisture	18		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211066	Analysis Date: 12/16/2015 1557					DryWt Corrected: N	

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	*	RPD of the LCS and LCSD exceeds the control limits
GC/MS Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-211257					
LB 240-211257/1-A	Method Blank	P	Solid	1311	
240-59150-F-1-C MS	Matrix Spike	P	Solid	1311	
240-59150-F-1-C MSD	Matrix Spike Duplicate	P	Solid	1311	
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	P	Solid	1311	
Analysis Batch:240-211277					
LCS 240-211311/2-A	Lab Control Sample	T	Solid	8260B	240-211311
LCS 240-211311/4-A	Lab Control Sample	T	Solid	8260B	240-211311
LCSD 240-211311/3-A	Lab Control Sample Duplicate	T	Solid	8260B	240-211311
LCSD 240-211311/5-A	Lab Control Sample Duplicate	T	Solid	8260B	240-211311
MB 240-211311/1-A	Method Blank	T	Solid	8260B	240-211311
Prep Batch: 240-211311					
LCS 240-211311/2-A	Lab Control Sample	T	Solid	5035	
LCS 240-211311/4-A	Lab Control Sample	T	Solid	5035	
LCSD 240-211311/3-A	Lab Control Sample Duplicate	T	Solid	5035	
LCSD 240-211311/5-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-211311/1-A	Method Blank	T	Solid	5035	
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	5035	
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	5035	
240-59162-3	TRIP BLANK	T	Solid	5035	
Prep Batch: 240-211351					
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	P	Solid	Part Size Red	
Analysis Batch:240-211382					
LB 240-211257/1-A	Method Blank	P	Solid	8260B	
LCS 240-211382/9	Lab Control Sample	T	Water	8260B	
240-59150-F-1-C MS	Matrix Spike	P	Solid	8260B	
240-59150-F-1-C MSD	Matrix Spike Duplicate	P	Solid	8260B	
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	P	Solid	8260B	
Analysis Batch:240-211549					
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	8260B	240-211311
240-59162-3	TRIP BLANK	T	Solid	8260B	240-211311
Prep Batch: 240-211625					
LB 240-211625/1-A	Method Blank	P	Solid	Part Size Red	
240-59286-J-1-A MS	Matrix Spike	P	Solid	Part Size Red	
240-59286-J-1-A MSD	Matrix Spike Duplicate	P	Solid	Part Size Red	

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-211823					
LB 240-211625/1-A	Method Blank	P	Solid	8260B	
LCS 240-211823/9	Lab Control Sample	T	Water	8260B	
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	P	Solid	8260B	
240-59286-J-1-A MS	Matrix Spike	P	Solid	8260B	
240-59286-J-1-A MSD	Matrix Spike Duplicate	P	Solid	8260B	
Analysis Batch:240-211919					
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	8260B	240-211311

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-211212					
LCS 240-211212/20-A	Lab Control Sample	T	Solid	3540C	
MB 240-211212/19-A	Method Blank	T	Solid	3540C	
240-59162-1	AREA-C-TRENCH-1_010_4-5(201512 15)	T	Solid	3540C	
240-59162-2	AREA-C-TRENCH-1_010_5-6(201512 15)	T	Solid	3540C	
240-59162-2MS	Matrix Spike	T	Solid	3540C	
240-59162-2MSD	Matrix Spike Duplicate	T	Solid	3540C	
Prep Batch: 240-211351					
240-59162-1	AREA-C-TRENCH-1_010_4-5(201512 15)	P	Solid	Part Size Red	
Prep Batch: 240-211400					
240-59162-2	AREA-C-TRENCH-1_010_5-6(201512 15)	P	Solid	1311	
240-59162-2MS	Matrix Spike	P	Solid	1311	
Prep Batch: 240-211507					
LCS 240-211507/15-A	Lab Control Sample	T	Water	3510C	
MB 240-211507/14-A	Method Blank	T	Water	3510C	
240-59162-1	AREA-C-TRENCH-1_010_4-5(201512 15)	P	Solid	3510C	240-211351
240-59162-2	AREA-C-TRENCH-1_010_5-6(201512 15)	P	Solid	3510C	240-211400
240-59162-2MS	Matrix Spike	P	Solid	3510C	240-211400
Analysis Batch:240-211630					
LCS 240-211212/20-A	Lab Control Sample	T	Solid	8270C	240-211212
MB 240-211212/19-A	Method Blank	T	Solid	8270C	240-211212
240-59162-1	AREA-C-TRENCH-1_010_4-5(201512 15)	T	Solid	8270C	240-211212
240-59162-2	AREA-C-TRENCH-1_010_5-6(201512 15)	T	Solid	8270C	240-211212
240-59162-2MS	Matrix Spike	T	Solid	8270C	240-211212
240-59162-2MSD	Matrix Spike Duplicate	T	Solid	8270C	240-211212
Analysis Batch:240-211751					
LCS 240-211507/15-A	Lab Control Sample	T	Water	8270C	240-211507
MB 240-211507/14-A	Method Blank	T	Water	8270C	240-211507
240-59162-1	AREA-C-TRENCH-1_010_4-5(201512 15)	P	Solid	8270C	240-211507
240-59162-2	AREA-C-TRENCH-1_010_5-6(201512 15)	P	Solid	8270C	240-211507
240-59162-2MS	Matrix Spike	P	Solid	8270C	240-211507

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Report Basis					
P = TCLP					
T = Total					
GC VOA					
Prep Batch: 240-211449					
LCS 240-211449/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-211449/10-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-211449/1-A	Method Blank	T	Solid	5035	
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	5035	
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	5035	
240-59162-3	TRIP BLANK	T	Solid	5035	
Analysis Batch:240-211457					
LCS 240-211449/2-A	Lab Control Sample	T	Solid	WI-GRO	240-211449
LCSD 240-211449/10-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-211449
MB 240-211449/1-A	Method Blank	T	Solid	WI-GRO	240-211449
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	WI-GRO	240-211449
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	WI-GRO	240-211449
240-59162-3	TRIP BLANK	T	Solid	WI-GRO	240-211449

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-211439					
LCS 240-211439/6-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-211439/7-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-211439/5-A	Method Blank	T	Solid	WI DRO PREP	
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	WI DRO PREP	
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	WI DRO PREP	
Analysis Batch:240-211546					
LCS 240-211439/6-A	Lab Control Sample	T	Solid	WI-DRO	240-211439
MB 240-211439/5-A	Method Blank	T	Solid	WI-DRO	240-211439
Analysis Batch:240-211963					
LCSD 240-211439/7-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-211439
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	WI-DRO	240-211439
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	WI-DRO	240-211439

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-211321					
LCS 240-211321/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-211321/1-A	Method Blank	T	Solid	3050B	
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	3050B	
240-59162-1MS	Matrix Spike	T	Solid	3050B	
240-59162-1MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	3050B	
Prep Batch: 240-211344					
LCS 240-211344/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-211344/1-A	Method Blank	T	Solid	7471A	
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	7471A	
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	7471A	
240-59175-H-1-C MS	Matrix Spike	T	Solid	7471A	
240-59175-H-1-D MSD	Matrix Spike Duplicate	T	Solid	7471A	
Prep Batch: 240-211351					
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	P	Solid	Part Size Red	
Prep Batch: 240-211400					
LB 240-211400/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-211400/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	P	Solid	1311	
240-59175-J-1-D MS ^5	Matrix Spike	P	Solid	1311	
240-59175-J-1-G MS	Matrix Spike	P	Solid	1311	
240-59175-J-1-E MSD ^5	Matrix Spike Duplicate	P	Solid	1311	
240-59175-J-1-H MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-211442					
LCS 240-211344/2-A	Lab Control Sample	T	Solid	7471A	240-211344
MB 240-211344/1-A	Method Blank	T	Solid	7471A	240-211344
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	7471A	240-211344
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	7471A	240-211344
240-59175-H-1-C MS	Matrix Spike	T	Solid	7471A	240-211344
240-59175-H-1-D MSD	Matrix Spike Duplicate	T	Solid	7471A	240-211344

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-211510					
LCS 240-211510/3-A	Lab Control Sample	T	Water	3010A	
MB 240-211510/2-A	Method Blank	T	Water	3010A	
LB 240-211400/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-211400
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	P	Solid	3010A	240-211351
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	P	Solid	3010A	240-211400
240-59175-J-1-D MS ^5	Matrix Spike	P	Solid	3010A	240-211400
240-59175-J-1-E MSD ^5	Matrix Spike Duplicate	P	Solid	3010A	240-211400
Prep Batch: 240-211512					
LCS 240-211512/3-A	Lab Control Sample	T	Water	7470A	
MB 240-211512/2-A	Method Blank	T	Water	7470A	
LB 240-211400/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-211400
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	P	Solid	7470A	240-211351
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	P	Solid	7470A	240-211400
240-59175-J-1-G MS	Matrix Spike	P	Solid	7470A	240-211400
240-59175-J-1-H MSD	Matrix Spike Duplicate	P	Solid	7470A	240-211400
Analysis Batch:240-211528					
LCS 240-211321/2-A	Lab Control Sample	T	Solid	6010B	240-211321
MB 240-211321/1-A	Method Blank	T	Solid	6010B	240-211321
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	6010B	240-211321
240-59162-1MS	Matrix Spike	T	Solid	6010B	240-211321
240-59162-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-211321
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	6010B	240-211321
Analysis Batch:240-211881					
LB 240-211400/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-211510
LCS 240-211510/3-A	Lab Control Sample	T	Water	6010B	240-211510
MB 240-211510/2-A	Method Blank	T	Water	6010B	240-211510
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	P	Solid	6010B	240-211510
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	P	Solid	6010B	240-211510
240-59175-J-1-D MS ^5	Matrix Spike	P	Solid	6010B	240-211510
240-59175-J-1-E MSD ^5	Matrix Spike Duplicate	P	Solid	6010B	240-211510

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-211887					
LB 240-211400/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-211512
LCS 240-211512/3-A	Lab Control Sample	T	Water	7470A	240-211512
MB 240-211512/2-A	Method Blank	T	Water	7470A	240-211512
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	P	Solid	7470A	240-211512
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	P	Solid	7470A	240-211512
240-59175-J-1-G MS	Matrix Spike	P	Solid	7470A	240-211512
240-59175-J-1-H MSD	Matrix Spike Duplicate	P	Solid	7470A	240-211512
Analysis Batch:240-212068					
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	6010B	240-211321
240-59162-1MS	Matrix Spike	T	Solid	6010B	240-211321
240-59162-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-211321

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-211066					
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	Moisture	
240-59162-1DU	Duplicate	T	Solid	Moisture	
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	Moisture	
Analysis Batch:240-212001					
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	7196A	
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	7196A	
Prep Batch: 240-212149					
LCS 240-212149/10-A	Lab Control Sample	T	Solid	3060A	
LCSI 240-212149/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
MB 240-212149/9-A	Method Blank	T	Solid	3060A	
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	3060A	
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	3060A	
Analysis Batch:240-212243					
LCS 240-212149/10-A	Lab Control Sample	T	Solid	7196A	240-212149
LCSI 240-212149/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-212149
MB 240-212149/9-A	Method Blank	T	Solid	7196A	240-212149
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	T	Solid	7196A	240-212149
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	T	Solid	7196A	240-212149

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	44	54	60	45
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	77	78	81	86
240-59162-3	TRIP BLANK	86	93	99	85
MB 240-211311/1-A		79	85	91	91
LCS 240-211311/2-A		88	96	96	95
LCS 240-211311/4-A		87	86	89	95
LCSD 240-211311/3-A		88	93	91	97
LCSD 240-211311/5-A		88	89	97	95

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	80	90	86	95
LB 240-211257/1-A MB		81	90	92	94
LB 240-211625/1-A MB		86	105	99	98
LCS 240-211382/9		78	94	81	90
LCS 240-211823/9		81	94	91	94
240-59150-F-1-C MS		77	93	82	95
240-59286-J-1-A MS		79	92	82	93
240-59150-F-1-C MSD		84	88	86	93
240-59286-J-1-A MSD		80	95	85	91

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	87	82	91	96

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-211212/19-A		85	79	80	87	98	65
LCS 240-211212/20-A		83	86	89	91	86	57
240-59162-2 MS	AREA-C-TRENCH-1_010_5-6(20151215) MS	73	70	70	75	78	57
240-59162-2 MSD	AREA-C-TRENCH-1_010_5-6(20151215) MSD	74	74	70	83	85	42

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	86	0X	0X	132X	89	96
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	74	72	42	66	81	78

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-59162-1	AREA-C-TRENCH-1_010_4-5(20151215)	74	43	72	27	67	77
240-59162-2	AREA-C-TRENCH-1_010_5-6(20151215)	70	63	75	52	70	71
MB 240-211507/14-A		70	58	76	42	71	78
LCS 240-211507/15-A		73	59	77	43	81	77
240-59162-2 MS	AREA-C-TRENCH-1_010_5-6(20151215) MS	77	71	83	63	77	78

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Method Blank - Batch: 240-211311

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-211311/1-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147105.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1920	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	252	J	230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		18	250
Chlorobenzene	ND		13	250
Chlorodibromomethane	ND		20	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		10	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	197	J	85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Method Blank - Batch: 240-211311

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-211311/1-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147105.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1920	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		25	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		27	250
1,1,2-Trichloroethane	ND		19	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		17	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	79	26 - 141
Dibromofluoromethane (Surr)	85	30 - 122
1,2-Dichloroethane-d4 (Surr)	91	39 - 128
Toluene-d8 (Surr)	91	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211311

Method: 8260B
Preparation: 5035

LCS Lab Sample ID:	LCS 240-211311/2-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147101.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1755	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-211311/3-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147102.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1816	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	84	68	16 - 156	20	30		
Allyl chloride	87	62	50 - 150	33	30		*
Bromobenzene	96	101	72 - 120	6	30		
Bromochloromethane	101	97	56 - 128	4	30		
Bromodichloromethane	89	89	28 - 123	0	30		
Benzene	99	100	70 - 120	0	30		
Bromoform	74	73	10 - 120	2	30		
Bromomethane	55	55	10 - 120	2	30		
2-Butanone (MEK)	95	90	10 - 199	6	30		
Carbon disulfide	52	52	10 - 132	0	30		
Carbon tetrachloride	97	96	29 - 120	1	30		
Chlorobenzene	96	101	71 - 120	5	30		
Chlorodibromomethane	87	88	22 - 120	1	30		
Chloroethane	61	61	10 - 120	0	30		
Chloroform	95	95	63 - 120	0	30		
Chloromethane	82	87	25 - 120	6	30		
2-Chlorotoluene	101	99	68 - 122	2	30		
4-Chlorotoluene	95	100	68 - 122	5	30		
cis-1,2-Dichloroethene	99	101	60 - 125	2	30		
cis-1,3-Dichloropropene	89	91	25 - 120	2	30		
Cyclohexane	95	95	40 - 120	0	30		
1,2-Dibromo-3-Chloropropane	88	80	10 - 129	10	30		
1,2-Dibromoethane	99	102	47 - 123	3	30		
Dibromomethane	98	101	68 - 120	3	30		
1,2-Dichlorobenzene	97	97	68 - 120	0	30		
1,3-Dichlorobenzene	94	96	66 - 121	2	30		
1,4-Dichlorobenzene	95	94	65 - 120	1	30		
Dichlorodifluoromethane	62	65	10 - 120	5	30		
1,1-Dichloroethane	102	103	63 - 120	2	30		
1,2-Dichloroethane	103	100	68 - 120	4	30		
1,1-Dichloroethene	59	58	44 - 143	1	30		
Dichlorofluoromethane	71	70	40 - 160	2	30		
1,2-Dichloropropane	100	101	73 - 120	1	30		
1,3-Dichloropropane	100	100	74 - 120	0	30		
2,2-Dichloropropane	92	92	25 - 123	1	30		

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211311

Method: 8260B
Preparation: 5035

LCS Lab Sample ID:	LCS 240-211311/2-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147101.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1755	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-211311/3-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147102.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1816	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1-Dichloropropene	110	111	60 - 123	0	30		
Ethylbenzene	102	108	66 - 120	5	30		
Ethyl ether	77	75	70 - 130	3	30		
Hexachlorobutadiene	103	106	34 - 135	3	30		
2-Hexanone	97	87	43 - 130	11	30		
Isopropylbenzene	107	111	61 - 123	4	30		
Methyl acetate	106	75	44 - 173	34	30		*
Methylcyclohexane	100	100	41 - 133	0	30		
Methylene Chloride	106	107	27 - 172	1	30		
4-Methyl-2-pentanone (MIBK)	97	96	49 - 121	1	30		
Methyl tert butyl ether	101	98	34 - 157	4	30		
m-Xylene & p-Xylene	100	106	67 - 120	6	30		
Naphthalene	87	88	37 - 126	1	30		
n-Butylbenzene	96	100	51 - 137	4	30		
N-Propylbenzene	100	104	64 - 130	4	30		
o-Xylene	104	112	68 - 120	8	30		
p-Isopropyltoluene	99	104	56 - 136	4	30		
sec-Butylbenzene	102	105	58 - 131	3	30		
Styrene	93	99	60 - 120	6	30		
tert-Butylbenzene	100	102	58 - 128	2	30		
1,1,1,2-Tetrachloroethane	108	108	27 - 121	1	30		
1,1,2,2-Tetrachloroethane	97	91	54 - 121	7	30		
Tetrachloroethene	99	101	58 - 131	2	30		
Tetrahydrofuran	96	90	70 - 130	7	30		
Toluene	102	105	66 - 123	3	30		
trans-1,2-Dichloroethene	99	97	58 - 121	1	30		
trans-1,3-Dichloropropene	97	101	22 - 122	4	30		
1,2,3-Trichlorobenzene	90	90	43 - 129	0	30		
1,2,4-Trichlorobenzene	88	90	41 - 135	2	30		
1,1,1-Trichloroethane	95	98	38 - 122	3	30		
1,1,2-Trichloroethane	96	96	74 - 120	0	30		
Trichloroethene	97	99	59 - 124	2	30		
Trichlorofluoromethane	76	74	17 - 145	3	30		
1,2,3-Trichloropropane	98	98	74 - 124	1	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	67	70	48 - 151	4	30		

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211311

Method: 8260B
Preparation: 5035

LCS Lab Sample ID:	LCS 240-211311/2-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147101.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1755	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-211311/3-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147102.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1816	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,2,4-Trimethylbenzene	99	102	62 - 133	3	30		
1,3,5-Trimethylbenzene	99	103	60 - 130	4	30		
Vinyl chloride	76	78	33 - 120	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	88	88	26 - 141
Dibromofluoromethane (Surr)	96	93	30 - 122
1,2-Dichloroethane-d4 (Surr)	96	91	39 - 128
Toluene-d8 (Surr)	95	97	33 - 134

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	87	88	26 - 141
Dibromofluoromethane (Surr)	86	89	30 - 122
1,2-Dichloroethane-d4 (Surr)	89	97	39 - 128
Toluene-d8 (Surr)	95	95	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Method Blank - Batch: 240-211382

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-211257/1-A	Analysis Batch:	240-211382	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248337.D
Dilution:	1.0	Leach Batch:	240-211257	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/17/2015 1748	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1748				
Leach Date:	12/16/2015 2000				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	81	70 - 124
Dibromofluoromethane (Surr)	90	80 - 128
1,2-Dichloroethane-d4 (Surr)	92	80 - 121
Toluene-d8 (Surr)	94	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Control Sample - Batch: 240-211382

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-211382/9	Analysis Batch:	240-211382	Instrument ID:	A3UX12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	U1248338.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/17/2015 1812	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1812				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	1000	100	80 - 120	
2-Butanone (MEK)	2000	1620	81	49 - 120	
Carbon tetrachloride	1000	807	81	54 - 122	
Chlorobenzene	1000	1060	106	80 - 120	
Chloroform	1000	1000	100	80 - 123	
1,2-Dichloroethane	1000	1000	100	80 - 120	
1,1-Dichloroethene	1000	921	92	71 - 133	
Tetrachloroethene	1000	1010	101	79 - 134	
Trichloroethene	1000	1100	110	78 - 130	
Vinyl chloride	1000	793	79	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	78	70 - 124
Dibromofluoromethane (Surr)	94	80 - 128
1,2-Dichloroethane-d4 (Surr)	81	80 - 121
Toluene-d8 (Surr)	90	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211382

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-59150-F-1-C MS	Analysis Batch:	240-211382	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248355.D
Dilution:	1.0	Leach Batch:	240-211257	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/18/2015 0046			Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0046				5 mL
Leach Date:	12/16/2015 2000				

MSD Lab Sample ID:	240-59150-F-1-C MSD	Analysis Batch:	240-211382	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248356.D
Dilution:	1.0	Leach Batch:	240-211257	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/18/2015 0109			Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0109				5 mL
Leach Date:	12/16/2015 2000				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	96	90	80 - 120	5	30		
2-Butanone (MEK)	70	70	49 - 120	1	30		
Carbon tetrachloride	71	71	60 - 120	0	30		
Chlorobenzene	96	93	80 - 120	3	30		
Chloroform	96	92	80 - 124	5	30		
1,2-Dichloroethane	99	92	80 - 120	8	30		
1,1-Dichloroethene	84	80	67 - 139	5	30		
Tetrachloroethene	90	92	74 - 138	3	30		
Trichloroethene	100	101	75 - 134	1	30		
Vinyl chloride	75	71	51 - 120	5	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	77	84	70 - 124
Dibromofluoromethane (Surr)	93	88	80 - 128
1,2-Dichloroethane-d4 (Surr)	82	86	80 - 121
Toluene-d8 (Surr)	95	93	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Method Blank - Batch: 240-211823

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-211625/1-A	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248413.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 1801	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 1801				
Leach Date:	12/18/2015 1810				

Analyte	Result	Qual	MDL	RL
Benzene	ND		0.0065	0.025
2-Butanone (MEK)	ND		0.029	0.25
Carbon tetrachloride	ND		0.0065	0.025
Chlorobenzene	ND		0.0075	0.025
Chloroform	ND		0.0080	0.025
1,2-Dichloroethane	ND		0.011	0.025
1,1-Dichloroethene	ND		0.0095	0.025
Tetrachloroethene	ND		0.015	0.025
Trichloroethene	ND		0.0085	0.025
Vinyl chloride	ND		0.011	0.025

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	86	70 - 124
Dibromofluoromethane (Surr)	105	80 - 128
1,2-Dichloroethane-d4 (Surr)	99	80 - 121
Toluene-d8 (Surr)	98	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Control Sample - Batch: 240-211823

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-211823/9	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	U1248414.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 1823	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 1823				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1.00	0.987	99	80 - 120	
2-Butanone (MEK)	2.00	1.36	68	49 - 120	
Carbon tetrachloride	1.00	0.867	87	54 - 122	
Chlorobenzene	1.00	0.995	100	80 - 120	
Chloroform	1.00	0.973	97	80 - 123	
1,2-Dichloroethane	1.00	0.997	100	80 - 120	
1,1-Dichloroethene	1.00	0.939	94	71 - 133	
Tetrachloroethene	1.00	0.983	98	79 - 134	
Trichloroethene	1.00	1.06	106	78 - 130	
Vinyl chloride	1.00	0.696	70	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	81	70 - 124
Dibromofluoromethane (Surr)	94	80 - 128
1,2-Dichloroethane-d4 (Surr)	91	80 - 121
Toluene-d8 (Surr)	94	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211823

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-59286-J-1-A MS	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248428.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 2344			Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 2344				5 mL
Leach Date:	12/18/2015 1810				

MSD Lab Sample ID:	240-59286-J-1-A MSD	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248429.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/22/2015 0008			Final Weight/Volume:	5 mL
Prep Date:	12/22/2015 0008				5 mL
Leach Date:	12/18/2015 1810				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	90	92	80 - 120	3	30		
2-Butanone (MEK)	59	65	49 - 120	9	30		
Carbon tetrachloride	73	75	60 - 120	2	30		
Chlorobenzene	89	97	80 - 120	8	30		
Chloroform	91	93	80 - 124	2	30		
1,2-Dichloroethane	90	92	80 - 120	2	30		
1,1-Dichloroethene	83	84	67 - 139	2	30		
Tetrachloroethene	94	94	74 - 138	0	30		
Trichloroethene	99	100	75 - 134	1	30		
Vinyl chloride	65	67	51 - 120	4	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	79	80	70 - 124
Dibromofluoromethane (Surr)	92	95	80 - 128
1,2-Dichloroethane-d4 (Surr)	82	85	80 - 121
Toluene-d8 (Surr)	93	91	80 - 120

Method Blank - Batch: 240-211212

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-211212/19-A	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/20/2015 1045	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Method Blank - Batch: 240-211212

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-211212/19-A	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/20/2015 1045	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	85	24 - 110
2-Fluorophenol (Surr)	79	24 - 110
Nitrobenzene-d5 (Surr)	80	20 - 110
Phenol-d5 (Surr)	87	26 - 110
Terphenyl-d14 (Surr)	98	36 - 110
2,4,6-Tribromophenol (Surr)	65	10 - 110

Lab Control Sample - Batch: 240-211212

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-211212/20-A	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/20/2015 1109	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	535	80	35 - 110	
2,2'-oxybis[1-chloropropane]	667	553	83	29 - 110	
2,4-Dichlorophenol	667	572	86	39 - 110	
2,4-Dimethylphenol	667	525	79	29 - 110	
2,4-Dinitrophenol	1330	443	33	10 - 110	J
2,4-Dinitrotoluene	667	611	92	48 - 110	
2,6-Dinitrotoluene	667	596	89	45 - 110	
2-Chloronaphthalene	667	509	76	32 - 110	
2,4,5-Trichlorophenol	667	477	72	25 - 110	
2-Chlorophenol	667	551	83	37 - 110	
2,4,6-Trichlorophenol	667	368	55	12 - 110	
2-Methylnaphthalene	667	561	84	36 - 110	
2-Methylphenol	667	532	80	41 - 110	
2-Nitroaniline	667	572	86	45 - 110	J
2-Nitrophenol	667	618	93	34 - 110	
3,3'-Dichlorobenzidine	1330	794	60	28 - 110	J
3-Nitroaniline	667	559	84	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	684	51	10 - 110	J
4-Bromophenyl phenyl ether	667	602	90	39 - 110	
4-Chloro-3-methylphenol	667	587	88	48 - 110	
4-Chloroaniline	667	441	66	30 - 110	
4-Chlorophenyl phenyl ether	667	559	84	40 - 110	
4-Nitroaniline	667	643	96	48 - 110	J
4-Nitrophenol	1330	1100	83	28 - 110	J
Acenaphthene	667	545	82	38 - 110	
Acenaphthylene	667	551	83	40 - 110	
Acetophenone	667	550	82	40 - 110	
Anthracene	667	582	87	48 - 110	
Atrazine	1330	1240	93	54 - 120	
Benzaldehyde	1330	1130	85	32 - 110	
Benzo[a]anthracene	667	562	84	50 - 110	
Benzo[a]pyrene	667	598	90	44 - 110	
Benzo[b]fluoranthene	667	593	89	43 - 110	
Benzo[g,h,i]perylene	667	593	89	51 - 110	
Benzo[k]fluoranthene	667	586	88	38 - 105	
Bis(2-chloroethoxy)methane	667	597	90	32 - 110	
Bis(2-chloroethyl)ether	667	552	83	34 - 110	
Bis(2-ethylhexyl) phthalate	667	608	91	50 - 110	
Butyl benzyl phthalate	667	603	90	51 - 110	
Caprolactam	1330	1220	92	44 - 114	
Carbazole	667	588	88	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Control Sample - Batch: 240-211212

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-211212/20-A	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/20/2015 1109	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	566	85	50 - 110	
Dibenz(a,h)anthracene	667	622	93	51 - 110	
Dibenzofuran	667	544	82	43 - 110	
Diethyl phthalate	667	577	87	52 - 110	
Dimethyl phthalate	667	561	84	50 - 110	
Di-n-butyl phthalate	667	619	93	51 - 110	
Di-n-octyl phthalate	667	613	92	48 - 110	
Fluoranthene	667	606	91	51 - 110	
Fluorene	667	537	81	46 - 110	
Hexachlorobenzene	667	563	84	43 - 110	
Hexachlorobutadiene	667	569	85	29 - 110	
Hexachlorocyclopentadiene	667	411	62	12 - 110	J
Hexachloroethane	667	510	77	30 - 110	
Indeno[1,2,3-cd]pyrene	667	607	91	50 - 110	
Isophorone	667	569	85	36 - 110	
Naphthalene	667	555	83	36 - 110	
Nitrobenzene	667	552	83	32 - 110	
N-Nitrosodi-n-propylamine	667	580	87	38 - 110	
N-Nitrosodiphenylamine	1330	1160	87	46 - 110	
Pentachlorophenol	1330	767	58	10 - 110	
Phenol	667	531	80	38 - 110	
Phenanthrene	667	556	83	49 - 110	
Pyrene	667	523	78	49 - 110	
3 & 4 Methylphenol	667	547	82	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	83	24 - 110
2-Fluorophenol (Surr)	86	24 - 110
Nitrobenzene-d5 (Surr)	89	20 - 110
Phenol-d5 (Surr)	91	26 - 110
Terphenyl-d14 (Surr)	86	36 - 110
2,4,6-Tribromophenol (Surr)	57	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211212

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59162-2	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.14 g
Analysis Date:	12/20/2015 1749			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59162-2	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.76 g
Analysis Date:	12/20/2015 1813			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	72	76	32 - 110	7	32		
2,2'-oxybis[1-chloropropane]	63	67	11 - 110	7	42		
2,4-Dichlorophenol	74	81	10 - 110	11	34		
2,4-Dimethylphenol	67	74	10 - 110	11	31		
2,4-Dinitrophenol	26	17	10 - 110	42	99	J	J
2,4-Dinitrotoluene	79	81	32 - 110	4	30		
2,6-Dinitrotoluene	79	84	35 - 110	7	30		
2-Chloronaphthalene	71	73	28 - 110	3	30		
2,4,5-Trichlorophenol	69	67	10 - 117	0	99		
2-Chlorophenol	65	74	10 - 110	14	47		
2,4,6-Trichlorophenol	58	47	10 - 110	21	38		J
2-Methylnaphthalene	69	81	10 - 133	16	42		
2-Methylphenol	70	76	24 - 110	8	51		
2-Nitroaniline	77	83	39 - 110	9	31	J	J
2-Nitrophenol	76	83	10 - 110	10	49		
3,3'-Dichlorobenzidine	20	34	10 - 110	50	56	J	J
3-Nitroaniline	58	73	10 - 110	24	30	J	J
4,6-Dinitro-2-methylphenol	34	24	10 - 110	35	55	J	J
4-Bromophenyl phenyl ether	75	89	33 - 110	18	30		
4-Chloro-3-methylphenol	75	85	25 - 110	13	54		
4-Chloroaniline	46	56	10 - 110	21	36	J	
4-Chlorophenyl phenyl ether	77	80	32 - 110	5	30		
4-Nitroaniline	56	69	10 - 110	23	48	J	J
4-Nitrophenol	74	78	10 - 113	6	49	J	J
Acenaphthene	74	94	22 - 110	23	99		
Acenaphthylene	77	83	24 - 110	9	99		
Acetophenone	62	69	31 - 110	11	43		
Anthracene	77	129	20 - 110	48	99		F1
Atrazine	75	85	45 - 118	14	30		
Benzaldehyde	60	66	23 - 110	11	42		
Benzo[a]anthracene	76	203	10 - 122	70	99		F1
Benzo[a]pyrene	69	168	10 - 110	64	99		F1

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211212

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59162-2	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.14 g
Analysis Date:	12/20/2015 1749			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59162-2	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.76 g
Analysis Date:	12/20/2015 1813			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	67	212	12 - 118	73	99		E F1
Benzo[g,h,i]perylene	33	70	10 - 117	54	99		
Benzo[k]fluoranthene	86	163	10 - 121	55	99		F1
Bis(2-chloroethoxy)methane	72	75	26 - 110	5	37		
Bis(2-chloroethyl)ether	57	66	21 - 110	16	55		
Bis(2-ethylhexyl) phthalate	90	101	40 - 110	13	30		
Butyl benzyl phthalate	86	97	44 - 110	14	30		
Caprolactam	81	87	10 - 134	8	32		
Carbazole	71	100	34 - 110	33	30		F2
Chrysene	75	208	10 - 125	70	99		E F1
Dibenz(a,h)anthracene	46	66	14 - 113	31	99		
Dibenzofuran	72	83	29 - 110	15	30		
Diethyl phthalate	77	79	42 - 110	4	30		
Dimethyl phthalate	75	80	41 - 110	8	30		
Di-n-butyl phthalate	78	87	43 - 110	11	30		
Di-n-octyl phthalate	98	112	24 - 119	15	30		
Fluoranthene	80	292	10 - 110	80	99		E F1
Fluorene	72	90	23 - 110	23	99		
Hexachlorobenzene	71	79	34 - 110	12	30		
Hexachlorobutadiene	65	68	25 - 110	6	34		
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	49	47	12 - 110	2	50	J	J
Indeno[1,2,3-cd]pyrene	41	81	10 - 114	53	99		
Isophorone	72	74	29 - 110	4	38		
Naphthalene	65	74	10 - 111	13	99		
Nitrobenzene	66	68	23 - 110	4	41		
N-Nitrosodi-n-propylamine	65	69	26 - 110	7	42		
N-Nitrosodiphenylamine	74	84	22 - 110	14	30		
Pentachlorophenol	28	24	10 - 110	15	50		J
Phenol	70	77	17 - 110	10	53		
Phenanthrene	80	259	10 - 166	85	99		E F1
Pyrene	81	284	10 - 147	81	99		E F1

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211212

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59162-2	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.14 g
Analysis Date:	12/20/2015 1749			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59162-2	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.76 g
Analysis Date:	12/20/2015 1813			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
3 & 4 Methylphenol	72	79	25 - 110	10	50		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	73	74	24 - 110
2-Fluorophenol (Surr)	70	74	24 - 110
Nitrobenzene-d5 (Surr)	70	70	20 - 110
Phenol-d5 (Surr)	75	83	26 - 110
Terphenyl-d14 (Surr)	78	85	36 - 110
2,4,6-Tribromophenol (Surr)	57	42	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Method Blank - Batch: 240-211507

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-211507/14-A	Analysis Batch:	240-211751	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-211507	Lab File ID:	51221003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/21/2015 1106	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 1029			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.016
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	70	30 - 110
2-Fluorophenol (Surr)	58	20 - 110
Nitrobenzene-d5 (Surr)	76	28 - 110
Phenol-d5 (Surr)	42	21 - 110
Terphenyl-d14 (Surr)	71	48 - 110
2,4,6-Tribromophenol (Surr)	78	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Control Sample - Batch: 240-211507

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-211507/15-A	Analysis Batch:	240-211751	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-211507	Lab File ID:	51221004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/21/2015 1129	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 1029			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0590	74	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0600	75	54 - 110	
Pyridine	0.0800	0.0498	62	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0606	76	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0626	78	46 - 110	
2-Methylphenol	0.0800	0.0561	70	44 - 111	
Hexachlorobenzene	0.0800	0.0683	85	50 - 110	
Hexachlorobutadiene	0.0800	0.0596	75	34 - 110	
Hexachloroethane	0.0800	0.0571	71	41 - 110	
Nitrobenzene	0.0800	0.0579	72	40 - 110	
Pentachlorophenol	0.160	0.130	81	12 - 110	
3 & 4 Methylphenol	0.0800	0.0520	65	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	73	30 - 110
2-Fluorophenol (Surr)	59	20 - 110
Nitrobenzene-d5 (Surr)	77	28 - 110
Phenol-d5 (Surr)	43	21 - 110
Terphenyl-d14 (Surr)	81	48 - 110
2,4,6-Tribromophenol (Surr)	77	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Matrix Spike - Batch: 240-211507

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-59162-2	Analysis Batch:	240-211751	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-211507	Lab File ID:	51221011.D
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	250 mL
Analysis Date:	12/21/2015 1413	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 1029			Injection Volume:	1 uL
Leach Date:	12/17/2015 1800				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0560	70	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0644	81	42 - 110	
Pyridine	ND	0.0800	0.0500	63	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0657	82	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0634	79	35 - 110	
2-Methylphenol	ND	0.0800	0.0551	69	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0654	82	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0654	82	28 - 110	
Hexachloroethane	ND	0.0800	0.0591	74	26 - 110	
Nitrobenzene	ND	0.0800	0.0613	77	32 - 110	
Pentachlorophenol	ND	0.160	0.135	84	10 - 124	
3 & 4 Methylphenol	ND	0.0800	0.0529	66	29 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	77	30 - 110
2-Fluorophenol (Surr)	71	20 - 110
Nitrobenzene-d5 (Surr)	83	28 - 110
Phenol-d5 (Surr)	63	21 - 110
Terphenyl-d14 (Surr)	77	48 - 110
2,4,6-Tribromophenol (Surr)	78	23 - 110

Method Blank - Batch: 240-211449 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-211449/1-A	Analysis Batch:	240-211457	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-211449	Lab File ID:	Y0121809.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/18/2015 1245	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211449 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-211449/2-A	Analysis Batch:	240-211457	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-211449	Lab File ID:	Y0121810.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/18/2015 1317	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-211449/10-A	Analysis Batch:	240-211457	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-211449	Lab File ID:	Y0121818.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/18/2015 1754	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	89	86	80 - 120	3	20		

Method Blank - Batch: 240-211439

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-211439/5-A	Analysis Batch:	240-211546	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-211439	Lab File ID:	P14R121816.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/18/2015 2102	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	1.12	J	0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211439

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-211439/6-A	Analysis Batch:	240-211546	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-211439	Lab File ID:	P14R121817.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/18/2015 2129	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-211439/7-A	Analysis Batch:	240-211963	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-211439	Lab File ID:	P14R122208.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/22/2015 1605	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	102	107	70 - 120	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Method Blank - Batch: 240-211321

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-211321/1-A	Analysis Batch:	240-211528	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211321	Lab File ID:	I9121815A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/18/2015 1419	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	0.0818	J	0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	ND		5.2	500
Manganese	ND		0.084	1.5
Sodium	ND		19	500
Nickel	ND		0.080	4.0
Potassium	ND		6.2	500
Antimony	ND		0.48	1.0
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Vanadium	ND		0.20	5.0
Selenium	ND		0.34	0.50
Zinc	ND		0.56	2.0
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Control Sample - Batch: 240-211321

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-211321/2-A	Analysis Batch:	240-211528	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211321	Lab File ID:	I9121815A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/18/2015 1423	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	214	107	80 - 120	
Barium	200	198	99	80 - 120	
Beryllium	5.00	5.01	100	80 - 120	
Cadmium	5.00	5.07	101	80 - 120	
Calcium	5000	5030	101	80 - 120	
Chromium	20.0	19.1	96	80 - 120	
Cobalt	50.0	52.2	104	80 - 120	
Copper	25.0	24.1	96	80 - 120	
Iron	100	100	100	80 - 120	
Magnesium	5000	4950	99	80 - 120	
Manganese	50.0	49.9	100	80 - 120	
Sodium	5000	5010	100	80 - 120	
Nickel	50.0	51.8	104	80 - 120	
Potassium	5000	4870	97	80 - 120	
Antimony	50.0	52.3	105	80 - 120	
Silver	5.00	4.97	99	80 - 120	
Arsenic	200	205	103	80 - 120	
Lead	50.0	51.9	104	80 - 120	
Vanadium	50.0	49.3	99	80 - 120	
Selenium	200	205	102	80 - 120	
Zinc	50.0	52.5	105	80 - 120	
Thallium	200	199	100	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211321

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-59162-1	Analysis Batch:	240-211528	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211321	Lab File ID:	I9121815A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.14 g
Analysis Date:	12/18/2015 1355			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59162-1	Analysis Batch:	240-211528	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211321	Lab File ID:	I9121815A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.14 g
Analysis Date:	12/18/2015 1359			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	1318	1850	75 - 125	9	20	4	4
Barium	-217	-126	75 - 125	22	20	4	4 F2
Beryllium	86	98	75 - 125	13	20		
Cadmium	83	96	75 - 125	11	20		
Calcium	50	72	75 - 125	19	20	F1	F1
Chromium	2077	2752	75 - 125	8	20	4	4
Cobalt	86	98	75 - 125	13	20		
Copper	219	291	75 - 125	10	20	4	4
Iron	-884	-248	75 - 125	22	20	4	4 F2
Magnesium	75	92	75 - 125	18	20		
Manganese	35	63	75 - 125	17	20	F1	F1
Sodium	88	100	75 - 125	12	20		
Nickel	91	107	75 - 125	12	20		
Potassium	82	96	75 - 125	14	20		
Antimony	109	145	75 - 125	18	20		F1
Silver	88	99	75 - 125	11	20		
Arsenic	74	85	75 - 125	14	20	F1	
Vanadium	82	95	75 - 125	14	20		
Selenium	80	90	75 - 125	12	20		
Zinc	236	324	75 - 125	11	20	4	4
Thallium	79	87	75 - 125	10	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211321

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-59162-1	Analysis Batch:	240-212068	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211321	Lab File ID:	I9122215A.asc
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1.14 g
Analysis Date:	12/22/2015 1720			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59162-1	Analysis Batch:	240-212068	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211321	Lab File ID:	I9122215A.asc
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1.14 g
Analysis Date:	12/22/2015 1724			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Lead	2900	3390	75 - 125	3	20	4	4

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

TCLP SPLPE Leachate Blank - Batch: 240-211510

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-211400/1-B	Analysis Batch:	240-211881	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211510	Lab File ID:	I9122115A.asc
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/22/2015 0354	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1041				
Leach Date:	12/17/2015 1800				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.000722	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	0.00256	J	0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Nickel	0.00150	J	0.00076	0.040
Potassium	3.93	J	0.070	5.0
Antimony	ND		0.0024	0.30
Silver	ND		0.00092	0.50
Arsenic	0.00578	J	0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Method Blank - Batch: 240-211510

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-211510/2-A	Analysis Batch:	240-211881	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-211510	Lab File ID:	I9122115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/22/2015 0358	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1041				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Nickel	ND		0.00076	0.040
Potassium	0.818	J	0.070	5.0
Antimony	ND		0.0024	0.30
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Lab Control Sample - Batch: 240-211510

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-211510/3-A	Analysis Batch:	240-211881	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-211510	Lab File ID:	I9122115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/22/2015 0403	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1041				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	2.22	111	50 - 150	
Barium	2.00	2.08	104	50 - 150	J
Beryllium	0.0500	0.0518	104	50 - 150	
Cadmium	0.0500	0.0519	104	50 - 150	J
Calcium	50.0	51.1	102	50 - 150	
Chromium	0.200	0.207	104	50 - 150	J
Cobalt	0.500	0.532	106	50 - 150	
Copper	0.250	0.267	107	50 - 150	J
Iron	1.00	1.02	102	50 - 150	
Magnesium	50.0	50.9	102	50 - 150	
Manganese	0.500	0.544	109	50 - 150	
Nickel	0.500	0.543	109	50 - 150	
Potassium	50.0	55.2	110	50 - 150	
Antimony	0.500	0.539	108	50 - 150	
Silver	0.0500	0.0581	116	50 - 150	J
Arsenic	2.00	2.21	110	50 - 150	
Lead	0.500	0.468	94	50 - 150	J
Vanadium	0.500	0.519	104	50 - 150	
Selenium	2.00	2.24	112	50 - 150	
Zinc	0.500	0.572	114	50 - 150	J
Thallium	2.00	1.97	99	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211510

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID: 240-59175-J-1-D MS ^5
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 12/22/2015 0419
Prep Date: 12/18/2015 1041
Leach Date: 12/17/2015 1800
Analysis Batch: 240-211881
Prep Batch: 240-211510
Leach Batch: 240-211400
Instrument ID: I9
Lab File ID: I9122115A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-59175-J-1-E MSD ^5
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 12/22/2015 0424
Prep Date: 12/18/2015 1041
Leach Date: 12/17/2015 1800
Analysis Batch: 240-211881
Prep Batch: 240-211510
Leach Batch: 240-211400
Instrument ID: I9
Lab File ID: I9122115A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	103	108	75 - 125	6	20		
Barium	103	98	75 - 125	5	20		
Beryllium	99	97	75 - 125	2	20		
Cadmium	108	103	75 - 125	5	20		
Calcium	112	69	75 - 125	4	20	4	4
Chromium	103	98	75 - 125	5	20		
Cobalt	106	102	75 - 125	4	20		
Copper	105	102	75 - 125	3	20	J	J
Iron	101	97	75 - 125	5	20		
Magnesium	100	93	75 - 125	3	20		
Manganese	88	80	75 - 125	1	20	4	4
Nickel	106	102	75 - 125	4	20		
Potassium	102	98	75 - 125	4	20		
Antimony	106	105	75 - 125	0	20	J	J
Silver	112	108	75 - 125	3	20	J	J
Arsenic	108	104	75 - 125	4	20		
Lead	99	94	75 - 125	5	20		
Vanadium	104	101	75 - 125	4	20		
Selenium	109	105	75 - 125	4	20	J	J
Zinc	111	104	75 - 125	6	20	J	J
Thallium	101	99	75 - 125	2	20	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

TCLP SPLPE Leachate Blank - Batch: 240-211512

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-211400/1-C	Analysis Batch:	240-211887	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1337	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	12/17/2015 1800				

Analyte	Result	Qual	MDL	RL
Mercury	0.000103	J	0.000090	0.0020

Method Blank - Batch: 240-211512

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-211512/2-A	Analysis Batch:	240-211887	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1339	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-211512

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-211512/3-A	Analysis Batch:	240-211887	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1424	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00481	96	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211512

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-59175-J-1-G MS	Analysis Batch:	240-211887	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1427			Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	12/17/2015 1800				

MSD Lab Sample ID:	240-59175-J-1-H MSD	Analysis Batch:	240-211887	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1428			Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	12/17/2015 1800				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	98	92	80 - 120	6	20		

Method Blank - Batch: 240-211344

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-211344/1-A	Analysis Batch:	240-211442	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211344	Lab File ID:	121815AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	12/18/2015 0539	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1455				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-211344

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-211344/2-A	Analysis Batch:	240-211442	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211344	Lab File ID:	121815AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	12/18/2015 0541	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1455				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.839	101	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211344

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-59175-H-1-C MS	Analysis Batch:	240-211442	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211344	Lab File ID:	121815AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.56 g
Analysis Date:	12/18/2015 0543			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1455				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59175-H-1-D MSD	Analysis Batch:	240-211442	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211344	Lab File ID:	121815AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.56 g
Analysis Date:	12/18/2015 0544			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1455				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	95	100	80 - 120	4	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Method Blank - Batch: 240-212149

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-212149/9-A	Analysis Batch:	240-212243	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-212149	Lab File ID:	212149.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	12/24/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/23/2015 1049				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.26	0.80

Lab Control Sample - Batch: 240-212149

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCS 240-212149/10-A	Analysis Batch:	240-212243	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-212149	Lab File ID:	212149.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	12/24/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/23/2015 1049				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	18.7	93	80 - 120	

Lab Control Sample Insoluble - Batch: 240-212149

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-212149/11-A	Analysis Batch:	240-212243	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-212149	Lab File ID:	212149.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	12/24/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/23/2015 1049				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	510	79	75 - 125	

Client: ARCADIS U.S., Inc. Job Number: 240-59162-1

Duplicate - Batch: 240-211066

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-59162-1	Analysis Batch:	240-211066	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/16/2015 1557	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	74	74	0.6	20	
Percent Moisture	26	26	2	20	

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS

240-59162 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica ~~Michigan~~
~~10449 Citation Drive~~
~~Suite 200~~
~~Brighton, MI 48116~~
~~Phone: 810.229.2763 Fax:~~

NORTH CANTON OH
4101 Shuffel Drive N.W.
North Canton, OH 44720
330-497-9396

Chain of Custody Record

2.8 / C2.5

062632

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact			
Company Name: ARCADIS	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 12-15-15
Address: 430 First Avenue North, Suite 720	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier: Gary Becker
City/State/Zip: Minneapolis, MN 55401	Analysis Turnaround Time: ☒ CALENDAR DAYS ☐ WORKING DAYS		
Phone: 612-339-9434	TAT if different from Below ____		
Fax:	☒ 2 weeks		
Project Name: Ford Trap	☐ 1 week		
Site: St Paul MN	☐ 2 days		
PO# MN000624.0001	☐ 1 day		

COC No: 1 of 2 COCs
Sampler: Adam Thompson
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.: 24006638

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	GRO (W1 Mod Method)	DRO (W1 Mod Method)	SVOCs (8270)	TAL metals (6010)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP TAL Metals (1311/6010)	Moisture content		PCBs (8082)							Sample Specific Notes:
Area-C-Trench-1_010_4-5(20151215)	12/15/15	1400	G	SO	11	N	N	2	2	1	1	1	1	1	1	1		—							
Area-C-Trench-1_010_5-6(20151215)	12/15/15	1427	G	SO	11	N	N	2	2	1	1	1	1	1	1	1		—							
Temp Blank																									
Trip Blank	12/15/15																								

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

* Chromium VI and Chromium III speciation on TAL metals and TCLP TAL metals analysis

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Adam T	Arcadis	12/15/15 1630	[signature]	TAmera	12-15-15 1630
[signature]	TAmera	12-15-15	[signature]	TA-Canton	12/16/15 0930
			Received in Laboratory by:		

12/30/2015

TestAmerica Canton Sample Receipt Form/Narrative — Login # : 59162
Canton Facility

Client Arcadis — Site Name ____ — Cooler unpacked by:

Cooler Received on 12/16/15 — Opened on 12/16/15

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other ____

Receipt After-hours: Drop-off Date/Time ____ Storage Location ____

TestAmerica Cooler # ____ Foam Box (Client Cooler) Box Other ____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other ____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 53 (CF +0.1 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C

IR GUN# 48 (CF -0.3 °C) Observed Cooler Temp. 2.8 °C Corrected Cooler Temp. 2.5 °C ☐ See Multiple Cooler Form

~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C~~

IR GUN# 8 (CF -0.5 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels be reconciled with the COC?	(Yes)	No
9. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
10. Sufficient quantity received to perform indicated analyses?	(Yes)	No
11. Were sample(s) at the correct pH upon receipt?	Yes No (NA)	pH Strip Lot# HC559158
12. Were VOAs on the COC?	(Yes)	No
13. Were air bubbles >6 mm in any VOA vials?	Yes (No)	NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # ____	(Yes)	No
15. Was a LL Hg or Me Hg trip blank present? B506301VB	(Yes)	No

Contacted PM ____ Date ____ by ____ via Verbal Voice Mail Other

Concerning ____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES — Samples processed by:

15. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.

Sample(s) ____ were received in a broken container.

Sample(s) ____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory.

Time preserved: ____ Preservative(s) added/Lot number(s): ____

December 31, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 59162-1
Sample date: 2015-12-15
Report received by CADENA: 2015-12-30
Initial Data Verification completed by CADENA: 2015-12-31

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch 211311 did not include MS recovery data due to insufficient sample volume available for spiking according to the laboratory submittal case narrative.

GCMS VOC QC batch 211311 method blank had detections below the RL for acetone and methylene chloride. Client sample -001 acetone result and client samples -001 and -002 methylene chloride results should be considered to be non-detect at the RL and qualified with a UB flag.

GCMS VOC QC batch 211311 LCS/LCSduplicate RPD was an outlier for methyl acetate. Qualification of client sample results was not required based on this QC outlier alone.

GCMS VOC/GRO trip blank had a detection below the RL for methylene chloride. Client sample results associated with these trip blank detections were already qualified based on method blank detections so no further qualification was required based on the trip blank detections.

GCMS SVOC sample -001 surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results.

GCMS SVOC sample -002 MS/MSD recoveries were outliers biased low for hexachlorobutadiene. Client sample -002 results for this analyte should be considered to be estimated and qualified with a UJ flag. MS or MSD recoveries but not both were outliers biased high for several PAH analytes and MS/MSD RPD only was an outlier for carbazole so qualification was not required based on these QC outliers alone.

WI-GRO and WI-DRO sample and batch QC did not include surrogate recovery or MS/MSD recovery information.

WI-DRO QC batch method blank had a detection below the RL. Qualification of client sample results was not required based on this method blank detection.

Metals method blanks had detections below the RL in QC batch 211510 for chromium, copper, nickel, potassium and arsenic and in QC batch 211321 for chromium and QC batch 211512 for mercury. Client sample -001 and -002 TCLP/SPLP copper and arsenic results and client sample -002 TCLP/SPLP chromium results should be considered to be non-detect at the RL and qualified with a UB flag and client samples -001 and -002 TCLP/SPLP potassium results non-detect at the concentration reported and qualified with a B flag.

Metals sample -001 MS/MSD recoveries for aluminum, barium, chromium, copper, iron, zinc and lead were not considered to be statistically reliable due to elevated levels of target analyte relative to the amount spiked (4X rule) so were not used to qualify results. MS or MSD recoveries but not both were outliers for antimony and lead so qualification was not required based on these QC outliers alone. MS and MSD recoveries were outliers biased low for calcium and manganese so these results should be considered to be estimated and qualified with J flags.

Metals QC batch 211510 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results is not required based on these sample-specific QC outliers.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

2 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s). 1 Trip blank was analyzed for GCMS VOC and GRO parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 59162-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240591621	AREA-C-TRENCH-1_010_4-5(201512	12/15/2015	2:00:00	X	X	X	X	X	X	X	X
240591622	AREA-C-TRENCH-1_010_5-6(201512	12/15/2015	2:27:00	X	X	X	X	X	X	X	X
240591623	TRIP BLANK	12/15/2015	12:00:00	X		X					

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 59162-1

			Sample Name:	AREA-C-TRENCH-1_010_4-5(201512			AREA-C-TRENCH-1_010_5-6(201512			
			Lab Sample ID:	240591621			240591622			
			Sample Date:	12/15/2015			12/15/2015			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC										
	OSW-8260B									
	Acetone	67-64-1	870	3000	ug/kg	UB				
	Methylene Chloride	75-09-2	650	750	ug/kg	UB	180	310	ug/kg	UB
GC/MS SVOC										
	OSW-8270C									
	Hexachlorocyclopentadiene	77-47-4					ND	2000	ug/kg	UJ
Metals										
	OSW-6010B									
	Arsenic	7440-38-2	0.0072	0.50	mg/l	UB	0.0089	0.50	mg/l	UB
	Calcium	7440-70-2	3200	640	mg/kg	J				
	Chromium	7440-47-3					0.0023	0.50	mg/l	UB
	Copper	7440-50-8	0.0080	1.0	mg/l	UB	0.0031	1.0	mg/l	UB
	Manganese	7439-96-5	73	1.9	mg/kg	J				
	Potassium	7440-09-7	5.3	5.0	mg/l	B	7.7	5.0	mg/l	B

ANALYTICAL REPORT

Job Number: 240-59175-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
12/30/2015 3:38 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
12/30/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-59175-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 12/16/2015 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)

Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) was analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The sample was leached on 12/18/2015 and analyzed on 12/21/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) and TRIP BLANK (240-59175-2) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 12/17/2015 and analyzed on 12/18/2015 and 12/19/2015.

Acetone was detected in method blank MB 240-211311/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Methylene Chloride was detected in method blank MB 240-211311/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Allyl chloride and Methyl acetate exceeded the RPD limit for LCSD 240-211311/3-A. Refer to the QC report for details.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-211311 and analytical batch 240-211549 on these samples AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) and TRIP BLANK (240-59175-2) .

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) was analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The sample was leached on 12/17/2015, prepared on 12/18/2015 and analyzed on

12/21/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)
Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) was analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The sample was prepared on 12/17/2015 and analyzed on 12/20/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Hexachlorocyclopentadiene failed the recovery criteria low for the MS of sample 240-59162-2 in batch 240-211630.

For the MSD of sample 240-59162-2 in batch 240-211630, Hexachlorocyclopentadiene failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, Carbazole exceeded the RPD limit.

Refer to the QC report for details.

Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO
Samples AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) and TRIP BLANK (240-59175-2) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The sample was prepared and analyzed on 12/18/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO
Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) was analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The sample was prepared on 12/18/2015 and analyzed on 12/22/2015.

WI Diesel Range Organics (C10-C28) was detected in method blank MB 240-211439/5-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) mix : AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)
Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The sample was leached on 12/17/2015, prepared on 12/18/2015 and analyzed on 12/22/2015.

Potassium was detected in method blank MB 240-211510/2-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Arsenic, Chromium, Copper, Nickel and Potassium were detected in method blank LB 240-211400/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Calcium failed the recovery criteria low for the MSD of sample AREA-C-TRENCH-1_015_5-6(20151215)MSD (240-59175-1) in batch 240-211881. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)
Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The sample was prepared on 12/17/2015 and analyzed on 12/18/2015.

Chromium was detected in method blank MB 240-211321/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample 240-59162-1 in batch 240-211528. Aluminum, Chromium, Copper and Zinc failed the recovery criteria high.

For the MSD of sample 240-59162-1 in batch 240-211528, Barium, Calcium, Iron and Manganese failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, Barium and Iron exceeded the RPD limit.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY
Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The sample was leached on 12/17/2015, prepared on 12/18/2015 and analyzed on 12/21/2015.

Mercury was detected in method blank LB 240-211400/1-C at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) was analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The sample was prepared on 12/17/2015 and analyzed on 12/18/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM
Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) was analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The sample was prepared on 12/23/2015 and analyzed on 12/24/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM
Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) was analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The sample was analyzed on 12/22/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS
Sample AREA-C-TRENCH-1_015_5-6(20151215) (240-59175-1) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The sample was analyzed on 12/16/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59175-1	**AREA-C-TRENCH-1_015_5-6(20151215)**					
Methylene Chloride		190	J B	310	ug/Kg	8260B
Naphthalene		32	J	310	ug/Kg	8260B
2-Methylnaphthalene		170	J	4000	ug/Kg	8270C
Acenaphthene		580	J	4000	ug/Kg	8270C
Acenaphthylene		93	J	4000	ug/Kg	8270C
Anthracene		1100	J	4000	ug/Kg	8270C
Benzo[a]anthracene		5000		4000	ug/Kg	8270C
Benzo[a]pyrene		3900	J	4000	ug/Kg	8270C
Benzo[b]fluoranthene		6400		4000	ug/Kg	8270C
Benzo[g,h,i]perylene		1200	J	4000	ug/Kg	8270C
Benzo[k]fluoranthene		2100	J	4000	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		390	J	4000	ug/Kg	8270C
Carbazole		880	J	4000	ug/Kg	8270C
Chrysene		5500		4000	ug/Kg	8270C
Dibenz(a,h)anthracene		540	J	4000	ug/Kg	8270C
Dibenzofuran		230	J	4000	ug/Kg	8270C
Fluoranthene		9300		4000	ug/Kg	8270C
Fluorene		510	J	4000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		1200	J	4000	ug/Kg	8270C
Naphthalene		220	J	4000	ug/Kg	8270C
Phenanthrene		4700		4000	ug/Kg	8270C
Pyrene		8000		4000	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		53	J B	54	mg/Kg	WI-DRO
Aluminum		3800		20	mg/Kg	6010B
Antimony		0.77	J	1.0	mg/Kg	6010B
Barium		150		20	mg/Kg	6010B
Beryllium		0.20	J	0.50	mg/Kg	6010B
Calcium		16000		500	mg/Kg	6010B
Cadmium		0.22		0.20	mg/Kg	6010B
Cobalt		5.1		5.0	mg/Kg	6010B
Chromium		12	B	0.50	mg/Kg	6010B
Copper		13		2.5	mg/Kg	6010B
Iron		15000		10	mg/Kg	6010B
Potassium		740		500	mg/Kg	6010B
Magnesium		4300		500	mg/Kg	6010B
Manganese		250		1.5	mg/Kg	6010B
Sodium		67	J	500	mg/Kg	6010B
Nickel		12		4.0	mg/Kg	6010B
Vanadium		12		5.0	mg/Kg	6010B
Zinc		37		2.0	mg/Kg	6010B
Arsenic		3.1		1.0	mg/Kg	6010B
Lead		73		0.30	mg/Kg	6010B
Thallium		0.15	J	1.0	mg/Kg	6010B
Mercury		0.053	J	0.13	mg/Kg	7471A
Cr (III)		14		2.4	mg/Kg	7196A
Percent Solids		82		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Moisture		18		0.10	%	Moisture
TCLP						
Antimony		0.0052	J	0.30	mg/L	6010B
Arsenic		0.0070	J B	0.50	mg/L	6010B
Barium		1.6	J	10	mg/L	6010B
Cadmium		0.0026	J	0.10	mg/L	6010B
Calcium		520		5.0	mg/L	6010B
Chromium		0.0018	J B	0.50	mg/L	6010B
Cobalt		0.0026	J	0.050	mg/L	6010B
Copper		0.0034	J B	1.0	mg/L	6010B
Iron		0.018	J	0.10	mg/L	6010B
Lead		0.027	J	0.50	mg/L	6010B
Magnesium		74		5.0	mg/L	6010B
Manganese		2.1		0.015	mg/L	6010B
Nickel		0.025	J B	0.040	mg/L	6010B
Potassium		9.5	B	5.0	mg/L	6010B
Zinc		0.051	J	1.0	mg/L	6010B
240-59175-2	**TRIP BLANK**					
Methylene Chloride		120	J B	250	ug/Kg	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction	TAL CAN		SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Method	Analyst	Analyst ID
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Lecorchick, Willis A	WAL
SW846 7471A	Lecorchick, Willis A	WAL
SW846 7196A	Counts, Karen	KLC
SW846 7196A	Grossman, Lucas	LKG
EPA Moisture	Woodward, Bruce	BLW

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	Solid	12/15/2015 1447	12/16/2015 0930
240-59175-2	TRIP BLANK	Solid	12/15/2015 0000	12/16/2015 0930

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Client Sample ID: **AREA-C-TRENCH-1_015_5-6(20151215)**

Lab Sample ID: 240-59175-1 Date Sampled: 12/15/2015 1447
Client Matrix: Solid % Moisture: 17.9 Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211549	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211311	Lab File ID:	147148.D
Dilution:	1.0			Initial Weight/Volume:	9.762 g
Analysis Date:	12/19/2015 0009			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 1054				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		280	1200
Allyl chloride		ND	*	37	620
Benzene		ND		11	310
Bromobenzene		ND		16	310
Bromochloromethane		ND		87	310
Bromodichloromethane		ND		47	310
Bromoform		ND		76	310
Bromomethane		ND		64	310
2-Butanone (MEK)		ND		91	1200
Carbon disulfide		ND		70	310
Carbon tetrachloride		ND		22	310
Chlorobenzene		ND		16	310
Chlorodibromomethane		ND		25	310
Chloroethane		ND		64	310
Chloroform		ND		45	310
Chloromethane		ND		60	310
2-Chlorotoluene		ND		51	310
4-Chlorotoluene		ND		32	310
cis-1,2-Dichloroethene		ND		47	310
cis-1,3-Dichloropropene		ND		27	310
Cyclohexane		ND		37	620
1,2-Dibromo-3-Chloropropane		ND		89	620
1,2-Dibromoethane		ND		40	310
Dibromomethane		ND		62	310
1,2-Dichlorobenzene		ND		24	310
1,3-Dichlorobenzene		ND		37	310
1,4-Dichlorobenzene		ND		51	310
Dichlorodifluoromethane		ND		76	310
1,1-Dichloroethane		ND		44	310
1,2-Dichloroethane		ND		12	310
1,1-Dichloroethene		ND		37	310
Dichlorofluoromethane		ND		41	620
1,2-Dichloropropane		ND		40	310
1,3-Dichloropropane		ND		29	310
2,2-Dichloropropane		ND		65	310
1,1-Dichloropropene		ND		47	310
Ethylbenzene		ND		44	310
Ethyl ether		ND		120	620
Hexachlorobutadiene		ND		55	310
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		16	310
Methyl acetate		ND	*	69	620
Methylcyclohexane		ND		47	620
Methylene Chloride		190	J B	110	310
4-Methyl-2-pentanone (MIBK)		ND		70	1200
Methyl tert butyl ether		ND		37	310

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Client Sample ID: **AREA-C-TRENCH-1_015_5-6(20151215)**

Lab Sample ID: 240-59175-1 Date Sampled: 12/15/2015 1447
Client Matrix: Solid % Moisture: 17.9 Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211549	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211311	Lab File ID:	147148.D
Dilution:	1.0			Initial Weight/Volume:	9.762 g
Analysis Date:	12/19/2015 0009			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 1054				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		25	310
Naphthalene		32	J	32	310
n-Butylbenzene		ND		26	310
N-Propylbenzene		ND		76	310
o-Xylene		ND		21	310
p-Isopropyltoluene		ND		31	310
sec-Butylbenzene		ND		20	310
Styrene		ND		34	310
tert-Butylbenzene		ND		42	310
1,1,1,2-Tetrachloroethane		ND		61	310
1,1,2,2-Tetrachloroethane		ND		31	310
Tetrachloroethene		ND		34	310
Tetrahydrofuran		ND		150	1200
Toluene		ND		12	310
trans-1,2-Dichloroethene		ND		32	310
trans-1,3-Dichloropropene		ND		32	310
1,2,3-Trichlorobenzene		ND		49	310
1,2,4-Trichlorobenzene		ND		37	310
1,1,1-Trichloroethane		ND		34	310
1,1,2-Trichloroethane		ND		24	310
Trichloroethene		ND		49	310
Trichlorofluoromethane		ND		44	310
1,2,3-Trichloropropane		ND		130	310
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		52	310
1,2,4-Trimethylbenzene		ND		16	310
1,3,5-Trimethylbenzene		ND		19	310
Vinyl chloride		ND		21	310

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	86		26 - 141
Dibromofluoromethane (Surr)	86		30 - 122
1,2-Dichloroethane-d4 (Surr)	90		39 - 128
Toluene-d8 (Surr)	93		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Client Sample ID: **AREA-C-TRENCH-1_015_5-6(20151215)**

Lab Sample ID: 240-59175-1 Date Sampled: 12/15/2015 1447
Client Matrix: Solid Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248421.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 2105			Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 2105				
Leach Date:	12/18/2015 1810				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	85		80 - 121
4-Bromofluorobenzene (Surr)	73		70 - 124
Toluene-d8 (Surr)	89		80 - 120
Dibromofluoromethane (Surr)	93		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-59175-2 Date Sampled: 12/15/2015 0000
Client Matrix: Solid Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211549	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211311	Lab File ID:	147147.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	12/18/2015 2347			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 1054				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND	*	30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		18	250
Chlorobenzene		ND		13	250
Chlorodibromomethane		ND		20	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		10	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND	*	55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		120	J B	85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-59175-2 Date Sampled: 12/15/2015 0000
Client Matrix: Solid Date Received: 12/16/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211549	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211311	Lab File ID:	147147.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	12/18/2015 2347			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 1054				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		25	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		27	250
1,1,2-Trichloroethane		ND		19	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		17	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	80		26 - 141
Dibromofluoromethane (Surr)	83		30 - 122
1,2-Dichloroethane-d4 (Surr)	86		39 - 128
Toluene-d8 (Surr)	88		33 - 134

Client Sample ID: **AREA-C-TRENCH-1_015_5-6(20151215)**

Lab Sample ID: 240-59175-1 Date Sampled: 12/15/2015 1447
Client Matrix: Solid % Moisture: 17.9 Date Received: 12/16/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211212	Lab File ID:	51220028.D
Dilution:	10			Initial Weight/Volume:	29.99 g
Analysis Date:	12/20/2015 2034			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		43	4000
2,2'-oxybis[1-chloropropane]		ND		120	4000
2,4,5-Trichlorophenol		ND		300	4000
2,4,6-Trichlorophenol		ND		110	4000
2,4-Dichlorophenol		ND		240	4000
2,4-Dimethylphenol		ND		240	4000
2,4-Dinitrophenol		ND		260	19000
2,4-Dinitrotoluene		ND		210	4000
2,6-Dinitrotoluene		ND		260	4000
2-Chloronaphthalene		ND		5.5	4000
2-Chlorophenol		ND		100	4000
2-Methylnaphthalene		170	J	6.1	4000
2-Methylphenol		ND		130	4000
2-Nitroaniline		ND		110	19000
2-Nitrophenol		ND		100	4000
3,3'-Dichlorobenzidine		ND		220	19000
3-Nitroaniline		ND		190	19000
4,6-Dinitro-2-methylphenol		ND		110	19000
4-Bromophenyl phenyl ether		ND		160	4000
4-Chloro-3-methylphenol		ND		260	4000
4-Chloroaniline		ND		210	4000
4-Chlorophenyl phenyl ether		ND		160	4000
4-Nitroaniline		ND		320	19000
4-Nitrophenol		ND		210	19000
Acenaphthene		580	J	9.3	4000
Acenaphthylene		93	J	4.3	4000
Acetophenone		ND		110	4000
Anthracene		1100	J	9.5	4000
Atrazine		ND		110	4000
Benzaldehyde		ND		150	4000
Benzo[a]anthracene		5000		7.7	4000
Benzo[a]pyrene		3900	J	7.8	4000
Benzo[b]fluoranthene		6400		7.2	4000
Benzo[g,h,i]perylene		1200	J	4.3	4000
Benzo[k]fluoranthene		2100	J	8.3	4000
Bis(2-chloroethoxy)methane		ND		270	4000
Bis(2-chloroethyl)ether		ND		24	4000
Bis(2-ethylhexyl) phthalate		390	J	230	4000
Butyl benzyl phthalate		ND		120	4000
Caprolactam		ND		450	4000
Carbazole		880	J	330	4000
Chrysene		5500		13	4000
Dibenz(a,h)anthracene		540	J	8.0	4000
Dibenzofuran		230	J	8.0	4000
Diethyl phthalate		ND		190	4000
Dimethyl phthalate		ND		210	4000

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Client Sample ID: **AREA-C-TRENCH-1_015_5-6(20151215)**

Lab Sample ID: 240-59175-1 Date Sampled: 12/15/2015 1447
Client Matrix: Solid % Moisture: 17.9 Date Received: 12/16/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211212	Lab File ID:	51220028.D
Dilution:	10			Initial Weight/Volume:	29.99 g
Analysis Date:	12/20/2015 2034			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		180	4000
Di-n-octyl phthalate		ND		96	4000
Fluoranthene		9300		6.7	4000
Fluorene		510	J	6.5	4000
Hexachlorobenzene		ND		26	4000
Hexachlorobutadiene		ND		68	4000
Hexachlorocyclopentadiene		ND		99	19000
Hexachloroethane		ND		110	4000
Indeno[1,2,3-cd]pyrene		1200	J	4.3	4000
Isophorone		ND		160	4000
Naphthalene		220	J	10	4000
Nitrobenzene		ND		27	4000
N-Nitrosodi-n-propylamine		ND		77	4000
N-Nitrosodiphenylamine		ND		260	4000
Pentachlorophenol		ND		110	4000
Phenol		ND		89	4000
Phenanthrene		4700		8.9	4000
Pyrene		8000		5.4	4000
3 & 4 Methylphenol		ND		240	4900

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	81		24 - 110
2-Fluorophenol (Surr)	67		24 - 110
2,4,6-Tribromophenol (Surr)	51		10 - 110
Nitrobenzene-d5 (Surr)	67		20 - 110
Phenol-d5 (Surr)	90		26 - 110
Terphenyl-d14 (Surr)	89		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Client Sample ID: **AREA-C-TRENCH-1_015_5-6(20151215)**

Lab Sample ID: 240-59175-1 Date Sampled: 12/15/2015 1447
Client Matrix: Solid Date Received: 12/16/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-211751	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-211507	Lab File ID:	51221012.D
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	250 mL
Analysis Date:	12/21/2015 1437			Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 1029			Injection Volume:	1 uL
Leach Date:	12/17/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.016
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	71		30 - 110
2-Fluorophenol (Surr)	57		20 - 110
Nitrobenzene-d5 (Surr)	75		28 - 110
Phenol-d5 (Surr)	48		21 - 110
Terphenyl-d14 (Surr)	69		48 - 110
2,4,6-Tribromophenol (Surr)	74		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Client Sample ID: **AREA-C-TRENCH-1_015_5-6(20151215)**

Lab Sample ID: 240-59175-1 Date Sampled: 12/15/2015 1447
Client Matrix: Solid % Moisture: 17.9 Date Received: 12/16/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-211457	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-211449	Lab File ID:	Y0121814.D
Dilution:	1.0			Initial Weight/Volume:	10.689 g
Analysis Date:	12/18/2015 1535			Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.3	11

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-59175-2 Date Sampled: 12/15/2015 0000
Client Matrix: Solid Date Received: 12/16/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-211457	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-211449	Lab File ID:	Y0121815.D
Dilution:	1.0			Initial Weight/Volume:	0.23 g
Analysis Date:	12/18/2015 1610			Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		87	430

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Client Sample ID: **AREA-C-TRENCH-1_015_5-6(20151215)**

Lab Sample ID: 240-59175-1 Date Sampled: 12/15/2015 1447
Client Matrix: Solid % Moisture: 17.9 Date Received: 12/16/2015 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-211963	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-211439	Lab File ID:	P14R122211.D
Dilution:	5.0			Initial Weight/Volume:	27.1 g
Analysis Date:	12/22/2015 1727			Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		53	J B	6.6	54

Client Sample ID: **AREA-C-TRENCH-1_015_5-6(20151215)**

Lab Sample ID: 240-59175-1 Date Sampled: 12/15/2015 1447
Client Matrix: Solid % Moisture: 17.9 Date Received: 12/16/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-211528	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-211321	Lab File ID:	I9121815A.asc
Dilution:	1.0			Initial Weight/Volume:	1.22 g
Analysis Date:	12/18/2015 1457			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3800		5.8	20
Antimony		0.77	J	0.48	1.0
Barium		150		0.41	20
Beryllium		0.20	J	0.026	0.50
Calcium		16000		23	500
Cadmium		0.22		0.021	0.20
Cobalt		5.1		0.047	5.0
Chromium		12	B	0.075	0.50
Copper		13		0.23	2.5
Iron		15000		3.2	10
Potassium		740		6.2	500
Magnesium		4300		5.2	500
Manganese		250		0.084	1.5
Silver		ND		0.063	0.50
Sodium		67	J	19	500
Nickel		12		0.080	4.0
Vanadium		12		0.20	5.0
Zinc		37		0.56	2.0
Arsenic		3.1		0.41	1.0
Lead		73		0.20	0.30
Selenium		ND		0.34	0.50
Thallium		0.15	J	0.13	1.0

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-211881	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-211510	Lab File ID:	I9122115A.asc
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/22/2015 0407			Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1041				
Leach Date:	12/17/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		0.0052	J	0.0024	0.30
Arsenic		0.0070	J B	0.0029	0.50
Barium		1.6	J	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0026	J	0.00014	0.10
Calcium		520		0.26	5.0
Chromium		0.0018	J B	0.00055	0.50
Cobalt		0.0026	J	0.00056	0.050
Copper		0.0034	J B	0.0019	1.0
Iron		0.018	J	0.013	0.10
Lead		0.027	J	0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Client Sample ID: **AREA-C-TRENCH-1_015_5-6(20151215)**

Lab Sample ID: 240-59175-1 Date Sampled: 12/15/2015 1447
Client Matrix: Solid Date Received: 12/16/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		74		0.055	5.0
Manganese		2.1		0.00046	0.015
Nickel		0.025	J B	0.00076	0.040
Potassium		9.5	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.051	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-211887	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1425			Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	12/17/2015 1800				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-211442	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-211344	Lab File ID:	121815AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.57 g
Analysis Date:	12/18/2015 0625			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1455				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.053	J	0.018	0.13

General Chemistry

Client Sample ID: **AREA-C-TRENCH-1_015_5-6(20151215)**

Lab Sample ID: 240-59175-1 Date Sampled: 12/15/2015 1447
Client Matrix: Solid % Moisture: 17.9 Date Received: 12/16/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.32	0.97	1.0	7196A
Analysis Batch: 240-212243	Analysis Date: 12/24/2015 0556					DryWt Corrected: Y	
Prep Batch: 240-212149	Prep Date: 12/23/2015 1049						
Cr (III)	14		mg/Kg	0.16	2.4	1.0	7196A
Analysis Batch: 240-212001	Analysis Date: 12/22/2015 1445					DryWt Corrected: Y	
Percent Solids	82		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211066	Analysis Date: 12/16/2015 1557					DryWt Corrected: N	
Percent Moisture	18		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211066	Analysis Date: 12/16/2015 1557					DryWt Corrected: N	

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	*	RPD of the LCS and LCSD exceeds the control limits
GC/MS Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-211277					
LCS 240-211311/2-A	Lab Control Sample	T	Solid	8260B	240-211311
LCS 240-211311/4-A	Lab Control Sample	T	Solid	8260B	240-211311
LCSD 240-211311/3-A	Lab Control Sample Duplicate	T	Solid	8260B	240-211311
LCSD 240-211311/5-A	Lab Control Sample Duplicate	T	Solid	8260B	240-211311
MB 240-211311/1-A	Method Blank	T	Solid	8260B	240-211311
Prep Batch: 240-211311					
LCS 240-211311/2-A	Lab Control Sample	T	Solid	5035	
LCS 240-211311/4-A	Lab Control Sample	T	Solid	5035	
LCSD 240-211311/3-A	Lab Control Sample Duplicate	T	Solid	5035	
LCSD 240-211311/5-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-211311/1-A	Method Blank	T	Solid	5035	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	5035	
240-59175-2	TRIP BLANK	T	Solid	5035	
Analysis Batch:240-211549					
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	8260B	240-211311
240-59175-2	TRIP BLANK	T	Solid	8260B	240-211311
Prep Batch: 240-211625					
LB 240-211625/1-A	Method Blank	P	Solid	1311	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	P	Solid	1311	
240-59286-J-1-A MS	Matrix Spike	P	Solid	1311	
240-59286-J-1-A MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-211823					
LB 240-211625/1-A	Method Blank	P	Solid	8260B	
LCS 240-211823/9	Lab Control Sample	T	Water	8260B	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	P	Solid	8260B	
240-59286-J-1-A MS	Matrix Spike	P	Solid	8260B	
240-59286-J-1-A MSD	Matrix Spike Duplicate	P	Solid	8260B	

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-211212					
LCS 240-211212/20-A	Lab Control Sample	T	Solid	3540C	
MB 240-211212/19-A	Method Blank	T	Solid	3540C	
240-59162-L-2-B MS	Matrix Spike	T	Solid	3540C	
240-59162-L-2-C MSD	Matrix Spike Duplicate	T	Solid	3540C	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	3540C	
Prep Batch: 240-211400					
240-59162-J-2-D MS	Matrix Spike	P	Solid	1311	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	P	Solid	1311	
Prep Batch: 240-211507					
LCS 240-211507/15-A	Lab Control Sample	T	Water	3510C	
MB 240-211507/14-A	Method Blank	T	Water	3510C	
240-59162-J-2-D MS	Matrix Spike	P	Solid	3510C	240-211400
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	P	Solid	3510C	240-211400
Analysis Batch:240-211630					
LCS 240-211212/20-A	Lab Control Sample	T	Solid	8270C	240-211212
MB 240-211212/19-A	Method Blank	T	Solid	8270C	240-211212
240-59162-L-2-B MS	Matrix Spike	T	Solid	8270C	240-211212
240-59162-L-2-C MSD	Matrix Spike Duplicate	T	Solid	8270C	240-211212
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	8270C	240-211212
Analysis Batch:240-211751					
LCS 240-211507/15-A	Lab Control Sample	T	Water	8270C	240-211507
MB 240-211507/14-A	Method Blank	T	Water	8270C	240-211507
240-59162-J-2-D MS	Matrix Spike	P	Solid	8270C	240-211507
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	P	Solid	8270C	240-211507

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Prep Batch: 240-211449					
LCS 240-211449/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-211449/10-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-211449/1-A	Method Blank	T	Solid	5035	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	5035	
240-59175-2	TRIP BLANK	T	Solid	5035	
Analysis Batch:240-211457					
LCS 240-211449/2-A	Lab Control Sample	T	Solid	WI-GRO	240-211449
LCSD 240-211449/10-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-211449
MB 240-211449/1-A	Method Blank	T	Solid	WI-GRO	240-211449
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	WI-GRO	240-211449
240-59175-2	TRIP BLANK	T	Solid	WI-GRO	240-211449

Report Basis
T = Total

GC Semi VOA					
Prep Batch: 240-211439					
LCS 240-211439/6-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-211439/7-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-211439/5-A	Method Blank	T	Solid	WI DRO PREP	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	WI DRO PREP	
Analysis Batch:240-211546					
LCS 240-211439/6-A	Lab Control Sample	T	Solid	WI-DRO	240-211439
MB 240-211439/5-A	Method Blank	T	Solid	WI-DRO	240-211439
Analysis Batch:240-211963					
LCSD 240-211439/7-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-211439
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	WI-DRO	240-211439

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-211321					
LCS 240-211321/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-211321/1-A	Method Blank	T	Solid	3050B	
240-59162-G-1-B MS	Matrix Spike	T	Solid	3050B	
240-59162-G-1-C MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	3050B	
Prep Batch: 240-211344					
LCS 240-211344/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-211344/1-A	Method Blank	T	Solid	7471A	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	7471A	
240-59175-1MS	Matrix Spike	T	Solid	7471A	
240-59175-1MSD	Matrix Spike Duplicate	T	Solid	7471A	
Prep Batch: 240-211400					
LB 240-211400/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-211400/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	P	Solid	1311	
240-59175-1MS	Matrix Spike	P	Solid	1311	
240-59175-1MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-211442					
LCS 240-211344/2-A	Lab Control Sample	T	Solid	7471A	240-211344
MB 240-211344/1-A	Method Blank	T	Solid	7471A	240-211344
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	7471A	240-211344
240-59175-1MS	Matrix Spike	T	Solid	7471A	240-211344
240-59175-1MSD	Matrix Spike Duplicate	T	Solid	7471A	240-211344
Prep Batch: 240-211510					
LCS 240-211510/3-A	Lab Control Sample	T	Water	3010A	
MB 240-211510/2-A	Method Blank	T	Water	3010A	
LB 240-211400/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-211400
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	P	Solid	3010A	240-211400
240-59175-1MS	Matrix Spike	P	Solid	3010A	240-211400
240-59175-1MSD	Matrix Spike Duplicate	P	Solid	3010A	240-211400

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-211512					
LCS 240-211512/3-A	Lab Control Sample	T	Water	7470A	
MB 240-211512/2-A	Method Blank	T	Water	7470A	
LB 240-211400/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-211400
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	P	Solid	7470A	240-211400
240-59175-1MS	Matrix Spike	P	Solid	7470A	240-211400
240-59175-1MSD	Matrix Spike Duplicate	P	Solid	7470A	240-211400
Analysis Batch:240-211528					
LCS 240-211321/2-A	Lab Control Sample	T	Solid	6010B	240-211321
MB 240-211321/1-A	Method Blank	T	Solid	6010B	240-211321
240-59162-G-1-B MS	Matrix Spike	T	Solid	6010B	240-211321
240-59162-G-1-C MSD	Matrix Spike Duplicate	T	Solid	6010B	240-211321
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	6010B	240-211321
Analysis Batch:240-211881					
LB 240-211400/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-211510
LCS 240-211510/3-A	Lab Control Sample	T	Water	6010B	240-211510
MB 240-211510/2-A	Method Blank	T	Water	6010B	240-211510
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	P	Solid	6010B	240-211510
240-59175-1MS	Matrix Spike	P	Solid	6010B	240-211510
240-59175-1MSD	Matrix Spike Duplicate	P	Solid	6010B	240-211510
Analysis Batch:240-211887					
LB 240-211400/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-211512
LCS 240-211512/3-A	Lab Control Sample	T	Water	7470A	240-211512
MB 240-211512/2-A	Method Blank	T	Water	7470A	240-211512
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	P	Solid	7470A	240-211512
240-59175-1MS	Matrix Spike	P	Solid	7470A	240-211512
240-59175-1MSD	Matrix Spike Duplicate	P	Solid	7470A	240-211512

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-211066					
240-59162-E-1 DU	Duplicate	T	Solid	Moisture	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	Moisture	
Analysis Batch:240-212001					
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	7196A	
Prep Batch: 240-212149					
LCS 240-212149/10-A	Lab Control Sample	T	Solid	3060A	
LCSI 240-212149/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
MB 240-212149/9-A	Method Blank	T	Solid	3060A	
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	3060A	
Analysis Batch:240-212243					
LCS 240-212149/10-A	Lab Control Sample	T	Solid	7196A	240-212149
LCSI 240-212149/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-212149
MB 240-212149/9-A	Method Blank	T	Solid	7196A	240-212149
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	T	Solid	7196A	240-212149

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	86	86	90	93
240-59175-2	TRIP BLANK	80	83	86	88
MB 240-211311/1-A		79	85	91	91
LCS 240-211311/2-A		88	96	96	95
LCS 240-211311/4-A		87	86	89	95
LCSD 240-211311/3-A		88	93	91	97
LCSD 240-211311/5-A		88	89	97	95

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-211625/1-A MB		86	105	99	98
LCS 240-211823/9		81	94	91	94
240-59286-J-1-A MS		79	92	82	93
240-59286-J-1-A MSD		80	95	85	91

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	85	73	89	93

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-211212/19-A		85	79	80	87	98	65
LCS 240-211212/20-A		83	86	89	91	86	57
240-59162-L-2-B MS		73	70	70	75	78	57
240-59162-L-2-C MSD		74	74	70	83	85	42

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	81	67	51	67	90	89

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-59175-1	AREA-C-TRENCH-1_015_5-6(20151215)	71	57	75	48	69	74
MB 240-211507/14-A		70	58	76	42	71	78
LCS 240-211507/15-A		73	59	77	43	81	77
240-59162-J-2-D MS		77	71	83	63	77	78

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Method Blank - Batch: 240-211311

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-211311/1-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147105.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1920	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	252	J	230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	ND		73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		18	250
Chlorobenzene	ND		13	250
Chlorodibromomethane	ND		20	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		10	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	197	J	85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Method Blank - Batch: 240-211311

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-211311/1-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147105.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1920	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		25	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		27	250
1,1,2-Trichloroethane	ND		19	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		17	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	79	26 - 141
Dibromofluoromethane (Surr)	85	30 - 122
1,2-Dichloroethane-d4 (Surr)	91	39 - 128
Toluene-d8 (Surr)	91	33 - 134

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211311

Method: 8260B
Preparation: 5035

LCS Lab Sample ID:	LCS 240-211311/2-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147101.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1755	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-211311/3-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147102.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1816	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	84	68	16 - 156	20	30		
Allyl chloride	87	62	50 - 150	33	30		*
Bromobenzene	96	101	72 - 120	6	30		
Bromochloromethane	101	97	56 - 128	4	30		
Bromodichloromethane	89	89	28 - 123	0	30		
Benzene	99	100	70 - 120	0	30		
Bromoform	74	73	10 - 120	2	30		
Bromomethane	55	55	10 - 120	2	30		
2-Butanone (MEK)	95	90	10 - 199	6	30		
Carbon disulfide	52	52	10 - 132	0	30		
Carbon tetrachloride	97	96	29 - 120	1	30		
Chlorobenzene	96	101	71 - 120	5	30		
Chlorodibromomethane	87	88	22 - 120	1	30		
Chloroethane	61	61	10 - 120	0	30		
Chloroform	95	95	63 - 120	0	30		
Chloromethane	82	87	25 - 120	6	30		
2-Chlorotoluene	101	99	68 - 122	2	30		
4-Chlorotoluene	95	100	68 - 122	5	30		
cis-1,2-Dichloroethene	99	101	60 - 125	2	30		
cis-1,3-Dichloropropene	89	91	25 - 120	2	30		
Cyclohexane	95	95	40 - 120	0	30		
1,2-Dibromo-3-Chloropropane	88	80	10 - 129	10	30		
1,2-Dibromoethane	99	102	47 - 123	3	30		
Dibromomethane	98	101	68 - 120	3	30		
1,2-Dichlorobenzene	97	97	68 - 120	0	30		
1,3-Dichlorobenzene	94	96	66 - 121	2	30		
1,4-Dichlorobenzene	95	94	65 - 120	1	30		
Dichlorodifluoromethane	62	65	10 - 120	5	30		
1,1-Dichloroethane	102	103	63 - 120	2	30		
1,2-Dichloroethane	103	100	68 - 120	4	30		
1,1-Dichloroethene	59	58	44 - 143	1	30		
Dichlorofluoromethane	71	70	40 - 160	2	30		
1,2-Dichloropropane	100	101	73 - 120	1	30		
1,3-Dichloropropane	100	100	74 - 120	0	30		
2,2-Dichloropropane	92	92	25 - 123	1	30		

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211311

Method: 8260B
Preparation: 5035

LCS Lab Sample ID:	LCS 240-211311/2-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147101.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1755	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-211311/3-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147102.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1816	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,1-Dichloropropene	110	111	60 - 123	0	30		
Ethylbenzene	102	108	66 - 120	5	30		
Ethyl ether	77	75	70 - 130	3	30		
Hexachlorobutadiene	103	106	34 - 135	3	30		
2-Hexanone	97	87	43 - 130	11	30		
Isopropylbenzene	107	111	61 - 123	4	30		
Methyl acetate	106	75	44 - 173	34	30		*
Methylcyclohexane	100	100	41 - 133	0	30		
Methylene Chloride	106	107	27 - 172	1	30		
4-Methyl-2-pentanone (MIBK)	97	96	49 - 121	1	30		
Methyl tert butyl ether	101	98	34 - 157	4	30		
m-Xylene & p-Xylene	100	106	67 - 120	6	30		
Naphthalene	87	88	37 - 126	1	30		
n-Butylbenzene	96	100	51 - 137	4	30		
N-Propylbenzene	100	104	64 - 130	4	30		
o-Xylene	104	112	68 - 120	8	30		
p-Isopropyltoluene	99	104	56 - 136	4	30		
sec-Butylbenzene	102	105	58 - 131	3	30		
Styrene	93	99	60 - 120	6	30		
tert-Butylbenzene	100	102	58 - 128	2	30		
1,1,1,2-Tetrachloroethane	108	108	27 - 121	1	30		
1,1,2,2-Tetrachloroethane	97	91	54 - 121	7	30		
Tetrachloroethene	99	101	58 - 131	2	30		
Tetrahydrofuran	96	90	70 - 130	7	30		
Toluene	102	105	66 - 123	3	30		
trans-1,2-Dichloroethene	99	97	58 - 121	1	30		
trans-1,3-Dichloropropene	97	101	22 - 122	4	30		
1,2,3-Trichlorobenzene	90	90	43 - 129	0	30		
1,2,4-Trichlorobenzene	88	90	41 - 135	2	30		
1,1,1-Trichloroethane	95	98	38 - 122	3	30		
1,1,2-Trichloroethane	96	96	74 - 120	0	30		
Trichloroethene	97	99	59 - 124	2	30		
Trichlorofluoromethane	76	74	17 - 145	3	30		
1,2,3-Trichloropropane	98	98	74 - 124	1	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	67	70	48 - 151	4	30		

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211311

Method: 8260B
Preparation: 5035

LCS Lab Sample ID:	LCS 240-211311/2-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147101.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1755	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-211311/3-A	Analysis Batch:	240-211277	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-211311	Lab File ID:	147102.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	12/17/2015 1816	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/17/2015 1054				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,2,4-Trimethylbenzene	99	102	62 - 133	3	30		
1,3,5-Trimethylbenzene	99	103	60 - 130	4	30		
Vinyl chloride	76	78	33 - 120	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	88	88	26 - 141
Dibromofluoromethane (Surr)	96	93	30 - 122
1,2-Dichloroethane-d4 (Surr)	96	91	39 - 128
Toluene-d8 (Surr)	95	97	33 - 134

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	87	88	26 - 141
Dibromofluoromethane (Surr)	86	89	30 - 122
1,2-Dichloroethane-d4 (Surr)	89	97	39 - 128
Toluene-d8 (Surr)	95	95	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Method Blank - Batch: 240-211823

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-211625/1-A	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248413.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 1801	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 1801				
Leach Date:	12/18/2015 1810				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	86	70 - 124
Dibromofluoromethane (Surr)	105	80 - 128
1,2-Dichloroethane-d4 (Surr)	99	80 - 121
Toluene-d8 (Surr)	98	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Lab Control Sample - Batch: 240-211823

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-211823/9	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	U1248414.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 1823	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 1823				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	987	99	80 - 120	
2-Butanone (MEK)	2000	1360	68	49 - 120	
Carbon tetrachloride	1000	867	87	54 - 122	
Chlorobenzene	1000	995	100	80 - 120	
Chloroform	1000	973	97	80 - 123	
1,2-Dichloroethane	1000	997	100	80 - 120	
1,1-Dichloroethene	1000	939	94	71 - 133	
Tetrachloroethene	1000	983	98	79 - 134	
Trichloroethene	1000	1060	106	78 - 130	
Vinyl chloride	1000	696	70	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	81	70 - 124
Dibromofluoromethane (Surr)	94	80 - 128
1,2-Dichloroethane-d4 (Surr)	91	80 - 121
Toluene-d8 (Surr)	94	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211823

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-59286-J-1-A MS	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248428.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 2344			Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 2344				5 mL
Leach Date:	12/18/2015 1810				

MSD Lab Sample ID:	240-59286-J-1-A MSD	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248429.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/22/2015 0008			Final Weight/Volume:	5 mL
Prep Date:	12/22/2015 0008				5 mL
Leach Date:	12/18/2015 1810				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	90	92	80 - 120	3	30		
2-Butanone (MEK)	59	65	49 - 120	9	30		
Carbon tetrachloride	73	75	60 - 120	2	30		
Chlorobenzene	89	97	80 - 120	8	30		
Chloroform	91	93	80 - 124	2	30		
1,2-Dichloroethane	90	92	80 - 120	2	30		
1,1-Dichloroethene	83	84	67 - 139	2	30		
Tetrachloroethene	94	94	74 - 138	0	30		
Trichloroethene	99	100	75 - 134	1	30		
Vinyl chloride	65	67	51 - 120	4	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	79	80	70 - 124
Dibromofluoromethane (Surr)	92	95	80 - 128
1,2-Dichloroethane-d4 (Surr)	82	85	80 - 121
Toluene-d8 (Surr)	93	91	80 - 120

Method Blank - Batch: 240-211212

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-211212/19-A	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/20/2015 1045	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Method Blank - Batch: 240-211212

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-211212/19-A	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/20/2015 1045	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	85	24 - 110
2-Fluorophenol (Surr)	79	24 - 110
Nitrobenzene-d5 (Surr)	80	20 - 110
Phenol-d5 (Surr)	87	26 - 110
Terphenyl-d14 (Surr)	98	36 - 110
2,4,6-Tribromophenol (Surr)	65	10 - 110

Lab Control Sample - Batch: 240-211212

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-211212/20-A	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/20/2015 1109	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	535	80	35 - 110	
2,2'-oxybis[1-chloropropane]	667	553	83	29 - 110	
2,4-Dichlorophenol	667	572	86	39 - 110	
2,4-Dimethylphenol	667	525	79	29 - 110	
2,4-Dinitrophenol	1330	443	33	10 - 110	J
2,4-Dinitrotoluene	667	611	92	48 - 110	
2,6-Dinitrotoluene	667	596	89	45 - 110	
2-Chloronaphthalene	667	509	76	32 - 110	
2,4,5-Trichlorophenol	667	477	72	25 - 110	
2-Chlorophenol	667	551	83	37 - 110	
2,4,6-Trichlorophenol	667	368	55	12 - 110	
2-Methylnaphthalene	667	561	84	36 - 110	
2-Methylphenol	667	532	80	41 - 110	
2-Nitroaniline	667	572	86	45 - 110	J
2-Nitrophenol	667	618	93	34 - 110	
3,3'-Dichlorobenzidine	1330	794	60	28 - 110	J
3-Nitroaniline	667	559	84	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	684	51	10 - 110	J
4-Bromophenyl phenyl ether	667	602	90	39 - 110	
4-Chloro-3-methylphenol	667	587	88	48 - 110	
4-Chloroaniline	667	441	66	30 - 110	
4-Chlorophenyl phenyl ether	667	559	84	40 - 110	
4-Nitroaniline	667	643	96	48 - 110	J
4-Nitrophenol	1330	1100	83	28 - 110	J
Acenaphthene	667	545	82	38 - 110	
Acenaphthylene	667	551	83	40 - 110	
Acetophenone	667	550	82	40 - 110	
Anthracene	667	582	87	48 - 110	
Atrazine	1330	1240	93	54 - 120	
Benzaldehyde	1330	1130	85	32 - 110	
Benzo[a]anthracene	667	562	84	50 - 110	
Benzo[a]pyrene	667	598	90	44 - 110	
Benzo[b]fluoranthene	667	593	89	43 - 110	
Benzo[g,h,i]perylene	667	593	89	51 - 110	
Benzo[k]fluoranthene	667	586	88	38 - 105	
Bis(2-chloroethoxy)methane	667	597	90	32 - 110	
Bis(2-chloroethyl)ether	667	552	83	34 - 110	
Bis(2-ethylhexyl) phthalate	667	608	91	50 - 110	
Butyl benzyl phthalate	667	603	90	51 - 110	
Caprolactam	1330	1220	92	44 - 114	
Carbazole	667	588	88	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Lab Control Sample - Batch: 240-211212

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-211212/20-A	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/20/2015 1109	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	566	85	50 - 110	
Dibenz(a,h)anthracene	667	622	93	51 - 110	
Dibenzofuran	667	544	82	43 - 110	
Diethyl phthalate	667	577	87	52 - 110	
Dimethyl phthalate	667	561	84	50 - 110	
Di-n-butyl phthalate	667	619	93	51 - 110	
Di-n-octyl phthalate	667	613	92	48 - 110	
Fluoranthene	667	606	91	51 - 110	
Fluorene	667	537	81	46 - 110	
Hexachlorobenzene	667	563	84	43 - 110	
Hexachlorobutadiene	667	569	85	29 - 110	
Hexachlorocyclopentadiene	667	411	62	12 - 110	J
Hexachloroethane	667	510	77	30 - 110	
Indeno[1,2,3-cd]pyrene	667	607	91	50 - 110	
Isophorone	667	569	85	36 - 110	
Naphthalene	667	555	83	36 - 110	
Nitrobenzene	667	552	83	32 - 110	
N-Nitrosodi-n-propylamine	667	580	87	38 - 110	
N-Nitrosodiphenylamine	1330	1160	87	46 - 110	
Pentachlorophenol	1330	767	58	10 - 110	
Phenol	667	531	80	38 - 110	
Phenanthrene	667	556	83	49 - 110	
Pyrene	667	523	78	49 - 110	
3 & 4 Methylphenol	667	547	82	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	83	24 - 110
2-Fluorophenol (Surr)	86	24 - 110
Nitrobenzene-d5 (Surr)	89	20 - 110
Phenol-d5 (Surr)	91	26 - 110
Terphenyl-d14 (Surr)	86	36 - 110
2,4,6-Tribromophenol (Surr)	57	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211212

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59162-L-2-B MS	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.14 g
Analysis Date:	12/20/2015 1749			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59162-L-2-C MSD	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.76 g
Analysis Date:	12/20/2015 1813			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	72	76	32 - 110	7	32		
2,2'-oxybis[1-chloropropane]	63	67	11 - 110	7	42		
2,4-Dichlorophenol	74	81	10 - 110	11	34		
2,4-Dimethylphenol	67	74	10 - 110	11	31		
2,4-Dinitrophenol	26	17	10 - 110	42	99	J	J
2,4-Dinitrotoluene	79	81	32 - 110	4	30		
2,6-Dinitrotoluene	79	84	35 - 110	7	30		
2-Chloronaphthalene	71	73	28 - 110	3	30		
2,4,5-Trichlorophenol	69	67	10 - 117	0	99		
2-Chlorophenol	65	74	10 - 110	14	47		
2,4,6-Trichlorophenol	58	47	10 - 110	21	38		J
2-Methylnaphthalene	69	81	10 - 133	16	42		
2-Methylphenol	70	76	24 - 110	8	51		
2-Nitroaniline	77	83	39 - 110	9	31	J	J
2-Nitrophenol	76	83	10 - 110	10	49		
3,3'-Dichlorobenzidine	20	34	10 - 110	50	56	J	J
3-Nitroaniline	58	73	10 - 110	24	30	J	J
4,6-Dinitro-2-methylphenol	34	24	10 - 110	35	55	J	J
4-Bromophenyl phenyl ether	75	89	33 - 110	18	30		
4-Chloro-3-methylphenol	75	85	25 - 110	13	54		
4-Chloroaniline	46	56	10 - 110	21	36	J	
4-Chlorophenyl phenyl ether	77	80	32 - 110	5	30		
4-Nitroaniline	56	69	10 - 110	23	48	J	J
4-Nitrophenol	74	78	10 - 113	6	49	J	J
Acenaphthene	74	94	22 - 110	23	99		
Acenaphthylene	77	83	24 - 110	9	99		
Acetophenone	62	69	31 - 110	11	43		
Anthracene	77	129	20 - 110	48	99		F1
Atrazine	75	85	45 - 118	14	30		
Benzaldehyde	60	66	23 - 110	11	42		
Benzo[a]anthracene	76	203	10 - 122	70	99		F1
Benzo[a]pyrene	69	168	10 - 110	64	99		F1

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211212

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59162-L-2-B MS	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.14 g
Analysis Date:	12/20/2015 1749			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59162-L-2-C MSD	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.76 g
Analysis Date:	12/20/2015 1813			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	67	212	12 - 118	73	99		E F1
Benzo[g,h,i]perylene	33	70	10 - 117	54	99		
Benzo[k]fluoranthene	86	163	10 - 121	55	99		F1
Bis(2-chloroethoxy)methane	72	75	26 - 110	5	37		
Bis(2-chloroethyl)ether	57	66	21 - 110	16	55		
Bis(2-ethylhexyl) phthalate	90	101	40 - 110	13	30		
Butyl benzyl phthalate	86	97	44 - 110	14	30		
Caprolactam	81	87	10 - 134	8	32		
Carbazole	71	100	34 - 110	33	30		F2
Chrysene	75	208	10 - 125	70	99		E F1
Dibenz(a,h)anthracene	46	66	14 - 113	31	99		
Dibenzofuran	72	83	29 - 110	15	30		
Diethyl phthalate	77	79	42 - 110	4	30		
Dimethyl phthalate	75	80	41 - 110	8	30		
Di-n-butyl phthalate	78	87	43 - 110	11	30		
Di-n-octyl phthalate	98	112	24 - 119	15	30		
Fluoranthene	80	292	10 - 110	80	99		E F1
Fluorene	72	90	23 - 110	23	99		
Hexachlorobenzene	71	79	34 - 110	12	30		
Hexachlorobutadiene	65	68	25 - 110	6	34		
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	49	47	12 - 110	2	50	J	J
Indeno[1,2,3-cd]pyrene	41	81	10 - 114	53	99		
Isophorone	72	74	29 - 110	4	38		
Naphthalene	65	74	10 - 111	13	99		
Nitrobenzene	66	68	23 - 110	4	41		
N-Nitrosodi-n-propylamine	65	69	26 - 110	7	42		
N-Nitrosodiphenylamine	74	84	22 - 110	14	30		
Pentachlorophenol	28	24	10 - 110	15	50		J
Phenol	70	77	17 - 110	10	53		
Phenanthrene	80	259	10 - 166	85	99		E F1
Pyrene	81	284	10 - 147	81	99		E F1

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211212

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59162-L-2-B MS	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.14 g
Analysis Date:	12/20/2015 1749			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59162-L-2-C MSD	Analysis Batch:	240-211630	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211212	Lab File ID:	51220022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.76 g
Analysis Date:	12/20/2015 1813			Final Weight/Volume:	2 mL
Prep Date:	12/17/2015 0642			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
3 & 4 Methylphenol	72	79	25 - 110	10	50		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	73	74	24 - 110
2-Fluorophenol (Surr)	70	74	24 - 110
Nitrobenzene-d5 (Surr)	70	70	20 - 110
Phenol-d5 (Surr)	75	83	26 - 110
Terphenyl-d14 (Surr)	78	85	36 - 110
2,4,6-Tribromophenol (Surr)	57	42	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Method Blank - Batch: 240-211507

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-211507/14-A	Analysis Batch:	240-211751	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-211507	Lab File ID:	51221003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/21/2015 1106	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 1029			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.016
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	70	30 - 110
2-Fluorophenol (Surr)	58	20 - 110
Nitrobenzene-d5 (Surr)	76	28 - 110
Phenol-d5 (Surr)	42	21 - 110
Terphenyl-d14 (Surr)	71	48 - 110
2,4,6-Tribromophenol (Surr)	78	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Lab Control Sample - Batch: 240-211507

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-211507/15-A	Analysis Batch:	240-211751	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-211507	Lab File ID:	51221004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/21/2015 1129	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 1029			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0590	74	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0600	75	54 - 110	
Pyridine	0.0800	0.0498	62	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0606	76	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0626	78	46 - 110	
2-Methylphenol	0.0800	0.0561	70	44 - 111	
Hexachlorobenzene	0.0800	0.0683	85	50 - 110	
Hexachlorobutadiene	0.0800	0.0596	75	34 - 110	
Hexachloroethane	0.0800	0.0571	71	41 - 110	
Nitrobenzene	0.0800	0.0579	72	40 - 110	
Pentachlorophenol	0.160	0.130	81	12 - 110	
3 & 4 Methylphenol	0.0800	0.0520	65	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	73	30 - 110
2-Fluorophenol (Surr)	59	20 - 110
Nitrobenzene-d5 (Surr)	77	28 - 110
Phenol-d5 (Surr)	43	21 - 110
Terphenyl-d14 (Surr)	81	48 - 110
2,4,6-Tribromophenol (Surr)	77	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Matrix Spike - Batch: 240-211507

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-59162-J-2-D MS	Analysis Batch:	240-211751	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-211507	Lab File ID:	51221011.D
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	250 mL
Analysis Date:	12/21/2015 1413	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 1029			Injection Volume:	1 uL
Leach Date:	12/17/2015 1800				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0560	70	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0644	81	42 - 110	
Pyridine	ND	0.0800	0.0500	63	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0657	82	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0634	79	35 - 110	
2-Methylphenol	ND	0.0800	0.0551	69	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0654	82	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0654	82	28 - 110	
Hexachloroethane	ND	0.0800	0.0591	74	26 - 110	
Nitrobenzene	ND	0.0800	0.0613	77	32 - 110	
Pentachlorophenol	ND	0.160	0.135	84	10 - 124	
3 & 4 Methylphenol	ND	0.0800	0.0529	66	29 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	77	30 - 110
2-Fluorophenol (Surr)	71	20 - 110
Nitrobenzene-d5 (Surr)	83	28 - 110
Phenol-d5 (Surr)	63	21 - 110
Terphenyl-d14 (Surr)	77	48 - 110
2,4,6-Tribromophenol (Surr)	78	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Method Blank - Batch: 240-211449 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-211449/1-A	Analysis Batch:	240-211457	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-211449	Lab File ID:	Y0121809.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/18/2015 1245	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211449 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-211449/2-A	Analysis Batch:	240-211457	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-211449	Lab File ID:	Y0121810.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/18/2015 1317	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-211449/10-A	Analysis Batch:	240-211457	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-211449	Lab File ID:	Y0121818.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/18/2015 1754	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	89	86	80 - 120	3	20		

Method Blank - Batch: 240-211439

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-211439/5-A	Analysis Batch:	240-211546	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-211439	Lab File ID:	P14R121816.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/18/2015 2102	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	1.12	J	0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211439

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-211439/6-A	Analysis Batch:	240-211546	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-211439	Lab File ID:	P14R121817.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/18/2015 2129	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-211439/7-A	Analysis Batch:	240-211963	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-211439	Lab File ID:	P14R122208.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/22/2015 1605	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	102	107	70 - 120	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Method Blank - Batch: 240-211321

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-211321/1-A	Analysis Batch:	240-211528	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211321	Lab File ID:	I9121815A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/18/2015 1419	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	0.0818	J	0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	ND		5.2	500
Manganese	ND		0.084	1.5
Sodium	ND		19	500
Nickel	ND		0.080	4.0
Potassium	ND		6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Vanadium	ND		0.20	5.0
Selenium	ND		0.34	0.50
Zinc	ND		0.56	2.0
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Lab Control Sample - Batch: 240-211321

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-211321/2-A	Analysis Batch:	240-211528	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211321	Lab File ID:	I9121815A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/18/2015 1423	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	214	107	80 - 120	
Antimony	50.0	52.3	105	80 - 120	
Barium	200	198	99	80 - 120	
Beryllium	5.00	5.01	100	80 - 120	
Cadmium	5.00	5.07	101	80 - 120	
Calcium	5000	5030	101	80 - 120	
Chromium	20.0	19.1	96	80 - 120	
Cobalt	50.0	52.2	104	80 - 120	
Copper	25.0	24.1	96	80 - 120	
Iron	100	100	100	80 - 120	
Magnesium	5000	4950	99	80 - 120	
Manganese	50.0	49.9	100	80 - 120	
Sodium	5000	5010	100	80 - 120	
Nickel	50.0	51.8	104	80 - 120	
Potassium	5000	4870	97	80 - 120	
Silver	5.00	4.97	99	80 - 120	
Arsenic	200	205	103	80 - 120	
Lead	50.0	51.9	104	80 - 120	
Vanadium	50.0	49.3	99	80 - 120	
Selenium	200	205	102	80 - 120	
Zinc	50.0	52.5	105	80 - 120	
Thallium	200	199	100	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211321

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-59162-G-1-B MS	Analysis Batch:	240-211528	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211321	Lab File ID:	I9121815A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.14 g
Analysis Date:	12/18/2015 1355			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59162-G-1-C MSD	Analysis Batch:	240-211528	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211321	Lab File ID:	I9121815A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.14 g
Analysis Date:	12/18/2015 1359			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1120				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	1318	1850	75 - 125	9	20	4	4
Antimony	109	145	75 - 125	18	20		F1
Barium	-217	-126	75 - 125	22	20	4	4 F2
Beryllium	86	98	75 - 125	13	20		
Cadmium	83	96	75 - 125	11	20		
Calcium	50	72	75 - 125	19	20	F1	F1
Chromium	2077	2752	75 - 125	8	20	4	4
Cobalt	86	98	75 - 125	13	20		
Copper	219	291	75 - 125	10	20	4	4
Iron	-884	-248	75 - 125	22	20	4	4 F2
Magnesium	75	92	75 - 125	18	20		
Manganese	35	63	75 - 125	17	20	F1	F1
Sodium	88	100	75 - 125	12	20		
Nickel	91	107	75 - 125	12	20		
Potassium	82	96	75 - 125	14	20		
Silver	88	99	75 - 125	11	20		
Arsenic	74	85	75 - 125	14	20	F1	
Vanadium	82	95	75 - 125	14	20		
Selenium	80	90	75 - 125	12	20		
Zinc	236	324	75 - 125	11	20	4	4
Thallium	79	87	75 - 125	10	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

TCLP SPLPE Leachate Blank - Batch: 240-211510

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-211400/1-B	Analysis Batch:	240-211881	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211510	Lab File ID:	I9122115A.asc
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/22/2015 0354	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1041				
Leach Date:	12/17/2015 1800				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.000722	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	0.00256	J	0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Nickel	0.00150	J	0.00076	0.040
Potassium	3.93	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00578	J	0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Method Blank - Batch: 240-211510

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-211510/2-A	Analysis Batch:	240-211881	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-211510	Lab File ID:	I9122115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/22/2015 0358	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1041				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	ND		0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	ND		0.00046	0.015
Nickel	ND		0.00076	0.040
Potassium	0.818	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Lab Control Sample - Batch: 240-211510

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-211510/3-A	Analysis Batch:	240-211881	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-211510	Lab File ID:	I9122115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/22/2015 0403	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1041				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	2.22	111	50 - 150	
Antimony	0.500	0.539	108	50 - 150	
Barium	2.00	2.08	104	50 - 150	J
Beryllium	0.0500	0.0518	104	50 - 150	
Cadmium	0.0500	0.0519	104	50 - 150	J
Calcium	50.0	51.1	102	50 - 150	
Chromium	0.200	0.207	104	50 - 150	J
Cobalt	0.500	0.532	106	50 - 150	
Copper	0.250	0.267	107	50 - 150	J
Iron	1.00	1.02	102	50 - 150	
Magnesium	50.0	50.9	102	50 - 150	
Manganese	0.500	0.544	109	50 - 150	
Nickel	0.500	0.543	109	50 - 150	
Potassium	50.0	55.2	110	50 - 150	
Silver	0.0500	0.0581	116	50 - 150	J
Arsenic	2.00	2.21	110	50 - 150	
Lead	0.500	0.468	94	50 - 150	J
Vanadium	0.500	0.519	104	50 - 150	
Selenium	2.00	2.24	112	50 - 150	
Zinc	0.500	0.572	114	50 - 150	J
Thallium	2.00	1.97	99	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211510

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID: 240-59175-1
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 12/22/2015 0419
Prep Date: 12/18/2015 1041
Leach Date: 12/17/2015 1800

Analysis Batch: 240-211881
Prep Batch: 240-211510
Leach Batch: 240-211400

Instrument ID: I9
Lab File ID: I9122115A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-59175-1
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 12/22/2015 0424
Prep Date: 12/18/2015 1041
Leach Date: 12/17/2015 1800

Analysis Batch: 240-211881
Prep Batch: 240-211510
Leach Batch: 240-211400

Instrument ID: I9
Lab File ID: I9122115A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	103	108	75 - 125	6	20		
Antimony	106	105	75 - 125	0	20	J	J
Barium	103	98	75 - 125	5	20		
Beryllium	99	97	75 - 125	2	20		
Cadmium	108	103	75 - 125	5	20		
Calcium	112	69	75 - 125	4	20	4	4
Chromium	103	98	75 - 125	5	20		
Cobalt	106	102	75 - 125	4	20		
Copper	105	102	75 - 125	3	20	J	J
Iron	101	97	75 - 125	5	20		
Magnesium	100	93	75 - 125	3	20		
Manganese	88	80	75 - 125	1	20	4	4
Nickel	106	102	75 - 125	4	20		
Potassium	102	98	75 - 125	4	20		
Silver	112	108	75 - 125	3	20	J	J
Arsenic	108	104	75 - 125	4	20		
Lead	99	94	75 - 125	5	20		
Vanadium	104	101	75 - 125	4	20		
Selenium	109	105	75 - 125	4	20	J	J
Zinc	111	104	75 - 125	6	20	J	J
Thallium	101	99	75 - 125	2	20	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

TCLP SPLPE Leachate Blank - Batch: 240-211512

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-211400/1-C	Analysis Batch:	240-211887	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1337	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	12/17/2015 1800				

Analyte	Result	Qual	MDL	RL
Mercury	0.000103	J	0.000090	0.0020

Method Blank - Batch: 240-211512

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-211512/2-A	Analysis Batch:	240-211887	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1339	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-211512

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-211512/3-A	Analysis Batch:	240-211887	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1424	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00481	96	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211512

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-59175-1	Analysis Batch:	240-211887	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1427			Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	12/17/2015 1800				

MSD Lab Sample ID:	240-59175-1	Analysis Batch:	240-211887	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-211512	Lab File ID:	122115AH1.PRN
Dilution:	1.0	Leach Batch:	240-211400	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2015 1428			Final Weight/Volume:	50 mL
Prep Date:	12/18/2015 1400				
Leach Date:	12/17/2015 1800				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	98	92	80 - 120	6	20		

Method Blank - Batch: 240-211344

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-211344/1-A	Analysis Batch:	240-211442	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211344	Lab File ID:	121815AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	12/18/2015 0539	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1455				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-211344

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-211344/2-A	Analysis Batch:	240-211442	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211344	Lab File ID:	121815AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	12/18/2015 0541	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1455				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.839	101	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211344

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-59175-1	Analysis Batch:	240-211442	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211344	Lab File ID:	121815AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.56 g
Analysis Date:	12/18/2015 0543			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1455				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59175-1	Analysis Batch:	240-211442	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211344	Lab File ID:	121815AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.56 g
Analysis Date:	12/18/2015 0544			Final Weight/Volume:	100 mL
Prep Date:	12/17/2015 1455				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	95	100	80 - 120	4	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

Method Blank - Batch: 240-212149

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-212149/9-A	Analysis Batch:	240-212243	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-212149	Lab File ID:	212149.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	12/24/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/23/2015 1049				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.26	0.80

Lab Control Sample - Batch: 240-212149

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCS 240-212149/10-A	Analysis Batch:	240-212243	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-212149	Lab File ID:	212149.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	12/24/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/23/2015 1049				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	18.7	93	80 - 120	

Lab Control Sample Insoluble - Batch: 240-212149

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-212149/11-A	Analysis Batch:	240-212243	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-212149	Lab File ID:	212149.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	12/24/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/23/2015 1049				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	510	79	75 - 125	

Client: ARCADIS U.S., Inc. Job Number: 240-59175-1

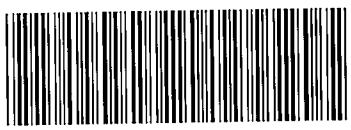
Duplicate - Batch: 240-211066

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-59162-E-1 DU	Analysis Batch:	240-211066	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/16/2015 1557	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	74	74	0.6	20	
Percent Moisture	26	26	2	20	

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-59175 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica Michigan
~~10448 Citation Drive~~
~~Suite 200~~
~~Brighton, MI 48116~~
~~Phone: 810.229.2753 Fax:~~

NORTH CANTON OH
4101 Shuffel Drive NW.
North Canton, OH 44720
330-497-9396

Chain of Custody Record

3,8 / C3,5

062631

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 12-15-15	COC No:
Company Name: ARCADIS	Tel/Fax: 269-832-7428	Lab Contact: Denise Pohl	Carrier: Gary Becker	2 of 2 COCs
Address: 430 First Avenue North, Suite 720	Analysis Turnaround Time			Sampler: Adam Thompson
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below ____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St. Paul MN	☐ 2 days			Job / SDG No.: 240066 38
PO # MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	GRO (w/ Mod Method)	DRO (w/ Mod Method)	SVOCs (8270)	TAL Metals (6010)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP TAL Metals (1311/6010)	Moisture content	PCBs (8082)	Sample Specific Notes:
Area-C-Trench-1_015.5-6(20151215)	12/15/15	1447	G	SO	11	N	N	2	2	1	1	1	1	1	1	1	1	
Temp Blank																		
Trip Blank	12/15/15																	
								6	6	1	1	1	1	1	1	1	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

* Chromium VI and Chromium III speciation on TAL metals and TCLP ~~TAL~~ metals analysis

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	ARCADIS	12/15/15 1630		TAmerica	12-15-15 1630
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAmerica	12-15-15		TA-Canton	12/16/15 930
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

12/30/2015

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 59175

Client Arcadis Site Name

Cooler unpacked by:

Cooler Received on 12/16/15 Opened on 12/16/15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 53 (CF +0.1 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN# 48 (CF -0.3 °C) Observed Cooler Temp. 3.8 °C Corrected Cooler Temp. 3.5 °C ☐ See Multiple Cooler Form

~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~

IR GUN# 8 (CF -0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2.	Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
	-Were custody seals on the outside of the cooler(s) signed & dated?	Yes	No NA
	-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
3.	Shippers' packing slip attached to the cooler(s)?	Yes	No
4.	Did custody papers accompany the sample(s)?	Yes	No
5.	Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6.	Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7.	Did all bottles arrive in good condition (Unbroken)?	Yes	No
8.	Could all bottle labels be reconciled with the COC?	Yes	No
9.	Were correct bottle(s) used for the test(s) indicated?	Yes	No
10.	Sufficient quantity received to perform indicated analyses?	Yes	No
11.	Were sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC559158
12.	Were VOAs on the COC?	Yes	No
13.	Were air bubbles >6 mm in any VOA vials?	Yes	No NA
14.	Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
15.	Was a LL Hg or Me Hg trip blank present?	Yes	No

Contacted PM Date by via Verbal Voice Mail Other

Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

December 31, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 59175-1
Sample date: 2015-12-15
Report received by CADENA: 2015-12-30
Initial Data Verification completed by CADENA: 2015-12-31

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch 211311 did not include MS recovery data due to insufficient sample volume available for spiking according to the laboratory submittal case narrative.

GCMS VOC QC batch 211311 method blank had detections below the RL for acetone and methylene chloride. Client sample -001 methylene chloride result should be considered to be non-detect at the RL and qualified with a UB flag.

GCMS VOC QC batch 211311 LCS/LCSduplicate RPD was an outlier for methyl acetate. Qualification of client sample results was not required based on this QC outlier alone.

GCMS VOC/GRO trip blank had a detection below the RL for methylene chloride. Client sample results associated with these trip blank detections were already qualified based on method blank detections so no further qualification was required based on the trip blank detections.

GCMS SVOC QC batch 211212 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results is not required based on these sample-specific QC outliers.

WI-GRO and WI-DRO sample and batch QC did not include surrogate recovery or MS/MSD recovery information.

WI-DRO QC batch method blank had a detection below the RL. Qualification of client sample results was not required based on this method blank detection.

Metals method blanks had detections below the RL in QC batch 211510 for chromium, copper, nickel, potassium and arsenic and in QC batch 211321 for chromium and QC batch 211512 for mercury. Client sample -001 TCLP/SPLP chromium, copper and arsenic results should be considered to be non-detect at the RL and qualified with a UB flag and client sample -001 TCLP/SPLP potassium results non-detect at the concentration reported and qualified with a B flag.

Metals sample -001 MS/MSD recoveries calcium and manganese were not considered to be statistically reliable due to elevated levels of target analyte relative to the amount spiked (4X rule) so were not used to qualify results.

Metals QC batch 211311 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results is not required based on these sample-specific QC outliers.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

1 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s). 1 Trip blank was analyzed for GCMS VOC and GRO parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 59175-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240591751	AREA-C-TRENCH-1_015_5-6(201512	12/15/2015	2:47:00	X	X	X	X	X	X	X	X
240591752	TRIP BLANK	12/15/2015	12:00:00	X		X					

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 59175-1

Sample Name: AREA-C-TRENCH-1_015_5-6(201512
Lab Sample ID: 240591751
Sample Date: 12/15/2015

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC					
OSW-8260B					
Methylene Chloride	75-09-2	190	310	ug/kg	UB
Metals					
OSW-6010B					
Arsenic	7440-38-2	0.0070	0.50	mg/l	UB
Chromium	7440-47-3	0.0018	0.50	mg/l	UB
Copper	7440-50-8	0.0034	1.0	mg/l	UB
Potassium	7440-09-7	9.5	5.0	mg/l	B

ANALYTICAL REPORT

Job Number: 240-59228-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
12/30/2015 4:03 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
12/30/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-59228-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 12/17/2015 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)
Sample AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) was analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The sample was leached on 12/18/2015 and analyzed on 12/21/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)
Samples AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) and MB-01 (20151216) (240-59228-2) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The sample was prepared on 12/17/2015 and analyzed on 12/22/2015.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-211406 and analytical batch 240-211919 on these samples AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) and MB-01 (20151216) (240-59228-2) .

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)
Sample AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) was analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The sample was leached on 12/21/2015, prepared on 12/22/2015 and analyzed on 12/24/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

3 & 4 Methylphenol failed the recovery criteria low for the MS of sample 240-59183-3 in batch 240-212275.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)
Sample AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) was analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The sample was prepared on 12/18/2015 and analyzed on 12/21/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Isophorone was detected in method blank MB 240-211448/17-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol and Hexachlorocyclopentadiene failed the recovery criteria low for the MS of sample AREA C-TRENCH-5_00_3-4 (20151216)MS (240-59228-1) in batch 240-211747.

2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol and Hexachlorocyclopentadiene failed the recovery criteria low for the MSD of sample AREA C-TRENCH-5_00_3-4 (20151216)MSD (240-59228-1) in batch 240-211747. 2,4,6-Trichlorophenol exceeded the RPD limit.

Refer to the QC report for details.

Method(s) 8270C: The following samples were diluted due to the nature of the sample matrix: (240-59183-A-3-E) and (240-59183-A-3-F MS). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO
Samples AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) and MB-01 (20151216) (240-59228-2) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared and analyzed on 12/18/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO
Sample AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) was analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The sample was prepared on 12/18/2015 and analyzed on 12/22/2015.

WI Diesel Range Organics (C10-C28) was detected in method blank MB 240-211439/5-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) mix : AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)
Sample AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The sample was leached on 12/21/2015, prepared on 12/22/2015 and analyzed on 12/23/2015.

Chromium, Manganese and Potassium were detected in method blank MB 240-211944/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Several analytes were detected in method blank LB 240-211830/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Zinc failed the recovery criteria low for the MSD of sample 240-59183-4 in batch 240-212146. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)
Sample AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The sample was prepared on 12/18/2015 and analyzed on 12/21/2015.

Chromium, Magnesium, Potassium, Sodium and Vanadium were detected in method blank MB 240-211543/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the

associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Antimony failed the recovery criteria low for the MS of sample AREA C-TRENCH-5_00_3-4 (20151216)MS (240-59228-1) in batch 240-211881. Aluminum, Calcium, Iron and Manganese failed the recovery criteria high.

For the MSD of sample AREA C-TRENCH-5_00_3-4 (20151216)MSD (240-59228-1) in batch 240-211881, Antimony, Calcium and Manganese failed the recovery criteria low. Aluminum and Iron failed the recovery criteria high. Also, Calcium exceeded the RPD limit.

Refer to the QC report for details.

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 212146 recovered above the upper control limit for aluminum, chromium, iron, thallium and zinc. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY

Sample AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The sample was leached on 12/21/2015, prepared on 12/22/2015 and analyzed on 12/23/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Sample AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) was analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The sample was prepared on 12/18/2015 and analyzed on 12/21/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM

Sample AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) was analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The sample was prepared on 12/23/2015 and analyzed on 12/24/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM

Sample AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) was analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The sample was analyzed on 12/27/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Sample AREA C-TRENCH-5_00_3-4 (20151216) (240-59228-1) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The sample was analyzed on 12/21/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59228-1	**AREA C-TRENCH-5_00_3-4 (20151216)**					
Methylene Chloride		290	J B	320	ug/Kg	8260B
Naphthalene		93	J	320	ug/Kg	8260B
Toluene		13	J	320	ug/Kg	8260B
Benzo[a]anthracene		7.1	J	410	ug/Kg	8270C
Benzo[a]pyrene		6.6	J	410	ug/Kg	8270C
Benzo[b]fluoranthene		12	J	410	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		33	J	410	ug/Kg	8270C
Chrysene		8.5	J	410	ug/Kg	8270C
Fluoranthene		15	J	410	ug/Kg	8270C
Isophorone		18	J B	410	ug/Kg	8270C
Phenanthrene		12	J	410	ug/Kg	8270C
Pyrene		16	J	410	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		12	B	11	mg/Kg	WI-DRO
Aluminum		7800		19	mg/Kg	6010B
Barium		40		19	mg/Kg	6010B
Beryllium		0.47		0.47	mg/Kg	6010B
Calcium		21000	F2	470	mg/Kg	6010B
Cadmium		0.057	J	0.19	mg/Kg	6010B
Cobalt		12		4.7	mg/Kg	6010B
Chromium		14	B	0.47	mg/Kg	6010B
Copper		12		2.4	mg/Kg	6010B
Iron		13000		9.5	mg/Kg	6010B
Potassium		3100	B	470	mg/Kg	6010B
Magnesium		5800	B	470	mg/Kg	6010B
Manganese		350		1.4	mg/Kg	6010B
Sodium		120	J B	470	mg/Kg	6010B
Nickel		24		3.8	mg/Kg	6010B
Vanadium		12	B	4.7	mg/Kg	6010B
Zinc		24		1.9	mg/Kg	6010B
Arsenic		4.6		0.95	mg/Kg	6010B
Lead		5.8		0.28	mg/Kg	6010B
Cr (III)		17		2.5	mg/Kg	7196A
Percent Solids		81		0.10	%	Moisture
Percent Moisture		19		0.10	%	Moisture
TCLP						
Arsenic		0.0063	J	0.50	mg/L	6010B
Barium		0.36	J	10	mg/L	6010B
Cadmium		0.00078	J	0.10	mg/L	6010B
Calcium		400		5.0	mg/L	6010B
Chromium		0.0072	J B ^	0.50	mg/L	6010B
Cobalt		0.057	B	0.050	mg/L	6010B
Copper		0.0046	J	1.0	mg/L	6010B
Iron		0.029	J ^	0.10	mg/L	6010B
Magnesium		79		5.0	mg/L	6010B
Manganese		3.8	B	0.015	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Nickel		0.065	B	0.040	mg/L	6010B
Potassium		7.3	B	5.0	mg/L	6010B
Zinc		0.027	J ^	1.0	mg/L	6010B
240-59228-2	**MB-01 (20151216)**					
Methylene Chloride		240	J B	250	ug/Kg	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction			SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction			SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction			SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Method	Analyst	Analyst ID
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Dillon, William K	WKD
SW846 7471A	Lecorchick, Willis A	WAL
SW846 7196A	Counts, Karen	KLC
SW846 7196A	Grossman, Lucas	LKG
EPA Moisture	Harshman, Tom	TPH

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	Solid	12/16/2015 1450	12/17/2015 0930
240-59228-2	MB-01 (20151216)	Solid	12/16/2015 0000	12/17/2015 0930

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Client Sample ID: **AREA C-TRENCH-5_00_3-4 (20151216)**

Lab Sample ID: 240-59228-1 Date Sampled: 12/16/2015 1450
Client Matrix: Solid % Moisture: 18.9 Date Received: 12/17/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211406	Lab File ID:	147194.D
Dilution:	1.0			Initial Weight/Volume:	9.73 g
Analysis Date:	12/22/2015 1257			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 2155				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		290	1300
Allyl chloride		ND		38	630
Benzene		ND		11	320
Bromobenzene		ND		16	320
Bromochloromethane		ND		89	320
Bromodichloromethane		ND		48	320
Bromoform		ND		77	320
Bromomethane		ND		65	320
2-Butanone (MEK)		ND		92	1300
Carbon disulfide		ND		71	320
Carbon tetrachloride		ND		23	320
Chlorobenzene		ND		16	320
Chlorodibromomethane		ND		25	320
Chloroethane		ND		65	320
Chloroform		ND		46	320
Chloromethane		ND		61	320
2-Chlorotoluene		ND		52	320
4-Chlorotoluene		ND		33	320
cis-1,2-Dichloroethene		ND		48	320
cis-1,3-Dichloropropene		ND		28	320
Cyclohexane		ND		38	630
1,2-Dibromo-3-Chloropropane		ND		90	630
1,2-Dibromoethane		ND		41	320
Dibromomethane		ND		63	320
1,2-Dichlorobenzene		ND		24	320
1,3-Dichlorobenzene		ND		38	320
1,4-Dichlorobenzene		ND		52	320
Dichlorodifluoromethane		ND		77	320
1,1-Dichloroethane		ND		44	320
1,2-Dichloroethane		ND		13	320
1,1-Dichloroethene		ND		38	320
Dichlorofluoromethane		ND		42	630
1,2-Dichloropropane		ND		41	320
1,3-Dichloropropane		ND		29	320
2,2-Dichloropropane		ND		66	320
1,1-Dichloropropene		ND		48	320
Ethylbenzene		ND		44	320
Ethyl ether		ND		120	630
Hexachlorobutadiene		ND		56	320
2-Hexanone		ND		110	1300
Isopropylbenzene		ND		16	320
Methyl acetate		ND		70	630
Methylcyclohexane		ND		48	630
Methylene Chloride		290	J B	110	320
4-Methyl-2-pentanone (MIBK)		ND		71	1300
Methyl tert butyl ether		ND		38	320

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Client Sample ID: **AREA C-TRENCH-5_00_3-4 (20151216)**

Lab Sample ID: 240-59228-1 Date Sampled: 12/16/2015 1450
Client Matrix: Solid % Moisture: 18.9 Date Received: 12/17/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211406	Lab File ID:	147194.D
Dilution:	1.0			Initial Weight/Volume:	9.73 g
Analysis Date:	12/22/2015 1257			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 2155				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		25	320
Naphthalene		93	J	33	320
n-Butylbenzene		ND		27	320
N-Propylbenzene		ND		77	320
o-Xylene		ND		22	320
p-Isopropyltoluene		ND		32	320
sec-Butylbenzene		ND		20	320
Styrene		ND		34	320
tert-Butylbenzene		ND		43	320
1,1,1,2-Tetrachloroethane		ND		62	320
1,1,2,2-Tetrachloroethane		ND		32	320
Tetrachloroethene		ND		34	320
Tetrahydrofuran		ND		150	1300
Toluene		13	J	13	320
trans-1,2-Dichloroethene		ND		33	320
trans-1,3-Dichloropropene		ND		33	320
1,2,3-Trichlorobenzene		ND		49	320
1,2,4-Trichlorobenzene		ND		38	320
1,1,1-Trichloroethane		ND		34	320
1,1,2-Trichloroethane		ND		24	320
Trichloroethene		ND		49	320
Trichlorofluoromethane		ND		44	320
1,2,3-Trichloropropane		ND		130	320
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		53	320
1,2,4-Trimethylbenzene		ND		16	320
1,3,5-Trimethylbenzene		ND		19	320
Vinyl chloride		ND		22	320

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	81		26 - 141
Dibromofluoromethane (Surr)	71		30 - 122
1,2-Dichloroethane-d4 (Surr)	71		39 - 128
Toluene-d8 (Surr)	81		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Client Sample ID: **AREA C-TRENCH-5_00_3-4 (20151216)**

Lab Sample ID: 240-59228-1 Date Sampled: 12/16/2015 1450
Client Matrix: Solid Date Received: 12/17/2015 0930

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248425.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 2233			Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 2233				
Leach Date:	12/18/2015 1810				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	86		80 - 121
4-Bromofluorobenzene (Surr)	80		70 - 124
Toluene-d8 (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	93		80 - 128

Client Sample ID: **MB-01 (20151216)**

Lab Sample ID: 240-59228-2 Date Sampled: 12/16/2015 0000
Client Matrix: Solid Date Received: 12/17/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211406	Lab File ID:	147195.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	12/22/2015 1319			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 2155				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		18	250
Chlorobenzene		ND		13	250
Chlorodibromomethane		ND		20	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		10	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		240	J B	85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Client Sample ID: **MB-01 (20151216)**

Lab Sample ID: 240-59228-2 Date Sampled: 12/16/2015 0000
Client Matrix: Solid Date Received: 12/17/2015 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211406	Lab File ID:	147195.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	12/22/2015 1319			Final Weight/Volume:	10 mL
Prep Date:	12/17/2015 2155				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		25	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		27	250
1,1,2-Trichloroethane		ND		19	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		17	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	90		26 - 141
Dibromofluoromethane (Surr)	86		30 - 122
1,2-Dichloroethane-d4 (Surr)	89		39 - 128
Toluene-d8 (Surr)	91		33 - 134

Client Sample ID: **AREA C-TRENCH-5_00_3-4 (20151216)**

Lab Sample ID: 240-59228-1 Date Sampled: 12/16/2015 1450
Client Matrix: Solid % Moisture: 18.9 Date Received: 12/17/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211448	Lab File ID:	51221026.D
Dilution:	1.0			Initial Weight/Volume:	29.95 g
Analysis Date:	12/21/2015 2009			Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.3	410
2,2'-oxybis[1-chloropropane]		ND		12	410
2,4,5-Trichlorophenol		ND		31	410
2,4,6-Trichlorophenol		ND	F2	11	410
2,4-Dichlorophenol		ND		25	410
2,4-Dimethylphenol		ND		25	410
2,4-Dinitrophenol		ND	F1	26	2000
2,4-Dinitrotoluene		ND		21	410
2,6-Dinitrotoluene		ND		26	410
2-Chloronaphthalene		ND		0.56	410
2-Chlorophenol		ND		10	410
2-Methylnaphthalene		ND		0.62	410
2-Methylphenol		ND		14	410
2-Nitroaniline		ND		11	2000
2-Nitrophenol		ND		10	410
3,3'-Dichlorobenzidine		ND		22	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND	F1	11	2000
4-Bromophenyl phenyl ether		ND		16	410
4-Chloro-3-methylphenol		ND		26	410
4-Chloroaniline		ND		21	410
4-Chlorophenyl phenyl ether		ND		16	410
4-Nitroaniline		ND		32	2000
4-Nitrophenol		ND		21	2000
Acenaphthene		ND		0.94	410
Acenaphthylene		ND		0.43	410
Acetophenone		ND		11	410
Anthracene		ND		0.96	410
Atrazine		ND		11	410
Benzaldehyde		ND		15	410
Benzo[a]anthracene		7.1	J	0.78	410
Benzo[a]pyrene		6.6	J	0.79	410
Benzo[b]fluoranthene		12	J	0.73	410
Benzo[g,h,i]perylene		ND		0.43	410
Benzo[k]fluoranthene		ND		0.84	410
Bis(2-chloroethoxy)methane		ND		27	410
Bis(2-chloroethyl)ether		ND		2.5	410
Bis(2-ethylhexyl) phthalate		33	J	23	410
Butyl benzyl phthalate		ND		12	410
Caprolactam		ND		46	410
Carbazole		ND		33	410
Chrysene		8.5	J	1.4	410
Dibenz(a,h)anthracene		ND		0.81	410
Dibenzofuran		ND		0.81	410
Diethyl phthalate		ND		20	410
Dimethyl phthalate		ND		21	410

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Client Sample ID: **AREA C-TRENCH-5_00_3-4 (20151216)**

Lab Sample ID: 240-59228-1 Date Sampled: 12/16/2015 1450
Client Matrix: Solid % Moisture: 18.9 Date Received: 12/17/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211448	Lab File ID:	51221026.D
Dilution:	1.0			Initial Weight/Volume:	29.95 g
Analysis Date:	12/21/2015 2009			Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		19	410
Di-n-octyl phthalate		ND		9.8	410
Fluoranthene		15	J	0.68	410
Fluorene		ND		0.65	410
Hexachlorobenzene		ND		2.6	410
Hexachlorobutadiene		ND		6.9	410
Hexachlorocyclopentadiene		ND	F1	10	2000
Hexachloroethane		ND		11	410
Indeno[1,2,3-cd]pyrene		ND		0.43	410
Isophorone		18	J B	16	410
Naphthalene		ND		1.0	410
Nitrobenzene		ND		2.7	410
N-Nitrosodi-n-propylamine		ND		7.8	410
N-Nitrosodiphenylamine		ND		26	410
Pentachlorophenol		ND		11	410
Phenol		ND		9.0	410
Phenanthrene		12	J	0.90	410
Pyrene		16	J	0.54	410
3 & 4 Methylphenol		ND		25	490

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	63		24 - 110
2-Fluorophenol (Surr)	62		24 - 110
2,4,6-Tribromophenol (Surr)	20		10 - 110
Nitrobenzene-d5 (Surr)	55		20 - 110
Phenol-d5 (Surr)	68		26 - 110
Terphenyl-d14 (Surr)	71		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Client Sample ID: **AREA C-TRENCH-5_00_3-4 (20151216)**

Lab Sample ID: 240-59228-1 Date Sampled: 12/16/2015 1450
Client Matrix: Solid Date Received: 12/17/2015 0930

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-212275	Instrument ID:	A4HP10
Prep Method:	3510C	Prep Batch:	240-211922	Lab File ID:	51224016.D
Dilution:	1.0	Leach Batch:	240-211830	Initial Weight/Volume:	250 mL
Analysis Date:	12/24/2015 1536			Final Weight/Volume:	2 mL
Prep Date:	12/22/2015 0959			Injection Volume:	1 uL
Leach Date:	12/21/2015 1630				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.016
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	80		30 - 110
2-Fluorophenol (Surr)	62		20 - 110
Nitrobenzene-d5 (Surr)	80		28 - 110
Phenol-d5 (Surr)	52		21 - 110
Terphenyl-d14 (Surr)	83		48 - 110
2,4,6-Tribromophenol (Surr)	90		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Client Sample ID: **AREA C-TRENCH-5_00_3-4 (20151216)**

Lab Sample ID: 240-59228-1 Date Sampled: 12/16/2015 1450
Client Matrix: Solid % Moisture: 18.9 Date Received: 12/17/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-211457	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-211449	Lab File ID:	Y0121816.D
Dilution:	1.0			Initial Weight/Volume:	10.04 g
Analysis Date:	12/18/2015 1645			Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Client Sample ID: MB-01 (20151216)

Lab Sample ID: 240-59228-2 Date Sampled: 12/16/2015 0000
Client Matrix: Solid Date Received: 12/17/2015 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-211457	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-211449	Lab File ID:	Y0121817.D
Dilution:	1.0			Initial Weight/Volume:	0.34 g
Analysis Date:	12/18/2015 1719			Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		59	290

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Client Sample ID: **AREA C-TRENCH-5_00_3-4 (20151216)**

Lab Sample ID: 240-59228-1 Date Sampled: 12/16/2015 1450
Client Matrix: Solid % Moisture: 18.9 Date Received: 12/17/2015 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-211963	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-211439	Lab File ID:	P14R122212.D
Dilution:	1.0			Initial Weight/Volume:	28.16 g
Analysis Date:	12/22/2015 1754			Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		12	B	1.3	11

Client Sample ID: **AREA C-TRENCH-5_00_3-4 (20151216)**

Lab Sample ID: 240-59228-1 Date Sampled: 12/16/2015 1450
Client Matrix: Solid % Moisture: 18.9 Date Received: 12/17/2015 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-211881	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-211543	Lab File ID:	I9122115A.asc
Dilution:	1.0			Initial Weight/Volume:	1.30 g
Analysis Date:	12/21/2015 1710			Final Weight/Volume:	100 mL
Prep Date:	12/18/2015 1253				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7800		5.5	19
Antimony		ND	F1	0.46	0.95
Barium		40		0.39	19
Beryllium		0.47		0.025	0.47
Calcium		21000	F2	22	470
Cadmium		0.057	J	0.020	0.19
Cobalt		12		0.045	4.7
Chromium		14	B	0.071	0.47
Copper		12		0.22	2.4
Iron		13000		3.0	9.5
Potassium		3100	B	5.9	470
Magnesium		5800	B	4.9	470
Manganese		350		0.080	1.4
Silver		ND		0.060	0.47
Sodium		120	J B	18	470
Nickel		24		0.076	3.8
Vanadium		12	B	0.19	4.7
Zinc		24		0.53	1.9
Arsenic		4.6		0.39	0.95
Lead		5.8		0.19	0.28
Selenium		ND		0.32	0.47
Thallium		ND		0.12	0.95

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-212146	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	1.0	Leach Batch:	240-211830	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1635			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	12/21/2015 1630				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND	^	0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0063	J	0.0029	0.50
Barium		0.36	J	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00078	J	0.00014	0.10
Calcium		400		0.26	5.0
Chromium		0.0072	J B ^	0.00055	0.50
Cobalt		0.057	B	0.00056	0.050
Copper		0.0046	J	0.0019	1.0
Iron		0.029	J ^	0.013	0.10
Lead		ND		0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Client Sample ID: **AREA C-TRENCH-5_00_3-4 (20151216)**

Lab Sample ID: 240-59228-1 Date Sampled: 12/16/2015 1450
Client Matrix: Solid Date Received: 12/17/2015 0930

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		79		0.055	5.0
Manganese		3.8	B	0.00046	0.015
Nickel		0.065	B	0.00076	0.040
Potassium		7.3	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND	^	0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.027	J ^	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-212196	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	240-211830	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1252			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	12/21/2015 1630				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-211892	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-211554	Lab File ID:	122115AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	12/21/2015 1309			Final Weight/Volume:	100 mL
Prep Date:	12/18/2015 1545				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.016	0.12

General Chemistry

Client Sample ID: **AREA C-TRENCH-5_00_3-4 (20151216)**

Lab Sample ID: 240-59228-1 Date Sampled: 12/16/2015 1450
Client Matrix: Solid % Moisture: 18.9 Date Received: 12/17/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.32	0.99	1.0	7196A
Analysis Batch: 240-212243	Analysis Date: 12/24/2015 0557						DryWt Corrected: Y
Prep Batch: 240-212149	Prep Date: 12/23/2015 1049						
Cr (III)	17		mg/Kg	0.16	2.5	1.0	7196A
Analysis Batch: 240-212344	Analysis Date: 12/27/2015 0957						DryWt Corrected: Y
Percent Solids	81		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211743	Analysis Date: 12/21/2015 0947						DryWt Corrected: N
Percent Moisture	19		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211743	Analysis Date: 12/21/2015 0947						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-211406					
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	5035	
240-59228-2	MB-01 (20151216)	T	Solid	5035	
Prep Batch: 240-211625					
LB 240-211625/1-A	Method Blank	P	Solid	1311	
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	P	Solid	1311	
240-59286-J-1-A MS	Matrix Spike	P	Solid	1311	
240-59286-J-1-A MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-211823					
LB 240-211625/1-A	Method Blank	P	Solid	8260B	
LCS 240-211823/9	Lab Control Sample	T	Water	8260B	
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	P	Solid	8260B	
240-59286-J-1-A MS	Matrix Spike	P	Solid	8260B	
240-59286-J-1-A MSD	Matrix Spike Duplicate	P	Solid	8260B	
Analysis Batch:240-211919					
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	8260B	240-211406
240-59228-2	MB-01 (20151216)	T	Solid	8260B	240-211406

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-211448					
LCS 240-211448/18-A	Lab Control Sample	T	Solid	3540C	
MB 240-211448/17-A	Method Blank	T	Solid	3540C	
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	3540C	
240-59228-1MS	Matrix Spike	T	Solid	3540C	
240-59228-1MSD	Matrix Spike Duplicate	T	Solid	3540C	
Analysis Batch:240-211747					
LCS 240-211448/18-A	Lab Control Sample	T	Solid	8270C	240-211448
MB 240-211448/17-A	Method Blank	T	Solid	8270C	240-211448
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	8270C	240-211448
240-59228-1MS	Matrix Spike	T	Solid	8270C	240-211448
240-59228-1MSD	Matrix Spike Duplicate	T	Solid	8270C	240-211448
Prep Batch: 240-211812					
240-59183-A-3-F MS	Matrix Spike	P	Solid	1311	
Prep Batch: 240-211830					
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	P	Solid	1311	
Prep Batch: 240-211922					
LCS 240-211922/15-A	Lab Control Sample	T	Water	3510C	
MB 240-211922/14-A	Method Blank	T	Water	3510C	
240-59183-A-3-F MS	Matrix Spike	P	Solid	3510C	240-211812
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	P	Solid	3510C	240-211830
Analysis Batch:240-212275					
LCS 240-211922/15-A	Lab Control Sample	T	Water	8270C	240-211922
MB 240-211922/14-A	Method Blank	T	Water	8270C	240-211922
240-59183-A-3-F MS	Matrix Spike	P	Solid	8270C	240-211922
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	P	Solid	8270C	240-211922

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Prep Batch: 240-211449					
LCS 240-211449/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-211449/10-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-211449/1-A	Method Blank	T	Solid	5035	
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	5035	
240-59228-2	MB-01 (20151216)	T	Solid	5035	
Analysis Batch:240-211457					
LCS 240-211449/2-A	Lab Control Sample	T	Solid	WI-GRO	240-211449
LCSD 240-211449/10-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-211449
MB 240-211449/1-A	Method Blank	T	Solid	WI-GRO	240-211449
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	WI-GRO	240-211449
240-59228-2	MB-01 (20151216)	T	Solid	WI-GRO	240-211449

Report Basis
T = Total

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-211439					
LCS 240-211439/6-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-211439/7-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-211439/5-A	Method Blank	T	Solid	WI DRO PREP	
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	WI DRO PREP	
Analysis Batch:240-211546					
LCS 240-211439/6-A	Lab Control Sample	T	Solid	WI-DRO	240-211439
MB 240-211439/5-A	Method Blank	T	Solid	WI-DRO	240-211439
Analysis Batch:240-211963					
LCSD 240-211439/7-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-211439
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	WI-DRO	240-211439

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-211543					
LCS 240-211543/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-211543/1-A	Method Blank	T	Solid	3050B	
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	3050B	
240-59228-1MS	Matrix Spike	T	Solid	3050B	
240-59228-1MSD	Matrix Spike Duplicate	T	Solid	3050B	
Prep Batch: 240-211554					
LCS 240-211554/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-211554/1-A	Method Blank	T	Solid	7471A	
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	7471A	
240-59228-1MS	Matrix Spike	T	Solid	7471A	
240-59228-1MSD	Matrix Spike Duplicate	T	Solid	7471A	
Prep Batch: 240-211812					
240-59183-A-4-G MS ^5	Matrix Spike	P	Solid	1311	
240-59183-A-4-J MS	Matrix Spike	P	Solid	1311	
240-59183-A-4-H MSD ^5	Matrix Spike Duplicate	P	Solid	1311	
240-59183-A-4-K MSD	Matrix Spike Duplicate	P	Solid	1311	
Prep Batch: 240-211830					
LB 240-211830/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-211830/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	P	Solid	1311	
Analysis Batch:240-211881					
LCS 240-211543/2-A	Lab Control Sample	T	Solid	6010B	240-211543
MB 240-211543/1-A	Method Blank	T	Solid	6010B	240-211543
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	6010B	240-211543
240-59228-1MS	Matrix Spike	T	Solid	6010B	240-211543
240-59228-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-211543
Analysis Batch:240-211892					
LCS 240-211554/2-A	Lab Control Sample	T	Solid	7471A	240-211554
MB 240-211554/1-A	Method Blank	T	Solid	7471A	240-211554
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	7471A	240-211554
240-59228-1MS	Matrix Spike	T	Solid	7471A	240-211554
240-59228-1MSD	Matrix Spike Duplicate	T	Solid	7471A	240-211554

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-211944					
LCS 240-211944/3-A	Lab Control Sample	T	Water	3010A	
MB 240-211944/2-A	Method Blank	T	Water	3010A	
LB 240-211830/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-211830
240-59183-A-4-G MS ^5	Matrix Spike	P	Solid	3010A	240-211812
240-59183-A-4-H MSD ^5	Matrix Spike Duplicate	P	Solid	3010A	240-211812
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	P	Solid	3010A	240-211830
Prep Batch: 240-211947					
LCS 240-211947/3-A	Lab Control Sample	T	Water	7470A	
MB 240-211947/2-A	Method Blank	T	Water	7470A	
LB 240-211830/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-211830
240-59183-A-4-J MS	Matrix Spike	P	Solid	7470A	240-211812
240-59183-A-4-K MSD	Matrix Spike Duplicate	P	Solid	7470A	240-211812
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	P	Solid	7470A	240-211830
Analysis Batch:240-212146					
LB 240-211830/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-211944
LCS 240-211944/3-A	Lab Control Sample	T	Water	6010B	240-211944
MB 240-211944/2-A	Method Blank	T	Water	6010B	240-211944
240-59183-A-4-G MS ^5	Matrix Spike	P	Solid	6010B	240-211944
240-59183-A-4-H MSD ^5	Matrix Spike Duplicate	P	Solid	6010B	240-211944
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	P	Solid	6010B	240-211944
Analysis Batch:240-212196					
LB 240-211830/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-211947
LCS 240-211947/3-A	Lab Control Sample	T	Water	7470A	240-211947
MB 240-211947/2-A	Method Blank	T	Water	7470A	240-211947
240-59183-A-4-J MS	Matrix Spike	P	Solid	7470A	240-211947
240-59183-A-4-K MSD	Matrix Spike Duplicate	P	Solid	7470A	240-211947
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	P	Solid	7470A	240-211947

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-211743					
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	Moisture	
240-59339-A-7 DU	Duplicate	T	Solid	Moisture	
Prep Batch: 240-212149					
LCS 240-212149/10-A	Lab Control Sample	T	Solid	3060A	
LCSI 240-212149/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
MB 240-212149/9-A	Method Blank	T	Solid	3060A	
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	3060A	
Analysis Batch:240-212243					
LCS 240-212149/10-A	Lab Control Sample	T	Solid	7196A	240-212149
LCSI 240-212149/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-212149
MB 240-212149/9-A	Method Blank	T	Solid	7196A	240-212149
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	7196A	240-212149
Analysis Batch:240-212344					
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	T	Solid	7196A	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	81	71	71	81
240-59228-2	MB-01 (20151216)	90	86	89	91

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-211625/1-A MB		86	105	99	98
LCS 240-211823/9		81	94	91	94
240-59286-J-1-A MS		79	92	82	93
240-59286-J-1-A MSD		80	95	85	91

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	86	80	92	93

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-211448/17-A		82	65	76	73	91	43
LCS 240-211448/18-A		73	79	80	84	87	35
240-59228-1 MS	AREA C-TRENCH-5_00_3-4 (20151216) MS	72	72	69	76	75	38
240-59228-1 MSD	AREA C-TRENCH-5_00_3-4 (20151216) MSD	59	60	56	62	65	26

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	63	62	20	55	68	71

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-59228-1	AREA C-TRENCH-5_00_3-4 (20151216)	80	62	80	52	83	90
MB 240-211922/14-A		94	73	92	52	97	97
LCS 240-211922/15-A		91	78	99	60	93	104
240-59183-A-3-F MS		68	60	73	26	68	78

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Method Blank - Batch: 240-211823

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-211625/1-A	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248413.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 1801	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 1801				
Leach Date:	12/18/2015 1810				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	86	70 - 124
Dibromofluoromethane (Surr)	105	80 - 128
1,2-Dichloroethane-d4 (Surr)	99	80 - 121
Toluene-d8 (Surr)	98	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Lab Control Sample - Batch: 240-211823

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-211823/9	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	U1248414.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 1823	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 1823				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	987	99	80 - 120	
2-Butanone (MEK)	2000	1360	68	49 - 120	
Carbon tetrachloride	1000	867	87	54 - 122	
Chlorobenzene	1000	995	100	80 - 120	
Chloroform	1000	973	97	80 - 123	
1,2-Dichloroethane	1000	997	100	80 - 120	
1,1-Dichloroethene	1000	939	94	71 - 133	
Tetrachloroethene	1000	983	98	79 - 134	
Trichloroethene	1000	1060	106	78 - 130	
Vinyl chloride	1000	696	70	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	81	70 - 124
Dibromofluoromethane (Surr)	94	80 - 128
1,2-Dichloroethane-d4 (Surr)	91	80 - 121
Toluene-d8 (Surr)	94	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211823

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-59286-J-1-A MS	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248428.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 2344			Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 2344				5 mL
Leach Date:	12/18/2015 1810				

MSD Lab Sample ID:	240-59286-J-1-A MSD	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248429.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/22/2015 0008			Final Weight/Volume:	5 mL
Prep Date:	12/22/2015 0008				5 mL
Leach Date:	12/18/2015 1810				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	90	92	80 - 120	3	30		
2-Butanone (MEK)	59	65	49 - 120	9	30		
Carbon tetrachloride	73	75	60 - 120	2	30		
Chlorobenzene	89	97	80 - 120	8	30		
Chloroform	91	93	80 - 124	2	30		
1,2-Dichloroethane	90	92	80 - 120	2	30		
1,1-Dichloroethene	83	84	67 - 139	2	30		
Tetrachloroethene	94	94	74 - 138	0	30		
Trichloroethene	99	100	75 - 134	1	30		
Vinyl chloride	65	67	51 - 120	4	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	79	80	70 - 124
Dibromofluoromethane (Surr)	92	95	80 - 128
1,2-Dichloroethane-d4 (Surr)	82	85	80 - 121
Toluene-d8 (Surr)	93	91	80 - 120

Method Blank - Batch: 240-211448

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-211448/17-A	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211448	Lab File ID:	51221009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/21/2015 1327	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Method Blank - Batch: 240-211448

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-211448/17-A	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211448	Lab File ID:	51221009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/21/2015 1327	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	13.6	J	13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	82	24 - 110
2-Fluorophenol (Surr)	65	24 - 110
Nitrobenzene-d5 (Surr)	76	20 - 110
Phenol-d5 (Surr)	73	26 - 110
Terphenyl-d14 (Surr)	91	36 - 110
2,4,6-Tribromophenol (Surr)	43	10 - 110

Lab Control Sample - Batch: 240-211448

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-211448/18-A	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211448	Lab File ID:	51221010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/21/2015 1351	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	491	74	35 - 110	
2,2'-oxybis[1-chloropropane]	667	538	81	29 - 110	
2,4-Dichlorophenol	667	496	74	39 - 110	
2,4-Dimethylphenol	667	487	73	29 - 110	
2,4-Dinitrophenol	1330	311	23	10 - 110	J
2,4-Dinitrotoluene	667	593	89	48 - 110	
2,6-Dinitrotoluene	667	557	84	45 - 110	
2-Chloronaphthalene	667	492	74	32 - 110	
2,4,5-Trichlorophenol	667	341	51	25 - 110	
2-Chlorophenol	667	529	79	37 - 110	
2,4,6-Trichlorophenol	667	234	35	12 - 110	J
2-Methylnaphthalene	667	519	78	36 - 110	
2-Methylphenol	667	551	83	41 - 110	
2-Nitroaniline	667	561	84	45 - 110	J
2-Nitrophenol	667	557	84	34 - 110	
3,3'-Dichlorobenzidine	1330	1010	75	28 - 110	J
3-Nitroaniline	667	579	87	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	560	42	10 - 110	J
4-Bromophenyl phenyl ether	667	581	87	39 - 110	
4-Chloro-3-methylphenol	667	554	83	48 - 110	
4-Chloroaniline	667	476	71	30 - 110	
4-Chlorophenyl phenyl ether	667	554	83	40 - 110	
4-Nitroaniline	667	621	93	48 - 110	J
4-Nitrophenol	1330	888	67	28 - 110	J
Acenaphthene	667	517	78	38 - 110	
Acenaphthylene	667	515	77	40 - 110	
Acetophenone	667	520	78	40 - 110	
Anthracene	667	568	85	48 - 110	
Atrazine	1330	1230	92	54 - 120	
Benzaldehyde	1330	1070	81	32 - 110	
Benzo[a]anthracene	667	587	88	50 - 110	
Benzo[a]pyrene	667	602	90	44 - 110	
Benzo[b]fluoranthene	667	605	91	43 - 110	
Benzo[g,h,i]perylene	667	599	90	51 - 110	
Benzo[k]fluoranthene	667	626	94	38 - 105	
Bis(2-chloroethoxy)methane	667	526	79	32 - 110	
Bis(2-chloroethyl)ether	667	517	78	34 - 110	
Bis(2-ethylhexyl) phthalate	667	625	94	50 - 110	
Butyl benzyl phthalate	667	622	93	51 - 110	
Caprolactam	1330	1220	92	44 - 114	
Carbazole	667	590	89	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Lab Control Sample - Batch: 240-211448

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-211448/18-A	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211448	Lab File ID:	51221010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/21/2015 1351	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	596	89	50 - 110	
Dibenz(a,h)anthracene	667	645	97	51 - 110	
Dibenzofuran	667	522	78	43 - 110	
Diethyl phthalate	667	562	84	52 - 110	
Dimethyl phthalate	667	546	82	50 - 110	
Di-n-butyl phthalate	667	624	94	51 - 110	
Di-n-octyl phthalate	667	602	90	48 - 110	
Fluoranthene	667	599	90	51 - 110	
Fluorene	667	501	75	46 - 110	
Hexachlorobenzene	667	571	86	43 - 110	
Hexachlorobutadiene	667	511	77	29 - 110	
Hexachlorocyclopentadiene	667	355	53	12 - 110	J
Hexachloroethane	667	494	74	30 - 110	
Indeno[1,2,3-cd]pyrene	667	627	94	50 - 110	
Isophorone	667	526	79	36 - 110	
Naphthalene	667	505	76	36 - 110	
Nitrobenzene	667	521	78	32 - 110	
N-Nitrosodi-n-propylamine	667	527	79	38 - 110	
N-Nitrosodiphenylamine	1330	1150	86	46 - 110	
Pentachlorophenol	1330	709	53	10 - 110	
Phenol	667	521	78	38 - 110	
Phenanthrene	667	567	85	49 - 110	
Pyrene	667	577	87	49 - 110	
3 & 4 Methylphenol	667	521	78	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	73	24 - 110
2-Fluorophenol (Surr)	79	24 - 110
Nitrobenzene-d5 (Surr)	80	20 - 110
Phenol-d5 (Surr)	84	26 - 110
Terphenyl-d14 (Surr)	87	36 - 110
2,4,6-Tribromophenol (Surr)	35	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211448

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59228-1	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211448	Lab File ID:	51221027.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.76 g
Analysis Date:	12/21/2015 2033			Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59228-1	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211448	Lab File ID:	51221028.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.61 g
Analysis Date:	12/21/2015 2056			Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	71	59	32 - 110	18	32		
2,2'-oxybis[1-chloropropane]	70	55	11 - 110	22	42		
2,4-Dichlorophenol	75	59	10 - 110	24	34		
2,4-Dimethylphenol	73	62	10 - 110	17	31		
2,4-Dinitrophenol	8	8	10 - 110	6	99	J F1	J F1
2,4-Dinitrotoluene	75	61	32 - 110	20	30		
2,6-Dinitrotoluene	80	63	35 - 110	23	30		
2-Chloronaphthalene	71	60	28 - 110	16	30		
2,4,5-Trichlorophenol	70	30	10 - 117	81	99		J
2-Chlorophenol	73	60	10 - 110	18	47		
2,4,6-Trichlorophenol	45	24	10 - 110	58	38	J	J F2
2-Methylnaphthalene	76	61	10 - 133	21	42		
2-Methylphenol	85	63	24 - 110	28	51		
2-Nitroaniline	78	67	39 - 110	14	31	J	J
2-Nitrophenol	67	51	10 - 110	28	49		
3,3'-Dichlorobenzidine	51	51	10 - 110	2	56	J	J
3-Nitroaniline	80	69	10 - 110	14	30	J	J
4,6-Dinitro-2-methylphenol	8	8	10 - 110	3	55	J F1	J F1
4-Bromophenyl phenyl ether	77	69	33 - 110	11	30		
4-Chloro-3-methylphenol	82	68	25 - 110	17	54		
4-Chloroaniline	58	51	10 - 110	11	36		
4-Chlorophenyl phenyl ether	75	65	32 - 110	14	30		
4-Nitroaniline	74	61	10 - 110	18	48	J	J
4-Nitrophenol	73	59	10 - 113	21	49	J	J
Acenaphthene	74	63	22 - 110	16	99		
Acenaphthylene	73	63	24 - 110	14	99		
Acetophenone	70	58	31 - 110	18	43		
Anthracene	75	68	20 - 110	8	99		
Atrazine	79	71	45 - 118	10	30		
Benzaldehyde	68	56	23 - 110	18	42		
Benzo[a]anthracene	77	66	10 - 122	15	99		
Benzo[a]pyrene	76	65	10 - 110	15	99		

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211448

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59228-1	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211448	Lab File ID:	51221027.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.76 g
Analysis Date:	12/21/2015 2033			Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59228-1	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211448	Lab File ID:	51221028.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.61 g
Analysis Date:	12/21/2015 2056			Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	81	68	12 - 118	16	99		
Benzo[g,h,i]perylene	43	41	10 - 117	3	99	J	J
Benzo[k]fluoranthene	78	65	10 - 121	17	99		
Bis(2-chloroethoxy)methane	74	61	26 - 110	19	37		
Bis(2-chloroethyl)ether	69	56	21 - 110	20	55		
Bis(2-ethylhexyl) phthalate	84	74	40 - 110	12	30		
Butyl benzyl phthalate	85	74	44 - 110	14	30		
Caprolactam	81	71	10 - 134	13	32		
Carbazole	73	66	34 - 110	9	30		
Chrysene	77	67	10 - 125	14	99		
Dibenz(a,h)anthracene	56	50	14 - 113	11	99		
Dibenzofuran	74	65	29 - 110	13	30		
Diethyl phthalate	75	65	42 - 110	13	30		
Dimethyl phthalate	76	64	41 - 110	17	30		
Di-n-butyl phthalate	79	72	43 - 110	9	30		
Di-n-octyl phthalate	100	82	24 - 119	19	30		
Fluoranthene	73	66	10 - 110	9	99		
Fluorene	71	62	23 - 110	14	99		
Hexachlorobenzene	69	68	34 - 110	1	30		
Hexachlorobutadiene	72	60	25 - 110	17	34		
Hexachlorocyclopentadiene	0	0	10 - 110	NC	79	F1	F1
Hexachloroethane	51	40	12 - 110	22	50		J
Indeno[1,2,3-cd]pyrene	51	49	10 - 114	3	99		
Isophorone	74	59	29 - 110	21	38		
Naphthalene	72	60	10 - 111	17	99		
Nitrobenzene	68	59	23 - 110	13	41		
N-Nitrosodi-n-propylamine	73	60	26 - 110	19	42		
N-Nitrosodiphenylamine	73	67	22 - 110	8	30		
Pentachlorophenol	23	18	10 - 110	25	50	J	J
Phenol	76	65	17 - 110	16	53		
Phenanthrene	72	64	10 - 166	10	99		
Pyrene	75	65	10 - 147	14	99		

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211448

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59228-1	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211448	Lab File ID:	51221027.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.76 g
Analysis Date:	12/21/2015 2033			Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59228-1	Analysis Batch:	240-211747	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211448	Lab File ID:	51221028.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.61 g
Analysis Date:	12/21/2015 2056			Final Weight/Volume:	2 mL
Prep Date:	12/18/2015 0726			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
3 & 4 Methylphenol	79	69	25 - 110	12	50		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	72	59	24 - 110
2-Fluorophenol (Surr)	72	60	24 - 110
Nitrobenzene-d5 (Surr)	69	56	20 - 110
Phenol-d5 (Surr)	76	62	26 - 110
Terphenyl-d14 (Surr)	75	65	36 - 110
2,4,6-Tribromophenol (Surr)	38	26	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Method Blank - Batch: 240-211922

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-211922/14-A	Analysis Batch:	240-212275	Instrument ID:	A4HP10
Client Matrix:	Water	Prep Batch:	240-211922	Lab File ID:	51224005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/24/2015 1051	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/22/2015 0959			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.016
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	94	30 - 110
2-Fluorophenol (Surr)	73	20 - 110
Nitrobenzene-d5 (Surr)	92	28 - 110
Phenol-d5 (Surr)	52	21 - 110
Terphenyl-d14 (Surr)	97	48 - 110
2,4,6-Tribromophenol (Surr)	97	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Lab Control Sample - Batch: 240-211922

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-211922/15-A	Analysis Batch:	240-212275	Instrument ID:	A4HP10
Client Matrix:	Water	Prep Batch:	240-211922	Lab File ID:	51224006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/24/2015 1115	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/22/2015 0959			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0714	89	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0800	100	54 - 110	
Pyridine	0.0800	0.0381	48	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0730	91	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0810	101	46 - 110	
2-Methylphenol	0.0800	0.0698	87	44 - 111	
Hexachlorobenzene	0.0800	0.0693	87	50 - 110	
Hexachlorobutadiene	0.0800	0.0732	92	34 - 110	
Hexachloroethane	0.0800	0.0717	90	41 - 110	
Nitrobenzene	0.0800	0.0765	96	40 - 110	
Pentachlorophenol	0.160	0.124	78	12 - 110	
3 & 4 Methylphenol	0.0800	0.0722	90	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	91	30 - 110
2-Fluorophenol (Surr)	78	20 - 110
Nitrobenzene-d5 (Surr)	99	28 - 110
Phenol-d5 (Surr)	60	21 - 110
Terphenyl-d14 (Surr)	93	48 - 110
2,4,6-Tribromophenol (Surr)	104	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Matrix Spike - Batch: 240-211922

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-59183-A-3-F MS	Analysis Batch:	240-212275	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211922	Lab File ID:	51224020.D
Dilution:	4.0	Leach Batch:	240-211812	Initial Weight/Volume:	250 mL
Analysis Date:	12/24/2015 1711	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/22/2015 0959			Injection Volume:	1 uL
Leach Date:	12/21/2015 0600				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0578	72	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0565	71	42 - 110	
Pyridine	ND	0.0800	0.0461	58	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0599	75	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0585	73	35 - 110	
2-Methylphenol	ND	0.0800	0.0288	36	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0526	66	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0577	72	28 - 110	
Hexachloroethane	ND	0.0800	0.0552	69	26 - 110	
Nitrobenzene	ND	0.0800	0.0601	75	32 - 110	
Pentachlorophenol	ND	0.160	0.0953	60	10 - 124	
3 & 4 Methylphenol	ND	0.0800	0.0132	17	29 - 110	J F1

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	68	30 - 110
2-Fluorophenol (Surr)	60	20 - 110
Nitrobenzene-d5 (Surr)	73	28 - 110
Phenol-d5 (Surr)	26	21 - 110
Terphenyl-d14 (Surr)	68	48 - 110
2,4,6-Tribromophenol (Surr)	78	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Method Blank - Batch: 240-211449 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-211449/1-A	Analysis Batch:	240-211457	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-211449	Lab File ID:	Y0121809.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/18/2015 1245	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211449 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-211449/2-A	Analysis Batch:	240-211457	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-211449	Lab File ID:	Y0121810.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/18/2015 1317	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-211449/10-A	Analysis Batch:	240-211457	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-211449	Lab File ID:	Y0121818.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/18/2015 1754	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/18/2015 0745			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	89	86	80 - 120	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Method Blank - Batch: 240-211439

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-211439/5-A	Analysis Batch:	240-211546	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-211439	Lab File ID:	P14R121816.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/18/2015 2102	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	1.12	J	0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-211439

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-211439/6-A	Analysis Batch:	240-211546	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-211439	Lab File ID:	P14R121817.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/18/2015 2129	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-211439/7-A	Analysis Batch:	240-211963	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-211439	Lab File ID:	P14R122208.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/22/2015 1605	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/18/2015 0619			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	102	107	70 - 120	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Method Blank - Batch: 240-211543

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-211543/1-A	Analysis Batch:	240-211881	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211543	Lab File ID:	I9122115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/21/2015 1545	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/18/2015 1253				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	0.0963	J	0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	5.28	J	5.2	500
Manganese	ND		0.084	1.5
Sodium	63.0	J	19	500
Nickel	ND		0.080	4.0
Potassium	13.5	J	6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Vanadium	0.280	J	0.20	5.0
Selenium	ND		0.34	0.50
Zinc	ND		0.56	2.0
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Lab Control Sample - Batch: 240-211543

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-211543/2-A	Analysis Batch:	240-211881	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211543	Lab File ID:	I9122115A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/21/2015 1549	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/18/2015 1253				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	199	100	80 - 120	
Antimony	50.0	49.0	98	80 - 120	
Barium	200	189	95	80 - 120	
Beryllium	5.00	4.78	96	80 - 120	
Cadmium	5.00	4.74	95	80 - 120	
Calcium	5000	4810	96	80 - 120	
Chromium	20.0	19.1	95	80 - 120	
Cobalt	50.0	47.5	95	80 - 120	
Copper	25.0	23.9	96	80 - 120	
Iron	100	96.9	97	80 - 120	
Magnesium	5000	4800	96	80 - 120	
Manganese	50.0	49.2	98	80 - 120	
Sodium	5000	4760	95	80 - 120	
Nickel	50.0	48.5	97	80 - 120	
Potassium	5000	4680	94	80 - 120	
Silver	5.00	4.96	99	80 - 120	
Arsenic	200	193	96	80 - 120	
Lead	50.0	46.0	92	80 - 120	
Vanadium	50.0	47.8	96	80 - 120	
Selenium	200	192	96	80 - 120	
Zinc	50.0	48.6	97	80 - 120	
Thallium	200	189	94	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211543

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-59228-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 12/21/2015 1722
Prep Date: 12/18/2015 1253
Leach Date: N/A

Analysis Batch: 240-211881
Prep Batch: 240-211543
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9122115A.asc
Initial Weight/Volume: 1.33 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-59228-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 12/21/2015 1726
Prep Date: 12/18/2015 1253
Leach Date: N/A

Analysis Batch: 240-211881
Prep Batch: 240-211543
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9122115A.asc
Initial Weight/Volume: 1.33 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	2565	1754	75 - 125	13	20	4	4
Antimony	33	33	75 - 125	1	20	F1	F1
Barium	86	87	75 - 125	1	20		
Beryllium	81	85	75 - 125	4	20		
Cadmium	82	85	75 - 125	4	20		
Calcium	228	19	75 - 125	36	20	4	4 F2
Chromium	105	109	75 - 125	2	20		
Cobalt	90	97	75 - 125	6	20		
Copper	83	91	75 - 125	6	20		
Iron	1849	1201	75 - 125	4	20	4	4
Magnesium	114	90	75 - 125	10	20		
Manganese	170	29	75 - 125	16	20	4	4
Sodium	81	82	75 - 125	2	20		
Nickel	93	99	75 - 125	4	20		
Potassium	125	115	75 - 125	5	20		
Silver	85	90	75 - 125	5	20		
Arsenic	82	87	75 - 125	5	20		
Lead	76	80	75 - 125	4	20		
Vanadium	85	79	75 - 125	6	20		
Selenium	82	85	75 - 125	4	20		
Zinc	100	104	75 - 125	3	20		
Thallium	90	93	75 - 125	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

TCLP SPLPE Leachate Blank - Batch: 240-211944

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-211830/1-B	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	1.0	Leach Batch:	240-211830	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1018	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	12/21/2015 1630				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.000976	J	0.00055	0.50
Cobalt	0.00121	J	0.00056	0.050
Copper	ND		0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	0.000737	J	0.00046	0.015
Nickel	0.00234	J	0.00076	0.040
Potassium	0.569	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	0.00292	J	0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Method Blank - Batch: 240-211944

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-211944/2-A	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1022	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.000559	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	0.00149	J	0.00046	0.015
Nickel	ND		0.00076	0.040
Potassium	0.115	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Lab Control Sample - Batch: 240-211944

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-211944/3-A	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1026	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	2.08	104	50 - 150	
Antimony	0.500	0.517	103	50 - 150	
Barium	2.00	2.01	100	50 - 150	J
Beryllium	0.0500	0.0516	103	50 - 150	
Cadmium	0.0500	0.0518	104	50 - 150	J
Calcium	50.0	50.4	101	50 - 150	
Chromium	0.200	0.202	101	50 - 150	J
Cobalt	0.500	0.520	104	50 - 150	
Copper	0.250	0.254	102	50 - 150	J
Iron	1.00	1.03	103	50 - 150	
Magnesium	50.0	49.7	99	50 - 150	
Manganese	0.500	0.511	102	50 - 150	
Nickel	0.500	0.530	106	50 - 150	
Potassium	50.0	53.2	106	50 - 150	
Silver	0.0500	0.0550	110	50 - 150	J
Arsenic	2.00	2.18	109	50 - 150	
Lead	0.500	0.473	95	50 - 150	J
Vanadium	0.500	0.514	103	50 - 150	
Selenium	2.00	2.22	111	50 - 150	
Zinc	0.500	0.565	113	50 - 150	J
Thallium	2.00	1.91	95	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211944

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-59183-A-4-G MS ^5	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	5.0	Leach Batch:	240-211812	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1553			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	12/21/2015 0600				

MSD Lab Sample ID:	240-59183-A-4-H MSD ^5	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	5.0	Leach Batch:	240-211812	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1557			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	12/21/2015 0600				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	114	109	75 - 125	4	20		
Antimony	106	103	75 - 125	3	20	J	J
Barium	101	98	75 - 125	4	20		J
Beryllium	105	101	75 - 125	4	20		
Cadmium	104	101	75 - 125	3	20		
Calcium	103	99	75 - 125	3	20		
Chromium	108	106	75 - 125	2	20		
Cobalt	105	101	75 - 125	4	20		
Copper	104	100	75 - 125	4	20	J	J
Magnesium	104	100	75 - 125	4	20		
Manganese	109	106	75 - 125	3	20		
Nickel	109	106	75 - 125	3	20		
Potassium	104	98	75 - 125	4	20		
Silver	107	104	75 - 125	3	20	J	J
Arsenic	104	100	75 - 125	3	20		
Lead	104	101	75 - 125	2	20		
Vanadium	103	97	75 - 125	6	20		
Selenium	105	102	75 - 125	4	20	J	J
Zinc	100	64	75 - 125	3	20	4	4

TCLP SPLPE Leachate Blank - Batch: 240-211947

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-211830/1-C	Analysis Batch:	240-212196	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	240-211830	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1220	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	12/21/2015 1630				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-211947

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-211947/2-A	Analysis Batch:	240-212196	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1227	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-211947

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-211947/3-A	Analysis Batch:	240-212196	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1229	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00551	110	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211947

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-59183-A-4-J MS	Analysis Batch:	240-212196	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	240-211812	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1233			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	12/21/2015 0600				

MSD Lab Sample ID:	240-59183-A-4-K MSD	Analysis Batch:	240-212196	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	240-211812	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1236			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	12/21/2015 0600				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	103	105	80 - 120	2	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Method Blank - Batch: 240-211554

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-211554/1-A	Analysis Batch:	240-211892	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211554	Lab File ID:	122115AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	12/21/2015 1306	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/18/2015 1545				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-211554

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-211554/2-A	Analysis Batch:	240-211892	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211554	Lab File ID:	122115AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	12/21/2015 1307	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/18/2015 1545				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.821	99	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211554

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-59228-1	Analysis Batch:	240-211892	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211554	Lab File ID:	122115AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.58 g
Analysis Date:	12/21/2015 1311			Final Weight/Volume:	100 mL
Prep Date:	12/18/2015 1545				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59228-1	Analysis Batch:	240-211892	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211554	Lab File ID:	122115AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.58 g
Analysis Date:	12/21/2015 1313			Final Weight/Volume:	100 mL
Prep Date:	12/18/2015 1545				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	112	110	80 - 120	2	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

Method Blank - Batch: 240-212149

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-212149/9-A	Analysis Batch:	240-212243	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-212149	Lab File ID:	212149.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	12/24/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/23/2015 1049				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.26	0.80

Lab Control Sample - Batch: 240-212149

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCS 240-212149/10-A	Analysis Batch:	240-212243	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-212149	Lab File ID:	212149.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	12/24/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/23/2015 1049				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	18.7	93	80 - 120	

Lab Control Sample Insoluble - Batch: 240-212149

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-212149/11-A	Analysis Batch:	240-212243	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-212149	Lab File ID:	212149.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	12/24/2015 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/23/2015 1049				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	510	79	75 - 125	

Client: ARCADIS U.S., Inc. Job Number: 240-59228-1

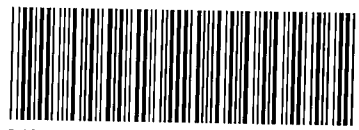
Duplicate - Batch: 240-211743

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-59339-A-7 DU	Analysis Batch:	240-211743	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/21/2015 0947	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	94	94	0.5	20	
Percent Moisture	5.9	5.5	8	20	

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS


240-59228 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica ~~Michigan~~
~~10448 Citation Drive~~
~~Suite 200~~
~~Brighton, MI 48116~~
~~Phone: 810.229.2763 Fax:~~

NORTH CANTON OH
4101 Shuffel Drive N.W.
North Canton, OH 44720
330-497-9396

1.8/C1.5

Chain of Custody Record

062630

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact		Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date:	COC No:
Company Name: ARCADIS		Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:	1 of 1 COCs
Address: 430 First Avenue North, Suite 720		Analysis Turnaround Time			Sampler: Adam Thompson
City/State/Zip: Minneapolis MN 55401		☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434		TAT if different from Below _____			Walk-in Client:
Fax:		☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP		☐ 1 week			
Site: St. Paul MN		☐ 2 days			Job / SDG No.: 24006638
P O # MN000624.0001		☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	GRO (wi mod method)	DRO (wi modified method)	SVOCs (8270)	TAL metals (6010)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP TAL metals (1311/6010)		moisture content	PCBs (8082)							Sample Specific Notes:
Area C-Trench-5_00_3-4(20151216)	12/16/15	1450	G	SO	11	N	W	2	2	1	1	1	1	1	1		1								
MB	12/16/15																								
Temp Blank																									
								6	6	1	1	1	1	1	1		1								

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
* Chromium VI and Chromium III Speciation on TAL metals and TCLP TAL metals analysis

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: 1530

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Arcadis	12/16/15 1530	[signature]	XA	12-16-15
[signature]	TAnum	12-16-15	[signature] 1900	TA-Canton	12/17/15 930
			Received in Laboratory by:		

12/30/2015

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 59228

Client Arcadis Site Name

Cooler Received on 12/17/15 Opened on 12/17/15

Cooler unpacked by:

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 53 (CF +0.1 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN# 48 (CF -0.3 °C) Observed Cooler Temp. 1.8 °C Corrected Cooler Temp. 1.5 °C ☐ See Multiple Cooler Form

~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~

IR GUN# 8 (CF -0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2.	Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
	-Were custody seals on the outside of the cooler(s) signed & dated?	Yes	No NA
	-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
3.	Shippers' packing slip attached to the cooler(s)?	Yes	No
4.	Did custody papers accompany the sample(s)?	Yes	No
5.	Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6.	Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7.	Did all bottles arrive in good condition (Unbroken)?	Yes	No
8.	Could all bottle labels be reconciled with the COC?	Yes	No
9.	Were correct bottle(s) used for the test(s) indicated?	Yes	No
10.	Sufficient quantity received to perform indicated analyses?	Yes	No
11.	Were sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC559158
12.	Were VOAs on the COC?	Yes	No
13.	Were air bubbles >6 mm in any VOA vials?	Yes	No NA
14.	Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
15.	Was a LL Hg or Me Hg trip blank present?	Yes	No

Contacted PM Date by via Verbal Voice Mail Other

Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

December 31, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 59228-1
Sample date: 2015-12-16
Report received by CADENA: 2015-12-30
Initial Data Verification completed by CADENA: 2015-12-31

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch 211406 did not include MS recovery data due to insufficient sample volume available for spiking according to the laboratory submittal case narrative.

GCMS SVOC QC batch 211448 method blank had a detection below the RL for isophorone. Client sample -001 result for this analyte should be considered to be non-detect at the RL and qualified with a UB flag.

GCMS SVOC sample -001 MS/MSD recoveries were outliers biased low for 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol and hexachlorocyclopentadiene. Client sample -001 results for these analytes should be considered to be estimated and qualified with UJ flags. MS/MSD RPD outlier only for 2,4,6-trichlorophenol did not require qualification of client sample results.

WI-GRO and WI-DRO sample and batch QC did not include surrogate recovery or MS/MSD recovery information.

WI-DRO QC batch method blank had a detection below the RL. Qualification of client sample results was not required based on this method blank detection.

Metals method blanks had detections below the RL in QC batch 211543 for chromium, magnesium, sodium, potassium and vanadium and in QC batch 211944 for chromium, cobalt, magnesium, nickel, potassium and lead. Client sample -001 total sodium results should be considered to be non-detect at the RL and qualified with a UB flag.

Metals sample -001 MS/MSD recoveries were outliers biased low for total antimony. Client sample -001 total antimony results should be considered to be estimated and qualified with a J flag. MS/MSD recoveries for aluminum, calcium, iron and magnesium were not considered to be statistically reliable due to elevated levels of target analyte relative to the amount spiked (4X rule) so were not used to qualify results.

Metals QC batch 211944 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results is not required based on these sample-specific QC outliers.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

2 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 59228-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240592281	AREA C-TRENCH-5_00_3-4 (201512	12/16/2015	2:50:00	X	X	X	X	X	X	X	X
240592282	MB-01 (20151216)	12/16/2015	12:00:00	X		X					

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 59228-1

Sample Name: AREA C-TRENCH-5_00_3-4 (201512
Lab Sample ID: 240592281
Sample Date: 12/16/2015

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC					
OSW-8270C					
2,4-Dinitrophenol	51-28-5	ND	2000	ug/kg	UJ
4,6-Dinitro-2-methylphenol	534-52-1	ND	2000	ug/kg	UJ
Hexachlorocyclopentadiene	77-47-4	ND	2000	ug/kg	UJ
Isophorone	78-59-1	18	410	ug/kg	UB
Metals					
OSW-6010B					
Antimony	7440-36-0	ND	0.95	mg/kg	UJ
Sodium	7440-23-5	120	470	mg/kg	UB

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 240-59286-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
1/6/2016 3:33 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
01/06/2016

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CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-59286-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 12/18/2015 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)
Sample AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1) was analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 12/18/2015 and analyzed on 12/21/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)
Samples AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1), HA-21_0-1(20151217) (240-59286-2) and MB (240-59286-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 12/21/2015 and analyzed on 12/22/2015.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-211741 and analytical batch 240-211919 on these samples AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1), HA-21_0-1(20151217) (240-59286-2) and MB (240-59286-4) .

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)
Sample AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1) was analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The sample was leached on 12/21/2015, prepared on 12/22/2015 and analyzed on 12/24/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

3 & 4 Methylphenol failed the recovery criteria low for the MS of sample 240-59183-3 in batch 240-212275. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)
Samples AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1) and HA-21_0-1(20151217) (240-59286-2) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 12/21/2015 and analyzed on 12/23/2015.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 240-211698/10-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Method(s) 8270C: The continuing calibration verification (CCV) associated with batch 212122 recovered above the upper control limit for Di-n-octyl phthalate. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following samples are impacted: AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1) and HA-21_0-1(20151217) (240-59286-2).

Method(s) 8270C: The following samples were diluted due to the nature of the sample matrix: (240-59183-A-3-E) and (240-59183-A-3-F MS). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO
Samples AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1), HA-21_0-1(20151217) (240-59286-2) and MB (240-59286-4) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared and analyzed on 12/29/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO
Samples AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1) and HA-21_0-1(20151217) (240-59286-2) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 12/24/2015 and analyzed on 01/05/2016.

WI Diesel Range Organics (C10-C28) was detected in method blank MB 240-212286/3-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the Diesel Range Organics (DRO) mix: AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1) and HA-21_0-1(20151217) (240-59286-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)
Sample AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The sample was leached on 12/21/2015, prepared on 12/22/2015 and analyzed on 12/23/2015.

Chromium, Manganese and Potassium were detected in method blank MB 240-211944/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Several analytes were detected in method blank LB 240-211830/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Zinc failed the recovery criteria low for the MSD of sample 240-59183-4 in batch 240-212146. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)
Samples AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1) and HA-21_0-1(20151217) (240-59286-2) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 12/21/2015 and analyzed on 12/22/2015 and 12/24/2015.

Barium, Manganese, Nickel, Potassium and Zinc were detected in method blank MB 240-211769/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Several analytes were detected in method blank MB 240-211798/1-A at levels that were above the method detection limit but below the reporting limit. The values should be

considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Antimony, Iron and Magnesium failed the recovery criteria low for the MS of sample AREAC-TRENCH-4_015_7-8(20151217)MS (240-59286-1) in batch 240-212068. Aluminum, Calcium and Manganese failed the recovery criteria high.

Antimony failed the recovery criteria low for the MSD of sample AREAC-TRENCH-4_015_7-8(20151217)MSD (240-59286-1) in batch 240-212068. Aluminum, Calcium and Manganese failed the recovery criteria high.

Antimony, Manganese and Iron failed the recovery criteria low for the MS of sample HA-21_0-1(20151217)MS (240-59286-2) in batch 240-212434. Aluminum failed the recovery criteria high.

For the MSD of sample HA-21_0-1(20151217)MSD (240-59286-2) in batch 240-212434, Antimony failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, Calcium, Magnesium and Manganese exceeded the RPD limit.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY

Sample AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The sample was leached on 12/21/2015, prepared on 12/22/2015 and analyzed on 12/23/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Sample AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1) was analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The sample was prepared on 12/21/2015 and analyzed on 12/22/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples AREAC-TRENCH-4_015_7-8(20151217) (240-59286-1) and HA-21_0-1(20151217) (240-59286-2) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 12/18/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59286-1	**AREAC-TRENCH-4_015_7-8(20151217)**					
Methylene Chloride		280	J B	310	ug/Kg	8260B
Bis(2-ethylhexyl) phthalate		51	J B	420	ug/Kg	8270C
Fluoranthene		8.2	J	420	ug/Kg	8270C
Phenanthrene		5.2	J	420	ug/Kg	8270C
Pyrene		7.1	J	420	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		2.6	J	13	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		4.7	J B	10	mg/Kg	WI-DRO
Aluminum		9400		22	mg/Kg	6010B
Barium		35	B	22	mg/Kg	6010B
Beryllium		0.60		0.55	mg/Kg	6010B
Calcium		18000	F1	550	mg/Kg	6010B
Cadmium		0.079	J	0.22	mg/Kg	6010B
Cobalt		12		5.5	mg/Kg	6010B
Chromium		16		0.55	mg/Kg	6010B
Copper		7.9		2.8	mg/Kg	6010B
Iron		19000		11	mg/Kg	6010B
Potassium		3900	B	550	mg/Kg	6010B
Magnesium		6100	F1	550	mg/Kg	6010B
Manganese		270	B	1.7	mg/Kg	6010B
Silver		0.11	J	0.55	mg/Kg	6010B
Sodium		510	J	550	mg/Kg	6010B
Nickel		25	B	4.4	mg/Kg	6010B
Vanadium		14		5.5	mg/Kg	6010B
Zinc		27	B	2.2	mg/Kg	6010B
Arsenic		7.2		1.1	mg/Kg	6010B
Lead		4.1		0.33	mg/Kg	6010B
Percent Solids		79		0.10	%	Moisture
Percent Moisture		21		0.10	%	Moisture
TCLP						
Arsenic		0.0059	J	0.50	mg/L	6010B
Barium		0.35	J	10	mg/L	6010B
Cadmium		0.00039	J	0.10	mg/L	6010B
Calcium		490		5.0	mg/L	6010B
Chromium		0.0073	J B	0.50	mg/L	6010B
Cobalt		0.029	J B	0.050	mg/L	6010B
Copper		0.0039	J	1.0	mg/L	6010B
Iron		0.086	J	0.10	mg/L	6010B
Lead		0.0045	J B	0.50	mg/L	6010B
Magnesium		45		5.0	mg/L	6010B
Manganese		3.4	B	0.015	mg/L	6010B
Nickel		0.051	B	0.040	mg/L	6010B
Potassium		6.7	B	5.0	mg/L	6010B
Zinc		0.047	J	1.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59286-2	**HA-21_0-1(20151217)**					
Methyl acetate		130	J	560	ug/Kg	8260B
Methylene Chloride		250	J B	280	ug/Kg	8260B
Acenaphthene		9.7	J	420	ug/Kg	8270C
Acenaphthylene		5.7	J	420	ug/Kg	8270C
Anthracene		28	J	420	ug/Kg	8270C
Benzaldehyde		15	J	420	ug/Kg	8270C
Benzo[a]anthracene		160	J	420	ug/Kg	8270C
Benzo[a]pyrene		200	J	420	ug/Kg	8270C
Benzo[b]fluoranthene		300	J	420	ug/Kg	8270C
Benzo[g,h,i]perylene		130	J	420	ug/Kg	8270C
Benzo[k]fluoranthene		110	J	420	ug/Kg	8270C
Bis(2-ethylhexyl) phthalate		40	J B	420	ug/Kg	8270C
Chrysene		260	J	420	ug/Kg	8270C
Dibenz(a,h)anthracene		39	J	420	ug/Kg	8270C
Fluoranthene		440		420	ug/Kg	8270C
Fluorene		13	J	420	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		120	J	420	ug/Kg	8270C
Phenanthrene		210	J	420	ug/Kg	8270C
Pyrene		370	J	420	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		15	B	10	mg/Kg	WI-DRO
Aluminum		7000		19	mg/Kg	6010B
Barium		73		19	mg/Kg	6010B
Beryllium		0.33	J	0.47	mg/Kg	6010B
Calcium		25000	B F2	470	mg/Kg	6010B
Cadmium		0.31		0.19	mg/Kg	6010B
Cobalt		5.3		4.7	mg/Kg	6010B
Chromium		13	B	0.47	mg/Kg	6010B
Copper		13		2.3	mg/Kg	6010B
Iron		12000	B	9.4	mg/Kg	6010B
Potassium		580		470	mg/Kg	6010B
Magnesium		8200	B F1 F2	470	mg/Kg	6010B
Manganese		350	B F2	1.4	mg/Kg	6010B
Silver		0.17	J	0.47	mg/Kg	6010B
Sodium		360	J B	470	mg/Kg	6010B
Nickel		16	B	3.7	mg/Kg	6010B
Vanadium		19		4.7	mg/Kg	6010B
Zinc		56	B	1.9	mg/Kg	6010B
Arsenic		2.7		0.94	mg/Kg	6010B
Lead		18		0.28	mg/Kg	6010B
Percent Solids		78		0.10	%	Moisture
Percent Moisture		22		0.10	%	Moisture
240-59286-4	**MB**					
Methylene Chloride		250	B	250	ug/Kg	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction	TAL CAN		SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction	TAL CAN		SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Method	Analyst	Analyst ID
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Shock, Ray	RES
SW846 6010B	Counts, Karen	KLC
SW846 6010B	Toth, Roger	RKT
SW846 7470A	Dillon, William K	WKD
SW846 7471A	Lecorchick, Willis A	WAL
EPA Moisture	Weimer, Joshua W	JWW

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	Solid	12/17/2015 1025	12/18/2015 1000
240-59286-2	HA-21_0-1(20151217)	Solid	12/17/2015 0800	12/18/2015 1000
240-59286-4	MB	Solid	12/17/2015 0000	12/18/2015 1000

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **AREAC-TRENCH-4_015_7-8(20151217)**

Lab Sample ID: 240-59286-1 Date Sampled: 12/17/2015 1025
Client Matrix: Solid % Moisture: 21.3 Date Received: 12/18/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211741	Lab File ID:	147196.D
Dilution:	1.0			Initial Weight/Volume:	10.35 g
Analysis Date:	12/22/2015 1340			Final Weight/Volume:	10 mL
Prep Date:	12/21/2015 0944				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		280	1200
Allyl chloride		ND		37	610
Benzene		ND		11	310
Bromobenzene		ND		16	310
Bromochloromethane		ND		86	310
Bromodichloromethane		ND		47	310
Bromoform		ND		75	310
Bromomethane		ND		63	310
2-Butanone (MEK)		ND		90	1200
Carbon disulfide		ND		69	310
Carbon tetrachloride		ND		22	310
Chlorobenzene		ND		16	310
Chlorodibromomethane		ND		25	310
Chloroethane		ND		63	310
Chloroform		ND		44	310
Chloromethane		ND		59	310
2-Chlorotoluene		ND		50	310
4-Chlorotoluene		ND		32	310
cis-1,2-Dichloroethene		ND		47	310
cis-1,3-Dichloropropene		ND		27	310
Cyclohexane		ND		37	610
1,2-Dibromo-3-Chloropropane		ND		87	610
1,2-Dibromoethane		ND		39	310
Dibromomethane		ND		61	310
1,2-Dichlorobenzene		ND		23	310
1,3-Dichlorobenzene		ND		37	310
1,4-Dichlorobenzene		ND		50	310
Dichlorodifluoromethane		ND		75	310
1,1-Dichloroethane		ND		43	310
1,2-Dichloroethane		ND		12	310
1,1-Dichloroethene		ND		37	310
Dichlorofluoromethane		ND	*	40	610
1,2-Dichloropropane		ND		39	310
1,3-Dichloropropane		ND		28	310
2,2-Dichloropropane		ND		64	310
1,1-Dichloropropene		ND		47	310
Ethylbenzene		ND		43	310
Ethyl ether		ND		120	610
Hexachlorobutadiene		ND		54	310
2-Hexanone		ND		100	1200
Isopropylbenzene		ND		16	310
Methyl acetate		ND		67	610
Methylcyclohexane		ND		47	610
Methylene Chloride		280	J B	100	310
4-Methyl-2-pentanone (MIBK)		ND		69	1200
Methyl tert butyl ether		ND		37	310

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **AREAC-TRENCH-4_015_7-8(20151217)**

Lab Sample ID: 240-59286-1 Date Sampled: 12/17/2015 1025
Client Matrix: Solid % Moisture: 21.3 Date Received: 12/18/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211741	Lab File ID:	147196.D
Dilution:	1.0			Initial Weight/Volume:	10.35 g
Analysis Date:	12/22/2015 1340			Final Weight/Volume:	10 mL
Prep Date:	12/21/2015 0944				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		25	310
Naphthalene		ND		32	310
n-Butylbenzene		ND		26	310
N-Propylbenzene		ND		75	310
o-Xylene		ND		21	310
p-Isopropyltoluene		ND		31	310
sec-Butylbenzene		ND		20	310
Styrene		ND		33	310
tert-Butylbenzene		ND		42	310
1,1,1,2-Tetrachloroethane		ND		60	310
1,1,2,2-Tetrachloroethane		ND		31	310
Tetrachloroethene		ND		33	310
Tetrahydrofuran		ND		150	1200
Toluene		ND		12	310
trans-1,2-Dichloroethene		ND		32	310
trans-1,3-Dichloropropene		ND		32	310
1,2,3-Trichlorobenzene		ND		48	310
1,2,4-Trichlorobenzene		ND		37	310
1,1,1-Trichloroethane		ND		33	310
1,1,2-Trichloroethane		ND		23	310
Trichloroethene		ND		48	310
Trichlorofluoromethane		ND		43	310
1,2,3-Trichloropropane		ND		130	310
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		52	310
1,2,4-Trimethylbenzene		ND		16	310
1,3,5-Trimethylbenzene		ND		18	310
Vinyl chloride		ND		21	310

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	75		26 - 141
Dibromofluoromethane (Surr)	70		30 - 122
1,2-Dichloroethane-d4 (Surr)	73		39 - 128
Toluene-d8 (Surr)	76		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **AREAC-TRENCH-4_015_7-8(20151217)**

Lab Sample ID: 240-59286-1 Date Sampled: 12/17/2015 1025
Client Matrix: Solid Date Received: 12/18/2015 1000

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248416.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 1910			Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 1910				
Leach Date:	12/18/2015 1810				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	86		80 - 121
4-Bromofluorobenzene (Surr)	78		70 - 124
Toluene-d8 (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	87		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **HA-21_0-1(20151217)**

Lab Sample ID: 240-59286-2 Date Sampled: 12/17/2015 0800
Client Matrix: Solid % Moisture: 21.5 Date Received: 12/18/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211741	Lab File ID:	147197.D
Dilution:	1.0			Initial Weight/Volume:	11.39 g
Analysis Date:	12/22/2015 1402			Final Weight/Volume:	10 mL
Prep Date:	12/21/2015 0944				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		250	1100
Allyl chloride		ND		34	560
Benzene		ND		10	280
Bromobenzene		ND		15	280
Bromochloromethane		ND		78	280
Bromodichloromethane		ND		43	280
Bromoform		ND		68	280
Bromomethane		ND		57	280
2-Butanone (MEK)		ND		82	1100
Carbon disulfide		ND		63	280
Carbon tetrachloride		ND		20	280
Chlorobenzene		ND		15	280
Chlorodibromomethane		ND		22	280
Chloroethane		ND		57	280
Chloroform		ND		40	280
Chloromethane		ND		54	280
2-Chlorotoluene		ND		46	280
4-Chlorotoluene		ND		29	280
cis-1,2-Dichloroethene		ND		43	280
cis-1,3-Dichloropropene		ND		25	280
Cyclohexane		ND		34	560
1,2-Dibromo-3-Chloropropane		ND		79	560
1,2-Dibromoethane		ND		36	280
Dibromomethane		ND		56	280
1,2-Dichlorobenzene		ND		21	280
1,3-Dichlorobenzene		ND		34	280
1,4-Dichlorobenzene		ND		46	280
Dichlorodifluoromethane		ND		68	280
1,1-Dichloroethane		ND		39	280
1,2-Dichloroethane		ND		11	280
1,1-Dichloroethene		ND		34	280
Dichlorofluoromethane		ND	*	37	560
1,2-Dichloropropane		ND		36	280
1,3-Dichloropropane		ND		26	280
2,2-Dichloropropane		ND		58	280
1,1-Dichloropropene		ND		43	280
Ethylbenzene		ND		39	280
Ethyl ether		ND		110	560
Hexachlorobutadiene		ND		49	280
2-Hexanone		ND		94	1100
Isopropylbenzene		ND		15	280
Methyl acetate		130	J	62	560
Methylcyclohexane		ND		43	560
Methylene Chloride		250	J B	95	280
4-Methyl-2-pentanone (MIBK)		ND		63	1100
Methyl tert butyl ether		ND		34	280

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **HA-21_0-1(20151217)**

Lab Sample ID: 240-59286-2 Date Sampled: 12/17/2015 0800
Client Matrix: Solid % Moisture: 21.5 Date Received: 12/18/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211741	Lab File ID:	147197.D
Dilution:	1.0			Initial Weight/Volume:	11.39 g
Analysis Date:	12/22/2015 1402			Final Weight/Volume:	10 mL
Prep Date:	12/21/2015 0944				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		22	280
Naphthalene		ND		29	280
n-Butylbenzene		ND		23	280
N-Propylbenzene		ND		68	280
o-Xylene		ND		19	280
p-Isopropyltoluene		ND		28	280
sec-Butylbenzene		ND		18	280
Styrene		ND		30	280
tert-Butylbenzene		ND		38	280
1,1,1,2-Tetrachloroethane		ND		55	280
1,1,2,2-Tetrachloroethane		ND		28	280
Tetrachloroethene		ND		30	280
Tetrahydrofuran		ND		130	1100
Toluene		ND		11	280
trans-1,2-Dichloroethene		ND		29	280
trans-1,3-Dichloropropene		ND		29	280
1,2,3-Trichlorobenzene		ND		44	280
1,2,4-Trichlorobenzene		ND		34	280
1,1,1-Trichloroethane		ND		30	280
1,1,2-Trichloroethane		ND		21	280
Trichloroethene		ND		44	280
Trichlorofluoromethane		ND		39	280
1,2,3-Trichloropropane		ND		120	280
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		47	280
1,2,4-Trimethylbenzene		ND		15	280
1,3,5-Trimethylbenzene		ND		17	280
Vinyl chloride		ND		19	280

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	67		26 - 141
Dibromofluoromethane (Surr)	68		30 - 122
1,2-Dichloroethane-d4 (Surr)	71		39 - 128
Toluene-d8 (Surr)	80		33 - 134

Client Sample ID: MB

Lab Sample ID: 240-59286-4 Date Sampled: 12/17/2015 0000
Client Matrix: Solid Date Received: 12/18/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211741	Lab File ID:	147198.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	12/22/2015 1423			Final Weight/Volume:	10 mL
Prep Date:	12/21/2015 0944				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		18	250
Chlorobenzene		ND		13	250
Chlorodibromomethane		ND		20	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		10	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND	*	33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		250	B	85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: MB

Lab Sample ID: 240-59286-4 Date Sampled: 12/17/2015 0000
Client Matrix: Solid Date Received: 12/18/2015 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-211919	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-211741	Lab File ID:	147198.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	12/22/2015 1423			Final Weight/Volume:	10 mL
Prep Date:	12/21/2015 0944				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		25	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		27	250
1,1,2-Trichloroethane		ND		19	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		17	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	79		26 - 141
Dibromofluoromethane (Surr)	84		30 - 122
1,2-Dichloroethane-d4 (Surr)	94		39 - 128
Toluene-d8 (Surr)	87		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **AREAC-TRENCH-4_015_7-8(20151217)**

Lab Sample ID: 240-59286-1 Date Sampled: 12/17/2015 1025
Client Matrix: Solid % Moisture: 21.3 Date Received: 12/18/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-212122	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211698	Lab File ID:	51223028.D
Dilution:	1.0			Initial Weight/Volume:	30.13 g
Analysis Date:	12/23/2015 2044			Final Weight/Volume:	2 mL
Prep Date:	12/21/2015 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.4	420
2,2'-oxybis[1-chloropropane]		ND		12	420
2,4,5-Trichlorophenol		ND		32	420
2,4,6-Trichlorophenol		ND		11	420
2,4-Dichlorophenol		ND		25	420
2,4-Dimethylphenol		ND		25	420
2,4-Dinitrophenol		ND		27	2000
2,4-Dinitrotoluene		ND		21	420
2,6-Dinitrotoluene		ND		27	420
2-Chloronaphthalene		ND		0.57	420
2-Chlorophenol		ND		10	420
2-Methylnaphthalene		ND		0.63	420
2-Methylphenol		ND		14	420
2-Nitroaniline		ND		12	2000
2-Nitrophenol		ND		10	420
3,3'-Dichlorobenzidine		ND		23	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		12	2000
4-Bromophenyl phenyl ether		ND		16	420
4-Chloro-3-methylphenol		ND		27	420
4-Chloroaniline		ND		21	420
4-Chlorophenyl phenyl ether		ND		16	420
4-Nitroaniline		ND		33	2000
4-Nitrophenol		ND		21	2000
Acenaphthene		ND		0.96	420
Acenaphthylene		ND		0.44	420
Acetophenone		ND		12	420
Anthracene		ND		0.99	420
Atrazine		ND		12	420
Benzaldehyde		ND		15	420
Benzo[a]anthracene		ND		0.80	420
Benzo[a]pyrene		ND		0.81	420
Benzo[b]fluoranthene		ND		0.75	420
Benzo[g,h,i]perylene		ND		0.44	420
Benzo[k]fluoranthene		ND		0.86	420
Bis(2-chloroethoxy)methane		ND		28	420
Bis(2-chloroethyl)ether		ND		2.5	420
Bis(2-ethylhexyl) phthalate		51	J B	24	420
Butyl benzyl phthalate		ND		13	420
Caprolactam		ND		47	420
Carbazole		ND		34	420
Chrysene		ND		1.4	420
Dibenz(a,h)anthracene		ND		0.83	420
Dibenzofuran		ND		0.83	420
Diethyl phthalate		ND		20	420
Dimethyl phthalate		ND		21	420

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **AREAC-TRENCH-4_015_7-8(20151217)**

Lab Sample ID: 240-59286-1 Date Sampled: 12/17/2015 1025
Client Matrix: Solid % Moisture: 21.3 Date Received: 12/18/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-212122	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211698	Lab File ID:	51223028.D
Dilution:	1.0			Initial Weight/Volume:	30.13 g
Analysis Date:	12/23/2015 2044			Final Weight/Volume:	2 mL
Prep Date:	12/21/2015 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		19	420
Di-n-octyl phthalate		ND		10	420
Fluoranthene		8.2	J	0.70	420
Fluorene		ND		0.67	420
Hexachlorobenzene		ND		2.7	420
Hexachlorobutadiene		ND		7.1	420
Hexachlorocyclopentadiene		ND		10	2000
Hexachloroethane		ND		11	420
Indeno[1,2,3-cd]pyrene		ND		0.44	420
Isophorone		ND		16	420
Naphthalene		ND		1.0	420
Nitrobenzene		ND		2.8	420
N-Nitrosodi-n-propylamine		ND		8.0	420
N-Nitrosodiphenylamine		ND		27	420
Pentachlorophenol		ND		12	420
Phenol		ND		9.2	420
Phenanthrene		5.2	J	0.92	420
Pyrene		7.1	J	0.56	420
3 & 4 Methylphenol		ND		25	510

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	55		24 - 110
2-Fluorophenol (Surr)	54		24 - 110
2,4,6-Tribromophenol (Surr)	40		10 - 110
Nitrobenzene-d5 (Surr)	50		20 - 110
Phenol-d5 (Surr)	54		26 - 110
Terphenyl-d14 (Surr)	69		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **AREAC-TRENCH-4_015_7-8(20151217)**

Lab Sample ID: 240-59286-1 Date Sampled: 12/17/2015 1025
Client Matrix: Solid Date Received: 12/18/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-212275	Instrument ID:	A4HP10
Prep Method:	3510C	Prep Batch:	240-211922	Lab File ID:	51224013.D
Dilution:	1.0	Leach Batch:	240-211830	Initial Weight/Volume:	250 mL
Analysis Date:	12/24/2015 1425			Final Weight/Volume:	2 mL
Prep Date:	12/22/2015 0959			Injection Volume:	1 uL
Leach Date:	12/21/2015 1630				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.016
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	88		30 - 110
2-Fluorophenol (Surr)	68		20 - 110
Nitrobenzene-d5 (Surr)	82		28 - 110
Phenol-d5 (Surr)	55		21 - 110
Terphenyl-d14 (Surr)	91		48 - 110
2,4,6-Tribromophenol (Surr)	86		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **HA-21_0-1(20151217)**

Lab Sample ID: 240-59286-2 Date Sampled: 12/17/2015 0800
Client Matrix: Solid % Moisture: 21.5 Date Received: 12/18/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-212122	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211698	Lab File ID:	51223029.D
Dilution:	1.0			Initial Weight/Volume:	30.18 g
Analysis Date:	12/23/2015 2108			Final Weight/Volume:	2 mL
Prep Date:	12/21/2015 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4.4	420
2,2'-oxybis[1-chloropropane]		ND		12	420
2,4,5-Trichlorophenol		ND		32	420
2,4,6-Trichlorophenol		ND		11	420
2,4-Dichlorophenol		ND		25	420
2,4-Dimethylphenol		ND		25	420
2,4-Dinitrophenol		ND		27	2000
2,4-Dinitrotoluene		ND		22	420
2,6-Dinitrotoluene		ND		27	420
2-Chloronaphthalene		ND		0.57	420
2-Chlorophenol		ND		10	420
2-Methylnaphthalene		ND		0.63	420
2-Methylphenol		ND		14	420
2-Nitroaniline		ND		12	2000
2-Nitrophenol		ND		11	420
3,3'-Dichlorobenzidine		ND		23	2000
3-Nitroaniline		ND		20	2000
4,6-Dinitro-2-methylphenol		ND		12	2000
4-Bromophenyl phenyl ether		ND		16	420
4-Chloro-3-methylphenol		ND		27	420
4-Chloroaniline		ND		22	420
4-Chlorophenyl phenyl ether		ND		16	420
4-Nitroaniline		ND		33	2000
4-Nitrophenol		ND		22	2000
Acenaphthene		9.7	J	0.96	420
Acenaphthylene		5.7	J	0.44	420
Acetophenone		ND		12	420
Anthracene		28	J	0.99	420
Atrazine		ND		12	420
Benzaldehyde		15	J	15	420
Benzo[a]anthracene		160	J	0.80	420
Benzo[a]pyrene		200	J	0.81	420
Benzo[b]fluoranthene		300	J	0.75	420
Benzo[g,h,i]perylene		130	J	0.44	420
Benzo[k]fluoranthene		110	J	0.86	420
Bis(2-chloroethoxy)methane		ND		28	420
Bis(2-chloroethyl)ether		ND		2.5	420
Bis(2-ethylhexyl) phthalate		40	J B	24	420
Butyl benzyl phthalate		ND		13	420
Caprolactam		ND		47	420
Carbazole		ND		34	420
Chrysene		260	J	1.4	420
Dibenz(a,h)anthracene		39	J	0.84	420
Dibenzofuran		ND		0.84	420
Diethyl phthalate		ND		20	420
Dimethyl phthalate		ND		22	420

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **HA-21_0-1(20151217)**

Lab Sample ID: 240-59286-2 Date Sampled: 12/17/2015 0800
Client Matrix: Solid % Moisture: 21.5 Date Received: 12/18/2015 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-212122	Instrument ID:	A4HP10
Prep Method:	3540C	Prep Batch:	240-211698	Lab File ID:	51223029.D
Dilution:	1.0			Initial Weight/Volume:	30.18 g
Analysis Date:	12/23/2015 2108			Final Weight/Volume:	2 mL
Prep Date:	12/21/2015 0817			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		19	420
Di-n-octyl phthalate		ND		10	420
Fluoranthene		440		0.70	420
Fluorene		13	J	0.67	420
Hexachlorobenzene		ND		2.7	420
Hexachlorobutadiene		ND		7.1	420
Hexachlorocyclopentadiene		ND		10	2000
Hexachloroethane		ND		11	420
Indeno[1,2,3-cd]pyrene		120	J	0.44	420
Isophorone		ND		16	420
Naphthalene		ND		1.0	420
Nitrobenzene		ND		2.8	420
N-Nitrosodi-n-propylamine		ND		8.0	420
N-Nitrosodiphenylamine		ND		27	420
Pentachlorophenol		ND		12	420
Phenol		ND		9.2	420
Phenanthrene		210	J	0.92	420
Pyrene		370	J	0.56	420
3 & 4 Methylphenol		ND		25	510

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	57		24 - 110
2-Fluorophenol (Surr)	51		24 - 110
2,4,6-Tribromophenol (Surr)	35		10 - 110
Nitrobenzene-d5 (Surr)	45		20 - 110
Phenol-d5 (Surr)	57		26 - 110
Terphenyl-d14 (Surr)	66		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **AREAC-TRENCH-4_015_7-8(20151217)**

Lab Sample ID: 240-59286-1 Date Sampled: 12/17/2015 1025
Client Matrix: Solid % Moisture: 21.3 Date Received: 12/18/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-212412	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-212400	Lab File ID:	Y0122906.D
Dilution:	1.0			Initial Weight/Volume:	9.97 g
Analysis Date:	12/29/2015 1457			Final Weight/Volume:	10 mL
Prep Date:	12/29/2015 0620			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		2.6	J	2.5	13

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **HA-21_0-1(20151217)**

Lab Sample ID: 240-59286-2 Date Sampled: 12/17/2015 0800
Client Matrix: Solid % Moisture: 21.5 Date Received: 12/18/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-212412	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-212400	Lab File ID:	Y0122907.D
Dilution:	1.0			Initial Weight/Volume:	10.34 g
Analysis Date:	12/29/2015 1531			Final Weight/Volume:	10 mL
Prep Date:	12/29/2015 0620			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.5	12

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: MB

Lab Sample ID: 240-59286-4 Date Sampled: 12/17/2015 0000
Client Matrix: Solid Date Received: 12/18/2015 1000

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-212412	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-212400	Lab File ID:	Y0122908.D
Dilution:	1.0			Initial Weight/Volume:	1.92 g
Analysis Date:	12/29/2015 1605			Final Weight/Volume:	10 mL
Prep Date:	12/29/2015 0620			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		10	52

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **AREAC-TRENCH-4_015_7-8(20151217)**

Lab Sample ID: 240-59286-1 Date Sampled: 12/17/2015 1025
Client Matrix: Solid % Moisture: 21.3 Date Received: 12/18/2015 1000

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-213003	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-212286	Lab File ID:	P14R010511.D
Dilution:	1.0			Initial Weight/Volume:	30.46 g
Analysis Date:	01/05/2016 1316			Final Weight/Volume:	5 mL
Prep Date:	12/24/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		4.7	J B	1.2	10

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **HA-21_0-1(20151217)**

Lab Sample ID: 240-59286-2 Date Sampled: 12/17/2015 0800
Client Matrix: Solid % Moisture: 21.5 Date Received: 12/18/2015 1000

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-213003	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-212286	Lab File ID:	P14R010512.D
Dilution:	1.0			Initial Weight/Volume:	29.56 g
Analysis Date:	01/05/2016 1344			Final Weight/Volume:	5 mL
Prep Date:	12/24/2015 0928			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		15	B	1.3	10

Client Sample ID: **AREAC-TRENCH-4_015_7-8(20151217)**

Lab Sample ID: 240-59286-1 Date Sampled: 12/17/2015 1025
Client Matrix: Solid % Moisture: 21.3 Date Received: 12/18/2015 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-212068	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-211769	Lab File ID:	I9122215A.asc
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	12/22/2015 2119			Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1056				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		9400		6.4	22
Antimony		ND	F1	0.53	1.1
Barium		35	B	0.45	22
Beryllium		0.60		0.029	0.55
Calcium		18000	F1	25	550
Cadmium		0.079	J	0.023	0.22
Cobalt		12		0.052	5.5
Chromium		16		0.083	0.55
Copper		7.9		0.25	2.8
Iron		19000		3.5	11
Potassium		3900	B	6.8	550
Magnesium		6100	F1	5.7	550
Manganese		270	B	0.093	1.7
Silver		0.11	J	0.070	0.55
Sodium		510	J	21	550
Nickel		25	B	0.088	4.4
Vanadium		14		0.22	5.5
Zinc		27	B	0.62	2.2
Arsenic		7.2		0.45	1.1
Lead		4.1		0.22	0.33
Selenium		ND		0.38	0.55
Thallium		ND		0.14	1.1

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-212146	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	1.0	Leach Batch:	240-211830	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1030			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	12/21/2015 1630				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		ND		0.040	0.20
Antimony		ND		0.0024	0.30
Arsenic		0.0059	J	0.0029	0.50
Barium		0.35	J	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.00039	J	0.00014	0.10
Calcium		490		0.26	5.0
Chromium		0.0073	J B	0.00055	0.50
Cobalt		0.029	J B	0.00056	0.050
Copper		0.0039	J	0.0019	1.0
Iron		0.086	J	0.013	0.10
Lead		0.0045	J B	0.0019	0.50

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **AREAC-TRENCH-4_015_7-8(20151217)**

Lab Sample ID: 240-59286-1 Date Sampled: 12/17/2015 1025
Client Matrix: Solid Date Received: 12/18/2015 1000

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Magnesium		45		0.055	5.0
Manganese		3.4	B	0.00046	0.015
Nickel		0.051	B	0.00076	0.040
Potassium		6.7	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		0.047	J	0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-212196	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	240-211830	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1238			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	12/21/2015 1630				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-212161	Instrument ID:	H1
Prep Method:	7471A	Prep Batch:	240-211791	Lab File ID:	122215AH1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.58 g
Analysis Date:	12/22/2015 1258			Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1535				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		ND		0.018	0.13

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Client Sample ID: **HA-21_0-1(20151217)**

Lab Sample ID: 240-59286-2 Date Sampled: 12/17/2015 0800
Client Matrix: Solid % Moisture: 21.5 Date Received: 12/18/2015 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-212146	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-211798	Lab File ID:	I9122315A.asc
Dilution:	1.0			Initial Weight/Volume:	1.36 g
Analysis Date:	12/24/2015 0103			Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1234				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7000		5.4	19
Antimony		ND	F1	0.45	0.94
Barium		73		0.38	19
Beryllium		0.33	J	0.024	0.47
Calcium		25000	B F2	22	470
Cadmium		0.31		0.020	0.19
Cobalt		5.3		0.044	4.7
Chromium		13	B	0.070	0.47
Copper		13		0.22	2.3
Potassium		580		5.8	470
Magnesium		8200	B F1 F2	4.9	470
Manganese		350	B F2	0.079	1.4
Silver		0.17	J	0.059	0.47
Sodium		360	J B	18	470
Nickel		16	B	0.075	3.7
Vanadium		19		0.19	4.7
Zinc		56	B	0.52	1.9
Arsenic		2.7		0.38	0.94
Lead		18		0.19	0.28
Selenium		ND		0.32	0.47

Analysis Method:	6010B	Analysis Batch:	240-212434	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-211798	Lab File ID:	I9122415A.asc
Dilution:	1.0			Initial Weight/Volume:	1.36 g
Analysis Date:	12/24/2015 2307			Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1234				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Iron		12000	B	3.0	9.4
Thallium		ND		0.12	0.94

General Chemistry

Client Sample ID: **AREAC-TRENCH-4_015_7-8(20151217)**

Lab Sample ID: 240-59286-1 Date Sampled: 12/17/2015 1025
Client Matrix: Solid Date Received: 12/18/2015 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	79		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211552	Analysis Date: 12/18/2015 1739						DryWt Corrected: N
Percent Moisture	21		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211552	Analysis Date: 12/18/2015 1739						DryWt Corrected: N

General Chemistry

Client Sample ID: **HA-21_0-1(20151217)**

Lab Sample ID: 240-59286-2 Date Sampled: 12/17/2015 0800
Client Matrix: Solid Date Received: 12/18/2015 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	78		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211552	Analysis Date: 12/18/2015 1739						DryWt Corrected: N
Percent Moisture	22		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-211552	Analysis Date: 12/18/2015 1739						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	*	RPD of the LCS and LCSD exceeds the control limits
GC/MS Semi VOA		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-211625					
LB 240-211625/1-A	Method Blank	P	Solid	1311	
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	P	Solid	1311	
240-59286-1MS	Matrix Spike	P	Solid	1311	
240-59286-1MSD	Matrix Spike Duplicate	P	Solid	1311	
Prep Batch: 240-211741					
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	5035	
240-59286-2	HA-21_0-1(20151217)	T	Solid	5035	
240-59286-4	MB	T	Solid	5035	
Analysis Batch:240-211823					
LB 240-211625/1-A	Method Blank	P	Solid	8260B	
LCS 240-211823/9	Lab Control Sample	T	Water	8260B	
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	P	Solid	8260B	
240-59286-1MS	Matrix Spike	P	Solid	8260B	
240-59286-1MSD	Matrix Spike Duplicate	P	Solid	8260B	
Analysis Batch:240-211919					
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	8260B	240-211741
240-59286-2	HA-21_0-1(20151217)	T	Solid	8260B	240-211741
240-59286-4	MB	T	Solid	8260B	240-211741

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-211698					
LCS 240-211698/11-A	Lab Control Sample	T	Solid	3540C	
MB 240-211698/10-A	Method Blank	T	Solid	3540C	
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	3540C	
240-59286-2	HA-21_0-1(20151217)	T	Solid	3540C	
Prep Batch: 240-211812					
240-59183-A-3-F MS	Matrix Spike	P	Solid	1311	
Prep Batch: 240-211830					
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	P	Solid	1311	
Prep Batch: 240-211922					
LCS 240-211922/15-A	Lab Control Sample	T	Water	3510C	
MB 240-211922/14-A	Method Blank	T	Water	3510C	
240-59183-A-3-F MS	Matrix Spike	P	Solid	3510C	240-211812
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	P	Solid	3510C	240-211830
Analysis Batch:240-212122					
LCS 240-211698/11-A	Lab Control Sample	T	Solid	8270C	240-211698
MB 240-211698/10-A	Method Blank	T	Solid	8270C	240-211698
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	8270C	240-211698
240-59286-2	HA-21_0-1(20151217)	T	Solid	8270C	240-211698
Analysis Batch:240-212275					
LCS 240-211922/15-A	Lab Control Sample	T	Water	8270C	240-211922
MB 240-211922/14-A	Method Blank	T	Water	8270C	240-211922
240-59183-A-3-F MS	Matrix Spike	P	Solid	8270C	240-211922
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	P	Solid	8270C	240-211922

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Prep Batch: 240-212400					
LCS 240-212400/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-212400/6-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-212400/1-A	Method Blank	T	Solid	5035	
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	5035	
240-59286-2	HA-21_0-1(20151217)	T	Solid	5035	
240-59286-4	MB	T	Solid	5035	
Analysis Batch:240-212412					
LCS 240-212400/2-A	Lab Control Sample	T	Solid	WI-GRO	240-212400
LCSD 240-212400/6-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-212400
MB 240-212400/1-A	Method Blank	T	Solid	WI-GRO	240-212400
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	WI-GRO	240-212400
240-59286-2	HA-21_0-1(20151217)	T	Solid	WI-GRO	240-212400
240-59286-4	MB	T	Solid	WI-GRO	240-212400

Report Basis
T = Total

GC Semi VOA					
Prep Batch: 240-212286					
LCS 240-212286/4-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-212286/5-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-212286/3-A	Method Blank	T	Solid	WI DRO PREP	
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	WI DRO PREP	
240-59286-2	HA-21_0-1(20151217)	T	Solid	WI DRO PREP	
Analysis Batch:240-213003					
LCS 240-212286/4-A	Lab Control Sample	T	Solid	WI-DRO	240-212286
LCSD 240-212286/5-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-212286
MB 240-212286/3-A	Method Blank	T	Solid	WI-DRO	240-212286
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	WI-DRO	240-212286
240-59286-2	HA-21_0-1(20151217)	T	Solid	WI-DRO	240-212286

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-211769					
LCS 240-211769/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-211769/1-A	Method Blank	T	Solid	3050B	
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	3050B	
240-59286-1MS	Matrix Spike	T	Solid	3050B	
240-59286-1MSD	Matrix Spike Duplicate	T	Solid	3050B	
Prep Batch: 240-211791					
LCS 240-211791/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-211791/1-A	Method Blank	T	Solid	7471A	
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	7471A	
240-59286-1MS	Matrix Spike	T	Solid	7471A	
240-59286-1MSD	Matrix Spike Duplicate	T	Solid	7471A	
Prep Batch: 240-211798					
LCS 240-211798/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-211798/1-A	Method Blank	T	Solid	3050B	
240-59286-2	HA-21_0-1(20151217)	T	Solid	3050B	
240-59286-2MS	Matrix Spike	T	Solid	3050B	
240-59286-2MSD	Matrix Spike Duplicate	T	Solid	3050B	
Prep Batch: 240-211812					
240-59183-A-4-G MS ^5	Matrix Spike	P	Solid	1311	
240-59183-A-4-J MS	Matrix Spike	P	Solid	1311	
240-59183-A-4-H MSD ^5	Matrix Spike Duplicate	P	Solid	1311	
240-59183-A-4-K MSD	Matrix Spike Duplicate	P	Solid	1311	
Prep Batch: 240-211830					
LB 240-211830/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-211830/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	P	Solid	1311	
Prep Batch: 240-211944					
LCS 240-211944/3-A	Lab Control Sample	T	Water	3010A	
MB 240-211944/2-A	Method Blank	T	Water	3010A	
LB 240-211830/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-211830
240-59183-A-4-G MS ^5	Matrix Spike	P	Solid	3010A	240-211812
240-59183-A-4-H MSD ^5	Matrix Spike Duplicate	P	Solid	3010A	240-211812
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	P	Solid	3010A	240-211830

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-211947					
LCS 240-211947/3-A	Lab Control Sample	T	Water	7470A	
MB 240-211947/2-A	Method Blank	T	Water	7470A	
LB 240-211830/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-211830
240-59183-A-4-J MS	Matrix Spike	P	Solid	7470A	240-211812
240-59183-A-4-K MSD	Matrix Spike Duplicate	P	Solid	7470A	240-211812
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	P	Solid	7470A	240-211830
Analysis Batch:240-212068					
LCS 240-211769/2-A	Lab Control Sample	T	Solid	6010B	240-211769
MB 240-211769/1-A	Method Blank	T	Solid	6010B	240-211769
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	6010B	240-211769
240-59286-1MS	Matrix Spike	T	Solid	6010B	240-211769
240-59286-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-211769
Analysis Batch:240-212146					
LCS 240-211798/2-A	Lab Control Sample	T	Solid	6010B	240-211798
MB 240-211798/1-A	Method Blank	T	Solid	6010B	240-211798
LB 240-211830/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-211944
LCS 240-211944/3-A	Lab Control Sample	T	Water	6010B	240-211944
MB 240-211944/2-A	Method Blank	T	Water	6010B	240-211944
240-59183-A-4-G MS ^5	Matrix Spike	P	Solid	6010B	240-211944
240-59183-A-4-H MSD ^5	Matrix Spike Duplicate	P	Solid	6010B	240-211944
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	P	Solid	6010B	240-211944
240-59286-2	HA-21_0-1(20151217)	T	Solid	6010B	240-211798
240-59286-2MS	Matrix Spike	T	Solid	6010B	240-211798
240-59286-2MSD	Matrix Spike Duplicate	T	Solid	6010B	240-211798
Analysis Batch:240-212161					
LCS 240-211791/2-A	Lab Control Sample	T	Solid	7471A	240-211791
MB 240-211791/1-A	Method Blank	T	Solid	7471A	240-211791
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	7471A	240-211791
240-59286-1MS	Matrix Spike	T	Solid	7471A	240-211791
240-59286-1MSD	Matrix Spike Duplicate	T	Solid	7471A	240-211791
Analysis Batch:240-212196					
LB 240-211830/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-211947
LCS 240-211947/3-A	Lab Control Sample	T	Water	7470A	240-211947
MB 240-211947/2-A	Method Blank	T	Water	7470A	240-211947
240-59183-A-4-J MS	Matrix Spike	P	Solid	7470A	240-211947
240-59183-A-4-K MSD	Matrix Spike Duplicate	P	Solid	7470A	240-211947
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	P	Solid	7470A	240-211947

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-212434					
LCS 240-211798/2-A	Lab Control Sample	T	Solid	6010B	240-211798
MB 240-211798/1-A	Method Blank	T	Solid	6010B	240-211798
240-59286-2	HA-21_0-1(20151217)	T	Solid	6010B	240-211798
240-59286-2MS	Matrix Spike	T	Solid	6010B	240-211798
240-59286-2MSD	Matrix Spike Duplicate	T	Solid	6010B	240-211798

Report Basis
P = TCLP
T = Total

General Chemistry					
Analysis Batch:240-211552					
240-59278-A-35 DU	Duplicate	T	Solid	Moisture	
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	T	Solid	Moisture	
240-59286-2	HA-21_0-1(20151217)	T	Solid	Moisture	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	75	70	73	76
240-59286-2	HA-21_0-1(20151217)	67	68	71	80
240-59286-4	MB	79	84	94	87

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-211625/1-A MB		86	105	99	98
LCS 240-211823/9		81	94	91	94
240-59286-1 MS	AREAC-TRENCH-4_015_7-8(20151217) MS	79	92	82	93
240-59286-1 MSD	AREAC-TRENCH-4_015_7-8(20151217) MSD	80	95	85	91

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-59286-1	AREAC-TRENCH-4_015_7-8(20151217)	86	78	91	87

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-211698/10-A		74	77	72	80	82	54
LCS 240-211698/11-A		66	67	68	67	76	65

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-59286-1	AREAC-TRENCH-4_0 15_7-8(20151217)	55	54	40	50	54	69
240-59286-2	HA-21_0-1(20151217)	57	51	35	45	57	66

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-59286-1	AREAC-TRENCH-4_0 15_7-8(20151217)	88	68	82	55	91	86
MB 240-211922/14-A		94	73	92	52	97	97
LCS 240-211922/15-A		91	78	99	60	93	104
240-59183-A-3-F MS		68	60	73	26	68	78

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Method Blank - Batch: 240-211823

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-211625/1-A	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248413.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 1801	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 1801				
Leach Date:	12/18/2015 1810				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	86	70 - 124
Dibromofluoromethane (Surr)	105	80 - 128
1,2-Dichloroethane-d4 (Surr)	99	80 - 121
Toluene-d8 (Surr)	98	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Lab Control Sample - Batch: 240-211823

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-211823/9	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	U1248414.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 1823	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 1823				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	987	99	80 - 120	
2-Butanone (MEK)	2000	1360	68	49 - 120	
Carbon tetrachloride	1000	867	87	54 - 122	
Chlorobenzene	1000	995	100	80 - 120	
Chloroform	1000	973	97	80 - 123	
1,2-Dichloroethane	1000	997	100	80 - 120	
1,1-Dichloroethene	1000	939	94	71 - 133	
Tetrachloroethene	1000	983	98	79 - 134	
Trichloroethene	1000	1060	106	78 - 130	
Vinyl chloride	1000	696	70	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	81	70 - 124
Dibromofluoromethane (Surr)	94	80 - 128
1,2-Dichloroethane-d4 (Surr)	91	80 - 121
Toluene-d8 (Surr)	94	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211823

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-59286-1	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248428.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/21/2015 2344			Final Weight/Volume:	5 mL
Prep Date:	12/21/2015 2344				5 mL
Leach Date:	12/18/2015 1810				

MSD Lab Sample ID:	240-59286-1	Analysis Batch:	240-211823	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248429.D
Dilution:	1.0	Leach Batch:	240-211625	Initial Weight/Volume:	0.1 mL
Analysis Date:	12/22/2015 0008			Final Weight/Volume:	5 mL
Prep Date:	12/22/2015 0008				5 mL
Leach Date:	12/18/2015 1810				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	90	92	80 - 120	3	30		
2-Butanone (MEK)	59	65	49 - 120	9	30		
Carbon tetrachloride	73	75	60 - 120	2	30		
Chlorobenzene	89	97	80 - 120	8	30		
Chloroform	91	93	80 - 124	2	30		
1,2-Dichloroethane	90	92	80 - 120	2	30		
1,1-Dichloroethene	83	84	67 - 139	2	30		
Tetrachloroethene	94	94	74 - 138	0	30		
Trichloroethene	99	100	75 - 134	1	30		
Vinyl chloride	65	67	51 - 120	4	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	79	80	70 - 124
Dibromofluoromethane (Surr)	92	95	80 - 128
1,2-Dichloroethane-d4 (Surr)	82	85	80 - 121
Toluene-d8 (Surr)	93	91	80 - 120

Method Blank - Batch: 240-211698

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-211698/10-A	Analysis Batch:	240-212122	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211698	Lab File ID:	51223008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/23/2015 1247	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/21/2015 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	44.8	J	19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Method Blank - Batch: 240-211698

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-211698/10-A	Analysis Batch:	240-212122	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211698	Lab File ID:	51223008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/23/2015 1247	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/21/2015 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	74	24 - 110
2-Fluorophenol (Surr)	77	24 - 110
Nitrobenzene-d5 (Surr)	72	20 - 110
Phenol-d5 (Surr)	80	26 - 110
Terphenyl-d14 (Surr)	82	36 - 110
2,4,6-Tribromophenol (Surr)	54	10 - 110

Lab Control Sample - Batch: 240-211698

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-211698/11-A	Analysis Batch:	240-212122	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211698	Lab File ID:	51223009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/23/2015 1311	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/21/2015 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	444	67	35 - 110	
2,2'-oxybis[1-chloropropane]	667	428	64	29 - 110	
2,4-Dichlorophenol	667	438	66	39 - 110	
2,4-Dimethylphenol	667	398	60	29 - 110	
2,4-Dinitrophenol	1330	426	32	10 - 110	J
2,4-Dinitrotoluene	667	545	82	48 - 110	
2,6-Dinitrotoluene	667	523	78	45 - 110	
2-Chloronaphthalene	667	436	65	32 - 110	
2,4,5-Trichlorophenol	667	458	69	25 - 110	
2-Chlorophenol	667	449	67	37 - 110	
2,4,6-Trichlorophenol	667	453	68	12 - 110	
2-Methylnaphthalene	667	442	66	36 - 110	
2-Methylphenol	667	419	63	41 - 110	
2-Nitroaniline	667	483	72	45 - 110	J
2-Nitrophenol	667	497	75	34 - 110	
3,3'-Dichlorobenzidine	1330	829	62	28 - 110	J
3-Nitroaniline	667	492	74	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	713	53	10 - 110	J
4-Bromophenyl phenyl ether	667	495	74	39 - 110	
4-Chloro-3-methylphenol	667	494	74	48 - 110	
4-Chloroaniline	667	400	60	30 - 110	
4-Chlorophenyl phenyl ether	667	474	71	40 - 110	
4-Nitroaniline	667	538	81	48 - 110	J
4-Nitrophenol	1330	1060	80	28 - 110	J
Acenaphthene	667	471	71	38 - 110	
Acenaphthylene	667	466	70	40 - 110	
Acetophenone	667	446	67	40 - 110	
Anthracene	667	507	76	48 - 110	
Atrazine	1330	1110	83	54 - 120	
Benzaldehyde	1330	893	67	32 - 110	
Benzo[a]anthracene	667	503	75	50 - 110	
Benzo[a]pyrene	667	532	80	44 - 110	
Benzo[b]fluoranthene	667	506	76	43 - 110	
Benzo[g,h,i]perylene	667	511	77	51 - 110	
Benzo[k]fluoranthene	667	530	79	38 - 105	
Bis(2-chloroethoxy)methane	667	460	69	32 - 110	
Bis(2-chloroethyl)ether	667	422	63	34 - 110	
Bis(2-ethylhexyl) phthalate	667	639	96	50 - 110	
Butyl benzyl phthalate	667	605	91	51 - 110	
Caprolactam	1330	1020	77	44 - 114	
Carbazole	667	516	77	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Lab Control Sample - Batch: 240-211698

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-211698/11-A	Analysis Batch:	240-212122	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211698	Lab File ID:	51223009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	12/23/2015 1311	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	12/21/2015 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	508	76	50 - 110	
Dibenz(a,h)anthracene	667	520	78	51 - 110	
Dibenzofuran	667	463	69	43 - 110	
Diethyl phthalate	667	531	80	52 - 110	
Dimethyl phthalate	667	517	78	50 - 110	
Di-n-butyl phthalate	667	564	85	51 - 110	
Di-n-octyl phthalate	667	569	85	48 - 110	
Fluoranthene	667	535	80	51 - 110	
Fluorene	667	454	68	46 - 110	
Hexachlorobenzene	667	456	68	43 - 110	
Hexachlorobutadiene	667	428	64	29 - 110	
Hexachlorocyclopentadiene	667	300	45	12 - 110	J
Hexachloroethane	667	433	65	30 - 110	
Indeno[1,2,3-cd]pyrene	667	525	79	50 - 110	
Isophorone	667	471	71	36 - 110	
Naphthalene	667	440	66	36 - 110	
Nitrobenzene	667	430	65	32 - 110	
N-Nitrosodi-n-propylamine	667	459	69	38 - 110	
N-Nitrosodiphenylamine	1330	990	74	46 - 110	
Pentachlorophenol	1330	619	46	10 - 110	
Phenol	667	427	64	38 - 110	
Phenanthrene	667	491	74	49 - 110	
Pyrene	667	518	78	49 - 110	
3 & 4 Methylphenol	667	458	69	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	66	24 - 110
2-Fluorophenol (Surr)	67	24 - 110
Nitrobenzene-d5 (Surr)	68	20 - 110
Phenol-d5 (Surr)	67	26 - 110
Terphenyl-d14 (Surr)	76	36 - 110
2,4,6-Tribromophenol (Surr)	65	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Method Blank - Batch: 240-211922

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-211922/14-A	Analysis Batch:	240-212275	Instrument ID:	A4HP10
Client Matrix:	Water	Prep Batch:	240-211922	Lab File ID:	51224005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/24/2015 1051	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/22/2015 0959			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.016
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	94	30 - 110
2-Fluorophenol (Surr)	73	20 - 110
Nitrobenzene-d5 (Surr)	92	28 - 110
Phenol-d5 (Surr)	52	21 - 110
Terphenyl-d14 (Surr)	97	48 - 110
2,4,6-Tribromophenol (Surr)	97	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Lab Control Sample - Batch: 240-211922

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-211922/15-A	Analysis Batch:	240-212275	Instrument ID:	A4HP10
Client Matrix:	Water	Prep Batch:	240-211922	Lab File ID:	51224006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/24/2015 1115	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/22/2015 0959			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0714	89	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0800	100	54 - 110	
Pyridine	0.0800	0.0381	48	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0730	91	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0810	101	46 - 110	
2-Methylphenol	0.0800	0.0698	87	44 - 111	
Hexachlorobenzene	0.0800	0.0693	87	50 - 110	
Hexachlorobutadiene	0.0800	0.0732	92	34 - 110	
Hexachloroethane	0.0800	0.0717	90	41 - 110	
Nitrobenzene	0.0800	0.0765	96	40 - 110	
Pentachlorophenol	0.160	0.124	78	12 - 110	
3 & 4 Methylphenol	0.0800	0.0722	90	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	91	30 - 110
2-Fluorophenol (Surr)	78	20 - 110
Nitrobenzene-d5 (Surr)	99	28 - 110
Phenol-d5 (Surr)	60	21 - 110
Terphenyl-d14 (Surr)	93	48 - 110
2,4,6-Tribromophenol (Surr)	104	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Matrix Spike - Batch: 240-211922

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-59183-A-3-F MS	Analysis Batch:	240-212275	Instrument ID:	A4HP10
Client Matrix:	Solid	Prep Batch:	240-211922	Lab File ID:	51224020.D
Dilution:	4.0	Leach Batch:	240-211812	Initial Weight/Volume:	250 mL
Analysis Date:	12/24/2015 1711	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	12/22/2015 0959			Injection Volume:	1 uL
Leach Date:	12/21/2015 0600				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0578	72	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0565	71	42 - 110	
Pyridine	ND	0.0800	0.0461	58	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0599	75	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0585	73	35 - 110	
2-Methylphenol	ND	0.0800	0.0288	36	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0526	66	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0577	72	28 - 110	
Hexachloroethane	ND	0.0800	0.0552	69	26 - 110	
Nitrobenzene	ND	0.0800	0.0601	75	32 - 110	
Pentachlorophenol	ND	0.160	0.0953	60	10 - 124	
3 & 4 Methylphenol	ND	0.0800	0.0132	17	29 - 110	J F1

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	68	30 - 110
2-Fluorophenol (Surr)	60	20 - 110
Nitrobenzene-d5 (Surr)	73	28 - 110
Phenol-d5 (Surr)	26	21 - 110
Terphenyl-d14 (Surr)	68	48 - 110
2,4,6-Tribromophenol (Surr)	78	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Method Blank - Batch: 240-212400 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-212400/1-A	Analysis Batch:	240-212412	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-212400	Lab File ID:	Y0122904.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/29/2015 1350	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/29/2015 0620			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-212400 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-212400/2-A	Analysis Batch:	240-212412	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-212400	Lab File ID:	Y0122905.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/29/2015 1423	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/29/2015 0620			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-212400/6-A	Analysis Batch:	240-212412	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-212400	Lab File ID:	Y0122909.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	12/29/2015 1638	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/29/2015 0620			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	95	90	80 - 120	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Method Blank - Batch: 240-212286

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-212286/3-A	Analysis Batch:	240-213003	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-212286	Lab File ID:	P14R010509.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/05/2016 1222	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/24/2015 0928			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	1.46	J	0.98	8.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-212286

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-212286/4-A	Analysis Batch:	240-213003	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-212286	Lab File ID:	P14R010510.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/05/2016 1249	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/24/2015 0928			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-212286/5-A	Analysis Batch:	240-213003	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-212286	Lab File ID:	P14R010513.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/05/2016 1411	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	12/24/2015 0928			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	106	107	70 - 120	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Method Reporting Limit Check - Batch: 240-213003

Method: WI-DRO
Preparation: N/A

Lab Sample ID:	MRL 240-213003/8	Analysis Batch:	240-213003	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	P14R010508.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	01/05/2016 1155	Units:	ng/uL	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
WI Diesel Range Organics (C10-C28)	20.0	21.9	109		

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Method Blank - Batch: 240-211769

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-211769/1-A	Analysis Batch:	240-212068	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211769	Lab File ID:	I9122215A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/22/2015 1733	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1056				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	0.527	J	0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	ND		23	500
Chromium	ND		0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	ND		5.2	500
Manganese	0.0962	J	0.084	1.5
Sodium	ND		19	500
Nickel	0.148	J	0.080	4.0
Potassium	25.9	J	6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Vanadium	ND		0.20	5.0
Selenium	ND		0.34	0.50
Zinc	0.633	J	0.56	2.0
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Lab Control Sample - Batch: 240-211769

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-211769/2-A	Analysis Batch:	240-212068	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211769	Lab File ID:	I9122215A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/22/2015 1737	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1056				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	196	98	80 - 120	
Antimony	50.0	47.9	96	80 - 120	
Barium	200	186	93	80 - 120	
Beryllium	5.00	4.80	96	80 - 120	
Cadmium	5.00	5.05	101	80 - 120	
Calcium	5000	4910	98	80 - 120	
Chromium	20.0	18.3	92	80 - 120	
Cobalt	50.0	47.3	95	80 - 120	
Copper	25.0	23.3	93	80 - 120	
Iron	100	97.7	98	80 - 120	
Magnesium	5000	4820	96	80 - 120	
Manganese	50.0	47.0	94	80 - 120	
Sodium	5000	4700	94	80 - 120	
Nickel	50.0	48.2	96	80 - 120	
Potassium	5000	4720	94	80 - 120	
Silver	5.00	4.75	95	80 - 120	
Arsenic	200	187	94	80 - 120	
Lead	50.0	45.9	92	80 - 120	
Vanadium	50.0	48.8	98	80 - 120	
Selenium	200	194	97	80 - 120	
Zinc	50.0	48.6	97	80 - 120	
Thallium	200	182	91	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211769

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-59286-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 12/22/2015 2131
Prep Date: 12/21/2015 1056
Leach Date: N/A

Analysis Batch: 240-212068
Prep Batch: 240-211769
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9122215A.asc
Initial Weight/Volume: 1.08 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-59286-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 12/22/2015 2135
Prep Date: 12/21/2015 1056
Leach Date: N/A

Analysis Batch: 240-212068
Prep Batch: 240-211769
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9122215A.asc
Initial Weight/Volume: 1.08 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	1570	1220	75 - 125	7	20	4	4
Antimony	34	35	75 - 125	3	20	F1	F1
Barium	78	83	75 - 125	5	20		
Beryllium	82	85	75 - 125	4	20		
Cadmium	86	89	75 - 125	4	20		
Calcium	261	171	75 - 125	17	20	F1	F1
Chromium	92	94	75 - 125	1	20		
Cobalt	93	92	75 - 125	1	20		
Copper	89	84	75 - 125	4	20		
Iron	-915	93	75 - 125	6	20	4	4
Magnesium	74	89	75 - 125	8	20	F1	
Manganese	126	197	75 - 125	11	20	4	4
Sodium	79	82	75 - 125	4	20		
Nickel	91	93	75 - 125	1	20		
Potassium	109	104	75 - 125	3	20		
Silver	86	89	75 - 125	3	20		
Arsenic	79	81	75 - 125	2	20		
Lead	75	76	75 - 125	1	20		
Vanadium	81	86	75 - 125	5	20		
Selenium	82	85	75 - 125	3	20		
Zinc	116	96	75 - 125	13	20		
Thallium	82	84	75 - 125	3	20		

Method Blank - Batch: 240-211798 **Method: 6010B**
Preparation: 3050B

Lab Sample ID:	MB 240-211798/1-A	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211798	Lab File ID:	I9122315A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/24/2015 0055	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1234				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	ND		0.021	0.20
Calcium	38.3	J	23	500
Chromium	0.155	J	0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Magnesium	5.91	J	5.2	500
Manganese	0.311	J	0.084	1.5
Sodium	35.2	J	19	500
Nickel	0.0940	J	0.080	4.0
Potassium	ND		6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Vanadium	ND		0.20	5.0
Selenium	ND		0.34	0.50
Zinc	1.42	J	0.56	2.0

Method Blank - Batch: 240-211798 **Method: 6010B**
Preparation: 3050B

Lab Sample ID:	MB 240-211798/1-A	Analysis Batch:	240-212434	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211798	Lab File ID:	I9122415A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/24/2015 2235	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1234				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Iron	4.45	J	3.2	10
Thallium	ND		0.13	1.0

Lab Control Sample - Batch: 240-211798

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-211798/2-A	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211798	Lab File ID:	I9122315A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/24/2015 0059	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1234				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	217	108	80 - 120	
Antimony	50.0	50.8	102	80 - 120	
Barium	200	200	100	80 - 120	
Beryllium	5.00	5.05	101	80 - 120	
Cadmium	5.00	4.67	93	80 - 120	
Calcium	5000	4980	100	80 - 120	
Chromium	20.0	20.9	105	80 - 120	
Cobalt	50.0	50.9	102	80 - 120	
Copper	25.0	23.8	95	80 - 120	
Magnesium	5000	4920	98	80 - 120	
Manganese	50.0	50.5	101	80 - 120	
Sodium	5000	5060	101	80 - 120	
Nickel	50.0	52.2	104	80 - 120	
Potassium	5000	4850	97	80 - 120	
Silver	5.00	5.03	101	80 - 120	
Arsenic	200	196	98	80 - 120	
Lead	50.0	51.0	102	80 - 120	
Vanadium	50.0	48.3	97	80 - 120	
Selenium	200	195	97	80 - 120	
Zinc	50.0	53.1	106	80 - 120	

Lab Control Sample - Batch: 240-211798

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-211798/2-A	Analysis Batch:	240-212434	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211798	Lab File ID:	I9122415A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/24/2015 2239	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1234				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	100	99.0	99	80 - 120	
Thallium	200	186	93	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211798

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-59286-2
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 12/24/2015 0115
Prep Date: 12/21/2015 1234
Leach Date: N/A

Analysis Batch: 240-212146
Prep Batch: 240-211798
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9122315A.asc
Initial Weight/Volume: 1.36 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-59286-2
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 12/24/2015 0119
Prep Date: 12/21/2015 1234
Leach Date: N/A

Analysis Batch: 240-212146
Prep Batch: 240-211798
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9122315A.asc
Initial Weight/Volume: 1.36 g
Final Weight/Volume: 100 mL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	694	313	75 - 125	9	20	4	4
Antimony	48	49	75 - 125	1	20	F1	F1
Barium	86	87	75 - 125	1	20		
Beryllium	89	85	75 - 125	5	20		
Cadmium	84	82	75 - 125	2	20		
Calcium	98	466	75 - 125	45	20	4	4 F2
Chromium	99	100	75 - 125	1	20		
Cobalt	99	96	75 - 125	3	20		
Copper	109	88	75 - 125	14	20		
Magnesium	86	326	75 - 125	63	20		F1 F2
Manganese	-38	459	75 - 125	52	20	4	4 F2
Sodium	91	90	75 - 125	1	20		
Nickel	98	96	75 - 125	1	20		
Potassium	91	89	75 - 125	2	20		
Silver	93	94	75 - 125	1	20		
Arsenic	87	86	75 - 125	1	20		
Lead	82	79	75 - 125	2	20		
Vanadium	91	88	75 - 125	2	20		
Selenium	86	85	75 - 125	2	20		
Zinc	88	94	75 - 125	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211798

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-59286-2	Analysis Batch:	240-212434	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211798	Lab File ID:	I9122415A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.36 g
Analysis Date:	12/24/2015 2259			Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1234				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59286-2	Analysis Batch:	240-212434	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211798	Lab File ID:	I9122415A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.36 g
Analysis Date:	12/24/2015 2303			Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1234				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Iron	-390	808	75 - 125	9	20	4	4
Thallium	91	89	75 - 125	2	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

TCLP SPLPE Leachate Blank - Batch: 240-211944

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-211830/1-B	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	1.0	Leach Batch:	240-211830	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1018	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	12/21/2015 1630				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.000976	J	0.00055	0.50
Cobalt	0.00121	J	0.00056	0.050
Copper	ND		0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	0.000737	J	0.00046	0.015
Nickel	0.00234	J	0.00076	0.040
Potassium	0.569	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	0.00292	J	0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Method Blank - Batch: 240-211944

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-211944/2-A	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1022	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	ND		0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.000559	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	ND		0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	0.00149	J	0.00046	0.015
Nickel	ND		0.00076	0.040
Potassium	0.115	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Lab Control Sample - Batch: 240-211944

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-211944/3-A	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1026	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	2.08	104	50 - 150	
Antimony	0.500	0.517	103	50 - 150	
Barium	2.00	2.01	100	50 - 150	J
Beryllium	0.0500	0.0516	103	50 - 150	
Cadmium	0.0500	0.0518	104	50 - 150	J
Calcium	50.0	50.4	101	50 - 150	
Chromium	0.200	0.202	101	50 - 150	J
Cobalt	0.500	0.520	104	50 - 150	
Copper	0.250	0.254	102	50 - 150	J
Iron	1.00	1.03	103	50 - 150	
Magnesium	50.0	49.7	99	50 - 150	
Manganese	0.500	0.511	102	50 - 150	
Nickel	0.500	0.530	106	50 - 150	
Potassium	50.0	53.2	106	50 - 150	
Silver	0.0500	0.0550	110	50 - 150	J
Arsenic	2.00	2.18	109	50 - 150	
Lead	0.500	0.473	95	50 - 150	J
Vanadium	0.500	0.514	103	50 - 150	
Selenium	2.00	2.22	111	50 - 150	
Zinc	0.500	0.565	113	50 - 150	J
Thallium	2.00	1.91	95	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211944

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-59183-A-4-G MS ^5	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	5.0	Leach Batch:	240-211812	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1553			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	12/21/2015 0600				

MSD Lab Sample ID:	240-59183-A-4-H MSD ^5	Analysis Batch:	240-212146	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-211944	Lab File ID:	I9122315A.asc
Dilution:	5.0	Leach Batch:	240-211812	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1557			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1051				
Leach Date:	12/21/2015 0600				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	114	109	75 - 125	4	20		
Antimony	106	103	75 - 125	3	20	J	J
Barium	101	98	75 - 125	4	20		J
Beryllium	105	101	75 - 125	4	20		
Cadmium	104	101	75 - 125	3	20		
Calcium	103	99	75 - 125	3	20		
Chromium	108	106	75 - 125	2	20		
Cobalt	105	101	75 - 125	4	20		
Copper	104	100	75 - 125	4	20	J	J
Magnesium	104	100	75 - 125	4	20		
Manganese	109	106	75 - 125	3	20		
Nickel	109	106	75 - 125	3	20		
Potassium	104	98	75 - 125	4	20		
Silver	107	104	75 - 125	3	20	J	J
Arsenic	104	100	75 - 125	3	20		
Lead	104	101	75 - 125	2	20		
Vanadium	103	97	75 - 125	6	20		
Selenium	105	102	75 - 125	4	20	J	J
Zinc	100	64	75 - 125	3	20	4	4

TCLP SPLPE Leachate Blank - Batch: 240-211947

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-211830/1-C	Analysis Batch:	240-212196	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	240-211830	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1220	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	12/21/2015 1630				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-211947

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-211947/2-A	Analysis Batch:	240-212196	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1227	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-211947

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-211947/3-A	Analysis Batch:	240-212196	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1229	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00551	110	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211947

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-59183-A-4-J MS	Analysis Batch:	240-212196	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	240-211812	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1233			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	12/21/2015 0600				

MSD Lab Sample ID:	240-59183-A-4-K MSD	Analysis Batch:	240-212196	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-211947	Lab File ID:	122315AH4.PRN
Dilution:	1.0	Leach Batch:	240-211812	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2015 1236			Final Weight/Volume:	50 mL
Prep Date:	12/22/2015 1400				
Leach Date:	12/21/2015 0600				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	103	105	80 - 120	2	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

Method Blank - Batch: 240-211791

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-211791/1-A	Analysis Batch:	240-212161	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-211791	Lab File ID:	122215AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	12/22/2015 1256	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1535				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-211791

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-211791/2-A	Analysis Batch:	240-212161	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-211791	Lab File ID:	122215AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	12/22/2015 1257	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1535				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.841	101	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-211791

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-59286-1	Analysis Batch:	240-212161	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-211791	Lab File ID:	122215AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.65 g
Analysis Date:	12/22/2015 1300			Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1535				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59286-1	Analysis Batch:	240-212161	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-211791	Lab File ID:	122215AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.65 g
Analysis Date:	12/22/2015 1302			Final Weight/Volume:	100 mL
Prep Date:	12/21/2015 1535				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	101	110	80 - 120	8	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59286-1

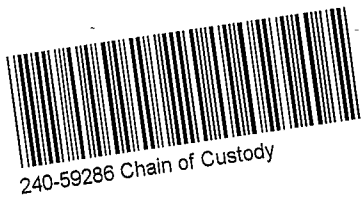
Duplicate - Batch: 240-211552

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-59278-A-35 DU	Analysis Batch:	240-211552	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/18/2015 1739	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	96	96	0.2	20	
Percent Moisture	4.0	3.8	6	20	

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



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3.5/C3.2

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Chain of Custody Record

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TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinsky	Site Contact: Kelly Hoehn	Date: 12/17/15	COC No:
Company Name: Arcadis	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier: Gary Becker	1 of 1 COCs
Address: 430 1st Ave N. Suite 720	Analysis Turnaround Time			Sampler: Adam Thompson
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul, MN	☐ 2 days			Job / SDG No.: 24006638
PO # MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOC (8260)	GRO (w/ modified methods)	DRO (w/ modified methods)	SVOC (8270)	TAL metals (6010)	TCLP VOC (1311/8260)	TCLP SVOC (1311/8270)	TCLP TAL metals (1311/6010)	moisture content	PCB (8082)	ACM via USEPA Method 600/M4-82-020	Sample Specific Notes:
AreaC-Trench-4_015_7.8(20151217)	12/17/15	1025	G	SO		N	N	2	2	1	1	1	1	1	1	1			
HA-21_0-1(20151217)	12/17/15	0800	G	SO	7	N	N	2	2	1	1					1			
AreaC-Trench-1_010_4-5(20151217)	12/17/15	1245	G	SO	1													1	
MB	12/17/15				2			1	1										
Temp Blank																			

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

	Company	Date/Time		Company	Date/Time
Relinquished by:	Arcadis	12/17/15 1445	Received by:	TAmm	12-17-15 1445
Relinquished by:	TAmm	12-17-15	Received by:	TA-Canton	12/18/15 1000
Relinquished by:			Received in Laboratory by:		

TestAmerica Canton Sample Receipt Form/Narrative Login # : 60786
Canton Facility

Client Arcadis Site Name _____ Cooler unpacked by: [signature]

Cooler Received on 12/18/15 Opened on 12/18/15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ ~~Foam~~ Box Client Cooler Box Other _____

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 53 (CF +0.1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

IR GUN# 48 (CF -0.3 °C) Observed Cooler Temp. 3.5 °C Corrected Cooler Temp. 3.2 °C ☐ See Multiple Cooler Form

~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C~~

IR GUN# 8 (CF -0.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC559158
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
15. Was a LL Hg or Me Hg trip blank present? B506301UB Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

Sample Area C-Trench-1-010-4-5 (2015 12/17) to be logged separately

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____.

Ref: SOP NC-SC-0005, Sample Receiving
X:\X-Drive Document Control\SOPs\Work Instructions\Word Version Work Instructions\WI-NC-099W-112315 Cooler Receipt Form.doc djl

January 06, 2016

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 59286-1
Sample date: 2015-12-17
Report received by CADENA: 2016-01-06
Initial Data Verification completed by CADENA: 2016-01-06

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch 211741 did not include MS recovery data due to insufficient sample volume available for QC samples according to the laboratory submittal case narrative.

GCMS SVOC QC batch 211698 method blank had a detection below the RL for bis-2-ethylhexylphthalate. Client samples -001 and -002 results for this analyte should be considered to be non-detect at the RL and qualified with UB flags.

WI-GRO and WI-DRO results did not include surrogate recovery data and QC batch did not include MS recovery data.

WI-DRO QC batch method blank had a detection below the RL. Client sample -001 DRO results should be considered to be non-detect at the RL and qualified with a UB flag.

Metals method blanks had detections below the RL in QC batch 211769 for barium, manganese, nickel, potassium and zinc and in QC batch 211798 for calcium, chromium, magnesium, manganese, sodium, nickel, zinc and iron and in QC batch 211944 for chromium, cobalt, manganese, nickel, potassium and lead. Client sample -001 TCLP/SPLP lead result should be considered to be non-detect at the RL and qualified with a UB flag.

Metals sample -001 MS/MSD recoveries were outliers biased low for antimony and biased high for calcium. Client sample -001 antimony and calcium results should be considered to be estimated and qualified with J flags if detected and UJ flags if non-detect. MS or MSD recoveries but not both were outliers biased low for magnesium so qualification was not required based on this QC outlier alone. MS/MSD recoveries were not considered to be statistically reliable due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule) so were not used to qualify client sample results for aluminum, iron and manganese.

Metals sample -002 MS/MSD recoveries were outliers biased low for antimony and biased high along with the MS/MSD RPD for magnesium. Client sample -002 antimony and magnesium results should be considered to be estimated and qualified with J flags if detected and UJ flags if non-detect. MS/MSD recoveries were not considered to be statistically reliable due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule) so were not used to qualify client sample results for aluminum, calcium, iron and manganese.

Metals QC batch 211944 MS recovery outliers were not determined using samples from this submittal so qualification was not required based on these sample-specific QC outliers.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

3 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other and Metals parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 59286-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste
240592861	AREAC-TRENCH-4_015_7-8(2015121	12/17/2015	10:25:00	X	X	X	X	X	X	X
240592862	HA-21_0-1(20151217)	12/17/2015	8:00:00	X	X	X	X	X		
240592864	MB	12/17/2015	12:00:00	X		X				

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 59286-1

			Sample Name:	AREAC-TRENCH-4_015_7-8(2015121			HA-21_0-1(20151217)			
			Lab Sample ID:	240592861			240592862			
			Sample Date:	12/17/2015			12/17/2015			
Analyte		Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC										
	OSW-8270C									
	Bis(2-ethylhexyl) phthalate	117-81-7	51	420	ug/kg	UB	40	420	ug/kg	UB
GC Other										
	PUBL-SW-141									
	WI Diesel Range Organics (C10-C28)	E-1004	4.7	10	mg/kg	UB				
Metals										
	OSW-6010B									
	Antimony	7440-36-0	ND	1.1	mg/kg	UJ	ND	0.94	mg/kg	UJ
	Calcium	7440-70-2	18000	550	mg/kg	J				
	Lead	7439-92-1	0.0045	0.50	mg/l	UB				
	Magnesium	7439-95-4					8200	470	mg/kg	J

ANALYTICAL REPORT

Job Number: 240-59294-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
12/30/2015 7:36 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
12/30/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

Job Narrative
240-59294-1

Comments
The Asbestos analysis was performed at the EMLab P&K San Francisco laboratory.

Receipt
The sample was received on 12/18/2015 10:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2º C.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59294-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
General Sub Contract Method	EMLab SB	Subcontract	

Lab References:

EMLab SB = EMLab P&K - San Bruno

Method References:

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59294-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-59294-1	AREAC-TRENCH-1_010_4-5(20151217)	Solid	12/17/2015 1245	12/18/2015 1000

SAMPLE RESULTS

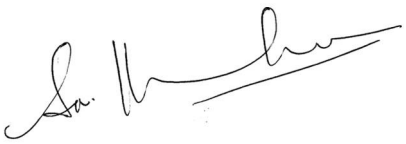
EMLab P&K
A TestAmerica Company

Report for:

Ms. Denise Pohl
TestAmerica-Canton
4101 Shuffel Dr. NW
North Canton, OH 44720

Regarding: Project: 240-59294-1
EML ID: 1472109

Approved by:



Approved Signatory
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Asbestos PLM: 12-24-2015

Service SOPs: Asbestos PLM (EPA Methods 600/R-93/116 & 600/M4-82-020, SOP EM-AS-S-1267)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080
(866) 888-6653 Fax (650) 624-5371 www.emlab.com

Client: TestAmerica-Canton
C/O: Ms. Denise Pohl
Re: 240-59294-1

Date of Sampling: 12-17-2015
Date of Receipt: 12-23-2015
Date of Report: 12-24-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	1
Total Samples Analyzed:	1
Total Samples with Layer Asbestos Content > 1%:	0

Location: AREAC-TRENCH-1_010_4-5 (20151217) (240-59294-1) Lab ID-Version‡: 6799562-1

Sample Layers	Asbestos Content
Black Semi-Fibrous Material	ND
Composite Non-Asbestos Content:	20% Glass Fibers 15% Cellulose
Sample Composite Homogeneity:	Moderate

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestA THE LEADER I 001472109

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Pohl, Denise	Carrier Tracking No(s):	COC No: 240-52530.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: denise.pohl@testamericainc.com		Page: Page 1 of 1
Company: EMLab P&K				Job #: 240-59294-1
Address: 6000 Shoreline Court, Suite 205,	Due Date Requested: 12/24/2015			
City: South San Francisco	TAT Requested (days):			
State, Zip: CA, 94080				
Phone: 866-388-6653(Tel)	PO #:			
Email:	WO #:			
Project Name: Ford TCAP - E200572	Project #: 24006638			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Subcontract EMLab P&K - ACM- USEPA 600/M4-82-020)	Total Number of Containers	Special Instructions/Note:
			Preservation Code						
AREAC-TRENCH-1_010_4-5(20151217) (240-59294-1)	12/17/15	12:45 Eastern		Solid			X		

Possible Hazard Identification
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Special Instructions/QC Requirements:

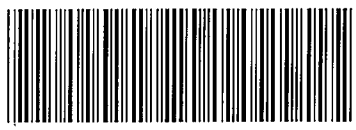
Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	2 20 15 1530	[signature]	[signature]	12/23/15 1130	EMLab PK
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

12/30/2015

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-59294 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica Canton
4101 Shuffel Street, N. U.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497. 2

3.5/C3.2

Chain of Custody Record

098326

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinsky	Site Contact: Kelly Hoehn	Date: 12/17/15	COC No:
Company Name: Arcadis	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier: Gary Becker	1 of 1 COCs
Address: 430 1st Ave N. Suite 720	Analysis Turnaround Time			Sampler: Adam Thompson
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul, MN	☐ 2 days			Job / SDG No.: 24006638
PO # MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOC (8260)	GRO (w/ modified method)	DRO (w/ mod. fuel method)	SVOC (8270)	TAL metals (6010)	TCLP VOC (1311/8260)	TCLP SVOC (1311/8270)	TCLP TAL metals (1311/6010)	moisture content	RCB (9022)	ACM via USE PA Method 600/M4-82-020	Sample Specific Notes:
AreaC-Trench-4_015_7.8(20151217)	12/17/15	1025	G	SO		N	N	2	2	1	1	1	1	1	1	1			
HA-21_0-1(20151217)	12/17/15	0800	G	SO	7	N	N	2	2	1	1					1			
AreaC-Trench-1_010_4-5(20151217)	12/17/15	1245	G	SO	1													1	
MB	12/17/15				2			1	1										
Temp Blank																			

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

Relinquished by:	Company: Arcadis	Date/Time: 12/17/15 1445	Received by:	Company: TAmmp	Date/Time: 12-17-15 1445
Relinquished by:	Company: TAmm	Date/Time: 12-17-15	Received by: IAW	Company: TA-Canton	Date/Time: 12/18/15 1060
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

12/30/2015

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : [illegible]

Client Arcadis Site Name

Cooler Received on 12/18/15 Opened on 12/18/15

Cooler unpacked by: [signature]

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 53 (CF +0.1 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C

IR GUN# 48 (CF -0.3 °C) Observed Cooler Temp. 3.5 °C Corrected Cooler Temp. 3.2 °C

~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C~~

IR GUN# 8 (CF -0.5 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C

☐ See Multiple Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC559158
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # ____ Yes No
15. Was a LL Hg or Me Hg trip blank present? B506301UB Yes No

Contacted PM ____ Date ____ by ____ via Verbal Voice Mail Other

Concerning ____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Sample Area C - Trench - 1 - 010 4-5 (2015 12 17) to be logged seperatly

15. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.

Sample(s) ____ were received in a broken container.

Sample(s) ____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory.

Time preserved: ____ Preservative(s) added/Lot number(s): ____.

Ref: SOP NC-SC-0005, Sample Receiving
X:\X-Drive Document Control\SOPs\Work Instructions\Word Version Work Instructions\WI-NC-099W-112315 Cooler Receipt Form.doc djl

December 31, 2015

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton (subcontracted to EMLab P&K San Bruno
Laboratory submittal: 59294-1
Sample date: 2015-12-17
Report received by CADENA: 2015-12-30
Initial Data Verification completed by CADENA: 2015-12-31

1 Solid sample was analyzed for asbestos parameters.

There were no significant QC anomalies or exceptions to report.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 240-59932-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
1/27/2016 3:35 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
01/27/2016

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-59932-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The USEPA 600 Method was performed at the EMLab P&K San Bruno Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 1/14/2016 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 3.2º C, 3.4º C and 3.7º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) were analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 01/20/2016 and analyzed on 01/21/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4), AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) and TRIP BLANK (240-59932-7) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 01/15/2016 and analyzed on 01/18/2016 and 01/19/2016.

2-Butanone (MEK) was detected in method blank MB 240-214307/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Tetrahydrofuran was detected in method blank MB 240-214307/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

1,2-Dichloroethane-d4 (Surr), 4-Bromofluorobenzene (Surr), Dibromofluoromethane (Surr) and Toluene-d8 (Surr) failed the surrogate recovery criteria high for AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5). Refer to the QC report for details.

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1)[500X], AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2)[4X], AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3)[1000X] and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-214307 and analytical batch 240-214411 on these samples: AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4), and TRIP BLANK (240-59932-7).

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-214307 and analytical batch 240-214576 on these samples: AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) were analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 01/21/2016, prepared on 01/22/2016 and analyzed on 01/25/2016 and 01/26/2016.

Pyridine was detected in method blank MB 240-215157/15-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Hexachloroethane failed the recovery criteria high for the MS of sample AREA C-TRENCH-2_015_6-7 (20160112)MS (240-59932-1) in batch 240-215372. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 01/18/2016 and analyzed on 01/20/2016 and 01/21/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl (Surr), 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr), Phenol-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5). Refer to the QC report for details.

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1)[50X], AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2) [100X], AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3)[200X], AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4)[25X] and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5)[400X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 3540C: Due to the matrix, the following samples could not be concentrated to the final method required volume: AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5). The reporting limits (RLs) are elevated proportionately.

Method(s) 8270C: The continuing calibration verification (CCV) associated with batch 214706 recovered above the upper control limit for N-Nitrosodiphenylamine. The samples associated with this CCV was non-detect for the affected analyte; therefore, the data have been reported. The following sample is impacted: AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5).

Method(s) 8270C: The continuing calibration verification (CCV) associated with batch 214903 recovered above the upper control limit for N-Nitrosodiphenylamine and Pentachlorophenol. The samples associated with this CCV was non-detect for the affected analytes; therefore, the data have been reported. The following samples are impacted: AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), and AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4).

Method(s) 8270C: The following samples were diluted due to the nature of the sample matrix: AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5), and (240-59932-J-1-G MS). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4), AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) and TRIP BLANK (240-59932-7) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared on 01/19/2016 and analyzed on 01/20/2016.

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1)[200X], AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2) [10X], AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3)[200X] and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS (DRO)

Sample AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1) was analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The sample was prepared on 01/19/2016 and analyzed on 01/22/2016.
Sample was analyzed for 8015B - DRO due to sample received was overweight for WI DRO.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Sample AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 01/19/2016 and analyzed on 01/22/2016.

WI Diesel Range Organics (C10-C28) was detected in method blank MB 240-214526/15-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Samples AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2)[50X], AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3) [200X], AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4)[50X] and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5)[200X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI DRO PREP: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-214526.

Method(s) WI DRO PREP: Due to the matrix, the following samples could not be concentrated to the final method required volume: AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5). The reporting limits (RLs) are elevated proportionately.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) mix : AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4), and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 01/21/2016, prepared on 01/21/2016 and analyzed on 01/25/2016.

Several analytes were detected in method blank LB 240-215019/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Zinc failed the recovery criteria low for the MS/MSD of sample 240-59930-1 in batch 240-215388. Refer to the QC report for details.

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1)[2X], AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2)[10X], AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3)[5X] and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Several analytes were detected in method blank MB 240-215033/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 01/15/2016 and analyzed on 01/18/2016 and 01/19/2016.

Chromium, Iron, Magnesium and Manganese were detected in method blank MB 240-214287/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Calcium failed the recovery criteria low for the MS of sample AREA C-TRENCH-2_015_6-7 (20160112)MS (240-59932-1) in batch 240-214690. Several analytes failed the recovery criteria high.

For the MSD of sample AREA C-TRENCH-2_015_6-7 (20160112)MSD (240-59932-1) in batch 240-214690, Antimony, Barium and Lead failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, Aluminum, Antimony, Chromium and Lead exceeded the RPD limit.

Refer to the QC report for details.

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1)[5X], AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2)[5X], AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3)[100X] and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 01/21/2016, prepared on 01/22/2016 and analyzed on 01/25/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 01/15/2016 and analyzed on 01/18/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 01/19/2016 and analyzed on 01/20/2016.

Samples AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3)[20X] and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) [20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 01/19/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples AREA C-TRENCH-2_015_6-7 (20160112) (240-59932-1), AREA C-TRENCH-2_00_12-13 (20160112) (240-59932-2), AREA C-TRENCH-2_013_6-7 (20160112) (240-59932-3), AREA C-TRENCH-2_00_9-10 (20160112) (240-59932-4) and AREA C-TRENCH-2_08_4-5 (20160112) (240-59932-5) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 01/15/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59932-1	**AREA C-TRENCH-2_015_6-7 (20160112)**					
Benzene		5900	J	160000	ug/Kg	8260B
Cyclohexane		28000	J	320000	ug/Kg	8260B
1,2-Dichlorobenzene		12000	J	160000	ug/Kg	8260B
Ethylbenzene		1400000		160000	ug/Kg	8260B
Isopropylbenzene		46000	J	160000	ug/Kg	8260B
Methylcyclohexane		230000	J	320000	ug/Kg	8260B
m-Xylene & p-Xylene		5300000		160000	ug/Kg	8260B
Naphthalene		260000		160000	ug/Kg	8260B
n-Butylbenzene		150000	J	160000	ug/Kg	8260B
N-Propylbenzene		63000	J	160000	ug/Kg	8260B
o-Xylene		1900000		160000	ug/Kg	8260B
sec-Butylbenzene		10000	J	160000	ug/Kg	8260B
Toluene		1500000		160000	ug/Kg	8260B
1,2,4-Trimethylbenzene		320000		160000	ug/Kg	8260B
1,3,5-Trimethylbenzene		90000	J	160000	ug/Kg	8260B
2-Methylnaphthalene		19000	J	22000	ug/Kg	8270C
Acenaphthene		240	J	22000	ug/Kg	8270C
Anthracene		270	J	22000	ug/Kg	8270C
Benzo[a]anthracene		820	J	22000	ug/Kg	8270C
Benzo[a]pyrene		560	J	22000	ug/Kg	8270C
Benzo[b]fluoranthene		910	J	22000	ug/Kg	8270C
Benzo[g,h,i]perylene		380	J	22000	ug/Kg	8270C
Benzo[k]fluoranthene		330	J	22000	ug/Kg	8270C
Chrysene		860	J	22000	ug/Kg	8270C
Fluoranthene		1800	J	22000	ug/Kg	8270C
Fluorene		270	J	22000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		330	J	22000	ug/Kg	8270C
Naphthalene		100000		22000	ug/Kg	8270C
Phenanthrene		1600	J	22000	ug/Kg	8270C
Pyrene		1400	J	22000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		16000		2500	mg/Kg	WI-GRO
Diesel Range Organics [C10 - C28]		25000		2200	mg/Kg	8015B
Aluminum		2400	F2	21	mg/Kg	6010B
Antimony		22	F1 F2	1.0	mg/Kg	6010B
Barium		1600		21	mg/Kg	6010B
Beryllium		0.14	J	0.52	mg/Kg	6010B
Calcium		18000	F1	520	mg/Kg	6010B
Cadmium		2.1	F1	0.21	mg/Kg	6010B
Cobalt		4.1	J	5.2	mg/Kg	6010B
Chromium		59	B F1 F2	0.52	mg/Kg	6010B
Copper		29		2.6	mg/Kg	6010B
Iron		11000	B	10	mg/Kg	6010B
Potassium		460	J	520	mg/Kg	6010B
Magnesium		5400	B	520	mg/Kg	6010B
Manganese		230	B F1	1.6	mg/Kg	6010B
Silver		0.12	J	0.52	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Sodium		650		520	mg/Kg	6010B
Nickel		59		4.2	mg/Kg	6010B
Vanadium		16		5.2	mg/Kg	6010B
Zinc		870		2.1	mg/Kg	6010B
Arsenic		12		1.0	mg/Kg	6010B
Lead		2300	F2	1.6	mg/Kg	6010B
Mercury		0.11	J	0.15	mg/Kg	7471A
Cr (VI)		2.0		1.1	mg/Kg	7196A
Cr (III)		57		2.7	mg/Kg	7196A
Percent Solids		75		0.10	%	Moisture
Percent Moisture		25		0.10	%	Moisture
TCLP						
Benzene		110		25	ug/L	8260B
2-Methylphenol		0.050		0.016	mg/L	8270C
3 & 4 Methylphenol		0.17		0.016	mg/L	8270C
Arsenic		0.033	J B	0.50	mg/L	6010B
Barium		1.1	J B	10	mg/L	6010B
Cadmium		0.0065	J B	0.10	mg/L	6010B
Chromium		0.0044	J B	0.50	mg/L	6010B
Lead		6.4		0.50	mg/L	6010B
Selenium		0.0048	J	0.25	mg/L	6010B
Antimony		0.17	J	0.30	mg/L	6010B
Potassium		5.1	B	5.0	mg/L	6010B
Beryllium		0.00014	J	0.0050	mg/L	6010B
Calcium		470	B	5.0	mg/L	6010B
Iron		8.6	B	0.10	mg/L	6010B
Nickel		0.91	B	0.040	mg/L	6010B
Magnesium		8.0	B	5.0	mg/L	6010B
Aluminum		0.62		0.20	mg/L	6010B
Zinc		13	B	2.0	mg/L	6010B
Manganese		4.1	B	0.015	mg/L	6010B
Cobalt		0.028	J B	0.050	mg/L	6010B
Mercury		0.00033	J	0.0020	mg/L	7470A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59932-2	**AREA C-TRENCH-2_00_12-13 (20160112)**					
Benzene		59	J	1000	ug/Kg	8260B
2-Butanone (MEK)		1100	J B	4100	ug/Kg	8260B
Ethylbenzene		5300		1000	ug/Kg	8260B
Isopropylbenzene		390	J	1000	ug/Kg	8260B
Methylcyclohexane		910	J	2000	ug/Kg	8260B
m-Xylene & p-Xylene		26000		1000	ug/Kg	8260B
Naphthalene		8800		1000	ug/Kg	8260B
n-Butylbenzene		3700		1000	ug/Kg	8260B
N-Propylbenzene		1200		1000	ug/Kg	8260B
o-Xylene		8400		1000	ug/Kg	8260B
p-Isopropyltoluene		270	J	1000	ug/Kg	8260B
sec-Butylbenzene		360	J	1000	ug/Kg	8260B
Tetrahydrofuran		2000	J B	4100	ug/Kg	8260B
Toluene		2200		1000	ug/Kg	8260B
1,2,4-Trimethylbenzene		13000		1000	ug/Kg	8260B
1,3,5-Trimethylbenzene		3100		1000	ug/Kg	8260B
2-Methylnaphthalene		1900	J	37000	ug/Kg	8270C
Acenaphthene		5100	J	37000	ug/Kg	8270C
Anthracene		11000	J	37000	ug/Kg	8270C
Benzo[a]anthracene		45000		37000	ug/Kg	8270C
Benzo[a]pyrene		32000	J	37000	ug/Kg	8270C
Benzo[b]fluoranthene		49000		37000	ug/Kg	8270C
Benzo[g,h,i]perylene		17000	J	37000	ug/Kg	8270C
Benzo[k]fluoranthene		22000	J	37000	ug/Kg	8270C
Carbazole		9800	J	37000	ug/Kg	8270C
Chrysene		54000		37000	ug/Kg	8270C
Dibenz(a,h)anthracene		5500	J	37000	ug/Kg	8270C
Dibenzofuran		2500	J	37000	ug/Kg	8270C
Fluoranthene		96000		37000	ug/Kg	8270C
Fluorene		5700	J	37000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		16000	J	37000	ug/Kg	8270C
Naphthalene		6700	J	37000	ug/Kg	8270C
Phenanthrene		53000		37000	ug/Kg	8270C
Pyrene		73000		37000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		550		110	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		1700	B	480	mg/Kg	WI-DRO
Aluminum		3000		17	mg/Kg	6010B
Antimony		54		0.84	mg/Kg	6010B
Barium		370		17	mg/Kg	6010B
Beryllium		0.17	J	0.42	mg/Kg	6010B
Calcium		12000		420	mg/Kg	6010B
Cadmium		0.62		0.17	mg/Kg	6010B
Cobalt		4.5		4.2	mg/Kg	6010B
Chromium		26	B	0.42	mg/Kg	6010B
Copper		30		2.1	mg/Kg	6010B
Iron		8700	B	8.4	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Potassium		430		420	mg/Kg	6010B
Magnesium		3600	B	420	mg/Kg	6010B
Manganese		220	B	1.3	mg/Kg	6010B
Silver		0.69		0.42	mg/Kg	6010B
Sodium		320	J	420	mg/Kg	6010B
Nickel		30		3.4	mg/Kg	6010B
Vanadium		13		4.2	mg/Kg	6010B
Zinc		270		1.7	mg/Kg	6010B
Arsenic		17		0.84	mg/Kg	6010B
Lead		2500		1.3	mg/Kg	6010B
Mercury		0.073	J	0.12	mg/Kg	7471A
Cr (III)		26		2.2	mg/Kg	7196A
Percent Solids		90		0.10	%	Moisture
Percent Moisture		10		0.10	%	Moisture
TCLP						
3 & 4 Methylphenol		0.0053		0.0040	mg/L	8270C
Pyridine		0.0015	J B	0.0040	mg/L	8270C
Arsenic		0.045	J B	0.50	mg/L	6010B
Barium		0.90	J B	10	mg/L	6010B
Cadmium		0.0098	J B	0.10	mg/L	6010B
Chromium		0.0036	J B	0.50	mg/L	6010B
Lead		76		5.0	mg/L	6010B
Antimony		0.63		0.30	mg/L	6010B
Potassium		4.5	J B	5.0	mg/L	6010B
Beryllium		0.00027	J	0.0050	mg/L	6010B
Calcium		440	B	5.0	mg/L	6010B
Iron		0.72	B	0.10	mg/L	6010B
Nickel		0.34	B	0.040	mg/L	6010B
Magnesium		12	B	5.0	mg/L	6010B
Copper		0.028	J	1.0	mg/L	6010B
Aluminum		0.18	J	0.20	mg/L	6010B
Zinc		2.9	B	1.0	mg/L	6010B
Manganese		3.7	B	0.015	mg/L	6010B
Cobalt		0.041	J B	0.050	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59932-3	**AREA C-TRENCH-2_013_6-7 (20160112)**					
2-Butanone (MEK)		300000	J B	1300000	ug/Kg	8260B
Cyclohexane		43000	J	640000	ug/Kg	8260B
Ethylbenzene		1200000		320000	ug/Kg	8260B
Isopropylbenzene		100000	J	320000	ug/Kg	8260B
Methylcyclohexane		210000	J	640000	ug/Kg	8260B
m-Xylene & p-Xylene		5500000		320000	ug/Kg	8260B
Naphthalene		800000		320000	ug/Kg	8260B
n-Butylbenzene		320000		320000	ug/Kg	8260B
N-Propylbenzene		290000	J	320000	ug/Kg	8260B
o-Xylene		2000000		320000	ug/Kg	8260B
sec-Butylbenzene		42000	J	320000	ug/Kg	8260B
Tetrahydrofuran		620000	J B	1300000	ug/Kg	8260B
Toluene		960000		320000	ug/Kg	8260B
1,2,4-Trimethylbenzene		1700000		320000	ug/Kg	8260B
1,3,5-Trimethylbenzene		460000		320000	ug/Kg	8260B
1,1'-Biphenyl		8100	J	620000	ug/Kg	8270C
2-Methylnaphthalene		190000	J	620000	ug/Kg	8270C
Acenaphthene		7800	J	620000	ug/Kg	8270C
Anthracene		9700	J	620000	ug/Kg	8270C
Benzo[a]anthracene		14000	J	620000	ug/Kg	8270C
Benzo[a]pyrene		6700	J	620000	ug/Kg	8270C
Benzo[b]fluoranthene		10000	J	620000	ug/Kg	8270C
Chrysene		14000	J	620000	ug/Kg	8270C
Fluoranthene		34000	J	620000	ug/Kg	8270C
Fluorene		11000	J	620000	ug/Kg	8270C
Naphthalene		1400000		620000	ug/Kg	8270C
Phenanthrene		53000	J	620000	ug/Kg	8270C
Pyrene		25000	J	620000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		19000		2500	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		38000	B	5700	mg/Kg	WI-DRO
Aluminum		4500		19	mg/Kg	6010B
Antimony		1100		93	mg/Kg	6010B
Barium		19000		1900	mg/Kg	6010B
Beryllium		0.11	J	0.47	mg/Kg	6010B
Calcium		9000		470	mg/Kg	6010B
Cadmium		14		0.19	mg/Kg	6010B
Cobalt		4.3	J	4.7	mg/Kg	6010B
Chromium		1400	B	0.47	mg/Kg	6010B
Copper		240		2.3	mg/Kg	6010B
Iron		16000	B	9.3	mg/Kg	6010B
Potassium		640		470	mg/Kg	6010B
Magnesium		2500	B	470	mg/Kg	6010B
Manganese		160	B	1.4	mg/Kg	6010B
Silver		1.9		0.47	mg/Kg	6010B
Sodium		1600		470	mg/Kg	6010B
Nickel		270		3.7	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Vanadium		4.8		4.7	mg/Kg	6010B
Zinc		9400		190	mg/Kg	6010B
Arsenic		120		0.93	mg/Kg	6010B
Lead		28000		28	mg/Kg	6010B
Selenium		2.1		0.47	mg/Kg	6010B
Mercury		0.45		0.13	mg/Kg	7471A
Cr (VI)		23		20	mg/Kg	7196A
Cr (III)		1400		2.5	mg/Kg	7196A
Percent Solids		79		0.10	%	Moisture
Percent Moisture		21		0.10	%	Moisture
TCLP						
2-Butanone (MEK)		62	J	250	ug/L	8260B
Benzene		54		25	ug/L	8260B
2-Methylphenol		0.041		0.016	mg/L	8270C
3 & 4 Methylphenol		0.16		0.016	mg/L	8270C
Arsenic		0.014	J B	0.50	mg/L	6010B
Barium		3.6	J B	10	mg/L	6010B
Cadmium		0.0075	J B	0.10	mg/L	6010B
Chromium		0.011	J B	0.50	mg/L	6010B
Lead		34		2.5	mg/L	6010B
Antimony		0.66		0.30	mg/L	6010B
Potassium		3.2	J B	5.0	mg/L	6010B
Calcium		410	B	5.0	mg/L	6010B
Iron		7.4	B	0.10	mg/L	6010B
Nickel		0.62	B	0.040	mg/L	6010B
Magnesium		6.6	B	5.0	mg/L	6010B
Aluminum		0.32		0.20	mg/L	6010B
Zinc		23	B	5.0	mg/L	6010B
Manganese		2.6	B	0.015	mg/L	6010B
Cobalt		0.012	J B	0.050	mg/L	6010B
Mercury		0.00015	J	0.0020	mg/L	7470A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59932-4	**AREA C-TRENCH-2_00_9-10 (20160112)**					
Benzene		150	J	260	ug/Kg	8260B
2-Butanone (MEK)		260	J B	1100	ug/Kg	8260B
Cyclohexane		370	J	530	ug/Kg	8260B
Ethylbenzene		340		260	ug/Kg	8260B
Isopropylbenzene		240	J	260	ug/Kg	8260B
Methyl acetate		170	J	530	ug/Kg	8260B
Methylcyclohexane		1600		530	ug/Kg	8260B
m-Xylene & p-Xylene		9400		260	ug/Kg	8260B
Naphthalene		1200		260	ug/Kg	8260B
n-Butylbenzene		280		260	ug/Kg	8260B
N-Propylbenzene		600		260	ug/Kg	8260B
o-Xylene		220	J	260	ug/Kg	8260B
p-Isopropyltoluene		75	J	260	ug/Kg	8260B
sec-Butylbenzene		70	J	260	ug/Kg	8260B
Tetrahydrofuran		440	J B	1100	ug/Kg	8260B
Toluene		43	J	260	ug/Kg	8260B
1,2,4-Trimethylbenzene		3900		260	ug/Kg	8260B
1,3,5-Trimethylbenzene		79	J	260	ug/Kg	8260B
1,1'-Biphenyl		150	J	9300	ug/Kg	8270C
2-Methylnaphthalene		790	J	9300	ug/Kg	8270C
Acenaphthene		2200	J	9300	ug/Kg	8270C
Anthracene		3100	J	9300	ug/Kg	8270C
Benzo[a]anthracene		14000		9300	ug/Kg	8270C
Benzo[a]pyrene		10000		9300	ug/Kg	8270C
Benzo[b]fluoranthene		17000		9300	ug/Kg	8270C
Benzo[g,h,i]perylene		5600	J	9300	ug/Kg	8270C
Benzo[k]fluoranthene		6100	J	9300	ug/Kg	8270C
Carbazole		4100	J	9300	ug/Kg	8270C
Chrysene		17000		9300	ug/Kg	8270C
Dibenz(a,h)anthracene		1900	J	9300	ug/Kg	8270C
Dibenzofuran		1100	J	9300	ug/Kg	8270C
Fluoranthene		33000		9300	ug/Kg	8270C
Fluorene		2100	J	9300	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		5100	J	9300	ug/Kg	8270C
Naphthalene		1700	J	9300	ug/Kg	8270C
Phenanthrene		21000		9300	ug/Kg	8270C
Pyrene		23000		9300	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		45		12	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		2300	B	500	mg/Kg	WI-DRO
Aluminum		3900		22	mg/Kg	6010B
Antimony		8.0		1.1	mg/Kg	6010B
Barium		210		22	mg/Kg	6010B
Beryllium		0.25	J	0.54	mg/Kg	6010B
Calcium		30000		540	mg/Kg	6010B
Cadmium		0.70		0.22	mg/Kg	6010B
Cobalt		5.2	J	5.4	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Chromium		17	B	0.54	mg/Kg	6010B
Copper		24		2.7	mg/Kg	6010B
Iron		15000	B	11	mg/Kg	6010B
Potassium		550		540	mg/Kg	6010B
Magnesium		5000	B	540	mg/Kg	6010B
Manganese		490	B	1.6	mg/Kg	6010B
Silver		0.12	J	0.54	mg/Kg	6010B
Sodium		760		540	mg/Kg	6010B
Nickel		17		4.4	mg/Kg	6010B
Vanadium		16		5.4	mg/Kg	6010B
Zinc		170		2.2	mg/Kg	6010B
Arsenic		14		1.1	mg/Kg	6010B
Lead		210		0.33	mg/Kg	6010B
Selenium		0.42	J	0.54	mg/Kg	6010B
Thallium		0.30	J	1.1	mg/Kg	6010B
Mercury		0.10	J	0.12	mg/Kg	7471A
Cr (III)		17		2.3	mg/Kg	7196A
Percent Solids		88		0.10	%	Moisture
Percent Moisture		12		0.10	%	Moisture
TCLP						
Pyridine		0.0016	J B	0.0040	mg/L	8270C
Arsenic		0.017	J B	0.50	mg/L	6010B
Barium		1.2	J B	10	mg/L	6010B
Cadmium		0.0031	J B	0.10	mg/L	6010B
Chromium		0.0039	J B	0.50	mg/L	6010B
Lead		0.12	J	0.50	mg/L	6010B
Silver		0.0017	J	0.50	mg/L	6010B
Antimony		0.033	J	0.30	mg/L	6010B
Potassium		5.0	B	5.0	mg/L	6010B
Calcium		540	B	5.0	mg/L	6010B
Iron		0.31	B	0.10	mg/L	6010B
Nickel		0.11	B	0.040	mg/L	6010B
Magnesium		23	B	5.0	mg/L	6010B
Aluminum		0.059	J	0.20	mg/L	6010B
Zinc		0.41	J B	1.0	mg/L	6010B
Manganese		8.2	B	0.015	mg/L	6010B
Cobalt		0.062	B	0.050	mg/L	6010B
Mercury		0.00020	J	0.0020	mg/L	7470A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59932-5	**AREA C-TRENCH-2_08_4-5 (20160112)**					
Ethylbenzene		170000		39000	ug/Kg	8260B
Isopropylbenzene		16000	J	39000	ug/Kg	8260B
Methylcyclohexane		12000	J	78000	ug/Kg	8260B
m-Xylene & p-Xylene		920000		39000	ug/Kg	8260B
Naphthalene		310000		39000	ug/Kg	8260B
n-Butylbenzene		170000		39000	ug/Kg	8260B
N-Propylbenzene		52000		39000	ug/Kg	8260B
o-Xylene		350000		39000	ug/Kg	8260B
p-Isopropyltoluene		13000	J	39000	ug/Kg	8260B
sec-Butylbenzene		17000	J	39000	ug/Kg	8260B
Toluene		60000		39000	ug/Kg	8260B
1,2,4-Trimethylbenzene		570000		39000	ug/Kg	8260B
1,3,5-Trimethylbenzene		140000		39000	ug/Kg	8260B
2-Methylnaphthalene		260000	J	790000	ug/Kg	8270C
Fluoranthene		17000	J	790000	ug/Kg	8270C
Fluorene		11000	J	790000	ug/Kg	8270C
Naphthalene		2200000		790000	ug/Kg	8270C
Phenanthrene		29000	J	790000	ug/Kg	8270C
Pyrene		13000	J	790000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		2900		790	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		42000	B	5500	mg/Kg	WI-DRO
Aluminum		6400		25	mg/Kg	6010B
Antimony		170		1.3	mg/Kg	6010B
Barium		15000		510	mg/Kg	6010B
Beryllium		0.13	J	0.63	mg/Kg	6010B
Calcium		6000		630	mg/Kg	6010B
Cadmium		6.3		0.25	mg/Kg	6010B
Cobalt		6.6		6.3	mg/Kg	6010B
Chromium		2200	B	0.63	mg/Kg	6010B
Copper		300		3.2	mg/Kg	6010B
Iron		18000	B	13	mg/Kg	6010B
Potassium		370	J	630	mg/Kg	6010B
Magnesium		2700	B	630	mg/Kg	6010B
Manganese		150	B	1.9	mg/Kg	6010B
Silver		0.40	J	0.63	mg/Kg	6010B
Sodium		570	J	630	mg/Kg	6010B
Nickel		280		5.1	mg/Kg	6010B
Vanadium		4.3	J	6.3	mg/Kg	6010B
Zinc		6900		51	mg/Kg	6010B
Arsenic		33		1.3	mg/Kg	6010B
Lead		12000		7.6	mg/Kg	6010B
Selenium		0.95		0.63	mg/Kg	6010B
Thallium		0.34	J	1.3	mg/Kg	6010B
Mercury		0.47		0.14	mg/Kg	7471A
Cr (VI)		59		24	mg/Kg	7196A
Cr (III)		2100		3.0	mg/Kg	7196A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Percent Solids		67		0.10	%	Moisture
Percent Moisture		33		0.10	%	Moisture
TCLP						
Benzene		9.6	J	25	ug/L	8260B
2-Methylphenol		0.032		0.010	mg/L	8270C
3 & 4 Methylphenol		0.063		0.010	mg/L	8270C
Arsenic		0.036	J B	0.50	mg/L	6010B
Barium		1.4	J B	10	mg/L	6010B
Cadmium		0.019	J B	0.10	mg/L	6010B
Chromium		0.026	J B	0.50	mg/L	6010B
Lead		100		5.0	mg/L	6010B
Antimony		1.4		0.30	mg/L	6010B
Potassium		1.9	J B	5.0	mg/L	6010B
Beryllium		0.00018	J	0.0050	mg/L	6010B
Calcium		74	B	5.0	mg/L	6010B
Iron		9.9	B	0.10	mg/L	6010B
Nickel		1.4	B	0.040	mg/L	6010B
Magnesium		4.8	J B	5.0	mg/L	6010B
Copper		0.075	J	1.0	mg/L	6010B
Aluminum		1.9		0.20	mg/L	6010B
Zinc		15	B	10	mg/L	6010B
Manganese		2.0	B	0.015	mg/L	6010B
Cobalt		0.023	J B	0.050	mg/L	6010B
Mercury		0.00014	J	0.0020	mg/L	7470A
240-59932-7	**TRIP BLANK**					
2-Butanone (MEK)		300	J B	1000	ug/Kg	8260B
Tetrahydrofuran		460	J B	1000	ug/Kg	8260B
WI Gasoline Range Organics (C6-C10)		27	J	120	mg/Kg	WI-GRO

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction			SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Diesel Range Organics (DRO) (GC)	TAL CAN	SW846 8015B	
Soxhlet Extraction	TAL CAN		SW846 3540C
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction			SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction			SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	
General Sub Contract Method	EMLab SB	Subcontract	

Lab References:

EMLab SB = EMLab P&K - San Bruno

TAL CAN = TestAmerica Canton

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Description	Lab Location	Method	Preparation Method

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Method	Analyst	Analyst ID
SW846 8260B	Lavey, Tim	TJL1
SW846 8260B	Macenczak, Steven	SAM
SW846 8270C	Gruber, John	JMG
SW846 8270C	Ulman, Mark	MRU
WI-GRO WI-GRO	Reed, Rachel T	RTR
SW846 8015B	Bolgrin, Deborah	DEB
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 6010B	Toth, Roger	RKT
SW846 7470A	Dillon, William K	WKD
SW846 7471A	Lecorchick, Willis A	WAL
SW846 7196A	Burns, Jill	JMB
SW846 7196A	Counts, Karen	KLC
EPA Moisture	Woodward, Bruce	BLW

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	Solid	01/12/2016 1637	01/14/2016 1010
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	Solid	01/12/2016 1715	01/14/2016 1010
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	Solid	01/12/2016 1740	01/14/2016 1010
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	Solid	01/12/2016 1815	01/14/2016 1010
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	Solid	01/12/2016 1838	01/14/2016 1010
240-59932-6	AREA C-TRENCH-2_15_10-11 (20160113)	Solid	01/13/2016 1342	01/14/2016 1010
240-59932-7	TRIP BLANK	Solid	01/12/2016 0000	01/14/2016 1010

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_015_6-7 (20160112)**

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid % Moisture: 25.5 Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214576	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147705.D
Dilution:	500			Initial Weight/Volume:	10.424 g
Analysis Date:	01/19/2016 1334			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		150000	640000
Allyl chloride		ND		19000	320000
Benzene		5900	J	5800	160000
Bromobenzene		ND		8400	160000
Bromochloromethane		ND		45000	160000
Bromodichloromethane		ND		24000	160000
Bromoform		ND		39000	160000
Bromomethane		ND		33000	160000
2-Butanone (MEK)		ND		47000	640000
Carbon disulfide		ND		36000	160000
Carbon tetrachloride		ND		12000	160000
Chlorobenzene		ND		8400	160000
Chlorodibromomethane		ND		13000	160000
Chloroethane		ND		33000	160000
Chloroform		ND		23000	160000
Chloromethane		ND		31000	160000
2-Chlorotoluene		ND		26000	160000
4-Chlorotoluene		ND		17000	160000
cis-1,2-Dichloroethene		ND		24000	160000
cis-1,3-Dichloropropene		ND		14000	160000
Cyclohexane		28000	J	19000	320000
1,2-Dibromo-3-Chloropropane		ND		46000	320000
1,2-Dibromoethane		ND		21000	160000
Dibromomethane		ND		32000	160000
1,2-Dichlorobenzene		12000	J	12000	160000
1,3-Dichlorobenzene		ND		19000	160000
1,4-Dichlorobenzene		ND		26000	160000
Dichlorodifluoromethane		ND		39000	160000
1,1-Dichloroethane		ND		23000	160000
1,2-Dichloroethane		ND		6400	160000
1,1-Dichloroethene		ND		19000	160000
Dichlorofluoromethane		ND		21000	320000
1,2-Dichloropropane		ND		21000	160000
1,3-Dichloropropane		ND		15000	160000
2,2-Dichloropropane		ND		33000	160000
1,1-Dichloropropene		ND		24000	160000
Ethylbenzene		1400000		23000	160000
Ethyl ether		ND		63000	320000
Hexachlorobutadiene		ND		28000	160000
2-Hexanone		ND		54000	640000
Isopropylbenzene		46000	J	8400	160000
Methyl acetate		ND		35000	320000
Methylcyclohexane		230000	J	24000	320000
Methylene Chloride		ND		55000	160000
4-Methyl-2-pentanone (MIBK)		ND		36000	640000
Methyl tert butyl ether		ND		19000	160000

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_015_6-7 (20160112)

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid % Moisture: 25.5 Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214576	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147705.D
Dilution:	500			Initial Weight/Volume:	10.424 g
Analysis Date:	01/19/2016 1334			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		5300000		13000	160000
Naphthalene		260000		17000	160000
n-Butylbenzene		150000	J	14000	160000
N-Propylbenzene		63000	J	39000	160000
o-Xylene		1900000		11000	160000
p-Isopropyltoluene		ND		16000	160000
sec-Butylbenzene		10000	J	10000	160000
Styrene		ND		17000	160000
tert-Butylbenzene		ND		22000	160000
1,1,1,2-Tetrachloroethane		ND		32000	160000
1,1,2,2-Tetrachloroethane		ND		16000	160000
Tetrachloroethene		ND		17000	160000
Tetrahydrofuran		ND		77000	640000
Toluene		1500000		6400	160000
trans-1,2-Dichloroethene		ND		17000	160000
trans-1,3-Dichloropropene		ND		17000	160000
1,2,3-Trichlorobenzene		ND		25000	160000
1,2,4-Trichlorobenzene		ND		19000	160000
1,1,1-Trichloroethane		ND		17000	160000
1,1,2-Trichloroethane		ND		12000	160000
Trichloroethene		ND		25000	160000
Trichlorofluoromethane		ND		23000	160000
1,2,3-Trichloropropane		ND		66000	160000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		27000	160000
1,2,4-Trimethylbenzene		320000		8400	160000
1,3,5-Trimethylbenzene		90000	J	9700	160000
Vinyl chloride		ND		11000	160000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	888	X	26 - 141
Dibromofluoromethane (Surr)	372	X	30 - 122
1,2-Dichloroethane-d4 (Surr)	605	X	39 - 128
Toluene-d8 (Surr)	516	X	33 - 134

Client Sample ID: **AREA C-TRENCH-2_015_6-7 (20160112)**

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-215013	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248693.D
Dilution:	1.0	Leach Batch:	240-214931	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/21/2016 2037			Final Weight/Volume:	5 mL
Prep Date:	01/21/2016 2037				
Leach Date:	01/20/2016 2040				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		110		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	86		80 - 121
4-Bromofluorobenzene (Surr)	87		70 - 124
Toluene-d8 (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	91		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_00_12-13 (20160112)

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid % Moisture: 10.5 Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147676.D
Dilution:	4.0			Initial Weight/Volume:	11.02 g
Analysis Date:	01/18/2016 1501			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		920	4100
Allyl chloride		ND		120	2000
Benzene		59	J	36	1000
Bromobenzene		ND		53	1000
Bromochloromethane		ND		280	1000
Bromodichloromethane		ND		150	1000
Bromoform		ND		250	1000
Bromomethane		ND		210	1000
2-Butanone (MEK)		1100	J B	300	4100
Carbon disulfide		ND		230	1000
Carbon tetrachloride		ND		73	1000
Chlorobenzene		ND		53	1000
Chlorodibromomethane		ND		81	1000
Chloroethane		ND		210	1000
Chloroform		ND		150	1000
Chloromethane		ND		190	1000
2-Chlorotoluene		ND		170	1000
4-Chlorotoluene		ND		110	1000
cis-1,2-Dichloroethene		ND		150	1000
cis-1,3-Dichloropropene		ND		89	1000
Cyclohexane		ND		120	2000
1,2-Dibromo-3-Chloropropane		ND		290	2000
1,2-Dibromoethane		ND		130	1000
Dibromomethane		ND		200	1000
1,2-Dichlorobenzene		ND		77	1000
1,3-Dichlorobenzene		ND		120	1000
1,4-Dichlorobenzene		ND		170	1000
Dichlorodifluoromethane		ND		250	1000
1,1-Dichloroethane		ND		140	1000
1,2-Dichloroethane		ND		41	1000
1,1-Dichloroethene		ND		120	1000
Dichlorofluoromethane		ND		130	2000
1,2-Dichloropropane		ND		130	1000
1,3-Dichloropropane		ND		93	1000
2,2-Dichloropropane		ND		210	1000
1,1-Dichloropropene		ND		150	1000
Ethylbenzene		5300		140	1000
Ethyl ether		ND		400	2000
Hexachlorobutadiene		ND		180	1000
2-Hexanone		ND		340	4100
Isopropylbenzene		390	J	53	1000
Methyl acetate		ND		220	2000
Methylcyclohexane		910	J	150	2000
Methylene Chloride		ND		340	1000
4-Methyl-2-pentanone (MIBK)		ND		230	4100
Methyl tert butyl ether		ND		120	1000

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_00_12-13 (20160112)

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid % Moisture: 10.5 Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147676.D
Dilution:	4.0			Initial Weight/Volume:	11.02 g
Analysis Date:	01/18/2016 1501			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		26000		81	1000
Naphthalene		8800		110	1000
n-Butylbenzene		3700		85	1000
N-Propylbenzene		1200		250	1000
o-Xylene		8400		69	1000
p-Isopropyltoluene		270	J	100	1000
sec-Butylbenzene		360	J	65	1000
Styrene		ND		110	1000
tert-Butylbenzene		ND		140	1000
1,1,1,2-Tetrachloroethane		ND		200	1000
1,1,2,2-Tetrachloroethane		ND		100	1000
Tetrachloroethene		ND		110	1000
Tetrahydrofuran		2000	J B	490	4100
Toluene		2200		41	1000
trans-1,2-Dichloroethene		ND		110	1000
trans-1,3-Dichloropropene		ND		110	1000
1,2,3-Trichlorobenzene		ND		160	1000
1,2,4-Trichlorobenzene		ND		120	1000
1,1,1-Trichloroethane		ND		110	1000
1,1,2-Trichloroethane		ND		77	1000
Trichloroethene		ND		160	1000
Trichlorofluoromethane		ND		140	1000
1,2,3-Trichloropropane		ND		420	1000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		170	1000
1,2,4-Trimethylbenzene		13000		53	1000
1,3,5-Trimethylbenzene		3100		61	1000
Vinyl chloride		ND		69	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	81		26 - 141
Dibromofluoromethane (Surr)	82		30 - 122
1,2-Dichloroethane-d4 (Surr)	103		39 - 128
Toluene-d8 (Surr)	80		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_00_12-13 (20160112)**

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-215013	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248694.D
Dilution:	1.0	Leach Batch:	240-214931	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/21/2016 2100			Final Weight/Volume:	5 mL
Prep Date:	01/21/2016 2100				
Leach Date:	01/20/2016 2040				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	85		80 - 121
4-Bromofluorobenzene (Surr)	74		70 - 124
Toluene-d8 (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	90		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_013_6-7 (20160112)

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid % Moisture: 21.2 Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147679.D
Dilution:	1000			Initial Weight/Volume:	9.88 g
Analysis Date:	01/18/2016 1606			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		290000	1300000
Allyl chloride		ND		39000	640000
Benzene		ND		12000	320000
Bromobenzene		ND		17000	320000
Bromochloromethane		ND		90000	320000
Bromodichloromethane		ND		49000	320000
Bromoform		ND		78000	320000
Bromomethane		ND		66000	320000
2-Butanone (MEK)		300000	J B	94000	1300000
Carbon disulfide		ND		72000	320000
Carbon tetrachloride		ND		23000	320000
Chlorobenzene		ND		17000	320000
Chlorodibromomethane		ND		26000	320000
Chloroethane		ND		66000	320000
Chloroform		ND		46000	320000
Chloromethane		ND		62000	320000
2-Chlorotoluene		ND		53000	320000
4-Chlorotoluene		ND		33000	320000
cis-1,2-Dichloroethene		ND		49000	320000
cis-1,3-Dichloropropene		ND		28000	320000
Cyclohexane		43000	J	39000	640000
1,2-Dibromo-3-Chloropropane		ND		91000	640000
1,2-Dibromoethane		ND		41000	320000
Dibromomethane		ND		64000	320000
1,2-Dichlorobenzene		ND		24000	320000
1,3-Dichlorobenzene		ND		39000	320000
1,4-Dichlorobenzene		ND		53000	320000
Dichlorodifluoromethane		ND		78000	320000
1,1-Dichloroethane		ND		45000	320000
1,2-Dichloroethane		ND		13000	320000
1,1-Dichloroethene		ND		39000	320000
Dichlorofluoromethane		ND		42000	640000
1,2-Dichloropropane		ND		41000	320000
1,3-Dichloropropane		ND		30000	320000
2,2-Dichloropropane		ND		67000	320000
1,1-Dichloropropene		ND		49000	320000
Ethylbenzene		1200000		45000	320000
Ethyl ether		ND		130000	640000
Hexachlorobutadiene		ND		57000	320000
2-Hexanone		ND		110000	1300000
Isopropylbenzene		100000	J	17000	320000
Methyl acetate		ND		71000	640000
Methylcyclohexane		210000	J	49000	640000
Methylene Chloride		ND		110000	320000
4-Methyl-2-pentanone (MIBK)		ND		72000	1300000
Methyl tert butyl ether		ND		39000	320000

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_013_6-7 (20160112)

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid % Moisture: 21.2 Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147679.D
Dilution:	1000			Initial Weight/Volume:	9.88 g
Analysis Date:	01/18/2016 1606			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		5500000		26000	320000
Naphthalene		800000		33000	320000
n-Butylbenzene		320000		27000	320000
N-Propylbenzene		290000	J	78000	320000
o-Xylene		2000000		22000	320000
p-Isopropyltoluene		ND		32000	320000
sec-Butylbenzene		42000	J	21000	320000
Styrene		ND		35000	320000
tert-Butylbenzene		ND		44000	320000
1,1,1,2-Tetrachloroethane		ND		63000	320000
1,1,2,2-Tetrachloroethane		ND		32000	320000
Tetrachloroethene		ND		35000	320000
Tetrahydrofuran		620000	J B	150000	1300000
Toluene		960000		13000	320000
trans-1,2-Dichloroethene		ND		33000	320000
trans-1,3-Dichloropropene		ND		33000	320000
1,2,3-Trichlorobenzene		ND		50000	320000
1,2,4-Trichlorobenzene		ND		39000	320000
1,1,1-Trichloroethane		ND		35000	320000
1,1,2-Trichloroethane		ND		24000	320000
Trichloroethene		ND		50000	320000
Trichlorofluoromethane		ND		45000	320000
1,2,3-Trichloropropane		ND		130000	320000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		54000	320000
1,2,4-Trimethylbenzene		1700000		17000	320000
1,3,5-Trimethylbenzene		460000		19000	320000
Vinyl chloride		ND		22000	320000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	2414	X	26 - 141
Dibromofluoromethane (Surr)	1502	X	30 - 122
1,2-Dichloroethane-d4 (Surr)	1832	X	39 - 128
Toluene-d8 (Surr)	1832	X	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_013_6-7 (20160112)**

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-215013	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248695.D
Dilution:	1.0	Leach Batch:	240-214931	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/21/2016 2124			Final Weight/Volume:	5 mL
Prep Date:	01/21/2016 2124				
Leach Date:	01/20/2016 2040				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		62	J	29	250
Benzene		54		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	86		80 - 121
4-Bromofluorobenzene (Surr)	73		70 - 124
Toluene-d8 (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	88		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_00_9-10 (20160112)

Lab Sample ID: 240-59932-4 Date Sampled: 01/12/2016 1815
Client Matrix: Solid % Moisture: 11.8 Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147674.D
Dilution:	1.0			Initial Weight/Volume:	10.73 g
Analysis Date:	01/18/2016 1419			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		240	1100
Allyl chloride		ND		32	530
Benzene		150	J	9.5	260
Bromobenzene		ND		14	260
Bromochloromethane		ND		74	260
Bromodichloromethane		ND		40	260
Bromoform		ND		64	260
Bromomethane		ND		54	260
2-Butanone (MEK)		260	J B	77	1100
Carbon disulfide		ND		59	260
Carbon tetrachloride		ND		19	260
Chlorobenzene		ND		14	260
Chlorodibromomethane		ND		21	260
Chloroethane		ND		54	260
Chloroform		ND		38	260
Chloromethane		ND		51	260
2-Chlorotoluene		ND		43	260
4-Chlorotoluene		ND		27	260
cis-1,2-Dichloroethene		ND		40	260
cis-1,3-Dichloropropene		ND		23	260
Cyclohexane		370	J	32	530
1,2-Dibromo-3-Chloropropane		ND		75	530
1,2-Dibromoethane		ND		34	260
Dibromomethane		ND		53	260
1,2-Dichlorobenzene		ND		20	260
1,3-Dichlorobenzene		ND		32	260
1,4-Dichlorobenzene		ND		43	260
Dichlorodifluoromethane		ND		64	260
1,1-Dichloroethane		ND		37	260
1,2-Dichloroethane		ND		11	260
1,1-Dichloroethene		ND		32	260
Dichlorofluoromethane		ND		35	530
1,2-Dichloropropane		ND		34	260
1,3-Dichloropropane		ND		24	260
2,2-Dichloropropane		ND		55	260
1,1-Dichloropropene		ND		40	260
Ethylbenzene		340		37	260
Ethyl ether		ND		100	530
Hexachlorobutadiene		ND		46	260
2-Hexanone		ND		89	1100
Isopropylbenzene		240	J	14	260
Methyl acetate		170	J	58	530
Methylcyclohexane		1600		40	530
Methylene Chloride		ND		90	260
4-Methyl-2-pentanone (MIBK)		ND		59	1100
Methyl tert butyl ether		ND		32	260

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_00_9-10 (20160112)

Lab Sample ID: 240-59932-4 Date Sampled: 01/12/2016 1815
Client Matrix: Solid % Moisture: 11.8 Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147674.D
Dilution:	1.0			Initial Weight/Volume:	10.73 g
Analysis Date:	01/18/2016 1419			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		9400		21	260
Naphthalene		1200		27	260
n-Butylbenzene		280		22	260
N-Propylbenzene		600		64	260
o-Xylene		220	J	18	260
p-Isopropyltoluene		75	J	26	260
sec-Butylbenzene		70	J	17	260
Styrene		ND		29	260
tert-Butylbenzene		ND		36	260
1,1,1,2-Tetrachloroethane		ND		52	260
1,1,2,2-Tetrachloroethane		ND		26	260
Tetrachloroethene		ND		29	260
Tetrahydrofuran		440	J B	130	1100
Toluene		43	J	11	260
trans-1,2-Dichloroethene		ND		27	260
trans-1,3-Dichloropropene		ND		27	260
1,2,3-Trichlorobenzene		ND		41	260
1,2,4-Trichlorobenzene		ND		32	260
1,1,1-Trichloroethane		ND		29	260
1,1,2-Trichloroethane		ND		20	260
Trichloroethene		ND		41	260
Trichlorofluoromethane		ND		37	260
1,2,3-Trichloropropane		ND		110	260
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		44	260
1,2,4-Trimethylbenzene		3900		14	260
1,3,5-Trimethylbenzene		79	J	16	260
Vinyl chloride		ND		18	260

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	80		26 - 141
Dibromofluoromethane (Surr)	81		30 - 122
1,2-Dichloroethane-d4 (Surr)	98		39 - 128
Toluene-d8 (Surr)	82		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_00_9-10 (20160112)**

Lab Sample ID: 240-59932-4 Date Sampled: 01/12/2016 1815
Client Matrix: Solid Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-215013	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248696.D
Dilution:	1.0	Leach Batch:	240-214931	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/21/2016 2146			Final Weight/Volume:	5 mL
Prep Date:	01/21/2016 2146				
Leach Date:	01/20/2016 2040				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	85		80 - 121
4-Bromofluorobenzene (Surr)	80		70 - 124
Toluene-d8 (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	91		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_08_4-5 (20160112)**

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid % Moisture: 33.1 Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214576	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147704.D
Dilution:	100			Initial Weight/Volume:	9.61 g
Analysis Date:	01/19/2016 1313			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		35000	160000
Allyl chloride		ND		4700	78000
Benzene		ND		1400	39000
Bromobenzene		ND		2000	39000
Bromochloromethane		ND		11000	39000
Bromodichloromethane		ND		5900	39000
Bromoform		ND		9500	39000
Bromomethane		ND		7900	39000
2-Butanone (MEK)		ND		11000	160000
Carbon disulfide		ND		8700	39000
Carbon tetrachloride		ND		2800	39000
Chlorobenzene		ND		2000	39000
Chlorodibromomethane		ND		3100	39000
Chloroethane		ND		7900	39000
Chloroform		ND		5600	39000
Chloromethane		ND		7500	39000
2-Chlorotoluene		ND		6400	39000
4-Chlorotoluene		ND		4000	39000
cis-1,2-Dichloroethene		ND		5900	39000
cis-1,3-Dichloropropene		ND		3400	39000
Cyclohexane		ND		4700	78000
1,2-Dibromo-3-Chloropropane		ND		11000	78000
1,2-Dibromoethane		ND		5000	39000
Dibromomethane		ND		7800	39000
1,2-Dichlorobenzene		ND		3000	39000
1,3-Dichlorobenzene		ND		4700	39000
1,4-Dichlorobenzene		ND		6400	39000
Dichlorodifluoromethane		ND		9500	39000
1,1-Dichloroethane		ND		5400	39000
1,2-Dichloroethane		ND		1600	39000
1,1-Dichloroethene		ND		4700	39000
Dichlorofluoromethane		ND		5100	78000
1,2-Dichloropropane		ND		5000	39000
1,3-Dichloropropane		ND		3600	39000
2,2-Dichloropropane		ND		8100	39000
1,1-Dichloropropene		ND		5900	39000
Ethylbenzene		170000		5400	39000
Ethyl ether		ND		15000	78000
Hexachlorobutadiene		ND		6800	39000
2-Hexanone		ND		13000	160000
Isopropylbenzene		16000	J	2000	39000
Methyl acetate		ND		8600	78000
Methylcyclohexane		12000	J	5900	78000
Methylene Chloride		ND		13000	39000
4-Methyl-2-pentanone (MIBK)		ND		8700	160000
Methyl tert butyl ether		ND		4700	39000

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_08_4-5 (20160112)

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid % Moisture: 33.1 Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214576	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147704.D
Dilution:	100			Initial Weight/Volume:	9.61 g
Analysis Date:	01/19/2016 1313			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		920000		3100	39000
Naphthalene		310000		4000	39000
n-Butylbenzene		170000		3300	39000
N-Propylbenzene		52000		9500	39000
o-Xylene		350000		2600	39000
p-Isopropyltoluene		13000	J	3900	39000
sec-Butylbenzene		17000	J	2500	39000
Styrene		ND		4200	39000
tert-Butylbenzene		ND		5300	39000
1,1,1,2-Tetrachloroethane		ND		7600	39000
1,1,2,2-Tetrachloroethane		ND		3900	39000
Tetrachloroethene		ND		4200	39000
Tetrahydrofuran		ND		19000	160000
Toluene		60000		1600	39000
trans-1,2-Dichloroethene		ND		4000	39000
trans-1,3-Dichloropropene		ND		4000	39000
1,2,3-Trichlorobenzene		ND		6100	39000
1,2,4-Trichlorobenzene		ND		4700	39000
1,1,1-Trichloroethane		ND		4200	39000
1,1,2-Trichloroethane		ND		3000	39000
Trichloroethene		ND		6100	39000
Trichlorofluoromethane		ND		5400	39000
1,2,3-Trichloropropane		ND		16000	39000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		6500	39000
1,2,4-Trimethylbenzene		570000		2000	39000
1,3,5-Trimethylbenzene		140000		2300	39000
Vinyl chloride		ND		2600	39000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	259	X	26 - 141
Dibromofluoromethane (Surr)	118		30 - 122
1,2-Dichloroethane-d4 (Surr)	218	X	39 - 128
Toluene-d8 (Surr)	148	X	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_08_4-5 (20160112)**

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-215013	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248697.D
Dilution:	1.0	Leach Batch:	240-214931	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/21/2016 2210			Final Weight/Volume:	5 mL
Prep Date:	01/21/2016 2210				
Leach Date:	01/20/2016 2040				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		9.6	J	6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90		80 - 121
4-Bromofluorobenzene (Surr)	82		70 - 124
Toluene-d8 (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	91		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-59932-7 Date Sampled: 01/12/2016 0000
Client Matrix: Solid Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147675.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	01/18/2016 1440			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		300	J B	73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		18	250
Chlorobenzene		ND		13	250
Chlorodibromomethane		ND		20	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		10	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-59932-7 Date Sampled: 01/12/2016 0000
Client Matrix: Solid Date Received: 01/14/2016 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Prep Method:	5035	Prep Batch:	240-214307	Lab File ID:	147675.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	01/18/2016 1440			Final Weight/Volume:	10 mL
Prep Date:	01/15/2016 1817				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		ND		26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		25	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		460	J B	120	1000
Toluene		ND		10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		27	250
1,1,2-Trichloroethane		ND		19	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		17	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	88		26 - 141
Dibromofluoromethane (Surr)	93		30 - 122
1,2-Dichloroethane-d4 (Surr)	109		39 - 128
Toluene-d8 (Surr)	89		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_015_6-7 (20160112)**

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid % Moisture: 25.5 Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-214903	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214379	Lab File ID:	60121014.D
Dilution:	50			Initial Weight/Volume:	30.29 g
Analysis Date:	01/21/2016 1406			Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		230	22000
2,2'-oxybis[1-chloropropane]		ND		630	22000
2,4,5-Trichlorophenol		ND		1700	22000
2,4,6-Trichlorophenol		ND		590	22000
2,4-Dichlorophenol		ND		1300	22000
2,4-Dimethylphenol		ND		1300	22000
2,4-Dinitrophenol		ND		1400	110000
2,4-Dinitrotoluene		ND		1100	22000
2,6-Dinitrotoluene		ND		1400	22000
2-Chloronaphthalene		ND		30	22000
2-Chlorophenol		ND		540	22000
2-Methylnaphthalene		19000	J	33	22000
2-Methylphenol		ND		730	22000
2-Nitroaniline		ND		600	110000
2-Nitrophenol		ND		550	22000
3,3'-Dichlorobenzidine		ND		1200	110000
3-Nitroaniline		ND		1100	110000
4,6-Dinitro-2-methylphenol		ND		610	110000
4-Bromophenyl phenyl ether		ND		860	22000
4-Chloro-3-methylphenol		ND		1400	22000
4-Chloroaniline		ND		1100	22000
4-Chlorophenyl phenyl ether		ND		860	22000
4-Nitroaniline		ND		1700	110000
4-Nitrophenol		ND		1100	110000
Acenaphthene		240	J	50	22000
Acenaphthylene		ND		23	22000
Acetophenone		ND		610	22000
Anthracene		270	J	52	22000
Atrazine		ND		600	22000
Benzaldehyde		ND		800	22000
Benzo[a]anthracene		820	J	42	22000
Benzo[a]pyrene		560	J	43	22000
Benzo[b]fluoranthene		910	J	39	22000
Benzo[g,h,i]perylene		380	J	23	22000
Benzo[k]fluoranthene		330	J	45	22000
Bis(2-chloroethoxy)methane		ND		1500	22000
Bis(2-chloroethyl)ether		ND		130	22000
Bis(2-ethylhexyl) phthalate		ND		1300	22000
Butyl benzyl phthalate		ND		660	22000
Caprolactam		ND		2500	22000
Carbazole		ND		1800	22000
Chrysene		860	J	73	22000
Dibenz(a,h)anthracene		ND		44	22000
Dibenzofuran		ND		44	22000
Diethyl phthalate		ND		1100	22000
Dimethyl phthalate		ND		1100	22000

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_015_6-7 (20160112)

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid % Moisture: 25.5 Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-214903	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214379	Lab File ID:	60121014.D
Dilution:	50			Initial Weight/Volume:	30.29 g
Analysis Date:	01/21/2016 1406			Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		1000	22000
Di-n-octyl phthalate		ND		520	22000
Fluoranthene		1800	J	37	22000
Fluorene		270	J	35	22000
Hexachlorobenzene		ND		140	22000
Hexachlorobutadiene		ND		370	22000
Hexachlorocyclopentadiene		ND		540	110000
Hexachloroethane		ND		600	22000
Indeno[1,2,3-cd]pyrene		330	J	23	22000
Isophorone		ND		860	22000
Naphthalene		100000		54	22000
Nitrobenzene		ND		150	22000
N-Nitrosodi-n-propylamine		ND		420	22000
N-Nitrosodiphenylamine		ND		1400	22000
Pentachlorophenol		ND		600	22000
Phenol		ND		490	22000
Phenanthrene		1600	J	49	22000
Pyrene		1400	J	29	22000
3 & 4 Methylphenol		ND		1300	27000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	62		24 - 110
2-Fluorophenol (Surr)	79		24 - 110
2,4,6-Tribromophenol (Surr)	43		10 - 110
Nitrobenzene-d5 (Surr)	96		20 - 110
Phenol-d5 (Surr)	87		26 - 110
Terphenyl-d14 (Surr)	63		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_015_6-7 (20160112)**

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-215372	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-215157	Lab File ID:	60126007.D
Dilution:	4.0	Leach Batch:	240-215019	Initial Weight/Volume:	250 mL
Analysis Date:	01/26/2016 1009			Final Weight/Volume:	2 mL
Prep Date:	01/22/2016 1454			Injection Volume:	1 uL
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.0014	0.016
2,4-Dinitrotoluene		ND		0.0010	0.016
Hexachlorobenzene		ND		0.00034	0.0032
Hexachlorobutadiene		ND		0.0011	0.016
Hexachloroethane		ND	F1	0.00076	0.016
2-Methylphenol		0.050		0.00068	0.016
3 & 4 Methylphenol		0.17		0.0032	0.016
Nitrobenzene		ND		0.00016	0.016
Pentachlorophenol		ND		0.0011	0.064
Pyridine		ND		0.0014	0.016
2,4,5-Trichlorophenol		ND		0.0012	0.016
2,4,6-Trichlorophenol		ND		0.00096	0.016

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	83		30 - 110
2-Fluorophenol (Surr)	66		20 - 110
Nitrobenzene-d5 (Surr)	76		28 - 110
Phenol-d5 (Surr)	57		21 - 110
Terphenyl-d14 (Surr)	84		48 - 110
2,4,6-Tribromophenol (Surr)	78		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_00_12-13 (20160112)**

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid % Moisture: 10.5 Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-214903	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214379	Lab File ID:	60121010.D
Dilution:	100			Initial Weight/Volume:	30.24 g
Analysis Date:	01/21/2016 1235			Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		390	37000
2,2'-oxybis[1-chloropropane]		ND		1100	37000
2,4,5-Trichlorophenol		ND		2800	37000
2,4,6-Trichlorophenol		ND		990	37000
2,4-Dichlorophenol		ND		2200	37000
2,4-Dimethylphenol		ND		2200	37000
2,4-Dinitrophenol		ND		2300	180000
2,4-Dinitrotoluene		ND		1900	37000
2,6-Dinitrotoluene		ND		2300	37000
2-Chloronaphthalene		ND		50	37000
2-Chlorophenol		ND		910	37000
2-Methylnaphthalene		1900	J	55	37000
2-Methylphenol		ND		1200	37000
2-Nitroaniline		ND		1000	180000
2-Nitrophenol		ND		920	37000
3,3'-Dichlorobenzidine		ND		2000	180000
3-Nitroaniline		ND		1800	180000
4,6-Dinitro-2-methylphenol		ND		1000	180000
4-Bromophenyl phenyl ether		ND		1400	37000
4-Chloro-3-methylphenol		ND		2300	37000
4-Chloroaniline		ND		1900	37000
4-Chlorophenyl phenyl ether		ND		1400	37000
4-Nitroaniline		ND		2900	180000
4-Nitrophenol		ND		1900	180000
Acenaphthene		5100	J	84	37000
Acenaphthylene		ND		39	37000
Acetophenone		ND		1000	37000
Anthracene		11000	J	86	37000
Atrazine		ND		1000	37000
Benzaldehyde		ND		1300	37000
Benzo[a]anthracene		45000		70	37000
Benzo[a]pyrene		32000	J	71	37000
Benzo[b]fluoranthene		49000		65	37000
Benzo[g,h,i]perylene		17000	J	39	37000
Benzo[k]fluoranthene		22000	J	75	37000
Bis(2-chloroethoxy)methane		ND		2400	37000
Bis(2-chloroethyl)ether		ND		220	37000
Bis(2-ethylhexyl) phthalate		ND		2100	37000
Butyl benzyl phthalate		ND		1100	37000
Caprolactam		ND		4100	37000
Carbazole		9800	J	3000	37000
Chrysene		54000		120	37000
Dibenz(a,h)anthracene		5500	J	73	37000
Dibenzofuran		2500	J	73	37000
Diethyl phthalate		ND		1800	37000
Dimethyl phthalate		ND		1900	37000

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_00_12-13 (20160112)

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid % Moisture: 10.5 Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-214903	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214379	Lab File ID:	60121010.D
Dilution:	100			Initial Weight/Volume:	30.24 g
Analysis Date:	01/21/2016 1235			Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		1700	37000
Di-n-octyl phthalate		ND		880	37000
Fluoranthene		96000		61	37000
Fluorene		5700	J	59	37000
Hexachlorobenzene		ND		230	37000
Hexachlorobutadiene		ND		620	37000
Hexachlorocyclopentadiene		ND		900	180000
Hexachloroethane		ND		1000	37000
Indeno[1,2,3-cd]pyrene		16000	J	39	37000
Isophorone		ND		1400	37000
Naphthalene		6700	J	91	37000
Nitrobenzene		ND		240	37000
N-Nitrosodi-n-propylamine		ND		700	37000
N-Nitrosodiphenylamine		ND		2300	37000
Pentachlorophenol		ND		1000	37000
Phenol		ND		810	37000
Phenanthrene		53000		81	37000
Pyrene		73000		49	37000
3 & 4 Methylphenol		ND		2200	44000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		24 - 110
2-Fluorophenol (Surr)	71		24 - 110
2,4,6-Tribromophenol (Surr)	30		10 - 110
Nitrobenzene-d5 (Surr)	57		20 - 110
Phenol-d5 (Surr)	66		26 - 110
Terphenyl-d14 (Surr)	74		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_00_12-13 (20160112)**

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-215228	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-215157	Lab File ID:	60125024.D
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	250 mL
Analysis Date:	01/25/2016 1729			Final Weight/Volume:	2 mL
Prep Date:	01/22/2016 1454			Injection Volume:	1 uL
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		0.0053		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.016
Pyridine		0.0015	J B	0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	83		30 - 110
2-Fluorophenol (Surr)	66		20 - 110
Nitrobenzene-d5 (Surr)	77		28 - 110
Phenol-d5 (Surr)	60		21 - 110
Terphenyl-d14 (Surr)	80		48 - 110
2,4,6-Tribromophenol (Surr)	84		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_013_6-7 (20160112)**

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid % Moisture: 21.2 Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-214903	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214379	Lab File ID:	60121012.D
Dilution:	200			Initial Weight/Volume:	30.18 g
Analysis Date:	01/21/2016 1320			Final Weight/Volume:	15 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		8100	J	6600	620000
2,2'-oxybis[1-chloropropane]		ND		18000	620000
2,4,5-Trichlorophenol		ND		47000	620000
2,4,6-Trichlorophenol		ND		17000	620000
2,4-Dichlorophenol		ND		38000	620000
2,4-Dimethylphenol		ND		38000	620000
2,4-Dinitrophenol		ND		40000	3000000
2,4-Dinitrotoluene		ND		32000	620000
2,6-Dinitrotoluene		ND		40000	620000
2-Chloronaphthalene		ND		850	620000
2-Chlorophenol		ND		16000	620000
2-Methylnaphthalene		190000	J	950	620000
2-Methylphenol		ND		21000	620000
2-Nitroaniline		ND		17000	3000000
2-Nitrophenol		ND		16000	620000
3,3'-Dichlorobenzidine		ND		34000	3000000
3-Nitroaniline		ND		30000	3000000
4,6-Dinitro-2-methylphenol		ND		17000	3000000
4-Bromophenyl phenyl ether		ND		25000	620000
4-Chloro-3-methylphenol		ND		40000	620000
4-Chloroaniline		ND		32000	620000
4-Chlorophenyl phenyl ether		ND		25000	620000
4-Nitroaniline		ND		49000	3000000
4-Nitrophenol		ND		32000	3000000
Acenaphthene		7800	J	1400	620000
Acenaphthylene		ND		660	620000
Acetophenone		ND		17000	620000
Anthracene		9700	J	1500	620000
Atrazine		ND		17000	620000
Benzaldehyde		ND		23000	620000
Benzo[a]anthracene		14000	J	1200	620000
Benzo[a]pyrene		6700	J	1200	620000
Benzo[b]fluoranthene		10000	J	1100	620000
Benzo[g,h,i]perylene		ND		660	620000
Benzo[k]fluoranthene		ND		1300	620000
Bis(2-chloroethoxy)methane		ND		42000	620000
Bis(2-chloroethyl)ether		ND		3800	620000
Bis(2-ethylhexyl) phthalate		ND		36000	620000
Butyl benzyl phthalate		ND		19000	620000
Caprolactam		ND		70000	620000
Carbazole		ND		51000	620000
Chrysene		14000	J	2100	620000
Dibenz(a,h)anthracene		ND		1200	620000
Dibenzofuran		ND		1200	620000
Diethyl phthalate		ND		30000	620000
Dimethyl phthalate		ND		32000	620000

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_013_6-7 (20160112)

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid % Moisture: 21.2 Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-214903	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214379	Lab File ID:	60121012.D
Dilution:	200			Initial Weight/Volume:	30.18 g
Analysis Date:	01/21/2016 1320			Final Weight/Volume:	15 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		28000	620000
Di-n-octyl phthalate		ND		15000	620000
Fluoranthene		34000	J	1000	620000
Fluorene		11000	J	1000	620000
Hexachlorobenzene		ND		4000	620000
Hexachlorobutadiene		ND		11000	620000
Hexachlorocyclopentadiene		ND		15000	3000000
Hexachloroethane		ND		17000	620000
Indeno[1,2,3-cd]pyrene		ND		660	620000
Isophorone		ND		25000	620000
Naphthalene		1400000		1600	620000
Nitrobenzene		ND		4200	620000
N-Nitrosodi-n-propylamine		ND		12000	620000
N-Nitrosodiphenylamine		ND		40000	620000
Pentachlorophenol		ND		17000	620000
Phenol		ND		14000	620000
Phenanthrene		53000	J	1400	620000
Pyrene		25000	J	830	620000
3 & 4 Methylphenol		ND		38000	760000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	0	X	24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	0	X	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_013_6-7 (20160112)**

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-215372	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-215157	Lab File ID:	60126006.D
Dilution:	4.0	Leach Batch:	240-215019	Initial Weight/Volume:	250 mL
Analysis Date:	01/26/2016 0943			Final Weight/Volume:	2 mL
Prep Date:	01/22/2016 1454			Injection Volume:	1 uL
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.0014	0.016
2,4-Dinitrotoluene		ND		0.0010	0.016
Hexachlorobenzene		ND		0.00034	0.0032
Hexachlorobutadiene		ND		0.0011	0.016
Hexachloroethane		ND		0.00076	0.016
2-Methylphenol		0.041		0.00068	0.016
3 & 4 Methylphenol		0.16		0.0032	0.016
Nitrobenzene		ND		0.00016	0.016
Pentachlorophenol		ND		0.0011	0.064
Pyridine		ND		0.0014	0.016
2,4,5-Trichlorophenol		ND		0.0012	0.016
2,4,6-Trichlorophenol		ND		0.00096	0.016

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	81		30 - 110
2-Fluorophenol (Surr)	66		20 - 110
Nitrobenzene-d5 (Surr)	74		28 - 110
Phenol-d5 (Surr)	66		21 - 110
Terphenyl-d14 (Surr)	78		48 - 110
2,4,6-Tribromophenol (Surr)	89		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_00_9-10 (20160112)**

Lab Sample ID: 240-59932-4 Date Sampled: 01/12/2016 1815
Client Matrix: Solid % Moisture: 11.8 Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-214903	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214379	Lab File ID:	60121013.D
Dilution:	25			Initial Weight/Volume:	30.11 g
Analysis Date:	01/21/2016 1343			Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		150	J	99	9300
2,2'-oxybis[1-chloropropane]		ND		270	9300
2,4,5-Trichlorophenol		ND		710	9300
2,4,6-Trichlorophenol		ND		250	9300
2,4-Dichlorophenol		ND		560	9300
2,4-Dimethylphenol		ND		560	9300
2,4-Dinitrophenol		ND		590	45000
2,4-Dinitrotoluene		ND		480	9300
2,6-Dinitrotoluene		ND		590	9300
2-Chloronaphthalene		ND		13	9300
2-Chlorophenol		ND		230	9300
2-Methylnaphthalene		790	J	14	9300
2-Methylphenol		ND		310	9300
2-Nitroaniline		ND		260	45000
2-Nitrophenol		ND		230	9300
3,3'-Dichlorobenzidine		ND		510	45000
3-Nitroaniline		ND		450	45000
4,6-Dinitro-2-methylphenol		ND		260	45000
4-Bromophenyl phenyl ether		ND		370	9300
4-Chloro-3-methylphenol		ND		590	9300
4-Chloroaniline		ND		480	9300
4-Chlorophenyl phenyl ether		ND		370	9300
4-Nitroaniline		ND		730	45000
4-Nitrophenol		ND		480	45000
Acenaphthene		2200	J	21	9300
Acenaphthylene		ND		9.9	9300
Acetophenone		ND		260	9300
Anthracene		3100	J	22	9300
Atrazine		ND		260	9300
Benzaldehyde		ND		340	9300
Benzo[a]anthracene		14000		18	9300
Benzo[a]pyrene		10000		18	9300
Benzo[b]fluoranthene		17000		17	9300
Benzo[g,h,i]perylene		5600	J	9.9	9300
Benzo[k]fluoranthene		6100	J	19	9300
Bis(2-chloroethoxy)methane		ND		620	9300
Bis(2-chloroethyl)ether		ND		56	9300
Bis(2-ethylhexyl) phthalate		ND		540	9300
Butyl benzyl phthalate		ND		280	9300
Caprolactam		ND		1000	9300
Carbazole		4100	J	760	9300
Chrysene		17000		31	9300
Dibenz(a,h)anthracene		1900	J	19	9300
Dibenzofuran		1100	J	19	9300
Diethyl phthalate		ND		450	9300
Dimethyl phthalate		ND		480	9300

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_00_9-10 (20160112)

Lab Sample ID: 240-59932-4 Date Sampled: 01/12/2016 1815
Client Matrix: Solid % Moisture: 11.8 Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-214903	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214379	Lab File ID:	60121013.D
Dilution:	25			Initial Weight/Volume:	30.11 g
Analysis Date:	01/21/2016 1343			Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		420	9300
Di-n-octyl phthalate		ND		220	9300
Fluoranthene		33000		16	9300
Fluorene		2100	J	15	9300
Hexachlorobenzene		ND		59	9300
Hexachlorobutadiene		ND		160	9300
Hexachlorocyclopentadiene		ND		230	45000
Hexachloroethane		ND		250	9300
Indeno[1,2,3-cd]pyrene		5100	J	9.9	9300
Isophorone		ND		370	9300
Naphthalene		1700	J	23	9300
Nitrobenzene		ND		62	9300
N-Nitrosodi-n-propylamine		ND		180	9300
N-Nitrosodiphenylamine		ND		590	9300
Pentachlorophenol		ND		260	9300
Phenol		ND		210	9300
Phenanthrene		21000		21	9300
Pyrene		23000		12	9300
3 & 4 Methylphenol		ND		560	11000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	71		24 - 110
2-Fluorophenol (Surr)	71		24 - 110
2,4,6-Tribromophenol (Surr)	52		10 - 110
Nitrobenzene-d5 (Surr)	62		20 - 110
Phenol-d5 (Surr)	68		26 - 110
Terphenyl-d14 (Surr)	66		36 - 110

Client Sample ID: **AREA C-TRENCH-2_00_9-10 (20160112)**

Lab Sample ID: 240-59932-4 Date Sampled: 01/12/2016 1815
Client Matrix: Solid Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-215228	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-215157	Lab File ID:	60125025.D
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	250 mL
Analysis Date:	01/25/2016 1755			Final Weight/Volume:	2 mL
Prep Date:	01/22/2016 1454			Injection Volume:	1 uL
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.016
Pyridine		0.0016	J B	0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		30 - 110
2-Fluorophenol (Surr)	67		20 - 110
Nitrobenzene-d5 (Surr)	78		28 - 110
Phenol-d5 (Surr)	62		21 - 110
Terphenyl-d14 (Surr)	79		48 - 110
2,4,6-Tribromophenol (Surr)	76		23 - 110

Client Sample ID: **AREA C-TRENCH-2_08_4-5 (20160112)**

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid % Moisture: 33.1 Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-214706	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214379	Lab File ID:	60120031.D
Dilution:	400			Initial Weight/Volume:	29.80 g
Analysis Date:	01/20/2016 2039			Final Weight/Volume:	8 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		8400	790000
2,2'-oxybis[1-chloropropane]		ND		23000	790000
2,4,5-Trichlorophenol		ND		60000	790000
2,4,6-Trichlorophenol		ND		21000	790000
2,4-Dichlorophenol		ND		48000	790000
2,4-Dimethylphenol		ND		48000	790000
2,4-Dinitrophenol		ND		51000	3900000
2,4-Dinitrotoluene		ND		41000	790000
2,6-Dinitrotoluene		ND		51000	790000
2-Chloronaphthalene		ND		1100	790000
2-Chlorophenol		ND		20000	790000
2-Methylnaphthalene		260000	J	1200	790000
2-Methylphenol		ND		26000	790000
2-Nitroaniline		ND		22000	3900000
2-Nitrophenol		ND		20000	790000
3,3'-Dichlorobenzidine		ND		43000	3900000
3-Nitroaniline		ND		39000	3900000
4,6-Dinitro-2-methylphenol		ND		22000	3900000
4-Bromophenyl phenyl ether		ND		31000	790000
4-Chloro-3-methylphenol		ND		51000	790000
4-Chloroaniline		ND		41000	790000
4-Chlorophenyl phenyl ether		ND		31000	790000
4-Nitroaniline		ND		63000	3900000
4-Nitrophenol		ND		41000	3900000
Acenaphthene		ND		1800	790000
Acenaphthylene		ND		840	790000
Acetophenone		ND		22000	790000
Anthracene		ND		1900	790000
Atrazine		ND		22000	790000
Benzaldehyde		ND		29000	790000
Benzo[a]anthracene		ND		1500	790000
Benzo[a]pyrene		ND		1500	790000
Benzo[b]fluoranthene		ND		1400	790000
Benzo[g,h,i]perylene		ND		840	790000
Benzo[k]fluoranthene		ND		1600	790000
Bis(2-chloroethoxy)methane		ND		53000	790000
Bis(2-chloroethyl)ether		ND		4800	790000
Bis(2-ethylhexyl) phthalate		ND		46000	790000
Butyl benzyl phthalate		ND		24000	790000
Caprolactam		ND		89000	790000
Carbazole		ND		65000	790000
Chrysene		ND		2600	790000
Dibenz(a,h)anthracene		ND		1600	790000
Dibenzofuran		ND		1600	790000
Diethyl phthalate		ND		39000	790000
Dimethyl phthalate		ND		41000	790000

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: AREA C-TRENCH-2_08_4-5 (20160112)

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid % Moisture: 33.1 Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-214706	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214379	Lab File ID:	60120031.D
Dilution:	400			Initial Weight/Volume:	29.80 g
Analysis Date:	01/20/2016 2039			Final Weight/Volume:	8 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		36000	790000
Di-n-octyl phthalate		ND		19000	790000
Fluoranthene		17000	J	1300	790000
Fluorene		11000	J	1300	790000
Hexachlorobenzene		ND		5100	790000
Hexachlorobutadiene		ND		13000	790000
Hexachlorocyclopentadiene		ND		19000	3900000
Hexachloroethane		ND		22000	790000
Indeno[1,2,3-cd]pyrene		ND		840	790000
Isophorone		ND		31000	790000
Naphthalene		2200000		2000	790000
Nitrobenzene		ND		5300	790000
N-Nitrosodi-n-propylamine		ND		15000	790000
N-Nitrosodiphenylamine		ND		51000	790000
Pentachlorophenol		ND		22000	790000
Phenol		ND		18000	790000
Phenanthrene		29000	J	1800	790000
Pyrene		13000	J	1100	790000
3 & 4 Methylphenol		ND		48000	960000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	0	X	24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	0	X	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_08_4-5 (20160112)**

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid Date Received: 01/14/2016 1010

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-215372	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-215157	Lab File ID:	60126009.D
Dilution:	2.5	Leach Batch:	240-215019	Initial Weight/Volume:	250 mL
Analysis Date:	01/26/2016 1100			Final Weight/Volume:	2 mL
Prep Date:	01/22/2016 1454			Injection Volume:	1 uL
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00085	0.010
2,4-Dinitrotoluene		ND		0.00063	0.010
Hexachlorobenzene		ND		0.00021	0.0020
Hexachlorobutadiene		ND		0.00068	0.010
Hexachloroethane		ND		0.00048	0.010
2-Methylphenol		0.032		0.00043	0.010
3 & 4 Methylphenol		0.063		0.0020	0.010
Nitrobenzene		ND		0.00010	0.010
Pentachlorophenol		ND		0.00068	0.040
Pyridine		ND		0.00088	0.010
2,4,5-Trichlorophenol		ND		0.00075	0.010
2,4,6-Trichlorophenol		ND		0.00060	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	81		30 - 110
2-Fluorophenol (Surr)	68		20 - 110
Nitrobenzene-d5 (Surr)	71		28 - 110
Phenol-d5 (Surr)	61		21 - 110
Terphenyl-d14 (Surr)	82		48 - 110
2,4,6-Tribromophenol (Surr)	69		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_015_6-7 (20160112)**

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid % Moisture: 25.5 Date Received: 01/14/2016 1010

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-214744	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-214558	Lab File ID:	Y0012012.D
Dilution:	200			Initial Weight/Volume:	10.578 g
Analysis Date:	01/20/2016 1604			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		16000		510	2500

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_00_12-13 (20160112)**

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid % Moisture: 10.5 Date Received: 01/14/2016 1010

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-214744	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-214558	Lab File ID:	Y0012013.D
Dilution:	10			Initial Weight/Volume:	10.59 g
Analysis Date:	01/20/2016 1638			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		550		21	110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_013_6-7 (20160112)**

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid % Moisture: 21.2 Date Received: 01/14/2016 1010

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-214744	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-214558	Lab File ID:	Y0012015.D
Dilution:	200			Initial Weight/Volume:	10.04 g
Analysis Date:	01/20/2016 1750			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		19000		510	2500

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_00_9-10 (20160112)**

Lab Sample ID: 240-59932-4 Date Sampled: 01/12/2016 1815
Client Matrix: Solid % Moisture: 11.8 Date Received: 01/14/2016 1010

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-214744	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-214558	Lab File ID:	Y0012016.D
Dilution:	1.0			Initial Weight/Volume:	9.47 g
Analysis Date:	01/20/2016 1825			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		45		2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_08_4-5 (20160112)**

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid % Moisture: 33.1 Date Received: 01/14/2016 1010

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-214744	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-214558	Lab File ID:	Y0012017.D
Dilution:	50			Initial Weight/Volume:	9.47 g
Analysis Date:	01/20/2016 1900			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		2900		160	790

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-59932-7 Date Sampled: 01/12/2016 0000
Client Matrix: Solid Date Received: 01/14/2016 1010

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-214744	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-214558	Lab File ID:	Y0012018.D
Dilution:	1.0			Initial Weight/Volume:	0.85 g
Analysis Date:	01/20/2016 1934			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		27	J	24	120

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_015_6-7 (20160112)**

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid % Moisture: 25.5 Date Received: 01/14/2016 1010

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	240-214981	Instrument ID:	A2HP6F
Prep Method:	3540C	Prep Batch:	240-214559	Initial Weight/Volume:	29.89 g
Dilution:	100			Final Weight/Volume:	5 mL
Analysis Date:	01/22/2016 1022			Injection Volume:	1 uL
Prep Date:	01/19/2016 0948			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel Range Organics [C10 - C28]		25000		860	2200

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl (Surr)	95		40 - 160

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_00_12-13 (20160112)**

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid % Moisture: 10.5 Date Received: 01/14/2016 1010

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-215139	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-214526	Lab File ID:	P14R012222.D
Dilution:	50			Initial Weight/Volume:	28.14 g
Analysis Date:	01/22/2016 1755			Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		1700	B	49	480

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_013_6-7 (20160112)**

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid % Moisture: 21.2 Date Received: 01/14/2016 1010

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-215139	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-214526	Lab File ID:	P14R012223.D
Dilution:	200			Initial Weight/Volume:	28.95 g
Analysis Date:	01/22/2016 1822			Final Weight/Volume:	13.5 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		38000	B	580	5700

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_00_9-10 (20160112)**

Lab Sample ID: 240-59932-4 Date Sampled: 01/12/2016 1815
Client Matrix: Solid % Moisture: 11.8 Date Received: 01/14/2016 1010

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-215139	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-214526	Lab File ID:	P14R012224.D
Dilution:	50			Initial Weight/Volume:	27.03 g
Analysis Date:	01/22/2016 1850			Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		2300	B	51	500

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_08_4-5 (20160112)**

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid % Moisture: 33.1 Date Received: 01/14/2016 1010

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-215139	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-214526	Lab File ID:	P14R012225.D
Dilution:	200			Initial Weight/Volume:	28.59 g
Analysis Date:	01/22/2016 1917			Final Weight/Volume:	11 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		42000	B	560	5500

Client Sample ID: **AREA C-TRENCH-2_015_6-7 (20160112)**

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid % Moisture: 25.5 Date Received: 01/14/2016 1010

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-214425	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214287	Lab File ID:	I9011816A.asc
Dilution:	1.0			Initial Weight/Volume:	1.28 g
Analysis Date:	01/18/2016 2240			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		2400	F2	6.1	21
Antimony		22	F1 F2	0.50	1.0
Barium		1600		0.43	21
Beryllium		0.14	J	0.027	0.52
Calcium		18000	F1	24	520
Cadmium		2.1	F1	0.022	0.21
Cobalt		4.1	J	0.049	5.2
Chromium		59	B F1 F2	0.079	0.52
Copper		29		0.24	2.6
Iron		11000	B	3.4	10
Potassium		460	J	6.5	520
Magnesium		5400	B	5.5	520
Manganese		230	B F1	0.088	1.6
Silver		0.12	J	0.066	0.52
Sodium		650		20	520
Nickel		59		0.084	4.2
Vanadium		16		0.21	5.2
Zinc		870		0.59	2.1
Arsenic		12		0.43	1.0
Selenium		ND		0.36	0.52
Thallium		ND		0.14	1.0

Analysis Method:	6010B	Analysis Batch:	240-214690	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214287	Lab File ID:	I9011916A.asc
Dilution:	5.0			Initial Weight/Volume:	1.28 g
Analysis Date:	01/19/2016 1432			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lead		2300	F2	1.0	1.6

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-215388	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1742			Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.033	J B	0.0029	0.50
Barium		1.1	J B	0.0010	10

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_015_6-7 (20160112)**

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid Date Received: 01/14/2016 1010

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Cadmium		0.0065	J B	0.00014	0.10
Chromium		0.0044	J B	0.00055	0.50
Lead		6.4		0.0019	0.50
Selenium		0.0048	J	0.0040	0.25
Silver		ND		0.00092	0.50
Antimony		0.17	J	0.0024	0.30
Potassium		5.1	B	0.070	5.0
Beryllium		0.00014	J	0.00013	0.0050
Thallium		ND		0.0017	2.0
Calcium		470	B	0.26	5.0
Iron		8.6	B	0.013	0.10
Nickel		0.91	B	0.00076	0.040
Vanadium		ND		0.0024	0.050
Magnesium		8.0	B	0.055	5.0
Copper		ND		0.0019	1.0
Aluminum		0.62		0.040	0.20
Manganese		4.1	B	0.00046	0.015
Cobalt		0.028	J B	0.00056	0.050

Analysis Method:	6010B	Analysis Batch:	240-215388	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	2.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1852			Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Zinc		13	B	0.019	2.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-215304	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-215034	Lab File ID:	012516AH1.PRN
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1240			Final Weight/Volume:	50 mL
Prep Date:	01/22/2016 1400				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		0.00033	J	0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-214474	Instrument ID:	H1
Prep Method:	7471A	Prep Batch:	240-214291	Lab File ID:	011816AH1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	01/18/2016 1442			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1500				

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_015_6-7 (20160112)**

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid % Moisture: 25.5 Date Received: 01/14/2016 1010

7471A Mercury (CVAA)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.11	J	0.020	0.15

Client Sample ID: **AREA C-TRENCH-2_00_12-13 (20160112)**

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid % Moisture: 10.5 Date Received: 01/14/2016 1010

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-214425	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214287	Lab File ID:	I9011816A.asc
Dilution:	1.0			Initial Weight/Volume:	1.33 g
Analysis Date:	01/18/2016 2300			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3000		4.9	17
Antimony		54		0.40	0.84
Barium		370		0.34	17
Beryllium		0.17	J	0.022	0.42
Calcium		12000		19	420
Cadmium		0.62		0.018	0.17
Cobalt		4.5		0.039	4.2
Chromium		26	B	0.063	0.42
Copper		30		0.19	2.1
Iron		8700	B	2.7	8.4
Potassium		430		5.2	420
Magnesium		3600	B	4.4	420
Manganese		220	B	0.071	1.3
Silver		0.69		0.053	0.42
Sodium		320	J	16	420
Nickel		30		0.067	3.4
Vanadium		13		0.17	4.2
Zinc		270		0.47	1.7
Arsenic		17		0.34	0.84
Selenium		ND		0.29	0.42
Thallium		ND		0.11	0.84

Analysis Method:	6010B	Analysis Batch:	240-214690	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214287	Lab File ID:	I9011916A.asc
Dilution:	5.0			Initial Weight/Volume:	1.33 g
Analysis Date:	01/19/2016 1448			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lead		2500		0.84	1.3

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-215388	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1746			Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.045	J B	0.0029	0.50
Barium		0.90	J B	0.0010	10

Client Sample ID: **AREA C-TRENCH-2_00_12-13 (20160112)**

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid Date Received: 01/14/2016 1010

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Cadmium		0.0098	J B	0.00014	0.10
Chromium		0.0036	J B	0.00055	0.50
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Antimony		0.63		0.0024	0.30
Potassium		4.5	J B	0.070	5.0
Beryllium		0.00027	J	0.00013	0.0050
Thallium		ND		0.0017	2.0
Calcium		440	B	0.26	5.0
Iron		0.72	B	0.013	0.10
Nickel		0.34	B	0.00076	0.040
Vanadium		ND		0.0024	0.050
Magnesium		12	B	0.055	5.0
Copper		0.028	J	0.0019	1.0
Aluminum		0.18	J	0.040	0.20
Zinc		2.9	B	0.0096	1.0
Manganese		3.7	B	0.00046	0.015
Cobalt		0.041	J B	0.00056	0.050

Analysis Method:	6010B	Analysis Batch:	240-215388	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	10	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1857			Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Lead		76		0.019	5.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-215304	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-215034	Lab File ID:	012516AH1.PRN
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1243			Final Weight/Volume:	50 mL
Prep Date:	01/22/2016 1400				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-214474	Instrument ID:	H1
Prep Method:	7471A	Prep Batch:	240-214291	Lab File ID:	011816AH1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.57 g
Analysis Date:	01/18/2016 1446			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1500				

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_00_12-13 (20160112)**

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid % Moisture: 10.5 Date Received: 01/14/2016 1010

7471A Mercury (CVAA)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.073	J	0.016	0.12

Client Sample ID: **AREA C-TRENCH-2_013_6-7 (20160112)**

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid % Moisture: 21.2 Date Received: 01/14/2016 1010

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-214425	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214287	Lab File ID:	I9011816A.asc
Dilution:	1.0			Initial Weight/Volume:	1.36 g
Analysis Date:	01/18/2016 2304			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4500		5.4	19
Beryllium		0.11	J	0.024	0.47
Calcium		9000		21	470
Cadmium		14		0.020	0.19
Cobalt		4.3	J	0.044	4.7
Chromium		1400	B	0.070	0.47
Copper		240		0.21	2.3
Iron		16000	B	3.0	9.3
Potassium		640		5.8	470
Magnesium		2500	B	4.9	470
Manganese		160	B	0.078	1.4
Silver		1.9		0.059	0.47
Sodium		1600		18	470
Nickel		270		0.075	3.7
Vanadium		4.8		0.19	4.7
Arsenic		120		0.38	0.93
Selenium		2.1		0.32	0.47
Thallium		ND		0.12	0.93

Analysis Method:	6010B	Analysis Batch:	240-214690	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214287	Lab File ID:	I9011916A.asc
Dilution:	100			Initial Weight/Volume:	1.36 g
Analysis Date:	01/19/2016 1452			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		1100		45	93
Barium		19000		38	1900
Zinc		9400		52	190
Lead		28000		19	28

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-215388	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1751			Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.014	J B	0.0029	0.50
Barium		3.6	J B	0.0010	10

Client Sample ID: **AREA C-TRENCH-2_013_6-7 (20160112)**

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid Date Received: 01/14/2016 1010

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Cadmium		0.0075	J B	0.00014	0.10
Chromium		0.011	J B	0.00055	0.50
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Antimony		0.66		0.0024	0.30
Potassium		3.2	J B	0.070	5.0
Beryllium		ND		0.00013	0.0050
Thallium		ND		0.0017	2.0
Calcium		410	B	0.26	5.0
Iron		7.4	B	0.013	0.10
Nickel		0.62	B	0.00076	0.040
Vanadium		ND		0.0024	0.050
Magnesium		6.6	B	0.055	5.0
Copper		ND		0.0019	1.0
Aluminum		0.32		0.040	0.20
Manganese		2.6	B	0.00046	0.015
Cobalt		0.012	J B	0.00056	0.050

Analysis Method:	6010B	Analysis Batch:	240-215388	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	5.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1901			Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Lead		34		0.0095	2.5
Zinc		23	B	0.048	5.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-215304	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-215034	Lab File ID:	012516AH1.PRN
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1245			Final Weight/Volume:	50 mL
Prep Date:	01/22/2016 1400				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		0.00015	J	0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-214474	Instrument ID:	H1
Prep Method:	7471A	Prep Batch:	240-214291	Lab File ID:	011816AH1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	01/18/2016 1448			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1500				

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_013_6-7 (20160112)**

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid % Moisture: 21.2 Date Received: 01/14/2016 1010

7471A Mercury (CVAA)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.45		0.018	0.13

Client Sample ID: **AREA C-TRENCH-2_00_9-10 (20160112)**

Lab Sample ID: 240-59932-4 Date Sampled: 01/12/2016 1815
Client Matrix: Solid % Moisture: 11.8 Date Received: 01/14/2016 1010

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-214425	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214287	Lab File ID:	I9011816A.asc
Dilution:	1.0			Initial Weight/Volume:	1.04 g
Analysis Date:	01/18/2016 2308			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3900		6.3	22
Antimony		8.0		0.52	1.1
Barium		210		0.45	22
Beryllium		0.25	J	0.028	0.54
Calcium		30000		25	540
Cadmium		0.70		0.023	0.22
Cobalt		5.2	J	0.051	5.4
Chromium		17	B	0.082	0.54
Copper		24		0.25	2.7
Iron		15000	B	3.5	11
Potassium		550		6.8	540
Magnesium		5000	B	5.7	540
Manganese		490	B	0.092	1.6
Silver		0.12	J	0.069	0.54
Sodium		760		21	540
Nickel		17		0.087	4.4
Vanadium		16		0.22	5.4
Zinc		170		0.61	2.2
Arsenic		14		0.45	1.1
Lead		210		0.22	0.33
Selenium		0.42	J	0.37	0.54
Thallium		0.30	J	0.14	1.1

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-215388	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1755			Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.017	J B	0.0029	0.50
Barium		1.2	J B	0.0010	10
Cadmium		0.0031	J B	0.00014	0.10
Chromium		0.0039	J B	0.00055	0.50
Lead		0.12	J	0.0019	0.50
Selenium		ND		0.0040	0.25
Silver		0.0017	J	0.00092	0.50
Antimony		0.033	J	0.0024	0.30
Potassium		5.0	B	0.070	5.0
Beryllium		ND		0.00013	0.0050
Thallium		ND		0.0017	2.0
Calcium		540	B	0.26	5.0

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_00_9-10 (20160112)**

Lab Sample ID: 240-59932-4 Date Sampled: 01/12/2016 1815
Client Matrix: Solid Date Received: 01/14/2016 1010

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Iron		0.31	B	0.013	0.10
Nickel		0.11	B	0.00076	0.040
Vanadium		ND		0.0024	0.050
Magnesium		23	B	0.055	5.0
Copper		ND		0.0019	1.0
Aluminum		0.059	J	0.040	0.20
Zinc		0.41	J B	0.0096	1.0
Manganese		8.2	B	0.00046	0.015
Cobalt		0.062	B	0.00056	0.050

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-215304	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-215034	Lab File ID:	012516AH1.PRN
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1247			Final Weight/Volume:	50 mL
Prep Date:	01/22/2016 1400				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		0.00020	J	0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-214474	Instrument ID:	H1
Prep Method:	7471A	Prep Batch:	240-214291	Lab File ID:	011816AH1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	01/18/2016 1450			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.10	J	0.016	0.12

Client Sample ID: **AREA C-TRENCH-2_08_4-5 (20160112)**

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid % Moisture: 33.1 Date Received: 01/14/2016 1010

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-214425	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214287	Lab File ID:	I9011816A.asc
Dilution:	1.0			Initial Weight/Volume:	1.18 g
Analysis Date:	01/18/2016 2320			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6400		7.3	25
Antimony		170		0.61	1.3
Beryllium		0.13	J	0.033	0.63
Calcium		6000		29	630
Cadmium		6.3		0.027	0.25
Cobalt		6.6		0.060	6.3
Chromium		2200	B	0.095	0.63
Copper		300		0.29	3.2
Iron		18000	B	4.1	13
Potassium		370	J	7.9	630
Magnesium		2700	B	6.6	630
Manganese		150	B	0.11	1.9
Silver		0.40	J	0.080	0.63
Sodium		570	J	24	630
Nickel		280		0.10	5.1
Vanadium		4.3	J	0.25	6.3
Arsenic		33		0.52	1.3
Selenium		0.95		0.43	0.63
Thallium		0.34	J	0.16	1.3

Analysis Method:	6010B	Analysis Batch:	240-214690	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214287	Lab File ID:	I9011916A.asc
Dilution:	20			Initial Weight/Volume:	1.18 g
Analysis Date:	01/19/2016 1456			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Barium		15000		10	510
Zinc		6900		14	51
Lead		12000		5.1	7.6

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-215388	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1759			Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.036	J B	0.0029	0.50
Barium		1.4	J B	0.0010	10

Client Sample ID: **AREA C-TRENCH-2_08_4-5 (20160112)**

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid Date Received: 01/14/2016 1010

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Cadmium		0.019	J B	0.00014	0.10
Chromium		0.026	J B	0.00055	0.50
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Antimony		1.4		0.0024	0.30
Potassium		1.9	J B	0.070	5.0
Beryllium		0.00018	J	0.00013	0.0050
Thallium		ND		0.0017	2.0
Calcium		74	B	0.26	5.0
Iron		9.9	B	0.013	0.10
Nickel		1.4	B	0.00076	0.040
Vanadium		ND		0.0024	0.050
Magnesium		4.8	J B	0.055	5.0
Copper		0.075	J	0.0019	1.0
Aluminum		1.9		0.040	0.20
Manganese		2.0	B	0.00046	0.015
Cobalt		0.023	J B	0.00056	0.050

Analysis Method:	6010B	Analysis Batch:	240-215388	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	10	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1905			Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Lead		100		0.019	5.0
Zinc		15	B	0.096	10

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-215304	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-215034	Lab File ID:	012516AH1.PRN
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1248			Final Weight/Volume:	50 mL
Prep Date:	01/22/2016 1400				
Leach Date:	01/21/2016 1725				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		0.00014	J	0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-214474	Instrument ID:	H1
Prep Method:	7471A	Prep Batch:	240-214291	Lab File ID:	011816AH1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	01/18/2016 1452			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1500				

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Client Sample ID: **AREA C-TRENCH-2_08_4-5 (20160112)**

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid % Moisture: 33.1 Date Received: 01/14/2016 1010

7471A Mercury (CVAA)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.47		0.020	0.14

General Chemistry

Client Sample ID: **AREA C-TRENCH-2_015_6-7 (20160112)**

Lab Sample ID: 240-59932-1 Date Sampled: 01/12/2016 1637
Client Matrix: Solid % Moisture: 25.5 Date Received: 01/14/2016 1010

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	2.0		mg/Kg	0.35	1.1	1.0	7196A
Analysis Batch: 240-214816	Analysis Date: 01/20/2016 1243						DryWt Corrected: Y
Prep Batch: 240-214546	Prep Date: 01/19/2016 0825						
Cr (III)	57		mg/Kg	0.17	2.7	1.0	7196A
Analysis Batch: 240-214613	Analysis Date: 01/19/2016 1222						DryWt Corrected: Y
Percent Solids	75		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214301	Analysis Date: 01/15/2016 1530						DryWt Corrected: N
Percent Moisture	25		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214301	Analysis Date: 01/15/2016 1530						DryWt Corrected: N

General Chemistry

Client Sample ID: **AREA C-TRENCH-2_00_12-13 (20160112)**

Lab Sample ID: 240-59932-2 Date Sampled: 01/12/2016 1715
Client Matrix: Solid % Moisture: 10.5 Date Received: 01/14/2016 1010

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.29	0.89	1.0	7196A
Analysis Batch: 240-214816	Analysis Date: 01/20/2016 1226						DryWt Corrected: Y
Prep Batch: 240-214546	Prep Date: 01/19/2016 0825						
Cr (III)	26		mg/Kg	0.15	2.2	1.0	7196A
Analysis Batch: 240-214613	Analysis Date: 01/19/2016 1222						DryWt Corrected: Y
Percent Solids	90		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214301	Analysis Date: 01/15/2016 1530						DryWt Corrected: N
Percent Moisture	10		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214301	Analysis Date: 01/15/2016 1530						DryWt Corrected: N

General Chemistry

Client Sample ID: **AREA C-TRENCH-2_013_6-7 (20160112)**

Lab Sample ID: 240-59932-3 Date Sampled: 01/12/2016 1740
Client Matrix: Solid % Moisture: 21.2 Date Received: 01/14/2016 1010

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	23		mg/Kg	6.6	20	20	7196A
Analysis Batch: 240-214816	Analysis Date: 01/20/2016 1342						DryWt Corrected: Y
Prep Batch: 240-214546	Prep Date: 01/19/2016 0825						
Cr (III)	1400		mg/Kg	0.17	2.5	1.0	7196A
Analysis Batch: 240-214613	Analysis Date: 01/19/2016 1222						DryWt Corrected: Y
Percent Solids	79		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214301	Analysis Date: 01/15/2016 1530						DryWt Corrected: N
Percent Moisture	21		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214301	Analysis Date: 01/15/2016 1530						DryWt Corrected: N

General Chemistry

Client Sample ID: **AREA C-TRENCH-2_00_9-10 (20160112)**

Lab Sample ID: 240-59932-4 Date Sampled: 01/12/2016 1815
Client Matrix: Solid % Moisture: 11.8 Date Received: 01/14/2016 1010

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	ND		mg/Kg	0.29	0.91	1.0	7196A
Analysis Batch: 240-214816	Analysis Date: 01/20/2016 1230						DryWt Corrected: Y
Prep Batch: 240-214546	Prep Date: 01/19/2016 0825						
Cr (III)	17		mg/Kg	0.15	2.3	1.0	7196A
Analysis Batch: 240-214613	Analysis Date: 01/19/2016 1222						DryWt Corrected: Y
Percent Solids	88		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214301	Analysis Date: 01/15/2016 1530						DryWt Corrected: N
Percent Moisture	12		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214301	Analysis Date: 01/15/2016 1530						DryWt Corrected: N

General Chemistry

Client Sample ID: **AREA C-TRENCH-2_08_4-5 (20160112)**

Lab Sample ID: 240-59932-5 Date Sampled: 01/12/2016 1838
Client Matrix: Solid % Moisture: 33.1 Date Received: 01/14/2016 1010

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	59		mg/Kg	7.8	24	20	7196A
Analysis Batch: 240-214816	Analysis Date: 01/20/2016 1342						DryWt Corrected: Y
Prep Batch: 240-214546	Prep Date: 01/19/2016 0825						
Cr (III)	2100		mg/Kg	0.19	3.0	1.0	7196A
Analysis Batch: 240-214613	Analysis Date: 01/19/2016 1222						DryWt Corrected: Y
Percent Solids	67		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214301	Analysis Date: 01/15/2016 1530						DryWt Corrected: N
Percent Moisture	33		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214301	Analysis Date: 01/15/2016 1530						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC/MS Semi VOA		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-214307					
LCS 240-214307/2-A	Lab Control Sample	T	Solid	5035	
MB 240-214307/1-A	Method Blank	T	Solid	5035	
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	5035	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	5035	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	5035	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	5035	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	5035	
240-59932-7	TRIP BLANK	T	Solid	5035	
Analysis Batch:240-214411					
LCS 240-214307/2-A	Lab Control Sample	T	Solid	8260B	240-214307
MB 240-214307/1-A	Method Blank	T	Solid	8260B	240-214307
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	8260B	240-214307
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	8260B	240-214307
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	8260B	240-214307
240-59932-7	TRIP BLANK	T	Solid	8260B	240-214307
Analysis Batch:240-214576					
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	8260B	240-214307
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	8260B	240-214307
Prep Batch: 240-214652					
240-59834-A-3-E MS	Matrix Spike	P	Solid	1311	
240-59834-A-3-E MSD	Matrix Spike Duplicate	P	Solid	1311	
Prep Batch: 240-214931					
LB 240-214931/1-A	Method Blank	P	Solid	1311	
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	P	Solid	1311	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	P	Solid	1311	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	P	Solid	1311	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	P	Solid	1311	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	P	Solid	1311	

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-215013					
LB 240-214931/1-A	Method Blank	P	Solid	8260B	
LCS 240-215013/9	Lab Control Sample	T	Water	8260B	
240-59834-A-3-E MS	Matrix Spike	P	Solid	8260B	
240-59834-A-3-E MSD	Matrix Spike Duplicate	P	Solid	8260B	
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	P	Solid	8260B	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	P	Solid	8260B	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	P	Solid	8260B	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	P	Solid	8260B	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	P	Solid	8260B	

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-214379					
LCS 240-214379/24-A	Lab Control Sample	T	Solid	3540C	
MB 240-214379/23-A	Method Blank	T	Solid	3540C	
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	3540C	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	3540C	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	3540C	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	3540C	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	3540C	
Analysis Batch:240-214706					
LCS 240-214379/24-A	Lab Control Sample	T	Solid	8270C	240-214379
MB 240-214379/23-A	Method Blank	T	Solid	8270C	240-214379
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	8270C	240-214379
Analysis Batch:240-214903					
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	8270C	240-214379
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	8270C	240-214379
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	8270C	240-214379
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	8270C	240-214379
Prep Batch: 240-215019					
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	P	Solid	1311	
240-59932-1MS	Matrix Spike	P	Solid	1311	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	P	Solid	1311	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	P	Solid	1311	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	P	Solid	1311	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	P	Solid	1311	

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-215157					
LCS 240-215157/16-A	Lab Control Sample	T	Water	3510C	
MB 240-215157/15-A	Method Blank	T	Water	3510C	
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	P	Solid	3510C	240-215019
240-59932-1MS	Matrix Spike	P	Solid	3510C	240-215019
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	P	Solid	3510C	240-215019
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	P	Solid	3510C	240-215019
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	P	Solid	3510C	240-215019
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	P	Solid	3510C	240-215019
Analysis Batch:240-215228					
LCS 240-215157/16-A	Lab Control Sample	T	Water	8270C	240-215157
MB 240-215157/15-A	Method Blank	T	Water	8270C	240-215157
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	P	Solid	8270C	240-215157
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	P	Solid	8270C	240-215157
Analysis Batch:240-215372					
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	P	Solid	8270C	240-215157
240-59932-1MS	Matrix Spike	P	Solid	8270C	240-215157
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	P	Solid	8270C	240-215157
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	P	Solid	8270C	240-215157

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Prep Batch: 240-214558					
LCS 240-214558/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-214558/19-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-214558/1-A	Method Blank	T	Solid	5035	
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	5035	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	5035	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	5035	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	5035	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	5035	
240-59932-7	TRIP BLANK	T	Solid	5035	
Analysis Batch:240-214744					
LCS 240-214558/2-A	Lab Control Sample	T	Solid	WI-GRO	240-214558
LCSD 240-214558/19-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-214558
MB 240-214558/1-A	Method Blank	T	Solid	WI-GRO	240-214558
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	WI-GRO	240-214558
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	WI-GRO	240-214558
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	WI-GRO	240-214558
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	WI-GRO	240-214558
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	WI-GRO	240-214558
240-59932-7	TRIP BLANK	T	Solid	WI-GRO	240-214558

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-214526					
LCS 240-214526/16-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-214526/17-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-214526/15-A	Method Blank	T	Solid	WI DRO PREP	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	WI DRO PREP	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	WI DRO PREP	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	WI DRO PREP	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	WI DRO PREP	
Prep Batch: 240-214559					
LCS 240-214559/22-A	Lab Control Sample	T	Solid	3540C	
MB 240-214559/21-A	Method Blank	T	Solid	3540C	
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	3540C	
Analysis Batch:240-214981					
LCS 240-214559/22-A	Lab Control Sample	T	Solid	8015B	240-214559
MB 240-214559/21-A	Method Blank	T	Solid	8015B	240-214559
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	8015B	240-214559
Analysis Batch:240-215139					
LCS 240-214526/16-A	Lab Control Sample	T	Solid	WI-DRO	240-214526
MB 240-214526/15-A	Method Blank	T	Solid	WI-DRO	240-214526
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	WI-DRO	240-214526
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	WI-DRO	240-214526
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	WI-DRO	240-214526
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	WI-DRO	240-214526
Analysis Batch:240-215287					
LCSD 240-214526/17-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-214526

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-214287					
LCS 240-214287/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-214287/1-A	Method Blank	T	Solid	3050B	
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	3050B	
240-59932-1MS	Matrix Spike	T	Solid	3050B	
240-59932-1MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	3050B	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	3050B	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	3050B	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	3050B	
Prep Batch: 240-214291					
LCS 240-214291/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-214291/1-A	Method Blank	T	Solid	7471A	
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	7471A	
240-59932-1MS	Matrix Spike	T	Solid	7471A	
240-59932-1MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	7471A	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	7471A	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	7471A	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	7471A	
Analysis Batch:240-214425					
LCS 240-214287/2-A	Lab Control Sample	T	Solid	6010B	240-214287
MB 240-214287/1-A	Method Blank	T	Solid	6010B	240-214287
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	6010B	240-214287
240-59932-1MS	Matrix Spike	T	Solid	6010B	240-214287
240-59932-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-214287
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	6010B	240-214287
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	6010B	240-214287
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	6010B	240-214287
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	6010B	240-214287

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-214474					
LCS 240-214291/2-A	Lab Control Sample	T	Solid	7471A	240-214291
MB 240-214291/1-A	Method Blank	T	Solid	7471A	240-214291
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	7471A	240-214291
240-59932-1MS	Matrix Spike	T	Solid	7471A	240-214291
240-59932-1MSD	Matrix Spike Duplicate	T	Solid	7471A	240-214291
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	7471A	240-214291
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	7471A	240-214291
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	7471A	240-214291
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	7471A	240-214291
Prep Batch: 240-214645					
240-59930-A-1-E MS ^5	Matrix Spike	P	Solid	1311	
240-59930-A-1-H MS	Matrix Spike	P	Solid	1311	
240-59930-A-1-F MSD ^5	Matrix Spike Duplicate	P	Solid	1311	
240-59930-A-1-I MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-214690					
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	6010B	240-214287
240-59932-1MS	Matrix Spike	T	Solid	6010B	240-214287
240-59932-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-214287
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	6010B	240-214287
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	6010B	240-214287
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	6010B	240-214287
Prep Batch: 240-215019					
LB 240-215019/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-215019/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	P	Solid	1311	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	P	Solid	1311	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	P	Solid	1311	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	P	Solid	1311	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	P	Solid	1311	

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-215033					
LCS 240-215033/3-A	Lab Control Sample	T	Water	3010A	
MB 240-215033/2-A	Method Blank	T	Water	3010A	
LB 240-215019/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-215019
240-59930-A-1-E MS ^5	Matrix Spike	P	Solid	3010A	240-214645
240-59930-A-1-F MSD ^5	Matrix Spike Duplicate	P	Solid	3010A	240-214645
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	P	Solid	3010A	240-215019
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	P	Solid	3010A	240-215019
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	P	Solid	3010A	240-215019
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	P	Solid	3010A	240-215019
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	P	Solid	3010A	240-215019
Prep Batch: 240-215034					
LCS 240-215034/3-A	Lab Control Sample	T	Water	7470A	
MB 240-215034/2-A	Method Blank	T	Water	7470A	
LB 240-215019/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-215019
240-59930-A-1-H MS	Matrix Spike	P	Solid	7470A	240-214645
240-59930-A-1-I MSD	Matrix Spike Duplicate	P	Solid	7470A	240-214645
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	P	Solid	7470A	240-215019
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	P	Solid	7470A	240-215019
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	P	Solid	7470A	240-215019
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	P	Solid	7470A	240-215019
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	P	Solid	7470A	240-215019

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-215304					
LB 240-215019/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-215034
LCS 240-215034/3-A	Lab Control Sample	T	Water	7470A	240-215034
MB 240-215034/2-A	Method Blank	T	Water	7470A	240-215034
240-59930-A-1-H MS	Matrix Spike	P	Solid	7470A	240-215034
240-59930-A-1-I MSD	Matrix Spike Duplicate	P	Solid	7470A	240-215034
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	P	Solid	7470A	240-215034
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	P	Solid	7470A	240-215034
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	P	Solid	7470A	240-215034
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	P	Solid	7470A	240-215034
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	P	Solid	7470A	240-215034
Analysis Batch:240-215388					
LB 240-215019/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-215033
LCS 240-215033/3-A	Lab Control Sample	T	Water	6010B	240-215033
MB 240-215033/2-A	Method Blank	T	Water	6010B	240-215033
240-59930-A-1-E MS ^5	Matrix Spike	P	Solid	6010B	240-215033
240-59930-A-1-F MSD ^5	Matrix Spike Duplicate	P	Solid	6010B	240-215033
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	P	Solid	6010B	240-215033
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	P	Solid	6010B	240-215033
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	P	Solid	6010B	240-215033
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	P	Solid	6010B	240-215033
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	P	Solid	6010B	240-215033

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-214301					
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	Moisture	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	Moisture	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	Moisture	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	Moisture	
240-59932-4DU	Duplicate	T	Solid	Moisture	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	Moisture	
Prep Batch: 240-214546					
LCSI 240-214546/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-214546/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-214546/9-A	Method Blank	T	Solid	3060A	
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	3060A	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	3060A	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	3060A	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	3060A	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	3060A	
Analysis Batch:240-214613					
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	7196A	
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	7196A	
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	7196A	
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	7196A	
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	7196A	

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-214816					
LCSI 240-214546/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-214546
LCSS 240-214546/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-214546
MB 240-214546/9-A	Method Blank	T	Solid	7196A	240-214546
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	T	Solid	7196A	240-214546
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	T	Solid	7196A	240-214546
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	T	Solid	7196A	240-214546
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	T	Solid	7196A	240-214546
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	T	Solid	7196A	240-214546

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	888X	372X	605X	516X
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	81	82	103	80
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	2414X	1502X	1832X	1832X
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	80	81	98	82
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	259X	118	218X	148X
240-59932-7	TRIP BLANK	88	93	109	89
MB 240-214307/1-A		82	84	103	83
LCS 240-214307/2-A		83	90	104	83

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-214931/1-A MB		70	87	82	86
LCS 240-215013/9		79	91	84	93
240-59834-A-3-E MS		88	100	98	99
240-59834-A-3-E MSD		80	95	94	96

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	86	87	95	91
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	85	74	91	90
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	86	73	91	88
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	85	80	95	91
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	90	82	95	91

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-214379/23-A		81	78	75	79	75	45
LCS 240-214379/24-A		77	85	73	84	75	47

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	62	79	43	96	87	63
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	74	71	30	57	66	74
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	0X	0X	0X	0X	0X	0X
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	71	71	52	62	68	66
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	0X	0X	0X	0X	0X	0X

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	83	66	76	57	84	78
240-59932-2	AREA C-TRENCH-2_00_12-13 (20160112)	83	66	77	60	80	84
240-59932-3	AREA C-TRENCH-2_013_6-7 (20160112)	81	66	74	66	78	89
240-59932-4	AREA C-TRENCH-2_00_9-10 (20160112)	74	67	78	62	79	76
240-59932-5	AREA C-TRENCH-2_08_4-5 (20160112)	81	68	71	61	82	69
MB 240-215157/15-A		84	79	87	69	86	82
LCS 240-215157/16-A		88	82	89	79	84	90
240-59932-1 MS	AREA C-TRENCH-2_015_6-7 (20160112) MS	79	63	81	58	81	87

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Surrogate Recovery Report

8015B Diesel Range Organics (DRO) (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH1 %Rec
240-59932-1	AREA C-TRENCH-2_015_6-7 (20160112)	95
MB 240-214559/21-A		72
LCS 240-214559/22-A		77

Surrogate	Acceptance Limits
OTPH = o-Terphenyl (Surr)	40-160

Method Blank - Batch: 240-214307

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-214307/1-A	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-214307	Lab File ID:	147673.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	01/18/2016 1357	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/15/2016 1817				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	248	J	73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		18	250
Chlorobenzene	ND		13	250
Chlorodibromomethane	ND		20	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		10	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Method Blank - Batch: 240-214307 **Method: 8260B**
Preparation: 5035

Lab Sample ID:	MB 240-214307/1-A	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-214307	Lab File ID:	147673.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	01/18/2016 1357	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/15/2016 1817				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		25	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	471	J	120	1000
Toluene	ND		10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		27	250
1,1,2-Trichloroethane	ND		19	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		17	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	82	26 - 141
Dibromofluoromethane (Surr)	84	30 - 122
1,2-Dichloroethane-d4 (Surr)	103	39 - 128
Toluene-d8 (Surr)	83	33 - 134

Lab Control Sample - Batch: 240-214307

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-214307/2-A	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-214307	Lab File ID:	147672.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	01/18/2016 1336	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/15/2016 1817				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	1840	92	16 - 156	
Allyl chloride	1000	765	76	50 - 150	
Bromobenzene	1000	912	91	72 - 120	
Bromochloromethane	1000	913	91	56 - 128	
Bromodichloromethane	1000	942	94	28 - 123	
Benzene	1000	867	87	70 - 120	
Bromoform	1000	826	83	10 - 120	
Bromomethane	1000	701	70	10 - 120	
2-Butanone (MEK)	2000	2000	100	10 - 199	
Carbon disulfide	1000	560	56	10 - 132	
Carbon tetrachloride	1000	1120	112	29 - 120	
Chlorobenzene	1000	865	86	71 - 120	
Chlorodibromomethane	1000	815	82	22 - 120	
Chloroethane	1000	558	56	10 - 120	
Chloroform	1000	981	98	63 - 120	
Chloromethane	1000	729	73	25 - 120	
2-Chlorotoluene	1000	918	92	68 - 122	
4-Chlorotoluene	1000	882	88	68 - 122	
cis-1,2-Dichloroethene	1000	890	89	60 - 125	
cis-1,3-Dichloropropene	1000	926	93	25 - 120	
Cyclohexane	1000	873	87	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	784	78	10 - 129	
1,2-Dibromoethane	1000	893	89	47 - 123	
Dibromomethane	1000	928	93	68 - 120	
1,2-Dichlorobenzene	1000	869	87	68 - 120	
1,3-Dichlorobenzene	1000	889	89	66 - 121	
1,4-Dichlorobenzene	1000	859	86	65 - 120	
Dichlorodifluoromethane	1000	674	67	10 - 120	
1,1-Dichloroethane	1000	904	90	63 - 120	
1,2-Dichloroethane	1000	1080	108	68 - 120	
1,1-Dichloroethene	1000	660	66	44 - 143	
Dichlorofluoromethane	1000	893	89	40 - 160	
1,2-Dichloropropane	1000	882	88	73 - 120	
1,3-Dichloropropane	1000	831	83	74 - 120	
2,2-Dichloropropane	1000	981	98	25 - 123	
1,1-Dichloropropene	1000	982	98	60 - 123	
Ethylbenzene	1000	860	86	66 - 120	
Ethyl ether	1000	938	94	70 - 130	
Hexachlorobutadiene	1000	1030	103	34 - 135	
2-Hexanone	2000	1570	78	43 - 130	
Isopropylbenzene	1000	933	93	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Control Sample - Batch: 240-214307

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-214307/2-A	Analysis Batch:	240-214411	Instrument ID:	A3UX14
Client Matrix:	Solid	Prep Batch:	240-214307	Lab File ID:	147672.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	01/18/2016 1336	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/15/2016 1817				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	4530	91	44 - 173	
Methylcyclohexane	1000	884	88	41 - 133	
Methylene Chloride	1000	762	76	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1690	84	49 - 121	
Methyl tert butyl ether	1000	1000	100	34 - 157	
m-Xylene & p-Xylene	1000	865	87	67 - 120	
Naphthalene	1000	787	79	37 - 126	
n-Butylbenzene	1000	928	93	51 - 137	
N-Propylbenzene	1000	892	89	64 - 130	
o-Xylene	1000	913	91	68 - 120	
p-Isopropyltoluene	1000	972	97	56 - 136	
sec-Butylbenzene	1000	945	95	58 - 131	
Styrene	1000	896	90	60 - 120	
tert-Butylbenzene	1000	960	96	58 - 128	
1,1,1,2-Tetrachloroethane	1000	973	97	27 - 121	
1,1,2,2-Tetrachloroethane	1000	833	83	54 - 121	
Tetrachloroethene	1000	923	92	58 - 131	
Tetrahydrofuran	2000	2190	110	70 - 130	
Toluene	1000	885	89	66 - 123	
trans-1,2-Dichloroethene	1000	856	86	58 - 121	
trans-1,3-Dichloropropene	1000	919	92	22 - 122	
1,2,3-Trichlorobenzene	1000	850	85	43 - 129	
1,2,4-Trichlorobenzene	1000	904	90	41 - 135	
1,1,1-Trichloroethane	1000	1010	101	38 - 122	
1,1,2-Trichloroethane	1000	857	86	74 - 120	
Trichloroethene	1000	929	93	59 - 124	
Trichlorofluoromethane	1000	1030	103	17 - 145	
1,2,3-Trichloropropane	1000	1020	102	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	773	77	48 - 151	
1,2,4-Trimethylbenzene	1000	954	95	62 - 133	
1,3,5-Trimethylbenzene	1000	967	97	60 - 130	
Vinyl chloride	1000	769	77	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	83	26 - 141
Dibromofluoromethane (Surr)	90	30 - 122
1,2-Dichloroethane-d4 (Surr)	104	39 - 128
Toluene-d8 (Surr)	83	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Method Blank - Batch: 240-215013

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-214931/1-A	Analysis Batch:	240-215013	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248686.D
Dilution:	1.0	Leach Batch:	240-214931	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/21/2016 1758	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/21/2016 1758				
Leach Date:	01/20/2016 2040				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	70	70 - 124
Dibromofluoromethane (Surr)	87	80 - 128
1,2-Dichloroethane-d4 (Surr)	82	80 - 121
Toluene-d8 (Surr)	86	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Control Sample - Batch: 240-215013

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-215013/9	Analysis Batch:	240-215013	Instrument ID:	A3UX12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	U1248687.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/21/2016 1820	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/21/2016 1820				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	1030	103	80 - 120	
2-Butanone (MEK)	2000	1770	89	49 - 120	
Carbon tetrachloride	1000	740	74	54 - 122	
Chlorobenzene	1000	1080	108	80 - 120	
Chloroform	1000	1030	103	80 - 123	
1,2-Dichloroethane	1000	1070	107	80 - 120	
1,1-Dichloroethene	1000	960	96	71 - 133	
Tetrachloroethene	1000	1050	105	79 - 134	
Trichloroethene	1000	1130	113	78 - 130	
Vinyl chloride	1000	838	84	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	79	70 - 124
Dibromofluoromethane (Surr)	91	80 - 128
1,2-Dichloroethane-d4 (Surr)	84	80 - 121
Toluene-d8 (Surr)	93	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-215013

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-59834-A-3-E MS	Analysis Batch:	240-215013	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248700.D
Dilution:	1.0	Leach Batch:	240-214652	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/21/2016 2321			Final Weight/Volume:	5 mL
Prep Date:	01/21/2016 2321				5 mL
Leach Date:	01/13/2016 0700				

MSD Lab Sample ID:	240-59834-A-3-E MSD	Analysis Batch:	240-215013	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248701.D
Dilution:	1.0	Leach Batch:	240-214652	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/21/2016 2345			Final Weight/Volume:	5 mL
Prep Date:	01/21/2016 2345				5 mL
Leach Date:	01/13/2016 0700				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	95	90	80 - 120	5	30		
2-Butanone (MEK)	83	71	49 - 120	16	30		
Carbon tetrachloride	62	60	60 - 120	4	30		
Chlorobenzene	97	90	80 - 120	8	30		
Chloroform	91	91	80 - 124	0	30		
1,2-Dichloroethane	95	91	80 - 120	4	30		
1,1-Dichloroethene	88	87	67 - 139	1	30		
Tetrachloroethene	93	88	74 - 138	5	30		
Trichloroethene	101	102	75 - 134	1	30		
Vinyl chloride	85	82	51 - 120	4	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	88	80	70 - 124
Dibromofluoromethane (Surr)	100	95	80 - 128
1,2-Dichloroethane-d4 (Surr)	98	94	80 - 121
Toluene-d8 (Surr)	99	96	80 - 120

Method Blank - Batch: 240-214379

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-214379/23-A	Analysis Batch:	240-214706	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214379	Lab File ID:	60120009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/20/2016 1212	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Method Blank - Batch: 240-214379

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-214379/23-A	Analysis Batch:	240-214706	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214379	Lab File ID:	60120009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/20/2016 1212	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	81	24 - 110
2-Fluorophenol (Surr)	78	24 - 110
Nitrobenzene-d5 (Surr)	75	20 - 110
Phenol-d5 (Surr)	79	26 - 110
Terphenyl-d14 (Surr)	75	36 - 110
2,4,6-Tribromophenol (Surr)	45	10 - 110

Lab Control Sample - Batch: 240-214379

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-214379/24-A	Analysis Batch:	240-214706	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214379	Lab File ID:	60120010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/20/2016 1235	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	492	74	35 - 110	
2,2'-oxybis[1-chloropropane]	667	329	49	29 - 110	J
2,4-Dichlorophenol	667	493	74	39 - 110	
2,4-Dimethylphenol	667	311	47	29 - 110	J
2,4-Dinitrophenol	1330	504	38	10 - 110	J
2,4-Dinitrotoluene	667	482	72	48 - 110	
2,6-Dinitrotoluene	667	532	80	45 - 110	
2-Chloronaphthalene	667	489	73	32 - 110	
2,4,5-Trichlorophenol	667	426	64	25 - 110	
2-Chlorophenol	667	509	76	37 - 110	
2,4,6-Trichlorophenol	667	393	59	12 - 110	
2-Methylnaphthalene	667	497	75	36 - 110	
2-Methylphenol	667	478	72	41 - 110	
2-Nitroaniline	667	440	66	45 - 110	J
2-Nitrophenol	667	498	75	34 - 110	
3,3'-Dichlorobenzidine	1330	835	63	28 - 110	J
3-Nitroaniline	667	444	67	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	961	72	10 - 110	J
4-Bromophenyl phenyl ether	667	644	97	39 - 110	
4-Chloro-3-methylphenol	667	464	70	48 - 110	
4-Chloroaniline	667	445	67	30 - 110	
4-Chlorophenyl phenyl ether	667	497	75	40 - 110	
4-Nitroaniline	667	445	67	48 - 110	J
4-Nitrophenol	1330	627	47	28 - 110	J
Acenaphthene	667	496	74	38 - 110	
Acenaphthylene	667	479	72	40 - 110	
Acetophenone	667	489	73	40 - 110	
Anthracene	667	510	77	48 - 110	
Atrazine	1330	1210	91	54 - 120	
Benzaldehyde	1330	1090	82	32 - 110	
Benzo[a]anthracene	667	510	76	50 - 110	
Benzo[a]pyrene	667	520	78	44 - 110	
Benzo[b]fluoranthene	667	527	79	43 - 110	
Benzo[g,h,i]perylene	667	513	77	51 - 110	
Benzo[k]fluoranthene	667	574	86	38 - 105	
Bis(2-chloroethoxy)methane	667	545	82	32 - 110	
Bis(2-chloroethyl)ether	667	567	85	34 - 110	
Bis(2-ethylhexyl) phthalate	667	476	71	50 - 110	
Butyl benzyl phthalate	667	471	71	51 - 110	
Caprolactam	1330	1170	88	44 - 114	
Carbazole	667	634	95	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Control Sample - Batch: 240-214379

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-214379/24-A	Analysis Batch:	240-214706	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214379	Lab File ID:	60120010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/20/2016 1235	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0830			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	533	80	50 - 110	
Dibenz(a,h)anthracene	667	523	79	51 - 110	
Dibenzofuran	667	514	77	43 - 110	
Diethyl phthalate	667	424	64	52 - 110	
Dimethyl phthalate	667	505	76	50 - 110	
Di-n-butyl phthalate	667	570	86	51 - 110	
Di-n-octyl phthalate	667	465	70	48 - 110	
Fluoranthene	667	598	90	51 - 110	
Fluorene	667	509	76	46 - 110	
Hexachlorobenzene	667	670	100	43 - 110	
Hexachlorobutadiene	667	454	68	29 - 110	
Hexachlorocyclopentadiene	667	326	49	12 - 110	J
Hexachloroethane	667	471	71	30 - 110	
Indeno[1,2,3-cd]pyrene	667	525	79	50 - 110	
Isophorone	667	524	79	36 - 110	
Naphthalene	667	505	76	36 - 110	
Nitrobenzene	667	486	73	32 - 110	
N-Nitrosodi-n-propylamine	667	515	77	38 - 110	
N-Nitrosodiphenylamine	1330	1150	86	46 - 110	
Pentachlorophenol	1330	667	50	10 - 110	
Phenol	667	537	81	38 - 110	
Phenanthrene	667	520	78	49 - 110	
Pyrene	667	495	74	49 - 110	
3 & 4 Methylphenol	667	482	72	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	77	24 - 110
2-Fluorophenol (Surr)	85	24 - 110
Nitrobenzene-d5 (Surr)	73	20 - 110
Phenol-d5 (Surr)	84	26 - 110
Terphenyl-d14 (Surr)	75	36 - 110
2,4,6-Tribromophenol (Surr)	47	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Method Blank - Batch: 240-215157

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-215157/15-A	Analysis Batch:	240-215228	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-215157	Lab File ID:	60125021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	01/25/2016 1613	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	01/22/2016 1454			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	0.00172	J	0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	ND		0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.016
3 & 4 Methylphenol	ND		0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	84	30 - 110
2-Fluorophenol (Surr)	79	20 - 110
Nitrobenzene-d5 (Surr)	87	28 - 110
Phenol-d5 (Surr)	69	21 - 110
Terphenyl-d14 (Surr)	86	48 - 110
2,4,6-Tribromophenol (Surr)	82	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Control Sample - Batch: 240-215157

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-215157/16-A	Analysis Batch:	240-215228	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-215157	Lab File ID:	60125022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	01/25/2016 1638	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	01/22/2016 1454			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0655	82	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0663	83	54 - 110	
Pyridine	0.0800	0.0530	66	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0702	88	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0697	87	46 - 110	
2-Methylphenol	0.0800	0.0678	85	44 - 111	
Hexachlorobenzene	0.0800	0.0812	102	50 - 110	
Hexachlorobutadiene	0.0800	0.0700	88	34 - 110	
Hexachloroethane	0.0800	0.0608	76	41 - 110	
Nitrobenzene	0.0800	0.0691	86	40 - 110	
Pentachlorophenol	0.160	0.156	98	12 - 110	
3 & 4 Methylphenol	0.0800	0.0631	79	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	88	30 - 110
2-Fluorophenol (Surr)	82	20 - 110
Nitrobenzene-d5 (Surr)	89	28 - 110
Phenol-d5 (Surr)	79	21 - 110
Terphenyl-d14 (Surr)	84	48 - 110
2,4,6-Tribromophenol (Surr)	90	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Matrix Spike - Batch: 240-215157

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-59932-1	Analysis Batch:	240-215372	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-215157	Lab File ID:	60126008.D
Dilution:	4.0	Leach Batch:	240-215019	Initial Weight/Volume:	250 mL
Analysis Date:	01/26/2016 1034	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	01/22/2016 1454			Injection Volume:	1 uL
Leach Date:	01/21/2016 1725				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0630	79	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0583	73	42 - 110	
Pyridine	ND	0.0800	0.0511	64	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0631	79	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0658	82	35 - 110	
2-Methylphenol	0.050	0.0800	0.109	74	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0594	74	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0639	80	28 - 110	
Hexachloroethane	ND	0.0800	0.152	190	26 - 110	F1
Nitrobenzene	ND	0.0800	0.0767	96	32 - 110	
Pentachlorophenol	ND	0.160	0.127	80	10 - 124	
3 & 4 Methylphenol	0.17	0.0800	0.223	67	29 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	79	30 - 110
2-Fluorophenol (Surr)	63	20 - 110
Nitrobenzene-d5 (Surr)	81	28 - 110
Phenol-d5 (Surr)	58	21 - 110
Terphenyl-d14 (Surr)	81	48 - 110
2,4,6-Tribromophenol (Surr)	87	23 - 110

Method Blank - Batch: 240-214558 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-214558/1-A	Analysis Batch:	240-214744	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-214558	Lab File ID:	Y0012004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/20/2016 1124	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-214558 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-214558/2-A	Analysis Batch:	240-214744	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-214558	Lab File ID:	Y0012005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/20/2016 1158	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-214558/19-A	Analysis Batch:	240-214744	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-214558	Lab File ID:	Y0012023.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/20/2016 2229	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	91	99	80 - 120	9	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Method Blank - Batch: 240-214559

Method: 8015B
Preparation: 3540C

Lab Sample ID:	MB 240-214559/21-A	Analysis Batch:	240-214981	Instrument ID:	A2HP6F
Client Matrix:	Solid	Prep Batch:	240-214559	Lab File ID:	P6F12118.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/21/2016 2157	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0903			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Diesel Range Organics [C10 - C28]	ND		6.4	17

Surrogate	% Rec	Acceptance Limits
o-Terphenyl (Surr)	72	40 - 160

Lab Control Sample - Batch: 240-214559

Method: 8015B
Preparation: 3540C

Lab Sample ID:	LCS 240-214559/22-A	Analysis Batch:	240-214981	Instrument ID:	A2HP6F
Client Matrix:	Solid	Prep Batch:	240-214559	Lab File ID:	P6F12119.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/21/2016 2228	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0903			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Diesel Range Organics [C10 - C28]	84.0	66.2	79	52 - 120	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl (Surr)	77	40 - 160

Method Blank - Batch: 240-214526

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-214526/15-A	Analysis Batch:	240-215139	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-214526	Lab File ID:	P14R012220.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 g
Analysis Date:	01/22/2016 1701	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	2.65	J	0.98	9.6

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-214526

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-214526/16-A	Analysis Batch:	240-215139	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-214526	Lab File ID:	P14R012221.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 g
Analysis Date:	01/22/2016 1728	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-214526/17-A	Analysis Batch:	240-215287	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-214526	Lab File ID:	P14R012508.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 g
Analysis Date:	01/25/2016 1427	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	113	111	70 - 120	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Method Blank - Batch: 240-214287

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-214287/1-A	Analysis Batch:	240-214425	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-214287	Lab File ID:	I9011816A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	01/18/2016 1512	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	ND		0.41	20
Cadmium	ND		0.021	0.20
Antimony	ND		0.48	1.0
Chromium	0.0886	J	0.075	0.50
Potassium	ND		6.2	500
Beryllium	ND		0.026	0.50
Silver	ND		0.063	0.50
Calcium	ND		23	500
Sodium	ND		19	500
Iron	3.55	J	3.2	10
Arsenic	ND		0.41	1.0
Nickel	ND		0.080	4.0
Lead	ND		0.20	0.30
Vanadium	ND		0.20	5.0
Selenium	ND		0.34	0.50
Magnesium	7.24	J	5.2	500
Thallium	ND		0.13	1.0
Copper	ND		0.23	2.5
Aluminum	ND		5.8	20
Zinc	ND		0.56	2.0
Manganese	0.0975	J	0.084	1.5
Cobalt	ND		0.047	5.0

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Control Sample - Batch: 240-214287

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-214287/2-A	Analysis Batch:	240-214425	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-214287	Lab File ID:	I9011816A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	01/18/2016 1517	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	200	189	95	80 - 120	
Cadmium	5.00	4.81	96	80 - 120	
Antimony	50.0	47.7	95	80 - 120	
Chromium	20.0	18.9	94	80 - 120	
Potassium	5000	4660	93	80 - 120	
Beryllium	5.00	4.73	95	80 - 120	
Silver	5.00	4.69	94	80 - 120	
Calcium	5000	4790	96	80 - 120	
Sodium	5000	4620	92	80 - 120	
Iron	100	95.3	95	80 - 120	
Arsenic	200	191	96	80 - 120	
Nickel	50.0	46.3	93	80 - 120	
Lead	50.0	46.5	93	80 - 120	
Vanadium	50.0	48.6	97	80 - 120	
Selenium	200	190	95	80 - 120	
Magnesium	5000	4570	91	80 - 120	
Thallium	200	185	92	80 - 120	
Copper	25.0	23.8	95	80 - 120	
Aluminum	200	188	94	80 - 120	
Zinc	50.0	46.5	93	80 - 120	
Manganese	50.0	44.3	89	80 - 120	
Cobalt	50.0	45.8	92	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-214287

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-59932-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 01/18/2016 2252
Prep Date: 01/15/2016 1132
Leach Date: N/A

Analysis Batch: 240-214425
Prep Batch: 240-214287
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9011816A.asc
Initial Weight/Volume: 1.11 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-59932-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 01/18/2016 2256
Prep Date: 01/15/2016 1132
Leach Date: N/A

Analysis Batch: 240-214425
Prep Batch: 240-214287
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9011816A.asc
Initial Weight/Volume: 1.11 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	121	40	75 - 125	11	20	4	4
Cadmium	130	121	75 - 125	5	20	F1	
Antimony	116	74	75 - 125	32	20		F1 F2
Chromium	158	78	75 - 125	22	20	F1	F2
Potassium	92	95	75 - 125	2	20		
Beryllium	87	83	75 - 125	5	20		
Silver	94	94	75 - 125	1	20		
Calcium	73	145	75 - 125	18	20	F1	F1
Sodium	86	83	75 - 125	4	20		
Iron	1319	282	75 - 125	11	20	4	4
Arsenic	94	90	75 - 125	4	20		
Nickel	100	90	75 - 125	5	20		
Vanadium	88	82	75 - 125	6	20		
Selenium	89	88	75 - 125	1	20		
Magnesium	76	107	75 - 125	17	20		
Thallium	91	90	75 - 125	1	20		
Copper	102	78	75 - 125	13	20		
Aluminum	615	1043	75 - 125	23	20	4	4 F2
Zinc	295	176	75 - 125	7	20	4	4
Manganese	165	144	75 - 125	4	20	F1	F1
Cobalt	92	89	75 - 125	2	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-214287

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-59932-1	Analysis Batch:	240-214690	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-214287	Lab File ID:	I9011916A.asc
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	1.11 g
Analysis Date:	01/19/2016 1440			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59932-1	Analysis Batch:	240-214690	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-214287	Lab File ID:	I9011916A.asc
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	1.11 g
Analysis Date:	01/19/2016 1444			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1132				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Lead	1501	-420	75 - 125	43	20	4	4 F2

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

TCLP SPLPE Leachate Blank - Batch: 240-215033

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-215019/1-B	Analysis Batch:	240-215388	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1635	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	01/21/2016 1725				

Analyte	Result	Qual	MDL	RL
Barium	0.00975	J	0.0010	10
Cadmium	ND		0.00014	0.10
Antimony	ND		0.0024	0.30
Chromium	0.00205	J	0.00055	0.50
Potassium	0.505	J	0.070	5.0
Beryllium	ND		0.00013	0.0050
Silver	ND		0.00092	0.50
Calcium	1.72	J	0.26	5.0
Iron	ND		0.013	0.10
Arsenic	0.00307	J	0.0029	0.50
Nickel	0.00231	J	0.00076	0.040
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Magnesium	0.252	J	0.055	5.0
Thallium	ND		0.0017	2.0
Copper	ND		0.0019	1.0
Aluminum	ND		0.040	0.20
Zinc	0.0255	J	0.0096	1.0
Manganese	0.00210	J	0.00046	0.015
Cobalt	0.000603	J	0.00056	0.050

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Method Blank - Batch: 240-215033

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-215033/2-A	Analysis Batch:	240-215388	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1639	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	0.00253	J	0.0010	10
Cadmium	0.000147	J	0.00014	0.10
Antimony	ND		0.0024	0.30
Chromium	0.000801	J	0.00055	0.50
Potassium	ND		0.070	5.0
Beryllium	ND		0.00013	0.0050
Silver	ND		0.00092	0.50
Calcium	0.478	J	0.26	5.0
Iron	0.0193	J	0.013	0.10
Arsenic	ND		0.0029	0.50
Nickel	ND		0.00076	0.040
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Magnesium	0.122	J	0.055	5.0
Thallium	ND		0.0017	2.0
Copper	ND		0.0019	1.0
Aluminum	ND		0.040	0.20
Zinc	0.0302	J	0.0096	1.0
Manganese	0.00113	J	0.00046	0.015
Cobalt	ND		0.00056	0.050

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Lab Control Sample - Batch: 240-215033

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-215033/3-A	Analysis Batch:	240-215388	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-215033	Lab File ID:	I9012516A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1651	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/21/2016 2043				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2.00	2.08	104	50 - 150	J
Cadmium	0.0500	0.0553	111	50 - 150	J
Antimony	0.500	0.546	109	50 - 150	
Chromium	0.200	0.212	106	50 - 150	J
Potassium	50.0	56.1	112	50 - 150	
Beryllium	0.0500	0.0552	110	50 - 150	
Silver	0.0500	0.0556	111	50 - 150	J
Calcium	50.0	56.4	113	50 - 150	
Iron	1.00	1.09	109	50 - 150	
Arsenic	2.00	2.25	112	50 - 150	
Nickel	0.500	0.532	106	50 - 150	
Lead	0.500	0.482	96	50 - 150	J
Vanadium	0.500	0.541	108	50 - 150	
Selenium	2.00	2.28	114	50 - 150	
Magnesium	50.0	52.0	104	50 - 150	
Thallium	2.00	2.02	101	50 - 150	
Copper	0.250	0.278	111	50 - 150	J
Aluminum	2.00	2.26	113	50 - 150	
Zinc	0.500	0.629	126	50 - 150	J
Manganese	0.500	0.495	99	50 - 150	
Cobalt	0.500	0.522	104	50 - 150	

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-215033

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID: 240-59930-A-1-E MS ^5
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 01/25/2016 1844
Prep Date: 01/21/2016 2043
Leach Date: 01/19/2016 1653
Analysis Batch: 240-215388
Prep Batch: 240-215033
Leach Batch: 240-214645
Instrument ID: I9
Lab File ID: I9012516A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-59930-A-1-F MSD ^5
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 01/25/2016 1848
Prep Date: 01/21/2016 2043
Leach Date: 01/19/2016 1653
Analysis Batch: 240-215388
Prep Batch: 240-215033
Leach Batch: 240-214645
Instrument ID: I9
Lab File ID: I9012516A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	98	98	75 - 125	0	20	J	J
Cadmium	104	104	75 - 125	0	20		
Antimony	103	103	75 - 125	0	20	J	J
Chromium	98	99	75 - 125	1	20		
Potassium	103	104	75 - 125	1	20		
Beryllium	102	104	75 - 125	1	20		
Silver	102	102	75 - 125	1	20	J	J
Calcium	108	88	75 - 125	2	20	4	4
Iron	98	98	75 - 125	0	20		
Arsenic	104	105	75 - 125	1	20		
Nickel	96	97	75 - 125	1	20		
Lead	96	95	75 - 125	0	20		
Vanadium	98	104	75 - 125	6	20		
Selenium	106	106	75 - 125	0	20	J	J
Magnesium	99	100	75 - 125	1	20		
Thallium	97	98	75 - 125	1	20	J	J
Copper	98	97	75 - 125	0	20	J	J
Aluminum	110	107	75 - 125	3	20		
Zinc	56	19	75 - 125	4	20	J 4	J 4
Manganese	92	87	75 - 125	3	20		
Cobalt	92	93	75 - 125	1	20		

TCLP SPLPE Leachate Blank - Batch: 240-215034

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-215019/1-C	Analysis Batch:	240-215304	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-215034	Lab File ID:	012516AH1.PRN
Dilution:	1.0	Leach Batch:	240-215019	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1222	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/22/2016 1400				
Leach Date:	01/21/2016 1725				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-215034

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-215034/2-A	Analysis Batch:	240-215304	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-215034	Lab File ID:	012516AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1224	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/22/2016 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-215034

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-215034/3-A	Analysis Batch:	240-215304	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-215034	Lab File ID:	012516AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1225	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/22/2016 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00512	102	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-215034

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-59930-A-1-H MS	Analysis Batch:	240-215304	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-215034	Lab File ID:	012516AH1.PRN
Dilution:	1.0	Leach Batch:	240-214645	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1228			Final Weight/Volume:	50 mL
Prep Date:	01/22/2016 1400				
Leach Date:	01/19/2016 1653				

MSD Lab Sample ID:	240-59930-A-1-I MSD	Analysis Batch:	240-215304	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-215034	Lab File ID:	012516AH1.PRN
Dilution:	1.0	Leach Batch:	240-214645	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2016 1232			Final Weight/Volume:	50 mL
Prep Date:	01/22/2016 1400				
Leach Date:	01/19/2016 1653				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	99	104	80 - 120	4	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Method Blank - Batch: 240-214291

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-214291/1-A	Analysis Batch:	240-214474	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-214291	Lab File ID:	011816AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	01/18/2016 1438	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1500				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-214291

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-214291/2-A	Analysis Batch:	240-214474	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-214291	Lab File ID:	011816AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	01/18/2016 1440	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1500				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.815	98	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-214291

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-59932-1	Analysis Batch:	240-214474	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-214291	Lab File ID:	011816AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.66 g
Analysis Date:	01/18/2016 1444			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1500				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59932-1	Analysis Batch:	240-214474	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-214291	Lab File ID:	011816AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.66 g
Analysis Date:	01/18/2016 1445			Final Weight/Volume:	100 mL
Prep Date:	01/15/2016 1500				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	105	91	80 - 120	9	20		

Method Blank - Batch: 240-214546

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-214546/9-A	Analysis Batch:	240-214816	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-214546	Lab File ID:	214546.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	01/20/2016 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 0825				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.26	0.80

Lab Control Sample Insoluble - Batch: 240-214546

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-214546/11-A	Analysis Batch:	240-214816	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-214546	Lab File ID:	214546.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	01/20/2016 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 0825				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	584	91	75 - 125	

Lab Control Sample Soluble - Batch: 240-214546

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-214546/10-A	Analysis Batch:	240-214816	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-214546	Lab File ID:	214546.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	01/20/2016 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 0825				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	21.2	106	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-59932-1

Duplicate - Batch: 240-214301

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-59932-4	Analysis Batch:	240-214301	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/15/2016 1530	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	88	87	0.9	20	
Percent Moisture	12	13	7	20	

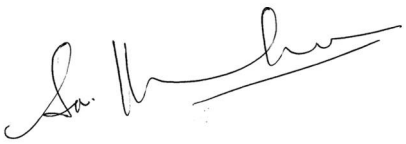
EMLab P&K
A TestAmerica Company

Report for:

Ms. Denise Pohl
TestAmerica-Canton
4101 Shuffel Dr. NW
North Canton, OH 44720

Regarding: Project: 240-59932-1
EML ID: 1481024

Approved by:



Approved Signatory
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Asbestos PLM: 01-21-2016

Service SOPs: Asbestos PLM (EPA Methods 600/R-93/116 & 600/M4-82-020, SOP EM-AS-S-1267)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080
(866) 888-6653 Fax (623) 780-7695 www.emlab.com

Client: TestAmerica-Canton
C/O: Ms. Denise Pohl
Re: 240-59932-1

Date of Sampling: 01-13-2016
Date of Receipt: 01-18-2016
Date of Report: 01-21-2016

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	1
Total Samples Analyzed:	1
Total Samples with Layer Asbestos Content > 1%:	0

Location: Area C-Trench-2_15_10-11 (20160113) (240-59932-6) Lab ID-Version‡: 6841955-1

Sample Layers	Asbestos Content
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	99% Cellulose
Sample Composite Homogeneity:	Moderate

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

001481024

01/27/2016

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Pohl, Denise	Carrier Tracking No(s):	COC No: 240-53231.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: denise.pohl@testamericainc.com		Page: Page 1 of 1
Company: EMLab P&K				Job #: 240-59932-1
Address: 6000 Shoreline Court, Suite 205,	Due Date Requested: 1/26/2016			
City: South San Francisco	TAT Requested (days):			
State, Zip: CA, 94080	PO #:			
Phone: 866-888-6853(Tel)	WO #:			
Email:	Project #: 24006638			
Project Name: Ford TCAP - E200572	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015 (Subcontract EMLab P&K; ACM - USEPA 600/4-82-020)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
AREA C-TRENCH-2_15_10-11 (20160113) (240-59932-6)	1/13/16	13:42 Eastern		Solid			X		

Possible Hazard Identification
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

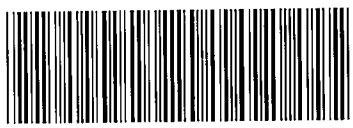
Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: Rick R.	Date/Time: 1-15-16 - 1425	Company	Received by:		Date/Time: 1/18/16 1030	Company EMLabP&K	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-59932 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

4.0/C3.4
3.7/C3.4
3.5/C3.2

TestAmerica Canton
4101 Shuffel Street, N. U.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

Chain of Custody Record

119608

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinsky	Site Contact: Kelly Hoehn	Date: 12/17/15	COC No:
Company Name: Arcadis	Tel/Fax: 269-832-7428	Lab Contact: Denise Pohl	Carrier: Gary Becker	1 of 1 COCs
Address: 430 1st Ave N Ste 720	Analysis Turnaround Time			Sampler: Adam Thompson
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul, MN	☐ 2 days			Job / SDG No.: 240006638
PO# MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOC (8260)	GRO (w/ modified)	DRO (w/ modified)	SVOC (8270)	TAL Metals (6010)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP-TAL (1311/6010)	Moisture	ACM via USEPA Method 600/M4-82-020	Sample Specific Notes:
Area C-Trench-2_015_6-7(20160112)	1/12/16	1637	G	SO	11	N	N	2	2	1	1	1	1	1	1	1		
Area C-Trench-2_00_12-13(20160112)	1/12/16	1715	G	SO	11	N	N	2	2	1	1	1	1	1	1	1		
Area C-Trench-2_013_6-7(20160112)	1/12/16	1740	G	SO	11	N	N	2	2	1	1	1	1	1	1	1		
Area C-Trench-2_00_9-10(20160112)	1/12/16	1815	G	SO	11	N	N	2	2	1	1	1	1	1	1	1		
Area C-Trench-2_08_4-5(20160112)	1/12/16	1838	G	SO	11	N	N	2	2	1	1	1	1	1	1	1		
Area C-Trench-2_15_10-11(20160113)	1/13/16	1342	G	~	1												1	
Trip Blank								1	1									
Temp Blank																		

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

*Chromium VI and Chromium III speciation for TAL-Metals

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____

Relinquished by:	Company: Arcadis	Date/Time: 1/13/16 1520	Received by:	Company: TAmm	Date/Time: 1-13-16 1552
Relinquished by:	Company:	Date/Time:	Received by:	Company: TAC	Date/Time: 1-14-16 10:10
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

01/7/2016

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 59932

Client ARCADIS Site Name FORD TCAP

Cooler unpacked by: Tem

Cooler Received on 1-14-16 Opened on 1-14-16

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 53 (CF +0.1 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN# 48 (CF -0.3 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C ☑ See Multiple Cooler Form

~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~

IR GUN# 8 (CF -0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 EA	Yes	No
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Were sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC559158
12. Were VOAs on the COC?	Yes	No
13. Were air bubbles >6 mm in any VOA vials?	Yes	No NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
15. Was a LL Hg or Me Hg trip blank present?	Yes	No

Contacted PM Date by via Verbal Voice Mail Other

Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

TestAmerica Multiple Cooler Receipt Form/Narrative
Canton Facility

Login # : 59932

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
client	8	4.0	3.7	ICE
client	8	3.7	3.4	ice
client	8	3.5	3.2	ice

January 29, 2016

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton (asbestos analysis subcontracted to EMLabP&K-San Bruno)
Laboratory submittal: 59932-1
Sample date: 2016-01-12
Report received by CADENA: 2016-01-27
Initial Data Verification completed by CADENA: 2016-01-29

The following minor QC exceptions or missing information were noted:

CCV response outliers for GCMS SVOC analytical batches 214706 and 214903 were not used to qualify field results as part of this level 2 data package verification review.

GCMS VOC QC batch 214307 and WI-DRO batch 214526 did not include MS recovery data due to insufficient sample volume available for QC samples according to the laboratory submittal case narrative.

GCMS VOC surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results for client samples -001total, -003total and -005total.

GCMS VOC QC batch 214607 method blank had detections below the RL for MEK and tetrahydrofuran. Qualifications based on these method blank detections were only applicable to the trip blank which was not qualified since it is being treated as a QC sample for the sake of this submittal.

GCMS VOC trip blank had detections below the RL for MEK and tetrahydrofuran. Client samples -002 and -003 MEK results should be considered to be non-detect at the RL and qualified with UB flags based on the trip blank detections.

GCMS SVOC QC batch 215157 method blank had a detection below the RL for TCLP/SPLP pyridine. Client samples -002 and -004 results for this analyte should be considered to be non-detect at the RL and qualified with UB flags.

GCMS SVOC surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify results for client samples -003total and -005total.

GCMS SVOC sample -001 MS recovery was an outlier biased high for TCLP hexachloroethane. Qualification of client sample results was not required based on this high bias QC outlier.

WI-GRO and WI-DRO results did not include surrogate recovery data and QC batches did not include MS recovery data.

WI-DRO QC batch 214576 method blank had a detection below the RL. Qualification of client sample results was not required based on this method blank detection.

Metals method blanks had detections below the RL in QC batch 214287 for TOTAL chromium, manganese, iron and magnesium and in QC batch 215033 for calcium, chromium, magnesium, manganese, nickel, zinc, barium, arsenic, cadmium, potassium, cobalt and iron. Client sample -005 TCLP/SPLP arsenic and potassium results and client sample -001, -002, -004 TCLP/SPLP Chromium results should be considered to be non-detect at the RL and qualified with a UB flag.

Metals sample -001 MS/MSD recoveries were outliers biased low along with an MS/MSD RPD outlier for antimony and biased high along with an MS/MSD RPD outlier for chromium and biased high and low for calcium and biased high for manganese. Client sample -001 results for these analytes should be considered to be estimated and qualified with J flags if detected and UJ flags if non-detect. MS or MSD recoveries but not both were outliers biased high for cadmium so qualification was not required based on this QC outlier alone. MS/MSD recoveries were not considered to be statistically reliable due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule) so were not used to qualify client sample results for barium, lead, aluminum, iron and zinc.

Metals QC batch 215033 MS recovery outliers were not determined using samples from this submittal so qualification was not required based on these sample-specific QC outliers.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

6 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters. 1 Solid sample was analyzed for asbestos parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 59932-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Non-Halogenated Cmpds by GC/FID	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240599321	AREA C-TRENCH-2_015_6-7 (20160	1/12/2016	4:37:00	X	X	X	X		X	X	X	X
240599322	AREA C-TRENCH-2_00_12-13 (2016	1/12/2016	5:15:00	X	X	X		X	X	X	X	X
240599323	AREA C-TRENCH-2_013_6-7 (20160	1/12/2016	5:40:00	X	X	X		X	X	X	X	X
240599324	AREA C-TRENCH-2_00_9-10 (20160	1/12/2016	6:15:00	X	X	X		X	X	X	X	X
240599325	AREA C-TRENCH-2_08_4-5 (201601	1/12/2016	6:38:00	X	X	X		X	X	X	X	X
240599327	TRIP BLANK	1/12/2016	12:00:00	X		X						

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 59932-1

		Sample Name:	AREA C-TRENCH-2_015_6-7 (20160				AREA C-TRENCH-2_00_12-13 (2016				AREA C-TRENCH-2_013_6-7 (20160				AREA C-TRENCH-2_00_9-10 (20160				AREA C-TRENCH-2_08_4-5 (201601			
		Lab Sample ID:	240599321				240599322				240599323				240599324				240599325			
		Sample Date:	1/12/2016				1/12/2016				1/12/2016				1/12/2016				1/12/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																						
	OSW-8260B																					
	2-Butanone (MEK)	78-93-3					1100	4100	ug/kg	UB	300000	1300000	ug/kg	UB								
	Tetrahydrofuran	109-99-9					2000	4100	ug/kg	UB	620000	1300000	ug/kg	UB	440	1100	ug/kg	UB				
GC/MS SVOC																						
	OSW-8270C																					
	Pyridine	110-86-1					0.0015	0.0040	mg/l	UB					0.0016	0.0040	mg/l	UB				
Metals																						
	OSW-6010B																					
	Antimony	7440-36-0	22	1.0	mg/kg	J																
	Arsenic	7440-38-2									0.014	0.50	mg/l	UB								
	Calcium	7440-70-2	18000	520	mg/kg	J																
	Chromium	7440-47-3	59	0.52	mg/kg	J	0.0036	0.50	mg/l	UB					0.0039	0.50	mg/l	UB				
	Manganese	7439-96-5	230	1.6	mg/kg	J																
	Potassium	7440-09-7																	1.9	5.0	mg/l	UB

ANALYTICAL REPORT

Job Number: 240-59997-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
2/1/2016 1:36 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
02/01/2016

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-59997-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 1/16/2016 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.6º C and 2.5º C.

TCLP VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) were analyzed for TCLP volatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8260B. The samples were leached on 01/25/2016 and analyzed on 01/26/2016 and 01/27/2016.

Carbon tetrachloride failed the recovery criteria low for the MS/MSD of sample 240-60024-6 in batch 240-215476. Trichloroethene failed the recovery criteria high. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2), AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) and TRIP BLANK (240-59997-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 01/19/2016 and analyzed on 01/21/2016.

2-Butanone (MEK) was detected in method blank MB 240-214579/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Toluene was detected in method blank MB 240-214579/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

1,2-Dichloroethane-d4 (Surr) failed the surrogate recovery criteria low for AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2). 4-Bromofluorobenzene (Surr) failed the surrogate recovery criteria high. 1,2-Dichloroethane-d4 (Surr) failed the surrogate recovery criteria low for AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3). 4-Bromofluorobenzene (Surr) failed the surrogate recovery criteria high. Refer to the QC report for details.

Carbon disulfide exceeded the RPD limit for the MSD of sample 240-60024-3 in batch 240-214661. Refer to the QC report for details.

Samples AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2)[250X] and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) [250X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: A MS/MSD was prepared for prep batch 214579, but was analyzed in a different analytical batch.

AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2), AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) and TRIP BLANK (240-59997-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) were analyzed for TCLP semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Methods 1311/8270C. The samples were leached on 01/25/2016, prepared on 01/26/2016 and analyzed on 01/28/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2-Methylphenol and 3 & 4 Methylphenol were detected in method blank MB 240-215452/11-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 01/18/2016 and analyzed on 01/22/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl (Surr), 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr), Phenol-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3). 2,4,6-Tribromophenol (Surr), 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr) and Phenol-d5 (Surr) failed the surrogate recovery criteria low for AREA C-TRENCH-3_07_3-4(20160114)MS (240-59997-3MS) and AREA C-TRENCH-3_07_3-4(20160114)MSD (240-59997-3MSD). Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS/MSD of sample AREA C-TRENCH-3_07_3-4(20160114)MS/MSD (240-59997-3) in batch 240-215094. Several analytes failed the recovery criteria high. Refer to the QC report for details.

Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1)[50X], AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2)[200X] and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3)[25X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: The continuing calibration verification (CCV) associated with batch 215094 recovered above the upper control limit for Pentachlorophenol. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following samples are impacted: AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3).

Method(s) 8270C: The following samples were diluted due to the nature of the sample matrix: AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3), (240-59997-I-3-B MS) and (240-59997-I-3-C MSD). Elevated reporting limits (RLs) are provided.

Method(s) 3540C: Due to the matrix, the following samples could not be concentrated to the final method required volume: AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2), AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3), (240-59997-I-3 MS) and (240-59997-I-3 MSD). The reporting limits (RLs) are elevated proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2), AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) and TRIP BLANK (240-59997-4) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were prepared on 01/19/2016 and analyzed on 01/20/2016.

Samples AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2)[200X] and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) [50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO
Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 01/19/2016 and analyzed on 01/22/2016.

WI Diesel Range Organics (C10-C28) was detected in method blank MB 240-214526/15-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1)[50X], AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2)[200X] and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) mix : AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3).

Method(s) WI DRO PREP: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-214526.

Method(s) WI DRO PREP: Due to the matrix, the following sample could not be concentrated to the final method required volume: AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2). The reporting limits (RLs) are elevated proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)
Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 01/25/2016, prepared on 01/26/2016 and analyzed on 01/27/2016 and 01/28/2016.

Several analytes were detected in method blank LB 240-215328/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Zinc failed the recovery criteria low for the MS/MSD of sample AREA C-TRENCH-3_010_9-10(20160114)MS/MSD (240-59997-2) in batch 240-215745. Refer to the QC report for details.

Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1)[5X] and AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) [10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Several analytes were detected in method blank MB 240-215399/2-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)
Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 01/19/2016 and analyzed on 01/20/2016.

Cadmium, Magnesium, Nickel and Vanadium were detected in method blank MB 240-214580/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample AREA C-TRENCH-3_022_2-3(20160114)MS (240-59997-1) in batch 240-214773. Aluminum and Iron failed the recovery criteria high.

For the MSD of sample AREA C-TRENCH-3_022_2-3(20160114)MSD (240-59997-1) in batch 240-214773, Several analytes failed the recovery criteria low. Aluminum failed the recovery criteria high. Also, Several analytes exceeded the RPD limit.

Refer to the QC report for details.

Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1)[5X], AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2)[20X] and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY
Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 01/25/2016, prepared on 01/26/2016 and analyzed on 01/27/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 01/19/2016 and analyzed on 01/21/2016.

Mercury failed the recovery criteria high for the MSD of sample AREA C-TRENCH-3_022_2-3(20160114)MSD (240-59997-1) in batch 240-214938. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM
Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 01/19/2016 and analyzed on 01/20/2016.

Samples AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2)[5X] and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM
Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) were analyzed for trivalent chromium in accordance with EPA SW-846 Method 7196A_CR3. The samples were analyzed on 01/26/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS
Samples AREA C-TRENCH-3_022_2-3(20160114) (240-59997-1), AREA C-TRENCH-3_010_9-10(20160114) (240-59997-2) and AREA C-TRENCH-3_07_3-4(20160114) (240-59997-3) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 01/18/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59997-1	**AREA C-TRENCH-3_022_2-3(20160114)**					
m-Xylene & p-Xylene		36	J	260	ug/Kg	8260B
Naphthalene		360		260	ug/Kg	8260B
n-Butylbenzene		23	J	260	ug/Kg	8260B
o-Xylene		18	J	260	ug/Kg	8260B
Toluene		31	J B	260	ug/Kg	8260B
1,2,4-Trimethylbenzene		29	J	260	ug/Kg	8260B
1,3,5-Trimethylbenzene		20	J	260	ug/Kg	8260B
1,1'-Biphenyl		490	J	18000	ug/Kg	8270C
2-Methylnaphthalene		2100	J	18000	ug/Kg	8270C
Acenaphthene		4300	J	18000	ug/Kg	8270C
Acenaphthylene		640	J	18000	ug/Kg	8270C
Anthracene		9700	J	18000	ug/Kg	8270C
Benzo[a]anthracene		25000		18000	ug/Kg	8270C
Benzo[a]pyrene		25000		18000	ug/Kg	8270C
Benzo[b]fluoranthene		31000		18000	ug/Kg	8270C
Benzo[g,h,i]perylene		16000	J	18000	ug/Kg	8270C
Benzo[k]fluoranthene		15000	J	18000	ug/Kg	8270C
Carbazole		4700	J	18000	ug/Kg	8270C
Chrysene		27000		18000	ug/Kg	8270C
Dibenz(a,h)anthracene		4300	J	18000	ug/Kg	8270C
Dibenzofuran		3100	J	18000	ug/Kg	8270C
Fluoranthene		57000		18000	ug/Kg	8270C
Fluorene		5500	J	18000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		15000	J	18000	ug/Kg	8270C
Naphthalene		5400	J	18000	ug/Kg	8270C
Phenanthrene		42000		18000	ug/Kg	8270C
Pyrene		45000		18000	ug/Kg	8270C
WI Diesel Range Organics (C10-C28)		1900	B	480	mg/Kg	WI-DRO
Aluminum		4000		19	mg/Kg	6010B
Antimony		37	F1 F2	0.97	mg/Kg	6010B
Barium		480	F1 F2	19	mg/Kg	6010B
Beryllium		0.20	J	0.49	mg/Kg	6010B
Calcium		37000	F2	490	mg/Kg	6010B
Cadmium		1.3	B	0.19	mg/Kg	6010B
Cobalt		5.7		4.9	mg/Kg	6010B
Chromium		22		0.49	mg/Kg	6010B
Copper		470	F2	2.4	mg/Kg	6010B
Iron		12000		9.7	mg/Kg	6010B
Potassium		760		490	mg/Kg	6010B
Magnesium		5900	B F1	490	mg/Kg	6010B
Manganese		310		1.5	mg/Kg	6010B
Silver		0.11	J	0.49	mg/Kg	6010B
Sodium		160	J	490	mg/Kg	6010B
Nickel		57	B	3.9	mg/Kg	6010B
Vanadium		13	B	4.9	mg/Kg	6010B
Zinc		880	F2	9.7	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Arsenic		13		0.97	mg/Kg	6010B
Lead		1600	F2	1.5	mg/Kg	6010B
Mercury		0.081	J F1	0.10	mg/Kg	7471A
Cr (VI)		1.8		0.87	mg/Kg	7196A
Cr (III)		20		2.2	mg/Kg	7196A
Percent Solids		92		0.10	%	Moisture
Percent Moisture		8.3		0.10	%	Moisture
TCLP						
Pyridine		0.0012	J	0.0040	mg/L	8270C
Aluminum		0.061	J	0.20	mg/L	6010B
Antimony		0.29	J	0.30	mg/L	6010B
Arsenic		0.019	J B	0.50	mg/L	6010B
Barium		0.76	J B	10	mg/L	6010B
Cadmium		0.027	J	0.10	mg/L	6010B
Calcium		530	B	5.0	mg/L	6010B
Chromium		0.0034	J B	0.50	mg/L	6010B
Cobalt		0.018	J B	0.050	mg/L	6010B
Copper		2.9	B	1.0	mg/L	6010B
Lead		17	B	2.5	mg/L	6010B
Magnesium		15	B	5.0	mg/L	6010B
Manganese		3.7	B	0.015	mg/L	6010B
Nickel		0.27	B	0.040	mg/L	6010B
Potassium		5.5	B	5.0	mg/L	6010B
Zinc		18		5.0	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59997-2	**AREA C-TRENCH-3_010_9-10(20160114)**					
Ethylbenzene		520000		92000	ug/Kg	8260B
Isopropylbenzene		79000	J	92000	ug/Kg	8260B
Methylcyclohexane		37000	J	180000	ug/Kg	8260B
m-Xylene & p-Xylene		2600000		92000	ug/Kg	8260B
Naphthalene		820000		92000	ug/Kg	8260B
n-Butylbenzene		170000		92000	ug/Kg	8260B
N-Propylbenzene		240000		92000	ug/Kg	8260B
o-Xylene		1200000		92000	ug/Kg	8260B
p-Isopropyltoluene		26000	J	92000	ug/Kg	8260B
sec-Butylbenzene		38000	J	92000	ug/Kg	8260B
Toluene		230000	B	92000	ug/Kg	8260B
1,2,4-Trimethylbenzene		1200000		92000	ug/Kg	8260B
1,3,5-Trimethylbenzene		330000		92000	ug/Kg	8260B
1,1'-Biphenyl		18000	J	620000	ug/Kg	8270C
2-Methylnaphthalene		180000	J	620000	ug/Kg	8270C
Acenaphthene		76000	J	620000	ug/Kg	8270C
Anthracene		110000	J	620000	ug/Kg	8270C
Benzo[a]anthracene		120000	J	620000	ug/Kg	8270C
Benzo[a]pyrene		110000	J	620000	ug/Kg	8270C
Benzo[b]fluoranthene		130000	J	620000	ug/Kg	8270C
Benzo[g,h,i]perylene		77000	J	620000	ug/Kg	8270C
Benzo[k]fluoranthene		57000	J	620000	ug/Kg	8270C
Carbazole		67000	J	620000	ug/Kg	8270C
Chrysene		120000	J	620000	ug/Kg	8270C
Dibenz(a,h)anthracene		17000	J	620000	ug/Kg	8270C
Dibenzofuran		81000	J	620000	ug/Kg	8270C
Fluoranthene		390000	J	620000	ug/Kg	8270C
Fluorene		100000	J	620000	ug/Kg	8270C
Indeno[1,2,3-cd]pyrene		63000	J	620000	ug/Kg	8270C
Naphthalene		1800000		620000	ug/Kg	8270C
Phenanthrene		540000	J	620000	ug/Kg	8270C
Pyrene		280000	J	620000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		13000		2900	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		35000	B	6800	mg/Kg	WI-DRO
Aluminum		5700		22	mg/Kg	6010B
Antimony		50		1.1	mg/Kg	6010B
Barium		7200		440	mg/Kg	6010B
Beryllium		0.14	J	0.55	mg/Kg	6010B
Calcium		8300		550	mg/Kg	6010B
Cadmium		7.6	B	0.22	mg/Kg	6010B
Cobalt		3.3	J	5.5	mg/Kg	6010B
Chromium		1800		0.55	mg/Kg	6010B
Copper		200		2.7	mg/Kg	6010B
Iron		25000		11	mg/Kg	6010B
Potassium		690		550	mg/Kg	6010B
Magnesium		2900	B	550	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Manganese		160		1.6	mg/Kg	6010B
Silver		0.20	J	0.55	mg/Kg	6010B
Sodium		540	J	550	mg/Kg	6010B
Nickel		170	B	4.4	mg/Kg	6010B
Vanadium		5.6	B	5.5	mg/Kg	6010B
Zinc		12000		44	mg/Kg	6010B
Arsenic		6.8		1.1	mg/Kg	6010B
Lead		4400		6.6	mg/Kg	6010B
Selenium		0.96		0.55	mg/Kg	6010B
Thallium		0.38	J	1.1	mg/Kg	6010B
Mercury		0.022	J	0.14	mg/Kg	7471A
Cr (VI)		140		5.3	mg/Kg	7196A
Cr (III)		1700		2.6	mg/Kg	7196A
Percent Solids		76		0.10	%	Moisture
Percent Moisture		24		0.10	%	Moisture
TCLP						
2-Methylphenol		0.063	B	0.0080	mg/L	8270C
3 & 4 Methylphenol		0.23	B	0.0080	mg/L	8270C
Pentachlorophenol		0.0021	J	0.032	mg/L	8270C
Pyridine		0.0020	J	0.0080	mg/L	8270C
Aluminum		0.48		0.20	mg/L	6010B
Antimony		0.29	J	0.30	mg/L	6010B
Arsenic		0.021	J B	0.50	mg/L	6010B
Barium		2.0	J B	10	mg/L	6010B
Cadmium		0.0051	J	0.10	mg/L	6010B
Calcium		150	B	5.0	mg/L	6010B
Chromium		0.044	J B	0.50	mg/L	6010B
Cobalt		0.023	J B	0.050	mg/L	6010B
Copper		0.0031	J B	1.0	mg/L	6010B
Iron		4.9	B	0.10	mg/L	6010B
Lead		9.9	B	0.50	mg/L	6010B
Magnesium		5.7	B	5.0	mg/L	6010B
Manganese		1.8	B	0.015	mg/L	6010B
Nickel		0.73	B	0.040	mg/L	6010B
Potassium		5.4	B	5.0	mg/L	6010B
Zinc		48		10	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-59997-3	**AREA C-TRENCH-3_07_3-4(20160114)**					
Ethylbenzene		370000		87000	ug/Kg	8260B
Isopropylbenzene		56000	J	87000	ug/Kg	8260B
Methylcyclohexane		37000	J	170000	ug/Kg	8260B
m-Xylene & p-Xylene		2000000		87000	ug/Kg	8260B
Naphthalene		640000		87000	ug/Kg	8260B
n-Butylbenzene		120000		87000	ug/Kg	8260B
N-Propylbenzene		160000		87000	ug/Kg	8260B
o-Xylene		1000000		87000	ug/Kg	8260B
p-Isopropyltoluene		21000	J	87000	ug/Kg	8260B
sec-Butylbenzene		29000	J	87000	ug/Kg	8260B
Toluene		190000	B	87000	ug/Kg	8260B
1,2,4-Trimethylbenzene		920000		87000	ug/Kg	8260B
1,3,5-Trimethylbenzene		250000		87000	ug/Kg	8260B
2-Methylnaphthalene		5900	J	59000	ug/Kg	8270C
Naphthalene		68000		59000	ug/Kg	8270C
Phenanthrene		870	J F1	59000	ug/Kg	8270C
WI Gasoline Range Organics (C6-C10)		1800		680	mg/Kg	WI-GRO
WI Diesel Range Organics (C10-C28)		6500	B	1100	mg/Kg	WI-DRO
Aluminum		7800		21	mg/Kg	6010B
Antimony		51		1.1	mg/Kg	6010B
Barium		10000		420	mg/Kg	6010B
Beryllium		0.066	J	0.53	mg/Kg	6010B
Calcium		3700		530	mg/Kg	6010B
Cadmium		2.8	B	0.21	mg/Kg	6010B
Cobalt		2.8	J	5.3	mg/Kg	6010B
Chromium		1200		0.53	mg/Kg	6010B
Copper		350		2.7	mg/Kg	6010B
Iron		10000		11	mg/Kg	6010B
Potassium		300	J	530	mg/Kg	6010B
Magnesium		1800	B	530	mg/Kg	6010B
Manganese		75		1.6	mg/Kg	6010B
Silver		0.21	J	0.53	mg/Kg	6010B
Sodium		1700		530	mg/Kg	6010B
Nickel		110	B	4.2	mg/Kg	6010B
Vanadium		1.8	J B	5.3	mg/Kg	6010B
Zinc		4100		42	mg/Kg	6010B
Arsenic		4.0		1.1	mg/Kg	6010B
Lead		5500		6.4	mg/Kg	6010B
Mercury		0.024	J	0.13	mg/Kg	7471A
Cr (VI)		21		5.1	mg/Kg	7196A
Cr (III)		1200		2.5	mg/Kg	7196A
Percent Solids		79		0.10	%	Moisture
Percent Moisture		21		0.10	%	Moisture
TCLP						
2-Methylphenol		0.0012	J B	0.0040	mg/L	8270C
3 & 4 Methylphenol		0.0018	J B	0.0040	mg/L	8270C

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Aluminum		0.20		0.20	mg/L	6010B
Antimony		0.028	J	0.30	mg/L	6010B
Arsenic		0.0063	J B	0.50	mg/L	6010B
Barium		2.5	J B	10	mg/L	6010B
Cadmium		0.046	J	0.10	mg/L	6010B
Calcium		140	B	5.0	mg/L	6010B
Chromium		0.020	J B	0.50	mg/L	6010B
Cobalt		0.026	J B	0.050	mg/L	6010B
Copper		0.11	J B	1.0	mg/L	6010B
Iron		0.19	B	0.10	mg/L	6010B
Lead		3.7	B	0.50	mg/L	6010B
Magnesium		17	B	5.0	mg/L	6010B
Manganese		1.8	B	0.015	mg/L	6010B
Nickel		0.17	B	0.040	mg/L	6010B
Potassium		3.5	J B	5.0	mg/L	6010B
Zinc		4.3		1.0	mg/L	6010B
240-59997-4	**TRIP BLANK**					
Naphthalene		47	J	250	ug/Kg	8260B
Toluene		23	J B	250	ug/Kg	8260B
WI Gasoline Range Organics (C6-C10)		100	J	380	mg/Kg	WI-GRO

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Closed System Purge and Trap	TAL CAN		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
TCLP Extraction	TAL CAN		SW846 1311
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Soxhlet Extraction	TAL CAN		SW846 3540C
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
TCLP Extraction			SW846 1311
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Closed System Purge and Trap	TAL CAN		SW846 5035
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Wisconsin Extraction (Diesel Range Organics)	TAL CAN		WI-DRO WI DRO PREP
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Metals	TAL CAN		SW846 3050B
Metals (ICP)	TAL CAN	SW846 6010B	
TCLP Extraction			SW846 1311
Preparation, Total Metals	TAL CAN		SW846 3010A
Mercury (CVAA)	TAL CAN	SW846 7470A	
TCLP Extraction			SW846 1311
Preparation, Mercury	TAL CAN		SW846 7470A
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Chromium, Trivalent (Colorimetric)	TAL CAN	SW846 7196A	
Percent Moisture	TAL CAN	EPA Moisture	

Lab References:

TAL CAN = TestAmerica Canton

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method	Analyst	Analyst ID
SW846 8260B	Lata, Todd	TJL2
SW846 8260B	Lavey, Tim	TJL1
SW846 8270C	Gruber, John	JMG
SW846 8270C	Ulman, Mark	MRU
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Counts, Karen	KLC
SW846 6010B	Toth, Roger	RKT
SW846 7470A	Dillon, William K	WKD
SW846 7471A	Dillon, William K	WKD
SW846 7196A	Burns, Jill	JMB
SW846 7196A	Counts, Karen	KLC
EPA Moisture	Sanford, Julie	JAS

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	Solid	01/14/2016 1650	01/16/2016 0945
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	Solid	01/14/2016 1708	01/16/2016 0945
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	Solid	01/14/2016 1730	01/16/2016 0945
240-59997-4	TRIP BLANK	Solid	01/14/2016 0000	01/16/2016 0945

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid % Moisture: 8.3 Date Received: 01/16/2016 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-214579	Lab File ID:	UX81731.D
Dilution:	1.0			Initial Weight/Volume:	10.51 g
Analysis Date:	01/21/2016 0726			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 1032				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		31	520
Benzene		ND		9.3	260
Bromobenzene		ND		13	260
Bromochloromethane		ND		73	260
Bromodichloromethane		ND		39	260
Bromoform		ND		63	260
Bromomethane		ND		53	260
2-Butanone (MEK)		ND		76	1000
Carbon disulfide		ND		58	260
Carbon tetrachloride		ND		19	260
Chlorobenzene		ND		13	260
Chlorodibromomethane		ND		21	260
Chloroethane		ND		53	260
Chloroform		ND		37	260
Chloromethane		ND		50	260
2-Chlorotoluene		ND		43	260
4-Chlorotoluene		ND		27	260
cis-1,2-Dichloroethene		ND		39	260
cis-1,3-Dichloropropene		ND		23	260
Cyclohexane		ND		31	520
1,2-Dibromo-3-Chloropropane		ND		74	520
1,2-Dibromoethane		ND		33	260
Dibromomethane		ND		52	260
1,2-Dichlorobenzene		ND		20	260
1,3-Dichlorobenzene		ND		31	260
1,4-Dichlorobenzene		ND		43	260
Dichlorodifluoromethane		ND		63	260
1,1-Dichloroethane		ND		36	260
1,2-Dichloroethane		ND		10	260
1,1-Dichloroethene		ND		31	260
Dichlorofluoromethane		ND		34	520
1,2-Dichloropropane		ND		33	260
1,3-Dichloropropane		ND		24	260
2,2-Dichloropropane		ND		54	260
1,1-Dichloropropene		ND		39	260
Ethylbenzene		ND		36	260
Ethyl ether		ND		100	520
Hexachlorobutadiene		ND		46	260
2-Hexanone		ND		87	1000
Isopropylbenzene		ND		13	260
Methyl acetate		ND		57	520
Methylcyclohexane		ND		39	520
Methylene Chloride		ND		88	260
4-Methyl-2-pentanone (MIBK)		ND		58	1000
Methyl tert butyl ether		ND		31	260

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid % Moisture: 8.3 Date Received: 01/16/2016 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-214579	Lab File ID:	UX81731.D
Dilution:	1.0			Initial Weight/Volume:	10.51 g
Analysis Date:	01/21/2016 0726			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 1032				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		36	J	21	260
Naphthalene		360		27	260
n-Butylbenzene		23	J	22	260
N-Propylbenzene		ND		63	260
o-Xylene		18	J	18	260
p-Isopropyltoluene		ND		26	260
sec-Butylbenzene		ND		17	260
Styrene		ND		28	260
tert-Butylbenzene		ND		35	260
1,1,1,2-Tetrachloroethane		ND		51	260
1,1,2,2-Tetrachloroethane		ND		26	260
Tetrachloroethene		ND		28	260
Tetrahydrofuran		ND		120	1000
Toluene		31	J B	10	260
trans-1,2-Dichloroethene		ND		27	260
trans-1,3-Dichloropropene		ND		27	260
1,2,3-Trichlorobenzene		ND		40	260
1,2,4-Trichlorobenzene		ND		31	260
1,1,1-Trichloroethane		ND		28	260
1,1,2-Trichloroethane		ND		20	260
Trichloroethene		ND		40	260
Trichlorofluoromethane		ND		36	260
1,2,3-Trichloropropane		ND		110	260
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		44	260
1,2,4-Trimethylbenzene		29	J	13	260
1,3,5-Trimethylbenzene		20	J	16	260
Vinyl chloride		ND		18	260

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	83		26 - 141
Dibromofluoromethane (Surr)	77		30 - 122
1,2-Dichloroethane-d4 (Surr)	84		39 - 128
Toluene-d8 (Surr)	81		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid Date Received: 01/16/2016 0945

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-215617	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248763.D
Dilution:	1.0	Leach Batch:	240-215408	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/27/2016 1831			Final Weight/Volume:	5 mL
Prep Date:	01/27/2016 1831				
Leach Date:	01/25/2016 1820				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89		80 - 121
4-Bromofluorobenzene (Surr)	85		70 - 124
Toluene-d8 (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	97		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid % Moisture: 24.0 Date Received: 01/16/2016 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-214579	Lab File ID:	UX81732.D
Dilution:	250			Initial Weight/Volume:	8.96 g
Analysis Date:	01/21/2016 0748			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 1032				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		83000	370000
Allyl chloride		ND		11000	180000
Benzene		ND		3300	92000
Bromobenzene		ND		4800	92000
Bromochloromethane		ND		26000	92000
Bromodichloromethane		ND		14000	92000
Bromoform		ND		22000	92000
Bromomethane		ND		19000	92000
2-Butanone (MEK)		ND		27000	370000
Carbon disulfide		ND		21000	92000
Carbon tetrachloride		ND		6600	92000
Chlorobenzene		ND		4800	92000
Chlorodibromomethane		ND		7300	92000
Chloroethane		ND		19000	92000
Chloroform		ND		13000	92000
Chloromethane		ND		18000	92000
2-Chlorotoluene		ND		15000	92000
4-Chlorotoluene		ND		9500	92000
cis-1,2-Dichloroethene		ND		14000	92000
cis-1,3-Dichloropropene		ND		8100	92000
Cyclohexane		ND		11000	180000
1,2-Dibromo-3-Chloropropane		ND		26000	180000
1,2-Dibromoethane		ND		12000	92000
Dibromomethane		ND		18000	92000
1,2-Dichlorobenzene		ND		7000	92000
1,3-Dichlorobenzene		ND		11000	92000
1,4-Dichlorobenzene		ND		15000	92000
Dichlorodifluoromethane		ND		22000	92000
1,1-Dichloroethane		ND		13000	92000
1,2-Dichloroethane		ND		3700	92000
1,1-Dichloroethene		ND		11000	92000
Dichlorofluoromethane		ND		12000	180000
1,2-Dichloropropane		ND		12000	92000
1,3-Dichloropropane		ND		8400	92000
2,2-Dichloropropane		ND		19000	92000
1,1-Dichloropropene		ND		14000	92000
Ethylbenzene		520000		13000	92000
Ethyl ether		ND		36000	180000
Hexachlorobutadiene		ND		16000	92000
2-Hexanone		ND		31000	370000
Isopropylbenzene		79000	J	4800	92000
Methyl acetate		ND		20000	180000
Methylcyclohexane		37000	J	14000	180000
Methylene Chloride		ND		31000	92000
4-Methyl-2-pentanone (MIBK)		ND		21000	370000
Methyl tert butyl ether		ND		11000	92000

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid % Moisture: 24.0 Date Received: 01/16/2016 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-214579	Lab File ID:	UX81732.D
Dilution:	250			Initial Weight/Volume:	8.96 g
Analysis Date:	01/21/2016 0748			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 1032				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		2600000		7300	92000
Naphthalene		820000		9500	92000
n-Butylbenzene		170000		7700	92000
N-Propylbenzene		240000		22000	92000
o-Xylene		1200000		6200	92000
p-Isopropyltoluene		26000	J	9200	92000
sec-Butylbenzene		38000	J	5900	92000
Styrene		ND		9900	92000
tert-Butylbenzene		ND		12000	92000
1,1,1,2-Tetrachloroethane		ND		18000	92000
1,1,2,2-Tetrachloroethane		ND		9200	92000
Tetrachloroethene		ND		9900	92000
Tetrahydrofuran		ND		44000	370000
Toluene		230000	B	3700	92000
trans-1,2-Dichloroethene		ND		9500	92000
trans-1,3-Dichloropropene		ND		9500	92000
1,2,3-Trichlorobenzene		ND		14000	92000
1,2,4-Trichlorobenzene		ND		11000	92000
1,1,1-Trichloroethane		ND		9900	92000
1,1,2-Trichloroethane		ND		7000	92000
Trichloroethene		ND		14000	92000
Trichlorofluoromethane		ND		13000	92000
1,2,3-Trichloropropane		ND		38000	92000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		15000	92000
1,2,4-Trimethylbenzene		1200000		4800	92000
1,3,5-Trimethylbenzene		330000		5500	92000
Vinyl chloride		ND		6200	92000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	207	X	26 - 141
Dibromofluoromethane (Surr)	52		30 - 122
1,2-Dichloroethane-d4 (Surr)	0	X	39 - 128
Toluene-d8 (Surr)	133		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid Date Received: 01/16/2016 0945

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-215476	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248751.D
Dilution:	1.0	Leach Batch:	240-215408	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/26/2016 2311			Final Weight/Volume:	5 mL
Prep Date:	01/26/2016 2311				
Leach Date:	01/25/2016 1820				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89		80 - 121
4-Bromofluorobenzene (Surr)	75		70 - 124
Toluene-d8 (Surr)	88		80 - 120
Dibromofluoromethane (Surr)	92		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_07_3-4(20160114)**

Lab Sample ID: 240-59997-3 Date Sampled: 01/14/2016 1730
Client Matrix: Solid % Moisture: 21.5 Date Received: 01/16/2016 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-214579	Lab File ID:	UX81733.D
Dilution:	250			Initial Weight/Volume:	9.11 g
Analysis Date:	01/21/2016 0809			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 1034				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		79000	350000
Allyl chloride		ND		10000	170000
Benzene		ND		3100	87000
Bromobenzene		ND		4500	87000
Bromochloromethane		ND		24000	87000
Bromodichloromethane		ND		13000	87000
Bromoform		ND		21000	87000
Bromomethane		ND		18000	87000
2-Butanone (MEK)		ND		26000	350000
Carbon disulfide		ND		20000	87000
Carbon tetrachloride		ND		6300	87000
Chlorobenzene		ND		4500	87000
Chlorodibromomethane		ND		7000	87000
Chloroethane		ND		18000	87000
Chloroform		ND		13000	87000
Chloromethane		ND		17000	87000
2-Chlorotoluene		ND		14000	87000
4-Chlorotoluene		ND		9100	87000
cis-1,2-Dichloroethene		ND		13000	87000
cis-1,3-Dichloropropene		ND		7700	87000
Cyclohexane		ND		10000	170000
1,2-Dibromo-3-Chloropropane		ND		25000	170000
1,2-Dibromoethane		ND		11000	87000
Dibromomethane		ND		17000	87000
1,2-Dichlorobenzene		ND		6600	87000
1,3-Dichlorobenzene		ND		10000	87000
1,4-Dichlorobenzene		ND		14000	87000
Dichlorodifluoromethane		ND		21000	87000
1,1-Dichloroethane		ND		12000	87000
1,2-Dichloroethane		ND		3500	87000
1,1-Dichloroethene		ND		10000	87000
Dichlorofluoromethane		ND		12000	170000
1,2-Dichloropropane		ND		11000	87000
1,3-Dichloropropane		ND		8000	87000
2,2-Dichloropropane		ND		18000	87000
1,1-Dichloropropene		ND		13000	87000
Ethylbenzene		370000		12000	87000
Ethyl ether		ND		34000	170000
Hexachlorobutadiene		ND		15000	87000
2-Hexanone		ND		29000	350000
Isopropylbenzene		56000	J	4500	87000
Methyl acetate		ND		19000	170000
Methylcyclohexane		37000	J	13000	170000
Methylene Chloride		ND		30000	87000
4-Methyl-2-pentanone (MIBK)		ND		20000	350000
Methyl tert butyl ether		ND		10000	87000

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_07_3-4(20160114)**

Lab Sample ID: 240-59997-3 Date Sampled: 01/14/2016 1730
Client Matrix: Solid % Moisture: 21.5 Date Received: 01/16/2016 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-214579	Lab File ID:	UX81733.D
Dilution:	250			Initial Weight/Volume:	9.11 g
Analysis Date:	01/21/2016 0809			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 1034				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		2000000		7000	87000
Naphthalene		640000		9100	87000
n-Butylbenzene		120000		7300	87000
N-Propylbenzene		160000		21000	87000
o-Xylene		1000000		5900	87000
p-Isopropyltoluene		21000	J	8700	87000
sec-Butylbenzene		29000	J	5600	87000
Styrene		ND		9400	87000
tert-Butylbenzene		ND		12000	87000
1,1,1,2-Tetrachloroethane		ND		17000	87000
1,1,2,2-Tetrachloroethane		ND		8700	87000
Tetrachloroethene		ND		9400	87000
Tetrahydrofuran		ND		42000	350000
Toluene		190000	B	3500	87000
trans-1,2-Dichloroethene		ND		9100	87000
trans-1,3-Dichloropropene		ND		9100	87000
1,2,3-Trichlorobenzene		ND		14000	87000
1,2,4-Trichlorobenzene		ND		10000	87000
1,1,1-Trichloroethane		ND		9400	87000
1,1,2-Trichloroethane		ND		6600	87000
Trichloroethene		ND		14000	87000
Trichlorofluoromethane		ND		12000	87000
1,2,3-Trichloropropane		ND		36000	87000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		15000	87000
1,2,4-Trimethylbenzene		920000		4500	87000
1,3,5-Trimethylbenzene		250000		5200	87000
Vinyl chloride		ND		5900	87000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	154	X	26 - 141
Dibromofluoromethane (Surr)	56		30 - 122
1,2-Dichloroethane-d4 (Surr)	0	X	39 - 128
Toluene-d8 (Surr)	91		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_07_3-4(20160114)**

Lab Sample ID: 240-59997-3 Date Sampled: 01/14/2016 1730
Client Matrix: Solid Date Received: 01/16/2016 0945

8260B Volatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8260B	Analysis Batch:	240-215476	Instrument ID:	A3UX12
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	U1248752.D
Dilution:	1.0	Leach Batch:	240-215408	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/26/2016 2335			Final Weight/Volume:	5 mL
Prep Date:	01/26/2016 2335				
Leach Date:	01/25/2016 1820				

Analyte	DryWt Corrected: N	Result (ug/L)	Qualifier	MDL	RL
1,1-Dichloroethene		ND		9.5	25
1,2-Dichloroethane		ND		11	25
2-Butanone (MEK)		ND		29	250
Benzene		ND		6.5	25
Carbon tetrachloride		ND		6.5	25
Chlorobenzene		ND		7.5	25
Chloroform		ND		8.0	25
Tetrachloroethene		ND		15	25
Trichloroethene		ND		8.5	25
Vinyl chloride		ND		11	25

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	88		80 - 121
4-Bromofluorobenzene (Surr)	80		70 - 124
Toluene-d8 (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	94		80 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-59997-4 Date Sampled: 01/14/2016 0000
Client Matrix: Solid Date Received: 01/16/2016 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-214579	Lab File ID:	UX81734.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	01/21/2016 0831			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 1034				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		ND		230	1000
Allyl chloride		ND		30	500
Benzene		ND		9.0	250
Bromobenzene		ND		13	250
Bromochloromethane		ND		70	250
Bromodichloromethane		ND		38	250
Bromoform		ND		61	250
Bromomethane		ND		51	250
2-Butanone (MEK)		ND		73	1000
Carbon disulfide		ND		56	250
Carbon tetrachloride		ND		18	250
Chlorobenzene		ND		13	250
Chlorodibromomethane		ND		20	250
Chloroethane		ND		51	250
Chloroform		ND		36	250
Chloromethane		ND		48	250
2-Chlorotoluene		ND		41	250
4-Chlorotoluene		ND		26	250
cis-1,2-Dichloroethene		ND		38	250
cis-1,3-Dichloropropene		ND		22	250
Cyclohexane		ND		30	500
1,2-Dibromo-3-Chloropropane		ND		71	500
1,2-Dibromoethane		ND		32	250
Dibromomethane		ND		50	250
1,2-Dichlorobenzene		ND		19	250
1,3-Dichlorobenzene		ND		30	250
1,4-Dichlorobenzene		ND		41	250
Dichlorodifluoromethane		ND		61	250
1,1-Dichloroethane		ND		35	250
1,2-Dichloroethane		ND		10	250
1,1-Dichloroethene		ND		30	250
Dichlorofluoromethane		ND		33	500
1,2-Dichloropropane		ND		32	250
1,3-Dichloropropane		ND		23	250
2,2-Dichloropropane		ND		52	250
1,1-Dichloropropene		ND		38	250
Ethylbenzene		ND		35	250
Ethyl ether		ND		98	500
Hexachlorobutadiene		ND		44	250
2-Hexanone		ND		84	1000
Isopropylbenzene		ND		13	250
Methyl acetate		ND		55	500
Methylcyclohexane		ND		38	500
Methylene Chloride		ND		85	250
4-Methyl-2-pentanone (MIBK)		ND		56	1000
Methyl tert butyl ether		ND		30	250

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-59997-4 Date Sampled: 01/14/2016 0000
Client Matrix: Solid Date Received: 01/16/2016 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Prep Method:	5035	Prep Batch:	240-214579	Lab File ID:	UX81734.D
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Analysis Date:	01/21/2016 0831			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 1034				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
m-Xylene & p-Xylene		ND		20	250
Naphthalene		47	J	26	250
n-Butylbenzene		ND		21	250
N-Propylbenzene		ND		61	250
o-Xylene		ND		17	250
p-Isopropyltoluene		ND		25	250
sec-Butylbenzene		ND		16	250
Styrene		ND		27	250
tert-Butylbenzene		ND		34	250
1,1,1,2-Tetrachloroethane		ND		49	250
1,1,2,2-Tetrachloroethane		ND		25	250
Tetrachloroethene		ND		27	250
Tetrahydrofuran		ND		120	1000
Toluene		23	J B	10	250
trans-1,2-Dichloroethene		ND		26	250
trans-1,3-Dichloropropene		ND		26	250
1,2,3-Trichlorobenzene		ND		39	250
1,2,4-Trichlorobenzene		ND		30	250
1,1,1-Trichloroethane		ND		27	250
1,1,2-Trichloroethane		ND		19	250
Trichloroethene		ND		39	250
Trichlorofluoromethane		ND		35	250
1,2,3-Trichloropropane		ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		42	250
1,2,4-Trimethylbenzene		ND		13	250
1,3,5-Trimethylbenzene		ND		15	250
Vinyl chloride		ND		17	250

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	87		26 - 141
Dibromofluoromethane (Surr)	80		30 - 122
1,2-Dichloroethane-d4 (Surr)	89		39 - 128
Toluene-d8 (Surr)	87		33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid % Moisture: 8.3 Date Received: 01/16/2016 0945

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214385	Lab File ID:	60122024.D
Dilution:	50			Initial Weight/Volume:	29.73 g
Analysis Date:	01/22/2016 1750			Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		490	J	190	18000
2,2'-oxybis[1-chloropropane]		ND		520	18000
2,4,5-Trichlorophenol		ND		1400	18000
2,4,6-Trichlorophenol		ND		490	18000
2,4-Dichlorophenol		ND		1100	18000
2,4-Dimethylphenol		ND		1100	18000
2,4-Dinitrophenol		ND		1200	88000
2,4-Dinitrotoluene		ND		940	18000
2,6-Dinitrotoluene		ND		1200	18000
2-Chloronaphthalene		ND		25	18000
2-Chlorophenol		ND		450	18000
2-Methylnaphthalene		2100	J	28	18000
2-Methylphenol		ND		610	18000
2-Nitroaniline		ND		500	88000
2-Nitrophenol		ND		460	18000
3,3'-Dichlorobenzidine		ND		990	88000
3-Nitroaniline		ND		880	88000
4,6-Dinitro-2-methylphenol		ND		510	88000
4-Bromophenyl phenyl ether		ND		720	18000
4-Chloro-3-methylphenol		ND		1200	18000
4-Chloroaniline		ND		940	18000
4-Chlorophenyl phenyl ether		ND		720	18000
4-Nitroaniline		ND		1400	88000
4-Nitrophenol		ND		940	88000
Acenaphthene		4300	J	42	18000
Acenaphthylene		640	J	19	18000
Acetophenone		ND		510	18000
Anthracene		9700	J	43	18000
Atrazine		ND		500	18000
Benzaldehyde		ND		660	18000
Benzo[a]anthracene		25000		35	18000
Benzo[a]pyrene		25000		35	18000
Benzo[b]fluoranthene		31000		32	18000
Benzo[g,h,i]perylene		16000	J	19	18000
Benzo[k]fluoranthene		15000	J	37	18000
Bis(2-chloroethoxy)methane		ND		1200	18000
Bis(2-chloroethyl)ether		ND		110	18000
Bis(2-ethylhexyl) phthalate		ND		1000	18000
Butyl benzyl phthalate		ND		550	18000
Caprolactam		ND		2000	18000
Carbazole		4700	J	1500	18000
Chrysene		27000		61	18000
Dibenz(a,h)anthracene		4300	J	36	18000
Dibenzofuran		3100	J	36	18000
Diethyl phthalate		ND		880	18000
Dimethyl phthalate		ND		940	18000

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid % Moisture: 8.3 Date Received: 01/16/2016 0945

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214385	Lab File ID:	60122024.D
Dilution:	50			Initial Weight/Volume:	29.73 g
Analysis Date:	01/22/2016 1750			Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		830	18000
Di-n-octyl phthalate		ND		430	18000
Fluoranthene		57000		30	18000
Fluorene		5500	J	29	18000
Hexachlorobenzene		ND		120	18000
Hexachlorobutadiene		ND		310	18000
Hexachlorocyclopentadiene		ND		450	88000
Hexachloroethane		ND		500	18000
Indeno[1,2,3-cd]pyrene		15000	J	19	18000
Isophorone		ND		720	18000
Naphthalene		5400	J	45	18000
Nitrobenzene		ND		120	18000
N-Nitrosodi-n-propylamine		ND		350	18000
N-Nitrosodiphenylamine		ND		1200	18000
Pentachlorophenol		ND		500	18000
Phenol		ND		400	18000
Phenanthrene		42000		40	18000
Pyrene		45000		24	18000
3 & 4 Methylphenol		ND		1100	22000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	66		24 - 110
2-Fluorophenol (Surr)	66		24 - 110
2,4,6-Tribromophenol (Surr)	34		10 - 110
Nitrobenzene-d5 (Surr)	52		20 - 110
Phenol-d5 (Surr)	66		26 - 110
Terphenyl-d14 (Surr)	69		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid Date Received: 01/16/2016 0945

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-215662	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-215452	Lab File ID:	60128009.D
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	250 mL
Analysis Date:	01/28/2016 1052			Final Weight/Volume:	2 mL
Prep Date:	01/26/2016 1211			Injection Volume:	1 uL
Leach Date:	01/25/2016 1645				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		ND		0.00017	0.0040
3 & 4 Methylphenol		ND		0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.016
Pyridine		0.0012	J	0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	89		30 - 110
2-Fluorophenol (Surr)	85		20 - 110
Nitrobenzene-d5 (Surr)	81		28 - 110
Phenol-d5 (Surr)	79		21 - 110
Terphenyl-d14 (Surr)	89		48 - 110
2,4,6-Tribromophenol (Surr)	84		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid % Moisture: 24.0 Date Received: 01/16/2016 0945

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214385	Lab File ID:	60122023.D
Dilution:	200			Initial Weight/Volume:	29.63 g
Analysis Date:	01/22/2016 1727			Final Weight/Volume:	14 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		18000	J	6500	620000
2,2'-oxybis[1-chloropropane]		ND		18000	620000
2,4,5-Trichlorophenol		ND		47000	620000
2,4,6-Trichlorophenol		ND		17000	620000
2,4-Dichlorophenol		ND		37000	620000
2,4-Dimethylphenol		ND		37000	620000
2,4-Dinitrophenol		ND		39000	3000000
2,4-Dinitrotoluene		ND		32000	620000
2,6-Dinitrotoluene		ND		39000	620000
2-Chloronaphthalene		ND		840	620000
2-Chlorophenol		ND		15000	620000
2-Methylnaphthalene		180000	J	930	620000
2-Methylphenol		ND		21000	620000
2-Nitroaniline		ND		17000	3000000
2-Nitrophenol		ND		15000	620000
3,3'-Dichlorobenzidine		ND		34000	3000000
3-Nitroaniline		ND		30000	3000000
4,6-Dinitro-2-methylphenol		ND		17000	3000000
4-Bromophenyl phenyl ether		ND		24000	620000
4-Chloro-3-methylphenol		ND		39000	620000
4-Chloroaniline		ND		32000	620000
4-Chlorophenyl phenyl ether		ND		24000	620000
4-Nitroaniline		ND		48000	3000000
4-Nitrophenol		ND		32000	3000000
Acenaphthene		76000	J	1400	620000
Acenaphthylene		ND		650	620000
Acetophenone		ND		17000	620000
Anthracene		110000	J	1500	620000
Atrazine		ND		17000	620000
Benzaldehyde		ND		22000	620000
Benzo[a]anthracene		120000	J	1200	620000
Benzo[a]pyrene		110000	J	1200	620000
Benzo[b]fluoranthene		130000	J	1100	620000
Benzo[g,h,i]perylene		77000	J	650	620000
Benzo[k]fluoranthene		57000	J	1300	620000
Bis(2-chloroethoxy)methane		ND		41000	620000
Bis(2-chloroethyl)ether		ND		3700	620000
Bis(2-ethylhexyl) phthalate		ND		35000	620000
Butyl benzyl phthalate		ND		19000	620000
Caprolactam		ND		69000	620000
Carbazole		67000	J	50000	620000
Chrysene		120000	J	2100	620000
Dibenz(a,h)anthracene		17000	J	1200	620000
Dibenzofuran		81000	J	1200	620000
Diethyl phthalate		ND		30000	620000
Dimethyl phthalate		ND		32000	620000

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid % Moisture: 24.0 Date Received: 01/16/2016 0945

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214385	Lab File ID:	60122023.D
Dilution:	200			Initial Weight/Volume:	29.63 g
Analysis Date:	01/22/2016 1727			Final Weight/Volume:	14 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		28000	620000
Di-n-octyl phthalate		ND		15000	620000
Fluoranthene		390000	J	1000	620000
Fluorene		100000	J	990	620000
Hexachlorobenzene		ND		3900	620000
Hexachlorobutadiene		ND		10000	620000
Hexachlorocyclopentadiene		ND		15000	3000000
Hexachloroethane		ND		17000	620000
Indeno[1,2,3-cd]pyrene		63000	J	650	620000
Isophorone		ND		24000	620000
Naphthalene		1800000		1500	620000
Nitrobenzene		ND		4100	620000
N-Nitrosodi-n-propylamine		ND		12000	620000
N-Nitrosodiphenylamine		ND		39000	620000
Pentachlorophenol		ND		17000	620000
Phenol		ND		14000	620000
Phenanthrene		540000	J	1400	620000
Pyrene		280000	J	820	620000
3 & 4 Methylphenol		ND		37000	750000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	0	X	24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	0	X	36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid Date Received: 01/16/2016 0945

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-215662	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-215452	Lab File ID:	60128011.D
Dilution:	2.0	Leach Batch:	240-215328	Initial Weight/Volume:	250 mL
Analysis Date:	01/28/2016 1143			Final Weight/Volume:	2 mL
Prep Date:	01/26/2016 1211			Injection Volume:	1 uL
Leach Date:	01/25/2016 1645				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00068	0.0080
2,4-Dinitrotoluene		ND		0.00050	0.0080
Hexachlorobenzene		ND		0.00017	0.0016
Hexachlorobutadiene		ND		0.00054	0.0080
Hexachloroethane		ND		0.00038	0.0080
2-Methylphenol		0.063	B	0.00034	0.0080
3 & 4 Methylphenol		0.23	B	0.0016	0.0080
Nitrobenzene		ND		0.000080	0.0080
Pentachlorophenol		0.0021	J	0.00054	0.032
Pyridine		0.0020	J	0.00070	0.0080
2,4,5-Trichlorophenol		ND		0.00060	0.0080
2,4,6-Trichlorophenol		ND		0.00048	0.0080

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	93		30 - 110
2-Fluorophenol (Surr)	86		20 - 110
Nitrobenzene-d5 (Surr)	82		28 - 110
Phenol-d5 (Surr)	82		21 - 110
Terphenyl-d14 (Surr)	90		48 - 110
2,4,6-Tribromophenol (Surr)	93		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_07_3-4(20160114)**

Lab Sample ID: 240-59997-3 Date Sampled: 01/14/2016 1730
Client Matrix: Solid % Moisture: 21.5 Date Received: 01/16/2016 0945

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214385	Lab File ID:	60122025.D
Dilution:	25			Initial Weight/Volume:	29.61 g
Analysis Date:	01/22/2016 1813			Final Weight/Volume:	11 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND	F1	620	59000
2,2'-oxybis[1-chloropropane]		ND		1700	59000
2,4,5-Trichlorophenol		ND		4400	59000
2,4,6-Trichlorophenol		ND		1600	59000
2,4-Dichlorophenol		ND		3500	59000
2,4-Dimethylphenol		ND		3500	59000
2,4-Dinitrophenol		ND		3700	280000
2,4-Dinitrotoluene		ND		3000	59000
2,6-Dinitrotoluene		ND		3700	59000
2-Chloronaphthalene		ND	F1	80	59000
2-Chlorophenol		ND	F1	1500	59000
2-Methylnaphthalene		5900	J	89	59000
2-Methylphenol		ND		2000	59000
2-Nitroaniline		ND		1600	280000
2-Nitrophenol		ND	F1	1500	59000
3,3'-Dichlorobenzidine		ND	F1	3200	280000
3-Nitroaniline		ND		2800	280000
4,6-Dinitro-2-methylphenol		ND	F1	1600	280000
4-Bromophenyl phenyl ether		ND		2300	59000
4-Chloro-3-methylphenol		ND		3700	59000
4-Chloroaniline		ND		3000	59000
4-Chlorophenyl phenyl ether		ND		2300	59000
4-Nitroaniline		ND		4600	280000
4-Nitrophenol		ND	F1	3000	280000
Acenaphthene		ND	F1	130	59000
Acenaphthylene		ND	F1	62	59000
Acetophenone		ND		1600	59000
Anthracene		ND		140	59000
Atrazine		ND		1600	59000
Benzaldehyde		ND	F1	2100	59000
Benzo[a]anthracene		ND		110	59000
Benzo[a]pyrene		ND		110	59000
Benzo[b]fluoranthene		ND		100	59000
Benzo[g,h,i]perylene		ND		62	59000
Benzo[k]fluoranthene		ND		120	59000
Bis(2-chloroethoxy)methane		ND		3900	59000
Bis(2-chloroethyl)ether		ND	F1	350	59000
Bis(2-ethylhexyl) phthalate		ND		3400	59000
Butyl benzyl phthalate		ND		1800	59000
Caprolactam		ND		6600	59000
Carbazole		ND		4800	59000
Chrysene		ND	F1	200	59000
Dibenz(a,h)anthracene		ND		120	59000
Dibenzofuran		ND	F1	120	59000
Diethyl phthalate		ND		2800	59000
Dimethyl phthalate		ND		3000	59000

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_07_3-4(20160114)**

Lab Sample ID: 240-59997-3 Date Sampled: 01/14/2016 1730
Client Matrix: Solid % Moisture: 21.5 Date Received: 01/16/2016 0945

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Prep Method:	3540C	Prep Batch:	240-214385	Lab File ID:	60122025.D
Dilution:	25			Initial Weight/Volume:	29.61 g
Analysis Date:	01/22/2016 1813			Final Weight/Volume:	11 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Di-n-butyl phthalate		ND		2700	59000
Di-n-octyl phthalate		ND	F1	1400	59000
Fluoranthene		ND	F1	98	59000
Fluorene		ND	F1	94	59000
Hexachlorobenzene		ND		370	59000
Hexachlorobutadiene		ND	F1	990	59000
Hexachlorocyclopentadiene		ND	F1	1400	280000
Hexachloroethane		ND		1600	59000
Indeno[1,2,3-cd]pyrene		ND		62	59000
Isophorone		ND		2300	59000
Naphthalene		68000		150	59000
Nitrobenzene		ND	F1	390	59000
N-Nitrosodi-n-propylamine		ND	F1	1100	59000
N-Nitrosodiphenylamine		ND		3700	59000
Pentachlorophenol		ND	F1	1600	59000
Phenol		ND	F1	1300	59000
Phenanthrene		870	J F1	130	59000
Pyrene		ND		78	59000
3 & 4 Methylphenol		ND		3500	71000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	0	X	24 - 110
2-Fluorophenol (Surr)	0	X	24 - 110
2,4,6-Tribromophenol (Surr)	0	X	10 - 110
Nitrobenzene-d5 (Surr)	0	X	20 - 110
Phenol-d5 (Surr)	0	X	26 - 110
Terphenyl-d14 (Surr)	78		36 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_07_3-4(20160114)**

Lab Sample ID: 240-59997-3 Date Sampled: 01/14/2016 1730
Client Matrix: Solid Date Received: 01/16/2016 0945

8270C Semivolatile Organic Compounds (GC/MS)-TCLP

Analysis Method:	8270C	Analysis Batch:	240-215662	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-215452	Lab File ID:	60128008.D
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	250 mL
Analysis Date:	01/28/2016 1026			Final Weight/Volume:	2 mL
Prep Date:	01/26/2016 1211			Injection Volume:	1 uL
Leach Date:	01/25/2016 1645				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		ND		0.00034	0.0040
2,4-Dinitrotoluene		ND		0.00025	0.0040
Hexachlorobenzene		ND		0.000085	0.00080
Hexachlorobutadiene		ND		0.00027	0.0040
Hexachloroethane		ND		0.00019	0.0040
2-Methylphenol		0.0012	J B	0.00017	0.0040
3 & 4 Methylphenol		0.0018	J B	0.00080	0.0040
Nitrobenzene		ND		0.000040	0.0040
Pentachlorophenol		ND		0.00027	0.016
Pyridine		ND		0.00035	0.0040
2,4,5-Trichlorophenol		ND		0.00030	0.0040
2,4,6-Trichlorophenol		ND		0.00024	0.0040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	90		30 - 110
2-Fluorophenol (Surr)	79		20 - 110
Nitrobenzene-d5 (Surr)	86		28 - 110
Phenol-d5 (Surr)	63		21 - 110
Terphenyl-d14 (Surr)	93		48 - 110
2,4,6-Tribromophenol (Surr)	90		23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid % Moisture: 8.3 Date Received: 01/16/2016 0945

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-214744	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-214558	Lab File ID:	Y0012019.D
Dilution:	1.0			Initial Weight/Volume:	9.07 g
Analysis Date:	01/20/2016 2010			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		ND		2.4	12

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid % Moisture: 24.0 Date Received: 01/16/2016 0945

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-214744	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-214558	Lab File ID:	Y0012020.D
Dilution:	200			Initial Weight/Volume:	9.2 g
Analysis Date:	01/20/2016 2045			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		13000		570	2900

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_07_3-4(20160114)**

Lab Sample ID: 240-59997-3 Date Sampled: 01/14/2016 1730
Client Matrix: Solid % Moisture: 21.5 Date Received: 01/16/2016 0945

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-214744	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-214558	Lab File ID:	Y0012021.D
Dilution:	50			Initial Weight/Volume:	9.37 g
Analysis Date:	01/20/2016 2119			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		1800		140	680

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-59997-4 Date Sampled: 01/14/2016 0000
Client Matrix: Solid Date Received: 01/16/2016 0945

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-214744	Instrument ID:	YPID
Prep Method:	5035	Prep Batch:	240-214558	Lab File ID:	Y0012022.D
Dilution:	1.0			Initial Weight/Volume:	0.26 g
Analysis Date:	01/20/2016 2154			Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)		100	J	77	380

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid % Moisture: 8.3 Date Received: 01/16/2016 0945

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-215139	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-214526	Lab File ID:	P14R012226.D
Dilution:	50			Initial Weight/Volume:	27.33 g
Analysis Date:	01/22/2016 1944			Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		1900	B	49	480

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid % Moisture: 24.0 Date Received: 01/16/2016 0945

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-215139	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-214526	Lab File ID:	P14R012227.D
Dilution:	200			Initial Weight/Volume:	29.53 g
Analysis Date:	01/22/2016 2011			Final Weight/Volume:	16 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		35000	B	700	6800

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_07_3-4(20160114)**

Lab Sample ID: 240-59997-3 Date Sampled: 01/14/2016 1730
Client Matrix: Solid % Moisture: 21.5 Date Received: 01/16/2016 0945

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-215139	Instrument ID:	A2HP14R
Prep Method:	WI DRO PREP	Prep Batch:	240-214526	Lab File ID:	P14R012228.D
Dilution:	100			Initial Weight/Volume:	26.59 g
Analysis Date:	01/22/2016 2038			Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)		6500	B	120	1100

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid % Moisture: 8.3 Date Received: 01/16/2016 0945

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-214773	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214580	Lab File ID:	I9012016A.asc
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Analysis Date:	01/20/2016 1121			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1034				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4000		5.6	19
Antimony		37	F1 F2	0.47	0.97
Barium		480	F1 F2	0.40	19
Beryllium		0.20	J	0.025	0.49
Calcium		37000	F2	22	490
Cadmium		1.3	B	0.020	0.19
Cobalt		5.7		0.046	4.9
Chromium		22		0.073	0.49
Copper		470	F2	0.22	2.4
Iron		12000		3.1	9.7
Potassium		760		6.0	490
Magnesium		5900	B F1	5.1	490
Manganese		310		0.082	1.5
Silver		0.11	J	0.061	0.49
Sodium		160	J	18	490
Nickel		57	B	0.078	3.9
Vanadium		13	B	0.19	4.9
Arsenic		13		0.40	0.97
Selenium		ND		0.33	0.49
Thallium		ND		0.13	0.97

Analysis Method:	6010B	Analysis Batch:	240-214773	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214580	Lab File ID:	I9012016A.asc
Dilution:	5.0			Initial Weight/Volume:	1.12 g
Analysis Date:	01/20/2016 1438			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1034				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Zinc		880	F2	2.7	9.7
Lead		1600	F2	0.97	1.5

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-215664	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215399	Lab File ID:	I9012716B.asc
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1701			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 0920				
Leach Date:	01/25/2016 1645				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		0.061	J	0.040	0.20
Antimony		0.29	J	0.0024	0.30

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid Date Received: 01/16/2016 0945

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.019	J B	0.0029	0.50
Barium		0.76	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.027	J	0.00014	0.10
Calcium		530	B	0.26	5.0
Chromium		0.0034	J B	0.00055	0.50
Cobalt		0.018	J B	0.00056	0.050
Copper		2.9	B	0.0019	1.0
Iron		ND		0.013	0.10
Magnesium		15	B	0.055	5.0
Manganese		3.7	B	0.00046	0.015
Nickel		0.27	B	0.00076	0.040
Potassium		5.5	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-215745	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215399	Lab File ID:	I9012816A.asc
Dilution:	5.0	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/28/2016 1203			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 0920				
Leach Date:	01/25/2016 1645				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Lead		17	B	0.0095	2.5
Zinc		18		0.048	5.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-215579	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-215400	Lab File ID:	012716AH4.PRN
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1157			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 1130				
Leach Date:	01/25/2016 1645				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-214938	Instrument ID:	H1
Prep Method:	7471A	Prep Batch:	240-214588	Lab File ID:	012116AH1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.65 g
Analysis Date:	01/21/2016 0851			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1445				

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid % Moisture: 8.3 Date Received: 01/16/2016 0945

7471A Mercury (CVAA)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.081	J F1	0.014	0.10

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid % Moisture: 24.0 Date Received: 01/16/2016 0945

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-214773	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214580	Lab File ID:	I9012016A.asc
Dilution:	1.0			Initial Weight/Volume:	1.20 g
Analysis Date:	01/20/2016 1142			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1034				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5700		6.4	22
Antimony		50		0.53	1.1
Beryllium		0.14	J	0.028	0.55
Calcium		8300		25	550
Cadmium		7.6	B	0.023	0.22
Cobalt		3.3	J	0.052	5.5
Chromium		1800		0.082	0.55
Copper		200		0.25	2.7
Iron		25000		3.5	11
Potassium		690		6.8	550
Magnesium		2900	B	5.7	550
Manganese		160		0.092	1.6
Silver		0.20	J	0.069	0.55
Sodium		540	J	21	550
Nickel		170	B	0.088	4.4
Vanadium		5.6	B	0.22	5.5
Arsenic		6.8		0.45	1.1
Selenium		0.96		0.37	0.55
Thallium		0.38	J	0.14	1.1

Analysis Method:	6010B	Analysis Batch:	240-214773	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214580	Lab File ID:	I9012016A.asc
Dilution:	20			Initial Weight/Volume:	1.20 g
Analysis Date:	01/20/2016 1454			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1034				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Barium		7200		9.0	440
Zinc		12000		12	44
Lead		4400		4.4	6.6

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-215664	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215399	Lab File ID:	I9012716B.asc
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1629			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 0920				
Leach Date:	01/25/2016 1645				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		0.48		0.040	0.20
Antimony		0.29	J	0.0024	0.30

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid Date Received: 01/16/2016 0945

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.021	J B	0.0029	0.50
Barium		2.0	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.0051	J	0.00014	0.10
Calcium		150	B	0.26	5.0
Chromium		0.044	J B	0.00055	0.50
Cobalt		0.023	J B	0.00056	0.050
Copper		0.0031	J B	0.0019	1.0
Iron		4.9	B	0.013	0.10
Lead		9.9	B	0.0019	0.50
Magnesium		5.7	B	0.055	5.0
Manganese		1.8	B	0.00046	0.015
Nickel		0.73	B	0.00076	0.040
Potassium		5.4	B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050

Analysis Method:	6010B	Analysis Batch:	240-215745	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215399	Lab File ID:	I9012816A.asc
Dilution:	10	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/28/2016 1147			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 0920				
Leach Date:	01/25/2016 1645				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Zinc		48		0.096	10

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-215579	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-215400	Lab File ID:	012716AH4.PRN
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1149			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 1130				
Leach Date:	01/25/2016 1645				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-214938	Instrument ID:	H1
Prep Method:	7471A	Prep Batch:	240-214588	Lab File ID:	012116AH1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.58 g
Analysis Date:	01/21/2016 0855			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1445				

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid % Moisture: 24.0 Date Received: 01/16/2016 0945

7471A Mercury (CVAA)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.022	J	0.019	0.14

Client Sample ID: **AREA C-TRENCH-3_07_3-4(20160114)**

Lab Sample ID: 240-59997-3 Date Sampled: 01/14/2016 1730
Client Matrix: Solid % Moisture: 21.5 Date Received: 01/16/2016 0945

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	240-214773	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214580	Lab File ID:	I9012016A.asc
Dilution:	1.0			Initial Weight/Volume:	1.20 g
Analysis Date:	01/20/2016 1146			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1034				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7800		6.2	21
Antimony		51		0.51	1.1
Beryllium		0.066	J	0.028	0.53
Calcium		3700		24	530
Cadmium		2.8	B	0.022	0.21
Cobalt		2.8	J	0.050	5.3
Chromium		1200		0.080	0.53
Copper		350		0.24	2.7
Iron		10000		3.4	11
Potassium		300	J	6.6	530
Magnesium		1800	B	5.5	530
Manganese		75		0.089	1.6
Silver		0.21	J	0.067	0.53
Sodium		1700		20	530
Nickel		110	B	0.085	4.2
Vanadium		1.8	J B	0.21	5.3
Arsenic		4.0		0.43	1.1
Selenium		ND		0.36	0.53
Thallium		ND		0.14	1.1

Analysis Method:	6010B	Analysis Batch:	240-214773	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-214580	Lab File ID:	I9012016A.asc
Dilution:	20			Initial Weight/Volume:	1.20 g
Analysis Date:	01/20/2016 1458			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1034				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Barium		10000		8.7	420
Zinc		4100		12	42
Lead		5500		4.2	6.4

6010B Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	240-215664	Instrument ID:	I9
Prep Method:	3010A	Prep Batch:	240-215399	Lab File ID:	I9012716B.asc
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1706			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 0920				
Leach Date:	01/25/2016 1645				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Aluminum		0.20		0.040	0.20
Antimony		0.028	J	0.0024	0.30

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Client Sample ID: **AREA C-TRENCH-3_07_3-4(20160114)**

Lab Sample ID: 240-59997-3 Date Sampled: 01/14/2016 1730
Client Matrix: Solid Date Received: 01/16/2016 0945

6010B Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.0063	J B	0.0029	0.50
Barium		2.5	J B	0.0010	10
Beryllium		ND		0.00013	0.0050
Cadmium		0.046	J	0.00014	0.10
Calcium		140	B	0.26	5.0
Chromium		0.020	J B	0.00055	0.50
Cobalt		0.026	J B	0.00056	0.050
Copper		0.11	J B	0.0019	1.0
Iron		0.19	B	0.013	0.10
Lead		3.7	B	0.0019	0.50
Magnesium		17	B	0.055	5.0
Manganese		1.8	B	0.00046	0.015
Nickel		0.17	B	0.00076	0.040
Potassium		3.5	J B	0.070	5.0
Selenium		ND		0.0040	0.25
Silver		ND		0.00092	0.50
Thallium		ND		0.0017	2.0
Vanadium		ND		0.0024	0.050
Zinc		4.3		0.0096	1.0

7470A Mercury (CVAA)-TCLP

Analysis Method:	7470A	Analysis Batch:	240-215579	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-215400	Lab File ID:	012716AH4.PRN
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1159			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 1130				
Leach Date:	01/25/2016 1645				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		ND		0.000090	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-214938	Instrument ID:	H1
Prep Method:	7471A	Prep Batch:	240-214588	Lab File ID:	012116AH1.PRN
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	01/21/2016 0857			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1445				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.024	J	0.018	0.13

General Chemistry

Client Sample ID: **AREA C-TRENCH-3_022_2-3(20160114)**

Lab Sample ID: 240-59997-1 Date Sampled: 01/14/2016 1650
Client Matrix: Solid % Moisture: 8.3 Date Received: 01/16/2016 0945

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	1.8		mg/Kg	0.28	0.87	1.0	7196A
Analysis Batch: 240-214816	Analysis Date: 01/20/2016 1234						DryWt Corrected: Y
Prep Batch: 240-214546	Prep Date: 01/19/2016 0825						
Cr (III)	20		mg/Kg	0.14	2.2	1.0	7196A
Analysis Batch: 240-215374	Analysis Date: 01/26/2016 0748						DryWt Corrected: Y
Percent Solids	92		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214397	Analysis Date: 01/18/2016 1006						DryWt Corrected: N
Percent Moisture	8.3		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214397	Analysis Date: 01/18/2016 1006						DryWt Corrected: N

General Chemistry

Client Sample ID: **AREA C-TRENCH-3_010_9-10(20160114)**

Lab Sample ID: 240-59997-2 Date Sampled: 01/14/2016 1708
Client Matrix: Solid % Moisture: 24.0 Date Received: 01/16/2016 0945

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	140		mg/Kg	1.7	5.3	5.0	7196A
Analysis Batch: 240-214816	Analysis Date: 01/20/2016 1342					DryWt Corrected: Y	
Prep Batch: 240-214546	Prep Date: 01/19/2016 0825						
Cr (III)	1700		mg/Kg	0.17	2.6	1.0	7196A
Analysis Batch: 240-215374	Analysis Date: 01/26/2016 0748					DryWt Corrected: Y	
Percent Solids	76		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214397	Analysis Date: 01/18/2016 1006					DryWt Corrected: N	
Percent Moisture	24		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214397	Analysis Date: 01/18/2016 1006					DryWt Corrected: N	

General Chemistry

Client Sample ID: **AREA C-TRENCH-3_07_3-4(20160114)**

Lab Sample ID: 240-59997-3 Date Sampled: 01/14/2016 1730
Client Matrix: Solid % Moisture: 21.5 Date Received: 01/16/2016 0945

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	21		mg/Kg	1.7	5.1	5.0	7196A
Analysis Batch: 240-214816	Analysis Date: 01/20/2016 1342						DryWt Corrected: Y
Prep Batch: 240-214546	Prep Date: 01/19/2016 0825						
Cr (III)	1200		mg/Kg	0.17	2.5	1.0	7196A
Analysis Batch: 240-215374	Analysis Date: 01/26/2016 0748						DryWt Corrected: Y
Percent Solids	79		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214397	Analysis Date: 01/18/2016 1006						DryWt Corrected: N
Percent Moisture	21		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-214397	Analysis Date: 01/18/2016 1006						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC/MS Semi VOA		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Section	Qualifier	Description
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 240-214579					
LCS 240-214579/2-A	Lab Control Sample	T	Solid	5035	
MB 240-214579/1-A	Method Blank	T	Solid	5035	
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	5035	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	5035	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	5035	
240-59997-4	TRIP BLANK	T	Solid	5035	
240-60024-B-3-C MS	Matrix Spike	T	Solid	5035	
240-60024-B-3-D MSD	Matrix Spike Duplicate	T	Solid	5035	
Analysis Batch:240-214661					
240-60024-B-3-C MS	Matrix Spike	T	Solid	8260B	240-214579
240-60024-B-3-D MSD	Matrix Spike Duplicate	T	Solid	8260B	240-214579
Analysis Batch:240-214849					
LCS 240-214579/2-A	Lab Control Sample	T	Solid	8260B	240-214579
MB 240-214579/1-A	Method Blank	T	Solid	8260B	240-214579
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	8260B	240-214579
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	8260B	240-214579
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	8260B	240-214579
240-59997-4	TRIP BLANK	T	Solid	8260B	240-214579
Prep Batch: 240-215408					
LB 240-215408/1-A	Method Blank	P	Solid	1311	
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	P	Solid	1311	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	P	Solid	1311	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	P	Solid	1311	
240-60024-H-6-B MS	Matrix Spike	P	Solid	1311	
240-60024-H-6-B MSD	Matrix Spike Duplicate	P	Solid	1311	
Analysis Batch:240-215476					
LB 240-215408/1-A	Method Blank	P	Solid	8260B	
LCS 240-215476/13	Lab Control Sample	T	Water	8260B	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	P	Solid	8260B	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	P	Solid	8260B	
240-60024-H-6-B MS	Matrix Spike	P	Solid	8260B	
240-60024-H-6-B MSD	Matrix Spike Duplicate	P	Solid	8260B	

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-215617					
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	P	Solid	8260B	

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-214385					
LCS 240-214385/12-A	Lab Control Sample	T	Solid	3540C	
MB 240-214385/11-A	Method Blank	T	Solid	3540C	
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	3540C	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	3540C	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	3540C	
240-59997-3MS	Matrix Spike	T	Solid	3540C	
240-59997-3MSD	Matrix Spike Duplicate	T	Solid	3540C	
Analysis Batch:240-215094					
LCS 240-214385/12-A	Lab Control Sample	T	Solid	8270C	240-214385
MB 240-214385/11-A	Method Blank	T	Solid	8270C	240-214385
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	8270C	240-214385
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	8270C	240-214385
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	8270C	240-214385
240-59997-3MS	Matrix Spike	T	Solid	8270C	240-214385
240-59997-3MSD	Matrix Spike Duplicate	T	Solid	8270C	240-214385
Prep Batch: 240-215328					
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	P	Solid	1311	
240-59997-1MS	Matrix Spike	P	Solid	1311	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	P	Solid	1311	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	P	Solid	1311	
Prep Batch: 240-215452					
LCS 240-215452/12-A	Lab Control Sample	T	Water	3510C	
MB 240-215452/11-A	Method Blank	T	Water	3510C	
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	P	Solid	3510C	240-215328
240-59997-1MS	Matrix Spike	P	Solid	3510C	240-215328
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	P	Solid	3510C	240-215328
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	P	Solid	3510C	240-215328

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:240-215662					
LCS 240-215452/12-A	Lab Control Sample	T	Water	8270C	240-215452
MB 240-215452/11-A	Method Blank	T	Water	8270C	240-215452
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	P	Solid	8270C	240-215452
240-59997-1MS	Matrix Spike	P	Solid	8270C	240-215452
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	P	Solid	8270C	240-215452
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	P	Solid	8270C	240-215452

Report Basis
P = TCLP
T = Total

GC VOA					
Prep Batch: 240-214558					
LCS 240-214558/2-A	Lab Control Sample	T	Solid	5035	
LCSD 240-214558/19-A	Lab Control Sample Duplicate	T	Solid	5035	
MB 240-214558/1-A	Method Blank	T	Solid	5035	
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	5035	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	5035	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	5035	
240-59997-4	TRIP BLANK	T	Solid	5035	
Analysis Batch:240-214744					
LCS 240-214558/2-A	Lab Control Sample	T	Solid	WI-GRO	240-214558
LCSD 240-214558/19-A	Lab Control Sample Duplicate	T	Solid	WI-GRO	240-214558
MB 240-214558/1-A	Method Blank	T	Solid	WI-GRO	240-214558
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	WI-GRO	240-214558
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	WI-GRO	240-214558
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	WI-GRO	240-214558
240-59997-4	TRIP BLANK	T	Solid	WI-GRO	240-214558

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-214526					
LCS 240-214526/16-A	Lab Control Sample	T	Solid	WI DRO PREP	
LCSD 240-214526/17-A	Lab Control Sample Duplicate	T	Solid	WI DRO PREP	
MB 240-214526/15-A	Method Blank	T	Solid	WI DRO PREP	
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	WI DRO PREP	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	WI DRO PREP	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	WI DRO PREP	
Analysis Batch:240-215139					
LCS 240-214526/16-A	Lab Control Sample	T	Solid	WI-DRO	240-214526
MB 240-214526/15-A	Method Blank	T	Solid	WI-DRO	240-214526
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	WI-DRO	240-214526
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	WI-DRO	240-214526
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	WI-DRO	240-214526
Analysis Batch:240-215287					
LCSD 240-214526/17-A	Lab Control Sample Duplicate	T	Solid	WI-DRO	240-214526

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-214580					
LCS 240-214580/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-214580/1-A	Method Blank	T	Solid	3050B	
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	3050B	
240-59997-1MS	Matrix Spike	T	Solid	3050B	
240-59997-1MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	3050B	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	3050B	
Prep Batch: 240-214588					
LCS 240-214588/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-214588/1-A	Method Blank	T	Solid	7471A	
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	7471A	
240-59997-1MS	Matrix Spike	T	Solid	7471A	
240-59997-1MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	7471A	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	7471A	
Analysis Batch:240-214773					
LCS 240-214580/2-A	Lab Control Sample	T	Solid	6010B	240-214580
MB 240-214580/1-A	Method Blank	T	Solid	6010B	240-214580
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	6010B	240-214580
240-59997-1MS	Matrix Spike	T	Solid	6010B	240-214580
240-59997-1MSD	Matrix Spike Duplicate	T	Solid	6010B	240-214580
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	6010B	240-214580
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	6010B	240-214580
Analysis Batch:240-214938					
LCS 240-214588/2-A	Lab Control Sample	T	Solid	7471A	240-214588
MB 240-214588/1-A	Method Blank	T	Solid	7471A	240-214588
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	7471A	240-214588
240-59997-1MS	Matrix Spike	T	Solid	7471A	240-214588
240-59997-1MSD	Matrix Spike Duplicate	T	Solid	7471A	240-214588
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	7471A	240-214588
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	7471A	240-214588

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-215328					
LB 240-215328/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 240-215328/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	P	Solid	1311	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	P	Solid	1311	
240-59997-2MS	Matrix Spike	P	Solid	1311	
240-59997-2MSD	Matrix Spike Duplicate	P	Solid	1311	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	P	Solid	1311	
Prep Batch: 240-215399					
LCS 240-215399/3-A	Lab Control Sample	T	Water	3010A	
MB 240-215399/2-A	Method Blank	T	Water	3010A	
LB 240-215328/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	240-215328
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	P	Solid	3010A	240-215328
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	P	Solid	3010A	240-215328
240-59997-2MS	Matrix Spike	P	Solid	3010A	240-215328
240-59997-2MSD	Matrix Spike Duplicate	P	Solid	3010A	240-215328
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	P	Solid	3010A	240-215328
Prep Batch: 240-215400					
LCS 240-215400/3-A	Lab Control Sample	T	Water	7470A	
MB 240-215400/2-A	Method Blank	T	Water	7470A	
LB 240-215328/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-215328
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	P	Solid	7470A	240-215328
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	P	Solid	7470A	240-215328
240-59997-2MS	Matrix Spike	P	Solid	7470A	240-215328
240-59997-2MSD	Matrix Spike Duplicate	P	Solid	7470A	240-215328
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	P	Solid	7470A	240-215328

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-215579					
LB 240-215328/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	240-215400
LCS 240-215400/3-A	Lab Control Sample	T	Water	7470A	240-215400
MB 240-215400/2-A	Method Blank	T	Water	7470A	240-215400
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	P	Solid	7470A	240-215400
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	P	Solid	7470A	240-215400
240-59997-2MS	Matrix Spike	P	Solid	7470A	240-215400
240-59997-2MSD	Matrix Spike Duplicate	P	Solid	7470A	240-215400
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	P	Solid	7470A	240-215400
Analysis Batch:240-215664					
LCS 240-215399/3-A	Lab Control Sample	T	Water	6010B	240-215399
MB 240-215399/2-A	Method Blank	T	Water	6010B	240-215399
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	P	Solid	6010B	240-215399
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	P	Solid	6010B	240-215399
240-59997-2MS	Matrix Spike	P	Solid	6010B	240-215399
240-59997-2MSD	Matrix Spike Duplicate	P	Solid	6010B	240-215399
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	P	Solid	6010B	240-215399
Analysis Batch:240-215745					
LB 240-215328/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	240-215399
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	P	Solid	6010B	240-215399
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	P	Solid	6010B	240-215399
240-59997-2MS	Matrix Spike	P	Solid	6010B	240-215399
240-59997-2MSD	Matrix Spike Duplicate	P	Solid	6010B	240-215399

Report Basis
P = TCLP
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-214397					
240-59969-A-21 DU	Duplicate	T	Solid	Moisture	
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	Moisture	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	Moisture	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	Moisture	
Prep Batch: 240-214546					
LCSI 240-214546/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-214546/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-214546/9-A	Method Blank	T	Solid	3060A	
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	3060A	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	3060A	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	3060A	
Analysis Batch:240-214816					
LCSI 240-214546/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-214546
LCSS 240-214546/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-214546
MB 240-214546/9-A	Method Blank	T	Solid	7196A	240-214546
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	7196A	240-214546
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	7196A	240-214546
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	7196A	240-214546
Analysis Batch:240-215374					
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	T	Solid	7196A	
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	T	Solid	7196A	
240-59997-3	AREA C-TRENCH-3_07_3-4(20160114)	T	Solid	7196A	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
MRL 240-214849/14		94	92	93	91

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	10-150
DBFM = Dibromofluoromethane (Surr)	10-150
DCA = 1,2-Dichloroethane-d4 (Surr)	10-150
TOL = Toluene-d8 (Surr)	10-150

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	83	77	84	81
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	207X	52	0X	133
240-59997-3	AREA C-TRENCH-3_07_3-4 (20160114)	154X	56	0X	91
240-59997-4	TRIP BLANK	87	80	89	87
MB 240-214579/1-A		86	81	90	83
LCS 240-214579/2-A		91	90	94	87
240-60024-B-3-C MS		59	58	64	64
240-60024-B-3-D MSD		63	62	68	67

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	26-141
DBFM = Dibromofluoromethane (Surr)	30-122
DCA = 1,2-Dichloroethane-d4 (Surr)	39-128
TOL = Toluene-d8 (Surr)	33-134

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
LB 240-215408/1-A MB		75	94	88	92
LCS 240-215476/13		79	98	94	96
240-60024-H-6-B MS		86	96	89	98
240-60024-H-6-B MSD		82	90	89	93

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	70-124
DBFM = Dibromofluoromethane (Surr)	80-128
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
TOL = Toluene-d8 (Surr)	80-120

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	89	85	94	97
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	89	75	88	92
240-59997-3	AREA C-TRENCH-3_07_3-4 (20160114)	88	80	91	94

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	80-121
BFB = 4-Bromofluorobenzene (Surr)	70-124
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	80-128

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
MB 240-214385/11-A		82	78	77	84	84	44
LCS 240-214385/12-A		77	88	73	85	81	63
240-59997-3 MS	AREA C-TRENCH-3_07_3-4 (20160114) MS	73	0X	0X	0X	96	0X
240-59997-3 MSD	AREA C-TRENCH-3_07_3-4 (20160114) MSD	93	0X	0X	0X	85	0X

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	66	66	34	52	66	69
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	0X	0X	0X	0X	0X	0X
240-59997-3	AREA C-TRENCH-3_07_3-4 (20160114)	0X	0X	0X	0X	0X	78

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	24-110
2FP = 2-Fluorophenol (Surr)	24-110
TBP = 2,4,6-Tribromophenol (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	20-110
PHL = Phenol-d5 (Surr)	26-110
TPH = Terphenyl-d14 (Surr)	36-110

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid TCLP

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-59997-1	AREA C-TRENCH-3_022_2-3(20160114)	89	85	81	79	89	84
240-59997-2	AREA C-TRENCH-3_010_9-10(20160114)	93	86	82	82	90	93
240-59997-3	AREA C-TRENCH-3_07_3-4 (20160114)	90	79	86	63	93	90
MB 240-215452/11-A		88	66	82	46	85	88
LCS 240-215452/12-A		94	80	97	60	90	92
240-59997-1 MS	AREA C-TRENCH-3_022_2-3(20160114) MS	86	84	93	67	86	85

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	30-110
2FP = 2-Fluorophenol (Surr)	20-110
NBZ = Nitrobenzene-d5 (Surr)	28-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	48-110
TBP = 2,4,6-Tribromophenol (Surr)	23-110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Blank - Batch: 240-214579

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-214579/1-A	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-214579	Lab File ID:	UX81729.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	01/21/2016 0644	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 1032				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	ND		230	1000
Allyl chloride	ND		30	500
Bromobenzene	ND		13	250
Bromochloromethane	ND		70	250
Bromodichloromethane	ND		38	250
Benzene	ND		9.0	250
Bromoform	ND		61	250
Bromomethane	ND		51	250
2-Butanone (MEK)	75.4	J	73	1000
Carbon disulfide	ND		56	250
Carbon tetrachloride	ND		18	250
Chlorobenzene	ND		13	250
Chlorodibromomethane	ND		20	250
Chloroethane	ND		51	250
Chloroform	ND		36	250
Chloromethane	ND		48	250
2-Chlorotoluene	ND		41	250
4-Chlorotoluene	ND		26	250
cis-1,2-Dichloroethene	ND		38	250
cis-1,3-Dichloropropene	ND		22	250
Cyclohexane	ND		30	500
1,2-Dibromo-3-Chloropropane	ND		71	500
1,2-Dibromoethane	ND		32	250
Dibromomethane	ND		50	250
1,2-Dichlorobenzene	ND		19	250
1,3-Dichlorobenzene	ND		30	250
1,4-Dichlorobenzene	ND		41	250
Dichlorodifluoromethane	ND		61	250
1,1-Dichloroethane	ND		35	250
1,2-Dichloroethane	ND		10	250
1,1-Dichloroethene	ND		30	250
Dichlorofluoromethane	ND		33	500
1,2-Dichloropropane	ND		32	250
1,3-Dichloropropane	ND		23	250
2,2-Dichloropropane	ND		52	250
1,1-Dichloropropene	ND		38	250
Ethylbenzene	ND		35	250
Ethyl ether	ND		98	500
Hexachlorobutadiene	ND		44	250
2-Hexanone	ND		84	1000
Isopropylbenzene	ND		13	250
Methyl acetate	ND		55	500
Methylcyclohexane	ND		38	500
Methylene Chloride	ND		85	250
4-Methyl-2-pentanone (MIBK)	ND		56	1000

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Blank - Batch: 240-214579

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 240-214579/1-A	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-214579	Lab File ID:	UX81729.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	01/21/2016 0644	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 1032				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Methyl tert butyl ether	ND		30	250
m-Xylene & p-Xylene	ND		20	250
Naphthalene	ND		26	250
n-Butylbenzene	ND		21	250
N-Propylbenzene	ND		61	250
o-Xylene	ND		17	250
p-Isopropyltoluene	ND		25	250
sec-Butylbenzene	ND		16	250
Styrene	ND		27	250
tert-Butylbenzene	ND		34	250
1,1,1,2-Tetrachloroethane	ND		49	250
1,1,2,2-Tetrachloroethane	ND		25	250
Tetrachloroethene	ND		27	250
Tetrahydrofuran	ND		120	1000
Toluene	16.1	J	10	250
trans-1,2-Dichloroethene	ND		26	250
trans-1,3-Dichloropropene	ND		26	250
1,2,3-Trichlorobenzene	ND		39	250
1,2,4-Trichlorobenzene	ND		30	250
1,1,1-Trichloroethane	ND		27	250
1,1,2-Trichloroethane	ND		19	250
Trichloroethene	ND		39	250
Trichlorofluoromethane	ND		35	250
1,2,3-Trichloropropane	ND		100	250
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		42	250
1,2,4-Trimethylbenzene	ND		13	250
1,3,5-Trimethylbenzene	ND		15	250
Vinyl chloride	ND		17	250

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	86	26 - 141
Dibromofluoromethane (Surr)	81	30 - 122
1,2-Dichloroethane-d4 (Surr)	90	39 - 128
Toluene-d8 (Surr)	83	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Control Sample - Batch: 240-214579

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-214579/2-A	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-214579	Lab File ID:	UX81730.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	01/21/2016 0705	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 1032				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	2000	1770	89	16 - 156	
Allyl chloride	1000	919	92	50 - 150	
Bromobenzene	1000	1020	102	72 - 120	
Bromochloromethane	1000	1050	105	56 - 128	
Bromodichloromethane	1000	919	92	28 - 123	
Benzene	1000	981	98	70 - 120	
Bromoform	1000	663	66	10 - 120	
Bromomethane	1000	597	60	10 - 120	
2-Butanone (MEK)	2000	1880	94	10 - 199	
Carbon disulfide	1000	680	68	10 - 132	
Carbon tetrachloride	1000	735	73	29 - 120	
Chlorobenzene	1000	988	99	71 - 120	
Chlorodibromomethane	1000	783	78	22 - 120	
Chloroethane	1000	577	58	10 - 120	
Chloroform	1000	1010	101	63 - 120	
Chloromethane	1000	765	76	25 - 120	
2-Chlorotoluene	1000	1010	101	68 - 122	
4-Chlorotoluene	1000	1040	104	68 - 122	
cis-1,2-Dichloroethene	1000	1010	101	60 - 125	
cis-1,3-Dichloropropene	1000	902	90	25 - 120	
Cyclohexane	1000	903	90	40 - 120	
1,2-Dibromo-3-Chloropropane	1000	620	62	10 - 129	
1,2-Dibromoethane	1000	1010	101	47 - 123	
Dibromomethane	1000	1020	102	68 - 120	
1,2-Dichlorobenzene	1000	953	95	68 - 120	
1,3-Dichlorobenzene	1000	963	96	66 - 121	
1,4-Dichlorobenzene	1000	946	95	65 - 120	
Dichlorodifluoromethane	1000	501	50	10 - 120	
1,1-Dichloroethane	1000	968	97	63 - 120	
1,2-Dichloroethane	1000	1020	102	68 - 120	
1,1-Dichloroethene	1000	855	85	44 - 143	
Dichlorofluoromethane	1000	856	86	40 - 160	
1,2-Dichloropropane	1000	1040	104	73 - 120	
1,3-Dichloropropane	1000	1030	103	74 - 120	
2,2-Dichloropropane	1000	604	60	25 - 123	
1,1-Dichloropropene	1000	982	98	60 - 123	
Ethylbenzene	1000	1000	100	66 - 120	
Ethyl ether	1000	957	96	70 - 130	
Hexachlorobutadiene	1000	871	87	34 - 135	
2-Hexanone	2000	1870	94	43 - 130	
Isopropylbenzene	1000	1030	103	61 - 123	

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Control Sample - Batch: 240-214579

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 240-214579/2-A	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-214579	Lab File ID:	UX81730.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.00 g
Analysis Date:	01/21/2016 0705	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 1032				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	5000	4990	100	44 - 173	
Methylcyclohexane	1000	940	94	41 - 133	
Methylene Chloride	1000	1020	102	27 - 172	
4-Methyl-2-pentanone (MIBK)	2000	1970	99	49 - 121	
Methyl tert butyl ether	1000	959	96	34 - 157	
m-Xylene & p-Xylene	1000	1010	101	67 - 120	
Naphthalene	1000	831	83	37 - 126	
n-Butylbenzene	1000	940	94	51 - 137	
N-Propylbenzene	1000	1020	102	64 - 130	
o-Xylene	1000	1050	105	68 - 120	
p-Isopropyltoluene	1000	1020	102	56 - 136	
sec-Butylbenzene	1000	1020	102	58 - 131	
Styrene	1000	1050	105	60 - 120	
tert-Butylbenzene	1000	981	98	58 - 128	
1,1,1,2-Tetrachloroethane	1000	917	92	27 - 121	
1,1,2,2-Tetrachloroethane	1000	962	96	54 - 121	
Tetrachloroethene	1000	925	93	58 - 131	
Tetrahydrofuran	2000	1830	91	70 - 130	
Toluene	1000	931	93	66 - 123	
trans-1,2-Dichloroethene	1000	965	96	58 - 121	
trans-1,3-Dichloropropene	1000	834	83	22 - 122	
1,2,3-Trichlorobenzene	1000	848	85	43 - 129	
1,2,4-Trichlorobenzene	1000	867	87	41 - 135	
1,1,1-Trichloroethane	1000	843	84	38 - 122	
1,1,2-Trichloroethane	1000	1030	103	74 - 120	
Trichloroethene	1000	979	98	59 - 124	
Trichlorofluoromethane	1000	756	76	17 - 145	
1,2,3-Trichloropropane	1000	940	94	74 - 124	
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	824	82	48 - 151	
1,2,4-Trimethylbenzene	1000	1030	103	62 - 133	
1,3,5-Trimethylbenzene	1000	1020	102	60 - 130	
Vinyl chloride	1000	774	77	33 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	91	26 - 141
Dibromofluoromethane (Surr)	90	30 - 122
1,2-Dichloroethane-d4 (Surr)	94	39 - 128
Toluene-d8 (Surr)	87	33 - 134

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-214579

Method: 8260B
Preparation: 5035

MS Lab Sample ID:	240-60024-B-3-C MS	Analysis Batch:	240-214661	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-214579	Lab File ID:	UX81711.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.65 g
Analysis Date:	01/20/2016 1058			Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 1032				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-60024-B-3-D MSD	Analysis Batch:	240-214661	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-214579	Lab File ID:	UX81712.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.01 g
Analysis Date:	01/20/2016 1120			Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 1032				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acetone	68	69	10 - 142	13	30		
Bromodichloromethane	59	60	18 - 133	14	30		
Benzene	58	63	10 - 199	15	30		
Bromoform	50	48	10 - 147	8	30		
Bromomethane	22	23	10 - 151	17	30	J	J
2-Butanone (MEK)	79	85	10 - 172	18	30		
Carbon disulfide	10	12	10 - 155	35	30	J	J F2
Carbon tetrachloride	40	43	12 - 135	19	30		
Chlorobenzene	63	66	47 - 120	16	30		
Chlorodibromomethane	56	63	10 - 128	25	30		
Chloroethane	37	36	10 - 168	10	30		
Chloroform	65	67	51 - 120	15	30		
Chloromethane	46	48	16 - 120	15	30		
cis-1,2-Dichloroethene	63	66	34 - 137	17	30		
cis-1,3-Dichloropropene	56	59	19 - 121	18	30		
Cyclohexane	48	58	10 - 154	23	30		
1,2-Dibromo-3-Chloropropane	76	51	10 - 137	28	30		
1,2-Dibromoethane	68	72	32 - 127	19	30		
1,2-Dichlorobenzene	58	62	27 - 126	18	30		
1,3-Dichlorobenzene	54	57	29 - 124	17	30		
1,4-Dichlorobenzene	53	57	30 - 123	20	30		
Dichlorodifluoromethane	24	24	10 - 120	15	30	J	J
1,1-Dichloroethane	67	71	18 - 160	17	30		
1,2-Dichloroethane	71	73	25 - 150	15	30		
1,1-Dichloroethene	45	51	10 - 179	24	30		
1,2-Dichloropropane	82	85	58 - 120	15	30		
Ethylbenzene	53	58	27 - 143	13	30		
2-Hexanone	96	103	21 - 141	19	30		
Isopropylbenzene	58	61	39 - 126	16	30		
Methyl acetate	91	94	10 - 175	14	30		
Methylcyclohexane	48	62	11 - 156	20	30		
Methylene Chloride	39	43	10 - 148	21	30		

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-214579

Method: 8260B
Preparation: 5035

MS Lab Sample ID:	240-60024-B-3-C MS	Analysis Batch:	240-214661	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-214579	Lab File ID:	UX81711.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.65 g
Analysis Date:	01/20/2016 1058			Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 1032				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-60024-B-3-D MSD	Analysis Batch:	240-214661	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	240-214579	Lab File ID:	UX81712.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.01 g
Analysis Date:	01/20/2016 1120			Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 1032				5 mL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4-Methyl-2-pentanone (MIBK)	84	92	19 - 151	22	30		
Methyl tert butyl ether	60	64	26 - 159	18	30		
m-Xylene & p-Xylene	36	50	14 - 151	12	30		
o-Xylene	54	61	18 - 151	14	30		
Styrene	68	70	31 - 137	15	30		
1,1,2,2-Tetrachloroethane	17	21	16 - 158	30	30	J	J
Tetrachloroethene	53	56	19 - 153	17	30		
Toluene	32	43	10 - 168	11	30		
trans-1,2-Dichloroethene	53	56	40 - 126	19	30		
trans-1,3-Dichloropropene	46	48	10 - 136	18	30		
1,2,4-Trichlorobenzene	47	48	10 - 136	14	30		
1,1,1-Trichloroethane	47	50	10 - 159	19	30		
1,1,2-Trichloroethane	85	85	34 - 152	12	30		
Trichloroethene	89	94	10 - 193	18	30		
Trichlorofluoromethane	41	44	10 - 157	17	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	40	41	23 - 168	14	30		
Vinyl chloride	47	48	15 - 123	15	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	59	63	26 - 141
Dibromofluoromethane (Surr)	58	62	30 - 122
1,2-Dichloroethane-d4 (Surr)	64	68	39 - 128
Toluene-d8 (Surr)	64	67	33 - 134

Method Reporting Limit Check - Batch: 240-214849 **Method: 8260B**
Preparation: N/A

Lab Sample ID:	MRL 240-214849/14	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX81727.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/21/2016 0601	Units:	ng/uL	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	0.0100	0.00992	99	10 - 150	J
Allyl chloride	0.00500	0.00468	94	10 - 150	
Bromobenzene	0.00500	0.00523	105	10 - 150	
Bromochloromethane	0.00500	0.00530	106	10 - 150	
Bromodichloromethane	0.00500	0.00461	92	10 - 150	
Benzene	0.00500	0.00515	103	10 - 150	
Bromoform	0.00500	0.00441	88	10 - 150	
Bromomethane	0.00500	0.00523	105	10 - 150	
2-Butanone (MEK)	0.0100	0.0103	103	10 - 150	
Carbon disulfide	0.00500	0.00452	90	10 - 150	
Carbon tetrachloride	0.00500	0.00436	87	10 - 150	
Chlorobenzene	0.00500	0.00529	106	10 - 150	
Chlorodibromomethane	0.00500	0.00449	90	10 - 150	
Chloroethane	0.00500	0.00551	110	10 - 150	
Chloroform	0.00500	0.00510	102	10 - 150	
Chloromethane	0.00500	0.00489	98	10 - 150	
2-Chlorotoluene	0.00500	0.00526	105	10 - 150	
4-Chlorotoluene	0.00500	0.00538	108	10 - 150	
cis-1,2-Dichloroethene	0.00500	0.00511	102	10 - 150	
cis-1,3-Dichloropropene	0.00500	0.00433	87	10 - 150	
Cyclohexane	0.00500	0.00523	105	10 - 150	
1,2-Dibromo-3-Chloropropane	0.00500	0.00580	116	10 - 150	
1,2-Dibromoethane	0.00500	0.00504	101	10 - 150	
Dibromomethane	0.00500	0.00512	102	10 - 150	
1,2-Dichlorobenzene	0.00500	0.00497	99	10 - 150	
1,3-Dichlorobenzene	0.00500	0.00521	104	10 - 150	
1,4-Dichlorobenzene	0.00500	0.00513	103	10 - 150	
Dichlorodifluoromethane	0.00500	0.00486	97	10 - 150	
1,1-Dichloroethane	0.00500	0.00521	104	10 - 150	
1,2-Dichloroethane	0.00500	0.00538	108	10 - 150	
1,1-Dichloroethene	0.00500	0.00501	100	10 - 150	
Dichlorofluoromethane	0.00500	0.00490	98	10 - 150	
1,2-Dichloropropane	0.00500	0.00513	103	10 - 150	
1,3-Dichloropropane	0.00500	0.00507	101	10 - 150	
2,2-Dichloropropane	0.00500	0.00415	83	10 - 150	
1,1-Dichloropropene	0.00500	0.00501	100	10 - 150	
Ethylbenzene	0.00500	0.00508	102	10 - 150	
Ethyl ether	0.00500	0.00513	103	10 - 150	
Hexachlorobutadiene	0.00500	0.00483	97	10 - 150	
2-Hexanone	0.0100	0.0100	100	10 - 150	
Isopropylbenzene	0.00500	0.00532	106	10 - 150	

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Reporting Limit Check - Batch: 240-214849 **Method: 8260B**
Preparation: N/A

Lab Sample ID:	MRL 240-214849/14	Analysis Batch:	240-214849	Instrument ID:	A3UX8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	UX81727.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/21/2016 0601	Units:	ng/uL	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methyl acetate	0.0250	0.0257	103	10 - 150	
Methylcyclohexane	0.00500	0.00520	104	10 - 150	
Methylene Chloride	0.00500	0.00539	108	10 - 150	
4-Methyl-2-pentanone (MIBK)	0.0100	0.0100	100	10 - 150	
Methyl tert butyl ether	0.00500	0.00514	103	10 - 150	
m-Xylene & p-Xylene	0.00500	0.00519	104	10 - 150	
Naphthalene	0.00500	0.00422	84	10 - 150	
n-Butylbenzene	0.00500	0.00478	96	10 - 150	
N-Propylbenzene	0.00500	0.00516	103	10 - 150	
o-Xylene	0.00500	0.00534	107	10 - 150	
p-Isopropyltoluene	0.00500	0.00513	103	10 - 150	
sec-Butylbenzene	0.00500	0.00524	105	10 - 150	
Styrene	0.00500	0.00495	99	10 - 150	
tert-Butylbenzene	0.00500	0.00493	99	10 - 150	
1,1,1,2-Tetrachloroethane	0.00500	0.00466	93	10 - 150	
1,1,2,2-Tetrachloroethane	0.00500	0.00502	100	10 - 150	
Tetrachloroethene	0.00500	0.00492	98	10 - 150	
Tetrahydrofuran	0.0100	0.00995	100	10 - 150	
Toluene	0.00500	0.00527	105	10 - 150	
trans-1,2-Dichloroethene	0.00500	0.00518	104	10 - 150	
trans-1,3-Dichloropropene	0.00500	0.00481	96	10 - 150	
1,2,3-Trichlorobenzene	0.00500	0.00479	96	10 - 150	
1,2,4-Trichlorobenzene	0.00500	0.00474	95	10 - 150	
1,1,1-Trichloroethane	0.00500	0.00505	101	10 - 150	
1,1,2-Trichloroethane	0.00500	0.00555	111	10 - 150	
Trichloroethene	0.00500	0.00488	98	10 - 150	
Trichlorofluoromethane	0.00500	0.00469	94	10 - 150	
1,2,3-Trichloropropane	0.00500	0.00501	100	10 - 150	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.00500	0.00426	85	10 - 150	
1,2,4-Trimethylbenzene	0.00500	0.00513	103	10 - 150	
1,3,5-Trimethylbenzene	0.00500	0.00513	103	10 - 150	
Vinyl chloride	0.00500	0.00479	96	10 - 150	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	94	10 - 150
Dibromofluoromethane (Surr)	92	10 - 150
1,2-Dichloroethane-d4 (Surr)	93	10 - 150
Toluene-d8 (Surr)	91	10 - 150

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Blank - Batch: 240-215476

Method: 8260B
Preparation: 5030B
TCLP

Lab Sample ID:	LB 240-215408/1-A	Analysis Batch:	240-215476	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248744.D
Dilution:	1.0	Leach Batch:	240-215408	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/26/2016 2030	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/26/2016 2030				
Leach Date:	01/25/2016 1820				

Analyte	Result	Qual	MDL	RL
Benzene	ND		6.5	25
2-Butanone (MEK)	ND		29	250
Carbon tetrachloride	ND		6.5	25
Chlorobenzene	ND		7.5	25
Chloroform	ND		8.0	25
1,2-Dichloroethane	ND		11	25
1,1-Dichloroethene	ND		9.5	25
Tetrachloroethene	ND		15	25
Trichloroethene	ND		8.5	25
Vinyl chloride	ND		11	25

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	75	70 - 124
Dibromofluoromethane (Surr)	94	80 - 128
1,2-Dichloroethane-d4 (Surr)	88	80 - 121
Toluene-d8 (Surr)	92	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Control Sample - Batch: 240-215476

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-215476/13	Analysis Batch:	240-215476	Instrument ID:	A3UX12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	U1248745.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/26/2016 2053	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/26/2016 2053				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	1000	1040	104	80 - 120	
2-Butanone (MEK)	2000	1760	88	49 - 120	
Carbon tetrachloride	1000	707	71	54 - 122	
Chlorobenzene	1000	1070	107	80 - 120	
Chloroform	1000	1050	105	80 - 123	
1,2-Dichloroethane	1000	1060	106	80 - 120	
1,1-Dichloroethene	1000	990	99	71 - 133	
Tetrachloroethene	1000	1060	106	79 - 134	
Trichloroethene	1000	1180	118	78 - 130	
Vinyl chloride	1000	882	88	56 - 120	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	79	70 - 124
Dibromofluoromethane (Surr)	98	80 - 128
1,2-Dichloroethane-d4 (Surr)	94	80 - 121
Toluene-d8 (Surr)	96	80 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-215476

Method: 8260B
Preparation: 5030B
TCLP

MS Lab Sample ID:	240-60024-H-6-B MS	Analysis Batch:	240-215476	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248757.D
Dilution:	1.0	Leach Batch:	240-215408	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/27/2016 0133			Final Weight/Volume:	5 mL
Prep Date:	01/27/2016 0133				5 mL
Leach Date:	01/25/2016 1820				

MSD Lab Sample ID:	240-60024-H-6-B MSD	Analysis Batch:	240-215476	Instrument ID:	A3UX12
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	U1248758.D
Dilution:	1.0	Leach Batch:	240-215408	Initial Weight/Volume:	0.1 mL
Analysis Date:	01/27/2016 0157			Final Weight/Volume:	5 mL
Prep Date:	01/27/2016 0157				5 mL
Leach Date:	01/25/2016 1820				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	87	85	80 - 120	2	30		
2-Butanone (MEK)	74	70	49 - 120	5	30		
Carbon tetrachloride	57	58	60 - 120	1	30	F1	F1
Chlorobenzene	92	89	80 - 120	3	30		
Chloroform	90	83	80 - 124	9	30		
1,2-Dichloroethane	90	87	80 - 120	3	30		
1,1-Dichloroethene	90	90	67 - 139	0	30		
Tetrachloroethene	89	88	74 - 138	1	30		
Trichloroethene	168	164	75 - 134	2	30	F1	F1
Vinyl chloride	79	81	51 - 120	3	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	86	82	70 - 124
Dibromofluoromethane (Surr)	96	90	80 - 128
1,2-Dichloroethane-d4 (Surr)	89	89	80 - 121
Toluene-d8 (Surr)	98	93	80 - 120

Method Blank - Batch: 240-214385

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-214385/11-A	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214385	Lab File ID:	60122008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/22/2016 1146	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	ND		3.5	330
2,2'-oxybis[1-chloropropane]	ND		9.5	330
2,4-Dichlorophenol	ND		20	330
2,4-Dimethylphenol	ND		20	330
2,4-Dinitrophenol	ND		21	1600
2,4-Dinitrotoluene	ND		17	330
2,6-Dinitrotoluene	ND		21	330
2-Chloronaphthalene	ND		0.45	330
2,4,5-Trichlorophenol	ND		25	330
2-Chlorophenol	ND		8.2	330
2,4,6-Trichlorophenol	ND		8.9	330
2-Methylnaphthalene	ND		0.50	330
2-Methylphenol	ND		11	330
2-Nitroaniline	ND		9.1	1600
2-Nitrophenol	ND		8.3	330
3,3'-Dichlorobenzidine	ND		18	1600
3-Nitroaniline	ND		16	1600
4,6-Dinitro-2-methylphenol	ND		9.2	1600
4-Bromophenyl phenyl ether	ND		13	330
4-Chloro-3-methylphenol	ND		21	330
4-Chloroaniline	ND		17	330
4-Chlorophenyl phenyl ether	ND		13	330
4-Nitroaniline	ND		26	1600
4-Nitrophenol	ND		17	1600
Acenaphthene	ND		0.76	330
Acenaphthylene	ND		0.35	330
Acetophenone	ND		9.2	330
Anthracene	ND		0.78	330
Atrazine	ND		9.1	330
Benzaldehyde	ND		12	330
Benzo[a]anthracene	ND		0.63	330
Benzo[a]pyrene	ND		0.64	330
Benzo[b]fluoranthene	ND		0.59	330
Benzo[g,h,i]perylene	ND		0.35	330
Benzo[k]fluoranthene	ND		0.68	330
Bis(2-chloroethoxy)methane	ND		22	330
Bis(2-chloroethyl)ether	ND		2.0	330
Bis(2-ethylhexyl) phthalate	ND		19	330
Butyl benzyl phthalate	ND		10	330
Caprolactam	ND		37	330
Carbazole	ND		27	330
Chrysene	ND		1.1	330
Dibenz(a,h)anthracene	ND		0.66	330
Dibenzofuran	ND		0.66	330
Diethyl phthalate	ND		16	330

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Blank - Batch: 240-214385

Method: 8270C
Preparation: 3540C

Lab Sample ID:	MB 240-214385/11-A	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214385	Lab File ID:	60122008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/22/2016 1146	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dimethyl phthalate	ND		17	330
Di-n-butyl phthalate	ND		15	330
Di-n-octyl phthalate	ND		7.9	330
Fluoranthene	ND		0.55	330
Fluorene	ND		0.53	330
Hexachlorobenzene	ND		2.1	330
Hexachlorobutadiene	ND		5.6	330
Hexachlorocyclopentadiene	ND		8.1	1600
Hexachloroethane	ND		9.0	330
Indeno[1,2,3-cd]pyrene	ND		0.35	330
Isophorone	ND		13	330
Naphthalene	ND		0.82	330
Nitrobenzene	ND		2.2	330
N-Nitrosodi-n-propylamine	ND		6.3	330
N-Nitrosodiphenylamine	ND		21	330
Pentachlorophenol	ND		9.1	330
Phenol	ND		7.3	330
Phenanthrene	ND		0.73	330
Pyrene	ND		0.44	330
3 & 4 Methylphenol	ND		20	400

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	82	24 - 110
2-Fluorophenol (Surr)	78	24 - 110
Nitrobenzene-d5 (Surr)	77	20 - 110
Phenol-d5 (Surr)	84	26 - 110
Terphenyl-d14 (Surr)	84	36 - 110
2,4,6-Tribromophenol (Surr)	44	10 - 110

Lab Control Sample - Batch: 240-214385

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-214385/12-A	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214385	Lab File ID:	60122009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/22/2016 1209	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	667	491	74	35 - 110	
2,2'-oxybis[1-chloropropane]	667	344	52	29 - 110	
2,4-Dichlorophenol	667	490	74	39 - 110	
2,4-Dimethylphenol	667	318	48	29 - 110	J
2,4-Dinitrophenol	1330	454	34	10 - 110	J
2,4-Dinitrotoluene	667	547	82	48 - 110	
2,6-Dinitrotoluene	667	548	82	45 - 110	
2-Chloronaphthalene	667	487	73	32 - 110	
2,4,5-Trichlorophenol	667	449	67	25 - 110	
2-Chlorophenol	667	526	79	37 - 110	
2,4,6-Trichlorophenol	667	420	63	12 - 110	
2-Methylnaphthalene	667	505	76	36 - 110	
2-Methylphenol	667	489	73	41 - 110	
2-Nitroaniline	667	449	67	45 - 110	J
2-Nitrophenol	667	496	74	34 - 110	
3,3'-Dichlorobenzidine	1330	905	68	28 - 110	J
3-Nitroaniline	667	540	81	44 - 110	J
4,6-Dinitro-2-methylphenol	1330	881	66	10 - 110	J
4-Bromophenyl phenyl ether	667	573	86	39 - 110	
4-Chloro-3-methylphenol	667	479	72	48 - 110	
4-Chloroaniline	667	417	63	30 - 110	
4-Chlorophenyl phenyl ether	667	507	76	40 - 110	
4-Nitroaniline	667	496	74	48 - 110	J
4-Nitrophenol	1330	772	58	28 - 110	J
Acenaphthene	667	498	75	38 - 110	
Acenaphthylene	667	472	71	40 - 110	
Acetophenone	667	495	74	40 - 110	
Anthracene	667	541	81	48 - 110	
Atrazine	1330	1240	93	54 - 120	
Benzaldehyde	1330	1150	86	32 - 110	
Benzo[a]anthracene	667	555	83	50 - 110	
Benzo[a]pyrene	667	557	84	44 - 110	
Benzo[b]fluoranthene	667	568	85	43 - 110	
Benzo[g,h,i]perylene	667	620	93	51 - 110	
Benzo[k]fluoranthene	667	583	87	38 - 105	
Bis(2-chloroethoxy)methane	667	551	83	32 - 110	
Bis(2-chloroethyl)ether	667	656	98	34 - 110	
Bis(2-ethylhexyl) phthalate	667	529	79	50 - 110	
Butyl benzyl phthalate	667	498	75	51 - 110	
Caprolactam	1330	1220	91	44 - 114	
Carbazole	667	632	95	50 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Control Sample - Batch: 240-214385

Method: 8270C
Preparation: 3540C

Lab Sample ID:	LCS 240-214385/12-A	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214385	Lab File ID:	60122009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/22/2016 1209	Units:	ug/Kg	Final Weight/Volume:	2 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	667	574	86	50 - 110	
Dibenz(a,h)anthracene	667	607	91	51 - 110	
Dibenzofuran	667	519	78	43 - 110	
Diethyl phthalate	667	489	73	52 - 110	
Dimethyl phthalate	667	519	78	50 - 110	
Di-n-butyl phthalate	667	574	86	51 - 110	
Di-n-octyl phthalate	667	488	73	48 - 110	
Fluoranthene	667	578	87	51 - 110	
Fluorene	667	507	76	46 - 110	
Hexachlorobenzene	667	590	88	43 - 110	
Hexachlorobutadiene	667	464	70	29 - 110	
Hexachlorocyclopentadiene	667	324	49	12 - 110	J
Hexachloroethane	667	483	72	30 - 110	
Indeno[1,2,3-cd]pyrene	667	612	92	50 - 110	
Isophorone	667	542	81	36 - 110	
Naphthalene	667	512	77	36 - 110	
Nitrobenzene	667	489	73	32 - 110	
N-Nitrosodi-n-propylamine	667	534	80	38 - 110	
N-Nitrosodiphenylamine	1330	1150	87	46 - 110	
Pentachlorophenol	1330	848	64	10 - 110	
Phenol	667	547	82	38 - 110	
Phenanthrene	667	555	83	49 - 110	
Pyrene	667	540	81	49 - 110	
3 & 4 Methylphenol	667	487	73	40 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	77	24 - 110
2-Fluorophenol (Surr)	88	24 - 110
Nitrobenzene-d5 (Surr)	73	20 - 110
Phenol-d5 (Surr)	85	26 - 110
Terphenyl-d14 (Surr)	81	36 - 110
2,4,6-Tribromophenol (Surr)	63	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-214385

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59997-3	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214385	Lab File ID:	60122026.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	29.66 g
Analysis Date:	01/22/2016 1835			Final Weight/Volume:	6 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59997-3	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214385	Lab File ID:	60122027.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	29.74 g
Analysis Date:	01/22/2016 1858			Final Weight/Volume:	9 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	292	328	32 - 110	11	32	J F1	J F1
2,2'-oxybis[1-chloropropane]	NC	NC	11 - 110	NC	42		
2,4-Dichlorophenol	NC	NC	10 - 110	NC	34		
2,4-Dimethylphenol	NC	NC	10 - 110	NC	31		
2,4-Dinitrophenol	NC	NC	10 - 110	NC	99		
2,4-Dinitrotoluene	NC	NC	32 - 110	9	30	J	J
2,6-Dinitrotoluene	NC	NC	35 - 110	NC	30		
2-Chloronaphthalene	123	91	28 - 110	30	30	J F1	J
2,4,5-Trichlorophenol	NC	NC	10 - 117	NC	99		
2-Chlorophenol	0	NC	10 - 110	NC	47	F1	
2,4,6-Trichlorophenol	NC	NC	10 - 110	NC	38	J	
2-Methylnaphthalene	2227	1501	10 - 133	29	42	J 4	J 4
2-Methylphenol	NC	NC	24 - 110	NC	51	J	
2-Nitroaniline	NC	NC	39 - 110	NC	31		
2-Nitrophenol	0	NC	10 - 110	NC	49	F1	
3,3'-Dichlorobenzidine	0	NC	10 - 110	NC	56	F1	
3-Nitroaniline	NC	NC	10 - 110	NC	30		
4,6-Dinitro-2-methylphenol	0	0	10 - 110	NC	55	F1	F1
4-Bromophenyl phenyl ether	NC	NC	33 - 110	NC	30		
4-Chloro-3-methylphenol	NC	NC	25 - 110	NC	54		
4-Chloroaniline	NC	NC	10 - 110	NC	36		
4-Chlorophenyl phenyl ether	NC	NC	32 - 110	NC	30		
4-Nitroaniline	NC	NC	10 - 110	NC	48		
4-Nitrophenol	0	NC	10 - 113	NC	49	F1	
Acenaphthene	141	170	22 - 110	18	99	J F1	J F1
Acenaphthylene	108	111	24 - 110	2	99	J	J F1
Acetophenone	NC	NC	31 - 110	NC	43		
Anthracene	96	79	20 - 110	20	99	J	J
Atrazine	101	91	45 - 118	11	30	J	J
Benzaldehyde	0	0	23 - 110	NC	42	F1	F1
Benzo[a]anthracene	108	104	10 - 122	4	99	J	J
Benzo[a]pyrene	87	92	10 - 110	5	99	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-214385

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59997-3	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214385	Lab File ID:	60122026.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	29.66 g
Analysis Date:	01/22/2016 1835			Final Weight/Volume:	6 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59997-3	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214385	Lab File ID:	60122027.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	29.74 g
Analysis Date:	01/22/2016 1858			Final Weight/Volume:	9 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzo[b]fluoranthene	94	93	12 - 118	1	99	J	J
Benzo[g,h,i]perylene	61	58	10 - 117	6	99	J	J
Benzo[k]fluoranthene	99	92	10 - 121	7	99	J	J
Bis(2-chloroethoxy)methane	NC	NC	26 - 110	NC	37		
Bis(2-chloroethyl)ether	100	0	21 - 110	NC	55	J	F1
Bis(2-ethylhexyl) phthalate	NC	NC	40 - 110	21	30	J	J
Butyl benzyl phthalate	NC	NC	44 - 110	NC	30	J	
Caprolactam	NC	NC	10 - 134	14	32	J	J
Carbazole	NC	NC	34 - 110	NC	30		
Chrysene	156	136	10 - 125	14	99	J F1	J F1
Dibenz(a,h)anthracene	68	49	14 - 113	33	99	J	J
Dibenzofuran	176	178	29 - 110	1	30	J F1	J F1
Diethyl phthalate	NC	NC	42 - 110	NC	30		
Dimethyl phthalate	NC	NC	41 - 110	NC	30		
Di-n-butyl phthalate	NC	NC	43 - 110	NC	30	J	
Di-n-octyl phthalate	0	NC	24 - 119	NC	30	F1	
Fluoranthene	142	136	10 - 110	4	99	J F1	J F1
Fluorene	145	153	23 - 110	5	99	J F1	J F1
Hexachlorobenzene	91	108	34 - 110	16	30	J	J
Hexachlorobutadiene	81	0	25 - 110	NC	34	J	F1
Hexachlorocyclopentadiene	0	NC	10 - 110	NC	79	F1	
Hexachloroethane	NC	NC	12 - 110	NC	50		
Indeno[1,2,3-cd]pyrene	65	51	10 - 114	25	99	J	J
Isophorone	NC	NC	29 - 110	NC	38		
Naphthalene	23428	24301	10 - 111	3	99	E 4	E 4
Nitrobenzene	0	0	23 - 110	NC	41	F1	F1
N-Nitrosodi-n-propylamine	0	NC	26 - 110	NC	42	F1	
N-Nitrosodiphenylamine	NC	NC	22 - 110	NC	30	J	
Pentachlorophenol	78	0	10 - 110	NC	50	J	F1
Phenol	385	NC	17 - 110	NC	53	J F1	
Phenanthrene	200	161	10 - 166	14	99	J F1	J
Pyrene	119	102	10 - 147	15	99	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-214385

Method: 8270C
Preparation: 3540C

MS Lab Sample ID:	240-59997-3	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214385	Lab File ID:	60122026.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	29.66 g
Analysis Date:	01/22/2016 1835			Final Weight/Volume:	6 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-59997-3	Analysis Batch:	240-215094	Instrument ID:	A4HP7
Client Matrix:	Solid	Prep Batch:	240-214385	Lab File ID:	60122027.D
Dilution:	25	Leach Batch:	N/A	Initial Weight/Volume:	29.74 g
Analysis Date:	01/22/2016 1858			Final Weight/Volume:	9 mL
Prep Date:	01/18/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
3 & 4 Methylphenol	NC	NC	25 - 110	NC	50	J	

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
2-Fluorobiphenyl (Surr)	73		93		24 - 110
2-Fluorophenol (Surr)	0	X	0	X	24 - 110
Nitrobenzene-d5 (Surr)	0	X	0	X	20 - 110
Phenol-d5 (Surr)	0	X	0	X	26 - 110
Terphenyl-d14 (Surr)	96		85		36 - 110
2,4,6-Tribromophenol (Surr)	0	X	0	X	10 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Blank - Batch: 240-215452

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-215452/11-A	Analysis Batch:	240-215662	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-215452	Lab File ID:	60128003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	01/28/2016 0819	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	01/26/2016 1211			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,4-Dichlorobenzene	ND		0.00034	0.0040
2,4-Dinitrotoluene	ND		0.00025	0.0040
Pyridine	ND		0.00035	0.0040
2,4,5-Trichlorophenol	ND		0.00030	0.0040
2,4,6-Trichlorophenol	ND		0.00024	0.0040
2-Methylphenol	0.00159	J	0.00017	0.0040
Hexachlorobenzene	ND		0.000085	0.00080
Hexachlorobutadiene	ND		0.00027	0.0040
Hexachloroethane	ND		0.00019	0.0040
Nitrobenzene	ND		0.000040	0.0040
Pentachlorophenol	ND		0.00027	0.016
3 & 4 Methylphenol	0.00153	J	0.00080	0.0040

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	88	30 - 110
2-Fluorophenol (Surr)	66	20 - 110
Nitrobenzene-d5 (Surr)	82	28 - 110
Phenol-d5 (Surr)	46	21 - 110
Terphenyl-d14 (Surr)	85	48 - 110
2,4,6-Tribromophenol (Surr)	88	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Control Sample - Batch: 240-215452

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-215452/12-A	Analysis Batch:	240-215662	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-215452	Lab File ID:	60128004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	01/28/2016 0844	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	01/26/2016 1211			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	0.0800	0.0681	85	52 - 110	
2,4-Dinitrotoluene	0.0800	0.0754	94	54 - 110	
Pyridine	0.0800	0.0478	60	30 - 110	
2,4,5-Trichlorophenol	0.0800	0.0745	93	51 - 110	
2,4,6-Trichlorophenol	0.0800	0.0746	93	46 - 110	
2-Methylphenol	0.0800	0.0694	87	44 - 111	
Hexachlorobenzene	0.0800	0.0840	105	50 - 110	
Hexachlorobutadiene	0.0800	0.0704	88	34 - 110	
Hexachloroethane	0.0800	0.0665	83	41 - 110	
Nitrobenzene	0.0800	0.0771	96	40 - 110	
Pentachlorophenol	0.160	0.164	102	12 - 110	
3 & 4 Methylphenol	0.0800	0.0676	85	48 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	94	30 - 110
2-Fluorophenol (Surr)	80	20 - 110
Nitrobenzene-d5 (Surr)	97	28 - 110
Phenol-d5 (Surr)	60	21 - 110
Terphenyl-d14 (Surr)	90	48 - 110
2,4,6-Tribromophenol (Surr)	92	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike - Batch: 240-215452

Method: 8270C
Preparation: 3510C
TCLP

Lab Sample ID:	240-59997-1	Analysis Batch:	240-215662	Instrument ID:	A4HP9
Client Matrix:	Solid	Prep Batch:	240-215452	Lab File ID:	60128010.D
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	250 mL
Analysis Date:	01/28/2016 1117	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	01/26/2016 1211			Injection Volume:	1 uL
Leach Date:	01/25/2016 1645				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,4-Dichlorobenzene	ND	0.0800	0.0721	90	31 - 110	
2,4-Dinitrotoluene	ND	0.0800	0.0689	86	42 - 110	
Pyridine	0.0012 J	0.0800	0.0591	72	21 - 110	
2,4,5-Trichlorophenol	ND	0.0800	0.0686	86	41 - 110	
2,4,6-Trichlorophenol	ND	0.0800	0.0655	82	35 - 110	
2-Methylphenol	ND	0.0800	0.0688	86	33 - 112	
Hexachlorobenzene	ND	0.0800	0.0767	96	42 - 110	
Hexachlorobutadiene	ND	0.0800	0.0695	87	28 - 110	
Hexachloroethane	ND	0.0800	0.0700	87	26 - 110	
Nitrobenzene	ND	0.0800	0.0740	93	32 - 110	
Pentachlorophenol	ND	0.160	0.147	92	10 - 124	
3 & 4 Methylphenol	ND	0.0800	0.0674	84	29 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	86	30 - 110
2-Fluorophenol (Surr)	84	20 - 110
Nitrobenzene-d5 (Surr)	93	28 - 110
Phenol-d5 (Surr)	67	21 - 110
Terphenyl-d14 (Surr)	86	48 - 110
2,4,6-Tribromophenol (Surr)	85	23 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Blank - Batch: 240-214558 **Method: WI-GRO**
Preparation: 5035

Lab Sample ID:	MB 240-214558/1-A	Analysis Batch:	240-214744	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-214558	Lab File ID:	Y0012004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/20/2016 1124	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		2.0	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-214558 **Method: WI-GRO**
Preparation: 5035

LCS Lab Sample ID:	LCS 240-214558/2-A	Analysis Batch:	240-214744	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-214558	Lab File ID:	Y0012005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/20/2016 1158	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-214558/19-A	Analysis Batch:	240-214744	Instrument ID:	YPID
Client Matrix:	Solid	Prep Batch:	240-214558	Lab File ID:	Y0012023.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/20/2016 2229	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	01/19/2016 0857			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	91	99	80 - 120	9	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Blank - Batch: 240-214526

Method: WI-DRO
Preparation: WI DRO PREP

Lab Sample ID:	MB 240-214526/15-A	Analysis Batch:	240-215139	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-214526	Lab File ID:	P14R012220.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 g
Analysis Date:	01/22/2016 1701	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	2.65	J	0.98	9.6

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-214526

Method: WI-DRO
Preparation: WI DRO PREP

LCS Lab Sample ID:	LCS 240-214526/16-A	Analysis Batch:	240-215139	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-214526	Lab File ID:	P14R012221.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 g
Analysis Date:	01/22/2016 1728	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-214526/17-A	Analysis Batch:	240-215287	Instrument ID:	A2HP14R
Client Matrix:	Solid	Prep Batch:	240-214526	Lab File ID:	P14R012508.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 g
Analysis Date:	01/25/2016 1427	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	01/19/2016 0726			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	113	111	70 - 120	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Blank - Batch: 240-214580

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 240-214580/1-A	Analysis Batch:	240-214773	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-214580	Lab File ID:	I9012016A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	01/20/2016 1113	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1034				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		5.8	20
Antimony	ND		0.48	1.0
Barium	ND		0.41	20
Beryllium	ND		0.026	0.50
Cadmium	0.0268	J	0.021	0.20
Calcium	ND		23	500
Chromium	ND		0.075	0.50
Cobalt	ND		0.047	5.0
Copper	ND		0.23	2.5
Iron	ND		3.2	10
Magnesium	5.31	J	5.2	500
Manganese	ND		0.084	1.5
Sodium	ND		19	500
Nickel	0.106	J	0.080	4.0
Potassium	ND		6.2	500
Silver	ND		0.063	0.50
Arsenic	ND		0.41	1.0
Lead	ND		0.20	0.30
Vanadium	0.352	J	0.20	5.0
Selenium	ND		0.34	0.50
Zinc	ND		0.56	2.0
Thallium	ND		0.13	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Control Sample - Batch: 240-214580

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 240-214580/2-A	Analysis Batch:	240-214773	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-214580	Lab File ID:	I9012016A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	01/20/2016 1118	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1034				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	196	98	80 - 120	
Antimony	50.0	49.8	100	80 - 120	
Barium	200	193	97	80 - 120	
Beryllium	5.00	4.82	96	80 - 120	
Cadmium	5.00	5.06	101	80 - 120	
Calcium	5000	4900	98	80 - 120	
Chromium	20.0	19.6	98	80 - 120	
Cobalt	50.0	47.5	95	80 - 120	
Copper	25.0	24.8	99	80 - 120	
Iron	100	98.8	99	80 - 120	
Magnesium	5000	4690	94	80 - 120	
Manganese	50.0	50.2	100	80 - 120	
Sodium	5000	4780	96	80 - 120	
Nickel	50.0	48.8	98	80 - 120	
Potassium	5000	4790	96	80 - 120	
Silver	5.00	4.97	99	80 - 120	
Arsenic	200	198	99	80 - 120	
Lead	50.0	48.1	96	80 - 120	
Vanadium	50.0	49.2	98	80 - 120	
Selenium	200	197	98	80 - 120	
Zinc	50.0	48.2	96	80 - 120	
Thallium	200	191	95	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-214580

Method: 6010B
Preparation: 3050B

MS Lab Sample ID: 240-59997-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 01/20/2016 1134
Prep Date: 01/19/2016 1034
Leach Date: N/A

Analysis Batch: 240-214773
Prep Batch: 240-214580
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9012016A.asc
Initial Weight/Volume: 1.40 g
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 240-59997-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 01/20/2016 1138
Prep Date: 01/19/2016 1034
Leach Date: N/A

Analysis Batch: 240-214773
Prep Batch: 240-214580
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9012016A.asc
Initial Weight/Volume: 1.40 g
Final Weight/Volume: 100 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	1117	1833	75 - 125	18	20	4	4
Antimony	46	-6	75 - 125	46	20	F1	F1 F2
Barium	-31	79	75 - 125	33	20	F1	F2
Beryllium	85	91	75 - 125	6	20		
Cadmium	87	90	75 - 125	2	20		
Calcium	-253	-426	75 - 125	29	20	4	4 F2
Chromium	90	88	75 - 125	1	20		
Cobalt	95	100	75 - 125	4	20		
Copper	-334	-1703	75 - 125	98	20	4	4 F2
Iron	1457	-234	75 - 125	10	20	4	4
Magnesium	70	47	75 - 125	11	20	F1	F1
Manganese	33	88	75 - 125	7	20	4	4
Sodium	87	89	75 - 125	3	20		
Nickel	122	104	75 - 125	7	20		
Potassium	91	110	75 - 125	17	20		
Silver	90	92	75 - 125	2	20		
Arsenic	85	87	75 - 125	1	20		
Vanadium	96	98	75 - 125	2	20		
Selenium	87	90	75 - 125	3	20		
Thallium	92	96	75 - 125	4	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-214580

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	240-59997-1	Analysis Batch:	240-214773	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-214580	Lab File ID:	I9012016A.asc
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	1.40 g
Analysis Date:	01/20/2016 1446			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1034				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59997-1	Analysis Batch:	240-214773	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-214580	Lab File ID:	I9012016A.asc
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	1.40 g
Analysis Date:	01/20/2016 1450			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1034				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Lead	-1054	-2240	75 - 125	49	20	4	4 F2
Zinc	-57	-768	75 - 125	38	20	4	4 F2

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Blank - Batch: 240-215399

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 240-215399/2-A	Analysis Batch:	240-215664	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-215399	Lab File ID:	I9012716B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1621	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 0920				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.00161	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	0.340	J	0.26	5.0
Chromium	0.00110	J	0.00055	0.50
Cobalt	ND		0.00056	0.050
Copper	ND		0.0019	1.0
Iron	0.0183	J	0.013	0.10
Magnesium	0.0835	J	0.055	5.0
Manganese	0.000763	J	0.00046	0.015
Nickel	ND		0.00076	0.040
Potassium	0.146	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	ND		0.0029	0.50
Lead	ND		0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	ND		0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

TCLP SPLPE Leachate Blank - Batch: 240-215399

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 240-215328/1-B	Analysis Batch:	240-215745	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-215399	Lab File ID:	I9012816A.asc
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/28/2016 1142	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 0920				
Leach Date:	01/25/2016 1645				

Analyte	Result	Qual	MDL	RL
Aluminum	ND		0.040	0.20
Antimony	ND		0.0024	0.30
Barium	0.0132	J	0.0010	10
Beryllium	ND		0.00013	0.0050
Cadmium	ND		0.00014	0.10
Calcium	ND		0.26	5.0
Chromium	0.00226	J	0.00055	0.50
Cobalt	0.000942	J	0.00056	0.050
Copper	0.00365	J	0.0019	1.0
Iron	0.0149	J	0.013	0.10
Magnesium	ND		0.055	5.0
Manganese	0.000623	J	0.00046	0.015
Nickel	0.00344	J	0.00076	0.040
Potassium	0.580	J	0.070	5.0
Silver	ND		0.00092	0.50
Arsenic	0.00673	J	0.0029	0.50
Lead	0.00240	J	0.0019	0.50
Vanadium	ND		0.0024	0.050
Selenium	0.00498	J	0.0040	0.25
Zinc	ND		0.0096	1.0
Thallium	ND		0.0017	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Lab Control Sample - Batch: 240-215399

Method: 6010B
Preparation: 3010A

Lab Sample ID:	LCS 240-215399/3-A	Analysis Batch:	240-215664	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-215399	Lab File ID:	I9012716B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1625	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 0920				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2.00	1.95	97	50 - 150	
Antimony	0.500	0.490	98	50 - 150	
Barium	2.00	1.96	98	50 - 150	J
Beryllium	0.0500	0.0504	101	50 - 150	
Cadmium	0.0500	0.0488	98	50 - 150	J
Calcium	50.0	48.2	96	50 - 150	
Chromium	0.200	0.193	97	50 - 150	J
Cobalt	0.500	0.490	98	50 - 150	
Copper	0.250	0.250	100	50 - 150	J
Iron	1.00	0.967	97	50 - 150	
Magnesium	50.0	46.4	93	50 - 150	
Manganese	0.500	0.480	96	50 - 150	
Nickel	0.500	0.499	100	50 - 150	
Potassium	50.0	53.5	107	50 - 150	
Silver	0.0500	0.0534	107	50 - 150	J
Arsenic	2.00	2.02	101	50 - 150	
Lead	0.500	0.435	87	50 - 150	J
Vanadium	0.500	0.494	99	50 - 150	
Selenium	2.00	2.09	104	50 - 150	
Zinc	0.500	0.532	106	50 - 150	J
Thallium	2.00	1.82	91	50 - 150	J

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-215399

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID: 240-59997-2
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 01/27/2016 1637
Prep Date: 01/26/2016 0920
Leach Date: 01/25/2016 1645

Analysis Batch: 240-215664
Prep Batch: 240-215399
Leach Batch: 240-215328

Instrument ID: I9
Lab File ID: I9012716B.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-59997-2
Client Matrix: Solid
Dilution: 5.0
Analysis Date: 01/27/2016 1649
Prep Date: 01/26/2016 0920
Leach Date: 01/25/2016 1645

Analysis Batch: 240-215664
Prep Batch: 240-215399
Leach Batch: 240-215328

Instrument ID: I9
Lab File ID: I9012716B.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	107	106	75 - 125	1	20		
Antimony	103	97	75 - 125	4	20	J	J
Barium	103	101	75 - 125	2	20	B	B
Beryllium	105	103	75 - 125	2	20		
Cadmium	105	104	75 - 125	1	20		
Calcium	105	94	75 - 125	3	20		
Chromium	102	100	75 - 125	3	20	B	B
Cobalt	104	102	75 - 125	2	20	B	B
Copper	103	102	75 - 125	1	20	J B	J B
Iron	108	89	75 - 125	3	20	4 B	4 B
Magnesium	100	99	75 - 125	1	20		
Manganese	104	95	75 - 125	2	20	B	B
Nickel	104	98	75 - 125	2	20	B	B
Potassium	103	101	75 - 125	2	20	B	B
Silver	109	106	75 - 125	2	20	J	J
Arsenic	106	103	75 - 125	3	20	B	B
Lead	105	96	75 - 125	3	20	B	B
Vanadium	107	102	75 - 125	5	20		
Selenium	107	104	75 - 125	3	20	J B	J B
Thallium	101	98	75 - 125	2	20	J	J

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-215399

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	240-59997-2	Analysis Batch:	240-215745	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-215399	Lab File ID:	I9012816A.asc
Dilution:	10	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/28/2016 1155			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 0920				
Leach Date:	01/25/2016 1645				

MSD Lab Sample ID:	240-59997-2	Analysis Batch:	240-215745	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-215399	Lab File ID:	I9012816A.asc
Dilution:	10	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/28/2016 1159			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 0920				
Leach Date:	01/25/2016 1645				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Zinc	-14	-323	75 - 125	3	20	4	4

TCLP SPLPE Leachate Blank - Batch: 240-215400

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 240-215328/1-C	Analysis Batch:	240-215579	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-215400	Lab File ID:	012716AH4.PRN
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1142	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 1130				
Leach Date:	01/25/2016 1645				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Method Blank - Batch: 240-215400

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-215400/2-A	Analysis Batch:	240-215579	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-215400	Lab File ID:	012716AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1144	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 1130				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000090	0.0020

Lab Control Sample - Batch: 240-215400

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-215400/3-A	Analysis Batch:	240-215579	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-215400	Lab File ID:	012716AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1147	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 1130				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00540	108	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-215400

Method: 7470A
Preparation: 7470A
TCLP

MS Lab Sample ID:	240-59997-2	Analysis Batch:	240-215579	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-215400	Lab File ID:	012716AH4.PRN
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1151			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 1130				
Leach Date:	01/25/2016 1645				

MSD Lab Sample ID:	240-59997-2	Analysis Batch:	240-215579	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-215400	Lab File ID:	012716AH4.PRN
Dilution:	1.0	Leach Batch:	240-215328	Initial Weight/Volume:	50 mL
Analysis Date:	01/27/2016 1153			Final Weight/Volume:	50 mL
Prep Date:	01/26/2016 1130				
Leach Date:	01/25/2016 1645				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	104	107	80 - 120	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Blank - Batch: 240-214588

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-214588/1-A	Analysis Batch:	240-214938	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-214588	Lab File ID:	012116AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	01/21/2016 0847	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1445				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.014	0.10

Lab Control Sample - Batch: 240-214588

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-214588/2-A	Analysis Batch:	240-214938	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-214588	Lab File ID:	012116AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	01/21/2016 0849	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1445				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.883	106	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-214588

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-59997-1	Analysis Batch:	240-214938	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-214588	Lab File ID:	012116AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.69 g
Analysis Date:	01/21/2016 0853			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1445				
Leach Date:	N/A				

MSD Lab Sample ID:	240-59997-1	Analysis Batch:	240-214938	Instrument ID:	H1
Client Matrix:	Solid	Prep Batch:	240-214588	Lab File ID:	012116AH1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.69 g
Analysis Date:	01/21/2016 0854			Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 1445				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	110	135	80 - 120	14	20		F1

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Method Blank - Batch: 240-214546

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-214546/9-A	Analysis Batch:	240-214816	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-214546	Lab File ID:	214546.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	01/20/2016 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 0825				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	ND		0.26	0.80

Lab Control Sample Insoluble - Batch: 240-214546

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-214546/11-A	Analysis Batch:	240-214816	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-214546	Lab File ID:	214546.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	01/20/2016 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 0825				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	584	91	75 - 125	

Lab Control Sample Soluble - Batch: 240-214546

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-214546/10-A	Analysis Batch:	240-214816	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-214546	Lab File ID:	214546.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	01/20/2016 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	01/19/2016 0825				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	21.2	106	90 - 110	

Client: ARCADIS U.S., Inc. Job Number: 240-59997-1

Duplicate - Batch: 240-214397

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-59969-A-21 DU	Analysis Batch:	240-214397	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/18/2016 1006	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	94	94	0.2	20	
Percent Moisture	6.5	6.2	3	20	

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS

240-59997 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

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1.9/C1.6
2-8/C2.5

Chain of Custody Record

119609

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinsky	Site Contact: Kris Hinsky	Date: 01/15/16	COC No:
Company Name: Arcadis	Tel/Fax: 269-832-7478	Lab Contact: 269-832-7428	Carrier: Gary Bettker	1 of 1 COCs
Address: 430 1st Ave N Ste 7200	Analysis Turnaround Time			Sampler: Adam Thompson
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul, MN	☐ 2 days			Job / SDG No.:
PO # MN000621680001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOC (8260)	GRO (w/ methanol)	DRO (w/ methanol)	SVOC (8270)	TAL Metals (6010)	TCLP VOCs (1311/8260)	TCLP SVOCs (1311/8270)	TCLP-TAL (1311/6010)	Moisture	Sample Specific Notes:
Area C-Trench-3_022.2-3(20160114)	1/14/16	1650	G	SO	11	N	N	2	2	1	1	1	1	1	1	1	
Area C-Trench-3_010.9-10(20160114)	1/14/16	1708	G	SO	11	N	N	2	2	1	1	1	1	1	1	1	
Area C-Trench-3_07_3-4(20160114)	1/14/16	1730	G	SO	11	N	N	2	2	1	1	1	1	1	1	1	
Trip Blank	1/15/16				2			1	1								
Temp Blank	1/15/16																

Page 111 of 113

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

* Chromium VI and Chromium III speciation for TAL Metals

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____		
Relinquished by:	Company: Arcadis	Date/Time: 1/15/16 1420	Received by:	Company: TAmm	Date/Time: 1-15-16 1420
Relinquished by:	Company: TAmm	Date/Time: 1-15-16	Received by:	Company: TA	Date/Time: 1-16-16 945
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

01/01/2016

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 59997

Client Arcadis Site Name

Cooler unpacked by:

Cooler Received on 1-16-16 Opened on 1-16-16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box (Other)

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other

COOLANT: ~~Wet Ice~~ Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 53 (CF +0.1 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN# 48 (CF -0.3 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C ☑ See Multiple Cooler Form

~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C~~

IR GUN# 8 (CF -0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2	~~Yes~~	No
-Were custody seals on the outside of the cooler(s) signed & dated?	~~Yes~~	No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	~~No~~
3. Shippers' packing slip attached to the cooler(s)?	~~Yes~~	No
4. Did custody papers accompany the sample(s)?	~~Yes~~	No
5. Were the custody papers relinquished & signed in the appropriate place?	~~Yes~~	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	~~Yes~~	No
7. Did all bottles arrive in good condition (Unbroken)?	~~Yes~~	No
8. Could all bottle labels be reconciled with the COC?	~~Yes~~	No
9. Were correct bottle(s) used for the test(s) indicated?	~~Yes~~	No
10. Sufficient quantity received to perform indicated analyses?	~~Yes~~	No
11. Were sample(s) at the correct pH upon receipt?	Yes	No (NA) pH Strip Lot# HC559158
12. Were VOAs on the COC?	~~Yes~~	No
13. Were air bubbles >6 mm in any VOA vials?	Yes	No (NA)
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	~~Yes~~	No
15. Was a LL Hg or Me Hg trip blank present?	Yes	~~No~~

Contacted PM Date by via Verbal Voice Mail Other

Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

TestAmerica Multiple Cooler Receipt Form/Narrative
Canton Facility

Login #: 59997

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	48	1.9	1.6	Cool
″	″	2.8	2.5	″

February 02, 2016

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 59997-1
Sample date: 2016-01-14
Report received by CADENA: 2016-02-01
Initial Data Verification completed by CADENA: 2016-02-02

The following minor QC exceptions or missing information were noted:

VOC GCMS
Samples -2, -3 and -3MS surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify client sample results.
QC batch 214579 MB had detections of 2-butanone and toluene below RL. Client sample -1 results for toluene should be considered estimated and flagged with UB based on MB detections. Trip blank was considered to be QC sample so was not qualified based on this method blank detection.

GCMS VOC trip blank had detections below the RL for toluene and naphthalene. Associated sample results were already qualified based on method blank detections so qualification of client sample results was not required based on these trip blank detections.

GCMS VOC QC batch 214579 and 215476MS/MSD recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

TCLP SVOC GCMS
QC batch 215452 MB had detections of 2-methylphenol and 3&4-methylphenol below RL. Client sample-3 TCLP SVOC GCMS results for these analytes should be considered estimated and flagged with UB based on MB detections.
TOTAL SVOC GCMS
Samples -2, -3 and -3MS surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify client sample results.
QC batch 215094 CCV for pentachlorophenol recovered above the upper control limit. No qualification required based on CCV outlier.
QC batch 215094 sample-3 MS recoveries were diluted to below reliably quantifiable levels so were not used to qualify client sample results.

Wisconsin DRO
QC batch 214526 MB had detection of DRO below RL. No qualification required based on MB detection.

WI-DRO QC batch 214526 did not include MS recovery data due to insufficient sample volume available for spiking according to the laboratory submittal case narrative.

WI-GRO and WI-DRO sample results did not include surrogate recovery data which is an optional QC requirement as specified in the method.

TCLP metals ICP
QC batches 215328 and 215399 MB had detections of several analytes below RL. Client sample-1, -2 and -3 results for arsenic; client samples-1 and -3 results for chromium; client sample-2 results for copper should be considered estimated and flagged with UB.
QC batch 215745 sample-2 MS recoveries for zinc were diluted to below reliably quantifiable levels so were not used to qualify client sample results.

Total metals ICP
QC batches 214580 and 215664 MB had several analytes detected below RL. No qualification required based on MB detections.
QC batch 214773 sample-1 MS/MSD of several analytes recovered outside the control limit, some biased low and some biased high. Based on these:
Sample-1 aluminum, calcium, copper, manganese, lead, zinc and iron MS recoveries were not considered to be statistically reliable so were not used to qualify results due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule)
Sample-1 antimony, barium and magnesium results should be considered estimated and flagged with J.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

3 Solid sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 59997-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Mercury in Solid Waste	Chromium, Hexavalent (Colorimetric)
240599971	AREA C-TRENCH-3_022_2-3(201601	1/14/2016	4:50:00	X	X	X	X	X	X	X	X
240599972	AREA C-TRENCH-3_010_9-10(20160	1/14/2016	5:08:00	X	X	X	X	X	X	X	X
240599973	AREA C-TRENCH-3_07_3-4(2016011	1/14/2016	5:30:00	X	X	X	X	X	X	X	X
240599974	TRIP BLANK	1/14/2016	12:00:00	X		X					

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 59997-1

		Sample Name:	AREA C-TRENCH-3_022_2-3(201601				AREA C-TRENCH-3_010_9-10(20160				AREA C-TRENCH-3_07_3-4(2016011			
		Lab Sample ID:	240599971				240599972				240599973			
		Sample Date:	1/14/2016				1/14/2016				1/14/2016			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC													
OSW-8260B													
Toluene	108-88-3	31	260	ug/kg	UB								
GC/MS SVOC													
OSW-8270C													
2-Methylphenol	95-48-7									0.0012	0.0040	mg/l	UB
3 & 4 Methylphenol	65794-96-9									0.0018	0.0040	mg/l	UB
Metals													
OSW-6010B													
Antimony	7440-36-0	37	0.97	mg/kg	J								
Arsenic	7440-38-2	0.019	0.50	mg/l	UB	0.021	0.50	mg/l	UB	0.0063	0.50	mg/l	UB
Barium	7440-39-3	480	19	mg/kg	J								
Chromium	7440-47-3	0.0034	0.50	mg/l	UB					0.020	0.50	mg/l	UB
Copper	7440-50-8					0.0031	1.0	mg/l	UB				
Magnesium	7439-95-4	5900	490	mg/kg	J								

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

February 29, 2016

Kris Hinsley
Arcadis US
430 1st Ave North
Suite 720
Minneapolis, MN 55401

RE: Project: FORD TCAP
Pace Project No.: 40128587

Dear Kris Hinsley:
Enclosed are the analytical results for sample(s) received by the laboratory on February 24, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Laurie Woelfel

Laurie Woelfel
laurie.woelfel@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: FORD TCAP
Pace Project No.: 40128587

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
Virginia VELAP ID: 460263
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Virginia VELAP Certification ID: 460263
Virginia VELAP ID: 460263
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: FORD TCAP
Pace Project No.: 40128587

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40128587001	**AREA C-TRENCH-2 (20160223)**	Solid	02/23/16 14:12	02/24/16 10:00
40128587002	**AREA C-TRENCH-1 (20160223)**	Solid	02/23/16 13:50	02/24/16 10:00
40128587003	**AREA C-TRENCH-3 (20160223)**	Solid	02/23/16 15:50	02/24/16 10:00
40128587004	**AREA C-TRENCH-3_022_2-3 (20160**	Solid	02/23/16 15:25	02/24/16 10:00
40128587005	**AREA C-TRENCH-3_010_9-10 (2016**	Solid	02/23/16 15:32	02/24/16 10:00
40128587006	**AREA C-TRENCH-2_015_6-7 (20160**	Solid	02/23/16 15:40	02/24/16 10:00

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SAMPLE ANALYTE COUNT

Project: FORD TCAP
Pace Project No.: 40128587

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40128587001	**AREA C-TRENCH-2 (20160223)**	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40128587002	**AREA C-TRENCH-1 (20160223)**	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40128587003	**AREA C-TRENCH-3 (20160223)**	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40128587004	**AREA C-TRENCH-3_022_2-3 (20160**	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40128587005	**AREA C-TRENCH-3_010_9-10 (2016**	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	BTH	1	PASI-G
40128587006	**AREA C-TRENCH-2_015_6-7 (20160**	EPA 8082	BDS	10	PASI-G
		ASTM D2974-87	BTH	1	PASI-G

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ANALYTICAL RESULTS

Project: FORD TCAP
Pace Project No.: 40128587

Sample: AREA C-TRENCH-2 (20160223) **Lab ID: 40128587001** Collected: 02/23/16 14:12 Received: 02/24/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541							
PCB-1016 (Aroclor 1016)	**<60.5**	ug/kg	60.5	1	02/25/16 10:26	02/26/16 15:13	12674-11-2	
PCB-1221 (Aroclor 1221)	**<60.5**	ug/kg	60.5	1	02/25/16 10:26	02/26/16 15:13	11104-28-2	
PCB-1232 (Aroclor 1232)	**<60.5**	ug/kg	60.5	1	02/25/16 10:26	02/26/16 15:13	11141-16-5	
PCB-1242 (Aroclor 1242)	**<60.5**	ug/kg	60.5	1	02/25/16 10:26	02/26/16 15:13	53469-21-9	
PCB-1248 (Aroclor 1248)	**<60.5**	ug/kg	60.5	1	02/25/16 10:26	02/26/16 15:13	12672-29-6	
PCB-1254 (Aroclor 1254)	**196**	ug/kg	60.5	1	02/25/16 10:26	02/26/16 15:13	11097-69-1	
PCB-1260 (Aroclor 1260)	**567**	ug/kg	60.5	1	02/25/16 10:26	02/26/16 15:13	11096-82-5	
PCB, Total	**763**	ug/kg	60.5	1	02/25/16 10:26	02/26/16 15:13	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	102	%	46-130	1	02/25/16 10:26	02/26/16 15:13	877-09-8	
Decachlorobiphenyl (S)	87	%	39-130	1	02/25/16 10:26	02/26/16 15:13	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**17.3**	%	0.10	1		02/24/16 17:21		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORD TCAP
Pace Project No.: 40128587

Sample: AREA C-TRENCH-1 (20160223) **Lab ID: 40128587002** Collected: 02/23/16 13:50 Received: 02/24/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541							
PCB-1016 (Aroclor 1016)	**<58.8**	ug/kg	58.8	1	02/25/16 10:26	02/26/16 15:31	12674-11-2	
PCB-1221 (Aroclor 1221)	**<58.8**	ug/kg	58.8	1	02/25/16 10:26	02/26/16 15:31	11104-28-2	
PCB-1232 (Aroclor 1232)	**<58.8**	ug/kg	58.8	1	02/25/16 10:26	02/26/16 15:31	11141-16-5	
PCB-1242 (Aroclor 1242)	**<58.8**	ug/kg	58.8	1	02/25/16 10:26	02/26/16 15:31	53469-21-9	
PCB-1248 (Aroclor 1248)	**<58.8**	ug/kg	58.8	1	02/25/16 10:26	02/26/16 15:31	12672-29-6	
PCB-1254 (Aroclor 1254)	**<58.8**	ug/kg	58.8	1	02/25/16 10:26	02/26/16 15:31	11097-69-1	
PCB-1260 (Aroclor 1260)	**<58.8**	ug/kg	58.8	1	02/25/16 10:26	02/26/16 15:31	11096-82-5	
PCB, Total	**<58.8**	ug/kg	58.8	1	02/25/16 10:26	02/26/16 15:31	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	107	%	46-130	1	02/25/16 10:26	02/26/16 15:31	877-09-8	
Decachlorobiphenyl (S)	88	%	39-130	1	02/25/16 10:26	02/26/16 15:31	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**15.0**	%	0.10	1		02/24/16 17:21		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORD TCAP
Pace Project No.: 40128587

Sample: AREA C-TRENCH-3 (20160223) **Lab ID: 40128587003** Collected: 02/23/16 15:50 Received: 02/24/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541							
PCB-1016 (Aroclor 1016)	**<58.9**	ug/kg	58.9	1	02/25/16 10:26	02/26/16 15:48	12674-11-2	
PCB-1221 (Aroclor 1221)	**<58.9**	ug/kg	58.9	1	02/25/16 10:26	02/26/16 15:48	11104-28-2	
PCB-1232 (Aroclor 1232)	**<58.9**	ug/kg	58.9	1	02/25/16 10:26	02/26/16 15:48	11141-16-5	
PCB-1242 (Aroclor 1242)	**<58.9**	ug/kg	58.9	1	02/25/16 10:26	02/26/16 15:48	53469-21-9	
PCB-1248 (Aroclor 1248)	**<58.9**	ug/kg	58.9	1	02/25/16 10:26	02/26/16 15:48	12672-29-6	
PCB-1254 (Aroclor 1254)	**427**	ug/kg	58.9	1	02/25/16 10:26	02/26/16 15:48	11097-69-1	
PCB-1260 (Aroclor 1260)	**<58.9**	ug/kg	58.9	1	02/25/16 10:26	02/26/16 15:48	11096-82-5	
PCB, Total	**427**	ug/kg	58.9	1	02/25/16 10:26	02/26/16 15:48	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	101	%	46-130	1	02/25/16 10:26	02/26/16 15:48	877-09-8	
Decachlorobiphenyl (S)	88	%	39-130	1	02/25/16 10:26	02/26/16 15:48	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**15.1**	%	0.10	1		02/24/16 17:21		

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FORD TCAP
Pace Project No.: 40128587

Sample: AREA C-TRENCH-3_022_2-3 (20160 **Lab ID: 40128587004** Collected: 02/23/16 15:25 Received: 02/24/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541							
PCB-1016 (Aroclor 1016)	**<2780**	ug/kg	2780	50	02/25/16 10:26	02/26/16 16:06	12674-11-2	
PCB-1221 (Aroclor 1221)	**<2780**	ug/kg	2780	50	02/25/16 10:26	02/26/16 16:06	11104-28-2	
PCB-1232 (Aroclor 1232)	**<2780**	ug/kg	2780	50	02/25/16 10:26	02/26/16 16:06	11141-16-5	
PCB-1242 (Aroclor 1242)	**<2780**	ug/kg	2780	50	02/25/16 10:26	02/26/16 16:06	53469-21-9	
PCB-1248 (Aroclor 1248)	**<2780**	ug/kg	2780	50	02/25/16 10:26	02/26/16 16:06	12672-29-6	
PCB-1254 (Aroclor 1254)	**13000**	ug/kg	2780	50	02/25/16 10:26	02/26/16 16:06	11097-69-1	
PCB-1260 (Aroclor 1260)	**<2780**	ug/kg	2780	50	02/25/16 10:26	02/26/16 16:06	11096-82-5	
PCB, Total	**13000**	ug/kg	2780	50	02/25/16 10:26	02/26/16 16:06	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	0	%	46-130	50	02/25/16 10:26	02/26/16 16:06	877-09-8	S4
Decachlorobiphenyl (S)	0	%	39-130	50	02/25/16 10:26	02/26/16 16:06	2051-24-3	S4
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**10.0**	%	0.10	1		02/24/16 17:21		

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ANALYTICAL RESULTS

Project: FORD TCAP
Pace Project No.: 40128587

Sample: AREA C-TRENCH-3_010_9-10 (2016 **Lab ID: 40128587005** Collected: 02/23/16 15:32 Received: 02/24/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541							
PCB-1016 (Aroclor 1016)	**<117**	ug/kg	117	2	02/25/16 10:26	02/26/16 14:37	12674-11-2	
PCB-1221 (Aroclor 1221)	**<117**	ug/kg	117	2	02/25/16 10:26	02/26/16 14:37	11104-28-2	
PCB-1232 (Aroclor 1232)	**<117**	ug/kg	117	2	02/25/16 10:26	02/26/16 14:37	11141-16-5	
PCB-1242 (Aroclor 1242)	**191**	ug/kg	117	2	02/25/16 10:26	02/26/16 14:37	53469-21-9	
PCB-1248 (Aroclor 1248)	**<117**	ug/kg	117	2	02/25/16 10:26	02/26/16 14:37	12672-29-6	
PCB-1254 (Aroclor 1254)	**1530**	ug/kg	117	2	02/25/16 10:26	02/26/16 14:37	11097-69-1	
PCB-1260 (Aroclor 1260)	**<117**	ug/kg	117	2	02/25/16 10:26	02/26/16 14:37	11096-82-5	
PCB, Total	**1720**	ug/kg	117	2	02/25/16 10:26	02/26/16 14:37	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	94	%	46-130	2	02/25/16 10:26	02/26/16 14:37	877-09-8	
Decachlorobiphenyl (S)	84	%	39-130	2	02/25/16 10:26	02/26/16 14:37	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**14.8**	%	0.10	1		02/24/16 17:21		

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ANALYTICAL RESULTS

Project: FORD TCAP
Pace Project No.: 40128587

Sample: AREA C-TRENCH-2_015_6-7 (20160 **Lab ID: 40128587006** Collected: 02/23/16 15:40 Received: 02/24/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3541							
PCB-1016 (Aroclor 1016)	**<69.0**	ug/kg	69.0	1	02/25/16 10:26	02/26/16 16:24	12674-11-2	
PCB-1221 (Aroclor 1221)	**<69.0**	ug/kg	69.0	1	02/25/16 10:26	02/26/16 16:24	11104-28-2	
PCB-1232 (Aroclor 1232)	**<69.0**	ug/kg	69.0	1	02/25/16 10:26	02/26/16 16:24	11141-16-5	
PCB-1242 (Aroclor 1242)	**73.0**	ug/kg	69.0	1	02/25/16 10:26	02/26/16 16:24	53469-21-9	
PCB-1248 (Aroclor 1248)	**<69.0**	ug/kg	69.0	1	02/25/16 10:26	02/26/16 16:24	12672-29-6	
PCB-1254 (Aroclor 1254)	**627**	ug/kg	69.0	1	02/25/16 10:26	02/26/16 16:24	11097-69-1	
PCB-1260 (Aroclor 1260)	**210**	ug/kg	69.0	1	02/25/16 10:26	02/26/16 16:24	11096-82-5	
PCB, Total	**910**	ug/kg	69.0	1	02/25/16 10:26	02/26/16 16:24	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	101	%	46-130	1	02/25/16 10:26	02/26/16 16:24	877-09-8	
Decachlorobiphenyl (S)	88	%	39-130	1	02/25/16 10:26	02/26/16 16:24	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**27.6**	%	0.10	1		02/24/16 17:21		

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QUALITY CONTROL DATA

Project: FORD TCAP
Pace Project No.: 40128587

QC Batch: OEXT/29750 Analysis Method: EPA 8082
QC Batch Method: EPA 3541 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40128587001, 40128587002, 40128587003, 40128587004, 40128587005, 40128587006

METHOD BLANK: 1299301 Matrix: Solid
Associated Lab Samples: 40128587001, 40128587002, 40128587003, 40128587004, 40128587005, 40128587006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<50.0	50.0	02/26/16 12:23	
PCB-1221 (Aroclor 1221)	ug/kg	<50.0	50.0	02/26/16 12:23	
PCB-1232 (Aroclor 1232)	ug/kg	<50.0	50.0	02/26/16 12:23	
PCB-1242 (Aroclor 1242)	ug/kg	<50.0	50.0	02/26/16 12:23	
PCB-1248 (Aroclor 1248)	ug/kg	<50.0	50.0	02/26/16 12:23	
PCB-1254 (Aroclor 1254)	ug/kg	<50.0	50.0	02/26/16 12:23	
PCB-1260 (Aroclor 1260)	ug/kg	<50.0	50.0	02/26/16 12:23	
Decachlorobiphenyl (S)	%	97	39-130	02/26/16 12:23	
Tetrachloro-m-xylene (S)	%	101	46-130	02/26/16 12:23	

LABORATORY CONTROL SAMPLE: 1299302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<50.0			
PCB-1221 (Aroclor 1221)	ug/kg		<50.0			
PCB-1232 (Aroclor 1232)	ug/kg		<50.0			
PCB-1242 (Aroclor 1242)	ug/kg		<50.0			
PCB-1248 (Aroclor 1248)	ug/kg		<50.0			
PCB-1254 (Aroclor 1254)	ug/kg		<50.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	435	87	63-130	
Decachlorobiphenyl (S)	%			90	39-130	
Tetrachloro-m-xylene (S)	%			93	46-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1299303 1299304

Parameter	Units	40128615002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<28.8			<57.5	<57.5					20	
PCB-1221 (Aroclor 1221)	ug/kg	<28.8			<57.5	<57.5					20	
PCB-1232 (Aroclor 1232)	ug/kg	<28.8			<57.5	<57.5					20	
PCB-1242 (Aroclor 1242)	ug/kg	<28.8			<57.5	<57.5					20	
PCB-1248 (Aroclor 1248)	ug/kg	<28.8			<57.5	<57.5					20	
PCB-1254 (Aroclor 1254)	ug/kg	<28.8			<57.5	<57.5					20	
PCB-1260 (Aroclor 1260)	ug/kg	<28.8	575	575	519	504	90	88	38-130	3	20	
Decachlorobiphenyl (S)	%						93	90	39-130			
Tetrachloro-m-xylene (S)	%						98	96	46-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORD TCAP
Pace Project No.: 40128587

QC Batch: PMST/12449 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40128587001, 40128587002, 40128587003, 40128587004, 40128587005, 40128587006

SAMPLE DUPLICATE: 1299115

Parameter	Units	40128615006 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.3	10.9	4	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: FORD TCAP
Pace Project No.: 40128587

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORD TCAP
Pace Project No.: 40128587

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40128587001	**AREA C-TRENCH-2 (20160223)**	EPA 3541	OEXT/29750	EPA 8082	GCSV/14097
40128587002	**AREA C-TRENCH-1 (20160223)**	EPA 3541	OEXT/29750	EPA 8082	GCSV/14097
40128587003	**AREA C-TRENCH-3 (20160223)**	EPA 3541	OEXT/29750	EPA 8082	GCSV/14097
40128587004	**AREA C-TRENCH-3_022_2-3 (20160**	EPA 3541	OEXT/29750	EPA 8082	GCSV/14097
40128587005	**AREA C-TRENCH-3_010_9-10 (2016**	EPA 3541	OEXT/29750	EPA 8082	GCSV/14097
40128587006	**AREA C-TRENCH-2_015_6-7 (20160**	EPA 3541	OEXT/29750	EPA 8082	GCSV/14097
40128587001	**AREA C-TRENCH-2 (20160223)**	ASTM D2974-87	PMST/12449		
40128587002	**AREA C-TRENCH-1 (20160223)**	ASTM D2974-87	PMST/12449		
40128587003	**AREA C-TRENCH-3 (20160223)**	ASTM D2974-87	PMST/12449		
40128587004	**AREA C-TRENCH-3_022_2-3 (20160**	ASTM D2974-87	PMST/12449		
40128587005	**AREA C-TRENCH-3_010_9-10 (2016**	ASTM D2974-87	PMST/12449		
40128587006	**AREA C-TRENCH-2_015_6-7 (20160**	ASTM D2974-87	PMST/12449		

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[redacted]

Pace Analytical
1241 Bellevue St.
Green Bay, WI 54302

Chain of Custody Record

120402

40128587

[redacted]

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210 (0713)

Client Contact	Project Manager: Kris Hinsky	Site Contact: Kelly Hoehn	Date: 2/23/16	COC No:
Company Name: Arcadis	Tel/Fax: 269-832-7478	Lab Contact: [redacted]	Carrier:	1 of 1 COCs
Address: 430 1st Ave N #720	Analysis Turnaround Time			Sampler: Adam Thompson
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below 3 day			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul, MN	☐ 2 days			Job / SDG No.: 24006638
P O # MN000624.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCB	Sample Specific Notes:
Area C-Trench-2 (20160223)	2/23/16	1412	C	SO	1	N	N	1	001 1-4oz Cy A
Area C-Trench-1 (20160223)	2/23/16	1350	C	SO	1	N	N	1	002
Area C-Trench-3 (20160223)	2/23/16	1550	C	SO	1	N	N	1	003
Area C-Trench-3_022_2-3 (20160223)	2/23/16	1525	G	SO	1	N	N	1	004
Area C-Trench-3_010_9-10 (20160223)	2/23/16	1532	G	SO	1	N	N	1	005
Area C-Trench-2_015_6-7 (20160223)	2/23/16	1540	G	SO	1	N	N	1	006
Temp Blank	2/23/16								

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Cadena # E200572 per JT LW 2/25/16

Custody Seals Intact: ☒ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 2.5 Corr'd: 3.5 Therm ID No.: SR-66

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Arcadis	2/23/16 1710			
Fed Ex		2/24/16 1000	Melissa Venema	Pace	2/24/16 1000
			Received in Laboratory by:		

Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project #: **WO# : 40128587**

40128587

Client Name: Arcadis

Courier: ☑ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: _____

Tracking #: 8043 3943 9176

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used SR-166 **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 2.5 /Corr: 3.5 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☑ yes ☐ no

Person examining contents:
Date: 2-24-16
Initials: MV

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7. 3days 2-24-16 MV
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
-Pace IR Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☐No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: LW **Date:** 2/24/16

F-GB-C-031-Rev.03 (9April2015) SCUR Form

February 29, 2016

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: PACE Laboratories Inc. - Green Bay
Laboratory submittal: 40128587
Sample date: 2016-02-23
Report received by CADENA: 2016-02-29
Initial Data Verification completed by CADENA: 2016-02-29

The following minor QC exceptions or missing information were noted:

PCB sample -004 surrogate recoveries were diluted to below reliably quantifiable levels so were not used to qualify client sample results.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

6 Solid sample(s) were analyzed for PCB and General Chemistry parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572

Laboratory: PACE Laboratories Inc.-Green Bay
Laboratory Submittal: 40128587

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Polychlorinated Biphenyls by GCECD	Organic Carbon Fraction
40128587001	AREA C-TRENCH-2 (20160223)	2/23/2016	2:12:00	X	X
40128587002	AREA C-TRENCH-1 (20160223)	2/23/2016	1:50:00	X	X
40128587003	AREA C-TRENCH-3 (20160223)	2/23/2016	3:50:00	X	X
40128587004	AREA C-TRENCH-3_022_2-3 (20160	2/23/2016	3:25:00	X	X
40128587005	AREA C-TRENCH-3_010_9-10 (2016	2/23/2016	3:32:00	X	X
40128587006	AREA C-TRENCH-2_015_6-7 (20160	2/23/2016	3:40:00	X	X

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: PACE Laboratories Inc. - Green Bay
Laboratory Submittal: 40128587

	Sample Name:	AREA C-TRENCH-2 (20160223)				AREA C-TRENCH-1 (20160223)				AREA C-TRENCH-3 (20160223)				AREA C-TRENCH-3_022_2-3 (20160				AREA C-TRENCH-3_010_9-10 (2016				AREA C-TRENCH-2_015_6-7 (20160			
	Lab Sample ID:	40128587001				40128587002				40128587003				40128587004				40128587005				40128587006			
	Sample Date:	2/23/2016				2/23/2016				2/23/2016				2/23/2016				2/23/2016				2/23/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
Pest & PCB																									
OSW-8082																									
PCB, Total	1336-36-3	763	60.5	ug/kg	---	ND	58.8	ug/kg	---	427	58.9	ug/kg	---	13000	2780	ug/kg	---	1720	117	ug/kg	---	910	69.0	ug/kg	---
PCB-1016 (Aroclor 1016)	12674-11-2	ND	60.5	ug/kg	---	ND	58.8	ug/kg	---	ND	58.9	ug/kg	---	ND	2780	ug/kg	---	ND	117	ug/kg	---	ND	69.0	ug/kg	---
PCB-1221 (Aroclor 1221)	11104-28-2	ND	60.5	ug/kg	---	ND	58.8	ug/kg	---	ND	58.9	ug/kg	---	ND	2780	ug/kg	---	ND	117	ug/kg	---	ND	69.0	ug/kg	---
PCB-1232 (Aroclor 1232)	11141-16-5	ND	60.5	ug/kg	---	ND	58.8	ug/kg	---	ND	58.9	ug/kg	---	ND	2780	ug/kg	---	ND	117	ug/kg	---	ND	69.0	ug/kg	---
PCB-1242 (Aroclor 1242)	53469-21-9	ND	60.5	ug/kg	---	ND	58.8	ug/kg	---	ND	58.9	ug/kg	---	ND	2780	ug/kg	---	191	117	ug/kg	---	73.0	69.0	ug/kg	---
PCB-1248 (Aroclor 1248)	12672-29-6	ND	60.5	ug/kg	---	ND	58.8	ug/kg	---	ND	58.9	ug/kg	---	ND	2780	ug/kg	---	ND	117	ug/kg	---	ND	69.0	ug/kg	---
PCB-1254 (Aroclor 1254)	11097-69-1	196	60.5	ug/kg	---	ND	58.8	ug/kg	---	427	58.9	ug/kg	---	13000	2780	ug/kg	---	1530	117	ug/kg	---	627	69.0	ug/kg	---
PCB-1260 (Aroclor 1260)	11096-82-5	567	60.5	ug/kg	---	ND	58.8	ug/kg	---	ND	58.9	ug/kg	---	ND	2780	ug/kg	---	ND	117	ug/kg	---	210	69.0	ug/kg	---
General Chemistry																									
ASTM-D2974																									
Percent Moisture	E-11870	17.3	0.10	%	---	15.0	0.10	%	---	15.1	0.10	%	---	10.0	0.10	%	---	14.8	0.10	%	---	27.6	0.10	%	---

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. FORD-TCAP-03 E200575-2

FORD TWIN CITIES PHA B E200572
SDG #: 8C13254

Rebecca Forbort

ARCADIS U.S., Inc.
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Minneapolis, MN 55401

TESTAMERICA LABORATORIES, INC.

Denise Pohl
Project Manager

March 25, 2008

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TestAmerica
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CASE NARRATIVE

CASE NARRATIVE

8C13254

The following report contains the analytical results for one water sample and one quality control sample submitted to TestAmerica North Canton by ARCADIS Geraghty & Miller, Inc from the Ford Twin Cities PHA B E200572 Site, project number FORD-TCAP-03 E200575-2. The samples were received March 13, 2008, according to documented sample acceptance procedures.

This SDG consists of (1) laboratory ID: A8C130254.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

Any reference within this document to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.)

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 1.6, 1.8, 2.4, 3.2 and 3.4°C.

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for sample(s) AMW-05B(20080311) had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

GC/MS SEMIVOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for sample(s) AMW-05B(20080311) had RPD's and recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

CASE NARRATIVE (continued)

GC/MS SEMIVOLATILES (continued)

Batch(s) 8079104 had recoveries and/or RPD's out high in the LCS. Since there were no hits detected in any of the associated samples, no corrective action was necessary.

The Method Blank associated with QC batch(es) 8071037 had surrogate recoveries below acceptance criteria. Upon re-extraction and re-analysis, all QC met acceptance criteria, however, sample holding times had been exceeded. Both sets of data have been reported.

GASOLINE RANGE ORGANICS

The analytical results met the requirements of the laboratory's QA/QC program.

POLYCHLORINATED BIPHENYLS-8082

The analytical results met the requirements of the laboratory's QA/QC program.

DIESEL RANGE ORGANICS

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

No ICP Trace Form IX was provided for batch(es) 8074016. The serial dilution was performed on a different sample from the same QC batch(es).

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

8C13254 : A8C130254

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
AMW-05B(20080311) 03/11/08 11:15 001				
Diesel Range Organics	0.097 J,B	0.10	mg/L	WI-DRO DRO
Barium - DISSOLVED	79.7 B,J	200	ug/L	SW846 6010B
Chromium - DISSOLVED	3.4 B	10.0	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	3.9 J,B	10	ug/L	SW846 8270C
TB-001(20080311) 03/11/08 002				
Acetone	7.2 J,B	10	ug/L	SW846 8260B
Methyl ethyl ketone	2.2 J	10	ug/L	SW846 8260B
Methylcyclohexane	0.50 J	1.0	ug/L	SW846 8260B
Naphthalene	0.26 J	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	0.25 J,B	1.0	ug/L	SW846 8260B

TestAmerica
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METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

8C13254

PARAMETER	ANALYTICAL METHOD
Diesel Range Organics	WI-DRO DRO
Gasoline Range Organics	WI-GRO GRO
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
PCBs by SW-846 8082	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

WI-DRO "Modified DRO: Method for Determining Diesel Range Organics", Wisconsin DNR, PUBL-SW-141, September, 1995.

WI-GRO "Modified GRO: Method for Determining Gasoline Range Organics", Wisconsin DNR, PUBL-SW-140, September, 1995.

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SAMPLE SUMMARY

SAMPLE SUMMARY

8C13254 : A8C130254

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KJHVV	001	AMW-05B(20080311)	03/11/08	11:15
KJHV6	002	TB-001(20080311)	03/11/08	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SHIPPING AND RECEIVING DOCUMENTS

Chain of Custody Record

[redacted]

* SEND TO NORTH CANTON

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4142 (0907)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	BRYAN ZINDA	3/11/08	373999
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
430 1ST AVE N., SUITE 720	612-339-9434 / 612-336-4538		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
MINNEAPOLIS, MN / MN / 55401		DENISE POHL	
Project Name and Location (State)	**Carrier/Waybill Number**		
FORD TWIN CITIES PHASE B, MN			
Contract/Purchase Order/Quote No.			
FORD-TCAP-03/E200575-2			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	VOC (8260)	SVOC	PCB	RCRA Metals (Field Filtered)	DRO (with SG)	GRO (with SG)			Temp Blank			
AMW-05B(20080311)	3/11/08	1115		X			4		1	8			3	2	2	1		2	3					
AMW-05B(20080311)MS	3/11/08	1115		X			4		1	8			3	2	2	1		2	3					
AMW-05B(20080311)MSD	3/11/08	1115		X			4		1	8			3	2	2	1		2	3					
~~Trip Blank~~ TB-001(20080311)	3/11/08	—		X			4		1	8			1											
Temp Blank -001(20080311)	3/11/08	—		X			1														1			

Special Instructions/ Conditions of Receipt

* LEVEL 4 *

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	3/12/08	14:00	1. Received By	3-12	1400
2. Relinquished By	3-12		2. Received By	3/13/08	0930
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: ABC130254

Client Arcadis | Project Ford TCAP | Quote # _____

Cooler Received on 3/13/08 | Opened on 3/13/08 | By _____ (Signature)

FedEx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ TestAmerica Courier ☐

Stetson ☐ US Cargo ☐ Other _____

TestAmerica Cooler # See back | Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity _____
   Were custody seals on the outside of cooler signed and dated? Yes ☐ No ☐ NA ☒
   Were custody seals on the bottles? Yes ☐ No ☒
   If YES, are there any exceptions _____
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other _____
6. Cooler temperature upon receipt _____ °C (see back of form for multiple coolers/temps)

METHOD: IR ☒ Other ☐ _____

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH upon receipt? Yes ☒ No ☐ NA ☐
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a Trip Blank present in the cooler? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM _____ Date _____ by _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:
Received 1xHCl VOA vial for sample AMW-05B (20080311) Empty There is plenty of volume to run analysis.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #071707-HNO3 - Sulfuric Acid Lot # 092006-H2SO4; Sodium Hydroxide Lot # 122805 -NaOH; Hydrochloric Acid Lot # 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot # 050205-CH3COO2ZN/NaOH*

What time was preservative added to sample(s)? _____

Sample(s) _____ were received with bubble > 6 mm in diameter (Notify PM)

Client ID	pH	Date	Initials
AMW-05B	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2	3/13/08	gw

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID		pH	Date	Initials

Cooler	Temp °C	Method	Coolant
485	3.2°C	IR	Ice
834	1.6	"	"
854	2.4	"	"
346	1.8	"	"
Client Blue	3.4	"	"

Discrepancies Cont'd

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

GCMS VOLATILE DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QC SUMMARY DATA

SW846 8260B SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C130254

Extraction: XXI25QKM1

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	TOT OUT
01	AMW-05B(20080311)	106	96	94	88	00
02	TB-001(20080311)	106	99	97	90	00
03	METHOD BLK. KJTMD1AA	106	97	96	90	00
04	LCS KJTMD1AC	105	95	98	92	00
05	AMW-05B(20080311) D	107	94	97	93	00
06	LCSD KJTMD1AD	105	93	97	90	00
07	AMW-05B(20080311) S	108	98	98	94	00

SURROGATES		QC LIMITS
SRG01	= Dibromofluoromethane	(73-122)
SRG02	= 1,2-Dichloroethane-d4	(61-128)
SRG03	= Toluene-d8	(76-110)
SRG04	= 4-Bromofluorobenzene	(74-116)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C190000 WO #: KJTMD1AC
BATCH: 8079081

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
Methyl acetate	10	7.6	76	70 - 130	
Methyl tert-butyl ether (	10	8.9	89	70 - 130	
Cyclohexane	10	7.1	71	70 - 130	
Methylcyclohexane	10	7.6	76	70 - 130	
1,2-Dibromoethane (EDB)	10	8.7	87	70 - 130	
Isopropylbenzene	10	10	102	70 - 130	
1,3-Dichlorobenzene	10	9.4	94	70 - 130	
1,4-Dichlorobenzene	10	9.5	95	70 - 130	
1,2-Dichlorobenzene	10	9.2	92	70 - 130	
1,2-Dibromo-3-chloropropa	10	7.3	73	70 - 130	
1,2,4-Trichlorobenzene	10	9.2	92	70 - 130	
n-Hexane	10	9.1	91	70 - 130	
o-Xylene	10	9.2	92	70 - 130	
m-Xylene & p-Xylene	20	18	92	70 - 130	
2-Chloroethyl vinyl ether	10	8.4	84	70 - 130	
Acetonitrile	100	100	101	50 - 130	
Acrolein	100	78	78	50 - 130	
Vinyl acetate	10	8.9	89	70 - 130	
Acrylonitrile	100	84	84	50 - 130	
Bromobenzene	10	9.4	94	70 - 130	
Bromochloromethane	10	9.9	99	70 - 130	
n-Butylbenzene	10	8.3	83	70 - 130	
sec-Butylbenzene	10	8.4	84	70 - 130	
tert-Butylbenzene	10	8.7	87	70 - 130	
2-Chlorotoluene	10	9.0	90	70 - 130	
4-Chlorotoluene	10	9.1	91	70 - 130	
Dibromomethane	10	9.0	90	70 - 130	
1,3-Dichloropropane	10	8.3	83	70 - 130	
2,2-Dichloropropane	10	9.9	99	70 - 130	
1,1-Dichloropropene	10	9.3	93	70 - 130	
Hexachlorobutadiene	10	9.6	96	70 - 130	

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SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C190000 WO #: KJTMD1AC
BATCH: 8079081

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
Iodomethane	10	11	108	70 - 130	
Isopropyl ether	10	9.8	98	70 - 130	
p-Isopropyltoluene	10	8.9	89	70 - 130	
Naphthalene	10	7.8	78	70 - 130	
n-Propylbenzene	10	9.0	90	70 - 130	
1,1,1,2-Tetrachloroethane	10	9.3	93	70 - 130	
1,2,3-Trichlorobenzene	10	9.1	91	70 - 130	
1,2,3-Trichloropropane	10	8.8	88	70 - 130	
1,2,4-Trimethylbenzene	10	8.5	85	70 - 130	
1,3,5-Trimethylbenzene	10	8.5	85	70 - 130	
Chloromethane	10	6.8	68	48 - 123	
Bromomethane	10	9.7	97	64 - 129	
Vinyl chloride	10	7.4	74	61 - 120	
Chloroethane	10	8.0	80	66 - 126	
Methylene chloride	10	8.1	81	78 - 118	
Acetone	10	10	103	22 - 200	
Carbon disulfide	10	8.8	88	73 - 139	
1,1-Dichloroethene	10	8.8	88	63 - 130	
1,1-Dichloroethane	10	8.9	89	86 - 123	
1,2-Dichloroethene (total	20	19	96	82 - 116	
Chloroform	10	9.3	93	84 - 128	
1,2-Dichloroethane	10	9.4	94	79 - 136	
Methyl ethyl ketone	10	8.0	80	28 - 237	
1,1,1-Trichloroethane	10	10	102	78 - 140	
Carbon tetrachloride	10	10	101	75 - 149	
Bromodichloromethane	10	9.2	92	87 - 130	
1,2-Dichloropropane	10	8.4	84	82 - 115	
cis-1,3-Dichloropropene	10	8.4	84	84 - 130	
Trichloroethene	10	10	102	75 - 122	
Chlorodibromomethane	10	8.8	88	81 - 138	
1,1,2-Trichloroethane	10	8.5	85	83 - 122	

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SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C190000 WO #: KJTMD1AC
BATCH: 8079081

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
Benzene	10	8.9	89	80 - 116	
trans-1,3-Dichloropropene	10	7.8	78*	84 - 130	a
Bromoform	10	8.6	86	76 - 150	
4-Methyl-2-pentanone (MIB	10	7.5	75*	78 - 141	a
2-Hexanone	10	6.9	69	35 - 200	
Tetrachloroethene	10	10	104	88 - 113	
1,1,2,2-Tetrachloroethane	10	7.6	76*	85 - 118	a
Toluene	10	8.9	89	74 - 119	
Chlorobenzene	10	9.4	94	76 - 117	
Ethylbenzene	10	9.4	94	86 - 116	
Styrene	10	8.9	89	85 - 117	
Xylenes (total)	30	28	92	87 - 116	
cis-1,2-Dichloroethene	10	9.6	96	85 - 113	
trans-1,2-Dichloroethene	10	9.5	95	80 - 120	
Dichlorodifluoromethane	10	7.7	77	70 - 130	
Trichlorofluoromethane	10	12	115	70 - 130	
1,1,2-Trichloro-1,2,2-tri	10	12	118	70 - 130	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

* Values outside of QC limits

Spike Recovery: 3 out of 79 outside limits

COMMENTS:

FORM III

SW846 8260B CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C190000 WO #: KJTMD1AD
BATCH: 8079081

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
Chloromethane	10	7.6	76	48 - 123	
Bromomethane	10	11	111	64 - 129	
Vinyl chloride	10	8.3	83	61 - 120	
Chloroethane	10	9.1	91	66 - 126	
Methylene chloride	10	9.2	92	78 - 118	
Acetone	10	11	111	22 - 200	
Carbon disulfide	10	10	100	73 - 139	
1,1-Dichloroethene	10	10	102	63 - 130	
1,1-Dichloroethane	10	9.8	98	86 - 123	
1,2-Dichloroethene (total	20	21	107	82 - 116	
Chloroform	10	11	105	84 - 128	
1,2-Dichloroethane	10	11	106	79 - 136	
Methyl ethyl ketone	10	8.6	86	28 - 237	
1,1,1-Trichloroethane	10	11	113	78 - 140	
Carbon tetrachloride	10	11	114	75 - 149	
Bromodichloromethane	10	10	101	87 - 130	
1,2-Dichloropropane	10	9.6	96	82 - 115	
cis-1,3-Dichloropropene	10	9.6	96	84 - 130	
Trichloroethene	10	11	114	75 - 122	
Chlorodibromomethane	10	9.9	99	81 - 138	
1,1,2-Trichloroethane	10	9.7	97	83 - 122	
Benzene	10	10	100	80 - 116	
trans-1,3-Dichloropropene	10	9.0	90	84 - 130	
Bromoform	10	9.4	94	76 - 150	
4-Methyl-2-pentanone (MIB	10	8.4	84	78 - 141	
2-Hexanone	10	7.6	76	35 - 200	
Tetrachloroethene	10	12	117*	88 - 113	a
1,1,2,2-Tetrachloroethane	10	8.6	86	85 - 118	
Toluene	10	10	100	74 - 119	
Chlorobenzene	10	11	105	76 - 117	
Ethylbenzene	10	10	104	86 - 116	

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SW846 8260B CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C190000 WO #: KJTMD1AD
BATCH: 8079081

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
Styrene	10	9.8	98	85- 117	
Xylenes (total)	30	31	102	87- 116	
cis-1,2-Dichloroethene	10	11	109	85- 113	
trans-1,2-Dichloroethene	10	11	106	80- 120	
Dichlorodifluoromethane	10	8.9	89	70- 130	
Trichlorofluoromethane	10	13	132*	70- 130	a
1,1,2-Trichloro-1,2,2-tri	10	14	137*	70- 130	a
Methyl acetate	10	8.4	84	70- 130	
Methyl tert-butyl ether (	10	9.8	98	70- 130	
Cyclohexane	10	8.1	81	70- 130	
Methylcyclohexane	10	8.8	88	70- 130	
1,2-Dibromoethane (EDB)	10	9.7	97	70- 130	
Isopropylbenzene	10	11	112	70- 130	
1,3-Dichlorobenzene	10	11	105	70- 130	
1,4-Dichlorobenzene	10	10	105	70- 130	
1,2-Dichlorobenzene	10	10	104	70- 130	
1,2-Dibromo-3-chloropropa	10	8.1	81	70- 130	
1,2,4-Trichlorobenzene	10	9.9	99	70- 130	
n-Hexane	10	10	100	70- 130	
o-Xylene	10	10	101	70- 130	
m-Xylene & p-Xylene	20	20	102	70- 130	
2-Chloroethyl vinyl ether	10	9.2	92	70- 130	
Acetonitrile	100	110	110	50- 130	
Acrolein	100	85	85	50- 130	
Vinyl acetate	10	9.5	95	70- 130	
Acrylonitrile	100	94	94	50- 130	
Bromobenzene	10	11	107	70- 130	
Bromochloromethane	10	11	109	70- 130	
n-Butylbenzene	10	9.4	94	70- 130	
sec-Butylbenzene	10	9.7	97	70- 130	
tert-Butylbenzene	10	9.9	99	70- 130	

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SW846 8260B CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C190000 WO #: KJTMD1AD
BATCH: 8079081

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
2-Chlorotoluene	10	10	100	70 - 130	
4-Chlorotoluene	10	10	103	70 - 130	
Dibromomethane	10	10	102	70 - 130	
1,3-Dichloropropane	10	9.3	93	70 - 130	
2,2-Dichloropropane	10	11	110	70 - 130	
1,1-Dichloropropene	10	10	104	70 - 130	
Hexachlorobutadiene	10	11	106	70 - 130	
Iodomethane	10	12	121	70 - 130	
Isopropyl ether	10	11	110	70 - 130	
p-Isopropyltoluene	10	10	102	70 - 130	
Naphthalene	10	8.3	83	70 - 130	
n-Propylbenzene	10	10	102	70 - 130	
1,1,1,2-Tetrachloroethane	10	10	102	70 - 130	
1,2,3-Trichlorobenzene	10	9.4	94	70 - 130	
1,2,3-Trichloropropane	10	10	101	70 - 130	
1,2,4-Trimethylbenzene	10	9.6	96	70 - 130	
1,3,5-Trimethylbenzene	10	9.6	96	70 - 130	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

* Values outside of QC limits

Spike Recovery: 3 out of 79 outside limits

COMMENTS:

FORM III

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AQ
BATCH: 8079081

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
1,1-Dichloroethene	10	ND	9.3	93	62 - 130	
Chloromethane	10	ND	6.2	62	40 - 137	
Bromomethane	10	ND	8.9	89	55 - 145	
Vinyl chloride	10	ND	7.6	76*	88 - 126	a
Chloroethane	10	ND	8.5	85	59 - 142	
Methylene chloride	10	ND	8.2	82	82 - 115	
Acetone	10	ND	9.1	91	45 - 128	
Carbon disulfide	10	ND	11	111	69 - 138	
1,1-Dichloroethane	10	ND	8.7	87*	88 - 127	a
1,2-Dichloroethene (total	20	ND	19	96	86 - 115	
Chloroform	10	ND	9.2	92	83 - 141	
1,2-Dichloroethane	10	ND	9.2	92	71 - 160	
Methyl ethyl ketone	10	ND	7.9	79	71 - 123	
1,1,1-Trichloroethane	10	ND	10	104	71 - 162	
Carbon tetrachloride	10	ND	11	106	63 - 176	
Bromodichloromethane	10	ND	9.0	90	80 - 146	
1,2-Dichloropropane	10	ND	8.4	84*	87 - 114	a
cis-1,3-Dichloropropene	10	ND	7.9	79*	82 - 130	a
Trichloroethene	10	ND	10	102	62 - 130	
Chlorodibromomethane	10	ND	8.4	84	71 - 158	
1,1,2-Trichloroethane	10	ND	8.2	82*	86 - 129	a
Benzene	10	ND	8.6	86	78 - 118	
trans-1,3-Dichloropropene	10	ND	7.3	73	73 - 147	
Bromoform	10	ND	8.3	83	58 - 176	
4-Methyl-2-pentanone (MIB	10	ND	7.4	74*	82 - 135	a
2-Hexanone	10	ND	6.8	68*	81 - 128	a
Tetrachloroethene	10	ND	10	104	85 - 121	
1,1,2,2-Tetrachloroethane	10	ND	7.6	76*	88 - 116	a

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SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AQ
BATCH: 8079081

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
Toluene	10	ND	8.7	87	70 - 119	
Chlorobenzene	10	ND	9.1	91	76 - 117	
Ethylbenzene	10	ND	9.1	91	86 - 132	
Styrene	10	ND	8.3	83	83 - 120	
Xylenes (total)	30	ND	27	89	89 - 121	
cis-1,2-Dichloroethene	10	ND	9.7	97	87 - 114	
trans-1,2-Dichloroethene	10	ND	9.6	96	85 - 116	
Dichlorodifluoromethane	10	ND	9.3	93	70 - 130	
Trichlorofluoromethane	10	ND	12	123	70 - 130	
1,1,2-Trichloro-1,2,2-tri	10	ND	14	139*	70 - 130	a
Methyl acetate	10	ND	7.2	72	70 - 130	
Methyl tert-butyl ether (	10	ND	8.8	88	70 - 130	
Cyclohexane	10	ND	8.2	82	70 - 130	
Methylcyclohexane	10	ND	9.1	91	70 - 130	
1,2-Dibromoethane (EDB)	10	ND	8.5	85	70 - 130	
Isopropylbenzene	10	ND	10	101	70 - 130	
1,3-Dichlorobenzene	10	ND	9.1	91	70 - 130	
1,4-Dichlorobenzene	10	ND	8.9	89	70 - 130	
1,2-Dichlorobenzene	10	ND	8.9	89	70 - 130	
1,2-Dibromo-3-chloropropa	10	ND	7.5	75	70 - 130	
1,2,4-Trichlorobenzene	10	ND	8.8	88	70 - 130	
n-Hexane	10	ND	11	107	70 - 130	
o-Xylene	10	ND	8.9	89	70 - 130	
m-Xylene & p-Xylene	20	ND	18	89	70 - 130	
2-Chloroethyl vinyl ether	10	ND	0.0	0*	70 - 130	a
Acetonitrile	100	ND	100	105	50 - 130	
Acrolein	100	ND	95	95	50 - 130	
Acrylonitrile	100	ND	85	85	50 - 130	

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SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AQ
BATCH: 8079081

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
Vinyl acetate	10	ND	9.3	93	70 - 130	
Bromobenzene	10	ND	9.1	91	70 - 130	
Bromochloromethane	10	ND	9.9	99	70 - 130	
n-Butylbenzene	10	ND	8.2	82	70 - 130	
sec-Butylbenzene	10	ND	8.5	85	70 - 130	
tert-Butylbenzene	10	ND	8.6	86	70 - 130	
2-Chlorotoluene	10	ND	8.6	86	70 - 130	
4-Chlorotoluene	10	ND	8.8	88	70 - 130	
Dibromomethane	10	ND	8.8	88	70 - 130	
1,3-Dichloropropane	10	ND	8.0	80	70 - 130	
2,2-Dichloropropane	10	ND	10	102	70 - 130	
1,1-Dichloropropene	10	ND	9.2	92	70 - 130	
Hexachlorobutadiene	10	ND	9.3	93	70 - 130	
Iodomethane	10	ND	10	104	70 - 130	
Isopropyl ether	10	ND	9.6	96	70 - 130	
p-Isopropyltoluene	10	ND	8.9	89	70 - 130	
Naphthalene	10	ND	7.4	74	70 - 130	
n-Propylbenzene	10	ND	8.8	88	70 - 130	
1,1,1,2-Tetrachloroethane	10	ND	9.0	90	70 - 130	
1,2,3-Trichlorobenzene	10	ND	8.4	84	70 - 130	
1,2,3-Trichloropropane	10	ND	8.8	88	70 - 130	
1,2,4-Trimethylbenzene	10	ND	8.2	82	70 - 130	
1,3,5-Trimethylbenzene	10	ND	8.2	82	70 - 130	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 10 out of 79 outside limits

COMMENTS:

FORM III

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AR
BATCH: 8079081

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENT. (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Benzene	10	9.8	98	13	20	78- 118	
trans-1,3-Dichloropropene	10	8.4	84	13	30	73- 147	
Bromoform	10	9.7	97	15	30	58- 176	
4-Methyl-2-pentanone (MIB	10	8.6	86	15	30	82- 135	
2-Hexanone	10	7.7	77*	13	30	81- 128	a
Tetrachloroethene	10	12	122*	16	30	85- 121	a
1,1,2,2-Tetrachloroethane	10	8.8	88	14	30	88- 116	
Toluene	10	10	100	14	20	70- 119	
Chlorobenzene	10	10	104	14	20	76- 117	
Ethylbenzene	10	10	104	14	30	86- 132	
Styrene	10	9.5	95	13	30	83- 120	
Xylenes (total)	30	31	103	14	30	89- 121	
cis-1,2-Dichloroethene	10	11	111	14	30	87- 114	
trans-1,2-Dichloroethene	10	11	110	14	30	85- 116	
Dichlorodifluoromethane	10	10	105	12	30	70- 130	
Trichlorofluoromethane	10	14	143*	15	30	70- 130	a
1,1,2-Trichloro-1,2,2-tri	10	16	159*	14	30	70- 130	a
Methyl acetate	10	8.0	80	11	30	70- 130	
Methyl tert-butyl ether (	10	9.9	99	13	30	70- 130	
Cyclohexane	10	9.3	93	12	30	70- 130	
Methylcyclohexane	10	10	102	12	30	70- 130	
1,2-Dibromoethane (EDB)	10	9.9	99	16	30	70- 130	
Isopropylbenzene	10	12	116	13	30	70- 130	
1,3-Dichlorobenzene	10	11	105	14	30	70- 130	
1,4-Dichlorobenzene	10	10	105	16	30	70- 130	
1,2-Dichlorobenzene	10	10	103	15	30	70- 130	
1,2-Dibromo-3-chloropropa	10	8.6	86	13	30	70- 130	
1,2,4-Trichlorobenzene	10	10	103	16	30	70- 130	

(Continued on next page)

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AR
BATCH: 8079081

COMPOUND	SPIKE ADDED	MSD CONCENT.	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
n-Hexane	10	13	126	16		30	70 - 130	
o-Xylene	10	10	102	13		30	70 - 130	
m-Xylene & p-Xylene	20	21	104	15		30	70 - 130	
2-Chloroethyl vinyl ether	10	0.0	0*	0.0		30	70 - 130	a
Acetonitrile	100	110	114	8.2		30	50 - 130	
Acrolein	100	110	115	19		30	50 - 130	
Acrylonitrile	100	96	96	12		30	50 - 130	
Vinyl acetate	10	11	106	14		30	70 - 130	
Bromobenzene	10	11	107	16		30	70 - 130	
Bromochloromethane	10	11	113	13		30	70 - 130	
n-Butylbenzene	10	9.5	95	15		30	70 - 130	
sec-Butylbenzene	10	9.8	98	14		30	70 - 130	
tert-Butylbenzene	10	10	100	15		30	70 - 130	
2-Chlorotoluene	10	10	100	15		30	70 - 130	
4-Chlorotoluene	10	10	101	14		30	70 - 130	
Dibromomethane	10	10	104	16		30	70 - 130	
1,3-Dichloropropane	10	9.4	94	17		30	70 - 130	
2,2-Dichloropropane	10	11	113	11		30	70 - 130	
1,1-Dichloropropene	10	10	104	12		30	70 - 130	
Hexachlorobutadiene	10	11	106	14		30	70 - 130	
Iodomethane	10	12	120	14		30	70 - 130	
Isopropyl ether	10	11	110	13		30	70 - 130	
p-Isopropyltoluene	10	10	103	14		30	70 - 130	
Naphthalene	10	9.1	91	20		30	70 - 130	
n-Propylbenzene	10	10	102	15		30	70 - 130	
1,1,1,2-Tetrachloroethane	10	11	105	16		30	70 - 130	
1,2,3-Trichlorobenzene	10	10	102	18		30	70 - 130	
1,2,3-Trichloropropane	10	10	101	14		30	70 - 130	

(Continued on next page)

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AR
BATCH: 8079081

COMPOUND	SPIKE ADDED	MSD CONCENT.	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
1,2,4-Trimethylbenzene	10	9.5	95	15	30	70 - 130	
1,3,5-Trimethylbenzene	10	9.5	95	15	30	70 - 130	
1,1-Dichloroethene	10	11	107	14	20	62 - 130	
Chloromethane	10	7.2	72	15	39	40 - 137	
Bromomethane	10	10	102	14	30	55 - 145	
Vinyl chloride	10	8.8	88	15	30	88 - 126	
Chloroethane	10	10	101	16	30	59 - 142	
Methylene chloride	10	9.4	94	14	30	82 - 115	
Acetone	10	11	106	15	30	45 - 128	
Carbon disulfide	10	12	119	7.2	41	69 - 138	
1,1-Dichloroethane	10	10	100	14	30	88 - 127	
1,2-Dichloroethene (total	20	22	111	14	30	86 - 115	
Chloroform	10	11	106	13	30	83 - 141	
1,2-Dichloroethane	10	11	106	14	30	71 - 160	
Methyl ethyl ketone	10	8.6	86	8.5	30	71 - 123	
1,1,1-Trichloroethane	10	12	118	12	30	71 - 162	
Carbon tetrachloride	10	12	121	13	30	63 - 176	
Bromodichloromethane	10	10	102	13	30	80 - 146	
1,2-Dichloropropane	10	9.8	98	16	30	87 - 114	
cis-1,3-Dichloropropene	10	9.1	91	14	30	82 - 130	
Trichloroethene	10	12	117	14	20	62 - 130	
Chlorodibromomethane	10	9.8	98	15	30	71 - 158	
1,1,2-Trichloroethane	10	9.7	97	16	30	86 - 129	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 79 outside limits
Spike Recovery: 5 out of 79 outside limits

COMMENTS:

FORM III

SW846 8260B METHOD BLANK SUMMARY

BLANK WORKORDER NO.: KJTMD1AA

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN SDG Number:8C13254

Lab File ID: UXC23838. Lot Number: A8C130254

Date Analyzed: 03/18/08 Time Analyzed: 12:24

Matrix: WATER Date Extracted:03/18/08

GC Column: DB624 ID: .18 Extraction Method: 5030B/8260B

Instrument ID: UX15 Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	AMW-05B(20080311)	KJHVV1AA	UXC23848.	03/18/08	16:18
02	AMW-05B(20080311)	KJHVV1AQ S	UXC23849.	03/18/08	16:41
03	AMW-05B(20080311)	KJHVV1AR D	UXC23850.	03/18/08	17:04
04	TB-001(20080311)	KJHV61AA	UXC23851.	03/18/08	17:27
05	CHECK SAMPLE	KJTMD1AC C	UXC23836.	03/18/08	11:38
06	DUPLICATE CHECK	KJTMD1AD L	UXC23837.	03/18/08	12:01
07					
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30					

COMMENTS:

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 8C13254

Lab File ID: BFB847 BFB Injection Date: 03/13/08

Instrument ID: A3UX15 BFB Injection Time: 1418

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.4
75	30.0 - 60.0% of mass 95	46.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.4 (0.6)1
174	50.0 - 100.0% of mass 95	59.3
175	5.0 - 9.0% of mass 174	4.2 (7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	56.6 (95.4)1
177	5.0 - 9.0% of mass 176	4.4 (7.8)2

1-Value is % of mass 174 2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD040	200NG8260CAL	UXC23736	03/13/08	1551
02	VSTD020	100NG8260CAL	UXC23737	03/13/08	1614
03	VSTD010	50NG8260CAL	UXC23738	03/13/08	1637
04	VSTD005	25NG8260CAL	UXC23739	03/13/08	1700
05	VSTD002	10NG8260CAL	UXC23740	03/13/08	1723
06	VSTD001	5NG8260CAL	UXC23741	03/13/08	1746
07	VSTD040	200NGA9CAL	UXC23743	03/13/08	1832
08	VSTD020	100NGA9CAL	UXC23744	03/13/08	1855
09	VSTD010	50NGA9CAL	UXC23745	03/13/08	1918
10	VSTD005	25NGA9CAL	UXC23746	03/13/08	1941
11	VSTD002	10NGA9CAL	UXC23747	03/13/08	2004
12	VSTD001	5NGA9CAL	UXC23748	03/13/08	2027
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 8C13254

Lab File ID: BFB851 BFB Injection Date: 03/18/08

Instrument ID: A3UX15 BFB Injection Time: 1026

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.2
75	30.0 - 60.0% of mass 95	46.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.3 (0.5)1
174	50.0 - 100.0% of mass 95	65.0
175	5.0 - 9.0% of mass 174	4.6 (7.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	61.9 (95.3)1
177	5.0 - 9.0% of mass 176	4.2 (6.8)2

1-Value is % of mass 174 2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	50NGA9-CC	UXC23834	03/18/08	1052
02	VSTD010	50NG-CC	UXC23835	03/18/08	1115
03	KJTMD-CHK	KJTMD1AC	UXC23836	03/18/08	1138
04	KJTMD-CKDUP	KJTMD1AD	UXC23837	03/18/08	1201
05	KJTMD-BLK	KJTMD1AA	UXC23838	03/18/08	1224
06	AMW-05B(2008	KJHVV1AA	UXC23848	03/18/08	1618
07	AMW-05B(2008	KJHVV1AQ	UXC23849	03/18/08	1641
08	AMW-05B(2008	KJHVV1AR	UXC23850	03/18/08	1704
09	TB-001(20080	KJHV61AA	UXC23851	03/18/08	1727
10					
11					
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16					
17					
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19					
20					
21					
22					

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 8C13254

Lab File ID (Standard): UXC23835 Date Analyzed: 03/18/08

Instrument ID: A3UX15 Time Analyzed: 1115

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (CBZ) AREA #	RT	IS2 (DCB) AREA #	RT	IS3 AREA #	RT
	12 HOUR STD	1012111	8.26	618918	10.49	1278766	5.58
	UPPER LIMIT	2024222	8.76	1237836	10.99	2557532	6.08
	LOWER LIMIT	506056	7.76	309459	9.99	639383	5.08
	EPA SAMPLE NO.						
01	KJTMD-CHK	980510	8.26	612351	10.49	1250768	5.58
02	KJTMD-CKDUP	1020269	8.26	616482	10.49	1288491	5.58
03	KJTMD-BLK	980478	8.26	595442	10.49	1248861	5.58
04	AMW-05B(2008	980534	8.26	597031	10.49	1245829	5.58
05	AMW-05B(2008	961741	8.26	599574	10.49	1225084	5.58
06	AMW-05B(2008	1018254	8.26	632473	10.49	1275272	5.58
07	TB-001(20080	999939	8.26	618467	10.49	1248147	5.58
08							
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16							
17							
18							
19							
20							
21							
22							

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DCB) = 1,4-Dichlorobenzene-d4
IS3 = Fluorobenzene

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SAMPLE DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

GC/MS Volatiles

Lot-Sample #...: A8C130254-001 **Work Order #...:** KJHVV1AA **Matrix.....:** WG
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/18/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8079081
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16

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ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

GC/MS Volatiles

Lot-Sample #...: A8C130254-001 **Work Order #...:** KJHVV1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

(Continued on next page)

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

GC/MS Volatiles

Lot-Sample #...: A8C130254-001 **Work Order #...:** KJHVV1AA **Matrix.....:** WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23848.D
Report Date: 19-Mar-2008 06:45

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23848.D
Lab Smp Id: KJHVV1AA Client Smp ID: AMW-05B(20080311)
Inj Date : 18-MAR-2008 16:18
Operator : 1754 Inst ID: a3ux15.i
Smp Info : KJHVV1AA,5ML/5ML
Misc Info : C80318A,8260LLUX15,,1754
Comment   :
Method   : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Meth Date : 18-Mar-2008 11:29 RoachC Quant Type: ISTD
Cal Date : 13-MAR-2008 18:32 Cal File: UXC23743.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 4-8260+IX.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Fluorobenzene	96	5.577	5.577	(1.000)	1245829	50.0000	
* 2	Chlorobenzene-d5	117	8.257	8.257	(1.000)	980534	50.0000	
* 3	1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	597031	50.0000	
$ 4	Dibromofluoromethane	113	5.008	5.008	(0.898)	265909	53.0273	10.605
$ 5	1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	285396	48.1640	9.633
$ 6	Toluene-d8	98	6.941	6.941	(0.841)	1020329	47.0310	9.406
$ 7	Bromofluorobenzene	95	9.360	9.360	(1.134)	393772	44.2060	8.841
8	Dichlorodifluoromethane	85	Compound Not Detected.					
9	Chloromethane	50	Compound Not Detected.					
10	Vinyl Chloride	62	Compound Not Detected.					
11	Bromomethane	94	Compound Not Detected.					
12	Chloroethane	64	Compound Not Detected.					
13	Trichlorofluoromethane	101	Compound Not Detected.					
15	Acrolein	56	Compound Not Detected.					
16	Acetone	43	Compound Not Detected.					
17	1,1-Dichloroethene	96	Compound Not Detected.					
18	Freon-113	151	Compound Not Detected.					
19	Iodomethane	142	Compound Not Detected.					
20	Carbon Disulfide	76	Compound Not Detected.					
21	Methylene Chloride	84	Compound Not Detected.					

22 Acetonitrile	41	Compound Not Detected.
23 Acrylonitrile	53	Compound Not Detected.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23848.D
Report Date: 19-Mar-2008 06:45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	24 Methyl tert-butyl ether	73	Compound Not Detected.					
	25 trans-1,2-Dichloroethene	96	Compound Not Detected.					
	26 Hexane	86	Compound Not Detected.					
	27 Vinyl acetate	43	Compound Not Detected.					
	28 1,1-Dichloroethane	63	Compound Not Detected.					
	29 tert-Butyl Alcohol	59	Compound Not Detected.					
	30 2-Butanone	43	Compound Not Detected.					
M	31 1,2-Dichloroethene (total)	96	Compound Not Detected.					
	32 cis-1,2-dichloroethene	96	Compound Not Detected.					
	33 2,2-Dichloropropane	77	Compound Not Detected.					
	34 Bromochloromethane	128	Compound Not Detected.					
	35 Chloroform	83	Compound Not Detected.					
	36 Tetrahydrofuran	42	Compound Not Detected.					
	37 1,1,1-Trichloroethane	97	Compound Not Detected.					
	38 1,1-Dichloropropene	75	Compound Not Detected.					
	39 Carbon Tetrachloride	117	Compound Not Detected.					
	40 1,2-Dichloroethane	62	Compound Not Detected.					
	41 Benzene	78	Compound Not Detected.					
	42 Trichloroethene	130	Compound Not Detected.					
	43 1,2-Dichloropropane	63	Compound Not Detected.					
	44 1,4-Dioxane	88	Compound Not Detected.					
	45 Dibromomethane	93	Compound Not Detected.					
	46 Bromodichloromethane	83	Compound Not Detected.					
	47 2-Chloroethyl vinyl ether	63	Compound Not Detected.					
	48 cis-1,3-Dichloropropene	75	Compound Not Detected.					
	49 4-Methyl-2-pentanone	43	Compound Not Detected.					
	50 Toluene	91	Compound Not Detected.					
	51 trans-1,3-Dichloropropene	75	Compound Not Detected.					
	52 Ethyl Methacrylate	69	Compound Not Detected.					
	53 1,1,2-Trichloroethane	97	Compound Not Detected.					
	54 1,3-Dichloropropane	76	Compound Not Detected.					
	55 Tetrachloroethene	164	Compound Not Detected.					
	56 2-Hexanone	43	Compound Not Detected.					
	57 Dibromochloromethane	129	Compound Not Detected.					
	58 1,2-Dibromoethane	107	Compound Not Detected.					
	59 Chlorobenzene	112	Compound Not Detected.					
	60 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	61 Ethylbenzene	106	Compound Not Detected.					
	62 m + p-Xylene	106	Compound Not Detected.					
M	63 Xylenes (total)	106	Compound Not Detected.					
	64 Xylene-o	106	Compound Not Detected.					
	65 Styrene	104	Compound Not Detected.					
	66 Bromoform	173	Compound Not Detected.					
	67 Isopropylbenzene	105	Compound Not Detected.					
	68 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
	69 1,4-Dichloro-2-butene	53	Compound Not Detected.					
	70 1,2,3-Trichloropropane	110	Compound Not Detected.					
	71 Bromobenzene	156	Compound Not Detected.					
	72 n-Propylbenzene	120	Compound Not Detected.					
	73 2-Chlorotoluene	126	Compound Not Detected.					
	74 1,3,5-Trimethylbenzene	105	Compound Not Detected.					
	75 4-Chlorotoluene	126	Compound Not Detected.					

76	tert-Butylbenzene	119	Compound Not Detected.
77	1,2,4-Trimethylbenzene	105	Compound Not Detected.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23848.D
Report Date: 19-Mar-2008 06:45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
78	sec-Butylbenzene	105	Compound Not Detected.					
79	4-Isopropyltoluene	119	Compound Not Detected.					
80	1,3-Dichlorobenzene	146	Compound Not Detected.					
81	1,4-Dichlorobenzene	146	Compound Not Detected.					
82	n-Butylbenzene	91	Compound Not Detected.					
83	1,2-Dichlorobenzene	146	Compound Not Detected.					
84	1,2-Dibromo-3-chloropropane	157	Compound Not Detected.					
85	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
86	Hexachlorobutadiene	225	Compound Not Detected.					
87	Naphthalene	128	Compound Not Detected.					
88	1,2,3-Trichlorobenzene	180	Compound Not Detected.					
14	Dichlorofluoromethane	67	Compound Not Detected.					
89	Ethyl Ether	59	Compound Not Detected.					
91	3-Chloropropene	76	Compound Not Detected.					
92	Isopropyl Ether	87	Compound Not Detected.					
93	2-Chloro-1,3-butadiene	53	Compound Not Detected.					
94	Propionitrile	54	Compound Not Detected.					
95	Ethyl Acetate	43	Compound Not Detected.					
96	Methacrylonitrile	41	Compound Not Detected.					
97	Isobutanol	41	Compound Not Detected.					
99	n-Butanol	56	Compound Not Detected.					
100	Methyl Methacrylate	41	Compound Not Detected.					
101	2-Nitropropane	41	Compound Not Detected.					
103	Cyclohexanone	55	Compound Not Detected.					
98	Cyclohexane	56	Compound Not Detected.					
140	1-Chlorohexane	91	Compound Not Detected.					
143	Methyl Acetate	43	Compound Not Detected.					
144	Methylcyclohexane	83	Compound Not Detected.					
141	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
153	1,3-Butadiene	54	Compound Not Detected.					
154	n-Heptane	43	Compound Not Detected.					
146	2-Methylnaphthalene	142	14.021	14.021	(1.337)	14638	1.04277	0.2086(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23848.D
Report Date: 19-Mar-2008 06:45

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23848.D
Lab Smp Id: KJHVV1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Misc Info: C80318A,8260LLUX15,,1754

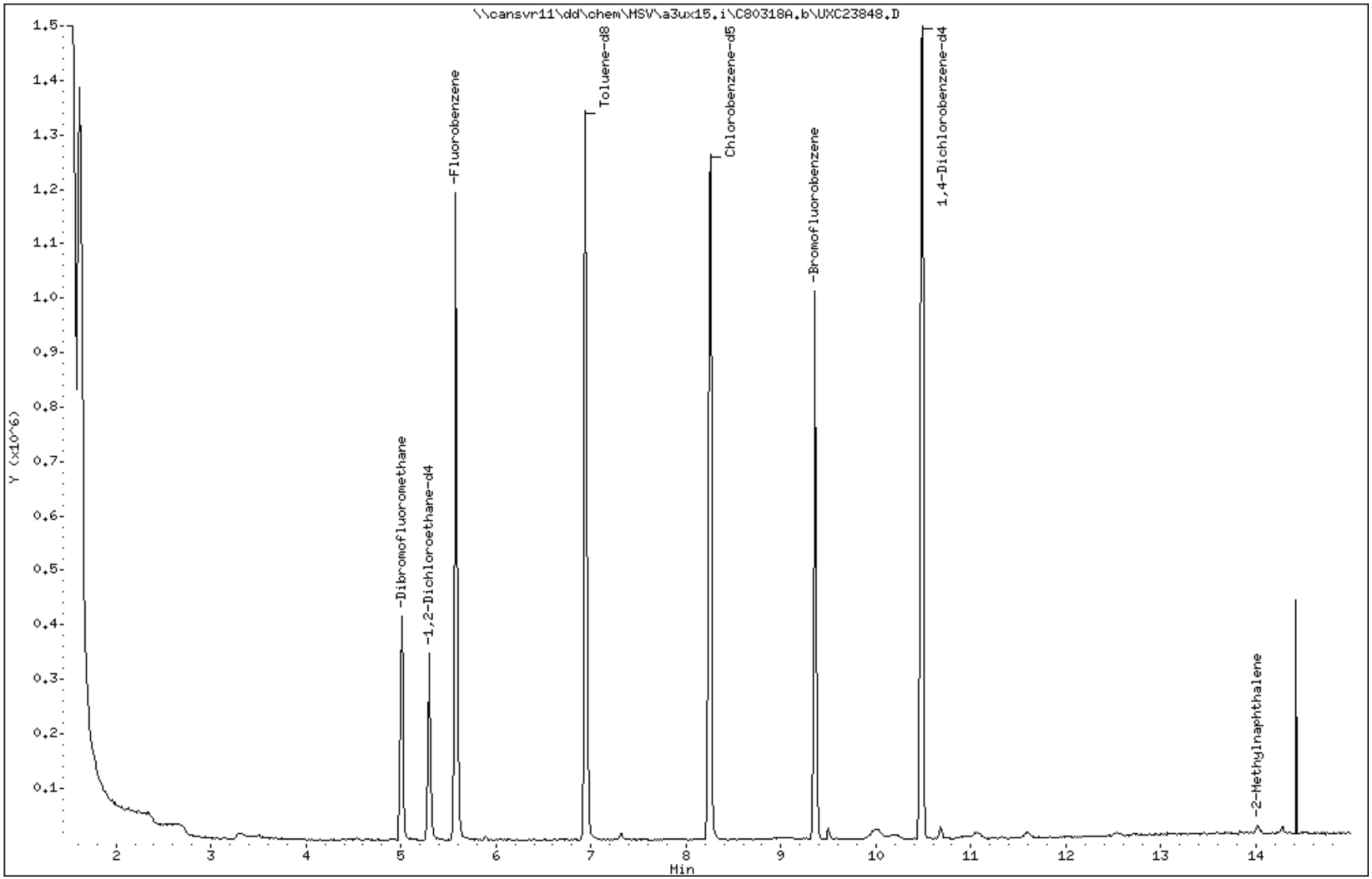
Calibration Date: 18-MAR-2008
Calibration Time: 11:15
Client Smp ID: AMW-05B(20080311)
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1278766	639383	2557532	1245829	-2.58
2 Chlorobenzene-d5	1012111	506056	2024222	980534	-3.12
3 1,4-Dichlorobenze	618918	309459	1237836	597031	-3.54

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23848.D
Date : 18-MAR-2008 16:18
Client ID: AMW-05B(20080311)
Instrument: a3ux15.i
Sample Info: KJHVV1AA,5ML/5ML
Purge Volume: 5.0
Operator: 1754
Column phase: DB624
Column diameter: 0.18



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23848.D

Date : 18-MAR-2008 16:18

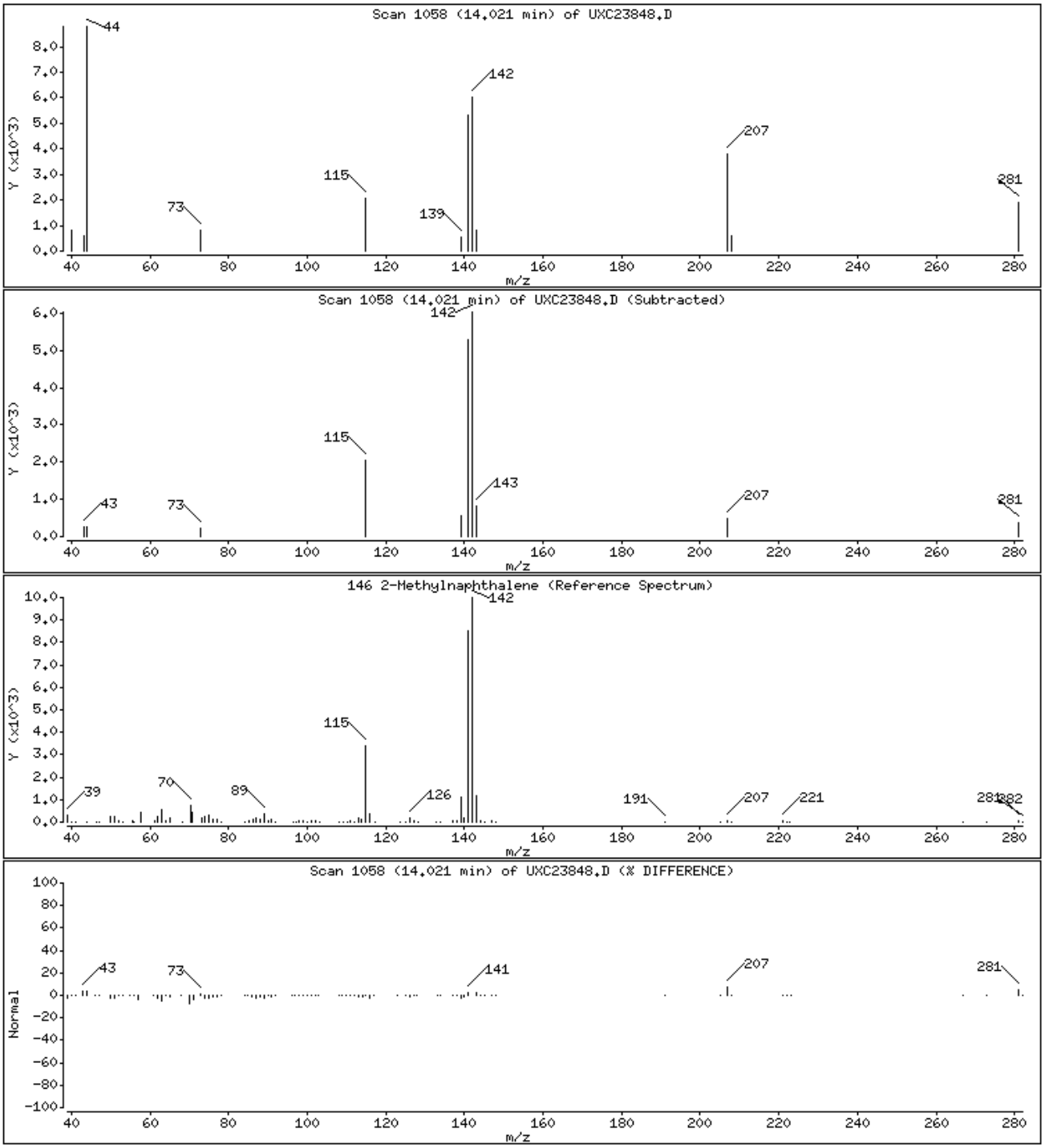
Client ID: AMW-05B(20080311) Instrument: a3ux15.i

Sample Info: KJHVV1AA,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

146 2-Methylnaphthalene Concentration: 0.2086 ug/L



ARCADIS U.S., Inc.

Client Sample ID: TB-001(20080311)

GC/MS Volatiles

Lot-Sample #...: A8C130254-002 **Work Order #...:** KJHV61AA **Matrix.....:** WQ
Date Sampled...: 03/11/08 **Date Received..:** 03/13/08
Prep Date.....: 03/18/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8079081
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**7.2 J,B**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**2.2 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16

(Continued on next page)

ARCADIS U.S., Inc.

Client Sample ID: TB-001(20080311)

GC/MS Volatiles

Lot-Sample #...: A8C130254-002 **Work Order #...:** KJHV61AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	**0.50 J**	**1.0**	**ug/L**	**0.13**
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	**0.26 J**	**1.0**	**ug/L**	**0.24**
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	**0.25 J,B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

(Continued on next page)

ARCADIS U.S., Inc.

Client Sample ID: TB-001(20080311)

GC/MS Volatiles

Lot-Sample #...: A8C130254-002 **Work Order #...:** KJHV61AA **Matrix.....:** WQ

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D
Report Date: 19-Mar-2008 06:47

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D
Lab Smp Id: KJHV61AA Client Smp ID: TB-001(20080311)
Inj Date : 18-MAR-2008 17:27
Operator : 1754 Inst ID: a3ux15.i
Smp Info : KJHV61AA,5ML/5ML
Misc Info : C80318A,8260LLUX15,,1754
Comment   :
Method   : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Meth Date : 18-Mar-2008 11:29 RoachC Quant Type: ISTD
Cal Date : 13-MAR-2008 18:32 Cal File: UXC23743.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 4-8260+IX.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	5.577	5.577	(1.000)	1248147	50.0000	
* 2 Chlorobenzene-d5	117	8.257	8.257	(1.000)	999939	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	618467	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	265178	52.7833	10.557
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	294152	49.5495	9.910
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	1070072	48.3667	9.673
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	410149	45.1510	9.030
8 Dichlorodifluoromethane	85	Compound Not Detected.					
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
15 Acrolein	56	2.980	2.969	(0.534)	8042	15.7141	3.143
16 Acetone	43	3.123	3.123	(0.560)	50979	36.0040	7.201
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Freon-113	151	Compound Not Detected.					
19 Iodomethane	142	Compound Not Detected.					
20 Carbon Disulfide	76	Compound Not Detected.					
21 Methylene Chloride	84	Compound Not Detected.					

22 Acetonitrile	41	3.384	3.372 (0.607)	4023	10.7262	2.145
23 Acrylonitrile	53	Compound Not Detected.				

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D
Report Date: 19-Mar-2008 06:47

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	24 Methyl tert-butyl ether	73	Compound Not Detected.					
	25 trans-1,2-Dichloroethene	96	Compound Not Detected.					
	26 Hexane	86	Compound Not Detected.					
	27 Vinyl acetate	43	Compound Not Detected.					
	28 1,1-Dichloroethane	63	Compound Not Detected.					
	29 tert-Butyl Alcohol	59	3.609	3.609	(0.647)	7512	40.5546	8.111
	30 2-Butanone	43	4.641	4.617	(0.832)	15748	11.2286	2.246
M	31 1,2-Dichloroethene (total)	96	Compound Not Detected.					
	32 cis-1,2-dichloroethene	96	Compound Not Detected.					
	33 2,2-Dichloropropane	77	Compound Not Detected.					
	34 Bromochloromethane	128	Compound Not Detected.					
	35 Chloroform	83	Compound Not Detected.					
	36 Tetrahydrofuran	42	Compound Not Detected.					
	37 1,1,1-Trichloroethane	97	Compound Not Detected.					
	38 1,1-Dichloropropene	75	Compound Not Detected.					
	39 Carbon Tetrachloride	117	Compound Not Detected.					
	40 1,2-Dichloroethane	62	Compound Not Detected.					
	41 Benzene	78	Compound Not Detected.					
	42 Trichloroethene	130	Compound Not Detected.					
	43 1,2-Dichloropropane	63	Compound Not Detected.					
	44 1,4-Dioxane	88	Compound Not Detected.					
	45 Dibromomethane	93	Compound Not Detected.					
	46 Bromodichloromethane	83	Compound Not Detected.					
	47 2-Chloroethyl vinyl ether	63	Compound Not Detected.					
	48 cis-1,3-Dichloropropene	75	Compound Not Detected.					
	49 4-Methyl-2-pentanone	43	Compound Not Detected.					
	50 Toluene	91	Compound Not Detected.					
	51 trans-1,3-Dichloropropene	75	Compound Not Detected.					
	52 Ethyl Methacrylate	69	Compound Not Detected.					
	53 1,1,2-Trichloroethane	97	Compound Not Detected.					
	54 1,3-Dichloropropane	76	Compound Not Detected.					
	55 Tetrachloroethene	164	Compound Not Detected.					
	56 2-Hexanone	43	Compound Not Detected.					
	57 Dibromochloromethane	129	Compound Not Detected.					
	58 1,2-Dibromoethane	107	Compound Not Detected.					
	59 Chlorobenzene	112	Compound Not Detected.					
	60 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	61 Ethylbenzene	106	Compound Not Detected.					
	62 m + p-Xylene	106	Compound Not Detected.					
M	63 Xylenes (total)	106	Compound Not Detected.					
	64 Xylene-o	106	Compound Not Detected.					
	65 Styrene	104	Compound Not Detected.					
	66 Bromoform	173	Compound Not Detected.					
	67 Isopropylbenzene	105	Compound Not Detected.					
	68 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
	69 1,4-Dichloro-2-butene	53	Compound Not Detected.					
	70 1,2,3-Trichloropropane	110	Compound Not Detected.					
	71 Bromobenzene	156	Compound Not Detected.					
	72 n-Propylbenzene	120	Compound Not Detected.					
	73 2-Chlorotoluene	126	Compound Not Detected.					
	74 1,3,5-Trimethylbenzene	105	Compound Not Detected.					
	75 4-Chlorotoluene	126	Compound Not Detected.					

76	tert-Butylbenzene	119	Compound Not Detected.
77	1,2,4-Trimethylbenzene	105	Compound Not Detected.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D
Report Date: 19-Mar-2008 06:47

						CONCENTRATIONS	
	QUANT SIG					ON-COLUMN	FINAL
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ng)	(ug/L)
78 sec-Butylbenzene	105	Compound Not Detected.					
79 4-Isopropyltoluene	119	Compound Not Detected.					
80 1,3-Dichlorobenzene	146	Compound Not Detected.					
81 1,4-Dichlorobenzene	146	Compound Not Detected.					
82 n-Butylbenzene	91	Compound Not Detected.					
83 1,2-Dichlorobenzene	146	Compound Not Detected.					
84 1,2-Dibromo-3-chloropropane	157	Compound Not Detected.					
85 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
86 Hexachlorobutadiene	225	Compound Not Detected.					
87 Naphthalene	128	12.716	12.716	(1.213)	35896	1.30002	0.2600
88 1,2,3-Trichlorobenzene	180	12.977	12.965	(1.237)	11961	1.24384	0.2488
14 Dichlorofluoromethane	67	Compound Not Detected.					
89 Ethyl Ether	59	Compound Not Detected.					
91 3-Chloropropene	76	Compound Not Detected.					
92 Isopropyl Ether	87	Compound Not Detected.					
93 2-Chloro-1,3-butadiene	53	Compound Not Detected.					
94 Propionitrile	54	Compound Not Detected.					
95 Ethyl Acetate	43	Compound Not Detected.					
96 Methacrylonitrile	41	Compound Not Detected.					
97 Isobutanol	41	Compound Not Detected.					
99 n-Butanol	56	Compound Not Detected.					
100 Methyl Methacrylate	41	Compound Not Detected.					
101 2-Nitropropane	41	Compound Not Detected.					
103 Cyclohexanone	55	Compound Not Detected.					
98 Cyclohexane	56	Compound Not Detected.					
140 1-Chlorohexane	91	Compound Not Detected.					
143 Methyl Acetate	43	Compound Not Detected.					
144 Methylcyclohexane	83	6.052	6.052	(1.085)	1975	2.50760	0.5015
141 1,3,5-Trichlorobenzene	180	Compound Not Detected.					
153 1,3-Butadiene	54	Compound Not Detected.					
154 n-Heptane	43	Compound Not Detected.					
146 2-Methylnaphthalene	142	Compound Not Detected.					

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D
Report Date: 19-Mar-2008 06:47

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

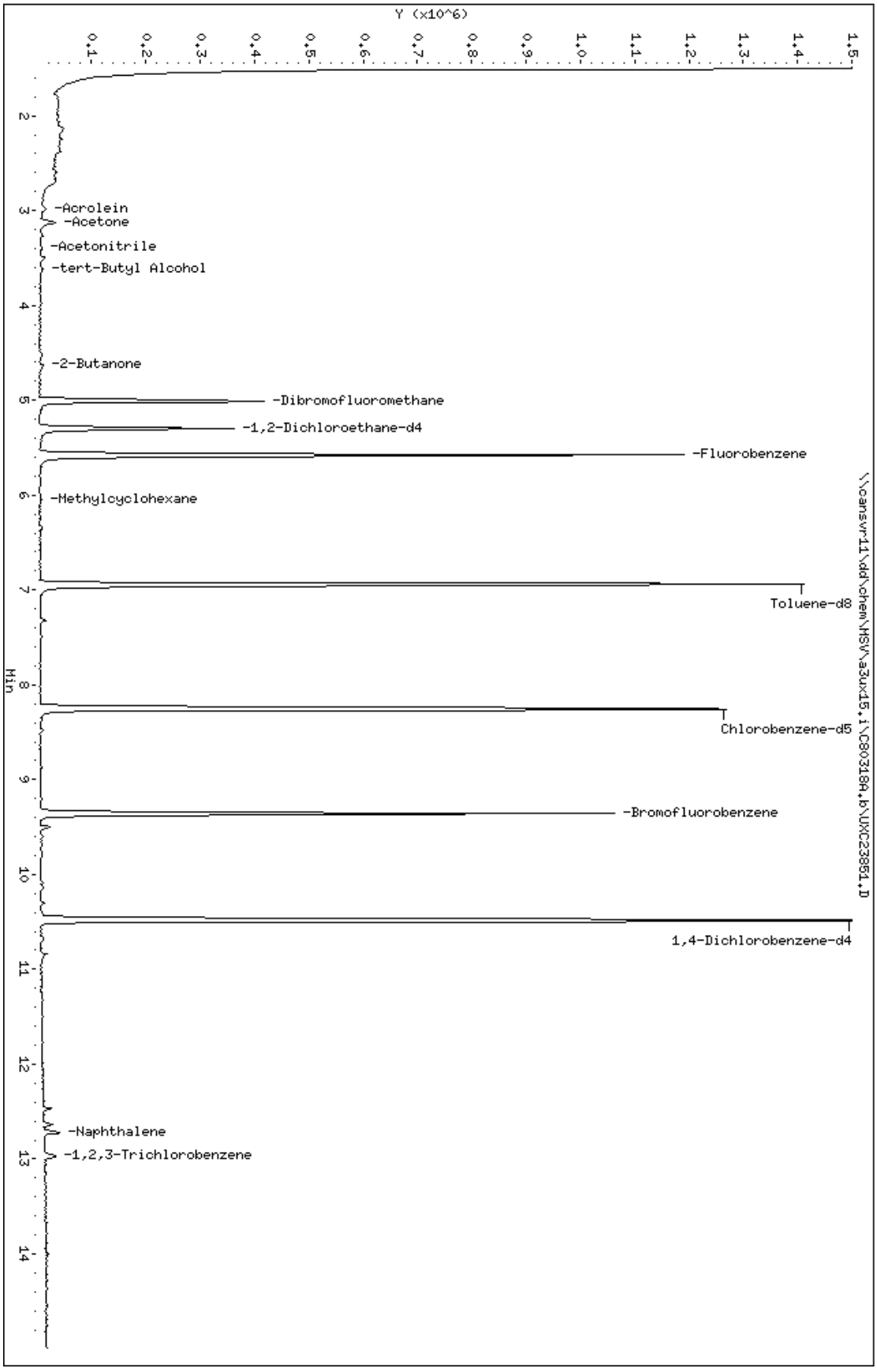
Instrument ID: a3ux15.i
Lab File ID: UXC23851.D
Lab Smp Id: KJHV61AA
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Misc Info: C80318A,8260LLUX15,,1754

Calibration Date: 18-MAR-2008
Calibration Time: 11:15
Client Smp ID: TB-001(20080311)
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1278766	639383	2557532	1248147	-2.39
2 Chlorobenzene-d5	1012111	506056	2024222	999939	-1.20
3 1,4-Dichlorobenze	618918	309459	1237836	618467	-0.07

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Data File: \\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23851.D
Date : 18-MAR-2008 17:27
Client ID: TB-001(20080311)
Sample Info: KJH161AA,5ML/5ML
Purge Volume: 5.0
Column phase: DB624
Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18
Y (x10^6)
Min
-Acrolein
-Acetone
-Acetonitrile
-tert-Butyl Alcohol
-2-Butanone
-Dibromofluoromethane
-1,2-Dichloroethane-d4
-Fluorobenzene
-Methylcyclohexane
Toluene-d8
Chlorobenzene-d5
-Bromofluorobenzene
1,4-Dichlorobenzene-d4
-Naphthalene
-1,2,3-Trichlorobenzene
\\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23851.D

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D

Date : 18-MAR-2008 17:27

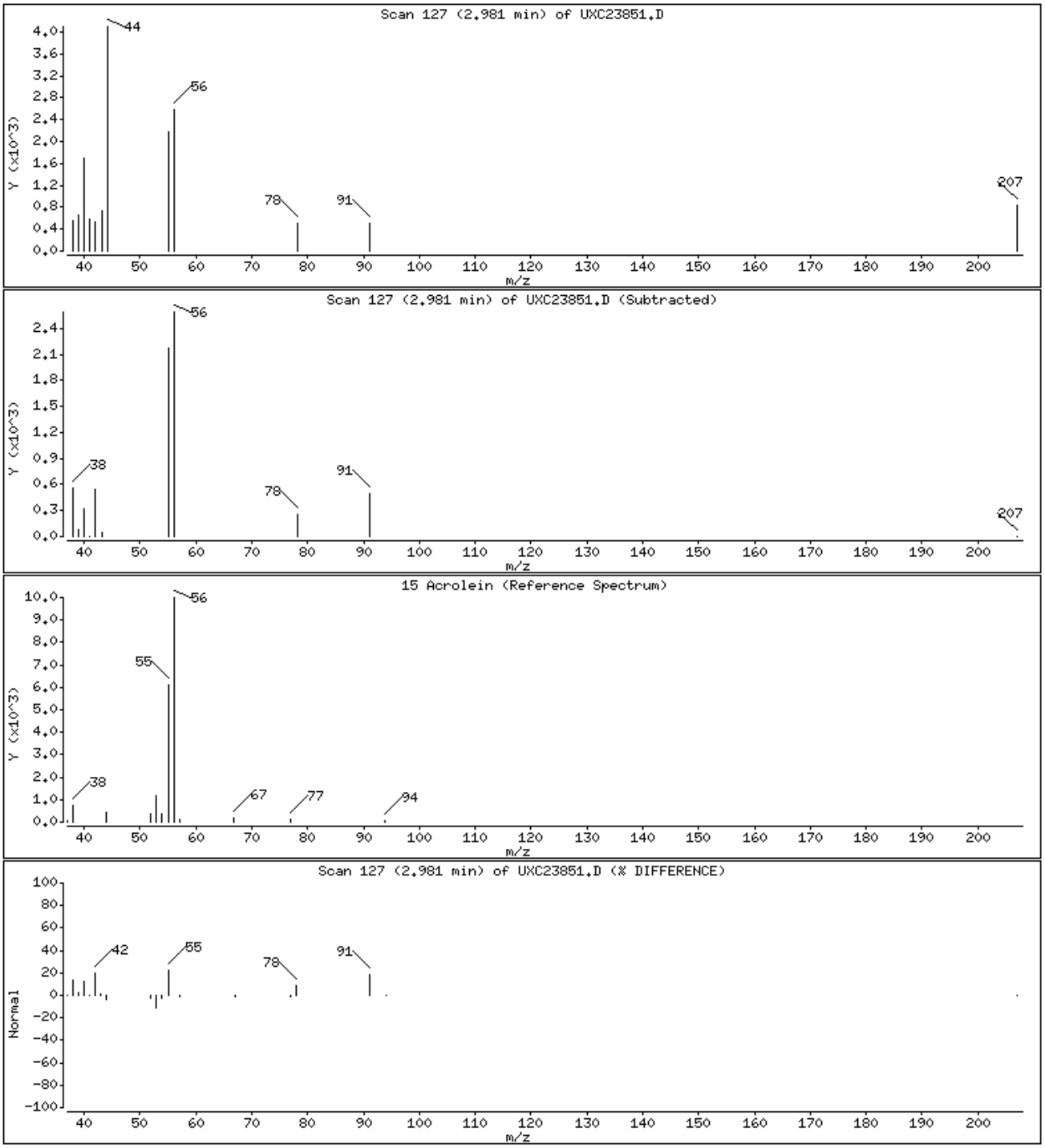
Client ID: TB-001(20080311) Instrument: a3ux15.i

Sample Info: KJHV61AA,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

15 Acrolein Concentration: 3.143 ug/L



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D

Date : 18-MAR-2008 17:27

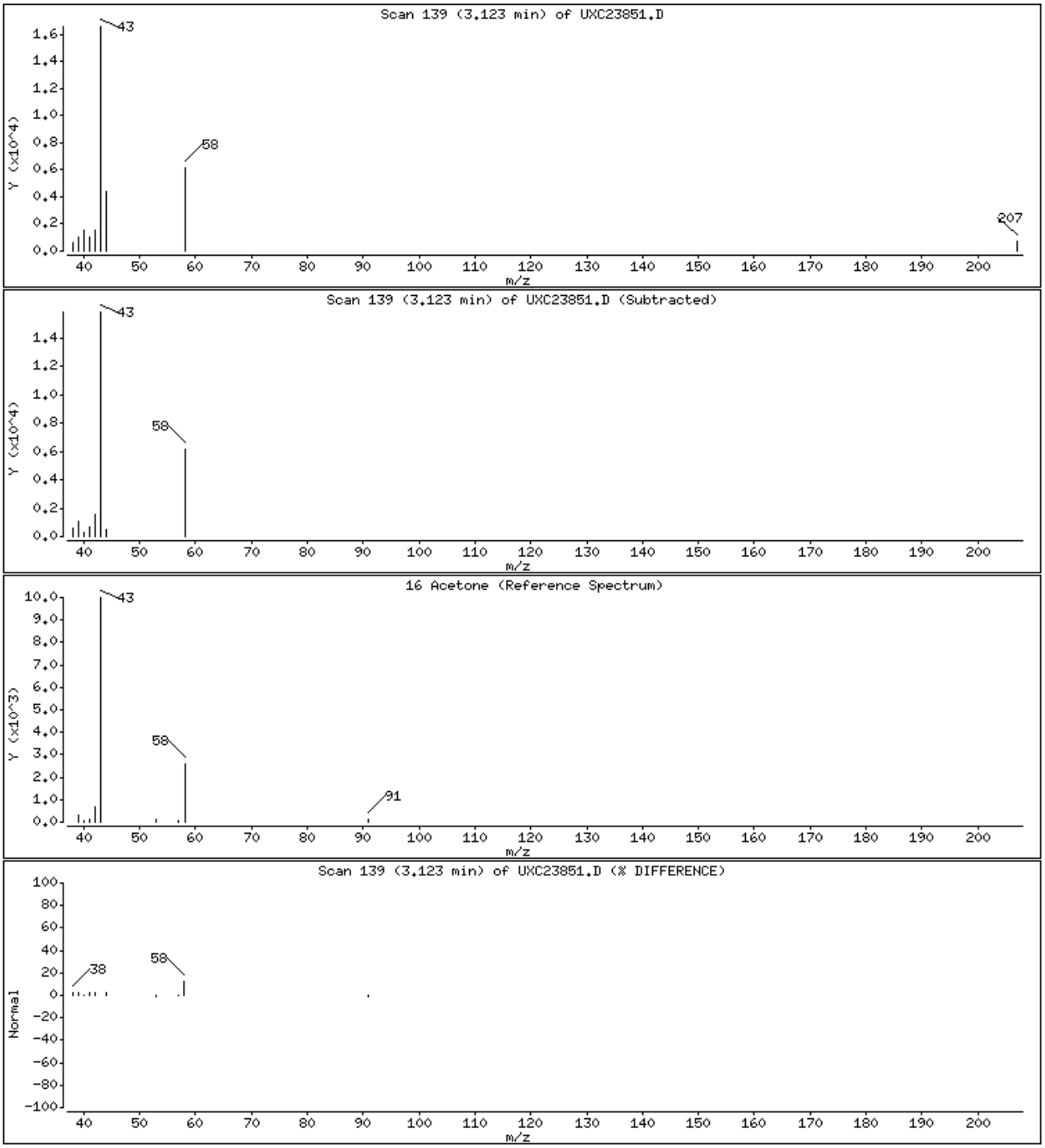
Client ID: TB-001(20080311) Instrument: a3ux15.i

Sample Info: KJHV61AA,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

16 Acetone Concentration: 7.201 ug/L



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D

Date : 18-MAR-2008 17:27

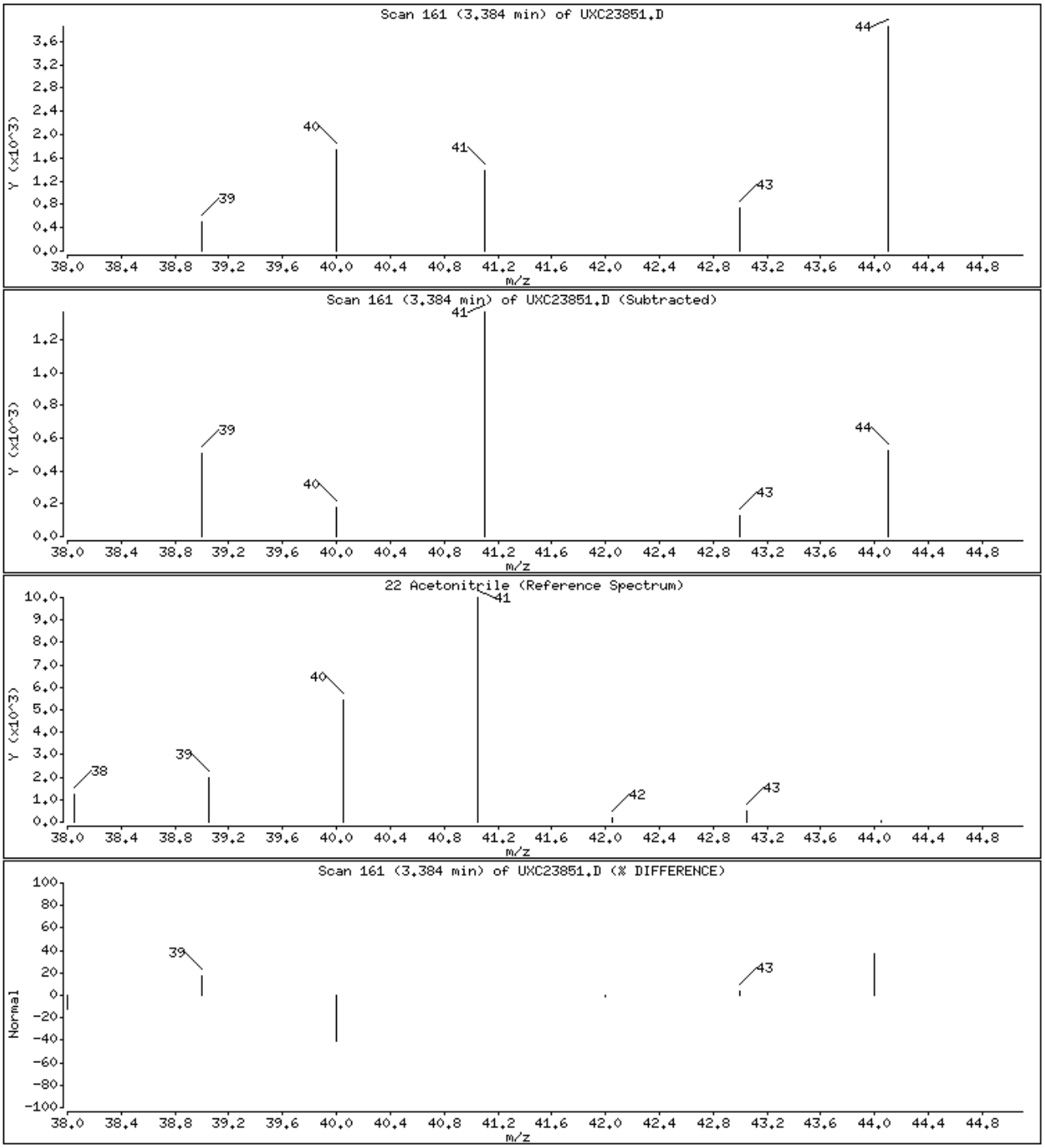
Client ID: TB-001(20080311) Instrument: a3ux15.i

Sample Info: KJHV61AA,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

22 Acetonitrile Concentration: 2.145 ug/L



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D

Date : 18-MAR-2008 17:27

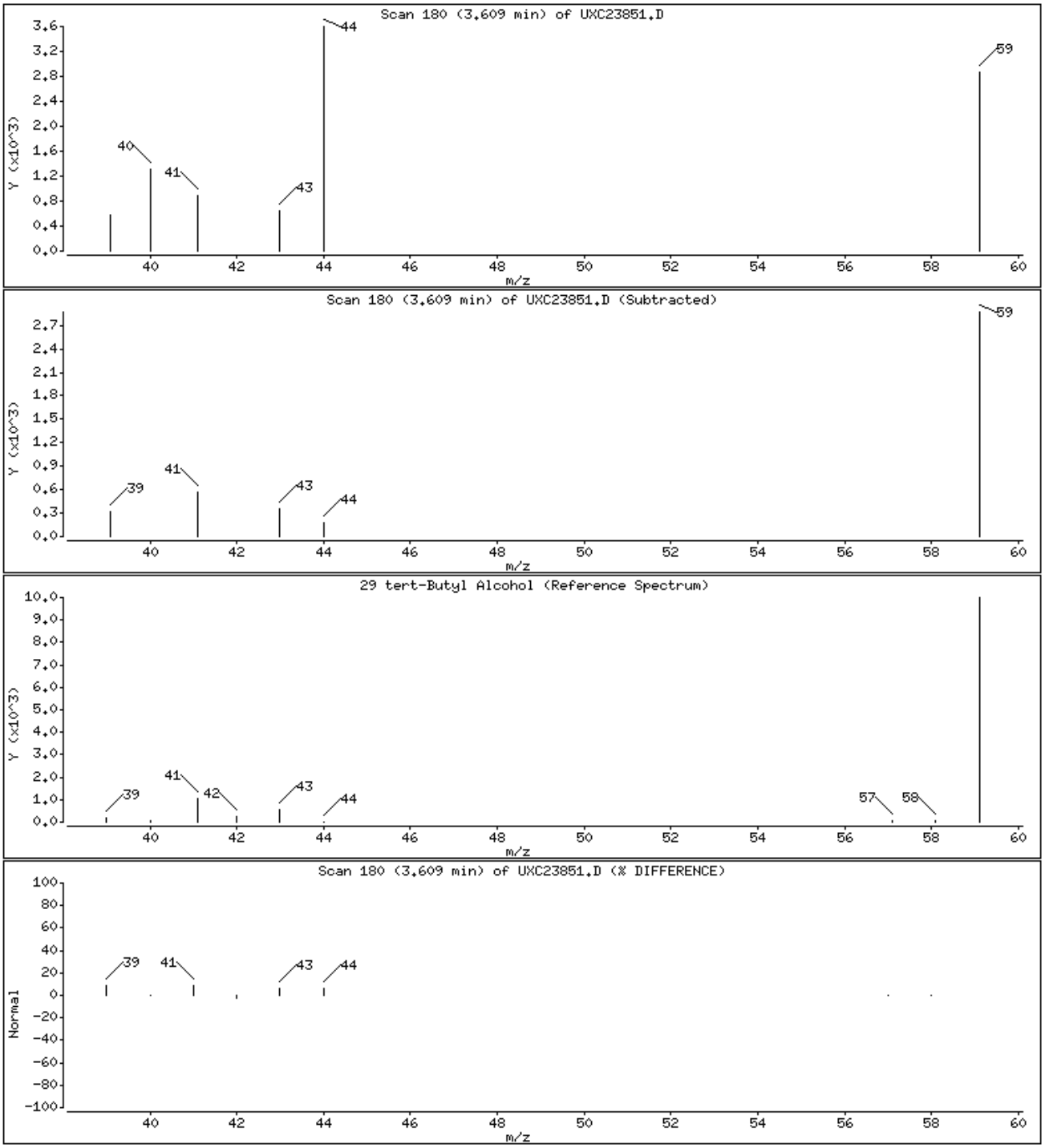
Client ID: TB-001(20080311) Instrument: a3ux15.i

Sample Info: KJHV61AA,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

29 tert-Butyl Alcohol Concentration: 8.111 ug/L



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D

Date : 18-MAR-2008 17:27

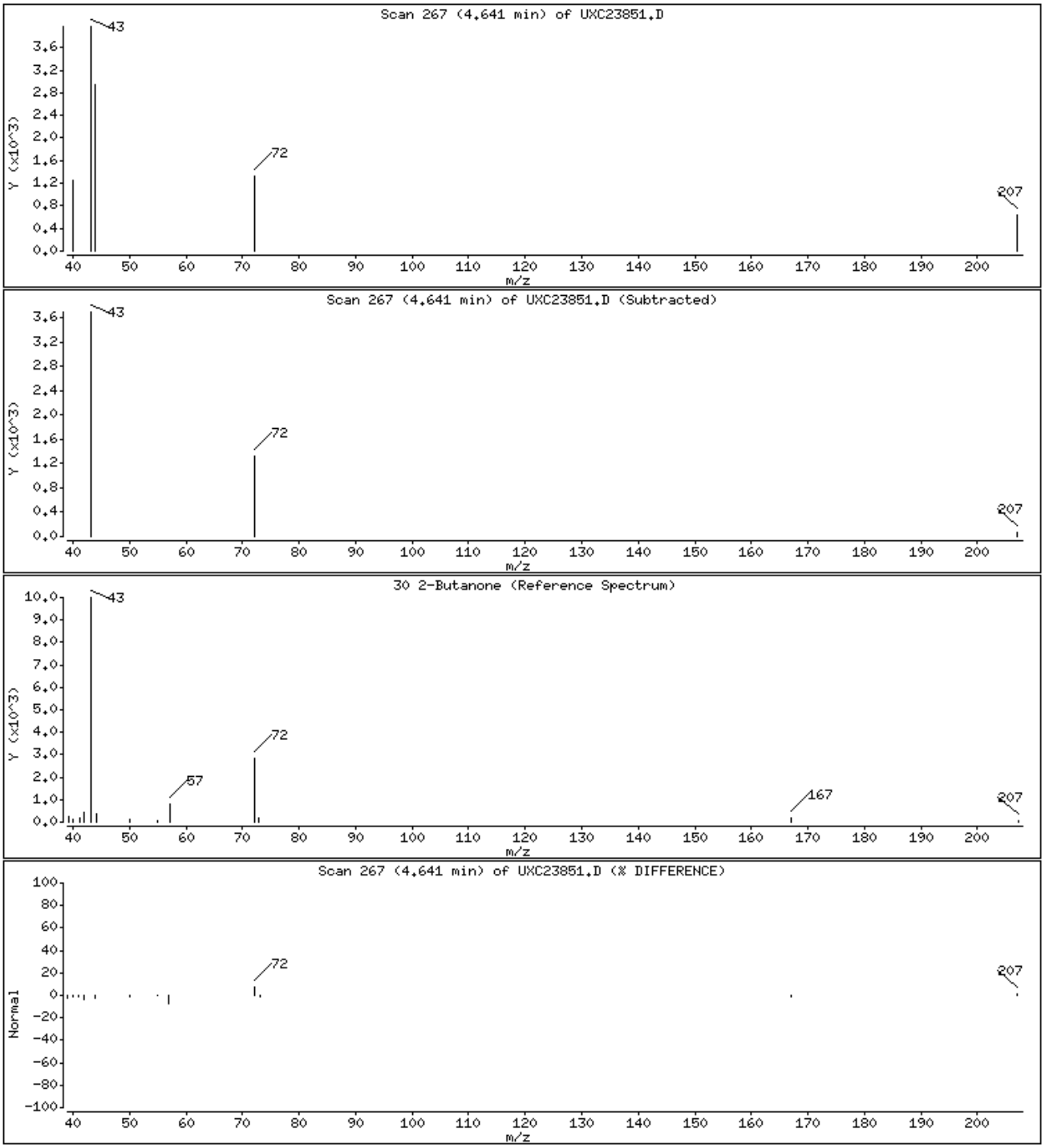
Client ID: TB-001(20080311) Instrument: a3ux15.i

Sample Info: KJHV61AA,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

30 2-Butanone Concentration: 2.246 ug/L



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D

Date : 18-MAR-2008 17:27

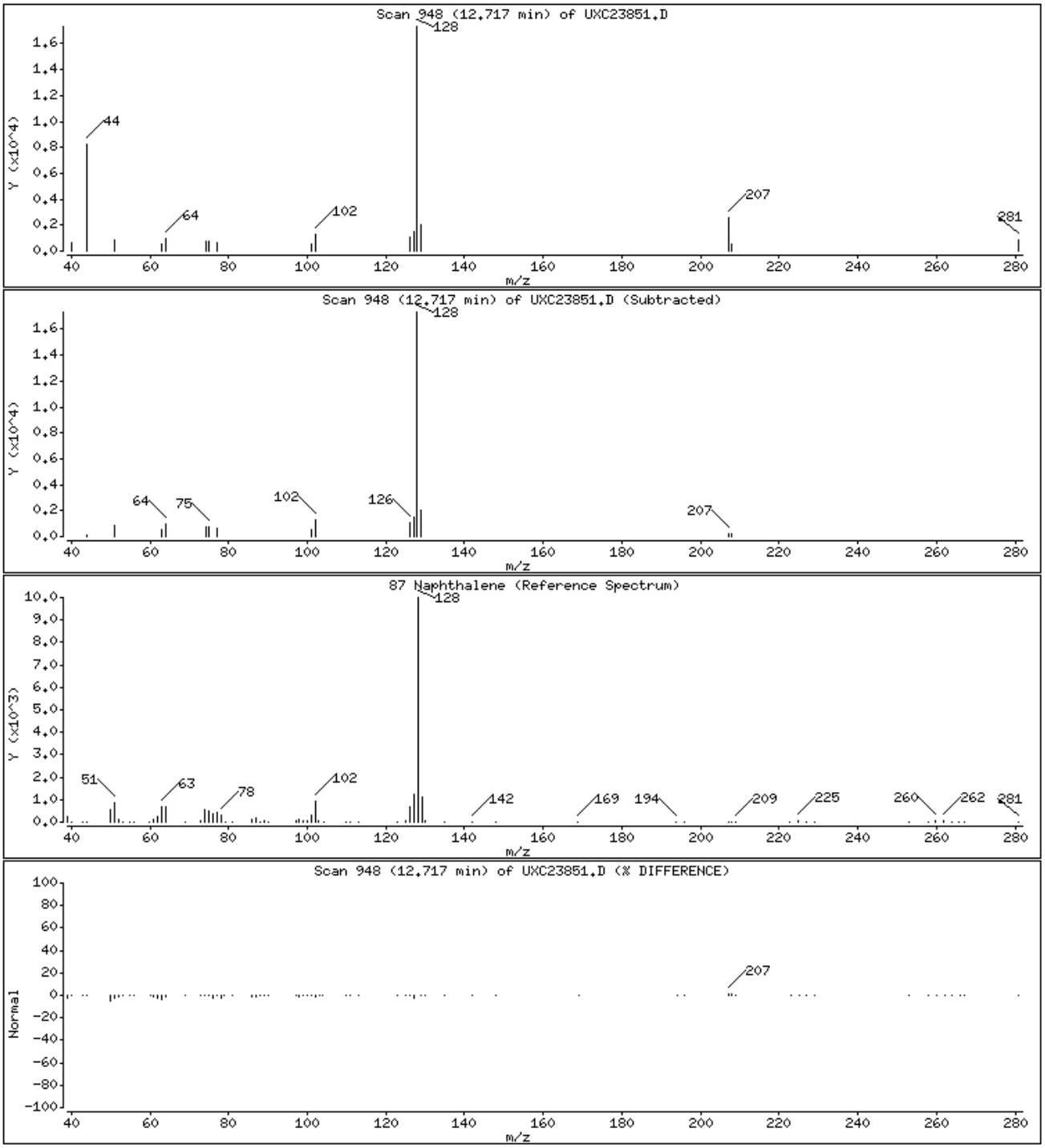
Client ID: TB-001(20080311) Instrument: a3ux15.i

Sample Info: KJHV61AA,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

87 Naphthalene Concentration: 0.2600 ug/L



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D

Date : 18-MAR-2008 17:27

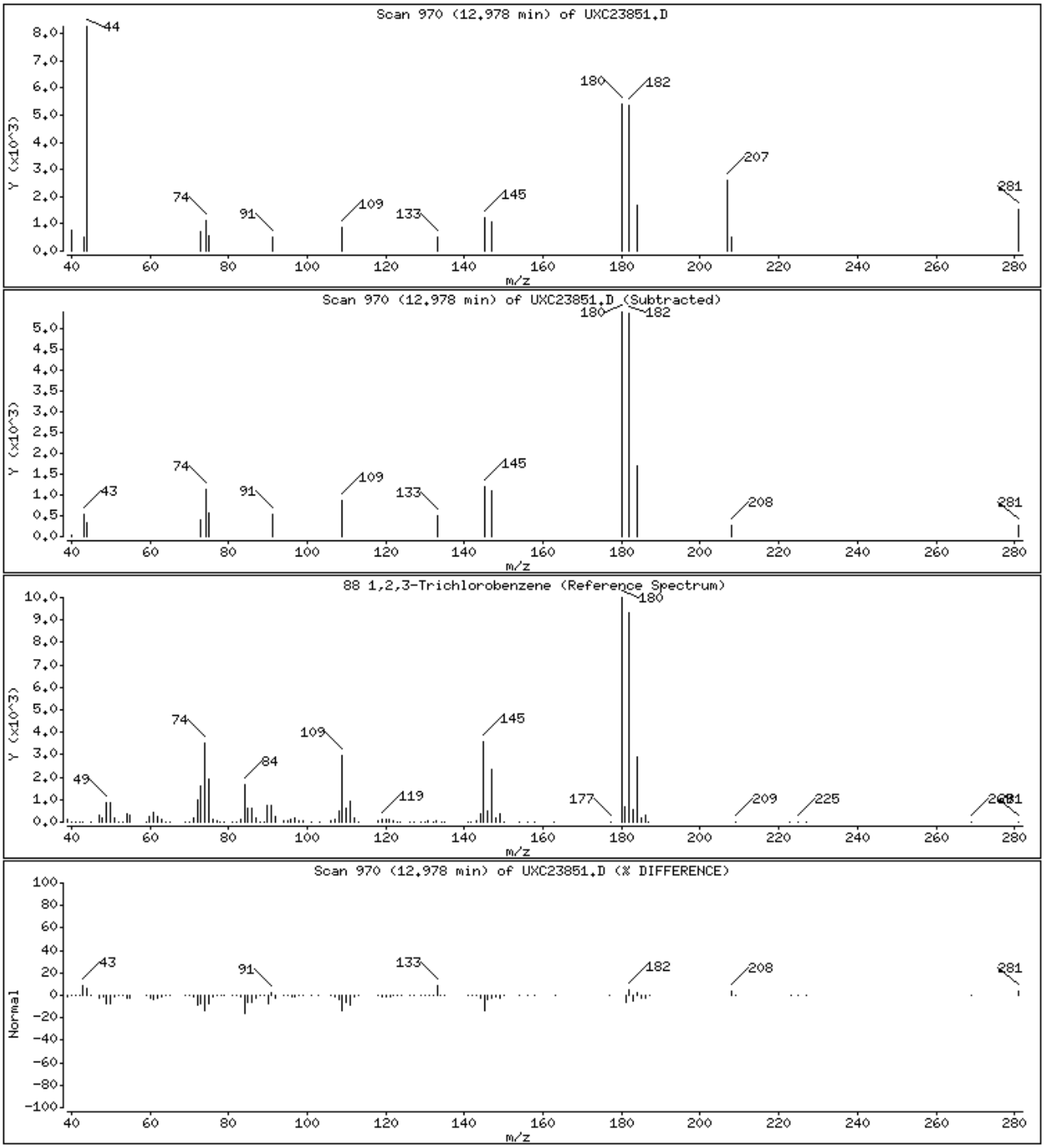
Client ID: TB-001(20080311) Instrument: a3ux15.i

Sample Info: KJHV61AA,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

88 1,2,3-Trichlorobenzene Concentration: 0.2488 ug/L



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23851.D

Date : 18-MAR-2008 17:27

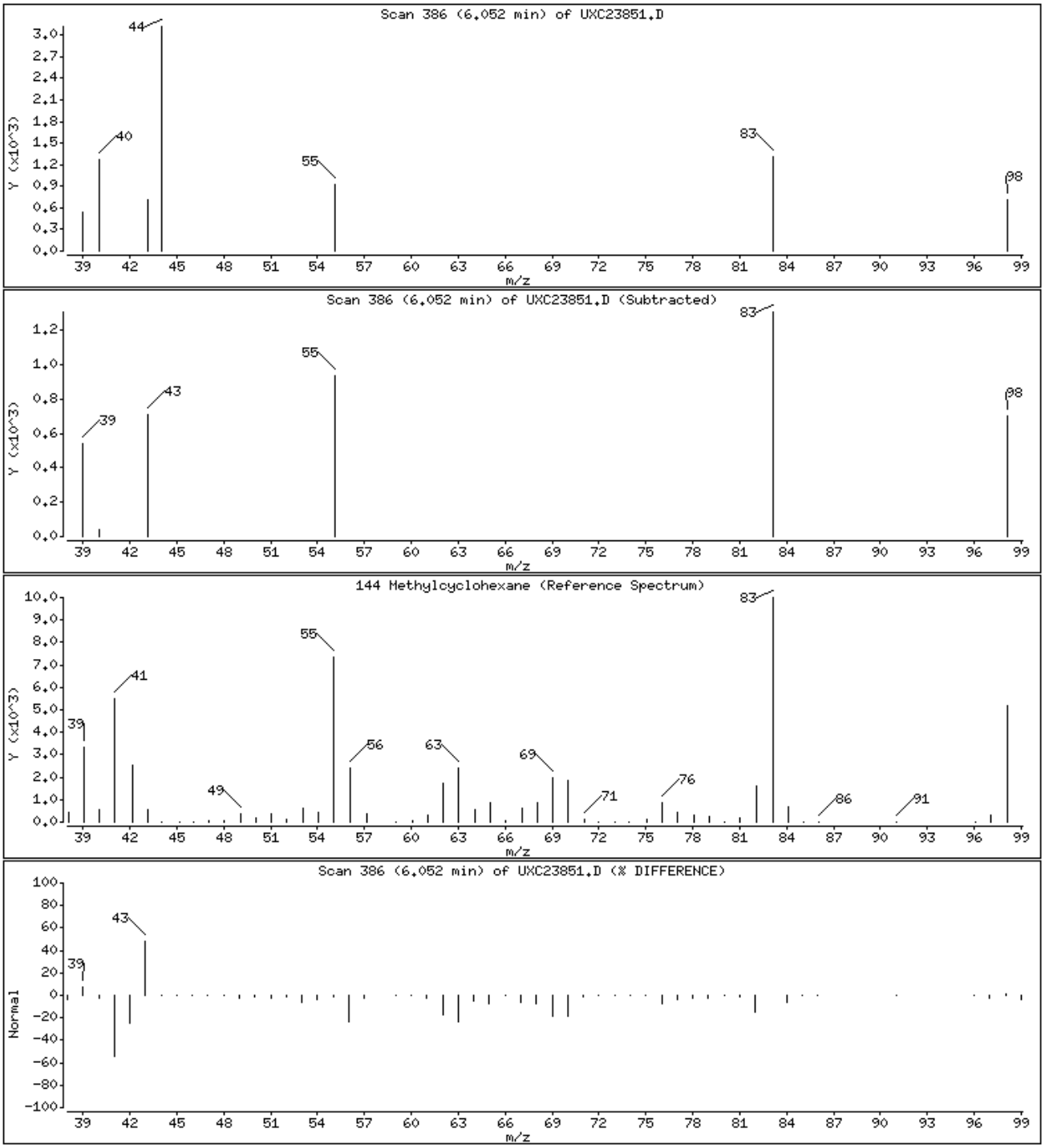
Client ID: TB-001(20080311) Instrument: a3ux15.i

Sample Info: KJHV61AA,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

144 Methylcyclohexane Concentration: 0.5015 ug/L



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

STANDARD DATA

Report Date: 14-Mar-2008 07:13

Calibration History

Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Start Cal Date: 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Last Cal Level: 2
Last Cal Type : Initial Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 5.00000		
13-MAR-2008 20:27	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23748.D
13-MAR-2008 17:46	2-8260+86	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23741.D
Cal Level: 2 , Cal Amount: 10.00000		
13-MAR-2008 20:04	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23747.D
13-MAR-2008 17:23	2-8260+86	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23740.D
Cal Level: 3 , Cal Amount: 25.00000		
13-MAR-2008 19:41	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23746.D
13-MAR-2008 17:00	2-8260+86	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23739.D
Cal Level: 4 , Cal Amount: 50.00000		
13-MAR-2008 19:18	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23745.D
13-MAR-2008 16:37	2-8260+86	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23738.D
Cal Level: 5 , Cal Amount: 100.00000		
13-MAR-2008 18:55	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23744.D
13-MAR-2008 16:14	2-8260+86	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23737.D
Cal Level: 6 , Cal Amount: 200.00000		
13-MAR-2008 18:32	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23743.D
13-MAR-2008 15:51	2-8260+86	

\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23736.D		

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

13-MAR-2008 16:37	2-8260+86	
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13-MAR-2008 19:18	3-IX	
\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23745.D		

Report Date : 14-Mar-2008 08:00

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Last Edit : 14-Mar-2008 07:46 a3ux15.i
Curve Type : Average

Calibration File Names:
Level 1: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23748.D
Level 2: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23747.D
Level 3: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23746.D
Level 4: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23745.D
Level 5: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23744.D
Level 6: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23743.D

	Compound	5.000 Level 1	10.000 Level 2	25.000 Level 3	50.000 Level 4	100.000 Level 5	200.000 Level 6	RRF	% RSD	
	8 Dichlorodifluoromethane	0.20864	0.13997	0.21185	0.21082	0.22452	0.21528	0.20185	15.270	
	9 Chloromethane	0.30323	0.25844	0.21758	0.23979	0.23830	0.23529	0.24877	11.930	
	10 Vinyl Chloride	0.26925	0.25343	0.28962	0.29566	0.30316	0.27980	0.28182	6.496	
	11 Bromomethane	0.15253	0.11284	0.13980	0.13289	0.11738	0.10598	0.12690	14.030	
	12 Chloroethane	0.18239	0.20304	0.14424	0.14101	0.12896	0.11271	0.15206	22.368	
	13 Trichlorofluoromethane	0.14772	0.12055	0.12546	0.15911	0.16945	0.16410	0.14773	13.885	
	14 Dichlorofluoromethane	0.79179	0.32576	0.31800	0.28220	0.23902	0.21022	0.36117	59.705	<-
	15 Acrolein	0.02310	0.01765	0.01888	0.02035	0.02214	0.02089	0.02050	9.839	
	16 Acetone	0.08514	0.04475	0.04670	0.05542	0.05349	0.05632	0.05697	25.594	
	17 1,1-Dichloroethene	0.20324	0.26300	0.20087	0.21954	0.23354	0.22935	0.22492	10.180	
	18 Freon-113	0.12909	0.13369	0.14038	0.16356	0.17134	0.17072	0.15146	12.705	
	19 Iodomethane	0.31988	0.30971	0.33781	0.36840	0.37945	0.37427	0.34825	8.572	
	20 Carbon Disulfide	0.62411	0.62861	0.64017	0.73663	0.76523	0.75567	0.69174	9.745	
	21 Methylene Chloride	0.30074	0.27380	0.23149	0.24431	0.25178	0.24714	0.25821	9.680	
	22 Acetonitrile	0.01443	0.01758	0.01103	0.01320	0.01427	0.01426	0.01413	15.017	
	23 Acrylonitrile	0.07469	0.06266	0.07330	0.08371	0.08866	0.08604	0.07818	12.518	
	24 Methyl tert-butyl ether	0.66703	0.61344	0.66746	0.73598	0.77958	0.77656	0.70668	9.569	
	25 trans-1,2-Dichloroethene	0.21402	0.24106	0.23253	0.25345	0.26153	0.26020	0.24380	7.559	
	26 Hexane	0.05378	0.04502	0.04499	0.05995	0.06409	0.06225	0.05501	15.445	
	27 Vinyl acetate	0.29623	0.35801	0.35787	0.40788	0.41975	0.41482	0.37576	12.736	
	28 1,1-Dichloroethane	0.36941	0.35625	0.37757	0.41661	0.42640	0.42673	0.39549	7.931	
	29 tert-Butyl Alcohol	0.01410	0.01186	0.02086	0.01527	0.01626	0.01711	0.01591	19.093	
	30 2-Butanone	0.06893	0.06071	0.08034	0.08843	0.09345	0.09355	0.08090	16.817	
M	31 1,2-Dichloroethene (total)	0.22526	0.22633	0.23868	0.25717	0.26654	0.26426	0.24637	7.593	
	32 cis-1,2-dichloroethene	0.23649	0.21161	0.24484	0.26090	0.27155	0.26832	0.24895	9.152	
	33 2,2-Dichloropropane	0.24341	0.24376	0.26757	0.30111	0.31049	0.30936	0.27928	11.368	
	34 Bromochloromethane	0.11698	0.11629	0.11811	0.13236	0.12933	0.13103	0.12402	6.154	
	35 Chloroform	0.39963	0.32922	0.35951	0.39583	0.40720	0.40276	0.38236	8.153	

Report Date : 14-Mar-2008 08:00

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INITIAL CALIBRATION DATA

Start Cal Date : 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Last Edit : 14-Mar-2008 07:46 a3ux15.i
Curve Type : Average

	Compound	5.000 Level 1	10.000 Level 2	25.000 Level 3	50.000 Level 4	100.000 Level 5	200.000 Level 6	RRF	% RSD	
	36 Tetrahydrofuran	0.05183	0.04895	0.05604	0.06182	0.06698	0.06779	0.05890	13.369	
	37 1,1,1-Trichloroethane	0.30460	0.28248	0.29224	0.33298	0.34100	0.34157	0.31581	8.238	
	38 1,1-Dichloropropene	0.27207	0.27673	0.28999	0.32259	0.33402	0.33588	0.30521	9.511	
	39 Carbon Tetrachloride	0.24640	0.25263	0.26884	0.30147	0.31010	0.31229	0.28196	10.508	
	40 1,2-Dichloroethane	0.25445	0.25191	0.27305	0.29390	0.30466	0.30397	0.28032	8.540	
	41 Benzene	0.96520	0.90514	0.91095	0.99702	1.04199	1.05669	0.97950	6.554	
	42 Trichloroethene	0.22737	0.22217	0.23843	0.26289	0.27618	0.27532	0.25039	9.638	
	43 1,2-Dichloropropane	0.19496	0.18507	0.20702	0.22579	0.23525	0.23498	0.21384	9.983	
	44 1,4-Dioxane	0.00172	0.00177	0.00166	0.00199	0.00207	0.00192	0.00186	8.758	<-
	45 Dibromomethane	0.12216	0.12280	0.12347	0.13438	0.13845	0.13790	0.12986	6.054	
	46 Bromodichloromethane	0.23882	0.23839	0.26162	0.28845	0.30160	0.30507	0.27232	11.111	
	47 2-Chloroethyl vinyl ether	0.11017	0.11025	0.11872	0.13723	0.14374	0.14193	0.12701	12.400	
	48 cis-1,3-Dichloropropene	0.29765	0.29939	0.33391	0.37241	0.39516	0.39824	0.34946	13.069	
	49 4-Methyl-2-pentanone	0.16825	0.17240	0.18629	0.21485	0.21375	0.20935	0.19415	10.926	
	50 Toluene	1.14499	1.15591	1.22149	1.36100	1.44395	1.47880	1.30102	11.263	
	51 trans-1,3-Dichloropropene	0.37490	0.36571	0.39739	0.44937	0.47053	0.47764	0.42259	11.685	
	52 Ethyl Methacrylate	0.37662	0.35452	0.38724	0.43133	0.45309	0.45399	0.40947	10.335	
	53 1,1,2-Trichloroethane	0.25201	0.23358	0.25715	0.25917	0.27035	0.27118	0.25724	5.379	
	54 1,3-Dichloropropane	0.41018	0.39918	0.42723	0.46419	0.49122	0.49379	0.44763	9.196	
	55 Tetrachloroethene	0.23028	0.22558	0.23839	0.27430	0.28996	0.29007	0.25810	11.648	
	56 2-Hexanone	0.18458	0.16114	0.17504	0.19629	0.19911	0.19367	0.18497	7.910	
	57 Dibromochloromethane	0.25974	0.24924	0.27876	0.30162	0.31280	0.32065	0.28713	10.152	
	58 1,2-Dibromoethane	0.24461	0.23852	0.25560	0.27991	0.28857	0.28776	0.26583	8.407	
	59 Chlorobenzene	0.76357	0.74127	0.80842	0.88402	0.93411	0.93542	0.84447	10.099	
	60 1,1,1,2-Tetrachloroethane	0.27378	0.27441	0.29586	0.32406	0.33582	0.33408	0.30633	9.397	
	61 Ethylbenzene	0.40718	0.42184	0.44298	0.49488	0.51525	0.52150	0.46727	10.602	
	62 m + p-Xylene	0.52880	0.51814	0.55776	0.62220	0.65034	0.66397	0.59020	10.742	
M	63 Xylenes (total)	0.52874	0.51957	0.56042	0.62206	0.64819	0.65798	0.58949	10.352	
	64 Xylene-o	0.52862	0.52242	0.56576	0.62178	0.64390	0.64599	0.58808	9.604	
	65 Styrene	0.88923	0.86246	0.95077	1.04967	1.09121	1.10634	0.99161	10.604	
	66 Bromoform	0.19464	0.18950	0.20643	0.22977	0.24533	0.24738	0.21884	11.625	
	67 Isopropylbenzene	1.20121	1.18762	1.30246	1.46313	1.53633	1.57237	1.37719	12.292	
	68 1,1,2,2-Tetrachloroethane	0.61696	0.54139	0.58278	0.63967	0.68841	0.68270	0.62532	9.160	
	69 1,4-Dichloro-2-butene	0.16250	0.13124	0.14213	0.17006	0.19397	0.19608	0.16600	15.925	
	70 1,2,3-Trichloropropane	0.20196	0.17535	0.18440	0.19495	0.20877	0.20119	0.19444	6.394	
	71 Bromobenzene	0.58064	0.56243	0.60605	0.67563	0.71920	0.71418	0.64302	10.703	

Report Date : 14-Mar-2008 08:00

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Last Edit : 14-Mar-2008 07:46 a3ux15.i
Curve Type : Average

	Compound	5.000 Level 1	10.000 Level 2	25.000 Level 3	50.000 Level 4	100.000 Level 5	200.000 Level 6	RRF	% RSD	
72	n-Propylbenzene	0.62176	0.64035	0.68758	0.76254	0.82572	0.82854	0.72775	12.512	
73	2-Chlorotoluene	0.56953	0.55896	0.60216	0.66051	0.70123	0.69222	0.63077	9.862	
74	1,3,5-Trimethylbenzene	1.90788	1.89031	2.01891	2.29050	2.47796	2.51644	2.18367	12.921	
75	4-Chlorotoluene	0.57876	0.57078	0.60459	0.66612	0.71330	0.70635	0.63998	9.945	
76	tert-Butylbenzene	1.69595	1.66707	1.77926	2.04494	2.21661	2.24965	1.94225	13.490	
77	1,2,4-Trimethylbenzene	2.00901	1.97033	2.11210	2.35646	2.55604	2.56018	2.26069	11.800	
78	sec-Butylbenzene	2.37545	2.40471	2.55870	2.94681	3.18265	3.23615	2.78408	13.924	
79	4-Isopropyltoluene	2.09215	2.07503	2.22547	2.52240	2.71853	2.75073	2.39738	12.792	
80	1,3-Dichlorobenzene	1.12330	1.11614	1.20577	1.34885	1.42392	1.40850	1.27108	11.037	
81	1,4-Dichlorobenzene	1.20421	1.18758	1.25125	1.36911	1.45300	1.45896	1.32069	9.278	
82	n-Butylbenzene	1.82460	1.86993	1.96996	2.25020	2.42732	2.44675	2.13146	13.098	
83	1,2-Dichlorobenzene	1.10290	1.10456	1.17985	1.28830	1.36287	1.33133	1.22830	9.333	
84	1,2-Dibromo-3-chloropropane	0.15432	0.14439	0.15133	0.16159	0.17194	0.16311	0.15778	6.185	
85	1,2,4-Trichlorobenzene	0.82379	0.79173	0.84489	0.90969	0.93905	0.86194	0.86185	6.334	
86	Hexachlorobutadiene	0.39993	0.39339	0.41441	0.45207	0.45049	0.40820	0.41975	6.064	
87	Naphthalene	2.14612	2.05739	2.18235	2.34147	2.45151	2.21492	2.23229	6.360	
88	1,2,3-Trichlorobenzene	0.74927	0.74586	0.75757	0.83383	0.83557	0.74244	0.77742	5.744	
89	Ethyl Ether	0.18356	0.16859	0.17701	0.18778	0.19454	0.19252	0.18400	5.350	
90	Ethanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
91	3-Chloropropene	0.11334	0.10634	0.11647	0.12293	0.13586	0.13212	0.12118	9.352	
92	Isopropyl Ether	0.18014	0.17886	0.19688	0.20391	0.22337	0.22119	0.20073	9.605	
93	2-Chloro-1,3-butadiene	0.26798	0.26629	0.26672	0.27255	0.30273	0.29085	0.27785	5.508	
94	Propionitrile	0.03116	0.02459	0.03195	0.02848	0.02976	0.02932	0.02921	8.868	
95	Ethyl Acetate	0.15076	0.13784	0.15404	0.15970	0.18297	0.18361	0.16149	11.365	
96	Methacrylonitrile	0.13347	0.09616	0.10513	0.11102	0.12603	0.12390	0.11595	12.224	
97	Isobutanol	0.00636	0.00565	0.00609	0.00616	0.00710	0.00732	0.00645	9.902	<-
98	Cyclohexane	0.33659	0.31838	0.37235	0.43178	0.45452	0.46534	0.39649	15.802	
99	n-Butanol	0.00710	0.00865	0.00809	0.00788	0.00875	0.00855	0.00817	7.670	<-
100	Methyl Methacrylate	0.14762	0.14216	0.14580	0.15075	0.16529	0.16555	0.15286	6.619	
101	2-Nitropropane	0.05134	0.04199	0.05221	0.05025	0.05420	0.05408	0.05068	8.934	
102	Chloropicrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
103	Cyclohexanone	0.04951	0.04632	0.04891	0.04887	0.03875	0.04683	0.04653	8.631	
104	Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
105	Benzyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
134	Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
135	Crotononitrile(1st Isomer)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

Report Date : 14-Mar-2008 08:00

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Last Edit : 14-Mar-2008 07:46 a3ux15.i
Curve Type : Average

		5.000	10.000	25.000	50.000	100.000	200.000			
	Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	% RSD	
	136 Crotononitrile(2nd Isomer)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
M	137 Total Crotononitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	138 Paraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	139 3,3,5-Trimethylcyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	140 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	141 1,3,5-Trichlorobenzene	0.92659	0.88021	0.93751	1.02327	1.06798	0.98960	0.97086	7.109	
	143 Methyl Acetate	0.17182	0.14243	0.15088	0.16968	0.18029	0.18137	0.16608	9.603	
	144 Methylcyclohexane	0.36599	0.33884	0.39514	0.46012	0.49137	0.49823	0.42495	15.890	
	145 Dimethoxymethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	146 2-Methylnaphthalene	0.91579	1.09520	1.27430	1.23522	1.35125	1.18192	1.17561	13.076	
	147 Tetrahydrothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	148 1,4-Dichlorobutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	151 Ethyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	152 Vinyl Acetate-86	0.03791	0.04867	0.04789	0.05308	0.05187	0.05499	0.04907	12.399	
	153 1,3-Butadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	154 n-Heptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	155 tert-Butyl Ethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	156 tert-Amyl Methyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	157 1,2,3-Trimethylbezene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$	4 Dibromofluoromethane	0.18869	0.18395	0.19921	0.21449	0.21295	0.20824	0.20125	6.372	
$	5 1,2-Dichloroethane-d4	0.23374	0.24541	0.22914	0.24137	0.24113	0.23609	0.23781	2.495	
$	6 Toluene-d8	1.03092	0.97153	1.08920	1.16580	1.18090	1.19931	1.10628	8.274	
$	7 Bromofluorobenzene	0.46164	0.43279	0.43847	0.46765	0.46797	0.45683	0.45422	3.323	

Report Date : 14-Mar-2008 08:04

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Last Edit : 14-Mar-2008 07:46 a3ux15.i

Calibration File Names:
Level 1: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23748.D
Level 2: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23747.D
Level 3: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23746.D
Level 4: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23745.D
Level 5: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23744.D
Level 6: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23743.D

Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
8 Dichlorodifluoromethane	28757	40902	146035	291724	622771	1210854	WLINR	0.02612	0.21978		0.99681
9 Chloromethane	0.30323	0.25844	0.21758	0.23979	0.23830	0.23529	AVRG		0.24877		11.93032
10 Vinyl Chloride	0.26925	0.25343	0.28962	0.29566	0.30316	0.27980	AVRG		0.28182		6.49632
11 Bromomethane	0.15253	0.11284	0.13980	0.13289	0.11738	0.10598	AVRG		0.12690		14.02977
12 Chloroethane	25139	59333	99433	195120	357704	633970	QUAD	-0.03336	6.55579	5.29081	0.99972
13 Trichlorofluoromethane	0.14772	0.12055	0.12546	0.15911	0.16945	0.16410	AVRG		0.14773		13.88518
14 Dichlorofluoromethane	104418	86845	212343	389195	646186	1137171	QUAD	-0.12654	3.69214	1.45353	0.99876
15 Acrolein	0.02310	0.01765	0.01888	0.02035	0.02214	0.02089	AVRG		0.02050		9.83872
16 Acetone	23469	26156	64382	153390	296742	633521	WLINR	-0.02618	0.05473		0.99156
17 1,1-Dichloroethene	0.20324	0.26300	0.20087	0.21954	0.23354	0.22935	AVRG		0.22492		10.18042
18 Freon-113	0.12909	0.13369	0.14038	0.16356	0.17134	0.17072	AVRG		0.15146		12.70465
19 Iodomethane	0.31988	0.30971	0.33781	0.36840	0.37945	0.37427	AVRG		0.34825		8.57189
20 Carbon Disulfide	0.62411	0.62861	0.64017	0.73663	0.76523	0.75567	AVRG		0.69174		9.74509
21 Methylene Chloride	0.30074	0.27380	0.23149	0.24431	0.25178	0.24714	AVRG		0.25821		9.67956

Report Date : 14-Mar-2008 08:04

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Last Edit : 14-Mar-2008 07:46 a3ux15.i

	Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
	22 Acetonitrile	19887	51370	76019	182696	395906	801841	WLINR	-0.01466	0.01406		0.99307
	23 Acrylonitrile	0.07469	0.06266	0.07330	0.08371	0.08866	0.08604	AVRG		0.07818		12.51752
	24 Methyl tert-butyl ether	0.66703	0.61344	0.66746	0.73598	0.77958	0.77656	AVRG		0.70668		9.56864
	25 trans-1,2-Dichloroethene	0.21402	0.24106	0.23253	0.25345	0.26153	0.26020	AVRG		0.24380		7.55861
	26 Hexane	7412	13155	31016	82958	177778	350114	WLINR	0.04053	0.06299		0.99457
	27 Vinyl acetate	0.29623	0.35801	0.35787	0.40788	0.41975	0.41482	AVRG		0.37576		12.73647
	28 1,1-Dichloroethane	0.36941	0.35625	0.37757	0.41661	0.42640	0.42673	AVRG		0.39549		7.93065
	29 tert-Butyl Alcohol	38869	69318	287587	422626	902103	1924448	WLINR	0.45999	0.01714		0.99100
	30 2-Butanone	19001	35481	110762	244731	518408	1052398	WLINR	0.09072	0.09426		0.99845
M	31 1,2-Dichloroethene (total)	0.22526	0.22633	0.23868	0.25717	0.26654	0.26426	AVRG		0.24637		7.59312
	32 cis-1,2-dichloroethene	0.23649	0.21161	0.24484	0.26090	0.27155	0.26832	AVRG		0.24895		9.15175
	33 2,2-Dichloropropane	0.24341	0.24376	0.26757	0.30111	0.31049	0.30936	AVRG		0.27928		11.36850
	34 Bromochloromethane	0.11698	0.11629	0.11811	0.13236	0.12933	0.13103	AVRG		0.12402		6.15387
	35 Chloroform	0.39963	0.32922	0.35951	0.39583	0.40720	0.40276	AVRG		0.38236		8.15274
	36 Tetrahydrofuran	0.05183	0.04895	0.05604	0.06182	0.06698	0.06779	AVRG		0.05890		13.36885
	37 1,1,1-Trichloroethane	0.30460	0.28248	0.29224	0.33298	0.34100	0.34157	AVRG		0.31581		8.23839
	38 1,1-Dichloropropene	0.27207	0.27673	0.28999	0.32259	0.33402	0.33588	AVRG		0.30521		9.51063
	39 Carbon Tetrachloride	0.24640	0.25263	0.26884	0.30147	0.31010	0.31229	AVRG		0.28196		10.50849
	40 1,2-Dichloroethane	0.25445	0.25191	0.27305	0.29390	0.30466	0.30397	AVRG		0.28032		8.53953
	41 Benzene	0.96520	0.90514	0.91095	0.99702	1.04199	1.05669	AVRG		0.97950		6.55361
	42 Trichloroethene	0.22737	0.22217	0.23843	0.26289	0.27618	0.27532	AVRG		0.25039		9.63759
	43 1,2-Dichloropropane	0.19496	0.18507	0.20702	0.22579	0.23525	0.23498	AVRG		0.21384		9.98278

Report Date : 14-Mar-2008 08:04

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Last Edit : 14-Mar-2008 07:46 a3ux15.i

	Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
44	1,4-Dioxane	0.00172	0.00177	0.00166	0.00199	0.00207	0.00192	AVRG		0.00186		8.75787	<-
45	Dibromomethane	0.12216	0.12280	0.12347	0.13438	0.13845	0.13790	AVRG		0.12986		6.05366	
46	Bromodichloromethane	0.23882	0.23839	0.26162	0.28845	0.30160	0.30507	AVRG		0.27232		11.11097	
47	2-Chloroethyl vinyl ether	0.11017	0.11025	0.11872	0.13723	0.14374	0.14193	AVRG		0.12701		12.39955	
48	cis-1,3-Dichloropropene	0.29765	0.29939	0.33391	0.37241	0.39516	0.39824	AVRG		0.34946		13.06872	
49	4-Methyl-2-pentanone	0.16825	0.17240	0.18629	0.21485	0.21375	0.20935	AVRG		0.19415		10.92566	
50	Toluene	1.14499	1.15591	1.22149	1.36100	1.44395	1.47880	AVRG		1.30102		11.26280	
51	trans-1,3-Dichloropropene	0.37490	0.36571	0.39739	0.44937	0.47053	0.47764	AVRG		0.42259		11.68483	
52	Ethyl Methacrylate	0.37662	0.35452	0.38724	0.43133	0.45309	0.45399	AVRG		0.40947		10.33513	
53	1,1,2-Trichloroethane	0.25201	0.23358	0.25715	0.25917	0.27035	0.27118	AVRG		0.25724		5.37860	
54	1,3-Dichloropropane	0.41018	0.39918	0.42723	0.46419	0.49122	0.49379	AVRG		0.44763		9.19572	
55	Tetrachloroethene	0.23028	0.22558	0.23839	0.27430	0.28996	0.29007	AVRG		0.25810		11.64842	
56	2-Hexanone	0.18458	0.16114	0.17504	0.19629	0.19911	0.19367	AVRG		0.18497		7.90961	
57	Dibromochloromethane	0.25974	0.24924	0.27876	0.30162	0.31280	0.32065	AVRG		0.28713		10.15192	
58	1,2-Dibromoethane	0.24461	0.23852	0.25560	0.27991	0.28857	0.28776	AVRG		0.26583		8.40682	
59	Chlorobenzene	0.76357	0.74127	0.80842	0.88402	0.93411	0.93542	AVRG		0.84447		10.09903	
60	1,1,1,2-Tetrachloroethane	0.27378	0.27441	0.29586	0.32406	0.33582	0.33408	AVRG		0.30633		9.39669	
61	Ethylbenzene	0.40718	0.42184	0.44298	0.49488	0.51525	0.52150	AVRG		0.46727		10.60176	
62	m + p-Xylene	0.52880	0.51814	0.55776	0.62220	0.65034	0.66397	AVRG		0.59020		10.74204	
M 63	Xylenes (total)	0.52874	0.51957	0.56042	0.62206	0.64819	0.65798	AVRG		0.58949		10.35246	
64	Xylene-o	0.52862	0.52242	0.56576	0.62178	0.64390	0.64599	AVRG		0.58808		9.60447	
65	Styrene	0.88923	0.86246	0.95077	1.04967	1.09121	1.10634	AVRG		0.99161		10.60412	

Report Date : 14-Mar-2008 08:04

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Last Edit : 14-Mar-2008 07:46 a3ux15.i

Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
66 Bromoform	0.19464	0.18950	0.20643	0.22977	0.24533	0.24738	AVRG		0.21884		11.62548
67 Isopropylbenzene	1.20121	1.18762	1.30246	1.46313	1.53633	1.57237	AVRG		1.37719		12.29242
68 1,1,2,2-Tetrachloroethane	0.61696	0.54139	0.58278	0.63967	0.68841	0.68270	AVRG		0.62532		9.15955
69 1,4-Dichloro-2-butene	9813	16927	43647	103402	229874	471829	WLINR	0.04697	0.19455		0.99406
70 1,2,3-Trichloropropane	0.20196	0.17535	0.18440	0.19495	0.20877	0.20119	AVRG		0.19444		6.39387
71 Bromobenzene	0.58064	0.56243	0.60605	0.67563	0.71920	0.71418	AVRG		0.64302		10.70312
72 n-Propylbenzene	0.62176	0.64035	0.68758	0.76254	0.82572	0.82854	AVRG		0.72775		12.51152
73 2-Chlorotoluene	0.56953	0.55896	0.60216	0.66051	0.70123	0.69222	AVRG		0.63077		9.86242
74 1,3,5-Trimethylbenzene	1.90788	1.89031	2.01891	2.29050	2.47796	2.51644	AVRG		2.18367		12.92061
75 4-Chlorotoluene	0.57876	0.57078	0.60459	0.66612	0.71330	0.70635	AVRG		0.63998		9.94499
76 tert-Butylbenzene	1.69595	1.66707	1.77926	2.04494	2.21661	2.24965	AVRG		1.94225		13.49044
77 1,2,4-Trimethylbenzene	2.00901	1.97033	2.11210	2.35646	2.55604	2.56018	AVRG		2.26069		11.80043
78 sec-Butylbenzene	2.37545	2.40471	2.55870	2.94681	3.18265	3.23615	AVRG		2.78408		13.92417
79 4-Isopropyltoluene	2.09215	2.07503	2.22547	2.52240	2.71853	2.75073	AVRG		2.39738		12.79217
80 1,3-Dichlorobenzene	1.12330	1.11614	1.20577	1.34885	1.42392	1.40850	AVRG		1.27108		11.03681
81 1,4-Dichlorobenzene	1.20421	1.18758	1.25125	1.36911	1.45300	1.45896	AVRG		1.32069		9.27828
82 n-Butylbenzene	1.82460	1.86993	1.96996	2.25020	2.42732	2.44675	AVRG		2.13146		13.09767
83 1,2-Dichlorobenzene	1.10290	1.10456	1.17985	1.28830	1.36287	1.33133	AVRG		1.22830		9.33291
84 1,2-Dibromo-3-chloropropane	0.15432	0.14439	0.15133	0.16159	0.17194	0.16311	AVRG		0.15778		6.18544
85 1,2,4-Trichlorobenzene	0.82379	0.79173	0.84489	0.90969	0.93905	0.86194	AVRG		0.86185		6.33442
86 Hexachlorobutadiene	0.39993	0.39339	0.41441	0.45207	0.45049	0.40820	AVRG		0.41975		6.06385
87 Naphthalene	2.14612	2.05739	2.18235	2.34147	2.45151	2.21492	AVRG		2.23229		6.36021

Report Date : 14-Mar-2008 08:04

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Last Edit : 14-Mar-2008 07:46 a3ux15.i

	Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
88	1,2,3-Trichlorobenzene	0.74927	0.74586	0.75757	0.83383	0.83557	0.74244	AVRG		0.77742		5.74357	
89	Ethyl Ether	0.18356	0.16859	0.17701	0.18778	0.19454	0.19252	AVRG		0.18400		5.34987	
90	Ethanol	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
91	3-Chloropropene	0.11334	0.10634	0.11647	0.12293	0.13586	0.13212	AVRG		0.12118		9.35225	
92	Isopropyl Ether	0.18014	0.17886	0.19688	0.20391	0.22337	0.22119	AVRG		0.20073		9.60524	
93	2-Chloro-1,3-butadiene	0.26798	0.26629	0.26672	0.27255	0.30273	0.29085	AVRG		0.27785		5.50796	
94	Propionitrile	0.03116	0.02459	0.03195	0.02848	0.02976	0.02932	AVRG		0.02921		8.86806	
95	Ethyl Acetate	0.15076	0.13784	0.15404	0.15970	0.18297	0.18361	AVRG		0.16149		11.36462	
96	Methacrylonitrile	0.13347	0.09616	0.10513	0.11102	0.12603	0.12390	AVRG		0.11595		12.22381	
97	Isobutanol	0.00636	0.00565	0.00609	0.00616	0.00710	0.00732	AVRG		0.00645		9.90198	<-
98	Cyclohexane	46392	93038	256672	597489	1260755	2617373	WLINR	0.04672	0.46427		0.99799	
99	n-Butanol	0.00710	0.00865	0.00809	0.00788	0.00875	0.00855	AVRG		0.00817		7.66977	<-
100	Methyl Methacrylate	0.14762	0.14216	0.14580	0.15075	0.16529	0.16555	AVRG		0.15286		6.61939	
101	2-Nitropropane	0.05134	0.04199	0.05221	0.05025	0.05420	0.05408	AVRG		0.05068		8.93402	
102	Chloropicrin	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
103	Cyclohexanone	0.04951	0.04632	0.04891	0.04887	0.03875	0.04683	AVRG		0.04653		8.63113	
104	Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
105	Benzyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
134	Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
135	Crotononitrile(1st Isomer)	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
136	Crotononitrile(2nd Isomer)	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
M 137	Total Crotononitrile	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

Report Date : 14-Mar-2008 08:04

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Last Edit : 14-Mar-2008 07:46 a3ux15.i

Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
138 Paraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
139 3,3,5-Trimethylcyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
140 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
141 1,3,5-Trichlorobenzene	0.92659	0.88021	0.93751	1.02327	1.06798	0.98960	AVRG		0.97086		7.10915	
143 Methyl Acetate	0.17182	0.14243	0.15088	0.16968	0.18029	0.18137	AVRG		0.16608		9.60293	
144 Methylcyclohexane	50445	99017	272382	636702	1362972	2802371	WLINR	0.04698	0.49806		0.99768	
145 Dimethoxymethane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
146 2-Methylnaphthalene	0.91579	1.09520	1.27430	1.23522	1.35125	1.18192	AVRG		1.17561		13.07596	
147 Tetrahydrothiophene	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
148 1,4-Dichlorobutane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
151 Ethyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
152 Vinyl Acetate-86	0.03791	0.04867	0.04789	0.05308	0.05187	0.05499	AVRG		0.04907		12.39875	
153 1,3-Butadiene	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
154 n-Heptane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
155 tert-Butyl Ethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
156 tert-Amyl Methyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
157 1,2,3-Trimethylbezene	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
$ 4 Dibromofluoromethane	0.18869	0.18395	0.19921	0.21449	0.21295	0.20824	AVRG		0.20125		6.37191	
$ 5 1,2-Dichloroethane-d4	0.23374	0.24541	0.22914	0.24137	0.24113	0.23609	AVRG		0.23781		2.49467	
$ 6 Toluene-d8	1.03092	0.97153	1.08920	1.16580	1.18090	1.19931	AVRG		1.10628		8.27408	
$ 7 Bromofluorobenzene	0.46164	0.43279	0.43847	0.46765	0.46797	0.45683	AVRG		0.45422		3.32269	

Report Date : 14-Mar-2008 08:04

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Last Edit : 14-Mar-2008 07:46 a3ux15.i

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Wt Linear	Amt = b + Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23736.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23736.D
Lab Smp Id: 200NG8260CAL
Inj Date : 13-MAR-2008 15:51
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 200NG8260CAL
Misc Info : C80313IC,8260LLUX15,2-8260.SUB,1754,1,6
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 20:27 Cal File: UXC23748.D
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-8260+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.577	5.577	(1.000)	1406150	50.0000	
* 2 Chlorobenzene-d5	117	8.257	8.257	(1.000)	1041632	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	601572	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	1171283	200.000	206.94
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	1327910	200.000	198.55
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	4996940	200.000	216.82
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	1903386	200.000	201.15
8 Dichlorodifluoromethane	85	1.640	1.640	(0.294)	1210854	200.000	197.20
9 Chloromethane	50	1.806	1.806	(0.324)	1323436	200.000	189.16
10 Vinyl Chloride	62	1.913	1.913	(0.343)	1573756	200.000	198.56
11 Bromomethane	94	2.245	2.245	(0.403)	596119	200.000	167.03
12 Chloroethane	64	2.352	2.352	(0.422)	633970	200.000	199.89
13 Trichlorofluoromethane	101	2.577	2.577	(0.462)	922992	200.000	222.16(H)
15 Acrolein	56	2.969	2.969	(0.532)	1174719	2000.00	2037.5
16 Acetone	43	3.123	3.123	(0.560)	633521	400.000	410.28
17 1,1-Dichloroethene	96	3.063	3.063	(0.549)	1290021	200.000	203.94
18 Freon-113	151	3.087	3.087	(0.554)	960206	200.000	225.42
19 Iodomethane	142	3.206	3.206	(0.575)	2105095	200.000	214.94
20 Carbon Disulfide	76	3.265	3.265	(0.585)	4250343	200.000	218.48
21 Methylene Chloride	84	3.502	3.502	(0.628)	1390074	200.000	191.42(H)
22 Acetonitrile	41	3.372	3.372	(0.605)	801841	2000.00	2026.6
23 Acrylonitrile	53	3.728	3.728	(0.668)	967927	400.000	440.25(H)

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23736.D
Report Date: 14-Mar-2008 08:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	Methyl tert-butyl ether	73	3.739	3.739	(0.670)	4367859	200.000	219.78
25	trans-1,2-Dichloroethene	96	3.739	3.739	(0.670)	1463516	200.000	213.46
26	Hexane	86	3.965	3.965	(0.711)	350114	200.000	199.66
27	Vinyl acetate	43	4.143	4.143	(0.743)	2333202	200.000	220.79
28	1,1-Dichloroethane	63	4.107	4.107	(0.736)	2400166	200.000	215.79
29	tert-Butyl Alcohol	59	3.609	3.609	(0.647)	1924448	4000.00	4014.9
30	2-Butanone	43	4.617	4.617	(0.828)	1052398	400.000	401.52
32	cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	1509187	200.000	215.56
33	2,2-Dichloropropane	77	4.605	4.605	(0.826)	1740002	200.000	221.54
34	Bromochloromethane	128	4.807	4.807	(0.862)	736990	200.000	211.31
35	Chloroform	83	4.866	4.866	(0.872)	2265346	200.000	210.67
36	Tetrahydrofuran	42	4.866	4.866	(0.872)	381287	200.000	230.18
37	1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	1921218	200.000	216.31
38	1,1-Dichloropropene	75	5.162	5.162	(0.926)	1889169	200.000	220.09
39	Carbon Tetrachloride	117	5.174	5.174	(0.928)	1756526	200.000	221.52
40	1,2-Dichloroethane	62	5.364	5.364	(0.962)	1709728	200.000	216.87
41	Benzene	78	5.352	5.352	(0.960)	5943435	200.000	215.76
42	Trichloroethene	130	5.886	5.886	(1.055)	1548549	200.000	219.91
43	1,2-Dichloropropane	63	6.087	6.087	(1.091)	1321659	200.000	219.77
44	1,4-Dioxane	88	6.206	6.206	(1.113)	540942	10000.0	10369
45	Dibromomethane	93	6.194	6.194	(1.111)	775660	200.000	212.39
46	Bromodichloromethane	83	6.313	6.313	(1.132)	1715885	200.000	224.05
47	2-Chloroethyl vinyl ether	63	6.562	6.562	(1.176)	1596578	400.000	447.00
48	cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	2239921	200.000	227.92
49	4-Methyl-2-pentanone	43	6.834	6.834	(1.225)	2355043	400.000	431.32
50	Toluene	91	7.000	7.000	(0.848)	6161451	200.000	227.33
51	trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	1990116	200.000	226.06
52	Ethyl Methacrylate	69	7.250	7.250	(0.878)	1891581	200.000	221.75
53	1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	1129859	200.000	210.84
54	1,3-Dichloropropane	76	7.510	7.510	(0.910)	2057404	200.000	220.62
55	Tetrachloroethene	164	7.487	7.487	(0.907)	1208580	200.000	224.77
56	2-Hexanone	43	7.570	7.570	(0.917)	1613903	400.000	418.82
57	Dibromochloromethane	129	7.724	7.724	(0.935)	1335993	200.000	223.34
58	1,2-Dibromoethane	107	7.831	7.831	(0.948)	1198946	200.000	216.50
59	Chlorobenzene	112	8.281	8.281	(1.003)	3897451	200.000	221.54
60	1,1,1,2-Tetrachloroethane	131	8.352	8.352	(1.011)	1391958	200.000	218.12
61	Ethylbenzene	106	8.376	8.376	(1.014)	2172865	200.000	223.21
62	m + p-Xylene	106	8.483	8.483	(1.027)	5532908	400.000	450.00
64	Xylene-o	106	8.850	8.850	(1.072)	2691529	200.000	219.69
65	Styrene	104	8.862	8.862	(1.073)	4609602	200.000	223.14
66	Bromoform	173	9.064	9.064	(1.098)	1030713	200.000	226.08
67	Isopropylbenzene	105	9.206	9.206	(1.115)	6551322	200.000	228.34
68	1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	1642780	200.000	218.35
69	1,4-Dichloro-2-butene	53	9.538	9.538	(0.910)	471829	200.000	203.92
70	1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	484128	200.000	206.95
71	Bromobenzene	156	9.514	9.514	(0.907)	1718521	200.000	222.13
72	n-Propylbenzene	120	9.598	9.598	(0.915)	1993697	200.000	227.70
73	2-Chlorotoluene	126	9.692	9.692	(0.924)	1665672	200.000	219.48
74	1,3,5-Trimethylbenzene	105	9.764	9.764	(0.931)	6055282	200.000	230.48 (H)
75	4-Chlorotoluene	126	9.799	9.799	(0.934)	1699689	200.000	220.74
76	tert-Butylbenzene	119	10.084	10.084	(0.962)	5413299	200.000	231.65
77	1,2,4-Trimethylbenzene	105	10.131	10.131	(0.966)	6160534	200.000	226.50
78	sec-Butylbenzene	105	10.297	10.297	(0.982)	7787103	200.000	232.48
79	4-Isopropyltoluene	119	10.439	10.439	(0.995)	6619054	200.000	229.48

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23736.D
Report Date: 14-Mar-2008 08:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	3389268	200.000	221.62
81	1,4-Dichlorobenzene	146	10.511	10.511	(1.002)	3510668	200.000	220.94(H)
82	n-Butylbenzene	91	10.843	10.843	(1.034)	5887581	200.000	229.58
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	3203566	200.000	216.78
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	392481	200.000	206.76
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	2074087	200.000	200.02
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	982237	200.000	194.50
87	Naphthalene	128	12.716	12.716	(1.213)	5329741	200.000	198.44
88	1,2,3-Trichlorobenzene	180	12.965	12.965	(1.236)	1786513	200.000	191.00
98	Cyclohexane	56	5.079	5.079	(0.911)	2617373	200.000	202.80(H)
143	Methyl Acetate	43	3.407	3.407	(0.611)	2040255	400.000	436.82
144	Methylcyclohexane	83	6.052	6.052	(1.085)	2802371	200.000	202.42
141	1,3,5-Trichlorobenzene	180	11.851	11.851	(1.130)	2381261	200.000	203.86
152	Vinyl Acetate-86	86	4.143	4.143	(0.743)	309287	200.000	224.13(H)

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23736.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23736.D
Lab Smp Id: 200NG8260CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Calibration Date: 13-MAR-2008
Calibration Time: 16:37
Level: LOW
Sample Type: WATER
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,2-8260.SUB,1754,1,6

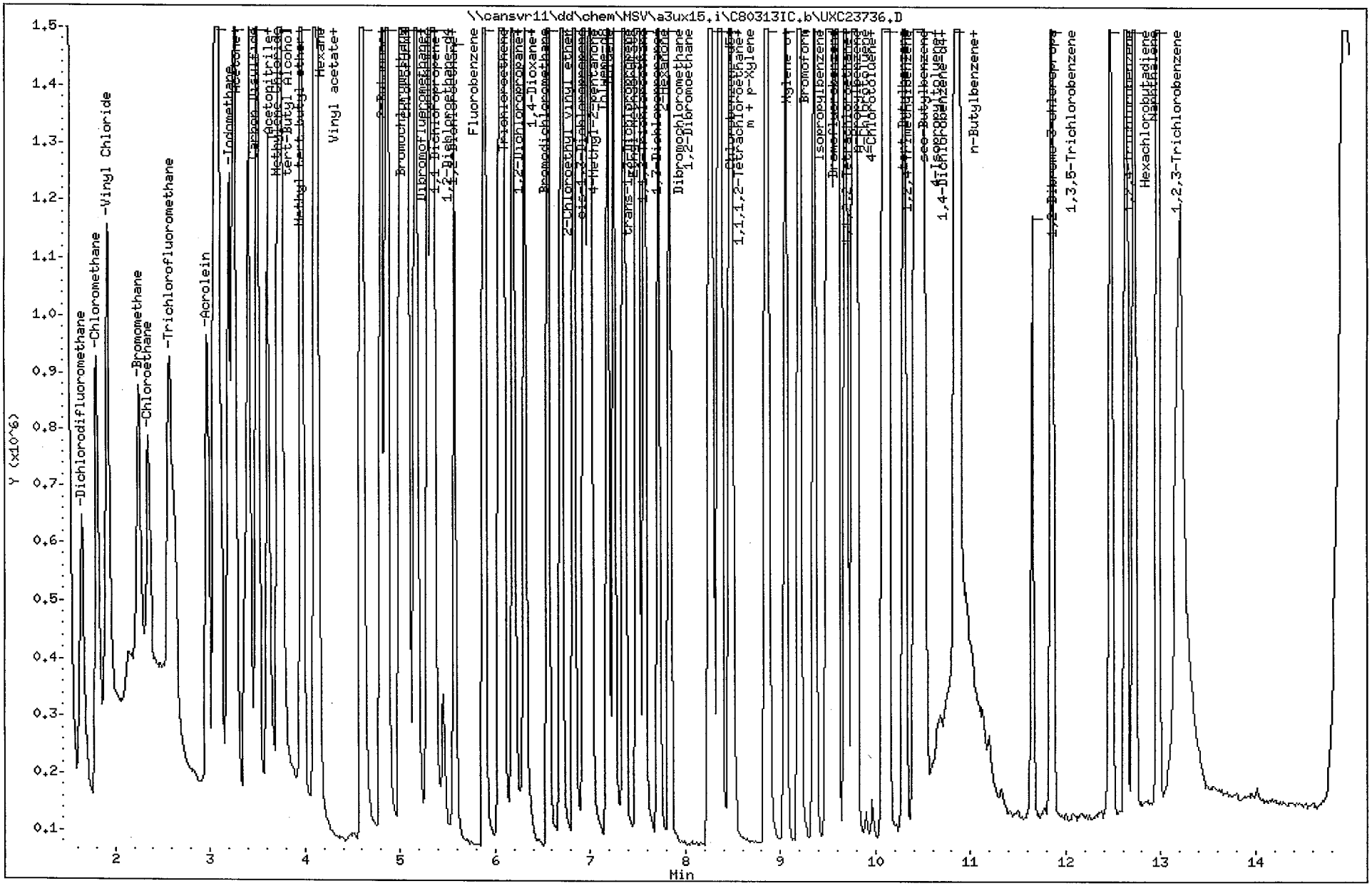
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1383768	691884	2767536	1406150	1.62
2 Chlorobenzene-d5	1019372	509686	2038744	1041632	2.18
3 1,4-Dichlorobenze	608048	304024	1216096	601572	-1.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	-0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23736.D
Date : 13-MAR-2008 15:51
Client ID:
Sample Info: 200NG8260CAL
Purge Volume: 5.0
Column phase: DB624

Instrument: a3ux15.i
Operator: 1754
Column diameter: 0.18



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23737.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23737.D
Lab Smp Id: 100NG8260CAL
Inj Date : 13-MAR-2008 16:14
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 100NG8260CAL
Misc Info : C80313IC,8260LLUX15,2-8260.SUB,1754,1,5
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 18:32 Cal File: UXC23743.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-8260+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.577	5.577	(1.000)	1386912	50.0000	
* 2 Chlorobenzene-d5	117	8.257	8.257	(1.000)	1028473	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	592560	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	590677	100.000	105.81
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	668861	100.000	101.40
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	2429041	100.000	106.74
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	962581	100.000	103.02
8 Dichlorodifluoromethane	85	1.640	1.640	(0.294)	622771	100.000	103.46
9 Chloromethane	50	1.794	1.794	(0.322)	661016	100.000	95.792
10 Vinyl Chloride	62	1.913	1.913	(0.343)	840923	100.000	107.57
11 Bromomethane	94	2.245	2.245	(0.403)	325587	100.000	92.495
12 Chloroethane	64	2.352	2.352	(0.422)	357704	100.000	100.47
13 Trichlorofluoromethane	101	2.565	2.565	(0.460)	470015	100.000	114.70
15 Acrolein	56	2.968	2.968	(0.532)	613987	1000.00	1079.7
16 Acetone	43	3.123	3.123	(0.560)	296742	200.000	194.15
17 1,1-Dichloroethene	96	3.051	3.051	(0.547)	647811	100.000	103.83
18 Freon-113	151	3.075	3.075	(0.551)	475277	100.000	113.13
19 Iodomethane	142	3.194	3.194	(0.573)	1052541	100.000	108.96
20 Carbon Disulfide	76	3.253	3.253	(0.583)	2122612	100.000	110.62
21 Methylene Chloride	84	3.490	3.490	(0.626)	698406	100.000	97.511
22 Acetonitrile	41	3.372	3.372	(0.605)	395906	1000.00	1014.2
23 Acrylonitrile	53	3.727	3.727	(0.668)	491837	200.000	226.81

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23737.D
Report Date: 14-Mar-2008 08:53

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24 Methyl tert-butyl ether	73	3.739	3.739	(0.670)	2162429	100.000	110.32
25 trans-1,2-Dichloroethene	96	3.739	3.739	(0.670)	725425	100.000	107.27
26 Hexane	86	3.965	3.965	(0.711)	177778	100.000	103.77
27 Vinyl acetate	43	4.142	4.142	(0.743)	1164309	100.000	111.71
28 1,1-Dichloroethane	63	4.107	4.107	(0.736)	1182769	100.000	107.82
29 tert-Butyl Alcohol	59	3.609	3.609	(0.647)	902103	2000.00	1920.2
30 2-Butanone	43	4.617	4.617	(0.828)	518408	200.000	202.80
32 cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	753231	100.000	109.08
33 2,2-Dichloropropane	77	4.605	4.605	(0.826)	861231	100.000	111.17
34 Bromochloromethane	128	4.807	4.807	(0.862)	358743	100.000	104.28
35 Chloroform	83	4.866	4.866	(0.872)	1129491	100.000	106.50
36 Tetrahydrofuran	42	4.866	4.866	(0.872)	185796	100.000	113.72
37 1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	945864	100.000	107.97
38 1,1-Dichloropropene	75	5.162	5.162	(0.926)	926511	100.000	109.44
39 Carbon Tetrachloride	117	5.174	5.174	(0.928)	860176	100.000	109.98
40 1,2-Dichloroethane	62	5.364	5.364	(0.962)	845066	100.000	108.68
41 Benzene	78	5.340	5.340	(0.957)	2890310	100.000	106.38
42 Trichloroethene	130	5.886	5.886	(1.055)	766079	100.000	110.30
43 1,2-Dichloropropane	63	6.087	6.087	(1.091)	652532	100.000	110.01
44 1,4-Dioxane	88	6.206	6.206	(1.113)	286781	5000.00	5573.4
45 Dibromomethane	93	6.182	6.182	(1.108)	384030	100.000	106.61
46 Bromodichloromethane	83	6.313	6.313	(1.132)	836572	100.000	110.75
47 2-Chloroethyl vinyl ether	63	6.562	6.562	(1.176)	797431	200.000	226.35
48 cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	1096117	100.000	113.08
49 4-Methyl-2-pentanone	43	6.834	6.834	(1.225)	1185831	200.000	220.19
50 Toluene	91	7.000	7.000	(0.848)	2970117	100.000	110.98
51 trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	967856	100.000	111.34
52 Ethyl Methacrylate	69	7.249	7.249	(0.878)	931972	100.000	110.65
53 1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	556093	100.000	105.10
54 1,3-Dichloropropane	76	7.510	7.510	(0.910)	1010416	100.000	109.74
55 Tetrachloroethene	164	7.487	7.487	(0.907)	596442	100.000	112.35
56 2-Hexanone	43	7.570	7.570	(0.917)	819101	200.000	215.28
57 Dibromochloromethane	129	7.724	7.724	(0.935)	643411	100.000	108.94
58 1,2-Dibromoethane	107	7.830	7.830	(0.948)	593577	100.000	108.56
59 Chlorobenzene	112	8.281	8.281	(1.003)	1921408	100.000	110.61
60 1,1,1,2-Tetrachloroethane	131	8.352	8.352	(1.011)	690769	100.000	109.63
61 Ethylbenzene	106	8.376	8.376	(1.014)	1059848	100.000	110.27
62 m + p-Xylene	106	8.483	8.483	(1.027)	2675410	200.000	220.38
64 Xylene-o	106	8.862	8.862	(1.073)	1324476	100.000	109.49
65 Styrene	104	8.862	8.862	(1.073)	2244553	100.000	110.04
66 Bromoform	173	9.052	9.052	(1.096)	504622	100.000	112.10
67 Isopropylbenzene	105	9.206	9.206	(1.115)	3160141	100.000	111.56
68 1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	815848	100.000	110.09
69 1,4-Dichloro-2-butene	53	9.538	9.538	(0.910)	229874	100.000	102.05
70 1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	247412	100.000	107.37
71 Bromobenzene	156	9.514	9.514	(0.907)	852335	100.000	111.85
72 n-Propylbenzene	120	9.597	9.597	(0.915)	978582	100.000	113.46
73 2-Chlorotoluene	126	9.692	9.692	(0.924)	831042	100.000	111.17
74 1,3,5-Trimethylbenzene	105	9.763	9.763	(0.931)	2936679	100.000	113.48
75 4-Chlorotoluene	126	9.799	9.799	(0.934)	845348	100.000	111.46
76 tert-Butylbenzene	119	10.084	10.084	(0.962)	2626954	100.000	114.13
77 1,2,4-Trimethylbenzene	105	10.131	10.131	(0.966)	3029214	100.000	113.06
78 sec-Butylbenzene	105	10.297	10.297	(0.982)	3771826	100.000	114.32
79 4-Isopropyltoluene	119	10.439	10.439	(0.995)	3221780	100.000	113.40

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23737.D
Report Date: 14-Mar-2008 08:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	1687512	100.000	112.02
81	1,4-Dichlorobenzene	146	10.510	10.510	(1.002)	1721985	100.000	110.02
82	n-Butylbenzene	91	10.842	10.842	(1.034)	2876670	100.000	113.88
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	1615159	100.000	110.96
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	203765	100.000	108.97
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	1112892	100.000	108.96
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	533885	100.000	107.32
87	Naphthalene	128	12.716	12.716	(1.213)	2905331	100.000	109.82
88	1,2,3-Trichlorobenzene	180	12.965	12.965	(1.236)	990250	100.000	107.48
98	Cyclohexane	56	5.079	5.079	(0.911)	1260755	100.000	100.24
143	Methyl Acetate	43	3.407	3.407	(0.611)	1000187	200.000	217.11
144	Methylcyclohexane	83	6.052	6.052	(1.085)	1362972	100.000	101.00
141	1,3,5-Trichlorobenzene	180	11.850	11.850	(1.130)	1265680	100.000	110.00
152	Vinyl Acetate-86	86	4.142	4.142	(0.743)	143865	100.000	105.70

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23737.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23737.D
Lab Smp Id: 100NG8260CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,2-8260.SUB,1754,1,5

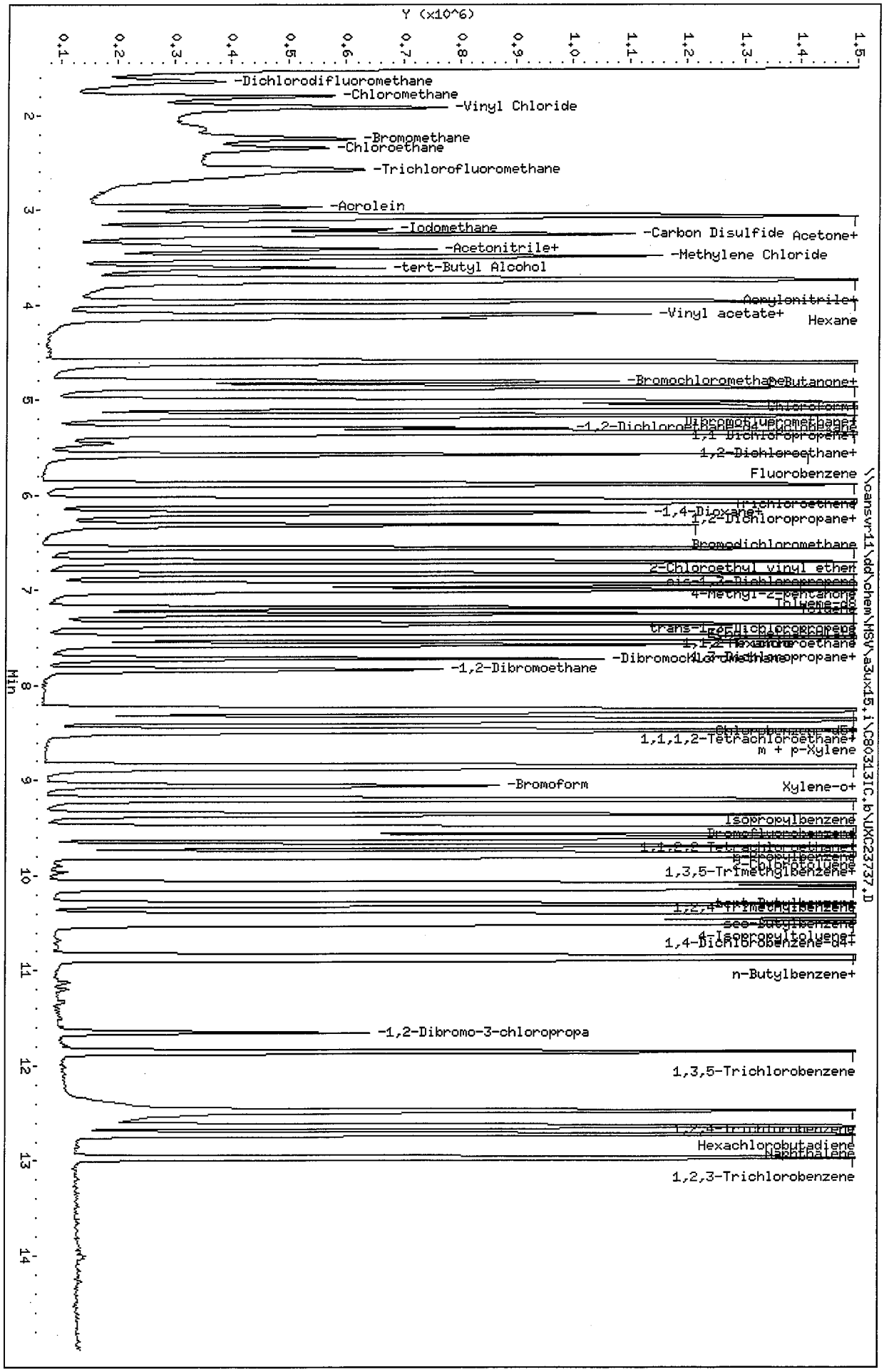
Calibration Date: 13-MAR-2008
Calibration Time: 16:37

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1383768	691884	2767536	1386912	0.23
2 Chlorobenzene-d5	1019372	509686	2038744	1028473	0.89
3 1,4-Dichlorobenze	608048	304024	1216096	592560	-2.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	-0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Data File: \\cansvr11\dd\chem\MSV\a3ux15,i\C803131C,b\UXC23737.D
Date : 13-MAR-2008 16:14
Client ID:
Sample Info: 100NG8260CAL
Purge Volume: 5.0
Column phase: DB624
Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18
Y (x10^6)
Min
-Dichlorodifluoromethane
-Chloromethane
-Vinyl Chloride
-Bromomethane
-Chloroethane
-Trichlorofluoromethane
-Acrolein
-Iodomethane
-Carbon Disulfide
Acetone+
-Acetonitrile+
-Methylene Chloride
-tert-Butyl Alcohol
-Acrylonitrile+
-Vinyl acetate+
Hexane
-Bromochloromethane
2-Butanone+
Chloroform+
Dibromofluoromethane+
-1,2-Dichloroethane-d4
Cyclohexane
1,1-Dichloropropene+
1,2-Dichloroethane+
Fluorobenzene
Trichloroethene
-1,4-Dioxane+
1,2-Dichloropropane+
Bromodichloromethane
2-Chloroethyl vinyl ether
cis-1,3-Dichloropropene
4-Methyl-2-pentanone
Toluene-d8
trans-1,3-Dichloropropene
1,1,2-Trichloroethane+
-Dibromochloromethane
1,3-Dichloropropane+
-1,2-Dibromoethane
Chlorobenzene-d5
1,1,1,2-Tetrachloroethane+
m + p-Xylene
-Bromoform
Xylene-o+
Isopropylbenzene
Bromofluorobenzene
1,1,2,2-Tetrachloroethane+
n-Propylbenzene
p-Chlorotoluene+
1,3,5-Trimethylbenzene
tert-Butylbenzene
1,2,4-Trimethylbenzene
sec-Butylbenzene
4-Isopropyltoluene+
1,4-Dichlorobenzene-d4+
n-Butylbenzene+
-1,2-Dibromo-3-chloropropa
1,3,5-Trichlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobutadiene
Naphthalene
1,2,3-Trichlorobenzene
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Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23738.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23738.D
Lab Smp Id: 50NG8260CAL
Inj Date : 13-MAR-2008 16:37
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 50NG8260CAL
Misc Info : C80313IC,8260LLUX15,2-8260.SUB,1754,1,4
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 18:55 Cal File: UXC23744.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-8260+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.578	5.578	(1.000)	1383768	50.0000	
* 2 Chlorobenzene-d5	117	8.258	8.258	(1.000)	1019372	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	608048	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	296801	50.0000	53.288
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	333995	50.0000	50.747
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	1188386	50.0000	52.690
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	476714	50.0000	51.478
8 Dichlorodifluoromethane	85	1.641	1.641	(0.294)	291724	50.0000	49.266
9 Chloromethane	50	1.795	1.795	(0.322)	331811	50.0000	48.194
10 Vinyl Chloride	62	1.913	1.913	(0.343)	409130	50.0000	52.456
11 Bromomethane	94	2.245	2.245	(0.403)	183888	50.0000	52.359
12 Chloroethane	64	2.352	2.352	(0.422)	195120	50.0000	49.812
13 Trichlorofluoromethane	101	2.577	2.577	(0.462)	220165	50.0000	53.850
15 Acrolein	56	2.969	2.969	(0.532)	281543	500.000	496.22
16 Acetone	43	3.123	3.123	(0.560)	153390	100.000	99.958
17 1,1-Dichloroethene	96	3.052	3.052	(0.547)	303787	50.0000	48.802
18 Freon-113	151	3.075	3.075	(0.551)	226323	50.0000	53.992
19 Iodomethane	142	3.206	3.206	(0.575)	509779	50.0000	52.892
20 Carbon Disulfide	76	3.253	3.253	(0.583)	1019322	50.0000	53.245
21 Methylene Chloride	84	3.502	3.502	(0.628)	338068	50.0000	47.308
22 Acetonitrile	41	3.372	3.372	(0.605)	182696	500.000	468.67
23 Acrylonitrile	53	3.728	3.728	(0.668)	231659	100.000	107.07

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23738.D
Report Date: 14-Mar-2008 08:53

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24 Methyl tert-butyl ether	73	3.740	3.740	(0.670)	1018431	50.0000	52.074
25 trans-1,2-Dichloroethene	96	3.740	3.740	(0.670)	350713	50.0000	51.980
26 Hexane	86	3.965	3.965	(0.711)	82958	50.0000	49.613
27 Vinyl acetate	43	4.143	4.143	(0.743)	564405	50.0000	54.274
28 1,1-Dichloroethane	63	4.107	4.107	(0.736)	576494	50.0000	52.670
29 tert-Butyl Alcohol	59	3.609	3.609	(0.647)	422626	1000.00	913.84
30 2-Butanone	43	4.617	4.617	(0.828)	244731	100.000	98.347
32 cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	361028	50.0000	52.400
33 2,2-Dichloropropane	77	4.605	4.605	(0.826)	416663	50.0000	53.908
34 Bromochloromethane	128	4.807	4.807	(0.862)	183162	50.0000	53.365
35 Chloroform	83	4.866	4.866	(0.872)	547732	50.0000	51.762
36 Tetrahydrofuran	42	4.866	4.866	(0.872)	85548	50.0000	52.479
37 1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	460772	50.0000	52.718
38 1,1-Dichloropropene	75	5.163	5.163	(0.926)	446384	50.0000	52.846
39 Carbon Tetrachloride	117	5.174	5.174	(0.928)	417166	50.0000	53.460
40 1,2-Dichloroethane	62	5.364	5.364	(0.962)	406690	50.0000	52.422
41 Benzene	78	5.340	5.340	(0.957)	1379643	50.0000	50.894
42 Trichloroethene	130	5.886	5.886	(1.055)	363777	50.0000	52.495
43 1,2-Dichloropropane	63	6.087	6.087	(1.091)	312439	50.0000	52.793
44 1,4-Dioxane	88	6.206	6.206	(1.113)	137729	2500.00	2682.8
45 Dibromomethane	93	6.194	6.194	(1.111)	185957	50.0000	51.742
46 Bromodichloromethane	83	6.313	6.313	(1.132)	399148	50.0000	52.961
47 2-Chloroethyl vinyl ether	63	6.562	6.562	(1.176)	379778	100.000	108.05
48 cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	515333	50.0000	53.284
49 4-Methyl-2-pentanone	43	6.835	6.835	(1.225)	594613	100.000	110.66
50 Toluene	91	7.001	7.001	(0.848)	1387366	50.0000	52.305
51 trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	458075	50.0000	53.168
52 Ethyl Methacrylate	69	7.250	7.250	(0.878)	439681	50.0000	52.669
53 1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	264195	50.0000	50.376
54 1,3-Dichloropropane	76	7.511	7.511	(0.910)	473178	50.0000	51.849
55 Tetrachloroethene	164	7.487	7.487	(0.907)	279614	50.0000	53.139
56 2-Hexanone	43	7.570	7.570	(0.917)	400183	100.000	106.12
57 Dibromochloromethane	129	7.724	7.724	(0.935)	307459	50.0000	52.522
58 1,2-Dibromoethane	107	7.831	7.831	(0.948)	285337	50.0000	52.649
59 Chlorobenzene	112	8.281	8.281	(1.003)	901150	50.0000	52.342
60 1,1,1,2-Tetrachloroethane	131	8.352	8.352	(1.011)	330342	50.0000	52.894
61 Ethylbenzene	106	8.364	8.364	(1.013)	504467	50.0000	52.954
62 m + p-Xylene	106	8.483	8.483	(1.027)	1268500	100.000	105.42
64 Xylene-o	106	8.851	8.851	(1.072)	633824	50.0000	52.865
65 Styrene	104	8.862	8.862	(1.073)	1070008	50.0000	52.928
66 Bromoform	173	9.052	9.052	(1.096)	234226	50.0000	52.498
67 Isopropylbenzene	105	9.206	9.206	(1.115)	1491470	50.0000	53.120
68 1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	388950	50.0000	51.148
69 1,4-Dichloro-2-butene	53	9.538	9.538	(0.910)	103402	50.0000	46.053
70 1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	118540	50.0000	50.132
71 Bromobenzene	156	9.515	9.515	(0.907)	410818	50.0000	52.536
72 n-Propylbenzene	120	9.598	9.598	(0.915)	463662	50.0000	52.390
73 2-Chlorotoluene	126	9.692	9.692	(0.924)	401621	50.0000	52.357
74 1,3,5-Trimethylbenzene	105	9.764	9.764	(0.931)	1392731	50.0000	52.446
75 4-Chlorotoluene	126	9.799	9.799	(0.934)	405030	50.0000	52.042
76 tert-Butylbenzene	119	10.084	10.084	(0.962)	1243422	50.0000	52.644
77 1,2,4-Trimethylbenzene	105	10.131	10.131	(0.966)	1432842	50.0000	52.118
78 sec-Butylbenzene	105	10.297	10.297	(0.982)	1791803	50.0000	52.922
79 4-Isopropyltoluene	119	10.440	10.440	(0.995)	1533743	50.0000	52.607

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23738.D
Report Date: 14-Mar-2008 08:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	820163	50.0000	53.059
81	1,4-Dichlorobenzene	146	10.511	10.511	(1.002)	832487	50.0000	51.833
82	n-Butylbenzene	91	10.843	10.843	(1.034)	1368232	50.0000	52.785
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	783350	50.0000	52.442
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	98252	50.0000	51.207
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	553135	50.0000	52.775
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	274882	50.0000	53.850
87	Naphthalene	128	12.716	12.716	(1.213)	1423727	50.0000	52.445
88	1,2,3-Trichlorobenzene	180	12.977	12.977	(1.237)	507006	50.0000	53.628
98	Cyclohexane	56	5.080	5.080	(0.911)	597489	50.0000	48.837
143	Methyl Acetate	43	3.407	3.407	(0.611)	469586	100.000	102.17
144	Methylcyclohexane	83	6.052	6.052	(1.085)	636702	50.0000	48.540
141	1,3,5-Trichlorobenzene	180	11.851	11.851	(1.130)	622195	50.0000	52.699
152	Vinyl Acetate-86	86	4.143	4.143	(0.743)	73452	50.0000	54.090

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23738.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23738.D
Lab Smp Id: 50NG8260CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,2-8260.SUB,1754,1,4

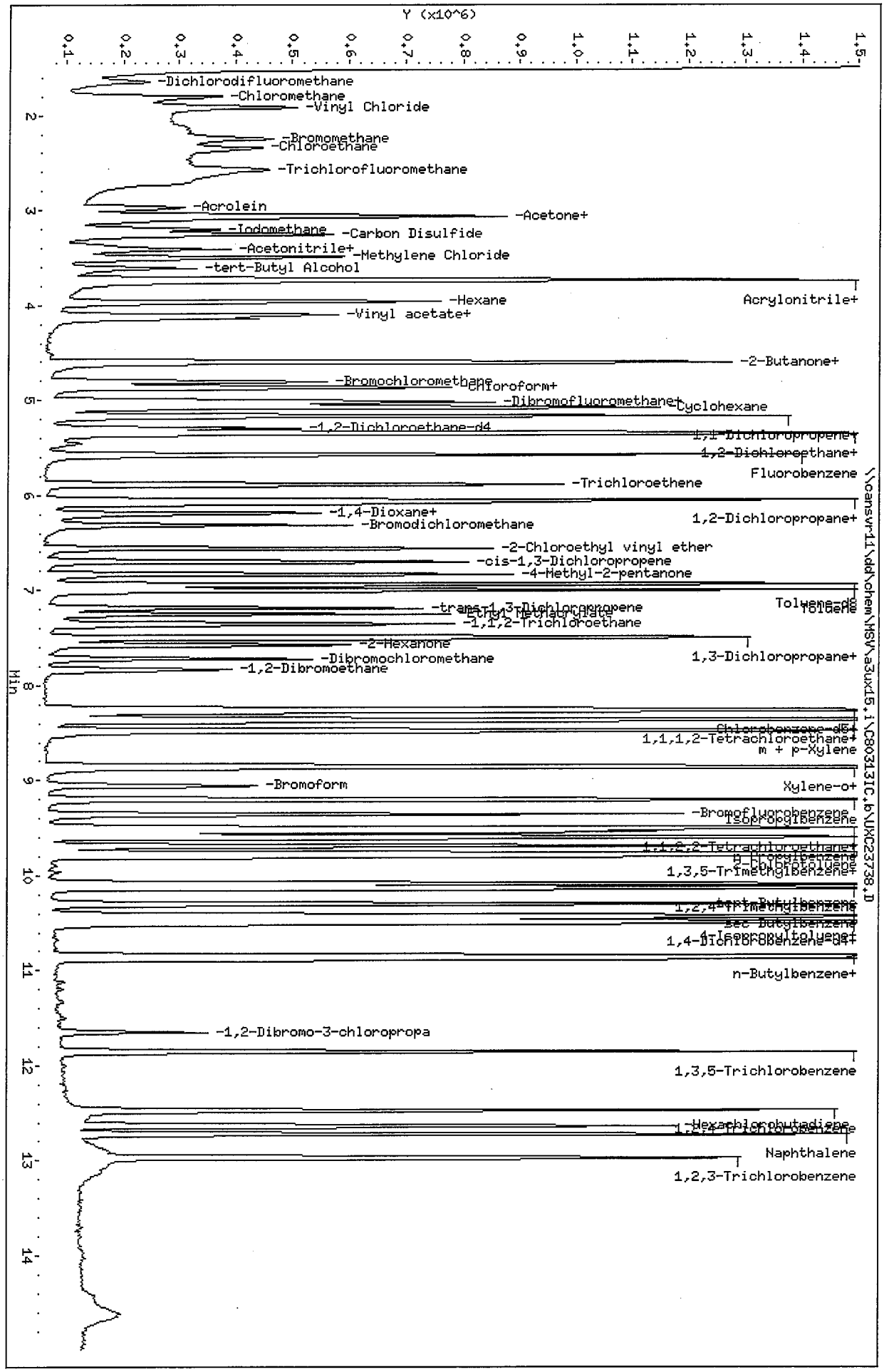
Calibration Date: 13-MAR-2008
Calibration Time: 16:37

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1383768	691884	2767536	1383768	0.00
2 Chlorobenzene-d5	1019372	509686	2038744	1019372	0.00
3 1,4-Dichlorobenze	608048	304024	1216096	608048	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\cansvr11\dd\chem\MSV\a3ux15,i\C803131C,b\UXC23738.D
Date : 13-MAR-2008 16:37
Client ID:
Sample Info: 50NG8260CAL
Purge Volume: 5.0
Column phase: DB624

Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18

\\cansvr11\dd\chem\MSV\a3ux15,i\C803131C,b\UXC23738.D

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23739.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23739.D
Lab Smp Id: 25NG8260CAL
Inj Date : 13-MAR-2008 17:00
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 25NG8260CAL
Misc Info : C80313IC,8260LLUX15,2-8260.SUB,1754,1,3
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 19:18 Cal File: UXC23745.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-8260+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.577	5.577	(1.000)	1378676	50.0000	
* 2 Chlorobenzene-d5	117	8.257	8.257	(1.000)	1014163	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	614174	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	137324	25.0000	24.746
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	157958	25.0000	24.089
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	552312	25.0000	24.614
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	222339	25.0000	24.133
8 Dichlorodifluoromethane	85	1.640	1.640	(0.294)	146035	25.0000	25.403
9 Chloromethane	50	1.795	1.795	(0.322)	149987	25.0000	21.865
10 Vinyl Chloride	62	1.913	1.913	(0.343)	199647	25.0000	25.692
11 Bromomethane	94	2.245	2.245	(0.403)	96368	25.0000	27.540
12 Chloroethane	64	2.352	2.352	(0.422)	99433	25.0000	23.349
13 Trichlorofluoromethane	101	2.577	2.577	(0.462)	86486	25.0000	21.232
15 Acrolein	56	2.969	2.969	(0.532)	130176	250.000	230.28
16 Acetone	43	3.123	3.123	(0.560)	64382	50.0000	41.353
17 1,1-Dichloroethene	96	3.063	3.063	(0.549)	138467	25.0000	22.326
18 Freon-113	151	3.087	3.087	(0.554)	96769	25.0000	23.171
19 Iodomethane	142	3.206	3.206	(0.575)	232868	25.0000	24.250
20 Carbon Disulfide	76	3.253	3.253	(0.583)	441292	25.0000	23.136
21 Methylene Chloride	84	3.502	3.502	(0.628)	159573	25.0000	22.412
22 Acetonitrile	41	3.384	3.384	(0.607)	76019	250.000	195.30
23 Acrylonitrile	53	3.727	3.727	(0.668)	101060	50.0000	46.882

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23739.D
Report Date: 14-Mar-2008 08:53

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24 Methyl tert-butyl ether	73	3.739	3.739	(0.670)	460108	25.0000	23.613
25 trans-1,2-Dichloroethene	96	3.739	3.739	(0.670)	160291	25.0000	23.845
26 Hexane	86	3.965	3.965	(0.711)	31016	25.0000	19.884
27 Vinyl acetate	43	4.143	4.143	(0.743)	246691	25.0000	23.810
28 1,1-Dichloroethane	63	4.107	4.107	(0.736)	260274	25.0000	23.867
29 tert-Butyl Alcohol	59	3.609	3.609	(0.647)	287587	500.000	631.44
30 2-Butanone	43	4.629	4.629	(0.830)	110762	50.0000	47.150
32 cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	168776	25.0000	24.587
33 2,2-Dichloropropane	77	4.605	4.605	(0.826)	184443	25.0000	23.951
34 Bromochloromethane	128	4.807	4.807	(0.862)	81416	25.0000	23.809
35 Chloroform	83	4.866	4.866	(0.872)	247827	25.0000	23.506
36 Tetrahydrofuran	42	4.866	4.866	(0.872)	38630	25.0000	23.785
37 1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	201454	25.0000	23.134
38 1,1-Dichloropropene	75	5.162	5.162	(0.926)	199903	25.0000	23.753
39 Carbon Tetrachloride	117	5.174	5.174	(0.928)	185324	25.0000	23.837
40 1,2-Dichloroethane	62	5.364	5.364	(0.962)	188224	25.0000	24.351
41 Benzene	78	5.352	5.352	(0.960)	627953	25.0000	23.250
42 Trichloroethene	130	5.886	5.886	(1.055)	164360	25.0000	23.806
43 1,2-Dichloropropane	63	6.087	6.087	(1.091)	142706	25.0000	24.202
44 1,4-Dioxane	88	6.218	6.218	(1.115)	57184	1250.00	1118.0
45 Dibromomethane	93	6.182	6.182	(1.108)	85110	25.0000	23.769
46 Bromodichloromethane	83	6.313	6.313	(1.132)	180346	25.0000	24.018
47 2-Chloroethyl vinyl ether	63	6.562	6.562	(1.176)	163678	50.0000	46.738
48 cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	230178	25.0000	23.888
49 4-Methyl-2-pentanone	43	6.834	6.834	(1.225)	256838	50.0000	47.977
50 Toluene	91	7.000	7.000	(0.848)	619395	25.0000	23.472
51 trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	201510	25.0000	23.509
52 Ethyl Methacrylate	69	7.249	7.249	(0.878)	196364	25.0000	23.643
53 1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	130395	25.0000	24.991
54 1,3-Dichloropropane	76	7.510	7.510	(0.910)	216638	25.0000	23.860
55 Tetrachloroethene	164	7.487	7.487	(0.907)	120882	25.0000	23.091
56 2-Hexanone	43	7.570	7.570	(0.917)	177518	50.0000	47.315
57 Dibromochloromethane	129	7.724	7.724	(0.935)	141355	25.0000	24.271
58 1,2-Dibromoethane	107	7.831	7.831	(0.948)	129611	25.0000	24.038
59 Chlorobenzene	112	8.281	8.281	(1.003)	409934	25.0000	23.933
60 1,1,1,2-Tetrachloroethane	131	8.352	8.352	(1.011)	150024	25.0000	24.145
61 Ethylbenzene	106	8.376	8.376	(1.014)	224625	25.0000	23.700
62 m + p-Xylene	106	8.483	8.483	(1.027)	565656	50.0000	47.251
64 Xylene-o	106	8.850	8.850	(1.072)	286886	25.0000	24.051
65 Styrene	104	8.862	8.862	(1.073)	482117	25.0000	23.970
66 Bromoform	173	9.052	9.052	(1.096)	104676	25.0000	23.582
67 Isopropylbenzene	105	9.206	9.206	(1.115)	660455	25.0000	23.644
68 1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	178963	25.0000	23.299
69 1,4-Dichloro-2-butene	53	9.538	9.538	(0.910)	43647	25.0000	20.612
70 1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	56627	25.0000	23.710
71 Bromobenzene	156	9.514	9.514	(0.907)	186110	25.0000	23.562
72 n-Propylbenzene	120	9.597	9.597	(0.915)	211147	25.0000	23.620
73 2-Chlorotoluene	126	9.692	9.692	(0.924)	184916	25.0000	23.866
74 1,3,5-Trimethylbenzene	105	9.763	9.763	(0.931)	619982	25.0000	23.114
75 4-Chlorotoluene	126	9.799	9.799	(0.934)	185663	25.0000	23.618
76 tert-Butylbenzene	119	10.084	10.084	(0.962)	546389	25.0000	22.902
77 1,2,4-Trimethylbenzene	105	10.131	10.131	(0.966)	648599	25.0000	23.357
78 sec-Butylbenzene	105	10.297	10.297	(0.982)	785744	25.0000	22.976
79 4-Isopropyltoluene	119	10.439	10.439	(0.995)	683412	25.0000	23.207

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23739.D
Report Date: 14-Mar-2008 08:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	370275	25.0000	23.715
81	1,4-Dichlorobenzene	146	10.511	10.511	(1.002)	384243	25.0000	23.686
82	n-Butylbenzene	91	10.843	10.843	(1.034)	604950	25.0000	23.106
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	362317	25.0000	24.014
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	46472	25.0000	23.979
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	259455	25.0000	24.508
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	127261	25.0000	24.682
87	Naphthalene	128	12.716	12.716	(1.213)	670171	25.0000	24.441
88	1,2,3-Trichlorobenzene	180	12.965	12.965	(1.236)	232641	25.0000	24.362
98	Cyclohexane	56	5.079	5.079	(0.911)	256672	25.0000	22.386
143	Methyl Acetate	43	3.419	3.419	(0.613)	208021	50.0000	45.426
144	Methylcyclohexane	83	6.052	6.052	(1.085)	272382	25.0000	22.182
141	1,3,5-Trichlorobenzene	180	11.851	11.851	(1.130)	287897	25.0000	24.141
152	Vinyl Acetate-86	86	4.143	4.143	(0.743)	33011	25.0000	24.399

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23739.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

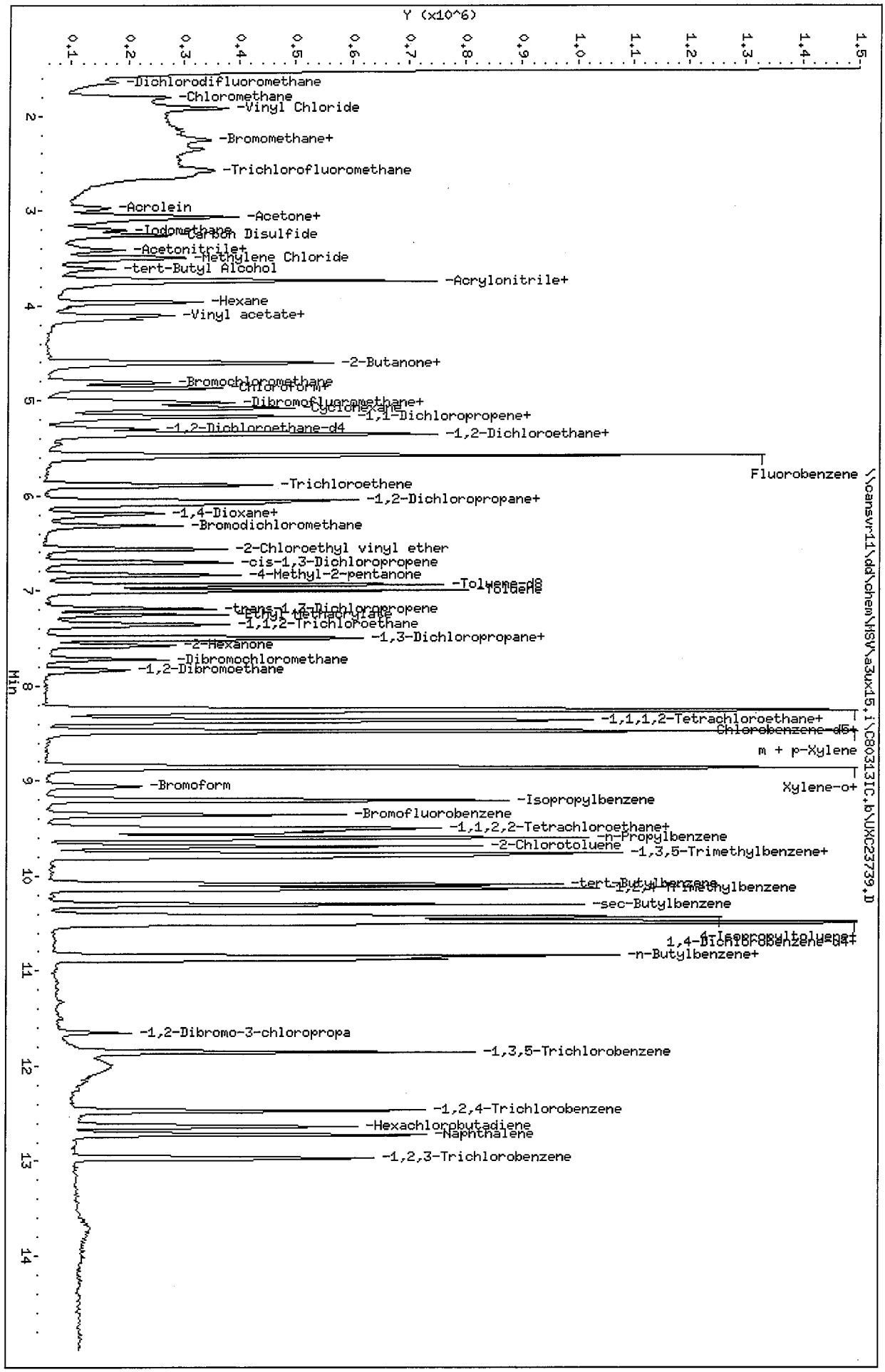
INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23739.D
Lab Smp Id: 25NG8260CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Calibration Date: 13-MAR-2008
Calibration Time: 16:37
Level: LOW
Sample Type: WATER
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,2-8260.SUB,1754,1,3

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1383768	691884	2767536	1378676	-0.37
2 Chlorobenzene-d5	1019372	509686	2038744	1014163	-0.51
3 1,4-Dichlorobenze	608048	304024	1216096	614174	1.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	-0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Data File: \\cansvr11\dd\chem\HSV\a3ux15,i\C803131C.b\UXC23739.D
Date : 13-MAR-2008 17:00
Client ID:
Sample Info: 25NG8260CAL
Purge Volume: 5.0
Column phase: DB624
Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18
Y (x10^6)
Min
-Dichlorodifluoromethane
-Chloromethane
-Vinyl Chloride
-Bromomethane+
-Trichlorofluoromethane
-Acrolein
-Acetone+
-Iodomethane
-Carbon Disulfide
-Acetonitrile+
-Methylene Chloride
-tert-Butyl Alcohol
-Acrylonitrile+
-Hexane
-Vinyl acetate+
-2-Butanone+
-Bromochloromethane
-Chloroform+
-Dibromofluoromethane+
-Cyclohexane
-1,1-Dichloropropene+
-1,2-Dichloroethane-d4
-1,2-Dichloroethane+
Fluorobenzene
-Trichloroethene
-1,2-Dichloropropane+
-1,4-Dioxane+
-Bromodichloromethane
-2-Chloroethyl vinyl ether
-cis-1,3-Dichloropropene
-4-Methyl-2-pentanone
-Toluene-d8
Toluene
-trans-1,3-Dichloropropene
-Ethyl Methacrylate
-1,1,2-Trichloroethane
-1,3-Dichloropropane+
-2-Hexanone
-Dibromochloromethane
-1,2-Dibromoethane
-1,1,1,2-Tetrachloroethane+
Chlorobenzene-d5+
m + p-Xylene
Xylene-o+
-Bromoform
-Isopropylbenzene
-Bromofluorobenzene
-1,1,2,2-Tetrachloroethane+
-n-Propylbenzene
-2-Chlorotoluene
-1,3,5-Trimethylbenzene+
-tert-Butylbenzene
1,2,4-Trimethylbenzene
-sec-Butylbenzene
4-Isopropyltoluene+
1,4-Dichlorobenzene-d4+
-n-Butylbenzene+
-1,2-Dibromo-3-chloropropa
-1,3,5-Trichlorobenzene
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23740.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23740.D
Lab Smp Id: 10NG8260CAL
Inj Date : 13-MAR-2008 17:23
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 10NG8260CAL
Misc Info : C80313IC,8260LLUX15,2-8260.SUB,1754,1,2
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 19:41 Cal File: UXC23746.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-8260+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.577	5.577	(1.000)	1461110	50.0000	
* 2 Chlorobenzene-d5	117	8.257	8.257	(1.000)	1082521	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	644903	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	53754	10.0000	9.140
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	71713	10.0000	10.319
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	210340	10.0000	8.782
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	93700	10.0000	9.528
8 Dichlorodifluoromethane	85	1.640	1.640	(0.294)	40902	10.0000	7.674
9 Chloromethane	50	1.795	1.795	(0.322)	75523	10.0000	10.389
10 Vinyl Chloride	62	1.913	1.913	(0.343)	74059	10.0000	8.993
11 Bromomethane	94	2.245	2.245	(0.403)	32973	10.0000	8.892
12 Chloroethane	64	2.340	2.340	(0.420)	59333	10.0000	12.079
13 Trichlorofluoromethane	101	2.577	2.577	(0.462)	35226	10.0000	8.160
15 Acrolein	56	2.980	2.980	(0.534)	51585	100.000	86.106
16 Acetone	43	3.123	3.123	(0.560)	26156	20.0000	15.045
17 1,1-Dichloroethene	96	3.052	3.052	(0.547)	76855	10.0000	11.693
18 Freon-113	151	3.075	3.075	(0.551)	39066	10.0000	8.826
19 Iodomethane	142	3.206	3.206	(0.575)	90503	10.0000	8.893
20 Carbon Disulfide	76	3.253	3.253	(0.583)	183695	10.0000	9.087
21 Methylene Chloride	84	3.502	3.502	(0.628)	80011	10.0000	10.604
22 Acetonitrile	41	3.384	3.384	(0.607)	51370	100.000	124.26
23 Acrylonitrile	53	3.727	3.727	(0.668)	36624	20.0000	16.031

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23740.D
Report Date: 14-Mar-2008 08:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24	Methyl tert-butyl ether	73	3.739	3.739	(0.670)	179260	10.0000	8.681
25	trans-1,2-Dichloroethene	96	3.739	3.739	(0.670)	70442	10.0000	9.888
26	Hexane	86	3.965	3.965	(0.711)	13155	10.0000	9.173
27	Vinyl acetate	43	4.142	4.142	(0.743)	104618	10.0000	9.528
28	1,1-Dichloroethane	63	4.107	4.107	(0.736)	104103	10.0000	9.008
29	tert-Butyl Alcohol	59	3.609	3.609	(0.647)	69318	200.000	161.38
30	2-Butanone	43	4.629	4.629	(0.830)	35481	20.0000	17.417
32	cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	61836	10.0000	8.500
33	2,2-Dichloropropane	77	4.605	4.605	(0.826)	71233	10.0000	8.728
34	Bromochloromethane	128	4.807	4.807	(0.862)	33982	10.0000	9.377
35	Chloroform	83	4.866	4.866	(0.872)	96204	10.0000	8.610
36	Tetrahydrofuran	42	4.866	4.866	(0.872)	14304	10.0000	8.310
37	1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	82548	10.0000	8.945
38	1,1-Dichloropropene	75	5.162	5.162	(0.926)	80867	10.0000	9.067
39	Carbon Tetrachloride	117	5.174	5.174	(0.928)	73824	10.0000	8.960
40	1,2-Dichloroethane	62	5.364	5.364	(0.962)	73615	10.0000	8.986
41	Benzene	78	5.352	5.352	(0.960)	264501	10.0000	9.241
42	Trichloroethene	130	5.886	5.886	(1.055)	64924	10.0000	8.873
43	1,2-Dichloropropane	63	6.087	6.087	(1.091)	54082	10.0000	8.654
44	1,4-Dioxane	88	6.218	6.218	(1.115)	25791	500.000	475.78
45	Dibromomethane	93	6.194	6.194	(1.111)	35885	10.0000	9.456
46	Bromodichloromethane	83	6.313	6.313	(1.132)	69662	10.0000	8.754
47	2-Chloroethyl vinyl ether	63	6.562	6.562	(1.176)	64435	20.0000	17.361
48	cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	87487	10.0000	8.567
49	4-Methyl-2-pentanone	43	6.834	6.834	(1.225)	100759	20.0000	17.760
50	Toluene	91	7.000	7.000	(0.848)	250259	10.0000	8.885
51	trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	79177	10.0000	8.654
52	Ethyl Methacrylate	69	7.249	7.249	(0.878)	76756	10.0000	8.658
53	1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	50570	10.0000	9.080
54	1,3-Dichloropropane	76	7.510	7.510	(0.910)	86424	10.0000	8.918
55	Tetrachloroethene	164	7.487	7.487	(0.907)	48840	10.0000	8.740
56	2-Hexanone	43	7.570	7.570	(0.917)	69776	20.0000	17.423
57	Dibromochloromethane	129	7.724	7.724	(0.935)	53961	10.0000	8.680
58	1,2-Dibromoethane	107	7.830	7.830	(0.948)	51640	10.0000	8.972
59	Chlorobenzene	112	8.281	8.281	(1.003)	160488	10.0000	8.778
60	1,1,1,2-Tetrachloroethane	131	8.352	8.352	(1.011)	59410	10.0000	8.958
61	Ethylbenzene	106	8.376	8.376	(1.014)	91331	10.0000	9.028
62	m + p-Xylene	106	8.483	8.483	(1.027)	224359	20.0000	17.558
64	Xylene-o	106	8.862	8.862	(1.073)	113106	10.0000	8.884
65	Styrene	104	8.874	8.874	(1.075)	186726	10.0000	8.698
66	Bromoform	173	9.064	9.064	(1.098)	41027	10.0000	8.659
67	Isopropylbenzene	105	9.206	9.206	(1.115)	257125	10.0000	8.624
68	1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	69829	10.0000	8.658
69	1,4-Dichloro-2-butene	53	9.538	9.538	(0.910)	16927	10.0000	9.094
70	1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	22617	10.0000	9.018
71	Bromobenzene	156	9.514	9.514	(0.907)	72542	10.0000	8.747
72	n-Propylbenzene	120	9.597	9.597	(0.915)	82593	10.0000	8.799
73	2-Chlorotoluene	126	9.692	9.692	(0.924)	72095	10.0000	8.862
74	1,3,5-Trimethylbenzene	105	9.763	9.763	(0.931)	243813	10.0000	8.656
75	4-Chlorotoluene	126	9.799	9.799	(0.934)	73619	10.0000	8.919
76	tert-Butylbenzene	119	10.084	10.084	(0.962)	215020	10.0000	8.583
77	1,2,4-Trimethylbenzene	105	10.131	10.131	(0.966)	254134	10.0000	8.716
78	sec-Butylbenzene	105	10.297	10.297	(0.982)	310161	10.0000	8.637
79	4-Isopropyltoluene	119	10.439	10.439	(0.995)	267638	10.0000	8.655

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23740.D
Report Date: 14-Mar-2008 08:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	143961	10.0000	8.781
81	1,4-Dichlorobenzene	146	10.511	10.511	(1.002)	153175	10.0000	8.992
82	n-Butylbenzene	91	10.843	10.843	(1.034)	241185	10.0000	8.773
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	142467	10.0000	8.992
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	18623	10.0000	9.151
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	102118	10.0000	9.186
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	50740	10.0000	9.372
87	Naphthalene	128	12.716	12.716	(1.213)	265363	10.0000	9.216
88	1,2,3-Trichlorobenzene	180	12.977	12.977	(1.237)	96202	10.0000	9.594
98	Cyclohexane	56	5.079	5.079	(0.911)	93038	10.0000	9.193
143	Methyl Acetate	43	3.419	3.419	(0.613)	83243	20.0000	17.152
144	Methylcyclohexane	83	6.052	6.052	(1.085)	99017	10.0000	9.152
141	1,3,5-Trichlorobenzene	180	11.851	11.851	(1.130)	113530	10.0000	9.066
152	Vinyl Acetate-86	86	4.142	4.142	(0.743)	14223	10.0000	9.919

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23740.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

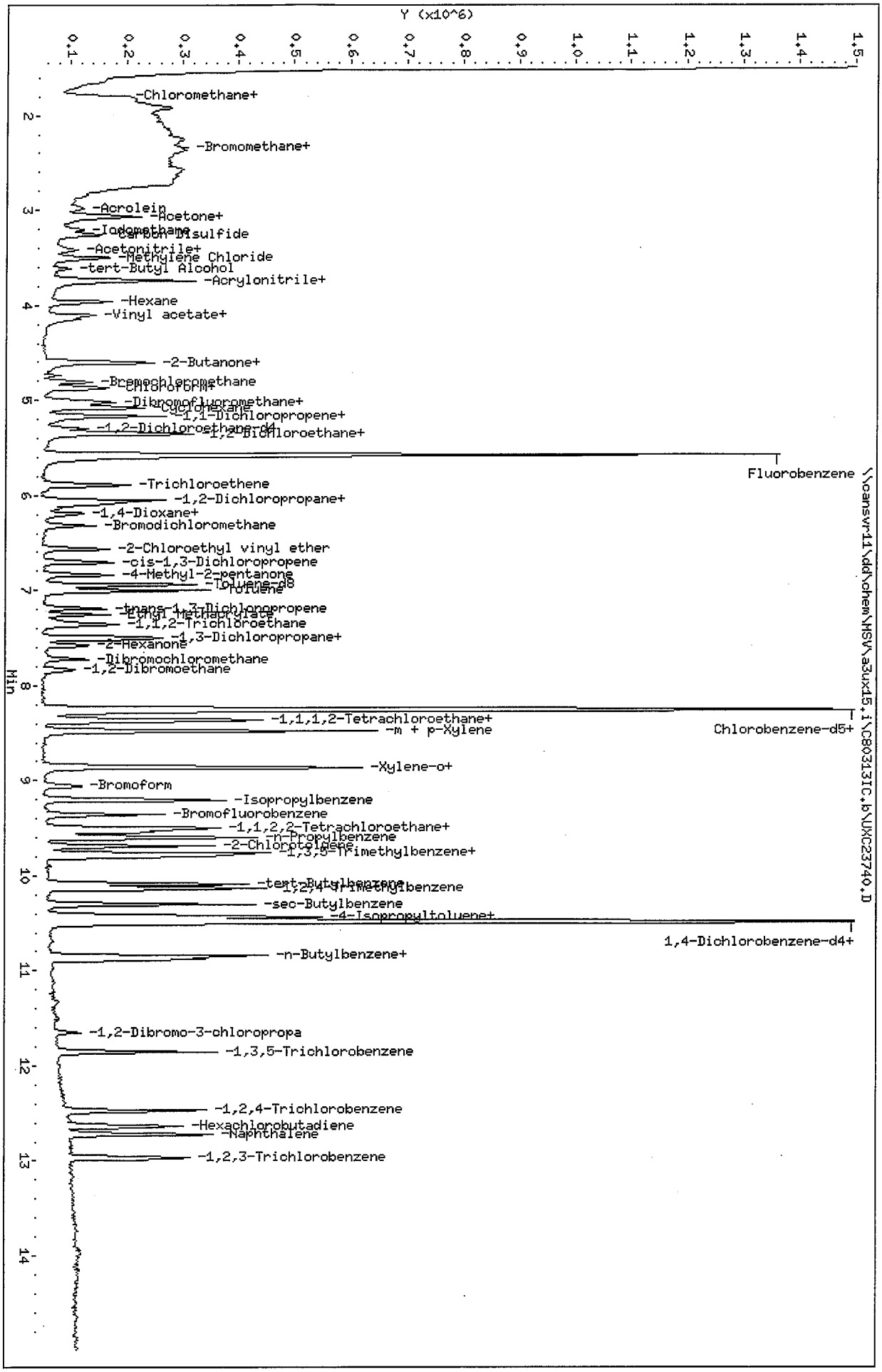
INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23740.D
Lab Smp Id: 10NG8260CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Calibration Date: 13-MAR-2008
Calibration Time: 16:37
Level: LOW
Sample Type: WATER
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,2-8260.SUB,1754,1,2

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1383768	691884	2767536	1461110	5.59
2 Chlorobenzene-d5	1019372	509686	2038744	1082521	6.19
3 1,4-Dichlorobenze	608048	304024	1216096	644903	6.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	-0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C803131C.b\UXC23740.D
Date : 13-MAR-2008 17:23
Client ID:
Sample Info: 10NG8260CAL
Purge Volume: 5.0
Column phase: DB624
Instrument: a3ux15.i
Operator: 1754
Column diameter: 0.18
Y (x10^6)
Min
-Chloromethane+
-Bromomethane+
-Acrolein
-Acetone+
-Iodomethane
Carbon Disulfide
-Acetonitrile+
-Methylene Chloride
-tert-Butyl Alcohol
-Acrylonitrile+
-Hexane
-Vinyl acetate+
-2-Butanone+
-Bromochloromethane
Chloroform
-Dibromofluoromethane+
Cyclohexane
-1,1-Dichloropropene+
-1,2-Dichloroethane-d4
1,2-Dichloroethane+
Fluorobenzene
-Trichloroethene
-1,2-Dichloropropane+
-1,4-Dioxane+
-Bromodichloromethane
-2-Chloroethyl vinyl ether
-cis-1,3-Dichloropropene
-4-Methyl-2-pentanone
-Toluene-d8
Toluene
-trans-1,3-Dichloropropene
Ethyl Methacrylate
-1,1,2-Trichloroethane
-1,3-Dichloropropane+
-2-Hexanone
-Dibromochloromethane
-1,2-Dibromoethane
-1,1,1,2-Tetrachloroethane+
-m + p-Xylene
Chlorobenzene-d5+
-Xylene-o+
-Bromoform
-Isopropylbenzene
-Bromofluorobenzene
-1,1,2,2-Tetrachloroethane+
-n-Propylbenzene
-2-Chlorotoluene
-1,3,5-Trimethylbenzene+
-tert-Butylbenzene
1,2,4-Trimethylbenzene
-sec-Butylbenzene
-4-Isopropyltoluene+
1,4-Dichlorobenzene-d4+
-n-Butylbenzene+
-1,2-Dibromo-3-chloropropa
-1,3,5-Trichlorobenzene
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
\\cansvr11\dd\chem\MSV\a3ux15.i\C803131C.b\UXC23740.D

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23741.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23741.D
Lab Smp Id: 5NG8260CAL
Inj Date : 13-MAR-2008 17:46
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 5NG8260CAL
Misc Info : C80313IC,8260LLUX15,2-8260.SUB,1754,1,1
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 20:04 Cal File: UXC23747.D
Als bottle: 9 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-8260+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.578	5.578	(1.000)	1378311	50.0000	
* 2 Chlorobenzene-d5	117	8.258	8.258	(1.000)	1004322	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	603881	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	26007	5.00000	4.688
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	32217	5.00000	4.914
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	103538	5.00000	4.659
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	46364	5.00000	5.082
8 Dichlorodifluoromethane	85	1.641	1.641	(0.294)	28757	5.00000	6.052
9 Chloromethane	50	1.807	1.807	(0.324)	41795	5.00000	6.094
10 Vinyl Chloride	62	1.913	1.913	(0.343)	37111	5.00000	4.777
11 Bromomethane	94	2.245	2.245	(0.403)	21023	5.00000	6.010
12 Chloroethane	64	2.352	2.352	(0.422)	25139	5.00000	4.398
13 Trichlorofluoromethane	101	2.566	2.566	(0.460)	20360	5.00000	5.000
15 Acrolein	56	2.969	2.969	(0.532)	31844	50.0000	56.347
16 Acetone	43	3.135	3.135	(0.562)	23469	10.0000	14.246
17 1,1-Dichloroethene	96	3.064	3.064	(0.549)	28013	5.00000	4.518
18 Freon-113	151	3.087	3.087	(0.554)	17793	5.00000	4.262
19 Iodomethane	142	3.206	3.206	(0.575)	44090	5.00000	4.593
20 Carbon Disulfide	76	3.265	3.265	(0.585)	86022	5.00000	4.511
21 Methylene Chloride	84	3.502	3.502	(0.628)	41452	5.00000	5.824
22 Acetonitrile	41	3.384	3.384	(0.607)	19887	50.0000	50.565
23 Acrylonitrile	53	3.728	3.728	(0.668)	20590	10.0000	9.554

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23741.D
Report Date: 14-Mar-2008 08:53

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
24 Methyl tert-butyl ether	73	3.751	3.751	(0.673)	91937	5.00000	4.719
25 trans-1,2-Dichloroethene	96	3.739	3.739	(0.670)	29498	5.00000	4.389
26 Hexane	86	3.965	3.965	(0.711)	7412	5.00000	6.295
27 Vinyl acetate	43	4.143	4.143	(0.743)	40830	5.00000	3.942
28 1,1-Dichloroethane	63	4.107	4.107	(0.736)	50916	5.00000	4.670
29 tert-Butyl Alcohol	59	3.609	3.609	(0.647)	38869	100.000	105.26
30 2-Butanone	43	4.629	4.629	(0.830)	19001	10.0000	11.848
32 cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	32596	5.00000	4.750
33 2,2-Dichloropropane	77	4.605	4.605	(0.826)	33549	5.00000	4.358
34 Bromochloromethane	128	4.807	4.807	(0.862)	16124	5.00000	4.716
35 Chloroform	83	4.866	4.866	(0.872)	55081	5.00000	5.226
36 Tetrahydrofuran	42	4.878	4.878	(0.875)	7144	5.00000	4.400
37 1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	41984	5.00000	4.822
38 1,1-Dichloropropene	75	5.163	5.163	(0.926)	37500	5.00000	4.457
39 Carbon Tetrachloride	117	5.174	5.174	(0.928)	33962	5.00000	4.370
40 1,2-Dichloroethane	62	5.364	5.364	(0.962)	35071	5.00000	4.538
41 Benzene	78	5.352	5.352	(0.960)	133035	5.00000	4.927
42 Trichloroethene	130	5.886	5.886	(1.055)	31339	5.00000	4.540
43 1,2-Dichloropropane	63	6.087	6.087	(1.091)	26871	5.00000	4.558
44 1,4-Dioxane	88	6.230	6.230	(1.117)	11881	250.000	232.34
45 Dibromomethane	93	6.194	6.194	(1.111)	16837	5.00000	4.703
46 Bromodichloromethane	83	6.313	6.313	(1.132)	32917	5.00000	4.385
47 2-Chloroethyl vinyl ether	63	6.562	6.562	(1.176)	30370	10.0000	8.674
48 cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	41025	5.00000	4.259
49 4-Methyl-2-pentanone	43	6.835	6.835	(1.225)	46379	10.0000	8.666
50 Toluene	91	7.001	7.001	(0.848)	114994	5.00000	4.400
51 trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	37652	5.00000	4.436
52 Ethyl Methacrylate	69	7.250	7.250	(0.878)	37825	5.00000	4.599
53 1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	25310	5.00000	4.898
54 1,3-Dichloropropane	76	7.511	7.511	(0.910)	41195	5.00000	4.582
55 Tetrachloroethene	164	7.499	7.499	(0.908)	23128	5.00000	4.461
56 2-Hexanone	43	7.570	7.570	(0.917)	37075	10.0000	9.979
57 Dibromochloromethane	129	7.724	7.724	(0.935)	26086	5.00000	4.523
58 1,2-Dibromoethane	107	7.831	7.831	(0.948)	24567	5.00000	4.601
59 Chlorobenzene	112	8.281	8.281	(1.003)	76687	5.00000	4.521
60 1,1,1,2-Tetrachloroethane	131	8.352	8.352	(1.011)	27496	5.00000	4.468
61 Ethylbenzene	106	8.376	8.376	(1.014)	40894	5.00000	4.357
62 m + p-Xylene	106	8.483	8.483	(1.027)	106217	10.0000	8.960
64 Xylene-o	106	8.851	8.851	(1.072)	53090	5.00000	4.494
65 Styrene	104	8.862	8.862	(1.073)	89307	5.00000	4.484
66 Bromoform	173	9.064	9.064	(1.098)	19548	5.00000	4.447
67 Isopropylbenzene	105	9.206	9.206	(1.115)	120640	5.00000	4.361
68 1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	37257	5.00000	4.933
69 1,4-Dichloro-2-butene	53	9.538	9.538	(0.910)	9813	5.00000	6.525
70 1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	12196	5.00000	5.193
71 Bromobenzene	156	9.515	9.515	(0.907)	35064	5.00000	4.515
72 n-Propylbenzene	120	9.598	9.598	(0.915)	37547	5.00000	4.272
73 2-Chlorotoluene	126	9.692	9.692	(0.924)	34393	5.00000	4.514
74 1,3,5-Trimethylbenzene	105	9.764	9.764	(0.931)	115213	5.00000	4.368
75 4-Chlorotoluene	126	9.799	9.799	(0.934)	34950	5.00000	4.522
76 tert-Butylbenzene	119	10.084	10.084	(0.962)	102415	5.00000	4.366
77 1,2,4-Trimethylbenzene	105	10.131	10.131	(0.966)	121320	5.00000	4.443
78 sec-Butylbenzene	105	10.297	10.297	(0.982)	143449	5.00000	4.266
79 4-Isopropyltoluene	119	10.440	10.440	(0.995)	126341	5.00000	4.363

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23741.D
Report Date: 14-Mar-2008 08:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	67834	5.00000	4.419
81	1,4-Dichlorobenzene	146	10.511	10.511	(1.002)	72720	5.00000	4.559
82	n-Butylbenzene	91	10.843	10.843	(1.034)	110184	5.00000	4.280
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	66602	5.00000	4.490
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	9319	5.00000	4.890
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	49747	5.00000	4.779
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	24151	5.00000	4.764
87	Naphthalene	128	12.716	12.716	(1.213)	129600	5.00000	4.807
88	1,2,3-Trichlorobenzene	180	12.965	12.965	(1.236)	45247	5.00000	4.819
98	Cyclohexane	56	5.080	5.080	(0.911)	46392	5.00000	5.961
143	Methyl Acetate	43	3.419	3.419	(0.613)	47365	10.0000	10.346
144	Methylcyclohexane	83	6.052	6.052	(1.085)	50445	5.00000	6.023
141	1,3,5-Trichlorobenzene	180	11.851	11.851	(1.130)	55955	5.00000	4.772
152	Vinyl Acetate-86	86	4.143	4.143	(0.743)	5225	5.00000	3.863(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23741.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

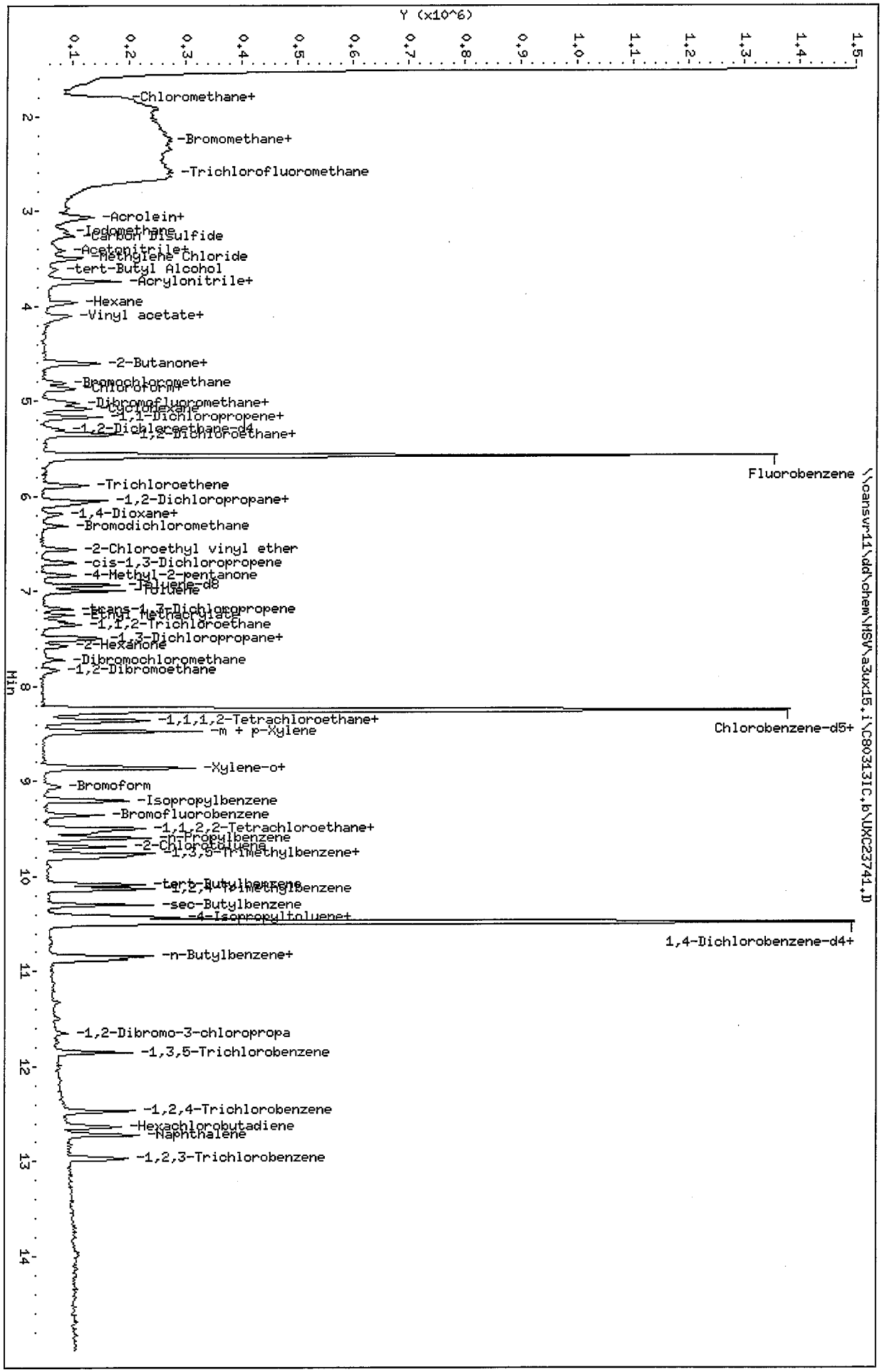
INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23741.D
Lab Smp Id: 5NG8260CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Calibration Date: 13-MAR-2008
Calibration Time: 16:37
Level: LOW
Sample Type: WATER
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,2-8260.SUB,1754,1,1

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1383768	691884	2767536	1378311	-0.39
2 Chlorobenzene-d5	1019372	509686	2038744	1004322	-1.48
3 1,4-Dichlorobenze	608048	304024	1216096	603881	-0.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C803131C.b\UXC23741.D
Date : 13-MAR-2008 17:46
Client ID:
Sample Info: 5NG8260CAL
Purge Volume: 5.0
Column phase: DB624
Instrument: a3ux15.i
Operator: 1754
Column diameter: 0.18
Y (x10^6)
Min
\\cansvr11\dd\chem\MSV\a3ux15.i\C803131C.b\UXC23741.D
-Chloromethane+
-Bromomethane+
-Trichlorofluoromethane
-Acrolein+
-Iodomethane
-Carbon Disulfide
-Acetonitrile+
-Methylene Chloride
-tert-Butyl Alcohol
-Acrylonitrile+
-Hexane
-Vinyl acetate+
-2-Butanone+
-Bromochloromethane
-Chloroform+
-Dibromofluoromethane+
-Cyclohexane
-1,1-Dichloropropene+
-1,2-Dichloroethane-d4
-1,2-Dichloroethane+
Fluorobenzene
-Trichloroethene
-1,2-Dichloropropane+
-1,4-Dioxane+
-Bromodichloromethane
-2-Chloroethyl vinyl ether
-cis-1,3-Dichloropropene
-4-Methyl-2-pentanone
-Toluene-d8
-Toluene
-trans-1,3-Dichloropropene
-Ethyl Methacrylate
-1,1,2-Trichloroethane
-1,3-Dichloropropane+
-2-Hexanone
-Dibromochloromethane
-1,2-Dibromoethane
-1,1,1,2-Tetrachloroethane+
-m + p-Xylene
Chlorobenzene-d5+
-Xylene-o+
-Bromoform
-Isopropylbenzene
-Bromofluorobenzene
-1,1,2,2-Tetrachloroethane+
-n-Propylbenzene
-2-Chlorotoluene
-1,3,5-Trimethylbenzene+
-tert-Butylbenzene
-1,2,4-Trimethylbenzene
-sec-Butylbenzene
-4-Isopropyltoluene+
1,4-Dichlorobenzene-d4+
-n-Butylbenzene+
-1,2-Dibromo-3-chloropropa
-1,3,5-Trichlorobenzene
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23742.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23742.D
Lab Smp Id: ICV
Inj Date : 13-MAR-2008 18:09
Operator : 1754 Inst ID: a3ux15.i
Smp Info : ICV
Misc Info : C80313IC,8260LLUX15,,1754,3
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 20:27 Cal File: UXC23748.D
Als bottle: 10 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 4-8260+IX+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 1 Fluorobenzene	96	5.578	5.578	(1.000)	1414373	50.0000	
* 2 Chlorobenzene-d5	117	8.258	8.258	(1.000)	1049162	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	624575	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	285613	50.1694	10.034
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	309178	45.9598	9.192
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	1162866	50.0949	10.019
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	463964	48.6789	9.736
8 Dichlorodifluoromethane	85	1.640	1.641	(0.294)	265893	44.0737	8.815
9 Chloromethane	50	1.795	1.807	(0.322)	298852	42.4675	8.494
10 Vinyl Chloride	62	1.913	1.913	(0.343)	363210	45.5606	9.112
11 Bromomethane	94	2.245	2.245	(0.403)	155739	43.3845	8.677
12 Chloroethane	64	2.352	2.352	(0.422)	169951	41.5387	8.308
13 Trichlorofluoromethane	101	2.577	2.566	(0.462)	216650	51.8439	10.369
15 Acrolein	56	2.969	2.969	(0.532)	245843	423.921	84.784
16 Acetone	43	3.123	3.135	(0.560)	73514	46.1744	9.235
17 1,1-Dichloroethene	96	3.064	3.064	(0.549)	316197	49.6966	9.939
18 Freon-113	151	3.075	3.087	(0.551)	258272	60.2808	12.056
19 Iodomethane	142	3.206	3.206	(0.575)	512698	52.0441	10.409
20 Carbon Disulfide	76	3.265	3.265	(0.585)	977687	49.9649	9.993
21 Methylene Chloride	84	3.502	3.502	(0.628)	342180	46.8473	9.369
22 Acetonitrile	41	3.372	3.384	(0.605)	243216	610.642	122.13
23 Acrylonitrile	53	3.716	3.728	(0.666)	1080877	488.764	97.753

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23742.D
Report Date: 14-Mar-2008 08:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
	24 Methyl tert-butyl ether	73	3.739	3.751	(0.670)	1002990	50.1744	10.035
	25 trans-1,2-Dichloroethene	96	3.739	3.739	(0.670)	371786	53.9105	10.782
	26 Hexane	86	3.965	3.965	(0.711)	87810	51.3067	10.261
	27 Vinyl acetate	43	4.154	4.143	(0.745)	953146	89.6719	17.934
	28 1,1-Dichloroethane	63	4.107	4.107	(0.736)	587981	52.5568	10.511
	29 tert-Butyl Alcohol	59	3.609	3.609	(0.647)	6125	35.6311	7.126
	30 2-Butanone	43	4.629	4.629	(0.830)	135624	55.3990	11.080
M	31 1,2-Dichloroethene (total)	96				746803	107.163	21.433
	32 cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	375017	53.2528	10.650
	33 2,2-Dichloropropane	77	4.605	4.605	(0.826)	399913	50.6210	10.124
	34 Bromochloromethane	128	4.807	4.807	(0.862)	175320	49.9752	9.995
	35 Chloroform	83	4.866	4.866	(0.872)	556136	51.4185	10.284
	36 Tetrahydrofuran	42	5.079	4.878	(0.911)	109967	65.9989	13.200
	37 1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	472516	52.8921	10.578
	38 1,1-Dichloropropene	75	5.162	5.163	(0.926)	442474	51.2496	10.250
	39 Carbon Tetrachloride	117	5.174	5.174	(0.928)	427802	53.6371	10.727
	40 1,2-Dichloroethane	62	5.364	5.364	(0.962)	414066	52.2174	10.443
	41 Benzene	78	5.340	5.352	(0.957)	1407542	50.8000	10.160
	42 Trichloroethene	130	5.886	5.886	(1.055)	380412	53.7076	10.742
	43 1,2-Dichloropropane	63	6.087	6.087	(1.091)	314907	52.0586	10.412
	44 1,4-Dioxane	88	6.194	6.230	(1.111)	788	15.0170	3.003
	45 Dibromomethane	93	6.182	6.194	(1.108)	185056	50.3771	10.075
	46 Bromodichloromethane	83	6.313	6.313	(1.132)	412429	53.5389	10.708
	47 2-Chloroethyl vinyl ether	63	6.562	6.562	(1.176)	189229	52.6706	10.534
	48 cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	512754	51.8702	10.374
	49 4-Methyl-2-pentanone	43	6.835	6.835	(1.225)	287916	52.4246	10.485
	50 Toluene	91	7.001	7.001	(0.848)	1418884	51.9744	10.395
	51 trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	461027	51.9917	10.398
	52 Ethyl Methacrylate	69	Compound Not Detected.					
	53 1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	276325	51.1931	10.239
	54 1,3-Dichloropropane	76	7.510	7.511	(0.910)	480463	51.1526	10.230
	55 Tetrachloroethene	164	7.487	7.499	(0.907)	296971	54.8348	10.967
	56 2-Hexanone	43	7.570	7.570	(0.917)	207526	53.4682	10.694
	57 Dibromochloromethane	129	7.724	7.724	(0.935)	314817	52.2519	10.450
	58 1,2-Dibromoethane	107	7.831	7.831	(0.948)	288432	51.7092	10.342
	59 Chlorobenzene	112	8.281	8.281	(1.003)	940422	53.0722	10.614
	60 1,1,1,2-Tetrachloroethane	131	8.352	8.352	(1.011)	335155	52.1407	10.428
	61 Ethylbenzene	106	8.376	8.376	(1.014)	522927	53.3332	10.667
	62 m + p-Xylene	106	8.483	8.483	(1.027)	1303387	105.245	21.049
M	63 Xylenes (total)	106				1954405	158.003	31.600
	64 Xylene-o	106	8.850	8.851	(1.072)	651018	52.7577	10.552
	65 Styrene	104	8.862	8.862	(1.073)	1082952	52.0469	10.409
	66 Bromoform	173	9.064	9.064	(1.098)	235712	51.3311	10.266
	67 Isopropylbenzene	105	9.206	9.206	(1.115)	1713119	59.2819	11.856
	68 1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	386492	49.4794	9.896
	70 1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	131846	54.2842	10.857
	71 Bromobenzene	156	9.515	9.515	(0.907)	425002	52.9116	10.582
	72 n-Propylbenzene	120	9.598	9.598	(0.915)	488068	53.6888	10.738
	73 2-Chlorotoluene	126	9.692	9.692	(0.924)	410177	52.0579	10.412
	74 1,3,5-Trimethylbenzene	105	9.764	9.764	(0.931)	1428248	52.3604	10.472
	75 4-Chlorotoluene	126	9.799	9.799	(0.934)	427565	53.4834	10.697
	76 tert-Butylbenzene	119	10.084	10.084	(0.962)	1291527	53.2334	10.647
	77 1,2,4-Trimethylbenzene	105	10.131	10.131	(0.966)	1470683	52.0792	10.416
	78 sec-Butylbenzene	105	10.297	10.297	(0.982)	1841376	52.9476	10.590

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23742.D
Report Date: 14-Mar-2008 08:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
79	4-Isopropyltoluene	119	10.439	10.440	(0.995)	1635574	54.6158	10.923
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	849235	53.4860	10.697
81	1,4-Dichlorobenzene	146	10.511	10.511	(1.002)	880023	53.3433	10.669
82	n-Butylbenzene	91	10.843	10.843	(1.034)	1408540	52.9026	10.580
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	795183	51.8260	10.365
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	97942	49.6946	9.939
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	554616	51.5165	10.303
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	270491	51.5880	10.318
87	Naphthalene	128	12.716	12.716	(1.213)	1384068	49.6354	9.927
88	1,2,3-Trichlorobenzene	180	12.977	12.965	(1.237)	501914	51.6841	10.337
14	Dichlorofluoromethane	67	Compound Not Detected.					
89	Ethyl Ether	59	3.064	2.851	(0.549)	21674	4.16418	0.8328
91	3-Chloropropene	76	3.479	3.384	(0.624)	9272	2.70492	0.5410
92	Isopropyl Ether	87	4.154	4.155	(0.745)	312852	55.0988	11.020
93	2-Chloro-1,3-butadiene	53	3.965	4.179	(0.711)	175717	22.3565	4.471
94	Propionitrile	54	Compound Not Detected.					
95	Ethyl Acetate	43	4.629	4.665	(0.830)	137345	30.0662	6.013
96	Methacrylonitrile	41	4.866	4.795	(0.872)	3351	1.02166	0.2043
97	Isobutanol	41	5.079	5.258	(0.615)	267545	1978.24	395.65
99	n-Butanol	56	5.874	5.827	(0.711)	6118	35.6896	7.138
100	Methyl Methacrylate	41	6.052	6.159	(1.085)	357547	82.6884	16.538
101	2-Nitropropane	41	6.562	6.515	(1.176)	7295	5.08886	1.018
103	Cyclohexanone	55	9.313	9.313	(0.888)	98737	169.873	33.974
98	Cyclohexane	56	5.079	5.080	(0.911)	543987	43.7570	8.751
143	Methyl Acetate	43	3.407	3.419	(0.611)	213165	45.3740	9.075
144	Methylcyclohexane	83	6.052	6.052	(1.085)	594340	44.5336	8.907
141	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
152	Vinyl Acetate-86	86	4.143	4.143	(0.743)	69041	49.7418	9.948
153	1,3-Butadiene	54	1.949	1.925	(0.349)	8379		(a)
146	2-Methylnaphthalene	142	14.021	14.021	(1.337)	1742	0.11862	0.02372(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23742.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23742.D
Lab Smp Id: ICV
Inj Date : 13-MAR-2008 18:09
Operator : 1754 Inst ID: a3ux15.i
Smp Info : ICV
Misc Info : C80313IC,8260LLUX15,,1754,3
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 20:27 Cal File: UXC23748.D
Als bottle: 10 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 4-8260+IX+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23742.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23742.D
Lab Smp Id: ICV
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Calibration Date: 13-MAR-2008
Calibration Time: 16:37
Level: LOW
Sample Type: WATER
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,,1754,3

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1383768	691884	2767536	1414373	2.21
2 Chlorobenzene-d5	1019372	509686	2038744	1049162	2.92
3 1,4-Dichlorobenze	608048	304024	1216096	624575	2.72

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	-0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23742.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

RECOVERY REPORT

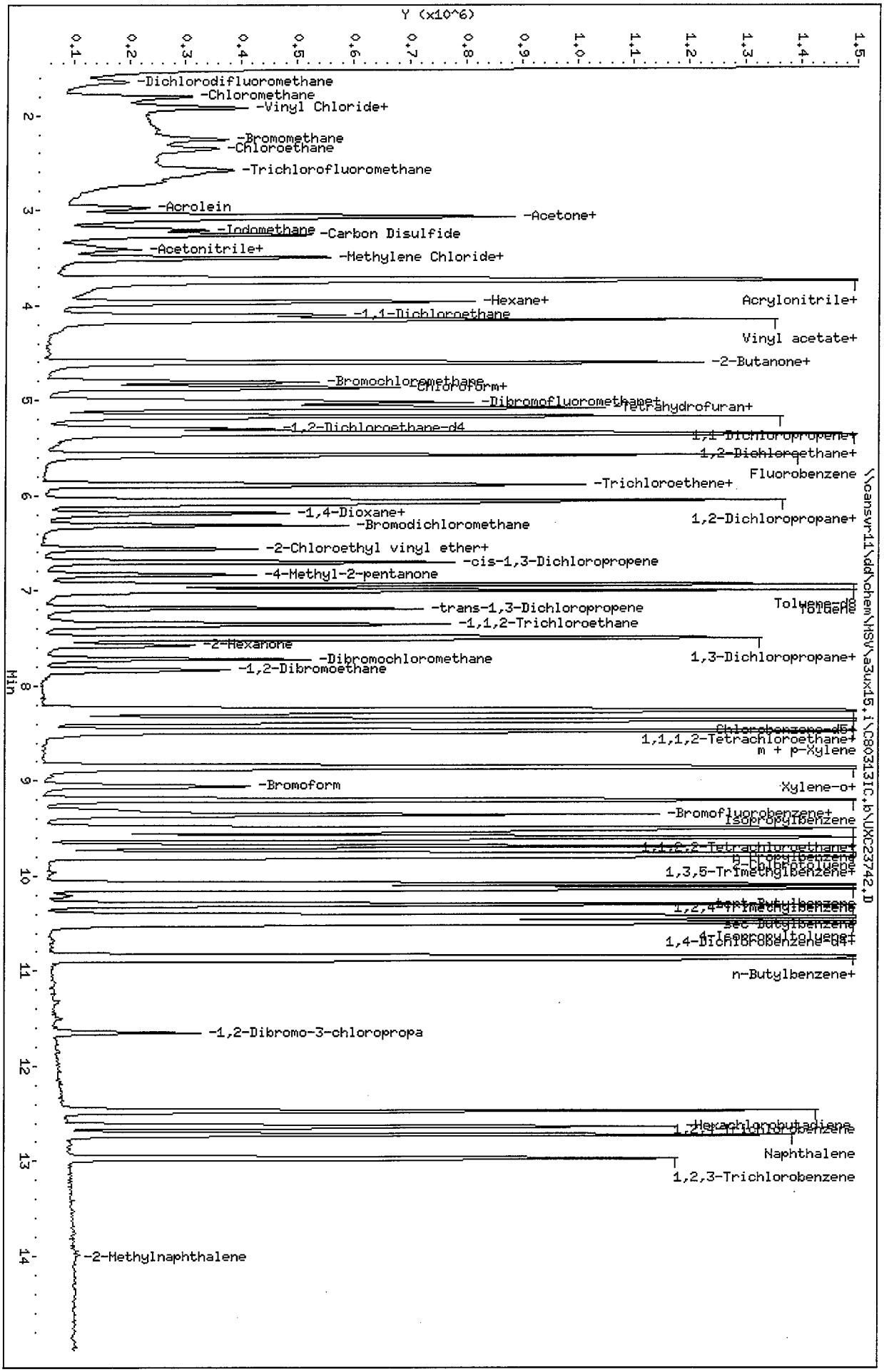
Client Name: Client SDG: SDGa00932
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: ICV
Level: LOW Operator: 1754
Data Type: MS DATA SampleType: METHSPIKE
SpikeList File: DOD-ck.spk Quant Type: ISTD
Sublist File: 4-8260+IX+86.sub
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,,1754,3

	SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
	17	1,1-Dichloroethene	10.000	9.939	99.39	45-155
	42	Trichloroethene	10.000	10.742	107.42	45-155
	59	Chlorobenzene	10.000	10.614	106.14	45-155
	50	Toluene	10.000	10.395	103.95	45-155
	41	Benzene	10.000	10.160	101.60	45-155
	16	Acetone	10.000	9.235	92.35	45-155
	20	Carbon Disulfide	10.000	9.993	99.93	45-155
	9	Chloromethane	10.000	8.494	84.94	45-155
	11	Bromomethane	10.000	8.677	86.77	45-155
	10	Vinyl Chloride	10.000	9.112	91.12	45-155
	12	Chloroethane	10.000	8.308	83.08	45-155
	21	Methylene Chloride	10.000	9.369	93.69	45-155
	28	1,1-Dichloroethane	10.000	10.511	105.11	45-155
M	31	1,2-Dichloroethene	20.000	21.433	107.16	45-155
	35	Chloroform	10.000	10.284	102.84	45-155
	40	1,2-Dichloroethane	10.000	10.443	104.43	45-155
	30	2-Butanone	10.000	11.080	110.80	45-155
	37	1,1,1-Trichloroeth	10.000	10.578	105.78	45-155
	39	Carbon Tetrachlori	10.000	10.727	107.27	45-155
	46	Bromodichlorometha	10.000	10.708	107.08	45-155
	43	1,2-Dichloropropan	10.000	10.412	104.12	45-155
	48	cis-1,3-Dichloropr	10.000	10.374	103.74	45-155
	54	1,3-Dichloropropan	10.000	10.230	102.31	45-155
	57	Dibromochlorometha	10.000	10.450	104.50	45-155
	53	1,1,2-Trichloroeth	10.000	10.239	102.39	45-155
	51	trans-1,3-Dichloro	10.000	10.398	103.98	45-155
	66	Bromoform	10.000	10.266	102.66	45-155
	49	4-Methyl-2-pentano	10.000	10.485	104.85	45-155
	56	2-Hexanone	10.000	10.694	106.94	45-155
	55	Tetrachloroethene	10.000	10.967	109.67	45-155
	68	1,1,2,2-Tetrachlor	10.000	9.896	98.96	45-155
	61	Ethylbenzene	10.000	10.667	106.67	45-155
	65	Styrene	10.000	10.409	104.09	45-155
M	63	Xylenes (total)	30.000	31.600	105.34	45-155
	32	cis-1,2-dichloroet	10.000	10.650	106.51	45-155
	25	trans-1,2-Dichloro	10.000	10.782	107.82	45-155
	8	Dichlorodifluorome	10.000	8.815	88.15	45-155
	13	Trichlorofluoromet	10.000	10.369	103.69	45-155
	70	1,2,3-Trichloropro	10.000	10.857	108.57	45-155
	18	Freon-113	10.000	12.056	120.56	45-155

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23742.D
Report Date: 14-Mar-2008 08:53

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
24 Methyl tert-butyl	10.000	10.035	100.35	45-155
58 1,2-Dibromoethane	10.000	10.342	103.42	45-155
67 Isopropylbenzene	10.000	11.856	118.56	45-155
80 1,3-Dichlorobenzen	10.000	10.697	106.97	45-155
81 1,4-Dichlorobenzen	10.000	10.669	106.69	45-155
83 1,2-Dichlorobenzen	10.000	10.365	103.65	45-155
84 1,2-Dibromo-3-chlo	10.000	9.939	99.39	45-155
85 1,2,4-Trichloroben	10.000	10.303	103.03	45-155
98 Cyclohexane	10.000	8.751	87.51	45-155
143 Methyl Acetate	10.000	9.075	90.75	45-155
144 Methylcyclohexane	10.000	8.907	89.07	45-155
71 Bromobenzene	10.000	10.582	105.82	45-155
34 Bromochloromethane	10.000	9.995	99.95	45-155
82 n-Butylbenzene	10.000	10.580	105.81	45-155
78 sec-Butylbenzene	10.000	10.590	105.90	45-155
76 tert-Butylbenzene	10.000	10.647	106.47	45-155
73 2-Chlorotoluene	10.000	10.412	104.12	45-155
75 4-Chlorotoluene	10.000	10.697	106.97	45-155
45 Dibromomethane	10.000	10.075	100.75	45-155
33 2,2-Dichloropropan	10.000	10.124	101.24	45-155
38 1,1-Dichloropropen	10.000	10.250	102.50	45-155
86 Hexachlorobutadien	10.000	10.318	103.18	45-155
19 Iodomethane	10.000	10.409	104.09	45-155
92 Isopropyl Ether	10.000	11.020	110.20	45-155
79 4-Isopropyltoluene	10.000	10.923	109.23	45-155
87 Naphthalene	10.000	9.927	99.27	45-155
72 n-Propylbenzene	10.000	10.738	107.38	45-155
60 1,1,1,2-Tetrachlor	10.000	10.428	104.28	45-155
88 1,2,3-Trichloroben	10.000	10.337	103.37	45-155
77 1,2,4-Trimethylben	10.000	10.416	104.16	45-155
74 1,3,5-Trimethylben	10.000	10.472	104.72	45-155
62 m + p-Xylene	20.000	21.049	105.25	45-155
64 Xylene-o	10.000	10.552	105.52	45-155
152 Vinyl Acetate-86	10.000	9.948	99.48	45-155

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 Dibromofluorometha	10.000	10.034	100.34	73-122
$ 5 1,2-Dichloroethane	10.000	9.192	91.92	61-128
$ 6 Toluene-d8	10.000	10.019	100.19	76-110
$ 7 Bromofluorobenzene	10.000	9.736	97.36	74-116



Data File: \\cansvr11\dd\chem\HSV\a3ux15,i\C803131C,b\UXC23742,D
Date : 13-MAR-2008 18:09
Client ID:
Sample Info: ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23743.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23743.D
Lab Smp Id: 200NGA9CAL
Inj Date : 13-MAR-2008 18:32
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 200NGA9CAL
Misc Info : C80313IC,8260LLUX15,3-IX.SUB,1754,1,6
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 20:27 Cal File: UXC23748.D
Als bottle: 11 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3-IX.SUB
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.578	5.578	(1.000)	1352349	50.0000	
* 2 Chlorobenzene-d5	117	8.258	8.258	(1.000)	996080	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	588034	50.0000	
14 Dichlorofluoromethane	67	2.542	2.542	(0.456)	1137171	200.000	200.29
89 Ethyl Ether	59	2.850	2.850	(0.511)	1041397	200.000	209.26(H)
91 3-Chloropropene	76	3.384	3.384	(0.607)	714681	200.000	218.06
92 Isopropyl Ether	87	4.155	4.155	(0.745)	5982644	1000.00	1102.0
93 2-Chloro-1,3-butadiene	53	4.178	4.178	(0.749)	1573308	200.000	209.35
94 Propionitrile	54	4.676	4.676	(0.838)	317221	400.000	401.53(H)
95 Ethyl Acetate	43	4.664	4.664	(0.836)	1986483	400.000	454.80
96 Methacrylonitrile	41	4.795	4.795	(0.860)	670232	200.000	213.71
97 Isobutanol	41	5.257	5.257	(0.637)	583110	4000.00	4541.3
99 n-Butanol	56	5.815	5.815	(0.704)	681685	4000.00	4188.6
100 Methyl Methacrylate	41	6.159	6.159	(1.104)	895499	200.000	216.60
101 2-Nitropropane	41	6.514	6.514	(1.168)	585112	400.000	426.88
103 Cyclohexanone	55	9.313	9.313	(0.888)	1101412	2000.00	2012.7
146 2-Methylnaphthalene	142	14.021	14.021	(1.337)	5560056	400.000	402.14

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23743.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23743.D
Lab Smp Id: 200NGA9CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Calibration Date: 13-MAR-2008
Calibration Time: 16:37
Level: LOW
Sample Type: WATER
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,3-IX.SUB,1754,1,6

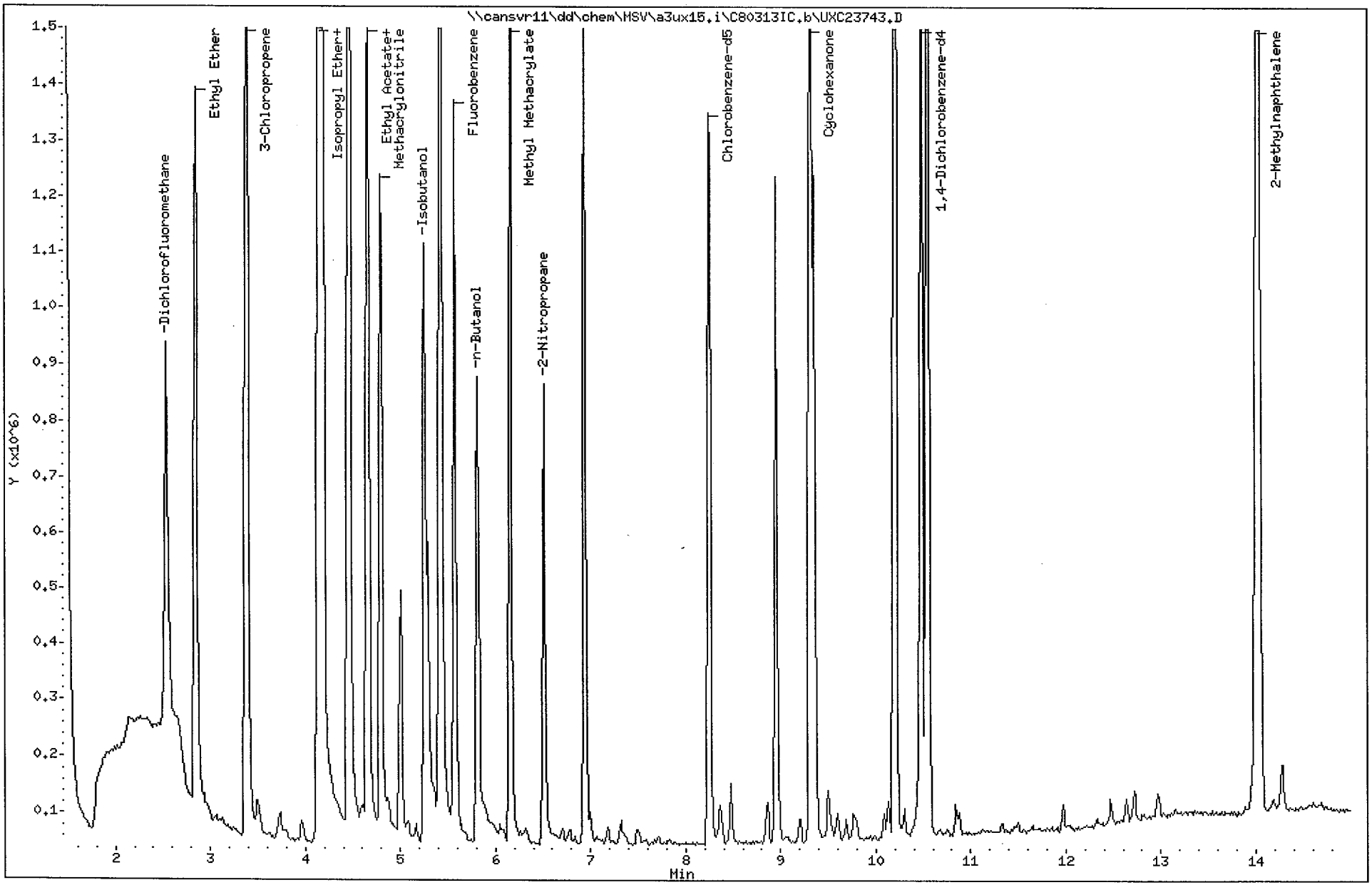
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1383768	691884	2767536	1352349	-2.27
2 Chlorobenzene-d5	1019372	509686	2038744	996080	-2.28
3 1,4-Dichlorobenze	608048	304024	1216096	588034	-3.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	-0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23743.D
Date : 13-MAR-2008 18:32
Client ID:
Sample Info: 200NGA9CAL
Purge Volume: 5.0
Column phase: DB624

Instrument: a3ux15.i
Operator: 1754
Column diameter: 0.18



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23744.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23744.D
Lab Smp Id: 100NGA9CAL
Inj Date : 13-MAR-2008 18:55
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 100NGA9CAL
Misc Info : C80313IC,8260LLUX15,3-IX.SUB,1754,1,5
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 18:32 Cal File: UXC23743.D
Als bottle: 12 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3-IX.SUB
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.577	5.577	(1.000)	1351731	50.0000	
* 2 Chlorobenzene-d5	117	8.258	8.258	(1.000)	995377	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	598223	50.0000	
14 Dichlorofluoromethane	67	2.542	2.542	(0.456)	646186	100.000	98.531
89 Ethyl Ether	59	2.850	2.850	(0.511)	525932	100.000	105.73
91 3-Chloropropene	76	3.384	3.384	(0.607)	367304	100.000	112.12
92 Isopropyl Ether	87	4.154	4.154	(0.745)	3019383	500.000	556.41
93 2-Chloro-1,3-butadiene	53	4.178	4.178	(0.749)	818427	100.000	108.95
94 Propionitrile	54	4.676	4.676	(0.838)	160903	200.000	203.76
95 Ethyl Acetate	43	4.664	4.664	(0.836)	989315	200.000	226.61
96 Methacrylonitrile	41	4.795	4.795	(0.860)	340711	100.000	108.69
97 Isobutanol	41	5.257	5.257	(0.637)	282611	2000.00	2202.5
99 n-Butanol	56	5.815	5.815	(0.704)	348348	2000.00	2141.9
100 Methyl Methacrylate	41	6.159	6.159	(1.104)	446865	100.000	108.13
101 2-Nitropropane	41	6.514	6.514	(1.168)	293037	200.000	213.89
103 Cyclohexanone	55	9.313	9.313	(0.888)	463627	1000.00	832.79
146 2-Methylnaphthalene	142	14.021	14.021	(1.337)	3233399	200.000	229.88

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23744.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23744.D
Lab Smp Id: 100NGA9CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Calibration Date: 13-MAR-2008
Calibration Time: 16:37
Level: LOW
Sample Type: WATER
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,3-IX.SUB,1754,1,5

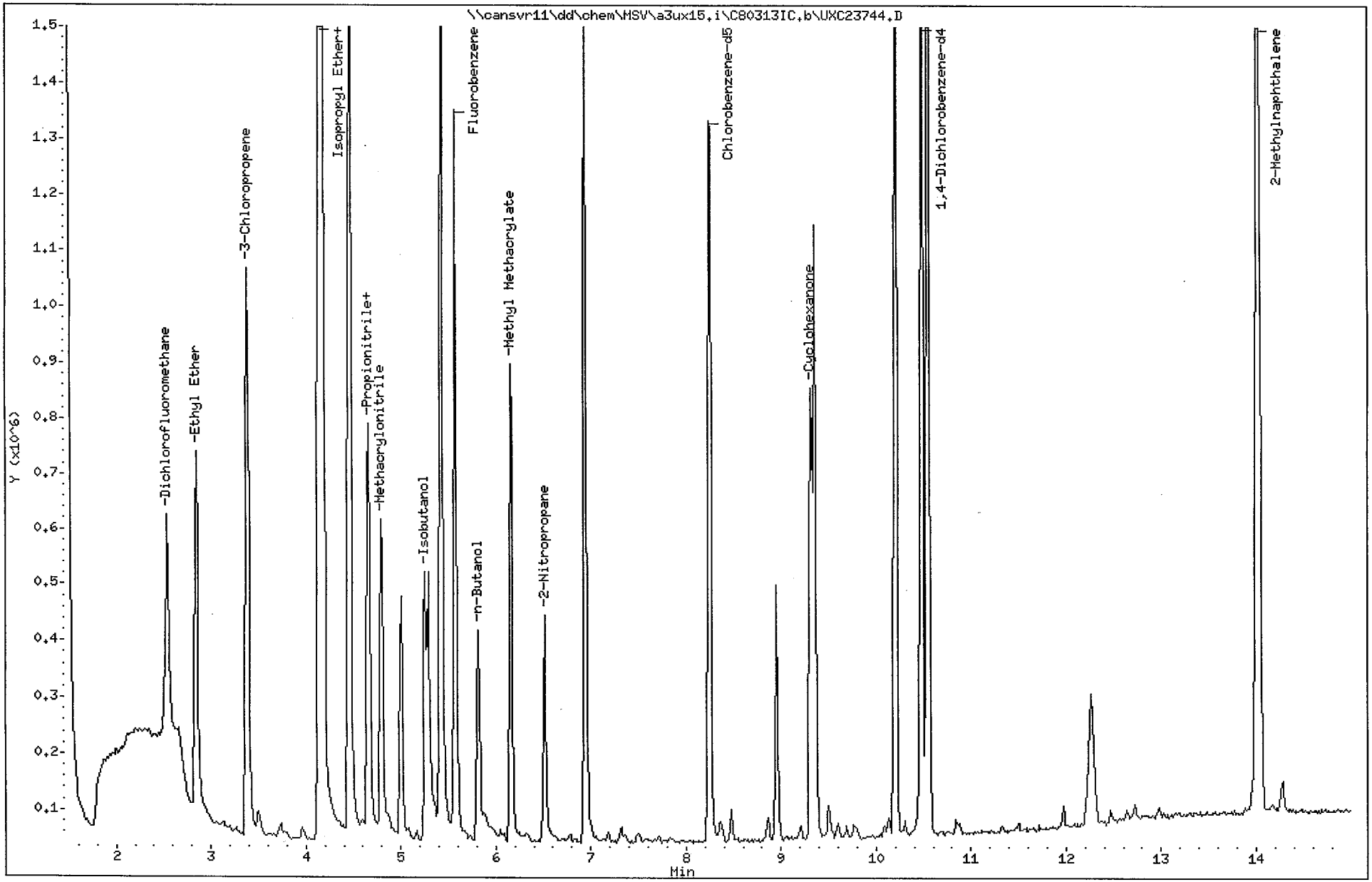
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1383768	691884	2767536	1351731	-2.32
2 Chlorobenzene-d5	1019372	509686	2038744	995377	-2.35
3 1,4-Dichlorobenze	608048	304024	1216096	598223	-1.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	-0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23744.D
Date : 13-MAR-2008 18:55
Client ID:
Sample Info: 100NGA9CAL
Purge Volume: 5.0
Column phase: DB624

Instrument: a3ux15.i
Operator: 1754
Column diameter: 0.18



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23745.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23745.D
Lab Smp Id: 50NGA9CAL
Inj Date : 13-MAR-2008 19:18
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 50NGA9CAL
Misc Info : C80313IC,8260LLUX15,3-IX.SUB,1754,1,4
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 18:55 Cal File: UXC23744.D
Als bottle: 13 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3-IX.SUB
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.577	5.577	(1.000)	1379135	50.0000	
* 2 Chlorobenzene-d5	117	8.257	8.257	(1.000)	1033776	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	616957	50.0000	
14 Dichlorofluoromethane	67	2.542	2.542	(0.456)	389195	50.0000	51.557
89 Ethyl Ether	59	2.850	2.850	(0.511)	258976	50.0000	51.028
91 3-Chloropropene	76	3.384	3.384	(0.607)	169539	50.0000	50.723
92 Isopropyl Ether	87	4.154	4.154	(0.745)	1406093	250.000	253.96
93 2-Chloro-1,3-butadiene	53	4.178	4.178	(0.749)	375877	50.0000	49.045
94 Propionitrile	54	4.676	4.676	(0.838)	78553	100.000	97.499
95 Ethyl Acetate	43	4.664	4.664	(0.836)	440509	100.000	98.896
96 Methacrylonitrile	41	4.795	4.795	(0.860)	153107	50.0000	47.872
97 Isobutanol	41	5.257	5.257	(0.637)	127284	1000.00	955.15
99 n-Butanol	56	5.815	5.815	(0.704)	162842	1000.00	964.08
100 Methyl Methacrylate	41	6.159	6.159	(1.104)	207910	50.0000	49.311
101 2-Nitropropane	41	6.514	6.514	(1.168)	138597	100.000	99.153
103 Cyclohexanone	55	9.313	9.313	(0.888)	301503	500.000	525.13
146 2-Methylnaphthalene	142	14.021	14.021	(1.337)	1524161	100.000	105.07

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23745.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23745.D
Lab Smp Id: 50NGA9CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,3-IX.SUB,1754,1,4

Calibration Date: 13-MAR-2008
Calibration Time: 19:18

Level: LOW
Sample Type: WATER

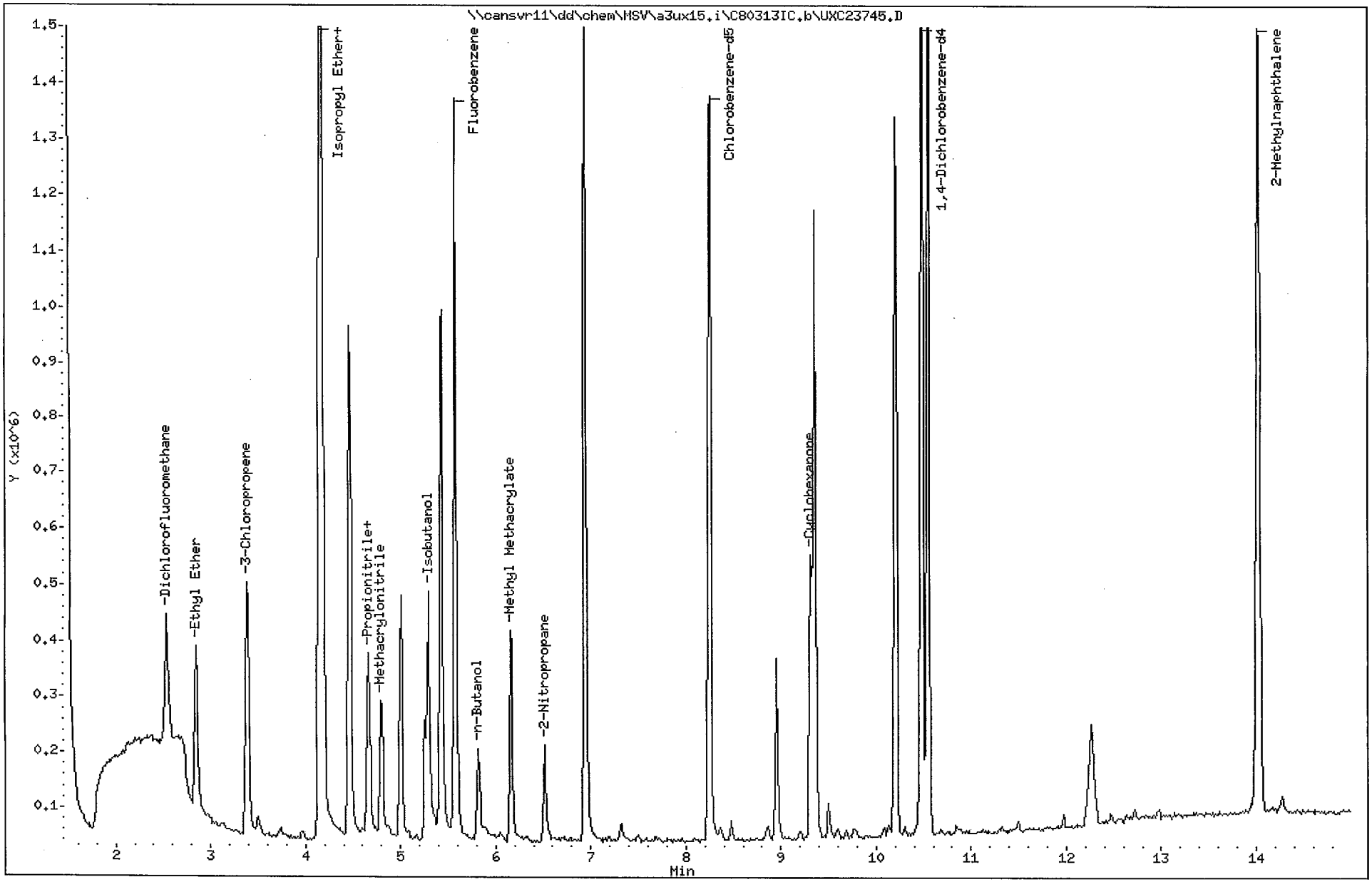
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1379135	689568	2758270	1379135	0.00
2 Chlorobenzene-d5	1033776	516888	2067552	1033776	0.00
3 1,4-Dichlorobenze	616957	308479	1233914	616957	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23745.D
Date : 13-MAR-2008 19:18
Client ID:
Sample Info: 50NGA9CAL
Purge Volume: 5.0
Column phase: DB624

Instrument: a3ux15.i
Operator: 1754
Column diameter: 0.18



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23746.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23746.D
Lab Smp Id: 25NGA9CAL
Inj Date : 13-MAR-2008 19:41
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 25NGA9CAL
Misc Info : C80313IC,8260LLUX15,3-IX.SUB,1754,1,3
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 19:18 Cal File: UXC23745.D
Als bottle: 14 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3-IX.SUB
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.578	5.578	(1.000)	1335508	50.0000	
* 2 Chlorobenzene-d5	117	8.258	8.258	(1.000)	994530	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	584909	50.0000	
14 Dichlorofluoromethane	67	2.542	2.542	(0.456)	212343	25.0000	24.862
89 Ethyl Ether	59	2.850	2.850	(0.511)	118198	25.0000	24.050
91 3-Chloropropene	76	3.384	3.384	(0.607)	77776	25.0000	24.029
92 Isopropyl Ether	87	4.155	4.155	(0.745)	657326	125.000	122.60
93 2-Chloro-1,3-butadiene	53	4.178	4.178	(0.749)	178104	25.0000	23.998
94 Propionitrile	54	4.688	4.688	(0.841)	42675	50.0000	54.698
95 Ethyl Acetate	43	4.664	4.664	(0.836)	205719	50.0000	47.693
96 Methacrylonitrile	41	4.795	4.795	(0.860)	70203	25.0000	22.667
97 Isobutanol	41	5.257	5.257	(0.637)	60539	500.000	472.22
99 n-Butanol	56	5.815	5.815	(0.704)	80418	500.000	494.89
100 Methyl Methacrylate	41	6.159	6.159	(1.104)	97357	25.0000	23.845
101 2-Nitropropane	41	6.514	6.514	(1.168)	69725	50.0000	51.511
103 Cyclohexanone	55	9.313	9.313	(0.888)	143037	250.000	262.78
146 2-Methylnaphthalene	142	14.021	14.021	(1.337)	745347	50.0000	54.197

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23746.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23746.D
Lab Smp Id: 25NGA9CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Calibration Date: 13-MAR-2008
Calibration Time: 19:18
Level: LOW
Sample Type: WATER
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,3-IX.SUB,1754,1,3

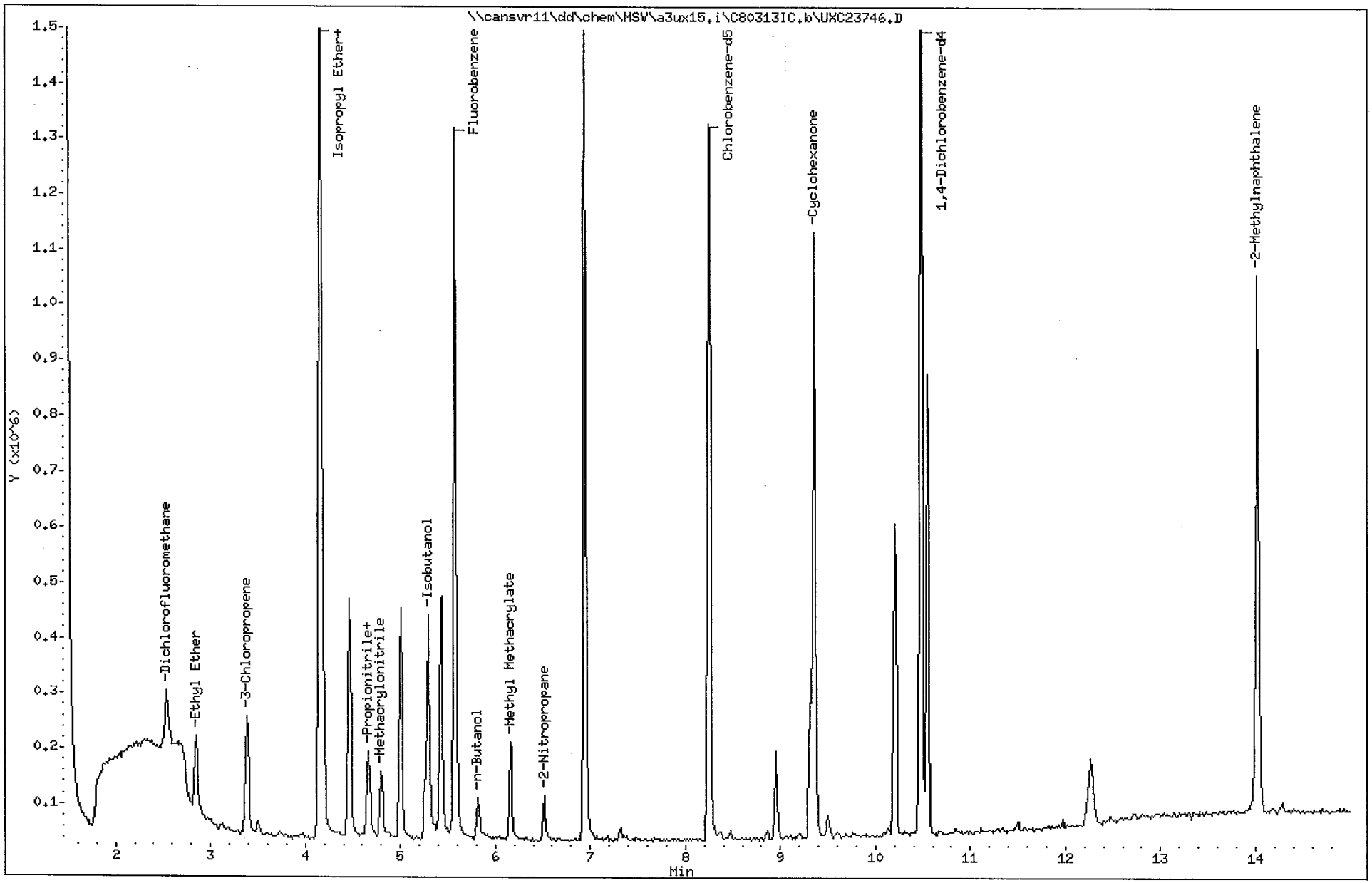
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1379135	689568	2758270	1335508	-3.16
2 Chlorobenzene-d5	1033776	516888	2067552	994530	-3.80
3 1,4-Dichlorobenze	616957	308479	1233914	584909	-5.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23746.D
Date : 13-MAR-2008 19:41
Client ID:
Sample Info: 25NGA9CAL
Purge Volume: 5.0
Column phase: DB624

Instrument: a3ux15.i
Operator: 1754
Column diameter: 0.18



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23747.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23747.D
Lab Smp Id: 10NGA9CAL
Inj Date : 13-MAR-2008 20:04
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 10NGA9CAL
Misc Info : C80313IC,8260LLUX15,3-IX.SUB,1754,1,2
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 19:41 Cal File: UXC23746.D
Als bottle: 15 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3-IX.SUB
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1	Fluorobenzene	96	5.578	5.578	(1.000)	1332944	50.0000	
* 2	Chlorobenzene-d5	117	8.258	8.258	(1.000)	998496	50.0000	
* 3	1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	595987	50.0000	
14	Dichlorofluoromethane	67	2.542	2.542	(0.456)	86845	10.0000	6.009
89	Ethyl Ether	59	2.850	2.850	(0.511)	44944	10.0000	9.162
91	3-Chloropropene	76	3.396	3.396	(0.609)	28349	10.0000	8.775
92	Isopropyl Ether	87	4.155	4.155	(0.745)	238405	50.0000	44.552
93	2-Chloro-1,3-butadiene	53	4.178	4.178	(0.749)	70991	10.0000	9.584
94	Propionitrile	54	4.688	4.688	(0.841)	13109	20.0000	16.834
95	Ethyl Acetate	43	4.664	4.664	(0.836)	73495	20.0000	17.072
96	Methacrylonitrile	41	4.795	4.795	(0.860)	25636	10.0000	8.293
97	Isobutanol	41	5.257	5.257	(0.637)	22570	200.000	175.35
99	n-Butanol	56	5.815	5.815	(0.704)	34565	200.000	211.87
100	Methyl Methacrylate	41	6.159	6.159	(1.104)	37897	10.0000	9.300
101	2-Nitropropane	41	6.514	6.514	(1.168)	22386	20.0000	16.570
103	Cyclohexanone	55	9.313	9.313	(0.888)	55217	100.000	99.555
146	2-Methylnaphthalene	142	14.021	14.021	(1.337)	261089	20.0000	18.632

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23747.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23747.D
Lab Smp Id: 10NGA9CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Calibration Date: 13-MAR-2008
Calibration Time: 19:18
Level: LOW
Sample Type: WATER
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,3-IX.SUB,1754,1,2

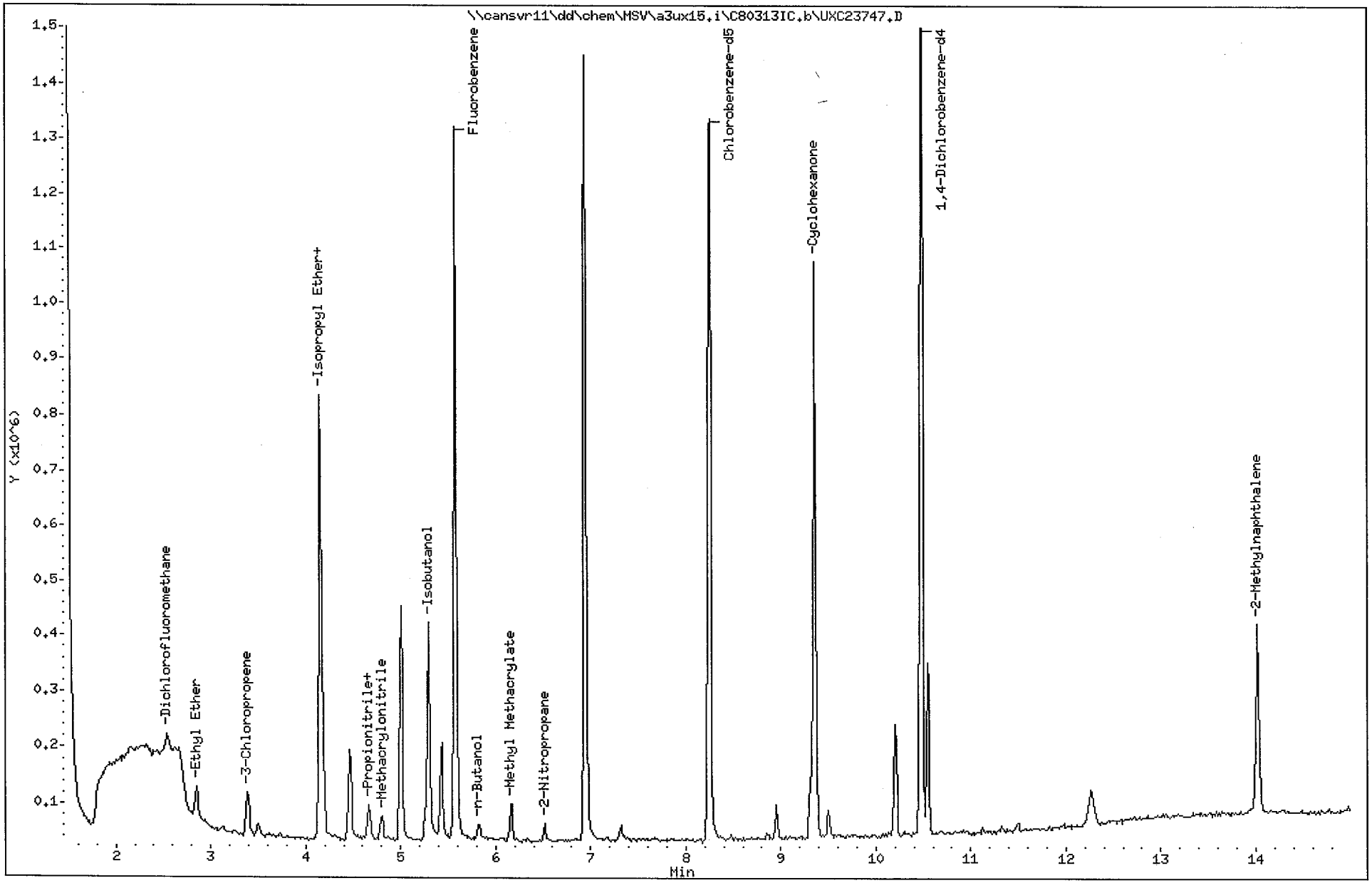
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1379135	689568	2758270	1332944	-3.35
2 Chlorobenzene-d5	1033776	516888	2067552	998496	-3.41
3 1,4-Dichlorobenze	616957	308479	1233914	595987	-3.40

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23747.D
Date : 13-MAR-2008 20:04
Client ID:
Sample Info: 10NGA9CAL
Purge Volume: 5.0
Column phase: DB624

Instrument: a3ux15.i
Operator: 1754
Column diameter: 0.18



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23748.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23748.D
Lab Smp Id: 5NGA9CAL
Inj Date : 13-MAR-2008 20:27
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 5NGA9CAL
Misc Info : C80313IC,8260LLUX15,3-IX.SUB,1754,1,1
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Meth Date : 14-Mar-2008 08:53 a3ux15.i Quant Type: ISTD
Cal Date : 13-MAR-2008 20:04 Cal File: UXC23747.D
Als bottle: 16 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3-IX.SUB
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.577	5.577	(1.000)	1318762	50.0000	
* 2 Chlorobenzene-d5	117	8.258	8.258	(1.000)	985936	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	593212	50.0000	
14 Dichlorofluoromethane	67	2.542	2.542	(0.456)	104418	5.00000	8.745
89 Ethyl Ether	59	2.850	2.850	(0.511)	24207	5.00000	4.988
91 3-Chloropropene	76	3.384	3.384	(0.607)	14947	5.00000	4.677
92 Isopropyl Ether	87	4.154	4.154	(0.745)	118784	25.0000	22.437
93 2-Chloro-1,3-butadiene	53	4.178	4.178	(0.749)	35340	5.00000	4.822
94 Propionitrile	54	4.688	4.688	(0.841)	8218	10.0000	10.667
95 Ethyl Acetate	43	4.664	4.664	(0.836)	39762	10.0000	9.335
96 Methacrylonitrile	41	4.795	4.795	(0.860)	17601	5.00000	5.755
97 Isobutanol	41	5.257	5.257	(0.637)	12545	100.000	98.706
99 n-Butanol	56	5.827	5.827	(0.706)	13994	100.000	86.870
100 Methyl Methacrylate	41	6.159	6.159	(1.104)	19467	5.00000	4.828
101 2-Nitropropane	41	6.514	6.514	(1.168)	13541	10.0000	10.131
103 Cyclohexanone	55	9.313	9.313	(0.888)	29368	50.0000	53.198
146 2-Methylnaphthalene	142	14.021	14.021	(1.337)	108652	10.0000	7.790

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23748.D
Report Date: 14-Mar-2008 08:53

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23748.D
Lab Smp Id: 5NGA9CAL
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Calibration Date: 13-MAR-2008
Calibration Time: 19:18
Level: LOW
Sample Type: WATER
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\8260LLUX15.m
Misc Info: C80313IC,8260LLUX15,3-IX.SUB,1754,1,1

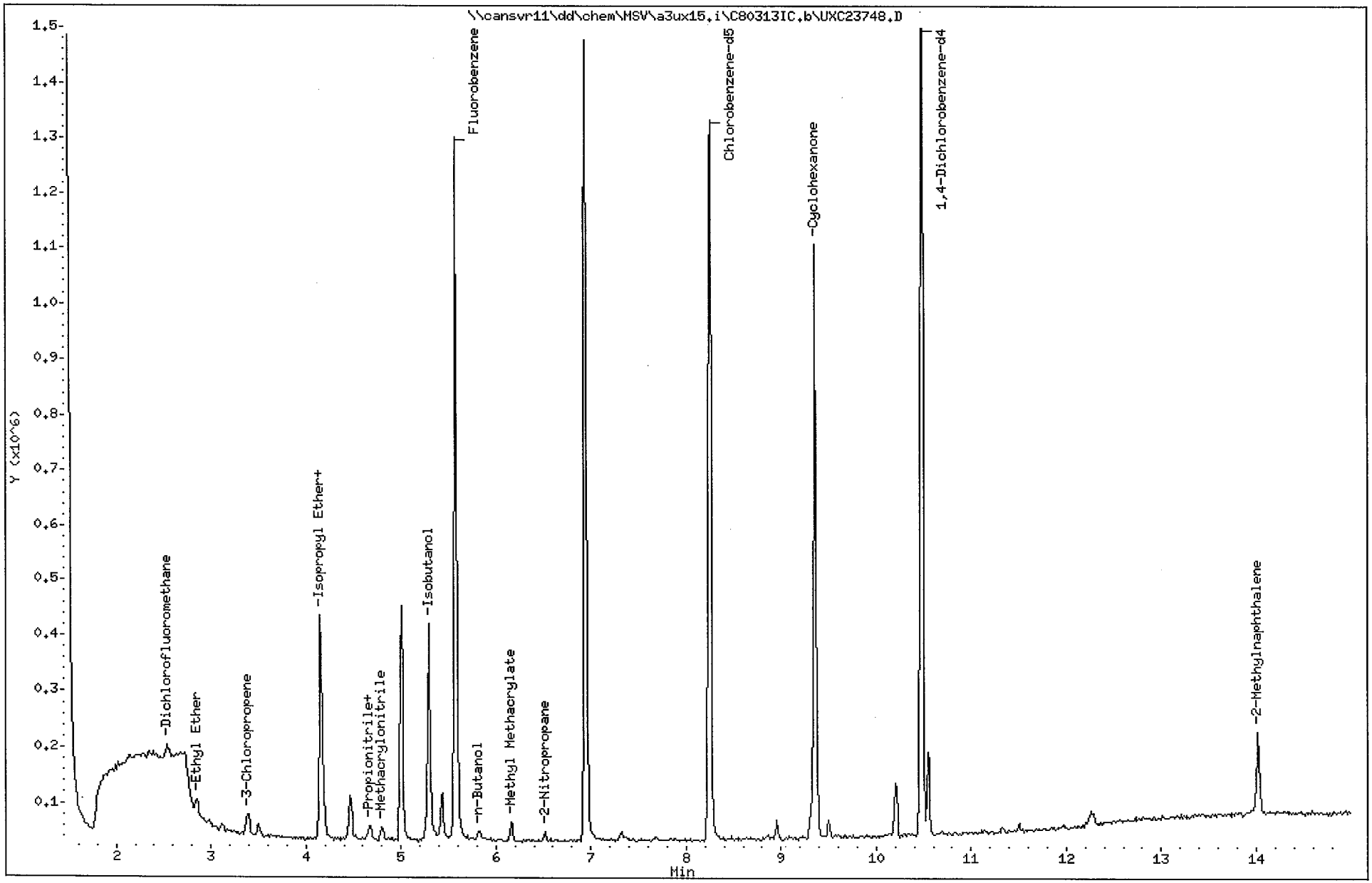
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1379135	689568	2758270	1318762	-4.38
2 Chlorobenzene-d5	1033776	516888	2067552	985936	-4.63
3 1,4-Dichlorobenze	616957	308479	1233914	593212	-3.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23748.D
Date : 13-MAR-2008 20:27
Client ID:
Sample Info: 5NGA9CAL
Purge Volume: 5.0
Column phase: DB624

Instrument: a3ux15.i
Operator: 1754
Column diameter: 0.18



Report Date: 19-Mar-2008 08:30

Calibration History

Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Start Cal Date: 13-MAR-2008 15:51
End Cal Date : 13-MAR-2008 20:27
Last Cal Level: 6
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 5.00000		
13-MAR-2008 20:27	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23748.D
13-MAR-2008 17:46	2-8260+86	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23741.D
Cal Level: 2 , Cal Amount: 10.00000		
13-MAR-2008 20:04	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23747.D
13-MAR-2008 17:23	2-8260+86	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23740.D
Cal Level: 3 , Cal Amount: 25.00000		
13-MAR-2008 19:41	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23746.D
13-MAR-2008 17:00	2-8260+86	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23739.D
Cal Level: 4 , Cal Amount: 50.00000		
13-MAR-2008 19:18	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23745.D
13-MAR-2008 16:37	2-8260+86	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23738.D
Cal Level: 5 , Cal Amount: 100.00000		
13-MAR-2008 18:55	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23744.D
13-MAR-2008 16:14	2-8260+86	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23737.D
Cal Level: 6 , Cal Amount: 200.00000		
13-MAR-2008 18:32	3-IX	\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23743.D
13-MAR-2008 15:51	2-8260+86	

\\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\UXC23736.D		

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

18-MAR-2008 11:15	2-8260	
\\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23835.D		
18-MAR-2008 10:52	3-IX	
\\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23834.D		

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23835.D
Report Date: 18-Mar-2008 11:29

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a3ux15.i Injection Date: 18-MAR-2008 11:15
Lab File ID: UXC23835.D Init. Cal. Date(s): 13-MAR-2008 13-MAR-2008
Analysis Type: WATER Init. Cal. Times: 15:51 20:27
Lab Sample ID: 50NG-CC Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 4 Dibromofluoromethane	0.20125	0.20854	0.20854	0.010	-3.62102	50.00000	Averaged
$ 5 1,2-Dichloroethane-d4	0.23781	0.21908	0.21908	0.010	7.87814	50.00000	Averaged
$ 6 Toluene-d8	1.10628	1.05186	1.05186	0.010	4.91839	50.00000	Averaged
$ 7 Bromofluorobenzene	0.45422	0.40252	0.40252	0.010	11.38215	50.00000	Averaged
8 Dichlorodifluoromethane	50.00000	46.07198	0.19678	0.010	7.85603	0.000e+000	Wt Linear
9 Chloromethane	0.24877	0.18358	0.18358	0.100	26.20648	50.00000	Averaged
10 Vinyl Chloride	0.28182	0.22973	0.22973	0.010	18.48424	20.00000	Averaged
11 Bromomethane	0.12690	0.13121	0.13121	0.010	-3.39104	50.00000	Averaged
12 Chloroethane	50.00000	40.80954	0.11829	0.010	18.38092	0.000e+000	Quadratic
13 Trichlorofluoromethane	0.14773	0.16089	0.16089	0.010	-8.91200	50.00000	Averaged
15 Acrolein	0.02050	0.01251	0.01251	0.010	38.97134	50.00000	Averaged
16 Acetone	100	90.50421	0.05025	0.010	9.49579	0.000e+000	Wt Linear
17 1,1-Dichloroethene	0.22492	0.20055	0.20055	0.010	10.83484	20.00000	Averaged
18 Freon-113	0.15146	0.16049	0.16049	0.010	-5.95727	50.00000	Averaged
19 Iodomethane	0.34825	0.37404	0.37404	0.010	-7.40466	50.00000	Averaged
20 Carbon Disulfide	0.69174	0.61456	0.61456	0.010	11.15748	50.00000	Averaged
21 Methylene Chloride	0.25821	0.21835	0.21835	0.010	15.43748	50.00000	Averaged
22 Acetonitrile	500	544	0.01532	0.010	-8.76187	0.000e+000	Wt Linear
23 Acrylonitrile	0.07818	0.06280	0.06280	0.010	19.66825	50.00000	Averaged
24 Methyl tert-butyl ether	0.70668	0.63498	0.63498	0.010	10.14613	50.00000	Averaged
25 trans-1,2-Dichloroethene	0.24380	0.23663	0.23663	0.010	2.93735	50.00000	Averaged
26 Hexane	50.00000	40.65068	0.04866	0.010	18.69864	0.000e+000	Wt Linear
27 Vinyl acetate	0.37576	0.22217	0.22217	0.010	40.87376	50.00000	Averaged
28 1,1-Dichloroethane	0.39549	0.35084	0.35084	0.100	11.29069	50.00000	Averaged
29 tert-Butyl Alcohol	1000	882	0.01472	0.010	11.83223	0.000e+000	Wt Linear
30 2-Butanone	100	73.44867	0.06496	0.010	26.55133	0.000e+000	Wt Linear
M 31 1,2-Dichloroethene (total)	0.24637	0.24234	0.24234	0.010	1.63711	50.00000	Averaged
32 cis-1,2-dichloroethene	0.24895	0.24805	0.24805	0.010	0.36354	50.00000	Averaged
33 2,2-Dichloropropane	0.27928	0.28747	0.28747	0.010	-2.93236	50.00000	Averaged
34 Bromochloromethane	0.12402	0.12637	0.12637	0.010	-1.89831	50.00000	Averaged
35 Chloroform	0.38236	0.36254	0.36254	0.010	5.18177	20.00000	Averaged
36 Tetrahydrofuran	0.05890	0.04433	0.04433	0.010	24.74197	50.00000	Averaged
37 1,1,1-Trichloroethane	0.31581	0.32659	0.32659	0.010	-3.41201	50.00000	Averaged
38 1,1-Dichloropropene	0.30521	0.28544	0.28544	0.010	6.47814	50.00000	Averaged
39 Carbon Tetrachloride	0.28196	0.29280	0.29280	0.010	-3.84549	50.00000	Averaged
40 1,2-Dichloroethane	0.28032	0.26912	0.26912	0.010	3.99562	50.00000	Averaged
41 Benzene	0.97950	0.88852	0.88852	0.010	9.28796	50.00000	Averaged
42 Trichloroethene	0.25039	0.26393	0.26393	0.010	-5.40433	50.00000	Averaged
43 1,2-Dichloropropane	0.21384	0.18610	0.18610	0.010	12.97415	20.00000	Averaged
44 1,4-Dioxane	0.00186	0.00157	0.00157	0.010	15.24202	50.00000	Averaged <-
45 Dibromomethane	0.12986	0.12283	0.12283	0.010	5.41291	50.00000	Averaged
46 Bromodichloromethane	0.27232	0.25607	0.25607	0.010	5.96678	50.00000	Averaged
47 2-Chloroethyl vinyl ether	0.12701	0.10070	0.10070	0.010	20.71098	50.00000	Averaged

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23835.D
Report Date: 18-Mar-2008 11:29

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a3ux15.i Injection Date: 18-MAR-2008 11:15
Lab File ID: UXC23835.D Init. Cal. Date(s): 13-MAR-2008 13-MAR-2008
Analysis Type: WATER Init. Cal. Times: 15:51 20:27
Lab Sample ID: 50NG-CC Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
48 cis-1,3-Dichloropropene	0.34946	0.30398	0.30398	0.010	13.01569	50.00000	Averaged
49 4-Methyl-2-pentanone	0.19415	0.13835	0.13835	0.010	28.73851	50.00000	Averaged
50 Toluene	1.30102	1.18352	1.18352	0.010	9.03142	20.00000	Averaged
51 trans-1,3-Dichloropropene	0.42259	0.33811	0.33811	0.010	19.99127	50.00000	Averaged
52 Ethyl Methacrylate	0.40947	0.31693	0.31693	0.010	22.60021	50.00000	Averaged
53 1,1,2-Trichloroethane	0.25724	0.22453	0.22453	0.010	12.71389	50.00000	Averaged
54 1,3-Dichloropropane	0.44763	0.38583	0.38583	0.010	13.80519	50.00000	Averaged
55 Tetrachloroethene	0.25810	0.26614	0.26614	0.010	-3.11521	50.00000	Averaged
56 2-Hexanone	0.18497	0.12122	0.12122	0.010	34.46773	50.00000	Averaged
57 Dibromochloromethane	0.28713	0.25562	0.25562	0.010	10.97412	50.00000	Averaged
58 1,2-Dibromoethane	0.26583	0.23566	0.23566	0.010	11.34763	50.00000	Averaged
59 Chlorobenzene	0.84447	0.80335	0.80335	0.300	4.86870	50.00000	Averaged
60 1,1,1,2-Tetrachloroethane	0.30633	0.28735	0.28735	0.010	6.19708	50.00000	Averaged
61 Ethylbenzene	0.46727	0.43960	0.43960	0.010	5.92162	20.00000	Averaged
62 m + p-Xylene	0.59020	0.55022	0.55022	0.010	6.77408	50.00000	Averaged
M 63 Xylenes (total)	0.58949	0.54791	0.54791	0.010	7.05418	50.00000	Averaged
64 Xylene-o	0.58808	0.54329	0.54329	0.010	7.61623	50.00000	Averaged
65 Styrene	0.99161	0.87610	0.87610	0.010	11.64851	50.00000	Averaged
66 Bromoform	0.21884	0.18908	0.18908	0.100	13.59926	50.00000	Averaged
67 Isopropylbenzene	1.37719	1.27960	1.27960	0.010	7.08591	50.00000	Averaged
68 1,1,2,2-Tetrachloroethane	0.62532	0.49177	0.49177	0.300	21.35641	50.00000	Averaged
69 1,4-Dichloro-2-butene	50.00000	20.96877	0.07245	0.010	58.06246	0.000e+000	Wt Linear
70 1,2,3-Trichloropropane	0.19444	0.16185	0.16185	0.010	16.75962	50.00000	Averaged
71 Bromobenzene	0.64302	0.62377	0.62377	0.010	2.99406	50.00000	Averaged
72 n-Propylbenzene	0.72775	0.66509	0.66509	0.010	8.61050	50.00000	Averaged
73 2-Chlorotoluene	0.63077	0.58540	0.58540	0.010	7.19270	50.00000	Averaged
74 1,3,5-Trimethylbenzene	2.18367	1.91177	1.91177	0.010	12.45154	50.00000	Averaged
75 4-Chlorotoluene	0.63998	0.58575	0.58575	0.010	8.47440	50.00000	Averaged
76 tert-Butylbenzene	1.94225	1.76567	1.76567	0.010	9.09140	50.00000	Averaged
77 1,2,4-Trimethylbenzene	2.26069	1.95990	1.95990	0.010	13.30526	50.00000	Averaged
78 sec-Butylbenzene	2.78408	2.44841	2.44841	0.010	12.05686	50.00000	Averaged
79 4-Isopropyltoluene	2.39738	2.13573	2.13573	0.010	10.91421	50.00000	Averaged
80 1,3-Dichlorobenzene	1.27108	1.22442	1.22442	0.010	3.67069	50.00000	Averaged
81 1,4-Dichlorobenzene	1.32069	1.25657	1.25657	0.010	4.85500	50.00000	Averaged
82 n-Butylbenzene	2.13146	1.78917	1.78917	0.010	16.05912	50.00000	Averaged
83 1,2-Dichlorobenzene	1.22830	1.15940	1.15940	0.010	5.60986	50.00000	Averaged
84 1,2-Dibromo-3-chloropropane	0.15778	0.11562	0.11562	0.010	26.72193	50.00000	Averaged
85 1,2,4-Trichlorobenzene	0.86185	0.79045	0.79045	0.010	8.28406	50.00000	Averaged
86 Hexachlorobutadiene	0.41975	0.40222	0.40222	0.010	4.17618	50.00000	Averaged
87 Naphthalene	2.23229	1.68389	1.68389	0.010	24.56685	50.00000	Averaged
88 1,2,3-Trichlorobenzene	0.77742	0.66040	0.66040	0.010	15.05215	50.00000	Averaged
98 Cyclohexane	50.00000	39.26712	0.34292	0.010	21.46577	0.000e+000	Wt Linear
143 Methyl Acetate	0.16608	0.13007	0.13007	0.010	21.68449	50.00000	Averaged

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23835.D
Report Date: 18-Mar-2008 11:29

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a3ux15.i Injection Date: 18-MAR-2008 11:15
Lab File ID: UXC23835.D Init. Cal. Date(s): 13-MAR-2008 13-MAR-2008
Analysis Type: WATER Init. Cal. Times: 15:51 20:27
Lab Sample ID: 50NG-CC Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
144 Methylcyclohexane	50.00000	42.34025	0.39837	0.010	15.31949	0.000e+000	Wt Linear
141 1,3,5-Trichlorobenzene	0.97086	0.93134	0.93134	0.010	4.06999	50.00000	Averaged

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23835.D
Report Date: 18-Mar-2008 11:29

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23835.D
Lab Smp Id: 50NG-CC
Inj Date : 18-MAR-2008 11:15
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 50NG-CC
Misc Info : C80318A,8260LLUX15,2-8260.SUB,1754,2
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Meth Date : 18-Mar-2008 11:29 RoachC Quant Type: ISTD
Cal Date : 13-MAR-2008 18:32 Cal File: UXC23743.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-8260.SUB
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	5.577	5.577	(1.000)	1278766	50.0000	
* 2 Chlorobenzene-d5	117	8.257	8.257	(1.000)	1012111	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	618918	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	266676	50.0000	51.810
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	280150	50.0000	46.061
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	1064604	50.0000	47.541
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	407399	50.0000	44.309
8 Dichlorodifluoromethane	85	1.640	1.640	(0.294)	251632	50.0000	46.072
9 Chloromethane	50	1.795	1.795	(0.322)	234755	50.0000	36.897
10 Vinyl Chloride	62	1.913	1.913	(0.343)	293770	50.0000	40.758
11 Bromomethane	94	2.245	2.245	(0.403)	167781	50.0000	51.696
12 Chloroethane	64	2.352	2.352	(0.422)	151271	50.0000	40.810
13 Trichlorofluoromethane	101	2.577	2.577	(0.462)	205747	50.0000	54.456
15 Acrolein	56	2.969	2.969	(0.532)	159994	500.000	305.14
16 Acetone	43	3.123	3.123	(0.560)	128517	100.000	90.504
17 1,1-Dichloroethene	96	3.063	3.063	(0.549)	256462	50.0000	44.582
18 Freon-113	151	3.075	3.075	(0.551)	205223	50.0000	52.979
19 Iodomethane	142	3.206	3.206	(0.575)	478311	50.0000	53.702
20 Carbon Disulfide	76	3.265	3.265	(0.585)	785874	50.0000	44.421

21 Methylene Chloride	84	3.502	3.502 (0.628)	279219	50.0000	42.281
22 Acetonitrile	41	3.372	3.372 (0.605)	195859	500.000	543.81
23 Acrylonitrile	53	3.728	3.728 (0.668)	160617	100.000	80.332

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23835.D
Report Date: 18-Mar-2008 11:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	24 Methyl tert-butyl ether	73	3.739	3.739	(0.670)	811986	50.0000	44.927
	25 trans-1,2-Dichloroethene	96	3.739	3.739	(0.670)	302600	50.0000	48.531
	26 Hexane	86	3.965	3.965	(0.711)	62224	50.0000	40.651
	27 Vinyl acetate	43	4.143	4.143	(0.743)	284106	50.0000	29.563
	28 1,1-Dichloroethane	63	4.107	4.107	(0.736)	448643	50.0000	44.355
	29 tert-Butyl Alcohol	59	3.609	3.609	(0.647)	376455	1000.00	881.68
	30 2-Butanone	43	4.617	4.617	(0.828)	166135	100.000	73.449
M	31 1,2-Dichloroethene (total)	96				619793	100.000	98.350
	32 cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	317193	50.0000	49.818
	33 2,2-Dichloropropane	77	4.605	4.605	(0.826)	367607	50.0000	51.466
	34 Bromochloromethane	128	4.807	4.807	(0.862)	161600	50.0000	50.949
	35 Chloroform	83	4.866	4.866	(0.872)	463608	50.0000	47.409
	36 Tetrahydrofuran	42	4.866	4.866	(0.872)	56686	50.0000	37.629
	37 1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	417632	50.0000	51.706
	38 1,1-Dichloropropene	75	5.162	5.162	(0.926)	365012	50.0000	46.761
	39 Carbon Tetrachloride	117	5.174	5.174	(0.928)	374423	50.0000	51.923
	40 1,2-Dichloroethane	62	5.364	5.364	(0.962)	344146	50.0000	48.002
	41 Benzene	78	5.352	5.352	(0.960)	1136213	50.0000	45.356
	42 Trichloroethene	130	5.886	5.886	(1.055)	337500	50.0000	52.702
	43 1,2-Dichloropropane	63	6.087	6.087	(1.091)	237977	50.0000	43.513
	44 1,4-Dioxane	88	6.206	6.206	(1.113)	100529	2500.00	2118.9
	45 Dibromomethane	93	6.194	6.194	(1.111)	157072	50.0000	47.294
	46 Bromodichloromethane	83	6.313	6.313	(1.132)	327460	50.0000	47.017
	47 2-Chloroethyl vinyl ether	63	6.562	6.562	(1.176)	257549	100.000	79.289
	48 cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	388713	50.0000	43.492
	49 4-Methyl-2-pentanone	43	6.834	6.834	(1.225)	353845	100.000	71.261
	50 Toluene	91	7.000	7.000	(0.848)	1197855	50.0000	45.484
	51 trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	342204	50.0000	40.004
	52 Ethyl Methacrylate	69	7.249	7.249	(0.878)	320764	50.0000	38.700
	53 1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	227253	50.0000	43.643
	54 1,3-Dichloropropane	76	7.510	7.510	(0.910)	390507	50.0000	43.097
	55 Tetrachloroethene	164	7.499	7.499	(0.908)	269362	50.0000	51.558
	56 2-Hexanone	43	7.570	7.570	(0.917)	245368	100.000	65.532
	57 Dibromochloromethane	129	7.724	7.724	(0.935)	258719	50.0000	44.513
	58 1,2-Dibromoethane	107	7.831	7.831	(0.948)	238518	50.0000	44.326
	59 Chlorobenzene	112	8.281	8.281	(1.003)	813083	50.0000	47.566
	60 1,1,1,2-Tetrachloroethane	131	8.352	8.352	(1.011)	290831	50.0000	46.901
	61 Ethylbenzene	106	8.376	8.376	(1.014)	444927	50.0000	47.039
	62 m + p-Xylene	106	8.483	8.483	(1.027)	1113766	100.000	93.226
M	63 Xylenes (total)	106				1663634	150.000	139.42
	64 Xylene-o	106	8.850	8.850	(1.072)	549868	50.0000	46.192
	65 Styrene	104	8.874	8.874	(1.075)	886715	50.0000	44.176
	66 Bromoform	173	9.052	9.052	(1.096)	191370	50.0000	43.200
	67 Isopropylbenzene	105	9.206	9.206	(1.115)	1295097	50.0000	46.457
	68 1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	304367	50.0000	39.322
	69 1,4-Dichloro-2-butene	53	9.538	9.538	(0.910)	44842	50.0000	20.969
	70 1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	100172	50.0000	41.620
	71 Bromobenzene	156	9.514	9.514	(0.907)	386062	50.0000	48.503
	72 n-Propylbenzene	120	9.597	9.597	(0.915)	411634	50.0000	45.695
	73 2-Chlorotoluene	126	9.692	9.692	(0.924)	362314	50.0000	46.404
	74 1,3,5-Trimethylbenzene	105	9.763	9.763	(0.931)	1183226	50.0000	43.774
	75 4-Chlorotoluene	126	9.799	9.799	(0.934)	362530	50.0000	45.763

76 tert-Butylbenzene	119	10.084	10.084 (0.962)	1092805	50.0000	45.454
77 1,2,4-Trimethylbenzene	105	10.131	10.131 (0.966)	1213015	50.0000	43.347

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23835.D
Report Date: 18-Mar-2008 11:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
78	sec-Butylbenzene	105	10.297	10.297	(0.982)	1515363	50.0000	43.972
79	4-Isopropyltoluene	119	10.439	10.439	(0.995)	1321841	50.0000	44.543
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	757817	50.0000	48.165
81	1,4-Dichlorobenzene	146	10.511	10.511	(1.002)	777712	50.0000	47.572
82	n-Butylbenzene	91	10.843	10.843	(1.034)	1107348	50.0000	41.970
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	717571	50.0000	47.195
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	71557	50.0000	36.639
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	489226	50.0000	45.858
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	248941	50.0000	47.912
87	Naphthalene	128	12.716	12.716	(1.213)	1042189	50.0000	37.716
88	1,2,3-Trichlorobenzene	180	12.965	12.965	(1.236)	408736	50.0000	42.474
98	Cyclohexane	56	5.079	5.079	(0.911)	438518	50.0000	39.267
143	Methyl Acetate	43	3.407	3.407	(0.611)	332647	100.000	78.316
144	Methylcyclohexane	83	6.052	6.052	(1.085)	509417	50.0000	42.340
141	1,3,5-Trichlorobenzene	180	11.851	11.851	(1.130)	576426	50.0000	47.965

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23835.D
Report Date: 18-Mar-2008 11:29

TestAmerica North Canton

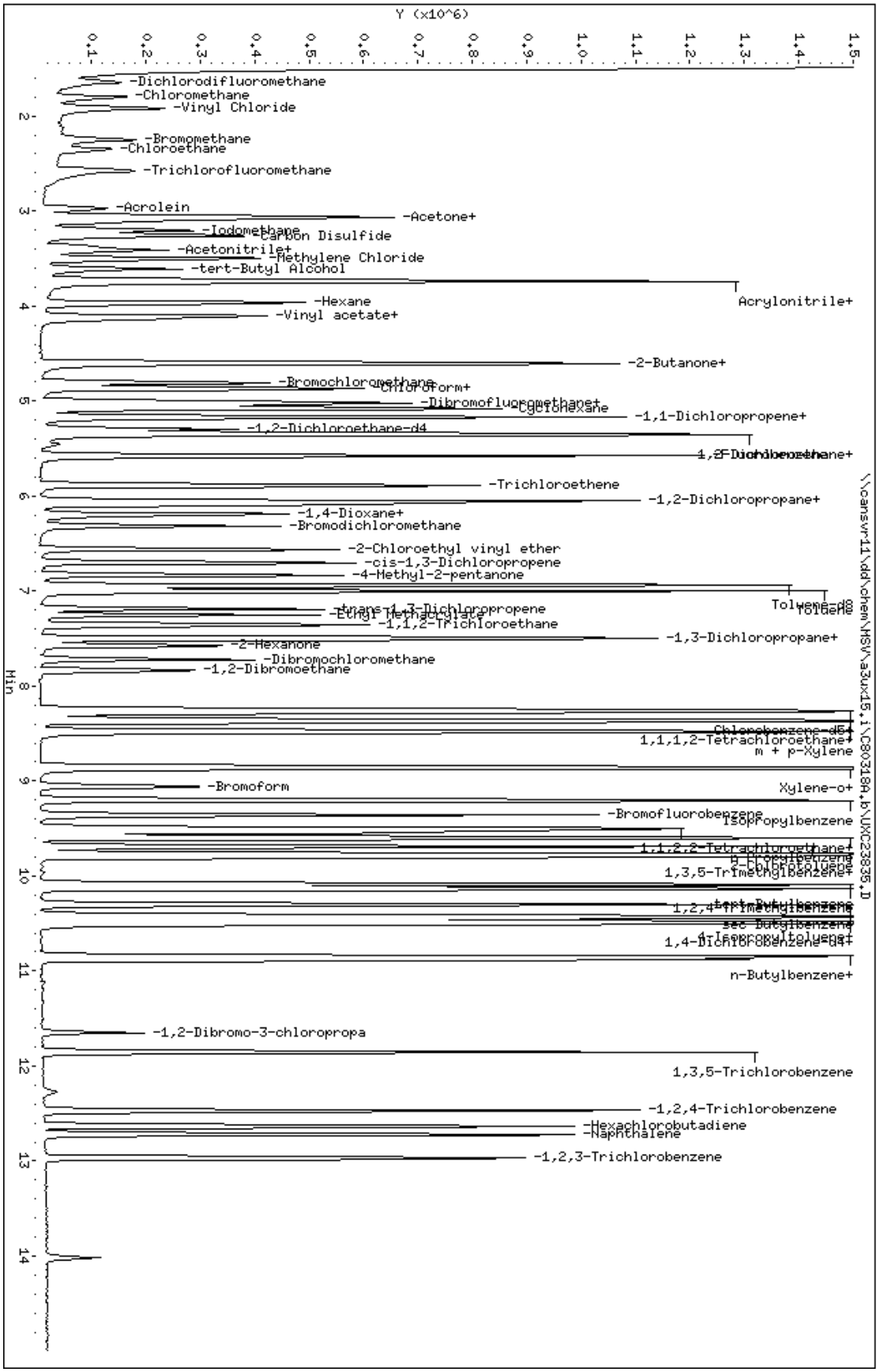
INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Calibration Date: 18-MAR-2008
Lab File ID: UXC23835.D
Calibration Time: 10:52
Lab Smp Id: 50NG-CC
Analysis Type: VOA
Level: LOW
Quant Type: ISTD
Sample Type: WATER
Operator: 1754
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Misc Info: C80318A,8260LLUX15,2-8260.SUB,1754,2

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1229282	614641	2458564	1278766	4.03
2 Chlorobenzene-d5	949223	474612	1898446	1012111	6.63
3 1,4-Dichlorobenze	579307	289654	1158614	618918	6.84

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	-0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Y (x10^6)
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-Dichlorodifluoromethane
-Chloromethane
-Vinyl Chloride
-Bromomethane
-Chloroethane
-Trichlorofluoromethane
-Acrolein
-Acetone+
-Iodomethane
-Carbon Disulfide
-Acetonitrile+
-Methylene Chloride
-tert-Butyl Alcohol
Acrylonitrile+
-Hexane
-Vinyl acetate+
-2-Butanone+
-Bromochloromethane
-Chloroform+
-Dibromofluoromethane+
Cyclohexane
-1,1-Dichloropropene+
-1,2-Dichloroethane-d4
1,2-Dichloroethane+
-Trichloroethene
-1,2-Dichloropropane+
-1,4-Dioxane+
-Bromodichloromethane
-2-Chloroethyl vinyl ether
-cis-1,3-Dichloropropene
-4-Methyl-2-pentanone
Toluene-d8
Toluene
trans-1,3-Dichloropropene
-Ethyl Methacrylate
-1,1,2-Trichloroethane
-1,3-Dichloropropane+
-2-Hexanone
-Dibromochloromethane
-1,2-Dibromoethane
Chlorobenzene-d5+
1,1,1,2-Tetrachloroethane+
m + p-Xylene
-Bromoform
Xylene-o+
-Bromofluorobenzene
Isopropylbenzene
1,1,2,2-Tetrachloroethane+
n-Propylbenzene
2-Chlorotoluene+
1,3,5-Trimethylbenzene+
tert-Butylbenzene
1,2,4-Trimethylbenzene
sec-Butylbenzene
4-Isopropyltoluene+
1,4-Dichlorobenzene-d4+
n-Butylbenzene+
-1,2-Dibromo-3-chloropropa
1,3,5-Trichlorobenzene
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
Data File: \\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23835.D
Date : 18-MAR-2008 11:15
Client ID:
Sample Info: 50NG-CC
Purge Volume: 5.0
Column phase: DB624
Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18
\\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23835.D

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23834.D
Report Date: 18-Mar-2008 10:15

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a3ux15.i Injection Date: 18-MAR-2008 10:52
Lab File ID: UXC23834.D Init. Cal. Date(s): 13-MAR-2008 13-MAR-2008
Analysis Type: WATER Init. Cal. Times: 15:51 20:27
Lab Sample ID: 50NGA9-CC Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
14 Dichlorofluoromethane	50.00000	32.00416	0.19298	0.010	35.99168	0.000e+000	Quadratic	
89 Ethyl Ether	0.18400	0.14433	0.14433	0.010	21.55815	50.00000	Averaged	
91 3-Chloropropene	0.12118	0.10543	0.10543	0.010	12.99670	50.00000	Averaged	
92 Isopropyl Ether	0.20073	0.19635	0.19635	0.010	2.18134	50.00000	Averaged	
93 2-Chloro-1,3-butadiene	0.27785	0.24253	0.24253	0.010	12.71430	50.00000	Averaged	
94 Propionitrile	0.02921	0.01771	0.01771	0.010	39.38207	50.00000	Averaged	
95 Ethyl Acetate	0.16149	0.11045	0.11045	0.010	31.60185	50.00000	Averaged	
96 Methacrylonitrile	0.11595	0.07992	0.07992	0.010	31.07188	50.00000	Averaged	
97 Isobutanol	0.00645	0.00465	0.00465	0.010	27.92011	50.00000	Averaged	<-
99 n-Butanol	0.00817	0.00459	0.00459	0.010	43.76805	50.00000	Averaged	<-
100 Methyl Methacrylate	0.15286	0.10937	0.10937	0.010	28.44862	50.00000	Averaged	
101 2-Nitropropane	0.05068	0.03419	0.03419	0.010	32.53209	50.00000	Averaged	
103 Cyclohexanone	0.04653	0.03011	0.03011	0.010	35.29198	50.00000	Averaged	
146 2-Methylnaphthalene	1.17561	0.73347	0.73347	0.010	37.60918	50.00000	Averaged	

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23834.D
Report Date: 18-Mar-2008 10:15

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23834.D
Lab Smp Id: 50NGA9-CC
Inj Date : 18-MAR-2008 10:52
Operator : 1754 Inst ID: a3ux15.i
Smp Info : 50NGA9-CC
Misc Info : C80318AB,8260LLUX15,3-IX.SUB,1754,2
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Meth Date : 18-Mar-2008 10:15 RoachC Quant Type: ISTD
Cal Date : 13-MAR-2008 18:32 Cal File: UXC23743.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3-IX.SUB
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1	Fluorobenzene	96	5.578	5.578	(1.000)	1229282	50.0000	
* 2	Chlorobenzene-d5	117	8.258	8.258	(1.000)	949223	50.0000	
* 3	1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	579307	50.0000	
14	Dichlorofluoromethane	67	2.542	2.542	(0.456)	237223	50.0000	32.004
89	Ethyl Ether	59	2.850	2.850	(0.511)	177425	50.0000	39.221
91	3-Chloropropene	76	3.396	3.396	(0.609)	129602	50.0000	43.502
92	Isopropyl Ether	87	4.155	4.155	(0.745)	1206829	250.000	244.55
93	2-Chloro-1,3-butadiene	53	4.178	4.178	(0.749)	298133	50.0000	43.643
94	Propionitrile	54	4.676	4.676	(0.838)	43532	100.000	60.618
95	Ethyl Acetate	43	4.664	4.664	(0.836)	271560	100.000	68.398
96	Methacrylonitrile	41	4.795	4.795	(0.860)	98248	50.0000	34.464
97	Isobutanol	41	5.257	5.257	(0.637)	88198	1000.00	720.80
99	n-Butanol	56	5.815	5.815	(0.704)	87212	1000.00	562.32
100	Methyl Methacrylate	41	6.159	6.159	(1.104)	134451	50.0000	35.776
101	2-Nitropropane	41	6.514	6.514	(1.168)	84060	100.000	67.468
103	Cyclohexanone	55	9.313	9.313	(0.888)	174425	500.000	323.54
146	2-Methylnaphthalene	142	14.021	14.021	(1.337)	849814	100.000	62.391

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23834.D
Report Date: 18-Mar-2008 10:15

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

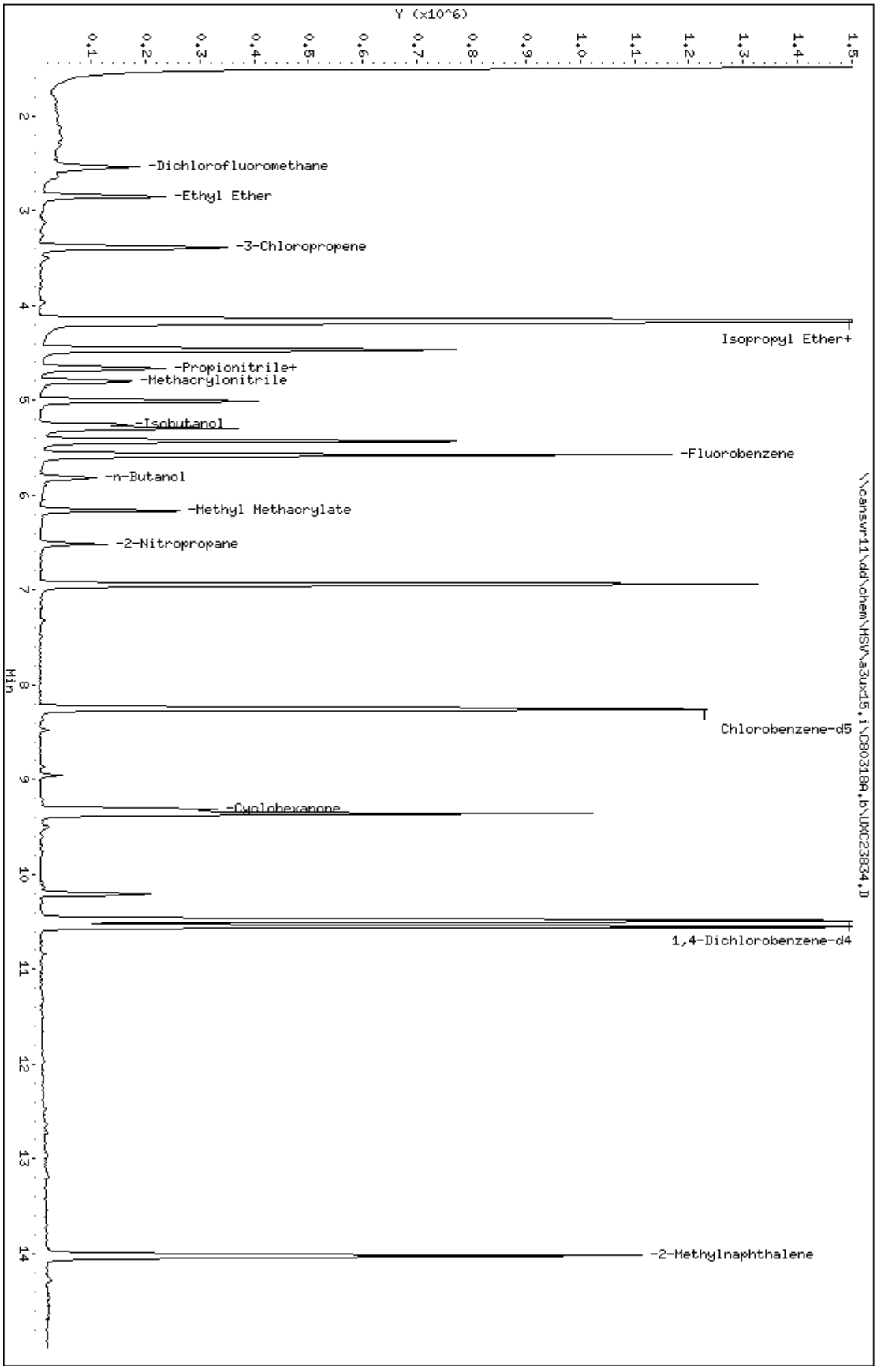
Instrument ID: a3ux15.i
Lab File ID: UXC23834.D
Lab Smp Id: 50NGA9-CC
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Misc Info: C80318AB,8260LLUX15,3-IX.SUB,1754,2

Calibration Date: 18-MAR-2008
Calibration Time: 10:52
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1229282	614641	2458564	1229282	0.00
2 Chlorobenzene-d5	949223	474612	1898446	949223	0.00
3 1,4-Dichlorobenze	579307	289654	1158614	579307	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Data File: \\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23834.D
Date : 18-MAR-2008 10:52
Client ID:
Sample Info: 5ONGA9-CC
Purge Volume: 5.0
Column phase: DB624
Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18
Y (x10^6)
Min
-Dichlorofluoromethane
-Ethyl Ether
-3-Chloropropene
Isopropyl Ether+
-Propionitrile+
-Methacrylonitrile
-Isobutanol
-Fluorobenzene
-n-Butanol
-Methyl Methacrylate
-2-Nitropropane
Chlorobenzene-d5
-Cyclohexanone
1,4-Dichlorobenzene-d4
-2-Methylnaphthalene
\\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23834.D

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

RAW QC DATA

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\BFB847.D
Lab Smp Id: 50ng bfb Client Smp ID: 50NG BFB
Inj Date : 13-MAR-2008 14:18
Operator : 1754 Inst ID: a3ux15.i
Smp Info :
Misc Info : C80313IC,BFBUX15,,1754
Comment   :
Method   : \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\BFBUX15.m
Meth Date : 23-May-2007 08:42 roachc Quant Type: ESTD
Cal Date : 01-MAR-2000 19:29 Cal File: uxx0287.d
Als bottle: 3 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14 Sample Matrix: WATER
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
Vi	1.000	Injection Volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
3.248	3.330	-0.082	95	676160			100.00- 100.00	100.00
3.248	3.330	-0.082	50	111192			15.00- 40.00	16.44
3.248	3.330	-0.082	75	317376			30.00- 60.00	46.94
3.248	3.330	-0.082	96	48000			5.00- 9.00	7.10
3.248	3.330	-0.082	173	2377			0.00- 2.00	0.59
3.248	3.330	-0.082	174	401216			50.00- 100.00	59.34
3.248	3.330	-0.082	175	28632			5.00- 9.00	7.14
3.248	3.330	-0.082	176	382720			95.00- 101.00	95.39
3.248	3.330	-0.082	177	29840			5.00- 9.00	7.80

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\BFB847.D Page 1

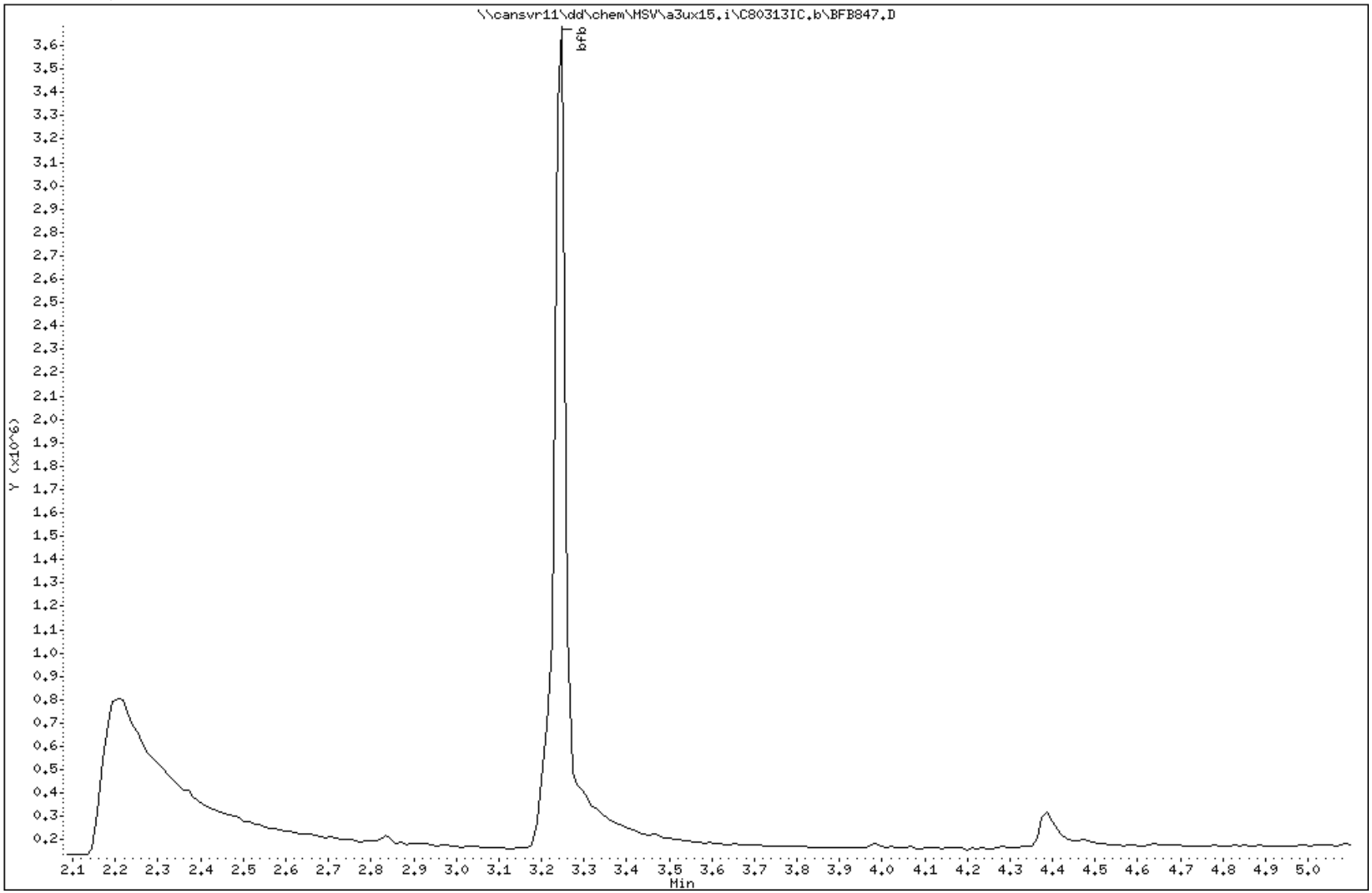
Date : 13-MAR-2008 14:18

Client ID: 50NG BFB Instrument: a3ux15.i

Sample Info:

Volume Injected (uL): 1.0 Operator: 1754

Column phase: DB624 20M Column diameter: 0.18



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\BFB847.D

Date : 13-MAR-2008 14:18

Client ID: 50NG BFB

Instrument: a3ux15.i

Sample Info:

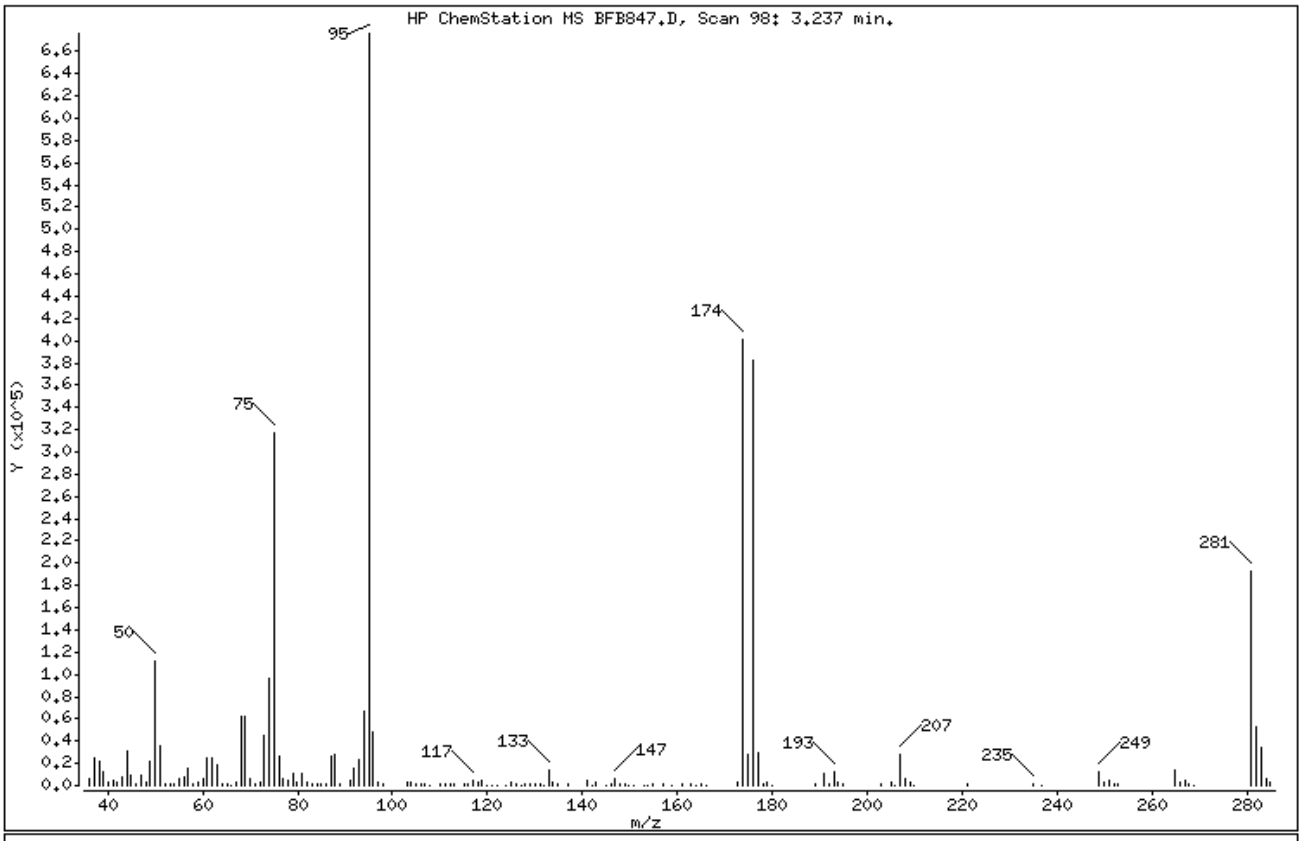
Volume Injected (uL): 1.0

Operator: 1754

Column phase: DB624 20M

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.44
75	30.00 - 60.00% of mass 95	46.94
96	5.00 - 9.00% of mass 95	7.10
173	Less than 2.00% of mass 174	0.35 (0.59)
174	50.00 - 100.00% of mass 95	59.34
175	5.00 - 9.00% of mass 174	4.23 (7.14)
176	95.00 - 101.00% of mass 174	56.60 (95.39)
177	5.00 - 9.00% of mass 176	4.41 (7.80)

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80313IC.b\BFB847.D

Date : 13-MAR-2008 14:18

Client ID: 50NG BFB

Instrument: a3ux15.i

Sample Info:

Volume Injected (uL): 1.0

Operator: 1754

Column phase: DB624 20M

Column diameter: 0.18

Data File: BFB847.D
Spectrum: HP ChemStation MS BFB847.D, Scan 98: 3.237 min.
Location of Maximum: 95.00
Number of points: 153

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	5984	75.00	317376	121.00	765	175.90	382720
37.10	24240	76.00	25904	122.10	584	176.90	29840
38.10	22472	77.00	5512	124.00	661	178.00	1768
39.10	12041	78.00	4274	125.00	3416	178.90	3171
40.00	2380	78.90	10969	125.90	1479	179.90	615
41.10	4941	79.90	3380	127.00	536	189.00	1238
42.10	2907	81.00	11155	127.90	1965	191.00	11226
43.10	7253	82.00	3318	128.90	1270	192.00	2315
44.00	30584	83.10	1606	129.90	2038	193.00	12640
45.00	9018	84.00	1604	131.00	1533	193.90	2653
46.00	1134	85.00	1115	132.00	756	195.00	1520
47.10	8723	86.10	917	133.00	13617	203.00	1535
48.00	3431	87.00	25832	133.80	2990	205.00	3362
49.00	21984	87.90	27432	134.90	2028	205.90	740
50.00	111192	88.80	1748	136.90	966	207.00	27920
51.10	35096	91.00	4327	140.90	3977	208.00	6140
52.00	2142	92.00	14801	142.00	565	209.00	3375
53.10	1254	93.00	22640	142.90	3754	210.00	699
54.00	1486	94.00	67488	144.90	715	221.00	1783
55.10	5465	95.00	676160	145.10	724	235.00	1373
56.10	8415	96.00	48000	146.00	1030	236.90	527
57.00	15857	97.00	2947	147.00	6181	248.90	12908
58.00	1546	98.00	1007	147.90	2224	249.90	3070
59.10	2843	103.00	3129	149.00	1636	250.90	4832
60.00	6664	104.00	3467	149.90	760	252.00	1210
61.00	24200	105.10	2133	151.00	602	252.90	1098
62.00	24488	105.90	1866	153.00	712	265.00	14420
63.00	17880	106.90	894	153.80	636	266.00	3533
64.00	2011	108.00	565	154.90	1453	267.00	4146
65.10	1019	110.00	1174	157.00	817	267.90	1314
66.10	615	111.10	1127	158.80	744	268.90	751
67.10	2757	112.10	1008	160.90	1511	281.00	192192
68.00	61856	113.00	799	163.00	2222	282.00	53608
69.00	62752	115.00	2319	164.00	525	283.00	34040
70.00	5753	115.90	2065	164.90	2211	284.00	6507

Date : 13-MAR-2008 14:18

Client ID: 50NG BFB Instrument: a3ux15.i

Sample Info:

Volume Injected (uL): 1.0 Operator: 1754

Column phase: DB624 20M Column diameter: 0.18

Data File: BFB847.D
Spectrum: HP ChemStation MS BFB847.D, Scan 98: 3.237 min.
Location of Maximum: 95.00
Number of points: 153

m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	1288	116.90	4570	166.00	523	285.00	2513
72.00	3386	118.00	2923	172.80	2377		
73.00	45168	118.90	4552	173.90	401216		
74.00	96704	119.90	647	174.90	28632		

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Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\BFB851.D
Lab Smp Id: 50NG BFB Client Smp ID: 50NG BFB
Inj Date : 18-MAR-2008 10:26
Operator : LE Inst ID: a3ux15.i
Smp Info :
Misc Info : C80318A,BFBUX15,,1754
Comment   :
Method   : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\BFBUX15.m
Meth Date : 23-May-2007 08:42 roachc Quant Type: ESTD
Cal Date : 01-MAR-2000 19:29 Cal File: uxx0287.d
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14 Sample Matrix: WATER
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
Vi	1.000	Injection Volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
3.249	3.330	-0.081	95	408128			100.00- 100.00	100.00
3.249	3.330	-0.081	50	66128			15.00- 40.00	16.20
3.249	3.330	-0.081	75	187776			30.00- 60.00	46.01
3.249	3.330	-0.081	96	27720			5.00- 9.00	6.79
3.249	3.330	-0.081	173	1341			0.00- 2.00	0.51
3.249	3.330	-0.081	174	265216			50.00- 100.00	64.98
3.249	3.330	-0.081	175	19000			5.00- 9.00	7.16
3.249	3.330	-0.081	176	252672			95.00- 101.00	95.27
3.249	3.330	-0.081	177	17312			5.00- 9.00	6.85

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\BFB851.D Page 1

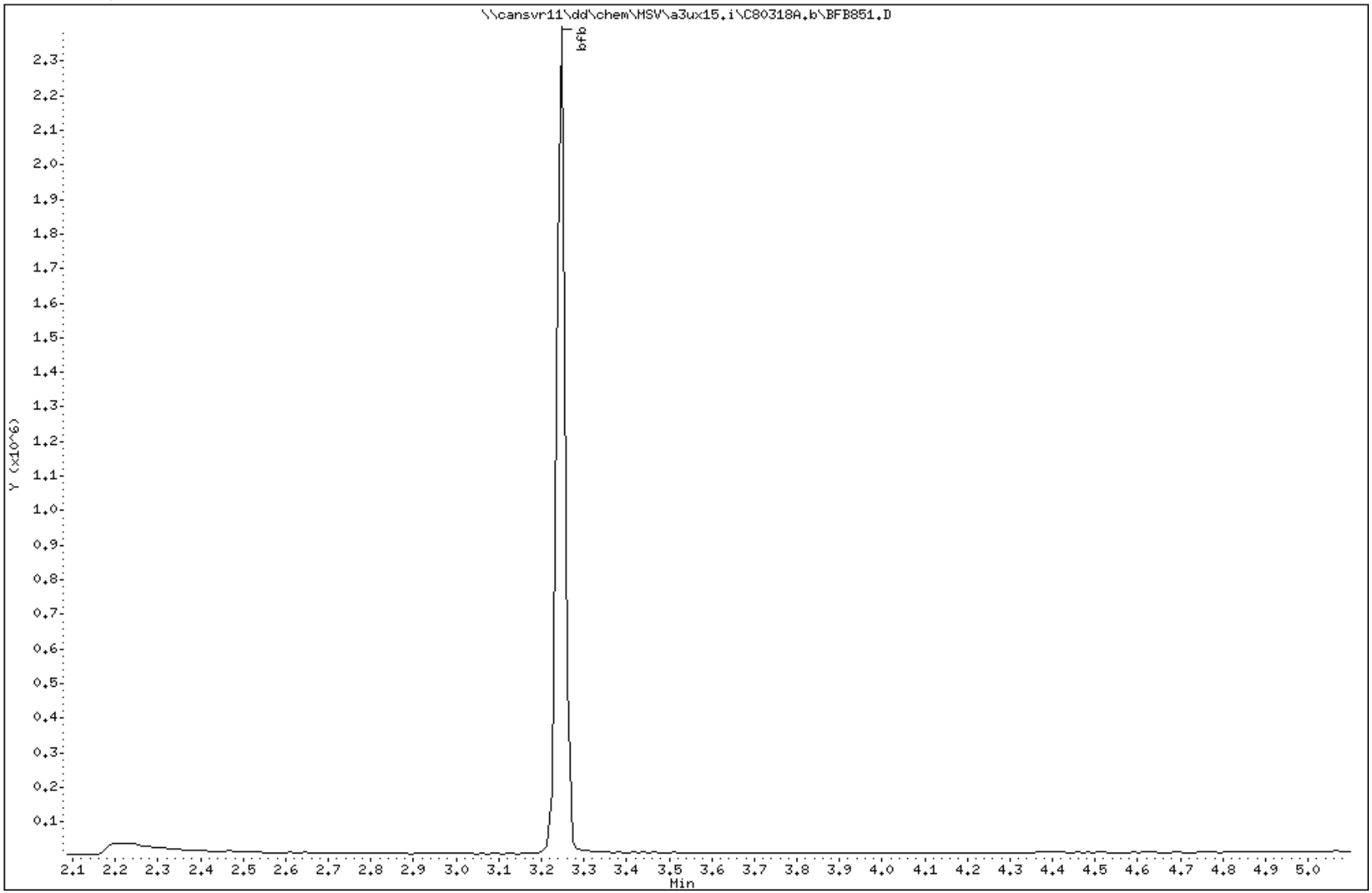
Date : 18-MAR-2008 10:26

Client ID: 50NG BFB Instrument: a3ux15.i

Sample Info:

Volume Injected (uL): 1.0 Operator: LE

Column phase: DB624 20M Column diameter: 0.18



Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\BFB851.D

Date : 18-MAR-2008 10:26

Client ID: 50NG BFB

Instrument: a3ux15.i

Sample Info:

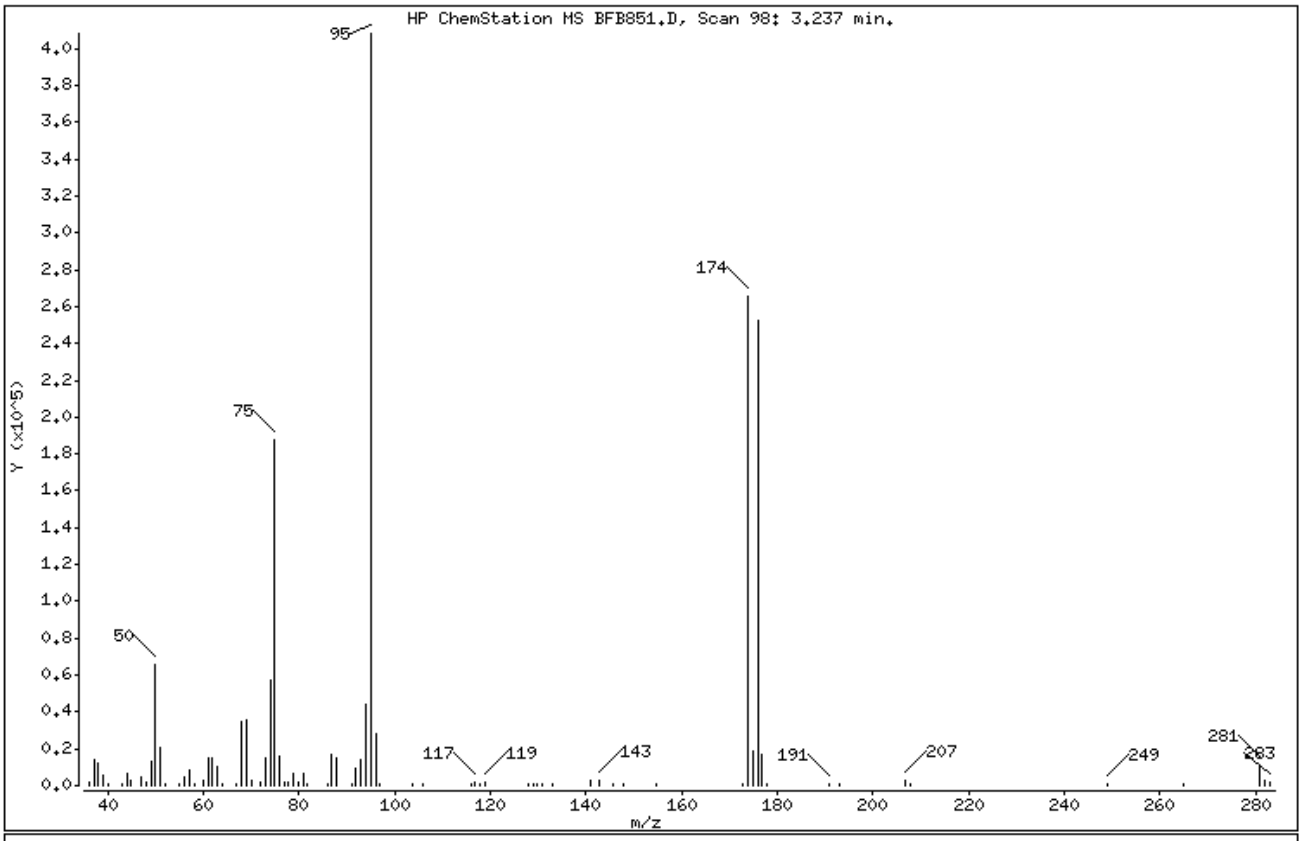
Volume Injected (uL): 1.0

Operator: LE

Column phase: DB624 20M

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.20
75	30.00 - 60.00% of mass 95	46.01
96	5.00 - 9.00% of mass 95	6.79
173	Less than 2.00% of mass 174	0.33 (0.51)
174	50.00 - 100.00% of mass 95	64.98
175	5.00 - 9.00% of mass 174	4.66 (7.16)
176	95.00 - 101.00% of mass 174	61.91 (95.27)
177	5.00 - 9.00% of mass 176	4.24 (6.85)

Date : 18-MAR-2008 10:26

Client ID: 50NG BFB Instrument: a3ux15.i

Sample Info:

Volume Injected (uL): 1.0 Operator: LE

Column phase: DB624 20M Column diameter: 0.18

Data File: BFB851.D
Spectrum: HP ChemStation MS BFB851.D, Scan 98: 3.237 min.
Location of Maximum: 95.00
Number of points: 79

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	2263	62.00	15046	87.90	15288	142.90	2679
37.10	14531	63.10	10608	91.00	1098	145.80	570
38.10	12655	64.00	1282	91.90	9379	148.00	797
39.10	5599	67.00	927	93.00	13936	154.90	902
40.10	788	68.00	34960	94.00	44408	172.80	1341
43.20	541	69.00	35808	95.00	408128	173.90	265216
44.00	6758	70.00	2720	96.00	27720	174.90	19000
45.00	2922	72.00	1865	97.00	964	175.90	252672
47.10	4458	73.00	14790	103.90	1389	176.90	17312
48.00	1659	74.00	57208	105.90	1208	177.90	737
49.10	12738	75.00	187776	115.90	1059	190.90	801
50.00	66128	76.00	15502	116.90	1777	193.00	677
51.10	20616	77.00	2315	117.90	1005	206.90	2881
52.00	935	77.90	1940	119.00	1973	208.00	620
55.00	837	78.90	6208	127.90	1219	248.90	570
56.00	4411	80.00	2321	128.90	530	265.00	723
57.00	8586	80.90	6201	129.90	1077	281.00	10863
58.10	502	81.90	1379	130.80	513	282.00	3171
60.00	2933	85.90	632	132.90	940	283.10	1939
61.00	15363	86.90	16712	140.90	2347		

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-081 KJTMD1AD-LCSD
Prep Date.....: 03/18/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8079081
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	103	(22 - 200)			SW846 8260B
	111	(22 - 200)	8.1	(0-95)	SW846 8260B
Benzene	**89**	**(80 - 116)**			**SW846 8260B**
	100	**(80 - 116)**	**12**	**(0-20)**	**SW846 8260B**
1,2-Dichloroethene (total)	96	(82 - 116)			SW846 8260B
	107	(82 - 116)	12	(0-30)	SW846 8260B
Bromobenzene	94	(70 - 130)			SW846 8260B
	107	(70 - 130)	13	(0-30)	SW846 8260B
Bromochloromethane	99	(70 - 130)			SW846 8260B
	109	(70 - 130)	10	(0-30)	SW846 8260B
Bromodichloromethane	92	(87 - 130)			SW846 8260B
	101	(87 - 130)	9.8	(0-30)	SW846 8260B
Bromoform	86	(76 - 150)			SW846 8260B
	94	(76 - 150)	8.7	(0-30)	SW846 8260B
Bromomethane	97	(64 - 129)			SW846 8260B
	111	(64 - 129)	14	(0-30)	SW846 8260B
Methyl ethyl ketone	80	(28 - 237)			SW846 8260B
	86	(28 - 237)	6.7	(0-65)	SW846 8260B
n-Butylbenzene	83	(70 - 130)			SW846 8260B
	94	(70 - 130)	12	(0-30)	SW846 8260B
Xylenes (total)	92	(87 - 116)			SW846 8260B
	102	(87 - 116)	10	(0-30)	SW846 8260B
sec-Butylbenzene	84	(70 - 130)			SW846 8260B
	97	(70 - 130)	14	(0-30)	SW846 8260B
tert-Butylbenzene	87	(70 - 130)			SW846 8260B
	99	(70 - 130)	13	(0-30)	SW846 8260B
Carbon disulfide	88	(73 - 139)			SW846 8260B
	100	(73 - 139)	13	(0-30)	SW846 8260B
Carbon tetrachloride	101	(75 - 149)			SW846 8260B
	114	(75 - 149)	12	(0-30)	SW846 8260B
Chlorobenzene	**94**	**(76 - 117)**			**SW846 8260B**
	105	**(76 - 117)**	**11**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	88	(81 - 138)			SW846 8260B
	99	(81 - 138)	12	(0-30)	SW846 8260B
Chloroethane	80	(66 - 126)			SW846 8260B
	91	(66 - 126)	12	(0-30)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-081 KJTMD1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
n-Hexane	91	(70 - 130)			SW846 8260B
	100	(70 - 130)	9.4	(0-30)	SW846 8260B
Chloroform	93	(84 - 128)			SW846 8260B
	105	(84 - 128)	12	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	84	(70 - 130)			SW846 8260B
	92	(70 - 130)	9.9	(0-30)	SW846 8260B
Acetonitrile	101	(50 - 130)			SW846 8260B
	110	(50 - 130)	8.2	(0-30)	SW846 8260B
Chloromethane	68	(48 - 123)			SW846 8260B
	76	(48 - 123)	10	(0-30)	SW846 8260B
Acrolein	78	(50 - 130)			SW846 8260B
	85	(50 - 130)	8.1	(0-30)	SW846 8260B
Vinyl acetate	89	(70 - 130)			SW846 8260B
	95	(70 - 130)	6.4	(0-30)	SW846 8260B
Acrylonitrile	84	(50 - 130)			SW846 8260B
	94	(50 - 130)	12	(0-30)	SW846 8260B
2-Chlorotoluene	90	(70 - 130)			SW846 8260B
	100	(70 - 130)	11	(0-30)	SW846 8260B
4-Chlorotoluene	91	(70 - 130)			SW846 8260B
	103	(70 - 130)	12	(0-30)	SW846 8260B
Cyclohexane	71	(70 - 130)			SW846 8260B
	81	(70 - 130)	13	(0-30)	SW846 8260B
Iodomethane	108	(70 - 130)			SW846 8260B
	121	(70 - 130)	11	(0-30)	SW846 8260B
Isopropyl ether	98	(70 - 130)			SW846 8260B
	110	(70 - 130)	11	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	73	(70 - 130)			SW846 8260B
	81	(70 - 130)	9.4	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	87	(70 - 130)			SW846 8260B
	97	(70 - 130)	11	(0-30)	SW846 8260B
Dibromomethane	90	(70 - 130)			SW846 8260B
	102	(70 - 130)	12	(0-30)	SW846 8260B
1,2-Dichlorobenzene	92	(70 - 130)			SW846 8260B
	104	(70 - 130)	12	(0-30)	SW846 8260B
1,3-Dichlorobenzene	94	(70 - 130)			SW846 8260B
	105	(70 - 130)	11	(0-30)	SW846 8260B
1,4-Dichlorobenzene	95	(70 - 130)			SW846 8260B
	105	(70 - 130)	10	(0-30)	SW846 8260B
Dichlorodifluoromethane	77	(70 - 130)			SW846 8260B
	89	(70 - 130)	15	(0-30)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-081 KJTMD1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethane	89	(86 - 123)			SW846 8260B
	98	(86 - 123)	10	(0-30)	SW846 8260B
1,2-Dichloroethane	94	(79 - 136)			SW846 8260B
	106	(79 - 136)	12	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	96	(85 - 113)			SW846 8260B
	109	(85 - 113)	12	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	95	(80 - 120)			SW846 8260B
	106	(80 - 120)	11	(0-30)	SW846 8260B
1,1-Dichloroethene	**88**	**(63 - 130)**			**SW846 8260B**
	102	**(63 - 130)**	**14**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	84	(82 - 115)			SW846 8260B
	96	(82 - 115)	13	(0-30)	SW846 8260B
1,3-Dichloropropane	83	(70 - 130)			SW846 8260B
	93	(70 - 130)	11	(0-30)	SW846 8260B
2,2-Dichloropropane	99	(70 - 130)			SW846 8260B
	110	(70 - 130)	11	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	84	(84 - 130)			SW846 8260B
	96	(84 - 130)	13	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	78 a	(84 - 130)			SW846 8260B
	90	(84 - 130)	14	(0-30)	SW846 8260B
1,1-Dichloropropene	93	(70 - 130)			SW846 8260B
	104	(70 - 130)	12	(0-30)	SW846 8260B
Ethylbenzene	94	(86 - 116)			SW846 8260B
	104	(86 - 116)	11	(0-30)	SW846 8260B
Hexachlorobutadiene	96	(70 - 130)			SW846 8260B
	106	(70 - 130)	10	(0-30)	SW846 8260B
2-Hexanone	69	(35 - 200)			SW846 8260B
	76	(35 - 200)	11	(0-52)	SW846 8260B
Isopropylbenzene	102	(70 - 130)			SW846 8260B
	112	(70 - 130)	9.6	(0-30)	SW846 8260B
p-Isopropyltoluene	89	(70 - 130)			SW846 8260B
	102	(70 - 130)	13	(0-30)	SW846 8260B
Methyl acetate	76	(70 - 130)			SW846 8260B
	84	(70 - 130)	10	(0-30)	SW846 8260B
Methylcyclohexane	76	(70 - 130)			SW846 8260B
	88	(70 - 130)	15	(0-30)	SW846 8260B
Methylene chloride	81	(78 - 118)			SW846 8260B
	92	(78 - 118)	13	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	75 a	(78 - 141)			SW846 8260B
	84	(78 - 141)	10	(0-32)	SW846 8260B
Methyl tert-butyl ether (MTBE)	89	(70 - 130)			SW846 8260B
	98	(70 - 130)	10	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-081 KJTMD1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	78	(70 - 130)			SW846 8260B
	83	(70 - 130)	5.5	(0-30)	SW846 8260B
n-Propylbenzene	90	(70 - 130)			SW846 8260B
	102	(70 - 130)	13	(0-30)	SW846 8260B
Styrene	89	(85 - 117)			SW846 8260B
	98	(85 - 117)	9.7	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	93	(70 - 130)			SW846 8260B
	102	(70 - 130)	8.6	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	76 a	(85 - 118)			SW846 8260B
	86	(85 - 118)	12	(0-30)	SW846 8260B
Tetrachloroethene	104	(88 - 113)			SW846 8260B
	117 a	(88 - 113)	11	(0-30)	SW846 8260B
Toluene	**89**	**(74 - 119)**			**SW846 8260B**
	100	**(74 - 119)**	**12**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	91	(70 - 130)			SW846 8260B
	94	(70 - 130)	3.8	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	92	(70 - 130)			SW846 8260B
	99	(70 - 130)	7.9	(0-30)	SW846 8260B
1,1,1-Trichloroethane	102	(78 - 140)			SW846 8260B
	113	(78 - 140)	9.8	(0-30)	SW846 8260B
1,1,2-Trichloroethane	85	(83 - 122)			SW846 8260B
	97	(83 - 122)	13	(0-30)	SW846 8260B
Trichloroethene	**102**	**(75 - 122)**			**SW846 8260B**
	114	**(75 - 122)**	**11**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	115	(70 - 130)			SW846 8260B
	132 a	(70 - 130)	13	(0-30)	SW846 8260B
1,2,3-Trichloropropane	88	(70 - 130)			SW846 8260B
	101	(70 - 130)	14	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	118	(70 - 130)			SW846 8260B
	137 a	(70 - 130)	14	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	85	(70 - 130)			SW846 8260B
	96	(70 - 130)	11	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	85	(70 - 130)			SW846 8260B
	96	(70 - 130)	13	(0-30)	SW846 8260B
Vinyl chloride	74	(61 - 120)			SW846 8260B
	83	(61 - 120)	12	(0-30)	SW846 8260B
m-Xylene & p-Xylene	92	(70 - 130)			SW846 8260B
	102	(70 - 130)	10	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-081 KJTMD1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	92	(70 - 130)			SW846 8260B
	101	(70 - 130)	9.1	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
	105	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
	93	(61 - 128)
Toluene-d8	98	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)
	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-081 KJTMD1AD-LCSD
Prep Date.....: 03/18/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8079081
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acetone	10	10	ug/L	103		SW846 8260B
	10	11	ug/L	111	8.1	SW846 8260B
Benzene	**10**	**8.9**	**ug/L**	**89**		**SW846 8260B**
	10	**10**	**ug/L**	**100**	**12**	**SW846 8260B**
1,2-Dichloroethene (total)	20	19	ug/L	96		SW846 8260B
	20	21	ug/L	107	12	SW846 8260B
Bromobenzene	10	9.4	ug/L	94		SW846 8260B
	10	11	ug/L	107	13	SW846 8260B
Bromochloromethane	10	9.9	ug/L	99		SW846 8260B
	10	11	ug/L	109	10	SW846 8260B
Bromodichloromethane	10	9.2	ug/L	92		SW846 8260B
	10	10	ug/L	101	9.8	SW846 8260B
Bromoform	10	8.6	ug/L	86		SW846 8260B
	10	9.4	ug/L	94	8.7	SW846 8260B
Bromomethane	10	9.7	ug/L	97		SW846 8260B
	10	11	ug/L	111	14	SW846 8260B
Methyl ethyl ketone	10	8.0	ug/L	80		SW846 8260B
	10	8.6	ug/L	86	6.7	SW846 8260B
n-Butylbenzene	10	8.3	ug/L	83		SW846 8260B
	10	9.4	ug/L	94	12	SW846 8260B
Xylenes (total)	30	28	ug/L	92		SW846 8260B
	30	31	ug/L	102	10	SW846 8260B
sec-Butylbenzene	10	8.4	ug/L	84		SW846 8260B
	10	9.7	ug/L	97	14	SW846 8260B
tert-Butylbenzene	10	8.7	ug/L	87		SW846 8260B
	10	9.9	ug/L	99	13	SW846 8260B
Carbon disulfide	10	8.8	ug/L	88		SW846 8260B
	10	10	ug/L	100	13	SW846 8260B
Carbon tetrachloride	10	10	ug/L	101		SW846 8260B
	10	11	ug/L	114	12	SW846 8260B
Chlorobenzene	**10**	**9.4**	**ug/L**	**94**		**SW846 8260B**
	10	**11**	**ug/L**	**105**	**11**	**SW846 8260B**
Chlorodibromomethane	10	8.8	ug/L	88		SW846 8260B
	10	9.9	ug/L	99	12	SW846 8260B
Chloroethane	10	8.0	ug/L	80		SW846 8260B
	10	9.1	ug/L	91	12	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-081 KJTMD1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
n-Hexane	10	9.1	ug/L	91		SW846 8260B
	10	10	ug/L	100	9.4	SW846 8260B
Chloroform	10	9.3	ug/L	93		SW846 8260B
	10	11	ug/L	105	12	SW846 8260B
2-Chloroethyl vinyl ether	10	8.4	ug/L	84		SW846 8260B
	10	9.2	ug/L	92	9.9	SW846 8260B
Acetonitrile	100	100	ug/L	101		SW846 8260B
	100	110	ug/L	110	8.2	SW846 8260B
Chloromethane	10	6.8	ug/L	68		SW846 8260B
	10	7.6	ug/L	76	10	SW846 8260B
Acrolein	100	78	ug/L	78		SW846 8260B
	100	85	ug/L	85	8.1	SW846 8260B
Vinyl acetate	10	8.9	ug/L	89		SW846 8260B
	10	9.5	ug/L	95	6.4	SW846 8260B
Acrylonitrile	100	84	ug/L	84		SW846 8260B
	100	94	ug/L	94	12	SW846 8260B
2-Chlorotoluene	10	9.0	ug/L	90		SW846 8260B
	10	10	ug/L	100	11	SW846 8260B
4-Chlorotoluene	10	9.1	ug/L	91		SW846 8260B
	10	10	ug/L	103	12	SW846 8260B
Cyclohexane	10	7.1	ug/L	71		SW846 8260B
	10	8.1	ug/L	81	13	SW846 8260B
Iodomethane	10	11	ug/L	108		SW846 8260B
	10	12	ug/L	121	11	SW846 8260B
Isopropyl ether	10	9.8	ug/L	98		SW846 8260B
	10	11	ug/L	110	11	SW846 8260B
1,2-Dibromo-3-chloro-propane	10	7.3	ug/L	73		SW846 8260B
	10	8.1	ug/L	81	9.4	SW846 8260B
1,2-Dibromoethane (EDB)	10	8.7	ug/L	87		SW846 8260B
	10	9.7	ug/L	97	11	SW846 8260B
Dibromomethane	10	9.0	ug/L	90		SW846 8260B
	10	10	ug/L	102	12	SW846 8260B
1,2-Dichlorobenzene	10	9.2	ug/L	92		SW846 8260B
	10	10	ug/L	104	12	SW846 8260B
1,3-Dichlorobenzene	10	9.4	ug/L	94		SW846 8260B
	10	11	ug/L	105	11	SW846 8260B
1,4-Dichlorobenzene	10	9.5	ug/L	95		SW846 8260B
	10	10	ug/L	105	10	SW846 8260B
Dichlorodifluoromethane	10	7.7	ug/L	77		SW846 8260B
	10	8.9	ug/L	89	15	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-081 KJTMD1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethane	10	8.9	ug/L	89		SW846 8260B
	10	9.8	ug/L	98	10	SW846 8260B
1,2-Dichloroethane	10	9.4	ug/L	94		SW846 8260B
	10	11	ug/L	106	12	SW846 8260B
cis-1,2-Dichloroethene	10	9.6	ug/L	96		SW846 8260B
	10	11	ug/L	109	12	SW846 8260B
trans-1,2-Dichloroethene	10	9.5	ug/L	95		SW846 8260B
	10	11	ug/L	106	11	SW846 8260B
1,1-Dichloroethene	**10**	**8.8**	**ug/L**	**88**		**SW846 8260B**
	10	**10**	**ug/L**	**102**	**14**	**SW846 8260B**
1,2-Dichloropropane	10	8.4	ug/L	84		SW846 8260B
	10	9.6	ug/L	96	13	SW846 8260B
1,3-Dichloropropane	10	8.3	ug/L	83		SW846 8260B
	10	9.3	ug/L	93	11	SW846 8260B
2,2-Dichloropropane	10	9.9	ug/L	99		SW846 8260B
	10	11	ug/L	110	11	SW846 8260B
cis-1,3-Dichloropropene	10	8.4	ug/L	84		SW846 8260B
	10	9.6	ug/L	96	13	SW846 8260B
trans-1,3-Dichloropropene	10	7.8 a	ug/L	78		SW846 8260B
	10	9.0	ug/L	90	14	SW846 8260B
1,1-Dichloropropene	10	9.3	ug/L	93		SW846 8260B
	10	10	ug/L	104	12	SW846 8260B
Ethylbenzene	10	9.4	ug/L	94		SW846 8260B
	10	10	ug/L	104	11	SW846 8260B
Hexachlorobutadiene	10	9.6	ug/L	96		SW846 8260B
	10	11	ug/L	106	10	SW846 8260B
2-Hexanone	10	6.9	ug/L	69		SW846 8260B
	10	7.6	ug/L	76	11	SW846 8260B
Isopropylbenzene	10	10	ug/L	102		SW846 8260B
	10	11	ug/L	112	9.6	SW846 8260B
p-Isopropyltoluene	10	8.9	ug/L	89		SW846 8260B
	10	10	ug/L	102	13	SW846 8260B
Methyl acetate	10	7.6	ug/L	76		SW846 8260B
	10	8.4	ug/L	84	10	SW846 8260B
Methylcyclohexane	10	7.6	ug/L	76		SW846 8260B
	10	8.8	ug/L	88	15	SW846 8260B
Methylene chloride	10	8.1	ug/L	81		SW846 8260B
	10	9.2	ug/L	92	13	SW846 8260B
4-Methyl-2-pentanone (MIBK	10	7.5 a	ug/L	75		SW846 8260B
	10	8.4	ug/L	84	10	SW846 8260B
Methyl tert-butyl ether (MTBE)	10	8.9	ug/L	89		SW846 8260B
	10	9.8	ug/L	98	10	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-081 KJTMD1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Naphthalene	10	7.8	ug/L	78		SW846 8260B
	10	8.3	ug/L	83	5.5	SW846 8260B
n-Propylbenzene	10	9.0	ug/L	90		SW846 8260B
	10	10	ug/L	102	13	SW846 8260B
Styrene	10	8.9	ug/L	89		SW846 8260B
	10	9.8	ug/L	98	9.7	SW846 8260B
1,1,1,2-Tetrachloroethane	10	9.3	ug/L	93		SW846 8260B
	10	10	ug/L	102	8.6	SW846 8260B
1,1,2,2-Tetrachloroethane	10	7.6 a	ug/L	76		SW846 8260B
	10	8.6	ug/L	86	12	SW846 8260B
Tetrachloroethene	10	10	ug/L	104		SW846 8260B
	10	12 a	ug/L	117	11	SW846 8260B
Toluene	**10**	**8.9**	**ug/L**	**89**		**SW846 8260B**
	10	**10**	**ug/L**	**100**	**12**	**SW846 8260B**
1,2,3-Trichlorobenzene	10	9.1	ug/L	91		SW846 8260B
	10	9.4	ug/L	94	3.8	SW846 8260B
1,2,4-Trichloro-benzene	10	9.2	ug/L	92		SW846 8260B
	10	9.9	ug/L	99	7.9	SW846 8260B
1,1,1-Trichloroethane	10	10	ug/L	102		SW846 8260B
	10	11	ug/L	113	9.8	SW846 8260B
1,1,2-Trichloroethane	10	8.5	ug/L	85		SW846 8260B
	10	9.7	ug/L	97	13	SW846 8260B
Trichloroethene	**10**	**10**	**ug/L**	**102**		**SW846 8260B**
	10	**11**	**ug/L**	**114**	**11**	**SW846 8260B**
Trichlorofluoromethane	10	12	ug/L	115		SW846 8260B
	10	13 a	ug/L	132	13	SW846 8260B
1,2,3-Trichloropropane	10	8.8	ug/L	88		SW846 8260B
	10	10	ug/L	101	14	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	10	12	ug/L	118		SW846 8260B
	10	14 a	ug/L	137	14	SW846 8260B
1,2,4-Trimethylbenzene	10	8.5	ug/L	85		SW846 8260B
	10	9.6	ug/L	96	11	SW846 8260B
1,3,5-Trimethylbenzene	10	8.5	ug/L	85		SW846 8260B
	10	9.6	ug/L	96	13	SW846 8260B
Vinyl chloride	10	7.4	ug/L	74		SW846 8260B
	10	8.3	ug/L	83	12	SW846 8260B
m-Xylene & p-Xylene	20	18	ug/L	92		SW846 8260B
	20	20	ug/L	102	10	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-081 KJTMD1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
o-Xylene	10	9.2	ug/L	92		SW846 8260B
	10	10	ug/L	101	9.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
	105	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
	93	(61 - 128)
Toluene-d8	98	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)
	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23836.D
Report Date: 18-Mar-2008 11:04

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23836.D
Lab Smp Id: LCS
Inj Date : 18-MAR-2008 11:38
Operator : 1754 Inst ID: a3ux15.i
Smp Info : LCS
Misc Info : C80318A,8260LLUX15,,1754,3
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Meth Date : 18-Mar-2008 11:29 RoachC Quant Type: ISTD
Cal Date : 13-MAR-2008 18:32 Cal File: UXC23743.D
Als bottle: 3 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 4-8260+IX+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	5.578	5.577	(1.000)	1250768	50.0000	
* 2 Chlorobenzene-d5	117	8.258	8.257	(1.000)	980510	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	612351	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	263711	52.3813	10.476
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	282725	47.5248	9.505
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	1060315	48.8753	9.775
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	410450	46.0795	9.216
8 Dichlorodifluoromethane	85	1.641	1.640	(0.294)	204708	38.5393	7.708
9 Chloromethane	50	1.795	1.795	(0.322)	213038	34.2330	6.846
10 Vinyl Chloride	62	1.913	1.913	(0.343)	259589	36.8218	7.364
11 Bromomethane	94	2.245	2.245	(0.403)	153280	48.2847	9.657
12 Chloroethane	64	2.352	2.352	(0.422)	146130	40.2393	8.048
13 Trichlorofluoromethane	101	2.577	2.577	(0.462)	213217	57.6964	11.539
15 Acrolein	56	2.969	2.969	(0.532)	200005	389.992	77.998
16 Acetone	43	3.123	3.123	(0.560)	72143	51.3840	10.277
17 1,1-Dichloroethene	96	3.064	3.063	(0.549)	247473	43.9829	8.796
18 Freon-113	151	3.075	3.075	(0.551)	224270	59.1916	11.838
19 Iodomethane	142	3.206	3.206	(0.575)	471132	54.0804	10.816
20 Carbon Disulfide	76	3.265	3.265	(0.585)	763743	44.1367	8.827
21 Methylene Chloride	84	3.502	3.502	(0.628)	262390	40.6223	8.124

22 Acetonitrile	41	3.372	3.372 (0.605)	178094	505.501	101.10
23 Acrylonitrile	53	3.716	3.728 (0.666)	821312	419.970	83.994

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23836.D
Report Date: 18-Mar-2008 11:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
24	Methyl tert-butyl ether	73	3.740	3.739	(0.670)	783436	44.3176	8.864
25	trans-1,2-Dichloroethene	96	3.740	3.739	(0.670)	289907	47.5364	9.507
26	Hexane	86	3.965	3.965	(0.711)	68593	45.5572	9.111
27	Vinyl acetate	43	4.155	4.143	(0.745)	686445	73.0281	14.606
28	1,1-Dichloroethane	63	4.107	4.107	(0.736)	438473	44.3196	8.864
29	tert-Butyl Alcohol	59	3.609	3.609	(0.647)	369351	884.332	176.87
30	2-Butanone	43	4.629	4.617	(0.830)	83833	40.0883	8.018
M 31	1,2-Dichloroethene (total)	96				589883	95.7052	19.141
32	cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	299976	48.1688	9.634
33	2,2-Dichloropropane	77	4.605	4.605	(0.826)	344446	49.3030	9.861
34	Bromochloromethane	128	4.807	4.807	(0.862)	152898	49.2847	9.857
35	Chloroform	83	4.866	4.866	(0.872)	445856	46.6144	9.323
36	Tetrahydrofuran	42	4.866	4.866	(0.872)	57245	38.8507	7.770
37	1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	404472	51.1976	10.240
38	1,1-Dichloropropene	75	5.163	5.162	(0.926)	353745	46.3320	9.266
39	Carbon Tetrachloride	117	5.174	5.174	(0.928)	356969	50.6104	10.122
40	1,2-Dichloroethane	62	5.364	5.364	(0.962)	328076	46.7851	9.357
41	Benzene	78	5.352	5.352	(0.960)	1084842	44.2747	8.855
42	Trichloroethene	130	5.886	5.886	(1.055)	317891	50.7513	10.150
43	1,2-Dichloropropane	63	6.088	6.087	(1.091)	225337	42.1240	8.425
44	1,4-Dioxane	88	6.206	6.206	(1.113)	105478	2273.03	454.61
45	Dibromomethane	93	6.194	6.194	(1.111)	146512	45.1015	9.020
46	Bromodichloromethane	83	6.313	6.313	(1.132)	313399	46.0050	9.201
47	2-Chloroethyl vinyl ether	63	6.562	6.562	(1.176)	133056	41.8795	8.376
48	cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	367821	42.0758	8.415
49	4-Methyl-2-pentanone	43	6.835	6.834	(1.225)	183009	37.6815	7.536
50	Toluene	91	7.001	7.000	(0.848)	1138204	44.6122	8.922
51	trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	325045	39.2231	7.845
52	Ethyl Methacrylate	69	Compound Not Detected.					
53	1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	214128	42.4478	8.490
54	1,3-Dichloropropane	76	7.511	7.510	(0.910)	365331	41.6184	8.324
55	Tetrachloroethene	164	7.499	7.499	(0.908)	263539	52.0688	10.414
56	2-Hexanone	43	7.570	7.570	(0.917)	124385	34.2911	6.858
57	Dibromochloromethane	129	7.724	7.724	(0.935)	248340	44.1043	8.821
58	1,2-Dibromoethane	107	7.831	7.831	(0.948)	226913	43.5286	8.706
59	Chlorobenzene	112	8.281	8.281	(1.003)	779806	47.0892	9.418
60	1,1,1,2-Tetrachloroethane	131	8.353	8.352	(1.011)	280373	46.6722	9.334
61	Ethylbenzene	106	8.376	8.376	(1.014)	430034	46.9299	9.386
62	m + p-Xylene	106	8.483	8.483	(1.027)	1066394	92.1375	18.428
M 63	Xylenes (total)	106				1597039	138.151	27.630
64	Xylene-o	106	8.851	8.850	(1.072)	530645	46.0137	9.203
65	Styrene	104	8.862	8.874	(1.073)	861902	44.3235	8.865
66	Bromoform	173	9.052	9.052	(1.096)	185448	43.2127	8.642
67	Isopropylbenzene	105	9.206	9.206	(1.115)	1373798	50.8684	10.174
68	1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	290968	37.9939	7.599
70	1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	104315	43.8064	8.761
71	Bromobenzene	156	9.515	9.514	(0.907)	369875	46.9677	9.394
72	n-Propylbenzene	120	9.598	9.597	(0.915)	400048	44.8849	8.977
73	2-Chlorotoluene	126	9.693	9.692	(0.924)	346501	44.8543	8.971
74	1,3,5-Trimethylbenzene	105	9.764	9.763	(0.931)	1134590	42.4251	8.485
75	4-Chlorotoluene	126	9.799	9.799	(0.934)	358352	45.7205	9.144
76	tert-Butylbenzene	119	10.084	10.084	(0.962)	1037575	43.6199	8.724

77	1,2,4-Trimethylbenzene	105	10.131	10.131 (0.966)	1182436	42.7078	8.542
78	sec-Butylbenzene	105	10.297	10.297 (0.982)	1439459	42.2170	8.443

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23836.D
Report Date: 18-Mar-2008 11:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
79	4-Isopropyltoluene	119	10.440	10.439	(0.995)	1309889	44.6135	8.923
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	734440	47.1795	9.436
81	1,4-Dichlorobenzene	146	10.511	10.511	(1.002)	765840	47.3487	9.470
82	n-Butylbenzene	91	10.843	10.843	(1.034)	1086462	41.6204	8.324
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	689392	45.8280	9.166
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	70965	36.7256	7.345
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	485059	45.9550	9.191
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	245937	47.8414	9.568
87	Naphthalene	128	12.716	12.716	(1.213)	1070442	39.1545	7.831
88	1,2,3-Trichlorobenzene	180	12.965	12.965	(1.236)	432220	45.3959	9.079
14	Dichlorofluoromethane	67	Compound Not Detected.					
89	Ethyl Ether	59	2.850	2.850	(0.511)	195431	42.4591	8.492
91	3-Chloropropene	76	3.455	3.396	(0.619)	5653	1.86487	0.3730
92	Isopropyl Ether	87	4.155	4.155	(0.745)	245913	48.9747	9.795
93	2-Chloro-1,3-butadiene	53	4.190	4.178	(0.751)	13174	1.89538	0.3791
94	Propionitrile	54	Compound Not Detected.					
95	Ethyl Acetate	43	4.629	4.664	(0.830)	84969	21.0336	4.207
96	Methacrylonitrile	41	Compound Not Detected.					
97	Isobutanol	41	5.257	5.257	(0.637)	306704	2426.56	485.31
99	n-Butanol	56	5.578	5.815	(0.675)	6226	38.8626	7.772
100	Methyl Methacrylate	41	6.206	6.159	(1.113)	3193	0.83502	0.1670
101	2-Nitropropane	41	6.562	6.514	(1.176)	6884	5.43030	1.086
103	Cyclohexanone	55	9.313	9.313	(0.888)	67155	117.844	23.569
98	Cyclohexane	56	5.080	5.079	(0.911)	384397	35.4338	7.087
143	Methyl Acetate	43	3.408	3.407	(0.611)	157359	37.8765	7.575
144	Methylcyclohexane	83	6.052	6.052	(1.085)	443974	37.9829	7.596
141	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
152	Vinyl Acetate-86	86	4.143	4.143	(0.743)	54572	44.4602	8.892
153	1,3-Butadiene	54	1.937	1.925	(0.347)	53874		(a)
146	2-Methylnaphthalene	142	14.009	14.021	(1.336)	9449	0.65628	0.1312(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23836.D
Report Date: 18-Mar-2008 11:04

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

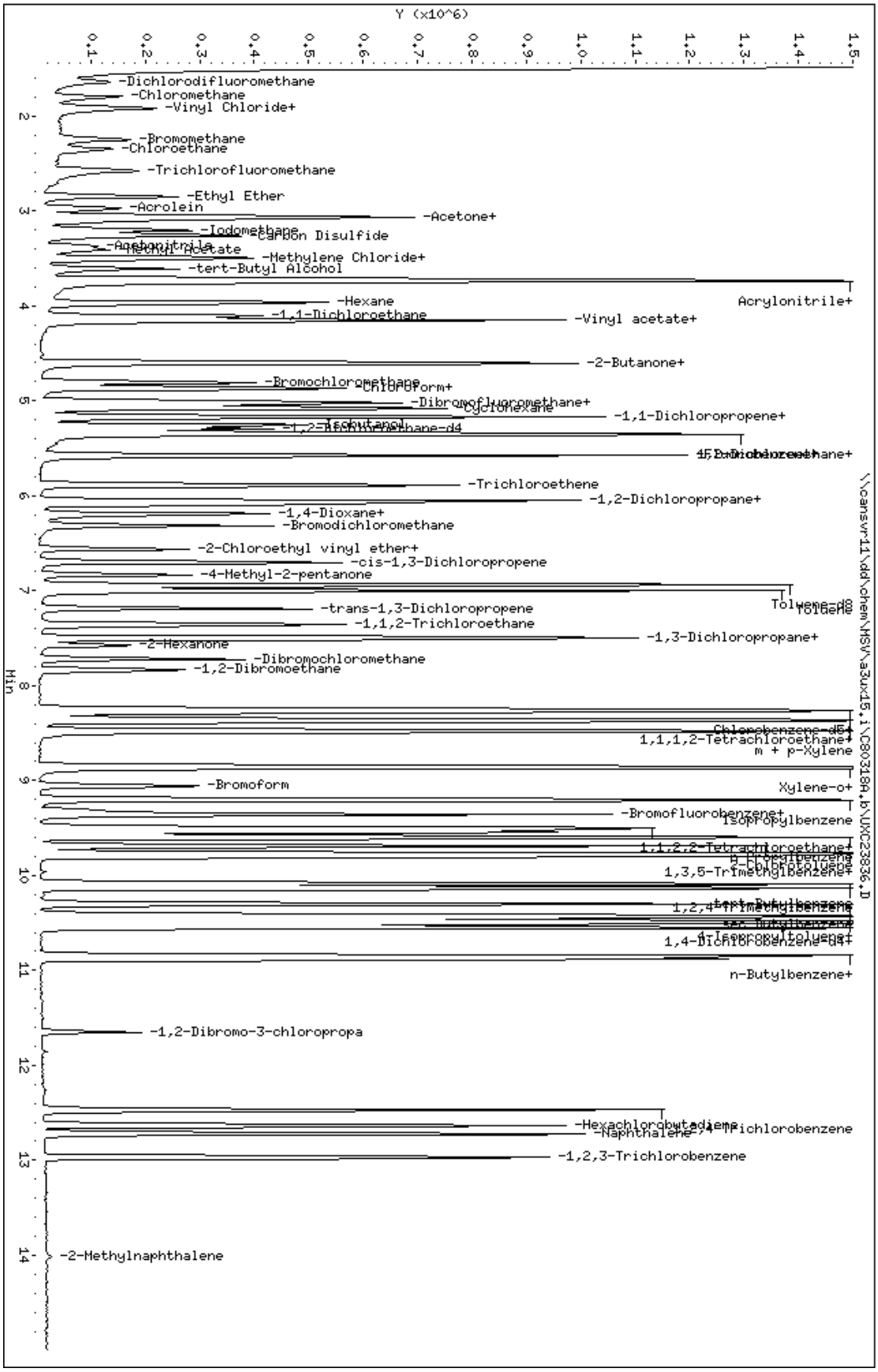
Instrument ID: a3ux15.i
Lab File ID: UXC23836.D
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Misc Info: C80318A,8260LLUX15,,1754,3

Calibration Date: 18-MAR-2008
Calibration Time: 11:15
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1278766	639383	2557532	1250768	-2.19
2 Chlorobenzene-d5	1012111	506056	2024222	980510	-3.12
3 1,4-Dichlorobenze	618918	309459	1237836	612351	-1.06

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23836.D
Date : 18-MAR-2008 11:38
Client ID:
Sample Info: LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23837.D
Report Date: 18-Mar-2008 11:17

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23837.D
Lab Smp Id: LCSD
Inj Date : 18-MAR-2008 12:01
Operator : 1754 Inst ID: a3ux15.i
Smp Info : LCSD
Misc Info : C80318A,8260LLUX15,,1754,3
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Meth Date : 18-Mar-2008 11:29 RoachC Quant Type: ISTD
Cal Date : 13-MAR-2008 18:32 Cal File: UXC23743.D
Als bottle: 4 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 4-8260+IX+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	5.578	5.577	(1.000)	1288491	50.0000	
* 2 Chlorobenzene-d5	117	8.258	8.257	(1.000)	1020269	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	616482	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	272915	52.6224	10.524
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	285897	46.6510	9.330
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	1097462	48.6162	9.723
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	417123	45.0038	9.001
8 Dichlorodifluoromethane	85	1.641	1.640	(0.294)	245243	44.6061	8.921
9 Chloromethane	50	1.795	1.795	(0.322)	243436	37.9724	7.594
10 Vinyl Chloride	62	1.913	1.913	(0.343)	301829	41.5599	8.312
11 Bromomethane	94	2.245	2.245	(0.403)	181986	55.6491	11.130
12 Chloroethane	64	2.352	2.352	(0.422)	167615	45.4496	9.090
13 Trichlorofluoromethane	101	2.577	2.577	(0.462)	250917	65.9101	13.182
15 Acrolein	56	2.981	2.969	(0.534)	223422	422.898	84.580
16 Acetone	43	3.123	3.123	(0.560)	80425	55.7134	11.143
17 1,1-Dichloroethene	96	3.064	3.063	(0.549)	294334	50.7800	10.156
18 Freon-113	151	3.075	3.075	(0.551)	266914	68.3842	13.677
19 Iodomethane	142	3.206	3.206	(0.575)	542827	60.4859	12.097
20 Carbon Disulfide	76	3.265	3.265	(0.585)	893436	50.1200	10.024
21 Methylene Chloride	84	3.502	3.502	(0.628)	307129	46.1566	9.231

22 Acetonitrile	41	3.372	3.372 (0.605)	199033	548.457	109.69
23 Acrylonitrile	53	3.728	3.728 (0.668)	951326	472.210	94.442

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23837.D
Report Date: 18-Mar-2008 11:17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
24	Methyl tert-butyl ether	73	3.740	3.739	(0.670)	892147	48.9897	9.798
25	trans-1,2-Dichloroethene	96	3.740	3.739	(0.670)	334299	53.2106	10.642
26	Hexane	86	3.965	3.965	(0.711)	77930	50.0347	10.007
27	Vinyl acetate	43	4.155	4.143	(0.745)	785211	81.0897	16.218
28	1,1-Dichloroethane	63	4.107	4.107	(0.736)	501701	49.2258	9.845
29	tert-Butyl Alcohol	59	3.609	3.609	(0.647)	436820	1011.85	202.37
30	2-Butanone	43	4.629	4.617	(0.830)	93102	42.8632	8.573
M 31	1,2-Dichloroethene (total)	96				682506	107.487	21.497
32	cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	348207	54.2765	10.855
33	2,2-Dichloropropane	77	4.605	4.605	(0.826)	397146	55.1821	11.036
34	Bromochloromethane	128	4.807	4.807	(0.862)	174338	54.5503	10.910
35	Chloroform	83	4.866	4.866	(0.872)	518305	52.6025	10.520
36	Tetrahydrofuran	42	4.866	4.866	(0.872)	64175	42.2788	8.456
37	1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	459659	56.4797	11.296
38	1,1-Dichloropropene	75	5.163	5.162	(0.926)	409177	52.0232	10.405
39	Carbon Tetrachloride	117	5.174	5.174	(0.928)	414667	57.0695	11.414
40	1,2-Dichloroethane	62	5.364	5.364	(0.962)	382823	52.9939	10.599
41	Benzene	78	5.352	5.352	(0.960)	1263028	50.0378	10.008
42	Trichloroethene	130	5.886	5.886	(1.055)	367244	56.9140	11.383
43	1,2-Dichloropropane	63	6.088	6.087	(1.091)	265388	48.1586	9.632
44	1,4-Dioxane	88	6.206	6.206	(1.113)	121925	2550.54	510.11
45	Dibromomethane	93	6.194	6.194	(1.111)	170194	50.8577	10.172
46	Bromodichloromethane	83	6.313	6.313	(1.132)	355965	50.7236	10.145
47	2-Chloroethyl vinyl ether	63	6.562	6.562	(1.176)	151364	46.2472	9.249
48	cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	432125	47.9845	9.597
49	4-Methyl-2-pentanone	43	6.835	6.834	(1.225)	209087	41.7906	8.358
50	Toluene	91	7.001	7.000	(0.848)	1331265	50.1459	10.029
51	trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	389877	45.2130	9.043
52	Ethyl Methacrylate	69	Compound Not Detected.					
53	1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	253471	48.2889	9.658
54	1,3-Dichloropropane	76	7.511	7.510	(0.910)	424643	46.4900	9.298
55	Tetrachloroethene	164	7.499	7.499	(0.908)	307190	58.3280	11.666
56	2-Hexanone	43	7.570	7.570	(0.917)	143857	38.1138	7.623
57	Dibromochloromethane	129	7.724	7.724	(0.935)	290245	49.5377	9.908
58	1,2-Dibromoethane	107	7.831	7.831	(0.948)	262926	48.4715	9.694
59	Chlorobenzene	112	8.281	8.281	(1.003)	907151	52.6443	10.529
60	1,1,1,2-Tetrachloroethane	131	8.353	8.352	(1.011)	317961	50.8666	10.173
61	Ethylbenzene	106	8.376	8.376	(1.014)	497834	52.2118	10.442
62	m + p-Xylene	106	8.483	8.483	(1.027)	1231330	102.242	20.448
M 63	Xylenes (total)	106				1836252	152.653	30.530
64	Xylene-o	106	8.862	8.850	(1.073)	604922	50.4104	10.082
65	Styrene	104	8.862	8.874	(1.073)	988123	48.8342	9.767
66	Bromoform	173	9.064	9.052	(1.098)	210599	47.1610	9.432
67	Isopropylbenzene	105	9.206	9.206	(1.115)	1573803	56.0032	11.201
68	1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	330437	42.8585	8.572
70	1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	121366	50.6253	10.125
71	Bromobenzene	156	9.515	9.514	(0.907)	424036	53.4843	10.697
72	n-Propylbenzene	120	9.598	9.597	(0.915)	457019	50.9333	10.187
73	2-Chlorotoluene	126	9.693	9.692	(0.924)	388880	50.0029	10.000
74	1,3,5-Trimethylbenzene	105	9.764	9.763	(0.931)	1296681	48.1611	9.632
75	4-Chlorotoluene	126	9.799	9.799	(0.934)	406360	51.4982	10.300
76	tert-Butylbenzene	119	10.084	10.084	(0.962)	1190096	49.6966	9.939

77	1,2,4-Trimethylbenzene	105	10.131	10.131 (0.966)	1333275	47.8332	9.567
78	sec-Butylbenzene	105	10.297	10.297 (0.982)	1672247	48.7156	9.743

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23837.D
Report Date: 18-Mar-2008 11:17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
79	4-Isopropyltoluene	119	10.440	10.439	(0.995)	1505439	50.9302	10.186
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	824536	52.6122	10.522
81	1,4-Dichlorobenzene	146	10.511	10.511	(1.002)	852727	52.3673	10.473
82	n-Butylbenzene	91	10.843	10.843	(1.034)	1231449	46.8585	9.372
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	785312	51.8545	10.371
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	78479	40.3421	8.068
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	528312	49.7174	9.943
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	273946	52.9328	10.586
87	Naphthalene	128	12.716	12.716	(1.213)	1138350	41.3594	8.272
88	1,2,3-Trichlorobenzene	180	12.965	12.965	(1.236)	451795	47.1339	9.427
14	Dichlorofluoromethane	67	Compound Not Detected.					
89	Ethyl Ether	59	2.850	2.850	(0.511)	230039	48.5148	9.703
91	3-Chloropropene	76	3.265	3.396	(0.585)	893436	286.106	57.221
92	Isopropyl Ether	87	4.155	4.155	(0.745)	283255	54.7600	10.952
93	2-Chloro-1,3-butadiene	53	4.119	4.178	(0.739)	7864	1.09829	0.2196
94	Propionitrile	54	Compound Not Detected.					
95	Ethyl Acetate	43	4.629	4.664	(0.830)	92441	22.2133	4.443
96	Methacrylonitrile	41	Compound Not Detected.					
97	Isobutanol	41	5.257	5.257	(0.637)	366138	2783.90	556.78
99	n-Butanol	56	5.578	5.815	(0.675)	5615	33.6830	6.736
100	Methyl Methacrylate	41	6.194	6.159	(1.111)	6214	1.57749	0.3155
101	2-Nitropropane	41	6.562	6.514	(1.176)	7062	5.40761	1.082
103	Cyclohexanone	55	9.313	9.313	(0.888)	76606	133.527	26.705
98	Cyclohexane	56	5.080	5.079	(0.911)	454947	40.3616	8.072
143	Methyl Acetate	43	3.419	3.407	(0.613)	179522	41.9461	8.389
144	Methylcyclohexane	83	6.052	6.052	(1.085)	534295	43.9767	8.795
141	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
152	Vinyl Acetate-86	86	4.143	4.143	(0.743)	59953	47.4142	9.483
153	1,3-Butadiene	54	1.937	1.925	(0.347)	55452		(a)
146	2-Methylnaphthalene	142	14.021	14.021	(1.337)	3697	0.25506	0.05101(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23837.D
Report Date: 18-Mar-2008 11:17

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

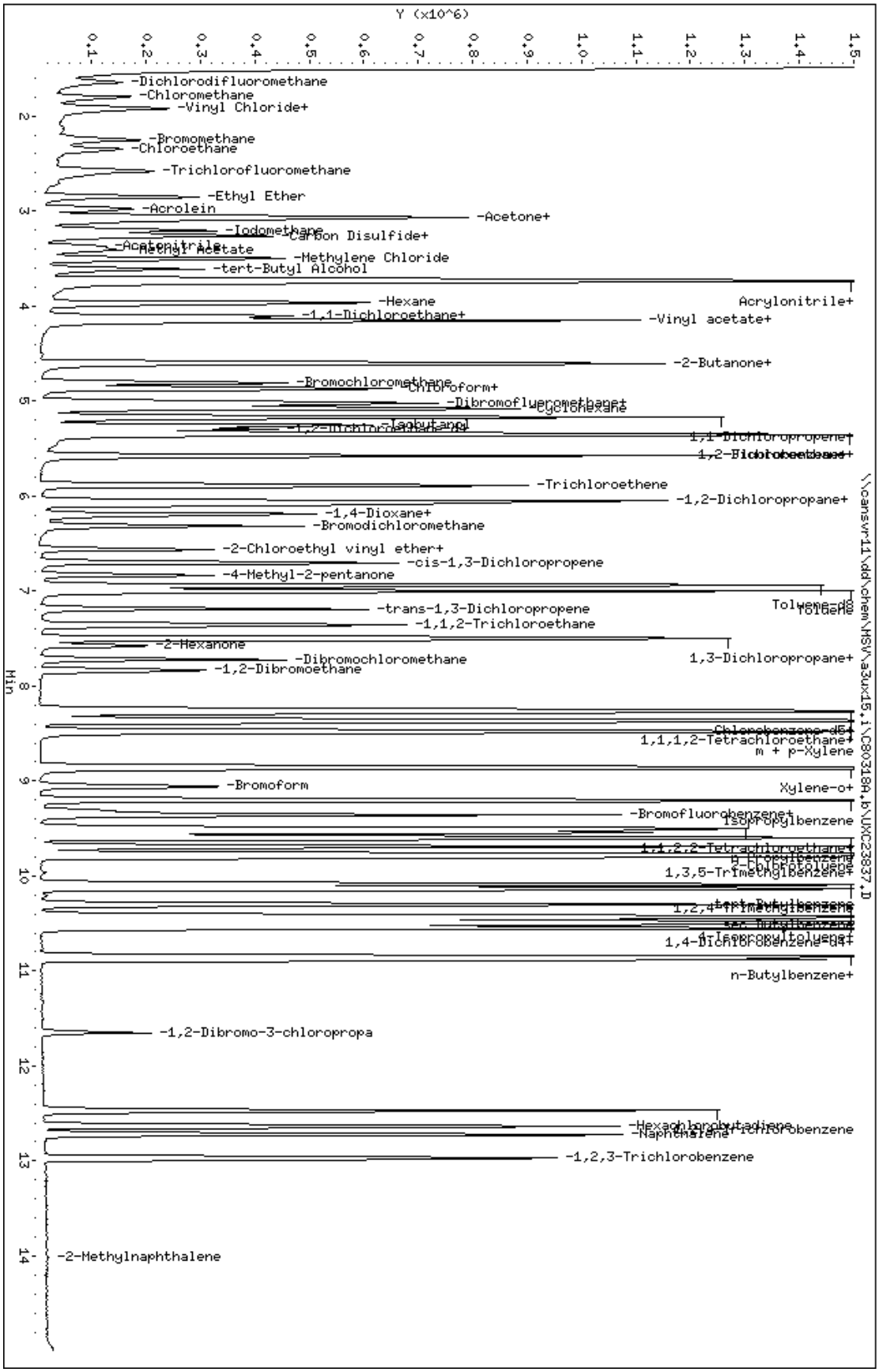
Instrument ID: a3ux15.i
Lab File ID: UXC23837.D
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Misc Info: C80318A,8260LLUX15,,1754,3

Calibration Date: 18-MAR-2008
Calibration Time: 11:15
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1278766	639383	2557532	1288491	0.76
2 Chlorobenzene-d5	1012111	506056	2024222	1020269	0.81
3 1,4-Dichlorobenze	618918	309459	1237836	616482	-0.39

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Y (x10^6)
Min
-Dichlorodifluoromethane
-Chloromethane
-Vinyl Chloride+
-Bromomethane
-Chloroethane
-Trichlorofluoromethane
-Ethyl Ether
-Acrolein
-Acetone+
-Iodomethane
-Carbon Disulfide+
-Acetonitrile
-Methyl Acetate
-Methylene Chloride
-tert-Butyl Alcohol
-Hexane
Acrylonitrile+
-1,1-Dichloroethane+
-Vinyl acetate+
-2-Butanone+
-Bromochloromethane
-Chloroform+
-Dibromofluoromethane+
Cyclohexane
-Trichloroethene
-1,2-Dichloropropane+
-1,4-Dioxane+
-Bromodichloromethane
-2-Chloroethyl vinyl ether+
-cis-1,3-Dichloropropene
-4-Methyl-2-pentanone
Toluene-d8
Toluene
-trans-1,3-Dichloropropene
-1,1,2-Trichloroethane
-2-Hexanone
1,3-Dichloropropane+
-Dibromochloromethane
-1,2-Dibromoethane
Chlorobenzene-d5
1,1,1,2-Tetrachloroethane+
m + p-Xylene
-Bromoform
Xylene-o+
-Bromofluorobenzene+
Isopropylbenzene
1,3,5-Trimethylbenzene+
n-Butylbenzene+
-1,2-Dibromo-3-chloropropa
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
-2-Methylnaphthalene
Data File: \\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23837.D
Date : 18-MAR-2008 12:01
Client ID:
Sample Info: LCSD
Purge Volume: 5.0
Column phase: DB624
Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AA **Matrix.....:** WATER
MB Lot-Sample #: A8C190000-081

Prep Date.....: 03/18/08 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 03/18/08 **Prep Batch #...:** 8079081
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	**2.3 J**	**10**	**ug/L**	**SW846 8260B**
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	**0.27 J**	**1.0**	**ug/L**	**SW846 8260B**
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTMD1AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23838.D
Report Date: 18-Mar-2008 13:06

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23838.D
Lab Smp Id: VBLK
Inj Date : 18-MAR-2008 12:24
Operator : 1754 Inst ID: a3ux15.i
Smp Info : VBLK,5ML/5ML
Misc Info : C80318A,8260LLUX15,,1754,3,,BLANK,,0
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Meth Date : 18-Mar-2008 11:29 RoachC Quant Type: ISTD
Cal Date : 13-MAR-2008 18:32 Cal File: UXC23743.D
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 4-8260+IX.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	5.577	5.577	(1.000)	1248861	50.0000	
* 2 Chlorobenzene-d5	117	8.257	8.257	(1.000)	980478	50.0000	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	595442	50.0000	
$ 4 Dibromofluoromethane	113	5.008	5.008	(0.898)	267075	53.1305	10.626
$ 5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	289245	48.6951	9.739
$ 6 Toluene-d8	98	6.941	6.941	(0.841)	1042795	48.0693	9.614
$ 7 Bromofluorobenzene	95	9.360	9.360	(1.134)	399126	44.8097	8.962
8 Dichlorodifluoromethane	85	Compound Not Detected.					
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
15 Acrolein	56	2.980	2.969	(0.534)	4457	8.70402	1.741
16 Acetone	43	3.123	3.123	(0.560)	17287	11.3366	2.267
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Freon-113	151	Compound Not Detected.					
19 Iodomethane	142	Compound Not Detected.					
20 Carbon Disulfide	76	Compound Not Detected.					
21 Methylene Chloride	84	Compound Not Detected.					

22 Acetonitrile	41	3.372	3.372 (0.605)	4508	12.1004	2.420
23 Acrylonitrile	53	Compound Not Detected.				

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23838.D
Report Date: 18-Mar-2008 13:06

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
	24 Methyl tert-butyl ether	73	Compound Not Detected.					
	25 trans-1,2-Dichloroethene	96	Compound Not Detected.					
	26 Hexane	86	Compound Not Detected.					
	27 Vinyl acetate	43	Compound Not Detected.					
	28 1,1-Dichloroethane	63	Compound Not Detected.					
	29 tert-Butyl Alcohol	59	3.621	3.609	(0.649)	5349	35.4927	7.098
	30 2-Butanone	43	Compound Not Detected.					
M	31 1,2-Dichloroethene (total)	96	Compound Not Detected.					
	32 cis-1,2-dichloroethene	96	Compound Not Detected.					
	33 2,2-Dichloropropane	77	Compound Not Detected.					
	34 Bromochloromethane	128	Compound Not Detected.					
	35 Chloroform	83	Compound Not Detected.					
	36 Tetrahydrofuran	42	Compound Not Detected.					
	37 1,1,1-Trichloroethane	97	Compound Not Detected.					
	38 1,1-Dichloropropene	75	Compound Not Detected.					
	39 Carbon Tetrachloride	117	Compound Not Detected.					
	40 1,2-Dichloroethane	62	Compound Not Detected.					
	41 Benzene	78	Compound Not Detected.					
	42 Trichloroethene	130	Compound Not Detected.					
	43 1,2-Dichloropropane	63	Compound Not Detected.					
	44 1,4-Dioxane	88	6.241	6.206	(1.119)	1116	24.0863	4.817
	45 Dibromomethane	93	Compound Not Detected.					
	46 Bromodichloromethane	83	Compound Not Detected.					
	47 2-Chloroethyl vinyl ether	63	Compound Not Detected.					
	48 cis-1,3-Dichloropropene	75	Compound Not Detected.					
	49 4-Methyl-2-pentanone	43	Compound Not Detected.					
	50 Toluene	91	Compound Not Detected.					
	51 trans-1,3-Dichloropropene	75	Compound Not Detected.					
	52 Ethyl Methacrylate	69	Compound Not Detected.					
	53 1,1,2-Trichloroethane	97	Compound Not Detected.					
	54 1,3-Dichloropropane	76	Compound Not Detected.					
	55 Tetrachloroethene	164	Compound Not Detected.					
	56 2-Hexanone	43	Compound Not Detected.					
	57 Dibromochloromethane	129	Compound Not Detected.					
	58 1,2-Dibromoethane	107	Compound Not Detected.					
	59 Chlorobenzene	112	Compound Not Detected.					
	60 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	61 Ethylbenzene	106	Compound Not Detected.					
	62 m + p-Xylene	106	Compound Not Detected.					
M	63 Xylenes (total)	106	Compound Not Detected.					
	64 Xylene-o	106	Compound Not Detected.					
	65 Styrene	104	Compound Not Detected.					
	66 Bromoform	173	Compound Not Detected.					
	67 Isopropylbenzene	105	Compound Not Detected.					
	68 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
	69 1,4-Dichloro-2-butene	53	Compound Not Detected.					
	70 1,2,3-Trichloropropane	110	Compound Not Detected.					
	71 Bromobenzene	156	Compound Not Detected.					
	72 n-Propylbenzene	120	Compound Not Detected.					
	73 2-Chlorotoluene	126	Compound Not Detected.					
	74 1,3,5-Trimethylbenzene	105	Compound Not Detected.					
	75 4-Chlorotoluene	126	Compound Not Detected.					

76	tert-Butylbenzene	119	Compound Not Detected.
77	1,2,4-Trimethylbenzene	105	Compound Not Detected.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23838.D
Report Date: 18-Mar-2008 13:06

						CONCENTRATIONS	
	QUANT SIG					ON-COLUMN	FINAL
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ng)	(ug/L)
78 sec-Butylbenzene	105	Compound Not Detected.					
79 4-Isopropyltoluene	119	Compound Not Detected.					
80 1,3-Dichlorobenzene	146	Compound Not Detected.					
81 1,4-Dichlorobenzene	146	Compound Not Detected.					
82 n-Butylbenzene	91	Compound Not Detected.					
83 1,2-Dichlorobenzene	146	Compound Not Detected.					
84 1,2-Dibromo-3-chloropropane	157	Compound Not Detected.					
85 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
86 Hexachlorobutadiene	225	Compound Not Detected.					
87 Naphthalene	128	12.716	12.716	(1.213)	26683	1.00372	0.2007
88 1,2,3-Trichlorobenzene	180	12.977	12.965	(1.237)	12471	1.34702	0.2694
14 Dichlorofluoromethane	67	Compound Not Detected.					
89 Ethyl Ether	59	Compound Not Detected.					
91 3-Chloropropene	76	Compound Not Detected.					
92 Isopropyl Ether	87	Compound Not Detected.					
93 2-Chloro-1,3-butadiene	53	Compound Not Detected.					
94 Propionitrile	54	Compound Not Detected.					
95 Ethyl Acetate	43	Compound Not Detected.					
96 Methacrylonitrile	41	Compound Not Detected.					
97 Isobutanol	41	5.257	5.257	(0.637)	4620	36.5534	7.311
99 n-Butanol	56	Compound Not Detected.					
100 Methyl Methacrylate	41	Compound Not Detected.					
101 2-Nitropropane	41	Compound Not Detected.					
103 Cyclohexanone	55	9.313	9.313	(0.888)	3147	5.67918	1.136
98 Cyclohexane	56	Compound Not Detected.					
140 1-Chlorohexane	91	Compound Not Detected.					
143 Methyl Acetate	43	Compound Not Detected.					
144 Methylcyclohexane	83	Compound Not Detected.					
141 1,3,5-Trichlorobenzene	180	Compound Not Detected.					
153 1,3-Butadiene	54	Compound Not Detected.					
154 n-Heptane	43	Compound Not Detected.					
146 2-Methylnaphthalene	142	Compound Not Detected.					

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23838.D
Report Date: 18-Mar-2008 13:06

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

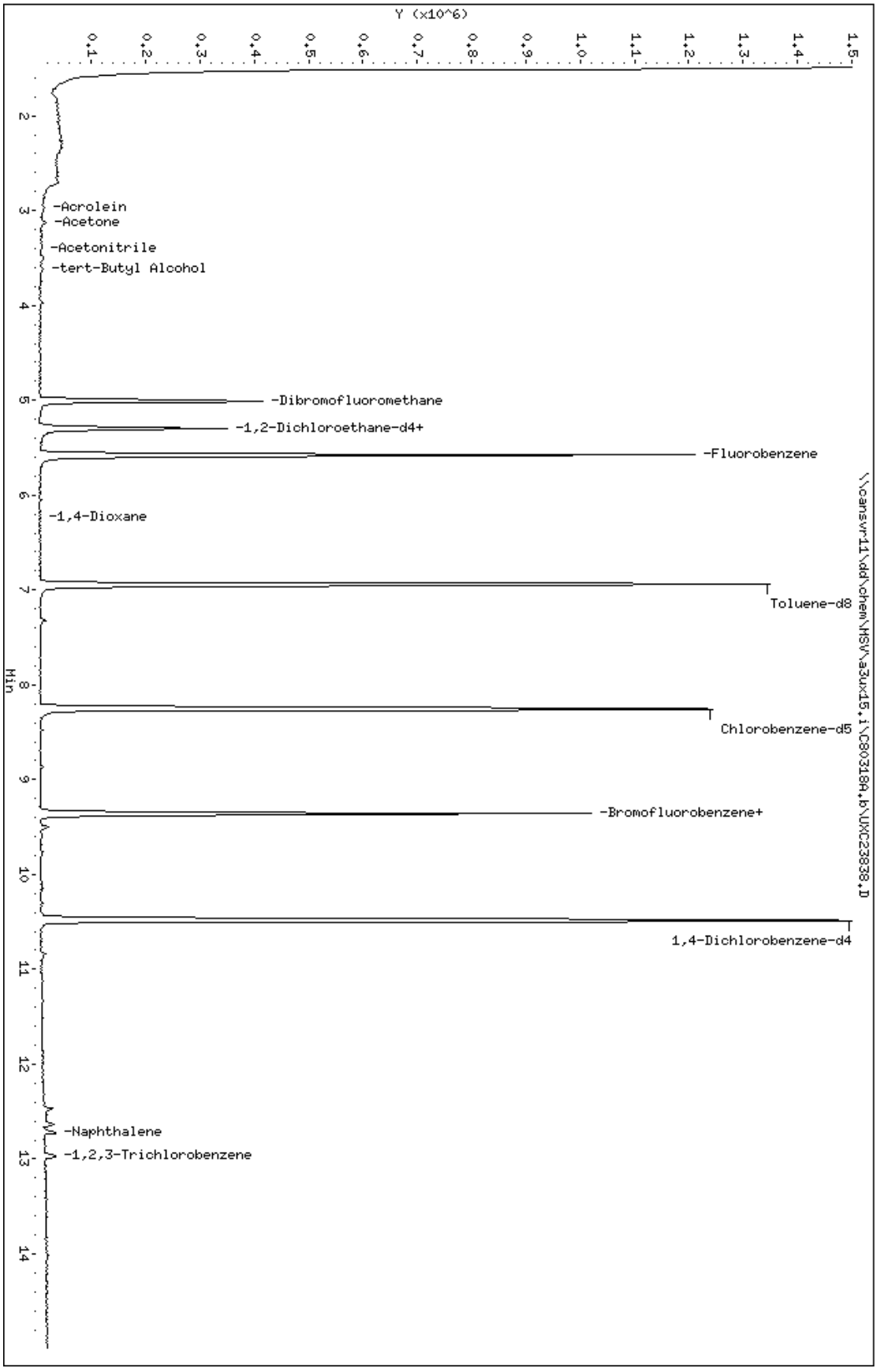
Instrument ID: a3ux15.i
Lab File ID: UXC23838.D
Lab Smp Id: VBLK
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Misc Info: C80318A,8260LLUX15,,1754,3,,BLANK,,0

Calibration Date: 18-MAR-2008
Calibration Time: 11:15
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1278766	639383	2557532	1248861	-2.34
2 Chlorobenzene-d5	1012111	506056	2024222	980478	-3.13
3 1,4-Dichlorobenze	618918	309459	1237836	595442	-3.79

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	-0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.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Date : 18-MAR-2008 12:24
Client ID:
Sample Info: VBLK,5ML/5ML
Purge Volume: 5.0
Column phase: DB624
Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18
Y (x10^6)
Min
-Acrolein
-Acetone
-Acetonitrile
-tert-Butyl Alcohol
-Dibromofluoromethane
-1,2-Dichloroethane-d4+
-Fluorobenzene
-1,4-Dioxane
Toluene-d8
Chlorobenzene-d5
-Bromofluorobenzene+
1,4-Dichlorobenzene-d4
-Naphthalene
-1,2,3-Trichlorobenzene
\\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23838.D

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23838.D

Date : 18-MAR-2008 12:24

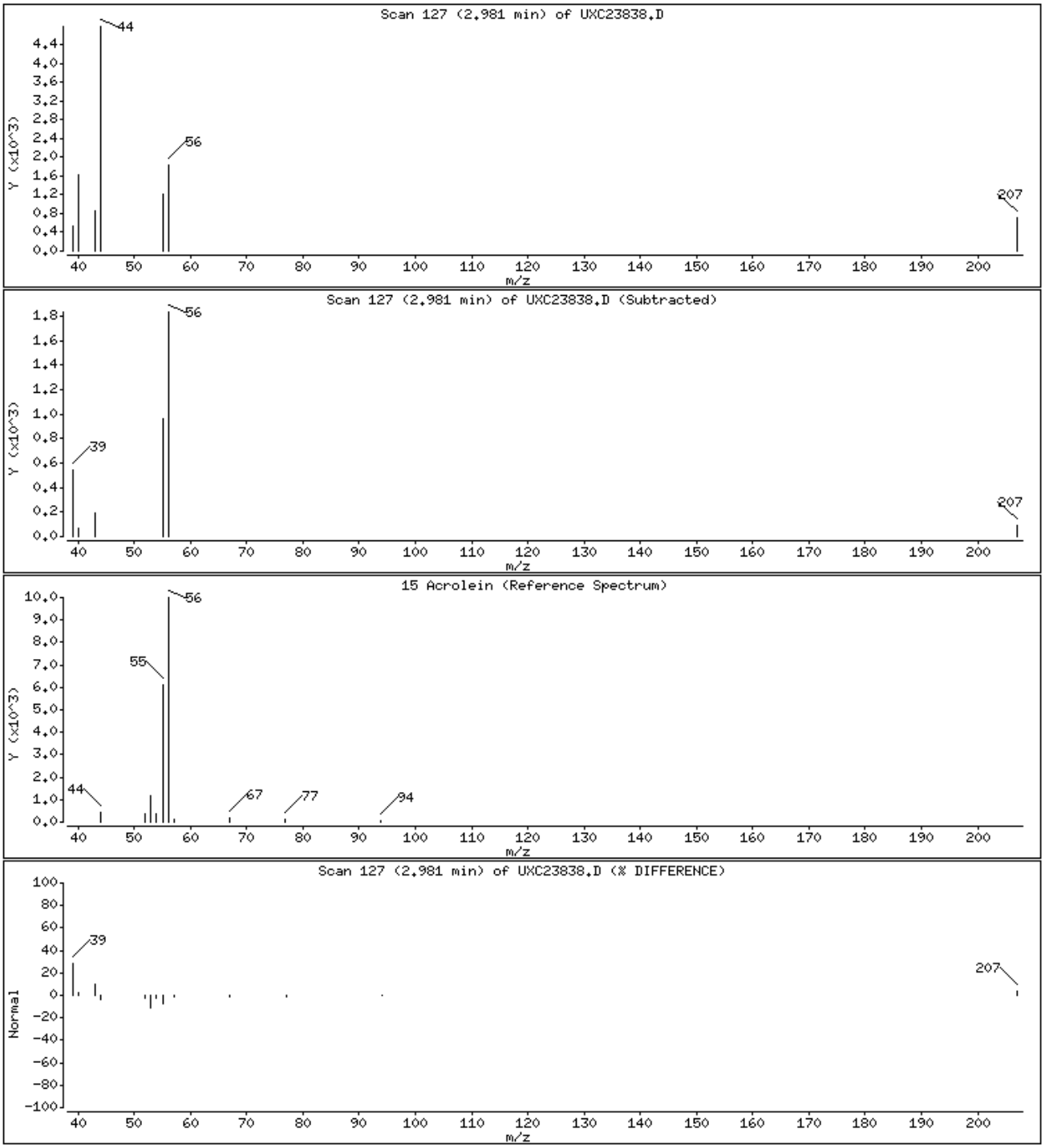
Client ID: Instrument: a3ux15.i

Sample Info: VBLK,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

15 Acrolein Concentration: 1.741 ug/L



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Date : 18-MAR-2008 12:24

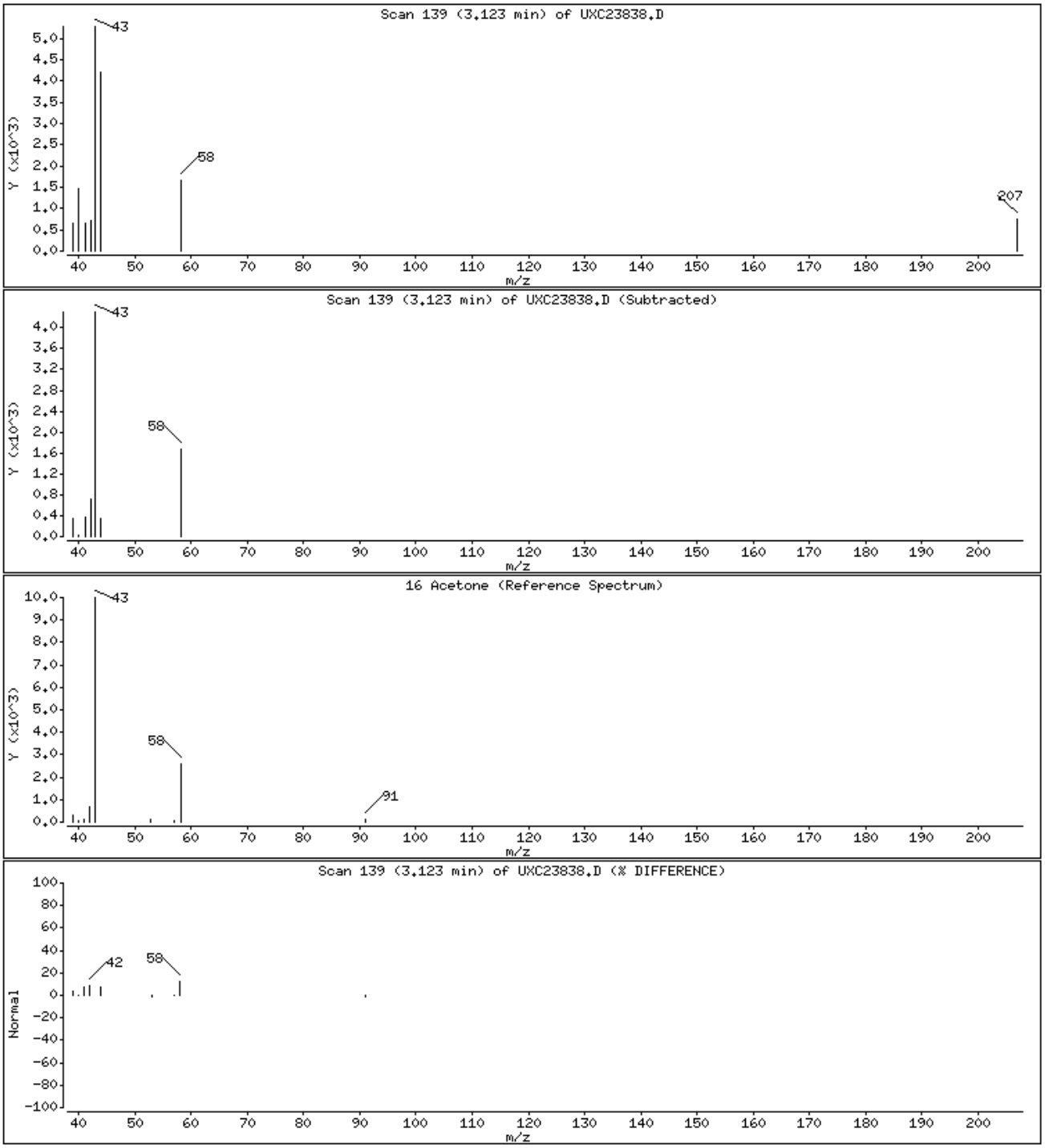
Client ID: Instrument: a3ux15.i

Sample Info: VBLK,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

16 Acetone Concentration: 2.267 ug/L



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Date : 18-MAR-2008 12:24

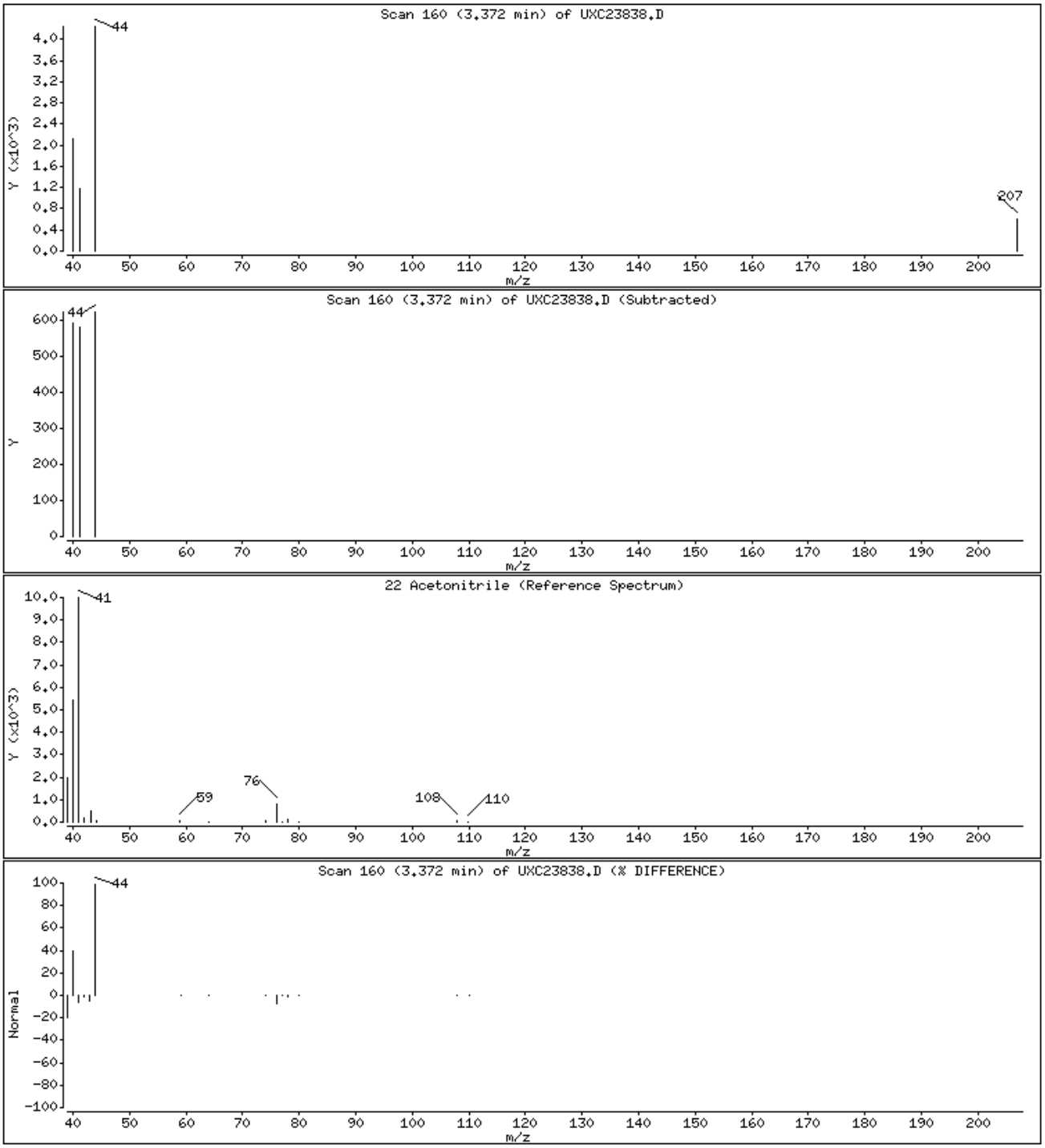
Client ID: Instrument: a3ux15.i

Sample Info: VBLK,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

22 Acetonitrile Concentration: 2.420 ug/L



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Date : 18-MAR-2008 12:24

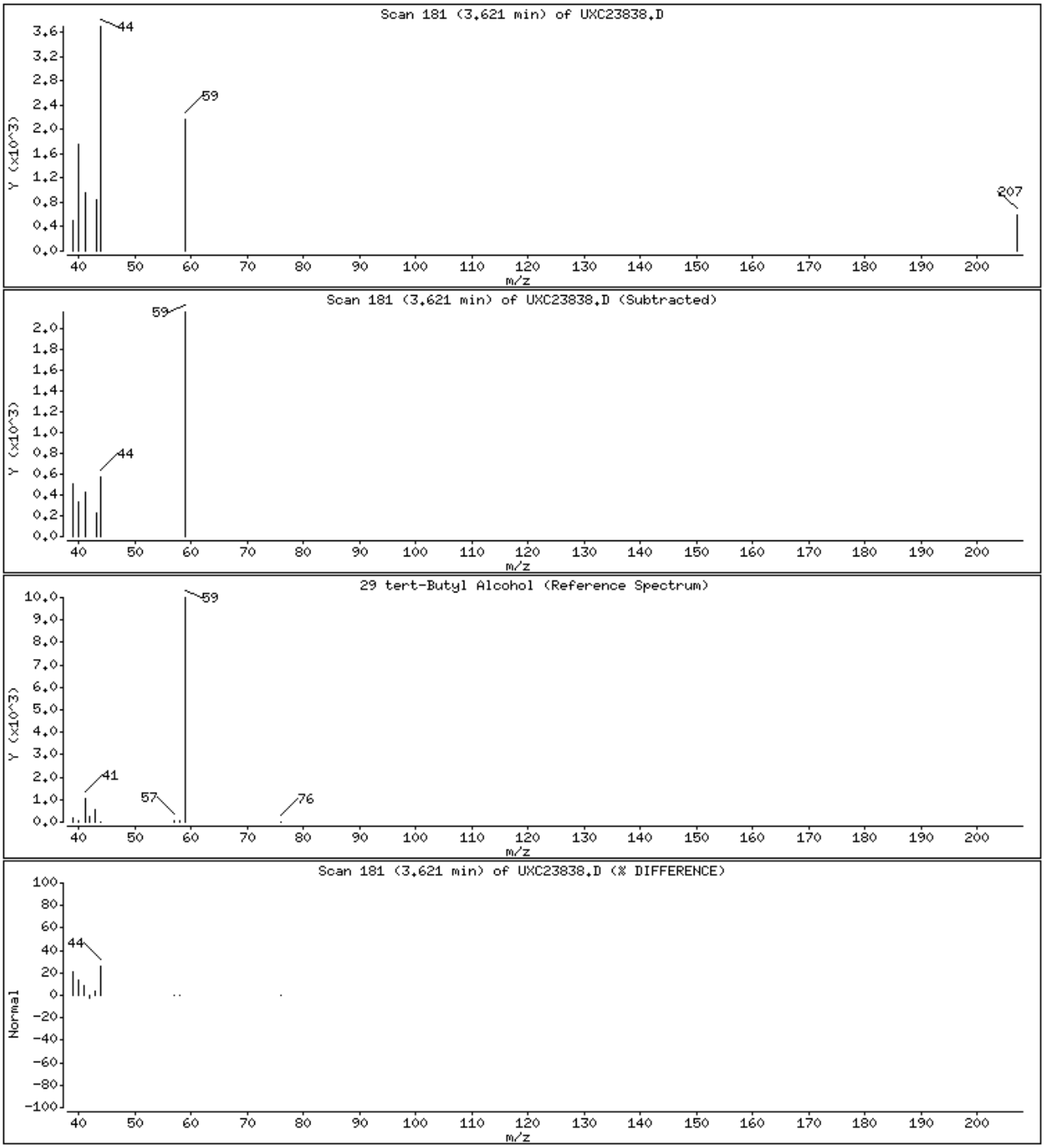
Client ID: Instrument: a3ux15.i

Sample Info: VBLK,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

29 tert-Butyl Alcohol Concentration: 7.098 ug/L



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Date : 18-MAR-2008 12:24

Client ID:

Instrument: a3ux15.i

Sample Info: VBLK,5ML/5ML

Purge Volume: 5.0

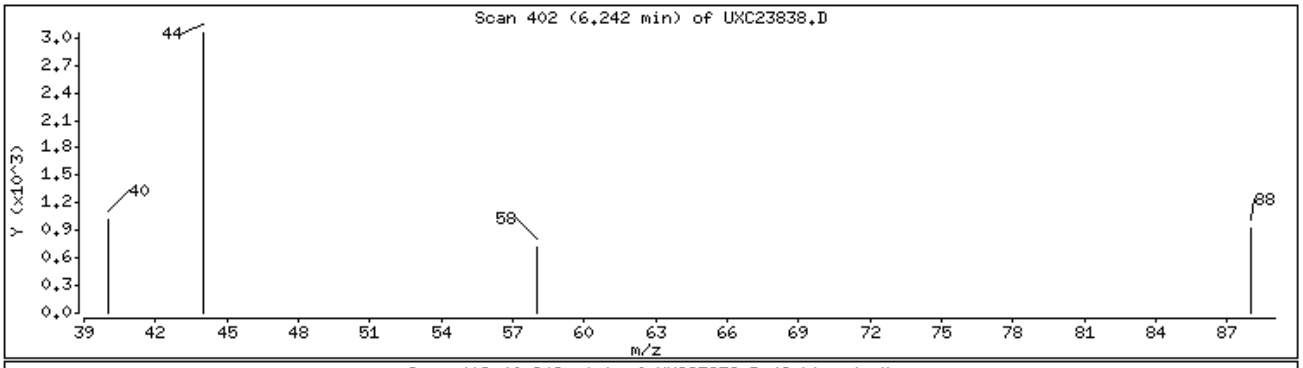
Operator: 1754

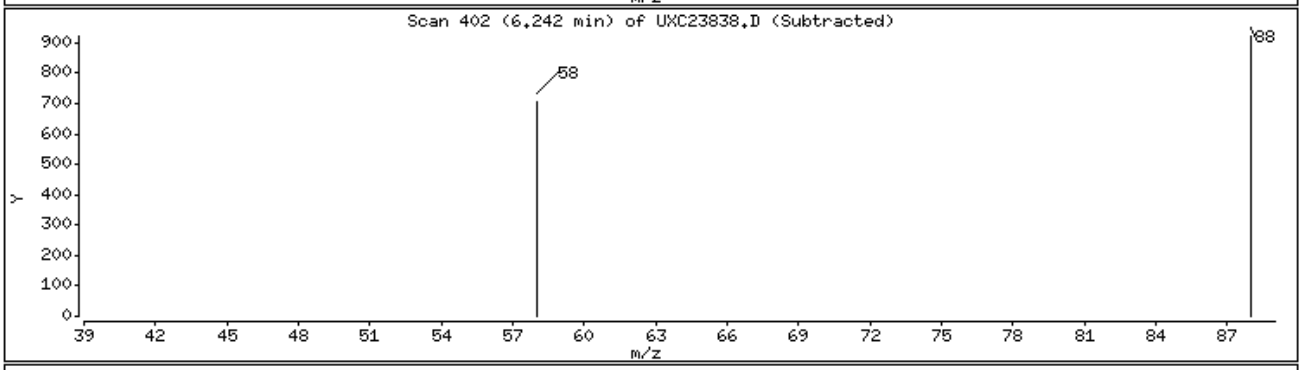
Column phase: DB624

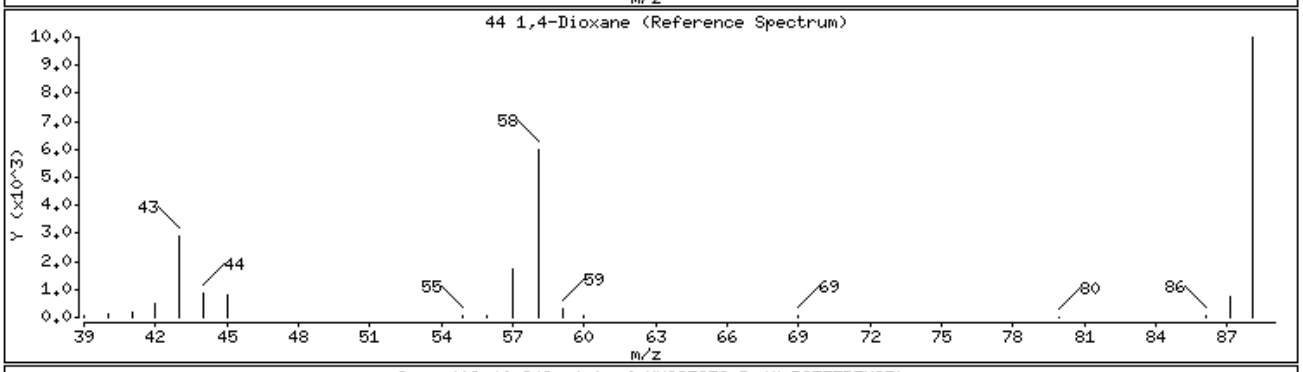
Column diameter: 0.18

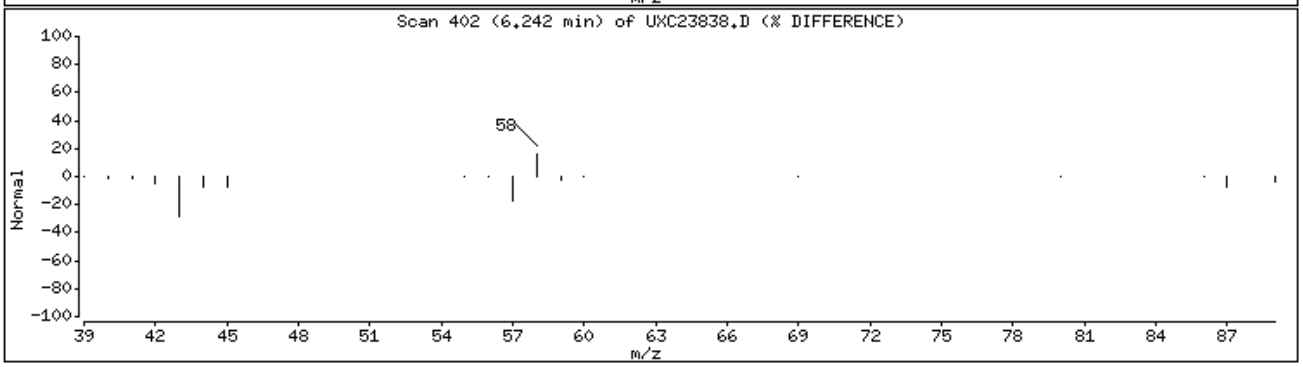
44 1,4-Dioxane

Concentration: 4.817 ug/L









Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23838.D

Date : 18-MAR-2008 12:24

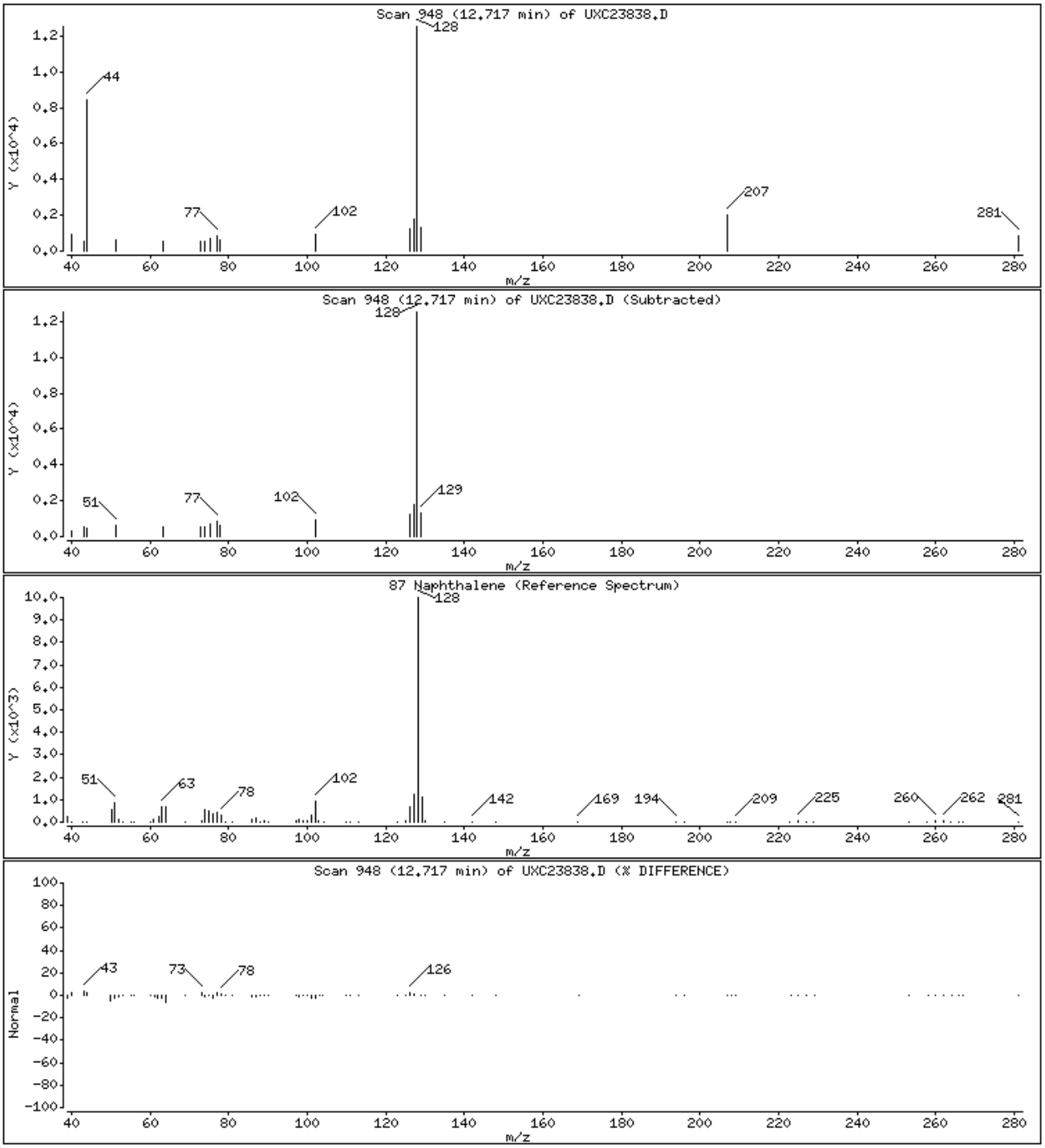
Client ID: Instrument: a3ux15.i

Sample Info: VBLK,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

87 Naphthalene Concentration: 0.2007 ug/L



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Date : 18-MAR-2008 12:24

Client ID:

Instrument: a3ux15.i

Sample Info: VBLK,5ML/5ML

Purge Volume: 5.0

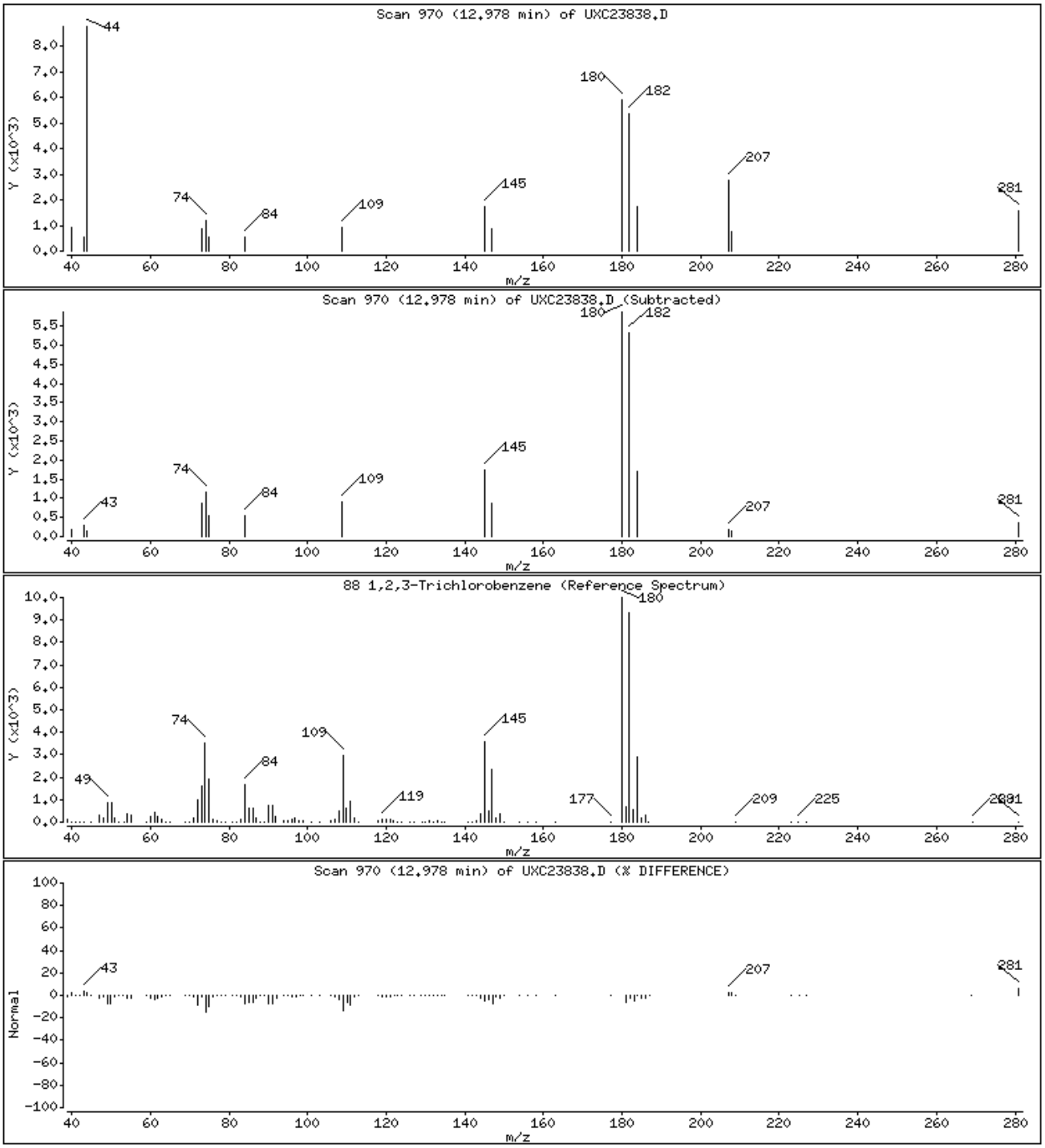
Operator: 1754

Column phase: DB624

Column diameter: 0.18

88 1,2,3-Trichlorobenzene

Concentration: 0.2694 ug/L



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Date : 18-MAR-2008 12:24

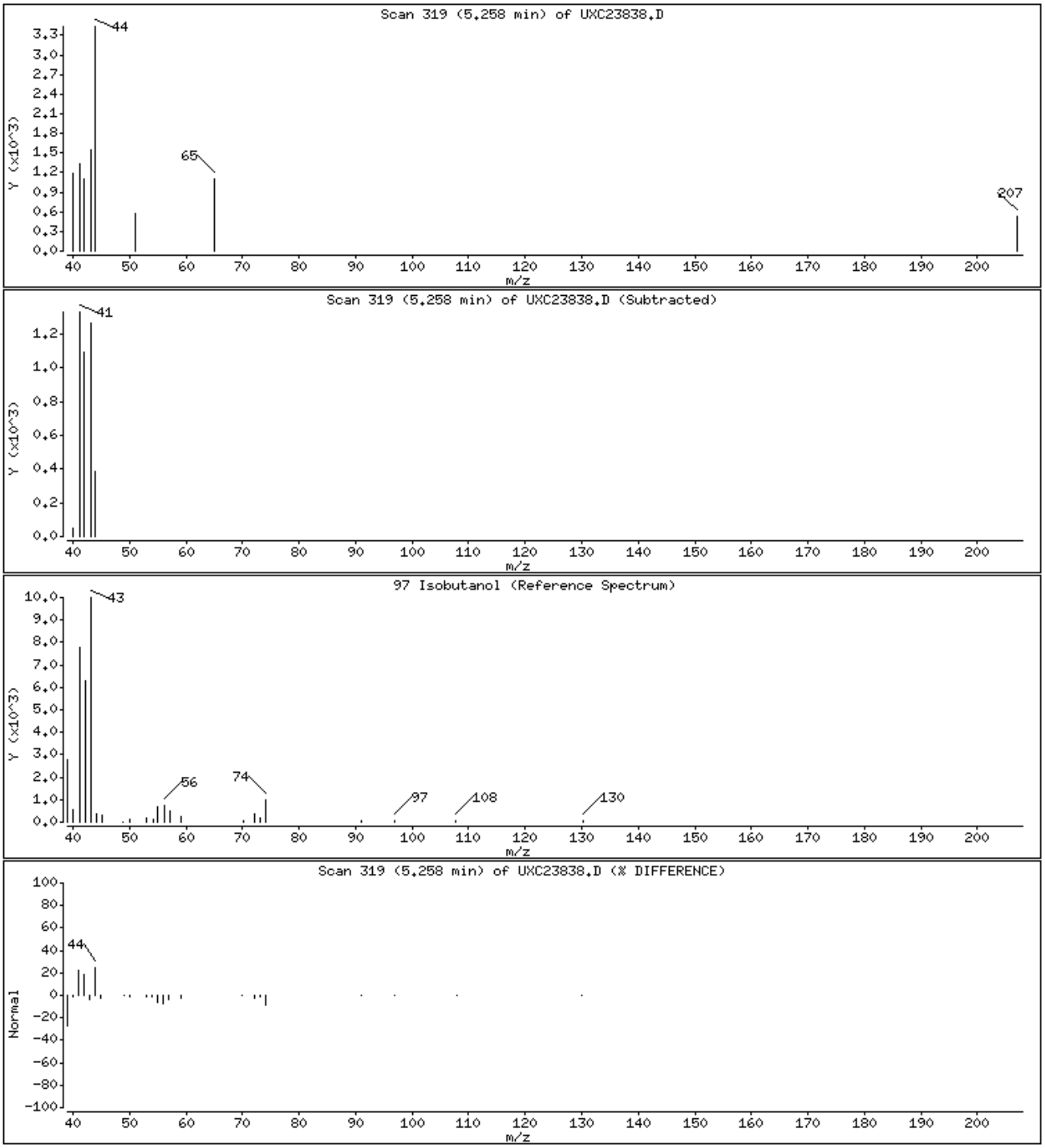
Client ID: Instrument: a3ux15.i

Sample Info: VBLK,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

97 Isobutanol Concentration: 7.311 ug/L



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Date : 18-MAR-2008 12:24

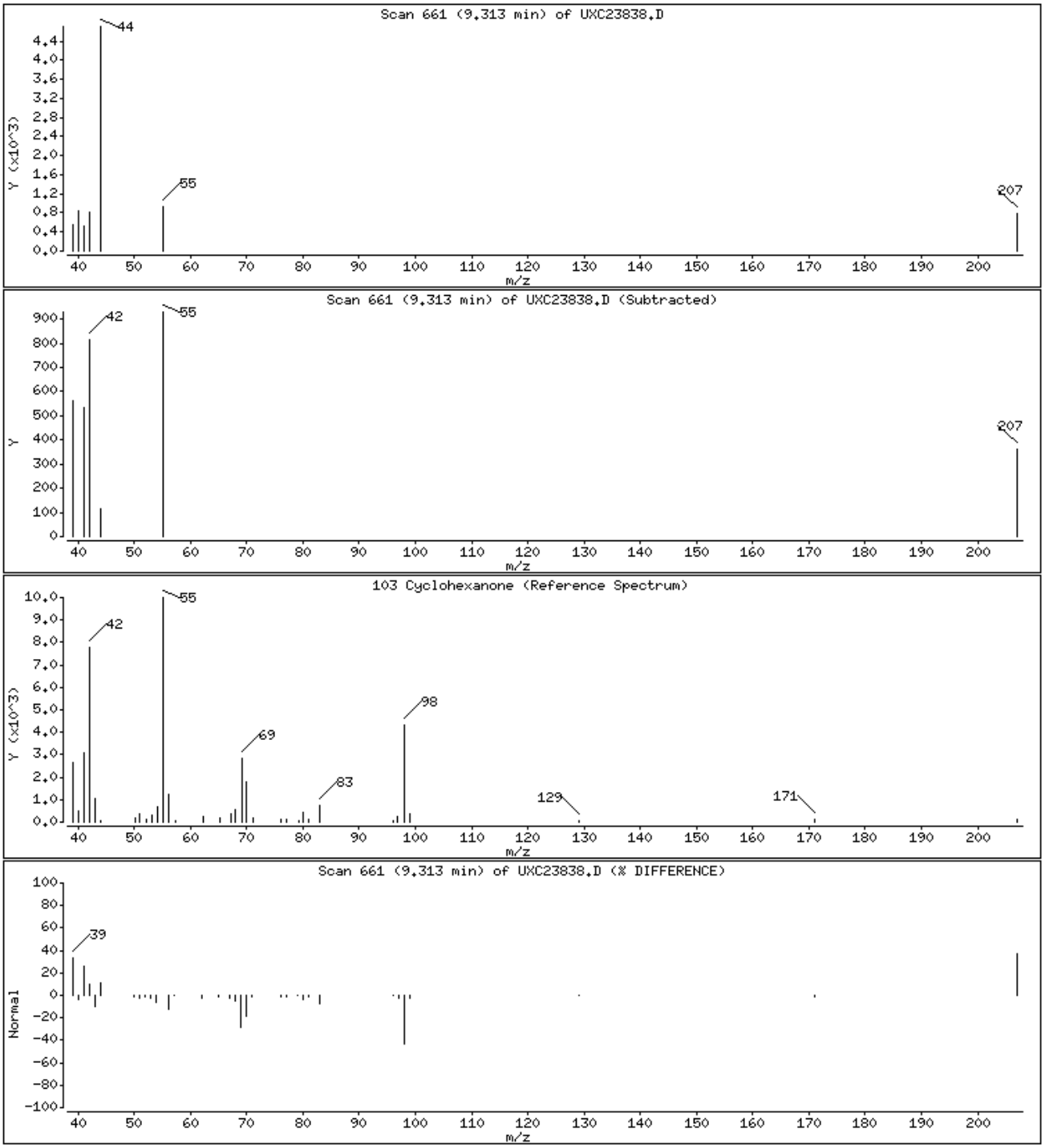
Client ID: Instrument: a3ux15.i

Sample Info: VBLK,5ML/5ML

Purge Volume: 5.0 Operator: 1754

Column phase: DB624 Column diameter: 0.18

103 Cyclohexanone Concentration: 1.136 ug/L



MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AR-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/18/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8079081
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	91	(45 - 128)			SW846 8260B
	106	(45 - 128)	15	(0-30)	SW846 8260B
Benzene	**86**	**(78 - 118)**			**SW846 8260B**
	98	**(78 - 118)**	**13**	**(0-20)**	**SW846 8260B**
Bromobenzene	91	(70 - 130)			SW846 8260B
	107	(70 - 130)	16	(0-30)	SW846 8260B
1,2-Dichloroethene (total)	96	(86 - 115)			SW846 8260B
	111	(86 - 115)	14	(0-30)	SW846 8260B
Bromochloromethane	99	(70 - 130)			SW846 8260B
	113	(70 - 130)	13	(0-30)	SW846 8260B
Bromodichloromethane	90	(80 - 146)			SW846 8260B
	102	(80 - 146)	13	(0-30)	SW846 8260B
Bromoform	83	(58 - 176)			SW846 8260B
	97	(58 - 176)	15	(0-30)	SW846 8260B
Bromomethane	89	(55 - 145)			SW846 8260B
	102	(55 - 145)	14	(0-30)	SW846 8260B
Methyl ethyl ketone	79	(71 - 123)			SW846 8260B
	86	(71 - 123)	8.5	(0-30)	SW846 8260B
n-Butylbenzene	82	(70 - 130)			SW846 8260B
	95	(70 - 130)	15	(0-30)	SW846 8260B
sec-Butylbenzene	85	(70 - 130)			SW846 8260B
	98	(70 - 130)	14	(0-30)	SW846 8260B
Xylenes (total)	89	(89 - 121)			SW846 8260B
	103	(89 - 121)	14	(0-30)	SW846 8260B
tert-Butylbenzene	86	(70 - 130)			SW846 8260B
	100	(70 - 130)	15	(0-30)	SW846 8260B
Carbon disulfide	111	(69 - 138)			SW846 8260B
	119	(69 - 138)	7.2	(0-41)	SW846 8260B
Carbon tetrachloride	106	(63 - 176)			SW846 8260B
	121	(63 - 176)	13	(0-30)	SW846 8260B
Chlorobenzene	**91**	**(76 - 117)**			**SW846 8260B**
	104	**(76 - 117)**	**14**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	84	(71 - 158)			SW846 8260B
	98	(71 - 158)	15	(0-30)	SW846 8260B
Chloroethane	85	(59 - 142)			SW846 8260B
	101	(59 - 142)	16	(0-30)	SW846 8260B
n-Hexane	107	(70 - 130)			SW846 8260B
	126	(70 - 130)	16	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AR-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	92	(83 - 141)			SW846 8260B
	106	(83 - 141)	13	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acetonitrile	105	(50 - 130)			SW846 8260B
	114	(50 - 130)	8.2	(0-30)	SW846 8260B
Acrolein	95	(50 - 130)			SW846 8260B
	115	(50 - 130)	19	(0-30)	SW846 8260B
Chloromethane	62	(40 - 137)			SW846 8260B
	72	(40 - 137)	15	(0-39)	SW846 8260B
Acrylonitrile	85	(50 - 130)			SW846 8260B
	96	(50 - 130)	12	(0-30)	SW846 8260B
Vinyl acetate	93	(70 - 130)			SW846 8260B
	106	(70 - 130)	14	(0-30)	SW846 8260B
2-Chlorotoluene	86	(70 - 130)			SW846 8260B
	100	(70 - 130)	15	(0-30)	SW846 8260B
4-Chlorotoluene	88	(70 - 130)			SW846 8260B
	101	(70 - 130)	14	(0-30)	SW846 8260B
Cyclohexane	82	(70 - 130)			SW846 8260B
	93	(70 - 130)	12	(0-30)	SW846 8260B
Iodomethane	104	(70 - 130)			SW846 8260B
	120	(70 - 130)	14	(0-30)	SW846 8260B
Isopropyl ether	96	(70 - 130)			SW846 8260B
	110	(70 - 130)	13	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	75	(70 - 130)			SW846 8260B
	86	(70 - 130)	13	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	85	(70 - 130)			SW846 8260B
	99	(70 - 130)	16	(0-30)	SW846 8260B
Dibromomethane	88	(70 - 130)			SW846 8260B
	104	(70 - 130)	16	(0-30)	SW846 8260B
1,2-Dichlorobenzene	89	(70 - 130)			SW846 8260B
	103	(70 - 130)	15	(0-30)	SW846 8260B
1,3-Dichlorobenzene	91	(70 - 130)			SW846 8260B
	105	(70 - 130)	14	(0-30)	SW846 8260B
1,4-Dichlorobenzene	89	(70 - 130)			SW846 8260B
	105	(70 - 130)	16	(0-30)	SW846 8260B
Dichlorodifluoromethane	93	(70 - 130)			SW846 8260B
	105	(70 - 130)	12	(0-30)	SW846 8260B
1,1-Dichloroethane	87 a	(88 - 127)			SW846 8260B
	100	(88 - 127)	14	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AR-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	92	(71 - 160)			SW846 8260B
	106	(71 - 160)	14	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	97	(87 - 114)			SW846 8260B
	111	(87 - 114)	14	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	96	(85 - 116)			SW846 8260B
	110	(85 - 116)	14	(0-30)	SW846 8260B
1,1-Dichloroethene	**93**	**(62 - 130)**			**SW846 8260B**
	107	**(62 - 130)**	**14**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	84 a	(87 - 114)			SW846 8260B
	98	(87 - 114)	16	(0-30)	SW846 8260B
1,3-Dichloropropane	80	(70 - 130)			SW846 8260B
	94	(70 - 130)	17	(0-30)	SW846 8260B
2,2-Dichloropropane	102	(70 - 130)			SW846 8260B
	113	(70 - 130)	11	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	79 a	(82 - 130)			SW846 8260B
	91	(82 - 130)	14	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	73	(73 - 147)			SW846 8260B
	84	(73 - 147)	13	(0-30)	SW846 8260B
1,1-Dichloropropene	92	(70 - 130)			SW846 8260B
	104	(70 - 130)	12	(0-30)	SW846 8260B
Ethylbenzene	91	(86 - 132)			SW846 8260B
	104	(86 - 132)	14	(0-30)	SW846 8260B
Hexachlorobutadiene	93	(70 - 130)			SW846 8260B
	106	(70 - 130)	14	(0-30)	SW846 8260B
2-Hexanone	68 a	(81 - 128)			SW846 8260B
	77 a	(81 - 128)	13	(0-30)	SW846 8260B
Isopropylbenzene	101	(70 - 130)			SW846 8260B
	116	(70 - 130)	13	(0-30)	SW846 8260B
p-Isopropyltoluene	89	(70 - 130)			SW846 8260B
	103	(70 - 130)	14	(0-30)	SW846 8260B
Methyl acetate	72	(70 - 130)			SW846 8260B
	80	(70 - 130)	11	(0-30)	SW846 8260B
Methylcyclohexane	91	(70 - 130)			SW846 8260B
	102	(70 - 130)	12	(0-30)	SW846 8260B
Methylene chloride	82	(82 - 115)			SW846 8260B
	94	(82 - 115)	14	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	74 a	(82 - 135)			SW846 8260B
	86	(82 - 135)	15	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	88	(70 - 130)			SW846 8260B
	99	(70 - 130)	13	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AR-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	74	(70 - 130)			SW846 8260B
	91	(70 - 130)	20	(0-30)	SW846 8260B
n-Propylbenzene	88	(70 - 130)			SW846 8260B
	102	(70 - 130)	15	(0-30)	SW846 8260B
Styrene	83	(83 - 120)			SW846 8260B
	95	(83 - 120)	13	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	90	(70 - 130)			SW846 8260B
	105	(70 - 130)	16	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	76 a	(88 - 116)			SW846 8260B
	88	(88 - 116)	14	(0-30)	SW846 8260B
Tetrachloroethene	104	(85 - 121)			SW846 8260B
	122 a	(85 - 121)	16	(0-30)	SW846 8260B
Toluene	**87**	**(70 - 119)**			**SW846 8260B**
	100	**(70 - 119)**	**14**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	84	(70 - 130)			SW846 8260B
	102	(70 - 130)	18	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	88	(70 - 130)			SW846 8260B
	103	(70 - 130)	16	(0-30)	SW846 8260B
1,1,1-Trichloroethane	104	(71 - 162)			SW846 8260B
	118	(71 - 162)	12	(0-30)	SW846 8260B
1,1,2-Trichloroethane	82 a	(86 - 129)			SW846 8260B
	97	(86 - 129)	16	(0-30)	SW846 8260B
Trichloroethene	**102**	**(62 - 130)**			**SW846 8260B**
	117	**(62 - 130)**	**14**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	123	(70 - 130)			SW846 8260B
	143 a	(70 - 130)	15	(0-30)	SW846 8260B
1,2,3-Trichloropropane	88	(70 - 130)			SW846 8260B
	101	(70 - 130)	14	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	139 a	(70 - 130)			SW846 8260B
	159 a	(70 - 130)	14	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	82	(70 - 130)			SW846 8260B
	95	(70 - 130)	15	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	82	(70 - 130)			SW846 8260B
	95	(70 - 130)	15	(0-30)	SW846 8260B
Vinyl chloride	76 a	(88 - 126)			SW846 8260B
	88	(88 - 126)	15	(0-30)	SW846 8260B
m-Xylene & p-Xylene	89	(70 - 130)			SW846 8260B
	104	(70 - 130)	15	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AR-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	89	(70 - 130)			SW846 8260B
	102	(70 - 130)	13	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
	107	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
	94	(61 - 128)
Toluene-d8	98	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)
	93	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AR-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/18/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8079081
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acetone	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	11	ug/L	106	15	SW846 8260B
Benzene	**ND**	**10**	**8.6**	**ug/L**	**86**		**SW846 8260B**
	ND	**10**	**9.8**	**ug/L**	**98**	**13**	**SW846 8260B**
Bromobenzene	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	11	ug/L	107	16	SW846 8260B
1,2-Dichloroethene (total)	ND	20	19	ug/L	96		SW846 8260B
	ND	20	22	ug/L	111	14	SW846 8260B
Bromochloromethane	ND	10	9.9	ug/L	99		SW846 8260B
	ND	10	11	ug/L	113	13	SW846 8260B
Bromodichloromethane	ND	10	9.0	ug/L	90		SW846 8260B
	ND	10	10	ug/L	102	13	SW846 8260B
Bromoform	ND	10	8.3	ug/L	83		SW846 8260B
	ND	10	9.7	ug/L	97	15	SW846 8260B
Bromomethane	ND	10	8.9	ug/L	89		SW846 8260B
	ND	10	10	ug/L	102	14	SW846 8260B
Methyl ethyl ketone	ND	10	7.9	ug/L	79		SW846 8260B
	ND	10	8.6	ug/L	86	8.5	SW846 8260B
n-Butylbenzene	ND	10	8.2	ug/L	82		SW846 8260B
	ND	10	9.5	ug/L	95	15	SW846 8260B
sec-Butylbenzene	ND	10	8.5	ug/L	85		SW846 8260B
	ND	10	9.8	ug/L	98	14	SW846 8260B
Xylenes (total)	ND	30	27	ug/L	89		SW846 8260B
	ND	30	31	ug/L	103	14	SW846 8260B
tert-Butylbenzene	ND	10	8.6	ug/L	86		SW846 8260B
	ND	10	10	ug/L	100	15	SW846 8260B
Carbon disulfide	ND	10	11	ug/L	111		SW846 8260B
	ND	10	12	ug/L	119	7.2	SW846 8260B
Carbon tetrachloride	ND	10	11	ug/L	106		SW846 8260B
	ND	10	12	ug/L	121	13	SW846 8260B
Chlorobenzene	**ND**	**10**	**9.1**	**ug/L**	**91**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**104**	**14**	**SW846 8260B**
Chlorodibromomethane	ND	10	8.4	ug/L	84		SW846 8260B
	ND	10	9.8	ug/L	98	15	SW846 8260B
Chloroethane	ND	10	8.5	ug/L	85		SW846 8260B
	ND	10	10	ug/L	101	16	SW846 8260B
n-Hexane	ND	10	11	ug/L	107		SW846 8260B
	ND	10	13	ug/L	126	16	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AR-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Chloroform	ND	10	9.2	ug/L	92		SW846 8260B
	ND	10	11	ug/L	106	13	SW846 8260B
2-Chloroethyl vinyl ether	ND	10	0.0	ug/L	0.0 a		SW846 8260B
	ND	10	0.0	ug/L	0.0 a	0.0	SW846 8260B
Acetonitrile	ND	100	100	ug/L	105		SW846 8260B
	ND	100	110	ug/L	114	8.2	SW846 8260B
Acrolein	ND	100	95	ug/L	95		SW846 8260B
	ND	100	110	ug/L	115	19	SW846 8260B
Chloromethane	ND	10	6.2	ug/L	62		SW846 8260B
	ND	10	7.2	ug/L	72	15	SW846 8260B
Acrylonitrile	ND	100	85	ug/L	85		SW846 8260B
	ND	100	96	ug/L	96	12	SW846 8260B
Vinyl acetate	ND	10	9.3	ug/L	93		SW846 8260B
	ND	10	11	ug/L	106	14	SW846 8260B
2-Chlorotoluene	ND	10	8.6	ug/L	86		SW846 8260B
	ND	10	10	ug/L	100	15	SW846 8260B
4-Chlorotoluene	ND	10	8.8	ug/L	88		SW846 8260B
	ND	10	10	ug/L	101	14	SW846 8260B
Cyclohexane	ND	10	8.2	ug/L	82		SW846 8260B
	ND	10	9.3	ug/L	93	12	SW846 8260B
Iodomethane	ND	10	10	ug/L	104		SW846 8260B
	ND	10	12	ug/L	120	14	SW846 8260B
Isopropyl ether	ND	10	9.6	ug/L	96		SW846 8260B
	ND	10	11	ug/L	110	13	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	10	7.5	ug/L	75		SW846 8260B
	ND	10	8.6	ug/L	86	13	SW846 8260B
1,2-Dibromoethane (EDB)	ND	10	8.5	ug/L	85		SW846 8260B
	ND	10	9.9	ug/L	99	16	SW846 8260B
Dibromomethane	ND	10	8.8	ug/L	88		SW846 8260B
	ND	10	10	ug/L	104	16	SW846 8260B
1,2-Dichlorobenzene	ND	10	8.9	ug/L	89		SW846 8260B
	ND	10	10	ug/L	103	15	SW846 8260B
1,3-Dichlorobenzene	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	11	ug/L	105	14	SW846 8260B
1,4-Dichlorobenzene	ND	10	8.9	ug/L	89		SW846 8260B
	ND	10	10	ug/L	105	16	SW846 8260B
Dichlorodifluoromethane	ND	10	9.3	ug/L	93		SW846 8260B
	ND	10	10	ug/L	105	12	SW846 8260B
1,1-Dichloroethane	ND	10	8.7	ug/L	87 a		SW846 8260B
	ND	10	10	ug/L	100	14	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AR-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2-Dichloroethane	ND	10	9.2	ug/L	92		SW846 8260B
	ND	10	11	ug/L	106	14	SW846 8260B
cis-1,2-Dichloroethene	ND	10	9.7	ug/L	97		SW846 8260B
	ND	10	11	ug/L	111	14	SW846 8260B
trans-1,2-Dichloroethene	ND	10	9.6	ug/L	96		SW846 8260B
	ND	10	11	ug/L	110	14	SW846 8260B
1,1-Dichloroethene	**ND**	**10**	**9.3**	**ug/L**	**93**		**SW846 8260B**
	ND	**10**	**11**	**ug/L**	**107**	**14**	**SW846 8260B**
1,2-Dichloropropane	ND	10	8.4	ug/L	84 a		SW846 8260B
	ND	10	9.8	ug/L	98	16	SW846 8260B
1,3-Dichloropropane	ND	10	8.0	ug/L	80		SW846 8260B
	ND	10	9.4	ug/L	94	17	SW846 8260B
2,2-Dichloropropane	ND	10	10	ug/L	102		SW846 8260B
	ND	10	11	ug/L	113	11	SW846 8260B
cis-1,3-Dichloropropene	ND	10	7.9	ug/L	79 a		SW846 8260B
	ND	10	9.1	ug/L	91	14	SW846 8260B
trans-1,3-Dichloropropene	ND	10	7.3	ug/L	73		SW846 8260B
	ND	10	8.4	ug/L	84	13	SW846 8260B
1,1-Dichloropropene	ND	10	9.2	ug/L	92		SW846 8260B
	ND	10	10	ug/L	104	12	SW846 8260B
Ethylbenzene	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	10	ug/L	104	14	SW846 8260B
Hexachlorobutadiene	ND	10	9.3	ug/L	93		SW846 8260B
	ND	10	11	ug/L	106	14	SW846 8260B
2-Hexanone	ND	10	6.8	ug/L	68 a		SW846 8260B
	ND	10	7.7	ug/L	77 a	13	SW846 8260B
Isopropylbenzene	ND	10	10	ug/L	101		SW846 8260B
	ND	10	12	ug/L	116	13	SW846 8260B
p-Isopropyltoluene	ND	10	8.9	ug/L	89		SW846 8260B
	ND	10	10	ug/L	103	14	SW846 8260B
Methyl acetate	ND	10	7.2	ug/L	72		SW846 8260B
	ND	10	8.0	ug/L	80	11	SW846 8260B
Methylcyclohexane	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	10	ug/L	102	12	SW846 8260B
Methylene chloride	ND	10	8.2	ug/L	82		SW846 8260B
	ND	10	9.4	ug/L	94	14	SW846 8260B
4-Methyl-2-pentanone (MIB	ND	10	7.4	ug/L	74 a		SW846 8260B
	ND	10	8.6	ug/L	86	15	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	10	8.8	ug/L	88		SW846 8260B
	ND	10	9.9	ug/L	99	13	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AR-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Naphthalene	ND	10	7.4	ug/L	74		SW846 8260B
	ND	10	9.1	ug/L	91	20	SW846 8260B
n-Propylbenzene	ND	10	8.8	ug/L	88		SW846 8260B
	ND	10	10	ug/L	102	15	SW846 8260B
Styrene	ND	10	8.3	ug/L	83		SW846 8260B
	ND	10	9.5	ug/L	95	13	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	10	9.0	ug/L	90		SW846 8260B
	ND	10	11	ug/L	105	16	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	10	7.6	ug/L	76 a		SW846 8260B
	ND	10	8.8	ug/L	88	14	SW846 8260B
Tetrachloroethene	ND	10	10	ug/L	104		SW846 8260B
	ND	10	12	ug/L	122 a	16	SW846 8260B
Toluene	**ND**	**10**	**8.7**	**ug/L**	**87**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**100**	**14**	**SW846 8260B**
1,2,3-Trichlorobenzene	ND	10	8.4	ug/L	84		SW846 8260B
	ND	10	10	ug/L	102	18	SW846 8260B
1,2,4-Trichloro-benzene	ND	10	8.8	ug/L	88		SW846 8260B
	ND	10	10	ug/L	103	16	SW846 8260B
1,1,1-Trichloroethane	ND	10	10	ug/L	104		SW846 8260B
	ND	10	12	ug/L	118	12	SW846 8260B
1,1,2-Trichloroethane	ND	10	8.2	ug/L	82 a		SW846 8260B
	ND	10	9.7	ug/L	97	16	SW846 8260B
Trichloroethene	**ND**	**10**	**10**	**ug/L**	**102**		**SW846 8260B**
	ND	**10**	**12**	**ug/L**	**117**	**14**	**SW846 8260B**
Trichlorofluoromethane	ND	10	12	ug/L	123		SW846 8260B
	ND	10	14	ug/L	143 a	15	SW846 8260B
1,2,3-Trichloropropane	ND	10	8.8	ug/L	88		SW846 8260B
	ND	10	10	ug/L	101	14	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	14	ug/L	139 a		SW846 8260B
	ND	10	16	ug/L	159 a	14	SW846 8260B
1,2,4-Trimethylbenzene	ND	10	8.2	ug/L	82		SW846 8260B
	ND	10	9.5	ug/L	95	15	SW846 8260B
1,3,5-Trimethylbenzene	ND	10	8.2	ug/L	82		SW846 8260B
	ND	10	9.5	ug/L	95	15	SW846 8260B
Vinyl chloride	ND	10	7.6	ug/L	76 a		SW846 8260B
	ND	10	8.8	ug/L	88	15	SW846 8260B
m-Xylene & p-Xylene	ND	20	18	ug/L	89		SW846 8260B
	ND	20	21	ug/L	104	15	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AR-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
o-Xylene	ND	10	8.9	ug/L	89		SW846 8260B
	ND	10	10	ug/L	102	13	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
	107	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
	94	(61 - 128)
Toluene-d8	98	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)
	93	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23849.D
Report Date: 19-Mar-2008 07:01

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23849.D
Lab Smp Id: KJHVV1AQ Client Smp ID: AMW-05B(20080311)
Inj Date : 18-MAR-2008 16:41
Operator : 1754 Inst ID: a3ux15.i
Smp Info : KJHVV1AQ,5ML/5ML
Misc Info : C80318A,8260LLUX15,,1754,3,,MS
Comment   :
Method   : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Meth Date : 18-Mar-2008 11:29 RoachC Quant Type: ISTD
Cal Date : 13-MAR-2008 18:32 Cal File: UXC23743.D
Als bottle: 16 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 4-8260+IX+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Fluorobenzene	96	5.577	5.577	(1.000)	1225084	50.0000	
*	2 Chlorobenzene-d5	117	8.257	8.257	(1.000)	961741	50.0000	
*	3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	599574	50.0000	
$	4 Dibromofluoromethane	113	5.008	5.008	(0.898)	267088	54.1643	10.833
$	5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	285348	48.9714	9.794
$	6 Toluene-d8	98	6.941	6.941	(0.841)	1047467	49.2253	9.845
$	7 Bromofluorobenzene	95	9.360	9.360	(1.134)	409935	46.9198	9.384
	8 Dichlorodifluoromethane	85	1.652	1.640	(0.296)	243437	46.5118	9.302
	9 Chloromethane	50	1.806	1.795	(0.324)	187453	30.7532	6.151
	10 Vinyl Chloride	62	1.913	1.913	(0.343)	262069	37.9529	7.590
	11 Bromomethane	94	2.257	2.245	(0.405)	138344	44.4934	8.899
	12 Chloroethane	64	2.352	2.352	(0.422)	150844	42.7032	8.541
	13 Trichlorofluoromethane	101	2.577	2.577	(0.462)	222560	61.4872	12.297
	15 Acrolein	56	2.980	2.969	(0.534)	239076	475.950	95.190
	16 Acetone	43	3.123	3.123	(0.560)	62816	45.5335	9.107
	17 1,1-Dichloroethene	96	3.063	3.063	(0.549)	255737	46.4046	9.281
	18 Freon-113	151	3.087	3.075	(0.554)	257322	69.3389	13.868
	19 Iodomethane	142	3.206	3.206	(0.575)	445029	52.1550	10.431
	20 Carbon Disulfide	76	3.265	3.265	(0.585)	939749	55.4466	11.089
	21 Methylene Chloride	84	3.502	3.502	(0.628)	259464	41.0115	8.202

22 Acetonitrile	41	3.372	3.372 (0.605)	180632	523.480	104.70
23 Acrylonitrile	53	3.727	3.728 (0.668)	816887	426.465	85.293

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23849.D
Report Date: 19-Mar-2008 07:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
24	Methyl tert-butyl ether	73	3.739	3.739	(0.670)	758634	43.8143	8.763
25	trans-1,2-Dichloroethene	96	3.739	3.739	(0.670)	285758	47.8384	9.568
26	Hexane	86	3.977	3.965	(0.713)	79311	53.4143	10.683
27	Vinyl acetate	43	4.154	4.143	(0.745)	687328	74.6550	14.931
28	1,1-Dichloroethane	63	4.107	4.107	(0.736)	422961	43.6479	8.730
29	tert-Butyl Alcohol	59	3.739	3.609	(0.670)	11662	50.7659	10.153
30	2-Butanone	43	4.629	4.617	(0.830)	80661	39.4603	7.892
M 31	1,2-Dichloroethene (total)	96				581964	96.3990	19.280
32	cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	296206	48.5606	9.712
33	2,2-Dichloropropane	77	4.605	4.605	(0.826)	348347	50.9068	10.181
34	Bromochloromethane	128	4.807	4.807	(0.862)	149838	49.3109	9.862
35	Chloroform	83	4.866	4.866	(0.872)	432857	46.2041	9.241
36	Tetrahydrofuran	42	Compound Not Detected.					
37	1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	402409	52.0044	10.401
38	1,1-Dichloropropene	75	5.162	5.162	(0.926)	343650	45.9534	9.191
39	Carbon Tetrachloride	117	5.174	5.174	(0.928)	367580	53.2074	10.641
40	1,2-Dichloroethane	62	5.364	5.364	(0.962)	315939	45.9988	9.200
41	Benzene	78	5.352	5.352	(0.960)	1028760	42.8661	8.573
42	Trichloroethene	130	5.886	5.886	(1.055)	311748	50.8140	10.163
43	1,2-Dichloropropane	63	6.087	6.087	(1.091)	220024	41.9932	8.399
44	1,4-Dioxane	88	Compound Not Detected.					
45	Dibromomethane	93	6.194	6.194	(1.111)	140790	44.2487	8.850
46	Bromodichloromethane	83	6.313	6.313	(1.132)	298595	44.7508	8.950
47	2-Chloroethyl vinyl ether	63	Compound Not Detected.					
48	cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	337692	39.4392	7.888
49	4-Methyl-2-pentanone	43	6.834	6.834	(1.225)	175995	36.9971	7.399
50	Toluene	91	7.000	7.000	(0.848)	1093647	43.7023	8.740
51	trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	297933	36.6531	7.331
52	Ethyl Methacrylate	69	Compound Not Detected.					
53	1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	203549	41.1381	8.228
54	1,3-Dichloropropane	76	7.510	7.510	(0.910)	342239	39.7486	7.950
55	Tetrachloroethene	164	7.499	7.499	(0.908)	257743	51.9174	10.383
56	2-Hexanone	43	7.570	7.570	(0.917)	120737	33.9350	6.787
57	Dibromochloromethane	129	7.724	7.724	(0.935)	232236	42.0492	8.410
58	1,2-Dibromoethane	107	7.831	7.831	(0.948)	216202	42.2833	8.457
59	Chlorobenzene	112	8.281	8.281	(1.003)	736561	45.3458	9.069
60	1,1,1,2-Tetrachloroethane	131	8.352	8.352	(1.011)	264026	44.8087	8.962
61	Ethylbenzene	106	8.376	8.376	(1.014)	408213	45.4180	9.084
62	m + p-Xylene	106	8.483	8.483	(1.027)	1011692	89.1171	17.823
M 63	Xylenes (total)	106				1515221	133.632	26.726
64	Xylene-o	106	8.862	8.850	(1.073)	503529	44.5145	8.903
65	Styrene	104	8.874	8.874	(1.075)	792510	41.5503	8.310
66	Bromoform	173	9.064	9.052	(1.098)	174177	41.3785	8.276
67	Isopropylbenzene	105	9.206	9.206	(1.115)	1341007	50.6233	10.125
68	1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	284916	37.9964	7.599
70	1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	102678	44.0378	8.808
71	Bromobenzene	156	9.514	9.514	(0.907)	351146	45.5396	9.108
72	n-Propylbenzene	120	9.597	9.597	(0.915)	384438	44.0526	8.810
73	2-Chlorotoluene	126	9.692	9.692	(0.924)	325318	43.0096	8.602
74	1,3,5-Trimethylbenzene	105	9.763	9.763	(0.931)	1076712	41.1188	8.224
75	4-Chlorotoluene	126	9.799	9.799	(0.934)	336972	43.9089	8.782
76	tert-Butylbenzene	119	10.084	10.084	(0.962)	1006179	43.2014	8.640

77	1,2,4-Trimethylbenzene	105	10.131	10.131 (0.966)	1110350	40.9588	8.192
78	sec-Butylbenzene	105	10.297	10.297 (0.982)	1426796	42.7373	8.547

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23849.D
Report Date: 19-Mar-2008 07:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
79	4-Isopropyltoluene	119	10.439	10.439	(0.995)	1282016	44.5947	8.919
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	694333	45.5536	9.111
81	1,4-Dichlorobenzene	146	10.511	10.511	(1.002)	705085	44.5214	8.904
82	n-Butylbenzene	91	10.843	10.843	(1.034)	1052267	41.1695	8.234
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	654305	44.4224	8.884
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	71183	37.6234	7.525
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	453668	43.8969	8.779
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	232895	46.2698	9.254
87	Naphthalene	128	12.716	12.716	(1.213)	996175	37.2145	7.443
88	1,2,3-Trichlorobenzene	180	12.965	12.965	(1.236)	393687	42.2300	8.446
14	Dichlorofluoromethane	67	Compound Not Detected.					
89	Ethyl Ether	59	Compound Not Detected.					
91	3-Chloropropene	76	3.265	3.396	(0.585)	953279	321.070	64.214
92	Isopropyl Ether	87	4.154	4.155	(0.745)	235895	47.9645	9.593
93	2-Chloro-1,3-butadiene	53	4.154	4.178	(0.745)	14967	2.19848	0.4397
94	Propionitrile	54	Compound Not Detected.					
95	Ethyl Acetate	43	4.629	4.664	(0.830)	89473	22.6129	4.522
96	Methacrylonitrile	41	Compound Not Detected.					
97	Isobutanol	41	5.079	5.257	(0.615)	218992	1766.42	353.28
99	n-Butanol	56	6.052	5.815	(0.733)	110309	701.985	140.40
100	Methyl Methacrylate	41	6.052	6.159	(1.085)	279121	74.5250	14.905
101	2-Nitropropane	41	Compound Not Detected.					
103	Cyclohexanone	55	9.313	9.313	(0.888)	62372	111.783	22.356
98	Cyclohexane	56	5.079	5.079	(0.911)	442488	41.2344	8.247
143	Methyl Acetate	43	3.419	3.407	(0.613)	146035	35.8878	7.178
144	Methylcyclohexane	83	6.052	6.052	(1.085)	526514	45.4936	9.099
141	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
152	Vinyl Acetate-86	86	4.143	4.143	(0.743)	55684	46.3173	9.263
153	1,3-Butadiene	54	Compound Not Detected.					
146	2-Methylnaphthalene	142	14.021	14.021	(1.337)	5435	0.38553	0.07711(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23849.D
Report Date: 19-Mar-2008 07:01

TestAmerica North Canton

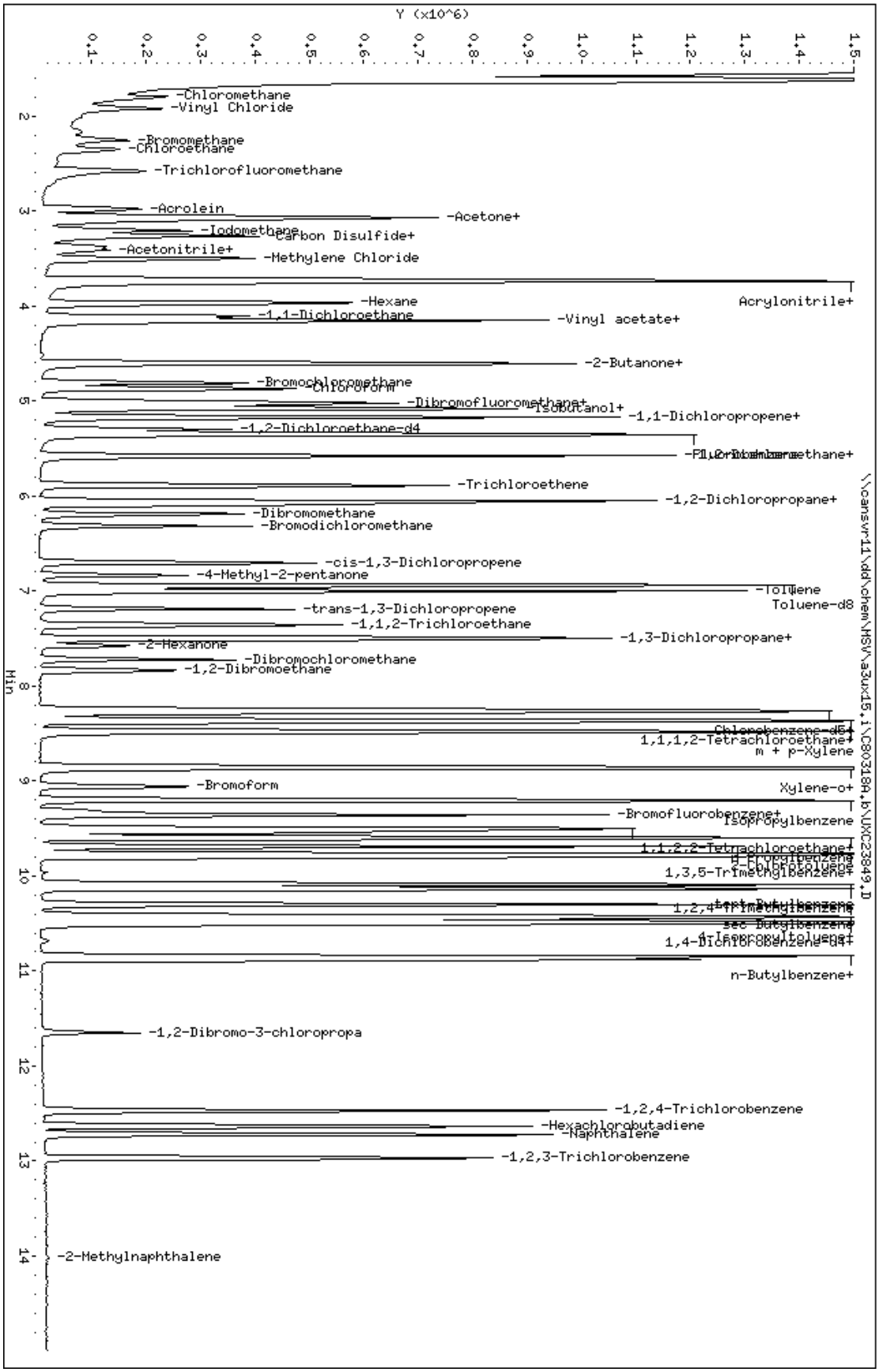
INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a3ux15.i
Lab File ID: UXC23849.D
Lab Smp Id: KJHVV1AQ
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Calibration Date: 18-MAR-2008
Calibration Time: 11:15
Client Smp ID: AMW-05B(20080311)
Level: LOW
Sample Type: WATER
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Misc Info: C80318A,8260LLUX15,,1754,3,,MS

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1278766	639383	2557532	1225084	-4.20
2 Chlorobenzene-d5	1012111	506056	2024222	961741	-4.98
3 1,4-Dichlorobenze	618918	309459	1237836	599574	-3.13

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	-0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	-0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Data File: \\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23849.D
Date : 18-MAR-2008 16:41
Client ID: AHW-05B(20080311)
Sample Info: KJHVV1AQ,5ML/5ML
Purge Volume: 5.0
Column phase: DB624
Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18
Y (x10^6)
Min
-Chloromethane
-Vinyl Chloride
-Bromomethane
-Chloroethane
-Trichlorofluoromethane
-Acrolein
-Acetone+
-Iodomethane
Carbon Disulfide+
-Acetonitrile+
-Methylene Chloride
Acrylonitrile+
-Hexane
-1,1-Dichloroethane
-Vinyl acetate+
-2-Butanone+
-Bromochloromethane
Chloroform
-Dibromofluoromethane+
Isobutanol+
-1,1-Dichloropropene+
-1,2-Dichloroethane-d4
-Trichloroethene
-1,2-Dichloropropane+
-Dibromomethane
-Bromodichloromethane
-cis-1,3-Dichloropropene
-4-Methyl-2-pentanone
-Toluene
Toluene-d8
-trans-1,3-Dichloropropene
-1,1,2-Trichloroethane
-1,3-Dichloropropane+
-2-Hexanone
-Dibromochloromethane
-1,2-Dibromoethane
Chlorobenzene-d5+
1,1,1,2-Tetrachloroethane+
m + p-Xylene
-Bromoform
Xylene-o+
-Bromofluorobenzene+
Isopropylbenzene
1,1,2,2-Tetrachloroethane+
n-Propylbenzene+
2-Chlorotoluene+
1,3,5-Trimethylbenzene+
tert-Butylbenzene
1,2,4-Trimethylbenzene
sec-Butylbenzene+
4-Isopropyltoluene+
1,4-Dichlorobenzene-d4+
n-Butylbenzene+
-1,2-Dibromo-3-chloropropa
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
-2-Methylnaphthalene
\\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23849.D

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23850.D
Report Date: 19-Mar-2008 07:01

TestAmerica North Canton

VOLATILE REPORT SW-846 Method

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23850.D
Lab Smp Id: KJHVV1AR Client Smp ID: AMW-05B(20080311)
Inj Date : 18-MAR-2008 17:04
Operator : 1754 Inst ID: a3ux15.i
Smp Info : KJHVV1AR,5ML/5ML
Misc Info : C80318A,8260LLUX15,,1754,3,,MSD
Comment   :
Method   : \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Meth Date : 18-Mar-2008 11:29 RoachC Quant Type: ISTD
Cal Date : 13-MAR-2008 18:32 Cal File: UXC23743.D
Als bottle: 17 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 4-8260+IX+86.sub
Target Version: 4.14
Processing Host: CANPMSV23

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	1 Fluorobenzene	96	5.578	5.577	(1.000)	1275272	50.0000	
*	2 Chlorobenzene-d5	117	8.258	8.257	(1.000)	1018254	50.0000	
*	3 1,4-Dichlorobenzene-d4	152	10.487	10.487	(1.000)	632473	50.0000	
$	4 Dibromofluoromethane	113	5.008	5.008	(0.898)	275039	53.5817	10.716
$	5 1,2-Dichloroethane-d4	65	5.293	5.293	(0.949)	286017	47.1544	9.431
$	6 Toluene-d8	98	6.941	6.941	(0.841)	1091288	48.4384	9.688
$	7 Bromofluorobenzene	95	9.360	9.360	(1.134)	428375	46.3092	9.262
	8 Dichlorodifluoromethane	85	1.652	1.640	(0.296)	286452	52.4062	10.481
	9 Chloromethane	50	1.807	1.795	(0.324)	227343	35.8297	7.166
	10 Vinyl Chloride	62	1.925	1.913	(0.345)	315837	43.9395	8.788
	11 Bromomethane	94	2.245	2.245	(0.403)	165144	51.0224	10.204
	12 Chloroethane	64	2.352	2.352	(0.422)	181379	50.3040	10.061
	13 Trichlorofluoromethane	101	2.577	2.577	(0.462)	268688	71.3097	14.262
	15 Acrolein	56	2.981	2.969	(0.534)	300026	573.783	114.76
	16 Acetone	43	3.123	3.123	(0.560)	75754	52.9583	10.592
	17 1,1-Dichloroethene	96	3.064	3.063	(0.549)	307707	53.6374	10.727
	18 Freon-113	151	3.087	3.075	(0.554)	306799	79.4176	15.884
	19 Iodomethane	142	3.206	3.206	(0.575)	532884	59.9934	11.999
	20 Carbon Disulfide	76	3.265	3.265	(0.585)	1050813	59.5596	11.912
	21 Methylene Chloride	84	3.502	3.502	(0.628)	310677	47.1737	9.435

22 Acetonitrile	41	3.372	3.372 (0.605)	204197	568.547	113.71
23 Acrylonitrile	53	3.728	3.728 (0.668)	955825	479.361	95.872

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23850.D
Report Date: 19-Mar-2008 07:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
	24 Methyl tert-butyl ether	73	3.740	3.739	(0.670)	895388	49.6773	9.935
	25 trans-1,2-Dichloroethene	96	3.740	3.739	(0.670)	340799	54.8075	10.961
	26 Hexane	86	3.977	3.965	(0.713)	97801	62.9006	12.580
	27 Vinyl acetate	43	4.155	4.143	(0.745)	825610	86.1456	17.229
	28 1,1-Dichloroethane	63	4.107	4.107	(0.736)	504635	50.0269	10.005
	29 tert-Butyl Alcohol	59	3.740	3.609	(0.670)	13827	54.6249	10.925
	30 2-Butanone	43	4.629	4.617	(0.830)	92387	42.9631	8.593
M	31 1,2-Dichloroethene (total)	96				694460	110.506	22.101
	32 cis-1,2-dichloroethene	96	4.605	4.605	(0.826)	353661	55.6981	11.140
	33 2,2-Dichloropropane	77	4.605	4.605	(0.826)	403150	56.5970	11.319
	34 Bromochloromethane	128	4.807	4.807	(0.862)	178049	56.2890	11.258
	35 Chloroform	83	4.866	4.866	(0.872)	515437	52.8536	10.571
	36 Tetrahydrofuran	42	Compound Not Detected.					
	37 1,1,1-Trichloroethane	97	5.032	5.032	(0.902)	474184	58.8684	11.774
	38 1,1-Dichloropropene	75	5.163	5.162	(0.926)	405479	52.0874	10.417
	39 Carbon Tetrachloride	117	5.174	5.174	(0.928)	433992	60.3483	12.070
	40 1,2-Dichloroethane	62	5.364	5.364	(0.962)	378608	52.9537	10.591
	41 Benzene	78	5.352	5.352	(0.960)	1225944	49.0720	9.814
	42 Trichloroethene	130	5.886	5.886	(1.055)	373852	58.5386	11.708
	43 1,2-Dichloropropane	63	6.088	6.087	(1.091)	268084	49.1521	9.830
	44 1,4-Dioxane	88	Compound Not Detected.					
	45 Dibromomethane	93	6.194	6.194	(1.111)	172583	52.1062	10.421
	46 Bromodichloromethane	83	6.313	6.313	(1.132)	355271	51.1495	10.230
	47 2-Chloroethyl vinyl ether	63	Compound Not Detected.					
	48 cis-1,3-Dichloropropene	75	6.704	6.704	(1.202)	405476	45.4920	9.098
	49 4-Methyl-2-pentanone	43	6.835	6.834	(1.225)	212293	42.8712	8.574
	50 Toluene	91	7.001	7.000	(0.848)	1329422	50.1755	10.035
	51 trans-1,3-Dichloropropene	75	7.190	7.190	(0.871)	360733	41.9160	8.383
	52 Ethyl Methacrylate	69	Compound Not Detected.					
	53 1,1,2-Trichloroethane	97	7.356	7.356	(0.891)	253220	48.3365	9.667
	54 1,3-Dichloropropane	76	7.511	7.510	(0.910)	427938	46.9435	9.389
	55 Tetrachloroethene	164	7.499	7.499	(0.908)	320232	60.9247	12.185
	56 2-Hexanone	43	7.570	7.570	(0.917)	145427	38.6060	7.721
	57 Dibromochloromethane	129	7.724	7.724	(0.935)	285431	48.8125	9.762
	58 1,2-Dibromoethane	107	7.831	7.831	(0.948)	269308	49.7463	9.949
	59 Chlorobenzene	112	8.281	8.281	(1.003)	898340	52.2362	10.447
	60 1,1,1,2-Tetrachloroethane	131	8.353	8.352	(1.011)	328306	52.6255	10.525
	61 Ethylbenzene	106	8.376	8.376	(1.014)	496239	52.1476	10.430
	62 m + p-Xylene	106	8.483	8.483	(1.027)	1245835	103.651	20.730
M	63 Xylenes (total)	106				1854197	154.449	30.890
	64 Xylene-o	106	8.862	8.850	(1.073)	608362	50.7974	10.159
	65 Styrene	104	8.862	8.874	(1.073)	955508	47.3158	9.463
	66 Bromoform	173	9.064	9.052	(1.098)	215268	48.3020	9.660
	67 Isopropylbenzene	105	9.206	9.206	(1.115)	1621748	57.8235	11.565
	68 1,1,2,2-Tetrachloroethane	83	9.491	9.491	(0.905)	346368	43.7890	8.758
	70 1,2,3-Trichloropropane	110	9.538	9.538	(0.910)	124061	50.4410	10.088
	71 Bromobenzene	156	9.515	9.514	(0.907)	434562	53.4262	10.685
	72 n-Propylbenzene	120	9.598	9.597	(0.915)	470999	51.1642	10.233
	73 2-Chlorotoluene	126	9.693	9.692	(0.924)	400180	50.1549	10.031
	74 1,3,5-Trimethylbenzene	105	9.764	9.763	(0.931)	1317051	47.6809	9.536
	75 4-Chlorotoluene	126	9.799	9.799	(0.934)	410539	50.7124	10.142
	76 tert-Butylbenzene	119	10.084	10.084	(0.962)	1230437	50.0821	10.016

77	1,2,4-Trimethylbenzene	105	10.131	10.131 (0.966)	1354700	47.3730	9.474
78	sec-Butylbenzene	105	10.297	10.297 (0.982)	1734443	49.2500	9.850

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23850.D
Report Date: 19-Mar-2008 07:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
79	4-Isopropyltoluene	119	10.440	10.439	(0.995)	1559089	51.4116	10.282
80	1,3-Dichlorobenzene	146	10.416	10.416	(0.993)	844855	52.5457	10.509
81	1,4-Dichlorobenzene	146	10.511	10.511	(1.002)	876773	52.4826	10.496
82	n-Butylbenzene	91	10.843	10.843	(1.034)	1286873	47.7294	9.546
83	1,2-Dichlorobenzene	146	10.878	10.878	(1.037)	803524	51.7156	10.343
84	1,2-Dibromo-3-chloropropane	157	11.649	11.649	(1.111)	85330	42.7548	8.551
85	1,2,4-Trichlorobenzene	180	12.467	12.467	(1.189)	560677	51.4291	10.286
86	Hexachlorobutadiene	225	12.633	12.633	(1.205)	282331	53.1737	10.635
87	Naphthalene	128	12.716	12.716	(1.213)	1283224	45.4443	9.089
88	1,2,3-Trichlorobenzene	180	12.965	12.965	(1.236)	499913	50.8353	10.167
14	Dichlorofluoromethane	67	Compound Not Detected.					
89	Ethyl Ether	59	Compound Not Detected.					
91	3-Chloropropene	76	3.502	3.396	(0.628)	149803	48.4689	9.694
92	Isopropyl Ether	87	4.155	4.155	(0.745)	280330	54.7563	10.951
93	2-Chloro-1,3-butadiene	53	4.238	4.178	(0.760)	9402	1.32670	0.2653
94	Propionitrile	54	Compound Not Detected.					
95	Ethyl Acetate	43	4.629	4.664	(0.830)	100595	24.4233	4.885
96	Methacrylonitrile	41	Compound Not Detected.					
97	Isobutanol	41	5.210	5.257	(0.631)	3760	28.6454	5.729
99	n-Butanol	56	6.052	5.815	(0.733)	128090	769.900	153.98
100	Methyl Methacrylate	41	6.052	6.159	(1.085)	334722	85.8533	17.171
101	2-Nitropropane	41	Compound Not Detected.					
103	Cyclohexanone	55	9.313	9.313	(0.888)	75275	127.890	25.578
98	Cyclohexane	56	5.080	5.079	(0.911)	525174	46.6863	9.337
143	Methyl Acetate	43	3.419	3.407	(0.613)	169379	39.9864	7.997
144	Methylcyclohexane	83	6.052	6.052	(1.085)	619727	51.1334	10.227
141	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
152	Vinyl Acetate-86	86	4.143	4.143	(0.743)	66533	53.1634	10.633
153	1,3-Butadiene	54	Compound Not Detected.					
146	2-Methylnaphthalene	142	14.021	14.021	(1.337)	3490	0.23469	0.04694(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\UXC23850.D
Report Date: 19-Mar-2008 07:01

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

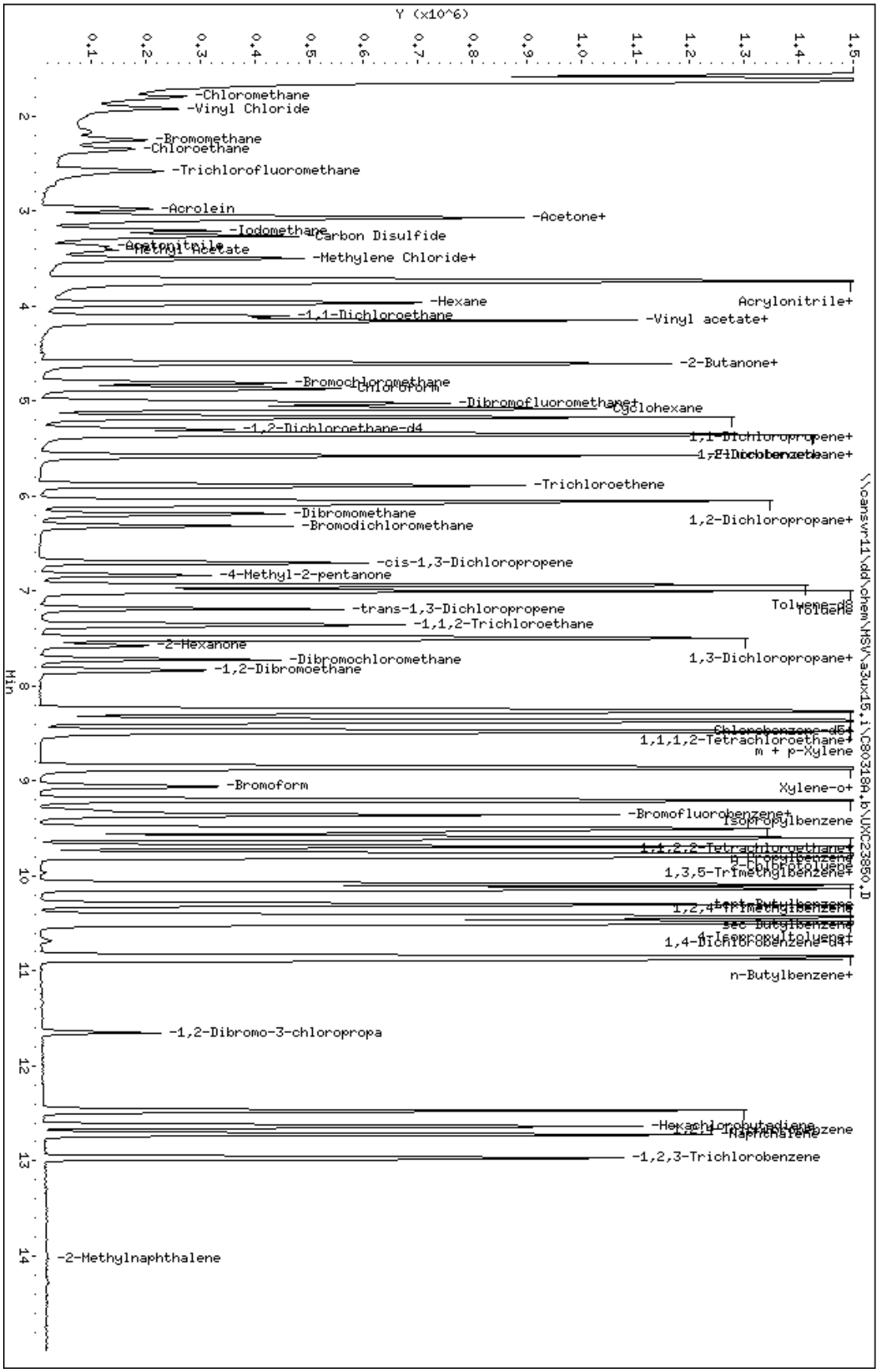
Instrument ID: a3ux15.i
Lab File ID: UXC23850.D
Lab Smp Id: KJHVV1AR
Analysis Type: VOA
Quant Type: ISTD
Operator: 1754
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C80318A.b\8260LLUX15.m
Misc Info: C80318A,8260LLUX15,,1754,3,,MSD

Calibration Date: 18-MAR-2008
Calibration Time: 11:15
Client Smp ID: AMW-05B(20080311)
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1278766	639383	2557532	1275272	-0.27
2 Chlorobenzene-d5	1012111	506056	2024222	1018254	0.61
3 1,4-Dichlorobenze	618918	309459	1237836	632473	2.19

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Fluorobenzene	5.58	5.08	6.08	5.58	0.00
2 Chlorobenzene-d5	8.26	7.76	8.76	8.26	0.00
3 1,4-Dichlorobenze	10.49	9.99	10.99	10.49	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\cansvr11\dd\chem\MSV\a3ux15,i\C80318A.b\UXC23850.D
Date : 18-MAR-2008 17:04
Client ID: AHW-05B(20080311)
Sample Info: KJHVV1AR,5ML/5ML
Purge Volume: 5.0
Column phase: DB624

Instrument: a3ux15,i
Operator: 1754
Column diameter: 0.18

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MISCELLANEOUS DATA

UX15
Batch # _____

TestAmerica-North Canton
GC/MS VOA Run Log

Date: 3-13-06

Column
Type: DB624
Length 20 M
I.D. 0.18 mm
Flow Rate 0.4ml/min

BFB
100 C for 0.1 min
to 200 C @ 20 C/min
Hold -- min
IS # VL3326 SS # VL3356

Analysis
40 C for 2 min
to 200 C @ 15 C/min
to -- C @ -- C/min
Hold 3 min
6760
25 ml

Purge & Trap
Trap: #10
Purge: 11
Desorb: 1 min @240 C
Bake: 5 min @ 250 C
Heated purge: Yes No

Auto num	Sample ID Workorder#	Method	File Name	Amt purged	Std number / Sample prep	Comments	Sample status
	BFB		BFB 6H7	50 ng	VL3H0	Direct Inject 1H:16	OK
1	6760 Cal		VLC23736	200 ng	VL3355-57 VL3359-61	Cal passed	OK
2	↓		37	100 ng	↓	↓	OK
3			38	50 ng			OK
H			39	25 ng			OK
5			H0	10 ng			OK
6	↓		H1	5 ng	↓	↓	OK
7	10 V		H2	50 ng	VL3352	Pass for Army DOD	OK
8	8260 Cal		H3	200 ng	VL3H7-H6	Cal passed	OK
9	↓		HH	100 ng	↓	↓	OK
10			H5	50 ng			OK
11			H6	25 ng			OK
12			H7	10 ng			OK
13	↓		H8	5 ng	↓	↓	OK
						CMR 3-14-06	

Analyst: CMR
Level 2 review: ✓ Date 3/15/06

PDF Made: ✓

UX15
Batch # 8079081

TestAmerica-North Canton
GC/MS VOA Run Log

3/19

Date: 3-18-08 (A)

Column	BFB	Analysis	Purge & Trap
Type: DB624	100 C for 0.1 min	40 C for 2 min	Trap: #10
Length 20 M	to 200 C @ 20 C/min	to 200 C @ 15 C/min	Purge: 11
I.D. 0.18 mm	Hold -- min	to -- C @ -- C/min	Desorb: 1 min @240 C
Flow Rate 0.4ml/min		Hold 3 min	Bake: 5 min @ 250 C
	IS # V6328 SS # V6358		Heated purge: Yes No

8260 25ml

3/19 3/21 3/24 3/20 3/24

CRR 070179 CRR GT 070237 100111 130254 100161 130201 3/27

Auto num	Sample ID Workorder#	Method	File Name	Amt purged	Std number / Sample prep	Comments	Sample status
	BFB		BFB851	50Ng	V63H0	Direct Inject 10:26	OK
1	A9 Cal		UXC2343H		V6371-73	C80313	OK
2	Vol Cal		35		V6369 V6370-79	↓	OK
3	LCS		36		V6378	8.892 KgTMD-1AC	OK
4	LCSD		37	↓	↓	9.483 1AD	OK
5	Vol Blank		38	5ml		↓ 1AA	OK
6	KH7NX-1AA	N/R	39	35ml/5ml		Use 5ml	~~OK~~
7	1AC		40	50Ng	V6378	15.133	~~OK~~
8	↓ 1AD	↓	41	↓ 50Ng	↓	15.672 ↓	~~OK~~
9	KH7RR-1AA		42	0.2ml/5ml			OK
10	KH9PQ-1AM	TICO Chevrolet	43	5ml			OK
11	KH9PRR-1AA	CMR 3-18-08	44	↓			OK
12	KH9PT-1AM		45	0.5ml/5ml			OK
13	KH9PV-1AM		46	5ml			OK
14	KH9PW-1AA	↓	47				OK
15	KgHVV-1AA		48				OK
16	1AQ		49	50Ng	V6378	9.263	OK
17	↓ 1AR		50	↓	↓	10.633	OK
18	KgHV6-1AA		51				OK
19	KH956-1AA		52				OK
20	KH957-1AA		53				OK
21	KH958-1AA		54				OK
22	KH959-1AA		55				OK
23	KH96A-1AA		56				OK
24	KH96C-1AA		57				OK
25	KH96D-1AA		58				OK
26	KH96E-1AA		59				OK
27	KH96F-1AA		60				OK
28	KH96G-1AA		61				OK
29	KgHD6-1AA		62	↓		21:40	OK
						CMR 3-19-08	

CMR 3-19-08 ↓

8766 ~~9720~~ CMR 3-19-08

Analyst: CMR
Level 2 review: [illegible] Date 3/19/08

PDF Made: ✓

1278766

SDG: 8C13254

A8C130254

Sample	Work Order	SAC	Client Sample ID	pH	Free Chlorine
1	KJHVV-1AA	XX I 25 QK M1	AMW-05B(20080311)	<2	N
2	KJHV6-1AA	XX I 25 QK M1	TB-001(20080311)	<2	N

Lot/SDG Number: **#8C13254**

Sample Control Chain of Custody - TAL North Canton
GC/MS Volatiles

Lot Number	Sample	Work Order	Analysis Type	Analysis Date	Analyst
A8C130254	1	KJHVV1AA	Volatile Organics, GC/MS (8260B)	03/18/08	Carolynne Roach
A8C130254	2	KJHV61AA	Volatile Organics, GC/MS (8260B)	03/18/08	Carolynne Roach

TestAmerica
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GCMS SEMIVOLATILE DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QC SUMMARY DATA

SW846 8270C SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C130254

Extraction: XXI49QLM1

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	SRG05	SRG06	TOT OUT
01	AMW-05B(20080311)	61	53	94	49	35	75	00
02	METHOD BLK. KJKJ61AA	0.0*	3.9*	96	0.0*	0.0*	47	04
03	LCS KJKJ61AC	58	52	89	47	40	74	00
04	AMW-05B(20080311) D	67	62	87	51	23	79	00
05	AMW-05B(20080311) S	81	66	86	64	44	79	00

SURROGATES		QC LIMITS
SRG01	= Nitrobenzene-d5	(27-111)
SRG02	= 2-Fluorobiphenyl	(28-110)
SRG03	= Terphenyl-d14	(37-119)
SRG04	= Phenol-d5	(10-110)
SRG05	= 2-Fluorophenol	(10-110)
SRG06	= 2,4,6-Tribromophenol	(22-120)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8270C SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C130254

Extraction: XXI54QLM1

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	SRG05	SRG06	TOT OUT
01	AMW-05B(20080311) RE-1	71	69	83	17	29	80	00
02	METHOD BLK. KJTNH1AA	66	67	69	35	50	75	00
03	LCS KJTNH1AC	76	80	88	45	61	87	00
04	AMW-05B(20080311) D	85	86	101	41	57	96	00
05	AMW-05B(20080311) S	77	81	95	36	54	86	00

SURROGATES		QC LIMITS
SRG01	= Nitrobenzene-d5	(27-111)
SRG02	= 2-Fluorobiphenyl	(28-110)
SRG03	= Terphenyl-d14	(37-119)
SRG04	= Phenol-d5	(10-110)
SRG05	= 2-Fluorophenol	(10-110)
SRG06	= 2,4,6-Tribromophenol	(22-120)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C140000 WO #: KJKJ61AC
BATCH: 8074037

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
1,2-Dinitrobenzene	20	16	79	10- 130	
2,3,5,6-Tetrachlorophenol	20	13	63	10- 130	
Benzaldehyde	20	12	62	10- 130	
2,2'-oxybis(1-Chloropropa	20	9.9	50	25- 128	
1,2,4-Trichlorobenzene	20	9.4	47	25- 110	
Acenaphthene	20	11	53	40- 110	
2,4-Dinitrotoluene	20	15	74	52- 123	
Pyrene	20	15	75	55- 120	
N-Nitrosodi-n-propylamine	20	10	52	37- 121	
1,4-Dichlorobenzene	20	13	66	19- 110	
Pentachlorophenol	20	13	63	26- 110	
Phenol	20	9.5	48	14- 112	
2-Chlorophenol	20	8.9	44	27- 110	
4-Chloro-3-methylphenol	20	12	61	39- 110	
4-Nitrophenol	20	14	72	12- 130	
1,2-Dichlorobenzene	20	8.8	44	23- 110	
1,3-Dichlorobenzene	20	8.3	41	19- 110	
2,4,5-Trichlorophenol	20	12	61	39- 110	
4-Methylphenol	40	20	51	32- 110	
4-Nitroaniline	20	13	67	45- 120	
Acenaphthylene	20	11	57	43- 110	
Anthracene	20	14	70	54- 114	
Benzo(a)anthracene	20	14	71	55- 115	
Benzo(a)pyrene	20	14	70	43- 116	
Benzo(b)fluoranthene	20	15	75	43- 122	
Benzo(ghi)perylene	20	16	78	45- 120	
Benzo(k)fluoranthene	20	15	74	43- 124	
bis(2-Chloroethoxy)methan	20	11	53	39- 110	
bis(2-Chloroethyl) ether	20	10	51	34- 113	
bis(2-Ethylhexyl) phthala	20	15	77	36- 163	
2,4,6-Trichlorophenol	20	12	61	35- 110	

(Continued on next page)

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C140000 WO #: KJKJ61AC
BATCH: 8074037

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
2,4-Dichlorophenol	20	11	54	33 - 110	
2,4-Dimethylphenol	20	8.1	41	12 - 110	
2,4-Dinitrophenol	20	7.2	36	17 - 112	
2,6-Dinitrotoluene	20	14	72	52 - 119	
2-Chloronaphthalene	20	10	52	39 - 110	
2-Methylnaphthalene	20	11	54	35 - 110	
2-Methylphenol	20	9.1	45	30 - 110	
2-Nitroaniline	20	13	65	43 - 130	
2-Nitrophenol	20	11	56	29 - 110	
3,3'-Dichlorobenzidine	20	7.7	38	19 - 110	
3-Nitroaniline	20	14	70	45 - 116	
4,6-Dinitro-2-methylpheno	20	12	61	28 - 112	
4-Bromophenyl phenyl ethe	20	15	77	51 - 114	
4-Chloroaniline	20	10	51	10 - 110	
4-Chlorophenyl phenyl eth	20	13	67	50 - 115	
Butyl benzyl phthalate	20	16	81	53 - 126	
Carbazole	20	15	74	53 - 120	
Chrysene	20	15	75	55 - 115	
Dibenz(a,h)anthracene	20	16	79	46 - 122	
Dibenzofuran	20	12	58	46 - 111	
Diethyl phthalate	20	14	71	33 - 134	
Dimethyl phthalate	20	13	66	15 - 143	
Di-n-octyl phthalate	20	15	74	44 - 128	
Fluoranthene	20	16	82	54 - 122	
Fluorene	20	12	59	47 - 112	
Hexachlorobenzene	20	14	72	51 - 112	
Hexachlorobutadiene	20	8.7	43	13 - 110	
Hexachloroethane	20	8.4	42	12 - 110	
Isophorone	20	12	61	44 - 128	
Naphthalene	20	9.3	46	31 - 110	
Nitrobenzene	20	12	58	37 - 115	

(Continued on next page)

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C140000 WO #: KJKJ61AC
BATCH: 8074037

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
N-Nitrosodiphenylamine	20	13	63	53 - 113	
Phenanthrene	20	13	67	52 - 114	
Indeno(1,2,3-cd)pyrene	20	16	79	46 - 121	
Di-n-butyl phthalate	20	17	83	55 - 122	
Hexachlorocyclopentadiene	20	3.5	17	10 - 110	
Benzoic acid	20	ND	15	10 - 129	
1,4-Dioxane	20	7.1	35	10 - 110	
Pyridine	20	7.6	38	10 - 110	
Atrazine	20	19	94	50 - 130	
Acetophenone	20	10	52	50 - 130	
1,1'-Biphenyl	20	9.4	47*	50 - 130	a
Caprolactam	20	16	79	50 - 130	
Aniline	20	8.6	43	10 - 130	
Benzyl alcohol	20	10	50	10 - 130	
N-Nitrosodimethylamine	20	9.0	45	10 - 130	
1-Methylnaphthalene	20	9.9	49	10 - 130	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

* Values outside of QC limits

Spike Recovery: 1 out of 78 outside limits

COMMENTS:

FORM III

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C190000 WO #: KJTNH1AC
BATCH: 8079104

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
2,3,5,6-Tetrachlorophenol	20	16	79	10- 130	
Benzaldehyde	20	16	82	10- 130	
2,2'-oxybis(1-Chloropropa	20	15	73	25- 128	
1,2,4-Trichlorobenzene	20	17	86	25- 110	
Acenaphthene	20	16	81	40- 110	
2,4-Dinitrotoluene	20	19	97	52- 123	
Pyrene	20	18	89	55- 120	
N-Nitrosodi-n-propylamine	20	17	83	37- 121	
1,4-Dichlorobenzene	20	26	131*	19- 110	a
Pentachlorophenol	20	12	58	26- 110	
Phenol	20	9.5	47	14- 112	
2-Chlorophenol	20	17	84	27- 110	
4-Chloro-3-methylphenol	20	16	82	39- 110	
4-Nitrophenol	20	11	56	12- 130	
1,2-Dichlorobenzene	20	17	85	23- 110	
1,3-Dichlorobenzene	20	16	79	19- 110	
2,4,5-Trichlorophenol	20	17	87	39- 110	
4-Methylphenol	40	30	75	32- 110	
4-Nitroaniline	20	18	88	45- 120	
Acenaphthylene	20	17	83	43- 110	
Anthracene	20	18	88	54- 114	
Benzo(a)anthracene	20	17	83	55- 115	
Benzo(a)pyrene	20	17	87	43- 116	
Benzo(b)fluoranthene	20	18	90	43- 122	
Benzo(ghi)perylene	20	18	91	45- 120	
Benzo(k)fluoranthene	20	17	87	43- 124	
bis(2-Chloroethoxy)methan	20	16	80	39- 110	
bis(2-Chloroethyl) ether	20	14	72	34- 113	
bis(2-Ethylhexyl) phthala	20	18	90	36- 163	
2,4,6-Trichlorophenol	20	17	85	35- 110	
2,4-Dichlorophenol	20	17	85	33- 110	

(Continued on next page)

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C190000 WO #: KJTNH1AC
BATCH: 8079104

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
2,4-Dimethylphenol	20	14	72	12- 110	
2,4-Dinitrophenol	20	15	73	17- 112	
2,6-Dinitrotoluene	20	19	95	52- 119	
2-Chloronaphthalene	20	17	83	39- 110	
2-Methylnaphthalene	20	18	90	35- 110	
2-Methylphenol	20	15	74	30- 110	
2-Nitroaniline	20	16	82	43- 130	
2-Nitrophenol	20	16	82	29- 110	
3,3'-Dichlorobenzidine	20	13	66	19- 110	
3-Nitroaniline	20	18	91	45- 116	
4,6-Dinitro-2-methylpheno	20	18	89	28- 112	
4-Bromophenyl phenyl ethe	20	19	93	51- 114	
4-Chloroaniline	20	7.9	40	10- 110	
4-Chlorophenyl phenyl eth	20	19	93	50- 115	
Butyl benzyl phthalate	20	18	89	53- 126	
Carbazole	20	18	89	53- 120	
Chrysene	20	18	89	55- 115	
Dibenz(a,h)anthracene	20	19	95	46- 122	
Dibenzofuran	20	17	83	46- 111	
Diethyl phthalate	20	18	90	33- 134	
Dimethyl phthalate	20	18	90	15- 143	
Di-n-octyl phthalate	20	18	89	44- 128	
Fluoranthene	20	19	95	54- 122	
Fluorene	20	16	82	47- 112	
Hexachlorobenzene	20	17	87	51- 112	
Hexachlorobutadiene	20	17	86	13- 110	
Hexachloroethane	20	16	78	12- 110	
Isophorone	20	17	87	44- 128	
Naphthalene	20	15	77	31- 110	
Nitrobenzene	20	17	83	37- 115	
N-Nitrosodiphenylamine	20	17	87	53- 113	

(Continued on next page)

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C190000 WO #: KJTNH1AC
BATCH: 8079104

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
Phenanthrene	20	17	85	52- 114	
Indeno(1,2,3-cd)pyrene	20	19	94	46- 121	
Di-n-butyl phthalate	20	19	93	55- 122	
Hexachlorocyclopentadiene	20	17	86	10- 110	
Benzoic acid	20	ND	16	10- 129	
1,4-Dioxane	20	7.8	39	10- 110	
Atrazine	20	19	93	50- 130	
Acetophenone	20	15	74	50- 130	
1,1'-Biphenyl	20	15	77	50- 130	
Caprolactam	20	4.6	23*	50- 130	a
Benzyl alcohol	20	12	62	10- 130	
N-Nitrosodimethylamine	20	9.2	46	10- 130	
1-Methylnaphthalene	20	15	77	10- 130	
1,2-Dinitrobenzene	20	19	93	10- 130	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

* Values outside of QC limits

Spike Recovery: 2 out of 76 outside limits

COMMENTS:

FORM III

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AT

BATCH: 8074037

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
1,2,4-Trichlorobenzene	39	ND	25	64	25- 110	
Acenaphthene	39	ND	24	62	36- 110	
2,4-Dinitrotoluene	39	ND	29	75	46- 119	
Pyrene	39	ND	30	76	54- 115	
N-Nitrosodi-n-propylamine	39	ND	26	66	25- 119	
1,4-Dichlorobenzene	39	ND	38	96	17- 110	
Pentachlorophenol	39	ND	28	71	23- 110	
Phenol	39	ND	24	62	16- 110	
2-Chlorophenol	39	ND	24	61	26- 110	
4-Chloro-3-methylphenol	39	ND	29	73	33- 110	
4-Nitrophenol	39	ND	31	78	13- 127	
Acenaphthylene	39	ND	26	66	39- 110	
Anthracene	39	ND	28	70	46- 110	
Benzo(a)anthracene	39	ND	28	71	52- 110	
Benzo(b)fluoranthene	39	ND	28	71	33- 114	
Benzo(k)fluoranthene	39	ND	30	77	32- 121	
Benzo(ghi)perylene	39	ND	30	76	34- 116	
Benzo(a)pyrene	39	ND	28	71	33- 110	
bis(2-Chloroethoxy)methan	39	ND	26	67	35- 110	
bis(2-Chloroethyl) ether	39	ND	31	80	27- 110	
2,2'-oxybis(1-Chloropropa	39	ND	26	67	13- 124	
bis(2-Ethylhexyl) phthala	39	3.9	31	68	40- 140	
4-Bromophenyl phenyl ethe	39	ND	30	77	42- 113	
Butyl benzyl phthalate	39	ND	33	83	51- 121	
Carbazole	39	ND	28	72	49- 114	
4-Chloroaniline	39	ND	25	63	10- 110	
2-Chloronaphthalene	39	ND	25	64	34- 110	
4-Chlorophenyl phenyl eth	39	ND	29	75	43- 113	

(Continued on next page)

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AT
BATCH: 8074037

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
Chrysene	39	ND	30	76	52- 111	
Dibenz(a,h)anthracene	39	ND	30	77	35- 118	
Dibenzofuran	39	ND	26	66	41- 110	
Di-n-butyl phthalate	39	ND	32	82	50- 117	
1,2-Dichlorobenzene	39	ND	24	60	22- 110	
1,3-Dichlorobenzene	39	ND	23	59	19- 110	
3,3'-Dichlorobenzidine	39	ND	16	42	10- 110	
2,4-Dichlorophenol	39	ND	27	69	30- 110	
Diethyl phthalate	39	ND	28	72	33- 130	
2,4-Dimethylphenol	39	ND	22	56	11- 110	
Dimethyl phthalate	39	ND	28	71	36- 124	
4,6-Dinitro-2-methylpheno	39	ND	27	68	25- 110	
2,4-Dinitrophenol	39	ND	23	58	11- 119	
2,6-Dinitrotoluene	39	ND	29	75	48- 115	
Di-n-octyl phthalate	39	ND	28	73	36- 124	
Fluoranthene	39	ND	32	82	53- 111	
Fluorene	39	ND	26	65	43- 110	
Hexachlorobenzene	39	ND	28	72	40- 113	
Hexachlorobutadiene	39	ND	25	63	14- 110	
Hexachlorocyclopentadiene	39	ND	10	26	10- 110	
Hexachloroethane	39	ND	24	61	10- 110	
Indeno(1,2,3-cd)pyrene	39	ND	30	78	36- 116	
Isophorone	39	ND	29	74	34- 125	
2-Methylnaphthalene	39	ND	28	70	35- 110	
2-Methylphenol	39	ND	25	63	26- 110	
4-Methylphenol	78	ND	50	64	25- 110	
Naphthalene	39	ND	24	62	32- 110	
2-Nitroaniline	39	ND	28	71	31- 129	

(Continued on next page)

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AT
BATCH: 8074037

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
3-Nitroaniline	39	ND	28	72	23 - 112	
4-Nitroaniline	39	ND	27	69	26 - 115	
Nitrobenzene	39	ND	30	78	26 - 118	
2-Nitrophenol	39	ND	28	72	30 - 110	
N-Nitrosodiphenylamine	39	ND	25	64	28 - 118	
Phenanthrene	39	ND	26	66	47 - 110	
2,4,5-Trichlorophenol	39	ND	27	70	36 - 110	
2,4,6-Trichlorophenol	39	ND	28	71	34 - 110	
Benzoic acid	39	ND	21	55	10 - 165	
1,4-Dioxane	39	ND	17	44	10 - 110	
Pyridine	39	ND	19	50	10 - 110	
Atrazine	39	ND	36	91	50 - 130	
Acetophenone	39	ND	27	68	50 - 130	
1,1'-Biphenyl	39	ND	23	58	50 - 130	
Caprolactam	39	ND	32	83	50 - 130	
Aniline	39	ND	20	50	10 - 130	
Benzyl alcohol	39	ND	26	66	10 - 130	
N-Nitrosodimethylamine	39	ND	20	52	10 - 130	
1-Methylnaphthalene	39	ND	24	62	10 - 130	
1,2-Dinitrobenzene	39	ND	31	80	10 - 130	
2,3,5,6-Tetrachlorophenol	39	ND	27	69	10 - 130	
Benzaldehyde	39	ND	33	84	10 - 130	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 78 outside limits

COMMENTS:

FORM III

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AU
BATCH: 8074037

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENT. (ug/L)	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
1,2,4-Trichlorobenzene	39	22	55	16		30	25- 110	
Acenaphthene	39	24	61	1.6		30	36- 110	
2,4-Dinitrotoluene	39	30	77	3.4		30	46- 119	
Pyrene	39	31	78	3.2		30	54- 115	
N-Nitrosodi-n-propylamine	39	25	63	3.9		30	25- 119	
1,4-Dichlorobenzene	39	33	85	12		30	17- 110	
Pentachlorophenol	39	31	80	11		30	23- 110	
Phenol	39	20	50	20		30	16- 110	
2-Chlorophenol	39	19	48	24		30	26- 110	
4-Chloro-3-methylphenol	39	27	69	5.5		30	33- 110	
4-Nitrophenol	39	33	84	6.5		30	13- 127	
Acenaphthylene	39	26	65	1.5		30	39- 110	
Anthracene	39	29	73	3.9		30	46- 110	
Benzo(a)anthracene	39	29	75	4.7		30	52- 110	
Benzo(b)fluoranthene	39	29	75	4.6		30	33- 114	
Benzo(k)fluoranthene	39	31	80	3.6		30	32- 121	
Benzo(ghi)perylene	39	31	80	5.0		30	34- 116	
Benzo(a)pyrene	39	29	73	3.6		30	33- 110	
bis(2-Chloroethoxy)methan	39	24	61	10		30	35- 110	
bis(2-Chloroethyl) ether	39	22	55	37	*	30	27- 110	p
2,2'-oxybis(1-Chloropropa	39	24	61	9.6		30	13- 124	
bis(2-Ethylhexyl) phthala	39	32	72	5.2		30	40- 140	
4-Bromophenyl phenyl ethe	39	32	81	5.5		30	42- 113	
Butyl benzyl phthalate	39	33	85	2.5		30	51- 121	
Carbazole	39	30	76	5.3		30	49- 114	
4-Chloroaniline	39	23	59	6.5		30	10- 110	
2-Chloronaphthalene	39	24	62	3.2		30	34- 110	
4-Chlorophenyl phenyl eth	39	29	75	0.060		30	43- 113	

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SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AU
BATCH: 8074037

COMPOUND	SPIKE ADDED	MSD CONCENT.	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
Chrysene	39	32	81	6.1		30	52- 111	
Dibenz(a,h)anthracene	39	32	82	5.2		30	35- 118	
Dibenzofuran	39	26	66	0.020		30	41- 110	
Di-n-butyl phthalate	39	34	88	6.6		30	50- 117	
1,2-Dichlorobenzene	39	22	55	8.7		30	22- 110	
1,3-Dichlorobenzene	39	20	52	13		30	19- 110	
3,3'-Dichlorobenzidine	39	13	34	20		30	10- 110	
2,4-Dichlorophenol	39	24	61	11		30	30- 110	
Diethyl phthalate	39	30	76	4.7		30	33- 130	
2,4-Dimethylphenol	39	21	53	6.4		30	11- 110	
Dimethyl phthalate	39	28	72	1.9		30	36- 124	
4,6-Dinitro-2-methylpheno	39	29	75	10		30	25- 110	
2,4-Dinitrophenol	39	25	65	11		30	11- 119	
2,6-Dinitrotoluene	39	30	77	2.8		30	48- 115	
Di-n-octyl phthalate	39	30	76	4.5		30	36- 124	
Fluoranthene	39	35	88	7.6		30	53- 111	
Fluorene	39	26	68	3.5		30	43- 110	
Hexachlorobenzene	39	29	75	4.4		30	40- 113	
Hexachlorobutadiene	39	20	51	21		30	14- 110	
Hexachlorocyclopentadiene	39	9.4	24	8.5		30	10- 110	
Hexachloroethane	39	20	51	18		30	10- 110	
Indeno(1,2,3-cd)pyrene	39	32	81	4.0		30	36- 116	
Isophorone	39	27	69	6.8		30	34- 125	
2-Methylnaphthalene	39	25	64	9.6		30	35- 110	
2-Methylphenol	39	23	58	8.6		30	26- 110	
4-Methylphenol	78	48	61	4.2		30	25- 110	
Naphthalene	39	22	55	13		30	32- 110	
2-Nitroaniline	39	28	72	2.5		30	31- 129	

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SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AU
BATCH: 8074037

COMPOUND	SPIKE ADDED	MSD CONCENT.	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
3-Nitroaniline	39	29	74	2.6	30	23- 112	
4-Nitroaniline	39	29	73	5.7	30	26- 115	
Nitrobenzene	39	27	69	12	30	26- 118	
2-Nitrophenol	39	25	63	14	30	30- 110	
N-Nitrosodiphenylamine	39	26	66	3.0	30	28- 118	
Phenanthrene	39	28	71	6.2	30	47- 110	
2,4,5-Trichlorophenol	39	28	71	1.8	30	36- 110	
2,4,6-Trichlorophenol	39	27	69	2.7	30	34- 110	
Benzoic acid	39	24	62	12	30	10- 165	
1,4-Dioxane	39	16	40	9.3	30	10- 110	
Pyridine	39	18	46	7.9	30	10- 110	
Atrazine	39	36	93	1.8	30	50- 130	
Acetophenone	39	24	61	11	30	50- 130	
1,1'-Biphenyl	39	23	58	0.17	30	50- 130	
Caprolactam	39	33	83	0.65	30	50- 130	
Aniline	39	20	52	2.4	30	10- 130	
Benzyl alcohol	39	24	61	8.4	30	10- 130	
N-Nitrosodimethylamine	39	22	56	7.1	30	10- 130	
1-Methylnaphthalene	39	23	58	6.8	30	10- 130	
1,2-Dinitrobenzene	39	33	84	4.1	30	10- 130	
2,3,5,6-Tetrachlorophenol	39	28	72	3.7	30	10- 130	
Benzaldehyde	39	29	75	12	30	10- 130	

NOTES(S):

p Relative percent difference (RPD) is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 1 out of 78 outside limits
Spike Recovery: 0 out of 78 outside limits

COMMENTS:

FORM III

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1FD
BATCH: 8079104

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
1,2,4-Trichlorobenzene	39	ND	35	89	25- 110	
Acenaphthene	39	ND	31	79	36- 110	
2,4-Dinitrotoluene	39	ND	38	96	46- 119	
Pyrene	39	ND	33	85	54- 115	
N-Nitrosodi-n-propylamine	39	ND	30	77	25- 119	
1,4-Dichlorobenzene	39	ND	50	128*	17- 110	a
Pentachlorophenol	39	ND	24	61	23- 110	
Phenol	39	ND	16	40	16- 110	
Atrazine	39	ND	35	91	50- 130	
Acetophenone	39	ND	28	72	50- 130	
1,1'-Biphenyl	39	ND	30	75	50- 130	
Caprolactam	39	ND	6.3	16*	50- 130	a
Benzyl alcohol	39	ND	22	55	10- 130	
N-Nitrosodimethylamine	39	ND	16	41	10- 130	
1-Methylnaphthalene	39	ND	30	77	10- 130	
1,2-Dinitrobenzene	39	ND	37	93	10- 130	
2,3,5,6-Tetrachlorophenol	39	ND	30	75	10- 130	
Benzaldehyde	39	ND	31	80	10- 130	
2,2'-oxybis(1-Chloropropa	39	ND	29	75	13- 124	
2-Chlorophenol	39	ND	30	77	26- 110	
4-Chloro-3-methylphenol	39	ND	32	81	33- 110	
4-Nitrophenol	39	ND	20	52	13- 127	
Acenaphthylene	39	ND	32	81	39- 110	
Anthracene	39	ND	33	85	46- 110	
Benzo(a)anthracene	39	ND	31	79	52- 110	
Benzo(b)fluoranthene	39	ND	32	83	33- 114	
Benzo(k)fluoranthene	39	ND	34	87	32- 121	
Benzo(ghi)perylene	39	ND	35	89	34- 116	

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SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1FD
BATCH: 8079104

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
Benzo(a)pyrene	39	ND	32	81	33 - 110	
bis(2-Chloroethoxy)methan	39	ND	32	81	35 - 110	
bis(2-Chloroethyl) ether	39	ND	28	70	27 - 110	
bis(2-Ethylhexyl) phthala	39	ND	34	86	40 - 140	
4-Bromophenyl phenyl ethe	39	ND	36	92	42 - 113	
Butyl benzyl phthalate	39	ND	34	87	51 - 121	
Carbazole	39	ND	34	86	49 - 114	
4-Chloroaniline	39	ND	13	33	10 - 110	
2-Chloronaphthalene	39	ND	32	82	34 - 110	
4-Chlorophenyl phenyl eth	39	ND	35	90	43 - 113	
Chrysene	39	ND	34	87	52 - 111	
Dibenz(a,h)anthracene	39	ND	35	89	35 - 118	
Dibenzofuran	39	ND	32	82	41 - 110	
Di-n-butyl phthalate	39	ND	35	90	50 - 117	
1,2-Dichlorobenzene	39	ND	33	83	22 - 110	
1,3-Dichlorobenzene	39	ND	31	78	19 - 110	
3,3'-Dichlorobenzidine	39	ND	26	65	10 - 110	
2,4-Dichlorophenol	39	ND	34	86	30 - 110	
Diethyl phthalate	39	ND	34	87	33 - 130	
2,4-Dimethylphenol	39	ND	29	73	11 - 110	
Dimethyl phthalate	39	ND	34	88	36 - 124	
4,6-Dinitro-2-methylpheno	39	ND	34	88	25 - 110	
2,4-Dinitrophenol	39	ND	29	75	11 - 119	
2,6-Dinitrotoluene	39	ND	37	94	48 - 115	
Di-n-octyl phthalate	39	ND	33	85	36 - 124	
Fluoranthene	39	ND	36	91	53 - 111	
Fluorene	39	ND	32	81	43 - 110	
Hexachlorobenzene	39	ND	34	88	40 - 113	

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SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1FD
BATCH: 8079104

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
Hexachlorobutadiene	39	ND	34	87	14 - 110	
Hexachlorocyclopentadiene	39	ND	35	88	10 - 110	
Hexachloroethane	39	ND	29	73	10 - 110	
Indeno(1,2,3-cd)pyrene	39	ND	35	89	36 - 116	
Isophorone	39	ND	34	86	34 - 125	
2-Methylnaphthalene	39	ND	34	88	35 - 110	
2-Methylphenol	39	ND	26	67	26 - 110	
4-Methylphenol	78	ND	54	69	25 - 110	
Naphthalene	39	ND	31	78	32 - 110	
2-Nitroaniline	39	ND	32	82	31 - 129	
3-Nitroaniline	39	ND	33	85	23 - 112	
4-Nitroaniline	39	ND	34	86	26 - 115	
Nitrobenzene	39	ND	33	83	26 - 118	
2-Nitrophenol	39	ND	33	84	30 - 110	
N-Nitrosodiphenylamine	39	ND	33	84	28 - 118	
Phenanthrene	39	ND	32	81	47 - 110	
2,4,5-Trichlorophenol	39	ND	34	88	36 - 110	
2,4,6-Trichlorophenol	39	ND	34	88	34 - 110	
Benzoic acid	39	ND	8.0	20	10 - 165	
1,4-Dioxane	39	ND	14	37	10 - 110	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 2 out of 76 outside limits

COMMENTS:

FORM III

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1FE
BATCH: 8079104

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENT. (ug/L)	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
1,2,4-Trichlorobenzene	39	35	90	0.77		30	25- 110	
Acenaphthene	39	34	86	7.7		30	36- 110	
2,4-Dinitrotoluene	39	40	102	5.7		30	46- 119	
Pyrene	39	35	88	3.7		30	54- 115	
N-Nitrosodi-n-propylamine	39	34	86	11		30	25- 119	
1,4-Dichlorobenzene	39	52	131*	3.0		30	17- 110	a
Pentachlorophenol	39	24	62	2.0		30	23- 110	
Phenol	39	17	44	8.4		30	16- 110	
2-Chlorophenol	39	32	81	5.7		30	26- 110	
4-Chloro-3-methylphenol	39	34	86	6.3		30	33- 110	
4-Nitrophenol	39	23	58	11		30	13- 127	
Acenaphthylene	39	34	87	7.8		30	39- 110	
Anthracene	39	34	87	2.6		30	46- 110	
Benzo(a)anthracene	39	33	83	5.6		30	52- 110	
Benzo(b)fluoranthene	39	36	92	11		30	33- 114	
Benzo(k)fluoranthene	39	33	84	3.8		30	32- 121	
Benzo(ghi)perylene	39	36	92	3.4		30	34- 116	
Benzo(a)pyrene	39	34	86	5.6		30	33- 110	
bis(2-Chloroethoxy)methan	39	35	89	9.3		30	35- 110	
bis(2-Chloroethyl) ether	39	29	75	6.5		30	27- 110	
2,2'-oxybis(1-Chloropropa	39	31	80	6.5		30	13- 124	
bis(2-Ethylhexyl) phthala	39	36	91	5.4		30	40- 140	
4-Bromophenyl phenyl ethe	39	38	96	4.7		30	42- 113	
Butyl benzyl phthalate	39	36	93	7.1		30	51- 121	
Carbazole	39	36	91	5.6		30	49- 114	
4-Chloroaniline	39	19	47	37	*	30	10- 110	p
2-Chloronaphthalene	39	36	92	12		30	34- 110	
4-Chlorophenyl phenyl eth	39	37	94	4.9		30	43- 113	

(Continued on next page)

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1FE
BATCH: 8079104

COMPOUND	SPIKE ADDED	MSD CONCENT.	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
Chrysene	39	34	88	0.88		30	52- 111	
Dibenz(a,h)anthracene	39	36	93	4.0		30	35- 118	
Dibenzofuran	39	34	88	6.2		30	41- 110	
Di-n-butyl phthalate	39	37	94	4.1		30	50- 117	
1,2-Dichlorobenzene	39	33	84	1.1		30	22- 110	
1,3-Dichlorobenzene	39	31	80	2.3		30	19- 110	
3,3'-Dichlorobenzidine	39	29	73	11		30	10- 110	
2,4-Dichlorophenol	39	36	93	7.9		30	30- 110	
Diethyl phthalate	39	37	95	8.5		30	33- 130	
2,4-Dimethylphenol	39	32	81	9.7		30	11- 110	
Dimethyl phthalate	39	38	98	11		30	36- 124	
4,6-Dinitro-2-methylpheno	39	35	89	1.7		30	25- 110	
2,4-Dinitrophenol	39	28	72	3.6		30	11- 119	
2,6-Dinitrotoluene	39	39	100	6.6		30	48- 115	
Di-n-octyl phthalate	39	35	88	4.0		30	36- 124	
Fluoranthene	39	37	95	3.3		30	53- 111	
Fluorene	39	35	89	9.0		30	43- 110	
Hexachlorobenzene	39	35	89	0.76		30	40- 113	
Hexachlorobutadiene	39	37	95	9.2		30	14- 110	
Hexachlorocyclopentadiene	39	36	92	4.8		30	10- 110	
Hexachloroethane	39	33	83	13		30	10- 110	
Indeno(1,2,3-cd)pyrene	39	36	93	4.8		30	36- 116	
Isophorone	39	37	95	9.4		30	34- 125	
2-Methylnaphthalene	39	36	93	5.3		30	35- 110	
2-Methylphenol	39	30	77	13		30	26- 110	
4-Methylphenol	78	60	77	11		30	25- 110	
Naphthalene	39	32	83	6.3		30	32- 110	
2-Nitroaniline	39	37	93	13		30	31- 129	

(Continued on next page)

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1FE
BATCH: 8079104

COMPOUND	SPIKE ADDED	MSD CONCENT.	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
3-Nitroaniline	39	38	97	13		30	23 - 112	
4-Nitroaniline	39	35	90	4.5		30	26 - 115	
Nitrobenzene	39	37	93	11		30	26 - 118	
2-Nitrophenol	39	36	91	7.6		30	30 - 110	
N-Nitrosodiphenylamine	39	34	87	3.6		30	28 - 118	
Phenanthrene	39	34	86	5.7		30	47 - 110	
2,4,5-Trichlorophenol	39	37	93	6.2		30	36 - 110	
2,4,6-Trichlorophenol	39	37	95	8.4		30	34 - 110	
Benzoic acid	39		6*	102	*	30	10 - 165	a p
1,4-Dioxane	39	17	44	18		30	10 - 110	
Atrazine	39	37	94	4.3		30	50 - 130	
Acetophenone	39	32	81	11		30	50 - 130	
1,1'-Biphenyl	39	33	84	10		30	50 - 130	
Caprolactam	39	7.2	18*	14		30	50 - 130	a
Benzyl alcohol	39	24	61	9.7		30	10 - 130	
N-Nitrosodimethylamine	39	18	45	11		30	10 - 130	
1-Methylnaphthalene	39	32	82	5.6		30	10 - 130	
1,2-Dinitrobenzene	39	40	103	9.8		30	10 - 130	
2,3,5,6-Tetrachlorophenol	39	34	88	15		30	10 - 130	
Benzaldehyde	39	35	89	11		30	10 - 130	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 2 out of 76 outside limits
Spike Recovery: 3 out of 76 outside limits

COMMENTS:

FORM III

SW846 8270C METHOD BLANK SUMMARY

BLANK WORKORDER NO.: KJKJ61AA

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN

SDG Number: 8C13254

Lab File ID: KJKJ61AA.

Lot Number: A8C130254

Date Analyzed: 03/18/08

Time Analyzed: 11:52

Matrix: WATER

Date Extracted: 03/14/08

GC Column: DB 5.625 ID: .00

Extraction Method: 3520C

Instrument ID: HP8

Level: (low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	AMW-05B(20080311)	KJHVV1AC	KJHVV1AC.	03/18/08	15:09
02	AMW-05B(20080311)	KJHVV1AT S	KJHVV1AT.	03/18/08	15:28
03	AMW-05B(20080311)	KJHVV1AU D	KJHVV1AU.	03/18/08	15:47
04	CHECK SAMPLE	KJKJ61AC C	KJKJ61AC.	03/18/08	12:10
05					
06					
07					
08					
09					
10					
11					
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16					
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27					
28					
29					
30					

COMMENTS:

FORM IV

SW846 8270C METHOD BLANK SUMMARY

BLANK WORKORDER NO.: KJTNH1AA

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN

SDG Number: 8C13254

Lab File ID: KJTNH1AA.

Lot Number: A8C130254

Date Analyzed: 03/20/08

Time Analyzed: 12:11

Matrix: WATER

Date Extracted: 03/19/08

GC Column: DB .625 ID: .32

Extraction Method: 3510C

Instrument ID: HP9

Level: (low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	AMW-05B(20080311)	KJHVV1FD S	KJHVV1FD.	03/20/08	14:09
02	AMW-05B(20080311)	KJHVV1FE D	KJHVV1FE.	03/20/08	14:29
03	AMW-05B(20080311)	KJHVV2AC	KJHVV2AC.	03/20/08	13:49
04	CHECK SAMPLE	KJTNH1AC C	KJTNH1AC.	03/20/08	12:31
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
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16					
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COMMENTS:

FORM IV

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: 8C13254

Lab File ID: 8DF0218 DFTPP Injection Date: 02/18/08

Instrument ID: A4HP8 DFTPP Injection Time: 1204

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	42.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	58.3
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	40.0 - 60.0% of mass 198	50.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	26.6
365	Greater than 1.0% of mass 198	3.1
441	Present, but less than mass 443	11.3
442	Greater than 40.0% of mass 198	76.6
443	17.0 - 23.0% of mass 442	14.4 (18.8)2

1-Value is % of mass 69 2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD005	L5	8SMM0218	02/18/08	1223
02	SSTD004	L4	8SM0218	02/18/08	1243
03	SSTD003	L3	8SML0218	02/18/08	1302
04	SSTD002	L2	8SL0218	02/18/08	1321
05	SSTD001	L1	8SLL0218	02/18/08	1340
06	SSTD009	L9	8HHH0218	02/18/08	1400
07	SSTD008	L8	8SHH0218	02/18/08	1419
08	SSTD007	L7	8SH0218	02/18/08	1438
09	SSTD006	L6	8SMH0218	02/18/08	1457
10					
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5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: 8C13254

Lab File ID: 9DF0317A DFTPP Injection Date: 03/17/08

Instrument ID: A4HP9 DFTPP Injection Time: 1027

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	42.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	71.0
70	Less than 2.0% of mass 69	0.3 (0.4)1
127	40.0 - 60.0% of mass 198	48.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	22.5
365	Greater than 1.0% of mass 198	3.5
441	Present, but less than mass 443	7.2
442	Greater than 40.0% of mass 198	60.2
443	17.0 - 23.0% of mass 442	11.4 (19.0)2

1-Value is % of mass 69 2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD006	L6	9SMH0317	03/17/08	1108
02	SSTD005	L5	9SMM0317	03/17/08	1127
03	SSTD003	L3	9SML0317	03/17/08	1207
04	SSTD004	L4	9SM0317	03/17/08	1227
05	SSTD002	L2	9SL0317	03/17/08	1247
06	SSTD001	L1	9SLL0317	03/17/08	1307
07	SSTD007	L7	9SH0317	03/17/08	1327
08	SSTD008	L8	9SHH0317	03/17/08	1346
09	SSTD009	L9	9HHH0317	03/17/08	1406
10					
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22					

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: 8C13254

Lab File ID: 8DF0318 DFTPP Injection Date: 03/18/08

Instrument ID: A4HP8 DFTPP Injection Time: 1114

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	60.0
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	40.0 - 60.0% of mass 198	50.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	28.0
365	Greater than 1.0% of mass 198	3.3
441	Present, but less than mass 443	12.0
442	Greater than 40.0% of mass 198	84.0
443	17.0 - 23.0% of mass 442	15.8 (18.8)2

1-Value is % of mass 69 2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD006	L6	8SMH0318	03/18/08	1133
02	KJKJ6BLK	KJKJ61AA	KJKJ61AA	03/18/08	1152
03	KJKJ6CHK	KJKJ61AC	KJKJ61AC	03/18/08	1210
04	AMW-05B(2008	KJHVV1AC	KJHVV1AC	03/18/08	1509
05	AMW-05B(2008	KJHVV1AT	KJHVV1AT	03/18/08	1528
06	AMW-05B(2008	KJHVV1AU	KJHVV1AU	03/18/08	1547
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: 8C13254

Lab File ID: 9DF0320B DFTPP Injection Date: 03/20/08

Instrument ID: A4HP9 DFTPP Injection Time: 1011

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	72.8
70	Less than 2.0% of mass 69	0.5 (0.7)1
127	40.0 - 60.0% of mass 198	52.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	7.2
275	10.0 - 30.0% of mass 198	24.4
365	Greater than 1.0% of mass 198	3.9
441	Present, but less than mass 443	5.6
442	Greater than 40.0% of mass 198	66.8
443	17.0 - 23.0% of mass 442	12.7 (19.0)2

1-Value is % of mass 69 2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD006	L6	9SMH0320	03/20/08	1048
02	KJTNHBLK	KJTNH1AA	KJTNH1AA	03/20/08	1211
03	KJTNHCHK	KJTNH1AC	KJTNH1AC	03/20/08	1231
04	AMW-05B(2008	KJHVV2AC	KJHVV2AC	03/20/08	1349
05	AMW-05B(2008	KJHVV1FD	KJHVV1FD	03/20/08	1409
06	AMW-05B(2008	KJHVV1FE	KJHVV1FE	03/20/08	1429
07					
08					
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13					
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19					
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22					

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: 8C13254

Lab File ID (Standard): 8SMH0318 Date Analyzed: 03/18/08

Instrument ID: A4HP8 Time Analyzed: 1133

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	134594	3.44	540972	4.32	323762	5.59
	UPPER LIMIT	269188	3.94	1081944	4.82	647524	6.09
	LOWER LIMIT	67297	2.94	270486	3.82	161881	5.09
	EPA SAMPLE NO.						
01	KJKJ6BLK	127219	3.43	507047	4.33	295491	5.59
02	KJKJ6CHK	95646	3.43	382979	4.32	232739	5.59
03	AMW-05B(2008	117298	3.43	469431	4.33	277975	5.59
04	AMW-05B(2008	89016	3.43	351189	4.32	213717	5.59
05	AMW-05B(2008	121002	3.43	498896	4.33	298711	5.59
06							
07							
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22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8C
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: 8C13254

Lab File ID (Standard): 8SMH0318 Date Analyzed: 03/18/08

Instrument ID: A4HP8 Time Analyzed: 1133

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	590518	6.68	670238	8.71	605727	10.12
	UPPER LIMIT	1181036	7.18	1340476	9.21	1211454	10.62
	LOWER LIMIT	295259	6.18	335119	8.21	302864	9.62
	EPA SAMPLE NO.						
01	KJKJ6BLK	536018	6.68	586269	8.69	549612	10.11
02	KJKJ6CHK	409555	6.68	468456	8.68	417523	10.09
03	AMW-05B(2008	502015	6.68	552355	8.68	510656	10.09
04	AMW-05B(2008	392179	6.68	441014	8.67	398149	10.07
05	AMW-05B(2008	544879	6.68	631164	8.66	568196	10.06
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

FORM VIII SV-2 1/87 Rev.

8B
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: 8C13254

Lab File ID (Standard): 9SMH0320 Date Analyzed: 03/20/08

Instrument ID: A4HP9 Time Analyzed: 1048

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	104755	3.85	382651	4.81	239536	6.11
	UPPER LIMIT	209510	4.35	765302	5.31	479072	6.61
	LOWER LIMIT	52378	3.35	191326	4.31	119768	5.61
	EPA SAMPLE NO.						
01	KJTNHBLK	124638	3.84	473801	4.80	287507	6.11
02	KJTNHCHK	122793	3.84	463577	4.81	290363	6.10
03	AMW-05B(2008	117582	3.84	408637	4.81	262160	6.10
04	AMW-05B(2008	107455	3.85	391357	4.81	241149	6.10
05	AMW-05B(2008	88167	3.85	324451	4.81	195930	6.10
06							
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19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: 8C13254

Lab File ID (Standard): 9SMH0320 Date Analyzed: 03/20/08

Instrument ID: A4HP9 Time Analyzed: 1048

		IS4 (PHN) AREA #	RT	IS5 (CRY) AREA #	RT	IS6 (PRY) AREA #	RT
	12 HOUR STD	417645	7.20	418554	9.18	338155	10.64
	UPPER LIMIT	835290	7.70	837108	9.68	676310	11.14
	LOWER LIMIT	208823	6.70	209277	8.68	169078	10.14
	EPA SAMPLE NO.						
01	KJTNHBLK	489037	7.20	511098	9.17	414251	10.63
02	KJTNHCHK	494121	7.20	513307	9.17	404964	10.63
03	AMW-05B(2008	442445	7.19	450767	9.18	363880	10.63
04	AMW-05B(2008	412558	7.20	430615	9.18	343428	10.63
05	AMW-05B(2008	349917	7.20	360923	9.18	284753	10.64
06							
07							
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09							
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11							
12							
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17							
18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SAMPLE DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

GC/MS Semivolatiles

Lot-Sample #...: A8C130254-001 **Work Order #...:** KJHVV1AC **Matrix.....:** WG
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8074037
Dilution Factor: 1 **Initial Wgt/Vol:** 1040 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	**3.9 J,B**	**10**	**ug/L**	**0.88**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44

(Continued on next page)

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

GC/MS Semivolatiles

Lot-Sample #...: A8C130254-001 **Work Order #...:** KJHVV1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(27 - 111)
2-Fluorobiphenyl	53	(28 - 110)
Terphenyl-d14	94	(37 - 119)
Phenol-d5	49	(10 - 110)
2-Fluorophenol	35	(10 - 110)
2,4,6-Tribromophenol	75	(22 - 120)

(Continued on next page)

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

GC/MS Semivolatiles

Lot-Sample #...: A8C130254-001 **Work Order #...:** KJHVV1AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\KJHVV1AC.D
Lab Smp Id: kjhvv1ac Client Smp ID: AMW-05B(20080311)
Inj Date : 18-MAR-2008 15:09
Operator : 001710 Inst ID: a4hp8.i
Smp Info : kjhvv1ac,80318a.b,8270p,1-827042d.sub
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\8270P.m
Meth Date : 19-Mar-2008 11:31 gruberj Quant Type: ISTD
Cal Date : 18-FEB-2008 17:50 Cal File: 8AL0218.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)
Vo	1040.000	Volume of sample extracted (mL)
Vi	0.50000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
* 1	1,4-Dichlorobenzene-d4	152	3.430	3.435	(1.000)	117298	2.00000	
* 2	Naphthalene-d8	136	4.325	4.324	(1.000)	469431	2.00000	
* 3	Acenaphthene-d10	164	5.594	5.594	(1.000)	277975	2.00000	
* 4	Phenanthrene-d10	188	6.676	6.681	(1.000)	502015	2.00000	
* 5	Chrysene-d12	240	8.677	8.710	(1.000)	552355	2.00000	
* 6	Perylene-d12	264	10.086	10.119	(1.000)	510656	2.00000	
9	Pyridine	79	Compound Not Detected.					
10	N-Nitrosodimethylamine	74	Compound Not Detected.					
11	Ethyl methacrylate	69	Compound Not Detected.					
12	3-Chloropropionitrile	54	Compound Not Detected.					
13	Malononitrile	66	Compound Not Detected.					
209	Benzaldehyde	77	Compound Not Detected.					
21	Aniline	93	Compound Not Detected.					
22	Phenol	94	Compound Not Detected.					
23	bis(2-Chloroethyl)ether	93	Compound Not Detected.					
24	2-Chlorophenol	128	Compound Not Detected.					
26	1,3-Dichlorobenzene	146	Compound Not Detected.					
27	1,4-Dichlorobenzene	146	Compound Not Detected.					

28	1,2-Dichlorobenzene	146	Compound Not Detected.
29	Benzyl Alcohol	108	Compound Not Detected.

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
30	2-Methylphenol	108	Compound Not Detected.					
31	bis(2-Chloroisopropyl)ether	45	Compound Not Detected.					
37	Acetophenone	105	Compound Not Detected.					
32	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
192	4-Methylphenol	108	Compound Not Detected.					
34	Hexachloroethane	117	Compound Not Detected.					
35	Nitrobenzene	77	Compound Not Detected.					
41	Isophorone	82	Compound Not Detected.					
42	2-Nitrophenol	139	Compound Not Detected.					
43	2,4-Dimethylphenol	107	Compound Not Detected.					
44	bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
46	2,4-Toluenediamene	121	Compound Not Detected.					
47	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
48	2,4-Dichlorophenol	162	Compound Not Detected.					
49	Benzoic Acid	122	Compound Not Detected.					
50	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
51	Naphthalene	128	Compound Not Detected.					
52	4-Chloroaniline	127	Compound Not Detected.					
56	Hexachlorobutadiene	225	Compound Not Detected.					
210	Caprolactam	113	Compound Not Detected.					
57	1,2,3-Trichlorobenzene	180	Compound Not Detected.					
59	4-Chloro-3-Methylphenol	107	Compound Not Detected.					
62	2-Methylnaphthalene	142	Compound Not Detected.					
63	1-Methylnaphthalene	142	Compound Not Detected.					
64	Hexachlorocyclopentadiene	237	Compound Not Detected.					
66	2,4,6-Trichlorophenol	196	Compound Not Detected.					
67	2,4,5-Trichlorophenol	196	Compound Not Detected.					
211	1,1'-Biphenyl	154	Compound Not Detected.					
68	1,2,3,5-Tetrachlorobenzene	216	Compound Not Detected.					
70	2-Chloronaphthalene	162	Compound Not Detected.					
73	2-Nitroaniline	65	Compound Not Detected.					
74	1,2,3,4-Tetrachlorobenzene	216	Compound Not Detected.					
76	Dimethylphthalate	163	Compound Not Detected.					
78	2,6-Dinitrotoluene	165	Compound Not Detected.					
79	Acenaphthylene	152	Compound Not Detected.					
80	1,2-Dinitrobenzene	168	Compound Not Detected.					
81	3-Nitroaniline	138	Compound Not Detected.					
82	Acenaphthene	153	Compound Not Detected.					
83	2,4-Dinitrophenol	184	Compound Not Detected.					
85	4-Nitrophenol	109	Compound Not Detected.					
86	Dibenzofuran	168	Compound Not Detected.					
87	2,4-Dinitrotoluene	165	Compound Not Detected.					
91	2,3,5,6-Tetrachlorophenol	232	Compound Not Detected.					
93	Diethylphthalate	149	Compound Not Detected.					
94	Fluorene	166	Compound Not Detected.					
95	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
96	4-Nitroaniline	138	Compound Not Detected.					
98	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
99	N-Nitrosodiphenylamine	169	Compound Not Detected.					
100	1,2-Diphenylhydrazine	77	Compound Not Detected.					
106	4-Bromophenyl-phenylether	248	Compound Not Detected.					
107	Hexachlorobenzene	284	Compound Not Detected.					

212	Atrazine	200	Compound Not Detected.
111	Pentachlorophenol	266	Compound Not Detected.

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)
115	Phenanthrene	178	Compound Not Detected.					
116	Anthracene	178	Compound Not Detected.					
119	Carbazole	167	Compound Not Detected.					
120	Di-n-Butylphthalate	149	Compound Not Detected.					
123	Fluoranthene	202	Compound Not Detected.					
124	Benzidine	184	Compound Not Detected.					
125	Pyrene	202	Compound Not Detected.					
131	Butylbenzylphthalate	149	Compound Not Detected.					
133	3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
135	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
136	Benzo(a)Anthracene	228	Compound Not Detected.					
137	Chrysene	228	Compound Not Detected.					
138	4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
139	bis(2-ethylhexyl)Phthalate	149	8.614	8.643	(0.993)	171572	1.01332	3.8974
140	Di-n-octylphthalate	149	Compound Not Detected.					
141	Benzo(b)fluoranthene	252	Compound Not Detected.					
142	Benzo(k)fluoranthene	252	Compound Not Detected.					
146	Benzo(a)pyrene	252	Compound Not Detected.					
149	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
150	Dibenz(a,h)anthracene	278	Compound Not Detected.					
151	Benzo(g,h,i)perylene	276	Compound Not Detected.					
198	1,4-Dioxane	88	Compound Not Detected.					
$ 154	Nitrobenzene-d5	82	3.810	3.815	(0.881)	344761	3.03033	11.655
$ 155	2-Fluorobiphenyl	172	5.084	5.089	(0.909)	466665	2.66963	10.268
$ 156	Terphenyl-d14	244	7.835	7.844	(0.903)	1001834	4.70522	18.097
$ 157	Phenol-d5	99	3.147	3.151	(0.917)	442245	3.70238	14.240
$ 158	2-Fluorophenol	112	2.565	2.569	(0.748)	198381	2.65783	10.222
$ 159	2,4,6-Tribromophenol	330	6.166	6.166	(1.102)	137395	5.60430	21.555
$ 186	2-Chlorophenol-d4	132	3.276	3.281	(0.955)	276817	3.95219	15.201
$ 187	1,2-Dichlorobenzene-d4	152	3.541	3.540	(1.032)	110600	2.29743	8.8363
M 195	Cresols, total	100	Compound Not Detected.					
101	Diphenylamine	169	Compound Not Detected.					

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

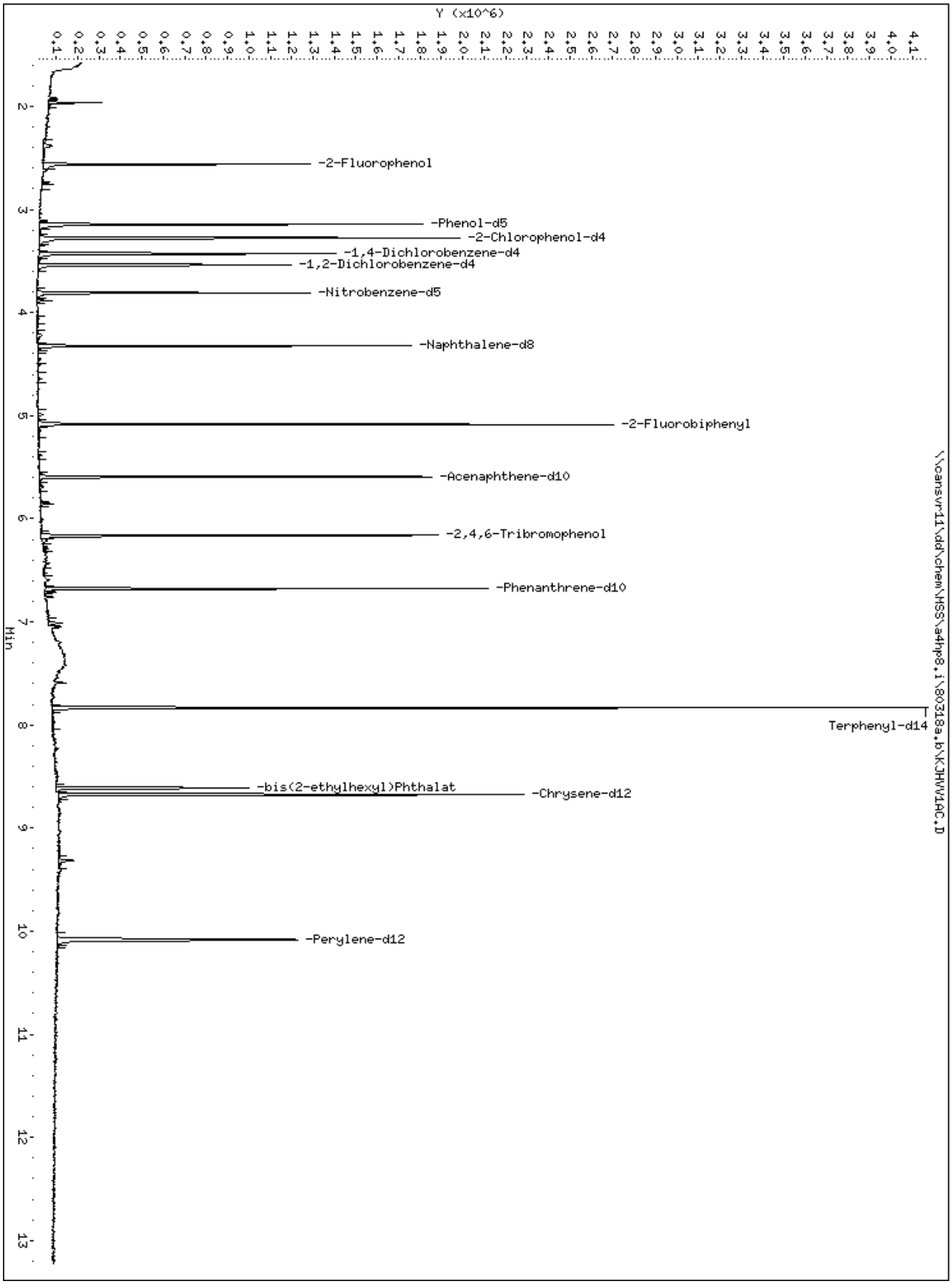
Instrument ID: a4hp8.i
Lab File ID: KJHVV1AC.D
Lab Smp Id: kjhvv1ac
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\8270P.m
Misc Info:

Calibration Date: 18-MAR-2008
Calibration Time: 11:33
Client Smp ID: AMW-05B(20080311)
Level: LOW
Sample Type: WATER

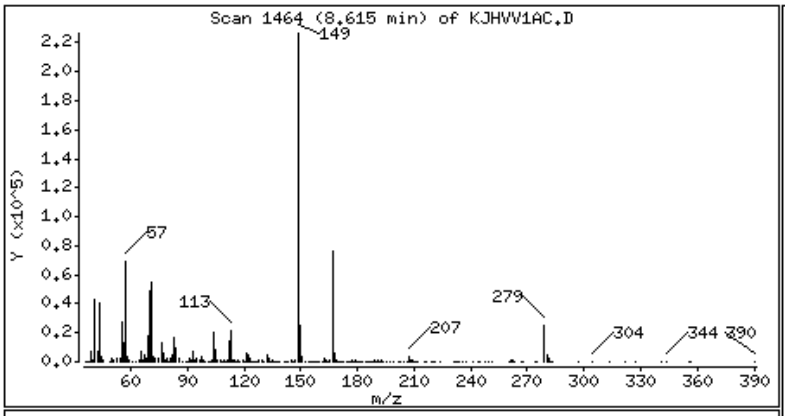
		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	134594	67297	269188	117298	-12.85
2 Naphthalene-d8	540972	270486	1081944	469431	-13.22
3 Acenaphthene-d10	323762	161881	647524	277975	-14.14
4 Phenanthrene-d10	590518	295259	1181036	502015	-14.99
5 Chrysene-d12	670238	335119	1340476	552355	-17.59
6 Perylene-d12	605727	302864	1211454	510656	-15.70

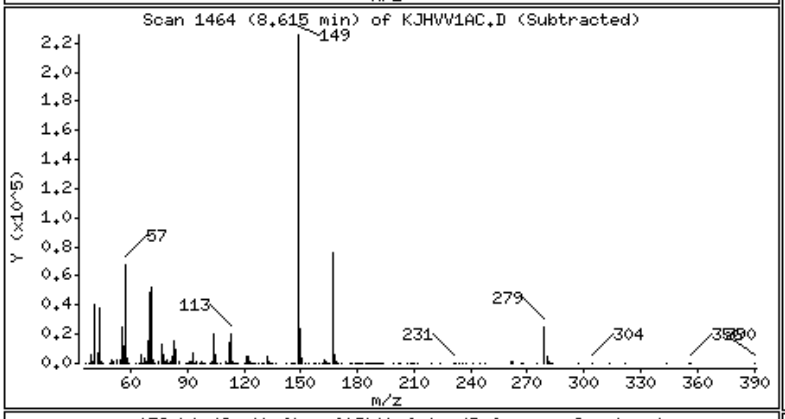
		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.44	2.94	3.94	3.43	-0.13
2 Naphthalene-d8	4.32	3.82	4.82	4.33	0.01
3 Acenaphthene-d10	5.59	5.09	6.09	5.59	0.01
4 Phenanthrene-d10	6.68	6.18	7.18	6.68	-0.07
5 Chrysene-d12	8.71	8.21	9.21	8.68	-0.38
6 Perylene-d12	10.12	9.62	10.62	10.09	-0.33

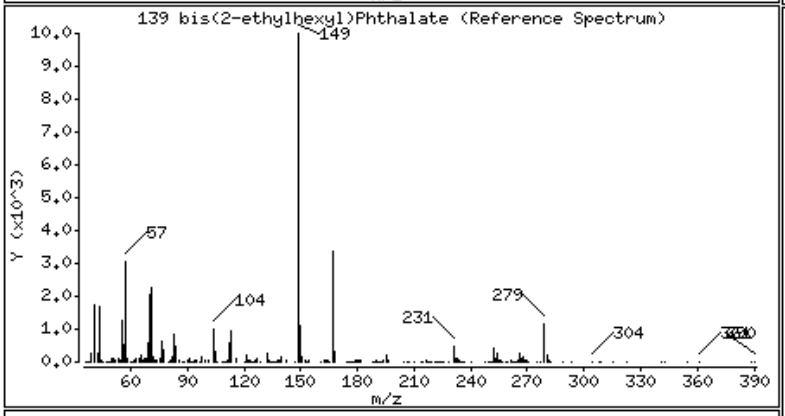
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

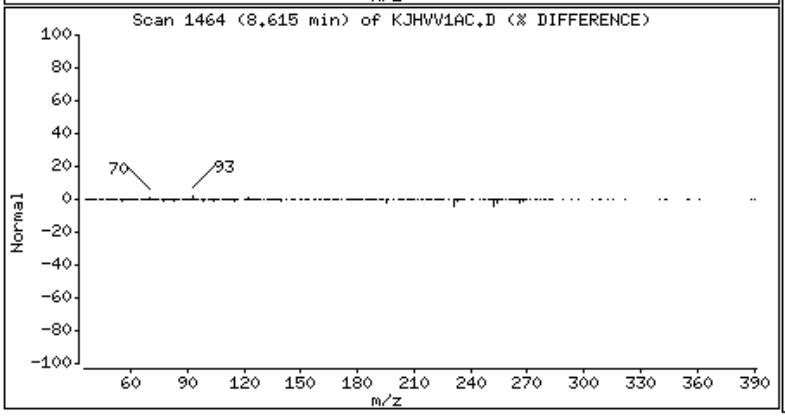

Y (x10^6)
-2-Fluorophenol
-Phenol-d5
-2-Chlorophenol-d4
-1,4-Dichlorobenzene-d4
-1,2-Dichlorobenzene-d4
-Nitrobenzene-d5
-Naphthalene-d8
-2-Fluorobiphenyl
-Acenaphthene-d10
-2,4,6-Tribromophenol
-Phenanthrene-d10
Min
Terphenyl-d14
-bis(2-ethylhexyl)Phthalat
-Chrysene-d12
-Perylene-d12
\\cansvr11\dd\chem\HSS\a4hp8,i\80318a,b\KJHW10C.D

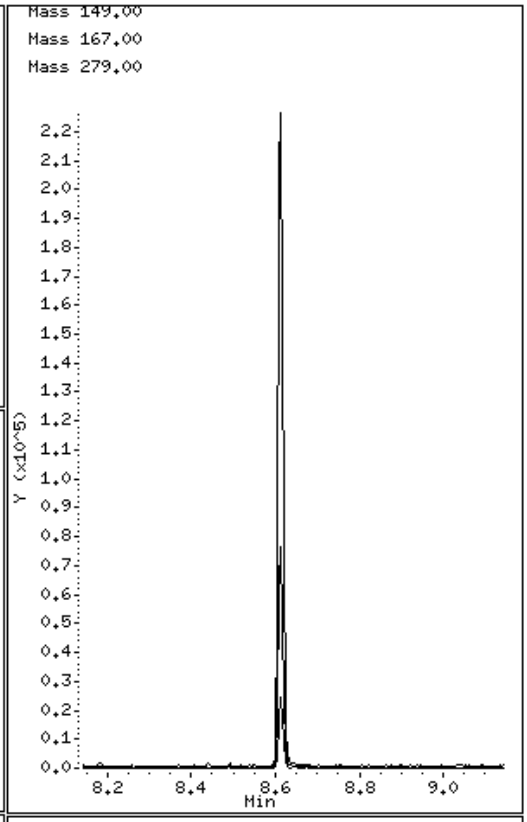
139 bis(2-ethylhexyl)Phthalate

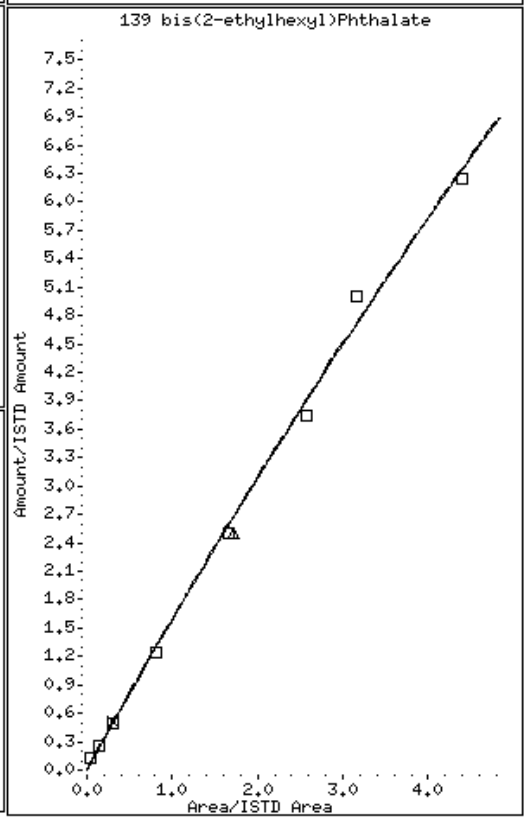












ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

GC/MS Semivolatiles

Lot-Sample #...: A8C130254-001 **Work Order #...:** KJHVV2AC **Matrix.....:** WG
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/19/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8079104
Dilution Factor: 1 **Initial Wgt/Vol:** 1030 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44

(Continued on next page)

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

GC/MS Semivolatiles

Lot-Sample #...: A8C130254-001 **Work Order #...:** KJHVV2AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	71	(27 - 111)
2-Fluorobiphenyl	69	(28 - 110)
Terphenyl-d14	83	(37 - 119)
Phenol-d5	17	(10 - 110)
2-Fluorophenol	29	(10 - 110)
2,4,6-Tribromophenol	80	(22 - 120)

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\KJHVV2AC.D
Lab Smp Id: kjhvv2ac Client Smp ID: AMW-05B(20080311)
Inj Date : 20-MAR-2008 13:49
Operator : 001574 Inst ID: a4hp9.i
Smp Info : kjhvv2ac,80320a.b,8270p,1-827042d.sub
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Meth Date : 21-Mar-2008 10:12 ulmanm Quant Type: ISTD
Cal Date : 18-MAR-2008 12:31 Cal File: 9THHH318.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)
Vo	1030.000	Volume of sample extracted (mL)
Vi	0.50000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
* 1	1,4-Dichlorobenzene-d4	152	3.844	3.846	(1.000)	117582	2.00000	
* 2	Naphthalene-d8	136	4.806	4.807	(1.000)	408637	2.00000	
* 3	Acenaphthene-d10	164	6.104	6.105	(1.000)	262160	2.00000	
* 4	Phenanthrene-d10	188	7.193	7.200	(1.000)	442445	2.00000	
* 5	Chrysene-d12	240	9.175	9.181	(1.000)	450767	2.00000	
* 6	Perylene-d12	264	10.628	10.640	(1.000)	363880	2.00000	
9	Pyridine	79	Compound Not Detected.					
10	N-Nitrosodimethylamine	74	Compound Not Detected.					
11	Ethyl methacrylate	69	Compound Not Detected.					
12	3-Chloropropionitrile	54	Compound Not Detected.					
13	Malononitrile	66	Compound Not Detected.					
209	Benzaldehyde	77	Compound Not Detected.					
21	Aniline	93	Compound Not Detected.					
22	Phenol	94	Compound Not Detected.					
23	bis(2-Chloroethyl)ether	93	Compound Not Detected.					
24	2-Chlorophenol	128	Compound Not Detected.					
26	1,3-Dichlorobenzene	146	Compound Not Detected.					
27	1,4-Dichlorobenzene	146	Compound Not Detected.					

28	1,2-Dichlorobenzene	146	Compound Not Detected.
29	Benzyl Alcohol	108	Compound Not Detected.

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)
30	2-Methylphenol	108	Compound Not Detected.					
31	bis(2-Chloroisopropyl)ether	45	Compound Not Detected.					
37	Acetophenone	105	Compound Not Detected.					
32	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
192	4-Methylphenol	108	Compound Not Detected.					
34	Hexachloroethane	117	Compound Not Detected.					
35	Nitrobenzene	77	Compound Not Detected.					
41	Isophorone	82	Compound Not Detected.					
42	2-Nitrophenol	139	Compound Not Detected.					
43	2,4-Dimethylphenol	107	Compound Not Detected.					
44	bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
46	2,4-Toluenediamene	121	Compound Not Detected.					
47	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
48	2,4-Dichlorophenol	162	Compound Not Detected.					
49	Benzoic Acid	122	Compound Not Detected.					
50	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
51	Naphthalene	128	Compound Not Detected.					
52	4-Chloroaniline	127	Compound Not Detected.					
56	Hexachlorobutadiene	225	Compound Not Detected.					
210	Caprolactam	113	Compound Not Detected.					
57	1,2,3-Trichlorobenzene	180	Compound Not Detected.					
59	4-Chloro-3-Methylphenol	107	Compound Not Detected.					
62	2-Methylnaphthalene	142	Compound Not Detected.					
63	1-Methylnaphthalene	142	Compound Not Detected.					
64	Hexachlorocyclopentadiene	237	Compound Not Detected.					
66	2,4,6-Trichlorophenol	196	Compound Not Detected.					
67	2,4,5-Trichlorophenol	196	Compound Not Detected.					
211	1,1'-Biphenyl	154	Compound Not Detected.					
68	1,2,3,5-Tetrachlorobenzene	216	Compound Not Detected.					
70	2-Chloronaphthalene	162	Compound Not Detected.					
73	2-Nitroaniline	65	Compound Not Detected.					
74	1,2,3,4-Tetrachlorobenzene	216	Compound Not Detected.					
76	Dimethylphthalate	163	Compound Not Detected.					
78	2,6-Dinitrotoluene	165	Compound Not Detected.					
79	Acenaphthylene	152	Compound Not Detected.					
80	1,2-Dinitrobenzene	168	Compound Not Detected.					
81	3-Nitroaniline	138	Compound Not Detected.					
82	Acenaphthene	153	Compound Not Detected.					
83	2,4-Dinitrophenol	184	Compound Not Detected.					
85	4-Nitrophenol	109	Compound Not Detected.					
86	Dibenzofuran	168	Compound Not Detected.					
87	2,4-Dinitrotoluene	165	Compound Not Detected.					
91	2,3,5,6-Tetrachlorophenol	232	Compound Not Detected.					
93	Diethylphthalate	149	Compound Not Detected.					
94	Fluorene	166	Compound Not Detected.					
95	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
96	4-Nitroaniline	138	Compound Not Detected.					
98	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
99	N-Nitrosodiphenylamine	169	Compound Not Detected.					
100	1,2-Diphenylhydrazine	77	Compound Not Detected.					
106	4-Bromophenyl-phenylether	248	Compound Not Detected.					
107	Hexachlorobenzene	284	Compound Not Detected.					

212	Atrazine	200	Compound Not Detected.
111	Pentachlorophenol	266	Compound Not Detected.

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)
	115 Phenanthrene	178	Compound Not Detected.					
	116 Anthracene	178	Compound Not Detected.					
	119 Carbazole	167	Compound Not Detected.					
	120 Di-n-Butylphthalate	149	Compound Not Detected.					
	123 Fluoranthene	202	Compound Not Detected.					
	124 Benzidine	184	Compound Not Detected.					
	125 Pyrene	202	Compound Not Detected.					
	131 Butylbenzylphthalate	149	Compound Not Detected.					
	133 3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
	135 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	136 Benzo(a)Anthracene	228	Compound Not Detected.					
	137 Chrysene	228	Compound Not Detected.					
	138 4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
	139 bis(2-ethylhexyl)Phthalate	149	Compound Not Detected.					
	140 Di-n-octylphthalate	149	Compound Not Detected.					
	141 Benzo(b)fluoranthene	252	Compound Not Detected.					
	142 Benzo(k)fluoranthene	252	Compound Not Detected.					
	146 Benzo(a)pyrene	252	Compound Not Detected.					
	149 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	150 Dibenz(a,h)anthracene	278	Compound Not Detected.					
	151 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	198 1,4-Dioxane	88	Compound Not Detected.					
$	154 Nitrobenzene-d5	82	4.256	4.262	(0.886)	494249	3.53492	13.728
$	155 2-Fluorobiphenyl	172	5.586	5.592	(0.915)	575751	3.43362	13.334
$	156 Terphenyl-d14	244	8.342	8.343	(0.909)	793991	4.17006	16.194
$	157 Phenol-d5	99	3.524	3.531	(0.917)	165089	1.25427	4.8709
$	158 2-Fluorophenol	112	2.835	2.842	(0.737)	186054	2.19544	8.5260
$	159 2,4,6-Tribromophenol	330	6.680	6.682	(1.094)	117915	5.99155	23.268
$	186 2-Chlorophenol-d4	132	3.668	3.675	(0.954)	334925	4.84931	18.832
$	187 1,2-Dichlorobenzene-d4	152	3.962	3.963	(1.031)	151159	2.89422	11.240
M	195 Cresols, total	100	Compound Not Detected.					
	101 Diphenylamine	169	Compound Not Detected.					

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp9.i
Lab File ID: KJHVV2AC.D
Lab Smp Id: kjhvv2ac
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Misc Info:

Calibration Date: 20-MAR-2008
Calibration Time: 10:48
Client Smp ID: AMW-05B(20080311)
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	104755	52378	209510	117582	12.24
2 Naphthalene-d8	382651	191326	765302	408637	6.79
3 Acenaphthene-d10	239536	119768	479072	262160	9.44
4 Phenanthrene-d10	417645	208823	835290	442445	5.94
5 Chrysene-d12	418554	209277	837108	450767	7.70
6 Perylene-d12	338155	169078	676310	363880	7.61

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.85	3.35	4.35	3.84	-0.03
2 Naphthalene-d8	4.81	4.31	5.31	4.81	-0.03
3 Acenaphthene-d10	6.11	5.61	6.61	6.10	-0.02
4 Phenanthrene-d10	7.20	6.70	7.70	7.19	-0.09
5 Chrysene-d12	9.18	8.68	9.68	9.18	-0.07
6 Perylene-d12	10.64	10.14	11.14	10.63	-0.11

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\KJHVV2AC.D

Page 1

Date : 20-MAR-2008 13:49

Client ID: AMW-05B(20080311)

Instrument: a4hp9.i

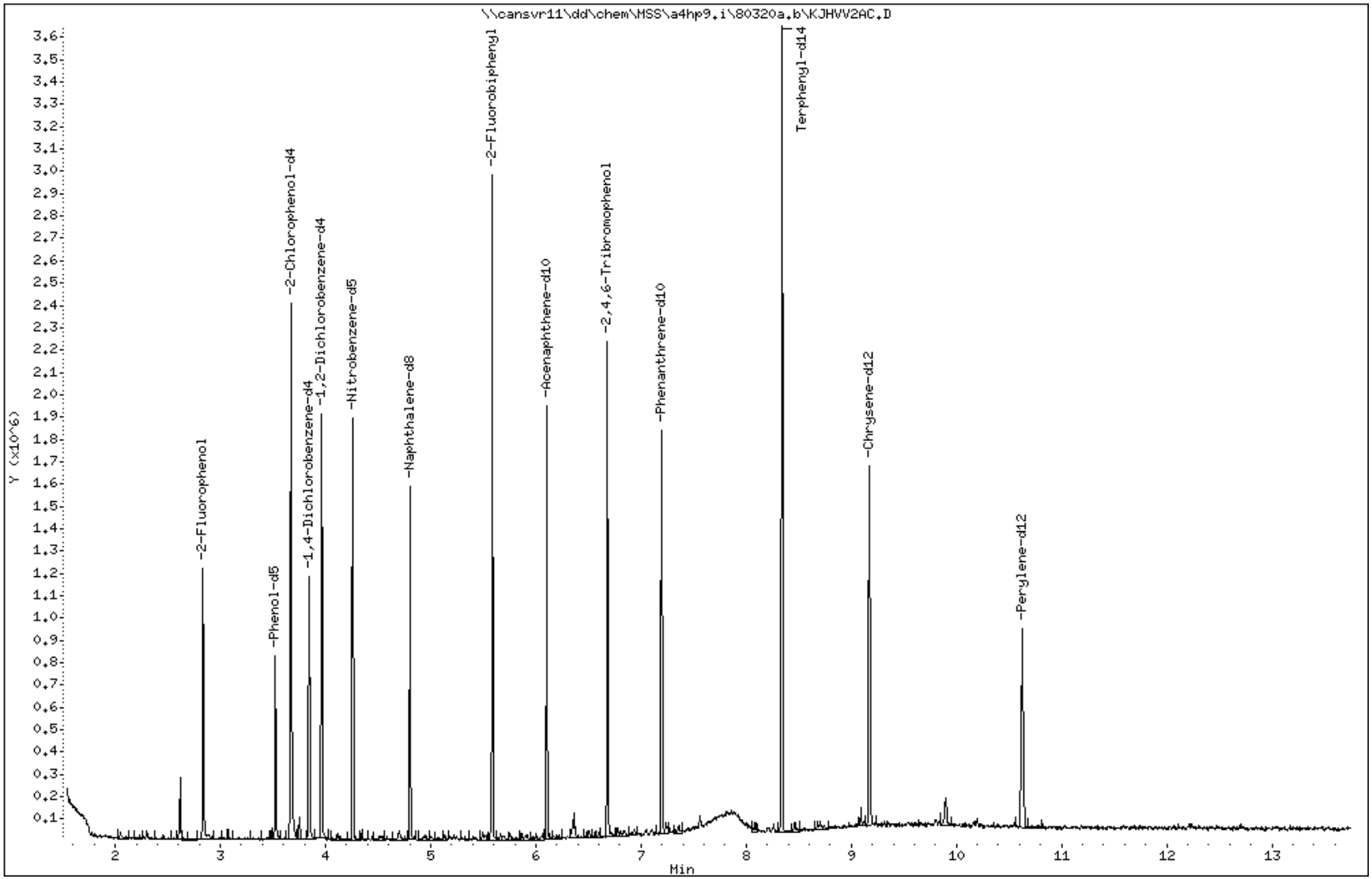
Sample Info: kjhvv2ac,80320a.b,8270p,1-827042d.sub

Volume Injected (uL): 0.5

Operator: 001574

Column phase: db5.625

Column diameter: 0.32



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

STANDARD DATA

Report Date: 18-Feb-2008 17:39

Calibration History

Method : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Start Cal Date: 16-JAN-2008 14:41
End Cal Date : 18-FEB-2008 17:50
Last Cal Level: 2
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.05000		
18-FEB-2008 13:40	pah	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SLL0218.D
Cal Level: 2 , Cal Amount: 0.25000		
18-FEB-2008 17:50	2-ap9	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AL0218.D
18-FEB-2008 13:21	1-827042d	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SL0218.D
Cal Level: 3 , Cal Amount: 0.50000		
18-FEB-2008 17:31	2-ap9	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AML0218.D
18-FEB-2008 13:02	1-827042d	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SML0218.D
Cal Level: 4 , Cal Amount: 1.00000		
18-FEB-2008 17:12	2-ap9	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AM0218.D
18-FEB-2008 12:43	1-827042d	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SM0218.D
Cal Level: 5 , Cal Amount: 2.50000		
18-FEB-2008 16:53	2-ap9	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AMM0218.D
18-FEB-2008 12:23	1-827042d	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SMM0218.D
Cal Level: 6 , Cal Amount: 5.00000		
18-FEB-2008 16:34	2-ap9	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AMH0218.D
18-FEB-2008 14:57	1-827042d	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SMH0218.D

Cal Level: 7 , Cal Amount: 7.50000		
18-FEB-2008 16:14	2-ap9	
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18-FEB-2008 14:38	1-827042d	
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Cal Level: 8 , Cal Amount: 10.00000		
18-FEB-2008 15:55	2-ap9	
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18-FEB-2008 14:19	1-827042d	
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Cal Level: 9 , Cal Amount: 12.50000		
18-FEB-2008 15:36	2-ap9	
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18-FEB-2008 14:00	1-827042d	
\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8HHH0218.D		

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

18-FEB-2008 18:10	2-ap9	
\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\ICVAP9.D		
18-FEB-2008 15:17	1-827042d	
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18-FEB-2008 16:34	2-ap9	
\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AMH0218.D		
18-FEB-2008 14:57	1-827042d	
\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SMH0218.D		

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 16-JAN-2008 14:41
End Cal Date : 18-FEB-2008 17:50
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i
Curve Type : Average

Calibration File Names:
Level 1: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SLL0218.D
Level 2: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AL0218.D
Level 3: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AML0218.D
Level 4: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AM0218.D
Level 5: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AMM0218.D
Level 6: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AMH0218.D
Level 7: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AH0218.D
Level 8: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AHH0218.D
Level 9: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AHHH218.D

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
198 1,4-Dioxane	+++++	0.59954	0.66427	0.78323	0.72398	0.60890			
	0.67976	0.59572	0.60360				0.65737	10.478	<-
7 N-Nitrosomorpholine	+++++	1.07014	1.07079	1.06646	1.07583	1.08868			
	1.14356	1.10047	1.17944				1.09942	3.732	<-
8 Ethyl methanesulfonate	+++++	0.71532	0.71203	0.70364	0.72504	0.71438			
	0.76292	0.70425	0.76511				0.72534	3.420	<-
9 Pyridine	+++++	1.74348	1.87511	2.05472	2.06184	1.92204			
	2.06970	1.85978	1.98074				1.94593	6.012	<-
10 N-Nitrosodimethylamine	+++++	1.03179	1.16048	1.25724	1.23409	1.19774			
	1.26212	1.14009	1.18938				1.18412	6.371	<-
11 Ethyl methacrylate	+++++	1.56250	1.69653	1.90685	1.87263	1.70147			
	1.83455	1.63227	1.66969				1.73456	7.080	<-
12 3-Chloropropionitrile	+++++	0.78320	0.82231	0.88057	0.83184	0.79536			
	0.83232	0.75098	0.78546				0.81025	4.920	<-
13 Malononitrile	+++++	2.09461	2.32052	2.45773	2.37451	2.26595			
	2.33453	2.07629	2.14512				2.25866	6.166	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 16-JAN-2008 14:41
End Cal Date : 18-FEB-2008 17:50
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD
	7.500 Level 7	10.000 Level 8	12.500 Level 9					
14 2-Picoline	+++++	1.62975	1.67265	1.80751	1.75392	1.71342		
	1.85926	1.89559	1.77402				1.76326	5.136 <-
15 N-Nitrosomethylethylamine	+++++	0.73795	0.80589	0.81163	0.81115	0.85668		
	0.88798	0.89957	0.95228				0.84539	7.962 <-
16 Methyl methanesulfonate	+++++	0.56536	0.59868	0.59128	0.57520	0.58293		
	0.59622	0.57076	0.60344				0.58548	2.398 <-
18 1,3-Dichloro-2-propanol	+++++	1.76428	1.86520	1.97393	1.85581	1.97274		
	2.04723	1.99120	2.13838				1.95110	6.073 <-
19 N-Nitrosodiethylamine	+++++	0.75482	0.75842	0.78193	0.74618	0.82825		
	0.80005	0.82737	0.83618				0.79165	4.602 <-
21 Aniline	+++++	2.42482	2.68449	2.82129	2.75210	2.81914		
	2.98526	2.69893	2.87703				2.75788	6.029 <-
22 Phenol	+++++	1.93257	2.06851	2.27726	2.18319	2.18395		
	2.28599	2.11453	2.26292				2.16362	5.617 <-
23 bis(2-Chloroethyl)ether	1.54775	1.58844	1.61276	1.78334	1.76396	1.66569		
	1.71080	1.61124	1.84524				1.68102	5.997
24 2-Chlorophenol	+++++	1.19674	1.27713	1.37690	1.31134	1.33749		
	1.40041	1.29738	1.38709				1.32306	5.115 <-
25 Pentachloroethane	+++++	0.49486	0.48683	0.51285	0.48410	0.52702		
	0.51199	0.51599	0.55095				0.51057	4.347 <-
26 1,3-Dichlorobenzene	+++++	1.24971	1.32308	1.40064	1.36840	1.33418		
	1.39644	1.28693	1.38041				1.34247	4.035 <-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 16-JAN-2008 14:41
End Cal Date : 18-FEB-2008 17:50
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
27 1,4-Dichlorobenzene	+++++	0.85057	0.86584	0.88711	0.86125	0.84162			
	0.89632	0.80276	0.86396				0.85868	3.351	<-
28 1,2-Dichlorobenzene	+++++	1.21368	1.26206	1.30734	1.29458	1.28839			
	1.33892	1.27273	1.37354				1.29391	3.750	<-
29 Benzyl Alcohol	+++++	0.84554	0.97677	1.01721	0.99953	1.03753			
	1.05830	0.99184	1.06099				0.99846	6.904	<-
30 2-Methylphenol	+++++	1.18648	1.34380	1.37348	1.39332	1.44518			
	1.46817	1.40910	1.54187				1.39517	7.479	<-
31 bis(2-Chloroisopropyl)ether	+++++	1.45979	1.59794	1.72177	1.70576	1.57237			
	1.59074	1.51369	1.61068				1.59659	5.501	<-
32 N-Nitroso-di-n-propylamine	+++++	1.34529	1.50750	1.64133	1.63953	1.68468			
	1.71493	1.60618	1.74692				1.61080	8.053	<-
M 195 Cresols, total	+++++	2.45938	2.74751	2.88851	2.89576	2.95836			
	3.01097	2.87413	3.09486				2.86618	6.760	<-
192 4-Methylphenol	+++++	1.27290	1.40371	1.51503	1.50244	1.51318			
	1.54280	1.46503	1.55299				1.47101	6.314	<-
193 3-Methylphenol	+++++	1.25961	1.32069	1.33802	1.38345	1.46257			
	1.53539	1.51648	1.63823				1.43180	8.936	<-
34 Hexachloroethane	+++++	0.50206	0.53065	0.57395	0.56045	0.56948			
	0.58585	0.54364	0.58166				0.55597	5.168	<-
35 Nitrobenzene	0.42662	0.43535	0.47669	0.53473	0.52042	0.52522			
	0.53981	0.50048	0.54414				0.50039	8.909	

TestAmerica North Canton

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Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
36 N-Nitrosopyrrolidine	+++++	0.72683	0.77172	0.82084	0.83034	0.85909			
	0.90425	0.88834	0.95931				0.84509	8.808	<-
37 Acetophenone	+++++	2.26034	2.25542	2.31866	2.26950	2.36391			
	2.47973	2.41433	2.62497				2.37336	5.444	<-
39 o-Toluidine	+++++	2.39682	2.54095	2.55039	2.46755	2.44770			
	2.25483	1.92097	1.73212				2.28892	13.285	<-
40 N-Nitrosopiperidine	+++++	0.15101	0.16311	0.16701	0.16611	0.17703			
	0.18048	0.17535	0.18937				0.17118	6.926	<-
41 Isophorone	+++++	0.74681	0.83798	0.90938	0.91144	0.92504			
	0.95209	0.88741	0.97322				0.89292	8.030	<-
42 2-Nitrophenol	+++++	0.11857	0.14158	0.16231	0.16057	0.17587			
	0.18375	0.16863	0.19083				0.16276	14.393	<-
43 2,4-Dimethylphenol	+++++	0.38731	0.41358	0.45821	0.44740	0.45431			
	0.46834	0.43258	0.47562				0.44217	6.706	<-
44 bis(2-Chloroethoxy)methane	+++++	0.44710	0.46415	0.49368	0.48092	0.48074			
	0.49481	0.45523	0.50417				0.47760	4.256	<-
45 O,O,O-Triethyl phosphorothioa	+++++	0.16826	0.17242	0.18115	0.17833	0.19267			
	0.19636	0.19504	0.20770				0.18649	7.262	<-
46 2,4-Toluenediamene	+++++	0.22639	0.23529	0.30540	0.28540	0.27967			
	0.24494	0.22146	0.20876				0.25091	13.897	<-
47 1,3,5-Trichlorobenzene	+++++	0.24833	0.26355	0.27518	0.26370	0.27478			
	0.28734	0.26663	0.29437				0.27173	5.356	<-

TestAmerica North Canton

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Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	___ RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
48 2,4-Dichlorophenol	+++++	0.20859	0.23488	0.25162	0.24703	0.25620			
	0.26664	0.24625	0.27197				0.24790	7.968	<-
49 Benzoic Acid	+++++	+++++	0.14942	0.16556	0.18894	0.22519			
	0.25453	0.23640	0.25792				0.21114	20.540	<-
50 1,2,4-Trichlorobenzene	+++++	0.27148	0.28386	0.29327	0.28129	0.28963			
	0.30201	0.27954	0.31128				0.28904	4.466	<-
51 Naphthalene	1.03596	0.92486	0.96254	1.04175	0.99527	1.00107			
	1.05872	0.97158	0.99733				0.99879	4.242	
52 4-Chloroaniline	+++++	0.34211	0.38518	0.44512	0.42969	0.41895			
	0.45036	0.39620	0.43569				0.41291	8.845	<-
53 a,a-Dimethyl-phenethylamine	+++++	+++++	0.70655	0.71840	0.86555	0.92623			
	0.92171	0.93718	1.00572				0.86876	13.164	<-
54 2,6-Dichlorophenol	+++++	0.20953	0.21357	0.21846	0.22853	0.24460			
	0.25179	0.25389	0.27668				0.23713	9.897	<-
55 Hexachloropropene	+++++	0.19609	0.19786	0.21945	0.22311	0.24235			
	0.24423	0.23581	0.25953				0.22731	9.899	<-
56 Hexachlorobutadiene	+++++	0.16602	0.17073	0.18940	0.18121	0.19137			
	0.19765	0.18022	0.20162				0.18478	6.774	<-
57 1,2,3-Trichlorobenzene	+++++	0.24489	0.25421	0.26791	0.25561	0.26209			
	0.27234	0.24855	0.27806				0.26046	4.486	<-
58 N-Nitrosodi-n-butylamine	+++++	0.27948	0.29612	0.30917	0.31164	0.34468			
	0.34761	0.34959	0.37509				0.32667	9.902	<-

TestAmerica North Canton

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Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD
	7.500 Level 7	10.000 Level 8	12.500 Level 9					
59 4-Chloro-3-Methylphenol	+++++	0.29336	0.33793	0.36748	0.36513	0.38367		
	0.39107	0.36440	0.39585				0.36236	9.210 <-
60 p-Phenylene diamine	+++++	+++++	0.26818	0.30199	0.31656	0.33182		
	0.30762	0.26759	0.24728				0.29158	10.565 <-
61 Safrole	+++++	0.23194	0.23810	0.23281	0.24051	0.25906		
	0.26651	0.26284	0.28431				0.25201	7.525 <-
62 2-Methylnaphthalene	0.58780	0.52541	0.56797	0.60215	0.58909	0.60163		
	0.61988	0.57553	0.64888				0.59093	5.834
63 1-Methylnaphthalene	0.66550	0.57355	0.59709	0.63977	0.62960	0.64295		
	0.66931	0.61740	0.69305				0.63647	5.851
64 Hexachlorocyclopentadiene	+++++	0.26550	0.30726	0.34041	0.35508	0.39079		
	0.41962	0.38658	0.43947				0.36309	15.981 <-
65 1,2,4,5-Tetrachlorobenzene	+++++	0.59296	0.57249	0.55294	0.54854	0.60052		
	0.61385	0.60544	0.66398				0.59384	6.262 <-
66 2,4,6-Trichlorophenol	+++++	0.27166	0.30422	0.34262	0.33125	0.36565		
	0.37538	0.34768	0.37739				0.33948	10.794 <-
67 2,4,5-Trichlorophenol	+++++	0.27973	0.30746	0.37470	0.36510	0.38498		
	0.39196	0.36976	0.39686				0.35882	11.793 <-
68 1,2,3,5-Tetrachlorobenzene	+++++	0.52335	0.52670	0.56485	0.54188	0.58970		
	0.61962	0.58256	0.65005				0.57484	7.807 <-
69 1,4-Dinitrobenzene	+++++	+++++	0.12190	0.15011	0.17155	0.19341		
	0.20408	0.20016	0.22231				0.18050	19.319 <-

TestAmerica North Canton

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Last Edit : 18-Feb-2008 17:24 a4hp8.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
70 2-Chloronaphthalene	1.07458	0.95562	0.99812	1.07604	1.03627	1.05201			
	1.08130	1.01699	1.11990				1.04565	4.765	
71 Isosafrole 1	+++++	0.12772	0.12029	0.12548	0.12326	0.13947			
	0.14287	0.13619	0.15170				0.13337	8.209	<-
M 188 Isosafrole, Total	+++++	0.90408	0.89379	0.91438	0.91267	1.01036			
	1.05535	1.03027	1.14664				0.98344	9.322	<-
72 Isosafrole 2	+++++	0.77636	0.77350	0.78891	0.78942	0.87089			
	0.91248	0.89407	0.99494				0.85007	9.533	<-
73 2-Nitroaniline	+++++	0.31343	0.38923	0.46752	0.48379	0.53261			
	0.54165	0.50383	0.52617				0.46978	16.989	<-
74 1,2,3,4-Tetrachlorobenzene	+++++	0.48058	0.49949	0.52742	0.51107	0.54596			
	0.57050	0.52730	0.59002				0.53154	6.829	<-
75 1,4-Naphthoquinone	+++++	+++++	0.29667	0.35116	0.38827	0.41496			
	0.42031	0.40660	0.41318				0.38445	11.806	<-
76 Dimethylphthalate	+++++	1.07447	1.16469	1.23862	1.20868	1.28044			
	1.28082	1.21562	1.31963				1.22287	6.330	<-
77 m-Dinitrobenzene	+++++	+++++	0.17683	0.19043	0.20372	0.22904			
	0.23774	0.22808	0.25537				0.21732	12.831	<-
78 2,6-Dinitrotoluene	+++++	0.15865	0.20470	0.24935	0.25417	0.29193			
	0.29870	0.28156	0.29865				0.25471	19.758	<-
79 Acenaphthylene	1.40401	1.46091	1.57999	1.74623	1.73210	1.78715			
	1.84795	1.72732	1.66236				1.66089	9.037	

TestAmerica North Canton

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Last Edit : 18-Feb-2008 17:24 a4hp8.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD
	7.500 Level 7	10.000 Level 8	12.500 Level 9					
80 1,2-Dinitrobenzene	+++++	0.08938	0.11341	0.12107	0.12613	0.14371		
	0.14446	0.13465	0.14310				0.12699	14.993 <-
81 3-Nitroaniline	+++++	0.19616	0.23655	0.27814	0.28001	0.29860		
	0.30401	0.28123	0.29771				0.27155	13.629 <-
82 Acenaphthene	1.14634	1.00683	1.03740	1.10986	1.08100	1.12424		
	1.16229	1.10436	1.22142				1.11042	5.824
83 2,4-Dinitrophenol	+++++	+++++	0.10984	0.13871	0.16528	0.20671		
	0.22524	0.22125	0.23471				0.18596	26.022 <-
84 Pentachlorobenzene	+++++	0.50312	0.48928	0.49235	0.49084	0.53408		
	0.55182	0.54729	0.60251				0.52641	7.625 <-
85 4-Nitrophenol	+++++	+++++	0.19952	0.22048	0.23652	0.25106		
	0.25691	0.24236	0.25589				0.23753	8.857 <-
86 Dibenzofuran	1.59158	1.46871	1.49521	1.62996	1.58129	1.63887		
	1.68154	1.58657	1.64825				1.59133	4.417
87 2,4-Dinitrotoluene	+++++	0.23006	0.30478	0.35606	0.36198	0.40164		
	0.41391	0.38226	0.40363				0.35679	17.377 <-
88 2,3,4,6-Tetrachlorophenol	+++++	+++++	0.20474	0.25341	0.27131	0.31176		
	0.33135	0.32386	0.37257				0.29557	18.982 <-
89 1-Naphthylamine	+++++	0.83329	0.93504	0.96168	0.89870	0.84996		
	0.74299	0.58493	0.55377				0.79504	19.466 <-
90 Zinophos	+++++	0.29562	0.32982	0.33831	0.35160	0.38326		
	0.39436	0.37606	0.41565				0.36058	10.828 <-

TestAmerica North Canton

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
91 2,3,5,6-Tetrachlorophenol	+++++	0.22613	0.28080	0.31396	0.30653	0.35816			
	0.36725	0.34464	0.38009				0.32219	15.928	<-
92 2-Naphthylamine	+++++	0.95808	1.03631	1.00120	0.92454	0.85092			
	0.69655	0.53525	0.51845				0.81516	25.296	<-
93 Diethylphthalate	+++++	1.07258	1.17152	1.28801	1.25753	1.33789			
	1.36187	1.26743	1.38182				1.26733	8.149	<-
94 Fluorene	1.31709	1.22039	1.24969	1.35375	1.33588	1.41737			
	1.46563	1.37712	1.51972				1.36185	7.078	
95 4-Chlorophenyl-phenylether	+++++	0.55283	0.57804	0.63306	0.62262	0.66780			
	0.67801	0.63306	0.70487				0.63379	7.991	<-
96 4-Nitroaniline	+++++	0.19800	0.24343	0.30387	0.31235	0.34289			
	0.35434	0.32130	0.34849				0.30308	18.197	<-
97 5-Nitro-o-toluidine	+++++	0.21916	0.26684	0.28871	0.31991	0.31261			
	0.28448	0.25892	0.27606				0.27834	11.414	<-
98 4,6-Dinitro-2-methylphenol	+++++	0.06136	0.08934	0.11457	0.12282	0.14537			
	0.15532	0.14413	0.16383				0.12459	28.201	<-
99 N-Nitrosodiphenylamine	+++++	0.45091	0.49424	0.50524	0.48502	0.55071			
	0.54542	0.53052	0.59026				0.51904	8.463	<-
100 1,2-Diphenylhydrazine	+++++	0.90168	1.00620	1.12033	1.08785	1.08879			
	1.12038	1.05803	0.98154				1.04560	7.351	<-
101 Diphenylamine	+++++	0.45091	0.49424	0.50524	0.48502	0.55071			
	0.54542	0.53052	0.59026				0.51904	8.463	<-

TestAmerica North Canton

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Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
102 Tetraethyl dithiopyrophosphat	+++++	0.08268	0.08799	0.08754	0.09284	0.09994			
	0.10347	0.10327	0.10732				0.09563	9.475	<-
103 Diallate 1	+++++	0.62290	0.64194	0.65338	0.65779	0.70794			
	0.73393	0.72837	0.77899				0.69066	7.898	<-
M 189 Diallate, Total	+++++	3.56164	3.73019	3.69830	3.94190	4.13507			
	4.43101	4.37116	4.80286				4.08402	10.508	<-
104 Phorate	+++++	0.12189	0.13423	0.13277	0.13843	0.14993			
	0.15657	0.15511	0.16732				0.14453	10.459	<-
105 1,3,5-Trinitrobenzene	+++++	+++++	+++++	0.05745	0.06938	0.08404			
	0.09226	0.08962	0.09555				0.08138	18.311	<-
106 4-Bromophenyl-phenylether	+++++	0.17344	0.18707	0.19921	0.19220	0.20398			
	0.21470	0.20208	0.22561				0.19979	8.084	<-
107 Hexachlorobenzene	+++++	0.20647	0.21739	0.22667	0.21457	0.23578			
	0.24698	0.22823	0.26361				0.22996	8.080	<-
108 Phenacetin	+++++	+++++	0.31698	0.35168	0.36677	0.41847			
	0.42970	0.42084	0.45714				0.39451	12.692	<-
109 Diallate 2	+++++	0.15899	0.15967	0.17097	0.17362	0.18025			
	0.18939	0.18614	0.19501				0.17676	7.542	<-
110 Dimethoate	+++++	0.23750	0.27764	0.30035	0.30699	0.31432			
	0.29763	0.29887	0.28609				0.28992	8.295	<-
111 Pentachlorophenol	+++++	0.07159	0.10460	0.11208	0.12469	0.15249			
	0.16271	0.16543	+++++				0.12766	27.134	<-

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Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD
	7.500 Level 7	10.000 Level 8	12.500 Level 9					
112 Pentachloronitrobenzene	+++++	0.07968	0.09256	0.09512	0.09837	0.10315		
	0.10822	0.10461	0.11141				0.09914	10.213 <-
113 4-Aminobiphenyl	+++++	0.52975	0.60480	0.61865	0.57194	0.54607		
	0.51848	0.46355	0.46606				0.53991	10.691 <-
114 Pronamide	+++++	0.23954	0.26584	0.28232	0.29358	0.32672		
	0.34301	0.34317	0.36971				0.30799	14.496 <-
115 Phenanthrene	1.14324	0.99295	1.02986	1.10856	1.06102	1.11373		
	1.16717	1.09769	1.03560				1.08331	5.282
116 Anthracene	0.94986	0.92471	0.98586	1.09092	1.06481	1.13578		
	1.19716	1.12012	1.02414				1.05482	8.619
117 Dinoseb	+++++	+++++	+++++	0.11665	0.13133	0.17028		
	0.19251	0.19712	0.21746				0.17089	23.159 <-
118 Disulfoton	+++++	0.37247	0.40408	0.42264	0.43748	0.46943		
	0.49056	0.48599	0.53268				0.45192	11.574 <-
119 Carbazole	+++++	0.81315	0.90356	0.98880	0.95929	1.00590		
	1.05141	0.98560	1.00129				0.96363	7.676 <-
120 Di-n-Butylphthalate	+++++	0.84520	1.00687	1.10291	1.11991	1.21814		
	1.25156	1.17475	1.03154				1.09386	12.014 <-
121 4-Nitroquinoline 1-oxide	+++++	+++++	+++++	0.04759	0.06956	0.09070		
	0.09577	0.10276	0.10620				0.08543	26.436 <-
122 Methapyrilene	+++++	0.28606	0.30453	0.32850	0.33272	0.34464		
	0.32909	0.34233	0.31188				0.32247	6.237 <-

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Last Edit : 18-Feb-2008 17:24 a4hp8.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD
	7.500 Level 7	10.000 Level 8	12.500 Level 9					
123 Fluoranthene	0.94826	0.91901	1.00430	1.12306	1.11255	1.20844		
	1.27826	1.18133	1.06675				1.09355	11.036
124 Benzidine	+++++	0.27897	0.23750	0.48373	0.49938	0.57601		
	0.62116	0.56628	0.60122				0.48303	30.388 <-
125 Pyrene	0.98463	0.92367	1.04788	1.14512	1.10924	1.14442		
	1.18682	1.07580	0.98431				1.06688	8.308
126 Aramite 1	+++++	0.03977	0.04111	0.04522	0.04836	0.05499		
	0.05607	0.05585	0.05878				0.05002	14.776 <-
M 191 Aramite, Total	+++++	0.43072	0.45272	0.46442	0.54145	0.58007		
	0.61306	0.59869	0.64908				0.54128	15.227 <-
127 Aramite 2	+++++	0.04921	0.05186	0.05772	0.06036	0.06925		
	0.06979	0.06959	0.07317				0.06262	14.536 <-
128 p-Dimethylamino azobenzene	+++++	+++++	0.20316	0.23456	0.24069	0.27342		
	0.28866	0.29110	0.31788				0.26421	15.017 <-
129 p-Chlorobenzilate	+++++	0.30371	0.32385	0.36272	0.35803	0.39427		
	0.40571	0.40396	0.43229				0.37307	11.790 <-
130 Famphur	+++++	0.35502	0.38086	0.41151	0.33169	0.20913		
	0.09235	0.05889	0.03941				0.23486	65.663 <-
131 Butylbenzylphthalate	+++++	0.28862	0.38278	0.42772	0.44976	0.46298		
	0.47819	0.44423	0.47909				0.42667	14.967 <-
132 3,3'-Dimethylbenzidine	+++++	0.32442	0.52336	0.53018	0.50677	0.39205		
	0.30634	0.25021	0.17963				0.37662	35.444 <-

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Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
133 3,3'-Dimethoxybenzidine	+++++	0.08297	0.09679	0.16174	0.17228	0.23425			
	0.27110	0.22742	0.24440				0.18637	37.421	<-
134 2-Acetylaminofluorene	+++++	+++++	0.27835	0.33869	0.37580	0.46509			
	0.47809	0.49028	0.51754				0.42055	21.376	<-
135 3,3'-Dichlorobenzidine	+++++	0.29065	0.33814	0.40190	0.40136	0.45677			
	0.49108	0.46048	0.51385				0.41928	18.243	<-
136 Benzo(a)Anthracene	1.15294	0.96473	1.07970	1.16230	1.13515	1.16265			
	1.23351	1.13954	1.15951				1.13223	6.560	
137 Chrysene	1.07558	0.95882	1.02319	1.09561	1.06064	1.07131			
	1.11230	1.03545	0.99399				1.04743	4.714	
138 4,4'-Methylene bis(o-chloroan	+++++	0.12340	0.16266	0.19437	0.19537	0.22215			
	0.22978	0.21335	0.24063				0.19771	19.570	<-
139 bis(2-ethylhexyl)Phthalate	+++++	0.39212	0.53975	0.62301	0.64336	0.66124			
	0.68719	0.63269	0.70449				0.61048	16.580	<-
140 Di-n-octylphthalate	+++++	0.63228	0.89564	1.05138	1.11066	1.23176			
	1.31084	1.24898	1.31050				1.09900	21.514	<-
141 Benzo(b)fluoranthene	1.06627	0.97474	1.06453	1.15970	1.14470	1.19952			
	1.29602	1.28625	1.35018				1.17133	10.606	
142 Benzo(k)fluoranthene	1.11498	1.01937	1.11137	1.25387	1.27169	1.35264			
	1.41412	1.27120	1.50678				1.25734	12.401	
143 7,12-dimethylbenz[a]anthracen	+++++	0.38688	0.40778	0.44271	0.47845	0.53710			
	0.57675	0.57292	0.64232				0.50561	17.946	<-

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Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
144 Hexachlorophene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
145 Hexachlorophene product	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
146 Benzo(a)pyrene	0.85532	0.83818	0.96788	1.06191	1.06962	1.13133			
	1.21108	1.13662	1.25630				1.05869	13.849	
148 3-Methylcholanthrene	+++++	0.38367	0.40630	0.43145	0.45916	0.51712			
	0.54776	0.54361	0.59812				0.48590	15.787	<-
149 Indeno(1,2,3-cd)pyrene	0.95248	0.93253	1.05464	1.22027	1.21342	1.28638			
	1.35692	1.26458	1.38301				1.18492	14.066	
150 Dibenz(a,h)anthracene	0.82291	0.83631	0.92604	1.03694	1.03108	1.12722			
	1.19821	1.12098	1.24855				1.03869	14.615	
151 Benzo(g,h,i)perylene	0.92573	0.85845	0.91453	1.03747	1.01338	1.05488			
	1.10956	1.04031	1.14529				1.01107	9.323	
232 Bis(2-hydroxyphenyl)methane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
233 Bis(4-hydroxyphenyl)methane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
234 4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
235 2,3-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
236 2,5-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
237 Octachlorostyrene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
238 Octachlorocyclopentene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
230 2-Chloroacetophenone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
199 3-Picoline	+++++	1.62975	1.68169	1.81793	1.71746	1.91711			
	1.86932	1.92901	1.89484				1.80714	6.408	<-
200 N,N-Dimethylacetamide	+++++	1.02690	1.01756	1.12916	1.13664	1.17864			
	1.22710	1.19087	1.27767				1.14807	7.929	<-
201 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
202 Diphenyl	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
203 Diphenyl ether	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
204 6-Methylchrysene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
205 Benzenethiol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

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Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
207 Indene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
208 Dibenz(a,j)acridine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
214 Dibenz(a,h)acridine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
209 Benzaldehyde	+++++	1.32563	1.43075	1.50556	1.42502	1.34076			
	1.18699	1.10003	1.01069				1.29068	13.517	<-
210 Caprolactam	+++++	0.07575	0.10155	0.10797	0.11441	0.12209			
	0.12605	0.11594	0.11569				0.10993	14.339	<-
211 1,1'-Biphenyl	+++++	1.05215	1.10432	1.24954	1.25492	1.33741			
	1.39976	1.33453	1.44986				1.27281	10.845	<-
212 Atrazine	+++++	0.15672	0.18459	0.21483	0.20626	0.22024			
	0.21724	0.20664	0.20777				0.20178	10.523	<-
220 Diphenyl Thiourea	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
216 1,3-Diethyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
218 1,1,3,3-Tetramethyl-2-Thioure	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
217 1,3-Dibutyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

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Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	7.500 Level 7	10.000 Level 8	12.500 Level 9	___ RRF	% RSD	
215 bis(2-Chloroethoxy) ethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
221 Hexabromobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
219 o-Benzyl Phenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
223 1,2-bis(2-chloroethoxy)ethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
224 Benzothiazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
225 1,3-Dimethyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
226 Methyl parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
227 Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
228 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
229 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
231 Acrylamide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

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Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
$ 154 Nitrobenzene-d5	0.42254	0.40572	0.45920	0.50054	0.49987	0.51788			
	0.53567	0.49054	0.53047				0.48471	9.527	
$ 155 2-Fluorobiphenyl	1.27845	1.13885	1.19130	1.27449	1.23711	1.29449			
	1.32767	1.22790	1.34907				1.25770	5.271	
$ 156 Terphenyl-d14	0.73587	0.64964	0.72582	0.79670	0.77721	0.81543			
	0.86180	0.79686	0.77924				0.77095	7.898	
$ 157 Phenol-d5	1.99039	1.83645	1.95283	2.11315	2.04796	2.06413			
	2.14588	2.02333	2.15594				2.03667	4.981	
$ 158 2-Fluorophenol	1.14165	1.18092	1.21378	1.37399	1.35374	1.28364			
	1.37273	1.23574	1.29777				1.27266	6.691	
$ 159 2,4,6-Tribromophenol	+++++	0.11709	0.13306	0.15236	0.15577	0.18329			
	0.19107	0.17729	0.20120				0.16389	17.903	<-
$ 186 2-Chlorophenol-d4	+++++	1.05783	1.14609	1.24057	1.19817	1.20718			
	1.26903	1.17456	1.26056				1.19425	5.804	<-
$ 187 1,2-Dichlorobenzene-d4	+++++	0.79865	0.79375	0.83903	0.83590	0.81090			
	0.85353	0.78863	0.84620				0.82083	3.134	

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Calibration File Names:
Level 1: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SLL0218.D
Level 2: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AL0218.D
Level 3: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AML0218.D
Level 4: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AM0218.D
Level 5: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AMM0218.D
Level 6: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AMH0218.D
Level 7: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AH0218.D
Level 8: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AHH0218.D
Level 9: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AHHH218.D

Compound	0.0500000 Level 1 / 7.5000 Level 7	0.2500000 Level 2 / 10.0000 Level 8	0.5000000 Level 3 / 12.5000 Level 9	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
198 1,4-Dioxane	+++++	0.59954	0.66427	0.78323	0.72398	0.60890						
	0.67976	0.59572	0.60360				AVRG		0.65737		10.47816	<-
7 N-Nitrosomorpholine	+++++	1.07014	1.07079	1.06646	1.07583	1.08868						
	1.14356	1.10047	1.17944				AVRG		1.09942		3.73247	<-
8 Ethyl methanesulfonate	+++++	0.71532	0.71203	0.70364	0.72504	0.71438						
	0.76292	0.70425	0.76511				AVRG		0.72534		3.41994	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
9 Pyridine	+++++	1.74348	1.87511	2.05472	2.06184	1.92204						
	2.06970	1.85978	1.98074				AVRG		1.94593		6.01171	<-
10 N-Nitrosodimethylamine	+++++	1.03179	1.16048	1.25724	1.23409	1.19774						
	1.26212	1.14009	1.18938				AVRG		1.18412		6.37139	<-
11 Ethyl methacrylate	+++++	1.56250	1.69653	1.90685	1.87263	1.70147						
	1.83455	1.63227	1.66969				AVRG		1.73456		7.07973	<-
12 3-Chloropropionitrile	+++++	0.78320	0.82231	0.88057	0.83184	0.79536						
	0.83232	0.75098	0.78546				AVRG		0.81025		4.92013	<-
13 Malononitrile	+++++	2.09461	2.32052	2.45773	2.37451	2.26595						
	2.33453	2.07629	2.14512				AVRG		2.25866		6.16552	<-
14 2-Picoline	+++++	1.62975	1.67265	1.80751	1.75392	1.71342						
	1.85926	1.89559	1.77402				AVRG		1.76326		5.13592	<-
15 N-Nitrosomethylethylamine	+++++	0.73795	0.80589	0.81163	0.81115	0.85668						
	0.88798	0.89957	0.95228				AVRG		0.84539		7.96231	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 16-JAN-2008 14:41
End Cal Date : 18-FEB-2008 17:50
Quant Method : ISTD
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Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
16 Methyl methanesulfonate	+++++	0.56536	0.59868	0.59128	0.57520	0.58293						
	0.59622	0.57076	0.60344				AVRG		0.58548		2.39755	<-
18 1,3-Dichloro-2-propanol	+++++	1.76428	1.86520	1.97393	1.85581	1.97274						
	2.04723	1.99120	2.13838				AVRG		1.95110		6.07277	<-
19 N-Nitrosodiethylamine	+++++	0.75482	0.75842	0.78193	0.74618	0.82825						
	0.80005	0.82737	0.83618				AVRG		0.79165		4.60193	<-
21 Aniline	+++++	2.42482	2.68449	2.82129	2.75210	2.81914						
	2.98526	2.69893	2.87703				AVRG		2.75788		6.02850	<-
22 Phenol	+++++	1.93257	2.06851	2.27726	2.18319	2.18395						
	2.28599	2.11453	2.26292				AVRG		2.16362		5.61691	<-
23 bis(2-Chloroethyl)ether	1.54775	1.58844	1.61276	1.78334	1.76396	1.66569						
	1.71080	1.61124	1.84524				AVRG		1.68102		5.99681	
24 2-Chlorophenol	+++++	1.19674	1.27713	1.37690	1.31134	1.33749						
	1.40041	1.29738	1.38709				AVRG		1.32306		5.11462	<-

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Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
25 Pentachloroethane	+++++	0.49486	0.48683	0.51285	0.48410	0.52702						
	0.51199	0.51599	0.55095				AVRG		0.51057		4.34716	<-
26 1,3-Dichlorobenzene	+++++	1.24971	1.32308	1.40064	1.36840	1.33418						
	1.39644	1.28693	1.38041				AVRG		1.34247		4.03530	<-
27 1,4-Dichlorobenzene	+++++	0.85057	0.86584	0.88711	0.86125	0.84162						
	0.89632	0.80276	0.86396				AVRG		0.85868		3.35064	<-
28 1,2-Dichlorobenzene	+++++	1.21368	1.26206	1.30734	1.29458	1.28839						
	1.33892	1.27273	1.37354				AVRG		1.29391		3.74978	<-
29 Benzyl Alcohol	+++++	0.84554	0.97677	1.01721	0.99953	1.03753						
	1.05830	0.99184	1.06099				AVRG		0.99846		6.90447	<-
30 2-Methylphenol	+++++	1.18648	1.34380	1.37348	1.39332	1.44518						
	1.46817	1.40910	1.54187				AVRG		1.39517		7.47855	<-
31 bis(2-Chloroisopropyl)ether	+++++	1.45979	1.59794	1.72177	1.70576	1.57237						
	1.59074	1.51369	1.61068				AVRG		1.59659		5.50103	<-

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Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
32 N-Nitroso-di-n-propylamine	+++++	1.34529	1.50750	1.64133	1.63953	1.68468						
	1.71493	1.60618	1.74692				AVRG		1.61080		8.05261	<-
M 195 Cresols, total	+++++	2.45938	2.74751	2.88851	2.89576	2.95836						
	3.01097	2.87413	3.09486				AVRG		2.86618		6.75964	<-
192 4-Methylphenol	+++++	1.27290	1.40371	1.51503	1.50244	1.51318						
	1.54280	1.46503	1.55299				AVRG		1.47101		6.31425	<-
193 3-Methylphenol	+++++	1.25961	1.32069	1.33802	1.38345	1.46257						
	1.53539	1.51648	1.63823				AVRG		1.43180		8.93606	<-
34 Hexachloroethane	+++++	0.50206	0.53065	0.57395	0.56045	0.56948						
	0.58585	0.54364	0.58166				AVRG		0.55597		5.16769	<-
35 Nitrobenzene	0.42662	0.43535	0.47669	0.53473	0.52042	0.52522						
	0.53981	0.50048	0.54414				AVRG		0.50039		8.90947	
36 N-Nitrosopyrrolidine	+++++	0.72683	0.77172	0.82084	0.83034	0.85909						
	0.90425	0.88834	0.95931				AVRG		0.84509		8.80841	<-

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Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
37 Acetophenone	+++++	2.26034	2.25542	2.31866	2.26950	2.36391						
	2.47973	2.41433	2.62497				AVRG		2.37336		5.44388	<-
39 o-Toluidine	+++++	2.39682	2.54095	2.55039	2.46755	2.44770						
	2.25483	1.92097	1.73212				AVRG		2.28892		13.28458	<-
40 N-Nitrosopiperidine	+++++	0.15101	0.16311	0.16701	0.16611	0.17703						
	0.18048	0.17535	0.18937				AVRG		0.17118		6.92619	<-
41 Isophorone	+++++	0.74681	0.83798	0.90938	0.91144	0.92504						
	0.95209	0.88741	0.97322				AVRG		0.89292		8.03041	<-
42 2-Nitrophenol	+++++	0.11857	0.14158	0.16231	0.16057	0.17587						
	0.18375	0.16863	0.19083				AVRG		0.16276		14.39275	<-
43 2,4-Dimethylphenol	+++++	0.38731	0.41358	0.45821	0.44740	0.45431						
	0.46834	0.43258	0.47562				AVRG		0.44217		6.70585	<-
44 bis(2-Chloroethoxy)methane	+++++	0.44710	0.46415	0.49368	0.48092	0.48074						
	0.49481	0.45523	0.50417				AVRG		0.47760		4.25635	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
45 O,O,O-Triethyl phosphorothioa	+++++	0.16826	0.17242	0.18115	0.17833	0.19267						
	0.19636	0.19504	0.20770				AVRG		0.18649		7.26203	<-
46 2,4-Toluenediamene	+++++	0.22639	0.23529	0.30540	0.28540	0.27967						
	0.24494	0.22146	0.20876				AVRG		0.25091		13.89687	<-
47 1,3,5-Trichlorobenzene	+++++	0.24833	0.26355	0.27518	0.26370	0.27478						
	0.28734	0.26663	0.29437				AVRG		0.27173		5.35586	<-
48 2,4-Dichlorophenol	+++++	0.20859	0.23488	0.25162	0.24703	0.25620						
	0.26664	0.24625	0.27197				AVRG		0.24790		7.96817	<-
49 Benzoic Acid	+++++	+++++	74563	162514	372402	1194700						
	1950607	2084728	3307219				QUAD	0.29755	4.31051	-0.15713	0.99672	<-
50 1,2,4-Trichlorobenzene	+++++	0.27148	0.28386	0.29327	0.28129	0.28963						
	0.30201	0.27954	0.31128				AVRG		0.28904		4.46608	<-
51 Naphthalene	1.03596	0.92486	0.96254	1.04175	0.99527	1.00107						
	1.05872	0.97158	0.99733				AVRG		0.99879		4.24162	

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Compound	0.0500000 Level 1 / 7.5000 Level 7	0.2500000 Level 2 / 10.0000 Level 8	0.5000000 Level 3 / 12.5000 Level 9	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
52 4-Chloroaniline	+++++ / 0.45036	0.34211 / 0.39620	0.38518 / 0.43569	0.44512	0.42969	0.41895	AVRG		0.41291		8.84517	<-
53 a,a-Dimethyl-phenethylamine	+++++ / 0.92171	+++++ / 0.93718	0.70655 / 1.00572	0.71840	0.86555	0.92623	AVRG		0.86876		13.16443	<-
54 2,6-Dichlorophenol	+++++ / 0.25179	0.20953 / 0.25389	0.21357 / 0.27668	0.21846	0.22853	0.24460	AVRG		0.23713		9.89656	<-
55 Hexachloropropene	+++++ / 0.24423	0.19609 / 0.23581	0.19786 / 0.25953	0.21945	0.22311	0.24235	AVRG		0.22731		9.89933	<-
56 Hexachlorobutadiene	+++++ / 0.19765	0.16602 / 0.18022	0.17073 / 0.20162	0.18940	0.18121	0.19137	AVRG		0.18478		6.77396	<-
57 1,2,3-Trichlorobenzene	+++++ / 0.27234	0.24489 / 0.24855	0.25421 / 0.27806	0.26791	0.25561	0.26209	AVRG		0.26046		4.48577	<-
58 N-Nitrosodi-n-butylamine	+++++ / 0.34761	0.27948 / 0.34959	0.29612 / 0.37509	0.30917	0.31164	0.34468	AVRG		0.32667		9.90231	<-

TestAmerica North Canton

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Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
59 4-Chloro-3-Methylphenol	+++++	0.29336	0.33793	0.36748	0.36513	0.38367						
	0.39107	0.36440	0.39585				AVRG		0.36236		9.20957	<-
60 p-Phenylene diamine	+++++	+++++	0.26818	0.30199	0.31656	0.33182						
	0.30762	0.26759	0.24728				AVRG		0.29158		10.56548	<-
61 Safrole	+++++	0.23194	0.23810	0.23281	0.24051	0.25906						
	0.26651	0.26284	0.28431				AVRG		0.25201		7.52545	<-
62 2-Methylnaphthalene	0.58780	0.52541	0.56797	0.60215	0.58909	0.60163						
	0.61988	0.57553	0.64888				AVRG		0.59093		5.83364	
63 1-Methylnaphthalene	0.66550	0.57355	0.59709	0.63977	0.62960	0.64295						
	0.66931	0.61740	0.69305				AVRG		0.63647		5.85140	
64 Hexachlorocyclopentadiene	+++++	17861	44548	94272	199959	600058						
	934422	990745	1684677				QUAD	0.03008	2.75864	-0.17120	0.99672	<-
65 1,2,4,5-Tetrachlorobenzene	+++++	0.59296	0.57249	0.55294	0.54854	0.60052						
	0.61385	0.60544	0.66398				AVRG		0.59384		6.26233	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
66 2,4,6-Trichlorophenol	+++++	0.27166	0.30422	0.34262	0.33125	0.36565						
	0.37538	0.34768	0.37739				AVRG		0.33948		10.79388	<-
67 2,4,5-Trichlorophenol	+++++	0.27973	0.30746	0.37470	0.36510	0.38498						
	0.39196	0.36976	0.39686				AVRG		0.35882		11.79287	<-
68 1,2,3,5-Tetrachlorobenzene	+++++	0.52335	0.52670	0.56485	0.54188	0.58970						
	0.61962	0.58256	0.65005				AVRG		0.57484		7.80666	<-
69 1,4-Dinitrobenzene	+++++	+++++	16784	45531	116841	227074						
	364146	429257	594850				QUAD	0.08287	5.46332	-0.71227	0.99867	<-
70 2-Chloronaphthalene	1.07458	0.95562	0.99812	1.07604	1.03627	1.05201						
	1.08130	1.01699	1.11990				AVRG		1.04565		4.76462	
71 Isosafrole 1	+++++	0.12772	0.12029	0.12548	0.12326	0.13947						
	0.14287	0.13619	0.15170				AVRG		0.13337		8.20878	<-
M 188 Isosafrole, Total	+++++	0.90408	0.89379	0.91438	0.91267	1.01036						
	1.05535	1.03027	1.14664				AVRG		0.98344		9.32218	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
72 Isosafrole 2	+++++	0.77636	0.77350	0.78891	0.78942	0.87089						
	0.91248	0.89407	0.99494				AVRG		0.85007		9.53285	<-
73 2-Nitroaniline	+++++	21085	56432	129474	272446	817822						
	1206144	1291248	2017033				QUAD	0.06887	1.84191	0.01648	0.99841	<-
74 1,2,3,4-Tetrachlorobenzene	+++++	0.48058	0.49949	0.52742	0.51107	0.54596						
	0.57050	0.52730	0.59002				AVRG		0.53154		6.82907	<-
75 1,4-Naphthoquinone	+++++	+++++	0.29667	0.35116	0.38827	0.41496						
	0.42031	0.40660	0.41318				AVRG		0.38445		11.80625	<-
76 Dimethylphthalate	+++++	1.07447	1.16469	1.23862	1.20868	1.28044						
	1.28082	1.21562	1.31963				AVRG		1.22287		6.33019	<-
77 m-Dinitrobenzene	+++++	+++++	0.17683	0.19043	0.20372	0.22904						
	0.23774	0.22808	0.25537				AVRG		0.21732		12.83141	<-
78 2,6-Dinitrotoluene	+++++	10673	29678	69055	143133	448257						
	665145	721588	1144836				QUAD	0.07395	3.46736	-0.06976	0.99837	<-

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Compound	0.0500000 Level 1 / 7.5000 Level 7	0.2500000 Level 2 / 10.0000 Level 8	0.5000000 Level 3 / 12.5000 Level 9	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
79 Acenaphthylene	1.40401	1.46091	1.57999	1.74623	1.73210	1.78715						
	1.84795	1.72732	1.66236				AVRG		1.66089		9.03692	
80 1,2-Dinitrobenzene	+++++	0.08938	0.11341	0.12107	0.12613	0.14371						
	0.14446	0.13465	0.14310				AVRG		0.12699		14.99299	<-
81 3-Nitroaniline	+++++	0.19616	0.23655	0.27814	0.28001	0.29860						
	0.30401	0.28123	0.29771				AVRG		0.27155		13.62867	<-
82 Acenaphthene	1.14634	1.00683	1.03740	1.10986	1.08100	1.12424						
	1.16229	1.10436	1.22142				AVRG		1.11042		5.82402	
83 2,4-Dinitrophenol	+++++	+++++	31849	76827	186158	634815						
	1003116	1134075	1799488				QUAD	0.37389	4.65633	-0.17509	0.99873	<-
84 Pentachlorobenzene	+++++	0.50312	0.48928	0.49235	0.49084	0.53408						
	0.55182	0.54729	0.60251				AVRG		0.52641		7.62535	<-
85 4-Nitrophenol	+++++	+++++	0.19952	0.22048	0.23652	0.25106						
	0.25691	0.24236	0.25589				AVRG		0.23753		8.85687	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
86 Dibenzofuran	1.59158	1.46871	1.49521	1.62996	1.58129	1.63887						
	1.68154	1.58657	1.64825				AVRG		1.59133		4.41720	
87 2,4-Dinitrotoluene	+++++	15477	44188	98605	203845	616712						
	921700	979692	1547271				QUAD	0.06480	2.47087	0.00127	0.99799	<-
88 2,3,4,6-Tetrachlorophenol	+++++	+++++	28191	76865	184787	366024						
	591230	694549	996884				QUAD	0.06091	3.50282	-0.35323	0.99807	<-
89 1-Naphthylamine	+++++	54600	128747	291702	612090	997899						
	1325722	1254435	1481729				QUAD	0.21043	0.22316	0.43606	0.98722	<-
90 Zinophos	+++++	0.29562	0.32982	0.33831	0.35160	0.38326						
	0.39436	0.37606	0.41565				AVRG		0.36058		10.82766	<-
91 2,3,5,6-Tetrachlorophenol	+++++	15212	40711	86947	172619	549954						
	817791	883277	1457028				QUAD	0.04185	2.99741	-0.14984	0.99745	<-
92 2-Naphthylamine	+++++	62777	142692	303689	629684	999027						
	1242867	1147885	1387233				QUAD	0.22742	0.04381	0.56229	0.97936	<-

TestAmerica North Canton

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Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
93 Diethylphthalate	+++++	1.07258	1.17152	1.28801	1.25753	1.33789						
	1.36187	1.26743	1.38182				AVRG		1.26733		8.14884	<-
94 Fluorene	1.31709	1.22039	1.24969	1.35375	1.33588	1.41737						
	1.46563	1.37712	1.51972				AVRG		1.36185		7.07838	
95 4-Chlorophenyl-phenylether	+++++	0.55283	0.57804	0.63306	0.62262	0.66780						
	0.67801	0.63306	0.70487				AVRG		0.63379		7.99087	<-
96 4-Nitroaniline	+++++	13320	35294	84152	175898	526508						
	789051	823452	1335905				QUAD	0.05393	2.97632	-0.04456	0.99676	<-
97 5-Nitro-o-toluidine	+++++	0.21916	0.26684	0.28871	0.31991	0.31261						
	0.28448	0.25892	0.27606				AVRG		0.27834		11.41353	<-
98 4,6-Dinitro-2-methylphenol	+++++	7354	23105	55561	125180	410802						
	627733	672857	1128256				QUAD	0.08194	7.32442	-1.20989	0.99676	<-
99 N-Nitrosodiphenylamine	+++++	0.45091	0.49424	0.50524	0.48502	0.55071						
	0.54542	0.53052	0.59026				AVRG		0.51904		8.46343	<-

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Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
100 1,2-Diphenylhydrazine	+++++	0.90168	1.00620	1.12033	1.08785	1.08879						
	1.12038	1.05803	0.98154				AVRG		1.04560		7.35064	<-
101 Diphenylamine	+++++	0.45091	0.49424	0.50524	0.48502	0.55071						
	0.54542	0.53052	0.59026				AVRG		0.51904		8.46343	<-
102 Tetraethyl dithiopyrophosphat	+++++	0.08268	0.08799	0.08754	0.09284	0.09994						
	0.10347	0.10327	0.10732				AVRG		0.09563		9.47469	<-
103 Diallate 1	+++++	0.62290	0.64194	0.65338	0.65779	0.70794						
	0.73393	0.72837	0.77899				AVRG		0.69066		7.89824	<-
M 189 Diallate, Total	+++++	3.56164	3.73019	3.69830	3.94190	4.13507						
	4.43101	4.37116	4.80286				AVRG		4.08402		10.50832	<-
104 Phorate	+++++	0.12189	0.13423	0.13277	0.13843	0.14993						
	0.15657	0.15511	0.16732				AVRG		0.14453		10.45943	<-
105 1,3,5-Trinitrobenzene	+++++	+++++	+++++	33179	92341	195192						
	322752	374131	514627				QUAD	0.22551	11.14182	-1.68731	0.99841	<-

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
106 4-Bromophenyl-phenylether	+++++	0.17344	0.18707	0.19921	0.19220	0.20398						
	0.21470	0.20208	0.22561				AVRG		0.19979		8.08384	<-
107 Hexachlorobenzene	+++++	0.20647	0.21739	0.22667	0.21457	0.23578						
	0.24698	0.22823	0.26361				AVRG		0.22996		8.07997	<-
108 Phenacetin	+++++	+++++	0.31698	0.35168	0.36677	0.41847						
	0.42970	0.42084	0.45714				AVRG		0.39451		12.69166	<-
109 Diallate 2	+++++	0.15899	0.15967	0.17097	0.17362	0.18025						
	0.18939	0.18614	0.19501				AVRG		0.17676		7.54183	<-
110 Dimethoate	+++++	0.23750	0.27764	0.30035	0.30699	0.31432						
	0.29763	0.29887	0.28609				AVRG		0.28992		8.29465	<-
111 Pentachlorophenol	+++++	17160	54106	108706	254166	861875						
	1315190	1544639	+++++				QUAD	0.22743	6.67608	-0.49217	0.99885	<-
112 Pentachloronitrobenzene	+++++	0.07968	0.09256	0.09512	0.09837	0.10315						
	0.10822	0.10461	0.11141				AVRG		0.09914		10.21332	<-

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Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
113 4-Aminobiphenyl	+++++	0.52975	0.60480	0.61865	0.57194	0.54607						
	0.51848	0.46355	0.46606				AVRG		0.53991		10.69072	<-
114 Pronamide	+++++	0.23954	0.26584	0.28232	0.29358	0.32672						
	0.34301	0.34317	0.36971				AVRG		0.30799		14.49610	<-
115 Phenanthrene	1.14324	0.99295	1.02986	1.10856	1.06102	1.11373						
	1.16717	1.09769	1.03560				AVRG		1.08331		5.28160	
116 Anthracene	0.94986	0.92471	0.98586	1.09092	1.06481	1.13578						
	1.19716	1.12012	1.02414				AVRG		1.05482		8.61904	
117 Dinoseb	+++++	+++++	+++++	67361	174791	395517						
	673478	822915	1171279				QUAD	0.25058	5.62010	-0.88171	0.99876	<-
118 Disulfoton	+++++	0.37247	0.40408	0.42264	0.43748	0.46943						
	0.49056	0.48599	0.53268				AVRG		0.45192		11.57399	<-
119 Carbazole	+++++	0.81315	0.90356	0.98880	0.95929	1.00590						
	1.05141	0.98560	1.00129				AVRG		0.96363		7.67582	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
120 Di-n-Butylphthalate	+++++	0.84520	1.00687	1.10291	1.11991	1.21814						
	1.25156	1.17475	1.03154				AVRG		1.09386		12.01442	<-
121 4-Nitroquinoline 1-oxide	+++++	+++++	+++++	27481	92583	210661						
	335059	428972	572031				QUAD	0.30720	10.21264	-1.94127	0.99957	<-
122 Methapyrilene	+++++	0.28606	0.30453	0.32850	0.33272	0.34464						
	0.32909	0.34233	0.31188				AVRG		0.32247		6.23660	<-
123 Fluoranthene	0.94826	0.91901	1.00430	1.12306	1.11255	1.20844						
	1.27826	1.18133	1.06675				AVRG		1.09355		11.03583	
124 Benzidine	+++++	36437	65262	252706	548790	1855461						
	2854201	3078077	4913515				QUAD	0.12166	1.66197	-0.00531	0.99719	<-
125 Pyrene	0.98463	0.92367	1.04788	1.14512	1.10924	1.14442						
	1.18682	1.07580	0.98431				AVRG		1.06688		8.30773	
126 Aramite 1	+++++	0.03977	0.04111	0.04522	0.04836	0.05499						
	0.05607	0.05585	0.05878				AVRG		0.05002		14.77578	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
M 191 Aramite, Total	+++++	12201	26160	59780	151991	289398						
	446920	522898	708976				QUAD	0.04833	1.80238	-0.06497	0.99913	<-
127 Aramite 2	+++++	0.04921	0.05186	0.05772	0.06036	0.06925						
	0.06979	0.06959	0.07317				AVRG		0.06262		14.53634	<-
128 p-Dimethylamino azobenzene	+++++	+++++	57165	136216	336473	636881						
	1024996	1213466	1707952				QUAD	0.06200	3.87633	-0.37646	0.99942	<-
129 p-Chlorobenzilate	+++++	0.30371	0.32385	0.36272	0.35803	0.39427						
	0.40571	0.40396	0.43229				AVRG		0.37307		11.78982	<-
130 Famphur	+++++	0.35502	0.38086	0.41151	0.33169	0.20913						
	0.09235	0.05889	0.03941				AVRG		0.23486		65.66275	<-
131 Butylbenzylphthalate	+++++	0.28862	0.38278	0.42772	0.44976	0.46298						
	0.47819	0.44423	0.47909				AVRG		0.42667		14.96739	<-
132 3,3'-Dimethylbenzidine	+++++	44486	147263	307890	708435	913208						
	1087773	+++++	+++++				QUAD	0.20401	-0.03841	2.62529	0.99305	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
133 3,3'-Dimethoxybenzidine	+++++	10837	26597	84494	189326	754558						
	1245721	1236156	1997394				QUAD	0.19531	3.83429	0.08580	0.99047	<-
134 2-Acetylaminofluorene	+++++	+++++	78324	196691	525339	1083333						
	1697642	2043758	2780693				QUAD	0.13996	2.18956	-0.09171	0.99942	<-
135 3,3'-Dichlorobenzidine	+++++	37962	92918	209957	441080	1471358						
	2256489	2502966	4199474				QUAD	0.04997	2.31773	-0.11538	0.99760	<-
136 Benzo(a)Anthracene	1.15294	0.96473	1.07970	1.16230	1.13515	1.16265						
	1.23351	1.13954	1.15951				AVRG		1.13223		6.56030	
137 Chrysene	1.07558	0.95882	1.02319	1.09561	1.06064	1.07131						
	1.11230	1.03545	0.99399				AVRG		1.04743		4.71422	
138 4,4'-Methylene bis(o-chloroan	+++++	16118	44697	101540	214698	715593						
	1055818	1159662	1966612				QUAD	0.03739	4.89930	-0.47739	0.99678	<-
139 bis(2-ethylhexyl)Phthalate	+++++	51216	148319	325466	707020	2130014						
	3157622	3439006	5757569				QUAD	0.00825	1.61731	-0.04102	0.99684	<-

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
140 Di-n-octylphthalate	+++++	72596	219697	490390	1084040	3448149						
	5172538	5701813	8901365				QUAD	0.08249	0.80043	-0.00538	0.99892	<-
141 Benzo(b)fluoranthene	1.06627	0.97474	1.06453	1.15970	1.14470	1.19952						
	1.29602	1.28625	1.35018				AVRG		1.17133		10.60634	
142 Benzo(k)fluoranthene	1.11498	1.01937	1.11137	1.25387	1.27169	1.35264						
	1.41412	1.27120	1.50678				AVRG		1.25734		12.40116	
143 7,12-dimethylbenz[a]anthracen	+++++	51108	109706	253608	636280	1219583						
	1984491	2342639	3255300				QUAD	0.04774	2.00149	-0.11154	0.99911	<-
144 Hexachlorophene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
145 Hexachlorophene product	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
146 Benzo(a)pyrene	0.85532	0.83818	0.96788	1.06191	1.06962	1.13133						
	1.21108	1.13662	1.25630				AVRG		1.05869		13.84909	

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
148 3-Methylcholanthrene	+++++	50684	109307	247162	610634	1174217						
	1884718	2222783	3031319				QUAD	0.04574	2.06676	-0.10647	0.99922	<-
149 Indeno(1,2,3-cd)pyrene	0.95248	0.93253	1.05464	1.22027	1.21342	1.28638						
	1.35692	1.26458	1.38301				AVRG		1.18492		14.06579	
150 Dibenz(a,h)anthracene	0.82291	0.83631	0.92604	1.03694	1.03108	1.12722						
	1.19821	1.12098	1.24855				AVRG		1.03869		14.61531	
151 Benzo(g,h,i)perylene	0.92573	0.85845	0.91453	1.03747	1.01338	1.05488						
	1.10956	1.04031	1.14529				AVRG		1.01107		9.32347	
232 Bis(2-hydroxyphenyl)methane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
233 Bis(4-hydroxyphenyl)methane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
234 4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
235 2,3-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
236 2,5-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
237 Octachlorostyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
238 Octachlorocyclopentene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
230 2-Chloroacetophenone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
199 3-Picoline	+++++	1.62975	1.68169	1.81793	1.71746	1.91711						
	1.86932	1.92901	1.89484				AVRG		1.80714		6.40801	<-
200 N,N-Dimethylacetamide	+++++	1.02690	1.01756	1.12916	1.13664	1.17864						
	1.22710	1.19087	1.27767				AVRG		1.14807		7.92939	<-

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
201 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
202 Diphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
203 Diphenyl ether	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
204 6-Methylchrysene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
205 Benzenethiol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
207 Indene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
208 Dibenz(a,j)acridine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 16-JAN-2008 14:41
End Cal Date : 18-FEB-2008 17:50
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
214 Dibenz(a,h)acridine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
209 Benzaldehyde	+++++	1.32563	1.43075	1.50556	1.42502	1.34076						
	1.18699	1.10003	1.01069				AVRG		1.29068		13.51715	<-
210 Caprolactam	+++++	0.07575	0.10155	0.10797	0.11441	0.12209						
	0.12605	0.11594	0.11569				AVRG		0.10993		14.33888	<-
211 1,1'-Biphenyl	+++++	1.05215	1.10432	1.24954	1.25492	1.33741						
	1.39976	1.33453	1.44986				AVRG		1.27281		10.84522	<-
212 Atrazine	+++++	0.15672	0.18459	0.21483	0.20626	0.22024						
	0.21724	0.20664	0.20777				AVRG		0.20178		10.52251	<-
220 Diphenyl Thiourea	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
216 1,3-Diethyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 16-JAN-2008 14:41
End Cal Date : 18-FEB-2008 17:50
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9	Curve	Coefficients b	m1	m2	%RSD or R^2	
218 1,1,3,3-Tetramethyl-2-Thioure	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
217 1,3-Dibutyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
215 bis(2-Chloroethoxy) ethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
221 Hexabromobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
219 o-Benzyl Phenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
223 1,2-bis(2-chloroethoxy)ethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
224 Benzothiazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 16-JAN-2008 14:41
End Cal Date : 18-FEB-2008 17:50
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
225 1,3-Dimethyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
226 Methyl parathion	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
227 Parathion	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
228 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
229 Kepone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
231 Acrylamide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
$ 154 Nitrobenzene-d5	0.42254	0.40572	0.45920	0.50054	0.49987	0.51788						
	0.53567	0.49054	0.53047				AVRG		0.48471		9.52691	

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 16-JAN-2008 14:41
End Cal Date : 18-FEB-2008 17:50
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
$ 155 2-Fluorobiphenyl	1.27845	1.13885	1.19130	1.27449	1.23711	1.29449						
	1.32767	1.22790	1.34907				AVRG		1.25770		5.27086	
$ 156 Terphenyl-d14	0.73587	0.64964	0.72582	0.79670	0.77721	0.81543						
	0.86180	0.79686	0.77924				AVRG		0.77095		7.89764	
$ 157 Phenol-d5	1.99039	1.83645	1.95283	2.11315	2.04796	2.06413						
	2.14588	2.02333	2.15594				AVRG		2.03667		4.98064	
$ 158 2-Fluorophenol	1.14165	1.18092	1.21378	1.37399	1.35374	1.28364						
	1.37273	1.23574	1.29777				AVRG		1.27266		6.69132	
$ 159 2,4,6-Tribromophenol	+++++	7877	19291	42195	87721	281437						
	425487	454360	771279				QUAD	0.04674	5.95407	-0.76757	0.99660	<-
$ 186 2-Chlorophenol-d4	+++++	1.05783	1.14609	1.24057	1.19817	1.20718						
	1.26903	1.17456	1.26056				AVRG		1.19425		5.80429	<-
$ 187 1,2-Dichlorobenzene-d4	+++++	0.79865	0.79375	0.83903	0.83590	0.81090						
	0.85353	0.78863	0.84620				AVRG		0.82083		3.13391	

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 16-JAN-2008 14:41
End Cal Date : 18-FEB-2008 17:50
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Last Edit : 18-Feb-2008 17:24 a4hp8.i

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8HHH0218.D
Lab Smp Id: L9
Inj Date : 18-FEB-2008 14:00
Operator : 001710 Inst ID: a4hp8.i
Smp Info : L9,80218a.b,8270p,1-827042d.sub,1,,9
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Meth Date : 18-Feb-2008 17:34 a4hp8.i Quant Type: ISTD
Cal Date : 18-FEB-2008 13:40 Cal File: 8SLL0218.D
Als bottle: 7 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(NG)	(NG)
*	1 1,4-Dichlorobenzene-d4	152	3.571	3.571	(1.000)	247696	2.00000	(Q)
*	2 Naphthalene-d8	136	4.470	4.470	(1.000)	1025832	2.00000	
*	3 Acenaphthene-d10	164	5.739	5.739	(1.000)	613347	2.00000	
*	4 Phenanthrene-d10	188	6.826	6.826	(1.000)	1101884	2.00000	
*	5 Chrysene-d12	240	8.827	8.827	(1.000)	1307619	2.00000	
*	6 Perylene-d12	264	10.327	10.327	(1.000)	1086776	2.00000	
	9 Pyridine	79	1.969	1.969	(0.552)	3066384	12.5000	12.724
	10 N-Nitrosodimethylamine	74	1.945	1.945	(0.545)	1841279	12.5000	12.556
	11 Ethyl methacrylate	69	2.166	2.166	(0.607)	2584845	12.5000	12.032
	12 3-Chloropropionitrile	54	2.354	2.354	(0.659)	1215968	12.5000	12.117(Q)
	13 Malononitrile	66	2.498	2.498	(0.700)	3320854	12.5000	11.872
	209 Benzaldehyde	77	3.282	3.282	(0.919)	1564656	12.5000	9.7884
	21 Aniline	93	3.349	3.349	(0.938)	4453924	12.5000	13.040
	22 Phenol	94	3.287	3.287	(0.921)	3503234	12.5000	13.074
	23 bis(2-Chloroethyl)ether	93	3.369	3.369	(0.943)	2856612	12.5000	13.721
	24 2-Chlorophenol	128	3.431	3.431	(0.961)	2147356	12.5000	13.105
	26 1,3-Dichlorobenzene	146	3.537	3.537	(0.991)	2137014	12.5000	12.853
	27 1,4-Dichlorobenzene	146	3.580	3.580	(1.003)	1337496	12.5000	12.577
	28 1,2-Dichlorobenzene	146	3.691	3.691	(1.034)	2126378	12.5000	13.269
	29 Benzyl Alcohol	108	3.648	3.648	(1.022)	1642519	12.5000	13.283
	30 2-Methylphenol	108	3.701	3.701	(1.036)	2386963	12.5000	13.814
	31 bis(2-Chloroisopropyl)ether	45	3.729	3.729	(1.044)	2493486	12.5000	12.610
	37 Acetophenone	105	3.840	3.840	(1.075)	3934958	12.5000	13.260
	32 N-Nitroso-di-n-propylamine	70	3.835	3.835	(1.074)	2704411	12.5000	13.556
	192 4-Methylphenol	108	3.811	3.811	(1.067)	2404187	12.5000	13.197
	34 Hexachloroethane	117	3.931	3.931	(1.101)	900470	12.5000	13.078
	35 Nitrobenzene	77	3.970	3.970	(0.888)	3488741	12.5000	13.593
	41 Isophorone	82	4.128	4.128	(0.924)	6239737	12.5000	13.624
	42 2-Nitrophenol	139	4.191	4.191	(0.938)	1223519	12.5000	14.656(Q)
	43 2,4-Dimethylphenol	107	4.181	4.181	(0.935)	3049385	12.5000	13.446(Q)
	44 bis(2-Chloroethoxy)methane	93	4.254	4.254	(0.952)	3232433	12.5000	13.195

46	2,4-Toluenediamene	121	5.297	5.297 (1.185)	1338436	12.5000	10.400
47	1,3,5-Trichlorobenzene	180	4.196	4.196 (0.939)	1887352	12.5000	13.541

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
48	2,4-Dichlorophenol	162	4.350	4.350	(0.973)	1743705	12.5000	13.714
49	Benzoic Acid	122	4.306	4.306	(0.963)	3307219	25.0000	25.122(H)
50	1,2,4-Trichlorobenzene	180	4.417	4.417	(0.988)	1995764	12.5000	13.462
51	Naphthalene	128	4.484	4.484	(1.003)	6394322	12.5000	12.482
52	4-Chloroaniline	127	4.504	4.504	(1.008)	2793398	12.5000	13.189
56	Hexachlorobutadiene	225	4.556	4.556	(1.019)	1292706	12.5000	13.640
210	Caprolactam	113	4.792	4.792	(1.072)	741765	12.5000	13.155(H)
57	1,2,3-Trichlorobenzene	180	4.585	4.585	(1.026)	1782742	12.5000	13.344
59	4-Chloro-3-Methylphenol	107	4.831	4.831	(1.081)	2537947	12.5000	13.655
62	2-Methylnaphthalene	142	4.975	4.975	(1.113)	4160279	12.5000	13.726
63	1-Methylnaphthalene	142	5.052	5.052	(1.130)	4443485	12.5000	13.611
64	Hexachlorocyclopentadiene	237	5.085	5.085	(0.886)	1684677	12.5000	12.631
66	2,4,6-Trichlorophenol	196	5.167	5.167	(0.900)	1446693	12.5000	13.896
67	2,4,5-Trichlorophenol	196	5.201	5.201	(0.906)	1521326	12.5000	13.825
211	1,1'-Biphenyl	154	5.768	5.768	(1.005)	5557913	12.5000	14.239
68	1,2,3,5-Tetrachlorobenzene	216	5.085	5.085	(0.886)	2491901	12.5000	14.135
70	2-Chloronaphthalene	162	5.340	5.340	(0.930)	4293033	12.5000	13.388
73	2-Nitroaniline	65	5.398	5.398	(0.941)	2017033	12.5000	12.609
74	1,2,3,4-Tetrachlorobenzene	216	5.307	5.307	(0.925)	2261801	12.5000	13.875
76	Dimethylphthalate	163	5.509	5.509	(0.960)	5058711	12.5000	13.489
78	2,6-Dinitrotoluene	165	5.562	5.562	(0.969)	1144836	12.5000	12.606
79	Acenaphthylene	152	5.643	5.643	(0.983)	6372524	12.5000	12.511
80	1,2-Dinitrobenzene	168	5.614	5.614	(0.978)	548573	12.5000	14.086
81	3-Nitroaniline	138	5.696	5.696	(0.992)	1141246	12.5000	13.704
82	Acenaphthene	153	5.768	5.768	(1.005)	4682227	12.5000	13.750
83	2,4-Dinitrophenol	184	5.768	5.768	(1.005)	1799488	25.0000	25.056(Q)
85	4-Nitrophenol	109	5.788	5.788	(1.008)	980928	12.5000	13.466
86	Dibenzofuran	168	5.889	5.889	(1.026)	6318427	12.5000	12.947
87	2,4-Dinitrotoluene	165	5.860	5.860	(1.021)	1547271	12.5000	12.612
91	2,3,5,6-Tetrachlorophenol	232	5.937	5.937	(1.034)	1457028	12.5000	12.633
93	Diethylphthalate	149	6.014	6.014	(1.048)	5297088	12.5000	13.629
94	Fluorene	166	6.143	6.143	(1.070)	5825705	12.5000	13.949
95	4-Chlorophenyl-phenylether	204	6.119	6.119	(1.066)	2702070	12.5000	13.902
96	4-Nitroaniline	138	6.148	6.148	(1.071)	1335905	12.5000	12.650
98	4,6-Dinitro-2-methylphenol	198	6.163	6.163	(0.903)	1128256	12.5000	12.626
99	N-Nitrosodiphenylamine	169	6.206	6.206	(0.909)	4064985	12.5000	14.215
100	1,2-Diphenylhydrazine	77	6.235	6.235	(0.913)	6759676	12.5000	11.734
106	4-Bromophenyl-phenylether	248	6.480	6.480	(0.949)	1553728	12.5000	14.116
107	Hexachlorobenzene	284	6.543	6.543	(0.958)	1815446	12.5000	14.329
212	Atrazine	200	6.571	6.571	(0.963)	1430898	12.5000	12.871
111	Pentachlorophenol	266	Compound Not Detected.					
115	Phenanthrene	178	6.850	6.850	(1.004)	7131916	12.5000	11.949
116	Anthracene	178	6.884	6.884	(1.008)	7053054	12.5000	12.136
119	Carbazole	167	6.990	6.990	(1.024)	6895678	12.5000	12.989
120	Di-n-Butylphthalate	149	7.192	7.192	(1.054)	7104006	12.5000	11.788
123	Fluoranthene	202	7.721	7.721	(1.131)	7346494	12.5000	12.194
124	Benzidine	184	7.798	7.798	(0.883)	4913515	12.5000	12.584
125	Pyrene	202	7.899	7.899	(0.895)	8044384	12.5000	11.533
131	Butylbenzylphthalate	149	8.317	8.317	(0.942)	3915443	12.5000	14.036
133	3,3'-Dimethoxybenzidine	244	8.726	8.726	(0.989)	1997394	12.5000	12.505(Q)
135	3,3'-Dichlorobenzidine	252	8.769	8.769	(0.993)	4199474	12.5000	12.607
136	Benzo(a)Anthracene	228	8.812	8.812	(0.998)	9476253	12.5000	12.801

137 Chrysene	228	8.846	8.846 (1.002)	8123461	12.5000	11.862
138 4,4'-Methylene bis(o-chloroan	231	8.764	8.764 (0.993)	1966612	12.5000	12.652

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139 bis(2-ethylhexyl)Phthalate	149	8.735	8.735	(0.990)	5757569	12.5000	12.668
140 Di-n-octylphthalate	149	9.312	9.312	(0.902)	8901365	12.5000	12.556
141 Benzo(b)fluoranthene	252	9.865	9.865	(0.955)	9170925	12.5000	14.409
142 Benzo(k)fluoranthene	252	9.904	9.904	(0.959)	10234561	12.5000	14.980(H)
146 Benzo(a)pyrene	252	10.274	10.274	(0.995)	8533196	12.5000	14.833
149 Indeno(1,2,3-cd)pyrene	276	12.020	12.020	(1.164)	9393908	12.5000	14.590(M)
150 Dibenz(a,h)anthracene	278	12.039	12.039	(1.166)	8480565	12.5000	15.025
151 Benzo(g,h,i)perylene	276	12.534	12.534	(1.214)	7779244	12.5000	14.159
198 1,4-Dioxane	88	1.767	1.767	(0.495)	934439	12.5000	11.478
$ 154 Nitrobenzene-d5	82	3.955	3.955	(0.885)	3401064	12.5000	13.680
$ 155 2-Fluorobiphenyl	172	5.230	5.230	(0.911)	5171545	12.5000	13.408
$ 156 Terphenyl-d14	244	7.976	7.976	(0.904)	6368471	12.5000	12.634
$ 157 Phenol-d5	99	3.277	3.277	(0.918)	3337604	12.5000	13.232
$ 158 2-Fluorophenol	112	2.695	2.695	(0.755)	2009070	12.5000	12.746
$ 159 2,4,6-Tribromophenol	330	6.316	6.316	(1.101)	771279	12.5000	12.640
$ 186 2-Chlorophenol-d4	132	3.422	3.422	(0.958)	1951479	12.5000	13.194
$ 187 1,2-Dichlorobenzene-d4	152	3.681	3.681	(1.031)	1310007	12.5000	12.886
101 Diphenylamine	169	6.206	6.206	(0.909)	4064985	12.5000	14.215

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

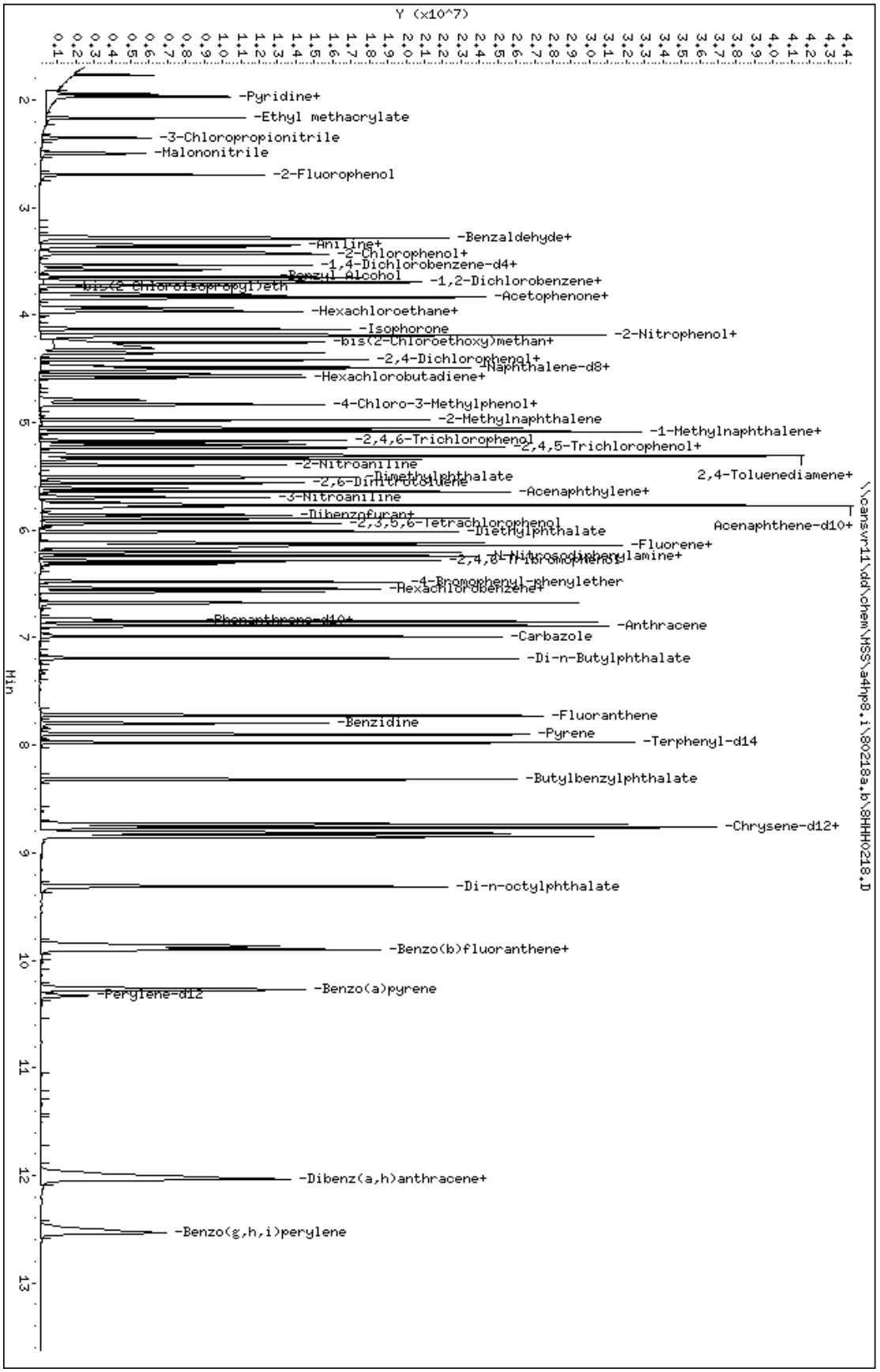
Instrument ID: a4hp8.i
Lab File ID: 8HHH0218.D
Lab Smp Id: L9
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Misc Info:

Calibration Date: 18-FEB-2008
Calibration Time: 16:34
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	199560	99780	399120	247696	24.12
2 Naphthalene-d8	828712	414356	1657424	1025832	23.79
3 Acenaphthene-d10	469624	234812	939248	613347	30.60
4 Phenanthrene-d10	929073	464537	1858146	1101884	18.60
5 Chrysene-d12	931719	465860	1863438	1307619	40.34
6 Perylene-d12	908273	454137	1816546	1086776	19.65

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.57	3.07	4.07	3.57	0.08
2 Naphthalene-d8	4.46	3.96	4.96	4.47	0.17
3 Acenaphthene-d10	5.74	5.24	6.24	5.74	0.05
4 Phenanthrene-d10	6.82	6.32	7.32	6.83	0.04
5 Chrysene-d12	8.82	8.32	9.32	8.83	0.03
6 Perylene-d12	10.33	9.83	10.83	10.33	-0.02

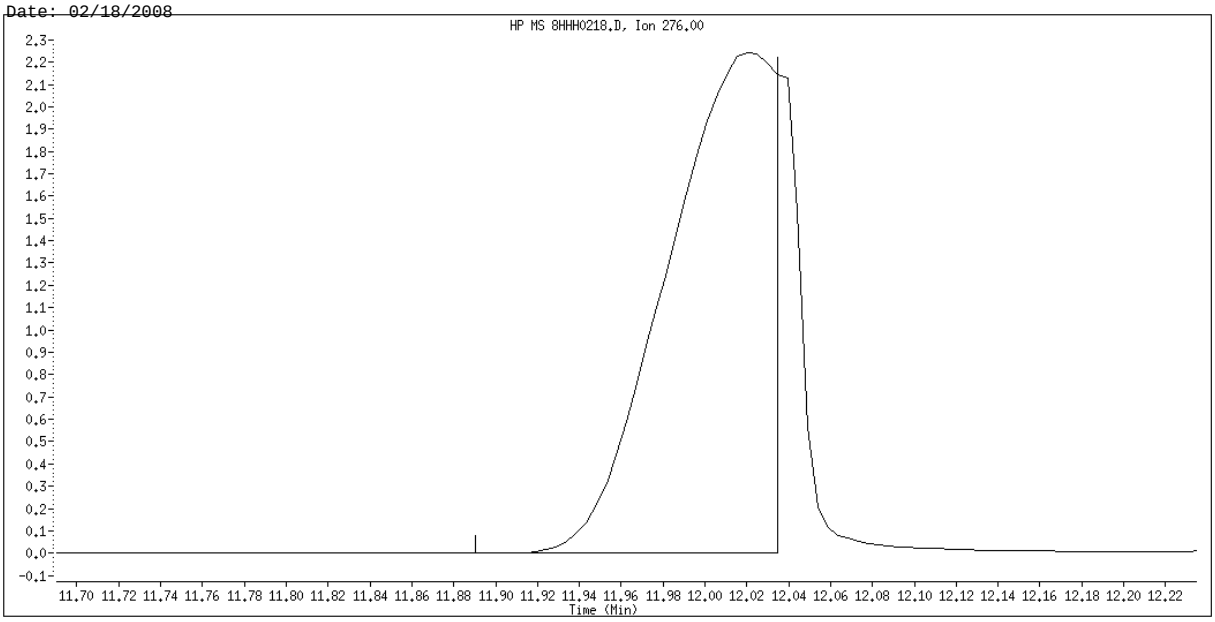
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



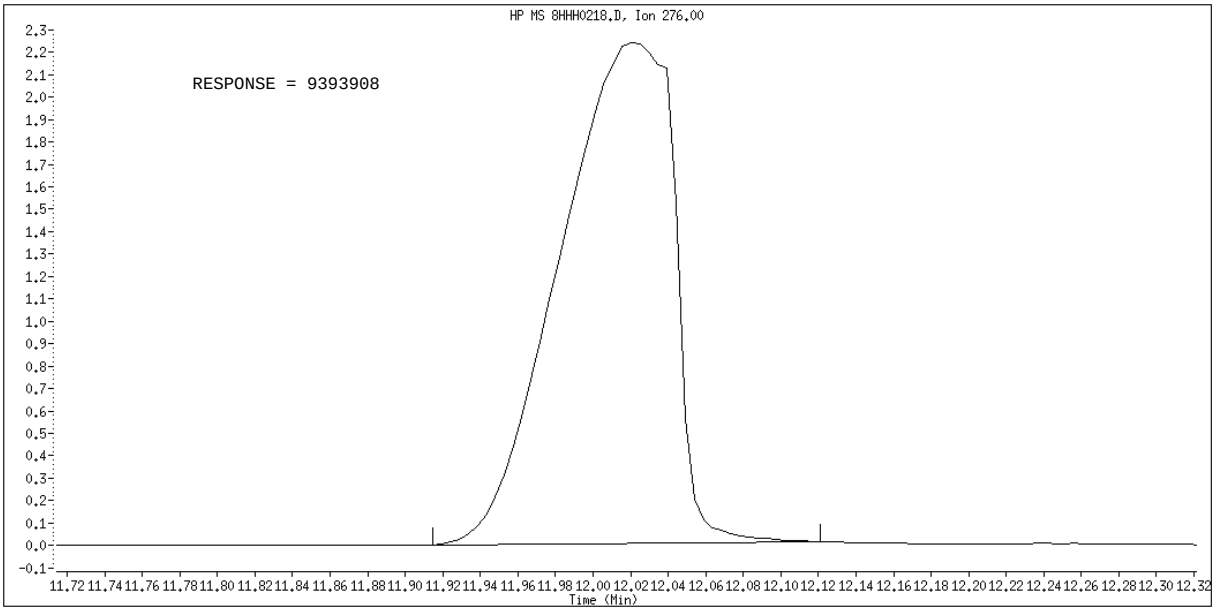
Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8HHH0218.D
Date : 18-FEB-2008 14:00
Client ID:
Sample Info: L9,80218a,b,8270p,1-8270424,sub,1,,9
Column phase: db5.625

Instrument: a4hp8.i
Operator: 001710
Column diameter: 0.32

Data File Name: 8HHH0218.D
Inj. Date and Time: 18-FEB-2008 14:00
Instrument ID: a4hp8.i
Client ID:
Compound Name: Indeno(1,2,3-cd)pyrene
CAS #: 193-39-5
Report Date: 02/18/2008



Original Integration



Manual Integration

Manually Integrated By: gruberj
Manual Integration Reason: Poor Chromatography

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SH0218.D
Lab Smp Id: L7
Inj Date : 18-FEB-2008 14:38
Operator : 001710 Inst ID: a4hp8.i
Smp Info : L7,80218a.b,8270p,1-827042d.sub,1,,7
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Meth Date : 18-Feb-2008 17:34 a4hp8.i Quant Type: ISTD
Cal Date : 18-FEB-2008 15:55 Cal File: 8AHH0218.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	3.571	3.571	(1.000)	248612	2.00000	
* 2	Naphthalene-d8	136	4.465	4.465	(1.000)	1021806	2.00000	
* 3	Acenaphthene-d10	164	5.739	5.739	(1.000)	593817	2.00000	
* 4	Phenanthrene-d10	188	6.826	6.826	(1.000)	1077765	2.00000	
* 5	Chrysene-d12	240	8.831	8.831	(1.000)	1225329	2.00000	
* 6	Perylene-d12	264	10.337	10.337	(1.000)	1052260	2.00000	
9	Pyridine	79	1.969	1.969	(0.552)	1929575	7.50000	7.9771
10	N-Nitrosodimethylamine	74	1.940	1.940	(0.543)	1176671	7.50000	7.9941
11	Ethyl methacrylate	69	2.171	2.171	(0.608)	1710346	7.50000	7.9324
12	3-Chloropropionitrile	54	2.349	2.349	(0.658)	775971	7.50000	7.7043
13	Malononitrile	66	2.493	2.493	(0.698)	2176470	7.50000	7.7519
209	Benzaldehyde	77	3.282	3.282	(0.919)	1106627	7.50000	6.8975
21	Aniline	93	3.349	3.349	(0.938)	2783139	7.50000	8.1183
22	Phenol	94	3.287	3.287	(0.921)	2131214	7.50000	7.9242
23	bis(2-Chloroethyl)ether	93	3.369	3.369	(0.943)	1594966	7.50000	7.6328
24	2-Chlorophenol	128	3.431	3.431	(0.961)	1305595	7.50000	7.9385
26	1,3-Dichlorobenzene	146	3.537	3.537	(0.991)	1301892	7.50000	7.8015
27	1,4-Dichlorobenzene	146	3.580	3.580	(1.003)	835635	7.50000	7.8288
28	1,2-Dichlorobenzene	146	3.691	3.691	(1.034)	1248273	7.50000	7.7609
29	Benzyl Alcohol	108	3.643	3.643	(1.020)	986649	7.50000	7.9495
30	2-Methylphenol	108	3.700	3.700	(1.036)	1368766	7.50000	7.8924
31	bis(2-Chloroisopropyl)ether	45	3.729	3.729	(1.044)	1483039	7.50000	7.4725
37	Acetophenone	105	3.835	3.835	(1.074)	2307296	7.50000	7.8102
32	N-Nitroso-di-n-propylamine	70	3.825	3.825	(1.071)	1598820	7.50000	7.9848
192	4-Methylphenol	108	3.806	3.806	(1.066)	1438344	7.50000	7.8660
34	Hexachloroethane	117	3.926	3.926	(1.100)	546182	7.50000	7.9031
35	Nitrobenzene	77	3.965	3.965	(0.888)	2068442	7.50000	8.0910
41	Isophorone	82	4.124	4.124	(0.924)	3648202	7.50000	7.9970
42	2-Nitrophenol	139	4.186	4.186	(0.938)	704089	7.50000	8.4671
43	2,4-Dimethylphenol	107	4.181	4.181	(0.936)	1794575	7.50000	7.9439
44	bis(2-Chloroethoxy)methane	93	4.253	4.253	(0.953)	1895994	7.50000	7.7702

46	2,4-Toluenediamene	121	5.292	5.292 (1.185)	938546	7.50000	7.3213
47	1,3,5-Trichlorobenzene	180	4.191	4.191 (0.939)	1101019	7.50000	7.9307

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
48	2,4-Dichlorophenol	162	4.350	4.350	(0.974)	1021698	7.50000	8.0670
49	Benzoic Acid	122	4.277	4.277	(0.958)	1950607	15.0000	15.907(QH)
50	1,2,4-Trichlorobenzene	180	4.417	4.417	(0.989)	1157231	7.50000	7.8364
51	Naphthalene	128	4.484	4.484	(1.004)	4056765	7.50000	7.9500
52	4-Chloroaniline	127	4.503	4.503	(1.009)	1725669	7.50000	8.1801
56	Hexachlorobutadiene	225	4.552	4.552	(1.019)	757337	7.50000	8.0223
210	Caprolactam	113	4.773	4.773	(1.069)	482988	7.50000	8.5995(H)
57	1,2,3-Trichlorobenzene	180	4.580	4.580	(1.026)	1043555	7.50000	7.8422
59	4-Chloro-3-Methylphenol	107	4.826	4.826	(1.081)	1498504	7.50000	8.0943
62	2-Methylnaphthalene	142	4.975	4.975	(1.114)	2375227	7.50000	7.8674
63	1-Methylnaphthalene	142	5.052	5.052	(1.131)	2564658	7.50000	7.8870
64	Hexachlorocyclopentadiene	237	5.081	5.081	(0.885)	934422	7.50000	7.8942
66	2,4,6-Trichlorophenol	196	5.167	5.167	(0.900)	835905	7.50000	8.2931
67	2,4,5-Trichlorophenol	196	5.196	5.196	(0.905)	872823	7.50000	8.1927
211	1,1'-Biphenyl	154	5.763	5.763	(1.004)	3116997	7.50000	8.2480
68	1,2,3,5-Tetrachlorobenzene	216	5.085	5.085	(0.886)	1379784	7.50000	8.0843
70	2-Chloronaphthalene	162	5.335	5.335	(0.930)	2407849	7.50000	7.7557
73	2-Nitroaniline	65	5.393	5.393	(0.940)	1206144	7.50000	7.7562
74	1,2,3,4-Tetrachlorobenzene	216	5.307	5.307	(0.925)	1270393	7.50000	8.0496
76	Dimethylphthalate	163	5.504	5.504	(0.959)	2852140	7.50000	7.8554
78	2,6-Dinitrotoluene	165	5.561	5.561	(0.969)	665145	7.50000	7.7405
79	Acenaphthylene	152	5.638	5.638	(0.982)	4115043	7.50000	8.3447
80	1,2-Dinitrobenzene	168	5.610	5.610	(0.977)	321685	7.50000	8.5317
81	3-Nitroaniline	138	5.691	5.691	(0.992)	676975	7.50000	8.3965
82	Acenaphthene	153	5.763	5.763	(1.004)	2588204	7.50000	7.8504
83	2,4-Dinitrophenol	184	5.763	5.763	(1.004)	1003116	15.0000	15.480
85	4-Nitrophenol	109	5.783	5.783	(1.008)	572096	7.50000	8.1118
86	Dibenzofuran	168	5.888	5.888	(1.026)	3744472	7.50000	7.9252
87	2,4-Dinitrotoluene	165	5.855	5.855	(1.020)	921700	7.50000	7.8061
91	2,3,5,6-Tetrachlorophenol	232	5.932	5.932	(1.034)	817791	7.50000	7.7712
93	Diethylphthalate	149	6.009	6.009	(1.047)	3032639	7.50000	8.0595
94	Fluorene	166	6.138	6.138	(1.070)	3263674	7.50000	8.0715
95	4-Chlorophenyl-phenylether	204	6.119	6.119	(1.066)	1509812	7.50000	8.0234
96	4-Nitroaniline	138	6.138	6.138	(1.070)	789051	7.50000	7.8602
98	4,6-Dinitro-2-methylphenol	198	6.153	6.153	(0.901)	627733	7.50000	7.8751
99	N-Nitrosodiphenylamine	169	6.201	6.201	(0.908)	2204362	7.50000	7.8811
100	1,2-Diphenylhydrazine	77	6.235	6.235	(0.913)	4528131	7.50000	8.0364
106	4-Bromophenyl-phenylether	248	6.475	6.475	(0.949)	867750	7.50000	8.0600
107	Hexachlorobenzene	284	6.538	6.538	(0.958)	998215	7.50000	8.0551
212	Atrazine	200	6.571	6.571	(0.963)	877993	7.50000	8.0744
111	Pentachlorophenol	266	6.677	6.677	(0.978)	1315190	15.0000	15.283
115	Phenanthrene	178	6.845	6.845	(1.003)	4717240	7.50000	8.0805
116	Anthracene	178	6.884	6.884	(1.008)	4838466	7.50000	8.5121
119	Carbazole	167	6.985	6.985	(1.023)	4249395	7.50000	8.1832
120	Di-n-Butylphthalate	149	7.192	7.192	(1.054)	5058312	7.50000	8.5812
123	Fluoranthene	202	7.725	7.725	(1.132)	5166252	7.50000	8.7668
124	Benzidine	184	7.793	7.793	(0.882)	2854201	7.50000	7.9283
125	Pyrene	202	7.898	7.898	(0.894)	5453437	7.50000	8.3432
131	Butylbenzylphthalate	149	8.322	8.322	(0.942)	2197259	7.50000	8.4055
133	3,3'-Dimethoxybenzidine	244	8.730	8.730	(0.989)	1245721	7.50000	8.3642
135	3,3'-Dichlorobenzidine	252	8.774	8.774	(0.993)	2256489	7.50000	7.8537
136	Benzo(a)Anthracene	228	8.822	8.822	(0.999)	5667947	7.50000	8.1709

137 Chrysene	228	8.855	8.855 (1.003)	5111023	7.50000	7.9645
138 4,4'-Methylene bis(o-chloroan	231	8.769	8.769 (0.993)	1055818	7.50000	7.8090

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139 bis(2-ethylhexyl)Phthalate	149	8.745	8.745	(0.990)	3157622	7.50000	7.8071
140 Di-n-octylphthalate	149	9.322	9.322	(0.902)	5172538	7.50000	7.7744
141 Benzo(b)fluoranthene	252	9.870	9.870	(0.955)	5114082	7.50000	8.2984
142 Benzo(k)fluoranthene	252	9.904	9.904	(0.958)	5580099	7.50000	8.4352(H)
146 Benzo(a)pyrene	252	10.274	10.274	(0.994)	4778895	7.50000	8.5795
149 Indeno(1,2,3-cd)pyrene	276	12.015	12.015	(1.162)	5354375	7.50000	8.5887
150 Dibenz(a,h)anthracene	278	12.029	12.029	(1.164)	4728112	7.50000	8.6518
151 Benzo(g,h,i)perylene	276	12.525	12.525	(1.212)	4378288	7.50000	8.2306
198 1,4-Dioxane	88	1.772	1.772	(0.496)	633737	7.50000	7.7554
$ 154 Nitrobenzene-d5	82	3.950	3.950	(0.885)	2052554	7.50000	8.2884
$ 155 2-Fluorobiphenyl	172	5.225	5.225	(0.910)	2956478	7.50000	7.9172
$ 156 Terphenyl-d14	244	7.975	7.975	(0.903)	3959950	7.50000	8.3838
$ 157 Phenol-d5	99	3.277	3.277	(0.918)	2000596	7.50000	7.9022
$ 158 2-Fluorophenol	112	2.695	2.695	(0.755)	1279788	7.50000	8.0897
$ 159 2,4,6-Tribromophenol	330	6.312	6.312	(1.100)	425487	7.50000	7.8378
$ 186 2-Chlorophenol-d4	132	3.417	3.417	(0.957)	1183107	7.50000	7.9696
$ 187 1,2-Dichlorobenzene-d4	152	3.681	3.681	(1.031)	795746	7.50000	7.7988
101 Diphenylamine	169	6.201	6.201	(0.908)	2204362	7.50000	7.8811

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

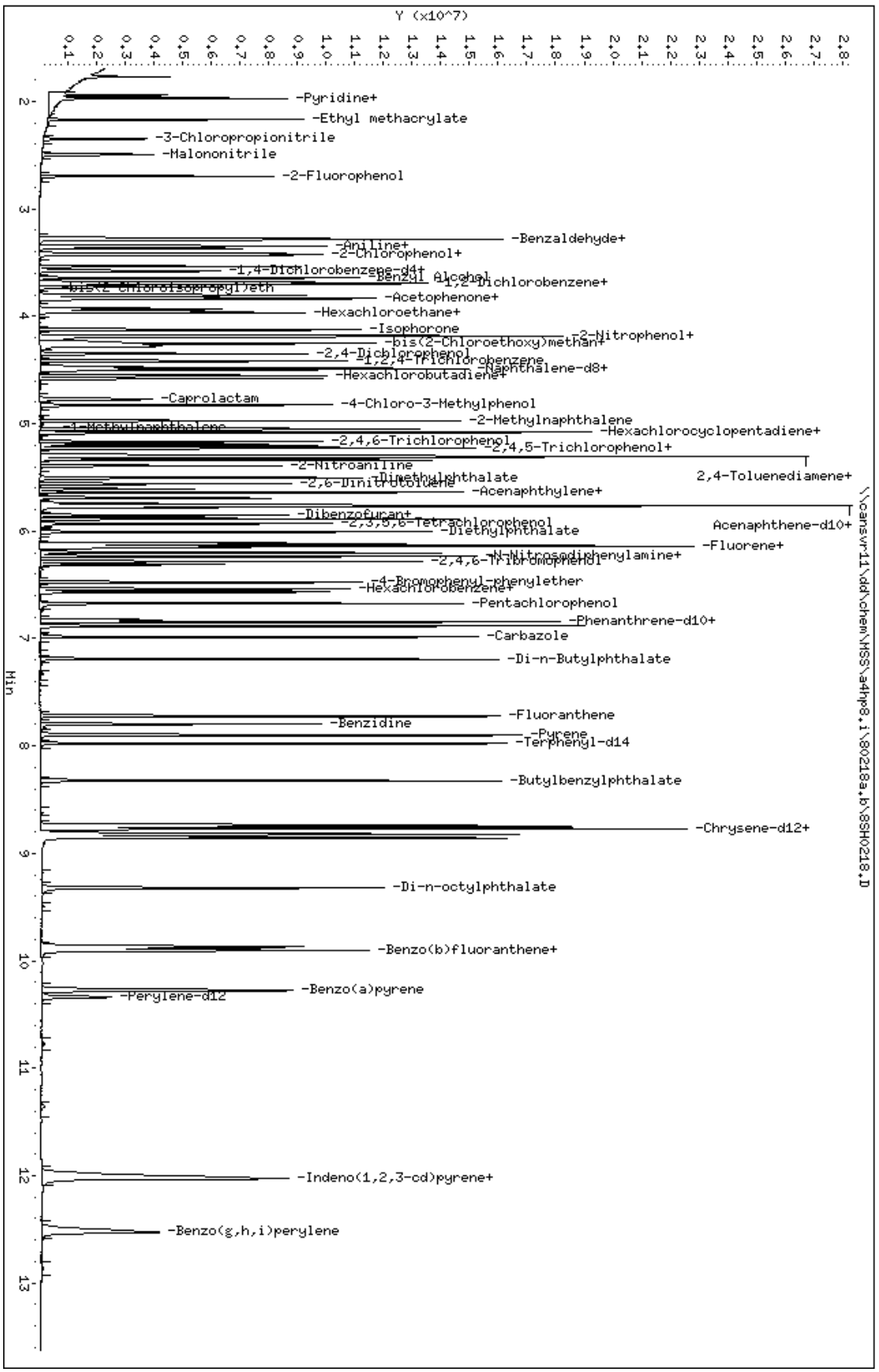
Instrument ID: a4hp8.i
Lab File ID: 8SH0218.D
Lab Smp Id: L7
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Misc Info:

Calibration Date: 18-FEB-2008
Calibration Time: 16:34
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	199560	99780	399120	248612	24.58
2 Naphthalene-d8	828712	414356	1657424	1021806	23.30
3 Acenaphthene-d10	469624	234812	939248	593817	26.45
4 Phenanthrene-d10	929073	464537	1858146	1077765	16.00
5 Chrysene-d12	931719	465860	1863438	1225329	31.51
6 Perylene-d12	908273	454137	1816546	1052260	15.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.57	3.07	4.07	3.57	0.08
2 Naphthalene-d8	4.46	3.96	4.96	4.47	0.06
3 Acenaphthene-d10	5.74	5.24	6.24	5.74	0.05
4 Phenanthrene-d10	6.82	6.32	7.32	6.83	0.04
5 Chrysene-d12	8.82	8.32	9.32	8.83	0.09
6 Perylene-d12	10.33	9.83	10.83	10.34	0.07

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SH0218.D

Date : 18-FEB-2008 14:38

Client ID:

Sample Info: L7,80218a,b,8270p,1-8270424,sub,1,,7

Column phase: db5.625

Instrument: a4hp8.i

Operator: 001710

Column diameter: 0.32

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SHH0218.D
Lab Smp Id: L8
Inj Date : 18-FEB-2008 14:19
Operator : 001710 Inst ID: a4hp8.i
Smp Info : L8,80218a.b,8270p,1-827042d.sub,1,,8
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Meth Date : 18-Feb-2008 17:34 a4hp8.i Quant Type: ISTD
Cal Date : 18-FEB-2008 15:36 Cal File: 8AHHH218.D
Als bottle: 8 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	3.569	3.569	(1.000)	210368	2.00000	
* 2	Naphthalene-d8	136	4.468	4.468	(1.000)	881876	2.00000	
* 3	Acenaphthene-d10	164	5.737	5.737	(1.000)	512573	2.00000	
* 4	Phenanthrene-d10	188	6.824	6.824	(1.000)	933690	2.00000	
* 5	Chrysene-d12	240	8.829	8.829	(1.000)	1087114	2.00000	
* 6	Perylene-d12	264	10.335	10.335	(1.000)	913035	2.00000	
9	Pyridine	79	1.962	1.962	(0.550)	1956196	10.0000	9.5573
10	N-Nitrosodimethylamine	74	1.938	1.938	(0.543)	1199195	10.0000	9.6282
11	Ethyl methacrylate	69	2.164	2.164	(0.607)	1716890	10.0000	9.4103
12	3-Chloropropionitrile	54	2.347	2.347	(0.658)	789908	10.0000	9.2684
13	Malononitrile	66	2.491	2.491	(0.698)	2183924	10.0000	9.1926
209	Benzaldehyde	77	3.280	3.280	(0.919)	1157051	10.0000	8.5228
21	Aniline	93	3.347	3.347	(0.938)	2838839	10.0000	9.7862
22	Phenol	94	3.285	3.285	(0.921)	2224143	10.0000	9.7731
23	bis(2-Chloroethyl)ether	93	3.367	3.367	(0.943)	1694770	10.0000	9.5849
24	2-Chlorophenol	128	3.429	3.429	(0.961)	1364632	10.0000	9.8059
26	1,3-Dichlorobenzene	146	3.535	3.535	(0.991)	1353642	10.0000	9.5862
27	1,4-Dichlorobenzene	146	3.583	3.583	(1.004)	844377	10.0000	9.3488
28	1,2-Dichlorobenzene	146	3.689	3.689	(1.034)	1338705	10.0000	9.8363
29	Benzyl Alcohol	108	3.646	3.646	(1.022)	1043253	10.0000	9.9336
30	2-Methylphenol	108	3.698	3.698	(1.036)	1482147	10.0000	10.100
31	bis(2-Chloroisopropyl)ether	45	3.727	3.727	(1.044)	1592160	10.0000	9.4808
37	Acetophenone	105	3.838	3.838	(1.075)	2461762	10.0000	9.8098
32	N-Nitroso-di-n-propylamine	70	3.828	3.828	(1.073)	1689449	10.0000	9.9714
192	4-Methylphenol	108	3.804	3.804	(1.066)	1540973	10.0000	9.9593
34	Hexachloroethane	117	3.929	3.929	(1.101)	571823	10.0000	9.7783
35	Nitrobenzene	77	3.963	3.963	(0.887)	2206815	10.0000	10.002
41	Isophorone	82	4.126	4.126	(0.924)	3912940	10.0000	9.9383
42	2-Nitrophenol	139	4.184	4.184	(0.937)	743532	10.0000	10.360
43	2,4-Dimethylphenol	107	4.179	4.179	(0.935)	1907430	10.0000	9.7832
44	bis(2-Chloroethoxy)methane	93	4.251	4.251	(0.952)	2007297	10.0000	9.5317

46	2,4-Toluenediamene	121	5.290	5.290 (1.184)	976499	10.0000	8.8261
47	1,3,5-Trichlorobenzene	180	4.194	4.194 (0.939)	1175686	10.0000	9.8122

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
48	2,4-Dichlorophenol	162	4.348	4.348	(0.973)	1085825	10.0000	9.9337
49	Benzoic Acid	122	4.285	4.285	(0.959)	2084728	20.0000	19.219(H)
50	1,2,4-Trichlorobenzene	180	4.415	4.415	(0.988)	1232586	10.0000	9.6711
51	Naphthalene	128	4.482	4.482	(1.003)	4284085	10.0000	9.7276
52	4-Chloroaniline	127	4.501	4.501	(1.008)	1747001	10.0000	9.5953
56	Hexachlorobutadiene	225	4.554	4.554	(1.019)	794664	10.0000	9.7534
210	Caprolactam	113	4.776	4.776	(1.069)	511202	10.0000	10.546(H)
57	1,2,3-Trichlorobenzene	180	4.578	4.578	(1.025)	1095966	10.0000	9.5429
59	4-Chloro-3-Methylphenol	107	4.828	4.828	(1.081)	1606762	10.0000	10.056
62	2-Methylnaphthalene	142	4.973	4.973	(1.113)	2537741	10.0000	9.7395
63	1-Methylnaphthalene	142	5.050	5.050	(1.130)	2722365	10.0000	9.7004
64	Hexachlorocyclopentadiene	237	5.083	5.083	(0.886)	990745	10.0000	9.4452
66	2,4,6-Trichlorophenol	196	5.165	5.165	(0.900)	891059	10.0000	10.242
67	2,4,5-Trichlorophenol	196	5.194	5.194	(0.905)	947654	10.0000	10.305
211	1,1'-Biphenyl	154	5.766	5.766	(1.005)	3420232	10.0000	10.485
68	1,2,3,5-Tetrachlorobenzene	216	5.083	5.083	(0.886)	1493016	10.0000	10.134
70	2-Chloronaphthalene	162	5.333	5.333	(0.930)	2606412	10.0000	9.7259
73	2-Nitroaniline	65	5.391	5.391	(0.940)	1291248	10.0000	9.6270
74	1,2,3,4-Tetrachlorobenzene	216	5.305	5.305	(0.925)	1351396	10.0000	9.9202
76	Dimethylphthalate	163	5.502	5.502	(0.959)	3115472	10.0000	9.9407
78	2,6-Dinitrotoluene	165	5.559	5.559	(0.969)	721588	10.0000	9.6339
79	Acenaphthylene	152	5.641	5.641	(0.983)	4426891	10.0000	10.400
80	1,2-Dinitrobenzene	168	5.608	5.608	(0.977)	345100	10.0000	10.603
81	3-Nitroaniline	138	5.689	5.689	(0.992)	720761	10.0000	10.356
82	Acenaphthene	153	5.766	5.766	(1.005)	2830330	10.0000	9.9455
83	2,4-Dinitrophenol	184	5.766	5.766	(1.005)	1134075	20.0000	19.638
85	4-Nitrophenol	109	5.781	5.781	(1.008)	621147	10.0000	10.203
86	Dibenzofuran	168	5.886	5.886	(1.026)	4066152	10.0000	9.9701
87	2,4-Dinitrotoluene	165	5.858	5.858	(1.021)	979692	10.0000	9.5842
91	2,3,5,6-Tetrachlorophenol	232	5.935	5.935	(1.034)	883277	10.0000	9.5242
93	Diethylphthalate	149	6.011	6.011	(1.048)	3248258	10.0000	10.001
94	Fluorene	166	6.136	6.136	(1.070)	3529378	10.0000	10.112
95	4-Chlorophenyl-phenylether	204	6.117	6.117	(1.066)	1622456	10.0000	9.9886
96	4-Nitroaniline	138	6.141	6.141	(1.070)	823452	10.0000	9.4408
98	4,6-Dinitro-2-methylphenol	198	6.156	6.156	(0.902)	672857	10.0000	9.4638
99	N-Nitrosodiphenylamine	169	6.204	6.204	(0.909)	2476697	10.0000	10.221
100	1,2-Diphenylhydrazine	77	6.233	6.233	(0.913)	4939340	10.0000	10.119
106	4-Bromophenyl-phenylether	248	6.478	6.478	(0.949)	943383	10.0000	10.115
107	Hexachlorobenzene	284	6.540	6.540	(0.958)	1065480	10.0000	9.9246
212	Atrazine	200	6.569	6.569	(0.963)	964671	10.0000	10.240
111	Pentachlorophenol	266	6.675	6.675	(0.978)	1544639	20.0000	19.850
115	Phenanthrene	178	6.848	6.848	(1.004)	5124489	10.0000	10.133
116	Anthracene	178	6.887	6.887	(1.009)	5229219	10.0000	10.619
119	Carbazole	167	6.988	6.988	(1.024)	4601202	10.0000	10.228
120	Di-n-Butylphthalate	149	7.190	7.190	(1.054)	5484279	10.0000	10.740
123	Fluoranthene	202	7.723	7.723	(1.132)	5514973	10.0000	10.803
124	Benzidine	184	7.796	7.796	(0.883)	3078077	10.0000	9.5697
125	Pyrene	202	7.901	7.901	(0.895)	5847585	10.0000	10.084
131	Butylbenzylphthalate	149	8.320	8.320	(0.942)	2414645	10.0000	10.412
133	3,3'-Dimethoxybenzidine	244	8.733	8.733	(0.989)	1236156	10.0000	9.3324
135	3,3'-Dichlorobenzidine	252	8.772	8.772	(0.993)	2502966	10.0000	9.5493
136	Benzo(a)Anthracene	228	8.820	8.820	(0.999)	6194043	10.0000	10.064

137 Chrysene	228	8.853	8.853 (1.003)	5628254	10.0000	9.8856
138 4,4'-Methylene bis(o-chloroan	231	8.767	8.767 (0.993)	1159662	10.0000	9.4408

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139 bis(2-ethylhexyl)Phthalate	149	8.743	8.743	(0.990)	3439006	10.0000	9.4279
140 Di-n-octylphthalate	149	9.320	9.320	(0.902)	5701813	10.0000	9.7428
141 Benzo(b)fluoranthene	252	9.873	9.873	(0.955)	5871942	10.0000	10.981
142 Benzo(k)fluoranthene	252	9.902	9.902	(0.958)	5803260	10.0000	10.110(H)
146 Benzo(a)pyrene	252	10.277	10.277	(0.994)	5188862	10.0000	10.736
149 Indeno(1,2,3-cd)pyrene	276	12.008	12.008	(1.162)	5773007	10.0000	10.672
150 Dibenz(a,h)anthracene	278	12.032	12.032	(1.164)	5117482	10.0000	10.792
151 Benzo(g,h,i)perylene	276	12.527	12.527	(1.212)	4749206	10.0000	10.289
198 1,4-Dioxane	88	1.765	1.765	(0.495)	626598	10.0000	9.0620
$ 154 Nitrobenzene-d5	82	3.948	3.948	(0.884)	2162967	10.0000	10.120
$ 155 2-Fluorobiphenyl	172	5.228	5.228	(0.911)	3146951	10.0000	9.7631
$ 156 Terphenyl-d14	244	7.978	7.978	(0.904)	4331381	10.0000	10.336
$ 157 Phenol-d5	99	3.275	3.275	(0.918)	2128217	10.0000	9.9345
$ 158 2-Fluorophenol	112	2.693	2.693	(0.755)	1299796	10.0000	9.7099
$ 159 2,4,6-Tribromophenol	330	6.314	6.314	(1.101)	454360	10.0000	9.4430
$ 186 2-Chlorophenol-d4	132	3.415	3.415	(0.957)	1235450	10.0000	9.8351
$ 187 1,2-Dichlorobenzene-d4	152	3.679	3.679	(1.031)	829513	10.0000	9.6078
101 Diphenylamine	169	6.204	6.204	(0.909)	2476697	10.0000	10.221

QC Flag Legend

H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

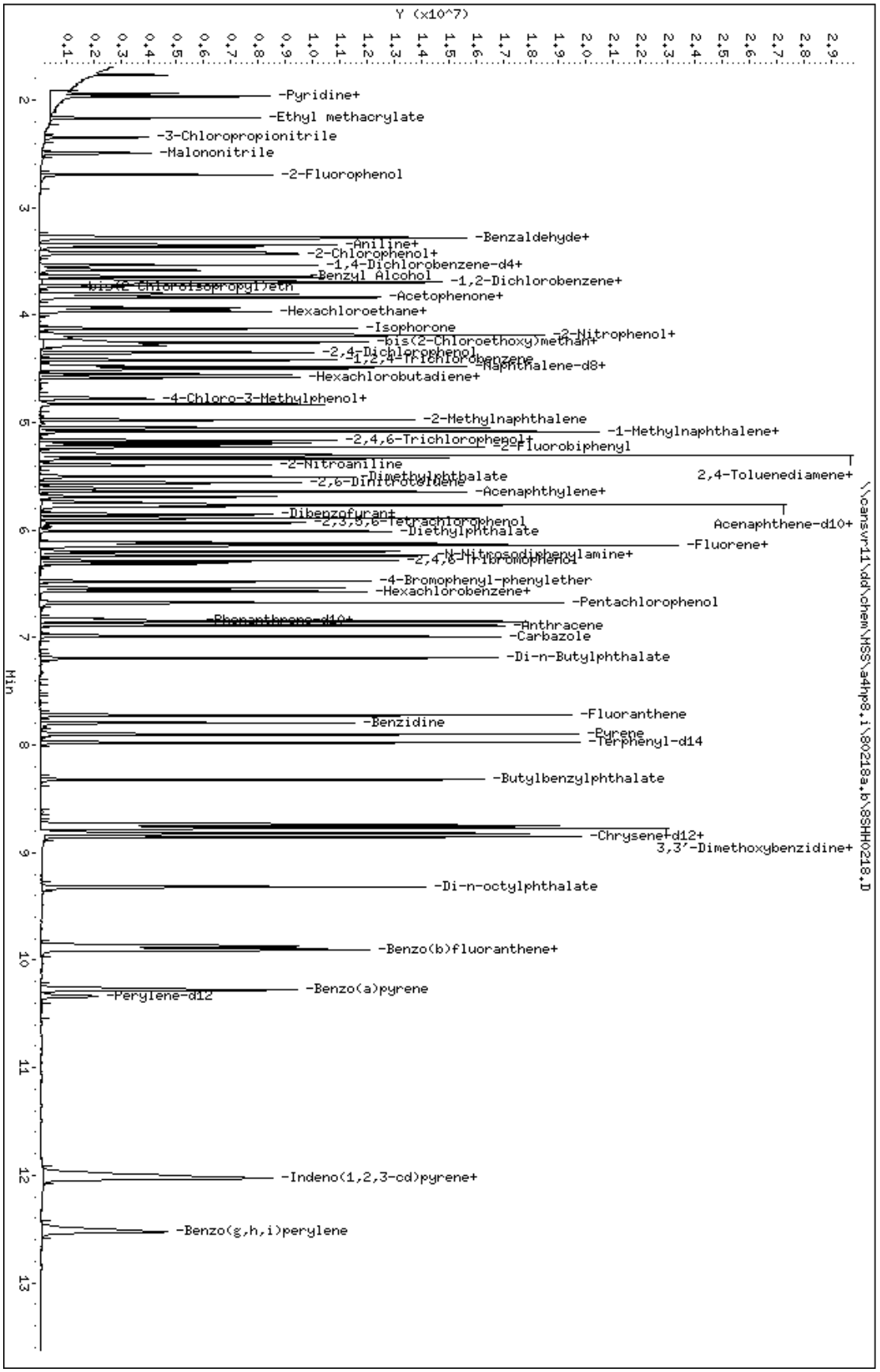
Instrument ID: a4hp8.i
Lab File ID: 8SHH0218.D
Lab Smp Id: L8
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Misc Info:

Calibration Date: 18-FEB-2008
Calibration Time: 16:34
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	199560	99780	399120	210368	5.42
2 Naphthalene-d8	828712	414356	1657424	881876	6.42
3 Acenaphthene-d10	469624	234812	939248	512573	9.15
4 Phenanthrene-d10	929073	464537	1858146	933690	0.50
5 Chrysene-d12	931719	465860	1863438	1087114	16.68
6 Perylene-d12	908273	454137	1816546	913035	0.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.57	3.07	4.07	3.57	0.02
2 Naphthalene-d8	4.46	3.96	4.96	4.47	0.13
3 Acenaphthene-d10	5.74	5.24	6.24	5.74	0.01
4 Phenanthrene-d10	6.82	6.32	7.32	6.82	0.01
5 Chrysene-d12	8.82	8.32	9.32	8.83	0.06
6 Perylene-d12	10.33	9.83	10.83	10.34	0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SHH0218.D
Date : 18-FEB-2008 14:19
Client ID:
Sample Info: L8,80218a,b,8270p,1-8270424,sub,1,,8
Column phase: db5.625

Instrument: a4hp8.i
Operator: 001710
Column diameter: 0.32

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SL0218.D
Lab Smp Id: L2
Inj Date : 18-FEB-2008 13:21
Operator : 001710 Inst ID: a4hp8.i
Smp Info : L2,80218a.b,8270p,1-827042d.sub,1,,2
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Meth Date : 18-Feb-2008 17:34 a4hp8.i Quant Type: ISTD
Cal Date : 18-FEB-2008 17:31 Cal File: 8AML0218.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

		QUANT SIG					AMOUNTS CAL-AMT	ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(NG)	(NG)
*	1 1,4-Dichlorobenzene-d4	152	3.569	3.569	(1.000)	235607	2.00000	
*	2 Naphthalene-d8	136	4.463	4.463	(1.000)	951331	2.00000	
*	3 Acenaphthene-d10	164	5.733	5.733	(1.000)	538180	2.00000	
*	4 Phenanthrene-d10	188	6.824	6.824	(1.000)	958835	2.00000	
*	5 Chrysene-d12	240	8.844	8.844	(1.000)	1044899	2.00000	
*	6 Perylene-d12	264	10.363	10.363	(1.000)	918532	2.00000	
	9 Pyridine	79	1.972	1.972	(0.553)	51347	0.25000	0.22399
	10 N-Nitrosodimethylamine	74	1.938	1.938	(0.543)	30387	0.25000	0.21784
	11 Ethyl methacrylate	69	2.169	2.169	(0.608)	46017	0.25000	0.22520
	12 3-Chloropropionitrile	54	2.347	2.347	(0.658)	23066	0.25000	0.24165(Q)
	13 Malononitrile	66	2.487	2.487	(0.697)	61688	0.25000	0.23184
	209 Benzaldehyde	77	3.280	3.280	(0.919)	39041	0.25000	0.25677
	21 Aniline	93	3.338	3.338	(0.935)	71413	0.25000	0.21981
	22 Phenol	94	3.275	3.275	(0.918)	56916	0.25000	0.22330
	23 bis(2-Chloroethyl)ether	93	3.362	3.362	(0.942)	46781	0.25000	0.23623
	24 2-Chlorophenol	128	3.424	3.424	(0.960)	35245	0.25000	0.22613
	26 1,3-Dichlorobenzene	146	3.535	3.535	(0.991)	36805	0.25000	0.23272
	27 1,4-Dichlorobenzene	146	3.578	3.578	(1.003)	25050	0.25000	0.24764
	28 1,2-Dichlorobenzene	146	3.689	3.689	(1.034)	35744	0.25000	0.23450
	29 Benzyl Alcohol	108	3.636	3.636	(1.019)	24902	0.25000	0.21171
	30 2-Methylphenol	108	3.694	3.694	(1.035)	34943	0.25000	0.21260
	31 bis(2-Chloroisopropyl)ether	45	3.722	3.722	(1.043)	42992	0.25000	0.22858
	37 Acetophenone	105	3.833	3.833	(1.074)	63728	0.25000	0.22463
	32 N-Nitroso-di-n-propylamine	70	3.814	3.814	(1.069)	39620	0.25000	0.20879
	192 4-Methylphenol	108	3.795	3.795	(1.063)	37488	0.25000	0.21633
	34 Hexachloroethane	117	3.924	3.924	(1.100)	14786	0.25000	0.22576
	35 Nitrobenzene	77	3.958	3.958	(0.887)	51770	0.25000	0.21751
	41 Isophorone	82	4.117	4.117	(0.922)	88808	0.25000	0.20909
	42 2-Nitrophenol	139	4.179	4.179	(0.936)	14100	0.25000	0.18212
	43 2,4-Dimethylphenol	107	4.175	4.175	(0.935)	46058	0.25000	0.21898(Q)
	44 bis(2-Chloroethoxy)methane	93	4.247	4.247	(0.952)	53168	0.25000	0.23404

46	2,4-Toluenediamene	121	5.281	5.281 (1.183)	26922	0.25000	0.22557
47	1,3,5-Trichlorobenzene	180	4.189	4.189 (0.939)	29530	0.25000	0.22846

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
48	2,4-Dichlorophenol	162	4.343	4.343	(0.973)	24805	0.25000	0.21036
49	Benzoic Acid	122	Compound Not Detected.					
50	1,2,4-Trichlorobenzene	180	4.415	4.415	(0.989)	32284	0.25000	0.23481
51	Naphthalene	128	4.477	4.477	(1.003)	109981	0.25000	0.23150
52	4-Chloroaniline	127	4.497	4.497	(1.008)	40683	0.25000	0.20713
56	Hexachlorobutadiene	225	4.550	4.550	(1.019)	19743	0.25000	0.22462
210	Caprolactam	113	4.723	4.723	(1.058)	9008	0.25000	0.17227(H)
57	1,2,3-Trichlorobenzene	180	4.578	4.578	(1.026)	29122	0.25000	0.23506
59	4-Chloro-3-Methylphenol	107	4.819	4.819	(1.080)	34885	0.25000	0.20239
62	2-Methylnaphthalene	142	4.973	4.973	(1.114)	62480	0.25000	0.22228
63	1-Methylnaphthalene	142	5.045	5.045	(1.130)	68205	0.25000	0.22529
64	Hexachlorocyclopentadiene	237	5.079	5.079	(0.886)	17861	0.25000	0.24288
66	2,4,6-Trichlorophenol	196	5.160	5.160	(0.900)	18275	0.25000	0.20005
67	2,4,5-Trichlorophenol	196	5.189	5.189	(0.905)	18818	0.25000	0.19490
211	1,1'-Biphenyl	154	5.757	5.757	(1.004)	70781	0.25000	0.20666
68	1,2,3,5-Tetrachlorobenzene	216	5.079	5.079	(0.886)	35207	0.25000	0.22761
70	2-Chloronaphthalene	162	5.329	5.329	(0.930)	64287	0.25000	0.22848
73	2-Nitroaniline	65	5.386	5.386	(0.940)	21085	0.25000	0.28211
74	1,2,3,4-Tetrachlorobenzene	216	5.300	5.300	(0.925)	32330	0.25000	0.22603
76	Dimethylphthalate	163	5.497	5.497	(0.959)	72282	0.25000	0.21966
78	2,6-Dinitrotoluene	165	5.550	5.550	(0.968)	10673	0.25000	0.28537
79	Acenaphthylene	152	5.636	5.636	(0.983)	98279	0.25000	0.21990
80	1,2-Dinitrobenzene	168	5.598	5.598	(0.977)	6013	0.25000	0.17596
81	3-Nitroaniline	138	5.680	5.680	(0.991)	13196	0.25000	0.18059
82	Acenaphthene	153	5.757	5.757	(1.004)	67732	0.25000	0.22668
83	2,4-Dinitrophenol	184	Compound Not Detected.					
85	4-Nitrophenol	109	Compound Not Detected.					
86	Dibenzofuran	168	5.882	5.882	(1.026)	98804	0.25000	0.23074
87	2,4-Dinitrotoluene	165	5.843	5.843	(1.019)	15477	0.25000	0.27171
91	2,3,5,6-Tetrachlorophenol	232	5.930	5.930	(1.034)	15212	0.25000	0.25291
93	Diethylphthalate	149	6.002	6.002	(1.047)	72155	0.25000	0.21158
94	Fluorene	166	6.132	6.132	(1.070)	82099	0.25000	0.22403
95	4-Chlorophenyl-phenylether	204	6.112	6.112	(1.066)	37190	0.25000	0.21806
96	4-Nitroaniline	138	6.122	6.122	(1.068)	13320	0.25000	0.25513
98	4,6-Dinitro-2-methylphenol	198	6.141	6.141	(0.900)	7354	0.25000	0.27609
99	N-Nitrosodiphenylamine	169	6.194	6.194	(0.908)	54043	0.25000	0.21718
100	1,2-Diphenylhydrazine	77	6.228	6.228	(0.913)	108070	0.25000	0.21559
106	4-Bromophenyl-phenylether	248	6.473	6.473	(0.949)	20788	0.25000	0.21704
107	Hexachlorobenzene	284	6.536	6.536	(0.958)	24746	0.25000	0.22446
212	Atrazine	200	6.560	6.560	(0.961)	18783	0.25000	0.19416
111	Pentachlorophenol	266	6.670	6.670	(0.977)	17160	0.50000	0.69351
115	Phenanthrene	178	6.839	6.839	(1.002)	119009	0.25000	0.22914
116	Anthracene	178	6.877	6.877	(1.008)	110830	0.25000	0.21916
119	Carbazole	167	6.983	6.983	(1.023)	97460	0.25000	0.21096
120	Di-n-Butylphthalate	149	7.190	7.190	(1.054)	101301	0.25000	0.19317
123	Fluoranthene	202	7.723	7.723	(1.132)	110147	0.25000	0.21010
124	Benzidine	184	7.800	7.800	(0.882)	36437	0.25000	0.35922
125	Pyrene	202	7.906	7.906	(0.894)	120643	0.25000	0.21644
131	Butylbenzylphthalate	149	8.339	8.339	(0.943)	37697	0.25000	0.16911
133	3,3'-Dimethoxybenzidine	244	8.748	8.748	(0.989)	10837	0.25000	0.47016
135	3,3'-Dichlorobenzidine	252	8.786	8.786	(0.993)	37962	0.25000	0.26804
136	Benzo(a)Anthracene	228	8.839	8.839	(0.999)	126006	0.25000	0.21302

137 Chrysene	228	8.868	8.868 (1.003)	125234	0.25000	0.22885
138 4,4'-Methylene bis(o-chloroan	231	8.781	8.781 (0.993)	16118	0.25000	0.22570

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
139 bis(2-ethylhexyl)Phthalate	149	8.767	8.767	(0.991)	51216	0.25000	0.17485
140 Di-n-octylphthalate	149	9.344	9.344	(0.902)	72596	0.25000	0.29143
141 Benzo(b)fluoranthene	252	9.887	9.887	(0.954)	111916	0.25000	0.20804
142 Benzo(k)fluoranthene	252	9.916	9.916	(0.957)	117040	0.25000	0.20268
146 Benzo(a)pyrene	252	10.286	10.286	(0.993)	96237	0.25000	0.19793
149 Indeno(1,2,3-cd)pyrene	276	12.003	12.003	(1.158)	107070	0.25000	0.19675
150 Dibenz(a,h)anthracene	278	12.027	12.027	(1.161)	96022	0.25000	0.20129
151 Benzo(g,h,i)perylene	276	12.513	12.513	(1.207)	98564	0.25000	0.21226
198 1,4-Dioxane	88	1.770	1.770	(0.496)	17657	0.25000	0.22800(M)
$ 154 Nitrobenzene-d5	82	3.944	3.944	(0.884)	48247	0.25000	0.20926
$ 155 2-Fluorobiphenyl	172	5.223	5.223	(0.911)	76613	0.25000	0.22637
$ 156 Terphenyl-d14	244	7.988	7.988	(0.903)	84851	0.25000	0.21066
$ 157 Phenol-d5	99	3.266	3.266	(0.915)	54085	0.25000	0.22542
$ 158 2-Fluorophenol	112	2.693	2.693	(0.755)	34779	0.25000	0.23198
$ 159 2,4,6-Tribromophenol	330	6.305	6.305	(1.100)	7877	0.25000	0.26745
$ 186 2-Chlorophenol-d4	132	3.410	3.410	(0.956)	31154	0.25000	0.22144
$ 187 1,2-Dichlorobenzene-d4	152	3.679	3.679	(1.031)	23521	0.25000	0.24325
101 Diphenylamine	169	6.194	6.194	(0.908)	54043	0.25000	0.21718

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp8.i
Lab File ID: 8SL0218.D
Lab Smp Id: L2
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Misc Info:

Calibration Date: 18-FEB-2008
Calibration Time: 16:34
Level:
Sample Type:

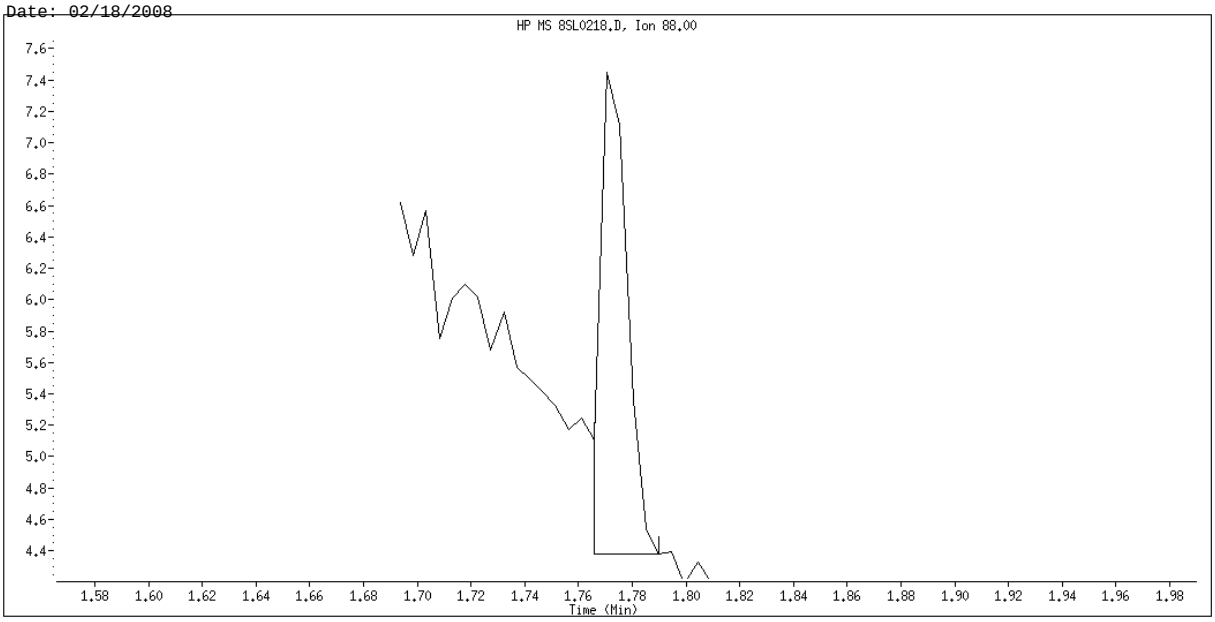
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	199560	99780	399120	235607	18.06
2 Naphthalene-d8	828712	414356	1657424	951331	14.80
3 Acenaphthene-d10	469624	234812	939248	538180	14.60
4 Phenanthrene-d10	929073	464537	1858146	958835	3.20
5 Chrysene-d12	931719	465860	1863438	1044899	12.15
6 Perylene-d12	908273	454137	1816546	918532	1.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.57	3.07	4.07	3.57	0.02
2 Naphthalene-d8	4.46	3.96	4.96	4.46	0.02
3 Acenaphthene-d10	5.74	5.24	6.24	5.73	-0.07
4 Phenanthrene-d10	6.82	6.32	7.32	6.82	0.01
5 Chrysene-d12	8.82	8.32	9.32	8.84	0.23
6 Perylene-d12	10.33	9.83	10.83	10.36	0.33

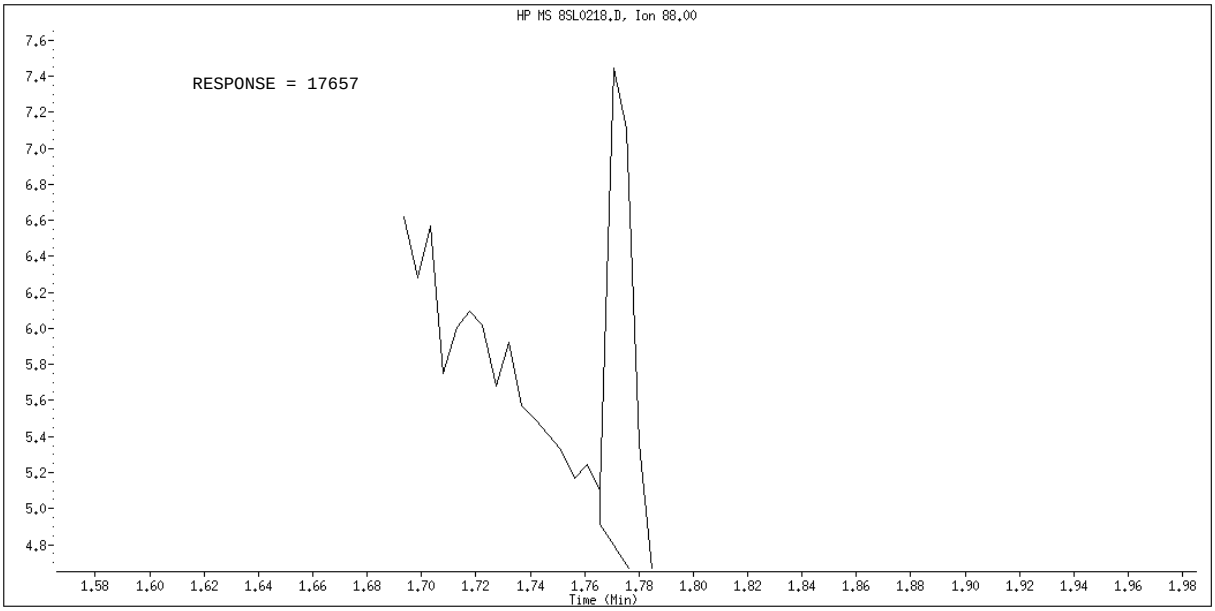
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SL0218.D
Date : 18-FEB-2008 13:21
Client ID:
Sample Info: L2,80218a,b,8270p,1-8270424,sub,1,,2
Column phase: db5.625
Instrument: a4hp8.i
Operator: 001710
Column diameter: 0.32
Page 1
Y (x10^6)
Min
-Pyridine+
-3-Chloropropionitrile+
-Benzaldehyde+
-Aniline+
-2-Chlorophenol+
-1,4-Dichlorobenzene-d4+
-Benzyl Alcohol
-1,2-Dichlorobenzene+
-Acetophenone+
-Hexachloroethane+
-Isophorone
-2-Nitrophenol+
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene+
Naphthalene-d8+
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene
-1-Methylnaphthalene+
-2,4,6-Trichlorophenol+
-2-Fluorobiphenyl
-2,4-Toluenediamene+
-2-Nitroaniline
-Dimethylphthalate+
-Acenaphthylene+
-2,4-Dinitrotoluene
-Dibenzofuran+
Acenaphthene-d10+
-Diethylphthalate
-Fluorene+
-N-Nitrosodiphenylamine+
-2,4,6-Tribromophenol
-4-Bromophenyl-phenylether
-Hexachlorobenzene+
-Pentachlorophenol
Phenanthrene-d10+
-Carbazole
-Di-n-Butylphthalate
-Fluoranthene
-Benzidine
-Pyrene
-Terphenyl-d14
-Butylbenzylphthalate
-3,3'-Dimethoxybenzidine+
Chrysene-d12+
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-d12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene
\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SL0218.D

Data File Name: 8SL0218.D
Inj. Date and Time: 18-FEB-2008 13:21
Instrument ID: a4hp8.i
Client ID:
Compound Name: 1,4-Dioxane
CAS #: 123-91-1
Report Date: 02/18/2008



Original Integration



Manual Integration

Manually Integrated By: gruberj
Manual Integration Reason: Poor Chromatography

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SLL0218.D
Lab Smp Id: L1
Inj Date : 18-FEB-2008 13:40
Operator : 001710 Inst ID: a4hp8.i
Smp Info : L1,80218a.b,8270p,pah.sub,1,,1
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Meth Date : 18-Feb-2008 17:34 a4hp8.i Quant Type: ISTD
Cal Date : 18-FEB-2008 17:50 Cal File: 8AL0218.D
Als bottle: 6 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pah.sub
Target Version: 4.14
Processing Host: CANPMSSV01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	3.568	3.568	(1.000)	238566	2.00000	
* 2	Naphthalene-d8	136	4.462	4.462	(1.000)	982239	2.00000	
* 3	Acenaphthene-d10	164	5.737	5.737	(1.000)	556832	2.00000	
* 4	Phenanthrene-d10	188	6.823	6.823	(1.000)	999051	2.00000	
* 5	Chrysene-d12	240	8.824	8.824	(1.000)	1059971	2.00000	
* 6	Perylene-d12	264	10.339	10.339	(1.000)	947711	2.00000	
23	bis(2-Chloroethyl)ether	93	3.361	3.361	(0.942)	9231	0.05000	0.046036
35	Nitrobenzene	77	3.957	3.957	(0.887)	10476	0.05000	0.042629
51	Naphthalene	128	4.477	4.477	(1.003)	25439	0.05000	0.051861
62	2-Methylnaphthalene	142	4.972	4.972	(1.114)	14434	0.05000	0.049735
63	1-Methylnaphthalene	142	5.044	5.044	(1.130)	16342	0.05000	0.052280
70	2-Chloronaphthalene	162	5.328	5.328	(0.929)	14959	0.05000	0.051383
79	Acenaphthylene	152	5.636	5.636	(0.982)	19545	0.05000	0.042267
82	Acenaphthene	153	5.756	5.756	(1.003)	15958	0.05000	0.051618
86	Dibenzofuran	168	5.881	5.881	(1.025)	22156	0.05000	0.050008
94	Fluorene	166	6.131	6.131	(1.069)	18335	0.05000	0.048357
115	Phenanthrene	178	6.843	6.843	(1.003)	28554	0.05000	0.052766
116	Anthracene	178	6.876	6.876	(1.008)	23724	0.05000	0.045025
123	Fluoranthene	202	7.718	7.718	(1.131)	23684	0.05000	0.043357
125	Pyrene	202	7.896	7.896	(0.895)	26092	0.05000	0.046145
136	Benzo(a)Anthracene	228	8.814	8.814	(0.999)	30552	0.05000	0.050915
137	Chrysene	228	8.848	8.848	(1.003)	28502	0.05000	0.051343
141	Benzo(b)fluoranthene	252	9.863	9.863	(0.954)	25263	0.05000	0.045516
142	Benzo(k)fluoranthene	252	9.891	9.891	(0.957)	26417	0.05000	0.044339
146	Benzo(a)pyrene	252	10.262	10.262	(0.993)	20265	0.05000	0.040395
149	Indeno(1,2,3-cd)pyrene	276	11.974	11.974	(1.158)	22567	0.05000	0.040192
150	Dibenz(a,h)anthracene	278	11.993	11.993	(1.160)	19497	0.05000	0.039613(M)
151	Benzo(g,h,i)perylene	276	12.488	12.488	(1.208)	21933	0.05000	0.045780(M)
$ 154	Nitrobenzene-d5	82	3.943	3.943	(0.884)	10376	0.05000	0.043587
$ 155	2-Fluorobiphenyl	172	5.222	5.222	(0.910)	17797	0.05000	0.050825
$ 156	Terphenyl-d14	244	7.973	7.973	(0.904)	19500	0.05000	0.047725

$ 157	Phenol-d5	99	3.265	3.265 (0.915)	11871	0.05000	0.048864
$ 158	2-Fluorophenol	112	2.693	2.693 (0.755)	6809	0.05000	0.044853
$ 159	2,4,6-Tribromophenol	330	Compound Not Detected.				

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)

QC Flag Legend

M - Compound response manually integrated.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp8.i
Lab File ID: 8SLL0218.D
Lab Smp Id: L1
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Misc Info:

Calibration Date: 18-FEB-2008
Calibration Time: 16:34
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	199560	99780	399120	238566	19.55
2 Naphthalene-d8	828712	414356	1657424	982239	18.53
3 Acenaphthene-d10	469624	234812	939248	556832	18.57
4 Phenanthrene-d10	929073	464537	1858146	999051	7.53
5 Chrysene-d12	931719	465860	1863438	1059971	13.77
6 Perylene-d12	908273	454137	1816546	947711	4.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.57	3.07	4.07	3.57	0.00
2 Naphthalene-d8	4.46	3.96	4.96	4.46	0.00
3 Acenaphthene-d10	5.74	5.24	6.24	5.74	0.00
4 Phenanthrene-d10	6.82	6.32	7.32	6.82	0.00
5 Chrysene-d12	8.82	8.32	9.32	8.82	0.00
6 Perylene-d12	10.33	9.83	10.83	10.34	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SLL0218.D

Page 1

Date : 18-FEB-2008 13:40

Client ID:

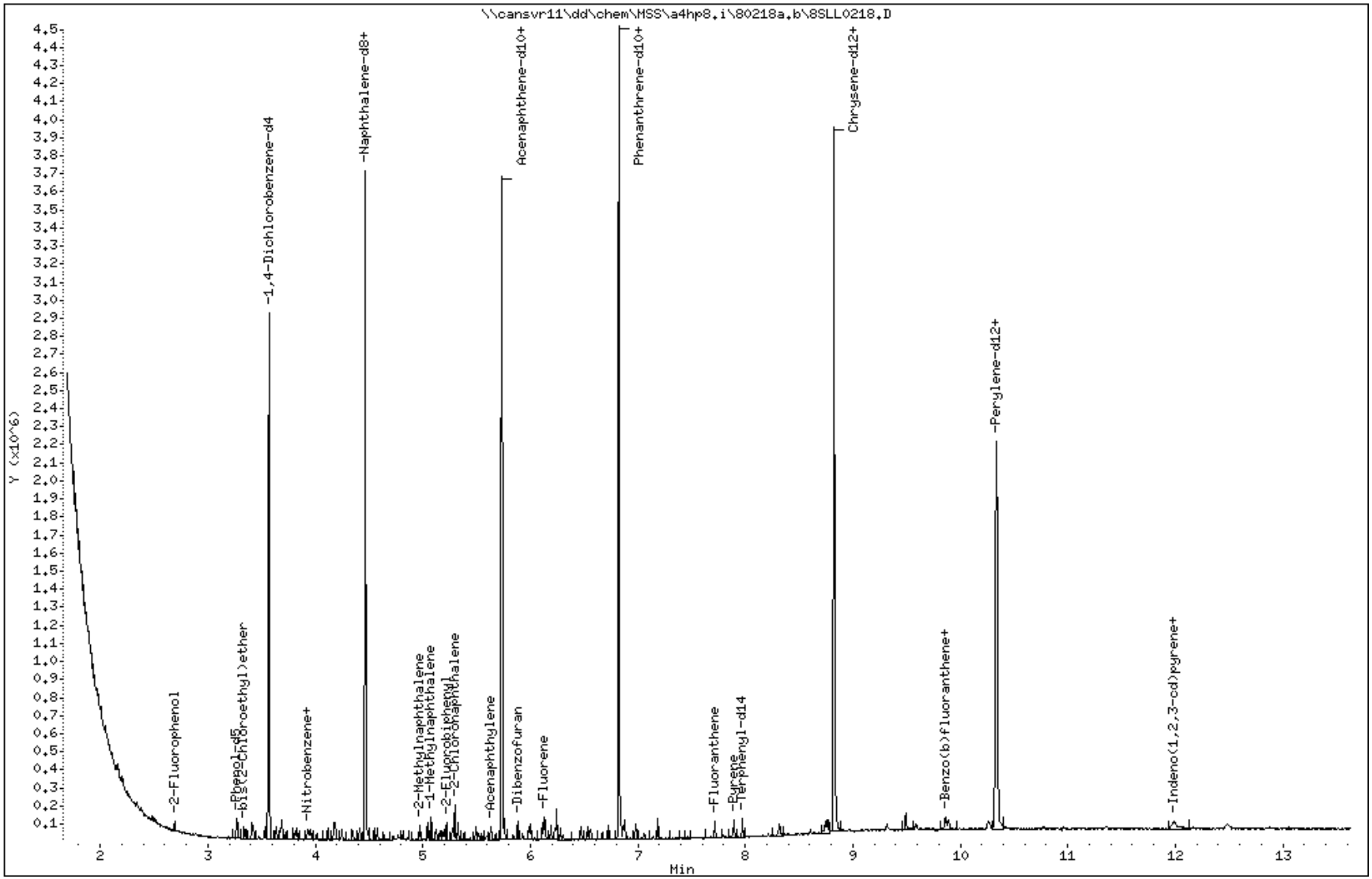
Instrument: a4hp8.i

Sample Info: L1,80218a.b,8270p,pah.sub,1,,1

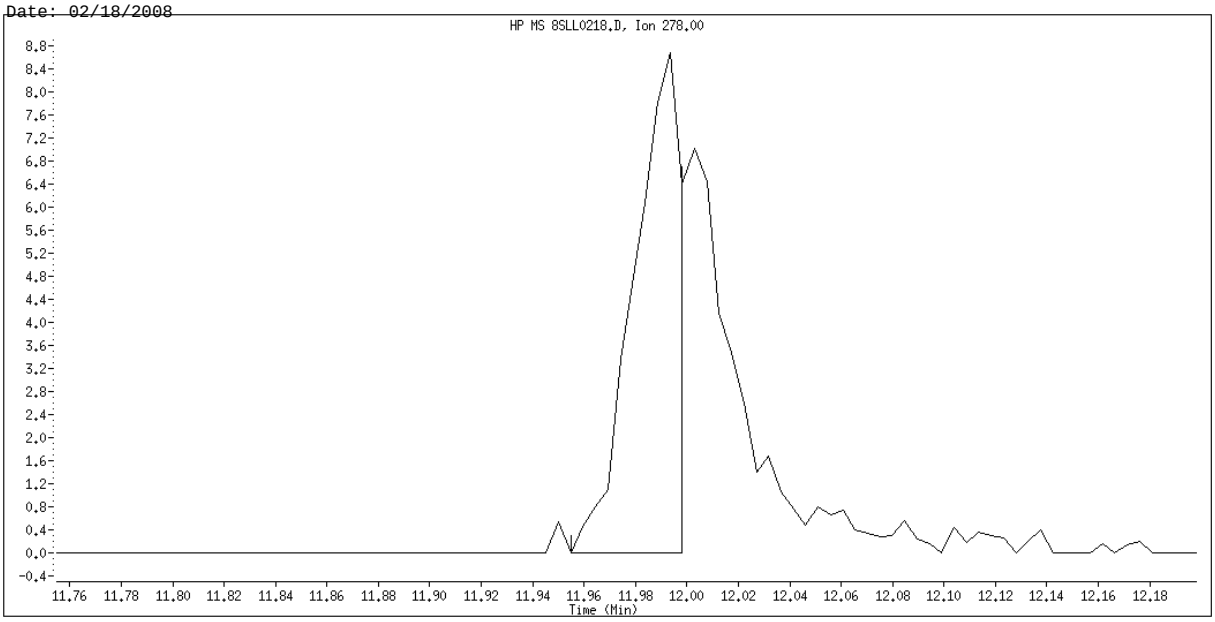
Operator: 001710

Column phase: db5.625

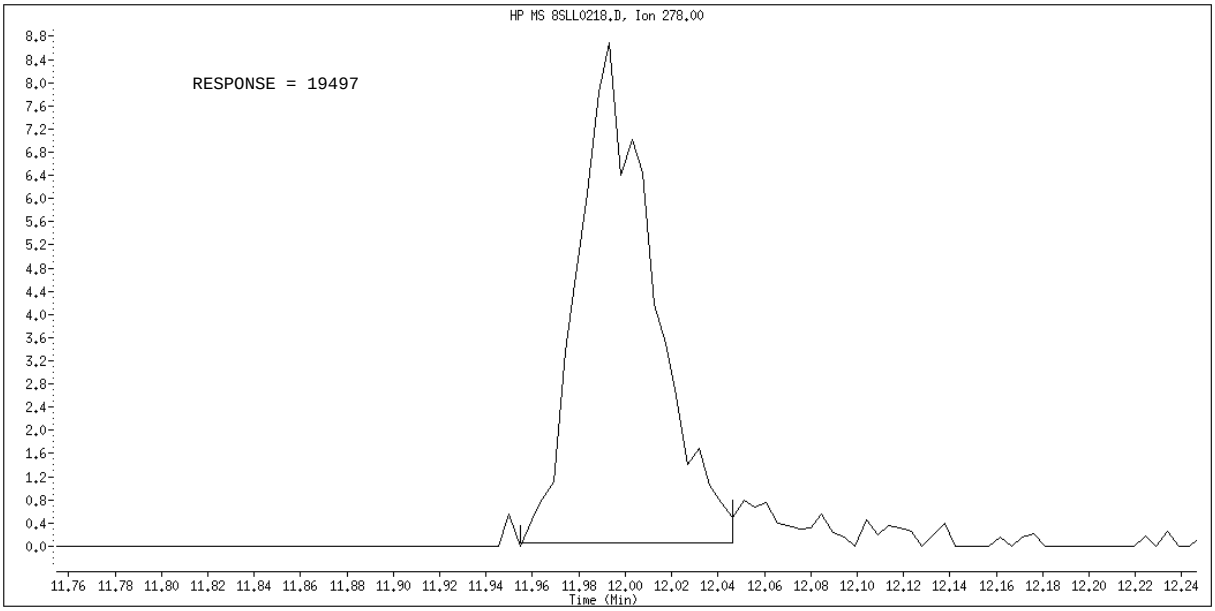
Column diameter: 0.32



Data File Name: 8SLL0218.D
Inj. Date and Time: 18-FEB-2008 13:40
Instrument ID: a4hp8.i
Client ID:
Compound Name: Dibenz(a,h)anthracene
CAS #: 53-70-3
Report Date: 02/18/2008



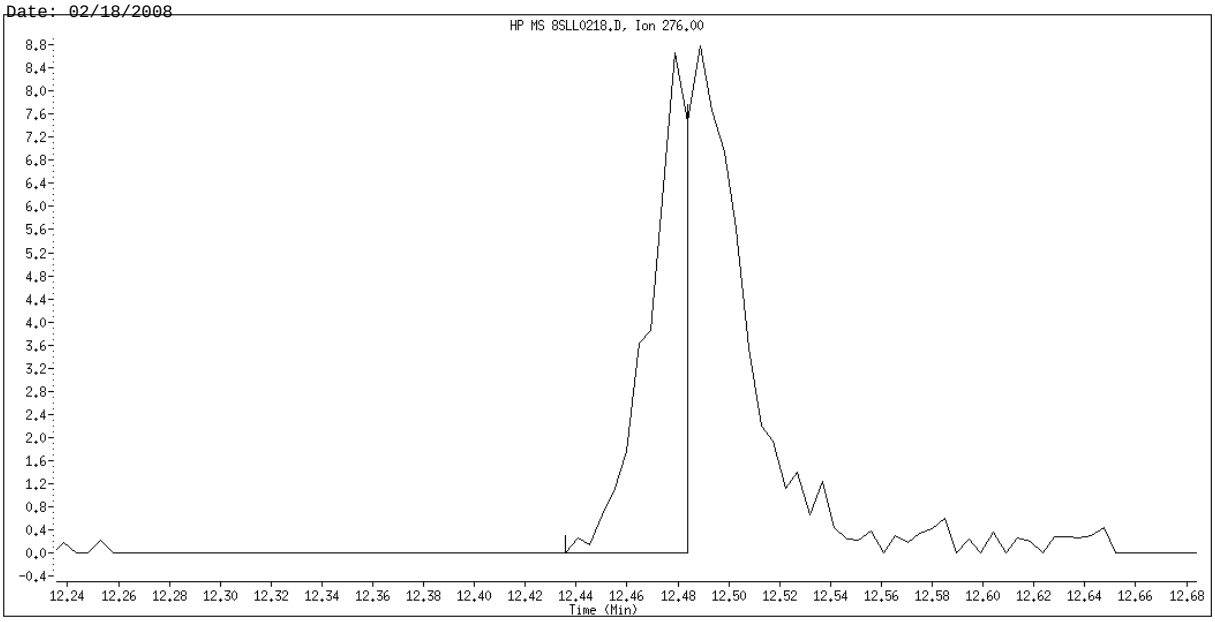
Original Integration



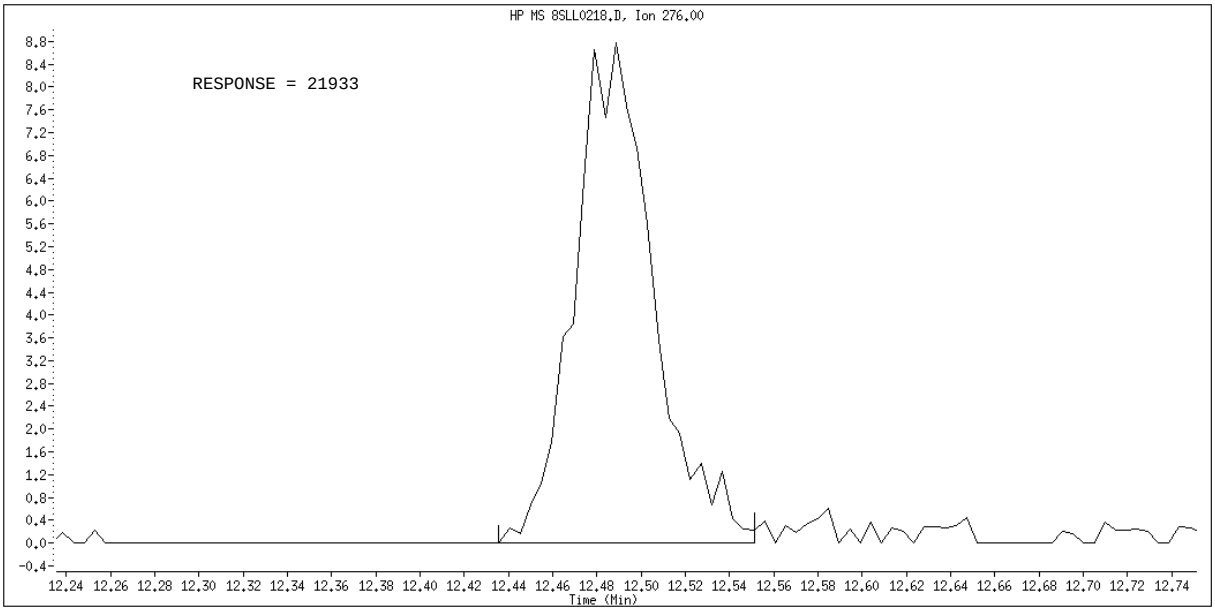
Manual Integration

Manually Integrated By: gruberj
Manual Integration Reason: Poor Chromatography

Data File Name: 8SLL0218.D
Inj. Date and Time: 18-FEB-2008 13:40
Instrument ID: a4hp8.i
Client ID:
Compound Name: Benzo(g,h,i)perylene
CAS #: 191-24-2
Report Date: 02/18/2008



Original Integration



Manual Integration

Manually Integrated By: gruberj
Manual Integration Reason: Poor Chromatography

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SM0218.D
Lab Smp Id: L4
Inj Date : 18-FEB-2008 12:43
Operator : 001710 Inst ID: a4hp8.i
Smp Info : L4,80218a.b,8270p,1-827042d.sub,1,,4
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Meth Date : 18-Feb-2008 17:33 a4hp8.i Quant Type: ISTD
Cal Date : 18-FEB-2008 16:53 Cal File: 8AMM0218.D
Als bottle: 3 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

		QUANT SIG					AMOUNTS CAL-AMT	ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(NG)	(NG)
*	1 1,4-Dichlorobenzene-d4	152	3.567	3.567	(1.000)	240685	2.00000	
*	2 Naphthalene-d8	136	4.466	4.466	(1.000)	981586	2.00000	
*	3 Acenaphthene-d10	164	5.736	5.736	(1.000)	553870	2.00000	
*	4 Phenanthrene-d10	188	6.822	6.822	(1.000)	969887	2.00000	
*	5 Chrysene-d12	240	8.828	8.828	(1.000)	1044816	2.00000	
*	6 Perylene-d12	264	10.333	10.333	(1.000)	932854	2.00000	
	9 Pyridine	79	1.970	1.970	(0.552)	247270	1.00000	1.0559
	10 N-Nitrosodimethylamine	74	1.937	1.937	(0.543)	151299	1.00000	1.0618
	11 Ethyl methacrylate	69	2.167	2.167	(0.608)	229475	1.00000	1.0993
	12 3-Chloropropionitrile	54	2.345	2.345	(0.658)	105970	1.00000	1.0868
	13 Malononitrile	66	2.485	2.485	(0.697)	295769	1.00000	1.0881
	209 Benzaldehyde	77	3.278	3.278	(0.919)	181183	1.00000	1.1665
	21 Aniline	93	3.341	3.341	(0.937)	339521	1.00000	1.0230
	22 Phenol	94	3.278	3.278	(0.919)	274051	1.00000	1.0525
	23 bis(2-Chloroethyl)ether	93	3.360	3.360	(0.942)	214612	1.00000	1.0609
	24 2-Chlorophenol	128	3.423	3.423	(0.960)	165700	1.00000	1.0407
	26 1,3-Dichlorobenzene	146	3.533	3.533	(0.991)	168557	1.00000	1.0433
	27 1,4-Dichlorobenzene	146	3.581	3.581	(1.004)	106757	1.00000	1.0331
	28 1,2-Dichlorobenzene	146	3.687	3.687	(1.034)	157329	1.00000	1.0104
	29 Benzyl Alcohol	108	3.639	3.639	(1.020)	122413	1.00000	1.0188
	30 2-Methylphenol	108	3.692	3.692	(1.035)	165288	1.00000	0.98445
	31 bis(2-Chloroisopropyl)ether	45	3.725	3.725	(1.044)	207202	1.00000	1.0784
	37 Acetophenone	105	3.831	3.831	(1.074)	294454	1.00000	1.0233
	32 N-Nitroso-di-n-propylamine	70	3.817	3.817	(1.070)	197522	1.00000	1.0190
	192 4-Methylphenol	108	3.793	3.793	(1.063)	182322	1.00000	1.0299
	34 Hexachloroethane	117	3.927	3.927	(1.101)	69070	1.00000	1.0323
	35 Nitrobenzene	77	3.956	3.956	(0.886)	262443	1.00000	1.0686
	41 Isophorone	82	4.120	4.120	(0.922)	446318	1.00000	1.0184
	42 2-Nitrophenol	139	4.182	4.182	(0.936)	79661	1.00000	0.99722
	43 2,4-Dimethylphenol	107	4.178	4.178	(0.935)	224888	1.00000	1.0363
	44 bis(2-Chloroethoxy)methane	93	4.250	4.250	(0.952)	242297	1.00000	1.0337

46	2,4-Toluenediamene	121	5.284	5.284 (1.183)	149890	1.00000	1.2172
47	1,3,5-Trichlorobenzene	180	4.187	4.187 (0.938)	135055	1.00000	1.0127

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
48	2,4-Dichlorophenol	162	4.346	4.346	(0.973)	123494	1.00000	1.0150
49	Benzoic Acid	122	4.211	4.211	(0.943)	162514	2.00000	2.0138(H)
50	1,2,4-Trichlorobenzene	180	4.413	4.413	(0.988)	143933	1.00000	1.0146
51	Naphthalene	128	4.480	4.480	(1.003)	511284	1.00000	1.0430
52	4-Chloroaniline	127	4.500	4.500	(1.008)	218463	1.00000	1.0780
56	Hexachlorobutadiene	225	4.553	4.553	(1.019)	92956	1.00000	1.0250
210	Caprolactam	113	4.731	4.731	(1.059)	52993	1.00000	0.98218(H)
57	1,2,3-Trichlorobenzene	180	4.577	4.577	(1.025)	131486	1.00000	1.0286
59	4-Chloro-3-Methylphenol	107	4.817	4.817	(1.079)	180355	1.00000	1.0141
62	2-Methylnaphthalene	142	4.971	4.971	(1.113)	295531	1.00000	1.0190
63	1-Methylnaphthalene	142	5.048	5.048	(1.130)	313996	1.00000	1.0052
64	Hexachlorocyclopentadiene	237	5.082	5.082	(0.886)	94272	1.00000	0.98931
66	2,4,6-Trichlorophenol	196	5.163	5.163	(0.900)	94883	1.00000	1.0092
67	2,4,5-Trichlorophenol	196	5.192	5.192	(0.905)	103767	1.00000	1.0442
211	1,1'-Biphenyl	154	5.760	5.760	(1.004)	346041	1.00000	0.98172
68	1,2,3,5-Tetrachlorobenzene	216	5.082	5.082	(0.886)	156426	1.00000	0.98262
70	2-Chloronaphthalene	162	5.332	5.332	(0.930)	297992	1.00000	1.0291
73	2-Nitroaniline	65	5.385	5.385	(0.939)	129474	1.00000	1.0007
74	1,2,3,4-Tetrachlorobenzene	216	5.298	5.298	(0.924)	146060	1.00000	0.99224
76	Dimethylphthalate	163	5.500	5.500	(0.959)	343016	1.00000	1.0129
78	2,6-Dinitrotoluene	165	5.553	5.553	(0.968)	69055	1.00000	1.0103
79	Acenaphthylene	152	5.635	5.635	(0.982)	483592	1.00000	1.0514
80	1,2-Dinitrobenzene	168	5.601	5.601	(0.977)	33529	1.00000	0.95339
81	3-Nitroaniline	138	5.683	5.683	(0.991)	77027	1.00000	1.0243
82	Acenaphthene	153	5.760	5.760	(1.004)	307359	1.00000	0.99950
83	2,4-Dinitrophenol	184	5.755	5.755	(1.003)	76827	2.00000	2.0328(Q)
85	4-Nitrophenol	109	5.769	5.769	(1.006)	61059	1.00000	0.92821
86	Dibenzofuran	168	5.885	5.885	(1.026)	451393	1.00000	1.0243
87	2,4-Dinitrotoluene	165	5.846	5.846	(1.019)	98605	1.00000	1.0094
91	2,3,5,6-Tetrachlorophenol	232	5.928	5.928	(1.034)	86947	1.00000	1.0174
93	Diethylphthalate	149	6.005	6.005	(1.047)	356696	1.00000	1.0163
94	Fluorene	166	6.135	6.135	(1.070)	374902	1.00000	0.99406
95	4-Chlorophenyl-phenylether	204	6.115	6.115	(1.066)	175316	1.00000	0.99885
96	4-Nitroaniline	138	6.125	6.125	(1.068)	84152	1.00000	1.0102
98	4,6-Dinitro-2-methylphenol	198	6.144	6.144	(0.901)	55561	1.00000	0.99511
99	N-Nitrosodiphenylamine	169	6.197	6.197	(0.908)	245012	1.00000	0.97341
100	1,2-Diphenylhydrazine	77	6.231	6.231	(0.913)	543298	1.00000	1.0715
106	4-Bromophenyl-phenylether	248	6.476	6.476	(0.949)	96604	1.00000	0.99710
107	Hexachlorobenzene	284	6.534	6.534	(0.958)	109921	1.00000	0.98567
212	Atrazine	200	6.558	6.558	(0.961)	104179	1.00000	1.0646
111	Pentachlorophenol	266	6.668	6.668	(0.977)	108706	2.00000	1.9390
115	Phenanthrene	178	6.842	6.842	(1.003)	537590	1.00000	1.0233
116	Anthracene	178	6.880	6.880	(1.008)	529034	1.00000	1.0342
119	Carbazole	167	6.981	6.981	(1.023)	479511	1.00000	1.0261
120	Di-n-Butylphthalate	149	7.188	7.188	(1.054)	534850	1.00000	1.0083
123	Fluoranthene	202	7.717	7.717	(1.131)	544622	1.00000	1.0270
124	Benzidine	184	7.789	7.789	(0.882)	252706	1.00000	1.0466
125	Pyrene	202	7.895	7.895	(0.894)	598221	1.00000	1.0733
131	Butylbenzylphthalate	149	8.323	8.323	(0.943)	223444	1.00000	1.0024
133	3,3'-Dimethoxybenzidine	244	8.727	8.727	(0.989)	84494	1.00000	1.0119
135	3,3'-Dichlorobenzidine	252	8.765	8.765	(0.993)	209957	1.00000	1.0221
136	Benzo(a)Anthracene	228	8.818	8.818	(0.999)	607195	1.00000	1.0266

137 Chrysene	228	8.847	8.847 (1.002)	572355	1.00000	1.0460
138 4,4'-Methylene bis(o-chloroan	231	8.760	8.760 (0.992)	101540	1.00000	1.0180

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139 bis(2-ethylhexyl)Phthalate	149	8.746	8.746	(0.991)	325466	1.00000	1.0161
140 Di-n-octylphthalate	149	9.318	9.318	(0.902)	490390	1.00000	1.0036
141 Benzo(b)fluoranthene	252	9.862	9.862	(0.954)	540917	1.00000	0.99008
142 Benzo(k)fluoranthene	252	9.890	9.890	(0.957)	584841	1.00000	0.99725
146 Benzo(a)pyrene	252	10.265	10.265	(0.993)	495304	1.00000	1.0030
149 Indeno(1,2,3-cd)pyrene	276	11.982	11.982	(1.160)	569168	1.00000	1.0298
150 Dibenz(a,h)anthracene	278	11.997	11.997	(1.161)	483655	1.00000	0.99831
151 Benzo(g,h,i)perylene	276	12.487	12.487	(1.208)	483904	1.00000	1.0261(H)
198 1,4-Dioxane	88	1.768	1.768	(0.496)	94256	1.00000	1.1914
$ 154 Nitrobenzene-d5	82	3.947	3.947	(0.884)	245660	1.00000	1.0326
$ 155 2-Fluorobiphenyl	172	5.221	5.221	(0.910)	352951	1.00000	1.0133
$ 156 Terphenyl-d14	244	7.976	7.976	(0.904)	416203	1.00000	1.0334
$ 157 Phenol-d5	99	3.269	3.269	(0.916)	254302	1.00000	1.0376
$ 158 2-Fluorophenol	112	2.692	2.692	(0.755)	165349	1.00000	1.0796
$ 159 2,4,6-Tribromophenol	330	6.308	6.308	(1.100)	42195	1.00000	0.99176
$ 186 2-Chlorophenol-d4	132	3.413	3.413	(0.957)	149293	1.00000	1.0388
$ 187 1,2-Dichlorobenzene-d4	152	3.677	3.677	(1.031)	100971	1.00000	1.0222
101 Diphenylamine	169	6.197	6.197	(0.908)	245012	1.00000	0.97341

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

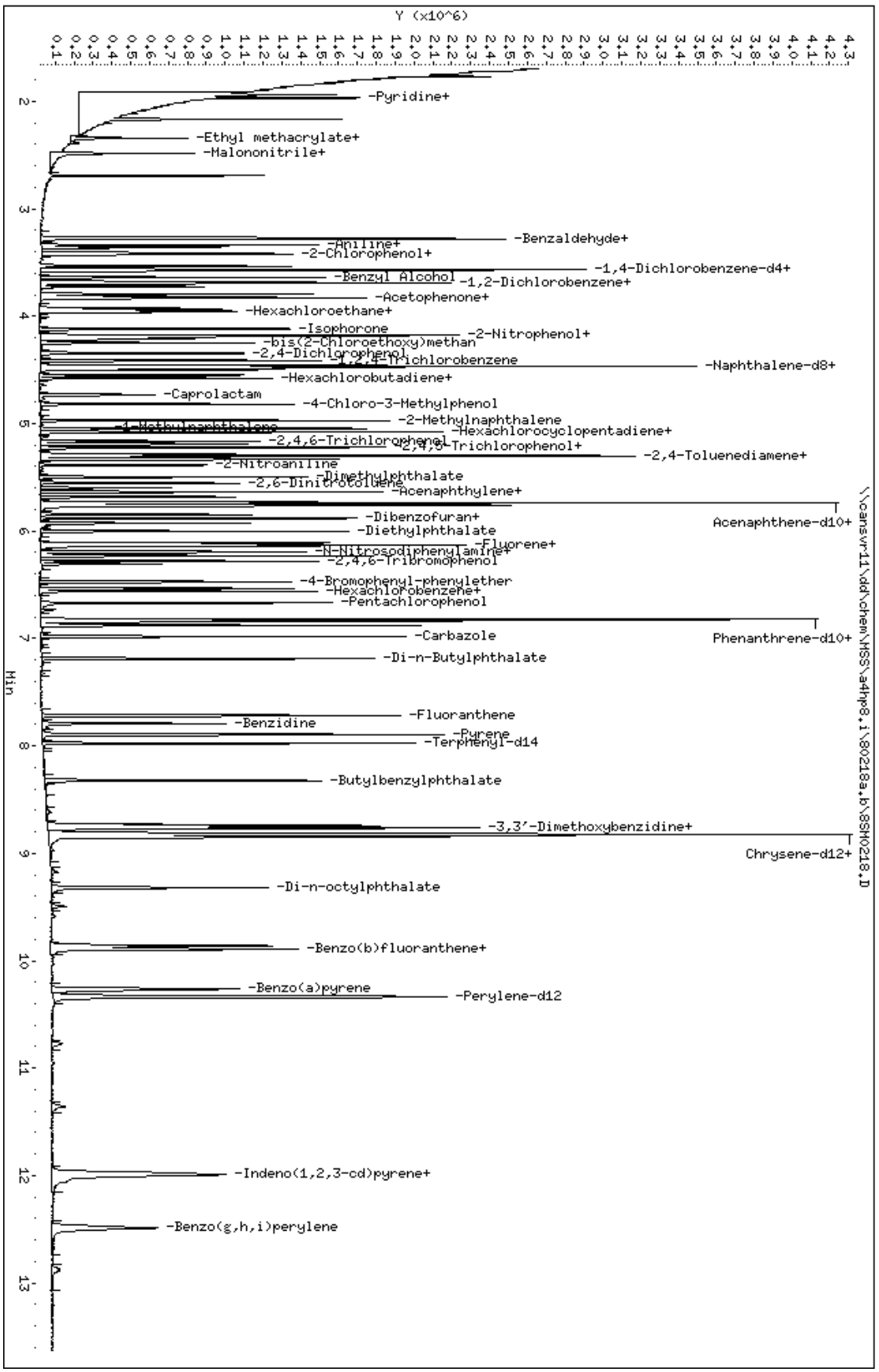
Instrument ID: a4hp8.i
Lab File ID: 8SM0218.D
Lab Smp Id: L4
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Misc Info:

Calibration Date: 18-FEB-2008
Calibration Time: 16:34
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	199560	99780	399120	240685	20.61
2 Naphthalene-d8	828712	414356	1657424	981586	18.45
3 Acenaphthene-d10	469624	234812	939248	553870	17.94
4 Phenanthrene-d10	929073	464537	1858146	969887	4.39
5 Chrysene-d12	931719	465860	1863438	1044816	12.14
6 Perylene-d12	908273	454137	1816546	932854	2.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.57	3.07	4.07	3.57	-0.03
2 Naphthalene-d8	4.46	3.96	4.96	4.47	0.09
3 Acenaphthene-d10	5.74	5.24	6.24	5.74	-0.02
4 Phenanthrene-d10	6.82	6.32	7.32	6.82	-0.01
5 Chrysene-d12	8.82	8.32	9.32	8.83	0.04
6 Perylene-d12	10.33	9.83	10.83	10.33	0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SH0218.D
Date : 18-FEB-2008 12:43
Client ID:
Sample Info: L4,80218a,b,8270p,1-8270424,sub,1,,4
Column phase: db5.625

Instrument: a4hp8.i
Operator: 001710
Column diameter: 0.32

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SMH0218.D
Lab Smp Id: L6
Inj Date : 18-FEB-2008 14:57
Operator : 001710 Inst ID: a4hp8.i
Smp Info : L6,80218a.b,8270p,1-827042d.sub,1,,6
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Meth Date : 18-Feb-2008 17:34 a4hp8.i Quant Type: ISTD
Cal Date : 18-FEB-2008 16:14 Cal File: 8AH0218.D
Als bottle: 10 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	3.566	3.566	(1.000)	257130	2.00000	
* 2	Naphthalene-d8	136	4.465	4.465	(1.000)	1061075	2.00000	
* 3	Acenaphthene-d10	164	5.735	5.735	(1.000)	614196	2.00000	
* 4	Phenanthrene-d10	188	6.827	6.827	(1.000)	1130394	2.00000	
* 5	Chrysene-d12	240	8.832	8.832	(1.000)	1288489	2.00000	
* 6	Perylene-d12	264	10.342	10.342	(1.000)	1119746	2.00000	
9	Pyridine	79	1.965	1.965	(0.551)	1235536	5.00000	4.9386
10	N-Nitrosodimethylamine	74	1.941	1.941	(0.544)	769935	5.00000	5.0575
11	Ethyl methacrylate	69	2.167	2.167	(0.608)	1093745	5.00000	4.9046
12	3-Chloropropionitrile	54	2.350	2.350	(0.659)	511275	5.00000	4.9081
13	Malononitrile	66	2.489	2.489	(0.698)	1456612	5.00000	5.0162
209	Benzaldehyde	77	3.283	3.283	(0.920)	861873	5.00000	5.1940
21	Aniline	93	3.345	3.345	(0.938)	1812214	5.00000	5.1111
22	Phenol	94	3.283	3.283	(0.920)	1403897	5.00000	5.0470
23	bis(2-Chloroethyl)ether	93	3.364	3.364	(0.943)	1070746	5.00000	4.9544
24	2-Chlorophenol	128	3.427	3.427	(0.961)	859773	5.00000	5.0545
26	1,3-Dichlorobenzene	146	3.533	3.533	(0.991)	857643	5.00000	4.9691
27	1,4-Dichlorobenzene	146	3.581	3.581	(1.004)	541013	5.00000	4.9007
28	1,2-Dichlorobenzene	146	3.691	3.691	(1.035)	828209	5.00000	4.9787
29	Benzyl Alcohol	108	3.643	3.643	(1.022)	666951	5.00000	5.1956
30	2-Methylphenol	108	3.696	3.696	(1.036)	928996	5.00000	5.1792
31	bis(2-Chloroisopropyl)ether	45	3.725	3.725	(1.044)	1010756	5.00000	4.9241
37	Acetophenone	105	3.836	3.836	(1.075)	1558017	5.00000	5.1005
32	N-Nitroso-di-n-propylamine	70	3.826	3.826	(1.073)	1082956	5.00000	5.2293
192	4-Methylphenol	108	3.802	3.802	(1.066)	972713	5.00000	5.1434
34	Hexachloroethane	117	3.927	3.927	(1.101)	366075	5.00000	5.1215
35	Nitrobenzene	77	3.961	3.961	(0.887)	1393253	5.00000	5.2482
41	Isophorone	82	4.124	4.124	(0.924)	2453839	5.00000	5.1798
42	2-Nitrophenol	139	4.187	4.187	(0.938)	466532	5.00000	5.4027
43	2,4-Dimethylphenol	107	4.177	4.177	(0.935)	1205145	5.00000	5.1373
44	bis(2-Chloroethoxy)methane	93	4.249	4.249	(0.952)	1275243	5.00000	5.0328

46	2,4-Toluenediamene	121	5.288	5.288 (1.184)	741884	5.00000	5.5730
47	1,3,5-Trichlorobenzene	180	4.191	4.191 (0.939)	728911	5.00000	5.0561

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
48	2,4-Dichlorophenol	162	4.345	4.345	(0.973)	679607	5.00000	5.1674
49	Benzoic Acid	122	4.264	4.264	(0.955)	1194700	10.0000	9.9034(Q)
50	1,2,4-Trichlorobenzene	180	4.417	4.417	(0.989)	768290	5.00000	5.0101
51	Naphthalene	128	4.480	4.480	(1.003)	2655524	5.00000	5.0114
52	4-Chloroaniline	127	4.499	4.499	(1.008)	1111350	5.00000	5.0731
56	Hexachlorobutadiene	225	4.552	4.552	(1.019)	507651	5.00000	5.1784
210	Caprolactam	113	4.764	4.764	(1.067)	323874	5.00000	5.5531
57	1,2,3-Trichlorobenzene	180	4.581	4.581	(1.026)	695249	5.00000	5.0314
59	4-Chloro-3-Methylphenol	107	4.826	4.826	(1.081)	1017747	5.00000	5.2940
62	2-Methylnaphthalene	142	4.975	4.975	(1.114)	1595942	5.00000	5.0906
63	1-Methylnaphthalene	142	5.047	5.047	(1.130)	1705537	5.00000	5.0509
64	Hexachlorocyclopentadiene	237	5.081	5.081	(0.886)	600058	5.00000	5.1236
66	2,4,6-Trichlorophenol	196	5.163	5.163	(0.900)	561450	5.00000	5.3854
67	2,4,5-Trichlorophenol	196	5.192	5.192	(0.905)	591126	5.00000	5.3645
211	1,1'-Biphenyl	154	5.764	5.764	(1.005)	2053582	5.00000	5.2538
68	1,2,3,5-Tetrachlorobenzene	216	5.081	5.081	(0.886)	905483	5.00000	5.1293
70	2-Chloronaphthalene	162	5.331	5.331	(0.930)	1615351	5.00000	5.0304
73	2-Nitroaniline	65	5.389	5.389	(0.940)	817822	5.00000	5.1013
74	1,2,3,4-Tetrachlorobenzene	216	5.302	5.302	(0.925)	838318	5.00000	5.1356
76	Dimethylphthalate	163	5.499	5.499	(0.959)	1966100	5.00000	5.2354
78	2,6-Dinitrotoluene	165	5.557	5.557	(0.969)	448257	5.00000	5.1347
79	Acenaphthylene	152	5.639	5.639	(0.983)	2744150	5.00000	5.3801
80	1,2-Dinitrobenzene	168	5.605	5.605	(0.977)	220666	5.00000	5.6583
81	3-Nitroaniline	138	5.687	5.687	(0.992)	458500	5.00000	5.4981
82	Acenaphthene	153	5.764	5.764	(1.005)	1726262	5.00000	5.0622
83	2,4-Dinitrophenol	184	5.759	5.759	(1.004)	634815	10.0000	9.9990
85	4-Nitrophenol	109	5.778	5.778	(1.008)	385496	5.00000	5.2846
86	Dibenzofuran	168	5.884	5.884	(1.026)	2516471	5.00000	5.1494
87	2,4-Dinitrotoluene	165	5.850	5.850	(1.020)	616712	5.00000	5.0941
91	2,3,5,6-Tetrachlorophenol	232	5.932	5.932	(1.034)	549954	5.00000	5.2112
93	Diethylphthalate	149	6.009	6.009	(1.048)	2054310	5.00000	5.2784
94	Fluorene	166	6.134	6.134	(1.070)	2176358	5.00000	5.2038
95	4-Chlorophenyl-phenylether	204	6.115	6.115	(1.066)	1025400	5.00000	5.2683
96	4-Nitroaniline	138	6.134	6.134	(1.070)	526508	5.00000	5.1452
98	4,6-Dinitro-2-methylphenol	198	6.149	6.149	(0.901)	410802	5.00000	5.1679
99	N-Nitrosodiphenylamine	169	6.197	6.197	(0.908)	1556301	5.00000	5.3051
100	1,2-Diphenylhydrazine	77	6.235	6.235	(0.913)	3076908	5.00000	5.2065
106	4-Bromophenyl-phenylether	248	6.476	6.476	(0.949)	576440	5.00000	5.1049
107	Hexachlorobenzene	284	6.538	6.538	(0.958)	666319	5.00000	5.1265
212	Atrazine	200	6.567	6.567	(0.962)	622383	5.00000	5.4572
111	Pentachlorophenol	266	6.673	6.673	(0.977)	861875	10.0000	10.063
115	Phenanthrene	178	6.846	6.846	(1.003)	3147390	5.00000	5.1404
116	Anthracene	178	6.884	6.884	(1.008)	3209688	5.00000	5.3838
119	Carbazole	167	6.985	6.985	(1.023)	2842670	5.00000	5.2194
120	Di-n-Butylphthalate	149	7.192	7.192	(1.054)	3442448	5.00000	5.5681
123	Fluoranthene	202	7.726	7.726	(1.132)	3415042	5.00000	5.5253
124	Benzidine	184	7.798	7.798	(0.883)	1855461	5.00000	5.0079
125	Pyrene	202	7.904	7.904	(0.895)	3686431	5.00000	5.3634
131	Butylbenzylphthalate	149	8.327	8.327	(0.943)	1491372	5.00000	5.4255
133	3,3'-Dimethoxybenzidine	244	8.736	8.736	(0.989)	754558	5.00000	4.9403
135	3,3'-Dichlorobenzidine	252	8.774	8.774	(0.993)	1471358	5.00000	5.0924
136	Benzo(a)Anthracene	228	8.822	8.822	(0.999)	3745170	5.00000	5.1344

137 Chrysene	228	8.856	8.856 (1.003)	3450925	5.00000	5.1140
138 4,4'-Methylene bis(o-chloroan	231	8.769	8.769 (0.993)	715593	5.00000	5.2222

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139 bis(2-ethylhexyl)Phthalate	149	8.750	8.750	(0.991)	2130014	5.00000	5.1395
140 Di-n-octylphthalate	149	9.322	9.322	(0.901)	3448149	5.00000	4.9927
141 Benzo(b)fluoranthene	252	9.871	9.871	(0.954)	3357907	5.00000	5.1204
142 Benzo(k)fluoranthene	252	9.904	9.904	(0.958)	3786539	5.00000	5.3790
146 Benzo(a)pyrene	252	10.279	10.279	(0.994)	3167011	5.00000	5.3430
149 Indeno(1,2,3-cd)pyrene	276	12.010	12.010	(1.161)	3601061	5.00000	5.4282
150 Dibenz(a,h)anthracene	278	12.025	12.025	(1.163)	3155496	5.00000	5.4261
151 Benzo(g,h,i)perylene	276	12.520	12.520	(1.211)	2952983	5.00000	5.2166
198 1,4-Dioxane	88	1.768	1.768	(0.496)	391418	5.00000	4.6313
$ 154 Nitrobenzene-d5	82	3.946	3.946	(0.884)	1373787	5.00000	5.3422
$ 155 2-Fluorobiphenyl	172	5.225	5.225	(0.911)	1987678	5.00000	5.1462
$ 156 Terphenyl-d14	244	7.981	7.981	(0.904)	2626677	5.00000	5.2884
$ 157 Phenol-d5	99	3.273	3.273	(0.918)	1326873	5.00000	5.0674
$ 158 2-Fluorophenol	112	2.696	2.696	(0.756)	825153	5.00000	5.0431
$ 159 2,4,6-Tribromophenol	330	6.312	6.312	(1.101)	281437	5.00000	5.2277
$ 186 2-Chlorophenol-d4	132	3.417	3.417	(0.958)	776005	5.00000	5.0541
$ 187 1,2-Dichlorobenzene-d4	152	3.682	3.682	(1.032)	521270	5.00000	4.9396
101 Diphenylamine	169	6.197	6.197	(0.908)	1556301	5.00000	5.3051

QC Flag Legend

Q - Qualifier signal failed the ratio test.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

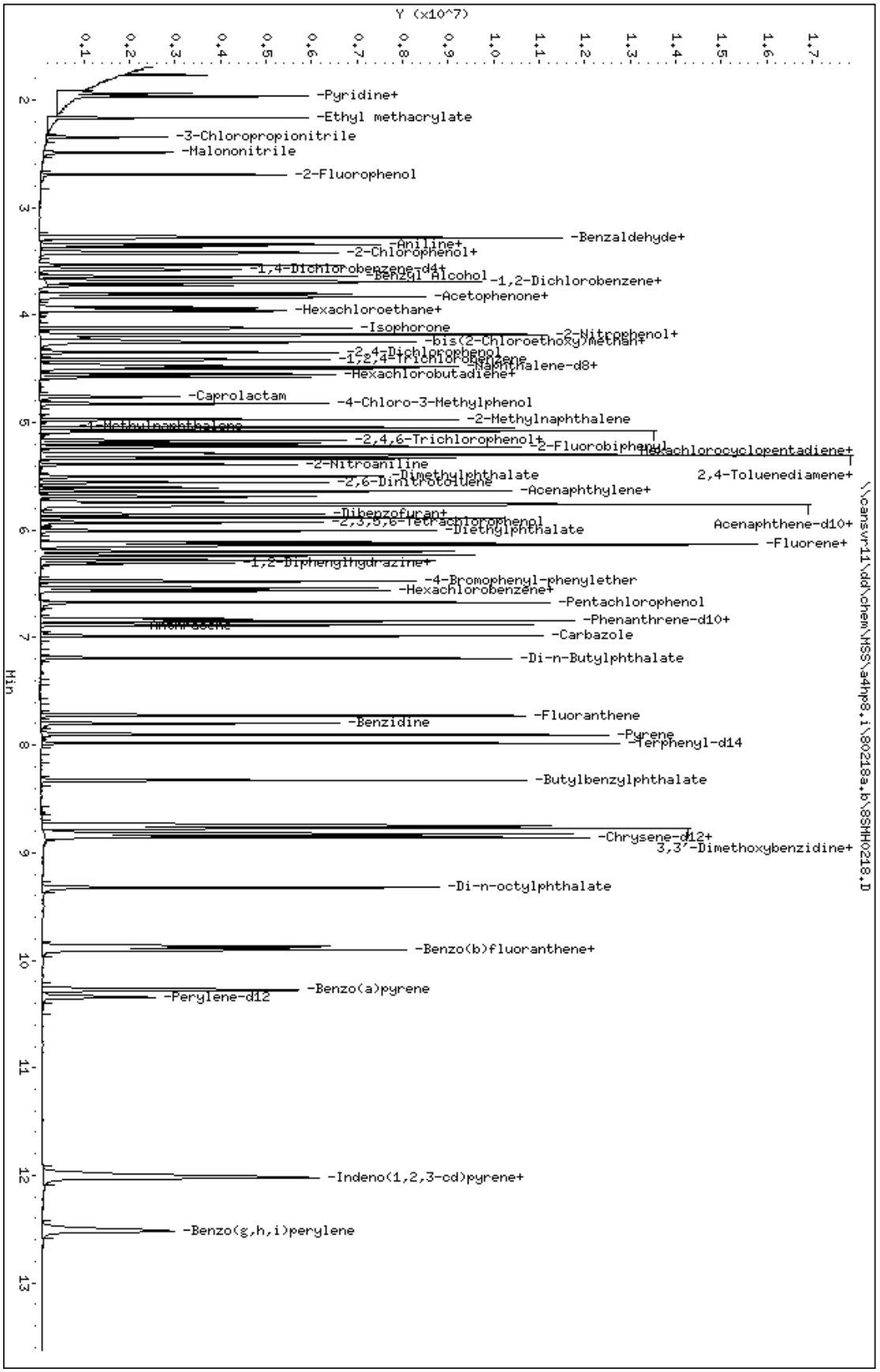
Instrument ID: a4hp8.i
Lab File ID: 8SMH0218.D
Lab Smp Id: L6
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Misc Info:

Calibration Date: 18-FEB-2008
Calibration Time: 14:57
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	257130	128565	514260	257130	0.00
2 Naphthalene-d8	1061075	530538	2122150	1061075	0.00
3 Acenaphthene-d10	614196	307098	1228392	614196	0.00
4 Phenanthrene-d10	1130394	565197	2260788	1130394	0.00
5 Chrysene-d12	1288489	644245	2576978	1288489	0.00
6 Perylene-d12	1119746	559873	2239492	1119746	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.57	3.07	4.07	3.57	0.00
2 Naphthalene-d8	4.47	3.97	4.97	4.47	0.00
3 Acenaphthene-d10	5.74	5.24	6.24	5.74	0.00
4 Phenanthrene-d10	6.83	6.33	7.33	6.83	0.00
5 Chrysene-d12	8.83	8.33	9.33	8.83	0.00
6 Perylene-d12	10.34	9.84	10.84	10.34	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



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Date : 18-FEB-2008 14:57
Client ID:
Sample Info: L6,80218a,b,8270p,1-8270424,sub,1,,6
Column phase: db5,625

Instrument: a4hp8.i
Operator: 001710
Column diameter: 0.32

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SML0218.D
Lab Smp Id: L3
Inj Date : 18-FEB-2008 13:02
Operator : 001710 Inst ID: a4hp8.i
Smp Info : L3,80218a.b,8270p,1-827042d.sub,1,,3
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Meth Date : 18-Feb-2008 17:33 a4hp8.i Quant Type: ISTD
Cal Date : 18-FEB-2008 17:12 Cal File: 8AM0218.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	3.568	3.568	(1.000)	242337	2.00000	
* 2	Naphthalene-d8	136	4.463	4.463	(1.000)	998019	2.00000	
* 3	Acenaphthene-d10	164	5.732	5.732	(1.000)	579936	2.00000	
* 4	Phenanthrene-d10	188	6.824	6.824	(1.000)	1034502	2.00000	
* 5	Chrysene-d12	240	8.824	8.824	(1.000)	1099162	2.00000	
* 6	Perylene-d12	264	10.339	10.339	(1.000)	981188	2.00000	
9	Pyridine	79	1.967	1.967	(0.551)	113602	0.50000	0.48180
10	N-Nitrosodimethylamine	74	1.938	1.938	(0.543)	70307	0.50000	0.49002
11	Ethyl methacrylate	69	2.169	2.169	(0.608)	102783	0.50000	0.48904
12	3-Chloropropionitrile	54	2.342	2.342	(0.656)	49819	0.50000	0.50744
13	Malononitrile	66	2.486	2.486	(0.697)	140587	0.50000	0.51369
209	Benzaldehyde	77	3.280	3.280	(0.919)	86681	0.50000	0.55426
21	Aniline	93	3.338	3.338	(0.935)	162638	0.50000	0.48669
22	Phenol	94	3.275	3.275	(0.918)	125319	0.50000	0.47802
23	bis(2-Chloroethyl)ether	93	3.362	3.362	(0.942)	97708	0.50000	0.47970
24	2-Chlorophenol	128	3.424	3.424	(0.960)	77374	0.50000	0.48264
26	1,3-Dichlorobenzene	146	3.530	3.530	(0.989)	80158	0.50000	0.49278
27	1,4-Dichlorobenzene	146	3.578	3.578	(1.003)	52456	0.50000	0.50417
28	1,2-Dichlorobenzene	146	3.689	3.689	(1.034)	76461	0.50000	0.48769
29	Benzyl Alcohol	108	3.636	3.636	(1.019)	59177	0.50000	0.48914
30	2-Methylphenol	108	3.693	3.693	(1.035)	81413	0.50000	0.48159
31	bis(2-Chloroisopropyl)ether	45	3.722	3.722	(1.043)	96810	0.50000	0.50042
37	Acetophenone	105	3.833	3.833	(1.074)	137231	0.50000	0.47052
32	N-Nitroso-di-n-propylamine	70	3.814	3.814	(1.069)	91331	0.50000	0.46794
192	4-Methylphenol	108	3.794	3.794	(1.063)	85043	0.50000	0.47712
34	Hexachloroethane	117	3.924	3.924	(1.100)	32149	0.50000	0.47723
35	Nitrobenzene	77	3.958	3.958	(0.887)	118937	0.50000	0.47632
41	Isophorone	82	4.117	4.117	(0.922)	209080	0.50000	0.46923
42	2-Nitrophenol	139	4.179	4.179	(0.936)	35324	0.50000	0.43492
43	2,4-Dimethylphenol	107	4.174	4.174	(0.935)	103189	0.50000	0.46766
44	bis(2-Chloroethoxy)methane	93	4.246	4.246	(0.952)	115807	0.50000	0.48592

46	2,4-Toluenediamene	121	5.280	5.280 (1.183)	58707	0.50000	0.46887
47	1,3,5-Trichlorobenzene	180	4.189	4.189 (0.939)	65757	0.50000	0.48494

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
48	2,4-Dichlorophenol	162	4.343	4.343	(0.973)	58603	0.50000	0.47374
49	Benzoic Acid	122	4.198	4.198	(0.941)	74563	1.00000	1.2374
50	1,2,4-Trichlorobenzene	180	4.415	4.415	(0.989)	70824	0.50000	0.49103
51	Naphthalene	128	4.477	4.477	(1.003)	240158	0.50000	0.48185
52	4-Chloroaniline	127	4.496	4.496	(1.008)	96103	0.50000	0.46641
56	Hexachlorobutadiene	225	4.549	4.549	(1.019)	42599	0.50000	0.46200
210	Caprolactam	113	4.727	4.727	(1.059)	25338	0.50000	0.46189(H)
57	1,2,3-Trichlorobenzene	180	4.578	4.578	(1.026)	63426	0.50000	0.48800
59	4-Chloro-3-Methylphenol	107	4.819	4.819	(1.080)	84316	0.50000	0.46630
62	2-Methylnaphthalene	142	4.973	4.973	(1.114)	141712	0.50000	0.48058
63	1-Methylnaphthalene	142	5.045	5.045	(1.130)	148977	0.50000	0.46906
64	Hexachlorocyclopentadiene	237	5.078	5.078	(0.886)	44548	0.50000	0.48194
66	2,4,6-Trichlorophenol	196	5.160	5.160	(0.900)	44107	0.50000	0.44807
67	2,4,5-Trichlorophenol	196	5.189	5.189	(0.905)	44577	0.50000	0.42844
211	1,1'-Biphenyl	154	5.756	5.756	(1.004)	160109	0.50000	0.43381
68	1,2,3,5-Tetrachlorobenzene	216	5.078	5.078	(0.886)	76363	0.50000	0.45813
70	2-Chloronaphthalene	162	5.328	5.328	(0.930)	144712	0.50000	0.47728
73	2-Nitroaniline	65	5.386	5.386	(0.940)	56432	0.50000	0.49651
74	1,2,3,4-Tetrachlorobenzene	216	5.300	5.300	(0.925)	72418	0.50000	0.46985
76	Dimethylphthalate	163	5.497	5.497	(0.959)	168861	0.50000	0.47621
78	2,6-Dinitrotoluene	165	5.550	5.550	(0.968)	29678	0.50000	0.50241
79	Acenaphthylene	152	5.636	5.636	(0.983)	229073	0.50000	0.47564
80	1,2-Dinitrobenzene	168	5.598	5.598	(0.977)	16443	0.50000	0.44654
81	3-Nitroaniline	138	5.679	5.679	(0.991)	34296	0.50000	0.43555
82	Acenaphthene	153	5.756	5.756	(1.004)	150407	0.50000	0.46712
83	2,4-Dinitrophenol	184	5.752	5.752	(1.003)	31849	1.00000	1.2582(Q)
85	4-Nitrophenol	109	5.771	5.771	(1.007)	28927	0.50000	0.41998
86	Dibenzofuran	168	5.881	5.881	(1.026)	216781	0.50000	0.46980
87	2,4-Dinitrotoluene	165	5.843	5.843	(1.019)	44188	0.50000	0.50615
91	2,3,5,6-Tetrachlorophenol	232	5.925	5.925	(1.034)	40711	0.50000	0.50305
93	Diethylphthalate	149	6.002	6.002	(1.047)	169851	0.50000	0.46220
94	Fluorene	166	6.131	6.131	(1.070)	181185	0.50000	0.45882
95	4-Chlorophenyl-phenylether	204	6.112	6.112	(1.066)	83806	0.50000	0.45602
96	4-Nitroaniline	138	6.122	6.122	(1.068)	35294	0.50000	0.46980
98	4,6-Dinitro-2-methylphenol	198	6.141	6.141	(0.900)	23105	0.50000	0.48985
99	N-Nitrosodiphenylamine	169	6.194	6.194	(0.908)	127823	0.50000	0.47611
100	1,2-Diphenylhydrazine	77	6.228	6.228	(0.913)	260230	0.50000	0.48116
106	4-Bromophenyl-phenylether	248	6.473	6.473	(0.949)	48380	0.50000	0.46817
107	Hexachlorobenzene	284	6.535	6.535	(0.958)	56223	0.50000	0.47266
212	Atrazine	200	6.559	6.559	(0.961)	47739	0.50000	0.45739
111	Pentachlorophenol	266	6.670	6.670	(0.977)	54106	1.00000	1.1505
115	Phenanthrene	178	6.838	6.838	(1.002)	266349	0.50000	0.47533
116	Anthracene	178	6.877	6.877	(1.008)	254968	0.50000	0.46731
119	Carbazole	167	6.983	6.983	(1.023)	233684	0.50000	0.46883
120	Di-n-Butylphthalate	149	7.189	7.189	(1.054)	260402	0.50000	0.46024
123	Fluoranthene	202	7.718	7.718	(1.131)	259738	0.50000	0.45919
124	Benzidine	184	7.791	7.791	(0.883)	65262	0.50000	0.44064
125	Pyrene	202	7.896	7.896	(0.895)	287947	0.50000	0.49110
131	Butylbenzylphthalate	149	8.319	8.319	(0.943)	105185	0.50000	0.44857
133	3,3'-Dimethoxybenzidine	244	8.728	8.728	(0.989)	26597	0.50000	0.57627
135	3,3'-Dichlorobenzidine	252	8.767	8.767	(0.993)	92918	0.50000	0.49015
136	Benzo(a)Anthracene	228	8.815	8.815	(0.999)	296691	0.50000	0.47680

137 Chrysene	228	8.848	8.848 (1.003)	281164	0.50000	0.48843
138 4,4'-Methylene bis(o-chloroan	231	8.762	8.762 (0.993)	44697	0.50000	0.47166

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139 bis(2-ethylhexyl)Phthalate	149	8.747	8.747	(0.991)	148319	0.50000	0.45148
140 Di-n-octylphthalate	149	9.320	9.320	(0.901)	219697	0.50000	0.52288
141 Benzo(b)fluoranthene	252	9.863	9.863	(0.954)	261126	0.50000	0.45441
142 Benzo(k)fluoranthene	252	9.892	9.892	(0.957)	272615	0.50000	0.44195
146 Benzo(a)pyrene	252	10.267	10.267	(0.993)	237419	0.50000	0.45711
149 Indeno(1,2,3-cd)pyrene	276	11.979	11.979	(1.159)	258701	0.50000	0.44503
150 Dibenz(a,h)anthracene	278	11.998	11.998	(1.160)	227156	0.50000	0.44577
151 Benzo(g,h,i)perylene	276	12.489	12.489	(1.208)	224332	0.50000	0.45226
198 1,4-Dioxane	88	1.765	1.765	(0.495)	40244	0.50000	0.50524(M)
$ 154 Nitrobenzene-d5	82	3.943	3.943	(0.884)	114573	0.50000	0.47368
$ 155 2-Fluorobiphenyl	172	5.223	5.223	(0.911)	172720	0.50000	0.47360
$ 156 Terphenyl-d14	244	7.973	7.973	(0.904)	199448	0.50000	0.47073
$ 157 Phenol-d5	99	3.265	3.265	(0.915)	118311	0.50000	0.47942
$ 158 2-Fluorophenol	112	2.693	2.693	(0.755)	73536	0.50000	0.47687
$ 159 2,4,6-Tribromophenol	330	6.305	6.305	(1.100)	19291	0.50000	0.48790
$ 186 2-Chlorophenol-d4	132	3.410	3.410	(0.956)	69435	0.50000	0.47984
$ 187 1,2-Dichlorobenzene-d4	152	3.679	3.679	(1.031)	48089	0.50000	0.48351
101 Diphenylamine	169	6.194	6.194	(0.908)	127823	0.50000	0.47611

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp8.i
Lab File ID: 8SML0218.D
Lab Smp Id: L3
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Misc Info:

Calibration Date: 18-FEB-2008
Calibration Time: 16:34
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	199560	99780	399120	242337	21.44
2 Naphthalene-d8	828712	414356	1657424	998019	20.43
3 Acenaphthene-d10	469624	234812	939248	579936	23.49
4 Phenanthrene-d10	929073	464537	1858146	1034502	11.35
5 Chrysene-d12	931719	465860	1863438	1099162	17.97
6 Perylene-d12	908273	454137	1816546	981188	8.03

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.57	3.07	4.07	3.57	0.02
2 Naphthalene-d8	4.46	3.96	4.96	4.46	0.01
3 Acenaphthene-d10	5.74	5.24	6.24	5.73	-0.07
4 Phenanthrene-d10	6.82	6.32	7.32	6.82	0.01
5 Chrysene-d12	8.82	8.32	9.32	8.82	0.01
6 Perylene-d12	10.33	9.83	10.83	10.34	0.10

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SML0218.D

Page 1

Date : 18-FEB-2008 13:02

Client ID:

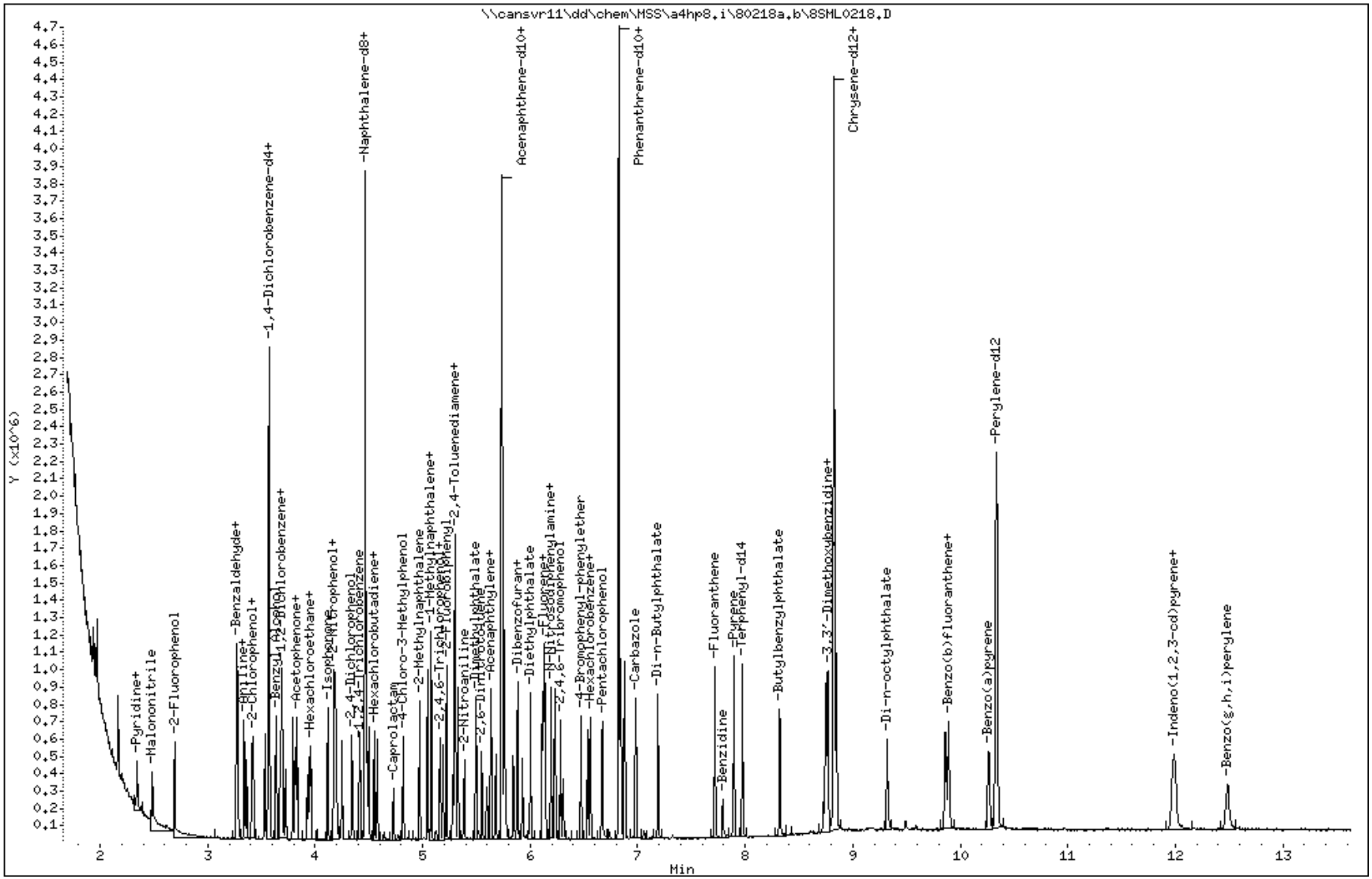
Instrument: a4hp8.i

Sample Info: L3,80218a.b,8270p,1-827042d.sub,1,,3

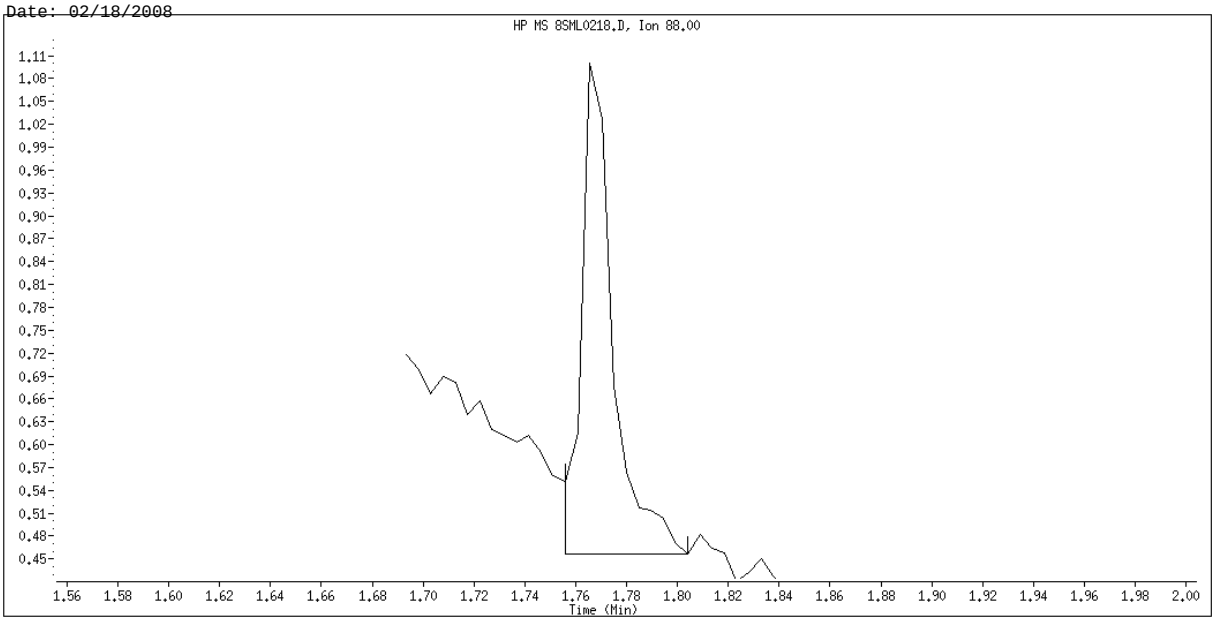
Operator: 001710

Column phase: db5.625

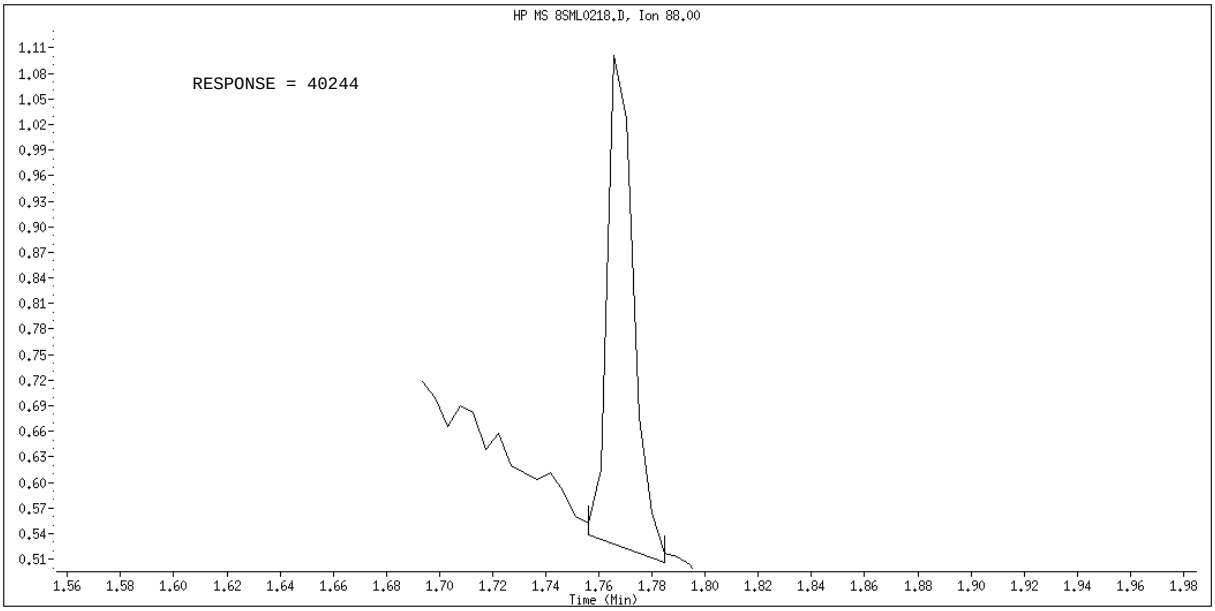
Column diameter: 0.32



Data File Name: 8SML0218.D
Inj. Date and Time: 18-FEB-2008 13:02
Instrument ID: a4hp8.i
Client ID:
Compound Name: 1,4-Dioxane
CAS #: 123-91-1
Report Date: 02/18/2008



Original Integration



Manual Integration

Manually Integrated By: gruberj
Manual Integration Reason: Poor Chromatography

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SMM0218.D
Lab Smp Id: L5
Inj Date : 18-FEB-2008 12:23
Operator : 001710   Inst ID: a4hp8.i
Smp Info : L5,80218a.b,8270p,1-827042d.sub,1,,5
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Meth Date : 18-Feb-2008 17:33 a4hp8.i   Quant Type: ISTD
Cal Date : 18-FEB-2008 17:50   Cal File: 8AL0218.D
Als bottle: 2   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(NG)	(NG)
*	1 1,4-Dichlorobenzene-d4	152	3.567	3.567	(1.000)	191747	2.00000	
*	2 Naphthalene-d8	136	4.466	4.466	(1.000)	788387	2.00000	
*	3 Acenaphthene-d10	164	5.735	5.735	(1.000)	450516	2.00000	
*	4 Phenanthrene-d10	188	6.827	6.827	(1.000)	815372	2.00000	
*	5 Chrysene-d12	240	8.832	8.832	(1.000)	879161	2.00000	
*	6 Perylene-d12	264	10.347	10.347	(1.000)	780823	2.00000	
	9 Pyridine	79	1.970	1.970	(0.552)	494190	2.50000	2.6489
	10 N-Nitrosodimethylamine	74	1.936	1.936	(0.543)	295791	2.50000	2.6055
	11 Ethyl methacrylate	69	2.167	2.167	(0.608)	448839	2.50000	2.6990
	12 3-Chloropropionitrile	54	2.345	2.345	(0.658)	199378	2.50000	2.5666
	13 Malononitrile	66	2.485	2.485	(0.697)	569131	2.50000	2.6282
	209 Benzaldehyde	77	3.278	3.278	(0.919)	341553	2.50000	2.7602
	21 Aniline	93	3.341	3.341	(0.937)	659634	2.50000	2.4948
	22 Phenol	94	3.278	3.278	(0.919)	523276	2.50000	2.5226
	23 bis(2-Chloroethyl)ether	93	3.360	3.360	(0.942)	422792	2.50000	2.6233
	24 2-Chlorophenol	128	3.422	3.422	(0.960)	314306	2.50000	2.4778
	26 1,3-Dichlorobenzene	146	3.533	3.533	(0.991)	327983	2.50000	2.5483
	27 1,4-Dichlorobenzene	146	3.581	3.581	(1.004)	206427	2.50000	2.5075
	28 1,2-Dichlorobenzene	146	3.687	3.687	(1.034)	310290	2.50000	2.5013
	29 Benzyl Alcohol	108	3.639	3.639	(1.020)	239572	2.50000	2.5027
	30 2-Methylphenol	108	3.696	3.696	(1.036)	333955	2.50000	2.4967
	31 bis(2-Chloroisopropyl)ether	45	3.725	3.725	(1.044)	408844	2.50000	2.6709
	37 Acetophenone	105	3.831	3.831	(1.074)	577852	2.50000	2.5395
	32 N-Nitroso-di-n-propylamine	70	3.817	3.817	(1.070)	392969	2.50000	2.5446
	192 4-Methylphenol	108	3.797	3.797	(1.065)	360111	2.50000	2.5534
	34 Hexachloroethane	117	3.927	3.927	(1.101)	134330	2.50000	2.5202
	35 Nitrobenzene	77	3.961	3.961	(0.887)	512865	2.50000	2.6001
	41 Isophorone	82	4.120	4.120	(0.922)	898213	2.50000	2.5518
	42 2-Nitrophenol	139	4.182	4.182	(0.936)	158235	2.50000	2.4662
	43 2,4-Dimethylphenol	107	4.177	4.177	(0.935)	440907	2.50000	2.5296
	44 bis(2-Chloroethoxy)methane	93	4.249	4.249	(0.952)	473939	2.50000	2.5174

46	2,4-Toluenediamene	121	5.283	5.283 (1.183)	281256	2.50000	2.8436
47	1,3,5-Trichlorobenzene	180	4.192	4.192 (0.939)	259870	2.50000	2.4261

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
48	2,4-Dichlorophenol	162	4.346	4.346	(0.973)	243441	2.50000	2.4912
49	Benzoic Acid	122	4.230	4.230	(0.947)	372402	5.00000	4.5972(H)
50	1,2,4-Trichlorobenzene	180	4.413	4.413	(0.988)	277206	2.50000	2.4329
51	Naphthalene	128	4.480	4.480	(1.003)	980823	2.50000	2.4912
52	4-Chloroaniline	127	4.500	4.500	(1.008)	423454	2.50000	2.6016
56	Hexachlorobutadiene	225	4.552	4.552	(1.019)	178577	2.50000	2.4517
210	Caprolactam	113	4.740	4.740	(1.061)	112752	2.50000	2.6019(H)
57	1,2,3-Trichlorobenzene	180	4.576	4.576	(1.025)	251903	2.50000	2.4535
59	4-Chloro-3-Methylphenol	107	4.822	4.822	(1.080)	359831	2.50000	2.5191
62	2-Methylnaphthalene	142	4.971	4.971	(1.113)	580534	2.50000	2.4922
63	1-Methylnaphthalene	142	5.048	5.048	(1.130)	620460	2.50000	2.4730
64	Hexachlorocyclopentadiene	237	5.081	5.081	(0.886)	199959	2.50000	2.4415
66	2,4,6-Trichlorophenol	196	5.163	5.163	(0.900)	186542	2.50000	2.4394
67	2,4,5-Trichlorophenol	196	5.192	5.192	(0.905)	205602	2.50000	2.5437
211	1,1'-Biphenyl	154	5.759	5.759	(1.004)	706701	2.50000	2.4648
68	1,2,3,5-Tetrachlorobenzene	216	5.081	5.081	(0.886)	305159	2.50000	2.3567
70	2-Chloronaphthalene	162	5.331	5.331	(0.930)	583573	2.50000	2.4776
73	2-Nitroaniline	65	5.389	5.389	(0.940)	272446	2.50000	2.3775
74	1,2,3,4-Tetrachlorobenzene	216	5.303	5.303	(0.925)	287809	2.50000	2.4037
76	Dimethylphthalate	163	5.500	5.500	(0.959)	680662	2.50000	2.4710
78	2,6-Dinitrotoluene	165	5.553	5.553	(0.968)	143133	2.50000	2.3370
79	Acenaphthylene	152	5.634	5.634	(0.982)	975421	2.50000	2.6072
80	1,2-Dinitrobenzene	168	5.601	5.601	(0.977)	71028	2.50000	2.4830
81	3-Nitroaniline	138	5.683	5.683	(0.991)	157686	2.50000	2.5779
82	Acenaphthene	153	5.759	5.759	(1.004)	608758	2.50000	2.4338
83	2,4-Dinitrophenol	184	5.755	5.755	(1.003)	186158	5.00000	4.5361(Q)
85	4-Nitrophenol	109	5.774	5.774	(1.007)	133195	2.50000	2.4893
86	Dibenzofuran	168	5.884	5.884	(1.026)	890494	2.50000	2.4842
87	2,4-Dinitrotoluene	165	5.846	5.846	(1.019)	203845	2.50000	2.3661
91	2,3,5,6-Tetrachlorophenol	232	5.928	5.928	(1.034)	172619	2.50000	2.3367
93	Diethylphthalate	149	6.005	6.005	(1.047)	708172	2.50000	2.4807
94	Fluorene	166	6.135	6.135	(1.070)	752296	2.50000	2.4523
95	4-Chlorophenyl-phenylether	204	6.115	6.115	(1.066)	350628	2.50000	2.4560
96	4-Nitroaniline	138	6.130	6.130	(1.069)	175898	2.50000	2.4184
98	4,6-Dinitro-2-methylphenol	198	6.144	6.144	(0.900)	125180	2.50000	2.3558(Q)
99	N-Nitrosodiphenylamine	169	6.197	6.197	(0.908)	494339	2.50000	2.3361
100	1,2-Diphenylhydrazine	77	6.231	6.231	(0.913)	1108757	2.50000	2.6010
106	4-Bromophenyl-phenylether	248	6.476	6.476	(0.949)	195894	2.50000	2.4051
107	Hexachlorobenzene	284	6.534	6.534	(0.957)	218695	2.50000	2.3327
212	Atrazine	200	6.563	6.563	(0.961)	210225	2.50000	2.5555
111	Pentachlorophenol	266	6.668	6.668	(0.977)	254166	5.00000	4.5213
115	Phenanthrene	178	6.841	6.841	(1.002)	1081403	2.50000	2.4485
116	Anthracene	178	6.880	6.880	(1.008)	1085269	2.50000	2.5237
119	Carbazole	167	6.981	6.981	(1.023)	977722	2.50000	2.4888
120	Di-n-Butylphthalate	149	7.188	7.188	(1.053)	1141430	2.50000	2.5595
123	Fluoranthene	202	7.721	7.721	(1.131)	1133924	2.50000	2.5434
124	Benzidine	184	7.794	7.794	(0.882)	548790	2.50000	2.3141
125	Pyrene	202	7.899	7.899	(0.894)	1218996	2.50000	2.5992
131	Butylbenzylphthalate	149	8.327	8.327	(0.943)	494269	2.50000	2.6353
133	3,3'-Dimethoxybenzidine	244	8.736	8.736	(0.989)	189326	2.50000	2.0500
135	3,3'-Dichlorobenzidine	252	8.775	8.775	(0.993)	441080	2.50000	2.3675
136	Benzo(a)Anthracene	228	8.823	8.823	(0.999)	1247472	2.50000	2.5064

137 Chrysene	228	8.856	8.856 (1.003)	1165593	2.50000	2.5315
138 4,4'-Methylene bis(o-chloroan	231	8.770	8.770 (0.993)	214698	2.50000	2.4107

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139 bis(2-ethylhexyl)Phthalate	149	8.755	8.755	(0.991)	707020	2.50000	2.5647
140 Di-n-octylphthalate	149	9.328	9.328	(0.901)	1084040	2.50000	2.3668
141 Benzo(b)fluoranthene	252	9.871	9.871	(0.954)	1117261	2.50000	2.4432
142 Benzo(k)fluoranthene	252	9.905	9.905	(0.957)	1241202	2.50000	2.5285
146 Benzo(a)pyrene	252	10.275	10.275	(0.993)	1043975	2.50000	2.5258
149 Indeno(1,2,3-cd)pyrene	276	11.996	11.996	(1.159)	1184334	2.50000	2.5601
150 Dibenz(a,h)anthracene	278	12.011	12.011	(1.161)	1006365	2.50000	2.4817
151 Benzo(g,h,i)perylene	276	12.501	12.501	(1.208)	989086	2.50000	2.5057(H)
198 1,4-Dioxane	88	1.768	1.768	(0.496)	173526	2.50000	2.7533
$ 154 Nitrobenzene-d5	82	3.947	3.947	(0.884)	492616	2.50000	2.5782
$ 155 2-Fluorobiphenyl	172	5.226	5.226	(0.911)	696671	2.50000	2.4591
$ 156 Terphenyl-d14	244	7.981	7.981	(0.904)	854111	2.50000	2.5203
$ 157 Phenol-d5	99	3.269	3.269	(0.916)	490862	2.50000	2.5138
$ 158 2-Fluorophenol	112	2.696	2.696	(0.756)	324469	2.50000	2.6593
$ 159 2,4,6-Tribromophenol	330	6.308	6.308	(1.100)	87721	2.50000	2.3539
$ 186 2-Chlorophenol-d4	132	3.413	3.413	(0.957)	287182	2.50000	2.5082
$ 187 1,2-Dichlorobenzene-d4	152	3.677	3.677	(1.031)	200352	2.50000	2.5459
101 Diphenylamine	169	6.197	6.197	(0.908)	494339	2.50000	2.3361

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

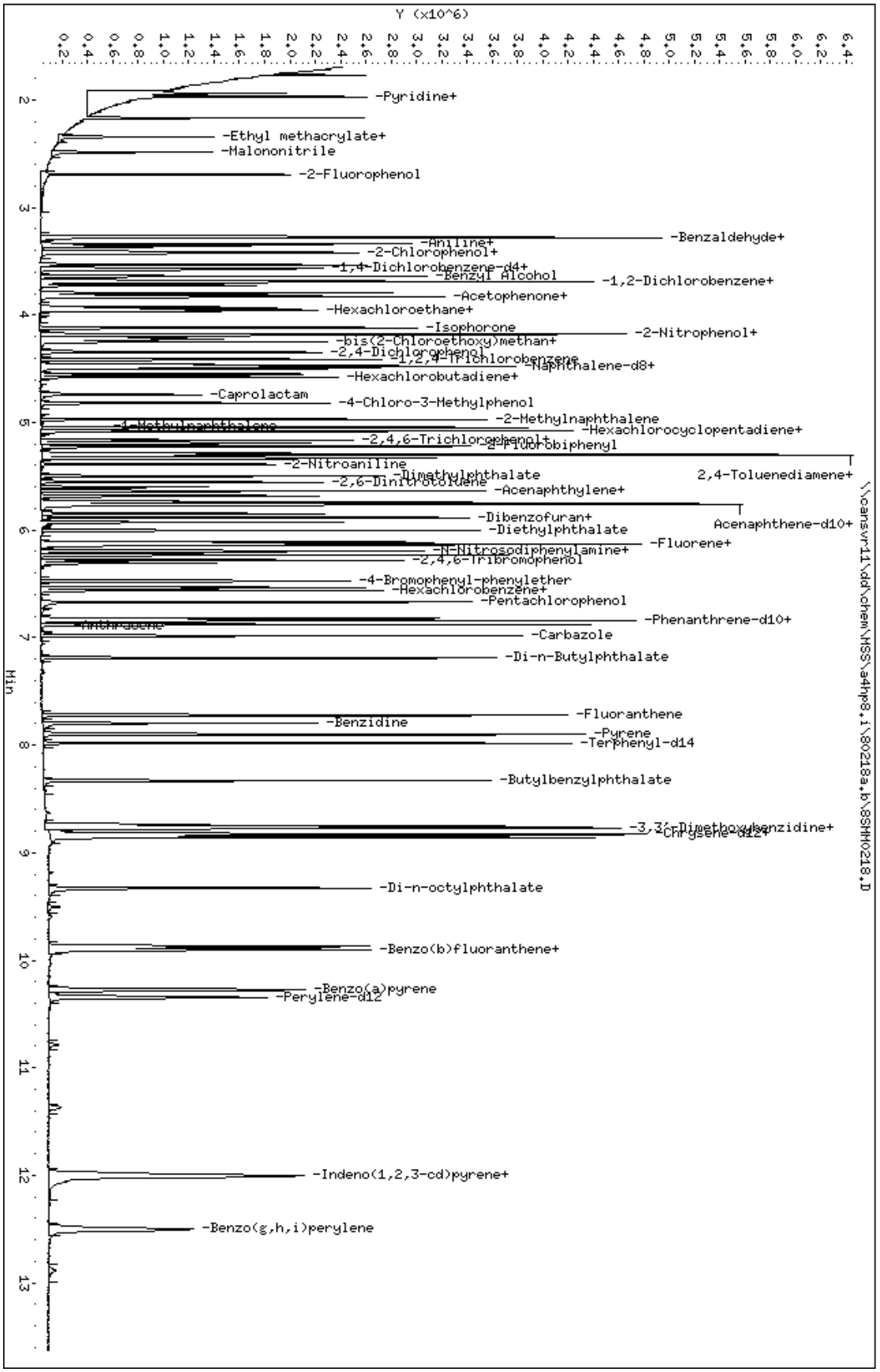
Instrument ID: a4hp8.i
Lab File ID: 8SMM0218.D
Lab Smp Id: L5
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Misc Info:

Calibration Date: 18-FEB-2008
Calibration Time: 16:34
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	199560	99780	399120	191747	-3.92
2 Naphthalene-d8	828712	414356	1657424	788387	-4.87
3 Acenaphthene-d10	469624	234812	939248	450516	-4.07
4 Phenanthrene-d10	929073	464537	1858146	815372	-12.24
5 Chrysene-d12	931719	465860	1863438	879161	-5.64
6 Perylene-d12	908273	454137	1816546	780823	-14.03

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.57	3.07	4.07	3.57	-0.03
2 Naphthalene-d8	4.46	3.96	4.96	4.47	0.08
3 Acenaphthene-d10	5.74	5.24	6.24	5.74	-0.02
4 Phenanthrene-d10	6.82	6.32	7.32	6.83	0.05
5 Chrysene-d12	8.82	8.32	9.32	8.83	0.10
6 Perylene-d12	10.33	9.83	10.83	10.35	0.18

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SHH0218.D
Date : 18-FEB-2008 12:23
Client ID:
Sample Info: L5,80218a,b,8270p,1-8270424,sub,1,,5
Column phase: db5.625

Instrument: a4hp8.i
Operator: 001710
Column diameter: 0.32

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp8.i Injection Date: 18-FEB-2008 15:17
Lab File ID: ICVTCL.D Init. Cal. Date(s): 16-JAN-2008 18-FEB-2008
Analysis Type: Init. Cal. Times: 14:41 17:50
Lab Sample ID: icvtcl Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
9 Pyridine	1.94593	1.93960	1.93960	0.010	0.32491	50.00000	Averaged
10 N-Nitrosodimethylamine	1.18412	1.16782	1.16782	0.010	1.37629	50.00000	Averaged
11 Ethyl methacrylate	1.73456	1.73814	1.73814	0.010	-0.20620	50.00000	Averaged
12 3-Chloropropionitrile	0.81025	0.76903	0.76903	0.010	5.08731	50.00000	Averaged
13 Malononitrile	2.25866	2.08722	2.08722	0.010	7.59023	50.00000	Averaged
209 Benzaldehyde	1.29068	1.30705	1.30705	0.010	-1.26838	50.00000	Averaged
21 Aniline	2.75788	2.77755	2.77755	0.010	-0.71327	50.00000	Averaged
22 Phenol	2.16362	2.14499	2.14499	0.010	0.86073	20.00000	Averaged
23 bis(2-Chloroethyl)ether	1.68102	1.66819	1.66819	0.010	0.76360	50.00000	Averaged
24 2-Chlorophenol	1.32306	1.31378	1.31378	0.010	0.70132	50.00000	Averaged
26 1,3-Dichlorobenzene	1.34247	1.32428	1.32428	0.010	1.35542	50.00000	Averaged
27 1,4-Dichlorobenzene	0.85868	0.82626	0.82626	0.010	3.77488	20.00000	Averaged
28 1,2-Dichlorobenzene	1.29391	1.29175	1.29175	0.010	0.16657	50.00000	Averaged
29 Benzyl Alcohol	0.99846	1.02861	1.02861	0.010	-3.01887	50.00000	Averaged
30 2-Methylphenol	1.39517	1.43213	1.43213	0.010	-2.64895	50.00000	Averaged
31 bis(2-Chloroisopropyl)ether	1.59659	1.52716	1.52716	0.010	4.34899	50.00000	Averaged
37 Acetophenone	2.37336	2.38563	2.38563	0.010	-0.51693	50.00000	Averaged
32 N-Nitroso-di-n-propylamine	1.61080	1.64929	1.64929	0.050	-2.38984	50.00000	Averaged
192 4-Methylphenol	1.47101	1.48139	1.48139	0.010	-0.70578	50.00000	Averaged
34 Hexachloroethane	0.55597	0.56013	0.56013	0.010	-0.74969	50.00000	Averaged
35 Nitrobenzene	0.50039	0.52768	0.52768	0.010	-5.45542	50.00000	Averaged
41 Isophorone	0.89292	0.93016	0.93016	0.010	-4.17054	50.00000	Averaged
42 2-Nitrophenol	0.16276	0.17511	0.17511	0.010	-7.58337	20.00000	Averaged
43 2,4-Dimethylphenol	0.44217	0.45427	0.45427	0.010	-2.73752	50.00000	Averaged
44 bis(2-Chloroethoxy)methane	0.47760	0.47478	0.47478	0.010	0.59065	50.00000	Averaged
46 2,4-Toluenediamene	0.25091	0.29270	0.29270	0.010	-16.65167	50.00000	Averaged
47 1,3,5-Trichlorobenzene	0.27173	0.27391	0.27391	0.010	-0.80158	50.00000	Averaged
48 2,4-Dichlorophenol	0.24790	0.26039	0.26039	0.010	-5.04121	20.00000	Averaged
49 Benzoic Acid	10.00000	9.22743	0.20816	0.010	7.72571	0.000e+000	Quadratic
50 1,2,4-Trichlorobenzene	0.28904	0.29253	0.29253	0.010	-1.20613	50.00000	Averaged
51 Naphthalene	0.99879	1.01286	1.01286	0.010	-1.40876	50.00000	Averaged
52 4-Chloroaniline	0.41291	0.44749	0.44749	0.010	-8.37460	50.00000	Averaged
56 Hexachlorobutadiene	0.18478	0.18929	0.18929	0.010	-2.44344	20.00000	Averaged
210 Caprolactam	0.10993	0.12260	0.12260	0.010	-11.52610	50.00000	Averaged
57 1,2,3-Trichlorobenzene	0.26046	0.26292	0.26292	0.010	-0.94617	50.00000	Averaged
59 4-Chloro-3-Methylphenol	0.36236	0.38273	0.38273	0.010	-5.62078	20.00000	Averaged
62 2-Methylnaphthalene	0.59093	0.59707	0.59707	0.010	-1.03912	50.00000	Averaged
63 1-Methylnaphthalene	0.63647	0.63974	0.63974	0.010	-0.51431	50.00000	Averaged
64 Hexachlorocyclopentadiene	5.00000	5.04368	0.38420	0.050	-0.87357	0.000e+000	Quadratic
66 2,4,6-Trichlorophenol	0.33948	0.35232	0.35232	0.010	-3.78217	20.00000	Averaged
67 2,4,5-Trichlorophenol	0.35882	0.38329	0.38329	0.010	-6.81947	50.00000	Averaged
211 1,1'-Biphenyl	1.27281	1.32623	1.32623	0.010	-4.19711	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp8.i Injection Date: 18-FEB-2008 15:17
Lab File ID: ICVTCL.D Init. Cal. Date(s): 16-JAN-2008 18-FEB-2008
Analysis Type: Init. Cal. Times: 14:41 17:50
Lab Sample ID: icvtcl Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
68 1,2,3,5-Tetrachlorobenzene	0.57484	0.57868	0.57868	0.010	-0.66781	50.00000	Averaged
70 2-Chloronaphthalene	1.04565	1.03559	1.03559	0.010	0.96141	50.00000	Averaged
73 2-Nitroaniline	5.00000	5.07866	0.53021	0.010	-1.57312	0.000e+000	Quadratic
74 1,2,3,4-Tetrachlorobenzene	0.53154	0.53283	0.53283	0.010	-0.24288	50.00000	Averaged
76 Dimethylphthalate	1.22287	1.27135	1.27135	0.010	-3.96425	50.00000	Averaged
78 2,6-Dinitrotoluene	5.00000	5.09320	0.28946	0.010	-1.86403	0.000e+000	Quadratic
79 Acenaphthylene	1.66089	1.74842	1.74842	0.010	-5.26998	50.00000	Averaged
80 1,2-Dinitrobenzene	0.12699	0.14136	0.14136	0.010	-11.31854	50.00000	Averaged
81 3-Nitroaniline	0.27155	0.30101	0.30101	0.010	-10.84990	50.00000	Averaged
82 Acenaphthene	1.11042	1.10172	1.10172	0.010	0.78324	20.00000	Averaged
83 2,4-Dinitrophenol	10.00000	9.86135	0.20351	0.050	1.38652	0.000e+000	Quadratic
85 4-Nitrophenol	0.23753	0.25884	0.25884	0.050	-8.96782	50.00000	Averaged
86 Dibenzofuran	1.59133	1.61659	1.61659	0.010	-1.58751	50.00000	Averaged
87 2,4-Dinitrotoluene	5.00000	4.99276	0.39344	0.010	0.14486	0.000e+000	Quadratic
91 2,3,5,6-Tetrachlorophenol	5.00000	5.18174	0.35600	0.010	-3.63471	0.000e+000	Quadratic
93 Diethylphthalate	1.26733	1.32817	1.32817	0.010	-4.80089	50.00000	Averaged
94 Fluorene	1.36185	1.40030	1.40030	0.010	-2.82332	50.00000	Averaged
95 4-Chlorophenyl-phenylether	0.63379	0.65721	0.65721	0.010	-3.69527	50.00000	Averaged
96 4-Nitroaniline	5.00000	5.13608	0.34227	0.010	-2.72161	0.000e+000	Quadratic
98 4,6-Dinitro-2-methylphenol	5.00000	5.13699	0.14441	0.010	-2.73976	0.000e+000	Quadratic
99 N-Nitrosodiphenylamine	0.51904	0.53617	0.53617	0.010	-3.30085	20.00000	Averaged
100 1,2-Diphenylhydrazine	1.04560	1.08427	1.08427	0.010	-3.69835	50.00000	Averaged
106 4-Bromophenyl-phenylether	0.19979	0.20368	0.20368	0.010	-1.94813	50.00000	Averaged
107 Hexachlorobenzene	0.22996	0.23475	0.23475	0.010	-2.08162	50.00000	Averaged
212 Atrazine	0.20178	0.22287	0.22287	0.010	-10.45076	50.00000	Averaged
111 Pentachlorophenol	10.00000	9.95201	0.15062	0.010	0.47993	0.000e+000	Quadratic
115 Phenanthrene	1.08331	1.11124	1.11124	0.010	-2.57781	50.00000	Averaged
116 Anthracene	1.05482	1.12115	1.12115	0.010	-6.28873	50.00000	Averaged
119 Carbazole	0.96363	0.99968	0.99968	0.010	-3.74144	50.00000	Averaged
120 Di-n-Butylphthalate	1.09386	1.21182	1.21182	0.010	-10.78363	50.00000	Averaged
123 Fluoranthene	1.09355	1.20521	1.20521	0.010	-10.21094	20.00000	Averaged
124 Benzidine	5.00000	4.98246	0.57292	0.010	0.35081	0.000e+000	Quadratic
125 Pyrene	1.06688	1.05821	1.05821	0.010	0.81190	50.00000	Averaged
131 Butylbenzylphthalate	0.42667	0.44714	0.44714	0.010	-4.79815	50.00000	Averaged
133 3,3'-Dimethoxybenzidine	5.00000	5.38728	0.25694	0.010	-7.74562	0.000e+000	Quadratic
135 3,3'-Dichlorobenzidine	5.00000	5.19985	0.46725	0.010	-3.99702	0.000e+000	Quadratic
136 Benzo(a)Anthracene	1.13223	1.14890	1.14890	0.010	-1.47298	50.00000	Averaged
137 Chrysene	1.04743	1.09785	1.09785	0.010	-4.81370	50.00000	Averaged
138 4,4'-Methylene bis(o-chloro	5.00000	5.06723	0.21507	0.010	-1.34468	0.000e+000	Quadratic
139 bis(2-ethylhexyl)Phthalate	5.00000	5.01279	0.64416	0.010	-0.25576	0.000e+000	Quadratic
140 Di-n-octylphthalate	5.00000	4.73678	1.16514	0.010	5.26436	0.000e+000	Quadratic
141 Benzo(b)fluoranthene	1.17133	1.23577	1.23577	0.010	-5.50199	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp8.i Injection Date: 18-FEB-2008 15:17
Lab File ID: ICVTCL.D Init. Cal. Date(s): 16-JAN-2008 18-FEB-2008
Analysis Type: Init. Cal. Times: 14:41 17:50
Lab Sample ID: icvtcl Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
142 Benzo(k)fluoranthene	1.25734	1.28015	1.28015	0.010	-1.81426	50.00000	Averaged
146 Benzo(a)pyrene	1.05869	1.12349	1.12349	0.010	-6.12001	20.00000	Averaged
149 Indeno(1,2,3-cd)pyrene	1.18492	1.30130	1.30130	0.010	-9.82196	50.00000	Averaged
150 Dibenz(a,h)anthracene	1.03869	1.15114	1.15114	0.010	-10.82558	50.00000	Averaged
151 Benzo(g,h,i)perylene	1.01107	1.07462	1.07462	0.010	-6.28601	50.00000	Averaged
198 1,4-Dioxane	0.65737	0.62828	0.62828	0.010	4.42632	50.00000	Averaged
$ 154 Nitrobenzene-d5	0.48471	0.52011	0.52011	0.010	-7.30184	50.00000	Averaged
$ 155 2-Fluorobiphenyl	1.25770	1.25200	1.25200	0.010	0.45366	50.00000	Averaged
$ 156 Terphenyl-d14	0.77095	0.77011	0.77011	0.010	0.10884	50.00000	Averaged
$ 157 Phenol-d5	2.03667	2.02395	2.02395	0.010	0.62489	50.00000	Averaged
$ 158 2-Fluorophenol	1.27266	1.30094	1.30094	0.010	-2.22177	50.00000	Averaged
$ 159 2,4,6-Tribromophenol	5.00000	5.19641	0.18210	0.010	-3.92823	0.000e+000	Quadratic
$ 186 2-Chlorophenol-d4	1.19425	1.19529	1.19529	0.010	-0.08733	50.00000	Averaged
$ 187 1,2-Dichlorobenzene-d4	0.82083	0.81655	0.81655	0.010	0.52060	50.00000	Averaged
M 195 Cresols, total	2.86618	2.91352	2.91352	0.010	-1.65166	50.00000	Averaged
101 Diphenylamine	0.51904	0.53617	0.53617	0.010	-3.30085	50.00000	Averaged

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\ICVTCL.D
Lab Smp Id: icvtcl
Inj Date : 18-FEB-2008 15:17
Operator : 001710 Inst ID: a4hp8.i
Smp Info : icvtcl,80218a.b,8270p,1-827042d.sub,2
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Meth Date : 18-Feb-2008 17:37 a4hp8.i Quant Type: ISTD
Cal Date : 18-FEB-2008 17:50 Cal File: 8AL0218.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	3.568	3.568	(1.000)	244231	2.00000	
* 2	Naphthalene-d8	136	4.468	4.468	(1.000)	991384	2.00000	
* 3	Acenaphthene-d10	164	5.737	5.737	(1.000)	586281	2.00000	
* 4	Phenanthrene-d10	188	6.824	6.824	(1.000)	1078464	2.00000	
* 5	Chrysene-d12	240	8.820	8.820	(1.000)	1316203	2.00000	
* 6	Perylene-d12	264	10.325	10.325	(1.000)	1211020	2.00000	
9	Pyridine	79	1.967	1.967	(0.551)	1184279	5.00000	4.9838
10	N-Nitrosodimethylamine	74	1.938	1.938	(0.543)	713044	5.00000	4.9312
11	Ethyl methacrylate	69	2.169	2.169	(0.608)	1061268	5.00000	5.0103
12	3-Chloropropionitrile	54	2.347	2.347	(0.658)	469555	5.00000	4.7456
13	Malononitrile	66	2.491	2.491	(0.698)	1274409	5.00000	4.6205
209	Benzaldehyde	77	3.280	3.280	(0.919)	798055	5.00000	5.0634
21	Aniline	93	3.347	3.347	(0.938)	1695911	5.00000	5.0357
22	Phenol	94	3.280	3.280	(0.919)	1309684	5.00000	4.9570
23	bis(2-Chloroethyl)ether	93	3.366	3.366	(0.943)	1018558	5.00000	4.9618
24	2-Chlorophenol	128	3.424	3.424	(0.960)	802165	5.00000	4.9649
26	1,3-Dichlorobenzene	146	3.535	3.535	(0.991)	808574	5.00000	4.9322
27	1,4-Dichlorobenzene	146	3.583	3.583	(1.004)	504498	5.00000	4.8112
28	1,2-Dichlorobenzene	146	3.689	3.689	(1.034)	788714	5.00000	4.9917
29	Benzyl Alcohol	108	3.641	3.641	(1.020)	628044	5.00000	5.1509
30	2-Methylphenol	108	3.698	3.698	(1.036)	874427	5.00000	5.1324
31	bis(2-Chloroisopropyl)ether	45	3.727	3.727	(1.044)	932447	5.00000	4.7826
37	Acetophenone	105	3.833	3.833	(1.074)	1456610	5.00000	5.0258
32	N-Nitroso-di-n-propylamine	70	3.823	3.823	(1.071)	1007021	5.00000	5.1195
192	4-Methylphenol	108	3.799	3.799	(1.065)	904505	5.00000	5.0353
34	Hexachloroethane	117	3.929	3.929	(1.101)	342005	5.00000	5.0375
35	Nitrobenzene	77	3.963	3.963	(0.887)	1307843	5.00000	5.2728
41	Isophorone	82	4.121	4.121	(0.923)	2305369	5.00000	5.2085
42	2-Nitrophenol	139	4.184	4.184	(0.937)	433993	5.00000	5.3792
43	2,4-Dimethylphenol	107	4.179	4.179	(0.935)	1125900	5.00000	5.1369

44	bis(2-Chloroethoxy)methane	93	4.251	4.251 (0.952)	1176721	5.00000	4.9705
46	2,4-Toluenediamene	121	5.290	5.290 (1.184)	725436	5.00000	5.8326
47	1,3,5-Trichlorobenzene	180	4.194	4.194 (0.939)	678882	5.00000	5.0401

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
48	2,4-Dichlorophenol	162	4.347	4.347	(0.973)	645375	5.00000	5.2521
49	Benzoic Acid	122	4.261	4.261	(0.954)	1031833	10.0000	9.2274(QH)
50	1,2,4-Trichlorobenzene	180	4.415	4.415	(0.988)	725025	5.00000	5.0603
51	Naphthalene	128	4.482	4.482	(1.003)	2510326	5.00000	5.0704
52	4-Chloroaniline	127	4.501	4.501	(1.008)	1109093	5.00000	5.4187
56	Hexachlorobutadiene	225	4.549	4.549	(1.018)	469157	5.00000	5.1222
210	Caprolactam	113	4.761	4.761	(1.066)	303868	5.00000	5.5763
57	1,2,3-Trichlorobenzene	180	4.578	4.578	(1.025)	651643	5.00000	5.0473
59	4-Chloro-3-Methylphenol	107	4.824	4.824	(1.080)	948575	5.00000	5.2810
62	2-Methylnaphthalene	142	4.973	4.973	(1.113)	1479808	5.00000	5.0520
63	1-Methylnaphthalene	142	5.050	5.050	(1.130)	1585580	5.00000	5.0257
64	Hexachlorocyclopentadiene	237	5.078	5.078	(0.885)	563130	5.00000	5.0437
66	2,4,6-Trichlorophenol	196	5.165	5.165	(0.900)	516397	5.00000	5.1891
67	2,4,5-Trichlorophenol	196	5.194	5.194	(0.905)	561785	5.00000	5.3410
211	1,1'-Biphenyl	154	5.761	5.761	(1.004)	1943863	5.00000	5.2098
68	1,2,3,5-Tetrachlorobenzene	216	5.083	5.083	(0.886)	848169	5.00000	5.0334
70	2-Chloronaphthalene	162	5.333	5.333	(0.930)	1517874	5.00000	4.9519
73	2-Nitroaniline	65	5.391	5.391	(0.940)	777133	5.00000	5.0786
74	1,2,3,4-Tetrachlorobenzene	216	5.304	5.304	(0.925)	780976	5.00000	5.0121
76	Dimethylphthalate	163	5.502	5.502	(0.959)	1863417	5.00000	5.1982
78	2,6-Dinitrotoluene	165	5.554	5.554	(0.968)	424268	5.00000	5.0932
79	Acenaphthylene	152	5.636	5.636	(0.982)	2562663	5.00000	5.2635
80	1,2-Dinitrobenzene	168	5.607	5.607	(0.977)	207197	5.00000	5.5659
81	3-Nitroaniline	138	5.689	5.689	(0.992)	441198	5.00000	5.5425
82	Acenaphthene	153	5.761	5.761	(1.004)	1614793	5.00000	4.9608
83	2,4-Dinitrophenol	184	5.761	5.761	(1.004)	596573	10.0000	9.8613
85	4-Nitrophenol	109	5.776	5.776	(1.007)	379377	5.00000	5.4484
86	Dibenzofuran	168	5.886	5.886	(1.026)	2369443	5.00000	5.0794
87	2,4-Dinitrotoluene	165	5.853	5.853	(1.020)	576666	5.00000	4.9928
91	2,3,5,6-Tetrachlorophenol	232	5.930	5.930	(1.034)	521794	5.00000	5.1817
93	Diethylphthalate	149	6.007	6.007	(1.047)	1946708	5.00000	5.2400
94	Fluorene	166	6.136	6.136	(1.070)	2052422	5.00000	5.1412
95	4-Chlorophenyl-phenylether	204	6.117	6.117	(1.066)	963270	5.00000	5.1848
96	4-Nitroaniline	138	6.136	6.136	(1.070)	501661	5.00000	5.1361
98	4,6-Dinitro-2-methylphenol	198	6.151	6.151	(0.901)	389344	5.00000	5.1370
99	N-Nitrosodiphenylamine	169	6.199	6.199	(0.908)	1445603	5.00000	5.1650
100	1,2-Diphenylhydrazine	77	6.233	6.233	(0.913)	2923367	5.00000	5.1849
106	4-Bromophenyl-phenylether	248	6.478	6.478	(0.949)	549148	5.00000	5.0974
107	Hexachlorobenzene	284	6.535	6.535	(0.958)	632925	5.00000	5.1041
212	Atrazine	200	6.564	6.564	(0.962)	600900	5.00000	5.5225
111	Pentachlorophenol	266	6.675	6.675	(0.978)	812182	10.0000	9.9520
115	Phenanthrene	178	6.843	6.843	(1.003)	2996076	5.00000	5.1289
116	Anthracene	178	6.882	6.882	(1.008)	3022804	5.00000	5.3144
119	Carbazole	167	6.983	6.983	(1.023)	2695294	5.00000	5.1871
120	Di-n-Butylphthalate	149	7.189	7.189	(1.054)	3267257	5.00000	5.5392
123	Fluoranthene	202	7.718	7.718	(1.131)	3249449	5.00000	5.5105
124	Benzidine	184	7.791	7.791	(0.883)	1885208	5.00000	4.9824
125	Pyrene	202	7.896	7.896	(0.895)	3482064	5.00000	4.9594
131	Butylbenzylphthalate	149	8.315	8.315	(0.943)	1471332	5.00000	5.2399
133	3,3'-Dimethoxybenzidine	244	8.719	8.719	(0.989)	845455	5.00000	5.3873
135	3,3'-Dichlorobenzidine	252	8.762	8.762	(0.993)	1537491	5.00000	5.1998
136	Benzo(a)Anthracene	228	8.810	8.810	(0.999)	3780474	5.00000	5.0736

137 Chrysene	228	8.844	8.844 (1.003)	3612492	5.00000	5.2407
138 4,4'-Methylene bis(o-chloroan	231	8.757	8.757 (0.993)	707691	5.00000	5.0672

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139	bis(2-ethylhexyl)Phthalate	149	8.733	8.733	(0.990)	2119626	5.00000	5.0128
140	Di-n-octylphthalate	149	9.305	9.305	(0.901)	3527510	5.00000	4.7368
141	Benzo(b)fluoranthene	252	9.858	9.858	(0.955)	3741360	5.00000	5.2751
142	Benzo(k)fluoranthene	252	9.887	9.887	(0.958)	3875709	5.00000	5.0907
146	Benzo(a)pyrene	252	10.262	10.262	(0.994)	3401409	5.00000	5.3060
149	Indeno(1,2,3-cd)pyrene	276	11.993	11.993	(1.162)	3939746	5.00000	5.4911
150	Dibenz(a,h)anthracene	278	12.008	12.008	(1.163)	3485127	5.00000	5.5413
151	Benzo(g,h,i)perylene	276	12.503	12.503	(1.211)	3253471	5.00000	5.3143
198	1,4-Dioxane	88	1.770	1.770	(0.496)	383612	5.00000	4.7787
$ 154	Nitrobenzene-d5	82	3.948	3.948	(0.884)	1289067	5.00000	5.3651
$ 155	2-Fluorobiphenyl	172	5.223	5.223	(0.910)	1835056	5.00000	4.9773
$ 156	Terphenyl-d14	244	7.973	7.973	(0.904)	2534061	5.00000	4.9946
$ 157	Phenol-d5	99	3.270	3.270	(0.916)	1235776	5.00000	4.9688
$ 158	2-Fluorophenol	112	2.693	2.693	(0.755)	794322	5.00000	5.1111
$ 159	2,4,6-Tribromophenol	330	6.309	6.309	(1.100)	266899	5.00000	5.1964
$ 186	2-Chlorophenol-d4	132	3.415	3.415	(0.957)	729818	5.00000	5.0044
$ 187	1,2-Dichlorobenzene-d4	152	3.679	3.679	(1.031)	498569	5.00000	4.9740
101	Diphenylamine	169	6.199	6.199	(0.908)	1445603	5.00000	5.1650

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

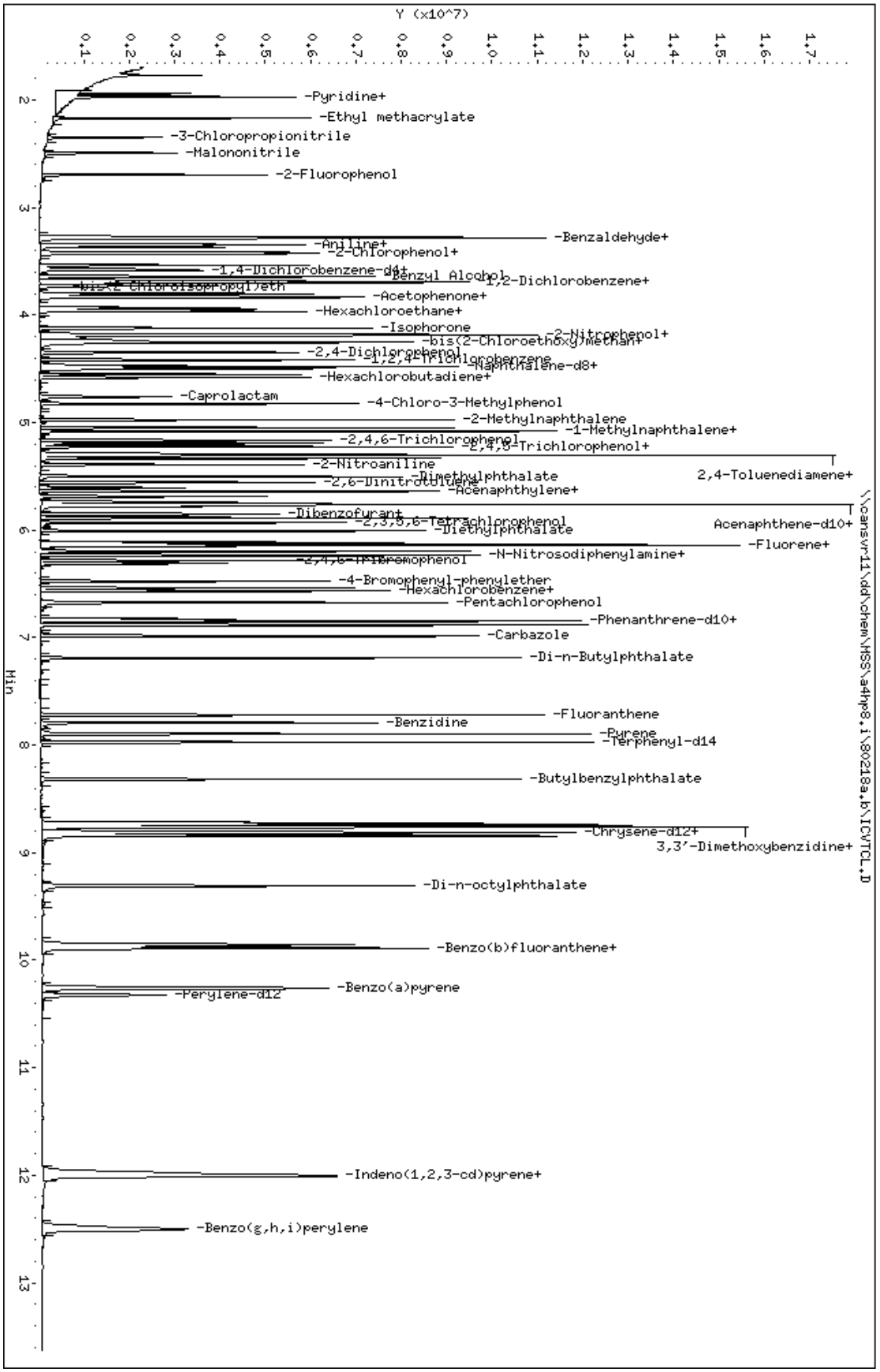
Instrument ID: a4hp8.i
Lab File ID: ICVTCL.D
Lab Smp Id: icvtcl
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8270P.m
Misc Info:

Calibration Date: 18-FEB-2008
Calibration Time: 18:10
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	179650	89825	359300	244231	35.95
2 Naphthalene-d8	758047	379024	1516094	991384	30.78
3 Acenaphthene-d10	433947	216974	867894	586281	35.10
4 Phenanthrene-d10	864240	432120	1728480	1078464	24.79
5 Chrysene-d12	895436	447718	1790872	1316203	46.99
6 Perylene-d12	861394	430697	1722788	1211020	40.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.57	3.07	4.07	3.57	0.02
2 Naphthalene-d8	4.46	3.96	4.96	4.47	0.13
3 Acenaphthene-d10	5.74	5.24	6.24	5.74	0.01
4 Phenanthrene-d10	6.82	6.32	7.32	6.82	0.01
5 Chrysene-d12	8.83	8.33	9.33	8.82	-0.15
6 Perylene-d12	10.34	9.84	10.84	10.33	-0.18

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\cansvr11\dd\chem\MSS\a4hp8,i\80218a,b\ICVTCL,D
Date : 18-FEB-2008 15:17
Client ID:
Sample Info: icvtcl,80218a,b,8270p,1-827042d,sub,2
Column phase: db5,625

Instrument: a4hp8,i
Operator: 001710
Column diameter: 0.32

Report Date: 19-Mar-2008 12:33

Calibration History

Method : \\cansvr11\dd\chem\MSS\a4hp8.i\80319a.b\8270P.m
Start Cal Date: 16-JAN-2008 14:41
End Cal Date : 18-FEB-2008 17:50
Last Cal Level: 2
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.05000		
18-FEB-2008 13:40	pah	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SLL0218.D
Cal Level: 2 , Cal Amount: 0.25000		
18-FEB-2008 17:50	2-ap9	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AL0218.D
18-FEB-2008 13:21	1-827042d	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SL0218.D
Cal Level: 3 , Cal Amount: 0.50000		
18-FEB-2008 17:31	2-ap9	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AML0218.D
18-FEB-2008 13:02	1-827042d	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SML0218.D
Cal Level: 4 , Cal Amount: 1.00000		
18-FEB-2008 17:12	2-ap9	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AM0218.D
18-FEB-2008 12:43	1-827042d	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SM0218.D
Cal Level: 5 , Cal Amount: 2.50000		
18-FEB-2008 16:53	2-ap9	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AMM0218.D
18-FEB-2008 12:23	1-827042d	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SMM0218.D
Cal Level: 6 , Cal Amount: 5.00000		
18-FEB-2008 16:34	2-ap9	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AMH0218.D
18-FEB-2008 14:57	1-827042d	\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SMH0218.D

Cal Level: 7 , Cal Amount: 7.50000		
18-FEB-2008 16:14	2-ap9	
\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AH0218.D		
18-FEB-2008 14:38	1-827042d	
\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SH0218.D		

Cal Level: 8 , Cal Amount: 10.00000		
18-FEB-2008 15:55	2-ap9	
\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AHH0218.D		
18-FEB-2008 14:19	1-827042d	
\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8SHH0218.D		

Cal Level: 9 , Cal Amount: 12.50000		
18-FEB-2008 15:36	2-ap9	
\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8AHHH218.D		
18-FEB-2008 14:00	1-827042d	
\\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8HHH0218.D		

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

19-MAR-2008 11:41	1-827042d	
\\cansvr11\dd\chem\MSS\a4hp8.i\80319a.b\8SMH0319.D		

TestAmerica North Canton

OKMW 3/21/08

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp8.i
Lab File ID: 8SMH0319.D
Analysis Type:
Lab Sample ID: L6
Method: \\cansvr11\dd\chem\MSS\a4hp8.i\80319a.b\8270p.m

Injection Date: 19-MAR-2008 11:41
Init. Cal. Date(s): 16-JAN-2008 18-FEB-2008
Init. Cal. Times: 14:41 17:50
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
9 Pyridine	1.94593	1.77220	1.77220	0.010	8.92767	50.00000	Averaged
10 N-Nitrosodimethylamine	1.18412	1.07674	1.07674	0.010	9.06831	50.00000	Averaged
11 Ethyl methacrylate	1.73456	1.64171	1.64171	0.010	5.35297	50.00000	Averaged
12 3-Chloropropionitrile	0.81025	0.77935	0.77935	0.010	3.81448	50.00000	Averaged
13 Malononitrile	2.25866	1.95660	1.95660	0.010	13.37324	50.00000	Averaged
209 Benzaldehyde	1.29068	1.23845	1.23845	0.010	4.04653	50.00000	Averaged
21 Aniline	2.75788	2.59791	2.59791	0.010	5.80039	50.00000	Averaged
22 Phenol	2.16362	2.04819	2.04819	0.010	5.33478	20.00000	Averaged
23 bis(2-Chloroethyl)ether	1.68102	1.46336	1.46336	0.010	12.94807	50.00000	Averaged
24 2-Chlorophenol	1.32306	1.34655	1.34655	0.010	-1.77525	50.00000	Averaged
26 1,3-Dichlorobenzene	1.34247	1.35179	1.35179	0.010	-0.69372	50.00000	Averaged
27 1,4-Dichlorobenzene	0.85868	0.84240	0.84240	0.010	1.89552	20.00000	Averaged
28 1,2-Dichlorobenzene	1.29391	1.31485	1.31485	0.010	-1.61871	50.00000	Averaged
29 Benzyl Alcohol	0.99846	0.95625	0.95625	0.010	4.22834	50.00000	Averaged
30 2-Methylphenol	1.39517	1.33933	1.33933	0.010	4.00271	50.00000	Averaged
31 bis(2-Chloroisopropyl)ether	1.59659	1.26745	1.26745	0.010	20.61548	50.00000	Averaged
37 Acetophenone	2.37336	2.31696	2.31696	0.010	2.37648	50.00000	Averaged
32 N-Nitroso-di-n-propylamine	1.61080	1.49879	1.49879	0.050	6.95324	50.00000	Averaged
192 4-Methylphenol	1.47101	1.42087	1.42087	0.010	3.40883	50.00000	Averaged
34 Hexachloroethane	0.55597	0.56207	0.56207	0.010	-1.09715	50.00000	Averaged
35 Nitrobenzene	0.50039	0.50390	0.50390	0.010	-0.70248	50.00000	Averaged
41 Isophorone	0.89292	0.86179	0.86179	0.010	3.48684	50.00000	Averaged
42 2-Nitrophenol	0.16276	0.19454	0.19454	0.010	-19.52131	20.00000	Averaged
43 2,4-Dimethylphenol	0.44217	0.46235	0.46235	0.010	-4.56502	50.00000	Averaged
44 bis(2-Chloroethoxy)methane	0.47760	0.45178	0.45178	0.010	5.40717	50.00000	Averaged
46 2,4-Toluenediamene	0.25091	0.26388	0.26388	0.010	-5.16561	50.00000	Averaged
47 1,3,5-Trichlorobenzene	0.27173	0.31231	0.31231	0.010	-14.93146	50.00000	Averaged
48 2,4-Dichlorophenol	0.24790	0.27887	0.27887	0.010	-12.49613	20.00000	Averaged
49 Benzoic Acid	10.00000	8.28266	0.18455	0.010	17.17338	0.000e+000	Quadratic
50 1,2,4-Trichlorobenzene	0.28904	0.31619	0.31619	0.010	-9.39086	50.00000	Averaged
51 Naphthalene	0.99879	1.02710	1.02710	0.010	-2.83489	50.00000	Averaged
52 4-Chloroaniline	0.41291	0.41547	0.41547	0.010	-0.61954	50.00000	Averaged
56 Hexachlorobutadiene	0.18478	0.21002	0.21002	0.010	-13.66151	20.00000	Averaged
210 Caprolactam	0.10993	0.12249	0.12249	0.010	-11.42636	50.00000	Averaged
57 1,2,3-Trichlorobenzene	0.26046	0.28358	0.28358	0.010	-8.87856	50.00000	Averaged
59 4-Chloro-3-Methylphenol	0.36236	0.37871	0.37871	0.010	-4.51303	20.00000	Averaged
62 2-Methylnaphthalene	0.59093	0.62535	0.62535	0.010	-5.82445	50.00000	Averaged
63 1-Methylnaphthalene	0.63647	0.66729	0.66729	0.010	-4.84299	50.00000	Averaged
64 Hexachlorocyclopentadiene	5.00000	4.80408	0.36455	0.050	3.91839	0.000e+000	Quadratic
66 2,4,6-Trichlorophenol	0.33948	0.37989	0.37989	0.010	-11.90347	20.00000	Averaged
67 2,4,5-Trichlorophenol	0.35882	0.41458	0.41458	0.010	-15.53968	50.00000	Averaged
211 1,1'-Biphenyl	1.27281	1.34799	1.34799	0.010	-5.90613	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp8.i
Lab File ID: 8SMH0319.D
Analysis Type:
Lab Sample ID: L6
Method: \\cansvr11\dd\chem\MSS\a4hp8.i\80319a.b\8270p.m

Injection Date: 19-MAR-2008 11:41
Init. Cal. Date(s): 16-JAN-2008 18-FEB-2008
Init. Cal. Times: 14:41 17:50
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
68 1,2,3,5-Tetrachlorobenzene	0.57484	0.61861	0.61861	0.010	-7.61502	50.00000	Averaged
70 2-Chloronaphthalene	1.04565	1.08981	1.08981	0.010	-4.22326	50.00000	Averaged
73 2-Nitroaniline	5.00000	4.85273	0.50624	0.010	2.94538	0.000e+000	Quadratic
74 1,2,3,4-Tetrachlorobenzene	0.53154	0.57958	0.57958	0.010	-9.03680	50.00000	Averaged
76 Dimethylphthalate	1.22287	1.31182	1.31182	0.010	-7.27417	50.00000	Averaged
78 2,6-Dinitrotoluene	5.00000	5.46540	0.31160	0.010	-9.30801	0.000e+000	Quadratic
79 Acenaphthylene	1.66089	1.82334	1.82334	0.010	-9.78055	50.00000	Averaged
80 1,2-Dinitrobenzene	0.12699	0.15033	0.15033	0.010	-18.38113	50.00000	Averaged
81 3-Nitroaniline	0.27155	0.30740	0.30740	0.010	-13.19958	50.00000	Averaged
82 Acenaphthene	1.11042	1.14723	1.14723	0.010	-3.31552	20.00000	Averaged
83 2,4-Dinitrophenol	10.00000	10.01930	0.20719	0.050	-0.19300	0.000e+000	Quadratic
85 4-Nitrophenol	0.23753	0.24082	0.24082	0.050	-1.38182	50.00000	Averaged
86 Dibenzofuran	1.59133	1.68407	1.68407	0.010	-5.82759	50.00000	Averaged
87 2,4-Dinitrotoluene	5.00000	5.36028	0.42316	0.010	-7.20562	0.000e+000	Quadratic
91 2,3,5,6-Tetrachlorophenol	5.00000	5.13768	0.35278	0.010	-2.75355	0.000e+000	Quadratic
93 Diethylphthalate	1.26733	1.37202	1.37202	0.010	-8.26077	50.00000	Averaged
94 Fluorene	1.36185	1.47164	1.47164	0.010	-8.06165	50.00000	Averaged
95 4-Chlorophenyl-phenylether	0.63379	0.70735	0.70735	0.010	-11.60619	50.00000	Averaged
96 4-Nitroaniline	5.00000	5.05211	0.33648	0.010	-1.04213	0.000e+000	Quadratic
98 4,6-Dinitro-2-methylphenol	5.00000	5.02863	0.14105	0.010	-0.57264	0.000e+000	Quadratic
99 N-Nitrosodiphenylamine	0.51904	0.55093	0.55093	0.010	-6.14475	20.00000	Averaged
100 1,2-Diphenylhydrazine	1.04560	0.94568	0.94568	0.010	9.55581	50.00000	Averaged
106 4-Bromophenyl-phenylether	0.19979	0.22654	0.22654	0.010	-13.38932	50.00000	Averaged
107 Hexachlorobenzene	0.22996	0.26471	0.26471	0.010	-15.10785	50.00000	Averaged
212 Atrazine	0.20178	0.22523	0.22523	0.010	-11.61850	50.00000	Averaged
111 Pentachlorophenol	10.00000	9.01130	0.13487	0.010	9.88702	0.000e+000	Quadratic
115 Phenanthrene	1.08331	1.11764	1.11764	0.010	-3.16916	50.00000	Averaged
116 Anthracene	1.05482	1.14416	1.14416	0.010	-8.46993	50.00000	Averaged
119 Carbazole	0.96363	1.00282	1.00282	0.010	-4.06730	50.00000	Averaged
120 Di-n-Butylphthalate	1.09386	1.25213	1.25213	0.010	-14.46889	50.00000	Averaged
123 Fluoranthene	1.09355	1.26963	1.26963	0.010	-16.10139	20.00000	Averaged
124 Benzidine	5.00000	4.90907	0.56401	0.010	1.81862	0.000e+000	Quadratic
125 Pyrene	1.06688	1.12316	1.12316	0.010	-5.27524	50.00000	Averaged
131 Butylbenzylphthalate	0.42667	0.45125	0.45125	0.010	-5.76073	50.00000	Averaged
133 3,3'-Dimethoxybenzidine	5.00000	5.55404	0.26539	0.010	-11.08080	0.000e+000	Quadratic
135 3,3'-Dichlorobenzidine	5.00000	5.30093	0.47713	0.010	-6.01866	0.000e+000	Quadratic
136 Benzo(a)Anthracene	1.13223	1.19152	1.19152	0.010	-5.23705	50.00000	Averaged
137 Chrysene	1.04743	1.09589	1.09589	0.010	-4.62655	50.00000	Averaged
138 4,4'-Methylene bis(o-chloro	5.00000	5.30331	0.22587	0.010	-6.06629	0.000e+000	Quadratic
139 bis(2-ethylhexyl)Phthalate	5.00000	5.15038	0.66272	0.010	-3.00768	0.000e+000	Quadratic
140 Di-n-octylphthalate	5.00000	4.70242	1.15620	0.010	5.95164	0.000e+000	Quadratic
141 Benzo(b)fluoranthene	1.17133	1.28681	1.28681	0.010	-9.85929	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp8.i Injection Date: 19-MAR-2008 11:41
Lab File ID: 8SMH0319.D Init. Cal. Date(s): 16-JAN-2008 18-FEB-2008
Analysis Type: Init. Cal. Times: 14:41 17:50
Lab Sample ID: L6 Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4hp8.i\80319a.b\8270p.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
142 Benzo(k)fluoranthene	1.25734	1.29331	1.29331	0.010	-2.86142	50.00000	Averaged
146 Benzo(a)pyrene	1.05869	1.14781	1.14781	0.010	-8.41806	20.00000	Averaged
149 Indeno(1,2,3-cd)pyrene	1.18492	1.33493	1.33493	0.010	-12.65997	50.00000	Averaged
150 Dibenz(a,h)anthracene	1.03869	1.17082	1.17082	0.010	-12.72037	50.00000	Averaged
151 Benzo(g,h,i)perylene	1.01107	1.12872	1.12872	0.010	-11.63670	50.00000	Averaged
198 1,4-Dioxane	0.65737	0.58972	0.58972	0.010	10.29138	50.00000	Averaged
$ 154 Nitrobenzene-d5	0.48471	0.50052	0.50052	0.010	-3.25997	50.00000	Averaged
$ 155 2-Fluorobiphenyl	1.25770	1.32373	1.32373	0.010	-5.24972	50.00000	Averaged
$ 156 Terphenyl-d14	0.77095	0.82762	0.82762	0.010	-7.34994	50.00000	Averaged
$ 157 Phenol-d5	2.03667	2.00812	2.00812	0.010	1.40211	50.00000	Averaged
$ 158 2-Fluorophenol	1.27266	1.29021	1.29021	0.010	-1.37923	50.00000	Averaged
$ 159 2,4,6-Tribromophenol	5.00000	6.38230	0.22800	0.010	-27.64597	0.000e+000	Quadratic
$ 186 2-Chlorophenol-d4	1.19425	1.24371	1.24371	0.010	-4.14125	50.00000	Averaged
$ 187 1,2-Dichlorobenzene-d4	0.82083	0.82966	0.82966	0.010	-1.07628	50.00000	Averaged
M 195 Cresols, total	2.86618	2.76020	2.76020	0.010	3.69791	50.00000	Averaged
101 Diphenylamine	0.51904	0.55093	0.55093	0.010	-6.14475	50.00000	Averaged

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80319a.b\8SMH0319.D

Page 1

Date : 19-MAR-2008 11:41

Client ID:

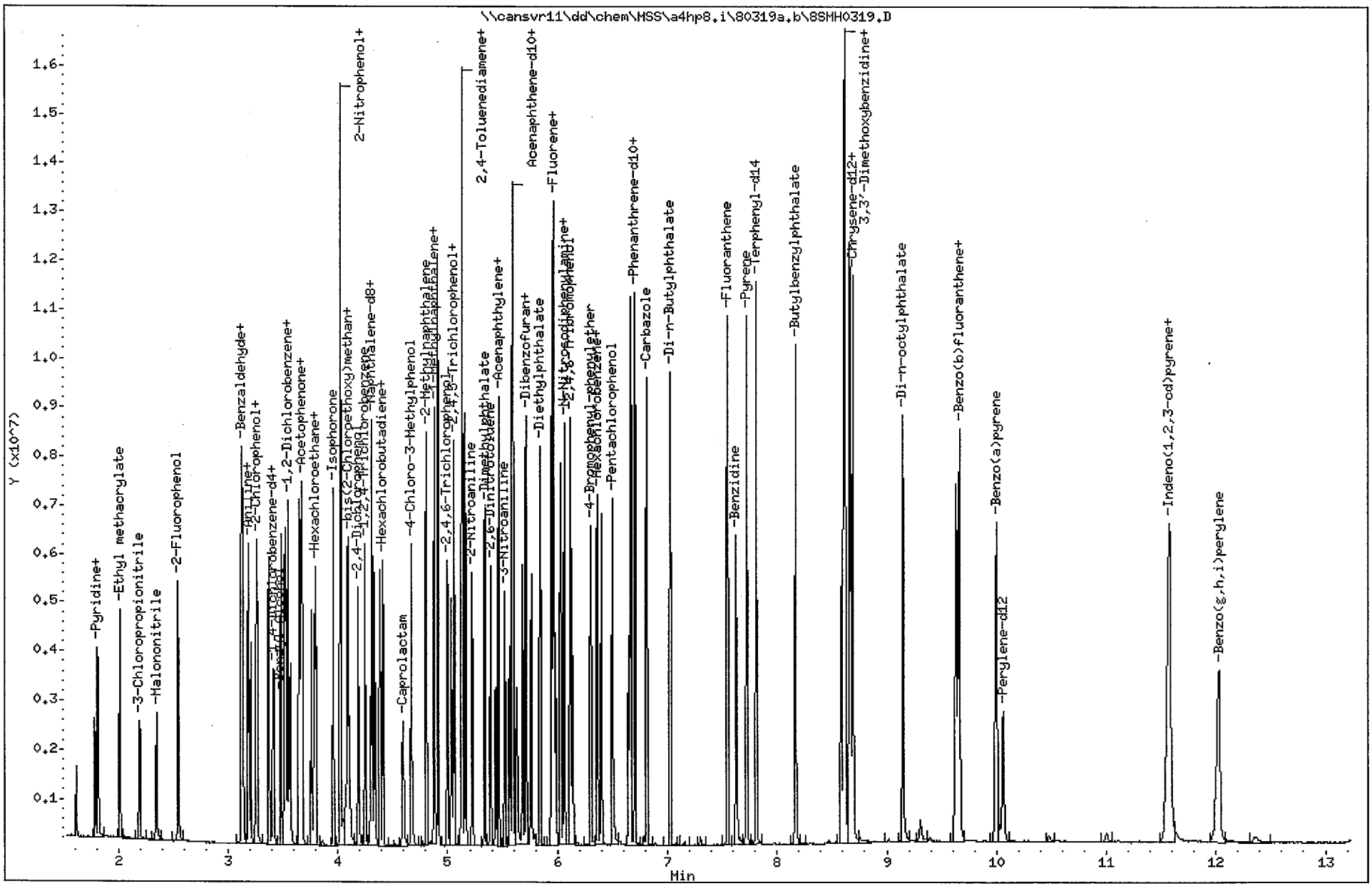
Instrument: a4hp8.i

Sample Info: L6,80319a.b,8270p,1-827042d.sub,2

Operator: 001710

Column phase: db5.625

Column diameter: 0.32



North Canton

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TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80319a.b\8SMH0319.D
Lab Smp Id: L6
Inj Date : 19-MAR-2008 11:41
Operator : 001710 Inst ID: a4hp8.i
Smp Info : L6,80319a.b,8270p,1-827042d.sub,2
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp8.i\80319a.b\8270p.m
Meth Date : 19-Mar-2008 12:33 a4hp8.i Quant Type: ISTD
Cal Date : 18-FEB-2008 17:50 Cal File: 8AL0218.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	3.405	3.405	(1.000)	240493	2.00000	
* 2	Naphthalene-d8	136	4.300	4.300	(1.000)	947701	2.00000	
* 3	Acenaphthene-d10	164	5.564	5.564	(1.000)	569945	2.00000	
* 4	Phenanthrene-d10	188	6.646	6.646	(1.000)	1084735	2.00000	
* 5	Chrysene-d12	240	8.671	8.671	(1.000)	1303658	2.00000	
* 6	Perylene-d12	264	10.061	10.061	(1.000)	1208368	2.00000	
9	Pyridine	79	1.809	1.809	(0.531)	1065505	5.00000	4.5536
10	N-Nitrosodimethylamine	74	1.785	1.785	(0.524)	647369	5.00000	4.5466
11	Ethyl methacrylate	69	2.015	2.015	(0.592)	987050	5.00000	4.7324
12	3-Chloropropionitrile	54	2.193	2.193	(0.644)	468569	5.00000	4.8093
13	Malononitrile	66	2.347	2.347	(0.689)	1176372	5.00000	4.3313
209	Benzaldehyde	77	3.121	3.121	(0.917)	744597	5.00000	4.7977
21	Aniline	93	3.184	3.184	(0.935)	1561950	5.00000	4.7100
22	Phenol	94	3.136	3.136	(0.921)	1231439	5.00000	4.7333
23	bis(2-Chloroethyl)ether	93	3.208	3.208	(0.942)	879822	5.00000	4.3526
24	2-Chlorophenol	128	3.266	3.266	(0.959)	809588	5.00000	5.0888
26	1,3-Dichlorobenzene	146	3.372	3.372	(0.990)	812738	5.00000	5.0347
27	1,4-Dichlorobenzene	146	3.420	3.420	(1.004)	506479	5.00000	4.9052
28	1,2-Dichlorobenzene	146	3.525	3.525	(1.035)	790531	5.00000	5.0809
29	Benzyl Alcohol	108	3.482	3.482	(1.023)	574926	5.00000	4.7886
30	2-Methylphenol	108	3.545	3.545	(1.041)	805248	5.00000	4.7999
31	bis(2-Chloroisopropyl)ether	45	3.569	3.569	(1.048)	762030	5.00000	3.9692
37	Acetophenone	105	3.674	3.674	(1.079)	1393029	5.00000	4.8812
32	N-Nitroso-di-n-propylamine	70	3.665	3.665	(1.076)	901124	5.00000	4.6523
192	4-Methylphenol	108	3.650	3.650	(1.072)	854271	5.00000	4.8296
34	Hexachloroethane	117	3.761	3.761	(1.104)	337932	5.00000	5.0548
35	Nitrobenzene	77	3.800	3.800	(0.884)	1193868	5.00000	5.0351
41	Isophorone	82	3.958	3.958	(0.921)	2041792	5.00000	4.8256
42	2-Nitrophenol	139	4.021	4.021	(0.935)	460906	5.00000	5.9761
43	2,4-Dimethylphenol	107	4.021	4.021	(0.935)	1095435	5.00000	5.2282
44	bis(2-Chloroethoxy)methane	93	4.093	4.093	(0.952)	1070370	5.00000	4.7296
46	2,4-Toluenediamene	121	5.122	5.122	(1.191)	625189	5.00000	5.2583
47	1,3,5-Trichlorobenzene	180	4.026	4.026	(0.936)	739938	5.00000	5.7466

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
48	2,4-Dichlorophenol	162	4.189	4.189	(0.974)	660723	5.00000	5.6248
49	Benzoic Acid	122	4.107	4.107	(0.955)	874503	10.0000	8.2827
50	1,2,4-Trichlorobenzene	180	4.252	4.252	(0.989)	749129	5.00000	5.4695
51	Naphthalene	128	4.314	4.314	(1.003)	2433462	5.00000	5.1417
52	4-Chloroaniline	127	4.338	4.338	(1.009)	984356	5.00000	5.0310
56	Hexachlorobutadiene	225	4.386	4.386	(1.020)	497596	5.00000	5.6831
210	Caprolactam	113	4.593	4.593	(1.068)	290219	5.00000	5.5713
57	1,2,3-Trichlorobenzene	180	4.410	4.410	(1.026)	671880	5.00000	5.4439
59	4-Chloro-3-Methylphenol	107	4.670	4.670	(1.086)	897268	5.00000	5.2256
62	2-Methylnaphthalene	142	4.805	4.805	(1.117)	1481601	5.00000	5.2912
63	1-Methylnaphthalene	142	4.877	4.877	(1.134)	1580990	5.00000	5.2421
64	Hexachlorocyclopentadiene	237	4.910	4.910	(0.882)	519435	5.00000	4.8041
66	2,4,6-Trichlorophenol	196	4.997	4.997	(0.898)	541292	5.00000	5.5952
67	2,4,5-Trichlorophenol	196	5.035	5.035	(0.905)	590715	5.00000	5.7770
211	1,1'-Biphenyl	154	5.588	5.588	(1.004)	1920694	5.00000	5.2953
68	1,2,3,5-Tetrachlorobenzene	216	4.915	4.915	(0.883)	881438	5.00000	5.3808
70	2-Chloronaphthalene	162	5.160	5.160	(0.927)	1552827	5.00000	5.2112
73	2-Nitroaniline	65	5.223	5.223	(0.939)	721317	5.00000	4.8527
74	1,2,3,4-Tetrachlorobenzene	216	5.132	5.132	(0.922)	825818	5.00000	5.4518
76	Dimethylphthalate	163	5.338	5.338	(0.959)	1869168	5.00000	5.3637
78	2,6-Dinitrotoluene	165	5.391	5.391	(0.969)	443990	5.00000	5.4654
79	Acenaphthylene	152	5.463	5.463	(0.982)	2598002	5.00000	5.4890
80	1,2-Dinitrobenzene	168	5.439	5.439	(0.978)	214203	5.00000	5.9190
81	3-Nitroaniline	138	5.521	5.521	(0.992)	437996	5.00000	5.6600
82	Acenaphthene	153	5.588	5.588	(1.004)	1634649	5.00000	5.1658
83	2,4-Dinitrophenol	184	5.593	5.593	(1.005)	590426	10.0000	10.019
85	4-Nitrophenol	109	5.627	5.627	(1.011)	343131	5.00000	5.0691
86	Dibenzofuran	168	5.713	5.713	(1.027)	2399562	5.00000	5.2914
87	2,4-Dinitrotoluene	165	5.685	5.685	(1.022)	602941	5.00000	5.3603
91	2,3,5,6-Tetrachlorophenol	232	5.761	5.761	(1.035)	502659	5.00000	5.1377
93	Diethylphthalate	149	5.843	5.843	(1.050)	1954943	5.00000	5.4130
94	Fluorene	166	5.963	5.963	(1.072)	2096881	5.00000	5.4031
95	4-Chlorophenyl-phenylether	204	5.944	5.944	(1.068)	1007870	5.00000	5.5803
96	4-Nitroaniline	138	5.968	5.968	(1.073)	479433	5.00000	5.0521
98	4,6-Dinitro-2-methylphenol	198	5.983	5.983	(0.900)	382512	5.00000	5.0286(H)
99	N-Nitrosodiphenylamine	169	6.031	6.031	(0.907)	1494038	5.00000	5.3072
100	1,2-Diphenylhydrazine	77	6.060	6.060	(0.912)	2564544	5.00000	4.5222
106	4-Bromophenyl-phenylether	248	6.305	6.305	(0.949)	614328	5.00000	5.6695
107	Hexachlorobenzene	284	6.363	6.363	(0.957)	717840	5.00000	5.7554
212	Atrazine	200	6.401	6.401	(0.963)	610784	5.00000	5.5809
111	Pentachlorophenol	266	6.502	6.502	(0.978)	731493	10.0000	9.0113
115	Phenanthrene	178	6.666	6.666	(1.003)	3030870	5.00000	5.1584
116	Anthracene	178	6.704	6.704	(1.009)	3102774	5.00000	5.4235
119	Carbazole	167	6.810	6.810	(1.025)	2719482	5.00000	5.2034
120	Di-n-Butylphthalate	149	7.026	7.026	(1.057)	3395574	5.00000	5.7234
123	Fluoranthene	202	7.546	7.546	(1.135)	3443027	5.00000	5.8051
124	Benzidine	184	7.627	7.627	(0.880)	1838192	5.00000	4.9091
125	Pyrene	202	7.723	7.723	(0.891)	3660532	5.00000	5.2638
131	Butylbenzylphthalate	149	8.171	8.171	(0.942)	1470694	5.00000	5.2880
133	3,3'-Dimethoxybenzidine	244	8.584	8.584	(0.990)	864941	5.00000	5.5540
135	3,3'-Dichlorobenzidine	252	8.623	8.623	(0.994)	1555051	5.00000	5.3009
136	Benzo(a)Anthracene	228	8.661	8.661	(0.999)	3883339	5.00000	5.2618
137	Chrysene	228	8.695	8.695	(1.003)	3571672	5.00000	5.2313
138	4,4'-Methylene bis(o-chloroan	231	8.618	8.618	(0.994)	736135	5.00000	5.3033

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139 bis(2-ethylhexyl)Phthalate	149	8.608	8.608	(0.993)	2159890	5.00000	5.1504
140 Di-n-octylphthalate	149	9.147	9.147	(0.909)	3492794	5.00000	4.7024
141 Benzo(b)fluoranthene	252	9.633	9.633	(0.957)	3887349	5.00000	5.4930
142 Benzo(k)fluoranthene	252	9.661	9.661	(0.960)	3906996	5.00000	5.1431
146 Benzo(a)pyrene	252	9.998	9.998	(0.994)	3467457	5.00000	5.4209
149 Indeno(1,2,3-cd)pyrene	276	11.561	11.561	(1.149)	4032706	5.00000	5.6330
150 Dibenz(a,h)anthracene	278	11.580	11.580	(1.151)	3536950	5.00000	5.6360
151 Benzo(g,h,i)perylene	276	12.027	12.027	(1.195)	3409775	5.00000	5.5818
198 1,4-Dioxane	88	1.612	1.612	(0.473)	354560	5.00000	4.4854
$ 154 Nitrobenzene-d5	82	3.785	3.785	(0.880)	1185850	5.00000	5.1630
$ 155 2-Fluorobiphenyl	172	5.059	5.059	(0.909)	1886132	5.00000	5.2625
$ 156 Terphenyl-d14	244	7.810	7.810	(0.901)	2697321	5.00000	5.3675
$ 157 Phenol-d5	99	3.126	3.126	(0.918)	1207345	5.00000	4.9299
$ 158 2-Fluorophenol	112	2.544	2.544	(0.747)	775718	5.00000	5.0690
$ 159 2,4,6-Tribromophenol	330	6.137	6.137	(1.103)	324865	5.00000	6.3823
$ 186 2-Chlorophenol-d4	132	3.256	3.256	(0.956)	747756	5.00000	5.2071
$ 187 1,2-Dichlorobenzene-d4	152	3.516	3.516	(1.032)	498819	5.00000	5.0538
101 Diphenylamine	169	6.031	6.031	(0.907)	1494038	5.00000	5.3072

QC Flag Legend

H - Operator selected an alternate compound hit.

Report Date: 17-Mar-2008 14:47

Calibration History

Method : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Start Cal Date: 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Last Cal Level: 6
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.05000		
17-MAR-2008 13:07	1-pahpl	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SLL0317.D
Cal Level: 2 , Cal Amount: 0.25000		
17-MAR-2008 12:47	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SL0317.D
Cal Level: 3 , Cal Amount: 0.50000		
17-MAR-2008 12:07	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SML0317.D
Cal Level: 4 , Cal Amount: 1.00000		
17-MAR-2008 12:27	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SM0317.D
Cal Level: 5 , Cal Amount: 2.50000		
17-MAR-2008 11:27	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SMM0317.D
Cal Level: 6 , Cal Amount: 5.00000		
17-MAR-2008 11:08	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SMH0317.D
Cal Level: 7 , Cal Amount: 7.50000		
17-MAR-2008 13:27	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SH0317.D
Cal Level: 8 , Cal Amount: 10.00000		

17-MAR-2008 13:46	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SHH0317.D

Cal Level: 9 , Cal Amount: 12.50000

17-MAR-2008 14:06	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9HHH0317.D

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

17-MAR-2008 14:26	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9TCLICV.D
17-MAR-2008 11:08	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SMH0317.D

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:22 a4hp9.i
Curve Type : Average

Calibration File Names:
Level 1: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SLL0317.D
Level 2: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SL0317.D
Level 3: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SML0317.D
Level 4: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SM0317.D
Level 5: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SMM0317.D
Level 6: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SMH0317.D
Level 7: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SH0317.D
Level 8: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SHH0317.D
Level 9: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9HHH0317.D

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
198 1,4-Dioxane	+++++	0.81639	0.78822	0.73140	0.64790	0.60226			
	0.64416	0.57422	0.61223				0.67710	13.331	<-
7 N-Nitrosomorpholine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
8 Ethyl methanesulfonate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
9 Pyridine	+++++	1.74048	2.00570	2.05264	2.10340	1.97148			
	2.13183	2.04808	2.20283				2.03205	6.816	<-
10 N-Nitrosodimethylamine	+++++	1.16454	1.35183	1.32764	1.31634	1.22932			
	1.38025	1.26081	1.39154				1.30278	6.041	<-
11 Ethyl methacrylate	+++++	2.02626	1.98510	2.15758	1.95781	1.92987			
	2.16600	1.91029	2.15378				2.03583	5.298	<-
12 3-Chloropropionitrile	+++++	0.88105	0.97096	0.90042	0.92030	0.88080			
	0.94164	0.82002	0.94060				0.90697	5.199	<-
13 Malononitrile	+++++	2.36582	2.51235	2.62264	2.66407	2.51970			
	2.67217	2.39901	2.53241				2.53602	4.496	<-

TestAmerica North Canton

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Start Cal Date : 17-MAR-2008 11:08
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Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:22 a4hp9.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
14 2-Picoline	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
15 N-Nitrosomethylethylamine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
16 Methyl methanesulfonate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
18 1,3-Dichloro-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
19 N-Nitrosodiethylamine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
21 Aniline	+++++	2.91198	3.06290	2.84555	2.98833	2.83006			
	3.02750	2.69895	3.06923				2.92931	4.484	<-
22 Phenol	+++++	2.19167	2.21333	2.36884	2.42626	2.34996			
	2.56718	2.30625	2.58971				2.37665	6.175	<-
23 bis(2-Chloroethyl)ether	2.52162	2.01189	1.81491	1.78915	1.91046	1.86110			
	1.72033	1.90446	2.01100				1.94943	12.067	
24 2-Chlorophenol	+++++	1.02794	1.31089	1.27850	1.30682	1.26561			
	1.32044	1.19217	1.36058				1.25787	8.356	<-
25 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
26 1,3-Dichlorobenzene	+++++	1.34677	1.38679	1.40452	1.38528	1.33974			
	1.43231	1.31420	1.44116				1.38134	3.260	<-

TestAmerica North Canton

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Last Edit : 17-Mar-2008 14:22 a4hp9.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
27 1,4-Dichlorobenzene	+++++	0.88098	0.94175	0.90074	0.88322	0.83460			
	0.86958	0.79210	0.90313				0.87576	5.204	<-
28 1,2-Dichlorobenzene	+++++	1.20047	1.24396	1.35886	1.29018	1.31301			
	1.37452	1.25958	1.48465				1.31565	6.804	<-
29 Benzyl Alcohol	+++++	0.97491	1.00992	1.10923	1.14321	1.11011			
	1.12005	1.07436	1.20255				1.09304	6.652	<-
30 2-Methylphenol	+++++	1.47062	1.37848	1.53550	1.51752	1.48320			
	1.53750	1.49106	1.63586				1.50621	4.834	<-
31 bis(2-Chloroisopropyl)ether	+++++	1.89218	1.79769	1.84772	1.74907	1.66002			
	1.70809	1.59011	1.72253				1.74593	5.648	<-
32 N-Nitroso-di-n-propylamine	+++++	1.91211	1.72695	1.91259	1.92778	1.85630			
	1.93848	1.78048	2.04673				1.88768	5.260	<-
M 195 Cresols, total	+++++	2.88902	2.96438	3.11990	3.15367	3.01832			
	3.13728	3.00639	3.30345				3.07405	4.242	<-
192 4-Methylphenol	+++++	1.41840	1.58590	1.58439	1.63615	1.53513			
	1.59978	1.51533	1.66760				1.56783	4.964	<-
193 3-Methylphenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
34 Hexachloroethane	0.84771	0.65038	0.62908	0.63351	0.63217	0.62134			
	0.63291	0.58004	0.64486				0.65244	11.634	
35 Nitrobenzene	+++++	0.60943	0.69456	0.72823	0.72739	0.67927			
	0.73501	0.68168	0.74075				0.69954	6.261	<-

TestAmerica North Canton

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Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:22 a4hp9.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
36 N-Nitrosopyrrolidine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
37 Acetophenone	+++++	2.49138	2.42709	2.49052	2.52581	2.44820			
	2.60344	2.42684	2.75081				2.52051	4.357	<-
39 o-Toluidine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
40 N-Nitrosopiperidine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
41 Isophorone	+++++	1.02139	1.15925	1.18045	1.13397	1.13050			
	1.23322	1.15397	1.24718				1.15749	6.032	<-
42 2-Nitrophenol	+++++	0.12342	0.16677	0.18544	0.19250	0.18839			
	0.21140	0.19416	0.22500				0.18588	16.477	<-
43 2,4-Dimethylphenol	+++++	0.50471	0.49918	0.52503	0.53032	0.52172			
	0.59512	0.55674	0.62088				0.54421	8.004	<-
44 bis(2-Chloroethoxy)methane	+++++	0.52531	0.55519	0.57739	0.55370	0.53467			
	0.58139	0.56579	0.59820				0.56145	4.334	<-
45 O,O,O-Triethyl phosphorothioa	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
46 2,4-Toluenediamene	+++++	0.29126	0.28344	0.12643	0.14710	0.10798			
	0.21362	0.16605	0.19539				0.19141	35.728	<-
47 1,3,5-Trichlorobenzene	+++++	0.27159	0.28496	0.30738	0.29143	0.29912			
	0.32261	0.30413	0.34919				0.30380	7.863	<-

TestAmerica North Canton

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Last Edit : 17-Mar-2008 14:22 a4hp9.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
48 2,4-Dichlorophenol	+++++	0.24163	0.29493	0.30646	0.29829	0.29896			
	0.32975	0.30270	0.33130				0.30050	9.199	<-
49 Benzoic Acid	+++++	+++++	0.19219	0.22167	0.24105	0.26140			
	0.27793	0.27330	0.28148				0.24986	13.343	<-
50 1,2,4-Trichlorobenzene	+++++	0.30373	0.29778	0.32575	0.32430	0.31935			
	0.33976	0.32093	0.35129				0.32286	5.384	<-
51 Naphthalene	1.24355	0.89936	1.01840	1.05164	1.02517	1.01799			
	1.11885	1.04754	1.17869				1.06680	9.465	
52 4-Chloroaniline	+++++	0.34782	0.38940	0.41377	0.42708	0.42933			
	0.43567	0.42034	0.46227				0.41571	8.237	<-
53 a,a-Dimethyl-phenethylamine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
54 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
55 Hexachloropropene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
56 Hexachlorobutadiene	0.26626	0.16817	0.22656	0.19747	0.19626	0.19783			
	0.21740	0.20037	0.22378				0.21045	13.033	
57 1,2,3-Trichlorobenzene	+++++	0.28669	0.29253	0.28425	0.26698	0.28031			
	0.30269	0.27479	0.31157				0.28748	5.059	<-
58 N-Nitrosodi-n-butylamine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

TestAmerica North Canton

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Last Edit : 17-Mar-2008 14:22 a4hp9.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
59 4-Chloro-3-Methylphenol	+++++	0.37048	0.38219	0.45149	0.43333	0.43032			
	0.46674	0.43908	0.47689				0.43132	8.727	<-
60 p-Phenylene diamine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
61 Safrole	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
62 2-Methylnaphthalene	0.70948	0.50581	0.58039	0.60654	0.60263	0.61183			
	0.66133	0.62873	0.71111				0.62420	10.304	
63 1-Methylnaphthalene	0.72173	0.61993	0.61423	0.68234	0.64050	0.63218			
	0.73134	0.67059	0.76463				0.67527	7.977	
64 Hexachlorocyclopentadiene	+++++	0.34599	0.36437	0.36726	0.40655	0.41747			
	0.42279	0.40255	0.47653				0.40044	10.335	<-
65 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
66 2,4,6-Trichlorophenol	+++++	0.32304	0.39242	0.41171	0.38361	0.39916			
	0.40934	0.39745	0.45034				0.39588	8.996	<-
67 2,4,5-Trichlorophenol	+++++	0.32149	0.37097	0.41384	0.40493	0.42432			
	0.43994	0.41508	0.47104				0.40770	11.051	<-
68 1,2,3,5-Tetrachlorobenzene	+++++	0.53083	0.56453	0.59227	0.57031	0.60079			
	0.63159	0.60190	0.71313				0.60067	9.071	
69 1,4-Dinitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:22 a4hp9.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
70 2-Chloronaphthalene	1.24942	1.03089	1.01036	1.10022	1.06917	1.08062			
	1.11475	1.05803	1.23736				1.10564	7.636	
71 Isosafrole 1	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
M 188 Isosafrole, Total	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
72 Isosafrole 2	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
73 2-Nitroaniline	+++++	0.57633	0.61084	0.69007	0.63610	0.64766			
	0.63642	0.60705	0.67950				0.63550	5.942	<-
74 1,2,3,4-Tetrachlorobenzene	+++++	0.47838	0.48346	0.53189	0.53598	0.55187			
	0.59590	0.59131	0.69994				0.55859	12.801	<-
75 1,4-Naphthoquinone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
76 Dimethylphthalate	+++++	1.15287	1.27622	1.35700	1.26496	1.33144			
	1.34488	1.31162	1.45912				1.31227	6.690	<-
77 m-Dinitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
78 2,6-Dinitrotoluene	+++++	0.23909	0.27845	0.28494	0.27891	0.29592			
	0.29807	0.27877	0.31289				0.28338	7.632	<-
79 Acenaphthylene	1.98632	1.64971	1.66267	1.80427	1.77870	1.84115			
	1.90880	1.85237	2.12224				1.84514	8.093	

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
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Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:22 a4hp9.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
80 1,2-Dinitrobenzene	+++++	+++++	0.14678	0.14228	0.13372	0.14610			
	0.14085	0.13632	0.15030				0.14234	4.156	<-
81 3-Nitroaniline	+++++	0.19541	0.24862	0.30181	0.28246	0.28817			
	0.28615	0.27827	0.31401				0.27436	13.521	<-
82 Acenaphthene	1.06098	1.06039	1.04762	1.14961	1.13857	1.19154			
	1.32244	1.24893	1.49955				1.19107	12.411	
83 2,4-Dinitrophenol	+++++	+++++	0.15280	0.13804	0.20849	0.24342			
	0.20748	0.22094	0.24821				0.20277	20.914	<-
84 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
85 4-Nitrophenol	+++++	+++++	0.25554	0.29237	0.31781	0.35655			
	0.36429	0.32846	0.37418				0.32703	13.022	<-
86 Dibenzofuran	1.57954	1.47388	1.55447	1.61179	1.57958	1.65288			
	1.71274	1.64740	1.90448				1.63519	7.436	
87 2,4-Dinitrotoluene	+++++	0.27894	0.36310	0.40719	0.37965	0.40020			
	0.39404	0.37765	0.41604				0.37710	11.463	<-
88 2,3,4,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
89 1-Naphthylamine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
90 Zinophos	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
91 2,3,5,6-Tetrachlorophenol	+++++	0.25472	0.29426	0.36681	0.35900	0.37244			
	0.38617	0.36764	0.42131				0.35279	15.035	<-
92 2-Naphthylamine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
93 Diethylphthalate	+++++	1.24423	1.24900	1.33643	1.29936	1.33184			
	1.38070	1.30352	1.52666				1.33397	6.748	<-
94 Fluorene	1.34153	1.35569	1.28149	1.37492	1.32190	1.40192			
	1.55496	1.49780	1.74515				1.43060	10.203	
95 4-Chlorophenyl-phenylether	+++++	0.63895	0.58892	0.65218	0.61189	0.62695			
	0.66069	0.63353	0.74117				0.64428	7.010	<-
96 4-Nitroaniline	+++++	0.27727	0.28741	0.30432	0.31518	0.32908			
	0.37149	0.33928	0.41315				0.32965	13.660	<-
97 5-Nitro-o-toluidine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
98 4,6-Dinitro-2-methylphenol	+++++	+++++	0.11309	0.12590	0.15388	0.16594			
	0.13928	0.13557	0.14800				0.14024	12.596	<-
99 N-Nitrosodiphenylamine	+++++	0.46807	0.49787	0.54821	0.53487	0.55119			
	0.58535	0.55641	0.64104				0.54788	9.561	<-
100 1,2-Diphenylhydrazine	+++++	1.23913	1.36234	1.51949	1.38374	1.40214			
	1.47809	1.38672	1.54201				1.41421	6.901	<-
101 Diphenylamine	+++++	0.46807	0.49787	0.54821	0.53487	0.55119			
	0.58535	0.55641	0.64104				0.54788	9.561	<-

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102 Tetraethyl dithiopyrophosphat	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
103 Diallate 1	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
M 189 Diallate, Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
104 Phorate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
105 1,3,5-Trinitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
106 4-Bromophenyl-phenylether	+++++	0.18013	0.18869	0.21705	0.19173	0.21702	0.22151	0.20822	0.23634	0.20759	9.216	<-
107 Hexachlorobenzene	0.25293	0.16360	0.20830	0.19989	0.20232	0.21249	0.22145	0.20577	0.23312	0.21110	11.651	
108 Phenacetin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
109 Diallate 2	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
110 Dimethoate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
111 Pentachlorophenol	+++++	0.08727	0.10779	0.14163	0.14177	0.14699	0.16542	0.16198	0.17582	0.14108	21.222	<-

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
112 Pentachloronitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
113 4-Aminobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
114 Pronamide	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
115 Phenanthrene	1.23165	1.06593	1.09751	1.22218	1.15366	1.20886			
	1.29212	1.22084	1.41213				1.21165	8.502	
116 Anthracene	1.17461	1.00977	1.11755	1.17576	1.16403	1.19986			
	1.30566	1.20538	1.45035				1.20033	10.177	
117 Dinoseb	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
118 Disulfoton	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
119 Carbazole	+++++	0.87951	0.95592	0.99327	0.97135	1.00660			
	1.08379	1.02820	1.15760				1.00953	8.313	<-
120 Di-n-Butylphthalate	+++++	1.14607	1.22260	1.18897	1.20781	1.26406			
	1.37397	1.30773	1.49182				1.27538	8.855	<-
121 4-Nitroquinoline 1-oxide	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
122 Methapyrilene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
123 Fluoranthene	1.18468	1.11821	1.20248	1.12556	1.17907	1.23150			
	1.36101	1.28076	1.45107				1.23715	8.899	
124 Benzidine	+++++	0.51333	0.61937	0.14264	0.60386	0.55851			
	0.61107	0.55451	0.69361				0.53711	31.322	<-
125 Pyrene	1.38863	1.13697	1.17101	1.16992	1.25978	1.28123			
	1.33357	1.24091	1.42406				1.26734	7.909	
126 Aramite 1	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
M 191 Aramite, Total	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
127 Aramite 2	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
128 p-Dimethylamino azobenzene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
129 p-Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
130 Famphur	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
131 Butylbenzylphthalate	+++++	0.51022	0.49016	0.55429	0.56816	0.55758			
	0.56327	0.53678	0.59792				0.54730	6.238	<-
132 3,3'-Dimethylbenzidine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
133 3,3'-Dimethoxybenzidine	+++++	0.24377	0.24880	0.15609	0.27350	0.27787			
	0.26659	0.25550	0.30157				0.25296	17.091	<-
134 2-Acetylaminofluorene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
135 3,3'-Dichlorobenzidine	+++++	0.39389	0.40556	0.40909	0.46357	0.45394			
	0.49575	0.45451	0.54498				0.45266	11.226	<-
136 Benzo(a)Anthracene	1.47327	1.11898	1.14023	1.24643	1.19805	1.20729			
	1.27655	1.17656	1.34974				1.24301	8.959	
137 Chrysene	1.23917	0.97871	1.02087	1.11009	1.09215	1.10240			
	1.13550	1.07403	1.25355				1.11183	8.092	
138 4,4'-Methylene bis(o-chloroan	+++++	+++++	0.20179	0.18760	0.21785	0.23364			
	0.24438	0.23171	0.27609				0.22758	12.745	<-
139 bis(2-ethylhexyl)Phthalate	+++++	0.68035	0.72431	0.76067	0.75186	0.76657			
	0.79860	0.76336	0.91904				0.77060	8.994	<-
140 Di-n-octylphthalate	+++++	1.38447	1.39013	1.54374	1.54384	1.53979			
	1.64162	1.59750	1.79817				1.55491	8.600	<-
141 Benzo(b)fluoranthene	1.55413	1.31331	1.29228	1.46437	1.35641	1.34958			
	1.48964	1.43797	1.62291				1.43118	7.885	
142 Benzo(k)fluoranthene	1.47158	1.28896	1.33349	1.49547	1.44838	1.42563			
	1.54836	1.47501	1.66398				1.46121	7.559	
143 7,12-dimethylbenz[a]anthracen	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

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Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	7.500 Level 7	10.000 Level 8	12.500 Level 9	___ RRF	% RSD	
144 Hexachlorophene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++							+++++	+++++	<-
145 Hexachlorophene product	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++							+++++	+++++	<-
146 Benzo(a)pyrene	1.39481	1.16148	1.20862	1.30963	1.27949	1.26279						
	1.35971	1.30330	1.44699							1.30298	6.839	
148 3-Methylcholanthrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++							+++++	+++++	<-
149 Indeno(1,2,3-cd)pyrene	1.15811	1.17314	1.28371	1.42844	1.33254	1.32502						
	1.41531	1.37583	1.54680							1.33766	9.227	
150 Dibenz(a,h)anthracene	1.18715	0.97368	1.07014	1.12999	1.10988	1.09815						
	1.20648	1.16176	1.34240							1.14218	8.936	
151 Benzo(g,h,i)perylene	1.05068	1.05692	1.09843	1.16116	1.08996	1.07772						
	1.13980	1.08477	1.21663							1.10845	4.880	
230 2-Chloroacetophenone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++							+++++	+++++	<-
199 3-Picoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++							+++++	+++++	<-
200 N,N-Dimethylacetamide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++							+++++	+++++	<-
201 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++							+++++	+++++	<-

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
202 Diphenyl	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
203 Diphenyl ether	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
204 6-Methylchrysene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
205 Benzenethiol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
207 Indene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
208 Dibenz(a,j)acridine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
214 Dibenz(a,h)acridine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
209 Benzaldehyde	+++++	1.79233	1.82466	1.83663	1.71483	1.55463			
	1.71608	1.38205	1.39095				1.65152	11.262	<-
210 Caprolactam	+++++	0.10983	0.10507	0.12933	0.13540	0.13559			
	0.13898	0.13194	0.13950				0.12821	10.372	<-
211 1,1'-Biphenyl	+++++	1.25125	1.35464	1.45687	1.45986	1.48631			
	1.64414	1.58258	1.93174				1.52092	13.547	<-
212 Atrazine	+++++	0.19655	0.22551	0.24249	0.23014	0.24172			
	0.24745	0.23518	0.25423				0.23416	7.592	<-

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220 Diphenyl Thiourea	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
216 1,3-Diethyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
218 1,1,3,3-Tetramethyl-2-Thioure	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
217 1,3-Dibutyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
221 Hexabromobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
219 o-Benzyl Phenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
223 bis(2-chloroethoxy)ethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
224 Benzothiazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
225 1,3-Dimethyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
226 Methyl parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
227 Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

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Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:22 a4hp9.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
228 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
229 Kepone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
231 Phenyl sulfone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
232 3,4-Dichloronitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
$ 154 Nitrobenzene-d5	0.67039	0.66945	0.67042	0.73484	0.68187	0.66327			
	0.70478	0.66076	0.70309				0.68432	3.630	
$ 155 2-Fluorobiphenyl	1.16236	1.14255	1.17512	1.30503	1.25018	1.32226			
	1.34737	1.28191	1.52623				1.27922	9.258	
$ 156 Terphenyl-d14	0.83973	0.75080	0.76913	0.80960	0.88038	0.86373			
	0.89506	0.83547	0.95926				0.84479	7.621	
$ 157 Phenol-d5	2.27584	2.01248	2.26824	2.28760	2.23528	2.14410			
	2.32141	2.14374	2.46060				2.23881	5.691	
$ 158 2-Fluorophenol	1.72653	1.31314	1.32831	1.40717	1.41419	1.41398			
	1.47949	1.37332	1.51716				1.44148	8.673	
$ 159 2,4,6-Tribromophenol	+++++	0.10857	0.13411	0.15783	0.15483	0.14937			
	0.16491	0.15424	0.17725				0.15014	13.872	<-
$ 186 2-Chlorophenol-d4	1.14321	1.12884	1.17147	1.16126	1.18416	1.12244			
	1.22631	1.16099	1.27434				1.17478	4.136	

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:22 a4hp9.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	___ RRF	% RSD
	7.500 Level 7	10.000 Level 8	12.500 Level 9					
$ 187 1,2-Dichlorobenzene-d4	0.98150	0.91698	0.88313	0.87999	0.88500	0.82568		
	0.88146	0.81225	0.92928				0.88836	5.774

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TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Calibration File Names:
Level 1: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SLL0317.D
Level 2: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SL0317.D
Level 3: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SML0317.D
Level 4: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SM0317.D
Level 5: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SMM0317.D
Level 6: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SMH0317.D
Level 7: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SH0317.D
Level 8: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SHH0317.D
Level 9: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9HHH0317.D

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
198 1,4-Dioxane	+++++	0.81639	0.78822	0.73140	0.64790	0.60226						
	0.64416	0.57422	0.61223				AVRG		0.67710		13.33060	<-
7 N-Nitrosomorpholine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
8 Ethyl methanesulfonate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
9 Pyridine	+++++	1.74048	2.00570	2.05264	2.10340	1.97148						
	2.13183	2.04808	2.20283				AVRG		2.03205		6.81566	<-
10 N-Nitrosodimethylamine	+++++	1.16454	1.35183	1.32764	1.31634	1.22932						
	1.38025	1.26081	1.39154				AVRG		1.30278		6.04100	<-
11 Ethyl methacrylate	+++++	2.02626	1.98510	2.15758	1.95781	1.92987						
	2.16600	1.91029	2.15378				AVRG		2.03583		5.29753	<-
12 3-Chloropropionitrile	+++++	0.88105	0.97096	0.90042	0.92030	0.88080						
	0.94164	0.82002	0.94060				AVRG		0.90697		5.19922	<-
13 Malononitrile	+++++	2.36582	2.51235	2.62264	2.66407	2.51970						
	2.67217	2.39901	2.53241				AVRG		2.53602		4.49627	<-
14 2-Picoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
15 N-Nitrosomethylethylamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
16 Methyl methanesulfonate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
18 1,3-Dichloro-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
19 N-Nitrosodiethylamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
21 Aniline	+++++	2.91198	3.06290	2.84555	2.98833	2.83006						
	3.02750	2.69895	3.06923				AVRG		2.92931		4.48423	<-
22 Phenol	+++++	2.19167	2.21333	2.36884	2.42626	2.34996						
	2.56718	2.30625	2.58971				AVRG		2.37665		6.17523	<-
23 bis(2-Chloroethyl)ether	2.52162	2.01189	1.81491	1.78915	1.91046	1.86110						
	1.72033	1.90446	2.01100				AVRG		1.94943		12.06713	
24 2-Chlorophenol	+++++	1.02794	1.31089	1.27850	1.30682	1.26561						
	1.32044	1.19217	1.36058				AVRG		1.25787		8.35634	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
25 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
26 1,3-Dichlorobenzene	+++++	1.34677	1.38679	1.40452	1.38528	1.33974						
	1.43231	1.31420	1.44116				AVRG		1.38134		3.25974	<-
27 1,4-Dichlorobenzene	+++++	0.88098	0.94175	0.90074	0.88322	0.83460						
	0.86958	0.79210	0.90313				AVRG		0.87576		5.20437	<-
28 1,2-Dichlorobenzene	+++++	1.20047	1.24396	1.35886	1.29018	1.31301						
	1.37452	1.25958	1.48465				AVRG		1.31565		6.80438	<-
29 Benzyl Alcohol	+++++	0.97491	1.00992	1.10923	1.14321	1.11011						
	1.12005	1.07436	1.20255				AVRG		1.09304		6.65189	<-
30 2-Methylphenol	+++++	1.47062	1.37848	1.53550	1.51752	1.48320						
	1.53750	1.49106	1.63586				AVRG		1.50621		4.83436	<-
31 bis(2-Chloroisopropyl)ether	+++++	1.89218	1.79769	1.84772	1.74907	1.66002						
	1.70809	1.59011	1.72253				AVRG		1.74593		5.64848	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
32 N-Nitroso-di-n-propylamine	+++++	1.91211	1.72695	1.91259	1.92778	1.85630						
	1.93848	1.78048	2.04673				AVRG		1.88768		5.26008	<-
M 195 Cresols, total	+++++	2.88902	2.96438	3.11990	3.15367	3.01832						
	3.13728	3.00639	3.30345				AVRG		3.07405		4.24168	<-
192 4-Methylphenol	+++++	1.41840	1.58590	1.58439	1.63615	1.53513						
	1.59978	1.51533	1.66760				AVRG		1.56783		4.96390	<-
193 3-Methylphenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
34 Hexachloroethane	0.84771	0.65038	0.62908	0.63351	0.63217	0.62134						
	0.63291	0.58004	0.64486				AVRG		0.65244		11.63420	
35 Nitrobenzene	+++++	0.60943	0.69456	0.72823	0.72739	0.67927						
	0.73501	0.68168	0.74075				AVRG		0.69954		6.26145	<-
36 N-Nitrosopyrrolidine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
37 Acetophenone	+++++	2.49138	2.42709	2.49052	2.52581	2.44820						
	2.60344	2.42684	2.75081				AVRG		2.52051		4.35703	<-
39 o-Toluidine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
40 N-Nitrosopiperidine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
41 Isophorone	+++++	1.02139	1.15925	1.18045	1.13397	1.13050						
	1.23322	1.15397	1.24718				AVRG		1.15749		6.03223	<-
42 2-Nitrophenol	+++++	6677	19297	42641	111943	154942						
	334477	354752	587064				QUAD	-0.00781	5.69866	-0.85581	0.99633	<-
43 2,4-Dimethylphenol	+++++	0.50471	0.49918	0.52503	0.53032	0.52172						
	0.59512	0.55674	0.62088				AVRG		0.54421		8.00379	<-
44 bis(2-Chloroethoxy)methane	+++++	0.52531	0.55519	0.57739	0.55370	0.53467						
	0.58139	0.56579	0.59820				AVRG		0.56145		4.33374	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
45 O,O,O-Triethyl phosphorothioa	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
46 2,4-Toluenediamene	+++++	15757	32797	29073	85544	88806						
	337992	303397	509813				QUAD	0.04534	6.85042	-1.54984	0.96390	<-
47 1,3,5-Trichlorobenzene	+++++	0.27159	0.28496	0.30738	0.29143	0.29912						
	0.32261	0.30413	0.34919				AVRG		0.30380		7.86263	<-
48 2,4-Dichlorophenol	+++++	0.24163	0.29493	0.30646	0.29829	0.29896						
	0.32975	0.30270	0.33130				AVRG		0.30050		9.19896	<-
49 Benzoic Acid	+++++	+++++	0.19219	0.22167	0.24105	0.26140						
	0.27793	0.27330	0.28148				AVRG		0.24986		13.34260	<-
50 1,2,4-Trichlorobenzene	+++++	0.30373	0.29778	0.32575	0.32430	0.31935						
	0.33976	0.32093	0.35129				AVRG		0.32286		5.38407	<-
51 Naphthalene	1.24355	0.89936	1.01840	1.05164	1.02517	1.01799						
	1.11885	1.04754	1.17869				AVRG		1.06680		9.46508	

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
52 4-Chloroaniline	+++++	0.34782	0.38940	0.41377	0.42708	0.42933						
	0.43567	0.42034	0.46227				AVRG		0.41571		8.23711	<-
53 a,a-Dimethyl-phenethylamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
54 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
55 Hexachloropropene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
56 Hexachlorobutadiene	0.26626	0.16817	0.22656	0.19747	0.19626	0.19783						
	0.21740	0.20037	0.22378				AVRG		0.21045		13.03283	
57 1,2,3-Trichlorobenzene	+++++	0.28669	0.29253	0.28425	0.26698	0.28031						
	0.30269	0.27479	0.31157				AVRG		0.28748		5.05928	<-
58 N-Nitrosodi-n-butylamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
59 4-Chloro-3-Methylphenol	+++++	0.37048	0.38219	0.45149	0.43333	0.43032						
	0.46674	0.43908	0.47689				AVRG		0.43132		8.72736	<-
60 p-Phenylene diamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
61 Safrole	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
62 2-Methylnaphthalene	0.70948	0.50581	0.58039	0.60654	0.60263	0.61183						
	0.66133	0.62873	0.71111				AVRG		0.62420		10.30350	
63 1-Methylnaphthalene	0.72173	0.61993	0.61423	0.68234	0.64050	0.63218						
	0.73134	0.67059	0.76463				AVRG		0.67527		7.97724	
64 Hexachlorocyclopentadiene	+++++	0.34599	0.36437	0.36726	0.40655	0.41747						
	0.42279	0.40255	0.47653				AVRG		0.40044		10.33467	<-
65 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
66 2,4,6-Trichlorophenol	+++++	0.32304	0.39242	0.41171	0.38361	0.39916						
	0.40934	0.39745	0.45034				AVRG		0.39588		8.99648	<-
67 2,4,5-Trichlorophenol	+++++	0.32149	0.37097	0.41384	0.40493	0.42432						
	0.43994	0.41508	0.47104				AVRG		0.40770		11.05057	<-
68 1,2,3,5-Tetrachlorobenzene	+++++	0.53083	0.56453	0.59227	0.57031	0.60079						
	0.63159	0.60190	0.71313				AVRG		0.60067		9.07064	
69 1,4-Dinitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
70 2-Chloronaphthalene	1.24942	1.03089	1.01036	1.10022	1.06917	1.08062						
	1.11475	1.05803	1.23736				AVRG		1.10564		7.63612	
71 Isosafrole 1	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
M 188 Isosafrole, Total	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
72 Isosafrole 2	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
73 2-Nitroaniline	+++++	0.57633	0.61084	0.69007	0.63610	0.64766						
	0.63642	0.60705	0.67950				AVRG		0.63550		5.94217	<-
74 1,2,3,4-Tetrachlorobenzene	+++++	0.47838	0.48346	0.53189	0.53598	0.55187						
	0.59590	0.59131	0.69994				AVRG		0.55859		12.80082	<-
75 1,4-Naphthoquinone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
76 Dimethylphthalate	+++++	1.15287	1.27622	1.35700	1.26496	1.33144						
	1.34488	1.31162	1.45912				AVRG		1.31227		6.68955	<-
77 m-Dinitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
78 2,6-Dinitrotoluene	+++++	0.23909	0.27845	0.28494	0.27891	0.29592						
	0.29807	0.27877	0.31289				AVRG		0.28338		7.63171	<-

TestAmerica North Canton

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Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
79 Acenaphthylene	1.98632	1.64971	1.66267	1.80427	1.77870	1.84115						
	1.90880	1.85237	2.12224				AVRG		1.84514		8.09347	
80 1,2-Dinitrobenzene	+++++	+++++	0.14678	0.14228	0.13372	0.14610						
	0.14085	0.13632	0.15030				AVRG		0.14234		4.15646	<-
81 3-Nitroaniline	+++++	0.19541	0.24862	0.30181	0.28246	0.28817						
	0.28615	0.27827	0.31401				AVRG		0.27436		13.52054	<-
82 Acenaphthene	1.06098	1.06039	1.04762	1.14961	1.13857	1.19154						
	1.32244	1.24893	1.49955				AVRG		1.19107		12.41119	
83 2,4-Dinitrophenol	+++++	+++++	22242	38877	151337	240819						
	426603	504266	792729				QUAD	0.10923	4.94917	-0.28978	0.99316	<-
84 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
85 4-Nitrophenol	+++++	+++++	0.25554	0.29237	0.31781	0.35655						
	0.36429	0.32846	0.37418				AVRG		0.32703		13.02175	<-

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Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
86 Dibenzofuran	1.57954	1.47388	1.55447	1.61179	1.57958	1.65288						
	1.71274	1.64740	1.90448				AVRG		1.63519		7.43565	
87 2,4-Dinitrotoluene	+++++	0.27894	0.36310	0.40719	0.37965	0.40020						
	0.39404	0.37765	0.41604				AVRG		0.37710		11.46329	<-
88 2,3,4,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
89 1-Naphthylamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
90 Zinophos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
91 2,3,5,6-Tetrachlorophenol	+++++	8392	21417	51654	130292	184226						
	397013	419541	672767				QUAD	-0.01585	3.00857	-0.22767	0.99743	<-
92 2-Naphthylamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

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Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
93 Diethylphthalate	+++++	1.24423	1.24900	1.33643	1.29936	1.33184						
	1.38070	1.30352	1.52666				AVRG		1.33397		6.74821	<-
94 Fluorene	1.34153	1.35569	1.28149	1.37492	1.32190	1.40192						
	1.55496	1.49780	1.74515				AVRG		1.43060		10.20285	
95 4-Chlorophenyl-phenylether	+++++	0.63895	0.58892	0.65218	0.61189	0.62695						
	0.66069	0.63353	0.74117				AVRG		0.64428		7.00979	<-
96 4-Nitroaniline	+++++	0.27727	0.28741	0.30432	0.31518	0.32908						
	0.37149	0.33928	0.41315				AVRG		0.32965		13.66032	<-
97 5-Nitro-o-toluidine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
98 4,6-Dinitro-2-methylphenol	+++++	+++++	0.11309	0.12590	0.15388	0.16594						
	0.13928	0.13557	0.14800				AVRG		0.14024		12.59579	<-
99 N-Nitrosodiphenylamine	+++++	0.46807	0.49787	0.54821	0.53487	0.55119						
	0.58535	0.55641	0.64104				AVRG		0.54788		9.56057	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
100 1,2-Diphenylhydrazine	+++++	1.23913	1.36234	1.51949	1.38374	1.40214						
	1.47809	1.38672	1.54201				AVRG		1.41421		6.90075	<-
101 Diphenylamine	+++++	0.46807	0.49787	0.54821	0.53487	0.55119						
	0.58535	0.55641	0.64104				AVRG		0.54788		9.56057	<-
102 Tetraethyl dithiopyrophosphat	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
103 Diallate 1	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
M 189 Diallate, Total	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
104 Phorate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
105 1,3,5-Trinitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
106 4-Bromophenyl-phenylether	+++++	0.18013	0.18869	0.21705	0.19173	0.21702						
	0.22151	0.20822	0.23634				AVRG		0.20759		9.21550	<-
107 Hexachlorobenzene	0.25293	0.16360	0.20830	0.19989	0.20232	0.21249						
	0.22145	0.20577	0.23312				AVRG		0.21110		11.65106	
108 Phenacetin	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
109 Diallate 2	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
110 Dimethoate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
111 Pentachlorophenol	+++++	10339	27384	69215	180239	254548						
	592486	652633	1011836				QUAD	0.10386	6.88770	-0.55980	0.99900	<-
112 Pentachloronitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

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Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
113 4-Aminobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
114 Pronamide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
115 Phenanthrene	1.23165	1.06593	1.09751	1.22218	1.15366	1.20886						
	1.29212	1.22084	1.41213				AVRG		1.21165		8.50190	
116 Anthracene	1.17461	1.00977	1.11755	1.17576	1.16403	1.19986						
	1.30566	1.20538	1.45035				AVRG		1.20033		10.17700	
117 Dinoseb	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
118 Disulfoton	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
119 Carbazole	+++++	0.87951	0.95592	0.99327	0.97135	1.00660						
	1.08379	1.02820	1.15760				AVRG		1.00953		8.31281	<-

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Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
120 Di-n-Butylphthalate	+++++	1.14607	1.22260	1.18897	1.20781	1.26406						
	1.37397	1.30773	1.49182				AVRG		1.27538		8.85508	<-
121 4-Nitroquinoline 1-oxide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
122 Methapyrilene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
123 Fluoranthene	1.18468	1.11821	1.20248	1.12556	1.17907	1.23150						
	1.36101	1.28076	1.45107				AVRG		1.23715		8.89894	
124 Benzidine	+++++	30819	79729	34791	370708	477851						
	1153211	1181288	2133921				QUAD	0.04431	1.97644	-0.12051	0.99027	<-
125 Pyrene	1.38863	1.13697	1.17101	1.16992	1.25978	1.28123						
	1.33357	1.24091	1.42406				AVRG		1.26734		7.90894	
126 Aramite 1	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
M 191 Aramite, Total	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
127 Aramite 2	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
128 p-Dimethylamino azobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
129 p-Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
130 Famphur	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
131 Butylbenzylphthalate	+++++	0.51022	0.49016	0.55429	0.56816	0.55758						
	0.56327	0.53678	0.59792				AVRG		0.54730		6.23773	<-
132 3,3'-Dimethylbenzidine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
133 3,3'-Dimethoxybenzidine	+++++	14635	32027	38070	167901	237741						
	503101	544293	927802				QUAD	-0.00444	4.24285	-0.45928	0.99410	<-
134 2-Acetylaminofluorene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
135 3,3'-Dichlorobenzidine	+++++	0.39389	0.40556	0.40909	0.46357	0.45394						
	0.49575	0.45451	0.54498				AVRG		0.45266		11.22554	<-
136 Benzo(a)Anthracene	1.47327	1.11898	1.14023	1.24643	1.19805	1.20729						
	1.27655	1.17656	1.34974				AVRG		1.24301		8.95879	
137 Chrysene	1.23917	0.97871	1.02087	1.11009	1.09215	1.10240						
	1.13550	1.07403	1.25355				AVRG		1.11183		8.09241	
138 4,4'-Methylene bis(o-chloroan	+++++	+++++	0.20179	0.18760	0.21785	0.23364						
	0.24438	0.23171	0.27609				AVRG		0.22758		12.74534	<-
139 bis(2-ethylhexyl)Phthalate	+++++	0.68035	0.72431	0.76067	0.75186	0.76657						
	0.79860	0.76336	0.91904				AVRG		0.77060		8.99418	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
140 Di-n-octylphthalate	+++++	1.38447	1.39013	1.54374	1.54384	1.53979						
	1.64162	1.59750	1.79817				AVRG		1.55491		8.60047	<-
141 Benzo(b)fluoranthene	1.55413	1.31331	1.29228	1.46437	1.35641	1.34958						
	1.48964	1.43797	1.62291				AVRG		1.43118		7.88497	
142 Benzo(k)fluoranthene	1.47158	1.28896	1.33349	1.49547	1.44838	1.42563						
	1.54836	1.47501	1.66398				AVRG		1.46121		7.55890	
143 7,12-dimethylbenz[a]anthracen	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
144 Hexachlorophene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
145 Hexachlorophene product	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
146 Benzo(a)pyrene	1.39481	1.16148	1.20862	1.30963	1.27949	1.26279						
	1.35971	1.30330	1.44699				AVRG		1.30298		6.83892	

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
148 3-Methylcholanthrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
149 Indeno(1,2,3-cd)pyrene	1.15811	1.17314	1.28371	1.42844	1.33254	1.32502						
	1.41531	1.37583	1.54680				AVRG		1.33766		9.22690	
150 Dibenz(a,h)anthracene	1.18715	0.97368	1.07014	1.12999	1.10988	1.09815						
	1.20648	1.16176	1.34240				AVRG		1.14218		8.93607	
151 Benzo(g,h,i)perylene	1.05068	1.05692	1.09843	1.16116	1.08996	1.07772						
	1.13980	1.08477	1.21663				AVRG		1.10845		4.87973	
230 2-Chloroacetophenone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
199 3-Picoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
200 N,N-Dimethylacetamide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
201 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
202 Diphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
203 Diphenyl ether	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
204 6-Methylchrysene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
205 Benzenethiol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
207 Indene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
208 Dibenz(a,j)acridine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
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Quant Method : ISTD
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Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
214 Dibenz(a,h)acridine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
209 Benzaldehyde	+++++	1.79233	1.82466	1.83663	1.71483	1.55463						
	1.71608	1.38205	1.39095				AVRG		1.65152		11.26176	<-
210 Caprolactam	+++++	0.10983	0.10507	0.12933	0.13540	0.13559						
	0.13898	0.13194	0.13950				AVRG		0.12821		10.37221	<-
211 1,1'-Biphenyl	+++++	1.25125	1.35464	1.45687	1.45986	1.48631						
	1.64414	1.58258	1.93174				AVRG		1.52092		13.54678	<-
212 Atrazine	+++++	0.19655	0.22551	0.24249	0.23014	0.24172						
	0.24745	0.23518	0.25423				AVRG		0.23416		7.59228	<-
220 Diphenyl Thiourea	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
216 1,3-Diethyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
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Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
218 1,1,3,3-Tetramethyl-2-Thioure	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
217 1,3-Dibutyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
221 Hexabromobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
219 o-Benzyl Phenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
223 bis(2-chloroethoxy)ethane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
224 Benzothiazole	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
225 1,3-Dimethyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

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Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
226 Methyl parathion	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
227 Parathion	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
228 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
229 Kepone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
231 Phenyl sulfone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
232 3,4-Dichloronitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
$ 154 Nitrobenzene-d5	0.67039	0.66945	0.67042	0.73484	0.68187	0.66327						
	0.70478	0.66076	0.70309				AVRG		0.68432		3.62982	

TestAmerica North Canton

INITIAL CALIBRATION DATA

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Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
$ 155 2-Fluorobiphenyl	1.16236	1.14255	1.17512	1.30503	1.25018	1.32226						
	1.34737	1.28191	1.52623				AVRG		1.27922		9.25757	
$ 156 Terphenyl-d14	0.83973	0.75080	0.76913	0.80960	0.88038	0.86373						
	0.89506	0.83547	0.95926				AVRG		0.84479		7.62137	
$ 157 Phenol-d5	2.27584	2.01248	2.26824	2.28760	2.23528	2.14410						
	2.32141	2.14374	2.46060				AVRG		2.23881		5.69123	
$ 158 2-Fluorophenol	1.72653	1.31314	1.32831	1.40717	1.41419	1.41398						
	1.47949	1.37332	1.51716				AVRG		1.44148		8.67278	
$ 159 2,4,6-Tribromophenol	+++++	0.10857	0.13411	0.15783	0.15483	0.14937						
	0.16491	0.15424	0.17725				AVRG		0.15014		13.87192	<-
$ 186 2-Chlorophenol-d4	1.14321	1.12884	1.17147	1.16126	1.18416	1.12244						
	1.22631	1.16099	1.27434				AVRG		1.17478		4.13596	
$ 187 1,2-Dichlorobenzene-d4	0.98150	0.91698	0.88313	0.87999	0.88500	0.82568						
	0.88146	0.81225	0.92928				AVRG		0.88836		5.77380	

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAR-2008 11:08
End Cal Date : 17-MAR-2008 14:06
Quant Method : ISTD
Origin : Included
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Last Edit : 17-Mar-2008 14:27 ulmanm

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9HHH0317.D
Lab Smp Id: L9
Inj Date : 17-MAR-2008 14:06
Operator : 001574   Inst ID: a4hp9.i
Smp Info : L9,80317a.b,8270p,1-827042d.sub,1,,9
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Meth Date : 17-Mar-2008 14:32 ulmanm   Quant Type: ISTD
Cal Date : 17-MAR-2008 14:06   Cal File: 9HHH0317.D
Als bottle: 10   Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: 1-827042d.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
*	1 1,4-Dichlorobenzene-d4	152	4.011	4.011	(1.000)	111033	2.00000	
*	2 Naphthalene-d8	136	4.973	4.973	(1.000)	417468	2.00000	
*	3 Acenaphthene-d10	164	6.276	6.276	(1.000)	255498	2.00000	
*	4 Phenanthrene-d10	188	7.371	7.371	(1.000)	460406	2.00000	
*	5 Chrysene-d12	240	9.385	9.385	(1.000)	492248	2.00000	
*	6 Perylene-d12	264	10.981	10.981	(1.000)	378841	2.00000	
	9 Pyridine	79	2.105	2.105	(0.525)	1528669	12.5000	13.550
	10 N-Nitrosodimethylamine	74	2.078	2.078	(0.518)	965670	12.5000	13.352
	11 Ethyl methacrylate	69	2.356	2.356	(0.587)	1494627	12.5000	13.224
	12 3-Chloropropionitrile	54	2.580	2.580	(0.643)	652733	12.5000	12.963
	13 Malononitrile	66	2.756	2.756	(0.687)	1757382	12.5000	12.482
	209 Benzaldehyde	77	3.686	3.686	(0.919)	965259	12.5000	10.528
	21 Aniline	93	3.760	3.760	(0.937)	2129913	12.5000	13.097
	22 Phenol	94	3.691	3.691	(0.920)	1797142	12.5000	13.620
	23 bis(2-Chloroethyl)ether	93	3.787	3.787	(0.944)	1395545	12.5000	12.895
	24 2-Chlorophenol	128	3.851	3.851	(0.960)	944186	12.5000	13.521
	26 1,3-Dichlorobenzene	146	3.969	3.969	(0.989)	1000101	12.5000	13.041
	27 1,4-Dichlorobenzene	146	4.022	4.022	(1.003)	626733	12.5000	12.891
	28 1,2-Dichlorobenzene	146	4.145	4.145	(1.033)	1030279	12.5000	14.106
	29 Benzyl Alcohol	108	4.091	4.091	(1.020)	834515	12.5000	13.752
	30 2-Methylphenol	108	4.156	4.156	(1.036)	1135214	12.5000	13.576
	31 bis(2-Chloroisopropyl)ether	45	4.188	4.188	(1.044)	1195358	12.5000	12.332
	37 Acetophenone	105	4.305	4.305	(1.073)	1908944	12.5000	13.642
	32 N-Nitroso-di-n-propylamine	70	4.294	4.294	(1.071)	1420344	12.5000	13.553
	192 4-Methylphenol	108	4.273	4.273	(1.065)	1157238	12.5000	13.295
	34 Hexachloroethane	117	4.401	4.401	(1.097)	447505	12.5000	12.355
	35 Nitrobenzene	77	4.444	4.444	(0.894)	1932750	12.5000	13.236
	41 Isophorone	82	4.615	4.615	(0.928)	3254104	12.5000	13.468
	42 2-Nitrophenol	139	4.679	4.680	(0.941)	587064	12.5000	15.130
	43 2,4-Dimethylphenol	107	4.674	4.674	(0.940)	1619983	12.5000	14.261
	44 bis(2-Chloroethoxy)methane	93	4.748	4.748	(0.955)	1560814	12.5000	13.318
	46 2,4-Toluenediamene	121	5.817	5.817	(1.170)	509813	12.5000	12.760

47	1,3,5-Trichlorobenzene	180	4.684	4.684 (0.942)	911087	12.5000	14.367
48	2,4-Dichlorophenol	162	4.850	4.850 (0.975)	864415	12.5000	13.781

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
49	Benzoic Acid	122	4.786	4.786	(0.962)	1468863	25.0000	28.164(M)
50	1,2,4-Trichlorobenzene	180	4.919	4.919	(0.989)	916578	12.5000	13.601
51	Naphthalene	128	4.989	4.989	(1.003)	3075401	12.5000	13.811
52	4-Chloroaniline	127	5.010	5.010	(1.008)	1206152	12.5000	13.900
56	Hexachlorobutadiene	225	5.064	5.064	(1.018)	583883	12.5000	13.291
210	Caprolactam	113	5.293	5.293	(1.064)	363971	12.5000	13.601
57	1,2,3-Trichlorobenzene	180	5.090	5.090	(1.024)	812931	12.5000	13.548
59	4-Chloro-3-Methylphenol	107	5.347	5.347	(1.075)	1244295	12.5000	13.821
62	2-Methylnaphthalene	142	5.502	5.502	(1.106)	1855400	12.5000	14.240
63	1-Methylnaphthalene	142	5.576	5.576	(1.121)	1995061	12.5000	14.154
64	Hexachlorocyclopentadiene	237	5.608	5.608	(0.894)	760957	12.5000	14.875
66	2,4,6-Trichlorophenol	196	5.694	5.694	(0.907)	719133	12.5000	14.220
67	2,4,5-Trichlorophenol	196	5.726	5.726	(0.912)	752191	12.5000	14.442
211	1,1'-Biphenyl	154	5.838	5.838	(0.930)	3084719	12.5000	15.876
68	1,2,3,5-Tetrachlorobenzene	216	5.608	5.608	(0.894)	1138766	12.5000	14.840
70	2-Chloronaphthalene	162	5.865	5.865	(0.934)	1975891	12.5000	13.989
73	2-Nitroaniline	65	5.923	5.923	(0.944)	1085062	12.5000	13.365
74	1,2,3,4-Tetrachlorobenzene	216	5.838	5.838	(0.930)	1117709	12.5000	15.663
76	Dimethylphthalate	163	6.036	6.036	(0.962)	2330019	12.5000	13.899
78	2,6-Dinitrotoluene	165	6.089	6.089	(0.970)	499641	12.5000	13.802
79	Acenaphthylene	152	6.175	6.175	(0.984)	3388923	12.5000	14.377
80	1,2-Dinitrobenzene	168	6.142	6.142	(0.979)	240013	12.5000	13.200
81	3-Nitroaniline	138	6.223	6.223	(0.991)	501434	12.5000	14.306
82	Acenaphthene	153	6.303	6.303	(1.004)	2394572	12.5000	15.737
83	2,4-Dinitrophenol	184	6.297	6.298	(1.003)	792729	25.0000	30.603
85	4-Nitrophenol	109	6.308	6.308	(1.005)	597510	12.5000	14.302
86	Dibenzofuran	168	6.426	6.426	(1.024)	3041197	12.5000	14.558
87	2,4-Dinitrotoluene	165	6.388	6.388	(1.018)	664356	12.5000	13.791
91	2,3,5,6-Tetrachlorophenol	232	6.468	6.469	(1.031)	672767	12.5000	14.928
93	Diethylphthalate	149	6.543	6.543	(1.043)	2437874	12.5000	14.306
94	Fluorene	166	6.677	6.677	(1.064)	2786761	12.5000	15.248
95	4-Chlorophenyl-phenylether	204	6.655	6.655	(1.060)	1183551	12.5000	14.380
96	4-Nitroaniline	138	6.677	6.677	(1.064)	659736	12.5000	15.666
98	4,6-Dinitro-2-methylphenol	198	6.693	6.693	(0.908)	425877	12.5000	13.192
99	N-Nitrosodiphenylamine	169	6.741	6.741	(0.915)	1844615	12.5000	14.626
100	1,2-Diphenylhydrazine	77	6.773	6.773	(0.919)	4437184	12.5000	13.630
106	4-Bromophenyl-phenylether	248	7.018	7.018	(0.952)	680069	12.5000	14.231
107	Hexachlorobenzene	284	7.082	7.082	(0.961)	670814	12.5000	13.804
212	Atrazine	200	7.104	7.104	(0.964)	731556	12.5000	13.571
111	Pentachlorophenol	266	7.216	7.217	(0.979)	1011836	25.0000	31.155
115	Phenanthrene	178	7.392	7.392	(1.003)	4063445	12.5000	14.568
116	Anthracene	178	7.430	7.430	(1.008)	4173434	12.5000	15.104
119	Carbazole	167	7.531	7.531	(1.022)	3331034	12.5000	14.333
120	Di-n-Butylphthalate	149	7.723	7.723	(1.048)	4292761	12.5000	14.621
123	Fluoranthene	202	8.268	8.268	(1.122)	4175514	12.5000	14.661
124	Benzidine	184	8.338	8.337	(0.888)	2133921	12.5000	16.142
125	Pyrene	202	8.450	8.450	(0.900)	4381194	12.5000	14.046
131	Butylbenzylphthalate	149	8.861	8.861	(0.944)	1839536	12.5000	13.656
133	3,3'-Dimethoxybenzidine	244	9.278	9.278	(0.989)	927802	12.5000	14.902
135	3,3'-Dichlorobenzidine	252	9.326	9.326	(0.994)	1676654	12.5000	15.049
136	Benzo(a)Anthracene	228	9.379	9.379	(0.999)	4152535	12.5000	13.573
137	Chrysene	228	9.411	9.411	(1.003)	3856608	12.5000	14.093

138	4,4'-Methylene bis(o-chloroan	231	9.320	9.320 (0.993)	849420	12.5000	15.165
139	bis(2-ethylhexyl)Phthalate	149	9.283	9.283 (0.989)	2827482	12.5000	14.908

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(NG)	(NG)
140	Di-n-octylphthalate	149	9.881	9.881	(0.900)	4257627	12.5000	14.456
141	Benzo(b)fluoranthene	252	10.485	10.485	(0.955)	3842661	12.5000	14.175
142	Benzo(k)fluoranthene	252	10.522	10.522	(0.958)	3939903	12.5000	14.235
146	Benzo(a)pyrene	252	10.917	10.917	(0.994)	3426118	12.5000	13.882
149	Indeno(1,2,3-cd)pyrene	276	12.792	12.792	(1.165)	3662450	12.5000	14.454
150	Dibenz(a,h)anthracene	278	12.803	12.803	(1.166)	3178466	12.5000	14.691
151	Benzo(g,h,i)perylene	276	13.337	13.337	(1.214)	2880688	12.5000	13.720
198	1,4-Dioxane	88	1.870	1.870	(0.466)	424862	12.5000	11.302
$ 154	Nitrobenzene-d5	82	4.428	4.428	(0.890)	1834482	12.5000	12.843
$ 155	2-Fluorobiphenyl	172	5.758	5.758	(0.917)	2437177	12.5000	14.914
$ 156	Terphenyl-d14	244	8.519	8.519	(0.908)	2951200	12.5000	14.194
$ 157	Phenol-d5	99	3.680	3.680	(0.917)	1707551	12.5000	13.738
$ 158	2-Fluorophenol	112	2.997	2.997	(0.747)	1052841	12.5000	13.156
$ 159	2,4,6-Tribromophenol	330	6.853	6.853	(1.092)	283039	12.5000	14.757
$ 186	2-Chlorophenol-d4	132	3.835	3.835	(0.956)	884335	12.5000	13.559
$ 187	1,2-Dichlorobenzene-d4	152	4.129	4.129	(1.029)	644882	12.5000	13.076
M 195	Cresols, total	100				2292452	12.5000	26.871
101	Diphenylamine	169	6.741	6.741	(0.915)	1844615	12.5000	14.626

QC Flag Legend

M - Compound response manually integrated.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

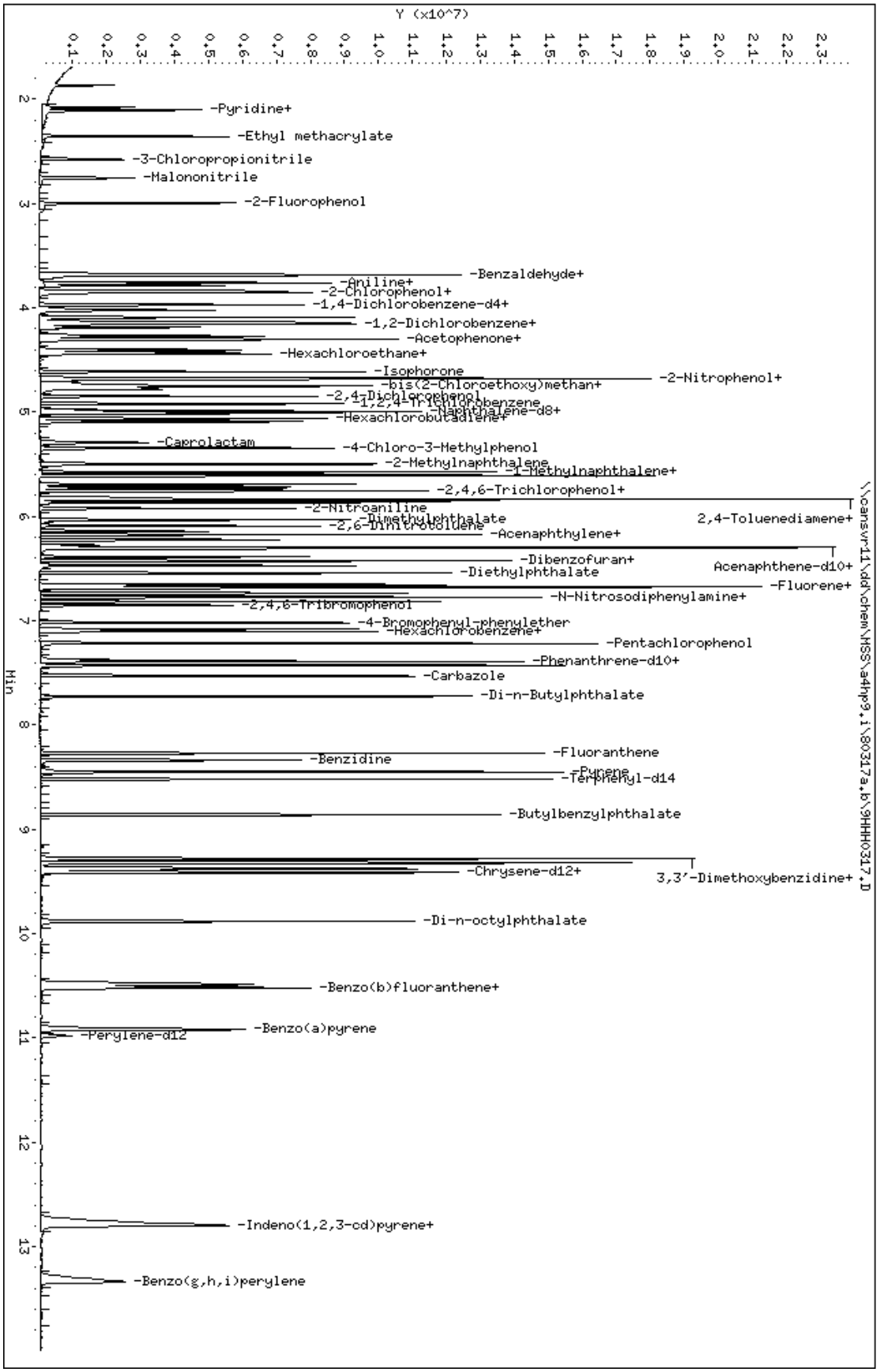
Instrument ID: a4hp9.i
Lab File ID: 9HHH0317.D
Lab Smp Id: L9
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Misc Info:

Calibration Date: 17-MAR-2008
Calibration Time: 11:08
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87943	43972	175886	111033	26.26
2 Naphthalene-d8	328975	164488	657950	417468	26.90
3 Acenaphthene-d10	197861	98931	395722	255498	29.13
4 Phenanthrene-d10	346358	173179	692716	460406	32.93
5 Chrysene-d12	342235	171118	684470	492248	43.83
6 Perylene-d12	281586	140793	563172	378841	34.54

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.01	3.51	4.51	4.01	0.13
2 Naphthalene-d8	4.97	4.47	5.47	4.97	-0.00
3 Acenaphthene-d10	6.27	5.77	6.77	6.28	0.08
4 Phenanthrene-d10	7.37	6.87	7.87	7.37	0.07
5 Chrysene-d12	9.39	8.89	9.89	9.38	-0.06
6 Perylene-d12	10.98	10.48	11.48	10.98	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\cansvr11\dd\chem\MSS\a4hp9,i\80317a,b\9HHH0317.D

Date : 17-MAR-2008 14:06

Client ID:

Sample Info: L9,80317a,b,8270p,1-8270424,sub,1,,9

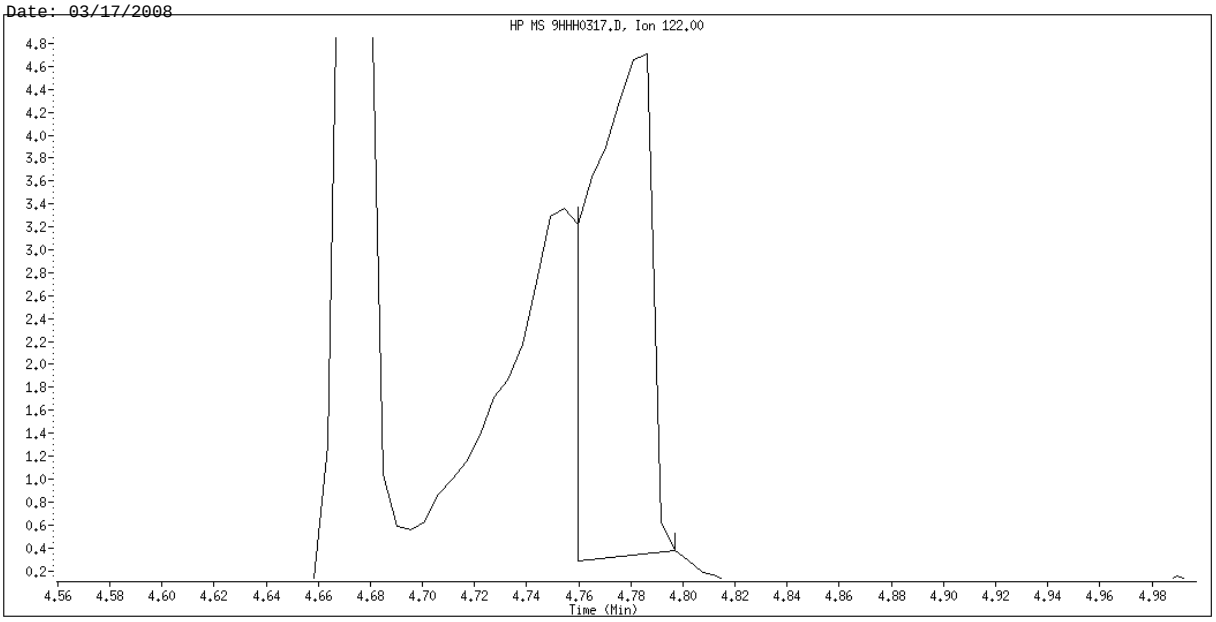
Column phase: db5,625

Instrument: a4hp9,i

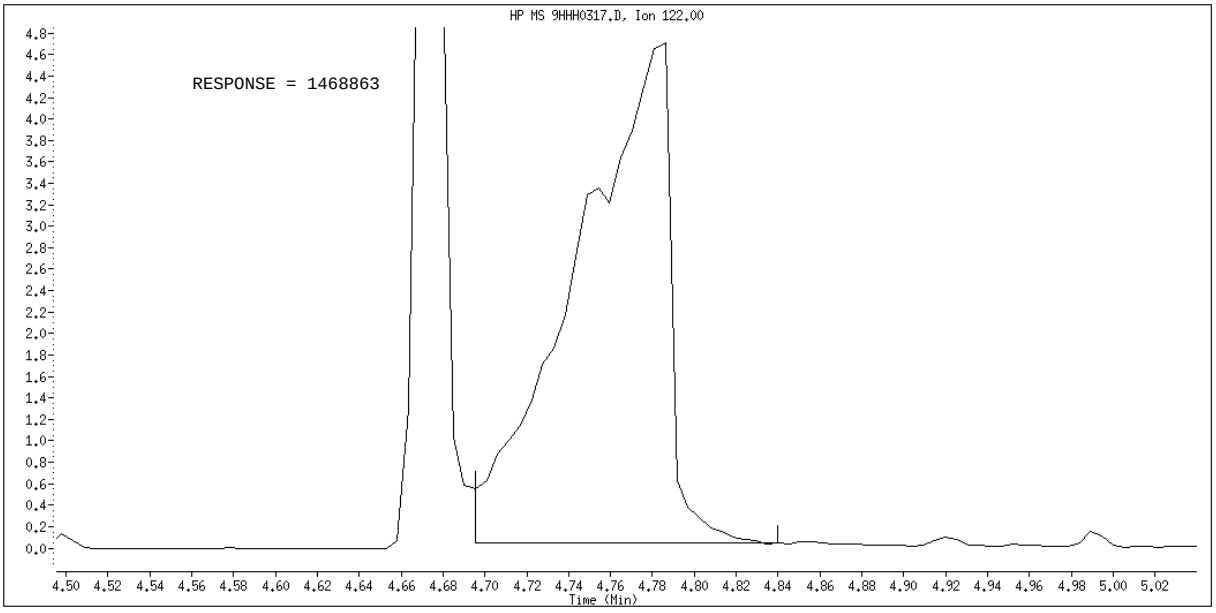
Operator: 001574

Column diameter: 0.32

Data File Name: 9HHH0317.D
Inj. Date and Time: 17-MAR-2008 14:06
Instrument ID: a4hp9.i
Client ID:
Compound Name: Benzoic Acid
CAS #: 65-85-0
Report Date: 03/17/2008



Original Integration



Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Poor Chromatography

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SH0317.D
Lab Smp Id: L7
Inj Date : 17-MAR-2008 13:27
Operator : 001574 Inst ID: a4hp9.i
Smp Info : L7,80317a.b,8270p,1-827042d.sub,1,,7
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Meth Date : 17-Mar-2008 14:32 ulmanm Quant Type: ISTD
Cal Date : 17-MAR-2008 13:27 Cal File: 9SH0317.D
Als bottle: 8 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV06

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	4.011	4.011	(1.000)	114753	2.00000	
* 2	Naphthalene-d8	136	4.973	4.973	(1.000)	421922	2.00000	
* 3	Acenaphthene-d10	164	6.276	6.276	(1.000)	274153	2.00000	
* 4	Phenanthrene-d10	188	7.371	7.371	(1.000)	477556	2.00000	
* 5	Chrysene-d12	240	9.374	9.385	(1.000)	503251	2.00000	
* 6	Perylene-d12	264	10.965	10.981	(1.000)	386058	2.00000	
9	Pyridine	79	2.110	2.105	(0.526)	917376	7.50000	7.9907
10	N-Nitrosodimethylamine	74	2.078	2.078	(0.518)	593954	7.50000	7.9938
11	Ethyl methacrylate	69	2.355	2.356	(0.587)	932081	7.50000	7.9746
12	3-Chloropropionitrile	54	2.574	2.580	(0.642)	405211	7.50000	7.7111
13	Malononitrile	66	2.756	2.756	(0.687)	1149897	7.50000	7.8303
209	Benzaldehyde	77	3.685	3.686	(0.919)	738469	7.50000	7.3975
21	Aniline	93	3.760	3.760	(0.937)	1302807	7.50000	7.7117
22	Phenol	94	3.691	3.691	(0.920)	1104718	7.50000	8.1831
23	bis(2-Chloroethyl)ether	93	3.781	3.787	(0.943)	740299	7.50000	6.6266
24	2-Chlorophenol	128	3.851	3.851	(0.960)	568215	7.50000	7.9118
26	1,3-Dichlorobenzene	146	3.968	3.969	(0.989)	616355	7.50000	7.7698
27	1,4-Dichlorobenzene	146	4.022	4.022	(1.003)	374203	7.50000	7.3681
28	1,2-Dichlorobenzene	146	4.139	4.145	(1.032)	591489	7.50000	7.9493
29	Benzyl Alcohol	108	4.091	4.091	(1.020)	481985	7.50000	7.7933
30	2-Methylphenol	108	4.150	4.156	(1.035)	661621	7.50000	7.7540
31	bis(2-Chloroisopropyl)ether	45	4.187	4.188	(1.044)	735032	7.50000	7.2140
37	Acetophenone	105	4.305	4.305	(1.073)	1120323	7.50000	7.8174
32	N-Nitroso-di-n-propylamine	70	4.289	4.294	(1.069)	834176	7.50000	7.7373
192	4-Methylphenol	108	4.267	4.273	(1.064)	688424	7.50000	7.6915
34	Hexachloroethane	117	4.401	4.401	(1.097)	272356	7.50000	7.1502
35	Nitrobenzene	77	4.438	4.444	(0.893)	1162932	7.50000	7.9243
41	Isophorone	82	4.609	4.615	(0.927)	1951205	7.50000	8.0911
42	2-Nitrophenol	139	4.673	4.680	(0.940)	334477	7.50000	8.9080
43	2,4-Dimethylphenol	107	4.673	4.674	(0.940)	941603	7.50000	8.4319
44	bis(2-Chloroethoxy)methane	93	4.748	4.748	(0.955)	919883	7.50000	7.8622

46	2,4-Toluenediamene	121	5.816	5.817 (1.170)	337992	7.50000	8.2173
47	1,3,5-Trichlorobenzene	180	4.684	4.684 (0.942)	510435	7.50000	8.1692

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
48	2,4-Dichlorophenol	162	4.844	4.850	(0.974)	521738	7.50000	8.3835
49	Benzoic Acid	122	4.759	4.786	(0.957)	879491	15.0000	17.454(MH)
50	1,2,4-Trichlorobenzene	180	4.919	4.919	(0.989)	537576	7.50000	8.0020
51	Naphthalene	128	4.989	4.989	(1.003)	1770247	7.50000	7.9647
52	4-Chloroaniline	127	5.010	5.010	(1.008)	689317	7.50000	8.0248
56	Hexachlorobutadiene	225	5.063	5.064	(1.018)	343965	7.50000	7.7644
210	Caprolactam	113	5.282	5.293	(1.062)	219902	7.50000	8.2925
57	1,2,3-Trichlorobenzene	180	5.090	5.090	(1.024)	478917	7.50000	7.9495
59	4-Chloro-3-Methylphenol	107	5.341	5.347	(1.074)	738487	7.50000	8.2868
62	2-Methylnaphthalene	142	5.496	5.502	(1.105)	1046362	7.50000	8.1159
63	1-Methylnaphthalene	142	5.576	5.576	(1.121)	1157125	7.50000	8.2708
64	Hexachlorocyclopentadiene	237	5.608	5.608	(0.894)	434657	7.50000	8.1850
66	2,4,6-Trichlorophenol	196	5.694	5.694	(0.907)	420828	7.50000	7.9422
67	2,4,5-Trichlorophenol	196	5.720	5.726	(0.911)	452288	7.50000	8.3339
211	1,1'-Biphenyl	154	5.832	5.838	(0.929)	1690301	7.50000	8.5503
68	1,2,3,5-Tetrachlorobenzene	216	5.608	5.608	(0.894)	649326	7.50000	8.1430
70	2-Chloronaphthalene	162	5.864	5.865	(0.934)	1146041	7.50000	7.6448
73	2-Nitroaniline	65	5.918	5.923	(0.943)	654285	7.50000	7.5417
74	1,2,3,4-Tetrachlorobenzene	216	5.832	5.838	(0.929)	612634	7.50000	8.4393
76	Dimethylphthalate	163	6.030	6.036	(0.961)	1382635	7.50000	7.8318
78	2,6-Dinitrotoluene	165	6.089	6.089	(0.970)	306441	7.50000	8.0061
79	Acenaphthylene	152	6.174	6.175	(0.984)	1962390	7.50000	7.9334
80	1,2-Dinitrobenzene	168	6.137	6.142	(0.978)	144805	7.50000	7.4421
81	3-Nitroaniline	138	6.222	6.223	(0.991)	294181	7.50000	8.0348
82	Acenaphthene	153	6.297	6.303	(1.003)	1359568	7.50000	8.7099
83	2,4-Dinitrophenol	184	6.292	6.298	(1.003)	426603	15.0000	16.376
85	4-Nitrophenol	109	6.308	6.308	(1.005)	374517	7.50000	8.6104
86	Dibenzofuran	168	6.425	6.426	(1.024)	1760820	7.50000	8.0537
87	2,4-Dinitrotoluene	165	6.388	6.388	(1.018)	405106	7.50000	7.9762
91	2,3,5,6-Tetrachlorophenol	232	6.468	6.469	(1.031)	397013	7.50000	8.5462
93	Diethylphthalate	149	6.543	6.543	(1.043)	1419466	7.50000	7.9234
94	Fluorene	166	6.676	6.677	(1.064)	1598616	7.50000	8.4751
95	4-Chlorophenyl-phenylether	204	6.655	6.655	(1.060)	679240	7.50000	7.8663
96	4-Nitroaniline	138	6.671	6.677	(1.063)	381917	7.50000	8.8696
98	4,6-Dinitro-2-methylphenol	198	6.687	6.693	(0.907)	249429	7.50000	7.4818
99	N-Nitrosodiphenylamine	169	6.735	6.741	(0.914)	1048269	7.50000	8.2688
100	1,2-Diphenylhydrazine	77	6.772	6.773	(0.919)	2647017	7.50000	7.9326
106	4-Bromophenyl-phenylether	248	7.018	7.018	(0.952)	396685	7.50000	8.1964
107	Hexachlorobenzene	284	7.082	7.082	(0.961)	396574	7.50000	7.9576
212	Atrazine	200	7.098	7.104	(0.963)	443144	7.50000	8.0466
111	Pentachlorophenol	266	7.216	7.217	(0.979)	592486	15.0000	18.825
115	Phenanthrene	178	7.387	7.392	(1.002)	2313977	7.50000	8.2008
116	Anthracene	178	7.429	7.430	(1.008)	2338225	7.50000	8.4136
119	Carbazole	167	7.526	7.531	(1.021)	1940888	7.50000	8.2796
120	Di-n-Butylphthalate	149	7.723	7.723	(1.048)	2460557	7.50000	8.3513
123	Fluoranthene	202	8.268	8.268	(1.122)	2437347	7.50000	8.5038
124	Benzidine	184	8.332	8.337	(0.889)	1153211	7.50000	9.0194
125	Pyrene	202	8.444	8.450	(0.901)	2516699	7.50000	8.0096
131	Butylbenzylphthalate	149	8.850	8.861	(0.944)	1063001	7.50000	7.8143
133	3,3'-Dimethoxybenzidine	244	9.267	9.278	(0.989)	503101	7.50000	8.1797
135	3,3'-Dichlorobenzidine	252	9.309	9.326	(0.993)	935568	7.50000	8.5089
136	Benzo(a)Anthracene	228	9.368	9.379	(0.999)	2409103	7.50000	7.7382

137 Chrysene	228	9.400	9.411 (1.003)	2142912	7.50000	7.7634
138 4,4'-Methylene bis(o-chloroan	231	9.304	9.320 (0.993)	461192	7.50000	8.4443

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
	139 bis(2-ethylhexyl)Phthalate	149	9.272	9.283	(0.989)	1507113	7.50000	8.0174
	140 Di-n-octylphthalate	149	9.870	9.881	(0.900)	2376603	7.50000	8.1685
	141 Benzo(b)fluoranthene	252	10.468	10.485	(0.955)	2156577	7.50000	7.9642
	142 Benzo(k)fluoranthene	252	10.506	10.522	(0.958)	2241581	7.50000	8.1192
	146 Benzo(a)pyrene	252	10.901	10.917	(0.994)	1968472	7.50000	7.9523
	149 Indeno(1,2,3-cd)pyrene	276	12.760	12.792	(1.164)	2048974	7.50000	8.1507
	150 Dibenz(a,h)anthracene	278	12.765	12.803	(1.164)	1746648	7.50000	8.1462
	151 Benzo(g,h,i)perylene	276	13.305	13.337	(1.213)	1650103	7.50000	7.7970
	198 1,4-Dioxane	88	1.875	1.870	(0.467)	277196	7.50000	6.8522
$	154 Nitrobenzene-d5	82	4.422	4.428	(0.889)	1115105	7.50000	7.7165
$	155 2-Fluorobiphenyl	172	5.752	5.758	(0.917)	1385196	7.50000	8.1261
$	156 Terphenyl-d14	244	8.514	8.519	(0.908)	1689148	7.50000	8.0901
$	157 Phenol-d5	99	3.675	3.680	(0.916)	998958	7.50000	7.8401
$	158 2-Fluorophenol	112	3.002	2.997	(0.748)	636661	7.50000	7.7035
$	159 2,4,6-Tribromophenol	330	6.853	6.853	(1.092)	169542	7.50000	8.5336
$	186 2-Chlorophenol-d4	132	3.835	3.835	(0.956)	527712	7.50000	7.9115
$	187 1,2-Dichlorobenzene-d4	152	4.129	4.129	(1.029)	379315	7.50000	7.3999
M	195 Cresols, total	100				1350045	7.50000	15.445
	101 Diphenylamine	169	6.735	6.741	(0.914)	1048269	7.50000	8.2688

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

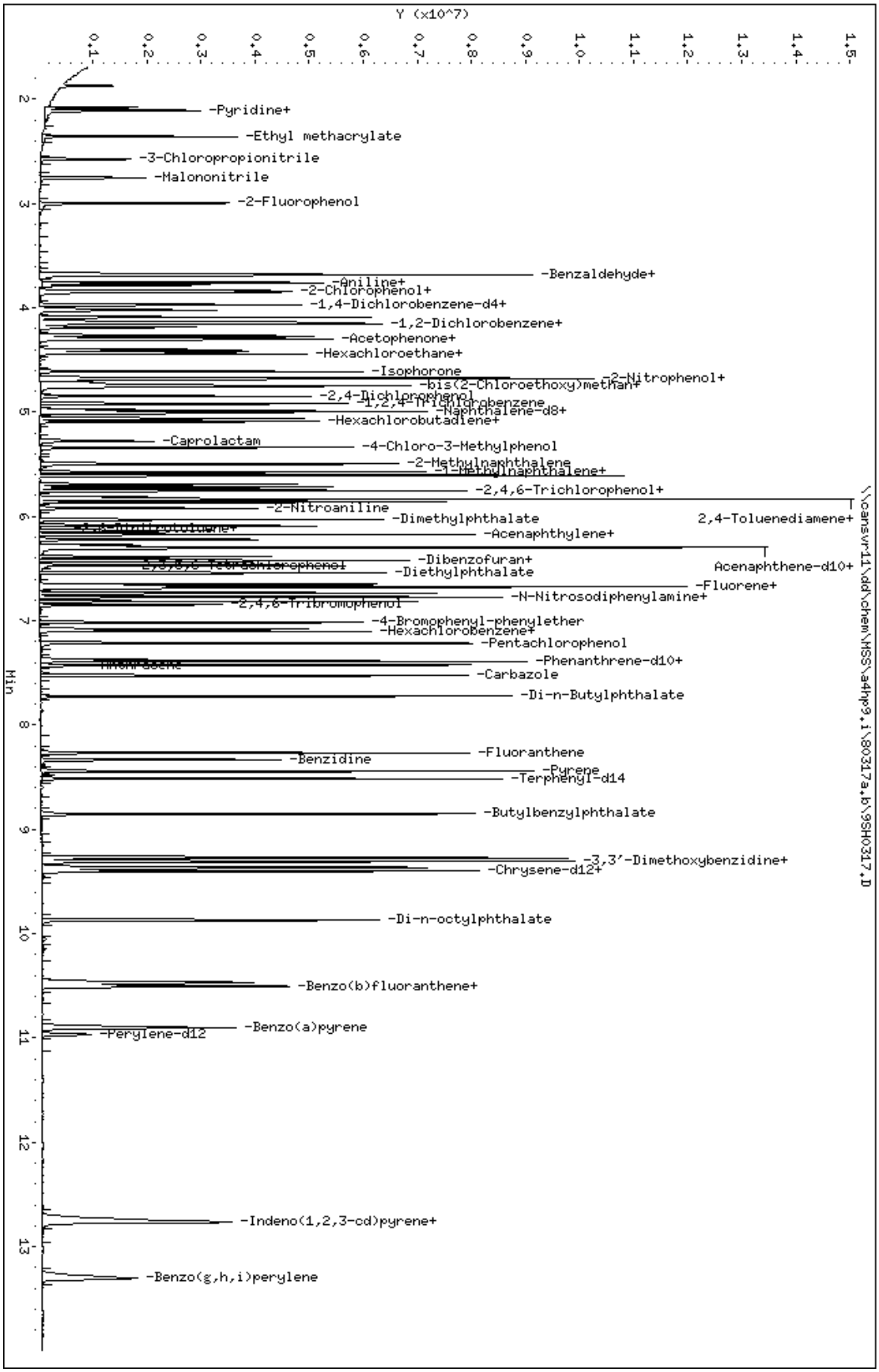
Instrument ID: a4hp9.i
Lab File ID: 9SH0317.D
Lab Smp Id: L7
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Misc Info:

Calibration Date: 17-MAR-2008
Calibration Time: 11:08
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87943	43972	175886	114753	30.49
2 Naphthalene-d8	328975	164488	657950	421922	28.25
3 Acenaphthene-d10	197861	98931	395722	274153	38.56
4 Phenanthrene-d10	346358	173179	692716	477556	37.88
5 Chrysene-d12	342235	171118	684470	503251	47.05
6 Perylene-d12	281586	140793	563172	386058	37.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.01	3.51	4.51	4.01	0.13
2 Naphthalene-d8	4.97	4.47	5.47	4.97	-0.01
3 Acenaphthene-d10	6.27	5.77	6.77	6.28	0.08
4 Phenanthrene-d10	7.37	6.87	7.87	7.37	0.07
5 Chrysene-d12	9.39	8.89	9.89	9.37	-0.17
6 Perylene-d12	10.98	10.48	11.48	10.97	-0.15

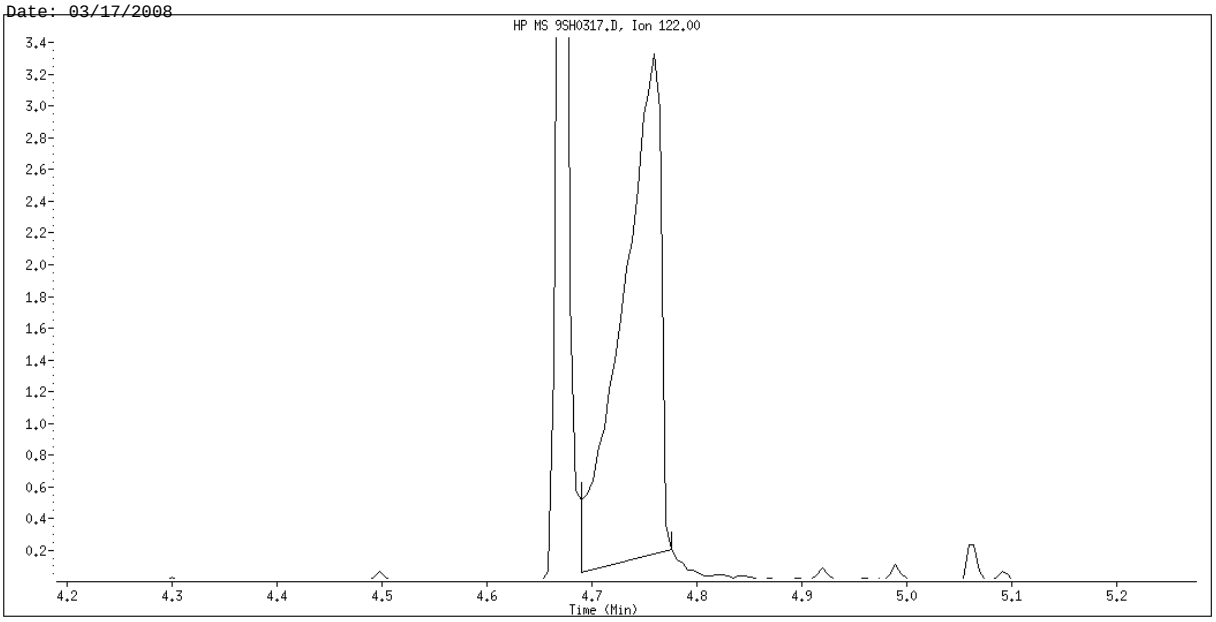
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



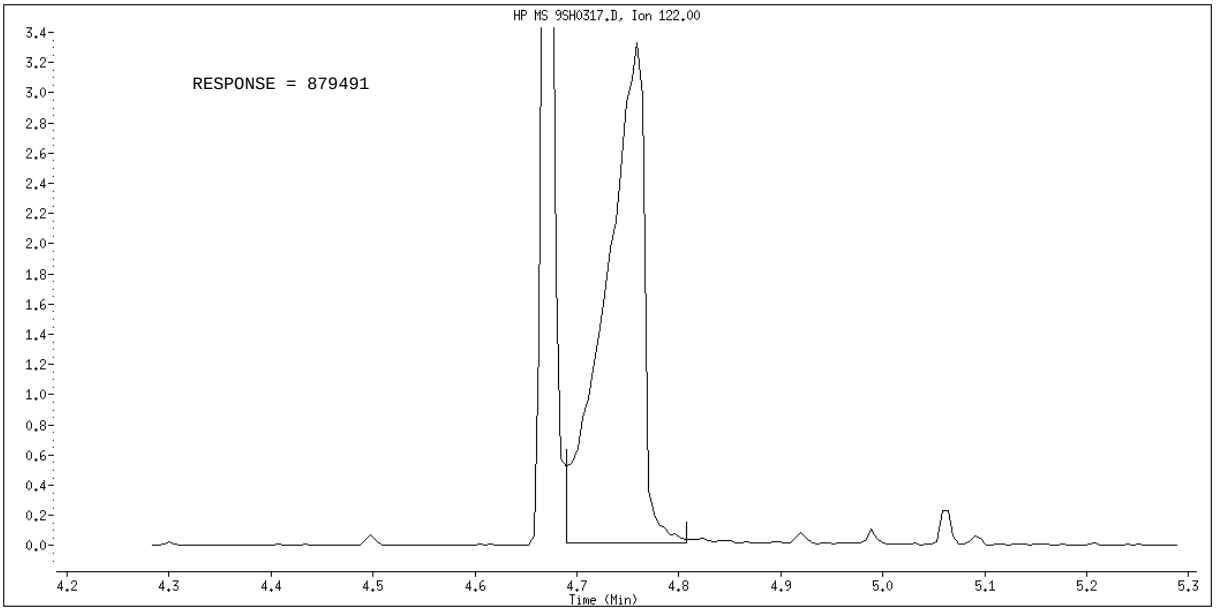
Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SH0317.D
Date : 17-MAR-2008 13:27
Client ID:
Sample Info: L7,80317a,b,8270p,1-8270424,sub,1,,7
Column phase: db5,625

Instrument: a4hp9.i
Operator: 001574
Column diameter: 0.32

Data File Name: 9SH0317.D
Inj. Date and Time: 17-MAR-2008 13:27
Instrument ID: a4hp9.i
Client ID:
Compound Name: Benzoic Acid
CAS #: 65-85-0
Report Date: 03/17/2008



Original Integration



Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Poor Chromatography

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SHH0317.D
Lab Smp Id: L8
Inj Date : 17-MAR-2008 13:46
Operator : 001574   Inst ID: a4hp9.i
Smp Info : L8,80317a.b,8270p,1-827042d.sub,1,,8
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Meth Date : 17-Mar-2008 14:32 ulmanm   Quant Type: ISTD
Cal Date : 17-MAR-2008 13:46   Cal File: 9SHH0317.D
Als bottle: 9   Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: 1-827042d.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
*	1 1,4-Dichlorobenzene-d4	152	4.007	4.011	(1.000)	99372	2.00000	
*	2 Naphthalene-d8	136	4.969	4.973	(1.000)	365419	2.00000	
*	3 Acenaphthene-d10	164	6.272	6.276	(1.000)	228232	2.00000	
*	4 Phenanthrene-d10	188	7.367	7.371	(1.000)	402914	2.00000	
*	5 Chrysene-d12	240	9.386	9.385	(1.000)	426067	2.00000	
*	6 Perylene-d12	264	10.978	10.981	(1.000)	318433	2.00000	
	9 Pyridine	79	2.101	2.105	(0.524)	1017608	10.0000	10.201
	10 N-Nitrosodimethylamine	74	2.074	2.078	(0.518)	626444	10.0000	9.7729
	11 Ethyl methacrylate	69	2.352	2.356	(0.587)	949146	10.0000	9.4616
	12 3-Chloropropionitrile	54	2.571	2.580	(0.642)	407434	10.0000	9.0894
	13 Malononitrile	66	2.752	2.756	(0.687)	1191972	10.0000	9.4578
	209 Benzaldehyde	77	3.682	3.686	(0.919)	686684	10.0000	8.1839
	21 Aniline	93	3.756	3.760	(0.937)	1340998	10.0000	9.2769
	22 Phenol	94	3.687	3.691	(0.920)	1145883	10.0000	9.8297
	23 bis(2-Chloroethyl)ether	93	3.783	3.787	(0.944)	946251	10.0000	9.8080(M)
	24 2-Chlorophenol	128	3.847	3.851	(0.960)	592342	10.0000	9.5896
	26 1,3-Dichlorobenzene	146	3.970	3.969	(0.991)	652972	10.0000	9.5731
	27 1,4-Dichlorobenzene	146	4.023	4.022	(1.004)	393563	10.0000	9.0852
	28 1,2-Dichlorobenzene	146	4.141	4.145	(1.033)	625834	10.0000	9.7528
	29 Benzyl Alcohol	108	4.088	4.091	(1.020)	533806	10.0000	9.9718
	30 2-Methylphenol	108	4.152	4.156	(1.036)	740846	10.0000	10.022
	31 bis(2-Chloroisopropyl)ether	45	4.184	4.188	(1.044)	790063	10.0000	9.0901
	37 Acetophenone	105	4.301	4.305	(1.073)	1205800	10.0000	9.7557
	32 N-Nitroso-di-n-propylamine	70	4.291	4.294	(1.071)	884650	10.0000	9.5470
	192 4-Methylphenol	108	4.264	4.273	(1.064)	752909	10.0000	9.7538
	34 Hexachloroethane	117	4.403	4.401	(1.099)	288201	10.0000	8.8774
	35 Nitrobenzene	77	4.440	4.444	(0.894)	1245486	10.0000	9.8273
	41 Isophorone	82	4.611	4.615	(0.928)	2108420	10.0000	10.081
	42 2-Nitrophenol	139	4.675	4.680	(0.941)	354752	10.0000	10.769
	43 2,4-Dimethylphenol	107	4.670	4.674	(0.940)	1017211	10.0000	10.440
	44 bis(2-Chloroethoxy)methane	93	4.750	4.748	(0.956)	1033750	10.0000	10.172
	46 2,4-Toluenediamene	121	5.813	5.817	(1.170)	303397	10.0000	8.7012

47	1,3,5-Trichlorobenzene	180	4.686	4.684 (0.943)	555673	10.0000	10.229
48	2,4-Dichlorophenol	162	4.846	4.850 (0.975)	553068	10.0000	10.223

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
49	Benzoic Acid	122	4.766	4.786	(0.959)	998693	20.0000	22.348(M)
50	1,2,4-Trichlorobenzene	180	4.921	4.919	(0.990)	586365	10.0000	10.067
51	Naphthalene	128	4.990	4.989	(1.004)	1913950	10.0000	9.9499
52	4-Chloroaniline	127	5.006	5.010	(1.008)	768003	10.0000	10.276
56	Hexachlorobutadiene	225	5.065	5.064	(1.019)	366095	10.0000	9.5968
210	Caprolactam	113	5.279	5.293	(1.062)	241072	10.0000	10.422
57	1,2,3-Trichlorobenzene	180	5.092	5.090	(1.025)	502065	10.0000	9.6745
59	4-Chloro-3-Methylphenol	107	5.343	5.347	(1.075)	802236	10.0000	10.336
62	2-Methylnaphthalene	142	5.498	5.502	(1.106)	1148752	10.0000	10.251
63	1-Methylnaphthalene	142	5.572	5.576	(1.121)	1225223	10.0000	10.098
64	Hexachlorocyclopentadiene	237	5.604	5.608	(0.894)	459377	10.0000	10.333
66	2,4,6-Trichlorophenol	196	5.690	5.694	(0.907)	453557	10.0000	10.241
67	2,4,5-Trichlorophenol	196	5.722	5.726	(0.912)	473670	10.0000	10.412
211	1,1'-Biphenyl	154	5.834	5.838	(0.930)	1805972	10.0000	10.823
68	1,2,3,5-Tetrachlorobenzene	216	5.610	5.608	(0.894)	686862	10.0000	10.296
70	2-Chloronaphthalene	162	5.866	5.865	(0.935)	1207380	10.0000	9.7140
73	2-Nitroaniline	65	5.920	5.923	(0.944)	692742	10.0000	9.6478
74	1,2,3,4-Tetrachlorobenzene	216	5.834	5.838	(0.930)	674780	10.0000	10.983
76	Dimethylphthalate	163	6.032	6.036	(0.962)	1496771	10.0000	10.157
78	2,6-Dinitrotoluene	165	6.090	6.089	(0.971)	318124	10.0000	9.9859
79	Acenaphthylene	152	6.176	6.175	(0.985)	2113853	10.0000	10.231
80	1,2-Dinitrobenzene	168	6.139	6.142	(0.979)	155568	10.0000	9.6677
81	3-Nitroaniline	138	6.219	6.223	(0.991)	317556	10.0000	10.356
82	Acenaphthene	153	6.299	6.303	(1.004)	1425231	10.0000	10.837
83	2,4-Dinitrophenol	184	6.293	6.298	(1.003)	504266	20.0000	22.638
85	4-Nitrophenol	109	6.304	6.308	(1.005)	374830	10.0000	10.291
86	Dibenzofuran	168	6.422	6.426	(1.024)	1879945	10.0000	10.286
87	2,4-Dinitrotoluene	165	6.384	6.388	(1.018)	430955	10.0000	10.164
91	2,3,5,6-Tetrachlorophenol	232	6.470	6.469	(1.032)	419541	10.0000	10.718
93	Diethylphthalate	149	6.539	6.543	(1.043)	1487521	10.0000	9.9776
94	Fluorene	166	6.678	6.677	(1.065)	1709235	10.0000	10.766
95	4-Chlorophenyl-phenylether	204	6.651	6.655	(1.060)	722961	10.0000	10.049
96	4-Nitroaniline	138	6.673	6.677	(1.064)	387169	10.0000	10.678
98	4,6-Dinitro-2-methylphenol	198	6.689	6.693	(0.908)	273121	10.0000	9.7573
99	N-Nitrosodiphenylamine	169	6.737	6.741	(0.914)	1120923	10.0000	10.408
100	1,2-Diphenylhydrazine	77	6.769	6.773	(0.919)	2793654	10.0000	9.9339
106	4-Bromophenyl-phenylether	248	7.014	7.018	(0.952)	419475	10.0000	10.233
107	Hexachlorobenzene	284	7.079	7.082	(0.961)	414538	10.0000	9.8764
212	Atrazine	200	7.100	7.104	(0.964)	473787	10.0000	10.168
111	Pentachlorophenol	266	7.212	7.217	(0.979)	652633	20.0000	23.799
115	Phenanthrene	178	7.388	7.392	(1.003)	2459469	10.0000	10.289
116	Anthracene	178	7.426	7.430	(1.008)	2428328	10.0000	10.310
119	Carbazole	167	7.527	7.531	(1.022)	2071381	10.0000	10.403
120	Di-n-Butylphthalate	149	7.725	7.723	(1.049)	2634504	10.0000	10.508
123	Fluoranthene	202	8.270	8.268	(1.123)	2580171	10.0000	10.581
124	Benzidine	184	8.334	8.337	(0.888)	1181288	10.0000	10.772
125	Pyrene	202	8.446	8.450	(0.900)	2643557	10.0000	9.9452
131	Butylbenzylphthalate	149	8.857	8.861	(0.944)	1143511	10.0000	9.9391
133	3,3'-Dimethoxybenzidine	244	9.274	9.278	(0.988)	544293	10.0000	10.385
135	3,3'-Dichlorobenzidine	252	9.322	9.326	(0.993)	968252	10.0000	10.342
136	Benzo(a)Anthracene	228	9.375	9.379	(0.999)	2506472	10.0000	9.5681
137	Chrysene	228	9.413	9.411	(1.003)	2288043	10.0000	9.8164

138	4,4'-Methylene bis(o-chloroan	231	9.316	9.320 (0.993)	493611	10.0000	10.556
139	bis(2-ethylhexyl)Phthalate	149	9.284	9.283 (0.989)	1626220	10.0000	10.186

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
140 Di-n-octylphthalate	149	9.883	9.881	(0.900)	2543482	10.0000	10.509
141 Benzo(b)fluoranthene	252	10.481	10.485	(0.955)	2289482	10.0000	10.218
142 Benzo(k)fluoranthene	252	10.513	10.522	(0.958)	2348462	10.0000	10.273
146 Benzo(a)pyrene	252	10.913	10.917	(0.994)	2075071	10.0000	10.142
149 Indeno(1,2,3-cd)pyrene	276	12.767	12.792	(1.163)	2190550	10.0000	10.490
150 Dibenz(a,h)anthracene	278	12.783	12.803	(1.164)	1849717	10.0000	10.399
151 Benzo(g,h,i)perylene	276	13.317	13.337	(1.213)	1727137	10.0000	9.9072
198 1,4-Dioxane	88	1.866	1.870	(0.466)	285305	10.0000	8.3660
$ 154 Nitrobenzene-d5	82	4.424	4.428	(0.890)	1207273	10.0000	9.6890
$ 155 2-Fluorobiphenyl	172	5.754	5.758	(0.917)	1462859	10.0000	10.269
$ 156 Terphenyl-d14	244	8.521	8.519	(0.908)	1779822	10.0000	10.060
$ 157 Phenol-d5	99	3.676	3.680	(0.917)	1065137	10.0000	9.6954
$ 158 2-Fluorophenol	112	2.998	2.997	(0.748)	682346	10.0000	9.5901(M)
$ 159 2,4,6-Tribromophenol	330	6.849	6.853	(1.092)	176015	10.0000	10.545
$ 186 2-Chlorophenol-d4	132	3.837	3.835	(0.957)	576849	10.0000	9.9884
$ 187 1,2-Dichlorobenzene-d4	152	4.130	4.129	(1.031)	403576	10.0000	9.1962
M 195 Cresols, total	100				1493755	10.0000	19.776
101 Diphenylamine	169	6.737	6.741	(0.914)	1120923	10.0000	10.408

QC Flag Legend

M - Compound response manually integrated.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp9.i
Lab File ID: 9SHH0317.D
Lab Smp Id: L8
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Misc Info:

Calibration Date: 17-MAR-2008
Calibration Time: 11:08
Level:
Sample Type:

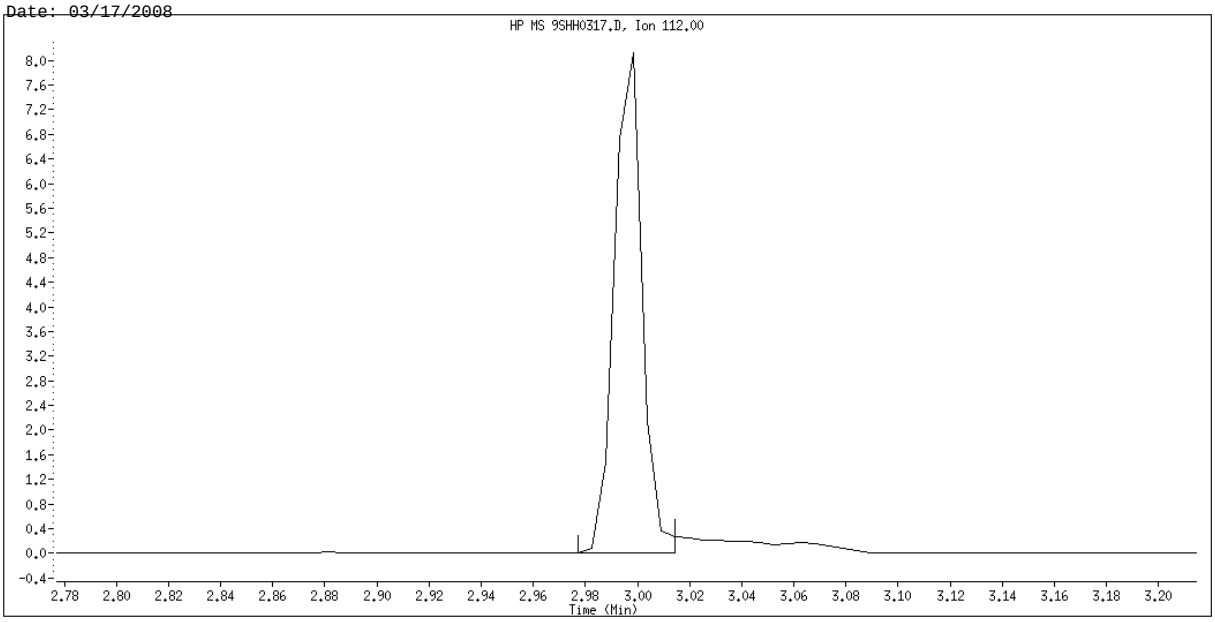
		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87943	43972	175886	99372	13.00
2 Naphthalene-d8	328975	164488	657950	365419	11.08
3 Acenaphthene-d10	197861	98931	395722	228232	15.35
4 Phenanthrene-d10	346358	173179	692716	402914	16.33
5 Chrysene-d12	342235	171118	684470	426067	24.50
6 Perylene-d12	281586	140793	563172	318433	13.09

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.01	3.51	4.51	4.01	0.03
2 Naphthalene-d8	4.97	4.47	5.47	4.97	-0.08
3 Acenaphthene-d10	6.27	5.77	6.77	6.27	0.02
4 Phenanthrene-d10	7.37	6.87	7.87	7.37	0.02
5 Chrysene-d12	9.39	8.89	9.89	9.39	-0.04
6 Perylene-d12	10.98	10.48	11.48	10.98	-0.04

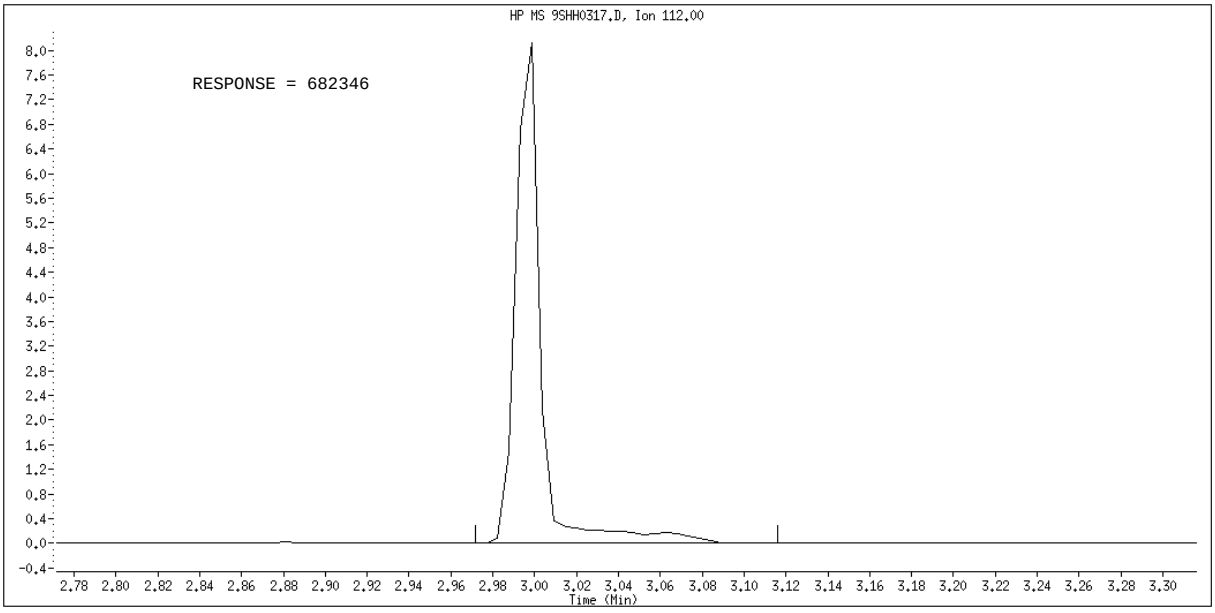
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SHH0317.D
Date : 17-MAR-2008 13:46
Client ID:
Sample Info: L8,80317a,b,8270p,1-8270424,sub,1,,8
Column phase: db5,625
Instrument: a4hp9.i
Operator: 001574
Column diameter: 0.32
Page 1
Y (x10^7)
Min
\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SHH0317.D
-Pyridine+
-Ethyl methacrylate
-3-Chloropropionitrile
-Malononitrile
-2-Fluorophenol
-Benzaldehyde+
-Aniline+
-2-Chlorophenol+
-1,4-Dichlorobenzene-d4+
-1,2-Dichlorobenzene+
-Acetophenone+
-Hexachloroethane+
-Isophorone
-2-Nitrophenol+
-bis(2-Chloroethoxy)methan+
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Naphthalene-d8+
-Hexachlorobutadiene+
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,6-Trichlorophenol+
2,4-Toluenediamene+
-Dimethylphthalate
-Acenaphthylene+
-Dibenzofuran
Acenaphthene-d10+
-Fluorene+
-N-Nitrosodiphenylamine+
-2,4,6-Tribromophenol
-4-Bromophenyl-phenylether
-Hexachlorobenzene+
-Pentachlorophenol
-Phenanthrene-d10+
-Carbazole
-Di-n-Butylphthalate
-Fluoranthene
-Benzidine
-Pyrene
-Terphenyl-d14
-Butylbenzylphthalate
-3,3'-Dimethoxybenzidine+
-Chrysene-d12+
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-d12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File Name: 9SHH0317.D
Inj. Date and Time: 17-MAR-2008 13:46
Instrument ID: a4hp9.i
Client ID:
Compound Name: 2-Fluorophenol
CAS #: 367-12-4
Report Date: 03/17/2008



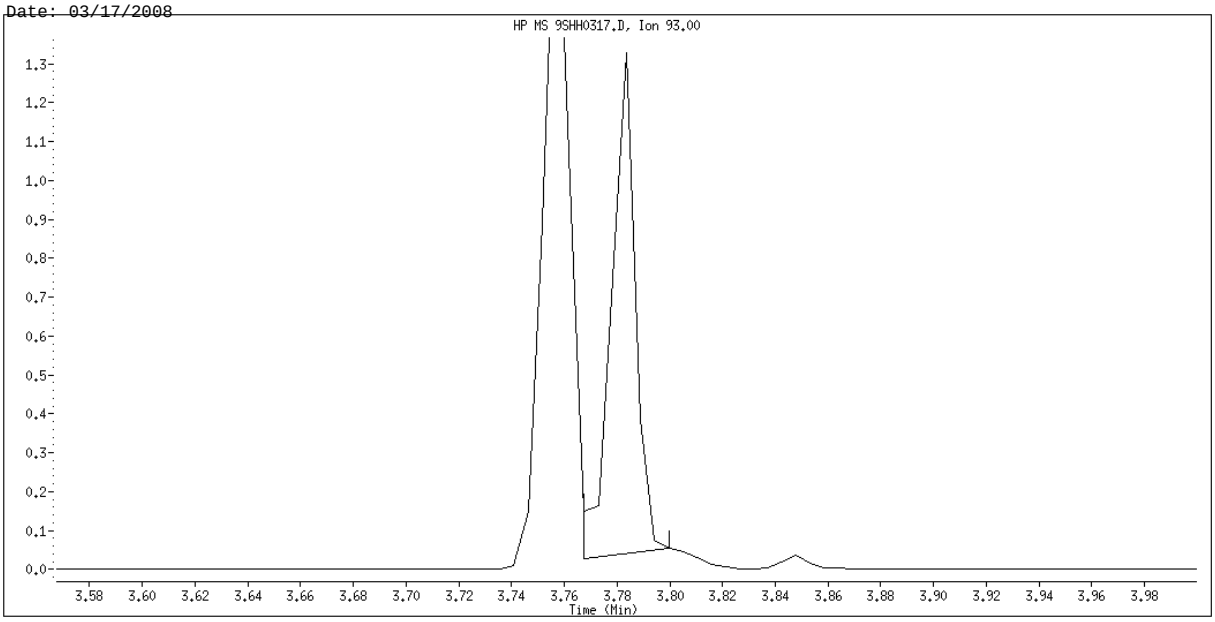
Original Integration



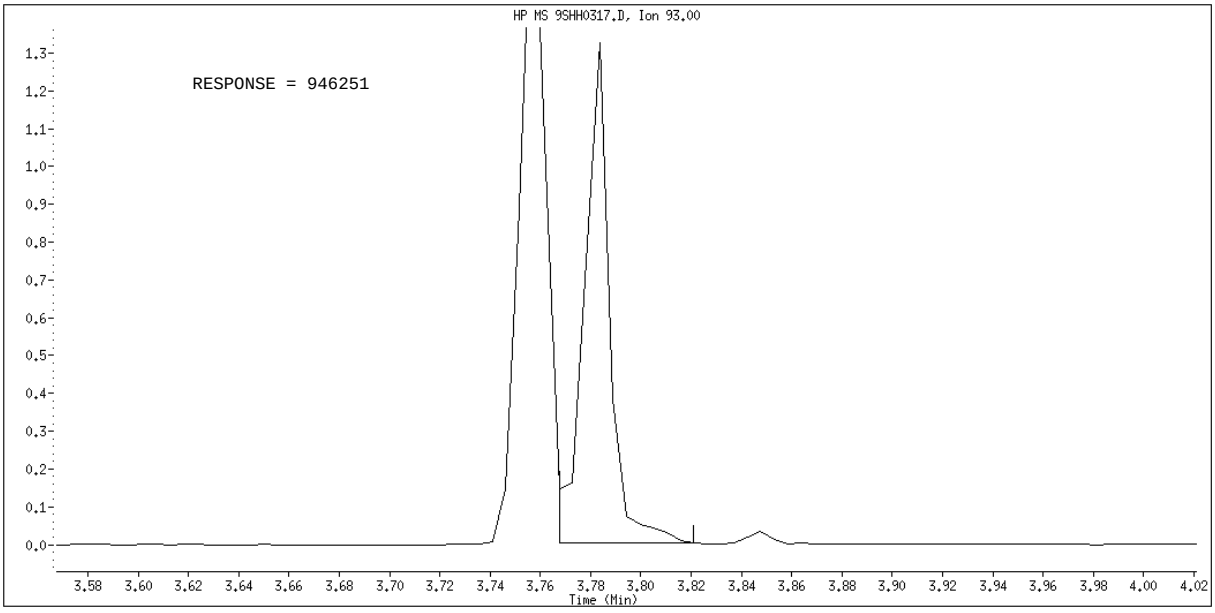
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Poor Chromatography

Data File Name: 9SHH0317.D
Inj. Date and Time: 17-MAR-2008 13:46
Instrument ID: a4hp9.i
Client ID:
Compound Name: bis(2-Chloroethyl)ether
CAS #: 111-44-4
Report Date: 03/17/2008



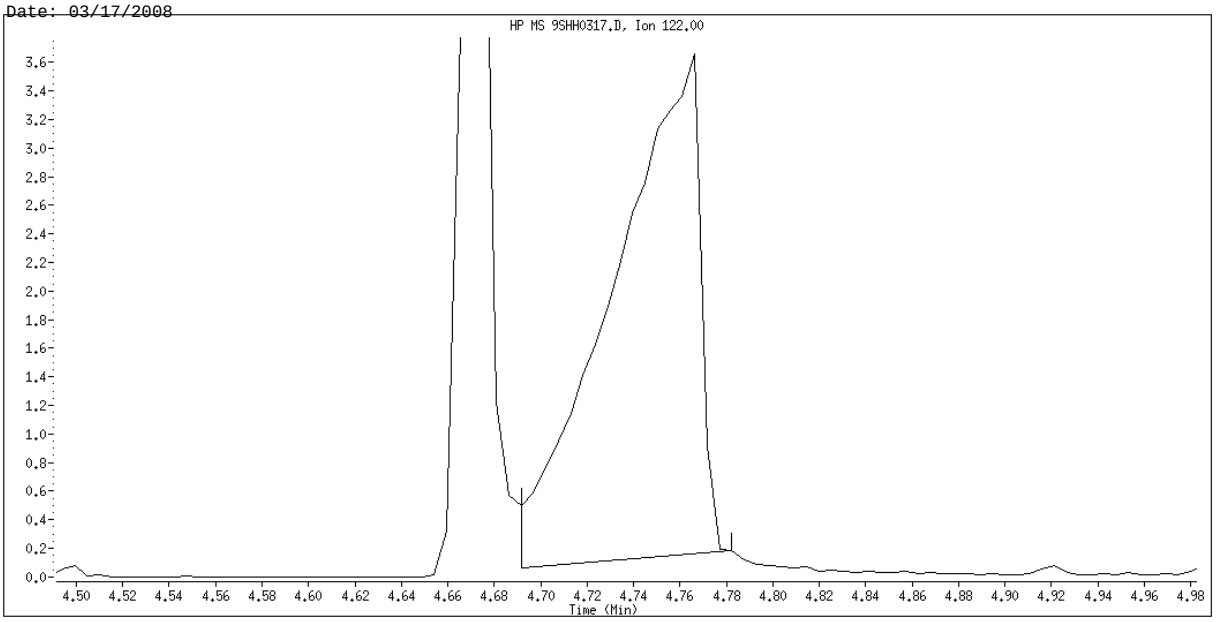
Original Integration



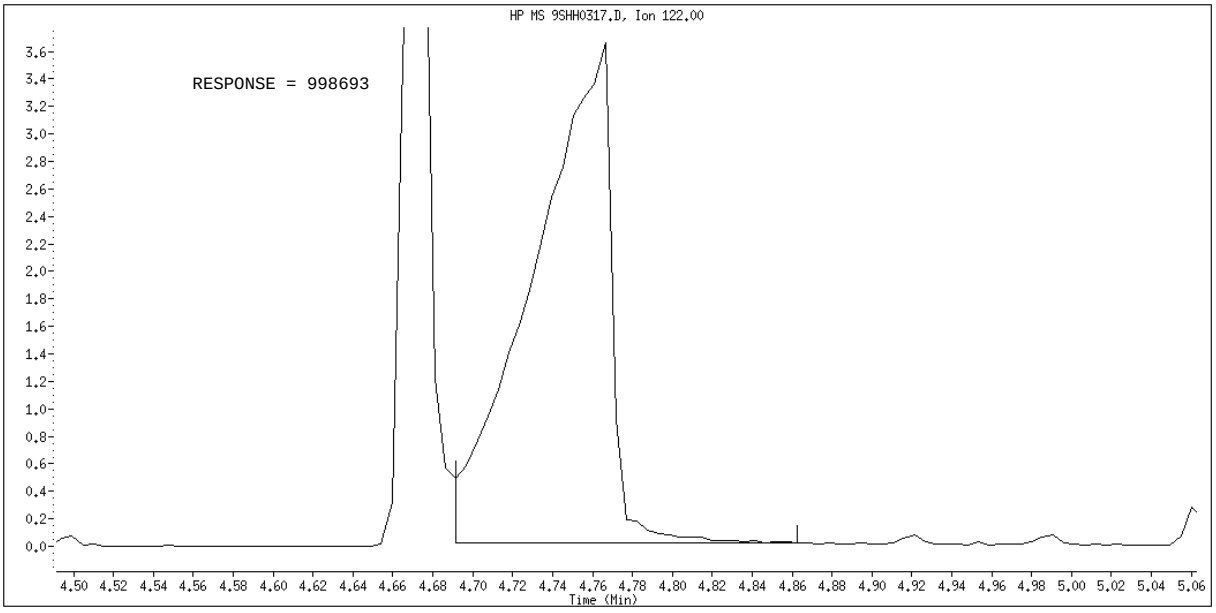
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Poor Chromatography

Data File Name: 9SHH0317.D
Inj. Date and Time: 17-MAR-2008 13:46
Instrument ID: a4hp9.i
Client ID:
Compound Name: Benzoic Acid
CAS #: 65-85-0
Report Date: 03/17/2008



Original Integration



Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Poor Chromatography

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SL0317.D
Lab Smp Id: L2
Inj Date : 17-MAR-2008 12:47
Operator : 001574 Inst ID: a4hp9.i
Smp Info : L2,80317a.b,8270p,1-827042d.sub,1,,2
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Meth Date : 17-Mar-2008 14:32 ulmanm Quant Type: ISTD
Cal Date : 17-MAR-2008 12:47 Cal File: 9SL0317.D
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV06

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	4.006	4.011	(1.000)	107998	2.00000	
* 2	Naphthalene-d8	136	4.972	4.973	(1.000)	432799	2.00000	
* 3	Acenaphthene-d10	164	6.270	6.276	(1.000)	263571	2.00000	
* 4	Phenanthrene-d10	188	7.365	7.371	(1.000)	473892	2.00000	
* 5	Chrysene-d12	240	9.373	9.385	(1.000)	480296	2.00000	
* 6	Perylene-d12	264	10.970	10.981	(1.000)	386278	2.00000	
9	Pyridine	79	2.120	2.105	(0.529)	23496	0.25000	0.22034
10	N-Nitrosodimethylamine	74	2.083	2.078	(0.520)	15721	0.25000	0.22782
11	Ethyl methacrylate	69	2.361	2.356	(0.589)	27354	0.25000	0.25186
12	3-Chloropropionitrile	54	2.574	2.580	(0.643)	11894	0.25000	0.24186
13	Malononitrile	66	2.745	2.756	(0.685)	31938	0.25000	0.23314
209	Benzaldehyde	77	3.680	3.686	(0.919)	24196	0.25000	0.25684
21	Aniline	93	3.749	3.760	(0.936)	39311	0.25000	0.24865
22	Phenol	94	3.680	3.691	(0.919)	29587	0.25000	0.23719
23	bis(2-Chloroethyl)ether	93	3.781	3.787	(0.944)	27160	0.25000	0.25340
24	2-Chlorophenol	128	3.845	3.851	(0.960)	13877	0.25000	0.20759
26	1,3-Dichlorobenzene	146	3.968	3.969	(0.991)	18181	0.25000	0.24529
27	1,4-Dichlorobenzene	146	4.022	4.022	(1.004)	11893	0.25000	0.24795
28	1,2-Dichlorobenzene	146	4.139	4.145	(1.033)	16206	0.25000	0.23423
29	Benzyl Alcohol	108	4.086	4.091	(1.020)	13161	0.25000	0.22789
30	2-Methylphenol	108	4.150	4.156	(1.036)	19853	0.25000	0.24891
31	bis(2-Chloroisopropyl)ether	45	4.182	4.188	(1.044)	25544	0.25000	0.26437
37	Acetophenone	105	4.299	4.305	(1.073)	33633	0.25000	0.25149
32	N-Nitroso-di-n-propylamine	70	4.283	4.294	(1.069)	25813	0.25000	0.25602
192	4-Methylphenol	108	4.257	4.273	(1.063)	19148	0.25000	0.22848
34	Hexachloroethane	117	4.401	4.401	(1.099)	8780	0.25000	0.24303
35	Nitrobenzene	77	4.433	4.444	(0.892)	32970	0.25000	0.22152
41	Isophorone	82	4.604	4.615	(0.926)	55257	0.25000	0.22695
42	2-Nitrophenol	139	4.673	4.680	(0.940)	6677	0.25000	0.18012
43	2,4-Dimethylphenol	107	4.668	4.674	(0.939)	27305	0.25000	0.24444
44	bis(2-Chloroethoxy)methane	93	4.743	4.748	(0.954)	28419	0.25000	0.23910

46	2,4-Toluenediamene	121	5.811	5.817 (1.169)	15757	0.25000	0.38074
47	1,3,5-Trichlorobenzene	180	4.684	4.684 (0.942)	14693	0.25000	0.23341

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
48	2,4-Dichlorophenol	162	4.844	4.850	(0.974)	13072	0.25000	0.20971
49	Benzoic Acid	122	Compound Not Detected.					
50	1,2,4-Trichlorobenzene	180	4.919	4.919	(0.989)	16432	0.25000	0.24168
51	Naphthalene	128	4.988	4.989	(1.003)	48655	0.25000	0.21563
52	4-Chloroaniline	127	5.004	5.010	(1.006)	18817	0.25000	0.21658
56	Hexachlorobutadiene	225	5.063	5.064	(1.018)	9098	0.25000	0.20139
210	Caprolactam	113	5.239	5.293	(1.054)	5942	0.25000	0.22316
57	1,2,3-Trichlorobenzene	180	5.090	5.090	(1.024)	15510	0.25000	0.25402
59	4-Chloro-3-Methylphenol	107	5.336	5.347	(1.073)	20043	0.25000	0.22396
62	2-Methylnaphthalene	142	5.496	5.502	(1.105)	27364	0.25000	0.20978
63	1-Methylnaphthalene	142	5.571	5.576	(1.120)	33538	0.25000	0.23777
64	Hexachlorocyclopentadiene	237	5.603	5.608	(0.894)	11399	0.25000	0.22742
66	2,4,6-Trichlorophenol	196	5.688	5.694	(0.907)	10643	0.25000	0.21142
67	2,4,5-Trichlorophenol	196	5.715	5.726	(0.911)	10592	0.25000	0.20762
211	1,1'-Biphenyl	154	5.832	5.838	(0.930)	41224	0.25000	0.22315
68	1,2,3,5-Tetrachlorobenzene	216	5.608	5.608	(0.894)	17489	0.25000	0.23211
70	2-Chloronaphthalene	162	5.859	5.865	(0.934)	33964	0.25000	0.23642
73	2-Nitroaniline	65	5.912	5.923	(0.943)	18988	0.25000	0.22791
74	1,2,3,4-Tetrachlorobenzene	216	5.832	5.838	(0.930)	15761	0.25000	0.23163
76	Dimethylphthalate	163	6.025	6.036	(0.961)	37983	0.25000	0.22579
78	2,6-Dinitrotoluene	165	6.083	6.089	(0.970)	7877	0.25000	0.21699
79	Acenaphthylene	152	6.169	6.175	(0.984)	54352	0.25000	0.23078
80	1,2-Dinitrobenzene	168	Compound Not Detected.					
81	3-Nitroaniline	138	6.211	6.223	(0.991)	6438	0.25000	0.18554
82	Acenaphthene	153	6.297	6.303	(1.004)	34936	0.25000	0.23923
83	2,4-Dinitrophenol	184	Compound Not Detected.					
85	4-Nitrophenol	109	Compound Not Detected.					
86	Dibenzofuran	168	6.420	6.426	(1.024)	48559	0.25000	0.23390
87	2,4-Dinitrotoluene	165	6.382	6.388	(1.018)	9190	0.25000	0.19063
91	2,3,5,6-Tetrachlorophenol	232	6.463	6.469	(1.031)	8392	0.25000	0.19329
93	Diethylphthalate	149	6.537	6.543	(1.043)	40993	0.25000	0.24072
94	Fluorene	166	6.671	6.677	(1.064)	44665	0.25000	0.25175
95	4-Chlorophenyl-phenylether	204	6.649	6.655	(1.060)	21051	0.25000	0.25608
96	4-Nitroaniline	138	6.660	6.677	(1.062)	9135	0.25000	0.22903
98	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
99	N-Nitrosodiphenylamine	169	6.730	6.741	(0.914)	27727	0.25000	0.22502
100	1,2-Diphenylhydrazine	77	6.767	6.773	(0.919)	73402	0.25000	0.22426
106	4-Bromophenyl-phenylether	248	7.013	7.018	(0.952)	10670	0.25000	0.22637
107	Hexachlorobenzene	284	7.077	7.082	(0.961)	9691	0.25000	0.19797
212	Atrazine	200	7.093	7.104	(0.963)	11643	0.25000	0.21620
111	Pentachlorophenol	266	7.210	7.217	(0.979)	10339	0.50000	0.34882
115	Phenanthrene	178	7.387	7.392	(1.003)	63142	0.25000	0.22907
116	Anthracene	178	7.424	7.430	(1.008)	59815	0.25000	0.22139
119	Carbazole	167	7.525	7.531	(1.022)	52099	0.25000	0.22872
120	Di-n-Butylphthalate	149	7.723	7.723	(1.049)	67889	0.25000	0.23760
123	Fluoranthene	202	8.262	8.268	(1.122)	66239	0.25000	0.23820
124	Benzidine	184	8.332	8.337	(0.889)	30819	0.25000	0.26322
125	Pyrene	202	8.439	8.450	(0.900)	68260	0.25000	0.23023
131	Butylbenzylphthalate	149	8.855	8.861	(0.945)	30632	0.25000	0.23794
133	3,3'-Dimethoxybenzidine	244	9.261	9.278	(0.988)	14635	0.25000	0.25392
135	3,3'-Dichlorobenzidine	252	9.309	9.326	(0.993)	23648	0.25000	0.23159
136	Benzo(a)Anthracene	228	9.363	9.379	(0.999)	67180	0.25000	0.22730

137	Chrysene	228	9.400	9.411 (1.003)	58759	0.25000	0.22436
138	4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.				

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139	bis(2-ethylhexyl)Phthalate	149	9.277	9.283	(0.990)	40846	0.25000	0.23086
140	Di-n-octylphthalate	149	9.875	9.881	(0.900)	66849	0.25000	0.23380
141	Benzo(b)fluoranthene	252	10.463	10.485	(0.954)	63413	0.25000	0.23649
142	Benzo(k)fluoranthene	252	10.495	10.522	(0.957)	62237	0.25000	0.22844
146	Benzo(a)pyrene	252	10.890	10.917	(0.993)	56082	0.25000	0.22873
149	Indeno(1,2,3-cd)pyrene	276	12.722	12.792	(1.160)	56645	0.25000	0.22850
150	Dibenz(a,h)anthracene	278	12.738	12.803	(1.161)	47014	0.25000	0.22234
151	Benzo(g,h,i)perylene	276	13.267	13.337	(1.209)	51033	0.25000	0.25253
198	1,4-Dioxane	88	1.880	1.870	(0.469)	11021	0.25000	0.28456
$ 154	Nitrobenzene-d5	82	4.417	4.428	(0.888)	36217	0.25000	0.24550
$ 155	2-Fluorobiphenyl	172	5.752	5.758	(0.917)	37643	0.25000	0.23294
$ 156	Terphenyl-d14	244	8.513	8.519	(0.908)	45076	0.25000	0.22921
$ 157	Phenol-d5	99	3.669	3.680	(0.916)	27168	0.25000	0.22828
$ 158	2-Fluorophenol	112	2.996	2.997	(0.748)	17727	0.25000	0.22895
$ 159	2,4,6-Tribromophenol	330	6.847	6.853	(1.092)	3577	0.25000	0.19258
$ 186	2-Chlorophenol-d4	132	3.835	3.835	(0.957)	15239	0.25000	0.24500
$ 187	1,2-Dichlorobenzene-d4	152	4.128	4.129	(1.031)	12379	0.25000	0.25603
M 195	Cresols, total	100				39001	0.25000	0.47739
101	Diphenylamine	169	6.730	6.741	(0.914)	27727	0.25000	0.22502

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp9.i
Lab File ID: 9SL0317.D
Lab Smp Id: L2
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Misc Info:

Calibration Date: 17-MAR-2008
Calibration Time: 11:08
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87943	43972	175886	107998	22.80
2 Naphthalene-d8	328975	164488	657950	432799	31.56
3 Acenaphthene-d10	197861	98931	395722	263571	33.21
4 Phenanthrene-d10	346358	173179	692716	473892	36.82
5 Chrysene-d12	342235	171118	684470	480296	40.34
6 Perylene-d12	281586	140793	563172	386278	37.18

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.01	3.51	4.51	4.01	-0.01
2 Naphthalene-d8	4.97	4.47	5.47	4.97	-0.01
3 Acenaphthene-d10	6.27	5.77	6.77	6.27	-0.01
4 Phenanthrene-d10	7.37	6.87	7.87	7.37	-0.01
5 Chrysene-d12	9.39	8.89	9.89	9.37	-0.18
6 Perylene-d12	10.98	10.48	11.48	10.97	-0.10

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SL0317.D

Page 1

Date : 17-MAR-2008 12:47

Client ID:

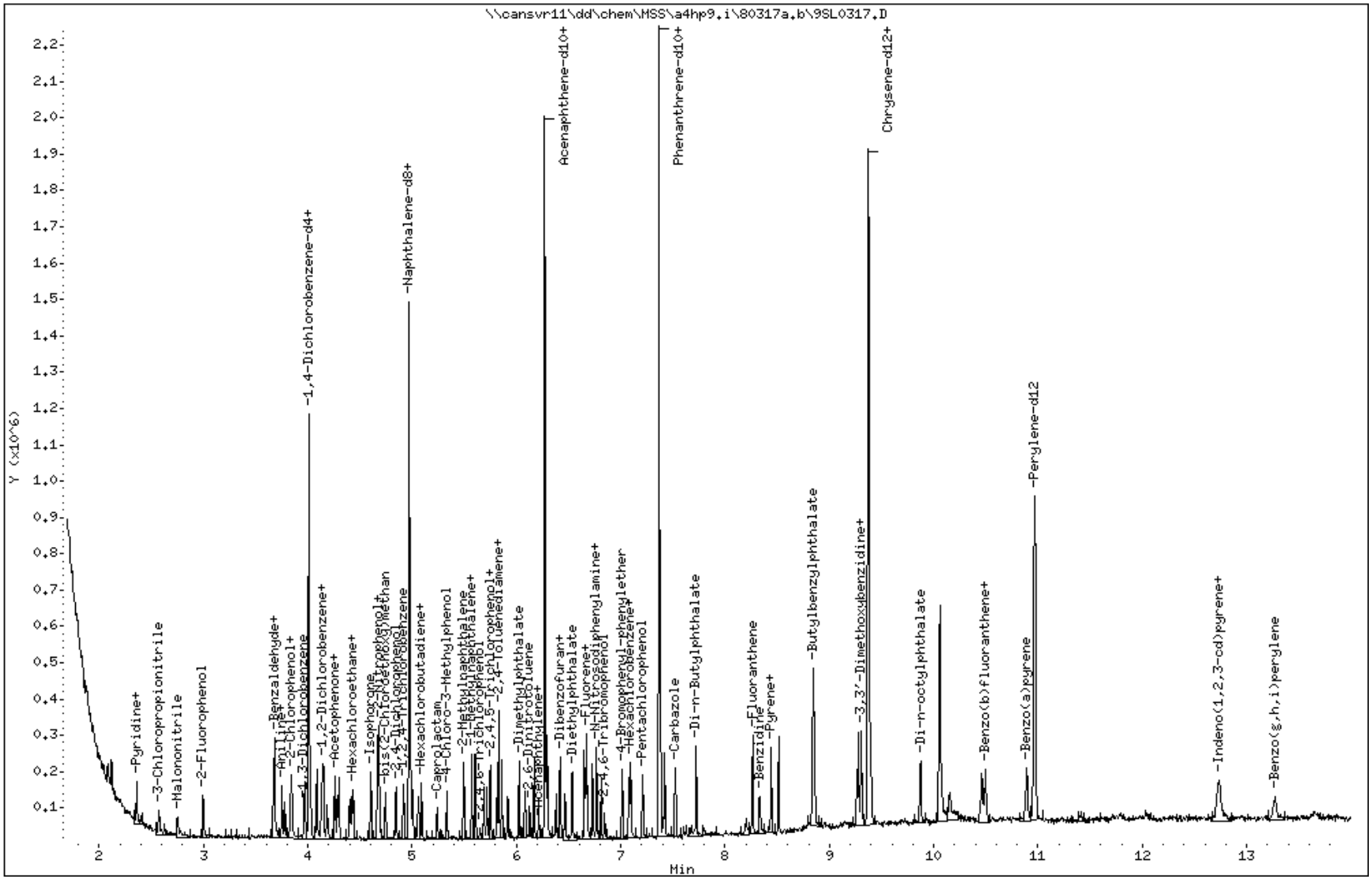
Instrument: a4hp9.i

Sample Info: L2,80317a.b,8270p,1-827042d.sub,1,,2

Operator: 001574

Column phase: db5.625

Column diameter: 0.32



TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SLL0317.D
Lab Smp Id: L1
Inj Date : 17-MAR-2008 13:07
Operator : 001574 Inst ID: a4hp9.i
Smp Info : L1,80317a.b,8270p,1-pahpl.sub,1,,1
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Meth Date : 17-Mar-2008 14:32 ulmanm Quant Type: ISTD
Cal Date : 17-MAR-2008 13:07 Cal File: 9SLL0317.D
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-pahpl.sub
Target Version: 4.14
Processing Host: CANPMSSV06

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	4.010	4.011	(1.000)	124666	2.00000	
* 2	Naphthalene-d8	136	4.972	4.973	(1.000)	463608	2.00000	
* 3	Acenaphthene-d10	164	6.270	6.276	(1.000)	284868	2.00000	
* 4	Phenanthrene-d10	188	7.365	7.371	(1.000)	484552	2.00000	
* 5	Chrysene-d12	240	9.373	9.385	(1.000)	488683	2.00000	
* 6	Perylene-d12	264	10.964	10.981	(1.000)	393917	2.00000	
23	bis(2-Chloroethyl)ether	93	3.781	3.787	(0.943)	7859	0.05000	0.063521
34	Hexachloroethane	117	4.400	4.401	(1.097)	2642	0.05000	0.063353
56	Hexachlorobutadiene	225	5.063	5.064	(1.018)	3086	0.05000	0.063772
51	Naphthalene	128	4.988	4.989	(1.003)	14413	0.05000	0.059632
62	2-Methylnaphthalene	142	5.495	5.502	(1.105)	8223	0.05000	0.058851
63	1-Methylnaphthalene	142	5.570	5.576	(1.120)	8365	0.05000	0.055363
70	2-Chloronaphthalene	162	5.858	5.865	(0.934)	8898	0.05000	0.057307
79	Acenaphthylene	152	6.174	6.175	(0.985)	14146	0.05000	0.055573
82	Acenaphthene	153	6.296	6.303	(1.004)	7556	0.05000	0.047873
86	Dibenzofuran	168	6.419	6.426	(1.024)	11249	0.05000	0.050133
94	Fluorene	166	6.670	6.677	(1.064)	9554	0.05000	0.049825
107	Hexachlorobenzene	284	7.076	7.082	(0.961)	3064	0.05000	0.061216
115	Phenanthrene	178	7.381	7.392	(1.002)	14920	0.05000	0.052938
116	Anthracene	178	7.423	7.430	(1.008)	14229	0.05000	0.051506
123	Fluoranthene	202	8.262	8.268	(1.122)	14351	0.05000	0.050473
125	Pyrene	202	8.438	8.450	(0.900)	16965	0.05000	0.056238
136	Benzo(a)Anthracene	228	9.362	9.379	(0.999)	17999	0.05000	0.059854
137	Chrysene	228	9.394	9.411	(1.002)	15139	0.05000	0.056813
141	Benzo(b)fluoranthene	252	10.462	10.485	(0.954)	15305	0.05000	0.055971
142	Benzo(k)fluoranthene	252	10.494	10.522	(0.957)	14492	0.05000	0.052162
146	Benzo(a)pyrene	252	10.884	10.917	(0.993)	13736	0.05000	0.054937
149	Indeno(1,2,3-cd)pyrene	276	12.727	12.792	(1.161)	11405	0.05000	0.045116
150	Dibenz(a,h)anthracene	278	12.738	12.803	(1.162)	11691	0.05000	0.054216
151	Benzo(g,h,i)perylene	276	13.266	13.337	(1.210)	10347	0.05000	0.048234(M)
$ 154	Nitrobenzene-d5	82	4.422	4.428	(0.889)	7770	0.05000	0.049170

$ 155 2-Fluorobiphenyl	172	5.752	5.758 (0.917)	8278	0.05000	0.047395
$ 156 Terphenyl-d14	244	8.513	8.519 (0.908)	10259	0.05000	0.051272

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
$ 157 Phenol-d5	99	3.669	3.680	(0.915)	7093	0.05000	0.051632
$ 158 2-Fluorophenol	112	2.996	2.997	(0.747)	5381	0.05000	0.060205
$ 159 2,4,6-Tribromophenol	330	Compound Not Detected.					
$ 186 2-Chlorophenol-d4	132	3.834	3.835	(0.956)	3563	0.05000	0.049623
$ 187 1,2-Dichlorobenzene-d4	152	4.128	4.129	(1.029)	3059	0.05000	0.054809

QC Flag Legend

M - Compound response manually integrated.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp9.i
Lab File ID: 9SLL0317.D
Lab Smp Id: L1
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Misc Info:

Calibration Date: 17-MAR-2008
Calibration Time: 11:08
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87943	43972	175886	124666	41.76
2 Naphthalene-d8	328975	164488	657950	463608	40.92
3 Acenaphthene-d10	197861	98931	395722	284868	43.97
4 Phenanthrene-d10	346358	173179	692716	484552	39.90
5 Chrysene-d12	342235	171118	684470	488683	42.79
6 Perylene-d12	281586	140793	563172	393917	39.89

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.01	3.51	4.51	4.01	0.11
2 Naphthalene-d8	4.97	4.47	5.47	4.97	-0.02
3 Acenaphthene-d10	6.27	5.77	6.77	6.27	-0.02
4 Phenanthrene-d10	7.37	6.87	7.87	7.37	-0.01
5 Chrysene-d12	9.39	8.89	9.89	9.37	-0.18
6 Perylene-d12	10.98	10.48	11.48	10.96	-0.16

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SLL0317.D

Page 1

Date : 17-MAR-2008 13:07

Client ID:

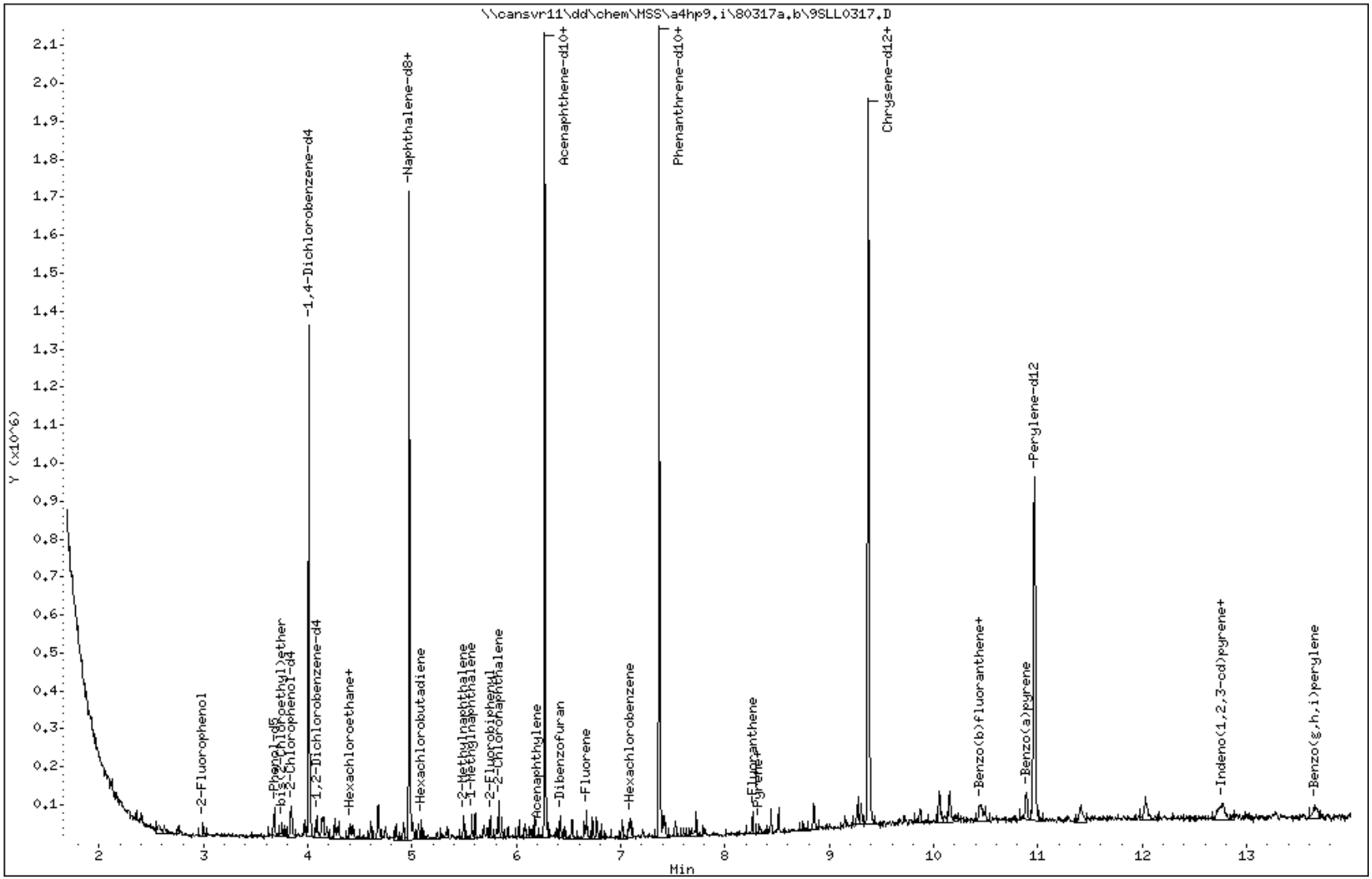
Instrument: a4hp9.i

Sample Info: L1,80317a.b,8270p,1-pahpl.sub,1,,1

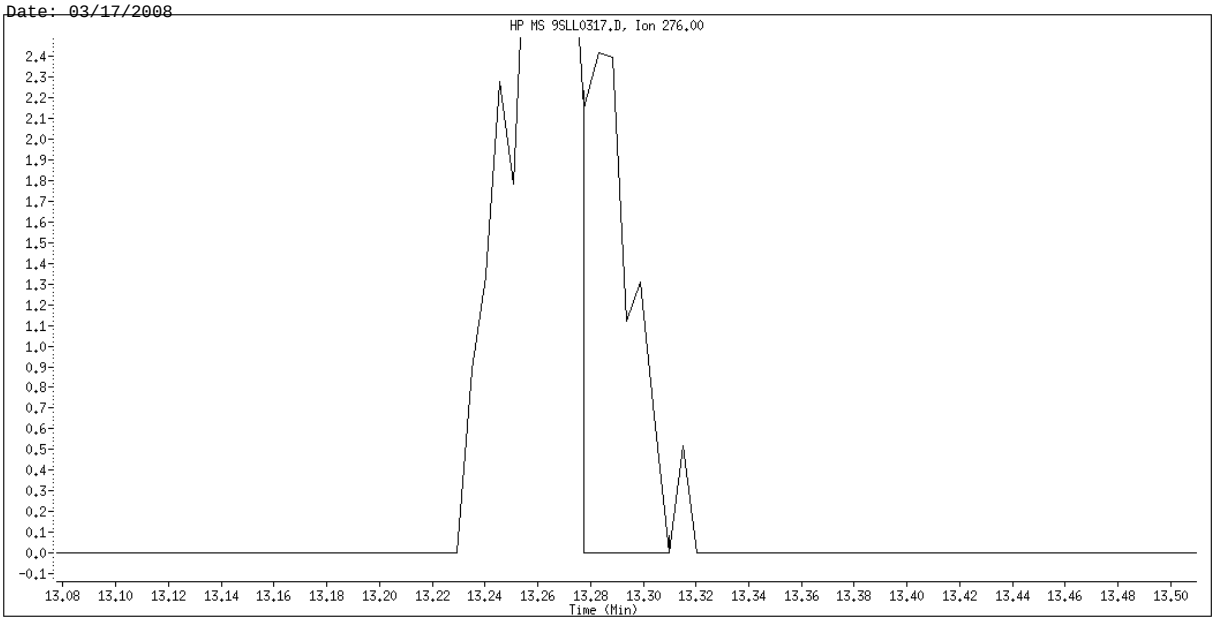
Operator: 001574

Column phase: db5.625

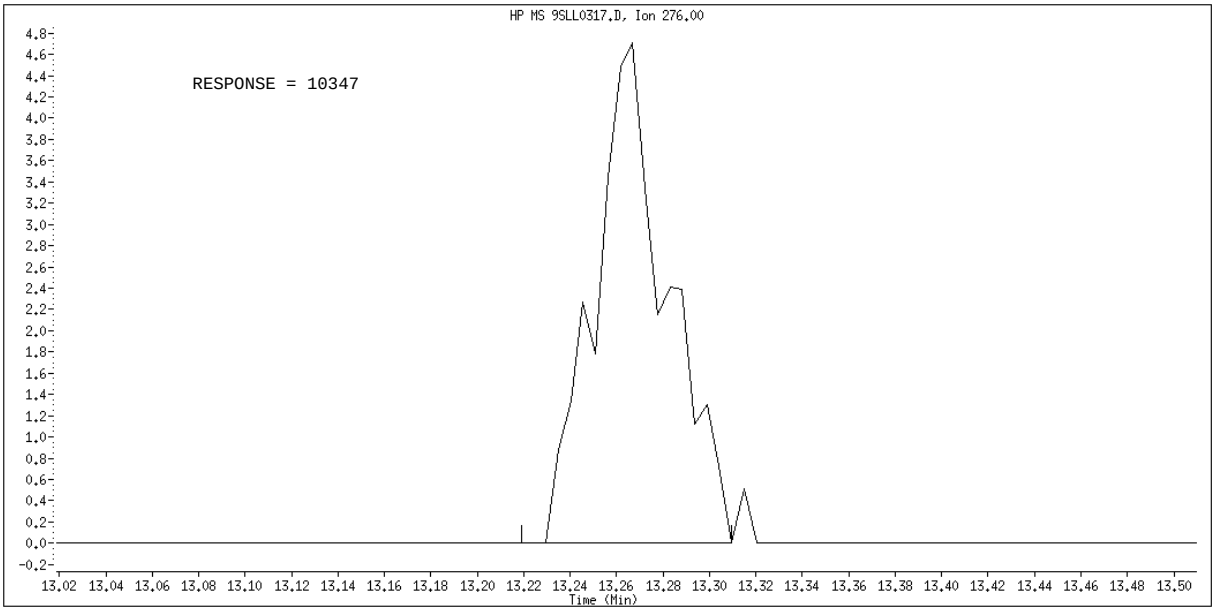
Column diameter: 0.32



Data File Name: 9SLL0317.D
Inj. Date and Time: 17-MAR-2008 13:07
Instrument ID: a4hp9.i
Client ID:
Compound Name: Benzo(g,h,i)perylene
CAS #: 191-24-2
Report Date: 03/17/2008



Original Integration



Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Poor Chromatography

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SM0317.D
Lab Smp Id: L4
Inj Date : 17-MAR-2008 12:27
Operator : 001574 Inst ID: a4hp9.i
Smp Info : L4,80317a.b,8270p,1-827042d.sub,1,,4
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Meth Date : 17-Mar-2008 14:32 ulmanm Quant Type: ISTD
Cal Date : 17-MAR-2008 12:27 Cal File: 9SM0317.D
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV06

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(NG)	(NG)
*	1 1,4-Dichlorobenzene-d4	152	4.010	4.011	(1.000)	126070	2.00000	
*	2 Naphthalene-d8	136	4.972	4.973	(1.000)	459899	2.00000	
*	3 Acenaphthene-d10	164	6.270	6.276	(1.000)	281639	2.00000	
*	4 Phenanthrene-d10	188	7.365	7.371	(1.000)	488695	2.00000	
*	5 Chrysene-d12	240	9.378	9.385	(1.000)	487803	2.00000	
*	6 Perylene-d12	264	10.975	10.981	(1.000)	391139	2.00000	
	9 Pyridine	79	2.109	2.105	(0.526)	129388	1.00000	1.0095
	10 N-Nitrosodimethylamine	74	2.077	2.078	(0.518)	83688	1.00000	1.0164
	11 Ethyl methacrylate	69	2.355	2.356	(0.587)	136003	1.00000	1.0747
	12 3-Chloropropionitrile	54	2.574	2.580	(0.642)	56758	1.00000	0.98072
	13 Malononitrile	66	2.745	2.756	(0.684)	165318	1.00000	1.0166
	209 Benzaldehyde	77	3.685	3.686	(0.919)	115772	1.00000	1.0600
	21 Aniline	93	3.754	3.760	(0.936)	179369	1.00000	0.97061
	22 Phenol	94	3.679	3.691	(0.917)	149320	1.00000	1.0125
	23 bis(2-Chloroethyl)ether	93	3.781	3.787	(0.943)	112779	1.00000	0.97030
	24 2-Chlorophenol	128	3.845	3.851	(0.959)	80590	1.00000	0.99073
	26 1,3-Dichlorobenzene	146	3.968	3.969	(0.989)	88534	1.00000	1.0184
	27 1,4-Dichlorobenzene	146	4.021	4.022	(1.003)	56778	1.00000	1.0120
	28 1,2-Dichlorobenzene	146	4.139	4.145	(1.032)	85656	1.00000	1.0441
	29 Benzyl Alcohol	108	4.085	4.091	(1.019)	69920	1.00000	1.0147
	30 2-Methylphenol	108	4.149	4.156	(1.035)	96790	1.00000	1.0384
	31 bis(2-Chloroisopropyl)ether	45	4.181	4.188	(1.043)	116471	1.00000	1.0477
	37 Acetophenone	105	4.299	4.305	(1.072)	156990	1.00000	1.0071
	32 N-Nitroso-di-n-propylamine	70	4.283	4.294	(1.068)	120560	1.00000	1.0305
	192 4-Methylphenol	108	4.256	4.273	(1.061)	99872	1.00000	0.99937
	34 Hexachloroethane	117	4.400	4.401	(1.097)	39933	1.00000	1.0071
	35 Nitrobenzene	77	4.432	4.444	(0.892)	167456	1.00000	1.0295
	41 Isophorone	82	4.603	4.615	(0.926)	271443	1.00000	1.0255
	42 2-Nitrophenol	139	4.673	4.680	(0.940)	42641	1.00000	1.0118
	43 2,4-Dimethylphenol	107	4.667	4.674	(0.939)	120731	1.00000	1.0115
	44 bis(2-Chloroethoxy)methane	93	4.742	4.748	(0.954)	132771	1.00000	1.0399

46	2,4-Toluenediamene	121	5.810	5.817 (1.169)	29073	1.00000	0.76054
47	1,3,5-Trichlorobenzene	180	4.683	4.684 (0.942)	70683	1.00000	1.0394

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
48	2,4-Dichlorophenol	162	4.844	4.850	(0.974)	70470	1.00000	1.0227
49	Benzoic Acid	122	4.699	4.786	(0.945)	101948	2.00000	1.9354
50	1,2,4-Trichlorobenzene	180	4.918	4.919	(0.989)	74906	1.00000	1.0283
51	Naphthalene	128	4.988	4.989	(1.003)	241824	1.00000	1.0227
52	4-Chloroaniline	127	5.004	5.010	(1.006)	95147	1.00000	0.99729
56	Hexachlorobutadiene	225	5.063	5.064	(1.018)	45407	1.00000	0.96546
210	Caprolactam	113	5.244	5.293	(1.055)	29739	1.00000	1.0236
57	1,2,3-Trichlorobenzene	180	5.089	5.090	(1.024)	65364	1.00000	1.0115
59	4-Chloro-3-Methylphenol	107	5.335	5.347	(1.073)	103820	1.00000	1.0640
62	2-Methylnaphthalene	142	5.495	5.502	(1.105)	139473	1.00000	1.0103
63	1-Methylnaphthalene	142	5.570	5.576	(1.120)	156903	1.00000	1.0623
64	Hexachlorocyclopentadiene	237	5.607	5.608	(0.894)	51717	1.00000	0.94431
66	2,4,6-Trichlorophenol	196	5.688	5.694	(0.907)	57977	1.00000	1.0378
67	2,4,5-Trichlorophenol	196	5.714	5.726	(0.911)	58277	1.00000	1.0256
211	1,1'-Biphenyl	154	5.832	5.838	(0.930)	205156	1.00000	1.0121
68	1,2,3,5-Tetrachlorobenzene	216	5.607	5.608	(0.894)	83403	1.00000	1.0177
70	2-Chloronaphthalene	162	5.858	5.865	(0.934)	154932	1.00000	1.0330
73	2-Nitroaniline	65	5.917	5.923	(0.944)	97176	1.00000	1.0680
74	1,2,3,4-Tetrachlorobenzene	216	5.832	5.838	(0.930)	74901	1.00000	1.0116
76	Dimethylphthalate	163	6.024	6.036	(0.961)	191092	1.00000	1.0379
78	2,6-Dinitrotoluene	165	6.083	6.089	(0.970)	40125	1.00000	1.0013
79	Acenaphthylene	152	6.174	6.175	(0.985)	254076	1.00000	1.0184
80	1,2-Dinitrobenzene	168	6.131	6.142	(0.978)	20036	1.00000	1.0004
81	3-Nitroaniline	138	6.211	6.223	(0.991)	42501	1.00000	1.0769
82	Acenaphthene	153	6.296	6.303	(1.004)	161887	1.00000	1.0157
83	2,4-Dinitrophenol	184	6.286	6.298	(1.003)	38877	2.00000	1.4868
85	4-Nitrophenol	109	6.296	6.308	(1.004)	41172	1.00000	0.95682
86	Dibenzofuran	168	6.419	6.426	(1.024)	226971	1.00000	1.0076
87	2,4-Dinitrotoluene	165	6.382	6.388	(1.018)	57340	1.00000	1.0507
91	2,3,5,6-Tetrachlorophenol	232	6.462	6.469	(1.031)	51654	1.00000	1.0537
93	Diethylphthalate	149	6.537	6.543	(1.043)	188196	1.00000	1.0247
94	Fluorene	166	6.670	6.677	(1.064)	193616	1.00000	1.0222
95	4-Chlorophenyl-phenylether	204	6.649	6.655	(1.060)	91839	1.00000	1.0519
96	4-Nitroaniline	138	6.660	6.677	(1.062)	42854	1.00000	0.98486
98	4,6-Dinitro-2-methylphenol	198	6.681	6.693	(0.907)	30764	1.00000	0.90121
99	N-Nitrosodiphenylamine	169	6.734	6.741	(0.914)	133954	1.00000	1.0285
100	1,2-Diphenylhydrazine	77	6.766	6.773	(0.919)	371283	1.00000	1.0724
106	4-Bromophenyl-phenylether	248	7.012	7.018	(0.952)	53036	1.00000	1.0659
107	Hexachlorobenzene	284	7.076	7.082	(0.961)	48843	1.00000	0.97152
212	Atrazine	200	7.092	7.104	(0.963)	59251	1.00000	1.0320
111	Pentachlorophenol	266	7.210	7.217	(0.979)	69215	2.00000	2.1054
115	Phenanthrene	178	7.386	7.392	(1.003)	298637	1.00000	1.0441
116	Anthracene	178	7.423	7.430	(1.008)	287294	1.00000	1.0098
119	Carbazole	167	7.525	7.531	(1.022)	242703	1.00000	1.0117
120	Di-n-Butylphthalate	149	7.722	7.723	(1.049)	290521	1.00000	0.97388
123	Fluoranthene	202	8.267	8.268	(1.123)	275028	1.00000	0.95012
124	Benzidine	184	8.331	8.337	(0.888)	34791	1.00000	0.29650
125	Pyrene	202	8.444	8.450	(0.900)	285346	1.00000	0.95857
131	Butylbenzylphthalate	149	8.860	8.861	(0.945)	135193	1.00000	1.0216
133	3,3'-Dimethoxybenzidine	244	9.266	9.278	(0.988)	38070	1.00000	0.65291
135	3,3'-Dichlorobenzidine	252	9.314	9.326	(0.993)	99777	1.00000	0.94469
136	Benzo(a)Anthracene	228	9.373	9.379	(0.999)	304007	1.00000	1.0404

137 Chrysene	228	9.405	9.411 (1.003)	270753	1.00000	1.0266
138 4,4'-Methylene bis(o-chloroan	231	9.309	9.320 (0.993)	45756	1.00000	0.89240

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139	bis(2-ethylhexyl)Phthalate	149	9.282	9.283	(0.990)	185528	1.00000	1.0131
140	Di-n-octylphthalate	149	9.880	9.881	(0.900)	301908	1.00000	1.0262
141	Benzo(b)fluoranthene	252	10.468	10.485	(0.954)	286386	1.00000	1.0723
142	Benzo(k)fluoranthene	252	10.500	10.522	(0.957)	292469	1.00000	1.0489
146	Benzo(a)pyrene	252	10.900	10.917	(0.993)	256124	1.00000	1.0352
149	Indeno(1,2,3-cd)pyrene	276	12.732	12.792	(1.160)	279360	1.00000	1.0641
150	Dibenz(a,h)anthracene	278	12.748	12.803	(1.162)	220991	1.00000	1.0254
151	Benzo(g,h,i)perylene	276	13.283	13.337	(1.210)	227088	1.00000	1.0491
198	1,4-Dioxane	88	1.874	1.870	(0.467)	46104	1.00000	1.0562
$ 154	Nitrobenzene-d5	82	4.422	4.428	(0.889)	168977	1.00000	1.0687
$ 155	2-Fluorobiphenyl	172	5.752	5.758	(0.917)	183773	1.00000	1.0332
$ 156	Terphenyl-d14	244	8.518	8.519	(0.908)	197463	1.00000	0.97459
$ 157	Phenol-d5	99	3.669	3.680	(0.915)	144199	1.00000	1.0241
$ 158	2-Fluorophenol	112	2.996	2.997	(0.747)	88701	1.00000	1.0117
$ 159	2,4,6-Tribromophenol	330	6.847	6.853	(1.092)	22225	1.00000	1.0590
$ 186	2-Chlorophenol-d4	132	3.834	3.835	(0.956)	73200	1.00000	1.0012
$ 187	1,2-Dichlorobenzene-d4	152	4.128	4.129	(1.029)	55470	1.00000	1.0133
M 195	Cresols, total	100				196662	1.00000	2.0378
101	Diphenylamine	169	6.734	6.741	(0.914)	133954	1.00000	1.0285

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

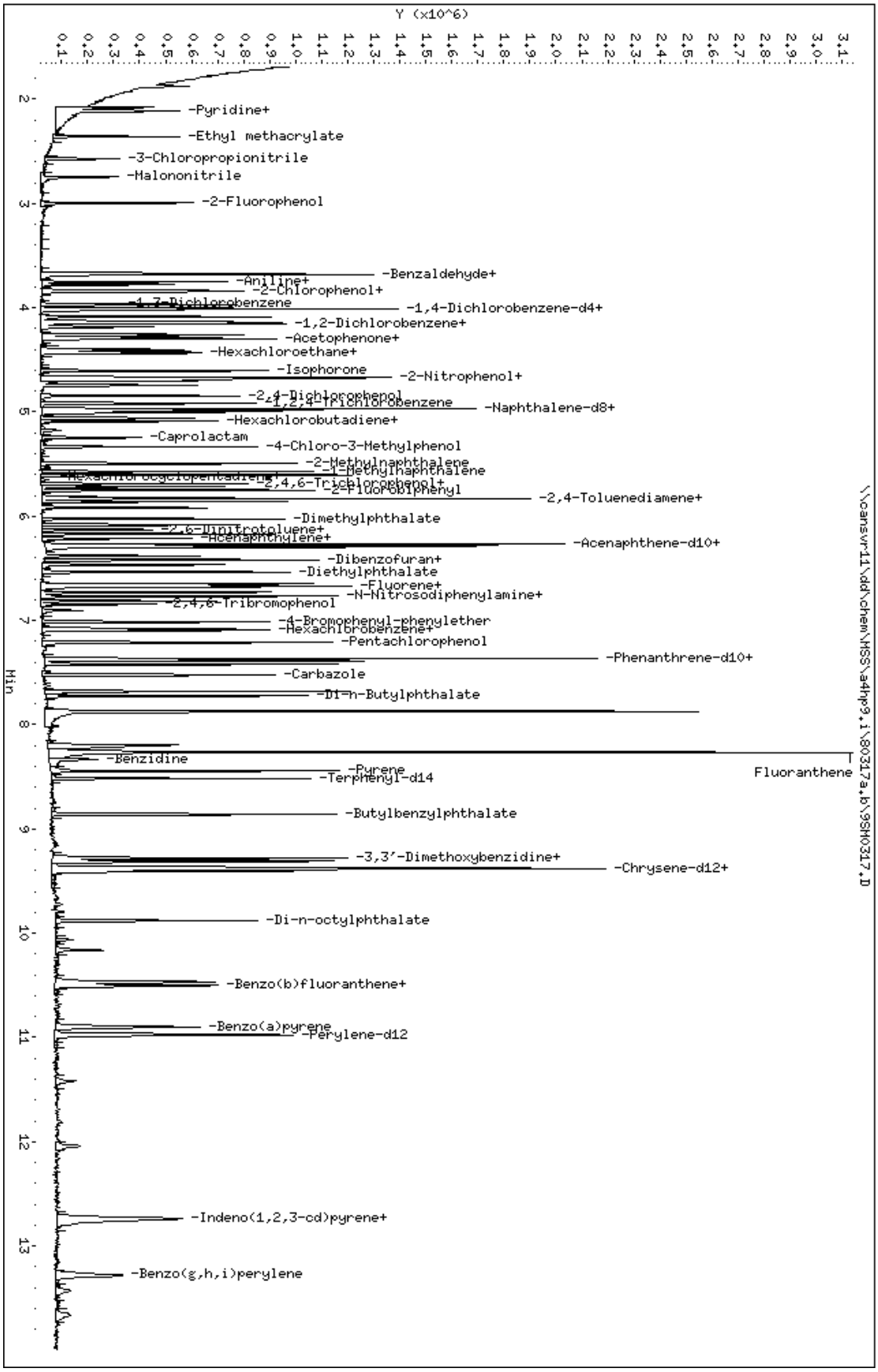
Instrument ID: a4hp9.i
Lab File ID: 9SM0317.D
Lab Smp Id: L4
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Misc Info:

Calibration Date: 17-MAR-2008
Calibration Time: 11:08
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87943	43972	175886	126070	43.35
2 Naphthalene-d8	328975	164488	657950	459899	39.80
3 Acenaphthene-d10	197861	98931	395722	281639	42.34
4 Phenanthrene-d10	346358	173179	692716	488695	41.10
5 Chrysene-d12	342235	171118	684470	487803	42.53
6 Perylene-d12	281586	140793	563172	391139	38.91

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.01	3.51	4.51	4.01	0.11
2 Naphthalene-d8	4.97	4.47	5.47	4.97	-0.02
3 Acenaphthene-d10	6.27	5.77	6.77	6.27	-0.02
4 Phenanthrene-d10	7.37	6.87	7.87	7.37	-0.01
5 Chrysene-d12	9.39	8.89	9.89	9.38	-0.12
6 Perylene-d12	10.98	10.48	11.48	10.98	-0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\camsvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SH0317.D
Date : 17-MAR-2008 12:27
Client ID:
Sample Info: L4,80317a,b,8270p,1-8270424,sub,1,,4
Column phase: db5,625

Instrument: a4hp9.i
Operator: 001574
Column diameter: 0.32

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SMH0317.D
Lab Smp Id: L6
Inj Date : 17-MAR-2008 11:08
Operator : 001574 Inst ID: a4hp9.i
Smp Info : L6,80317a.b,8270p,1-827042d.sub,2
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Meth Date : 17-Mar-2008 14:47 a4hp9.i Quant Type: ISTD
Cal Date : 17-MAR-2008 11:08 Cal File: 9SMH0317.D
Als bottle: 2 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
*	1 1,4-Dichlorobenzene-d4	152	4.006	4.006	(1.000)	87943	2.00000	
*	2 Naphthalene-d8	136	4.973	4.973	(1.000)	328975	2.00000	
*	3 Acenaphthene-d10	164	6.271	6.271	(1.000)	197861	2.00000	
*	4 Phenanthrene-d10	188	7.366	7.366	(1.000)	346358	2.00000	
*	5 Chrysene-d12	240	9.390	9.390	(1.000)	342235	2.00000	
*	6 Perylene-d12	264	10.982	10.982	(1.000)	281586	2.00000	
	9 Pyridine	79	2.099	2.099	(0.524)	433444	5.00000	4.8509
	10 N-Nitrosodimethylamine	74	2.067	2.067	(0.516)	270275	5.00000	4.7180
	11 Ethyl methacrylate	69	2.350	2.350	(0.587)	424296	5.00000	4.7397
	12 3-Chloropropionitrile	54	2.564	2.564	(0.640)	193650	5.00000	4.8557
	13 Malononitrile	66	2.740	2.740	(0.684)	553976	5.00000	4.9678
	209 Benzaldehyde	77	3.680	3.680	(0.919)	341796	5.00000	4.7066
	21 Aniline	93	3.755	3.755	(0.937)	622211	5.00000	4.8306
	22 Phenol	94	3.680	3.680	(0.919)	516656	5.00000	4.9438
	23 bis(2-Chloroethyl)ether	93	3.782	3.782	(0.944)	375848	5.00000	4.4228
	24 2-Chlorophenol	128	3.846	3.846	(0.960)	278254	5.00000	5.0308
	26 1,3-Dichlorobenzene	146	3.969	3.969	(0.991)	294551	5.00000	4.8494
	27 1,4-Dichlorobenzene	146	4.022	4.022	(1.004)	183494	5.00000	4.7650
	28 1,2-Dichlorobenzene	146	4.140	4.140	(1.033)	288674	5.00000	4.9899
	29 Benzyl Alcohol	108	4.086	4.086	(1.020)	244065	5.00000	5.0781
	30 2-Methylphenol	108	4.150	4.150	(1.036)	326092	5.00000	4.9236
	31 bis(2-Chloroisopropyl)ether	45	4.182	4.182	(1.044)	364968	5.00000	4.7540
	37 Acetophenone	105	4.300	4.300	(1.073)	538256	5.00000	4.8566
	32 N-Nitroso-di-n-propylamine	70	4.284	4.284	(1.069)	408121	5.00000	4.9169
	192 4-Methylphenol	108	4.262	4.262	(1.064)	337509	5.00000	4.8957
	34 Hexachloroethane	117	4.401	4.401	(1.099)	136607	5.00000	4.7616
	35 Nitrobenzene	77	4.433	4.433	(0.892)	558660	5.00000	4.8551
	41 Isophorone	82	4.604	4.604	(0.926)	929766	5.00000	4.8834
	42 2-Nitrophenol	139	4.674	4.674	(0.940)	154942	5.00000	4.9727
	43 2,4-Dimethylphenol	107	4.668	4.668	(0.939)	429080	5.00000	4.7933
	44 bis(2-Chloroethoxy)methane	93	4.743	4.743	(0.954)	439730	5.00000	4.7614
	46 2,4-Toluenediamene	121	5.811	5.811	(1.169)	88806	5.00000	3.5633

47	1,3,5-Trichlorobenzene	180	4.684	4.684 (0.942)	246004	5.00000	4.9229
48	2,4-Dichlorophenol	162	4.845	4.845 (0.974)	245873	5.00000	4.9743

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
49	Benzoic Acid	122	4.732	4.732	(0.952)	429965	10.0000	10.462(H)
50	1,2,4-Trichlorobenzene	180	4.919	4.919	(0.989)	262645	5.00000	4.9456
51	Naphthalene	128	4.989	4.989	(1.003)	837236	5.00000	4.7712
52	4-Chloroaniline	127	5.005	5.005	(1.006)	353101	5.00000	5.1639
56	Hexachlorobutadiene	225	5.064	5.064	(1.018)	162704	5.00000	4.7001
210	Caprolactam	113	5.261	5.261	(1.058)	111517	5.00000	5.2881
57	1,2,3-Trichlorobenzene	180	5.090	5.090	(1.024)	230535	5.00000	4.8753
59	4-Chloro-3-Methylphenol	107	5.336	5.336	(1.073)	353913	5.00000	4.9885
62	2-Methylnaphthalene	142	5.496	5.496	(1.105)	503194	5.00000	4.9009
63	1-Methylnaphthalene	142	5.571	5.571	(1.120)	519927	5.00000	4.6809
64	Hexachlorocyclopentadiene	237	5.608	5.608	(0.894)	206505	5.00000	5.2127
66	2,4,6-Trichlorophenol	196	5.689	5.689	(0.907)	197444	5.00000	5.0414
67	2,4,5-Trichlorophenol	196	5.721	5.721	(0.912)	209892	5.00000	5.2038
211	1,1'-Biphenyl	154	5.833	5.833	(0.930)	735209	5.00000	4.8862
68	1,2,3,5-Tetrachlorobenzene	216	5.608	5.608	(0.894)	297181	5.00000	5.0010
70	2-Chloronaphthalene	162	5.865	5.865	(0.935)	534531	5.00000	4.8868
73	2-Nitroaniline	65	5.918	5.918	(0.944)	320367	5.00000	5.0957
74	1,2,3,4-Tetrachlorobenzene	216	5.833	5.833	(0.930)	272986	5.00000	4.9399
76	Dimethylphthalate	163	6.030	6.030	(0.962)	658602	5.00000	5.0731
78	2,6-Dinitrotoluene	165	6.084	6.084	(0.970)	146380	5.00000	5.2213
79	Acenaphthylene	152	6.175	6.175	(0.985)	910730	5.00000	4.9892
80	1,2-Dinitrobenzene	168	6.132	6.132	(0.978)	72270	5.00000	5.1323
81	3-Nitroaniline	138	6.217	6.217	(0.991)	142544	5.00000	5.2516
82	Acenaphthene	153	6.297	6.297	(1.004)	589397	5.00000	5.0020
83	2,4-Dinitrophenol	184	6.292	6.292	(1.003)	240819	10.0000	11.407
85	4-Nitrophenol	109	6.303	6.303	(1.005)	176366	5.00000	5.4513
86	Dibenzofuran	168	6.420	6.420	(1.024)	817601	5.00000	5.0541
87	2,4-Dinitrotoluene	165	6.383	6.383	(1.018)	197958	5.00000	5.3062
91	2,3,5,6-Tetrachlorophenol	232	6.468	6.468	(1.032)	184226	5.00000	5.1760
93	Diethylphthalate	149	6.538	6.538	(1.043)	658798	5.00000	4.9920
94	Fluorene	166	6.677	6.677	(1.065)	693463	5.00000	4.8998
95	4-Chlorophenyl-phenylether	204	6.650	6.650	(1.060)	310122	5.00000	4.8655
96	4-Nitroaniline	138	6.666	6.666	(1.063)	162778	5.00000	4.9914
98	4,6-Dinitro-2-methylphenol	198	6.682	6.682	(0.907)	143688	5.00000	5.9164
99	N-Nitrosodiphenylamine	169	6.735	6.735	(0.914)	477276	5.00000	5.0303
100	1,2-Diphenylhydrazine	77	6.767	6.767	(0.919)	1214106	5.00000	4.9573
106	4-Bromophenyl-phenylether	248	7.013	7.013	(0.952)	187914	5.00000	5.2272
107	Hexachlorobenzene	284	7.077	7.077	(0.961)	183997	5.00000	5.0331
212	Atrazine	200	7.099	7.099	(0.964)	209302	5.00000	5.1614
111	Pentachlorophenol	266	7.211	7.211	(0.979)	254548	10.0000	9.7269
115	Phenanthrene	178	7.387	7.387	(1.003)	1046750	5.00000	4.9885
116	Anthracene	178	7.424	7.424	(1.008)	1038955	5.00000	4.9980
119	Carbazole	167	7.526	7.526	(1.022)	871611	5.00000	4.9855
120	Di-n-Butylphthalate	149	7.723	7.723	(1.049)	1094543	5.00000	4.9556
123	Fluoranthene	202	8.268	8.268	(1.123)	1066350	5.00000	4.9772
124	Benzidine	184	8.332	8.332	(0.887)	477852	5.00000	5.1380
125	Pyrene	202	8.445	8.445	(0.899)	1096203	5.00000	5.0548
131	Butylbenzylphthalate	149	8.861	8.861	(0.944)	477059	5.00000	5.0940
133	3,3'-Dimethoxybenzidine	244	9.278	9.278	(0.988)	237741	5.00000	5.4426
135	3,3'-Dichlorobenzidine	252	9.320	9.320	(0.993)	388389	5.00000	5.0142
136	Benzo(a)Anthracene	228	9.379	9.379	(0.999)	1032944	5.00000	4.8563
137	Chrysene	228	9.411	9.411	(1.002)	943198	5.00000	4.9576

138	4,4'-Methylene bis(o-chloroan	231	9.315	9.315 (0.992)	199898	5.00000	5.1331
139	bis(2-ethylhexyl)Phthalate	149	9.288	9.288 (0.989)	655864	5.00000	4.9738

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
140 Di-n-octylphthalate	149	9.887	9.887	(0.900)	1083960	5.00000	4.9514
141 Benzo(b)fluoranthene	252	10.479	10.479	(0.954)	950058	5.00000	4.7149
142 Benzo(k)fluoranthene	252	10.512	10.512	(0.957)	1003593	5.00000	4.8782
146 Benzo(a)pyrene	252	10.912	10.912	(0.994)	888962	5.00000	4.8458
149 Indeno(1,2,3-cd)pyrene	276	12.755	12.755	(1.161)	932768	5.00000	4.9528
151 Benzo(g,h,i)perylene	276	13.300	13.300	(1.211)	758675	5.00000	4.8614
198 1,4-Dioxane	88	1.864	1.864	(0.465)	132412	5.00000	4.4474
$ 154 Nitrobenzene-d5	82	4.423	4.423	(0.889)	545495	5.00000	4.8462
$ 155 2-Fluorobiphenyl	172	5.753	5.753	(0.917)	654058	5.00000	5.1682
$ 156 Terphenyl-d14	244	8.519	8.519	(0.907)	738996	5.00000	5.1121
$ 157 Phenol-d5	99	3.670	3.670	(0.916)	471397	5.00000	4.7885
$ 158 2-Fluorophenol	112	2.997	2.997	(0.748)	310874	5.00000	4.9046
$ 159 2,4,6-Tribromophenol	330	6.848	6.848	(1.092)	73888	5.00000	4.9745
$ 186 2-Chlorophenol-d4	132	3.830	3.830	(0.956)	246776	5.00000	4.7772
$ 187 1,2-Dichlorobenzene-d4	152	4.129	4.129	(1.031)	181531	5.00000	4.6472
M 195 Cresols, total	100				663601	5.00000	9.8193
101 Diphenylamine	169	6.735	6.735	(0.914)	477276	5.00000	5.0303

QC Flag Legend

H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

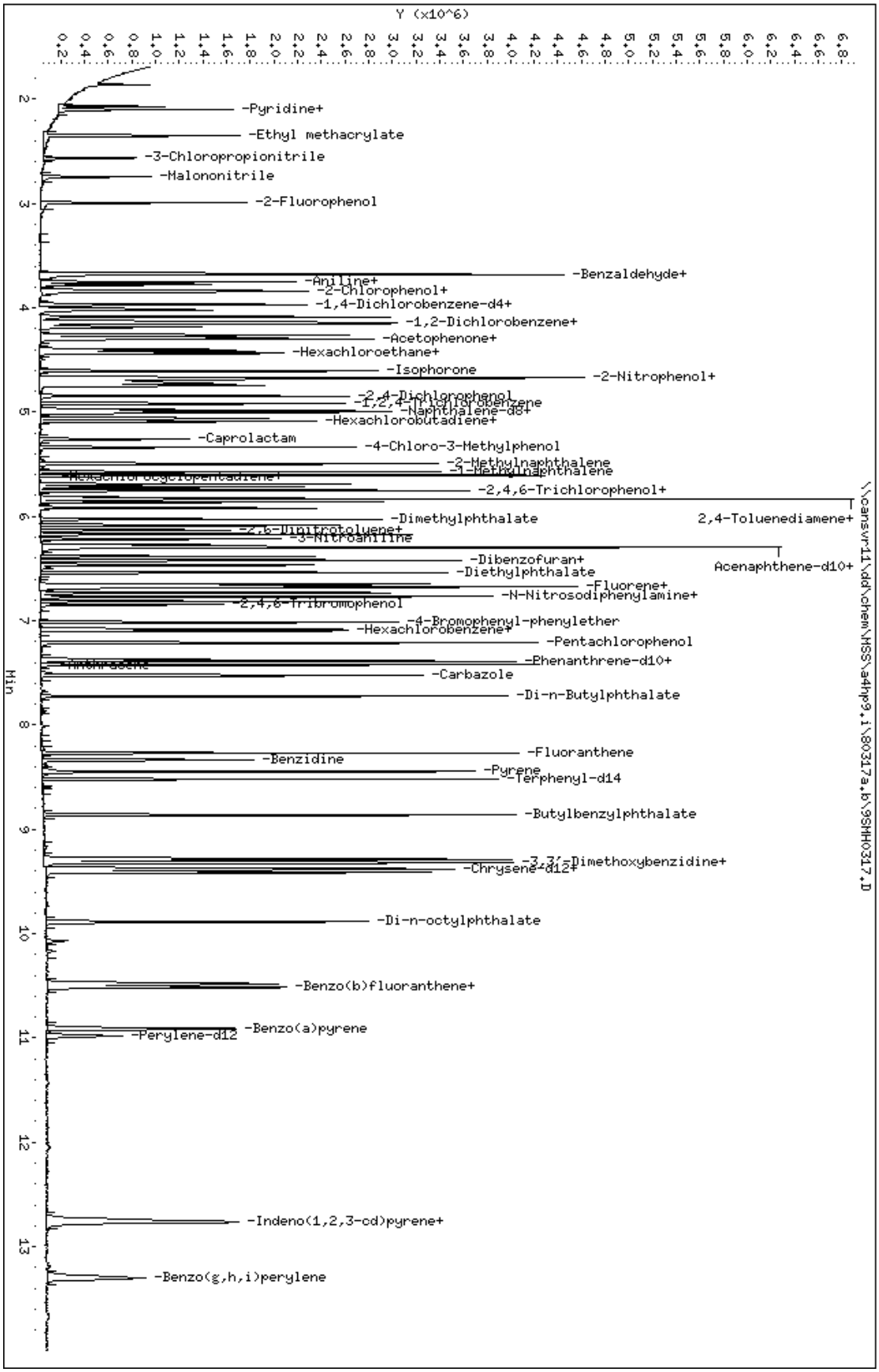
Instrument ID: a4hp9.i
Lab File ID: 9SMH0317.D
Lab Smp Id: L6
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Misc Info:

Calibration Date: 17-MAR-2008
Calibration Time: 11:08
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87943	43972	175886	87943	0.00
2 Naphthalene-d8	328975	164488	657950	328975	0.00
3 Acenaphthene-d10	197861	98931	395722	197861	0.00
4 Phenanthrene-d10	346358	173179	692716	346358	0.00
5 Chrysene-d12	342235	171118	684470	342235	0.00
6 Perylene-d12	281586	140793	563172	281586	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.01	3.51	4.51	4.01	0.00
2 Naphthalene-d8	4.97	4.47	5.47	4.97	0.00
3 Acenaphthene-d10	6.27	5.77	6.77	6.27	0.00
4 Phenanthrene-d10	7.37	6.87	7.87	7.37	0.00
5 Chrysene-d12	9.39	8.89	9.89	9.39	0.00
6 Perylene-d12	10.98	10.48	11.48	10.98	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\cansvr11\dd\chem\MSS\a4hp9,i\80317a,b\9SHH0317.D
Date : 17-MAR-2008 11:08
Client ID:
Sample Info: L6,80317a,b,8270p,1-8270424,sub,2
Column phase: db5,625

Instrument: a4hp9,i
Operator: 001574
Column diameter: 0.32

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SML0317.D
Lab Smp Id: L3
Inj Date : 17-MAR-2008 12:07
Operator : 001574 Inst ID: a4hp9.i
Smp Info : L3,80317a.b,8270p,1-827042d.sub,1,,3
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Meth Date : 17-Mar-2008 14:32 ulmanm Quant Type: ISTD
Cal Date : 17-MAR-2008 12:07 Cal File: 9SML0317.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV06

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	4.009	4.011	(1.000)	123107	2.00000	
* 2	Naphthalene-d8	136	4.970	4.973	(1.000)	462836	2.00000	
* 3	Acenaphthene-d10	164	6.273	6.276	(1.000)	291129	2.00000	
* 4	Phenanthrene-d10	188	7.368	7.371	(1.000)	508082	2.00000	
* 5	Chrysene-d12	240	9.382	9.385	(1.000)	514904	2.00000	
* 6	Perylene-d12	264	10.979	10.981	(1.000)	408653	2.00000	
9	Pyridine	79	2.107	2.105	(0.526)	61729	0.50000	0.49396
10	N-Nitrosodimethylamine	74	2.075	2.078	(0.518)	41605	0.50000	0.50768
11	Ethyl methacrylate	69	2.353	2.356	(0.587)	61095	0.50000	0.48699
12	3-Chloropropionitrile	54	2.572	2.580	(0.642)	29883	0.50000	0.50884
13	Malononitrile	66	2.743	2.756	(0.684)	77322	0.50000	0.47420
209	Benzaldehyde	77	3.683	3.686	(0.919)	56157	0.50000	0.51528
21	Aniline	93	3.752	3.760	(0.936)	94266	0.50000	0.50830
22	Phenol	94	3.683	3.691	(0.919)	68119	0.50000	0.46357
23	bis(2-Chloroethyl)ether	93	3.779	3.787	(0.943)	55857	0.50000	0.45728
24	2-Chlorophenol	128	3.843	3.851	(0.959)	40345	0.50000	0.50117
26	1,3-Dichlorobenzene	146	3.966	3.969	(0.989)	42681	0.50000	0.48607
27	1,4-Dichlorobenzene	146	4.019	4.022	(1.003)	28984	0.50000	0.50806
28	1,2-Dichlorobenzene	146	4.137	4.145	(1.032)	38285	0.50000	0.46051
29	Benzyl Alcohol	108	4.083	4.091	(1.019)	31082	0.50000	0.43977
30	2-Methylphenol	108	4.148	4.156	(1.035)	42425	0.50000	0.45342
31	bis(2-Chloroisopropyl)ether	45	4.185	4.188	(1.044)	55327	0.50000	0.49738
37	Acetophenone	105	4.297	4.305	(1.072)	74698	0.50000	0.47164
32	N-Nitroso-di-n-propylamine	70	4.281	4.294	(1.068)	53150	0.50000	0.45395
192	4-Methylphenol	108	4.260	4.273	(1.063)	48809	0.50000	0.48018
34	Hexachloroethane	117	4.399	4.401	(1.097)	19361	0.50000	0.47324
35	Nitrobenzene	77	4.436	4.444	(0.893)	80367	0.50000	0.48590
41	Isophorone	82	4.602	4.615	(0.926)	134136	0.50000	0.49894
42	2-Nitrophenol	139	4.671	4.680	(0.940)	19297	0.50000	0.44949
43	2,4-Dimethylphenol	107	4.666	4.674	(0.939)	57760	0.50000	0.47351
44	bis(2-Chloroethoxy)methane	93	4.746	4.748	(0.955)	64240	0.50000	0.50157

46	2,4-Toluenediamene	121	5.809	5.817 (1.169)	32797	0.50000	0.67584
47	1,3,5-Trichlorobenzene	180	4.682	4.684 (0.942)	32972	0.50000	0.47527

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
48	2,4-Dichlorophenol	162	4.842	4.850	(0.974)	34126	0.50000	0.49739
49	Benzoic Acid	122	4.687	4.786	(0.943)	44476	1.00000	1.0903(H)
50	1,2,4-Trichlorobenzene	180	4.917	4.919	(0.989)	34456	0.50000	0.45983
51	Naphthalene	128	4.986	4.989	(1.003)	117838	0.50000	0.49677
52	4-Chloroaniline	127	5.002	5.010	(1.006)	45057	0.50000	0.45948
56	Hexachlorobutadiene	225	5.061	5.064	(1.018)	26215	0.50000	0.54613
210	Caprolactam	113	5.237	5.293	(1.054)	12158	0.50000	0.42000
57	1,2,3-Trichlorobenzene	180	5.088	5.090	(1.024)	33848	0.50000	0.51540
59	4-Chloro-3-Methylphenol	107	5.333	5.347	(1.073)	44223	0.50000	0.45317
62	2-Methylnaphthalene	142	5.493	5.502	(1.105)	67156	0.50000	0.48093
63	1-Methylnaphthalene	142	5.574	5.576	(1.121)	71072	0.50000	0.48221
64	Hexachlorocyclopentadiene	237	5.606	5.608	(0.894)	26520	0.50000	0.46204
66	2,4,6-Trichlorophenol	196	5.686	5.694	(0.906)	28561	0.50000	0.50803
67	2,4,5-Trichlorophenol	196	5.718	5.726	(0.911)	27000	0.50000	0.45787
211	1,1'-Biphenyl	154	5.830	5.838	(0.929)	98594	0.50000	0.47327
68	1,2,3,5-Tetrachlorobenzene	216	5.606	5.608	(0.894)	41088	0.50000	0.48052
70	2-Chloronaphthalene	162	5.862	5.865	(0.934)	73536	0.50000	0.47439
73	2-Nitroaniline	65	5.915	5.923	(0.943)	44458	0.50000	0.47827
74	1,2,3,4-Tetrachlorobenzene	216	5.830	5.838	(0.929)	35187	0.50000	0.45395
76	Dimethylphthalate	163	6.028	6.036	(0.961)	92886	0.50000	0.48722
78	2,6-Dinitrotoluene	165	6.081	6.089	(0.969)	20266	0.50000	0.47976
79	Acenaphthylene	152	6.172	6.175	(0.984)	121013	0.50000	0.46447
80	1,2-Dinitrobenzene	168	6.129	6.142	(0.977)	10683	0.50000	0.51223
81	3-Nitroaniline	138	6.215	6.223	(0.991)	18095	0.50000	0.44168
82	Acenaphthene	153	6.295	6.303	(1.003)	76248	0.50000	0.45761
83	2,4-Dinitrophenol	184	6.289	6.298	(1.003)	22242	1.00000	0.78902
85	4-Nitrophenol	109	6.300	6.308	(1.004)	18599	0.50000	0.42802
86	Dibenzofuran	168	6.417	6.426	(1.023)	113138	0.50000	0.47853
87	2,4-Dinitrotoluene	165	6.380	6.388	(1.017)	26427	0.50000	0.48010
91	2,3,5,6-Tetrachlorophenol	232	6.466	6.469	(1.031)	21417	0.50000	0.42529
93	Diethylphthalate	149	6.535	6.543	(1.042)	90905	0.50000	0.47542
94	Fluorene	166	6.674	6.677	(1.064)	93270	0.50000	0.47483
95	4-Chlorophenyl-phenylether	204	6.652	6.655	(1.060)	42863	0.50000	0.47921
96	4-Nitroaniline	138	6.658	6.677	(1.061)	20918	0.50000	0.46635
98	4,6-Dinitro-2-methylphenol	198	6.679	6.693	(0.906)	14365	0.50000	0.41800
99	N-Nitrosodiphenylamine	169	6.733	6.741	(0.914)	63240	0.50000	0.47081
100	1,2-Diphenylhydrazine	77	6.765	6.773	(0.918)	173045	0.50000	0.48168
106	4-Bromophenyl-phenylether	248	7.016	7.018	(0.952)	23968	0.50000	0.47000
107	Hexachlorobenzene	284	7.080	7.082	(0.961)	26458	0.50000	0.50147
212	Atrazine	200	7.096	7.104	(0.963)	28644	0.50000	0.48285
111	Pentachlorophenol	266	7.208	7.217	(0.978)	27384	1.00000	0.84827
115	Phenanthrene	178	7.384	7.392	(1.002)	139406	0.50000	0.46500
116	Anthracene	178	7.422	7.430	(1.007)	141952	0.50000	0.47662
119	Carbazole	167	7.523	7.531	(1.021)	121421	0.50000	0.48529
120	Di-n-Butylphthalate	149	7.721	7.723	(1.048)	155295	0.50000	0.48663
123	Fluoranthene	202	8.266	8.268	(1.122)	152739	0.50000	0.49588
124	Benzidine	184	8.330	8.337	(0.888)	79729	0.50000	0.50494(M)
125	Pyrene	202	8.442	8.450	(0.900)	150740	0.50000	0.46529
131	Butylbenzylphthalate	149	8.858	8.861	(0.944)	63096	0.50000	0.44679
133	3,3'-Dimethoxybenzidine	244	9.270	9.278	(0.988)	32027	0.50000	0.46413
135	3,3'-Dichlorobenzidine	252	9.312	9.326	(0.993)	52206	0.50000	0.45864
136	Benzo(a)Anthracene	228	9.371	9.379	(0.999)	146777	0.50000	0.47753

137 Chrysene	228	9.403	9.411 (1.002)	131412	0.50000	0.46237
138 4,4'-Methylene bis(o-chloroan	231	9.307	9.320 (0.992)	25975	0.50000	0.45150

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(NG)	(NG)
	139 bis(2-ethylhexyl)Phthalate	149	9.286	9.283	(0.990)	93238	0.50000	0.48558
	140 Di-n-octylphthalate	149	9.884	9.881	(0.900)	142020	0.50000	0.46062
	141 Benzo(b)fluoranthene	252	10.471	10.485	(0.954)	132024	0.50000	0.47953
	142 Benzo(k)fluoranthene	252	10.503	10.522	(0.957)	136234	0.50000	0.47473
	146 Benzo(a)pyrene	252	10.899	10.917	(0.993)	123477	0.50000	0.47932
	149 Indeno(1,2,3-cd)pyrene	276	12.725	12.792	(1.159)	131148	0.50000	0.49114
	150 Dibenz(a,h)anthracene	278	12.752	12.803	(1.162)	109329	0.50000	0.49352
	151 Benzo(g,h,i)perylene	276	13.275	13.337	(1.209)	112219	0.50000	0.50652
	198 1,4-Dioxane	88	1.872	1.870	(0.467)	24259	0.50000	0.50766
$	154 Nitrobenzene-d5	82	4.420	4.428	(0.889)	77574	0.50000	0.48786
$	155 2-Fluorobiphenyl	172	5.750	5.758	(0.917)	85528	0.50000	0.45986
$	156 Terphenyl-d14	244	8.517	8.519	(0.908)	99007	0.50000	0.45174
$	157 Phenol-d5	99	3.672	3.680	(0.916)	69809	0.50000	0.50342
$	158 2-Fluorophenol	112	2.994	2.997	(0.747)	40881	0.50000	0.46556
$	159 2,4,6-Tribromophenol	330	6.845	6.853	(1.091)	9761	0.50000	0.46077
$	186 2-Chlorophenol-d4	132	3.832	3.835	(0.956)	36054	0.50000	0.48066
$	187 1,2-Dichlorobenzene-d4	152	4.126	4.129	(1.029)	27180	0.50000	0.48544
M	195 Cresols, total	100				91234	0.50000	0.93359
	101 Diphenylamine	169	6.733	6.741	(0.914)	63240	0.50000	0.47081

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

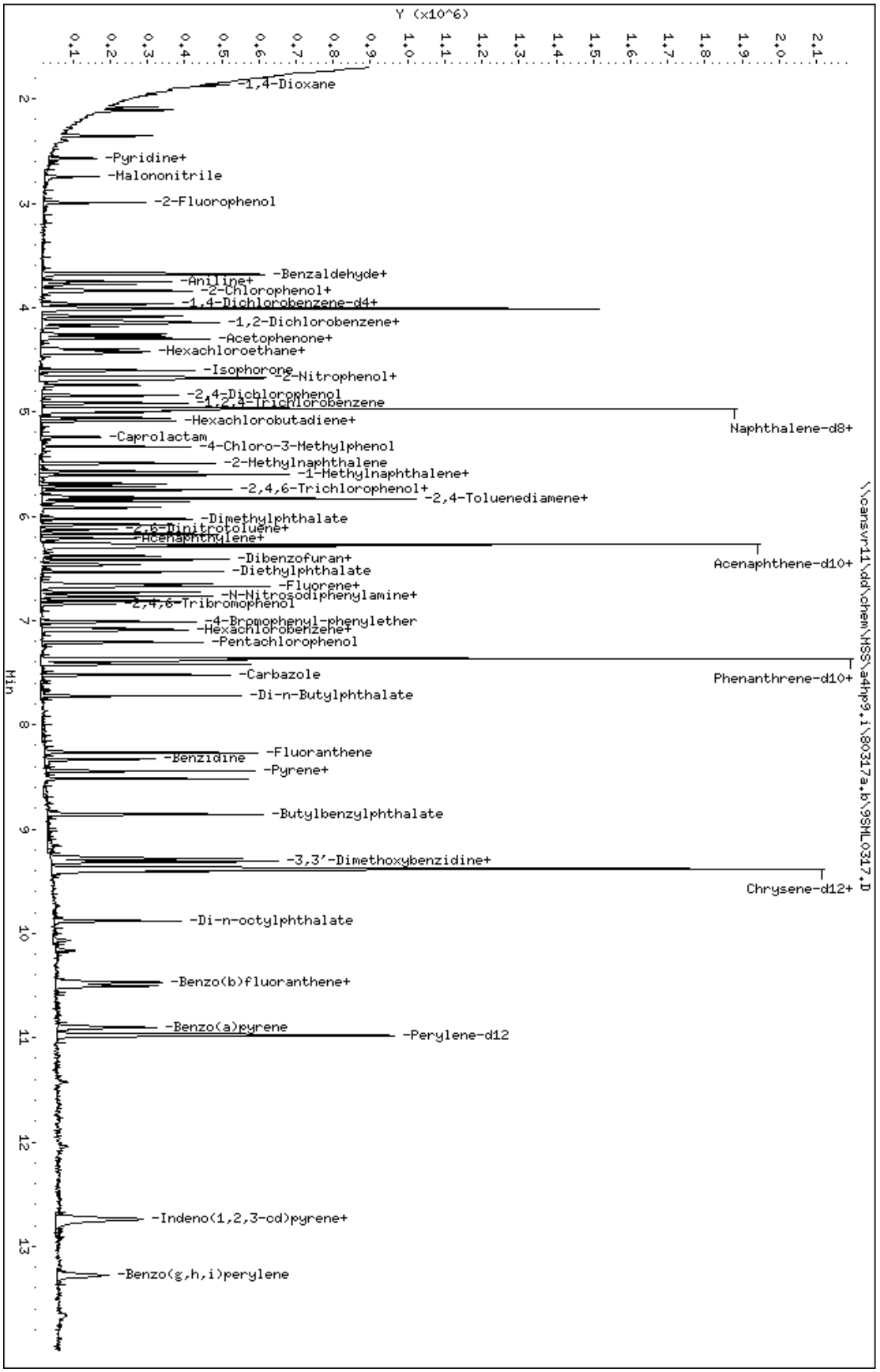
Instrument ID: a4hp9.i
Lab File ID: 9SML0317.D
Lab Smp Id: L3
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Misc Info:

Calibration Date: 17-MAR-2008
Calibration Time: 11:08
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87943	43972	175886	123107	39.98
2 Naphthalene-d8	328975	164488	657950	462836	40.69
3 Acenaphthene-d10	197861	98931	395722	291129	47.14
4 Phenanthrene-d10	346358	173179	692716	508082	46.69
5 Chrysene-d12	342235	171118	684470	514904	50.45
6 Perylene-d12	281586	140793	563172	408653	45.13

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.01	3.51	4.51	4.01	0.06
2 Naphthalene-d8	4.97	4.47	5.47	4.97	-0.06
3 Acenaphthene-d10	6.27	5.77	6.77	6.27	0.04
4 Phenanthrene-d10	7.37	6.87	7.87	7.37	0.04
5 Chrysene-d12	9.39	8.89	9.89	9.38	-0.09
6 Perylene-d12	10.98	10.48	11.48	10.98	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



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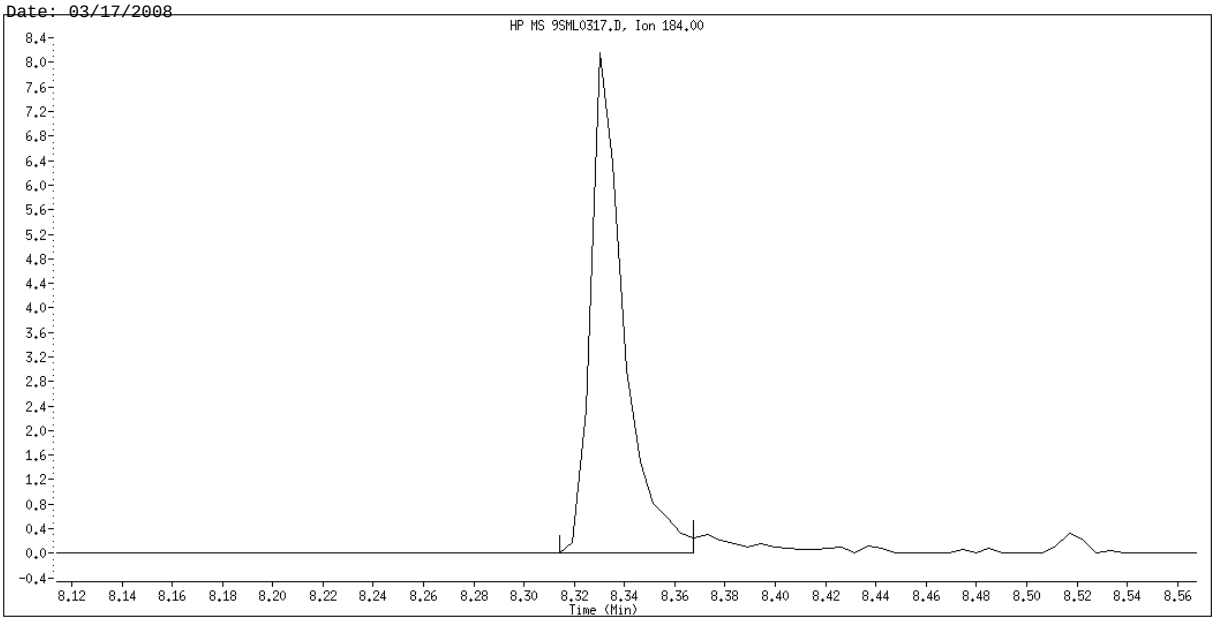
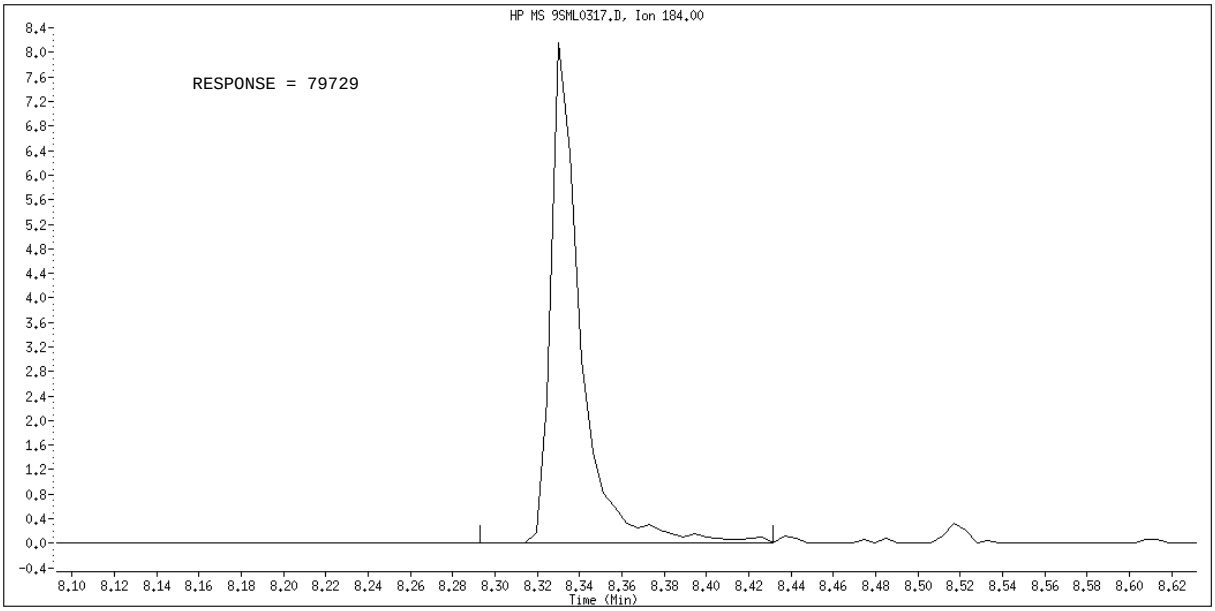
Date : 17-MAR-2008 12:07
Client ID:
Sample Info: L3,80317a,b,8270p,1-8270424,sub,1,,3
Column phase: db5,625

Instrument: a4hp9,i
Operator: 001574
Column diameter: 0.32

Data File Name: 9SML0317.D
Inj. Date and Time: 17-MAR-2008 12:07
Instrument ID: a4hp9.i
Client ID:
Compound Name: Benzidine
CAS #: 92-87-5
Report Date: 03/17/2008



Original Integration



Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Poor Chromatography

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SMM0317.D
Lab Smp Id: L5
Inj Date : 17-MAR-2008 11:27
Operator : 001574 Inst ID: a4hp9.i
Smp Info : L5,80317a.b,8270p,1-827042d.sub,1,,5
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Meth Date : 17-Mar-2008 14:32 ulmanm Quant Type: ISTD
Cal Date : 17-MAR-2008 11:27 Cal File: 9SMM0317.D
Als bottle: 3 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV06

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	4.006	4.011	(1.000)	122650	2.00000	
* 2	Naphthalene-d8	136	4.968	4.973	(1.000)	465227	2.00000	
* 3	Acenaphthene-d10	164	6.271	6.276	(1.000)	290346	2.00000	
* 4	Phenanthrene-d10	188	7.366	7.371	(1.000)	508545	2.00000	
* 5	Chrysene-d12	240	9.380	9.385	(1.000)	491115	2.00000	
* 6	Perylene-d12	264	10.971	10.981	(1.000)	398651	2.00000	
9	Pyridine	79	2.110	2.105	(0.527)	322477	2.50000	2.5797
10	N-Nitrosodimethylamine	74	2.078	2.078	(0.519)	201811	2.50000	2.4845
11	Ethyl methacrylate	69	2.356	2.356	(0.588)	300156	2.50000	2.3808
12	3-Chloropropionitrile	54	2.575	2.580	(0.643)	141093	2.50000	2.4257
13	Malononitrile	66	2.746	2.756	(0.685)	408435	2.50000	2.4717
209	Benzaldehyde	77	3.681	3.686	(0.919)	262905	2.50000	2.4463
21	Aniline	93	3.755	3.760	(0.937)	458148	2.50000	2.4934
22	Phenol	94	3.686	3.691	(0.920)	371976	2.50000	2.4806
23	bis(2-Chloroethyl)ether	93	3.782	3.787	(0.944)	292897	2.50000	2.3402
24	2-Chlorophenol	128	3.846	3.851	(0.960)	200352	2.50000	2.5000
26	1,3-Dichlorobenzene	146	3.969	3.969	(0.991)	212380	2.50000	2.4054
27	1,4-Dichlorobenzene	146	4.022	4.022	(1.004)	135409	2.50000	2.3953
28	1,2-Dichlorobenzene	146	4.140	4.145	(1.033)	197801	2.50000	2.3269
29	Benzyl Alcohol	108	4.087	4.091	(1.020)	175268	2.50000	2.3930
30	2-Methylphenol	108	4.151	4.156	(1.036)	232655	2.50000	2.4206
31	bis(2-Chloroisopropyl)ether	45	4.183	4.188	(1.044)	268155	2.50000	2.4155
37	Acetophenone	105	4.300	4.305	(1.073)	387239	2.50000	2.4086
32	N-Nitroso-di-n-propylamine	70	4.284	4.294	(1.069)	295553	2.50000	2.4582
192	4-Methylphenol	108	4.257	4.273	(1.063)	250842	2.50000	2.4446
34	Hexachloroethane	117	4.402	4.401	(1.099)	96920	2.50000	2.3361
35	Nitrobenzene	77	4.434	4.444	(0.892)	423004	2.50000	2.5207
41	Isophorone	82	4.605	4.615	(0.927)	659439	2.50000	2.4386
42	2-Nitrophenol	139	4.674	4.680	(0.941)	111943	2.50000	2.5096
43	2,4-Dimethylphenol	107	4.669	4.674	(0.940)	308398	2.50000	2.4715
44	bis(2-Chloroethoxy)methane	93	4.743	4.748	(0.955)	321998	2.50000	2.5038

46	2,4-Toluenediamene	121	5.812	5.817 (1.170)	85544	2.50000	1.9866
47	1,3,5-Trichlorobenzene	180	4.685	4.684 (0.943)	169479	2.50000	2.3909

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
48	2,4-Dichlorophenol	162	4.845	4.850	(0.975)	173464	2.50000	2.5109
49	Benzoic Acid	122	4.722	4.786	(0.951)	280353	5.00000	7.0492
50	1,2,4-Trichlorobenzene	180	4.920	4.919	(0.990)	188594	2.50000	2.4386
51	Naphthalene	128	4.989	4.989	(1.004)	596171	2.50000	2.4950
52	4-Chloroaniline	127	5.005	5.010	(1.008)	248360	2.50000	2.4534(M)
56	Hexachlorobutadiene	225	5.064	5.064	(1.019)	114133	2.50000	2.4405
210	Caprolactam	113	5.256	5.293	(1.058)	78740	2.50000	2.5691
57	1,2,3-Trichlorobenzene	180	5.091	5.090	(1.025)	155258	2.50000	2.3763
59	4-Chloro-3-Methylphenol	107	5.336	5.347	(1.074)	251997	2.50000	2.4912
62	2-Methylnaphthalene	142	5.497	5.502	(1.106)	350451	2.50000	2.4655
63	1-Methylnaphthalene	142	5.571	5.576	(1.121)	372471	2.50000	2.4847
64	Hexachlorocyclopentadiene	237	5.603	5.608	(0.894)	147552	2.50000	2.5140
66	2,4,6-Trichlorophenol	196	5.689	5.694	(0.907)	139223	2.50000	2.4965
67	2,4,5-Trichlorophenol	196	5.716	5.726	(0.911)	146962	2.50000	2.4307
211	1,1'-Biphenyl	154	5.833	5.838	(0.930)	529831	2.50000	2.5055
68	1,2,3,5-Tetrachlorobenzene	216	5.609	5.608	(0.894)	206984	2.50000	2.3960
70	2-Chloronaphthalene	162	5.860	5.865	(0.934)	388035	2.50000	2.4679
73	2-Nitroaniline	65	5.919	5.923	(0.944)	230860	2.50000	2.4547
74	1,2,3,4-Tetrachlorobenzene	216	5.833	5.838	(0.930)	194525	2.50000	2.4414
76	Dimethylphthalate	163	6.025	6.036	(0.961)	459096	2.50000	2.3942
78	2,6-Dinitrotoluene	165	6.084	6.089	(0.970)	101226	2.50000	2.3708
79	Acenaphthylene	152	6.170	6.175	(0.984)	645549	2.50000	2.4269
80	1,2-Dinitrobenzene	168	6.132	6.142	(0.978)	48531	2.50000	2.3524
81	3-Nitroaniline	138	6.218	6.223	(0.991)	102513	2.50000	2.4151
82	Acenaphthene	153	6.298	6.303	(1.004)	413223	2.50000	2.4184
83	2,4-Dinitrophenol	184	6.287	6.298	(1.003)	151337	5.00000	5.0294
85	4-Nitrophenol	109	6.298	6.308	(1.004)	115343	2.50000	2.5397
86	Dibenzofuran	168	6.421	6.426	(1.024)	573280	2.50000	2.3970
87	2,4-Dinitrotoluene	165	6.383	6.388	(1.018)	137787	2.50000	2.4771
91	2,3,5,6-Tetrachlorophenol	232	6.463	6.469	(1.031)	130292	2.50000	2.4712
93	Diethylphthalate	149	6.538	6.543	(1.043)	471579	2.50000	2.4331
94	Fluorene	166	6.672	6.677	(1.064)	479760	2.50000	2.4086
95	4-Chlorophenyl-phenylether	204	6.650	6.655	(1.060)	222075	2.50000	2.4554
96	4-Nitroaniline	138	6.661	6.677	(1.062)	114390	2.50000	2.5010
98	4,6-Dinitro-2-methylphenol	198	6.682	6.693	(0.907)	97819	2.50000	2.6964
99	N-Nitrosodiphenylamine	169	6.730	6.741	(0.914)	340008	2.50000	2.4807
100	1,2-Diphenylhydrazine	77	6.768	6.773	(0.919)	879617	2.50000	2.4167
106	4-Bromophenyl-phenylether	248	7.013	7.018	(0.952)	121881	2.50000	2.3410
107	Hexachlorobenzene	284	7.078	7.082	(0.961)	128614	2.50000	2.4379
212	Atrazine	200	7.094	7.104	(0.963)	146297	2.50000	2.4360
111	Pentachlorophenol	266	7.211	7.217	(0.979)	180239	5.00000	5.3096
115	Phenanthrene	178	7.387	7.392	(1.003)	733362	2.50000	2.3882
116	Anthracene	178	7.425	7.430	(1.008)	739951	2.50000	2.4441
119	Carbazole	167	7.521	7.531	(1.021)	617468	2.50000	2.4417
120	Di-n-Butylphthalate	149	7.724	7.723	(1.049)	767780	2.50000	2.3825
123	Fluoranthene	202	8.263	8.268	(1.122)	749515	2.50000	2.4245
124	Benzidine	184	8.333	8.337	(0.888)	370708	2.50000	2.4696
125	Pyrene	202	8.445	8.450	(0.900)	773368	2.50000	2.4462
131	Butylbenzylphthalate	149	8.856	8.861	(0.944)	348787	2.50000	2.5008
133	3,3'-Dimethoxybenzidine	244	9.267	9.278	(0.988)	167901	2.50000	2.4914
135	3,3'-Dichlorobenzidine	252	9.315	9.326	(0.993)	284580	2.50000	2.5508
136	Benzo(a)Anthracene	228	9.369	9.379	(0.999)	735476	2.50000	2.4717

137 Chrysene	228	9.406	9.411 (1.003)	670464	2.50000	2.4127
138 4,4'-Methylene bis(o-chloroan	231	9.310	9.320 (0.993)	133739	2.50000	2.3609

		QUANT SIG					AMOUNTS CAL-AMT	ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(NG)	(NG)
	139 bis(2-ethylhexyl)Phthalate	149	9.283	9.283	(0.990)	461562	2.50000	2.4962
	140 Di-n-octylphthalate	149	9.876	9.881	(0.900)	769318	2.50000	2.4924
	141 Benzo(b)fluoranthene	252	10.469	10.485	(0.954)	675918	2.50000	2.4828
	142 Benzo(k)fluoranthene	252	10.501	10.522	(0.957)	721749	2.50000	2.5355
	146 Benzo(a)pyrene	252	10.902	10.917	(0.994)	637589	2.50000	2.5026
	149 Indeno(1,2,3-cd)pyrene	276	12.739	12.792	(1.161)	664021	2.50000	2.5341
	150 Dibenz(a,h)anthracene	278	12.750	12.803	(1.162)	553066	2.50000	2.5482
	151 Benzo(g,h,i)perylene	276	13.284	13.337	(1.211)	543140	2.50000	2.5240
	198 1,4-Dioxane	88	1.875	1.870	(0.468)	99331	2.50000	2.0971(H)
$	154 Nitrobenzene-d5	82	4.418	4.428	(0.889)	396531	2.50000	2.4610
$	155 2-Fluorobiphenyl	172	5.753	5.758	(0.917)	453732	2.50000	2.3824
$	156 Terphenyl-d14	244	8.514	8.519	(0.908)	540457	2.50000	2.5048
$	157 Phenol-d5	99	3.670	3.680	(0.916)	342696	2.50000	2.4862
$	158 2-Fluorophenol	112	2.997	2.997	(0.748)	216813	2.50000	2.4227
$	159 2,4,6-Tribromophenol	330	6.848	6.853	(1.092)	56192	2.50000	2.5919
$	186 2-Chlorophenol-d4	132	3.835	3.835	(0.957)	181547	2.50000	2.3984
$	187 1,2-Dichlorobenzene-d4	152	4.129	4.129	(1.031)	135681	2.50000	2.4090
M	195 Cresols, total	100				483497	2.50000	4.8652
	101 Diphenylamine	169	6.730	6.741	(0.914)	340008	2.50000	2.4807

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

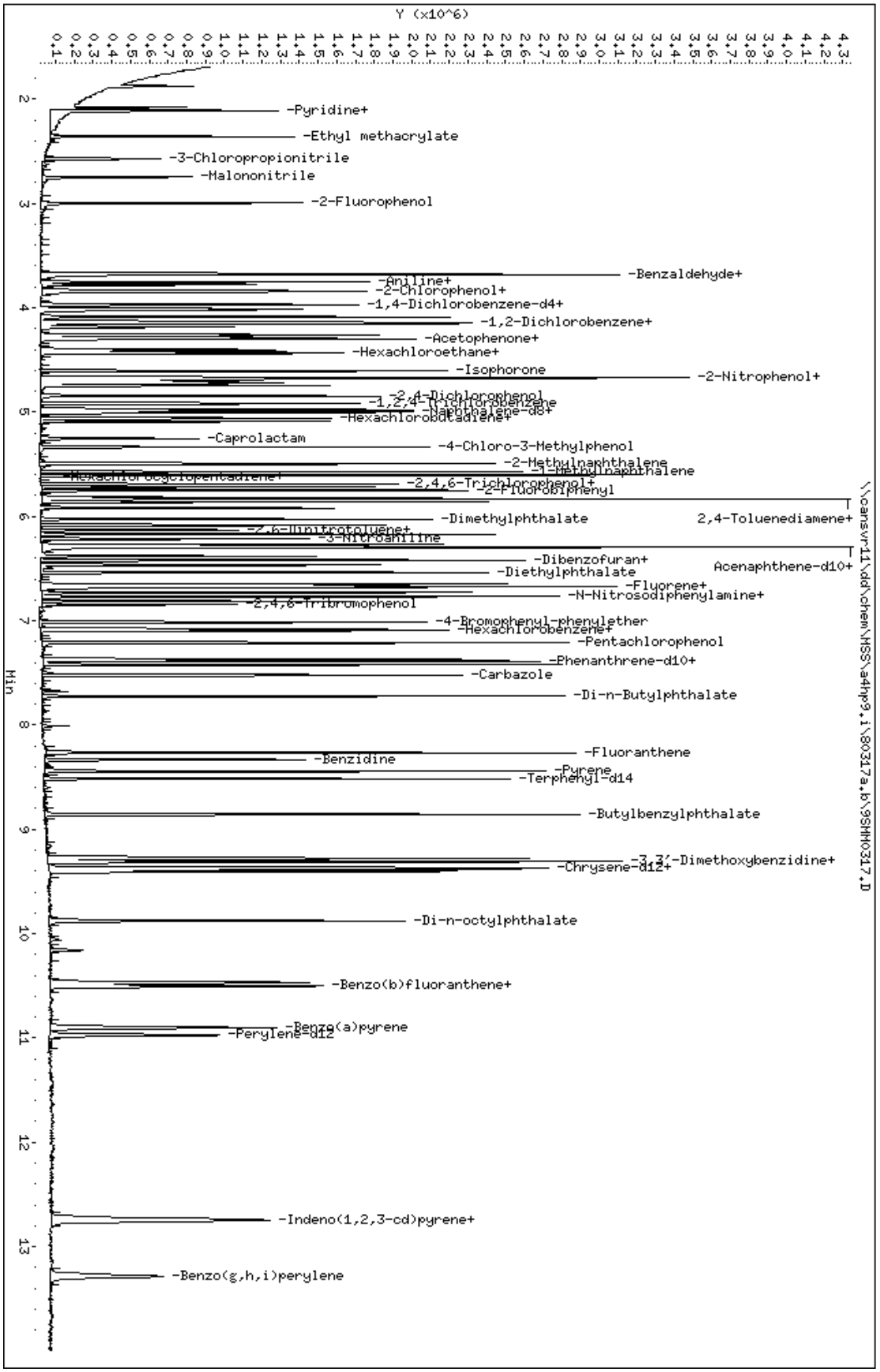
Instrument ID: a4hp9.i
Lab File ID: 9SMM0317.D
Lab Smp Id: L5
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Misc Info:

Calibration Date: 17-MAR-2008
Calibration Time: 11:08
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87943	43972	175886	122650	39.47
2 Naphthalene-d8	328975	164488	657950	465227	41.42
3 Acenaphthene-d10	197861	98931	395722	290346	46.74
4 Phenanthrene-d10	346358	173179	692716	508545	46.83
5 Chrysene-d12	342235	171118	684470	491115	43.50
6 Perylene-d12	281586	140793	563172	398651	41.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.01	3.51	4.51	4.01	0.01
2 Naphthalene-d8	4.97	4.47	5.47	4.97	-0.10
3 Acenaphthene-d10	6.27	5.77	6.77	6.27	0.01
4 Phenanthrene-d10	7.37	6.87	7.87	7.37	0.00
5 Chrysene-d12	9.39	8.89	9.89	9.38	-0.11
6 Perylene-d12	10.98	10.48	11.48	10.97	-0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



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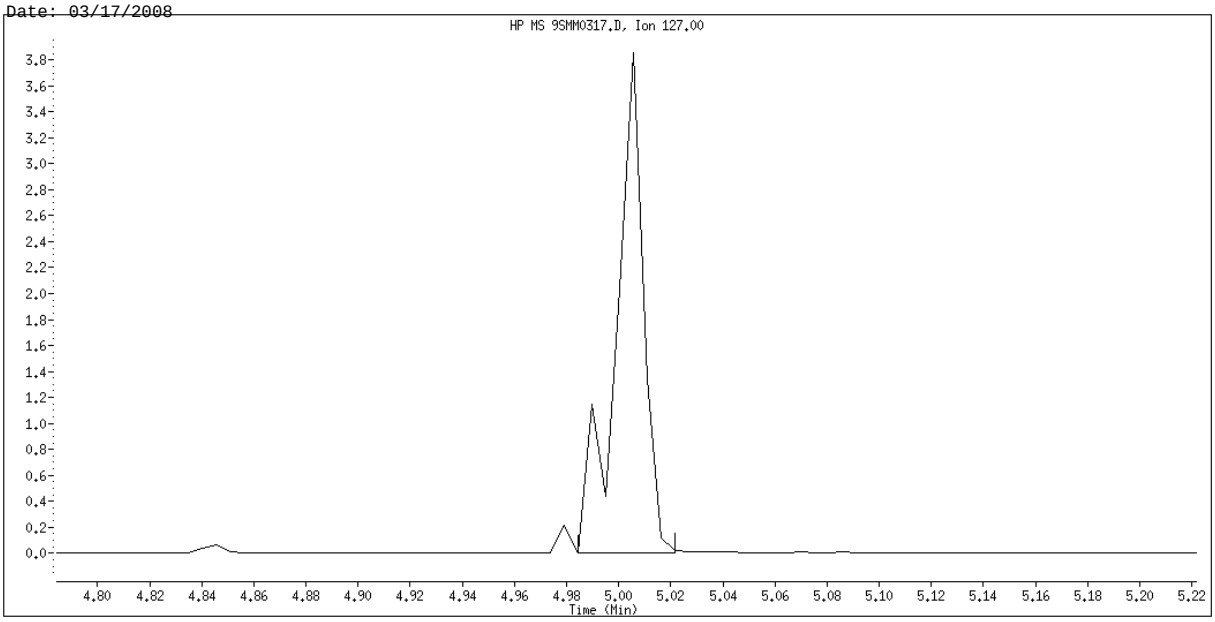
Date : 17-MAR-2008 11:27
Client ID:
Sample Info: L5,80317a,b,8270p,1-8270424,sub,1,,5
Column phase: db5,625

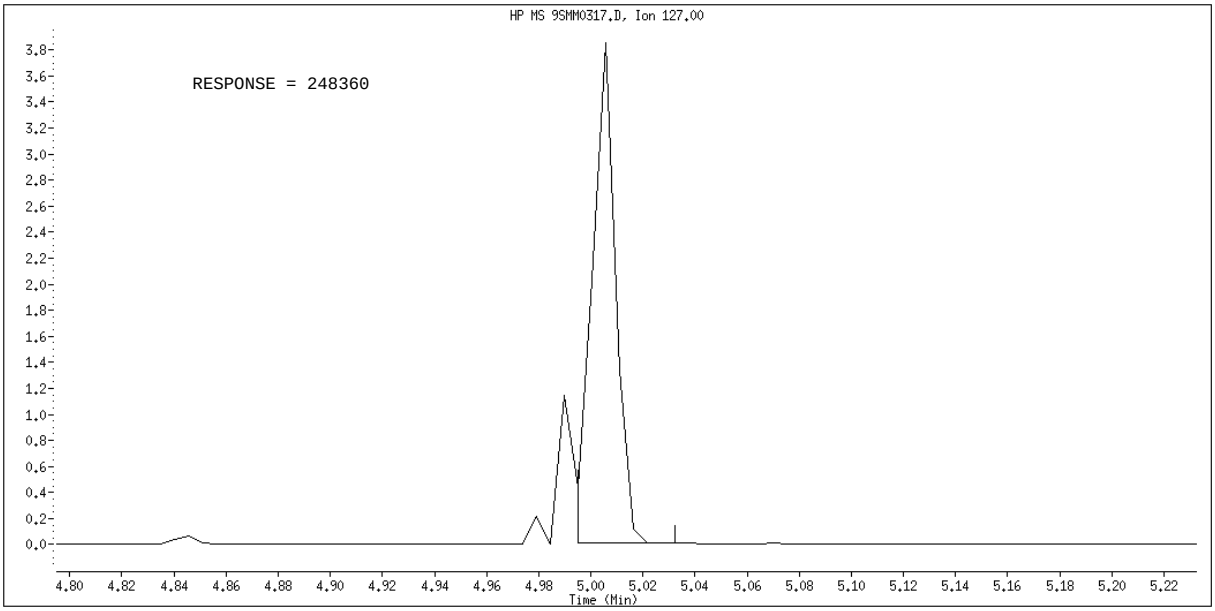
Instrument: a4hp9,i
Operator: 001574
Column diameter: 0.32

\\cansvr11\dd\chem\MSS\a4hp9,i\80317a,b\9SHH0317.D

Data File Name: 9SMM0317.D
Inj. Date and Time: 17-MAR-2008 11:27
Instrument ID: a4hp9.i
Client ID:
Compound Name: 4-Chloroaniline
CAS #: 106-47-8
Report Date: 03/17/2008



Original Integration



Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Poor Chromatography

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp9.i Injection Date: 17-MAR-2008 14:26
Lab File ID: 9TCLICV.D Init. Cal. Date(s): 17-MAR-2008 17-MAR-2008
Analysis Type: Init. Cal. Times: 11:08 14:06
Lab Sample ID: L6 Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
9 Pyridine	2.03205	1.95529	1.95529	0.010	3.77745	50.00000	Averaged
10 N-Nitrosodimethylamine	1.30278	1.27172	1.27172	0.010	2.38424	50.00000	Averaged
11 Ethyl methacrylate	2.03583	2.05777	2.05777	0.010	-1.07737	50.00000	Averaged
12 3-Chloropropionitrile	0.90697	0.87814	0.87814	0.010	3.17871	50.00000	Averaged
13 Malononitrile	2.53602	2.49095	2.49095	0.010	1.77712	50.00000	Averaged
209 Benzaldehyde	1.65152	1.58970	1.58970	0.010	3.74308	50.00000	Averaged
21 Aniline	2.92931	2.77995	2.77995	0.010	5.09878	50.00000	Averaged
22 Phenol	2.37665	2.28121	2.28121	0.010	4.01575	20.00000	Averaged
23 bis(2-Chloroethyl)ether	1.93259	1.78935	1.78935	0.010	7.41165	50.00000	Averaged
24 2-Chlorophenol	1.25787	1.23026	1.23026	0.010	2.19511	50.00000	Averaged
26 1,3-Dichlorobenzene	1.38134	1.35258	1.35258	0.010	2.08225	50.00000	Averaged
27 1,4-Dichlorobenzene	0.87576	0.83521	0.83521	0.010	4.63060	20.00000	Averaged
28 1,2-Dichlorobenzene	1.31565	1.23317	1.23317	0.010	6.26941	50.00000	Averaged
29 Benzyl Alcohol	1.09304	1.10437	1.10437	0.010	-1.03696	50.00000	Averaged
30 2-Methylphenol	1.50621	1.44669	1.44669	0.010	3.95209	50.00000	Averaged
31 bis(2-Chloroisopropyl)ether	1.74593	1.64979	1.64979	0.010	5.50628	50.00000	Averaged
37 Acetophenone	2.52051	2.39790	2.39790	0.010	4.86455	50.00000	Averaged
32 N-Nitroso-di-n-propylamine	1.88768	1.86400	1.86400	0.050	1.25454	50.00000	Averaged
192 4-Methylphenol	1.56783	1.51729	1.51729	0.010	3.22413	50.00000	Averaged
34 Hexachloroethane	0.65244	0.58118	0.58118	0.010	10.92293	50.00000	Averaged
35 Nitrobenzene	0.69954	0.68621	0.68621	0.010	1.90559	50.00000	Averaged
41 Isophorone	1.15749	1.15541	1.15541	0.010	0.17998	50.00000	Averaged
42 2-Nitrophenol	5.00000	4.87931	0.18458	0.010	2.41377	0.000e+000	Quadratic
43 2,4-Dimethylphenol	0.54421	0.51748	0.51748	0.010	4.91199	50.00000	Averaged
44 bis(2-Chloroethoxy)methane	0.56145	0.55107	0.55107	0.010	1.85028	50.00000	Averaged
46 2,4-Toluenediamene	5.00000	4.96619	0.15613	0.010	0.67615	0.000e+000	Quadratic
47 1,3,5-Trichlorobenzene	0.30380	0.29371	0.29371	0.010	3.32151	50.00000	Averaged
48 2,4-Dichlorophenol	0.30050	0.29552	0.29552	0.010	1.65700	20.00000	Averaged
49 Benzoic Acid	0.21277	0.26000	0.26000	0.010	-22.19891	50.00000	Averaged
50 1,2,4-Trichlorobenzene	0.32286	0.31165	0.31165	0.010	3.47289	50.00000	Averaged
51 Naphthalene	1.06680	1.01090	1.01090	0.010	5.23967	50.00000	Averaged
52 4-Chloroaniline	0.41571	0.40110	0.40110	0.010	3.51558	50.00000	Averaged
56 Hexachlorobutadiene	0.21045	0.19517	0.19517	0.010	7.26340	20.00000	Averaged
210 Caprolactam	0.12821	0.13195	0.13195	0.010	-2.91969	50.00000	Averaged
57 1,2,3-Trichlorobenzene	0.28748	0.27000	0.27000	0.010	6.08068	50.00000	Averaged
59 4-Chloro-3-Methylphenol	0.43132	0.42698	0.42698	0.010	1.00520	20.00000	Averaged
62 2-Methylnaphthalene	0.62420	0.60488	0.60488	0.010	3.09516	50.00000	Averaged
63 1-Methylnaphthalene	0.67527	0.65517	0.65517	0.010	2.97751	50.00000	Averaged
64 Hexachlorocyclopentadiene	0.40044	0.38250	0.38250	0.050	4.47986	50.00000	Averaged
66 2,4,6-Trichlorophenol	0.39588	0.38076	0.38076	0.010	3.81982	20.00000	Averaged
67 2,4,5-Trichlorophenol	0.40770	0.42011	0.42011	0.010	-3.04386	50.00000	Averaged
211 1,1'-Biphenyl	1.52092	1.52673	1.52673	0.010	-0.38186	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp9.i Injection Date: 17-MAR-2008 14:26
Lab File ID: 9TCLICV.D Init. Cal. Date(s): 17-MAR-2008 17-MAR-2008
Analysis Type: Init. Cal. Times: 11:08 14:06
Lab Sample ID: L6 Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
68 1,2,3,5-Tetrachlorobenzene	0.60067	0.59958	0.59958	0.010	0.18123	50.00000	Averaged
70 2-Chloronaphthalene	1.10564	1.07857	1.07857	0.010	2.44837	50.00000	Averaged
73 2-Nitroaniline	0.63550	0.63497	0.63497	0.010	0.08346	50.00000	Averaged
74 1,2,3,4-Tetrachlorobenzene	0.55859	0.55302	0.55302	0.010	0.99742	50.00000	Averaged
76 Dimethylphthalate	1.31227	1.29330	1.29330	0.010	1.44522	50.00000	Averaged
78 2,6-Dinitrotoluene	0.28338	0.28586	0.28586	0.010	-0.87609	50.00000	Averaged
79 Acenaphthylene	1.84514	1.80362	1.80362	0.010	2.24995	50.00000	Averaged
80 1,2-Dinitrobenzene	0.14234	0.14099	0.14099	0.010	0.94735	50.00000	Averaged
81 3-Nitroaniline	0.27436	0.28041	0.28041	0.010	-2.20279	50.00000	Averaged
82 Acenaphthene	1.19107	1.18134	1.18134	0.010	0.81644	20.00000	Averaged
83 2,4-Dinitrophenol	10.00000	9.17947	0.19183	0.050	8.20527	0.000e+000	Quadratic
85 4-Nitrophenol	0.32703	0.32850	0.32850	0.050	-0.45013	50.00000	Averaged
86 Dibenzofuran	1.63519	1.61483	1.61483	0.010	1.24547	50.00000	Averaged
87 2,4-Dinitrotoluene	0.37710	0.37350	0.37350	0.010	0.95585	50.00000	Averaged
91 2,3,5,6-Tetrachlorophenol	5.00000	5.03770	0.36176	0.010	-0.75391	0.000e+000	Quadratic
93 Diethylphthalate	1.33397	1.34030	1.34030	0.010	-0.47454	50.00000	Averaged
94 Fluorene	1.43060	1.43141	1.43141	0.010	-0.05677	50.00000	Averaged
95 4-Chlorophenyl-phenylether	0.64428	0.63960	0.63960	0.010	0.72732	50.00000	Averaged
96 4-Nitroaniline	0.32965	0.32700	0.32700	0.010	0.80135	50.00000	Averaged
98 4,6-Dinitro-2-methylphenol	0.14024	0.12572	0.12572	0.010	10.34976	50.00000	Averaged
99 N-Nitrosodiphenylamine	0.54788	0.51939	0.51939	0.010	5.19978	20.00000	Averaged
100 1,2-Diphenylhydrazine	1.41421	1.38380	1.38380	0.010	2.15030	50.00000	Averaged
106 4-Bromophenyl-phenylether	0.20759	0.19996	0.19996	0.010	3.67388	50.00000	Averaged
107 Hexachlorobenzene	0.21110	0.19637	0.19637	0.010	6.97520	50.00000	Averaged
212 Atrazine	0.23416	0.22682	0.22682	0.010	3.13180	50.00000	Averaged
111 Pentachlorophenol	10.00000	9.73311	0.14709	0.010	2.66889	0.000e+000	Quadratic
115 Phenanthrene	1.21165	1.14814	1.14814	0.010	5.24197	50.00000	Averaged
116 Anthracene	1.20033	1.15353	1.15353	0.010	3.89865	50.00000	Averaged
119 Carbazole	1.00953	0.96845	0.96845	0.010	4.06942	50.00000	Averaged
120 Di-n-Butylphthalate	1.27538	1.21838	1.21838	0.010	4.46891	50.00000	Averaged
123 Fluoranthene	1.23715	1.19827	1.19827	0.010	3.14240	20.00000	Averaged
124 Benzidine	5.00000	5.57902	0.61284	0.010	-11.58036	0.000e+000	Quadratic
125 Pyrene	1.26734	1.26323	1.26323	0.010	0.32462	50.00000	Averaged
131 Butylbenzylphthalate	0.54730	0.53761	0.53761	0.010	1.76942	50.00000	Averaged
133 3,3'-Dimethoxybenzidine	5.00000	5.03636	0.25549	0.010	-0.72711	0.000e+000	Quadratic
135 3,3'-Dichlorobenzidine	0.45266	0.45432	0.45432	0.010	-0.36716	50.00000	Averaged
136 Benzo(a)Anthracene	1.24301	1.18944	1.18944	0.010	4.31009	50.00000	Averaged
137 Chrysene	1.11183	1.06640	1.06640	0.010	4.08575	50.00000	Averaged
138 4,4'-Methylene bis(o-chloro	0.22758	0.22472	0.22472	0.010	1.25607	50.00000	Averaged
139 bis(2-ethylhexyl)Phthalate	0.77060	0.75967	0.75967	0.010	1.41757	50.00000	Averaged
140 Di-n-octylphthalate	1.55491	1.57753	1.57753	0.010	-1.45456	20.00000	Averaged
141 Benzo(b)fluoranthene	1.43118	1.45590	1.45590	0.010	-1.72717	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp9.i Injection Date: 17-MAR-2008 14:26
Lab File ID: 9TCLICV.D Init. Cal. Date(s): 17-MAR-2008 17-MAR-2008
Analysis Type: Init. Cal. Times: 11:08 14:06
Lab Sample ID: L6 Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
142 Benzo(k)fluoranthene	1.46121	1.49329	1.49329	0.010	-2.19566	50.00000	Averaged
146 Benzo(a)pyrene	1.30298	1.32046	1.32046	0.010	-1.34163	20.00000	Averaged
149 Indeno(1,2,3-cd)pyrene	1.33766	1.40371	1.40371	0.010	-4.93771	50.00000	Averaged
150 Dibenz(a,h)anthracene	1.02032	1.15044	1.15044	0.010	-12.75263	50.00000	Averaged
151 Benzo(g,h,i)perylene	1.10845	1.11280	1.11280	0.010	-0.39245	50.00000	Averaged
198 1,4-Dioxane	0.67710	0.55398	0.55398	0.010	18.18267	50.00000	Averaged
$ 154 Nitrobenzene-d5	0.68432	0.67264	0.67264	0.010	1.70655	50.00000	Averaged
$ 155 2-Fluorobiphenyl	1.27922	1.27151	1.27151	0.010	0.60274	50.00000	Averaged
$ 156 Terphenyl-d14	0.84479	0.86673	0.86673	0.010	-2.59694	50.00000	Averaged
$ 157 Phenol-d5	2.23881	2.14417	2.14417	0.010	4.22716	50.00000	Averaged
$ 158 2-Fluorophenol	1.44148	1.35642	1.35642	0.010	5.90094	50.00000	Averaged
$ 159 2,4,6-Tribromophenol	0.15014	0.15374	0.15374	0.010	-2.40131	50.00000	Averaged
$ 186 2-Chlorophenol-d4	1.17478	1.12366	1.12366	0.010	4.35179	50.00000	Averaged
$ 187 1,2-Dichlorobenzene-d4	0.88836	0.81481	0.81481	0.010	8.27964	50.00000	Averaged
M 195 Cresols, total	3.07405	2.96397	2.96397	0.010	3.58090	50.00000	Averaged
101 Diphenylamine	0.54788	0.51939	0.51939	0.010	5.19978	50.00000	Averaged

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9TCLICV.D
Lab Smp Id: L6
Inj Date : 17-MAR-2008 14:26
Operator : 001574 Inst ID: a4hp9.i
Smp Info : L6,80317a.b,8270p,1-827042d.sub
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Meth Date : 17-Mar-2008 14:45 a4hp9.i Quant Type: ISTD
Cal Date : 17-MAR-2008 11:08 Cal File: 9SMH0317.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV06

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1	1,4-Dichlorobenzene-d4	152	4.011	4.011	(1.000)	126962	2.00000	
* 2	Naphthalene-d8	136	4.972	4.972	(1.000)	473625	2.00000	
* 3	Acenaphthene-d10	164	6.270	6.270	(1.000)	291674	2.00000	
* 4	Phenanthrene-d10	188	7.371	7.371	(1.000)	537137	2.00000	
* 5	Chrysene-d12	240	9.379	9.379	(1.000)	519821	2.00000	
* 6	Perylene-d12	264	10.970	10.970	(1.000)	393827	2.00000	
9	Pyridine	79	2.104	2.104	(0.525)	620620	5.00000	4.8111
10	N-Nitrosodimethylamine	74	2.078	2.078	(0.518)	403651	5.00000	4.8808
11	Ethyl methacrylate	69	2.355	2.355	(0.587)	653146	5.00000	5.0539
12	3-Chloropropionitrile	54	2.574	2.574	(0.642)	278727	5.00000	4.8411
13	Malononitrile	66	2.751	2.751	(0.686)	790641	5.00000	4.9111
209	Benzaldehyde	77	3.685	3.685	(0.919)	504579	5.00000	4.8128
21	Aniline	93	3.755	3.755	(0.936)	882371	5.00000	4.7451
22	Phenol	94	3.685	3.685	(0.919)	724067	5.00000	4.7992
23	bis(2-Chloroethyl)ether	93	3.781	3.781	(0.943)	567950	5.00000	4.6294
24	2-Chlorophenol	128	3.845	3.845	(0.959)	390490	5.00000	4.8902
26	1,3-Dichlorobenzene	146	3.968	3.968	(0.989)	429316	5.00000	4.8959
27	1,4-Dichlorobenzene	146	4.022	4.022	(1.003)	265100	5.00000	4.7685
28	1,2-Dichlorobenzene	146	4.139	4.139	(1.032)	391414	5.00000	4.6865
29	Benzyl Alcohol	108	4.091	4.091	(1.020)	350534	5.00000	5.0518
30	2-Methylphenol	108	4.150	4.150	(1.035)	459186	5.00000	4.8024
31	bis(2-Chloroisopropyl)ether	45	4.187	4.187	(1.044)	523652	5.00000	4.7247
37	Acetophenone	105	4.299	4.299	(1.072)	761106	5.00000	4.7568
32	N-Nitroso-di-n-propylamine	70	4.289	4.289	(1.069)	591642	5.00000	4.9373
192	4-Methylphenol	108	4.262	4.262	(1.063)	481594	5.00000	4.8388
34	Hexachloroethane	117	4.401	4.401	(1.097)	184469	5.00000	4.4538
35	Nitrobenzene	77	4.438	4.438	(0.893)	812515	5.00000	4.9047
41	Isophorone	82	4.609	4.609	(0.927)	1368074	5.00000	4.9910
42	2-Nitrophenol	139	4.673	4.673	(0.940)	218559	5.00000	4.8793
43	2,4-Dimethylphenol	107	4.668	4.668	(0.939)	612730	5.00000	4.7544

44	bis(2-Chloroethoxy)methane	93	4.748	4.748 (0.955)	652497	5.00000	4.9075
46	2,4-Toluenediamene	121	5.811	5.811 (1.169)	184867	5.00000	4.9662
47	1,3,5-Trichlorobenzene	180	4.684	4.684 (0.942)	347771	5.00000	4.8339

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
48	2,4-Dichlorophenol	162	4.844	4.844	(0.974)	349917	5.00000	4.9172
49	Benzoic Acid	122	4.748	4.748	(0.955)	615723	10.0000	12.220(QM)
50	1,2,4-Trichlorobenzene	180	4.919	4.919	(0.989)	369013	5.00000	4.8264
51	Naphthalene	128	4.988	4.988	(1.003)	1196970	5.00000	4.7380(M)
52	4-Chloroaniline	127	5.005	5.005	(1.006)	474923	5.00000	4.8242
56	Hexachlorobutadiene	225	5.063	5.063	(1.018)	231092	5.00000	4.6368
210	Caprolactam	113	5.272	5.272	(1.060)	156237	5.00000	5.1460
57	1,2,3-Trichlorobenzene	180	5.090	5.090	(1.024)	319691	5.00000	4.6960
59	4-Chloro-3-Methylphenol	107	5.341	5.341	(1.074)	505572	5.00000	4.9497
62	2-Methylnaphthalene	142	5.496	5.496	(1.105)	716221	5.00000	4.8452
63	1-Methylnaphthalene	142	5.576	5.576	(1.121)	775758	5.00000	4.8511
64	Hexachlorocyclopentadiene	237	5.608	5.608	(0.894)	278914	5.00000	4.7760
66	2,4,6-Trichlorophenol	196	5.694	5.694	(0.908)	277645	5.00000	4.8090
67	2,4,5-Trichlorophenol	196	5.720	5.720	(0.912)	306339	5.00000	5.1522
211	1,1'-Biphenyl	154	5.832	5.832	(0.930)	1113270	5.00000	5.0191
68	1,2,3,5-Tetrachlorobenzene	216	5.608	5.608	(0.894)	437205	5.00000	4.9909
70	2-Chloronaphthalene	162	5.864	5.864	(0.935)	786480	5.00000	4.8776
73	2-Nitroaniline	65	5.918	5.918	(0.944)	463007	5.00000	4.9958
74	1,2,3,4-Tetrachlorobenzene	216	5.832	5.832	(0.930)	403255	5.00000	4.9501
76	Dimethylphthalate	163	6.030	6.030	(0.962)	943055	5.00000	4.9277
78	2,6-Dinitrotoluene	165	6.089	6.089	(0.971)	208447	5.00000	5.0438
79	Acenaphthylene	152	6.174	6.174	(0.985)	1315175	5.00000	4.8875
80	1,2-Dinitrobenzene	168	6.137	6.137	(0.979)	102807	5.00000	4.9526
81	3-Nitroaniline	138	6.217	6.217	(0.991)	204468	5.00000	5.1101
82	Acenaphthene	153	6.297	6.297	(1.004)	861419	5.00000	4.9592
83	2,4-Dinitrophenol	184	6.292	6.292	(1.003)	279766	10.0000	9.1795(QM)
85	4-Nitrophenol	109	6.302	6.302	(1.005)	239538	5.00000	5.0225
86	Dibenzofuran	168	6.420	6.420	(1.024)	1177509	5.00000	4.9377
87	2,4-Dinitrotoluene	165	6.383	6.383	(1.018)	272347	5.00000	4.9522
91	2,3,5,6-Tetrachlorophenol	232	6.468	6.468	(1.032)	263787	5.00000	5.0377
93	Diethylphthalate	149	6.537	6.537	(1.043)	977326	5.00000	5.0237
94	Fluorene	166	6.676	6.676	(1.065)	1043762	5.00000	5.0028
95	4-Chlorophenyl-phenylether	204	6.650	6.650	(1.060)	466386	5.00000	4.9636
96	4-Nitroaniline	138	6.671	6.671	(1.064)	238446	5.00000	4.9599
98	4,6-Dinitro-2-methylphenol	198	6.682	6.682	(0.907)	168828	5.00000	4.4825
99	N-Nitrosodiphenylamine	169	6.735	6.735	(0.914)	697458	5.00000	4.7400
100	1,2-Diphenylhydrazine	77	6.767	6.767	(0.918)	1858223	5.00000	4.8925
106	4-Bromophenyl-phenylether	248	7.013	7.013	(0.951)	268514	5.00000	4.8163
107	Hexachlorobenzene	284	7.082	7.082	(0.961)	263698	5.00000	4.6512
212	Atrazine	200	7.098	7.098	(0.963)	304590	5.00000	4.8434
111	Pentachlorophenol	266	7.210	7.210	(0.978)	395031	10.0000	9.7331
115	Phenanthrene	178	7.387	7.387	(1.002)	1541771	5.00000	4.7379
116	Anthracene	178	7.424	7.424	(1.007)	1549014	5.00000	4.8051
119	Carbazole	167	7.525	7.525	(1.021)	1300472	5.00000	4.7965
120	Di-n-Butylphthalate	149	7.723	7.723	(1.048)	1636094	5.00000	4.7766
123	Fluoranthene	202	8.268	8.268	(1.122)	1609092	5.00000	4.8429
124	Benzidine	184	8.332	8.332	(0.888)	796413	5.00000	5.5790
125	Pyrene	202	8.444	8.444	(0.900)	1641631	5.00000	4.9838
131	Butylbenzylphthalate	149	8.855	8.855	(0.944)	698656	5.00000	4.9115
133	3,3'-Dimethoxybenzidine	244	9.267	9.267	(0.988)	332020	5.00000	5.0364
135	3,3'-Dichlorobenzidine	252	9.315	9.315	(0.993)	590415	5.00000	5.0184
136	Benzo(a)Anthracene	228	9.368	9.368	(0.999)	1545735	5.00000	4.7845

137 Chrysene	228	9.406	9.406 (1.003)	1385847	5.00000	4.7957
138 4,4'-Methylene bis(o-chloroan	231	9.309	9.309 (0.993)	292037	5.00000	4.9372

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139 bis(2-ethylhexyl)Phthalate	149	9.277	9.277	(0.989)	987233	5.00000	4.9291
140 Di-n-octylphthalate	149	9.876	9.876	(0.900)	1553180	5.00000	5.0727
141 Benzo(b)fluoranthene	252	10.474	10.474	(0.955)	1433430	5.00000	5.0864
142 Benzo(k)fluoranthene	252	10.506	10.506	(0.958)	1470245	5.00000	5.1098
146 Benzo(a)pyrene	252	10.901	10.901	(0.994)	1300085	5.00000	5.0671
149 Indeno(1,2,3-cd)pyrene	276	12.744	12.744	(1.162)	1382044	5.00000	5.2469
150 Dibenz(a,h)anthracene	278	12.765	12.765	(1.164)	1132686	5.00000	5.6376(QM)
151 Benzo(g,h,i)perylene	276	13.299	13.299	(1.212)	1095628	5.00000	5.0196
198 1,4-Dioxane	88	1.869	1.869	(0.466)	175837	5.00000	4.0909(M)
$ 154 Nitrobenzene-d5	82	4.422	4.422	(0.889)	796449	5.00000	4.9147
$ 155 2-Fluorobiphenyl	172	5.752	5.752	(0.917)	927168	5.00000	4.9699
$ 156 Terphenyl-d14	244	8.519	8.519	(0.908)	1126365	5.00000	5.1298
$ 157 Phenol-d5	99	3.675	3.675	(0.916)	680571	5.00000	4.7886
$ 158 2-Fluorophenol	112	2.996	2.996	(0.747)	430533	5.00000	4.7050
$ 159 2,4,6-Tribromophenol	330	6.847	6.847	(1.092)	112108	5.00000	5.1201
$ 186 2-Chlorophenol-d4	132	3.835	3.835	(0.956)	356654	5.00000	4.7824
$ 187 1,2-Dichlorobenzene-d4	152	4.129	4.129	(1.029)	258625	5.00000	4.5860
101 Diphenylamine	169	6.735	6.735	(0.914)	697458	5.00000	4.7400

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

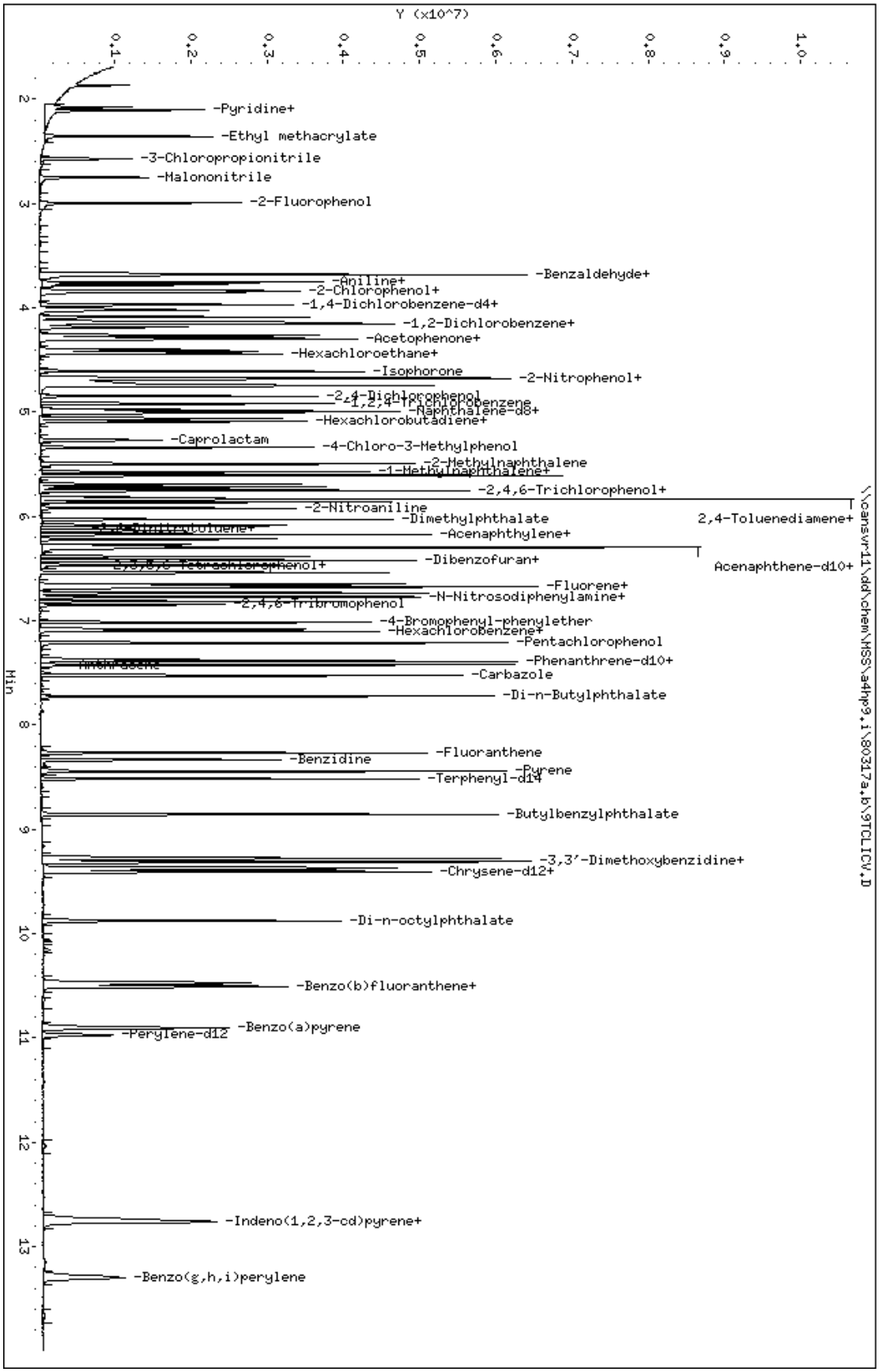
Instrument ID: a4hp9.i
Lab File ID: 9TCLICV.D
Lab Smp Id: L6
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\8270p.m
Misc Info:

Calibration Date: 17-MAR-2008
Calibration Time: 11:08
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87943	43972	175886	126962	44.37
2 Naphthalene-d8	328975	164488	657950	473625	43.97
3 Acenaphthene-d10	197861	98931	395722	291674	47.41
4 Phenanthrene-d10	346358	173179	692716	537137	55.08
5 Chrysene-d12	342235	171118	684470	519821	51.89
6 Perylene-d12	281586	140793	563172	393827	39.86

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.01	3.51	4.51	4.01	0.12
2 Naphthalene-d8	4.97	4.47	5.47	4.97	-0.01
3 Acenaphthene-d10	6.27	5.77	6.77	6.27	-0.01
4 Phenanthrene-d10	7.37	6.87	7.87	7.37	0.07
5 Chrysene-d12	9.39	8.89	9.89	9.38	-0.12
6 Perylene-d12	10.98	10.48	11.48	10.97	-0.10

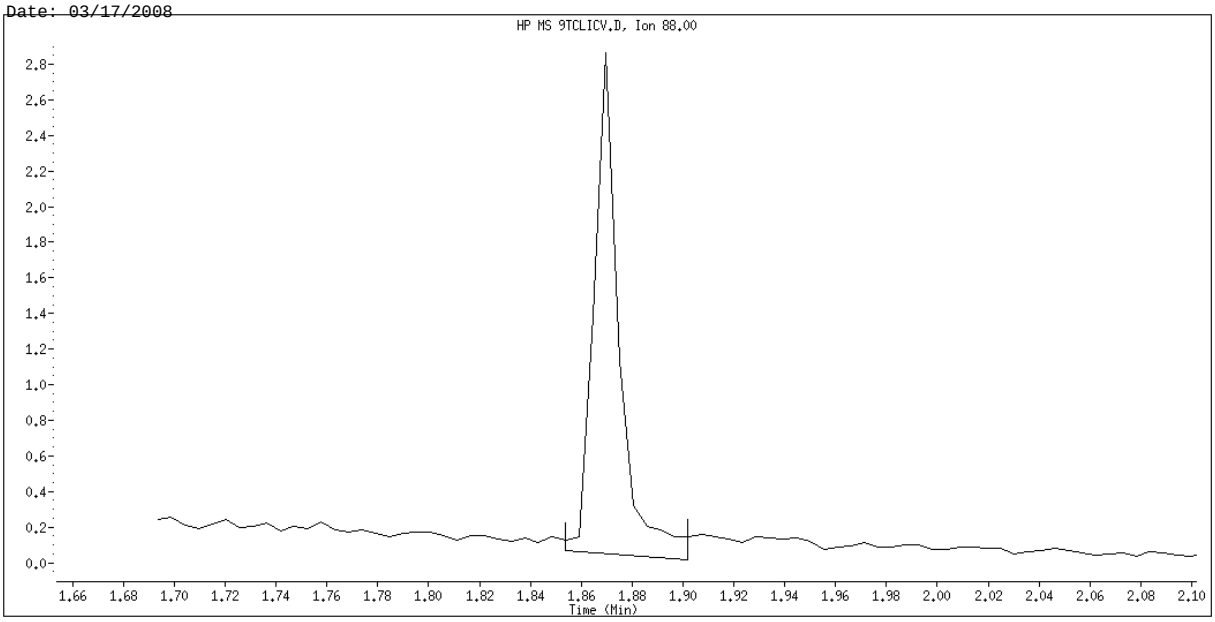
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



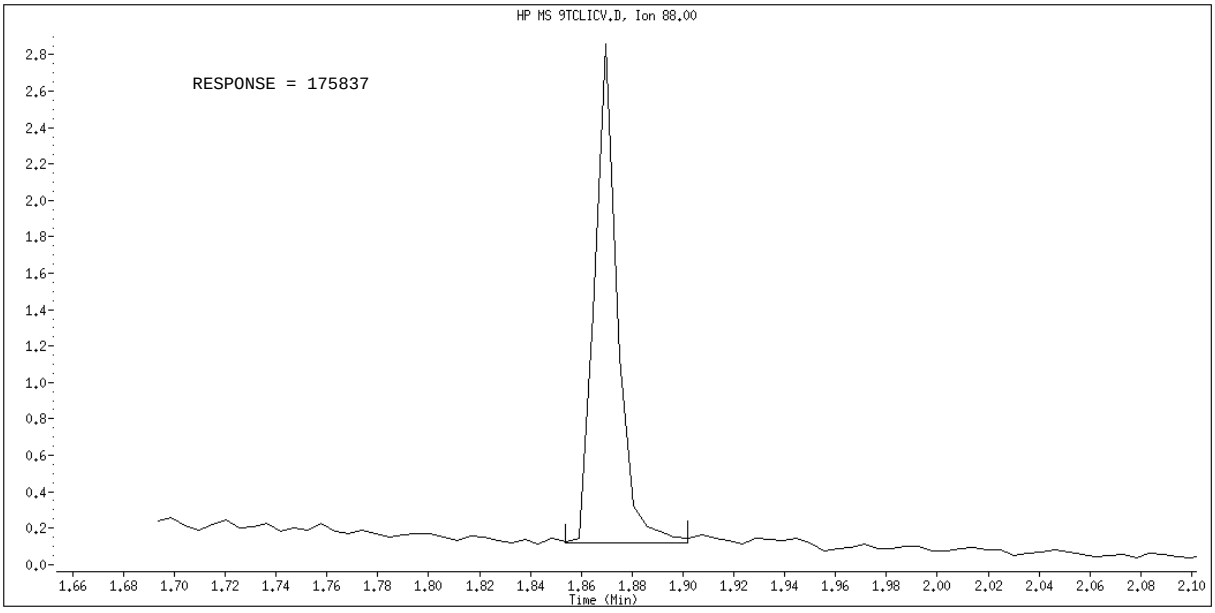
Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9TCLICV.D
Date : 17-MAR-2008 14:26
Client ID:
Sample Info: L6,80317a,b,8270p,1-8270424,sub
Column phase: db5.625

Instrument: a4hp9.i
Operator: 001574
Column diameter: 0.32

Data File Name: 9TCLICV.D
Inj. Date and Time: 17-MAR-2008 14:26
Instrument ID: a4hp9.i
Client ID:
Compound Name: 1,4-Dioxane
CAS #: 123-91-1
Report Date: 03/17/2008



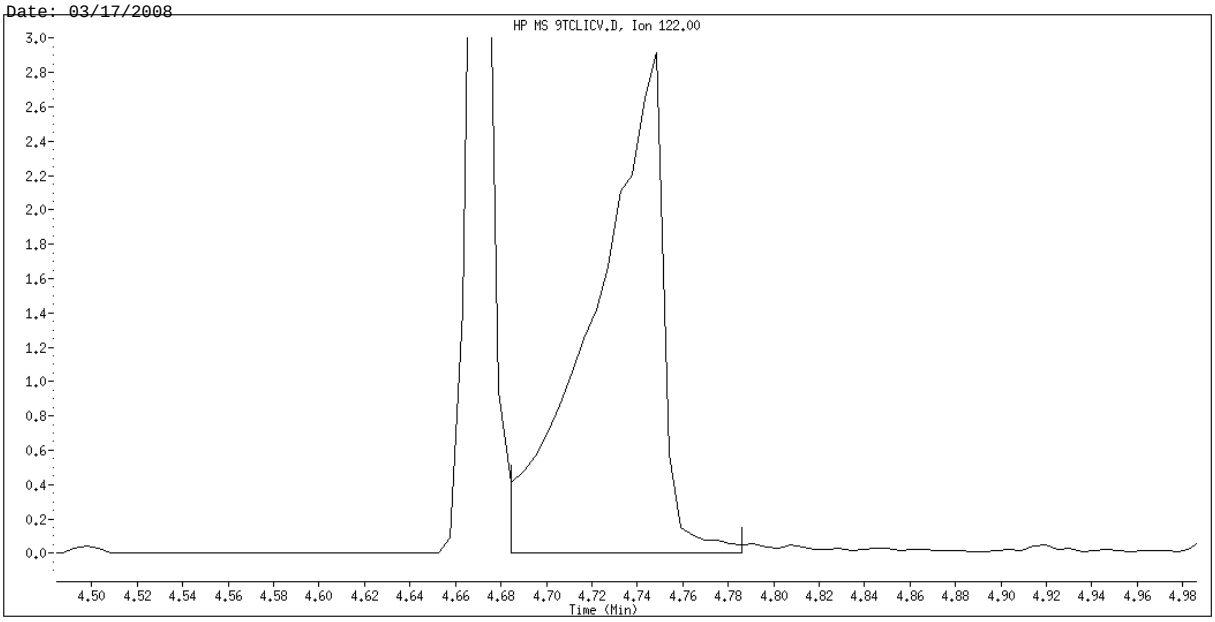
Original Integration



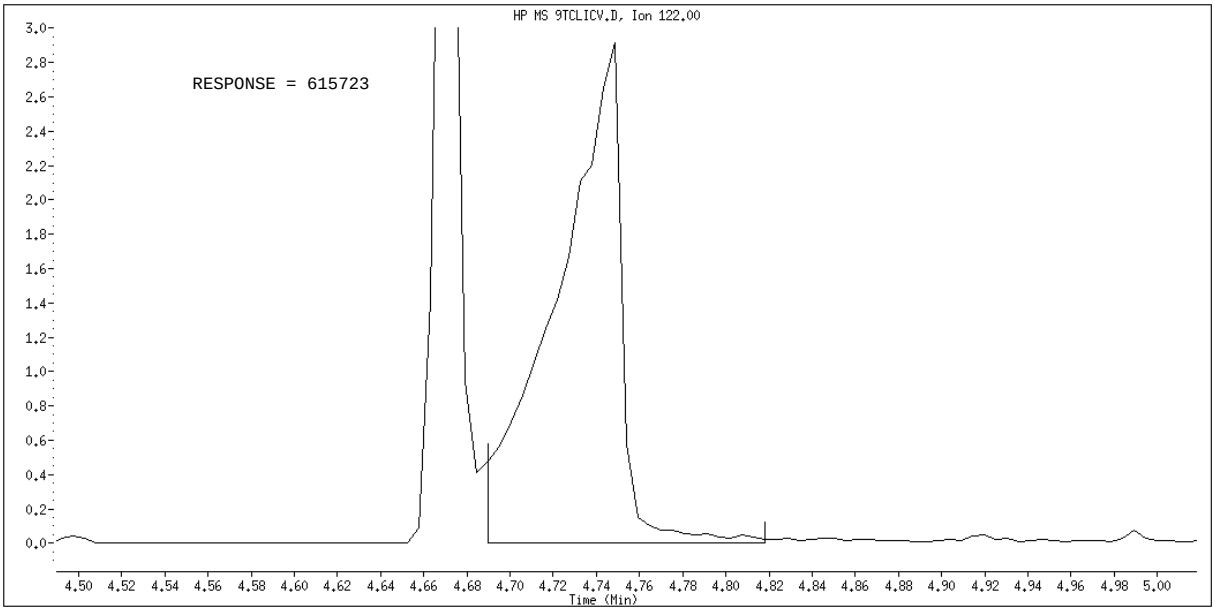
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Poor Chromatography

Data File Name: 9TCLICV.D
Inj. Date and Time: 17-MAR-2008 14:26
Instrument ID: a4hp9.i
Client ID:
Compound Name: Benzoic Acid
CAS #: 65-85-0
Report Date: 03/17/2008



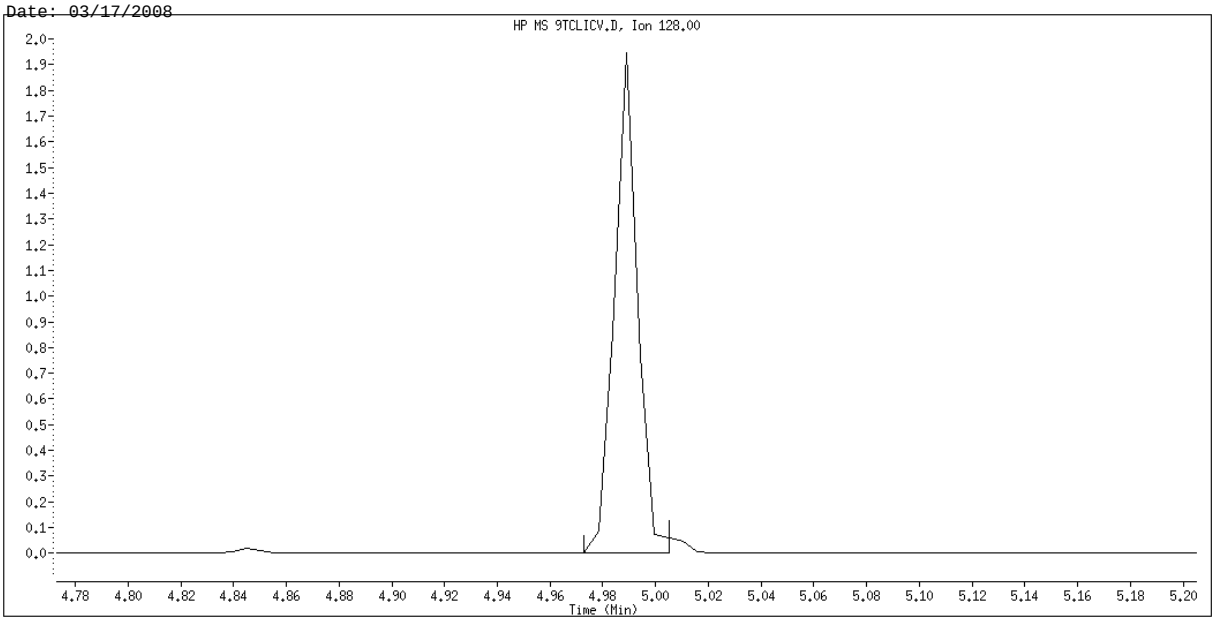
Original Integration



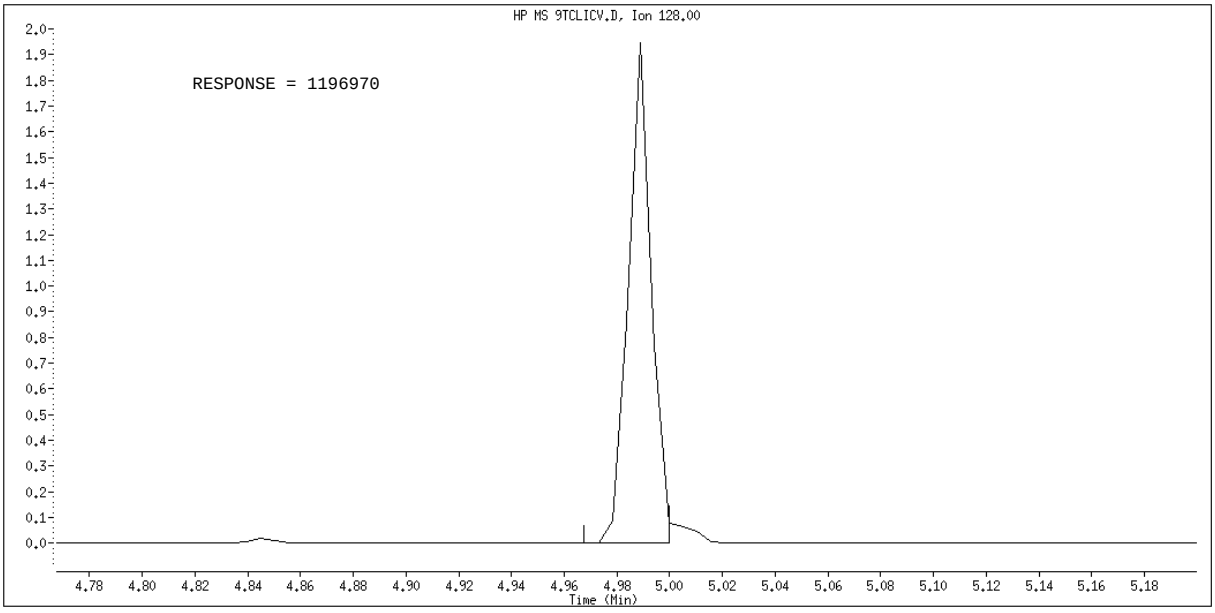
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

Data File Name: 9TCLICV.D
Inj. Date and Time: 17-MAR-2008 14:26
Instrument ID: a4hp9.i
Client ID:
Compound Name: Naphthalene
CAS #: 91-20-3
Report Date: 03/17/2008



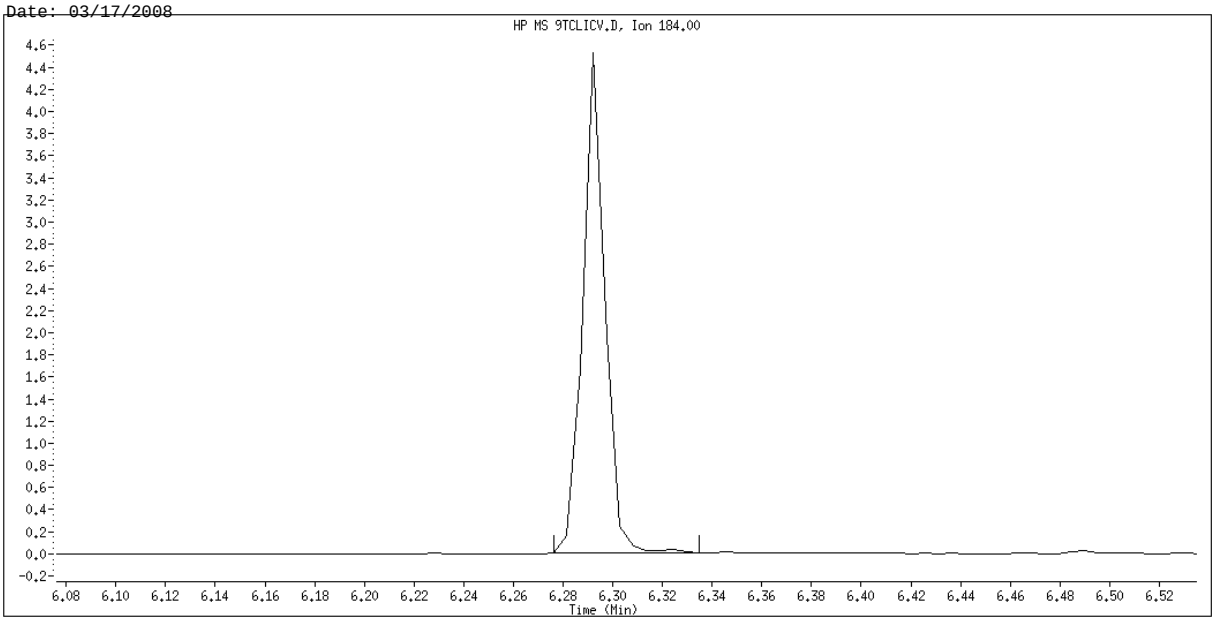
Original Integration



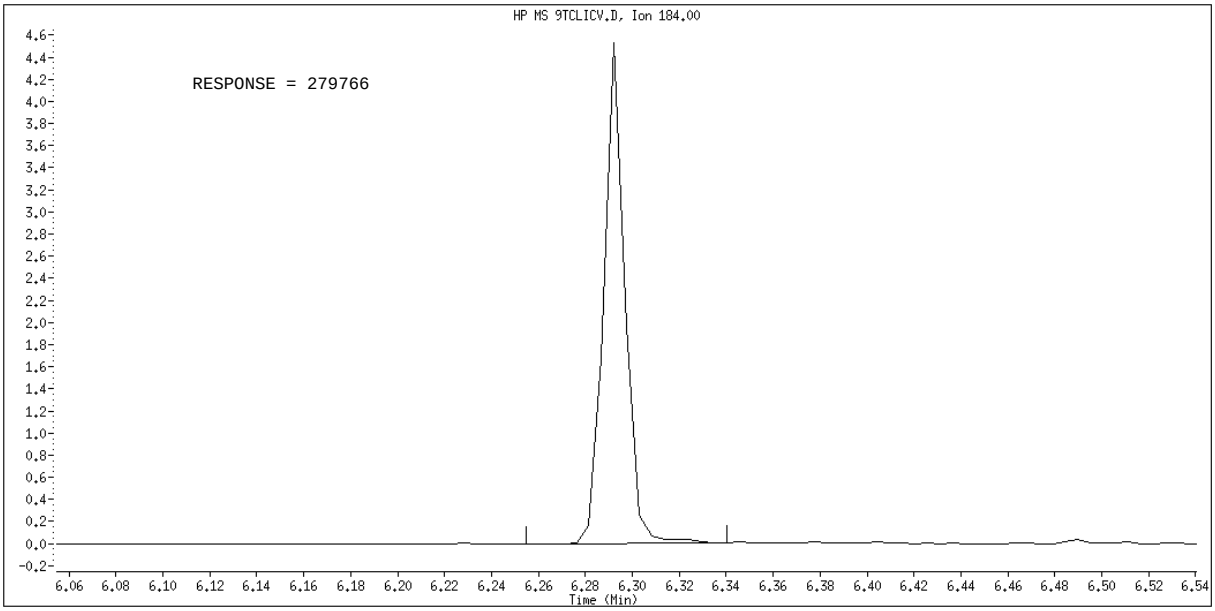
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

Data File Name: 9TCLICV.D
Inj. Date and Time: 17-MAR-2008 14:26
Instrument ID: a4hp9.i
Client ID:
Compound Name: 2,4-Dinitrophenol
CAS #: 51-28-5
Report Date: 03/17/2008



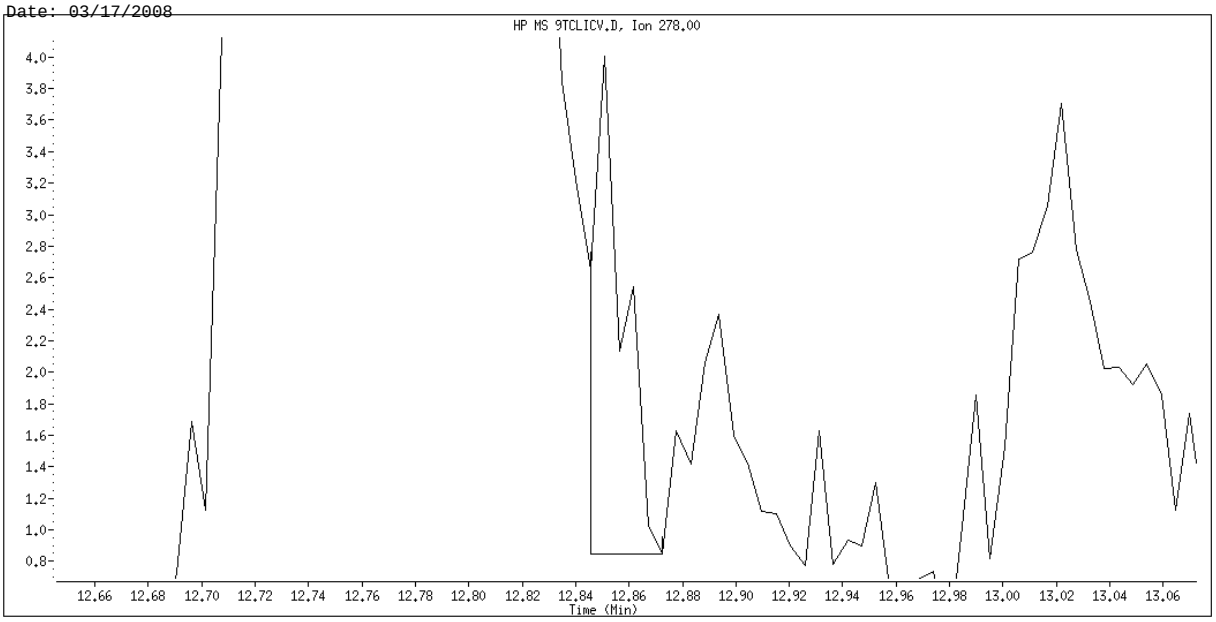
Original Integration



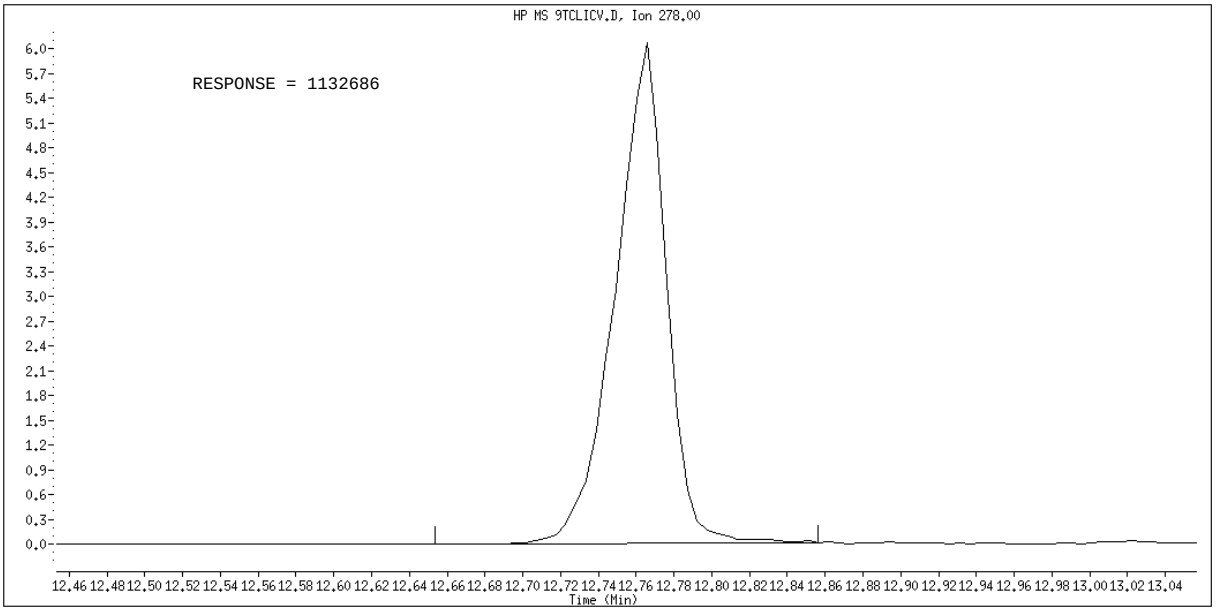
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

Data File Name: 9TCLICV.D
Inj. Date and Time: 17-MAR-2008 14:26
Instrument ID: a4hp9.i
Client ID:
Compound Name: Dibenz(a,h)anthracene
CAS #: 53-70-3
Report Date: 03/17/2008



Original Integration



Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

Report Date: 20-Mar-2008 11:29

Calibration History

Method : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Start Cal Date: 17-MAR-2008 11:08
End Cal Date : 18-MAR-2008 12:31
Last Cal Level: 9
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.05000		
17-MAR-2008 13:07	1-pahpl	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SLL0317.D
Cal Level: 2 , Cal Amount: 0.25000		
18-MAR-2008 11:31	fisk	\\cansvr11\dd\chem\MSS\a4hp9.i\80318a.b\9TL0318.D
17-MAR-2008 12:47	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SL0317.D
Cal Level: 3 , Cal Amount: 0.50000		
18-MAR-2008 11:11	fisk	\\cansvr11\dd\chem\MSS\a4hp9.i\80318a.b\9TML0318.D
17-MAR-2008 12:07	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SML0317.D
Cal Level: 4 , Cal Amount: 1.00000		
18-MAR-2008 10:31	fisk	\\cansvr11\dd\chem\MSS\a4hp9.i\80318a.b\9TM0318.D
17-MAR-2008 12:27	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SM0317.D
Cal Level: 5 , Cal Amount: 2.50000		
18-MAR-2008 10:51	fisk	\\cansvr11\dd\chem\MSS\a4hp9.i\80318a.b\9TMM0318.D
17-MAR-2008 11:27	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SMM0317.D
Cal Level: 6 , Cal Amount: 5.00000		
18-MAR-2008 09:52	fisk	\\cansvr11\dd\chem\MSS\a4hp9.i\80318a.b\9TMH0318.D
17-MAR-2008 11:08	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SMH0317.D

Cal Level: 7 , Cal Amount: 7.50000		
18-MAR-2008 11:51	fisk	\\cansvr11\dd\chem\MSS\a4hp9.i\80318a.b\9TH0318.D
17-MAR-2008 13:27	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SH0317.D

Cal Level: 8 , Cal Amount: 10.00000		
18-MAR-2008 12:11	fisk	\\cansvr11\dd\chem\MSS\a4hp9.i\80318a.b\9THH0318.D
17-MAR-2008 13:46	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9SHH0317.D

Cal Level: 9 , Cal Amount: 12.50000		
18-MAR-2008 12:31	fisk	\\cansvr11\dd\chem\MSS\a4hp9.i\80318a.b\9THHH318.D
17-MAR-2008 14:06	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9HHH0317.D

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

20-MAR-2008 11:09	fisk	\\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\9TMH0320.D
20-MAR-2008 10:48	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\9SMH0320.D
20-MAR-2008 10:28	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\9SMH0320.D
20-MAR-2008 08:44	1-827042d	\\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\9SMH0320.D

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp9.i Injection Date: 20-MAR-2008 10:48
Lab File ID: 9SMH0320.D Init. Cal. Date(s): 17-MAR-2008 18-MAR-2008
Analysis Type: Init. Cal. Times: 11:08 12:31
Lab Sample ID: L6 Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
9 Pyridine	2.03205	1.84204	1.84204	0.010	9.35067	50.00000	Averaged
10 N-Nitrosodimethylamine	1.30278	1.14784	1.14784	0.010	11.89356	50.00000	Averaged
11 Ethyl methacrylate	2.03583	1.85810	1.85810	0.010	8.73017	50.00000	Averaged
12 3-Chloropropionitrile	0.90697	0.80024	0.80024	0.010	11.76758	50.00000	Averaged
13 Malononitrile	2.53602	2.25975	2.25975	0.010	10.89393	50.00000	Averaged
209 Benzaldehyde	1.65152	1.43840	1.43840	0.010	12.90416	50.00000	Averaged
21 Aniline	2.92931	2.72443	2.72443	0.010	6.99436	50.00000	Averaged
22 Phenol	2.37665	2.18719	2.18719	0.010	7.97180	20.00000	Averaged
23 bis(2-Chloroethyl)ether	1.93259	1.58575	1.58575	0.010	17.94677	50.00000	Averaged
24 2-Chlorophenol	1.25787	1.25879	1.25879	0.010	-0.07307	50.00000	Averaged
26 1,3-Dichlorobenzene	1.38134	1.31596	1.31596	0.010	4.73322	50.00000	Averaged
27 1,4-Dichlorobenzene	0.87576	0.87485	0.87485	0.010	0.10444	20.00000	Averaged
28 1,2-Dichlorobenzene	1.31565	1.28543	1.28543	0.010	2.29688	50.00000	Averaged
29 Benzyl Alcohol	1.09304	1.03648	1.03648	0.010	5.17463	50.00000	Averaged
30 2-Methylphenol	1.50621	1.43813	1.43813	0.010	4.52059	50.00000	Averaged
31 bis(2-Chloroisopropyl)ether	1.74593	1.46062	1.46062	0.010	16.34153	50.00000	Averaged
37 Acetophenone	2.52051	2.29665	2.29665	0.010	8.88165	50.00000	Averaged
32 N-Nitroso-di-n-propylamine	1.88768	1.74087	1.74087	0.050	7.77743	50.00000	Averaged
192 4-Methylphenol	1.56783	1.49720	1.49720	0.010	4.50498	50.00000	Averaged
34 Hexachloroethane	0.65244	0.62470	0.62470	0.010	4.25249	50.00000	Averaged
35 Nitrobenzene	0.69954	0.67390	0.67390	0.010	3.66455	50.00000	Averaged
41 Isophorone	1.15749	1.08261	1.08261	0.010	6.46941	50.00000	Averaged
42 2-Nitrophenol	5.00000	5.09642	0.19346	0.010	-1.92839	0.000e+000	Quadratic
43 2,4-Dimethylphenol	0.54421	0.55210	0.55210	0.010	-1.44985	50.00000	Averaged
44 bis(2-Chloroethoxy)methane	0.56145	0.52965	0.52965	0.010	5.66467	50.00000	Averaged
46 2,4-Toluenediamene	5.00000	5.81110	0.18673	0.010	-16.22198	0.000e+000	Quadratic
47 1,3,5-Trichlorobenzene	0.30380	0.32167	0.32167	0.010	-5.88245	50.00000	Averaged
48 2,4-Dichlorophenol	0.30050	0.30419	0.30419	0.010	-1.22754	20.00000	Averaged
49 Benzoic Acid	0.24986	0.18035	0.18035	0.010	27.81883	50.00000	Averaged
50 1,2,4-Trichlorobenzene	0.32286	0.33201	0.33201	0.010	-2.83422	50.00000	Averaged
51 Naphthalene	1.06680	1.01737	1.01737	0.010	4.63358	50.00000	Averaged
52 4-Chloroaniline	0.41571	0.40309	0.40309	0.010	3.03546	50.00000	Averaged
56 Hexachlorobutadiene	0.21045	0.21154	0.21154	0.010	-0.51410	20.00000	Averaged
210 Caprolactam	0.12821	0.13260	0.13260	0.010	-3.42443	50.00000	Averaged
57 1,2,3-Trichlorobenzene	0.28748	0.29661	0.29661	0.010	-3.17593	50.00000	Averaged
59 4-Chloro-3-Methylphenol	0.43132	0.41996	0.41996	0.010	2.63231	20.00000	Averaged
62 2-Methylnaphthalene	0.62420	0.62224	0.62224	0.010	0.31455	50.00000	Averaged
63 1-Methylnaphthalene	0.67527	0.65778	0.65778	0.010	2.59101	50.00000	Averaged
64 Hexachlorocyclopentadiene	0.40044	0.42261	0.42261	0.050	-5.53605	50.00000	Averaged
66 2,4,6-Trichlorophenol	0.39588	0.39679	0.39679	0.010	-0.22846	20.00000	Averaged
67 2,4,5-Trichlorophenol	0.40770	0.41121	0.41121	0.010	-0.85971	50.00000	Averaged
211 1,1'-Biphenyl	1.52092	1.48600	1.48600	0.010	2.29627	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp9.i Injection Date: 20-MAR-2008 10:48
Lab File ID: 9SMH0320.D Init. Cal. Date(s): 17-MAR-2008 18-MAR-2008
Analysis Type: Init. Cal. Times: 11:08 12:31
Lab Sample ID: L6 Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m

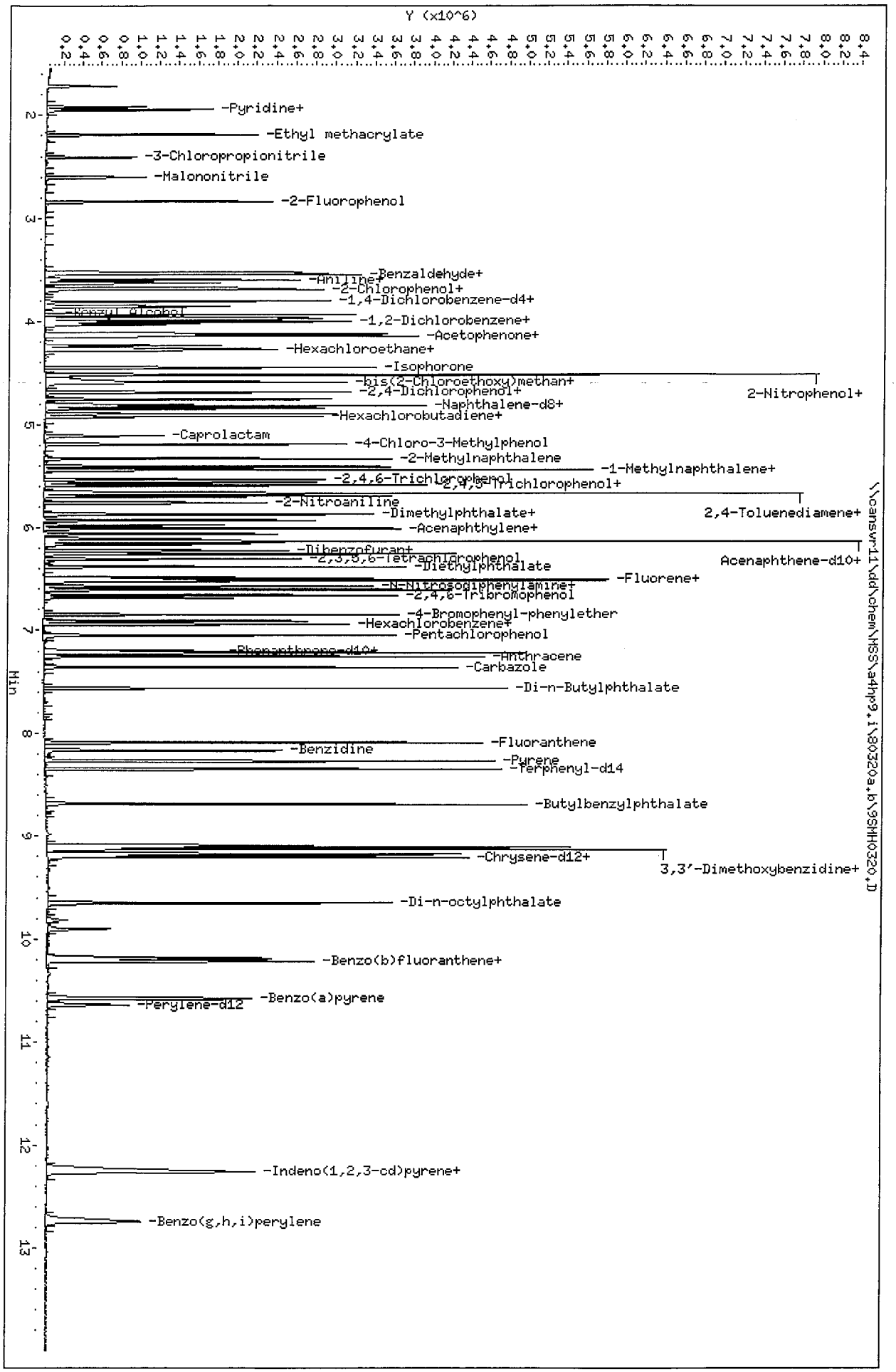
COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
68 1,2,3,5-Tetrachlorobenzene	0.60067	0.58186	0.58186	0.010	3.13190	50.00000	Averaged
70 2-Chloronaphthalene	1.10564	1.07314	1.07314	0.010	2.93988	50.00000	Averaged
73 2-Nitroaniline	0.63550	0.61142	0.61142	0.010	3.78865	50.00000	Averaged
74 1,2,3,4-Tetrachlorobenzene	0.55859	0.55625	0.55625	0.010	0.41878	50.00000	Averaged
76 Dimethylphthalate	1.31227	1.30159	1.30159	0.010	0.81352	50.00000	Averaged
78 2,6-Dinitrotoluene	0.28338	0.29408	0.29408	0.010	-3.77404	50.00000	Averaged
79 Acenaphthylene	1.84514	1.82268	1.82268	0.010	1.21702	50.00000	Averaged
80 1,2-Dinitrobenzene	0.14234	0.14531	0.14531	0.010	-2.08911	50.00000	Averaged
81 3-Nitroaniline	0.27436	0.29704	0.29704	0.010	-8.26523	50.00000	Averaged
82 Acenaphthene	1.19107	1.17558	1.17558	0.010	1.30008	20.00000	Averaged
83 2,4-Dinitrophenol	10.00000	10.89860	0.23148	0.050	-8.98603	0.000e+000	Quadratic
85 4-Nitrophenol	0.32703	0.31539	0.31539	0.050	3.55754	50.00000	Averaged
86 Dibenzofuran	1.63519	1.60030	1.60030	0.010	2.13415	50.00000	Averaged
87 2,4-Dinitrotoluene	0.37710	0.40097	0.40097	0.010	-6.32874	50.00000	Averaged
91 2,3,5,6-Tetrachlorophenol	5.00000	4.89194	0.35056	0.010	2.16112	0.000e+000	Quadratic
93 Diethylphthalate	1.33397	1.31997	1.31997	0.010	1.04965	50.00000	Averaged
94 Fluorene	1.43060	1.42346	1.42346	0.010	0.49920	50.00000	Averaged
95 4-Chlorophenyl-phenylether	0.64428	0.63883	0.63883	0.010	0.84744	50.00000	Averaged
96 4-Nitroaniline	0.32965	0.32504	0.32504	0.010	1.39594	50.00000	Averaged
98 4,6-Dinitro-2-methylphenol	0.14024	0.15142	0.15142	0.010	-7.97405	50.00000	Averaged
99 N-Nitrosodiphenylamine	0.54788	0.56440	0.56440	0.010	-3.01585	20.00000	Averaged
100 1,2-Diphenylhydrazine	1.41421	1.32761	1.32761	0.010	6.12330	50.00000	Averaged
106 4-Bromophenyl-phenylether	0.20759	0.21708	0.21708	0.010	-4.57177	50.00000	Averaged
107 Hexachlorobenzene	0.21110	0.20953	0.20953	0.010	0.74157	50.00000	Averaged
212 Atrazine	0.23416	0.23713	0.23713	0.010	-1.27063	50.00000	Averaged
111 Pentachlorophenol	10.00000	8.05933	0.11983	0.010	19.40669	0.000e+000	Quadratic
115 Phenanthrene	1.21165	1.18512	1.18512	0.010	2.18990	50.00000	Averaged
116 Anthracene	1.20033	1.20576	1.20576	0.010	-0.45250	50.00000	Averaged
119 Carbazole	1.00953	1.01648	1.01648	0.010	-0.68820	50.00000	Averaged
120 Di-n-Butylphthalate	1.27538	1.27856	1.27856	0.010	-0.24927	50.00000	Averaged
123 Fluoranthene	1.23715	1.22686	1.22686	0.010	0.83168	20.00000	Averaged
124 Benzidine	5.00000	6.01689	0.66789	0.010	-20.33782	0.000e+000	Quadratic
125 Pyrene	1.26734	1.26736	1.26736	0.010	-0.00177	50.00000	Averaged
131 Butylbenzylphthalate	0.54730	0.56854	0.56854	0.010	-3.88067	50.00000	Averaged
133 3,3'-Dimethoxybenzidine	5.00000	5.55742	0.28425	0.010	-11.14832	0.000e+000	Quadratic
135 3,3'-Dichlorobenzidine	0.45266	0.48111	0.48111	0.010	-6.28463	50.00000	Averaged
136 Benzo(a)Anthracene	1.24301	1.24156	1.24156	0.010	0.11689	50.00000	Averaged
137 Chrysene	1.11183	1.12352	1.12352	0.010	-1.05113	50.00000	Averaged
138 4,4'-Methylene bis(o-chloro	0.22758	0.24792	0.24792	0.010	-8.93899	50.00000	Averaged
139 bis(2-ethylhexyl)Phthalate	0.77060	0.80177	0.80177	0.010	-4.04603	50.00000	Averaged
140 Di-n-octylphthalate	1.55491	1.58577	1.58577	0.010	-1.98472	20.00000	Averaged
141 Benzo(b)fluoranthene	1.43118	1.34203	1.34203	0.010	6.22894	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp9.i Injection Date: 20-MAR-2008 10:48
Lab File ID: 9SMH0320.D Init. Cal. Date(s): 17-MAR-2008 18-MAR-2008
Analysis Type: Init. Cal. Times: 11:08 12:31
Lab Sample ID: L6 Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
142 Benzo(k)fluoranthene	1.46121	1.46615	1.46615	0.010	-0.33845	50.00000	Averaged
146 Benzo(a)pyrene	1.30298	1.28822	1.28822	0.010	1.13302	20.00000	Averaged
149 Indeno(1,2,3-cd)pyrene	1.33766	1.38729	1.38729	0.010	-3.71047	50.00000	Averaged
150 Dibenz(a,h)anthracene	1.14218	1.17519	1.17519	0.010	-2.88992	50.00000	Averaged
151 Benzo(g,h,i)perylene	1.10845	1.13837	1.13837	0.010	-2.69897	50.00000	Averaged
198 1,4-Dioxane	0.67710	0.63454	0.63454	0.010	6.28534	50.00000	Averaged
$ 154 Nitrobenzene-d5	0.68432	0.63897	0.63897	0.010	6.62741	50.00000	Averaged
$ 155 2-Fluorobiphenyl	1.27922	1.26624	1.26624	0.010	1.01494	50.00000	Averaged
$ 156 Terphenyl-d14	0.84479	0.85656	0.85656	0.010	-1.39280	50.00000	Averaged
$ 157 Phenol-d5	2.23881	2.01819	2.01819	0.010	9.85448	50.00000	Averaged
$ 158 2-Fluorophenol	1.44148	1.34675	1.34675	0.010	6.57145	50.00000	Averaged
$ 159 2,4,6-Tribromophenol	0.15014	0.16395	0.16395	0.010	-9.20128	50.00000	Averaged
$ 186 2-Chlorophenol-d4	1.17478	1.16969	1.16969	0.010	0.43365	50.00000	Averaged
$ 187 1,2-Dichlorobenzene-d4	0.88836	0.83968	0.83968	0.010	5.47963	50.00000	Averaged
M 195 Cresols, total	3.07405	2.93533	2.93533	0.010	4.51269	50.00000	Averaged
101 Diphenylamine	0.54788	0.56440	0.56440	0.010	-3.01585	50.00000	Averaged



Data File: \\cansvr11\dd\chem\MSS\a4hp9,i\80320a,b\9SMH0320.D
Date : 20-MAR-2008 10:48
Client ID:
Sample Info: L6,80320a,b,8270p,1-827042d,sub,2

Instrument: a4hp9,i
Operator: 001574
Column diameter: 0.32

Column phase: db5.625

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\9SMH0320.D
Lab Smp Id: L6
Inj Date : 20-MAR-2008 10:48
Operator : 001574 Inst ID: a4hp9.i
Smp Info : L6,80320a.b,8270p,1-827042d.sub,2
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Meth Date : 20-Mar-2008 11:08 ulmanm Quant Type: ISTD
Cal Date : 18-MAR-2008 12:31 Cal File: 9THHH318.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV06

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 1 1,4-Dichlorobenzene-d4	152	3.846	3.846	(1.000)	104755	2.00000	
* 2 Naphthalene-d8	136	4.807	4.807	(1.000)	382651	2.00000	
* 3 Acenaphthene-d10	164	6.105	6.105	(1.000)	239536	2.00000	
* 4 Phenanthrene-d10	188	7.200	7.200	(1.000)	417645	2.00000	
* 5 Chrysene-d12	240	9.181	9.181	(1.000)	418554	2.00000	
* 6 Perylene-d12	264	10.640	10.640	(1.000)	338155	2.00000	
9 Pyridine	79	1.944	1.944	(0.506)	482408	5.00000	4.5325
10 N-Nitrosodimethylamine	74	1.918	1.918	(0.499)	300604	5.00000	4.4053
11 Ethyl methacrylate	69	2.190	2.190	(0.570)	486614	5.00000	4.5635
12 3-Chloropropionitrile	54	2.409	2.409	(0.626)	209574	5.00000	4.4116
13 Malononitrile	66	2.607	2.607	(0.678)	591800	5.00000	4.4553
209 Benzaldehyde	77	3.520	3.520	(0.915)	376700	5.00000	4.3548(Q)
21 Aniline	93	3.595	3.595	(0.935)	713493	5.00000	4.6503
22 Phenol	94	3.541	3.541	(0.921)	572797	5.00000	4.6014
23 bis(2-Chloroethyl)ether	93	3.621	3.621	(0.942)	415289	5.00000	4.1027
24 2-Chlorophenol	128	3.685	3.685	(0.958)	329661	5.00000	5.0036
26 1,3-Dichlorobenzene	146	3.803	3.803	(0.989)	344634	5.00000	4.7633
27 1,4-Dichlorobenzene	146	3.856	3.856	(1.003)	229112	5.00000	4.9948
28 1,2-Dichlorobenzene	146	3.974	3.974	(1.033)	336639	5.00000	4.8852
29 Benzyl Alcohol	108	3.931	3.931	(1.022)	271441	5.00000	4.7413
30 2-Methylphenol	108	4.001	4.001	(1.040)	376627	5.00000	4.7740
31 bis(2-Chloroisopropyl)ether	45	4.027	4.027	(1.047)	382517	5.00000	4.1829
37 Acetophenone	105	4.139	4.139	(1.076)	601464	5.00000	4.5559
32 N-Nitroso-di-n-propylamine	70	4.129	4.129	(1.074)	455911	5.00000	4.6111
192 4-Methylphenol	108	4.118	4.118	(1.071)	392099	5.00000	4.7748
34 Hexachloroethane	117	4.236	4.236	(1.101)	163601	5.00000	4.7874
35 Nitrobenzene	77	4.278	4.278	(0.890)	644676	5.00000	4.8168
41 Isophorone	82	4.449	4.449	(0.926)	1035652	5.00000	4.6765
42 2-Nitrophenol	139	4.513	4.513	(0.939)	185073	5.00000	5.0964
43 2,4-Dimethylphenol	107	4.519	4.519	(0.940)	528157	5.00000	5.0725
44 bis(2-Chloroethoxy)methane	93	4.588	4.588	(0.954)	506678	5.00000	4.7168
46 2,4-Toluenediamene	121	5.656	5.656	(1.177)	178632	5.00000	5.8111
47 1,3,5-Trichlorobenzene	180	4.519	4.519	(0.940)	307720	5.00000	5.2941

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
48	2,4-Dichlorophenol	162	4.690	4.690	(0.976)	290997	5.00000	5.0614
49	Benzoic Acid	122	4.593	4.593	(0.956)	345059	10.0000	7.2181
50	1,2,4-Trichlorobenzene	180	4.754	4.754	(0.989)	317613	5.00000	5.1417
51	Naphthalene	128	4.823	4.823	(1.003)	973241	5.00000	4.7683
52	4-Chloroaniline	127	4.850	4.850	(1.009)	385609	5.00000	4.8482
56	Hexachlorobutadiene	225	4.898	4.898	(1.019)	202362	5.00000	5.0257
210	Caprolactam	113	5.117	5.117	(1.064)	126846	5.00000	5.1712(Q)
57	1,2,3-Trichlorobenzene	180	4.925	4.925	(1.024)	283741	5.00000	5.1588
59	4-Chloro-3-Methylphenol	107	5.192	5.192	(1.080)	401748	5.00000	4.8684
62	2-Methylnaphthalene	142	5.330	5.330	(1.109)	595253	5.00000	4.9843
63	1-Methylnaphthalene	142	5.411	5.411	(1.126)	629247	5.00000	4.8704
64	Hexachlorocyclopentadiene	237	5.443	5.443	(0.892)	253075	5.00000	5.2768
66	2,4,6-Trichlorophenol	196	5.533	5.533	(0.906)	237612	5.00000	5.0114
67	2,4,5-Trichlorophenol	196	5.565	5.565	(0.912)	246247	5.00000	5.0430
211	1,1'-Biphenyl	154	5.667	5.667	(0.928)	889876	5.00000	4.8852(Q)
68	1,2,3,5-Tetrachlorobenzene	216	5.443	5.443	(0.892)	348439	5.00000	4.8434
70	2-Chloronaphthalene	162	5.699	5.699	(0.934)	642639	5.00000	4.8530
73	2-Nitroaniline	65	5.758	5.758	(0.943)	366142	5.00000	4.8106
74	1,2,3,4-Tetrachlorobenzene	216	5.667	5.667	(0.928)	333107	5.00000	4.9791
76	Dimethylphthalate	163	5.870	5.870	(0.962)	779444	5.00000	4.9593
78	2,6-Dinitrotoluene	165	5.929	5.929	(0.971)	176104	5.00000	5.1887
79	Acenaphthylene	152	6.009	6.009	(0.984)	1091495	5.00000	4.9391
80	1,2-Dinitrobenzene	168	5.977	5.977	(0.979)	87018	5.00000	5.1044
81	3-Nitroaniline	138	6.062	6.062	(0.993)	177879	5.00000	5.4133
82	Acenaphthene	153	6.132	6.132	(1.004)	703987	5.00000	4.9350
83	2,4-Dinitrophenol	184	6.137	6.137	(1.005)	277244	10.0000	10.899
85	4-Nitrophenol	109	6.164	6.164	(1.010)	188871	5.00000	4.8221
86	Dibenzofuran	168	6.254	6.254	(1.024)	958322	5.00000	4.8933
87	2,4-Dinitrotoluene	165	6.228	6.228	(1.020)	240114	5.00000	5.3164
91	2,3,5,6-Tetrachlorophenol	232	6.303	6.303	(1.032)	209928	5.00000	4.8919
93	Diethylphthalate	149	6.383	6.383	(1.045)	790449	5.00000	4.9475
94	Fluorene	166	6.506	6.506	(1.066)	852422	5.00000	4.9750
95	4-Chlorophenyl-phenylether	204	6.490	6.490	(1.063)	382554	5.00000	4.9576
96	4-Nitroaniline	138	6.511	6.511	(1.066)	194649	5.00000	4.9302
98	4,6-Dinitro-2-methylphenol	198	6.527	6.527	(0.907)	158101	5.00000	5.3987
99	N-Nitrosodiphenylamine	169	6.575	6.575	(0.913)	589298	5.00000	5.1508
100	1,2-Diphenylhydrazine	77	6.607	6.607	(0.918)	1386176	5.00000	4.6938
106	4-Bromophenyl-phenylether	248	6.847	6.847	(0.951)	226652	5.00000	5.2286
107	Hexachlorobenzene	284	6.911	6.911	(0.960)	218775	5.00000	4.9629
212	Atrazine	200	6.943	6.943	(0.964)	247594	5.00000	5.0635(Q)
111	Pentachlorophenol	266	7.050	7.050	(0.979)	250232	10.0000	8.0593
115	Phenanthrene	178	7.216	7.216	(1.002)	1237399	5.00000	4.8905
116	Anthracene	178	7.253	7.253	(1.007)	1258951	5.00000	5.0226
119	Carbazole	167	7.360	7.360	(1.022)	1061316	5.00000	5.0344
120	Di-n-Butylphthalate	149	7.563	7.563	(1.050)	1334956	5.00000	5.0125
123	Fluoranthene	202	8.092	8.092	(1.124)	1280980	5.00000	4.9584
124	Benzidine	184	8.167	8.167	(0.889)	698875	5.00000	6.0169
125	Pyrene	202	8.268	8.268	(0.901)	1326151	5.00000	5.0001
131	Butylbenzylphthalate	149	8.685	8.685	(0.946)	594907	5.00000	5.1940
133	3,3'-Dimethoxybenzidine	244	9.085	9.085	(0.990)	297436	5.00000	5.5574
135	3,3'-Dichlorobenzidine	252	9.128	9.128	(0.994)	503424	5.00000	5.3142
136	Benzo(a)Anthracene	228	9.171	9.171	(0.999)	1299148	5.00000	4.9942
137	Chrysene	228	9.203	9.203	(1.002)	1175631	5.00000	5.0526
138	4,4'-Methylene bis(o-chloroan	231	9.123	9.123	(0.994)	259423	5.00000	5.4469

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
139 bis(2-ethylhexyl)Phthalate	149	9.101	9.101	(0.991)	838964	5.00000	5.2023
140 Di-n-octylphthalate	149	9.651	9.651	(0.907)	1340589	5.00000	5.0992
141 Benzo(b)fluoranthene	252	10.186	10.186	(0.957)	1134537	5.00000	4.6886
142 Benzo(k)fluoranthene	252	10.212	10.212	(0.960)	1239467	5.00000	5.0169
146 Benzo(a)pyrene	252	10.575	10.575	(0.994)	1089044	5.00000	4.9433
149 Indeno(1,2,3-cd)pyrene	276	12.247	12.247	(1.151)	1172798	5.00000	5.1855
150 Dibenz(a,h)anthracene	278	12.263	12.263	(1.153)	993490	5.00000	5.1445
151 Benzo(g,h,i)perylene	276	12.744	12.744	(1.198)	962362	5.00000	5.1349
198 1,4-Dioxane	88	1.715	1.715	(0.446)	166178	5.00000	4.6857
$ 154 Nitrobenzene-d5	82	4.262	4.262	(0.887)	611253	5.00000	4.6686
$ 155 2-Fluorobiphenyl	172	5.592	5.592	(0.916)	758275	5.00000	4.9492
$ 156 Terphenyl-d14	244	8.343	8.343	(0.909)	896292	5.00000	5.0696
$ 157 Phenol-d5	99	3.531	3.531	(0.918)	528538	5.00000	4.5073
$ 158 2-Fluorophenol	112	2.842	2.842	(0.739)	352697	5.00000	4.6714
$ 159 2,4,6-Tribromophenol	330	6.682	6.682	(1.094)	98182	5.00000	5.4601
$ 186 2-Chlorophenol-d4	132	3.675	3.675	(0.956)	306326	5.00000	4.9783
$ 187 1,2-Dichlorobenzene-d4	152	3.963	3.963	(1.031)	219903	5.00000	4.7260
M 195 Cresols, total	100				768726	5.00000	9.5487
101 Diphenylamine	169	6.575	6.575	(0.913)	589298	5.00000	5.1508

QC Flag Legend

Q - Qualifier signal failed the ratio test.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

RAW QC DATA

2/19

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8DF0218.D

Date : 18-FEB-2008 12:04

Client ID:

Instrument: a4hp8.i

Sample Info: dftpp,80218a.b,dftpp288

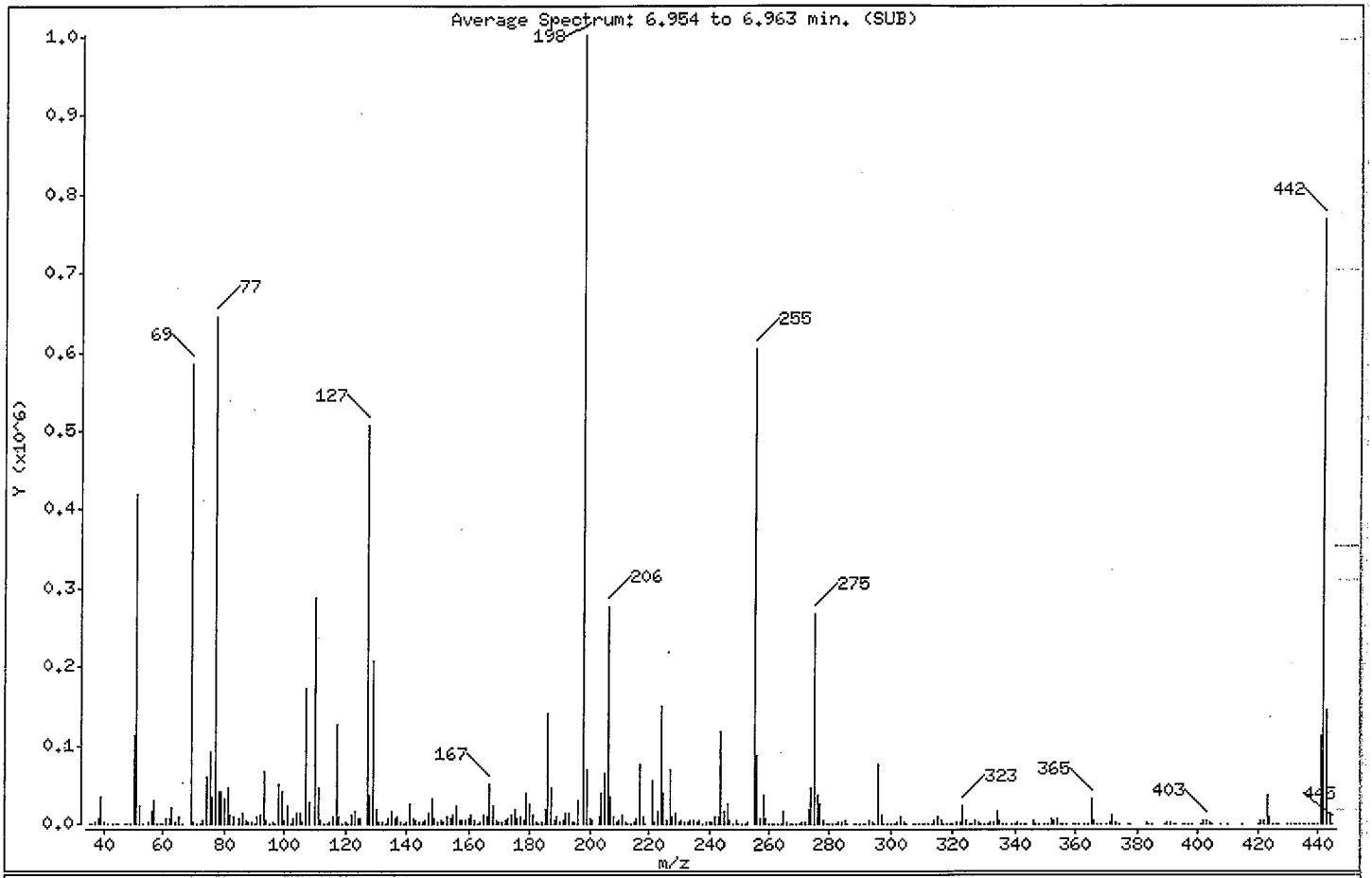
Volume Injected (uL): 1.0

Operator: 001710

Column phase:

Column diameter: 2.00

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	41.95
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	58.33
70	Less than 2.00% of mass 69	0.29 (0.49)
127	40.00 - 60.00% of mass 198	50.65
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.80
275	10.00 - 30.00% of mass 198	26.57
365	Greater than 1.00% of mass 198	3.11
441	Present, but less than mass 443	11.31
442	Greater than 40.00% of mass 198	76.62
443	17.00 - 23.00% of mass 442	14.37 (18.76)

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8DF0218.D

Date : 18-FEB-2008 12:04

Client ID:

Instrument: a4hp8.i

Sample Info: dftpp,80218a.b,dftpp288

Volume Injected (uL): 1.0

Operator: 001710

Column phase:

Column diameter: 2.00

Data File: 8DF0218.D
Spectrum: Average Spectrum: 6.954 to 6.963 min. (SUB)
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	336	135.00	16440	230.00	1952	325.00	421
36.00	477	136.00	6697	231.00	5492	326.00	473
37.00	1825	137.00	8692	232.00	1254	327.00	4522
38.00	6619	138.00	1483	233.00	1375	328.00	2482
39.00	34152	139.00	884	234.00	4039	329.00	644
40.00	1386	140.00	3340	235.00	4883	330.00	164
41.00	579	141.00	25672	236.00	3323	331.00	89
43.00	310	142.00	7798	237.00	5195	332.00	1693
44.00	931	143.00	5625	238.00	985	333.00	2211
45.00	889	144.00	1471	239.00	3051	334.00	15018
47.00	71	145.00	1326	240.00	2179	335.00	3660
48.00	159	146.00	4506	241.00	3443	336.00	697
49.00	425	147.00	13720	242.00	8325	337.00	105
50.00	111800	148.00	31176	243.00	8805	339.00	328
51.00	420352	149.00	6526	244.00	118280	340.00	497
52.00	22320	150.00	1570	245.00	15775	341.00	2677
53.00	732	151.00	3546	246.00	26264	342.00	907
55.00	1748	152.00	1590	247.00	4872	343.00	237
56.00	15788	153.00	8773	248.00	1025	344.00	55
57.00	30376	154.00	6175	249.00	4308	346.00	4934
58.00	1088	155.00	12436	250.00	786	347.00	1046
59.00	576	156.00	22680	251.00	1116	348.00	51
60.00	109	157.00	4216	252.00	1141	350.00	216
61.00	7091	158.00	5158	253.00	2695	351.00	599
62.00	7827	159.00	3917	255.00	603648	352.00	7145
63.00	21744	160.00	7885	256.00	87208	353.00	4067
64.00	3407	161.00	11652	257.00	6455	354.00	6605
65.00	10086	162.00	3596	258.00	35872	355.00	1141
66.00	928	163.00	900	259.00	6386	356.00	381
69.00	584448	164.00	1387	260.00	1145	357.00	131
70.00	2874	165.00	10891	261.00	928	359.00	769
71.00	251	166.00	8256	262.00	177	360.00	121
72.00	15	167.00	51704	263.00	355	361.00	52
73.00	5197	168.00	24120	264.00	999	363.00	254
74.00	60200	169.00	4557	265.00	15045	364.00	194

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218a.b\8DF0218.D

Date : 18-FEB-2008 12:04

Client ID:

Instrument: a4hp8.i

Sample Info: dftpp,80218a.b,dftpp288

Volume Injected (uL): 1.0

Operator: 001710

Column phase:

Column diameter: 2.00

Data File: 8DF0218.D
Spectrum: Average Spectrum: 6.954 to 6.963 min. (SUB)
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
75.00	92616	170.00	1575	266.00	2623	365.00	31152
76.00	34176	171.00	2231	267.00	126	366.00	4515
77.00	644032	172.00	4833	268.00	16	367.00	393
78.00	41880	173.00	5838	269.00	109	368.00	69
79.00	41400	174.00	10915	270.00	646	370.00	417
80.00	32184	175.00	19384	271.00	1333	371.00	1688
81.00	46584	176.00	6173	272.00	1547	372.00	11707
82.00	11255	177.00	10080	273.00	17480	373.00	2611
83.00	10023	178.00	3695	274.00	46536	374.00	135
85.00	7820	179.00	38176	275.00	266240	377.00	283
86.00	12732	180.00	26144	276.00	36080	378.00	105
87.00	5184	181.00	12005	277.00	24360	383.00	2930
88.00	1914	182.00	2486	278.00	4313	384.00	813
89.00	1193	183.00	1096	279.00	1007	385.00	254
90.00	176	184.00	2938	280.00	261	389.00	121
91.00	9494	185.00	19192	281.00	631	390.00	1533
92.00	11510	186.00	141120	282.00	431	391.00	1155
93.00	66528	187.00	45288	283.00	2886	392.00	663
94.00	4180	188.00	4969	284.00	1779	393.00	64
95.00	665	189.00	10257	285.00	4272	395.00	186
96.00	2660	190.00	1914	286.00	853	396.00	95
97.00	322	191.00	3879	288.00	286	397.00	108
98.00	51232	192.00	12692	289.00	967	398.00	73
99.00	40840	193.00	14761	290.00	1003	401.00	715
100.00	3871	194.00	2854	291.00	417	402.00	4241
101.00	22944	195.00	1574	292.00	730	403.00	5583
102.00	1017	196.00	29968	293.00	4562	404.00	1861
103.00	7870	198.00	1002048	294.00	1324	405.00	373
104.00	13938	199.00	68160	295.00	217	408.00	53
105.00	13262	200.00	5975	296.00	75800	410.00	145
106.00	3232	201.00	5181	297.00	10664	415.00	431
107.00	172224	203.00	8075	298.00	1021	420.00	207
108.00	26544	204.00	39152	299.00	226	421.00	5387
110.00	287616	205.00	65504	300.00	56	422.00	5121
111.00	45128	206.00	276864	301.00	1105	423.00	37824

Date : 18-FEB-2008 12:04

Client ID: Instrument: a4hp8.i

Sample Info: dftpp,80218a.b,dftpp288

Volume Injected (uL): 1.0 Operator: 001710

Column phase: Column diameter: 2.00

Data File: 8DF0218.D
Spectrum: Average Spectrum: 6.954 to 6.963 min. (SUB)
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	5491	207.00	35136	302.00	1593	424.00	8856
113.00	1127	208.00	9254	303.00	9127	425.00	795
114.00	540	209.00	3345	304.00	2403	426.00	134
115.00	1400	210.00	3640	305.00	476	427.00	54
116.00	9648	211.00	10477	307.00	187	430.00	74
117.00	127520	212.00	1475	308.00	1018	431.00	163
118.00	9371	213.00	843	309.00	802	432.00	52
119.00	868	214.00	423	310.00	1095	433.00	100
120.00	1844	215.00	3277	311.00	181	434.00	61
121.00	808	216.00	6254	312.00	273	435.00	164
122.00	10741	217.00	76064	313.00	483	436.00	116
123.00	16640	218.00	9795	314.00	3505	437.00	200
124.00	6646	219.00	1042	315.00	8871	438.00	74
125.00	6536	221.00	54320	316.00	4868	439.00	753
127.00	507520	222.00	1863	317.00	763	440.00	63
128.00	37416	223.00	16153	318.00	222	441.00	113296
129.00	206720	224.00	149440	319.00	343	442.00	767744
130.00	17432	225.00	39704	320.00	391	443.00	144000
131.00	3334	226.00	4003	321.00	2237	444.00	13540
132.00	1834	227.00	68960	322.00	1409	445.00	714
133.00	591	228.00	9600	323.00	22472		
134.00	6198	229.00	13543	324.00	3887		

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218t.b\8DF0218T.D

Date : 18-FEB-2008 12:04

Client ID:

Instrument: a4hp8.i

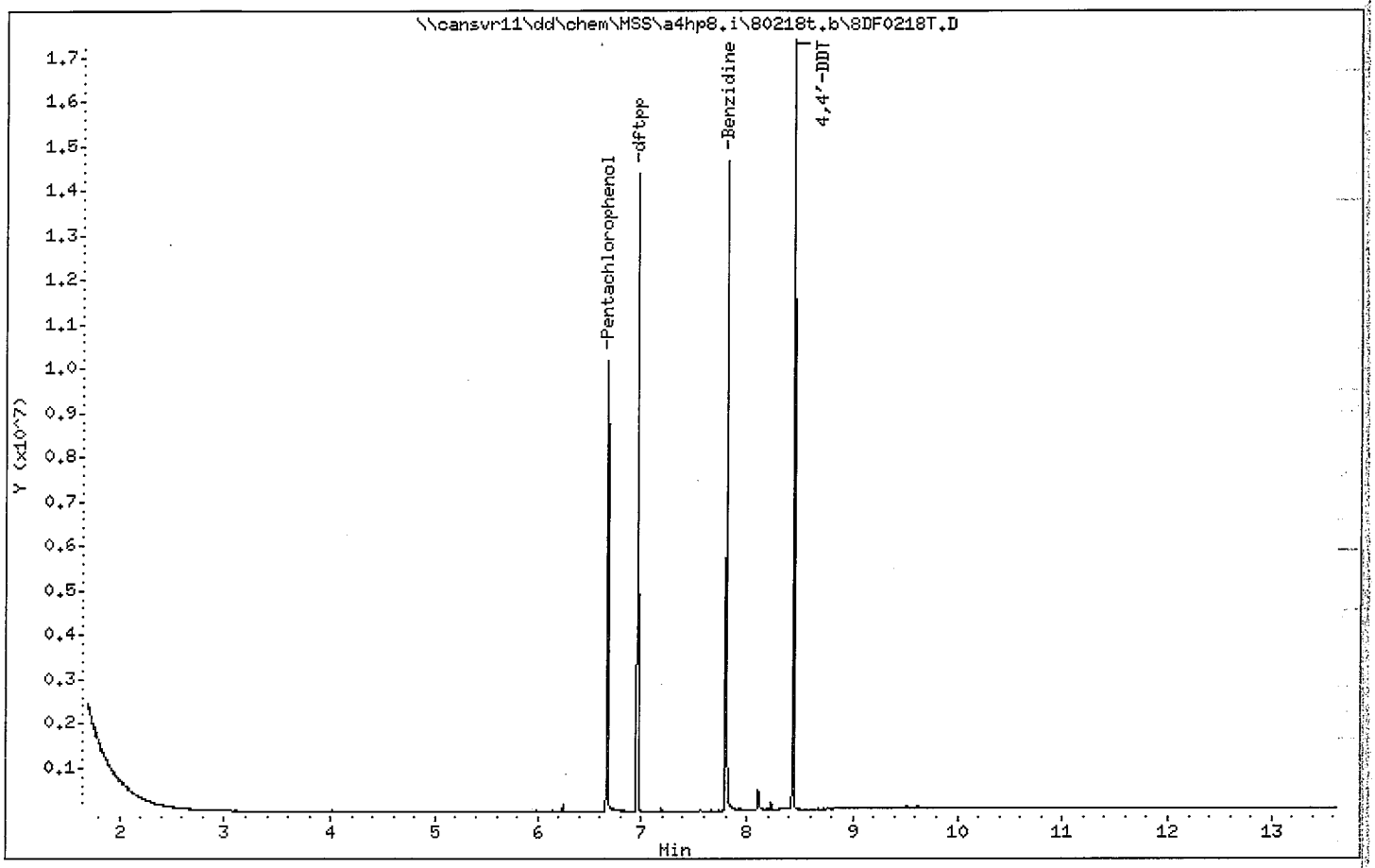
Sample Info: dftpp,80218a.b,dftpp288

Volume Injected (uL): 1.0

Operator: 001710

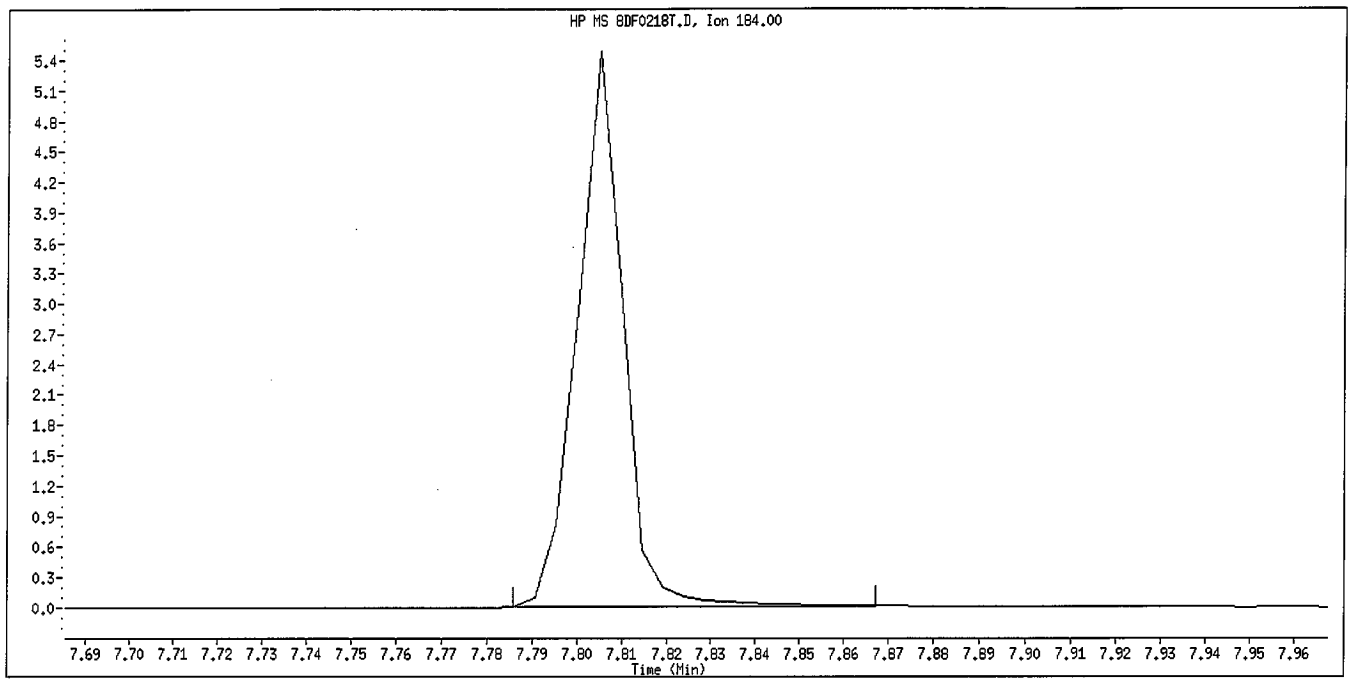
Column phase:

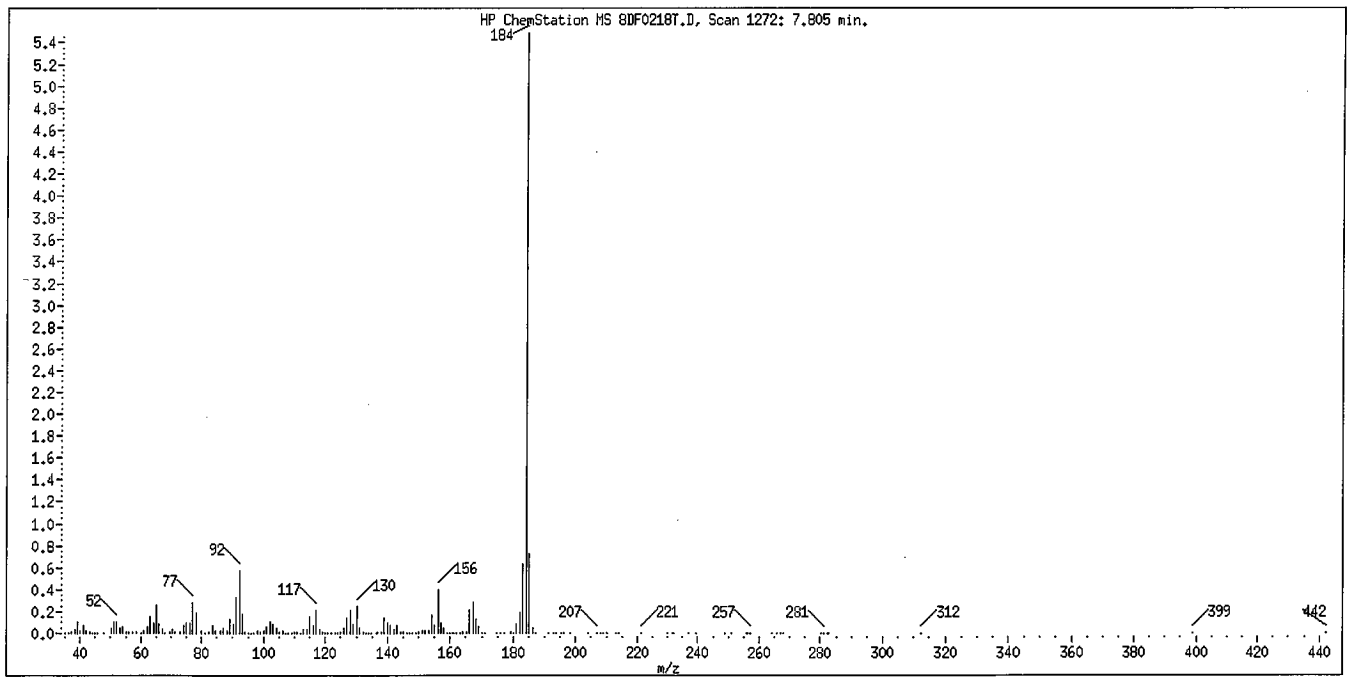
Column diameter: 2.00



Data File: 8DF0218T.D
Inj Date: 18-FEB-2008 12:04
Instrument ID: a4hp8.i
Compound Name: Benzidine
Operator Name: 001710
Report Date: 02/18/2008

TAILING FACTOR

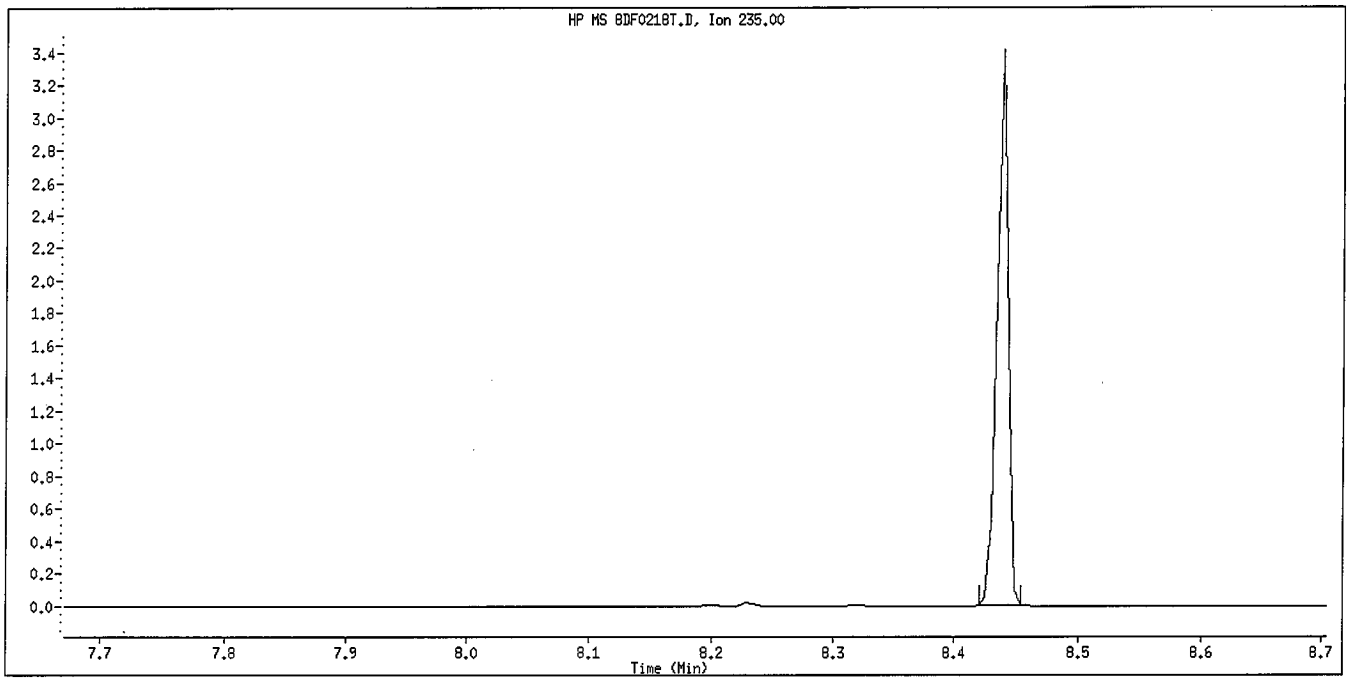




Tailing Factor = 0.858 Good
Acceptance Criteria 0 - 3
Tailing Factor = (T3 - T2) / (T2 - T1)
T1 = 7.793366 T2 = 7.804767 T3 = 7.814554

Data File: 8DF0218T.D
Inj Date: 18-FEB-2008 12:04
Instrument ID: a4hp8.i
Compound Name: 4,4'-DDT
Operator Name: 001710
Report Date: 02/18/2008

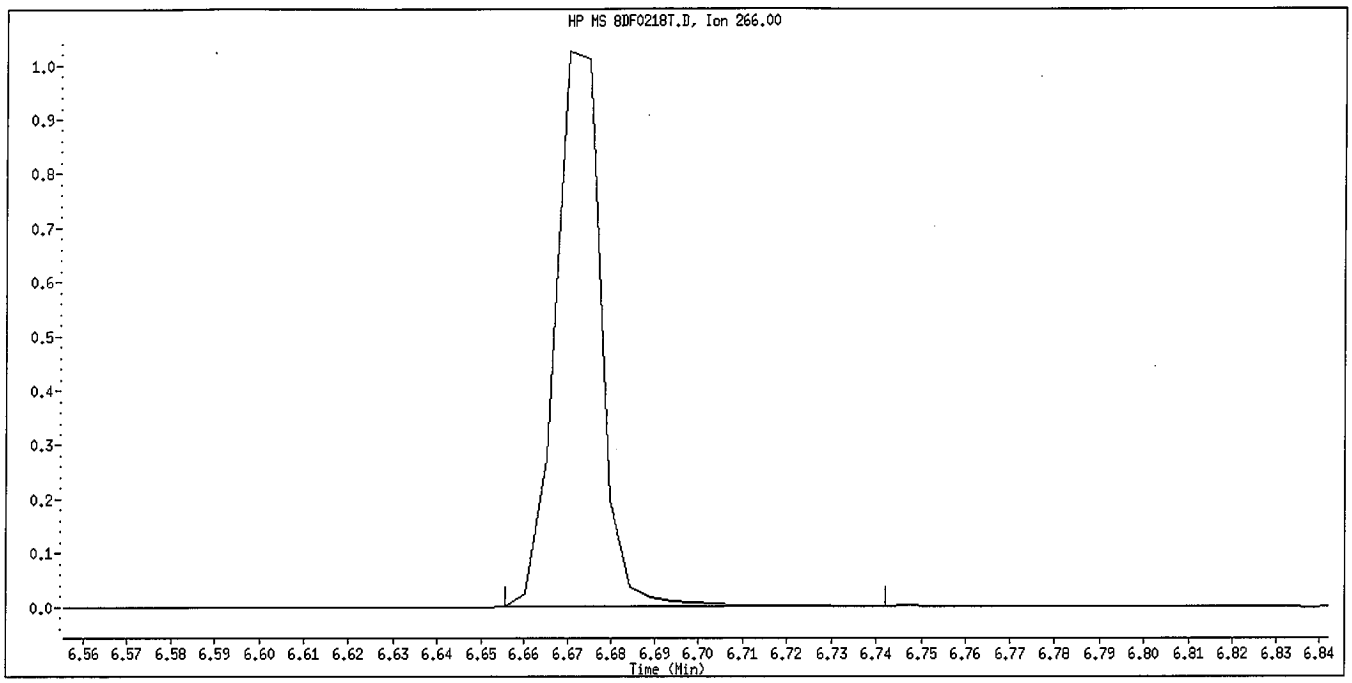
DEGRADATION REPORT

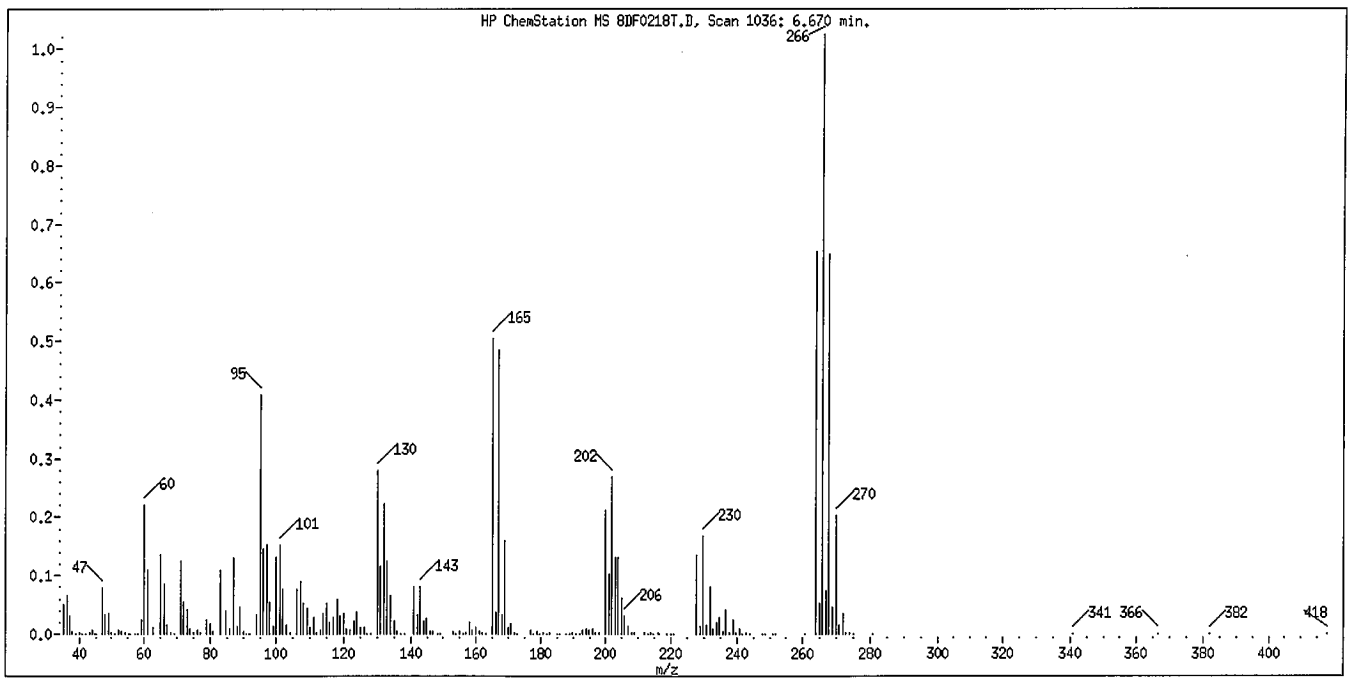


Degradation = 0% Good
Acceptance Criteria 0 - 20 %
DDT Area = 2179998
DDE Area = 0
DDD Area = 0

Data File: 8DF0218T.D
Inj Date: 18-FEB-2008 12:04
Instrument ID: a4hp8.i
Compound Name: Pentachlorophenol
Operator Name: 001710
Report Date: 02/18/2008

TAILING FACTOR





Tailing Factor = 1.53 Good
Acceptance Criteria 0 - 5
Tailing Factor = (T3 - T2) / (T2 - T1)
T1 = 6.66179 T2 = 6.6699 T3 = 6.682339

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80319a.b\8DF0319.D

Date : 19-MAR-2008 11:07

Client ID:

Instrument: a4hp8.i

Sample Info: dftpp,80319a.b,dftpp288

Volume Injected (uL): 1.0

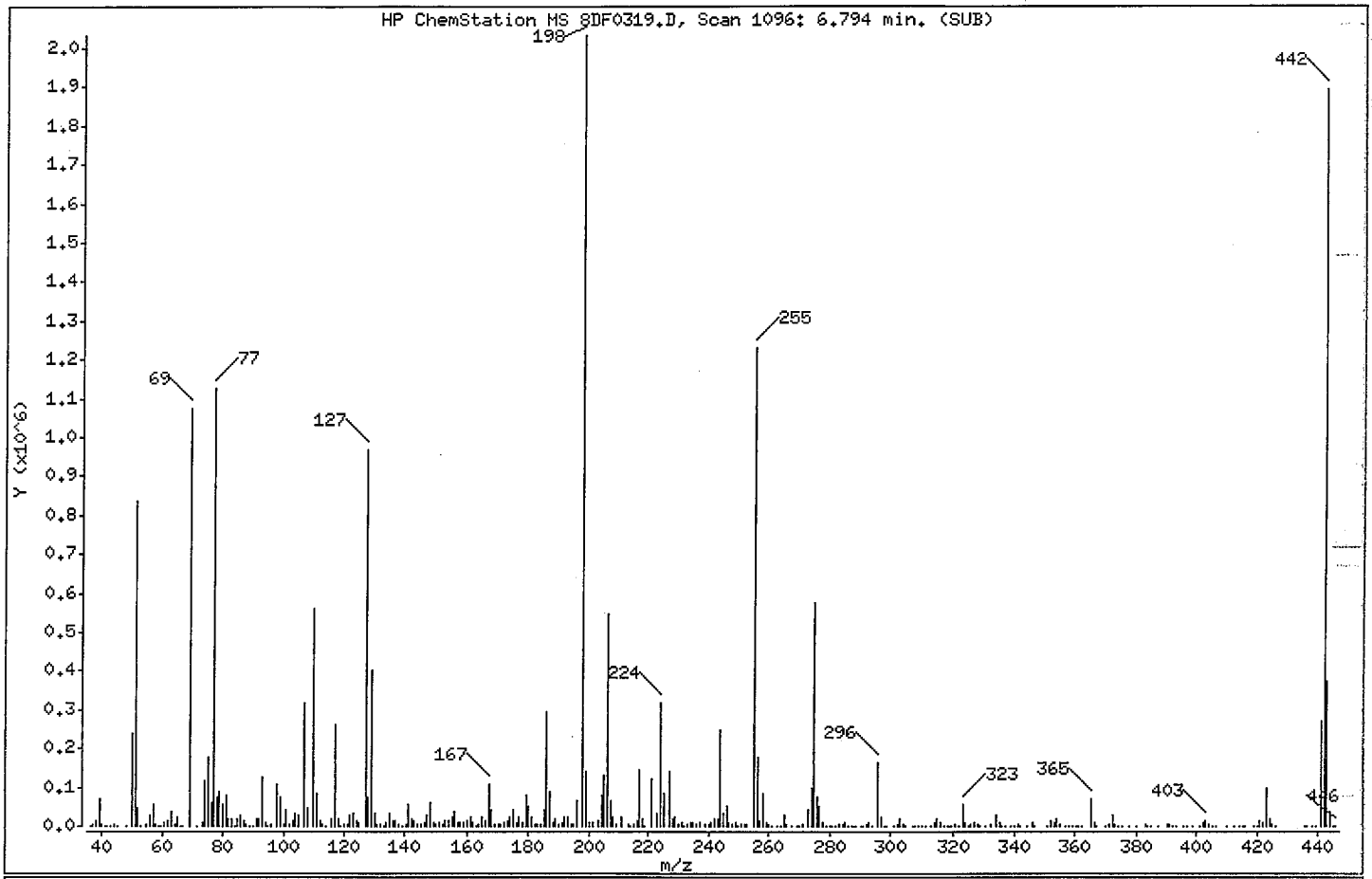
Operator: 001710

Column phase:

Column diameter: 2.00

OKmu 3/21/08

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	41.17
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	52.96
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	47.58
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 30.00% of mass 198	28.26
365	Greater than 1.00% of mass 198	3.43
441	Present, but less than mass 443	13.34
442	Greater than 40.00% of mass 198	93.17
443	17.00 - 23.00% of mass 442	18.28 (19.62)

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80319a.b\8DF0319.D

Date : 19-MAR-2008 11:07

Client ID:

Instrument: a4hp8.i

Sample Info: dftpp,80319a.b,dftpp288

Volume Injected (uL): 1.0

Operator: 001710

Column phase:

Column diameter: 2.00

Data File: 8DF0319.D
Spectrum: HP ChemStation MS 8DF0319.D, Scan 1096: 6.794 min. (SUB)
Location of Maximum: 197.90
Number of points: 343

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	591	134.00	11611	227.00	141312	321.90	2024
37.10	4955	135.00	32504	228.00	16608	323.00	57960
38.10	14420	136.00	14627	229.00	24960	324.00	8359
39.10	70696	137.00	14630	230.00	4585	325.00	800
40.10	3473	138.10	4626	231.00	10351	325.80	2490
41.10	969	139.30	2239	231.90	1424	326.90	7227
41.90	551	140.10	6102	233.00	2762	327.90	6496
43.00	506	141.00	56720	233.90	7203	328.90	1191
44.00	2778	142.00	17064	234.90	9298	330.70	196
45.00	1585	143.00	12022	235.90	5038	332.00	4689
48.00	946	144.00	3470	237.00	10728	334.00	28768
50.10	238336	145.00	3159	239.00	5454	335.00	7055
51.10	836544	146.00	10009	240.20	3135	336.00	699
52.10	44856	147.00	25936	241.00	8423	337.00	272
53.10	2212	148.00	62784	242.00	17176	338.90	743
55.10	3476	149.10	8532	243.10	16424	339.90	702
56.00	28584	150.00	2618	244.00	248640	341.00	6752
57.00	56136	151.10	7947	245.00	30912	341.90	1794
58.00	3559	152.00	3566	246.00	50512	343.90	301
59.10	743	153.00	13803	247.00	7418	346.00	11336
59.90	233	153.90	13581	248.00	2713	346.80	1714
61.00	10733	155.10	24768	248.90	10539	350.50	1149
62.10	15168	156.00	39528	249.90	1901	351.00	573
63.10	38352	157.00	9005	251.00	2360	352.00	15400
64.10	5397	157.90	10499	252.00	2940	353.00	9536
65.10	22760	159.00	10738	253.00	6188	354.00	16968
66.00	1707	160.00	15204	255.00	1226752	354.90	2505
67.00	2314	161.00	22472	256.00	177920	356.50	740
69.00	1076224	161.90	7795	257.00	12496	357.00	251
71.50	2017	163.00	2178	258.00	84792	358.00	248
73.10	9825	163.90	2815	259.00	10266	359.10	1040
74.00	116696	165.00	23024	259.90	2443	360.20	1390
75.00	175424	166.00	15273	261.00	1275	360.90	239
76.10	61464	167.00	105928	263.00	772	362.40	232
77.10	1124864	168.00	42944	264.00	1321	365.00	69720

Date : 19-MAR-2008 11:07

Client ID: Instrument: a4hp8.i

Sample Info: dftpp,80319a.b,dftpp288

Volume Injected (uL): 1.0 Operator: 001710

Column phase: Column diameter: 2.00

Data File: 8DF0319.D
Spectrum: HP ChemStation MS 8DF0319.D, Scan 1096: 6.794 min. (SUB)
Location of Maximum: 197.90
Number of points: 343

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.10	73376	169.00	6286	265.00	28024	366.00	8944
79.00	86520	170.10	3312	265.90	4405	366.90	1240
80.00	57032	171.00	4173	267.60	924	369.70	1337
81.00	78096	172.00	8448	269.20	307	371.00	2850
82.00	18688	173.00	14722	270.00	750	372.00	26584
83.00	18352	174.00	25648	271.00	3543	373.00	5478
83.90	1352	175.00	41736	272.90	42112	374.10	990
85.00	20264	176.10	10910	274.00	99952	375.10	204
86.00	27480	177.00	22536	275.00	574336	377.60	587
87.10	12126	177.90	8281	276.00	73144	380.10	194
88.00	4451	178.90	80232	276.90	52000	382.90	5547
89.00	1322	180.00	49432	277.90	8399	383.90	1767
89.90	537	181.00	22272	278.90	1477	384.90	500
91.00	19056	182.20	2503	280.20	756	387.10	306
92.00	19872	182.80	2347	280.90	937	390.00	5396
93.00	125752	184.00	6949	282.00	1010	390.90	2921
94.00	9732	185.00	39888	283.10	4771	392.10	1079
95.10	994	186.00	294656	284.10	5304	392.90	202
96.00	4268	187.00	89320	285.00	7266	395.80	437
98.00	107104	188.00	8179	286.00	903	396.90	551
99.00	72720	189.00	19904	287.20	988	398.60	156
100.10	5383	190.00	3474	287.80	280	400.90	1400
101.00	42112	191.10	8988	288.80	1354	402.00	10330
102.00	2966	192.00	23504	290.20	1835	403.00	14115
103.00	15061	193.00	23528	290.90	1005	403.90	4625
104.00	32800	193.90	6571	291.90	2468	405.00	295
105.00	27024	195.00	3111	293.00	10459	406.20	321
107.00	319616	196.00	63704	293.90	1750	410.00	299
108.00	47896	197.90	2032128	295.90	161856	412.10	368
110.00	559680	198.90	138880	297.00	24752	414.30	162
111.00	81960	199.90	10799	298.00	1742	415.10	1108
112.00	12084	201.50	9218	299.00	1100	415.80	225
112.90	3388	203.00	15295	301.00	2135	419.10	169
114.10	594	204.00	77800	302.10	3189	419.80	286
116.00	18728	205.00	132096	303.00	18040	420.90	13267

Date : 19-MAR-2008 11:07

Client ID: Instrument: a4hp8.i

Sample Info: dftpp,80319a.b,dftpp288

Volume Injected (uL): 1.0 Operator: 001710

Column phase: Column diameter: 2.00

Data File: 8DF0319.D
Spectrum: HP ChemStation MS 8DF0319.D, Scan 1096: 6.794 min. (SUB)
Location of Maximum: 197.90
Number of points: 343

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	263424	206.00	545088	304.10	5721	422.00	9926
118.00	18760	207.00	64984	305.00	933	423.00	97472
119.00	967	208.00	21256	307.00	661	424.00	19616
120.10	3273	209.00	6316	307.90	2135	425.00	3095
121.00	2396	211.00	23768	308.90	896	426.10	192
122.00	26384	213.10	2461	310.00	2271	435.40	263
123.00	34528	213.90	877	311.10	640	436.50	341
124.00	13513	214.90	6159	312.90	1707	437.90	449
125.00	11166	216.00	14314	314.00	8164	439.00	858
127.00	966848	216.90	143424	315.00	19056	441.00	271168
128.00	75992	217.90	18768	316.00	10529	442.00	1893376
129.00	403136	218.80	986	317.20	1138	443.00	371520
130.00	34448	221.00	119288	318.30	175	444.00	38864
131.00	5134	222.90	31136	318.90	433	445.10	1841
132.10	3459	224.00	319744	319.90	1577	446.00	248
133.20	1514	225.00	86344	321.00	5022		

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80218t.b\8DF0319T.D

Date : 19-MAR-2008 11:07

Client ID:

Instrument: a4hp8.i

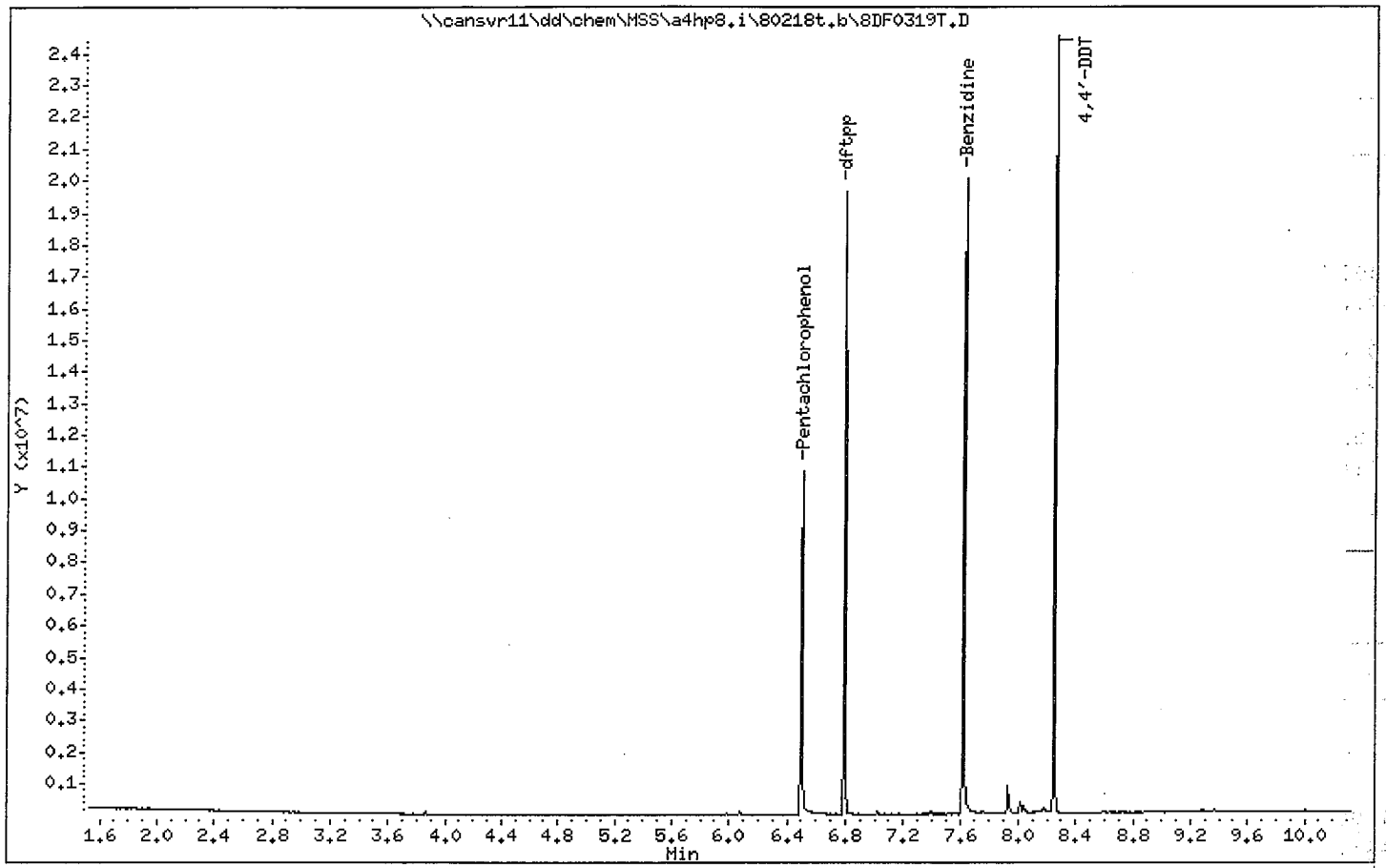
Sample Info: dftpp,80319a.b,dftpp288

Volume Injected (uL): 1.0

Operator: 001710

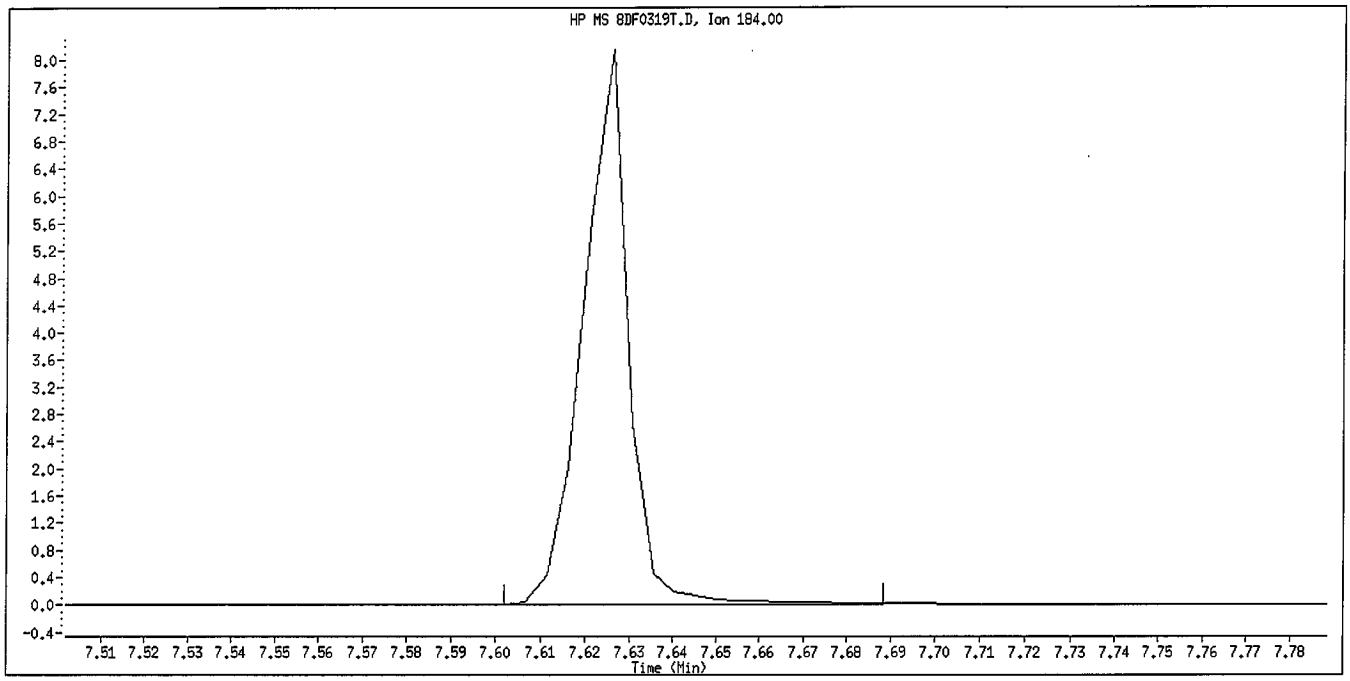
Column phase:

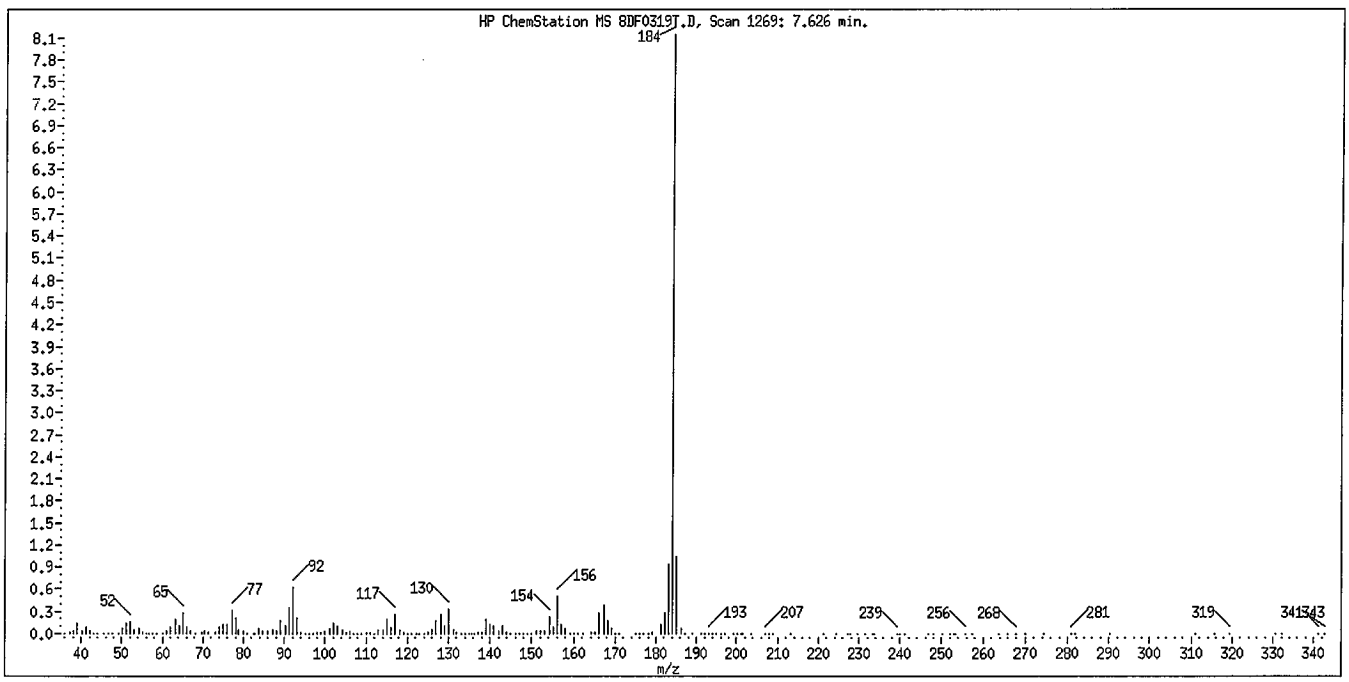
Column diameter: 2.00



Data File: 8DF0319T.D
Inj Date: 19-MAR-2008 11:07
Instrument ID: a4hp8.i
Compound Name: Benzidine
Operator Name: 001710
Report Date: 03/19/2008

TAILING FACTOR

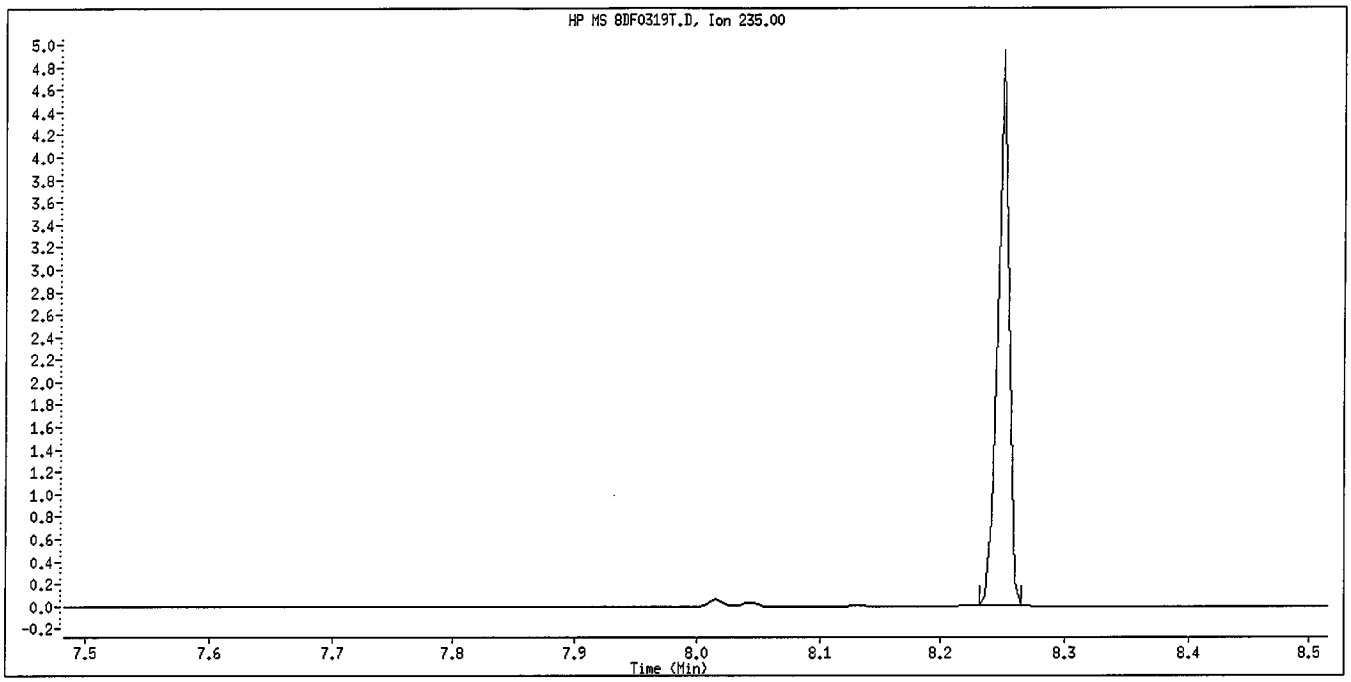




Tailing Factor = 0.666 Good
Acceptance Criteria 0 - 3
Tailing Factor = (T3 - T2) / (T2 - T1)
T1 = 7.612661 T2 = 7.625917 T3 = 7.634744

Data File: 8DF0319T.D
Inj Date: 19-MAR-2008 11:07
Instrument ID: a4hp8.i
Compound Name: 4,4'-DDT
Operator Name: 001710
Report Date: 03/19/2008

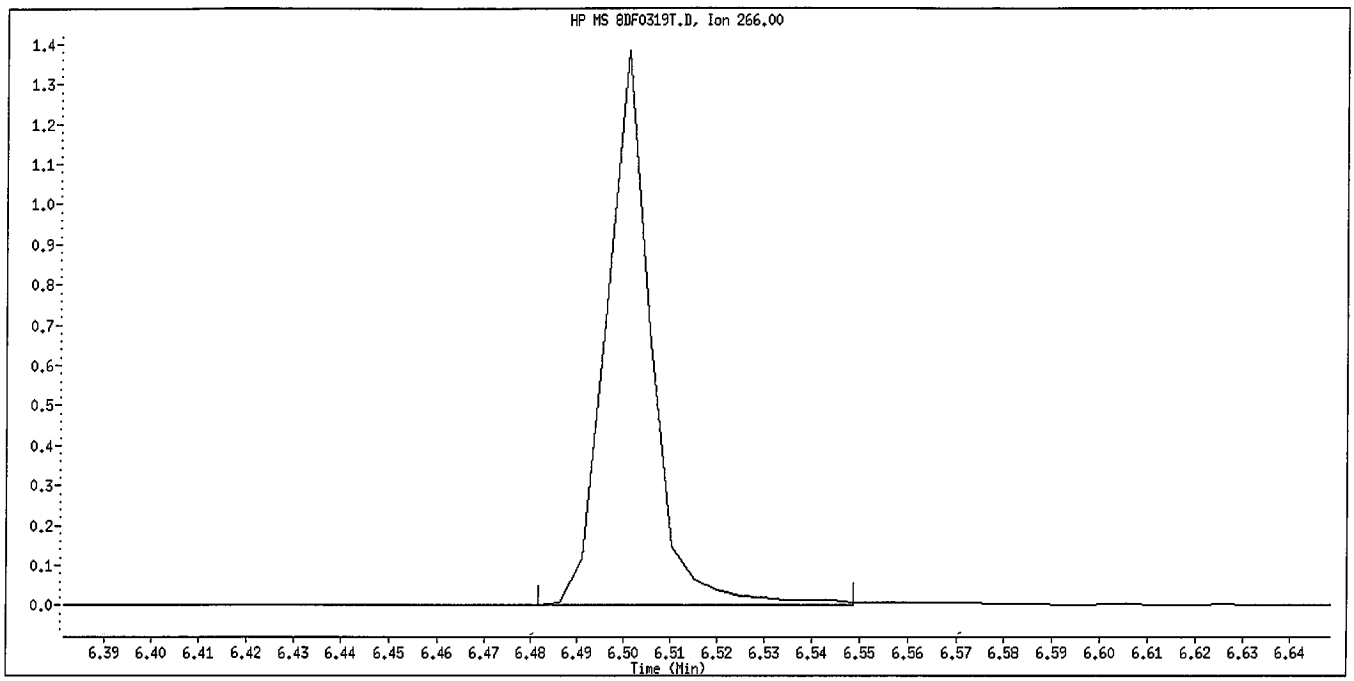
DEGRADATION REPORT

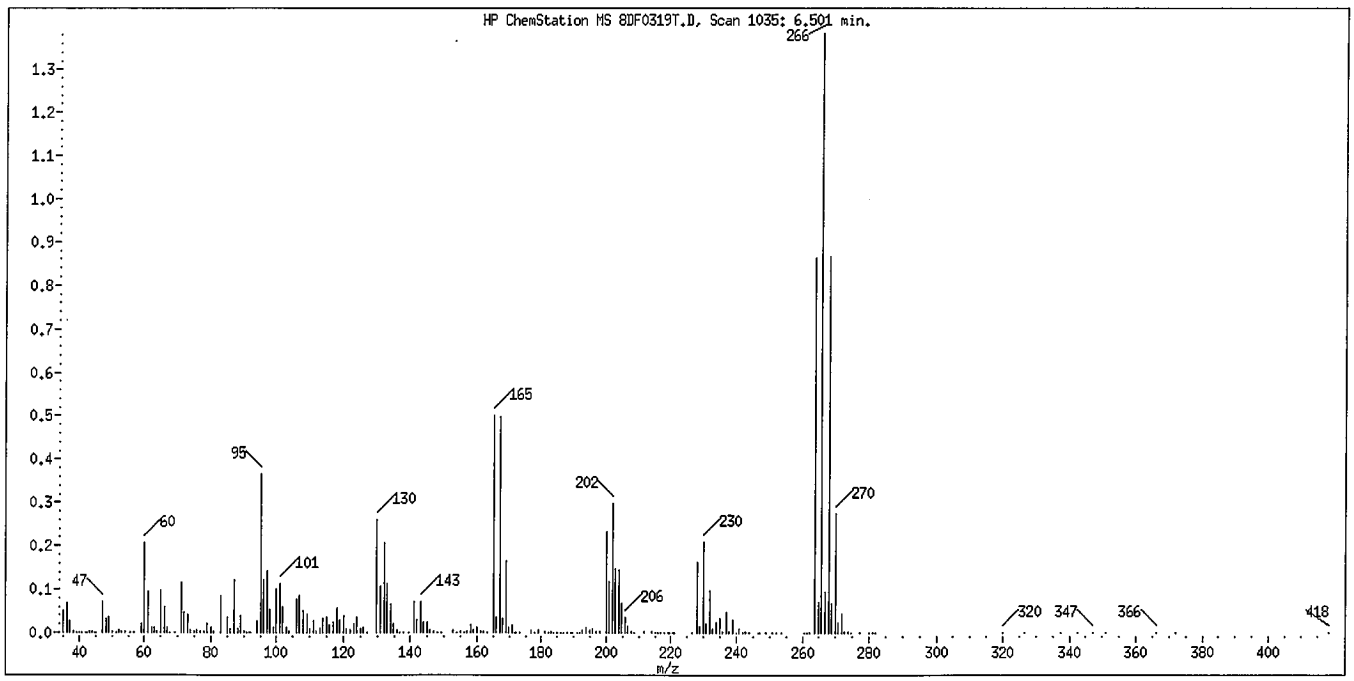


Degradation = 0% Good
Acceptance Criteria 0 - 20 %
DDT Area = 3208454
DDE Area = 0
DDD Area = 0

Data File: 8DF0319T.D
Inj Date: 19-MAR-2008 11:07
Instrument ID: a4hp8.i
Compound Name: Pentachlorophenol
Operator Name: 001710
Report Date: 03/19/2008

TAILING FACTOR





Tailing Factor = 1.08 Good
Acceptance Criteria 0 - 5
Tailing Factor = (T3 - T2) / (T2 - T1)
T1 = 6.491223 T2 = 6.500667 T3 = 6.510867

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9DF0317A.D

Date : 17-MAR-2008 10:27

Client ID:

Instrument: a4hp9.i

Sample Info: dftpp,80317a.b,dftpp288

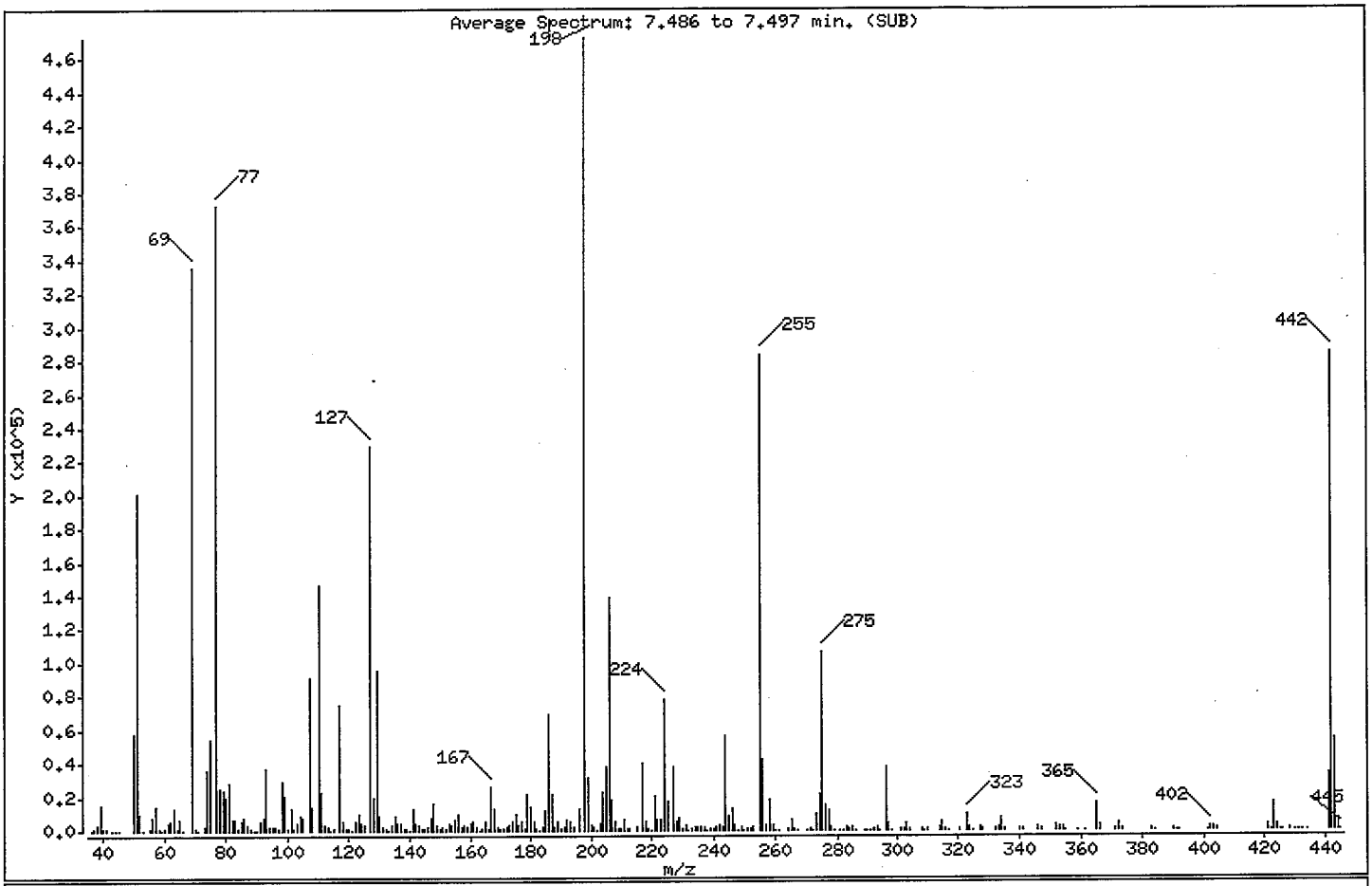
Volume Injected (uL): 1.0

Operator: 001710

Column phase:

Column diameter: 2.00

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.49
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	71.04
70	Less than 2.00% of mass 69	0.30 (0.42)
127	40.00 - 60.00% of mass 198	48.45
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.65
275	10.00 - 30.00% of mass 198	22.54
365	Greater than 1.00% of mass 198	3.47
441	Present, but less than mass 443	7.17
442	Greater than 40.00% of mass 198	60.21
443	17.00 - 23.00% of mass 442	11.42 (18.97)

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9DF0317A.D

Date : 17-MAR-2008 10:27

Client ID:

Instrument: a4hp9.i

Sample Info: dftpp,80317a.b,dftpp288

Volume Injected (uL): 1.0

Operator: 001710

Column phase:

Column diameter: 2.00

Data File: 9DF0317A.D
Spectrum: Average Spectrum: 7.486 to 7.497 min. (SUB)
Location of Maximum: 198.00
Number of points: 296

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	170	124.00	4057	202.00	200	286.00	326
37.00	666	125.00	3743	203.00	4170	289.00	373
38.00	2934	127.00	228800	204.00	22488	290.00	191
39.00	15173	128.00	19648	205.00	38128	291.00	303
40.00	1071	129.00	95440	206.00	138560	292.00	580
41.00	710	130.00	8338	207.00	18352	293.00	1874
43.00	179	131.00	1825	208.00	5671	294.00	473
44.00	49	132.00	863	209.00	1180	296.00	37704
45.00	442	133.00	377	210.00	699	297.00	4798
50.00	57824	134.00	3065	211.00	6978	298.00	501
51.00	200640	135.00	8528	212.00	834	301.00	544
52.00	10015	136.00	4002	213.00	771	302.00	973
53.00	299	137.00	3838	215.00	2152	303.00	4138
55.00	1374	138.00	839	217.00	39688	304.00	1211
56.00	7420	139.00	1046	218.00	5285	308.00	666
57.00	14642	140.00	184	219.00	885	309.00	175
58.00	669	141.00	12605	220.00	183	310.00	612
59.00	196	142.00	3814	221.00	20912	314.00	2553
60.00	651	143.00	3250	222.00	6129	315.00	4902
61.00	3849	144.00	765	223.00	5974	316.00	1599
62.00	5027	145.00	926	224.00	78528	317.00	242
63.00	12734	146.00	2358	225.00	17512	321.00	1328
64.00	811	147.00	7762	227.00	38040	323.00	10164
65.00	6117	148.00	16552	228.00	5451	324.00	2010
66.00	246	149.00	3500	229.00	7112	325.00	323
69.00	335424	150.00	1207	230.00	828	327.00	2290
70.00	1417	151.00	1892	231.00	3325	328.00	1553
71.00	346	152.00	1289	232.00	487	332.00	958
73.00	1775	153.00	4388	233.00	650	333.00	1865
74.00	36272	154.00	2975	234.00	1963	334.00	7698
75.00	53744	155.00	6994	235.00	2292	335.00	1414
77.00	372288	156.00	9772	236.00	1978	340.00	705
78.00	25400	157.00	2175	237.00	2703	341.00	893
79.00	24120	158.00	2762	238.00	224	346.00	2490
80.00	19000	159.00	2361	239.00	1485	347.00	600

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9DF0317A.D

Date : 17-MAR-2008 10:27

Client ID:

Instrument: a4hp9.i

Sample Info: dftpp,80317a.b,dftpp288

Volume Injected (uL): 1.0

Operator: 001710

Column phase:

Column diameter: 2.00

Data File: 9DF0317A.D
Spectrum: Average Spectrum: 7.486 to 7.497 min. (SUB)
Location of Maximum: 198.00
Number of points: 296

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	28040	160.00	4157	240.00	1271	352.00	2880
82.00	6231	161.00	5851	241.00	1699	353.00	2319
83.00	6826	162.00	2625	242.00	3734	354.00	2102
84.00	592	163.00	253	243.00	1858	355.00	482
85.00	4898	164.00	983	244.00	56112	359.00	180
86.00	7591	165.00	5270	245.00	8392	361.00	360
87.00	3147	166.00	544	246.00	13544	365.00	16381
88.00	888	167.00	26464	247.00	2746	366.00	2744
89.00	428	168.00	13361	248.00	475	371.00	664
90.00	201	169.00	2501	249.00	2008	372.00	4687
91.00	5889	170.00	1153	250.00	367	373.00	1406
92.00	7758	171.00	1623	251.00	920	383.00	1118
93.00	37400	172.00	2274	252.00	1147	384.00	186
94.00	2409	173.00	3729	253.00	1812	390.00	883
95.00	1696	174.00	5483	255.00	283520	391.00	482
96.00	1807	175.00	9805	256.00	42096	392.00	175
97.00	571	176.00	3162	257.00	3731	401.00	235
98.00	29232	177.00	5077	258.00	17952	402.00	2424
99.00	21120	178.00	655	259.00	2835	403.00	2161
100.00	1397	179.00	21256	260.00	491	404.00	859
101.00	12638	180.00	13813	261.00	309	421.00	2746
102.00	776	181.00	5861	264.00	1060	422.00	354
103.00	4210	182.00	1206	265.00	6743	423.00	15760
104.00	8354	183.00	500	266.00	1461	424.00	3459
105.00	7854	184.00	1884	267.00	237	425.00	257
107.00	91480	185.00	12407	270.00	282	426.00	175
108.00	13893	186.00	69032	271.00	696	428.00	598
110.00	147008	187.00	21840	272.00	179	430.00	414
111.00	22592	188.00	2467	273.00	9315	431.00	267
112.00	3195	189.00	5135	274.00	21888	432.00	434
113.00	2032	190.00	918	275.00	106440	434.00	186
114.00	319	191.00	2406	276.00	15159	441.00	33840
115.00	825	192.00	6880	277.00	11518	442.00	284288
117.00	75384	193.00	5801	278.00	1977	443.00	53944
118.00	5025	194.00	2034	279.00	228	444.00	4927

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317a.b\9DF0317A.D

Date : 17-MAR-2008 10:27

Client ID:

Instrument: a4hp9.i

Sample Info: dftpp,80317a.b,dftpp288

Volume Injected (uL): 1.0

Operator: 001710

Column phase:

Column diameter: 2.00

Data File: 9DF0317A.D
Spectrum: Average Spectrum: 7.486 to 7.497 min. (SUB)
Location of Maximum: 198.00
Number of points: 296

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	813	196.00	12847	281.00	182	445.00	383
120.00	1182	198.00	472256	282.00	238		
121.00	474	199.00	31408	283.00	1820		
122.00	5454	200.00	3219	284.00	1118		
123.00	10108	201.00	1838	285.00	2050		

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80317b.b\9DF0317T.D

Date : 17-MAR-2008 10:27

Client ID:

Instrument: a4hp9.i

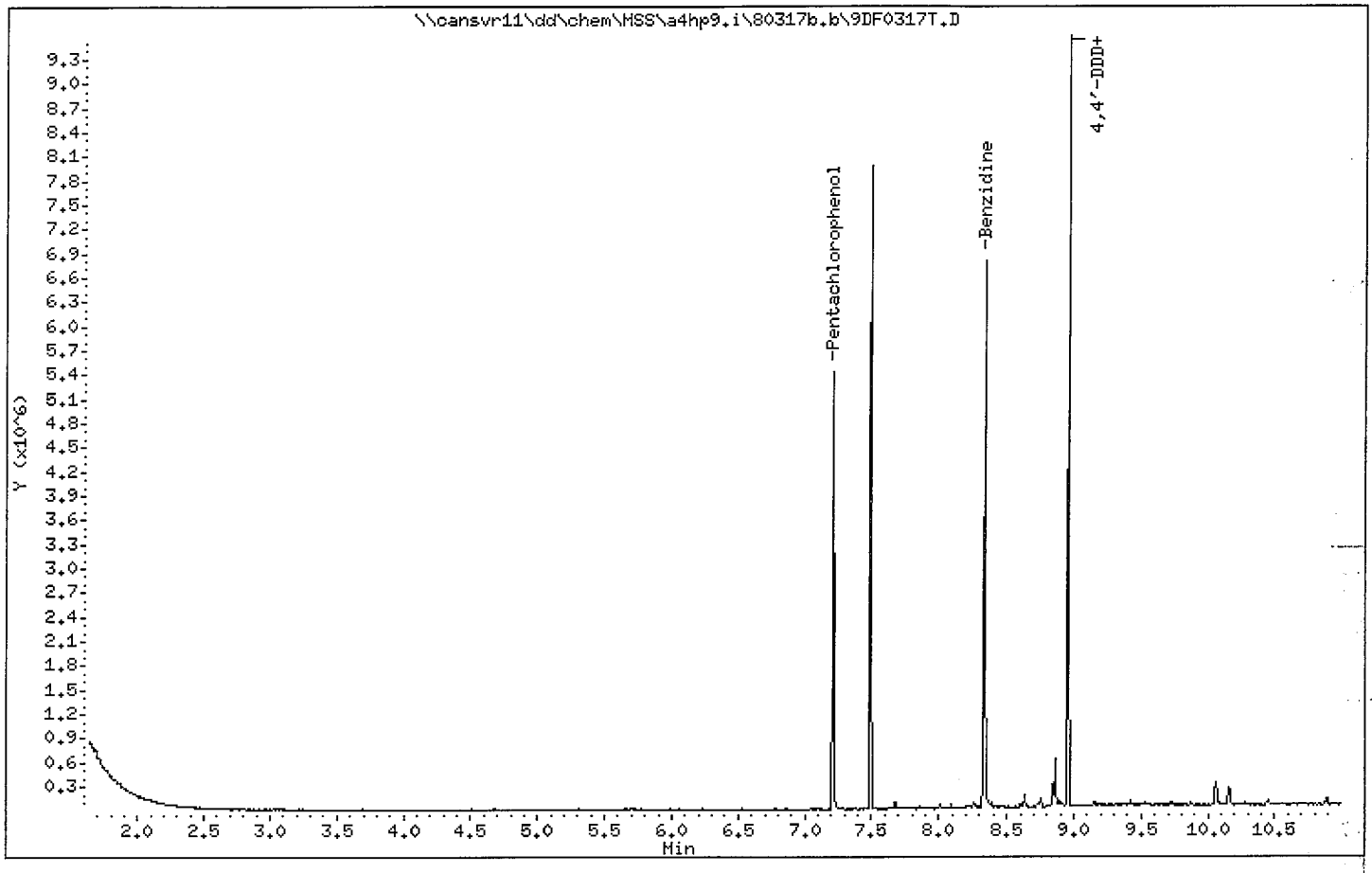
Sample Info: dftpp,80317a,b,dftpp288

Volume Injected (uL): 1.0

Operator: 001710

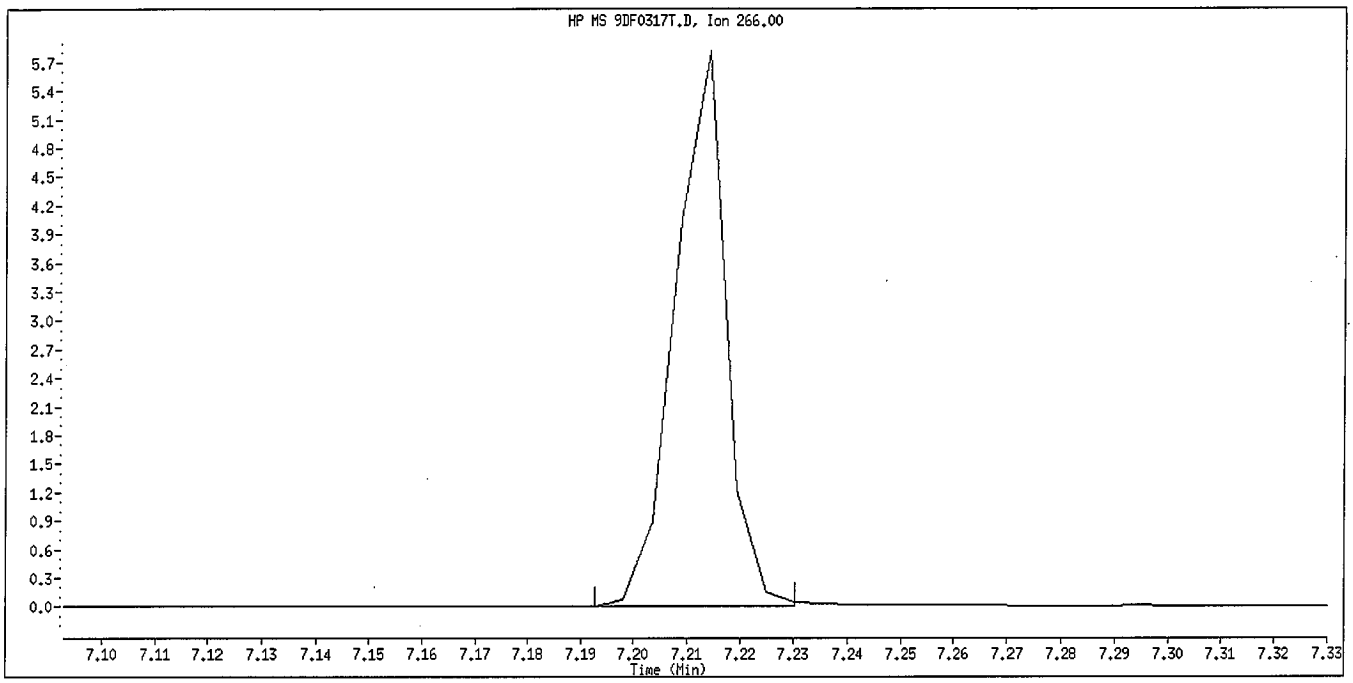
Column phase:

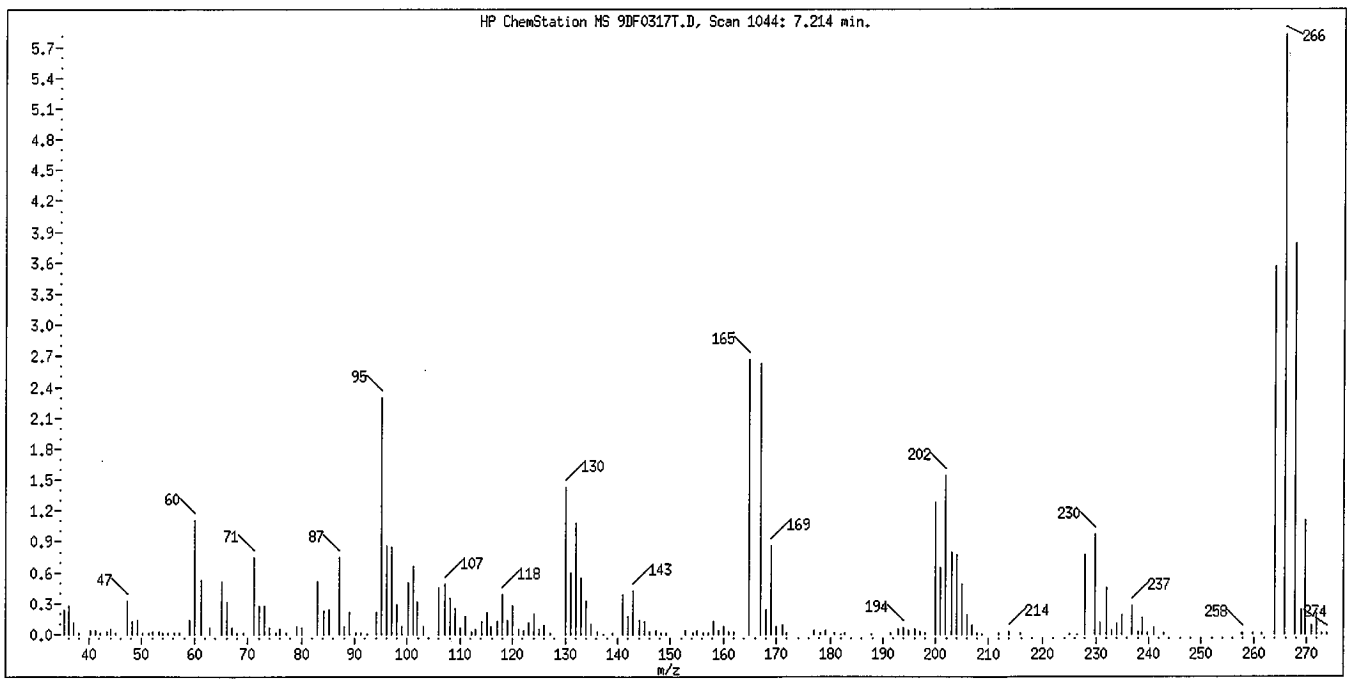
Column diameter: 2.00



Data File: 9DF0317T.D
Inj Date: 17-MAR-2008 10:27
Instrument ID: a4hp9.i
Compound Name: Pentachlorophenol
Operator Name: 001710
Report Date: 03/17/2008

TAILING FACTOR

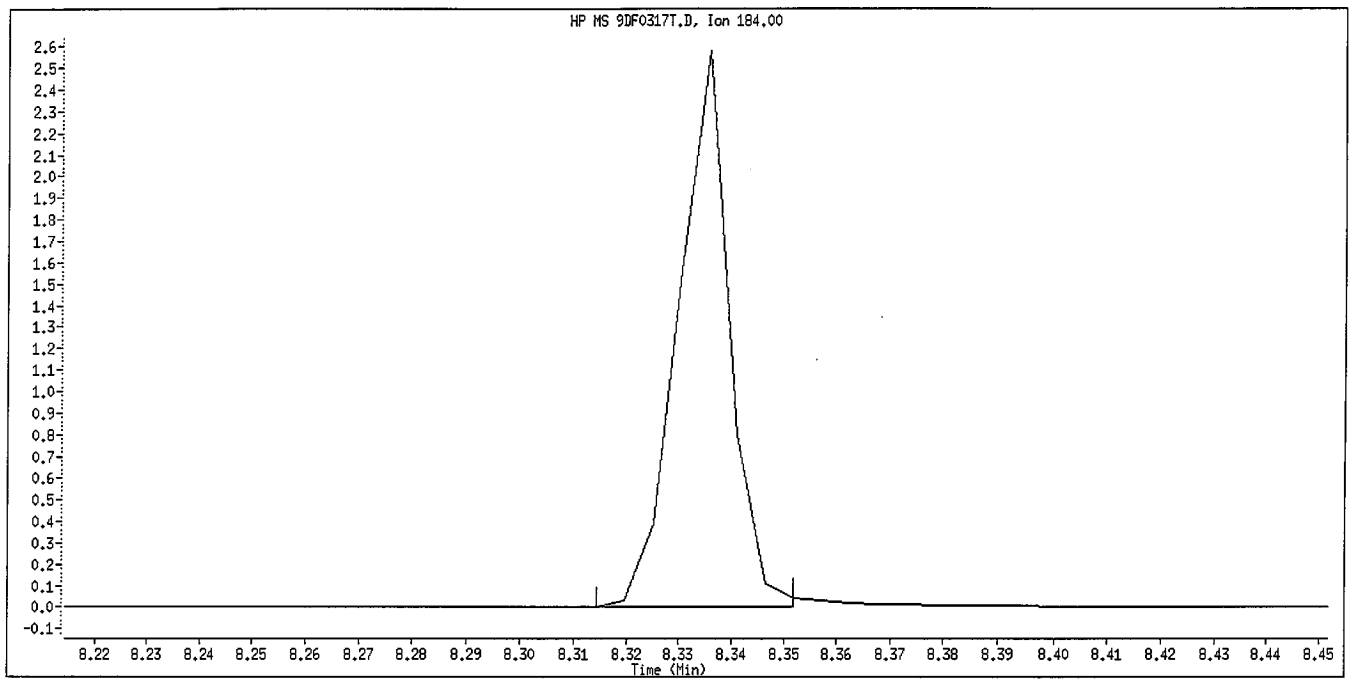


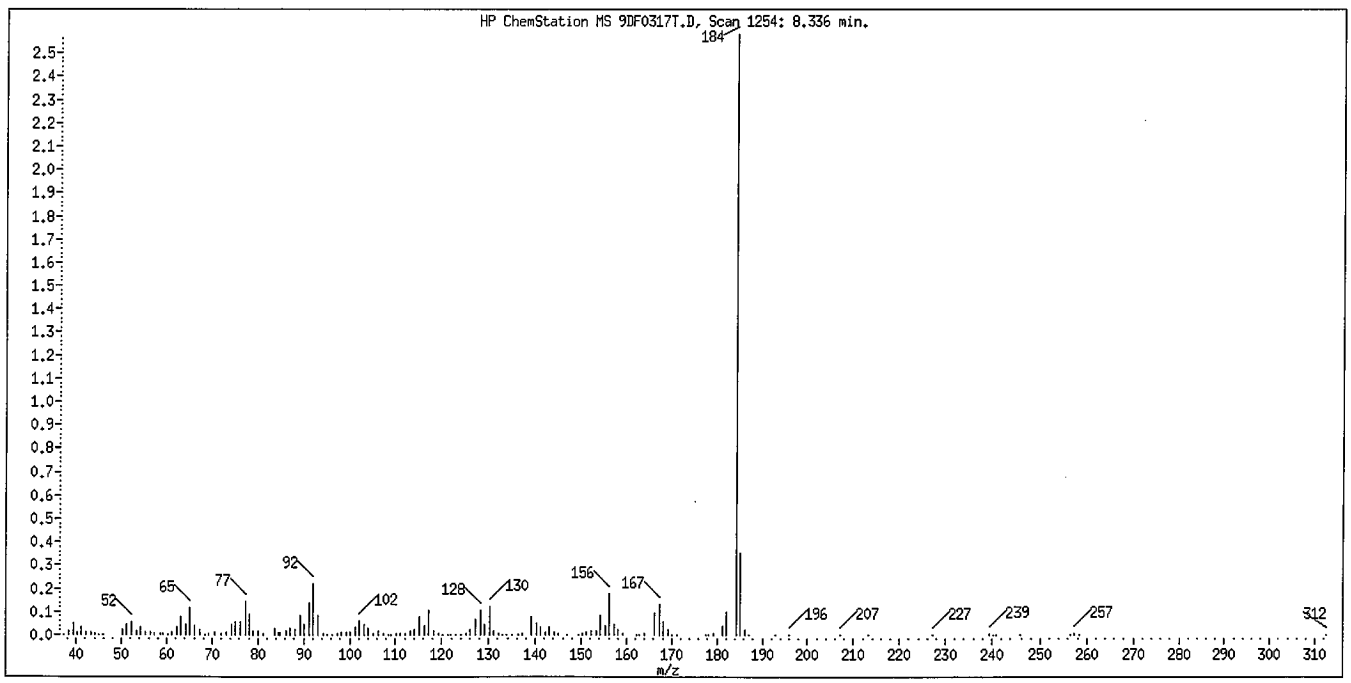


Tailing Factor = 0.675 Good
Acceptance Criteria 0 - 5
Tailing Factor = (T3 - T2) / (T2 - T1)
T1 = 7.201419 T2 = 7.214083 T3 = 7.222628

Data File: 9DF0317T.D
Inj Date: 17-MAR-2008 10:27
Instrument ID: a4hp9.i
Compound Name: Benzidine
Operator Name: 001710
Report Date: 03/17/2008

TAILING FACTOR

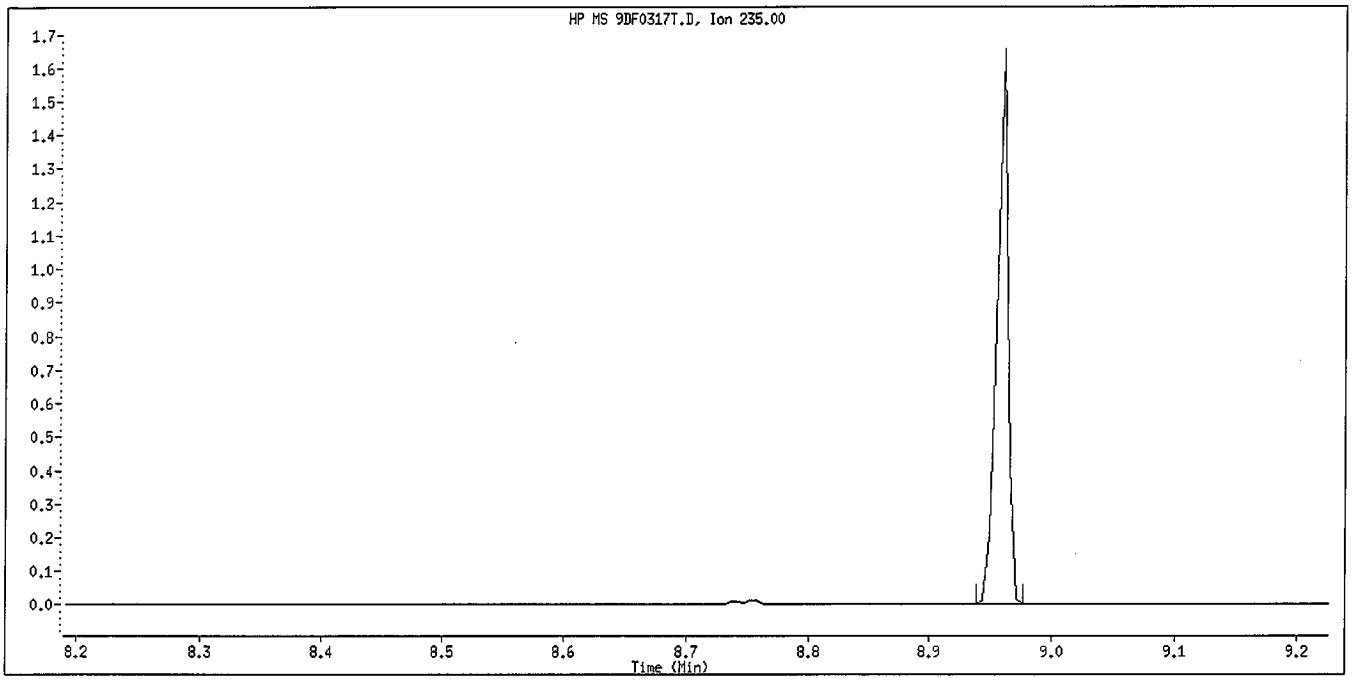




Tailing Factor = 0.754 Good
Acceptance Criteria 0 - 3
Tailing Factor = (T3 - T2) / (T2 - T1)
T1 = 8.323065 T2 = 8.335717 T3 = 8.34525

Data File: 9DF0317T.D
Inj Date: 17-MAR-2008 10:27
Instrument ID: a4hp9.i
Compound Name: 4,4'-DDT
Operator Name: 001710
Report Date: 03/17/2008

DEGRADATION REPORT



Degradation = 0.28% Good
Acceptance Criteria 0 - 20 %
DDT Area = 1051387
DDE Area = 0
DDD Area = 2955

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\9DF0320B.D

Date : 20-MAR-2008 10:11

Client ID:

Instrument: a4hp9.i

Sample Info: dftpp,80320a,b,dftpp288

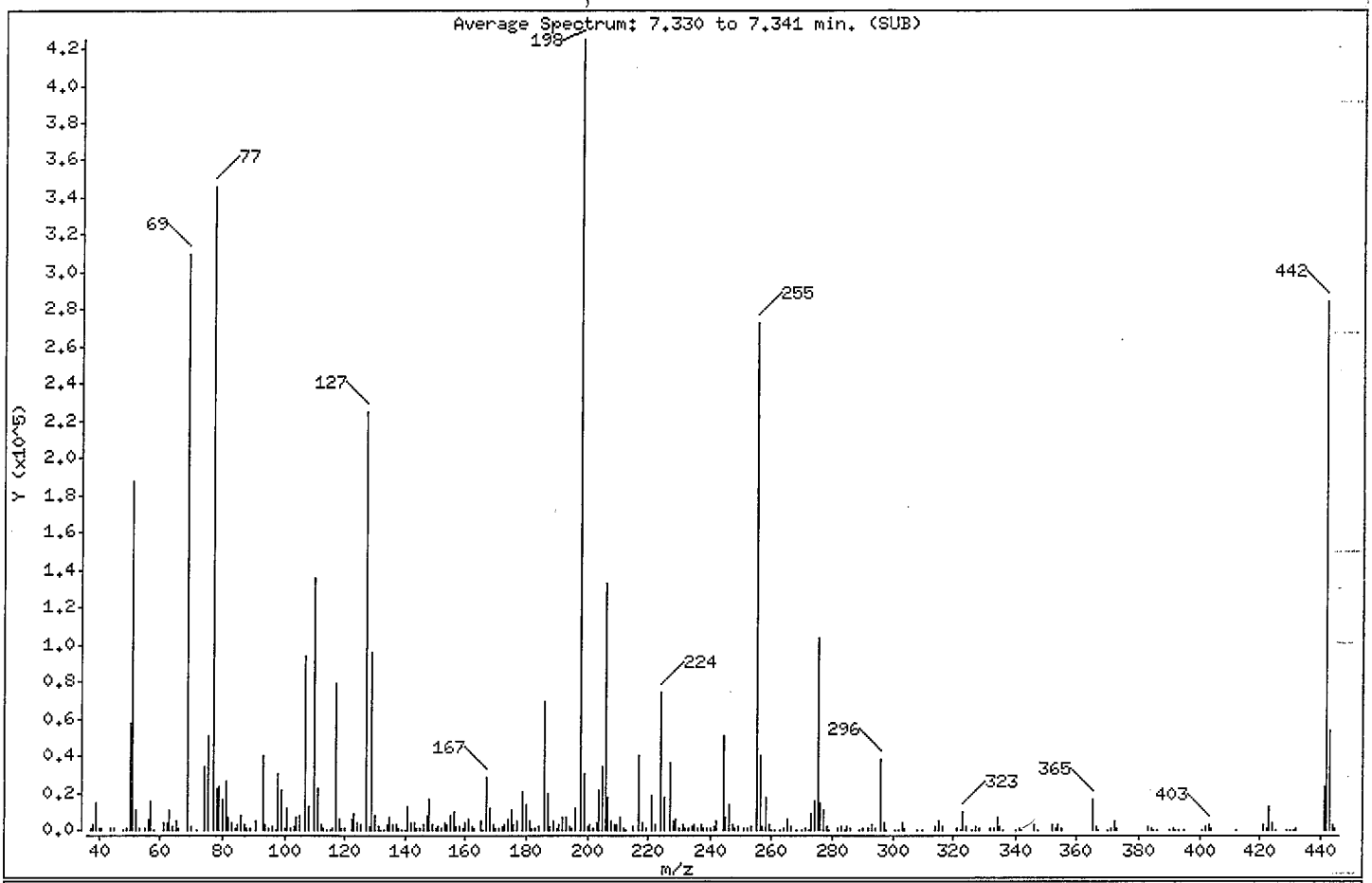
Volume Injected (uL): 1.0

Operator: 001710

Column phase:

Column diameter: 2.00

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	44.05
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	72.84
70	Less than 2.00% of mass 69	0.50 (0.69)
127	40.00 - 60.00% of mass 198	52.80
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.22
275	10.00 - 30.00% of mass 198	24.36
365	Greater than 1.00% of mass 198	3.92
441	Present, but less than mass 443	5.58
442	Greater than 40.00% of mass 198	66.85
443	17.00 - 23.00% of mass 442	12.71 (19.01)

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\9DF0320B.D

Date : 20-MAR-2008 10:11

Client ID:

Instrument: a4hp9.i

Sample Info: dftpp,80320a.b,dftpp288

Volume Injected (uL): 1.0

Operator: 001710

Column phase:

Column diameter: 2.00

Data File: 9DF0320B.D
Spectrum: Average Spectrum: 7.330 to 7.341 min. (SUB)
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	888	128.00	1778	205.00	33960	294.00	979
38.00	2673	129.00	96136	206.00	132672	296.00	37864
39.00	14337	130.00	8252	207.00	17912	297.00	4329
40.00	624	131.00	1719	208.00	5005	298.00	340
41.00	1099	132.00	402	209.00	2636	301.00	443
44.00	795	133.00	379	210.00	2823	302.00	232
45.00	573	134.00	3258	211.00	6818	303.00	3435
48.00	187	135.00	6869	212.00	1063	304.00	1239
49.00	854	136.00	3296	213.00	371	308.00	373
50.00	57832	137.00	3004	215.00	2143	310.00	410
51.00	187200	138.00	641	217.00	39912	314.00	2321
52.00	10817	139.00	427	218.00	4259	315.00	4480
53.00	666	140.00	167	219.00	988	316.00	2116
55.00	1061	141.00	13058	221.00	18456	321.00	1442
56.00	6235	142.00	4163	222.00	2722	322.00	275
57.00	15191	143.00	3572	224.00	73784	323.00	9375
58.00	487	144.00	1035	225.00	17208	324.00	1590
61.00	3703	145.00	877	227.00	36632	326.00	248
62.00	3689	146.00	2590	228.00	4599	327.00	1933
63.00	10366	147.00	7603	229.00	6006	328.00	1084
64.00	1570	148.00	16728	230.00	1174	332.00	658
65.00	5302	149.00	2790	231.00	3035	333.00	1294
66.00	671	150.00	913	232.00	648	334.00	6393
69.00	309568	151.00	1819	233.00	548	335.00	1542
70.00	2142	152.00	1421	234.00	1900	336.00	261
72.00	303	153.00	3955	235.00	2861	340.00	171
74.00	33712	154.00	3074	236.00	1177	341.00	1296
75.00	50736	155.00	8067	237.00	2930	342.00	417
77.00	346048	156.00	9870	238.00	814	346.00	2462
78.00	22608	157.00	1802	239.00	1400	347.00	194
79.00	23664	158.00	2326	240.00	1279	352.00	3418
80.00	16792	159.00	1465	241.00	1894	353.00	1032
81.00	26504	160.00	4350	242.00	4444	354.00	2878
82.00	6902	161.00	5410	244.00	50768	355.00	602
83.00	4382	162.00	1971	245.00	6360	365.00	16664

Date : 20-MAR-2008 10:11

Client ID: Instrument: a4hp9.i

Sample Info: dftpp,80320a,b,dftpp288

Volume Injected (uL): 1.0 Operator: 001710

Column phase: Column diameter: 2.00

Data File: 9DF0320B.D
Spectrum: Average Spectrum: 7.330 to 7.341 min. (SUB)
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
84.00	1022	163.00	531	246.00	13803	366.00	2365
85.00	2601	165.00	4646	247.00	2656	367.00	181
86.00	7425	166.00	469	248.00	489	370.00	286
87.00	2917	167.00	28096	249.00	2358	371.00	1296
88.00	914	168.00	11512	251.00	1393	372.00	5159
89.00	666	169.00	2532	252.00	897	373.00	1009
91.00	5066	170.00	1255	253.00	2060	383.00	1470
93.00	39792	171.00	815	255.00	272128	384.00	649
94.00	3186	172.00	2058	256.00	39768	385.00	177
95.00	954	173.00	3263	257.00	1611	386.00	187
96.00	1559	174.00	5874	258.00	17128	390.00	455
97.00	443	175.00	10597	259.00	2974	391.00	991
98.00	29984	176.00	2592	260.00	358	392.00	243
99.00	21696	177.00	4595	261.00	428	393.00	206
100.00	1029	179.00	20256	263.00	277	395.00	183
101.00	11361	180.00	13640	264.00	725	401.00	216
102.00	1087	181.00	5073	265.00	6178	402.00	2176
103.00	2426	182.00	1242	266.00	2242	403.00	2886
104.00	6983	183.00	565	268.00	435	404.00	753
105.00	7582	184.00	1937	270.00	214	412.00	284
107.00	94088	186.00	69112	271.00	719	421.00	2685
108.00	12688	187.00	19952	272.00	224	422.00	1147
110.00	135808	188.00	2336	273.00	9014	423.00	13118
111.00	21984	189.00	4594	274.00	15392	424.00	3652
112.00	3020	190.00	1128	275.00	103512	425.00	193
113.00	822	191.00	2594	276.00	14960	429.00	190
114.00	186	192.00	6495	277.00	10694	430.00	352
115.00	388	193.00	7163	278.00	1694	431.00	413
116.00	596	194.00	1934	279.00	211	432.00	633
117.00	79440	195.00	656	282.00	491	441.00	23704
118.00	5468	196.00	12116	283.00	1987	442.00	284096
119.00	630	198.00	424960	284.00	330	443.00	54000
120.00	1078	199.00	30696	285.00	1610	444.00	2509
122.00	6000	200.00	2123	286.00	749	445.00	541
123.00	8823	201.00	2565	289.00	398		

Date : 20-MAR-2008 10:11

Client ID: Instrument: a4hp9.i

Sample Info: dftpp,80320a.b,dftpp288

Volume Injected (uL): 1.0 Operator: 001710

Column phase: Column diameter: 2.00

Data File: 9DF0320B.D
Spectrum: Average Spectrum: 7.330 to 7.341 min. (SUB)
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	4100	202.00	777	290.00	602		
125.00	2659	203.00	4375	292.00	489		
127.00	224384	204.00	21032	293.00	2701		

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320b.b\9DF0320T.D

Date : 20-MAR-2008 10:11

Client ID:

Instrument: a4hp9.i

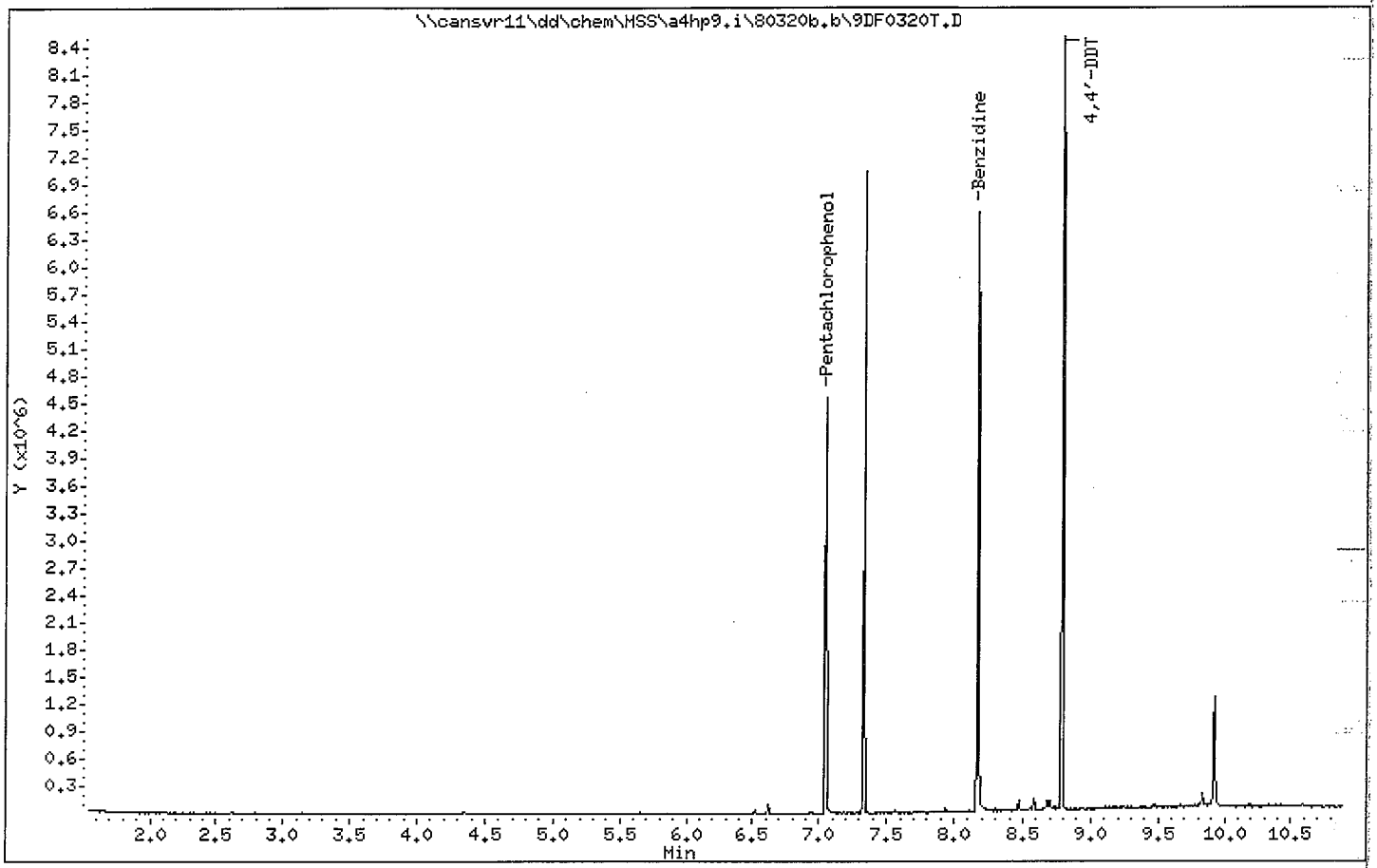
Sample Info: dftpp,80320a.b,dftpp288

Volume Injected (uL): 1.0

Operator: 001710

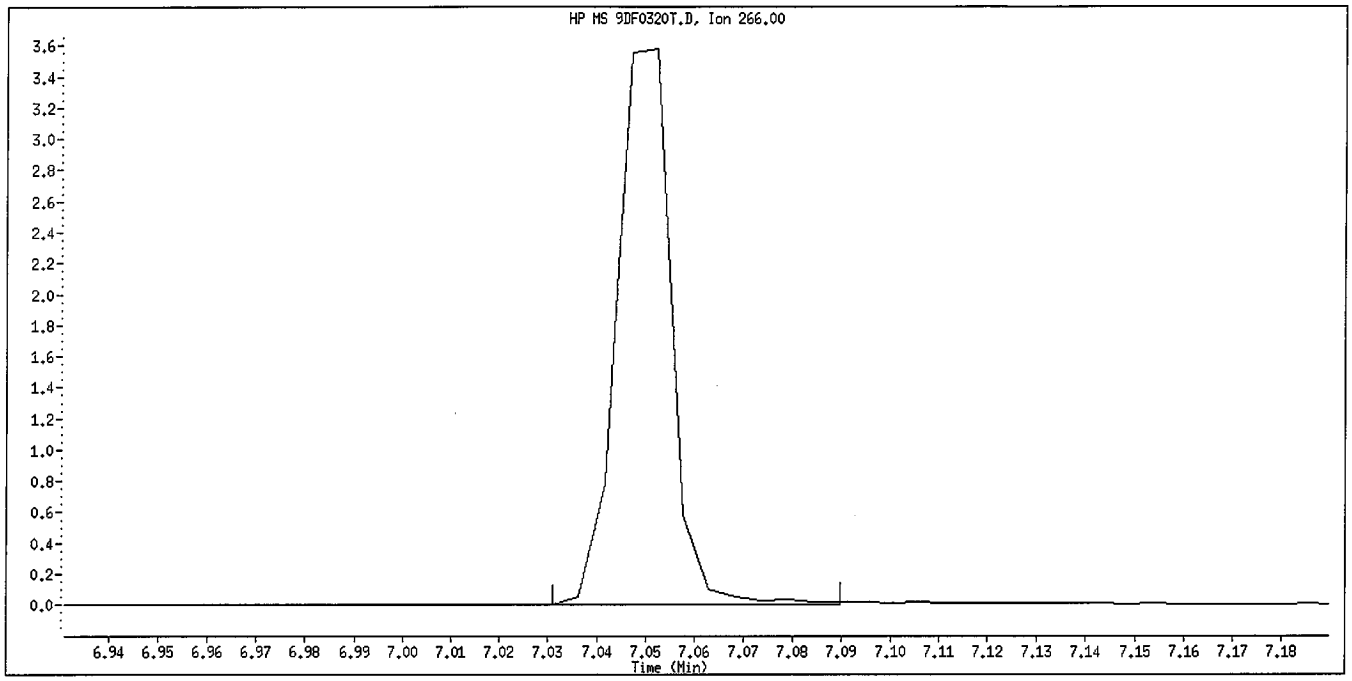
Column phase:

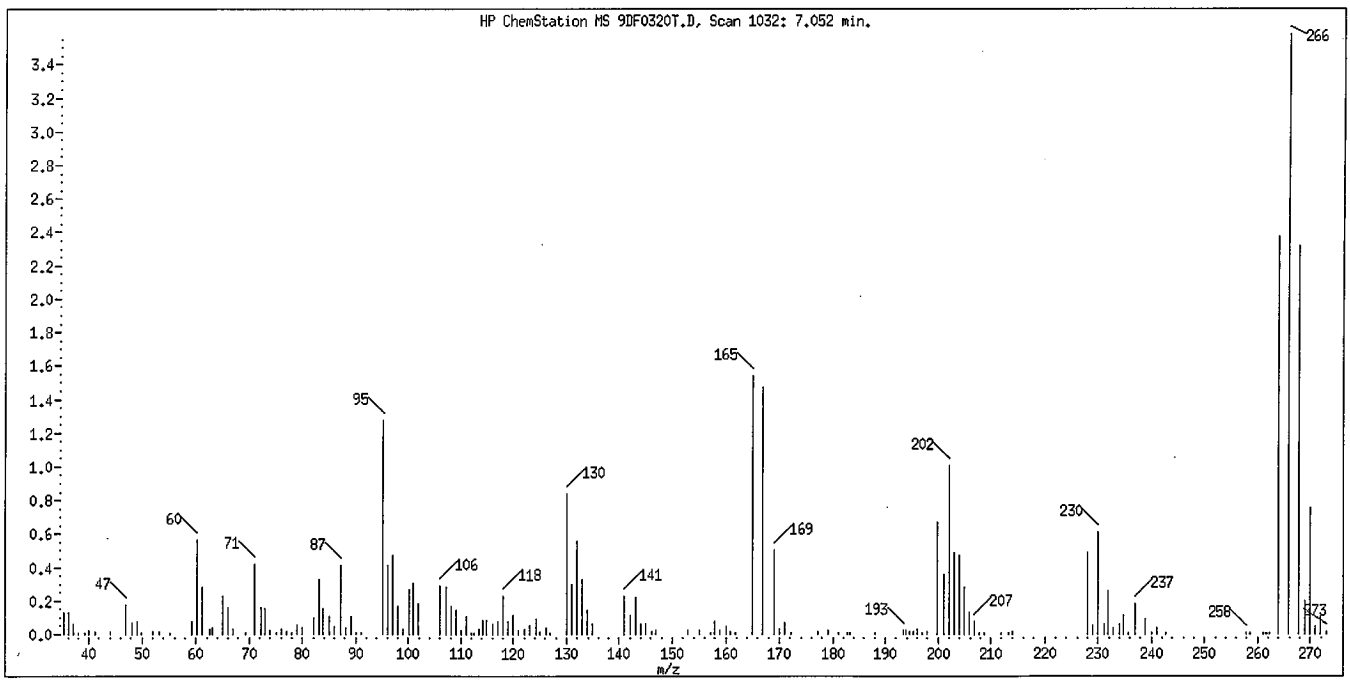
Column diameter: 2.00



Data File: 9DF0320T.D
Inj Date: 20-MAR-2008 10:11
Instrument ID: a4hp9.i
Compound Name: Pentachlorophenol
Operator Name: 001710
Report Date: 03/20/2008

TAILING FACTOR

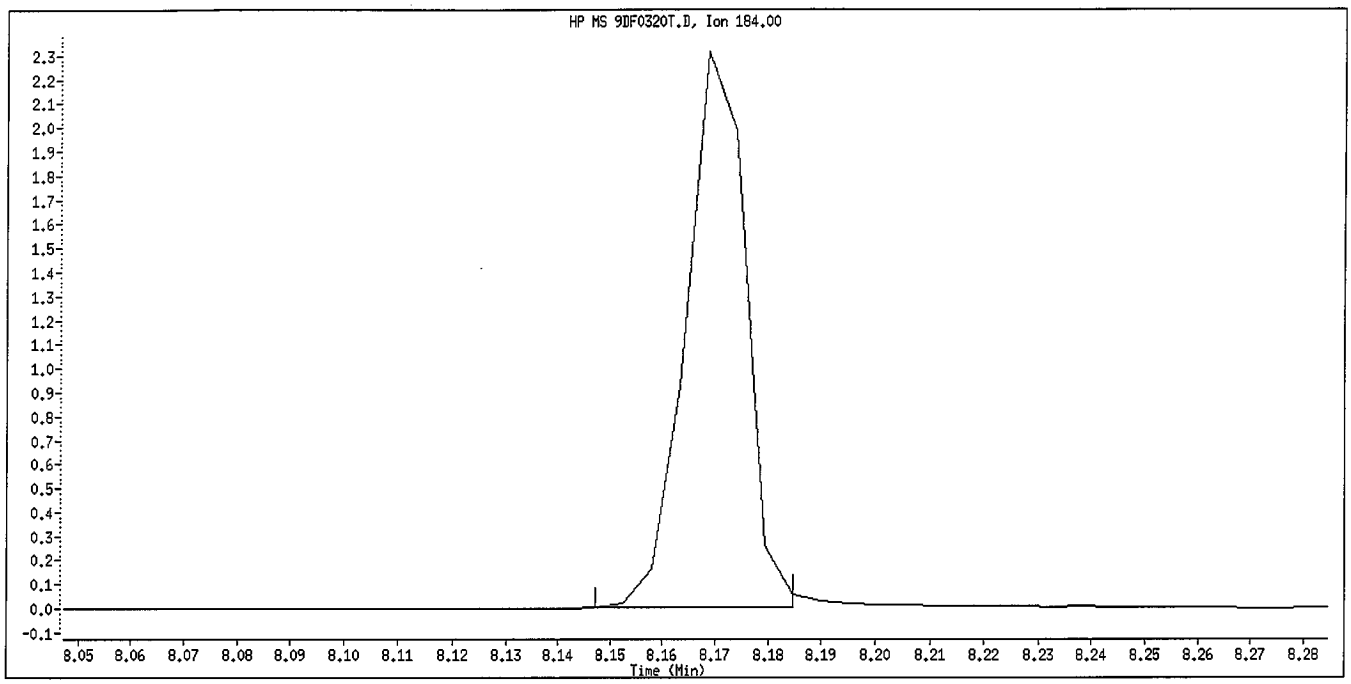


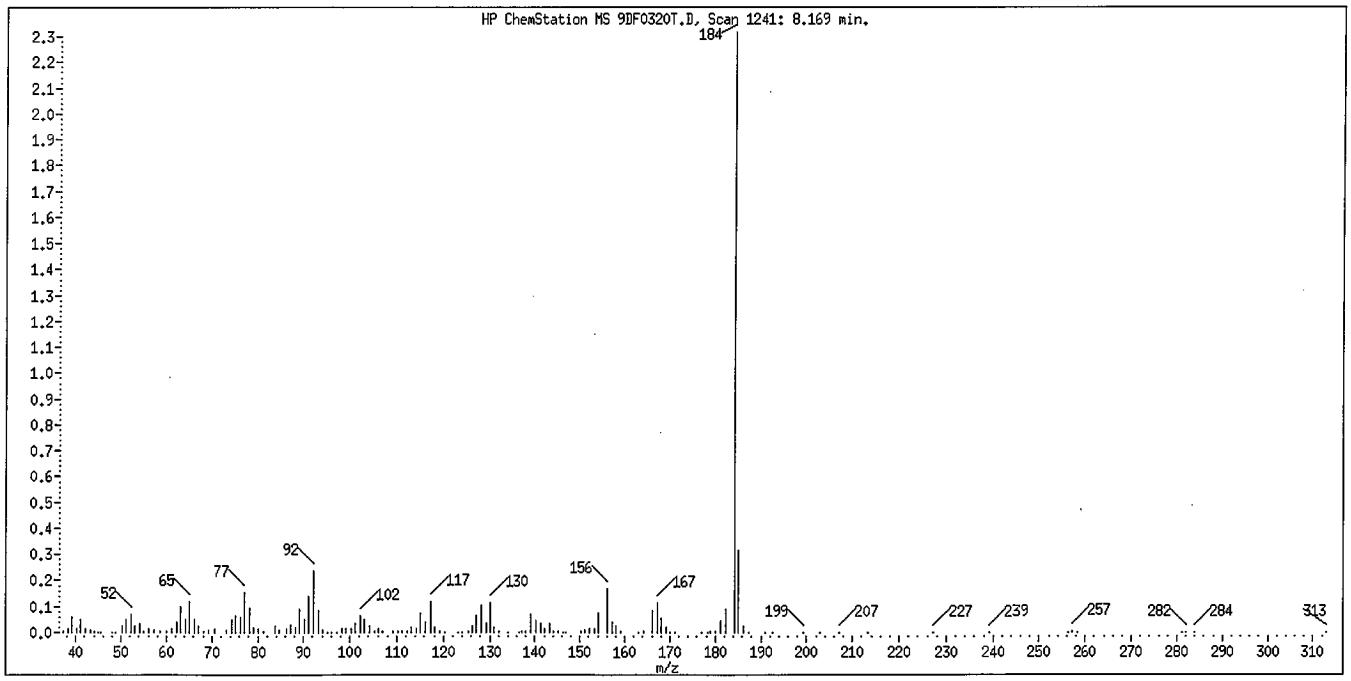


Tailing Factor = 0.567 Good
Acceptance Criteria 0 - 5
Tailing Factor = (T3 - T2) / (T2 - T1)
T1 = 7.038476 T2 = 7.052283 T3 = 7.060112

Data File: 9DF0320T.D
Inj Date: 20-MAR-2008 10:11
Instrument ID: a4hp9.i
Compound Name: Benzidine
Operator Name: 001710
Report Date: 03/20/2008

TAILING FACTOR

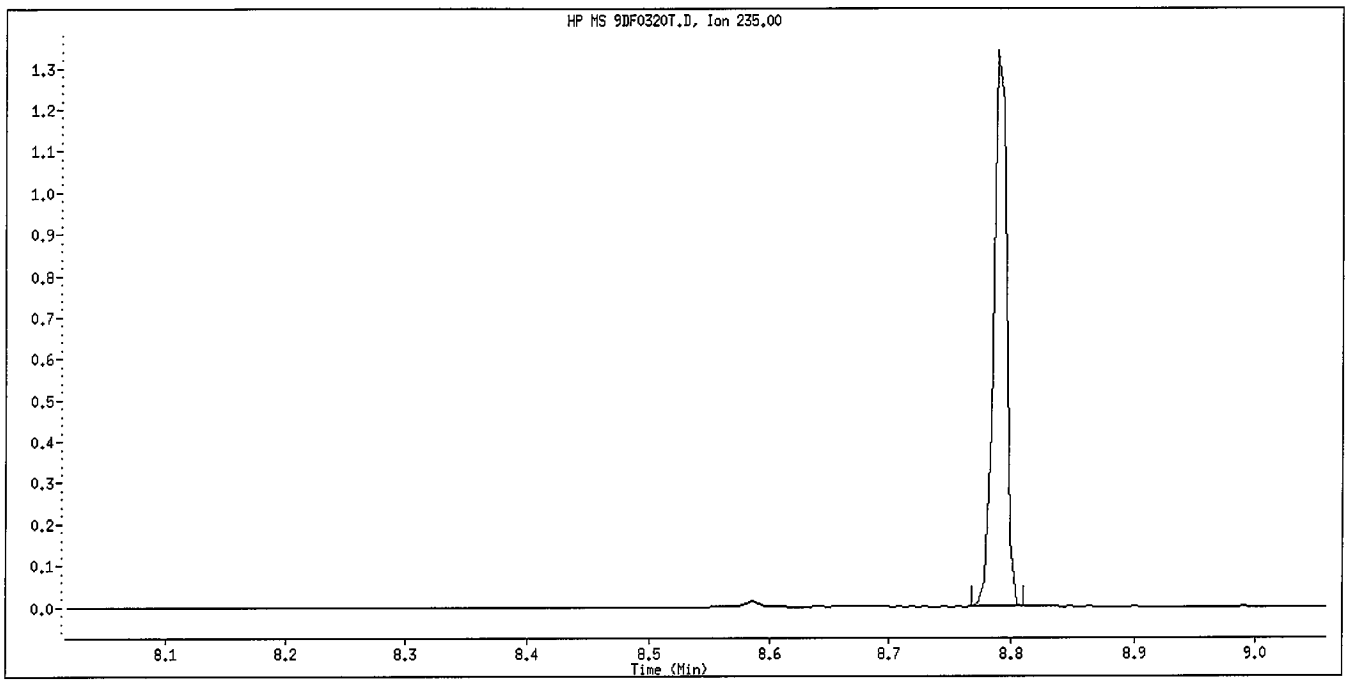




Tailing Factor = 1.11 Good
Acceptance Criteria 0 - 3
Tailing Factor = (T3 - T2) / (T2 - T1)
T1 = 8.158372 T2 = 8.168567 T3 = 8.179919

Data File: 9DF0320T.D
Inj Date: 20-MAR-2008 10:11
Instrument ID: a4hp9.i
Compound Name: 4,4'-DDT
Operator Name: 001710
Report Date: 03/20/2008

DEGRADATION REPORT



Degradation = 0% Good
Acceptance Criteria 0 - 20 %
DDT Area = 1031276
DDE Area = 0
DDD Area = 0

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKJ61AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-037
Prep Date.....: 03/14/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8074037
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2,4-Trichloro-benzene	**47**	**(25 - 110)**	**SW846 8270C**
Acenaphthene	**53**	**(40 - 110)**	**SW846 8270C**
1,4-Dichlorobenzene	**66**	**(19 - 110)**	**SW846 8270C**
Acenaphthylene	57	(43 - 110)	SW846 8270C
Acetophenone	52	(50 - 130)	SW846 8270C
Anthracene	70	(54 - 114)	SW846 8270C
Atrazine	94	(50 - 130)	SW846 8270C
1,2-Dichlorobenzene	44	(23 - 110)	SW846 8270C
1,3-Dichlorobenzene	41	(19 - 110)	SW846 8270C
Benzaldehyde	62	(10 - 130)	SW846 8270C
Benzo(a)anthracene	71	(55 - 115)	SW846 8270C
Benzo(b)fluoranthene	75	(43 - 122)	SW846 8270C
Benzo(k)fluoranthene	74	(43 - 124)	SW846 8270C
Benzo(ghi)perylene	78	(45 - 120)	SW846 8270C
Benzo(a)pyrene	70	(43 - 116)	SW846 8270C
1,1'-Biphenyl	47 a	(50 - 130)	SW846 8270C
bis(2-Chloroethoxy) methane	53	(39 - 110)	SW846 8270C
bis(2-Chloroethyl)-ether	51	(34 - 113)	SW846 8270C
bis(2-Ethylhexyl) phthalate	77	(36 - 163)	SW846 8270C
4-Bromophenyl phenyl ether	77	(51 - 114)	SW846 8270C
Butyl benzyl phthalate	81	(53 - 126)	SW846 8270C
Caprolactam	79	(50 - 130)	SW846 8270C
Carbazole	74	(53 - 120)	SW846 8270C
4-Chloroaniline	51	(10 - 110)	SW846 8270C
4-Chloro-3-methylphenol	**61**	**(39 - 110)**	**SW846 8270C**
Benzoic acid	15	(10 - 129)	SW846 8270C
1,4-Dioxane	35	(10 - 110)	SW846 8270C
Pyridine	38	(10 - 110)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKJ61AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-037

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2-Chloronaphthalene	52	(39 - 110)	SW846 8270C
2-Chlorophenol	**44**	**(27 - 110)**	**SW846 8270C**
Aniline	43	(10 - 130)	SW846 8270C
Benzyl alcohol	50	(10 - 130)	SW846 8270C
4-Chlorophenyl phenyl ether	67	(50 - 115)	SW846 8270C
N-Nitrosodimethylamine	45	(10 - 130)	SW846 8270C
1-Methylnaphthalene	49	(10 - 130)	SW846 8270C
1,2-Dinitrobenzene	79	(10 - 130)	SW846 8270C
2,3,5,6-Tetrachlorophenol	63	(10 - 130)	SW846 8270C
Chrysene	75	(55 - 115)	SW846 8270C
Dibenz(a,h)anthracene	79	(46 - 122)	SW846 8270C
Dibenzofuran	58	(46 - 111)	SW846 8270C
Di-n-butyl phthalate	83	(55 - 122)	SW846 8270C
3,3'-Dichlorobenzidine	38	(19 - 110)	SW846 8270C
2,4-Dichlorophenol	54	(33 - 110)	SW846 8270C
Diethyl phthalate	71	(33 - 134)	SW846 8270C
2,4-Dimethylphenol	41	(12 - 110)	SW846 8270C
Dimethyl phthalate	66	(15 - 143)	SW846 8270C
4,6-Dinitro-2-methylphenol	61	(28 - 112)	SW846 8270C
2,4-Dinitrophenol	36	(17 - 112)	SW846 8270C
2,4-Dinitrotoluene	**74**	**(52 - 123)**	**SW846 8270C**
2,6-Dinitrotoluene	72	(52 - 119)	SW846 8270C
Di-n-octyl phthalate	74	(44 - 128)	SW846 8270C
Fluoranthene	82	(54 - 122)	SW846 8270C
Fluorene	59	(47 - 112)	SW846 8270C
Hexachlorobenzene	72	(51 - 112)	SW846 8270C
Hexachlorobutadiene	43	(13 - 110)	SW846 8270C
Hexachlorocyclopenta-diene	17	(10 - 110)	SW846 8270C
Hexachloroethane	42	(12 - 110)	SW846 8270C
Indeno(1,2,3-cd)pyrene	79	(46 - 121)	SW846 8270C
Isophorone	61	(44 - 128)	SW846 8270C
2-Methylnaphthalene	54	(35 - 110)	SW846 8270C
2-Methylphenol	45	(30 - 110)	SW846 8270C
4-Methylphenol	51	(32 - 110)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKJ61AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-037

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Naphthalene	46	(31 - 110)	SW846 8270C
2-Nitroaniline	65	(43 - 130)	SW846 8270C
3-Nitroaniline	70	(45 - 116)	SW846 8270C
4-Nitroaniline	67	(45 - 120)	SW846 8270C
Nitrobenzene	58	(37 - 115)	SW846 8270C
2-Nitrophenol	56	(29 - 110)	SW846 8270C
4-Nitrophenol	**72**	**(12 - 130)**	**SW846 8270C**
N-Nitrosodiphenylamine	63	(53 - 113)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**52**	**(37 - 121)**	**SW846 8270C**
2,2'-oxybis(1-Chloropropa	50	(25 - 128)	SW846 8270C
Pentachlorophenol	**63**	**(26 - 110)**	**SW846 8270C**
Phenanthrene	67	(52 - 114)	SW846 8270C
Phenol	**48**	**(14 - 112)**	**SW846 8270C**
Pyrene	**75**	**(55 - 120)**	**SW846 8270C**
2,4,5-Trichloro-phenol	61	(39 - 110)	SW846 8270C
2,4,6-Trichloro-phenol	61	(35 - 110)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(27 - 111)
2-Fluorobiphenyl	52	(28 - 110)
Terphenyl-d14	89	(37 - 119)
Phenol-d5	47	(10 - 110)
2-Fluorophenol	40	(10 - 110)
2,4,6-Tribromophenol	74	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKJ61AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-037
Prep Date.....: 03/14/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8074037
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,2,4-Trichloro-benzene	**20**	**9.4**	**ug/L**	**47**	**SW846 8270C**
Acenaphthene	**20**	**11**	**ug/L**	**53**	**SW846 8270C**
1,4-Dichlorobenzene	**20**	**13**	**ug/L**	**66**	**SW846 8270C**
Acenaphthylene	20	11	ug/L	57	SW846 8270C
Acetophenone	20	10	ug/L	52	SW846 8270C
Anthracene	20	14	ug/L	70	SW846 8270C
Atrazine	20	19	ug/L	94	SW846 8270C
1,2-Dichlorobenzene	20	8.8	ug/L	44	SW846 8270C
1,3-Dichlorobenzene	20	8.3	ug/L	41	SW846 8270C
Benzaldehyde	20	12	ug/L	62	SW846 8270C
Benzo(a)anthracene	20	14	ug/L	71	SW846 8270C
Benzo(b)fluoranthene	20	15	ug/L	75	SW846 8270C
Benzo(k)fluoranthene	20	15	ug/L	74	SW846 8270C
Benzo(ghi)perylene	20	16	ug/L	78	SW846 8270C
Benzo(a)pyrene	20	14	ug/L	70	SW846 8270C
1,1'-Biphenyl	20	9.4 a	ug/L	47	SW846 8270C
bis(2-Chloroethoxy) methane	20	11	ug/L	53	SW846 8270C
bis(2-Chloroethyl)-ether	20	10	ug/L	51	SW846 8270C
bis(2-Ethylhexyl) phthalate	20	15	ug/L	77	SW846 8270C
4-Bromophenyl phenyl ether	20	15	ug/L	77	SW846 8270C
Butyl benzyl phthalate	20	16	ug/L	81	SW846 8270C
Caprolactam	20	16	ug/L	79	SW846 8270C
Carbazole	20	15	ug/L	74	SW846 8270C
4-Chloroaniline	20	10	ug/L	51	SW846 8270C
4-Chloro-3-methylphenol	**20**	**12**	**ug/L**	**61**	**SW846 8270C**
Benzoic acid	20		ug/L	15	SW846 8270C
1,4-Dioxane	20	7.1	ug/L	35	SW846 8270C
Pyridine	20	7.6	ug/L	38	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKJ61AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-037

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2-Chloronaphthalene	20	10	ug/L	52	SW846 8270C
2-Chlorophenol	**20**	**8.9**	**ug/L**	**44**	**SW846 8270C**
Aniline	20	8.6	ug/L	43	SW846 8270C
Benzyl alcohol	20	10	ug/L	50	SW846 8270C
4-Chlorophenyl phenyl ether	20	13	ug/L	67	SW846 8270C
N-Nitrosodimethylamine	20	9.0	ug/L	45	SW846 8270C
1-Methylnaphthalene	20	9.9	ug/L	49	SW846 8270C
1,2-Dinitrobenzene	20	16	ug/L	79	SW846 8270C
2,3,5,6-Tetrachlorophenol	20	13	ug/L	63	SW846 8270C
Chrysene	20	15	ug/L	75	SW846 8270C
Dibenz(a,h)anthracene	20	16	ug/L	79	SW846 8270C
Dibenzofuran	20	12	ug/L	58	SW846 8270C
Di-n-butyl phthalate	20	17	ug/L	83	SW846 8270C
3,3'-Dichlorobenzidine	20	7.7	ug/L	38	SW846 8270C
2,4-Dichlorophenol	20	11	ug/L	54	SW846 8270C
Diethyl phthalate	20	14	ug/L	71	SW846 8270C
2,4-Dimethylphenol	20	8.1	ug/L	41	SW846 8270C
Dimethyl phthalate	20	13	ug/L	66	SW846 8270C
4,6-Dinitro-2-methylphenol	20	12	ug/L	61	SW846 8270C
2,4-Dinitrophenol	20	7.2	ug/L	36	SW846 8270C
2,4-Dinitrotoluene	**20**	**15**	**ug/L**	**74**	**SW846 8270C**
2,6-Dinitrotoluene	20	14	ug/L	72	SW846 8270C
Di-n-octyl phthalate	20	15	ug/L	74	SW846 8270C
Fluoranthene	20	16	ug/L	82	SW846 8270C
Fluorene	20	12	ug/L	59	SW846 8270C
Hexachlorobenzene	20	14	ug/L	72	SW846 8270C
Hexachlorobutadiene	20	8.7	ug/L	43	SW846 8270C
Hexachlorocyclopenta-diene	20	3.5	ug/L	17	SW846 8270C
Hexachloroethane	20	8.4	ug/L	42	SW846 8270C
Indeno(1,2,3-cd)pyrene	20	16	ug/L	79	SW846 8270C
Isophorone	20	12	ug/L	61	SW846 8270C
2-Methylnaphthalene	20	11	ug/L	54	SW846 8270C
2-Methylphenol	20	9.1	ug/L	45	SW846 8270C
4-Methylphenol	40	20	ug/L	51	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKJ61AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-037

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Naphthalene	20	9.3	ug/L	46	SW846 8270C
2-Nitroaniline	20	13	ug/L	65	SW846 8270C
3-Nitroaniline	20	14	ug/L	70	SW846 8270C
4-Nitroaniline	20	13	ug/L	67	SW846 8270C
Nitrobenzene	20	12	ug/L	58	SW846 8270C
2-Nitrophenol	20	11	ug/L	56	SW846 8270C
4-Nitrophenol	**20**	**14**	**ug/L**	**72**	**SW846 8270C**
N-Nitrosodiphenylamine	20	13	ug/L	63	SW846 8270C
N-Nitrosodi-n-propyl-amine	**20**	**10**	**ug/L**	**52**	**SW846 8270C**
2,2'-oxybis(1-Chloropropa	20	9.9	ug/L	50	SW846 8270C
Pentachlorophenol	**20**	**13**	**ug/L**	**63**	**SW846 8270C**
Phenanthrene	20	13	ug/L	67	SW846 8270C
Phenol	**20**	**9.5**	**ug/L**	**48**	**SW846 8270C**
Pyrene	**20**	**15**	**ug/L**	**75**	**SW846 8270C**
2,4,5-Trichloro-phenol	20	12	ug/L	61	SW846 8270C
2,4,6-Trichloro-phenol	20	12	ug/L	61	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(27 - 111)
2-Fluorobiphenyl	52	(28 - 110)
Terphenyl-d14	89	(37 - 119)
Phenol-d5	47	(10 - 110)
2-Fluorophenol	40	(10 - 110)
2,4,6-Tribromophenol	74	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\KJKJ61AC.D
Lab Smp Id: KJKJ61AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 18-MAR-2008 12:10
Operator : 001710 Inst ID: a4hp8.i
Smp Info : kjkj61ac,80318a.b,8270p,1-827042d.sub
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\8270P.m
Meth Date : 19-Mar-2008 11:05 gruberj Quant Type: ISTD
Cal Date : 18-FEB-2008 17:50 Cal File: 8AL0218.D
Als bottle: 4 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	0.50000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
* 1	1,4-Dichlorobenzene-d4	152	3.430	3.435	(1.000)	95646	2.00000	
* 2	Naphthalene-d8	136	4.324	4.324	(1.000)	382979	2.00000	
* 3	Acenaphthene-d10	164	5.594	5.594	(1.000)	232739	2.00000	
* 4	Phenanthrene-d10	188	6.681	6.681	(1.000)	409555	2.00000	
* 5	Chrysene-d12	240	8.681	8.710	(1.000)	468456	2.00000	
* 6	Perylene-d12	264	10.085	10.119	(1.000)	417523	2.00000	
9	Pyridine	79	1.824	1.833	(0.532)	177590	1.90834	7.6333
10	N-Nitrosodimethylamine	74	1.795	1.809	(0.523)	127516	2.25182	9.0073
11	Ethyl methacrylate	69	Compound Not Detected.					
12	3-Chloropropionitrile	54	Compound Not Detected.					
13	Malononitrile	66	Compound Not Detected.					
209	Benzaldehyde	77	3.142	3.146	(0.916)	192567	3.11980	12.479
21	Aniline	93	3.204	3.209	(0.934)	283599	2.15027	8.6011
22	Phenol	94	3.156	3.161	(0.920)	246979	2.38695	9.5478
23	bis(2-Chloroethyl)ether	93	3.228	3.233	(0.941)	206251	2.56558	10.262
24	2-Chlorophenol	128	3.291	3.290	(0.959)	140648	2.22289	8.8915
26	1,3-Dichlorobenzene	146	3.392	3.396	(0.989)	132602	2.06542	8.2617
27	1,4-Dichlorobenzene	146	3.444	3.444	(1.004)	135964	3.31098	13.244

28	1,2-Dichlorobenzene	146	3.550	3.550 (1.035)	135365	2.18759	8.7504
29	Benzyl Alcohol	108	3.507	3.512 (1.022)	120083	2.51485	10.059

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
30	2-Methylphenol	108	3.570	3.569	(1.041)	151223	2.26648	9.0659
31	bis(2-Chloroisopropyl)ether	45	3.589	3.593	(1.046)	189223	2.47824	9.9130
37	Acetophenone	105	3.699	3.699	(1.078)	296185	2.60953	10.438
32	N-Nitroso-di-n-propylamine	70	3.685	3.690	(1.074)	198382	2.57528	10.301
192	4-Methylphenol	108	3.670	3.675	(1.070)	355907	5.05922	20.237
34	Hexachloroethane	117	3.786	3.786	(1.104)	55522	2.08824	8.3530
35	Nitrobenzene	77	3.824	3.824	(0.884)	279759	2.91967	11.679
41	Isophorone	82	3.983	3.988	(0.921)	517423	3.02613	12.104
42	2-Nitrophenol	139	4.046	4.045	(0.936)	87352	2.80267	11.211(Q)
43	2,4-Dimethylphenol	107	4.046	4.050	(0.936)	171808	2.02913	8.1165
44	bis(2-Chloroethoxy)methane	93	4.113	4.117	(0.951)	241797	2.64388	10.576
46	2,4-Toluenediamene	121	Compound Not Detected.					
47	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
48	2,4-Dichlorophenol	162	4.214	4.214	(0.974)	129280	2.72343	10.894
49	Benzoic Acid	122	4.103	4.137	(0.949)	7836	0.77137	3.0855(QRH)
50	1,2,4-Trichlorobenzene	180	4.276	4.276	(0.989)	129646	2.34234	9.3694
51	Naphthalene	128	4.339	4.344	(1.003)	443620	2.31949	9.2780
52	4-Chloroaniline	127	4.363	4.363	(1.009)	202946	2.56671	10.267
56	Hexachlorobutadiene	225	4.411	4.416	(1.020)	76838	2.17160	8.6864(R)
210	Caprolactam	113	4.603	4.622	(1.064)	83093	3.94723	15.789
57	1,2,3-Trichlorobenzene	180	Compound Not Detected.					
59	4-Chloro-3-Methylphenol	107	4.695	4.699	(1.086)	211774	3.05202	12.208
62	2-Methylnaphthalene	142	4.834	4.834	(1.118)	307209	2.71491	10.860
63	1-Methylnaphthalene	142	4.906	4.906	(1.135)	301091	2.47044	9.8818
64	Hexachlorocyclopentadiene	237	4.940	4.940	(0.883)	34459	0.86953	3.4781
66	2,4,6-Trichlorophenol	196	5.027	5.031	(0.899)	120678	3.05474	12.219
67	2,4,5-Trichlorophenol	196	5.060	5.065	(0.905)	126473	3.02890	12.116
211	1,1'-Biphenyl	154	5.618	5.618	(1.004)	348833	2.35513	9.4205
68	1,2,3,5-Tetrachlorobenzene	216	Compound Not Detected.					
70	2-Chloronaphthalene	162	5.190	5.190	(0.928)	314251	2.58257	10.330
73	2-Nitroaniline	65	5.248	5.252	(0.938)	196713	3.27487	13.099
74	1,2,3,4-Tetrachlorobenzene	216	Compound Not Detected.					
76	Dimethylphthalate	163	5.363	5.368	(0.959)	470282	3.30475	13.219
78	2,6-Dinitrotoluene	165	5.416	5.421	(0.968)	117409	3.61072	14.443
79	Acenaphthylene	152	5.493	5.498	(0.982)	548723	2.83905	11.356
80	1,2-Dinitrobenzene	168	5.464	5.469	(0.977)	58427	3.95371	15.815
81	3-Nitroaniline	138	5.546	5.551	(0.991)	111149	3.51734	14.069
82	Acenaphthene	153	5.618	5.618	(1.004)	340670	2.63638	10.546
83	2,4-Dinitrophenol	184	5.618	5.627	(1.004)	26407	1.79990	7.1996(Q)
85	4-Nitrophenol	109	5.657	5.656	(1.011)	100033	3.61891	14.476
86	Dibenzofuran	168	5.738	5.743	(1.026)	533851	2.88284	11.531(R)
87	2,4-Dinitrotoluene	165	5.709	5.714	(1.021)	167228	3.68166	14.727
91	2,3,5,6-Tetrachlorophenol	232	5.791	5.791	(1.035)	122515	3.15635	12.625
93	Diethylphthalate	149	5.868	5.873	(1.049)	522516	3.54299	14.172
94	Fluorene	166	5.993	5.993	(1.071)	471363	2.97432	11.897
95	4-Chlorophenyl-phenylether	204	5.974	5.974	(1.068)	247343	3.35365	13.414
96	4-Nitroaniline	138	5.993	5.998	(1.071)	127006	3.32968	13.319(R)
98	4,6-Dinitro-2-methylphenol	198	6.008	6.012	(0.899)	84188	3.07285	12.291
99	N-Nitrosodiphenylamine	169	6.056	6.060	(0.906)	337236	3.17287	12.691
100	1,2-Diphenylhydrazine	77	6.089	6.094	(0.911)	716305	3.34541	13.382
106	4-Bromophenyl-phenylether	248	6.335	6.334	(0.948)	156643	3.82881	15.315
107	Hexachlorobenzene	284	6.392	6.397	(0.957)	169676	3.60312	14.412

212 Atrazine	200	6.426	6.431 (0.962)	193696	4.68760	18.750
111 Pentachlorophenol	266	6.532	6.532 (0.978)	83917	3.14937	12.597

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
115 Phenanthrene	178	6.695	6.700	(1.002)	740525	3.33813	13.352
116 Anthracene	178	6.734	6.738	(1.008)	754053	3.49094	13.964
119 Carbazole	167	6.839	6.844	(1.024)	727741	3.68796	14.752
120 Di-n-Butylphthalate	149	7.056	7.056	(1.056)	927035	4.13858	16.554
123 Fluoranthene	202	7.575	7.580	(1.134)	920915	4.11242	16.450
124 Benzidine	184	Compound Not Detected.					
125 Pyrene	202	7.753	7.763	(0.893)	931025	3.72570	14.903
131 Butylbenzylphthalate	149	8.186	8.200	(0.943)	404202	4.04451	16.178
133 3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
135 3,3'-Dichlorobenzidine	252	8.628	8.657	(0.994)	187338	1.91678	7.6671
136 Benzo(a)Anthracene	228	8.672	8.700	(0.999)	943542	3.55786	14.231
137 Chrysene	228	8.700	8.729	(1.002)	915606	3.73202	14.928
138 4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
139 bis(2-ethylhexyl)Phthalate	149	8.614	8.643	(0.992)	574199	3.85800	15.432
140 Di-n-octylphthalate	149	9.153	9.186	(0.908)	931194	3.68185	14.727
141 Benzo(b)fluoranthene	252	9.648	9.686	(0.957)	913194	3.73452	14.938
142 Benzo(k)fluoranthene	252	9.677	9.715	(0.959)	971917	3.70278	14.811
146 Benzo(a)pyrene	252	10.023	10.061	(0.994)	777982	3.52005	14.080
149 Indeno(1,2,3-cd)pyrene	276	11.610	11.653	(1.151)	974140	3.93807	15.752
150 Dibenz(a,h)anthracene	278	11.624	11.672	(1.153)	858493	3.95912	15.836
151 Benzo(g,h,i)perylene	276	12.076	12.129	(1.197)	822666	3.89757	15.590
198 1,4-Dioxane	88	1.622	1.631	(0.473)	55458	1.76406	7.0562
$ 154 Nitrobenzene-d5	82	3.810	3.815	(0.881)	268870	2.89675	11.587
$ 155 2-Fluorobiphenyl	172	5.084	5.089	(0.909)	377852	2.58169	10.327
$ 156 Terphenyl-d14	244	7.835	7.844	(0.903)	803933	4.45199	17.808
$ 157 Phenol-d5	99	3.146	3.151	(0.917)	341366	3.50479	14.019
$ 158 2-Fluorophenol	112	2.564	2.569	(0.748)	182010	2.99052	11.962
$ 159 2,4,6-Tribromophenol	330	6.166	6.166	(1.102)	113426	5.53234	22.129
$ 186 2-Chlorophenol-d4	132	3.276	3.281	(0.955)	209350	3.66557	14.662
$ 187 1,2-Dichlorobenzene-d4	152	3.541	3.540	(1.032)	89302	2.27496	9.0998
M 195 Cresols, total	100				507130	7.32571	29.303
101 Diphenylamine	169	6.056	6.060	(0.906)	337236	3.17287	12.691

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

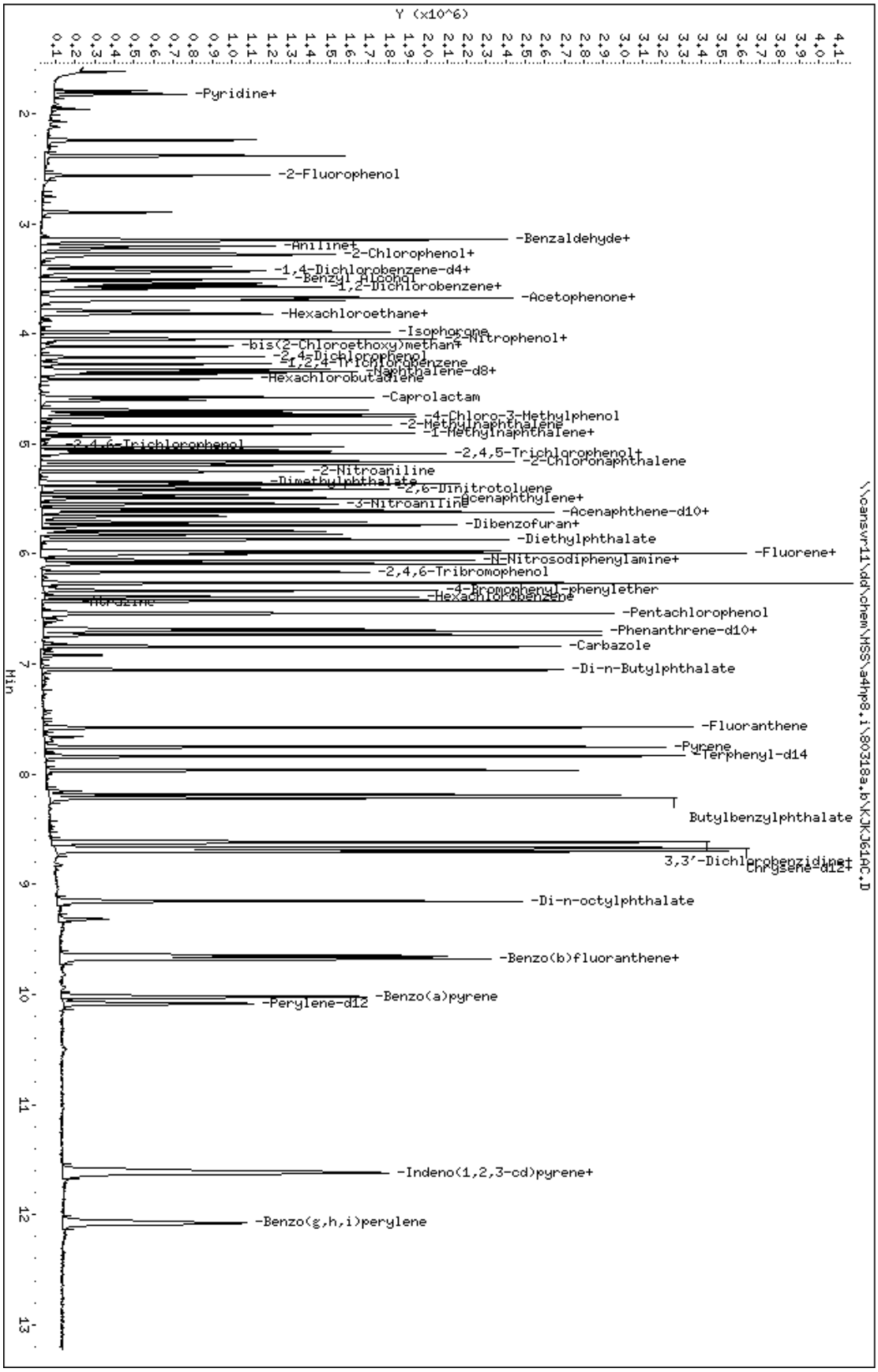
Instrument ID: a4hp8.i
Lab File ID: KJKJ61AC.D
Lab Smp Id: KJKJ61AC
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\8270P.m
Misc Info:

Calibration Date: 18-MAR-2008
Calibration Time: 11:33
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	134594	67297	269188	95646	-28.94
2 Naphthalene-d8	540972	270486	1081944	382979	-29.21
3 Acenaphthene-d10	323762	161881	647524	232739	-28.11
4 Phenanthrene-d10	590518	295259	1181036	409555	-30.64
5 Chrysene-d12	670238	335119	1340476	468456	-30.11
6 Perylene-d12	605727	302864	1211454	417523	-31.07

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.44	2.94	3.94	3.43	-0.13
2 Naphthalene-d8	4.32	3.82	4.82	4.32	0.01
3 Acenaphthene-d10	5.59	5.09	6.09	5.59	0.00
4 Phenanthrene-d10	6.68	6.18	7.18	6.68	0.00
5 Chrysene-d12	8.71	8.21	9.21	8.68	-0.33
6 Perylene-d12	10.12	9.62	10.62	10.09	-0.33

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\KJKJ61AC.D
Date : 18-MAR-2008 12:10
Client ID: INTRA-LAB CHECK
Sample Info: kjkj61ac,80318a,b,8270p,1-8270d2,sub
Volume Injected (uL): 0.5
Column phase: db5.625

Instrument: a4hp8.i
Operator: 001710
Column diameter: 0.32

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTNH1AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-104
Prep Date.....: 03/19/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8079104
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2,4-Trichloro-benzene	**86**	**(25 - 110)**	**SW846 8270C**
Acenaphthene	**81**	**(40 - 110)**	**SW846 8270C**
1,4-Dichlorobenzene	**131 a**	**(19 - 110)**	**SW846 8270C**
Acenaphthylene	83	(43 - 110)	SW846 8270C
Acetophenone	74	(50 - 130)	SW846 8270C
Anthracene	88	(54 - 114)	SW846 8270C
Atrazine	93	(50 - 130)	SW846 8270C
1,2-Dichlorobenzene	85	(23 - 110)	SW846 8270C
1,3-Dichlorobenzene	79	(19 - 110)	SW846 8270C
Benzaldehyde	82	(10 - 130)	SW846 8270C
Benzo(a)anthracene	83	(55 - 115)	SW846 8270C
Benzo(b)fluoranthene	90	(43 - 122)	SW846 8270C
Benzo(k)fluoranthene	87	(43 - 124)	SW846 8270C
Benzo(ghi)perylene	91	(45 - 120)	SW846 8270C
Benzo(a)pyrene	87	(43 - 116)	SW846 8270C
1,1'-Biphenyl	77	(50 - 130)	SW846 8270C
bis(2-Chloroethoxy) methane	80	(39 - 110)	SW846 8270C
bis(2-Chloroethyl)-ether	72	(34 - 113)	SW846 8270C
bis(2-Ethylhexyl) phthalate	90	(36 - 163)	SW846 8270C
4-Bromophenyl phenyl ether	93	(51 - 114)	SW846 8270C
Butyl benzyl phthalate	89	(53 - 126)	SW846 8270C
Caprolactam	23 a	(50 - 130)	SW846 8270C
Carbazole	89	(53 - 120)	SW846 8270C
4-Chloroaniline	40	(10 - 110)	SW846 8270C
4-Chloro-3-methylphenol	**82**	**(39 - 110)**	**SW846 8270C**
Benzoic acid	16	(10 - 129)	SW846 8270C
1,4-Dioxane	39	(10 - 110)	SW846 8270C
2-Chloronaphthalene	83	(39 - 110)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTNH1AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-104

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2-Chlorophenol	**84**	**(27 - 110)**	**SW846 8270C**
Benzyl alcohol	62	(10 - 130)	SW846 8270C
4-Chlorophenyl phenyl ether	93	(50 - 115)	SW846 8270C
N-Nitrosodimethylamine	46	(10 - 130)	SW846 8270C
1-Methylnaphthalene	77	(10 - 130)	SW846 8270C
1,2-Dinitrobenzene	93	(10 - 130)	SW846 8270C
2,3,5,6-Tetrachlorophenol	79	(10 - 130)	SW846 8270C
Chrysene	89	(55 - 115)	SW846 8270C
Dibenz(a,h)anthracene	95	(46 - 122)	SW846 8270C
Dibenzofuran	83	(46 - 111)	SW846 8270C
Di-n-butyl phthalate	93	(55 - 122)	SW846 8270C
3,3'-Dichlorobenzidine	66	(19 - 110)	SW846 8270C
2,4-Dichlorophenol	85	(33 - 110)	SW846 8270C
Diethyl phthalate	90	(33 - 134)	SW846 8270C
2,4-Dimethylphenol	72	(12 - 110)	SW846 8270C
Dimethyl phthalate	90	(15 - 143)	SW846 8270C
4,6-Dinitro-2-methylphenol	89	(28 - 112)	SW846 8270C
2,4-Dinitrophenol	73	(17 - 112)	SW846 8270C
2,4-Dinitrotoluene	**97**	**(52 - 123)**	**SW846 8270C**
2,6-Dinitrotoluene	95	(52 - 119)	SW846 8270C
Di-n-octyl phthalate	89	(44 - 128)	SW846 8270C
Fluoranthene	95	(54 - 122)	SW846 8270C
Fluorene	82	(47 - 112)	SW846 8270C
Hexachlorobenzene	87	(51 - 112)	SW846 8270C
Hexachlorobutadiene	86	(13 - 110)	SW846 8270C
Hexachlorocyclopentadiene	86	(10 - 110)	SW846 8270C
Hexachloroethane	78	(12 - 110)	SW846 8270C
Indeno(1,2,3-cd)pyrene	94	(46 - 121)	SW846 8270C
Isophorone	87	(44 - 128)	SW846 8270C
2-Methylnaphthalene	90	(35 - 110)	SW846 8270C
2-Methylphenol	74	(30 - 110)	SW846 8270C
4-Methylphenol	75	(32 - 110)	SW846 8270C
Naphthalene	77	(31 - 110)	SW846 8270C
2-Nitroaniline	82	(43 - 130)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTNH1AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-104

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
3-Nitroaniline	91	(45 - 116)	SW846 8270C
4-Nitroaniline	88	(45 - 120)	SW846 8270C
Nitrobenzene	83	(37 - 115)	SW846 8270C
2-Nitrophenol	82	(29 - 110)	SW846 8270C
4-Nitrophenol	**56**	**(12 - 130)**	**SW846 8270C**
N-Nitrosodiphenylamine	87	(53 - 113)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**83**	**(37 - 121)**	**SW846 8270C**
2,2'-oxybis(1-Chloropropa	73	(25 - 128)	SW846 8270C
Pentachlorophenol	**58**	**(26 - 110)**	**SW846 8270C**
Phenanthrene	85	(52 - 114)	SW846 8270C
Phenol	**47**	**(14 - 112)**	**SW846 8270C**
Pyrene	**89**	**(55 - 120)**	**SW846 8270C**
2,4,5-Trichloro-phenol	87	(39 - 110)	SW846 8270C
2,4,6-Trichloro-phenol	85	(35 - 110)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	76	(27 - 111)
2-Fluorobiphenyl	80	(28 - 110)
Terphenyl-d14	88	(37 - 119)
Phenol-d5	45	(10 - 110)
2-Fluorophenol	61	(10 - 110)
2,4,6-Tribromophenol	87	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTNH1AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-104
Prep Date.....: 03/19/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8079104
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,2,4-Trichloro-benzene	**20**	**17**	**ug/L**	**86**	**SW846 8270C**
Acenaphthene	**20**	**16**	**ug/L**	**81**	**SW846 8270C**
1,4-Dichlorobenzene	**20**	**26 a**	**ug/L**	**131**	**SW846 8270C**
Acenaphthylene	20	17	ug/L	83	SW846 8270C
Acetophenone	20	15	ug/L	74	SW846 8270C
Anthracene	20	18	ug/L	88	SW846 8270C
Atrazine	20	19	ug/L	93	SW846 8270C
1,2-Dichlorobenzene	20	17	ug/L	85	SW846 8270C
1,3-Dichlorobenzene	20	16	ug/L	79	SW846 8270C
Benzaldehyde	20	16	ug/L	82	SW846 8270C
Benzo(a)anthracene	20	17	ug/L	83	SW846 8270C
Benzo(b)fluoranthene	20	18	ug/L	90	SW846 8270C
Benzo(k)fluoranthene	20	17	ug/L	87	SW846 8270C
Benzo(ghi)perylene	20	18	ug/L	91	SW846 8270C
Benzo(a)pyrene	20	17	ug/L	87	SW846 8270C
1,1'-Biphenyl	20	15	ug/L	77	SW846 8270C
bis(2-Chloroethoxy) methane	20	16	ug/L	80	SW846 8270C
bis(2-Chloroethyl)-ether	20	14	ug/L	72	SW846 8270C
bis(2-Ethylhexyl) phthalate	20	18	ug/L	90	SW846 8270C
4-Bromophenyl phenyl ether	20	19	ug/L	93	SW846 8270C
Butyl benzyl phthalate	20	18	ug/L	89	SW846 8270C
Caprolactam	20	4.6 a	ug/L	23	SW846 8270C
Carbazole	20	18	ug/L	89	SW846 8270C
4-Chloroaniline	20	7.9	ug/L	40	SW846 8270C
4-Chloro-3-methylphenol	**20**	**16**	**ug/L**	**82**	**SW846 8270C**
Benzoic acid	20		ug/L	16	SW846 8270C
1,4-Dioxane	20	7.8	ug/L	39	SW846 8270C
2-Chloronaphthalene	20	17	ug/L	83	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTNH1AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-104

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2-Chlorophenol	**20**	**17**	**ug/L**	**84**	**SW846 8270C**
Benzyl alcohol	20	12	ug/L	62	SW846 8270C
4-Chlorophenyl phenyl ether	20	19	ug/L	93	SW846 8270C
N-Nitrosodimethylamine	20	9.2	ug/L	46	SW846 8270C
1-Methylnaphthalene	20	15	ug/L	77	SW846 8270C
1,2-Dinitrobenzene	20	19	ug/L	93	SW846 8270C
2,3,5,6-Tetrachlorophenol	20	16	ug/L	79	SW846 8270C
Chrysene	20	18	ug/L	89	SW846 8270C
Dibenz(a,h)anthracene	20	19	ug/L	95	SW846 8270C
Dibenzofuran	20	17	ug/L	83	SW846 8270C
Di-n-butyl phthalate	20	19	ug/L	93	SW846 8270C
3,3'-Dichlorobenzidine	20	13	ug/L	66	SW846 8270C
2,4-Dichlorophenol	20	17	ug/L	85	SW846 8270C
Diethyl phthalate	20	18	ug/L	90	SW846 8270C
2,4-Dimethylphenol	20	14	ug/L	72	SW846 8270C
Dimethyl phthalate	20	18	ug/L	90	SW846 8270C
4,6-Dinitro-2-methylphenol	20	18	ug/L	89	SW846 8270C
2,4-Dinitrophenol	20	15	ug/L	73	SW846 8270C
2,4-Dinitrotoluene	**20**	**19**	**ug/L**	**97**	**SW846 8270C**
2,6-Dinitrotoluene	20	19	ug/L	95	SW846 8270C
Di-n-octyl phthalate	20	18	ug/L	89	SW846 8270C
Fluoranthene	20	19	ug/L	95	SW846 8270C
Fluorene	20	16	ug/L	82	SW846 8270C
Hexachlorobenzene	20	17	ug/L	87	SW846 8270C
Hexachlorobutadiene	20	17	ug/L	86	SW846 8270C
Hexachlorocyclopenta-diene	20	17	ug/L	86	SW846 8270C
Hexachloroethane	20	16	ug/L	78	SW846 8270C
Indeno(1,2,3-cd)pyrene	20	19	ug/L	94	SW846 8270C
Isophorone	20	17	ug/L	87	SW846 8270C
2-Methylnaphthalene	20	18	ug/L	90	SW846 8270C
2-Methylphenol	20	15	ug/L	74	SW846 8270C
4-Methylphenol	40	30	ug/L	75	SW846 8270C
Naphthalene	20	15	ug/L	77	SW846 8270C
2-Nitroaniline	20	16	ug/L	82	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTNH1AC **Matrix.....:** WATER
LCS Lot-Sample#: A8C190000-104

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
3-Nitroaniline	20	18	ug/L	91	SW846 8270C
4-Nitroaniline	20	18	ug/L	88	SW846 8270C
Nitrobenzene	20	17	ug/L	83	SW846 8270C
2-Nitrophenol	20	16	ug/L	82	SW846 8270C
4-Nitrophenol	**20**	**11**	**ug/L**	**56**	**SW846 8270C**
N-Nitrosodiphenylamine	20	17	ug/L	87	SW846 8270C
N-Nitrosodi-n-propyl-amine	**20**	**17**	**ug/L**	**83**	**SW846 8270C**
2,2'-oxybis(1-Chloropropa	20	15	ug/L	73	SW846 8270C
Pentachlorophenol	**20**	**12**	**ug/L**	**58**	**SW846 8270C**
Phenanthrene	20	17	ug/L	85	SW846 8270C
Phenol	**20**	**9.5**	**ug/L**	**47**	**SW846 8270C**
Pyrene	**20**	**18**	**ug/L**	**89**	**SW846 8270C**
2,4,5-Trichloro-phenol	20	17	ug/L	87	SW846 8270C
2,4,6-Trichloro-phenol	20	17	ug/L	85	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	76	(27 - 111)
2-Fluorobiphenyl	80	(28 - 110)
Terphenyl-d14	88	(37 - 119)
Phenol-d5	45	(10 - 110)
2-Fluorophenol	61	(10 - 110)
2,4,6-Tribromophenol	87	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\KJTNH1AC.D
Lab Smp Id: kjtnh1ac Client Smp ID: INTRA-LAB CHECK
Inj Date : 20-MAR-2008 12:31
Operator : 001574 Inst ID: a4hp9.i
Smp Info : kjtnh1ac,80320a.b,8270p,1-827042d.sub
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Meth Date : 21-Mar-2008 10:12 ulmanm Quant Type: ISTD
Cal Date : 18-MAR-2008 12:31 Cal File: 9THHH318.D
Als bottle: 7 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	0.50000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
* 1	1,4-Dichlorobenzene-d4	152	3.844	3.846	(1.000)	122793	2.00000	
* 2	Naphthalene-d8	136	4.805	4.807	(1.000)	463577	2.00000	
* 3	Acenaphthene-d10	164	6.103	6.105	(1.000)	290363	2.00000	
* 4	Phenanthrene-d10	188	7.198	7.200	(1.000)	494121	2.00000	
* 5	Chrysene-d12	240	9.174	9.181	(1.000)	513307	2.00000	
* 6	Perylene-d12	264	10.627	10.640	(1.000)	404964	2.00000	
9	Pyridine	79	Compound Not Detected.					
10	N-Nitrosodimethylamine	74	1.916	1.918	(0.498)	183629	2.29575	9.1830
11	Ethyl methacrylate	69	Compound Not Detected.					
12	3-Chloropropionitrile	54	Compound Not Detected.					
13	Malononitrile	66	Compound Not Detected.					
209	Benzaldehyde	77	3.518	3.520	(0.915)	416381	4.10642	16.426(Q)
21	Aniline	93	3.593	3.595	(0.935)	31798	0.17680	0.70721(R)
22	Phenol	94	3.540	3.541	(0.921)	346228	2.37276	9.4910
23	bis(2-Chloroethyl)ether	93	3.620	3.621	(0.942)	429075	3.61618	14.465
24	2-Chlorophenol	128	3.684	3.685	(0.958)	325027	4.20863	16.834
26	1,3-Dichlorobenzene	146	3.801	3.803	(0.989)	336103	3.96303	15.852
27	1,4-Dichlorobenzene	146	3.855	3.856	(1.003)	351994	6.54643	26.186(R)

28 1,2-Dichlorobenzene	146	3.978	3.974 (1.035)	341423	4.22676	16.907
29 Benzyl Alcohol	108	3.930	3.931 (1.022)	207838	3.09703	12.388

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
30	2-Methylphenol	108	3.999	4.001	(1.040)	340543	3.68249	14.730
31	bis(2-Chloroisopropyl)ether	45	4.026	4.027	(1.047)	391188	3.64935	14.597
37	Acetophenone	105	4.138	4.139	(1.076)	571824	3.69513	14.780
32	N-Nitroso-di-n-propylamine	70	4.133	4.129	(1.075)	479780	4.13971	16.559
192	4-Methylphenol	108	4.117	4.118	(1.071)	722827	7.50915	30.036
34	Hexachloroethane	117	4.234	4.236	(1.101)	156102	3.89692	15.588
35	Nitrobenzene	77	4.277	4.278	(0.890)	673130	4.15140	16.606
41	Isophorone	82	4.448	4.449	(0.926)	1161490	4.32919	17.317
42	2-Nitrophenol	139	4.512	4.513	(0.939)	178588	4.12106	16.484(QM)
43	2,4-Dimethylphenol	107	4.517	4.519	(0.940)	454663	3.60437	14.417
44	bis(2-Chloroethoxy)methane	93	4.587	4.588	(0.954)	519414	3.99123	15.965
46	2,4-Toluenediamene	121	Compound Not Detected.					
47	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
48	2,4-Dichlorophenol	162	4.688	4.690	(0.976)	295681	4.24507	16.980
49	Benzoic Acid	122	4.549	4.593	(0.947)	46462	0.80225	3.2090(QM)
50	1,2,4-Trichlorobenzene	180	4.757	4.754	(0.990)	321716	4.29896	17.196
51	Naphthalene	128	4.822	4.823	(1.003)	954058	3.85834	15.433
52	4-Chloroaniline	127	4.848	4.850	(1.009)	191107	1.98332	7.9333(R)
56	Hexachlorobutadiene	225	4.896	4.898	(1.019)	210265	4.31038	17.242
210	Caprolactam	113	5.099	5.117	(1.061)	33810	1.13774	4.5510(Q)
57	1,2,3-Trichlorobenzene	180	Compound Not Detected.					
59	4-Chloro-3-Methylphenol	107	5.190	5.192	(1.080)	411712	4.11818	16.473
62	2-Methylnaphthalene	142	5.334	5.330	(1.110)	653338	4.51564	18.062(R)
63	1-Methylnaphthalene	142	5.409	5.411	(1.126)	603652	3.85670	15.427
64	Hexachlorocyclopentadiene	237	5.441	5.443	(0.891)	250288	4.30518	17.221
66	2,4,6-Trichlorophenol	196	5.532	5.533	(0.906)	244022	4.24572	16.983
67	2,4,5-Trichlorophenol	196	5.564	5.565	(0.912)	257941	4.35779	17.431
211	1,1'-Biphenyl	154	5.671	5.667	(0.929)	853271	3.86428	15.457(Q)
68	1,2,3,5-Tetrachlorobenzene	216	Compound Not Detected.					
70	2-Chloronaphthalene	162	5.697	5.699	(0.933)	668752	4.16618	16.665
73	2-Nitroaniline	65	5.756	5.758	(0.943)	377181	4.08814	16.352
74	1,2,3,4-Tetrachlorobenzene	216	Compound Not Detected.					
76	Dimethylphthalate	163	5.874	5.870	(0.962)	858649	4.50695	18.028
78	2,6-Dinitrotoluene	165	5.927	5.929	(0.971)	195127	4.74282	18.971
79	Acenaphthylene	152	6.007	6.009	(0.984)	1105200	4.12573	16.503
80	1,2-Dinitrobenzene	168	5.975	5.977	(0.979)	96316	4.66088	18.644
81	3-Nitroaniline	138	6.061	6.062	(0.993)	181192	4.54886	18.195
82	Acenaphthene	153	6.130	6.132	(1.004)	703233	4.06678	16.267
83	2,4-Dinitrophenol	184	6.130	6.137	(1.004)	103422	3.67054	14.682(QM)
85	4-Nitrophenol	109	6.162	6.164	(1.010)	133776	2.81761	11.270
86	Dibenzofuran	168	6.253	6.254	(1.025)	988942	4.16572	16.663(R)
87	2,4-Dinitrotoluene	165	6.226	6.228	(1.020)	264544	4.83204	19.328
91	2,3,5,6-Tetrachlorophenol	232	6.306	6.303	(1.033)	201995	3.93384	15.735
93	Diethylphthalate	149	6.381	6.383	(1.046)	875399	4.52011	18.080
94	Fluorene	166	6.509	6.506	(1.067)	847991	4.08284	16.331
95	4-Chlorophenyl-phenylether	204	6.488	6.490	(1.063)	434382	4.64390	18.576
96	4-Nitroaniline	138	6.509	6.511	(1.067)	211611	4.42161	17.686
98	4,6-Dinitro-2-methylphenol	198	6.525	6.527	(0.907)	153662	4.43502	17.740
99	N-Nitrosodiphenylamine	169	6.573	6.575	(0.913)	586542	4.33323	17.333
100	1,2-Diphenylhydrazine	77	6.605	6.607	(0.918)	1500863	4.29561	17.182
106	4-Bromophenyl-phenylether	248	6.851	6.847	(0.952)	238567	4.65167	18.607
107	Hexachlorobenzene	284	6.910	6.911	(0.960)	227210	4.35653	17.426

212 Atrazine	200	6.942	6.943 (0.964)	269976	4.66673	18.667(Q)
111 Pentachlorophenol	266	7.049	7.050 (0.979)	98371	2.90579	11.623

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
115	Phenanthrene	178	7.214	7.216	(1.002)	1272676	4.25144	17.006
116	Anthracene	178	7.252	7.253	(1.007)	1303893	4.39681	17.587
119	Carbazole	167	7.359	7.360	(1.022)	1114977	4.47037	17.881
120	Di-n-Butylphthalate	149	7.561	7.563	(1.050)	1458129	4.62758	18.510
123	Fluoranthene	202	8.090	8.092	(1.124)	1455069	4.76056	19.042
124	Benzidine	184	Compound Not Detected.					
125	Pyrene	202	8.261	8.268	(0.900)	1439931	4.42691	17.708
131	Butylbenzylphthalate	149	8.678	8.685	(0.946)	625176	4.45074	17.803
133	3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
135	3,3'-Dichlorobenzidine	252	9.116	9.128	(0.994)	380755	3.27738	13.110
136	Benzo(a)Anthracene	228	9.164	9.171	(0.999)	1331792	4.17459	16.698
137	Chrysene	228	9.196	9.203	(1.002)	1274826	4.46751	17.870
138	4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
139	bis(2-ethylhexyl)Phthalate	149	9.094	9.101	(0.991)	891496	4.50761	18.030
140	Di-n-octylphthalate	149	9.645	9.651	(0.908)	1407031	4.46902	17.876
141	Benzo(b)fluoranthene	252	10.173	10.186	(0.957)	1309758	4.51971	18.079
142	Benzo(k)fluoranthene	252	10.205	10.212	(0.960)	1283292	4.33738	17.350
146	Benzo(a)pyrene	252	10.563	10.575	(0.994)	1146608	4.34600	17.384
149	Indeno(1,2,3-cd)pyrene	276	12.235	12.247	(1.151)	1269844	4.68834	18.753
150	Dibenz(a,h)anthracene	278	12.246	12.263	(1.152)	1099589	4.75455	19.018
151	Benzo(g,h,i)perylene	276	12.732	12.744	(1.198)	1025648	4.56978	18.279
198	1,4-Dioxane	88	1.713	1.715	(0.446)	81029	1.94915	7.7966
$ 154	Nitrobenzene-d5	82	4.261	4.262	(0.887)	598908	3.77580	15.103
$ 155	2-Fluorobiphenyl	172	5.591	5.592	(0.916)	745048	4.01168	16.047
$ 156	Terphenyl-d14	244	8.341	8.343	(0.909)	955669	4.40767	17.631
$ 157	Phenol-d5	99	3.529	3.531	(0.918)	465994	3.39015	13.561
$ 158	2-Fluorophenol	112	2.840	2.842	(0.739)	402672	4.54988	18.200
$ 159	2,4,6-Tribromophenol	330	6.686	6.682	(1.095)	141534	6.49316	25.973
$ 186	2-Chlorophenol-d4	132	3.673	3.675	(0.956)	449909	6.23770	24.951
$ 187	1,2-Dichlorobenzene-d4	152	3.962	3.963	(1.031)	197546	3.62188	14.488
M 195	Cresols, total	100				1063370	11.1916	44.766
101	Diphenylamine	169	6.573	6.575	(0.913)	586542	4.33323	17.333

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

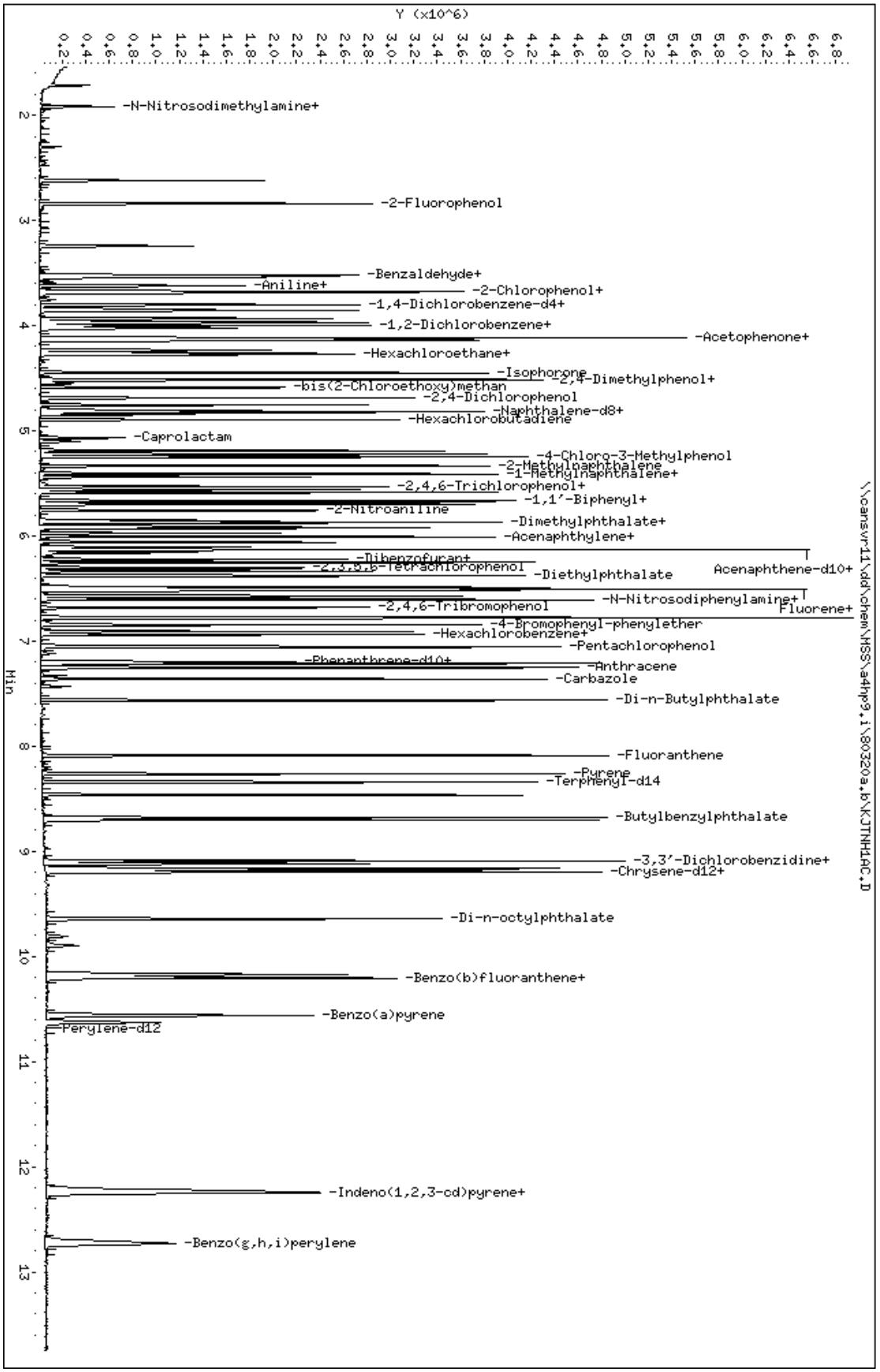
Instrument ID: a4hp9.i
Lab File ID: KJTNH1AC.D
Lab Smp Id: kjtnh1ac
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Misc Info:

Calibration Date: 20-MAR-2008
Calibration Time: 10:48
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	104755	52378	209510	122793	17.22
2 Naphthalene-d8	382651	191326	765302	463577	21.15
3 Acenaphthene-d10	239536	119768	479072	290363	21.22
4 Phenanthrene-d10	417645	208823	835290	494121	18.31
5 Chrysene-d12	418554	209277	837108	513307	22.64
6 Perylene-d12	338155	169078	676310	404964	19.76

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.85	3.35	4.35	3.84	-0.04
2 Naphthalene-d8	4.81	4.31	5.31	4.81	-0.03
3 Acenaphthene-d10	6.11	5.61	6.61	6.10	-0.03
4 Phenanthrene-d10	7.20	6.70	7.70	7.20	-0.02
5 Chrysene-d12	9.18	8.68	9.68	9.17	-0.08
6 Perylene-d12	10.64	10.14	11.14	10.63	-0.12

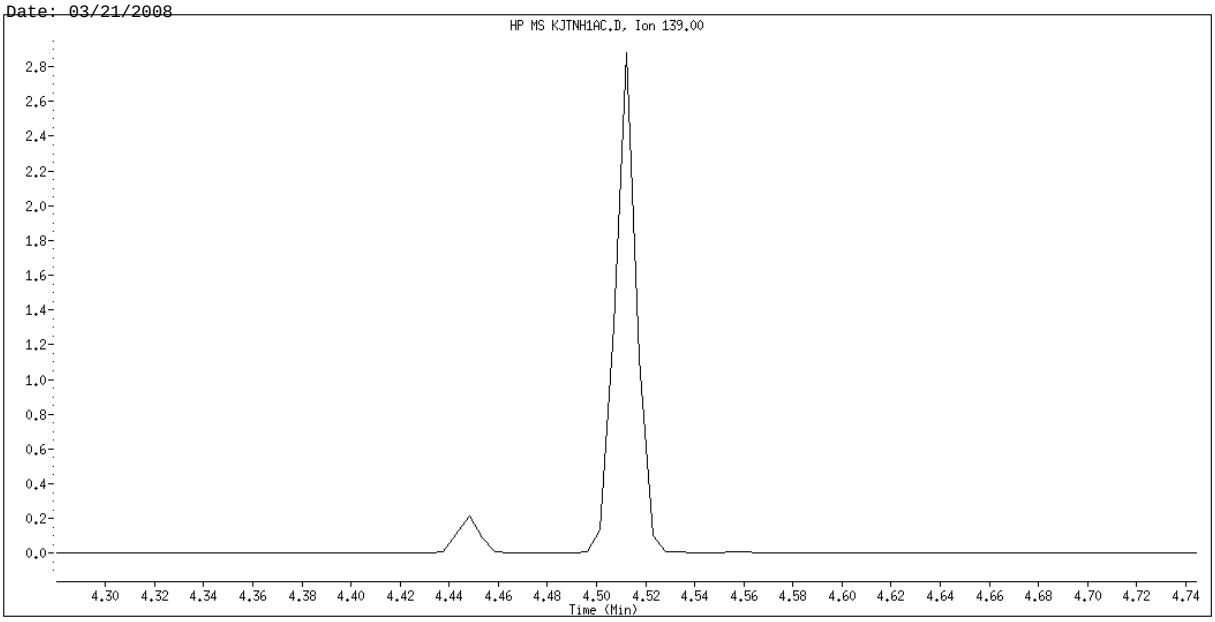
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



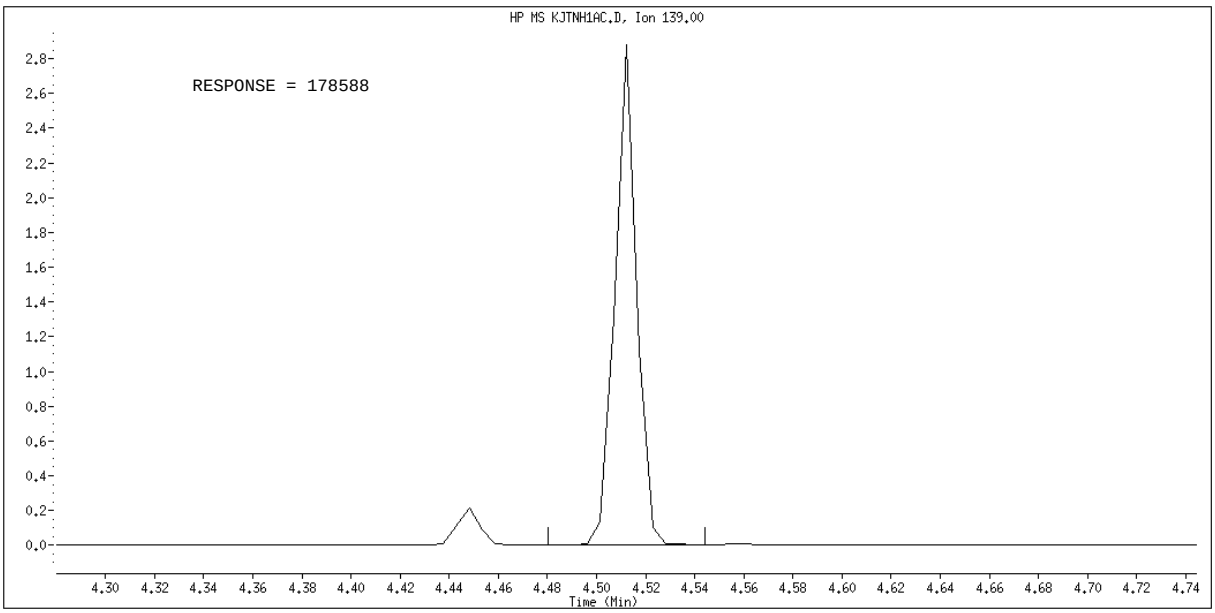
Data File: \\cansvr11\dd\chem\MSS\a4hp9,i\80320a,b\KJTNH1AC,D
Date : 20-MAR-2008 12:31
Client ID: INTRA-LAB CHECK
Sample Info: kjtnh1ac,80320a,b,8270p,1-8270d2d,sub
Volume Injected (uL): 0.5
Column phase: db5.625

Instrument: a4hp9,i
Operator: 001574
Column diameter: 0.32

Data File Name: KJTNH1AC.D
Inj. Date and Time: 20-MAR-2008 12:31
Instrument ID: a4hp9.i
Client ID: INTRA-LAB CHECK
Compound Name: 2-Nitrophenol
CAS #: 88-75-5
Report Date: 03/21/2008



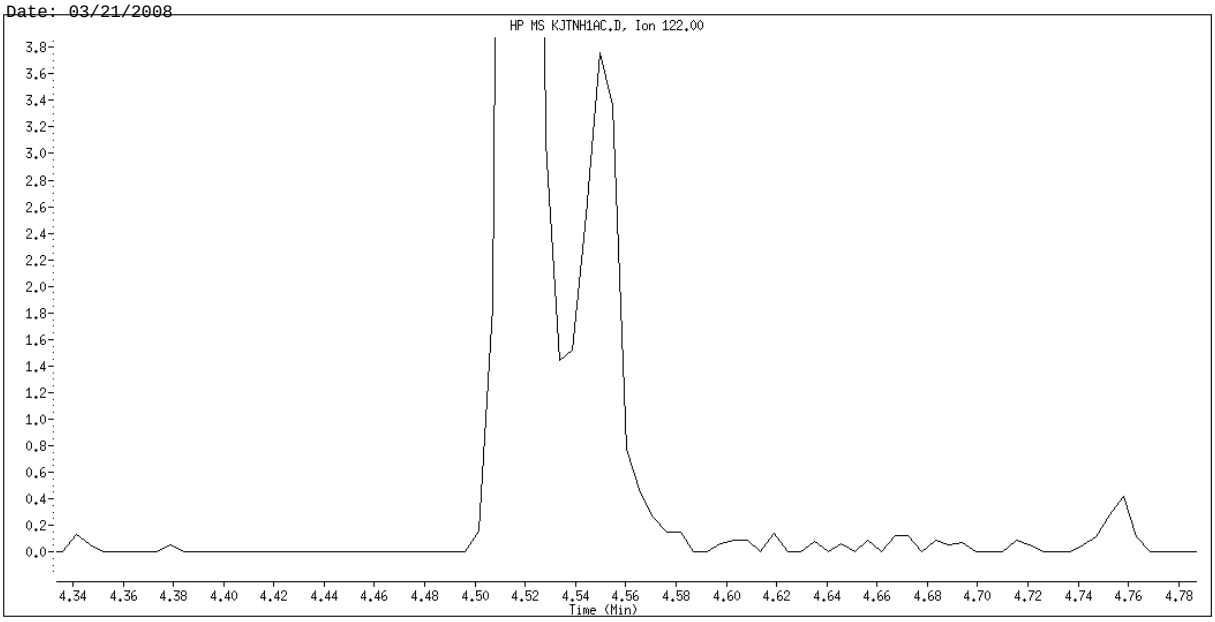
Original Integration



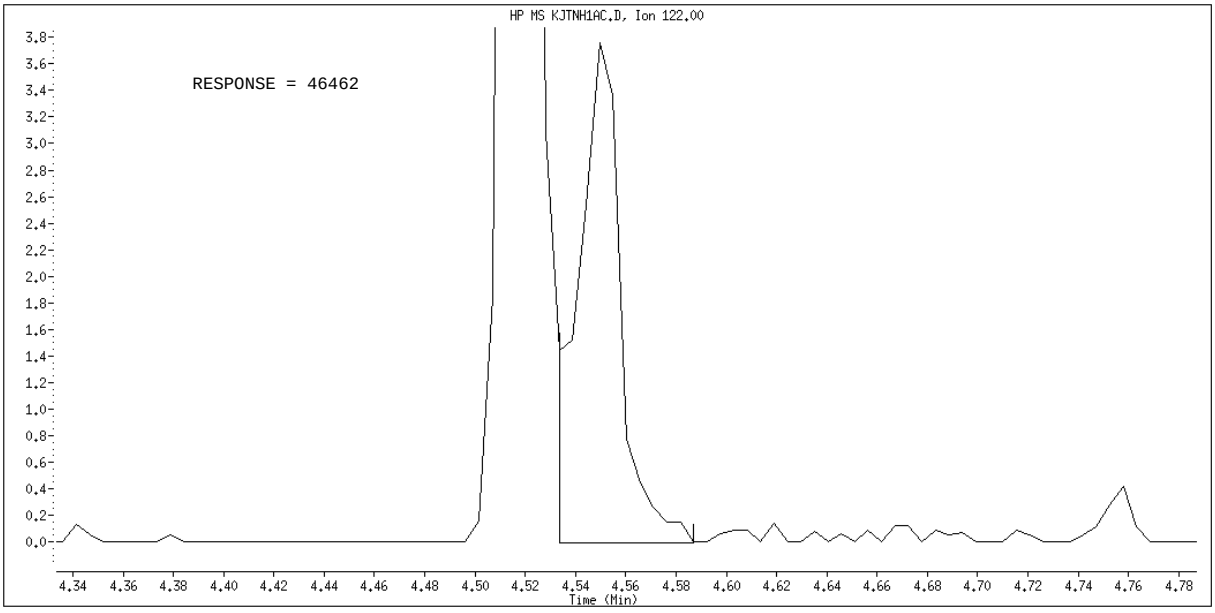
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

Data File Name: KJTNH1AC.D
Inj. Date and Time: 20-MAR-2008 12:31
Instrument ID: a4hp9.i
Client ID: INTRA-LAB CHECK
Compound Name: Benzoic Acid
CAS #: 65-85-0
Report Date: 03/21/2008



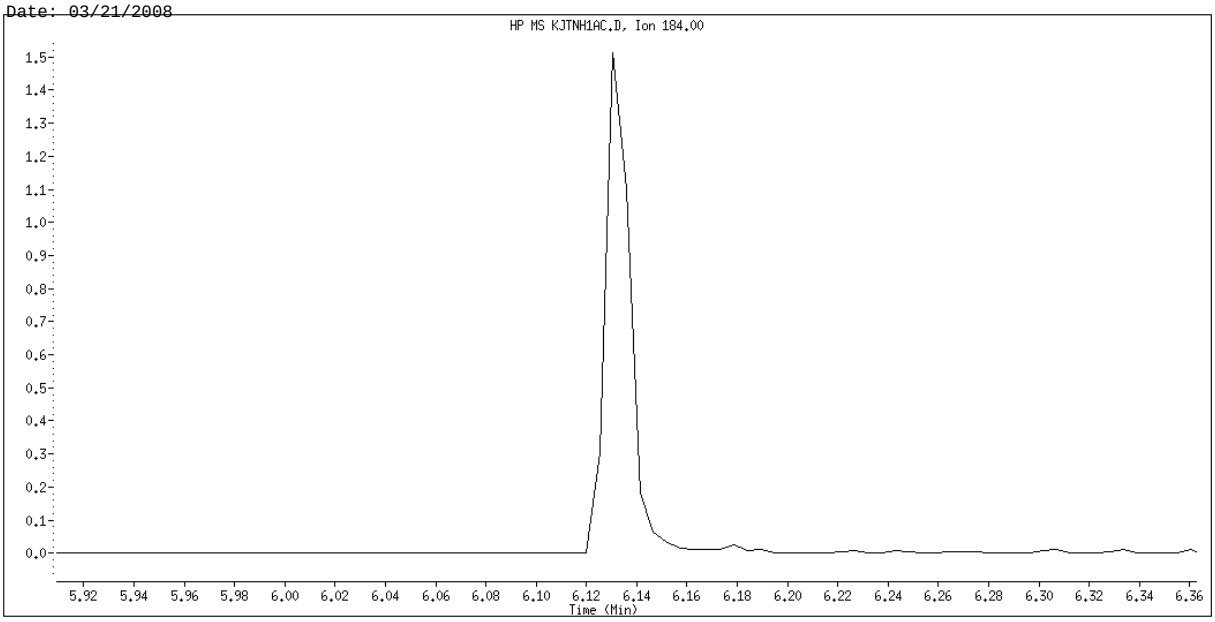
Original Integration



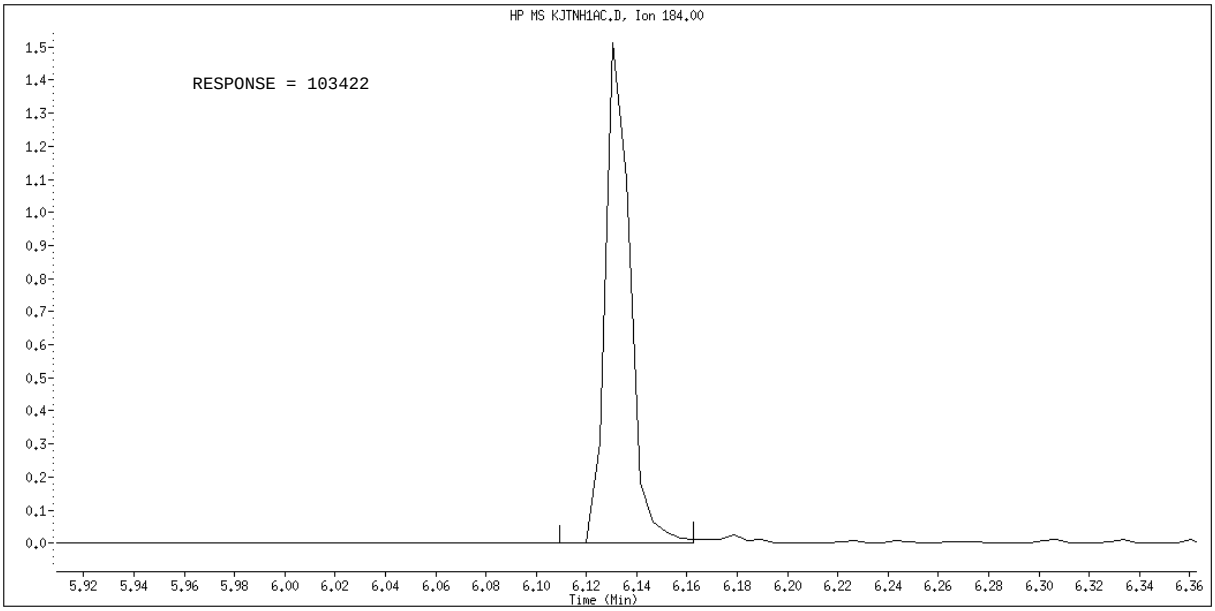
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

Data File Name: KJTNH1AC.D
Inj. Date and Time: 20-MAR-2008 12:31
Instrument ID: a4hp9.i
Client ID: INTRA-LAB CHECK
Compound Name: 2,4-Dinitrophenol
CAS #: 51-28-5
Report Date: 03/21/2008



Original Integration



Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKJ61AA **Matrix.....:** WATER
MB Lot-Sample #: A8C140000-037

Prep Date.....: 03/14/08 **Final Wgt/Vol..:** 2 mL
Analysis Date..: 03/18/08 **Prep Batch #...:** 8074037
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Atrazine	ND	10	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	**0.93 J**	**10**	**ug/L**	**SW846 8270C**
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKJ61AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	0.0 *	(27 - 111)
2-Fluorobiphenyl	3.9 *	(28 - 110)
Terphenyl-d14	96	(37 - 119)
Phenol-d5	0.0 *	(10 - 110)
2-Fluorophenol	0.0 *	(10 - 110)
2,4,6-Tribromophenol	47	(22 - 120)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKJ61AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\KJKJ61AA.D
Lab Smp Id: KJKJ61AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 18-MAR-2008 11:52
Operator : 001710 Inst ID: a4hp8.i
Smp Info : kjkj61aa,80318a.b,8270p,1-827042d.sub
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\8270P.m
Meth Date : 19-Mar-2008 11:31 gruberj Quant Type: ISTD
Cal Date : 18-FEB-2008 17:50 Cal File: 8AL0218.D
Als bottle: 3 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	0.50000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
*	1 1,4-Dichlorobenzene-d4	152	3.431	3.435	(1.000)	127219	2.00000		(Q)
*	2 Naphthalene-d8	136	4.326	4.324	(1.000)	507047	2.00000		
*	3 Acenaphthene-d10	164	5.591	5.594	(1.000)	295491	2.00000		
*	4 Phenanthrene-d10	188	6.677	6.681	(1.000)	536018	2.00000		
*	5 Chrysene-d12	240	8.692	8.710	(1.000)	586269	2.00000		
*	6 Perylene-d12	264	10.106	10.119	(1.000)	549612	2.00000		
	9 Pyridine	79	Compound Not Detected.						
	10 N-Nitrosodimethylamine	74	Compound Not Detected.						
	11 Ethyl methacrylate	69	Compound Not Detected.						
	12 3-Chloropropionitrile	54	Compound Not Detected.						
	13 Malononitrile	66	Compound Not Detected.						
	209 Benzaldehyde	77	Compound Not Detected.						
	21 Aniline	93	Compound Not Detected.						
	22 Phenol	94	Compound Not Detected.						
	23 bis(2-Chloroethyl)ether	93	Compound Not Detected.						
	24 2-Chlorophenol	128	Compound Not Detected.						
	26 1,3-Dichlorobenzene	146	Compound Not Detected.						
	27 1,4-Dichlorobenzene	146	Compound Not Detected.						

28	1,2-Dichlorobenzene	146	Compound Not Detected.
29	Benzyl Alcohol	108	Compound Not Detected.

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
30	2-Methylphenol	108	Compound Not Detected.					
31	bis(2-Chloroisopropyl)ether	45	Compound Not Detected.					
37	Acetophenone	105	Compound Not Detected.					
32	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
192	4-Methylphenol	108	Compound Not Detected.					
34	Hexachloroethane	117	Compound Not Detected.					
35	Nitrobenzene	77	Compound Not Detected.					
41	Isophorone	82	Compound Not Detected.					
42	2-Nitrophenol	139	Compound Not Detected.					
43	2,4-Dimethylphenol	107	Compound Not Detected.					
44	bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
46	2,4-Toluenediamene	121	Compound Not Detected.					
47	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
48	2,4-Dichlorophenol	162	Compound Not Detected.					
49	Benzoic Acid	122	Compound Not Detected.					
50	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
51	Naphthalene	128	Compound Not Detected.					
52	4-Chloroaniline	127	Compound Not Detected.					
56	Hexachlorobutadiene	225	Compound Not Detected.					
210	Caprolactam	113	Compound Not Detected.					
57	1,2,3-Trichlorobenzene	180	Compound Not Detected.					
59	4-Chloro-3-Methylphenol	107	Compound Not Detected.					
62	2-Methylnaphthalene	142	Compound Not Detected.					
63	1-Methylnaphthalene	142	Compound Not Detected.					
64	Hexachlorocyclopentadiene	237	Compound Not Detected.					
66	2,4,6-Trichlorophenol	196	Compound Not Detected.					
67	2,4,5-Trichlorophenol	196	Compound Not Detected.					
211	1,1'-Biphenyl	154	Compound Not Detected.					
68	1,2,3,5-Tetrachlorobenzene	216	Compound Not Detected.					
70	2-Chloronaphthalene	162	Compound Not Detected.					
73	2-Nitroaniline	65	Compound Not Detected.					
74	1,2,3,4-Tetrachlorobenzene	216	Compound Not Detected.					
76	Dimethylphthalate	163	Compound Not Detected.					
78	2,6-Dinitrotoluene	165	Compound Not Detected.					
79	Acenaphthylene	152	Compound Not Detected.					
80	1,2-Dinitrobenzene	168	Compound Not Detected.					
81	3-Nitroaniline	138	Compound Not Detected.					
82	Acenaphthene	153	Compound Not Detected.					
83	2,4-Dinitrophenol	184	Compound Not Detected.					
85	4-Nitrophenol	109	Compound Not Detected.					
86	Dibenzofuran	168	Compound Not Detected.					
87	2,4-Dinitrotoluene	165	Compound Not Detected.					
91	2,3,5,6-Tetrachlorophenol	232	Compound Not Detected.					
93	Diethylphthalate	149	Compound Not Detected.					
94	Fluorene	166	Compound Not Detected.					
95	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
96	4-Nitroaniline	138	Compound Not Detected.					
98	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
99	N-Nitrosodiphenylamine	169	Compound Not Detected.					
100	1,2-Diphenylhydrazine	77	Compound Not Detected.					
106	4-Bromophenyl-phenylether	248	Compound Not Detected.					
107	Hexachlorobenzene	284	Compound Not Detected.					

212	Atrazine	200	Compound Not Detected.
111	Pentachlorophenol	266	Compound Not Detected.

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
115	Phenanthrene	178	Compound Not Detected.					
116	Anthracene	178	Compound Not Detected.					
119	Carbazole	167	Compound Not Detected.					
120	Di-n-Butylphthalate	149	Compound Not Detected.					
123	Fluoranthene	202	Compound Not Detected.					
124	Benzidine	184	Compound Not Detected.					
125	Pyrene	202	Compound Not Detected.					
131	Butylbenzylphthalate	149	Compound Not Detected.					
133	3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
135	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
136	Benzo(a)Anthracene	228	Compound Not Detected.					
137	Chrysene	228	Compound Not Detected.					
138	4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
139	bis(2-ethylhexyl)Phthalate	149	8.630	8.643	(0.993)	39172	0.23226	0.92905
140	Di-n-octylphthalate	149	Compound Not Detected.					
141	Benzo(b)fluoranthene	252	Compound Not Detected.					
142	Benzo(k)fluoranthene	252	Compound Not Detected.					
146	Benzo(a)pyrene	252	Compound Not Detected.					
149	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
150	Dibenz(a,h)anthracene	278	Compound Not Detected.					
151	Benzo(g,h,i)perylene	276	Compound Not Detected.					
198	1,4-Dioxane	88	Compound Not Detected.					
$ 154	Nitrobenzene-d5	82	Compound Not Detected.					
$ 155	2-Fluorobiphenyl	172	5.086	5.089	(0.910)	36408	0.19593	0.78373
$ 156	Terphenyl-d14	244	7.841	7.844	(0.902)	1083593	4.79482	19.179
$ 157	Phenol-d5	99	Compound Not Detected.					
$ 158	2-Fluorophenol	112	Compound Not Detected.					
$ 159	2,4,6-Tribromophenol	330	6.163	6.166	(1.102)	88587	3.52552	14.102
$ 186	2-Chlorophenol-d4	132	Compound Not Detected.					
$ 187	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
M 195	Cresols, total	100	Compound Not Detected.					
101	Diphenylamine	169	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

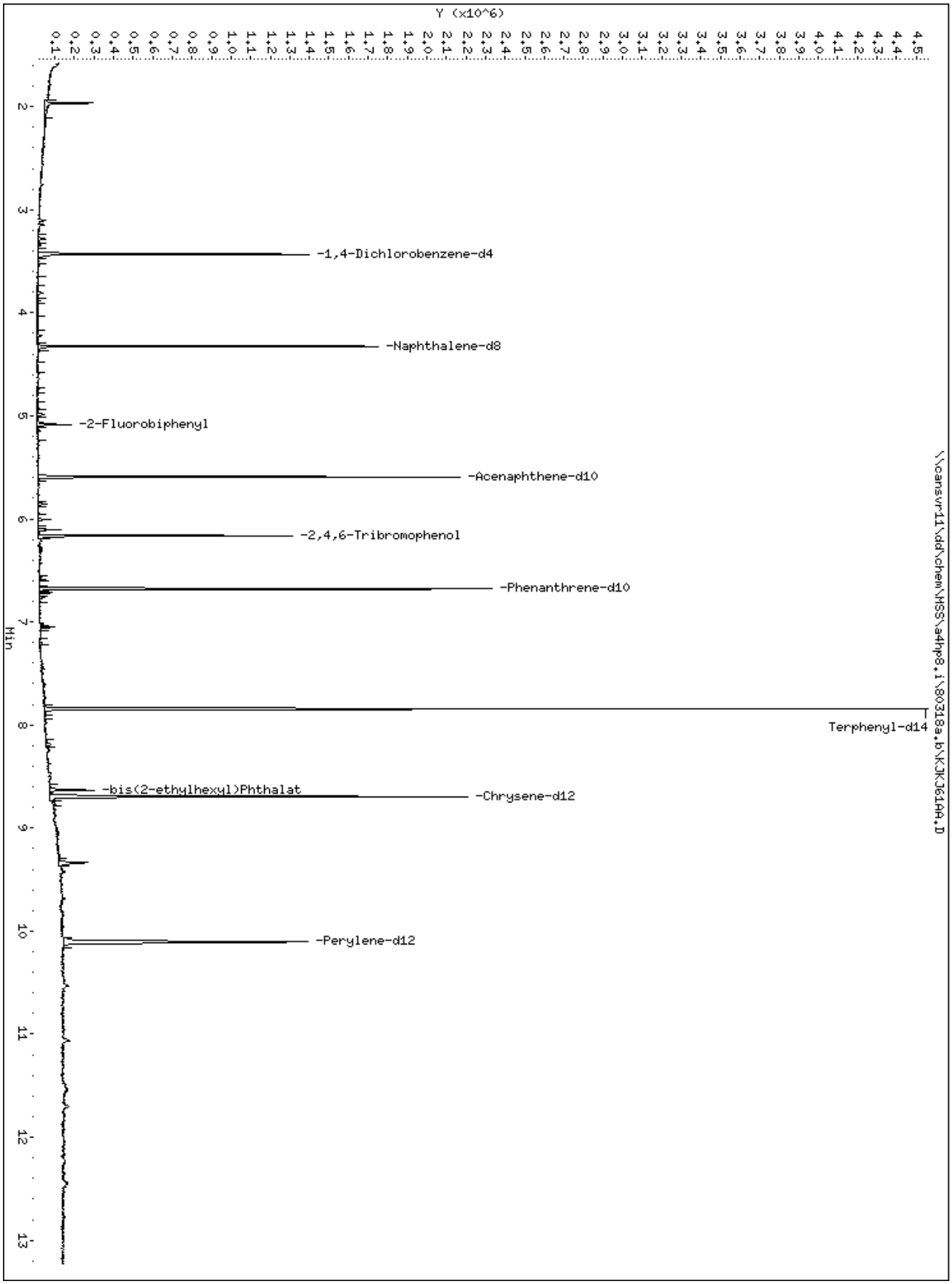
Instrument ID: a4hp8.i
Lab File ID: KJKJ61AA.D
Lab Smp Id: KJKJ61AA
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\8270P.m
Misc Info:

Calibration Date: 18-MAR-2008
Calibration Time: 11:33
Client Smp ID: INTRA-LAB BLANK
Level: LOW
Sample Type: WATER

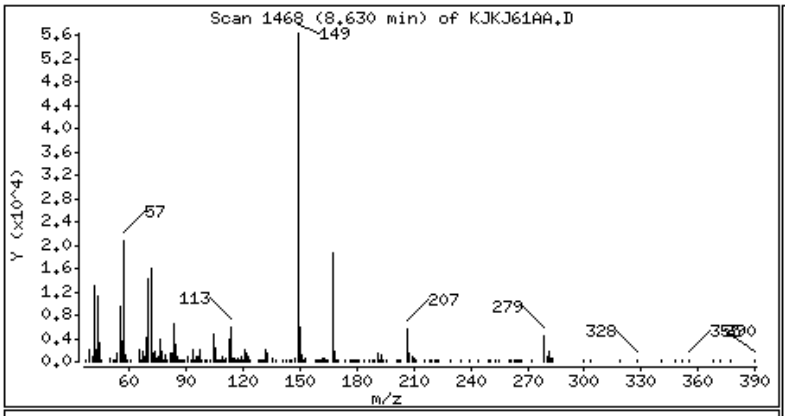
		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	134594	67297	269188	127219	-5.48
2 Naphthalene-d8	540972	270486	1081944	507047	-6.27
3 Acenaphthene-d10	323762	161881	647524	295491	-8.73
4 Phenanthrene-d10	590518	295259	1181036	536018	-9.23
5 Chrysene-d12	670238	335119	1340476	586269	-12.53
6 Perylene-d12	605727	302864	1211454	549612	-9.26

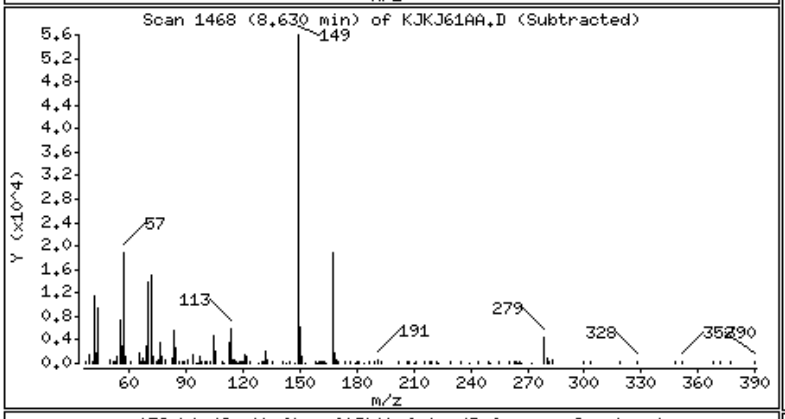
		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.44	2.94	3.94	3.43	-0.09
2 Naphthalene-d8	4.32	3.82	4.82	4.33	0.04
3 Acenaphthene-d10	5.59	5.09	6.09	5.59	-0.06
4 Phenanthrene-d10	6.68	6.18	7.18	6.68	-0.05
5 Chrysene-d12	8.71	8.21	9.21	8.69	-0.20
6 Perylene-d12	10.12	9.62	10.62	10.11	-0.13

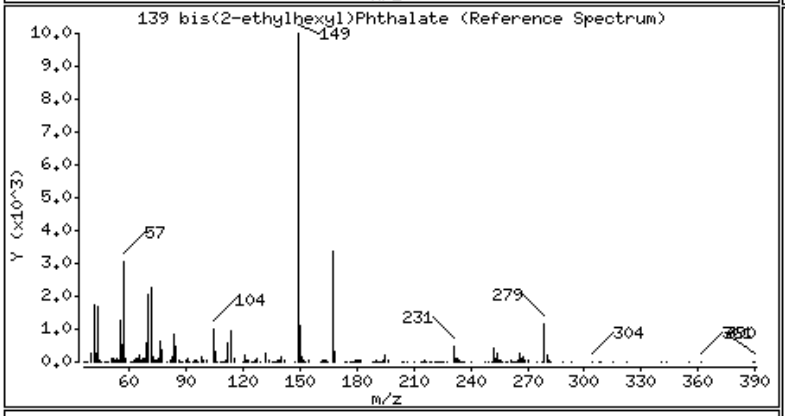
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

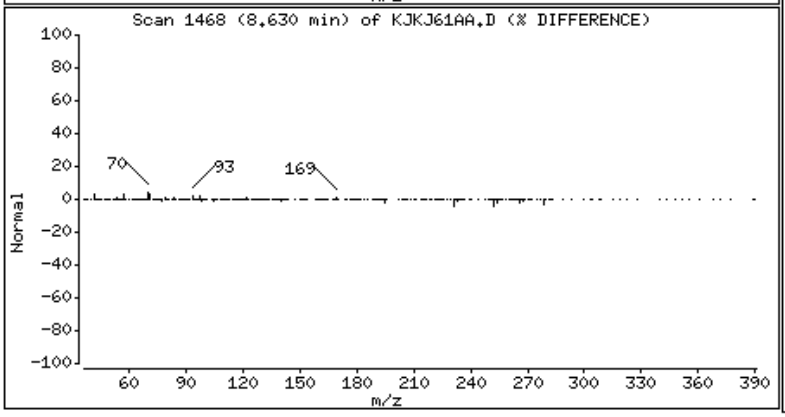

Y (x10^6)
Min
-1,4-Dichlorobenzene-d4
-Naphthalene-d8
-2-Fluorobiphenyl
-Acenaphthene-d10
-2,4,6-Tribromophenol
-Phenanthrene-d10
Terphenyl-d14
-bis(2-ethylhexyl)Phthalat
-Chrysene-d12
-Perylene-d12
\\cansvr11\dd\chem\HSS\a4hp8,i\80318a,b\KJKJ610A.D

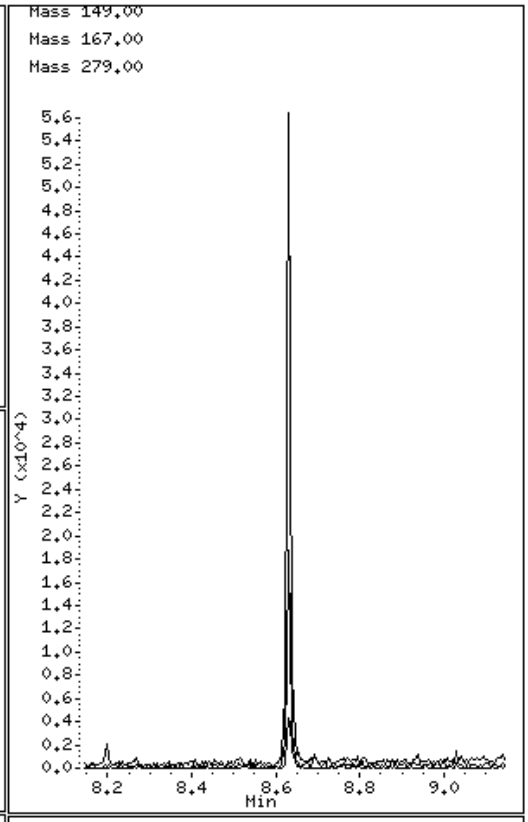
139 bis(2-ethylhexyl)Phthalate

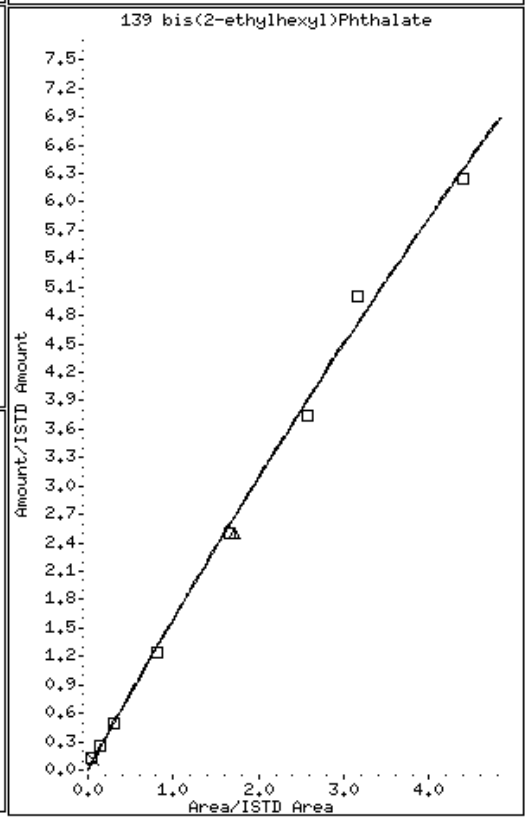












METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTNH1AA **Matrix.....:** WATER
MB Lot-Sample #: A8C190000-104

Prep Date.....: 03/19/08 **Final Wgt/Vol..:** 2 mL
Analysis Date..: 03/20/08 **Prep Batch #...:** 8079104
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Atrazine	ND	10	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJTNH1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	66	(27 - 111)
2-Fluorobiphenyl	67	(28 - 110)
Terphenyl-d14	69	(37 - 119)
Phenol-d5	35	(10 - 110)
2-Fluorophenol	50	(10 - 110)
2,4,6-Tribromophenol	75	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\KJTNH1AA.D
Lab Smp Id: kjtnh1aa Client Smp ID: INTRA-LAB BLANK
Inj Date : 20-MAR-2008 12:11
Operator : 001574 Inst ID: a4hp9.i
Smp Info : kjtnh1aa,80320a.b,8270p,1-827042d.sub
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Meth Date : 21-Mar-2008 10:12 ulmanm Quant Type: ISTD
Cal Date : 18-MAR-2008 12:31 Cal File: 9THHH318.D
Als bottle: 6 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	0.50000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 1 1,4-Dichlorobenzene-d4	152	3.842	3.846	(1.000)	124638	2.00000		(Q)
* 2 Naphthalene-d8	136	4.803	4.807	(1.000)	473801	2.00000		
* 3 Acenaphthene-d10	164	6.107	6.105	(1.000)	287507	2.00000		
* 4 Phenanthrene-d10	188	7.196	7.200	(1.000)	489037	2.00000		
* 5 Chrysene-d12	240	9.172	9.181	(1.000)	511098	2.00000		
* 6 Perylene-d12	264	10.625	10.640	(1.000)	414251	2.00000		
9 Pyridine	79	Compound Not Detected.						
10 N-Nitrosodimethylamine	74	Compound Not Detected.						
11 Ethyl methacrylate	69	Compound Not Detected.						
12 3-Chloropropionitrile	54	Compound Not Detected.						
13 Malononitrile	66	Compound Not Detected.						
209 Benzaldehyde	77	Compound Not Detected.						
21 Aniline	93	Compound Not Detected.						
22 Phenol	94	Compound Not Detected.						
23 bis(2-Chloroethyl)ether	93	Compound Not Detected.						
24 2-Chlorophenol	128	Compound Not Detected.						
26 1,3-Dichlorobenzene	146	Compound Not Detected.						
27 1,4-Dichlorobenzene	146	Compound Not Detected.						

28	1,2-Dichlorobenzene	146	Compound Not Detected.
29	Benzyl Alcohol	108	Compound Not Detected.

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)
30	2-Methylphenol	108	Compound Not Detected.					
31	bis(2-Chloroisopropyl)ether	45	Compound Not Detected.					
37	Acetophenone	105	Compound Not Detected.					
32	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
192	4-Methylphenol	108	Compound Not Detected.					
34	Hexachloroethane	117	Compound Not Detected.					
35	Nitrobenzene	77	Compound Not Detected.					
41	Isophorone	82	Compound Not Detected.					
42	2-Nitrophenol	139	Compound Not Detected.					
43	2,4-Dimethylphenol	107	Compound Not Detected.					
44	bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
46	2,4-Toluenediamene	121	Compound Not Detected.					
47	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
48	2,4-Dichlorophenol	162	Compound Not Detected.					
49	Benzoic Acid	122	Compound Not Detected.					
50	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
51	Naphthalene	128	Compound Not Detected.					
52	4-Chloroaniline	127	Compound Not Detected.					
56	Hexachlorobutadiene	225	Compound Not Detected.					
210	Caprolactam	113	Compound Not Detected.					
57	1,2,3-Trichlorobenzene	180	Compound Not Detected.					
59	4-Chloro-3-Methylphenol	107	Compound Not Detected.					
62	2-Methylnaphthalene	142	Compound Not Detected.					
63	1-Methylnaphthalene	142	Compound Not Detected.					
64	Hexachlorocyclopentadiene	237	Compound Not Detected.					
66	2,4,6-Trichlorophenol	196	Compound Not Detected.					
67	2,4,5-Trichlorophenol	196	Compound Not Detected.					
211	1,1'-Biphenyl	154	Compound Not Detected.					
68	1,2,3,5-Tetrachlorobenzene	216	Compound Not Detected.					
70	2-Chloronaphthalene	162	Compound Not Detected.					
73	2-Nitroaniline	65	Compound Not Detected.					
74	1,2,3,4-Tetrachlorobenzene	216	Compound Not Detected.					
76	Dimethylphthalate	163	Compound Not Detected.					
78	2,6-Dinitrotoluene	165	Compound Not Detected.					
79	Acenaphthylene	152	Compound Not Detected.					
80	1,2-Dinitrobenzene	168	Compound Not Detected.					
81	3-Nitroaniline	138	Compound Not Detected.					
82	Acenaphthene	153	Compound Not Detected.					
83	2,4-Dinitrophenol	184	Compound Not Detected.					
85	4-Nitrophenol	109	Compound Not Detected.					
86	Dibenzofuran	168	Compound Not Detected.					
87	2,4-Dinitrotoluene	165	Compound Not Detected.					
91	2,3,5,6-Tetrachlorophenol	232	Compound Not Detected.					
93	Diethylphthalate	149	Compound Not Detected.					
94	Fluorene	166	Compound Not Detected.					
95	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
96	4-Nitroaniline	138	Compound Not Detected.					
98	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
99	N-Nitrosodiphenylamine	169	Compound Not Detected.					
100	1,2-Diphenylhydrazine	77	Compound Not Detected.					
106	4-Bromophenyl-phenylether	248	Compound Not Detected.					
107	Hexachlorobenzene	284	Compound Not Detected.					

212	Atrazine	200	Compound Not Detected.
111	Pentachlorophenol	266	Compound Not Detected.

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
115 Phenanthrene	178	Compound Not Detected.					
116 Anthracene	178	Compound Not Detected.					
119 Carbazole	167	Compound Not Detected.					
120 Di-n-Butylphthalate	149	Compound Not Detected.					
123 Fluoranthene	202	Compound Not Detected.					
124 Benzidine	184	Compound Not Detected.					
125 Pyrene	202	Compound Not Detected.					
131 Butylbenzylphthalate	149	Compound Not Detected.					
133 3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
135 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
136 Benzo(a)Anthracene	228	Compound Not Detected.					
137 Chrysene	228	Compound Not Detected.					
138 4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
139 bis(2-ethylhexyl)Phthalate	149	Compound Not Detected.					
140 Di-n-octylphthalate	149	Compound Not Detected.					
141 Benzo(b)fluoranthene	252	Compound Not Detected.					
142 Benzo(k)fluoranthene	252	Compound Not Detected.					
146 Benzo(a)pyrene	252	Compound Not Detected.					
149 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
150 Dibenz(a,h)anthracene	278	Compound Not Detected.					
151 Benzo(g,h,i)perylene	276	Compound Not Detected.					
198 1,4-Dioxane	88	Compound Not Detected.					
$ 154 Nitrobenzene-d5	82	4.259	4.262	(0.887)	534898	3.29949	13.198
$ 155 2-Fluorobiphenyl	172	5.588	5.592	(0.915)	617196	3.35628	13.425
$ 156 Terphenyl-d14	244	8.339	8.343	(0.909)	746477	3.45773	13.831
$ 157 Phenol-d5	99	3.527	3.531	(0.918)	364365	2.61155	10.446
$ 158 2-Fluorophenol	112	2.838	2.842	(0.739)	339636	3.78082	15.123
$ 159 2,4,6-Tribromophenol	330	6.683	6.682	(1.094)	121287	5.61956	22.478
$ 186 2-Chlorophenol-d4	132	3.671	3.675	(0.956)	383014	5.23164	20.926
$ 187 1,2-Dichlorobenzene-d4	152	3.965	3.963	(1.032)	170649	3.08242	12.330
M 195 Cresols, total	100	Compound Not Detected.					
101 Diphenylamine	169	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp9.i
Lab File ID: KJTNH1AA.D
Lab Smp Id: kjtnh1aa
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Misc Info:

Calibration Date: 20-MAR-2008
Calibration Time: 10:48
Client Smp ID: INTRA-LAB BLANK
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	104755	52378	209510	124638	18.98
2 Naphthalene-d8	382651	191326	765302	473801	23.82
3 Acenaphthene-d10	239536	119768	479072	287507	20.03
4 Phenanthrene-d10	417645	208823	835290	489037	17.09
5 Chrysene-d12	418554	209277	837108	511098	22.11
6 Perylene-d12	338155	169078	676310	414251	22.50

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.85	3.35	4.35	3.84	-0.10
2 Naphthalene-d8	4.81	4.31	5.31	4.80	-0.08
3 Acenaphthene-d10	6.11	5.61	6.61	6.11	0.03
4 Phenanthrene-d10	7.20	6.70	7.70	7.20	-0.05
5 Chrysene-d12	9.18	8.68	9.68	9.17	-0.10
6 Perylene-d12	10.64	10.14	11.14	10.63	-0.14

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\KJTNH1AA.D

Page 1

Date : 20-MAR-2008 12:11

Client ID: INTRA-LAB BLANK

Instrument: a4hp9.i

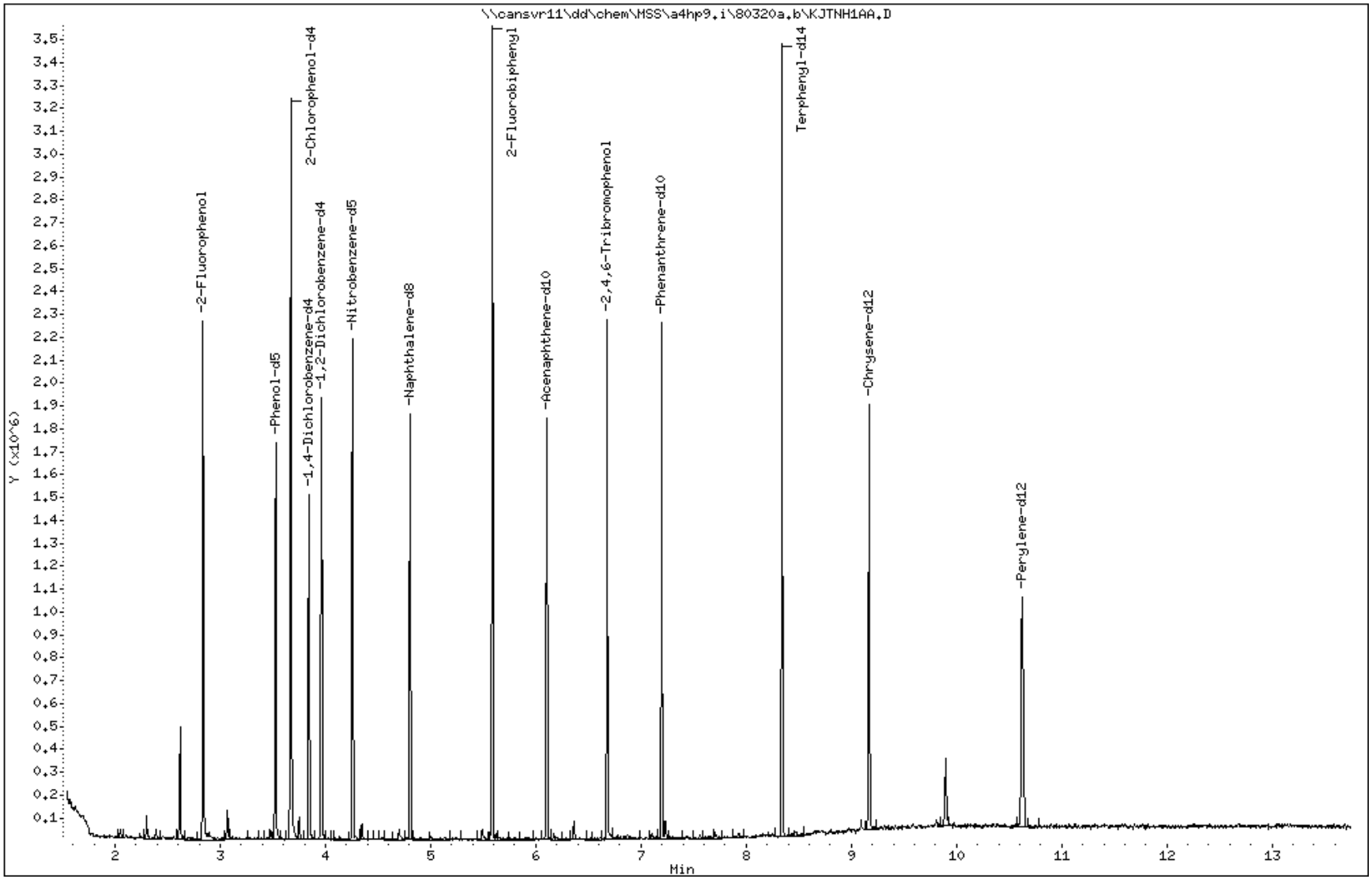
Sample Info: kjtnh1aa,80320a.b,8270p,1-827042d.sub

Volume Injected (uL): 0.5

Operator: 001574

Column phase: db5.625

Column diameter: 0.32



MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AT-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AU-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8074037
Dilution Factor: 1 **Initial Wgt/Vol:** 510 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichloro-benzene	**64**	**(25 - 110)**			**SW846 8270C**
	55	**(25 - 110)**	**16**	**(0-30)**	**SW846 8270C**
Acenaphthene	**62**	**(36 - 110)**			**SW846 8270C**
	61	**(36 - 110)**	**1.6**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**96**	**(17 - 110)**			**SW846 8270C**
	85	**(17 - 110)**	**12**	**(0-30)**	**SW846 8270C**
Acenaphthylene	66	(39 - 110)			SW846 8270C
	65	(39 - 110)	1.5	(0-30)	SW846 8270C
Acetophenone	68	(50 - 130)			SW846 8270C
	61	(50 - 130)	11	(0-30)	SW846 8270C
Anthracene	70	(46 - 110)			SW846 8270C
	73	(46 - 110)	3.9	(0-30)	SW846 8270C
Atrazine	91	(50 - 130)			SW846 8270C
	93	(50 - 130)	1.8	(0-30)	SW846 8270C
Benzaldehyde	84	(10 - 130)			SW846 8270C
	75	(10 - 130)	12	(0-30)	SW846 8270C
Benzo(a)anthracene	71	(52 - 110)			SW846 8270C
	75	(52 - 110)	4.7	(0-30)	SW846 8270C
Benzo(b)fluoranthene	71	(33 - 114)			SW846 8270C
	75	(33 - 114)	4.6	(0-30)	SW846 8270C
Benzo(k)fluoranthene	77	(32 - 121)			SW846 8270C
	80	(32 - 121)	3.6	(0-30)	SW846 8270C
Benzo(ghi)perylene	76	(34 - 116)			SW846 8270C
	80	(34 - 116)	5.0	(0-30)	SW846 8270C
Benzo(a)pyrene	71	(33 - 110)			SW846 8270C
	73	(33 - 110)	3.6	(0-30)	SW846 8270C
1,2-Dichlorobenzene	60	(22 - 110)			SW846 8270C
	55	(22 - 110)	8.7	(0-30)	SW846 8270C
1,3-Dichlorobenzene	59	(19 - 110)			SW846 8270C
	52	(19 - 110)	13	(0-30)	SW846 8270C
1,1'-Biphenyl	58	(50 - 130)			SW846 8270C
	58	(50 - 130)	0.17	(0-30)	SW846 8270C
bis(2-Chloroethoxy) methane	67	(35 - 110)			SW846 8270C
	61	(35 - 110)	10	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AT-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AU-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
bis(2-Chloroethyl)-ether	80	(27 - 110)			SW846 8270C
	55 p	(27 - 110)	37	(0-30)	SW846 8270C
bis(2-Ethylhexyl) phthalate	68	(40 - 140)			SW846 8270C
	72	(40 - 140)	5.2	(0-30)	SW846 8270C
4-Bromophenyl phenyl ether	77	(42 - 113)			SW846 8270C
	81	(42 - 113)	5.5	(0-30)	SW846 8270C
Butyl benzyl phthalate	83	(51 - 121)			SW846 8270C
	85	(51 - 121)	2.5	(0-30)	SW846 8270C
Caprolactam	83	(50 - 130)			SW846 8270C
	83	(50 - 130)	0.65	(0-30)	SW846 8270C
Carbazole	72	(49 - 114)			SW846 8270C
	76	(49 - 114)	5.3	(0-30)	SW846 8270C
4-Chloroaniline	63	(10 - 110)			SW846 8270C
	59	(10 - 110)	6.5	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	**73**	**(33 - 110)**			**SW846 8270C**
	69	**(33 - 110)**	**5.5**	**(0-30)**	**SW846 8270C**
Benzoic acid	55	(10 - 165)			SW846 8270C
	62	(10 - 165)	12	(0-30)	SW846 8270C
1,4-Dioxane	44	(10 - 110)			SW846 8270C
	40	(10 - 110)	9.3	(0-30)	SW846 8270C
Pyridine	50	(10 - 110)			SW846 8270C
	46	(10 - 110)	7.9	(0-30)	SW846 8270C
2-Chloronaphthalene	64	(34 - 110)			SW846 8270C
	62	(34 - 110)	3.2	(0-30)	SW846 8270C
2-Chlorophenol	**61**	**(26 - 110)**			**SW846 8270C**
	48	**(26 - 110)**	**24**	**(0-30)**	**SW846 8270C**
Aniline	50	(10 - 130)			SW846 8270C
	52	(10 - 130)	2.4	(0-30)	SW846 8270C
Benzyl alcohol	66	(10 - 130)			SW846 8270C
	61	(10 - 130)	8.4	(0-30)	SW846 8270C
4-Chlorophenyl phenyl ether	75	(43 - 113)			SW846 8270C
	75	(43 - 113)	0.06	(0-30)	SW846 8270C
N-Nitrosodimethylamine	52	(10 - 130)			SW846 8270C
	56	(10 - 130)	7.1	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AT-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AU-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1-Methylnaphthalene	62	(10 - 130)			SW846 8270C
	58	(10 - 130)	6.8	(0-30)	SW846 8270C
1,2-Dinitrobenzene	80	(10 - 130)			SW846 8270C
	84	(10 - 130)	4.1	(0-30)	SW846 8270C
2,3,5,6-Tetrachlorophenol	69	(10 - 130)			SW846 8270C
	72	(10 - 130)	3.7	(0-30)	SW846 8270C
Chrysene	76	(52 - 111)			SW846 8270C
	81	(52 - 111)	6.1	(0-30)	SW846 8270C
Dibenz(a,h)anthracene	77	(35 - 118)			SW846 8270C
	82	(35 - 118)	5.2	(0-30)	SW846 8270C
Dibenzofuran	66	(41 - 110)			SW846 8270C
	66	(41 - 110)	0.02	(0-30)	SW846 8270C
Di-n-butyl phthalate	82	(50 - 117)			SW846 8270C
	88	(50 - 117)	6.6	(0-30)	SW846 8270C
3,3'-Dichlorobenzidine	42	(10 - 110)			SW846 8270C
	34	(10 - 110)	20	(0-30)	SW846 8270C
2,4-Dichlorophenol	69	(30 - 110)			SW846 8270C
	61	(30 - 110)	11	(0-30)	SW846 8270C
Diethyl phthalate	72	(33 - 130)			SW846 8270C
	76	(33 - 130)	4.7	(0-30)	SW846 8270C
2,4-Dimethylphenol	56	(11 - 110)			SW846 8270C
	53	(11 - 110)	6.4	(0-30)	SW846 8270C
Dimethyl phthalate	71	(36 - 124)			SW846 8270C
	72	(36 - 124)	1.9	(0-30)	SW846 8270C
4,6-Dinitro-2-methylphenol	68	(25 - 110)			SW846 8270C
	75	(25 - 110)	10	(0-30)	SW846 8270C
2,4-Dinitrophenol	58	(11 - 119)			SW846 8270C
	65	(11 - 119)	11	(0-30)	SW846 8270C
2,4-Dinitrotoluene	**75**	**(46 - 119)**			**SW846 8270C**
	77	**(46 - 119)**	**3.4**	**(0-30)**	**SW846 8270C**
2,6-Dinitrotoluene	75	(48 - 115)			SW846 8270C
	77	(48 - 115)	2.8	(0-30)	SW846 8270C
Di-n-octyl phthalate	73	(36 - 124)			SW846 8270C
	76	(36 - 124)	4.5	(0-30)	SW846 8270C
Fluoranthene	82	(53 - 111)			SW846 8270C
	88	(53 - 111)	7.6	(0-30)	SW846 8270C
Fluorene	65	(43 - 110)			SW846 8270C
	68	(43 - 110)	3.5	(0-30)	SW846 8270C
Hexachlorobenzene	72	(40 - 113)			SW846 8270C
	75	(40 - 113)	4.4	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AT-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AU-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Hexachlorobutadiene	63	(14 - 110)			SW846 8270C
	51	(14 - 110)	21	(0-30)	SW846 8270C
Hexachlorocyclopenta-diene	26	(10 - 110)			SW846 8270C
	24	(10 - 110)	8.5	(0-30)	SW846 8270C
Hexachloroethane	61	(10 - 110)			SW846 8270C
	51	(10 - 110)	18	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	78	(36 - 116)			SW846 8270C
	81	(36 - 116)	4.0	(0-30)	SW846 8270C
Isophorone	74	(34 - 125)			SW846 8270C
	69	(34 - 125)	6.8	(0-30)	SW846 8270C
2-Methylnaphthalene	70	(35 - 110)			SW846 8270C
	64	(35 - 110)	9.6	(0-30)	SW846 8270C
2-Methylphenol	63	(26 - 110)			SW846 8270C
	58	(26 - 110)	8.6	(0-30)	SW846 8270C
4-Methylphenol	64	(25 - 110)			SW846 8270C
	61	(25 - 110)	4.2	(0-30)	SW846 8270C
Naphthalene	62	(32 - 110)			SW846 8270C
	55	(32 - 110)	13	(0-30)	SW846 8270C
2-Nitroaniline	71	(31 - 129)			SW846 8270C
	72	(31 - 129)	2.5	(0-30)	SW846 8270C
3-Nitroaniline	72	(23 - 112)			SW846 8270C
	74	(23 - 112)	2.6	(0-30)	SW846 8270C
4-Nitroaniline	69	(26 - 115)			SW846 8270C
	73	(26 - 115)	5.7	(0-30)	SW846 8270C
Nitrobenzene	78	(26 - 118)			SW846 8270C
	69	(26 - 118)	12	(0-30)	SW846 8270C
2-Nitrophenol	72	(30 - 110)			SW846 8270C
	63	(30 - 110)	14	(0-30)	SW846 8270C
4-Nitrophenol	**78**	**(13 - 127)**			**SW846 8270C**
	84	**(13 - 127)**	**6.5**	**(0-30)**	**SW846 8270C**
N-Nitrosodiphenylamine	64	(28 - 118)			SW846 8270C
	66	(28 - 118)	3.0	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**66**	**(25 - 119)**			**SW846 8270C**
	63	**(25 - 119)**	**3.9**	**(0-30)**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	67	(13 - 124)			SW846 8270C
	61	(13 - 124)	9.6	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AT-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AU-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Pentachlorophenol	**71**	**(23 - 110)**			**SW846 8270C**
	80	**(23 - 110)**	**11**	**(0-30)**	**SW846 8270C**
Phenanthrene	66	(47 - 110)			SW846 8270C
	71	(47 - 110)	6.2	(0-30)	SW846 8270C
Phenol	**62**	**(16 - 110)**			**SW846 8270C**
	50	**(16 - 110)**	**20**	**(0-30)**	**SW846 8270C**
Pyrene	**76**	**(54 - 115)**			**SW846 8270C**
	78	**(54 - 115)**	**3.2**	**(0-30)**	**SW846 8270C**
2,4,5-Trichloro-phenol	70	(36 - 110)			SW846 8270C
	71	(36 - 110)	1.8	(0-30)	SW846 8270C
2,4,6-Trichloro-phenol	71	(34 - 110)			SW846 8270C
	69	(34 - 110)	2.7	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	81	(27 - 111)
	67	(27 - 111)
2-Fluorobiphenyl	66	(28 - 110)
	62	(28 - 110)
Terphenyl-d14	86	(37 - 119)
	87	(37 - 119)
Phenol-d5	64	(10 - 110)
	51	(10 - 110)
2-Fluorophenol	44	(10 - 110)
	23	(10 - 110)
2,4,6-Tribromophenol	79	(22 - 120)
	79	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AT-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AU-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8074037
Dilution Factor: 1 **Initial Wgt/Vol:** 510 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2,4-Trichloro-benzene	**ND**	**39**	**25**	**ug/L**	**64**		**SW846 8270C**
	ND	**39**	**22**	**ug/L**	**55**	**16**	**SW846 8270C**
Acenaphthene	**ND**	**39**	**24**	**ug/L**	**62**		**SW846 8270C**
	ND	**39**	**24**	**ug/L**	**61**	**1.6**	**SW846 8270C**
1,4-Dichlorobenzene	**ND**	**39**	**38**	**ug/L**	**96**		**SW846 8270C**
	ND	**39**	**33**	**ug/L**	**85**	**12**	**SW846 8270C**
Acenaphthylene	ND	39	26	ug/L	66		SW846 8270C
	ND	39	26	ug/L	65	1.5	SW846 8270C
Acetophenone	ND	39	27	ug/L	68		SW846 8270C
	ND	39	24	ug/L	61	11	SW846 8270C
Anthracene	ND	39	28	ug/L	70		SW846 8270C
	ND	39	29	ug/L	73	3.9	SW846 8270C
Atrazine	ND	39	36	ug/L	91		SW846 8270C
	ND	39	36	ug/L	93	1.8	SW846 8270C
Benzaldehyde	ND	39	33	ug/L	84		SW846 8270C
	ND	39	29	ug/L	75	12	SW846 8270C
Benzo(a)anthracene	ND	39	28	ug/L	71		SW846 8270C
	ND	39	29	ug/L	75	4.7	SW846 8270C
Benzo(b)fluoranthene	ND	39	28	ug/L	71		SW846 8270C
	ND	39	29	ug/L	75	4.6	SW846 8270C
Benzo(k)fluoranthene	ND	39	30	ug/L	77		SW846 8270C
	ND	39	31	ug/L	80	3.6	SW846 8270C
Benzo(ghi)perylene	ND	39	30	ug/L	76		SW846 8270C
	ND	39	31	ug/L	80	5.0	SW846 8270C
Benzo(a)pyrene	ND	39	28	ug/L	71		SW846 8270C
	ND	39	29	ug/L	73	3.6	SW846 8270C
1,2-Dichlorobenzene	ND	39	24	ug/L	60		SW846 8270C
	ND	39	22	ug/L	55	8.7	SW846 8270C
1,3-Dichlorobenzene	ND	39	23	ug/L	59		SW846 8270C
	ND	39	20	ug/L	52	13	SW846 8270C
1,1'-Biphenyl	ND	39	23	ug/L	58		SW846 8270C
	ND	39	23	ug/L	58	0.17	SW846 8270C
bis(2-Chloroethoxy) methane	ND	39	26	ug/L	67		SW846 8270C
	ND	39	24	ug/L	61	10	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AT-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AU-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
bis(2-Chloroethyl)-ether	ND	39	31	ug/L	80		SW846 8270C
	ND	39	22	ug/L	55 p	37	SW846 8270C
bis(2-Ethylhexyl) phthalate	3.9	39	31	ug/L	68		SW846 8270C
	3.9	39	32	ug/L	72	5.2	SW846 8270C
4-Bromophenyl phenyl ether	ND	39	30	ug/L	77		SW846 8270C
	ND	39	32	ug/L	81	5.5	SW846 8270C
Butyl benzyl phthalate	ND	39	33	ug/L	83		SW846 8270C
	ND	39	33	ug/L	85	2.5	SW846 8270C
Caprolactam	ND	39	32	ug/L	83		SW846 8270C
	ND	39	33	ug/L	83	0.65	SW846 8270C
Carbazole	ND	39	28	ug/L	72		SW846 8270C
	ND	39	30	ug/L	76	5.3	SW846 8270C
4-Chloroaniline	ND	39	25	ug/L	63		SW846 8270C
	ND	39	23	ug/L	59	6.5	SW846 8270C
4-Chloro-3-methylphenol	**ND**	**39**	**29**	**ug/L**	**73**		**SW846 8270C**
	ND	**39**	**27**	**ug/L**	**69**	**5.5**	**SW846 8270C**
Benzoic acid	ND	39	21	ug/L	55		SW846 8270C
	ND	39	24	ug/L	62	12	SW846 8270C
1,4-Dioxane	ND	39	17	ug/L	44		SW846 8270C
	ND	39	16	ug/L	40	9.3	SW846 8270C
Pyridine	ND	39	19	ug/L	50		SW846 8270C
	ND	39	18	ug/L	46	7.9	SW846 8270C
2-Chloronaphthalene	ND	39	25	ug/L	64		SW846 8270C
	ND	39	24	ug/L	62	3.2	SW846 8270C
2-Chlorophenol	**ND**	**39**	**24**	**ug/L**	**61**		**SW846 8270C**
	ND	**39**	**19**	**ug/L**	**48**	**24**	**SW846 8270C**
Aniline	ND	39	20	ug/L	50		SW846 8270C
	ND	39	20	ug/L	52	2.4	SW846 8270C
Benzyl alcohol	ND	39	26	ug/L	66		SW846 8270C
	ND	39	24	ug/L	61	8.4	SW846 8270C
4-Chlorophenyl phenyl ether	ND	39	29	ug/L	75		SW846 8270C
	ND	39	29	ug/L	75	0.06	SW846 8270C
N-Nitrosodimethylamine	ND	39	20	ug/L	52		SW846 8270C
	ND	39	22	ug/L	56	7.1	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AT-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AU-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1-Methylnaphthalene	ND	39	24	ug/L	62		SW846 8270C
	ND	39	23	ug/L	58	6.8	SW846 8270C
1,2-Dinitrobenzene	ND	39	31	ug/L	80		SW846 8270C
	ND	39	33	ug/L	84	4.1	SW846 8270C
2,3,5,6-Tetrachlorophenol	ND	39	27	ug/L	69		SW846 8270C
	ND	39	28	ug/L	72	3.7	SW846 8270C
Chrysene	ND	39	30	ug/L	76		SW846 8270C
	ND	39	32	ug/L	81	6.1	SW846 8270C
Dibenz(a,h)anthracene	ND	39	30	ug/L	77		SW846 8270C
	ND	39	32	ug/L	82	5.2	SW846 8270C
Dibenzofuran	ND	39	26	ug/L	66		SW846 8270C
	ND	39	26	ug/L	66	0.02	SW846 8270C
Di-n-butyl phthalate	ND	39	32	ug/L	82		SW846 8270C
	ND	39	34	ug/L	88	6.6	SW846 8270C
3,3'-Dichlorobenzidine	ND	39	16	ug/L	42		SW846 8270C
	ND	39	13	ug/L	34	20	SW846 8270C
2,4-Dichlorophenol	ND	39	27	ug/L	69		SW846 8270C
	ND	39	24	ug/L	61	11	SW846 8270C
Diethyl phthalate	ND	39	28	ug/L	72		SW846 8270C
	ND	39	30	ug/L	76	4.7	SW846 8270C
2,4-Dimethylphenol	ND	39	22	ug/L	56		SW846 8270C
	ND	39	21	ug/L	53	6.4	SW846 8270C
Dimethyl phthalate	ND	39	28	ug/L	71		SW846 8270C
	ND	39	28	ug/L	72	1.9	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	39	27	ug/L	68		SW846 8270C
	ND	39	29	ug/L	75	10	SW846 8270C
2,4-Dinitrophenol	ND	39	23	ug/L	58		SW846 8270C
	ND	39	25	ug/L	65	11	SW846 8270C
2,4-Dinitrotoluene	**ND**	**39**	**29**	**ug/L**	**75**		**SW846 8270C**
	ND	**39**	**30**	**ug/L**	**77**	**3.4**	**SW846 8270C**
2,6-Dinitrotoluene	ND	39	29	ug/L	75		SW846 8270C
	ND	39	30	ug/L	77	2.8	SW846 8270C
Di-n-octyl phthalate	ND	39	28	ug/L	73		SW846 8270C
	ND	39	30	ug/L	76	4.5	SW846 8270C
Fluoranthene	ND	39	32	ug/L	82		SW846 8270C
	ND	39	35	ug/L	88	7.6	SW846 8270C
Fluorene	ND	39	26	ug/L	65		SW846 8270C
	ND	39	26	ug/L	68	3.5	SW846 8270C
Hexachlorobenzene	ND	39	28	ug/L	72		SW846 8270C
	ND	39	29	ug/L	75	4.4	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AT-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AU-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Hexachlorobutadiene	ND	39	25	ug/L	63		SW846 8270C
	ND	39	20	ug/L	51	21	SW846 8270C
Hexachlorocyclopenta-diene	ND	39	10	ug/L	26		SW846 8270C
	ND	39	9.4	ug/L	24	8.5	SW846 8270C
Hexachloroethane	ND	39	24	ug/L	61		SW846 8270C
	ND	39	20	ug/L	51	18	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	39	30	ug/L	78		SW846 8270C
	ND	39	32	ug/L	81	4.0	SW846 8270C
Isophorone	ND	39	29	ug/L	74		SW846 8270C
	ND	39	27	ug/L	69	6.8	SW846 8270C
2-Methylnaphthalene	ND	39	28	ug/L	70		SW846 8270C
	ND	39	25	ug/L	64	9.6	SW846 8270C
2-Methylphenol	ND	39	25	ug/L	63		SW846 8270C
	ND	39	23	ug/L	58	8.6	SW846 8270C
4-Methylphenol	ND	78	50	ug/L	64		SW846 8270C
	ND	78	48	ug/L	61	4.2	SW846 8270C
Naphthalene	ND	39	24	ug/L	62		SW846 8270C
	ND	39	22	ug/L	55	13	SW846 8270C
2-Nitroaniline	ND	39	28	ug/L	71		SW846 8270C
	ND	39	28	ug/L	72	2.5	SW846 8270C
3-Nitroaniline	ND	39	28	ug/L	72		SW846 8270C
	ND	39	29	ug/L	74	2.6	SW846 8270C
4-Nitroaniline	ND	39	27	ug/L	69		SW846 8270C
	ND	39	29	ug/L	73	5.7	SW846 8270C
Nitrobenzene	ND	39	30	ug/L	78		SW846 8270C
	ND	39	27	ug/L	69	12	SW846 8270C
2-Nitrophenol	ND	39	28	ug/L	72		SW846 8270C
	ND	39	25	ug/L	63	14	SW846 8270C
4-Nitrophenol	**ND**	**39**	**31**	**ug/L**	**78**		**SW846 8270C**
	ND	**39**	**33**	**ug/L**	**84**	**6.5**	**SW846 8270C**
N-Nitrosodiphenylamine	ND	39	25	ug/L	64		SW846 8270C
	ND	39	26	ug/L	66	3.0	SW846 8270C
N-Nitrosodi-n-propyl-amine	**ND**	**39**	**26**	**ug/L**	**66**		**SW846 8270C**
	ND	**39**	**25**	**ug/L**	**63**	**3.9**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	ND	39	26	ug/L	67		SW846 8270C
	ND	39	24	ug/L	61	9.6	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AT-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1AU-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Pentachlorophenol	**ND**	**39**	**28**	**ug/L**	**71**		**SW846 8270C**
	ND	**39**	**31**	**ug/L**	**80**	**11**	**SW846 8270C**
Phenanthrene	ND	39	26	ug/L	66		SW846 8270C
	ND	39	28	ug/L	71	6.2	SW846 8270C
Phenol	**ND**	**39**	**24**	**ug/L**	**62**		**SW846 8270C**
	ND	**39**	**20**	**ug/L**	**50**	**20**	**SW846 8270C**
Pyrene	**ND**	**39**	**30**	**ug/L**	**76**		**SW846 8270C**
	ND	**39**	**31**	**ug/L**	**78**	**3.2**	**SW846 8270C**
2,4,5-Trichloro-phenol	ND	39	27	ug/L	70		SW846 8270C
	ND	39	28	ug/L	71	1.8	SW846 8270C
2,4,6-Trichloro-phenol	ND	39	28	ug/L	71		SW846 8270C
	ND	39	27	ug/L	69	2.7	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	81	(27 - 111)
	67	(27 - 111)
2-Fluorobiphenyl	66	(28 - 110)
	62	(28 - 110)
Terphenyl-d14	86	(37 - 119)
	87	(37 - 119)
Phenol-d5	64	(10 - 110)
	51	(10 - 110)
2-Fluorophenol	44	(10 - 110)
	23	(10 - 110)
2,4,6-Tribromophenol	79	(22 - 120)
	79	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\KJHVV1AT.D
Lab Smp Id: kjhvv1at Client Smp ID: AMW-05B(20080311)
Inj Date : 18-MAR-2008 15:28
Operator : 001710 Inst ID: a4hp8.i
Smp Info : kjhvv1at,80318a.b,8270p,1-827042d.sub
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\8270P.m
Meth Date : 19-Mar-2008 11:05 gruberj Quant Type: ISTD
Cal Date : 18-FEB-2008 17:50 Cal File: 8AL0218.D
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)
Vo	510.000	Volume of sample extracted (mL)
Vi	0.50000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
* 1	1,4-Dichlorobenzene-d4	152	3.428	3.435	(1.000)	89016	2.00000	
* 2	Naphthalene-d8	136	4.323	4.324	(1.000)	351189	2.00000	
* 3	Acenaphthene-d10	164	5.592	5.594	(1.000)	213717	2.00000	
* 4	Phenanthrene-d10	188	6.679	6.681	(1.000)	392179	2.00000	
* 5	Chrysene-d12	240	8.670	8.710	(1.000)	441014	2.00000	
* 6	Perylene-d12	264	10.074	10.119	(1.000)	398149	2.00000	
9	Pyridine	79	1.827	1.833	(0.533)	214712	2.47909	19.444
10	N-Nitrosodimethylamine	74	1.803	1.809	(0.526)	137074	2.60090	20.399
11	Ethyl methacrylate	69	Compound Not Detected.					
12	3-Chloropropionitrile	54	Compound Not Detected.					
13	Malononitrile	66	Compound Not Detected.					
209	Benzaldehyde	77	3.144	3.146	(0.917)	241090	4.19685	32.916
21	Aniline	93	3.207	3.209	(0.935)	308552	2.51371	19.715
22	Phenol	94	3.154	3.161	(0.920)	296985	3.08401	24.188
23	bis(2-Chloroethyl)ether	93	3.231	3.233	(0.942)	299844	4.00759	31.432
24	2-Chlorophenol	128	3.289	3.290	(0.959)	178807	3.03646	23.815
26	1,3-Dichlorobenzene	146	3.395	3.396	(0.990)	176020	2.94590	23.105
27	1,4-Dichlorobenzene	146	3.443	3.444	(1.004)	183527	4.80211	37.664(R)

28 1,2-Dichlorobenzene	146	3.548	3.550 (1.035)	173001	3.00405	23.561
29 Benzyl Alcohol	108	3.505	3.512 (1.022)	147168	3.31164	25.974

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
30	2-Methylphenol	108	3.568	3.569	(1.041)	197142	3.17477	24.900
31	bis(2-Chloroisopropyl)ether	45	3.592	3.593	(1.048)	239238	3.36665	26.405
37	Acetophenone	105	3.697	3.699	(1.079)	356986	3.37948	26.506
32	N-Nitroso-di-n-propylamine	70	3.688	3.690	(1.076)	236036	3.29230	25.822
192	4-Methylphenol	108	3.673	3.675	(1.072)	418132	6.38645	50.090
34	Hexachloroethane	117	3.784	3.786	(1.104)	75142	3.03666	23.817
35	Nitrobenzene	77	3.822	3.824	(0.884)	340944	3.88032	30.434
41	Isophorone	82	3.981	3.988	(0.921)	580749	3.70394	29.050
42	2-Nitrophenol	139	4.044	4.045	(0.935)	103175	3.61001	28.314(Q)
43	2,4-Dimethylphenol	107	4.049	4.050	(0.937)	217373	2.79966	21.958
44	bis(2-Chloroethoxy)methane	93	4.116	4.117	(0.952)	282667	3.37054	26.436
46	2,4-Toluenediamene	121	Compound Not Detected.					
47	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
48	2,4-Dichlorophenol	162	4.212	4.214	(0.974)	149838	3.44224	26.998
49	Benzoic Acid	122	4.087	4.137	(0.945)	87607	2.72614	21.381(H)
50	1,2,4-Trichlorobenzene	180	4.275	4.276	(0.989)	163447	3.22034	25.258
51	Naphthalene	128	4.342	4.344	(1.004)	546735	3.11741	24.450
52	4-Chloroaniline	127	4.361	4.363	(1.009)	227032	3.13125	24.559
56	Hexachlorobutadiene	225	4.414	4.416	(1.021)	101846	3.13893	24.619
210	Caprolactam	113	4.606	4.622	(1.066)	79789	4.13338	32.419
57	1,2,3-Trichlorobenzene	180	Compound Not Detected.					
59	4-Chloro-3-Methylphenol	107	4.693	4.699	(1.086)	232091	3.64760	28.609
62	2-Methylnaphthalene	142	4.832	4.834	(1.118)	365080	3.51838	27.595
63	1-Methylnaphthalene	142	4.904	4.906	(1.135)	347964	3.11347	24.419
64	Hexachlorocyclopentadiene	237	4.938	4.940	(0.883)	48789	1.30184	10.210
66	2,4,6-Trichlorophenol	196	5.025	5.031	(0.899)	128453	3.54095	27.772
67	2,4,5-Trichlorophenol	196	5.058	5.065	(0.905)	134268	3.50179	27.465
211	1,1'-Biphenyl	154	5.616	5.618	(1.004)	393704	2.89465	22.703
68	1,2,3,5-Tetrachlorobenzene	216	Compound Not Detected.					
70	2-Chloronaphthalene	162	5.188	5.190	(0.928)	356132	3.18725	24.998
73	2-Nitroaniline	65	5.251	5.252	(0.939)	194940	3.52532	27.650
74	1,2,3,4-Tetrachlorobenzene	216	Compound Not Detected.					
76	Dimethylphthalate	163	5.366	5.368	(0.960)	462297	3.53779	27.747
78	2,6-Dinitrotoluene	165	5.419	5.421	(0.969)	112161	3.74888	29.403
79	Acenaphthylene	152	5.496	5.498	(0.983)	588554	3.31616	26.009
80	1,2-Dinitrobenzene	168	5.462	5.469	(0.977)	54418	4.01018	31.452
81	3-Nitroaniline	138	5.544	5.551	(0.991)	104395	3.59764	28.217
82	Acenaphthene	153	5.616	5.618	(1.004)	367704	3.09887	24.305
83	2,4-Dinitrophenol	184	5.621	5.627	(1.005)	50146	2.91360	22.852(Q)
85	4-Nitrophenol	109	5.655	5.656	(1.011)	99514	3.92056	30.749
86	Dibenzofuran	168	5.741	5.743	(1.027)	558695	3.28553	25.769(R)
87	2,4-Dinitrotoluene	165	5.712	5.714	(1.021)	155476	3.72599	29.223
91	2,3,5,6-Tetrachlorophenol	232	5.789	5.791	(1.035)	123776	3.45512	27.099
93	Diethylphthalate	149	5.871	5.873	(1.050)	490607	3.62272	28.413
94	Fluorene	166	5.991	5.993	(1.071)	474695	3.26194	25.584
95	4-Chlorophenyl-phenylether	204	5.972	5.974	(1.068)	253910	3.74910	29.405
96	4-Nitroaniline	138	5.991	5.998	(1.071)	120619	3.43906	26.973(R)
98	4,6-Dinitro-2-methylphenol	198	6.010	6.012	(0.900)	89905	3.39489	26.626
99	N-Nitrosodiphenylamine	169	6.059	6.060	(0.907)	326341	3.20640	25.148
100	1,2-Diphenylhydrazine	77	6.092	6.094	(0.912)	699967	3.41395	26.776
106	4-Bromophenyl-phenylether	248	6.333	6.334	(0.948)	150949	3.85311	30.220
107	Hexachlorobenzene	284	6.390	6.397	(0.957)	161734	3.58664	28.130

212 Atrazine	200	6.429	6.431 (0.963)	180031	4.54993	35.686
111 Pentachlorophenol	266	6.530	6.532 (0.978)	93174	3.57152	28.012

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)
115 Phenanthrene	178	6.698	6.700	(1.003)	704627	3.31704	26.016
116 Anthracene	178	6.737	6.738	(1.009)	726462	3.51222	27.547
119 Carbazole	167	6.842	6.844	(1.024)	682393	3.61137	28.324
120 Di-n-Butylphthalate	149	7.054	7.056	(1.056)	879245	4.09915	32.150
123 Fluoranthene	202	7.578	7.580	(1.135)	875459	4.08265	32.021
124 Benzidine	184	Compound Not Detected.					
125 Pyrene	202	7.746	7.763	(0.894)	888375	3.77624	29.618
131 Butylbenzylphthalate	149	8.184	8.200	(0.944)	390093	4.14621	32.519
133 3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
135 3,3'-Dichlorobenzidine	252	8.617	8.657	(0.994)	192903	2.08337	16.340
136 Benzo(a)Anthracene	228	8.665	8.700	(0.999)	888883	3.56032	27.924
137 Chrysene	228	8.694	8.729	(1.003)	874762	3.78740	29.705
138 4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
139 bis(2-ethylhexyl)Phthalate	149	8.607	8.643	(0.993)	548297	3.91117	30.676
140 Di-n-octylphthalate	149	9.146	9.186	(0.908)	873810	3.62655	28.444
141 Benzo(b)fluoranthene	252	9.641	9.686	(0.957)	833587	3.57485	28.038
142 Benzo(k)fluoranthene	252	9.670	9.715	(0.960)	960726	3.83824	30.104
146 Benzo(a)pyrene	252	10.011	10.061	(0.994)	743427	3.52738	27.666
149 Indeno(1,2,3-cd)pyrene	276	11.598	11.653	(1.151)	914970	3.87885	30.422
150 Dibenz(a,h)anthracene	278	11.613	11.672	(1.153)	801257	3.87498	30.392
151 Benzo(g,h,i)perylene	276	12.065	12.129	(1.198)	766440	3.80788	29.866
198 1,4-Dioxane	88	1.625	1.631	(0.474)	64455	2.20295	17.278
$ 154 Nitrobenzene-d5	82	3.808	3.815	(0.881)	344089	4.04272	31.708
$ 155 2-Fluorobiphenyl	172	5.087	5.089	(0.910)	442765	3.29447	25.839
$ 156 Terphenyl-d14	244	7.833	7.844	(0.903)	735084	4.32402	33.914
$ 157 Phenol-d5	99	3.144	3.151	(0.917)	436343	4.81358	37.754
$ 158 2-Fluorophenol	112	2.563	2.569	(0.748)	188971	3.33614	26.166
$ 159 2,4,6-Tribromophenol	330	6.164	6.166	(1.102)	112454	5.93431	46.544
$ 186 2-Chlorophenol-d4	132	3.279	3.281	(0.957)	272516	5.12695	40.211
$ 187 1,2-Dichlorobenzene-d4	152	3.539	3.540	(1.032)	119151	3.26143	25.580
M 195 Cresols, total	100				615274	9.56122	74.990
101 Diphenylamine	169	6.059	6.060	(0.907)	326341	3.20640	25.148

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp8.i
Lab File ID: KJHVV1AT.D
Lab Smp Id: kjhvv1at
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\8270P.m
Misc Info:

Calibration Date: 18-MAR-2008
Calibration Time: 11:33
Client Smp ID: AMW-05B(20080311)
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	134594	67297	269188	89016	-33.86
2 Naphthalene-d8	540972	270486	1081944	351189	-35.08
3 Acenaphthene-d10	323762	161881	647524	213717	-33.99
4 Phenanthrene-d10	590518	295259	1181036	392179	-33.59
5 Chrysene-d12	670238	335119	1340476	441014	-34.20
6 Perylene-d12	605727	302864	1211454	398149	-34.27

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.44	2.94	3.94	3.43	-0.19
2 Naphthalene-d8	4.32	3.82	4.82	4.32	-0.04
3 Acenaphthene-d10	5.59	5.09	6.09	5.59	-0.03
4 Phenanthrene-d10	6.68	6.18	7.18	6.68	-0.02
5 Chrysene-d12	8.71	8.21	9.21	8.67	-0.46
6 Perylene-d12	10.12	9.62	10.62	10.07	-0.44

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\KJHVV1AT.D

Page 1

Date : 18-MAR-2008 15:28

Client ID: AMW-05B(20080311)

Instrument: a4hp8.i

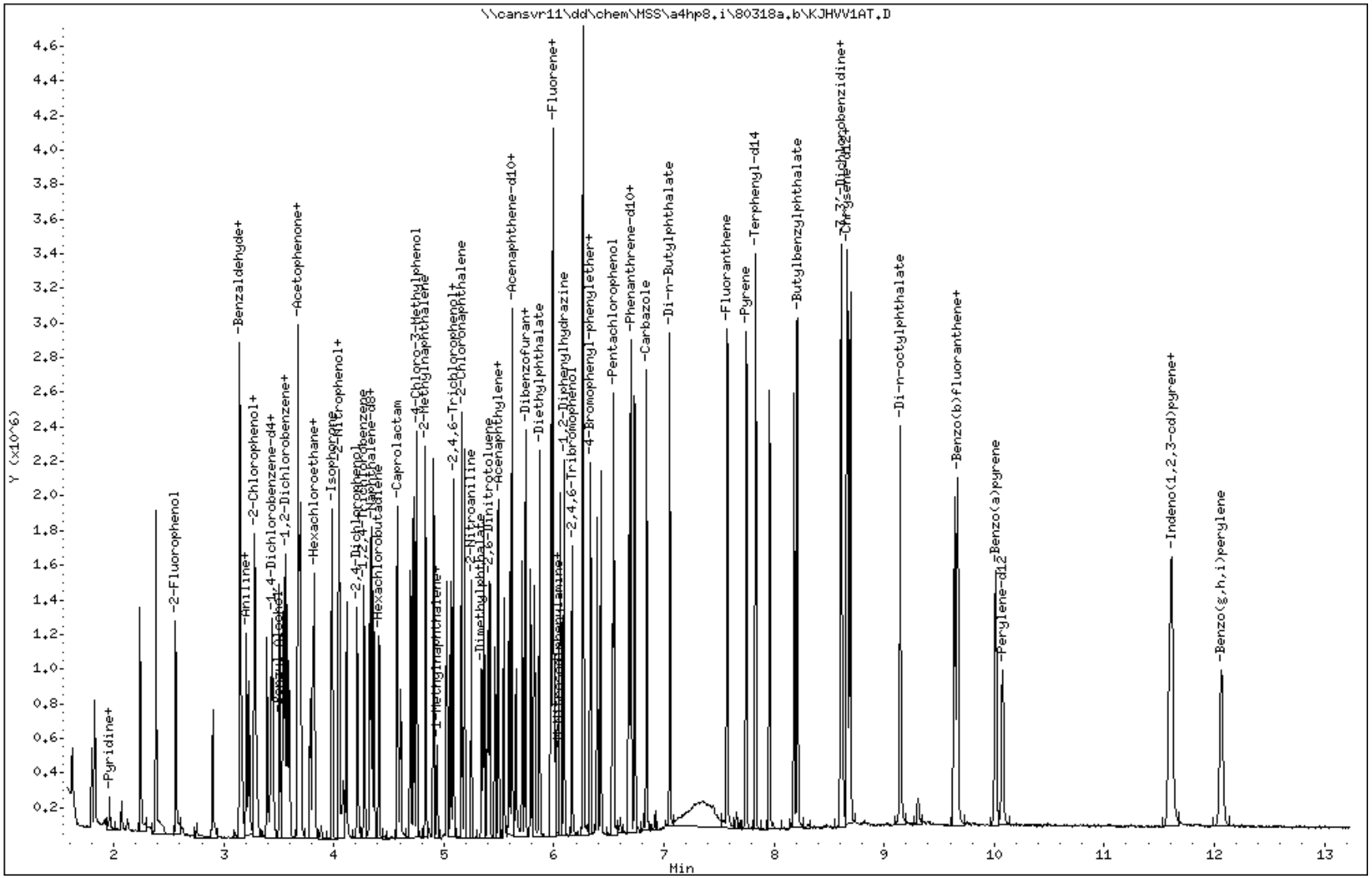
Sample Info: kjhvv1at,80318a.b,8270p,1-827042d.sub

Volume Injected (uL): 0.5

Operator: 001710

Column phase: db5.625

Column diameter: 0.32



TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\KJHVV1AU.D
Lab Smp Id: kjhvv1au Client Smp ID: AMW-05B(20080311)
Inj Date : 18-MAR-2008 15:47
Operator : 001710 Inst ID: a4hp8.i
Smp Info : kjhvv1au,80318a.b,8270p,1-827042d.sub
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\8270P.m
Meth Date : 19-Mar-2008 11:05 gruberj Quant Type: ISTD
Cal Date : 18-FEB-2008 17:50 Cal File: 8AL0218.D
Als bottle: 14 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)
Vo	510.000	Volume of sample extracted (mL)
Vi	0.50000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
* 1	1,4-Dichlorobenzene-d4	152	3.433	3.435	(1.000)	121002	2.00000	
* 2	Naphthalene-d8	136	4.327	4.324	(1.000)	498896	2.00000	
* 3	Acenaphthene-d10	164	5.592	5.594	(1.000)	298711	2.00000	
* 4	Phenanthrene-d10	188	6.679	6.681	(1.000)	544879	2.00000	
* 5	Chrysene-d12	240	8.660	8.710	(1.000)	631164	2.00000	
* 6	Perylene-d12	264	10.059	10.119	(1.000)	568196	2.00000	
9	Pyridine	79	1.827	1.833	(0.532)	269642	2.29033	17.963
10	N-Nitrosodimethylamine	74	1.803	1.809	(0.525)	199963	2.79121	21.892
11	Ethyl methacrylate	69	Compound Not Detected.					
12	3-Chloropropionitrile	54	Compound Not Detected.					
13	Malononitrile	66	Compound Not Detected.					
209	Benzaldehyde	77	3.144	3.146	(0.916)	291597	3.73424	29.288
21	Aniline	93	3.207	3.209	(0.934)	429804	2.57592	20.203
22	Phenol	94	3.154	3.161	(0.919)	330487	2.52471	19.802
23	bis(2-Chloroethyl)ether	93	3.231	3.233	(0.941)	279405	2.74725	21.547
24	2-Chlorophenol	128	3.289	3.290	(0.958)	190119	2.37511	18.628
26	1,3-Dichlorobenzene	146	3.394	3.396	(0.989)	209186	2.57552	20.200
27	1,4-Dichlorobenzene	146	3.443	3.444	(1.003)	220576	4.24586	33.301

28	1,2-Dichlorobenzene	146	3.548	3.550 (1.034)	215592	2.75402	21.600
29	Benzyl Alcohol	108	3.505	3.512 (1.021)	183898	3.04426	23.876

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
30	2-Methylphenol	108	3.568	3.569	(1.039)	245889	2.91305	22.847
31	bis(2-Chloroisopropyl)ether	45	3.592	3.593	(1.046)	295379	3.05790	23.984
37	Acetophenone	105	3.697	3.699	(1.077)	434482	3.02584	23.732
32	N-Nitroso-di-n-propylamine	70	3.688	3.690	(1.074)	308505	3.16562	24.828
192	4-Methylphenol	108	3.673	3.675	(1.070)	544883	6.12245	48.019
34	Hexachloroethane	117	3.789	3.786	(1.104)	85613	2.54524	19.963
35	Nitrobenzene	77	3.822	3.824	(0.883)	429683	3.44242	26.999
41	Isophorone	82	3.981	3.988	(0.920)	770961	3.46130	27.147
42	2-Nitrophenol	139	4.044	4.045	(0.934)	127418	3.13830	24.614(Q)
43	2,4-Dimethylphenol	107	4.048	4.050	(0.936)	289563	2.62527	20.590
44	bis(2-Chloroethoxy)methane	93	4.116	4.117	(0.951)	361510	3.03442	23.799
46	2,4-Toluenediamene	121	Compound Not Detected.					
47	1,3,5-Trichlorobenzene	180	4.274	4.055	(0.988)	197761	2.91753	22.883
48	2,4-Dichlorophenol	162	4.212	4.214	(0.973)	190007	3.07269	24.100
49	Benzoic Acid	122	4.097	4.137	(0.947)	145100	3.07588	24.124(H)
50	1,2,4-Trichlorobenzene	180	4.274	4.276	(0.988)	197761	2.74281	21.512
51	Naphthalene	128	4.342	4.344	(1.003)	684119	2.74586	21.536
52	4-Chloroaniline	127	4.361	4.363	(1.008)	302098	2.93298	23.004
56	Hexachlorobutadiene	225	4.414	4.416	(1.020)	117536	2.54999	20.000
210	Caprolactam	113	4.611	4.622	(1.066)	114091	4.16049	32.631
57	1,2,3-Trichlorobenzene	180	Compound Not Detected.					
59	4-Chloro-3-Methylphenol	107	4.698	4.699	(1.086)	312138	3.45324	27.084
62	2-Methylnaphthalene	142	4.832	4.834	(1.117)	471069	3.19573	25.064
63	1-Methylnaphthalene	142	4.904	4.906	(1.133)	461915	2.90940	22.819
64	Hexachlorocyclopentadiene	237	4.938	4.940	(0.883)	62282	1.19563	9.3775
66	2,4,6-Trichlorophenol	196	5.029	5.031	(0.899)	174693	3.44540	27.023
67	2,4,5-Trichlorophenol	196	5.063	5.065	(0.905)	191173	3.56723	27.978
211	1,1'-Biphenyl	154	5.616	5.618	(1.004)	551247	2.89975	22.743
68	1,2,3,5-Tetrachlorobenzene	216	Compound Not Detected.					
70	2-Chloronaphthalene	162	5.188	5.190	(0.928)	481878	3.08553	24.200
73	2-Nitroaniline	65	5.251	5.252	(0.939)	279538	3.61397	28.345
74	1,2,3,4-Tetrachlorobenzene	216	Compound Not Detected.					
76	Dimethylphthalate	163	5.366	5.368	(0.960)	658275	3.60418	28.268
78	2,6-Dinitrotoluene	165	5.419	5.421	(0.969)	161532	3.85713	30.252
79	Acenaphthylene	152	5.496	5.498	(0.983)	810688	3.26807	25.632
80	1,2-Dinitrobenzene	168	5.467	5.469	(0.978)	79254	4.17859	32.773
81	3-Nitroaniline	138	5.549	5.551	(0.992)	149819	3.69397	28.972
82	Acenaphthene	153	5.616	5.618	(1.004)	505958	3.05075	23.927
83	2,4-Dinitrophenol	184	5.621	5.627	(1.005)	80954	3.24589	25.458(Q)
85	4-Nitrophenol	109	5.655	5.656	(1.011)	148389	4.18267	32.805
86	Dibenzofuran	168	5.741	5.743	(1.027)	781102	3.28645	25.776(R)
87	2,4-Dinitrotoluene	165	5.712	5.714	(1.021)	225008	3.85347	30.223
91	2,3,5,6-Tetrachlorophenol	232	5.789	5.791	(1.035)	179892	3.58525	28.120
93	Diethylphthalate	149	5.871	5.873	(1.050)	718853	3.79777	29.786
94	Fluorene	166	5.991	5.993	(1.071)	687057	3.37787	26.493
95	4-Chlorophenyl-phenylether	204	5.977	5.974	(1.069)	355114	3.75149	29.423
96	4-Nitroaniline	138	5.996	5.998	(1.072)	178824	3.63948	28.545(R)
98	4,6-Dinitro-2-methylphenol	198	6.010	6.012	(0.900)	139598	3.75808	29.475
99	N-Nitrosodiphenylamine	169	6.058	6.060	(0.907)	467335	3.30490	25.921
100	1,2-Diphenylhydrazine	77	6.092	6.094	(0.912)	1020714	3.58318	28.103
106	4-Bromophenyl-phenylether	248	6.333	6.334	(0.948)	221583	4.07101	31.929
107	Hexachlorobenzene	284	6.395	6.397	(0.958)	234906	3.74943	29.407

212 Atrazine	200	6.429	6.431 (0.963)	254729	4.63362	36.342
111 Pentachlorophenol	266	6.530	6.532 (0.978)	147892	4.00642	31.423

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)
115	Phenanthrene	178	6.698	6.700	(1.003)	1041932	3.53033	27.689
116	Anthracene	178	6.737	6.738	(1.009)	1049933	3.65354	28.655
119	Carbazole	167	6.842	6.844	(1.024)	999684	3.80789	29.866
120	Di-n-Butylphthalate	149	7.054	7.056	(1.056)	1305197	4.37970	34.350
123	Fluoranthene	202	7.578	7.580	(1.135)	1312857	4.40664	34.562
124	Benzidine	184	Compound Not Detected.					
125	Pyrene	202	7.746	7.763	(0.895)	1313089	3.90003	30.588
131	Butylbenzylphthalate	149	8.170	8.200	(0.943)	572553	4.25216	33.350
133	3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
135	3,3'-Dichlorobenzidine	252	8.607	8.657	(0.994)	221409	1.69763	13.315
136	Benzo(a)Anthracene	228	8.650	8.700	(0.999)	1333729	3.73269	29.276
137	Chrysene	228	8.679	8.729	(1.002)	1330822	4.02607	31.577
138	4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
139	bis(2-ethylhexyl)Phthalate	149	8.593	8.643	(0.992)	828574	4.12142	32.325
140	Di-n-octylphthalate	149	9.127	9.186	(0.907)	1308585	3.79480	29.763
141	Benzo(b)fluoranthene	252	9.627	9.686	(0.957)	1246294	3.74520	29.374(H)
142	Benzo(k)fluoranthene	252	9.655	9.715	(0.960)	1420808	3.97755	31.196
146	Benzo(a)pyrene	252	9.997	10.061	(0.994)	1100404	3.65859	28.695
149	Indeno(1,2,3-cd)pyrene	276	11.589	11.653	(1.152)	1358675	4.03608	31.656
150	Dibenz(a,h)anthracene	278	11.598	11.672	(1.153)	1204326	4.08121	32.009
151	Benzo(g,h,i)perylene	276	12.055	12.129	(1.198)	1149341	4.00130	31.383
198	1,4-Dioxane	88	1.625	1.631	(0.473)	79859	2.00793	15.748
$ 154	Nitrobenzene-d5	82	3.813	3.815	(0.881)	407355	3.36904	26.424
$ 155	2-Fluorobiphenyl	172	5.087	5.089	(0.910)	579434	3.08464	24.193
$ 156	Terphenyl-d14	244	7.828	7.844	(0.904)	1060616	4.35932	34.191
$ 157	Phenol-d5	99	3.149	3.151	(0.917)	475523	3.85911	30.268
$ 158	2-Fluorophenol	112	2.567	2.569	(0.748)	135030	1.75370	13.754
$ 159	2,4,6-Tribromophenol	330	6.169	6.166	(1.103)	157280	5.93788	46.572
$ 186	2-Chlorophenol-d4	132	3.279	3.281	(0.955)	276211	3.82282	29.983
$ 187	1,2-Dichlorobenzene-d4	152	3.539	3.540	(1.031)	142633	2.87214	22.527
M 195	Cresols, total	100				790772	9.03550	70.867
101	Diphenylamine	169	6.058	6.060	(0.907)	467335	3.30490	25.921

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp8.i
Lab File ID: KJHVV1AU.D
Lab Smp Id: kjhvv1au
Analysis Type: SV
Quant Type: ISTD
Operator: 001710
Method File: \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\8270P.m
Misc Info:

Calibration Date: 18-MAR-2008
Calibration Time: 11:33
Client Smp ID: AMW-05B(20080311)
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	134594	67297	269188	121002	-10.10
2 Naphthalene-d8	540972	270486	1081944	498896	-7.78
3 Acenaphthene-d10	323762	161881	647524	298711	-7.74
4 Phenanthrene-d10	590518	295259	1181036	544879	-7.73
5 Chrysene-d12	670238	335119	1340476	631164	-5.83
6 Perylene-d12	605727	302864	1211454	568196	-6.20

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.44	2.94	3.94	3.43	-0.05
2 Naphthalene-d8	4.32	3.82	4.82	4.33	0.07
3 Acenaphthene-d10	5.59	5.09	6.09	5.59	-0.03
4 Phenanthrene-d10	6.68	6.18	7.18	6.68	-0.03
5 Chrysene-d12	8.71	8.21	9.21	8.66	-0.57
6 Perylene-d12	10.12	9.62	10.62	10.06	-0.59

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\KJHWV1AU.D
Date : 18-MAR-2008 15:47
Client ID: AHW-05B(20080311)
Sample Info: kjhwv1au,80318a,b,827op,1-827d42d,sub
Volume Injected (uL): 0.5
Column phase: db5.625
Instrument: a4hp8.i
Operator: 001710
Column diameter: 0.32
Page 1
Y (x10^6)
Min
\\cansvr11\dd\chem\MSS\a4hp8.i\80318a.b\KJHWV1AU.D
-Pyridine+
-2-Fluorophenol
-Benzaldehyde+
-Aniline+
-2-Chlorophenol+
-1,4-Dichlorobenzene-d4+
-Benzyl Alcohol
-1,2-Dichlorobenzene+
-Acetophenone+
-Hexachloroethane+
-Isophorone
-2-Nitrophenol+
-2,4-Dichlorophenol
-1,3,5-Trichlorobenzene+
-Naphthalene-d8+
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene
-1-Methylnaphthalene+
-2,4,6-Trichlorophenol+
-2-Chloronaphthalene
-2-Nitroaniline
-Dimethylphthalate
-2,6-Dinitrotoluene
-Acenaphthylene+
-Acenaphthene-d10+
-Dibenzofuran+
-Diethylphthalate
-N-Nitrosodiphenylamine+
Fluorene+
-2,4,6-Tribromophenol
-4-Bromophenyl-phenylether
-Hexachlorobenzene+
-Pentachlorophenol
-Phenanthrene-d10+
-Anthracene
-Carbazole
-Di-n-Butylphthalate
-Fluoranthene
-Pyrene
-Terphenyl-d14
Butylbenzylphthalate
-Chrysene-d12+
3,3'-Dichlorobenzidine+
-Di-n-octylphthalate
-Benzo(k)fluoranthene+
-Benzo(a)pyrene
-Perylene-d12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FD-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FE-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/19/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8079104
Dilution Factor: 1 **Initial Wgt/Vol:** 510 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichloro-benzene	**89**	**(25 - 110)**			**SW846 8270C**
	90	**(25 - 110)**	**0.77**	**(0-30)**	**SW846 8270C**
Acenaphthene	**79**	**(36 - 110)**			**SW846 8270C**
	86	**(36 - 110)**	**7.7**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**128 a**	**(17 - 110)**			**SW846 8270C**
	131 a	**(17 - 110)**	**3.0**	**(0-30)**	**SW846 8270C**
Acenaphthylene	81	(39 - 110)			SW846 8270C
	87	(39 - 110)	7.8	(0-30)	SW846 8270C
Acetophenone	72	(50 - 130)			SW846 8270C
	81	(50 - 130)	11	(0-30)	SW846 8270C
Anthracene	85	(46 - 110)			SW846 8270C
	87	(46 - 110)	2.6	(0-30)	SW846 8270C
Atrazine	91	(50 - 130)			SW846 8270C
	94	(50 - 130)	4.3	(0-30)	SW846 8270C
Benzaldehyde	80	(10 - 130)			SW846 8270C
	89	(10 - 130)	11	(0-30)	SW846 8270C
Benzo(a)anthracene	79	(52 - 110)			SW846 8270C
	83	(52 - 110)	5.6	(0-30)	SW846 8270C
Benzo(b)fluoranthene	83	(33 - 114)			SW846 8270C
	92	(33 - 114)	11	(0-30)	SW846 8270C
Benzo(k)fluoranthene	87	(32 - 121)			SW846 8270C
	84	(32 - 121)	3.8	(0-30)	SW846 8270C
Benzo(ghi)perylene	89	(34 - 116)			SW846 8270C
	92	(34 - 116)	3.4	(0-30)	SW846 8270C
Benzo(a)pyrene	81	(33 - 110)			SW846 8270C
	86	(33 - 110)	5.6	(0-30)	SW846 8270C
1,2-Dichlorobenzene	83	(22 - 110)			SW846 8270C
	84	(22 - 110)	1.1	(0-30)	SW846 8270C
1,3-Dichlorobenzene	78	(19 - 110)			SW846 8270C
	80	(19 - 110)	2.3	(0-30)	SW846 8270C
1,1'-Biphenyl	75	(50 - 130)			SW846 8270C
	84	(50 - 130)	10	(0-30)	SW846 8270C
bis(2-Chloroethoxy) methane	81	(35 - 110)			SW846 8270C
	89	(35 - 110)	9.3	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FD-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
bis(2-Chloroethyl)-ether	70	(27 - 110)			SW846 8270C
	75	(27 - 110)	6.5	(0-30)	SW846 8270C
bis(2-Ethylhexyl) phthalate	86	(40 - 140)			SW846 8270C
	91	(40 - 140)	5.4	(0-30)	SW846 8270C
4-Bromophenyl phenyl ether	92	(42 - 113)			SW846 8270C
	96	(42 - 113)	4.7	(0-30)	SW846 8270C
Butyl benzyl phthalate	87	(51 - 121)			SW846 8270C
	93	(51 - 121)	7.1	(0-30)	SW846 8270C
Caprolactam	16 a	(50 - 130)			SW846 8270C
	18 a	(50 - 130)	14	(0-30)	SW846 8270C
Carbazole	86	(49 - 114)			SW846 8270C
	91	(49 - 114)	5.6	(0-30)	SW846 8270C
4-Chloroaniline	33	(10 - 110)			SW846 8270C
	47 p	(10 - 110)	37	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	**81**	**(33 - 110)**			**SW846 8270C**
	86	**(33 - 110)**	**6.3**	**(0-30)**	**SW846 8270C**
Benzoic acid	20	(10 - 165)			SW846 8270C
	6.6 a,p	(10 - 165)	102	(0-30)	SW846 8270C
1,4-Dioxane	37	(10 - 110)			SW846 8270C
	44	(10 - 110)	18	(0-30)	SW846 8270C
2-Chloronaphthalene	82	(34 - 110)			SW846 8270C
	92	(34 - 110)	12	(0-30)	SW846 8270C
2-Chlorophenol	**77**	**(26 - 110)**			**SW846 8270C**
	81	**(26 - 110)**	**5.7**	**(0-30)**	**SW846 8270C**
Benzyl alcohol	55	(10 - 130)			SW846 8270C
	61	(10 - 130)	9.7	(0-30)	SW846 8270C
4-Chlorophenyl phenyl ether	90	(43 - 113)			SW846 8270C
	94	(43 - 113)	4.9	(0-30)	SW846 8270C
N-Nitrosodimethylamine	41	(10 - 130)			SW846 8270C
	45	(10 - 130)	11	(0-30)	SW846 8270C
1-Methylnaphthalene	77	(10 - 130)			SW846 8270C
	82	(10 - 130)	5.6	(0-30)	SW846 8270C
1,2-Dinitrobenzene	93	(10 - 130)			SW846 8270C
	103	(10 - 130)	9.8	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FD-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
2,3,5,6-Tetrachlorophenol	75	(10 - 130)			SW846 8270C
	88	(10 - 130)	15	(0-30)	SW846 8270C
Chrysene	87	(52 - 111)			SW846 8270C
	88	(52 - 111)	0.88	(0-30)	SW846 8270C
Dibenz(a,h)anthracene	89	(35 - 118)			SW846 8270C
	93	(35 - 118)	4.0	(0-30)	SW846 8270C
Dibenzofuran	82	(41 - 110)			SW846 8270C
	88	(41 - 110)	6.2	(0-30)	SW846 8270C
Di-n-butyl phthalate	90	(50 - 117)			SW846 8270C
	94	(50 - 117)	4.1	(0-30)	SW846 8270C
3,3'-Dichlorobenzidine	65	(10 - 110)			SW846 8270C
	73	(10 - 110)	11	(0-30)	SW846 8270C
2,4-Dichlorophenol	86	(30 - 110)			SW846 8270C
	93	(30 - 110)	7.9	(0-30)	SW846 8270C
Diethyl phthalate	87	(33 - 130)			SW846 8270C
	95	(33 - 130)	8.5	(0-30)	SW846 8270C
2,4-Dimethylphenol	73	(11 - 110)			SW846 8270C
	81	(11 - 110)	9.7	(0-30)	SW846 8270C
Dimethyl phthalate	88	(36 - 124)			SW846 8270C
	98	(36 - 124)	11	(0-30)	SW846 8270C
4,6-Dinitro-2-methylphenol	88	(25 - 110)			SW846 8270C
	89	(25 - 110)	1.7	(0-30)	SW846 8270C
2,4-Dinitrophenol	75	(11 - 119)			SW846 8270C
	72	(11 - 119)	3.6	(0-30)	SW846 8270C
2,4-Dinitrotoluene	**96**	**(46 - 119)**			**SW846 8270C**
	102	**(46 - 119)**	**5.7**	**(0-30)**	**SW846 8270C**
2,6-Dinitrotoluene	94	(48 - 115)			SW846 8270C
	100	(48 - 115)	6.6	(0-30)	SW846 8270C
Di-n-octyl phthalate	85	(36 - 124)			SW846 8270C
	88	(36 - 124)	4.0	(0-30)	SW846 8270C
Fluoranthene	91	(53 - 111)			SW846 8270C
	95	(53 - 111)	3.3	(0-30)	SW846 8270C
Fluorene	81	(43 - 110)			SW846 8270C
	89	(43 - 110)	9.0	(0-30)	SW846 8270C
Hexachlorobenzene	88	(40 - 113)			SW846 8270C
	89	(40 - 113)	0.76	(0-30)	SW846 8270C
Hexachlorobutadiene	87	(14 - 110)			SW846 8270C
	95	(14 - 110)	9.2	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FD-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Hexachlorocyclopenta-diene	88	(10 - 110)			SW846 8270C
	92	(10 - 110)	4.8	(0-30)	SW846 8270C
Hexachloroethane	73	(10 - 110)			SW846 8270C
	83	(10 - 110)	13	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	89	(36 - 116)			SW846 8270C
	93	(36 - 116)	4.8	(0-30)	SW846 8270C
Isophorone	86	(34 - 125)			SW846 8270C
	95	(34 - 125)	9.4	(0-30)	SW846 8270C
2-Methylnaphthalene	88	(35 - 110)			SW846 8270C
	93	(35 - 110)	5.3	(0-30)	SW846 8270C
2-Methylphenol	67	(26 - 110)			SW846 8270C
	77	(26 - 110)	13	(0-30)	SW846 8270C
4-Methylphenol	69	(25 - 110)			SW846 8270C
	77	(25 - 110)	11	(0-30)	SW846 8270C
Naphthalene	78	(32 - 110)			SW846 8270C
	83	(32 - 110)	6.3	(0-30)	SW846 8270C
2-Nitroaniline	82	(31 - 129)			SW846 8270C
	93	(31 - 129)	13	(0-30)	SW846 8270C
3-Nitroaniline	85	(23 - 112)			SW846 8270C
	97	(23 - 112)	13	(0-30)	SW846 8270C
4-Nitroaniline	86	(26 - 115)			SW846 8270C
	90	(26 - 115)	4.5	(0-30)	SW846 8270C
Nitrobenzene	83	(26 - 118)			SW846 8270C
	93	(26 - 118)	11	(0-30)	SW846 8270C
2-Nitrophenol	84	(30 - 110)			SW846 8270C
	91	(30 - 110)	7.6	(0-30)	SW846 8270C
4-Nitrophenol	**52**	**(13 - 127)**			**SW846 8270C**
	58	**(13 - 127)**	**11**	**(0-30)**	**SW846 8270C**
N-Nitrosodiphenylamine	84	(28 - 118)			SW846 8270C
	87	(28 - 118)	3.6	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**77**	**(25 - 119)**			**SW846 8270C**
	86	**(25 - 119)**	**11**	**(0-30)**	**SW846 8270C**
	80	(13 - 124)	6.5	(0-30)	SW846 8270C
Pentachlorophenol	**61**	**(23 - 110)**			**SW846 8270C**
	62	**(23 - 110)**	**2.0**	**(0-30)**	**SW846 8270C**
Phenanthrene	81	(47 - 110)			SW846 8270C
	86	(47 - 110)	5.7	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FD-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Phenol	**40**	**(16 - 110)**			**SW846 8270C**
	44	**(16 - 110)**	**8.4**	**(0-30)**	**SW846 8270C**
Pyrene	**85**	**(54 - 115)**			**SW846 8270C**
	88	**(54 - 115)**	**3.7**	**(0-30)**	**SW846 8270C**
2,4,5-Trichloro-phenol	88	(36 - 110)			SW846 8270C
	93	(36 - 110)	6.2	(0-30)	SW846 8270C
2,4,6-Trichloro-phenol	88	(34 - 110)			SW846 8270C
	95	(34 - 110)	8.4	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	77	(27 - 111)
	85	(27 - 111)
2-Fluorobiphenyl	81	(28 - 110)
	86	(28 - 110)
Terphenyl-d14	95	(37 - 119)
	101	(37 - 119)
Phenol-d5	36	(10 - 110)
	41	(10 - 110)
2-Fluorophenol	54	(10 - 110)
	57	(10 - 110)
2,4,6-Tribromophenol	86	(22 - 120)
	96	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FD-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FE-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/19/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8079104
Dilution Factor: 1 **Initial Wgt/Vol:** 510 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2,4-Trichloro-benzene	**ND**	**39**	**35**	**ug/L**	**89**		**SW846 8270C**
	ND	**39**	**35**	**ug/L**	**90**	**0.77**	**SW846 8270C**
Acenaphthene	**ND**	**39**	**31**	**ug/L**	**79**		**SW846 8270C**
	ND	**39**	**34**	**ug/L**	**86**	**7.7**	**SW846 8270C**
1,4-Dichlorobenzene	**ND**	**39**	**50**	**ug/L**	**128 a**		**SW846 8270C**
	ND	**39**	**52**	**ug/L**	**131 a**	**3.0**	**SW846 8270C**
Acenaphthylene	ND	39	32	ug/L	81		SW846 8270C
	ND	39	34	ug/L	87	7.8	SW846 8270C
Acetophenone	ND	39	28	ug/L	72		SW846 8270C
	ND	39	32	ug/L	81	11	SW846 8270C
Anthracene	ND	39	33	ug/L	85		SW846 8270C
	ND	39	34	ug/L	87	2.6	SW846 8270C
Atrazine	ND	39	35	ug/L	91		SW846 8270C
	ND	39	37	ug/L	94	4.3	SW846 8270C
Benzaldehyde	ND	39	31	ug/L	80		SW846 8270C
	ND	39	35	ug/L	89	11	SW846 8270C
Benzo(a)anthracene	ND	39	31	ug/L	79		SW846 8270C
	ND	39	33	ug/L	83	5.6	SW846 8270C
Benzo(b)fluoranthene	ND	39	32	ug/L	83		SW846 8270C
	ND	39	36	ug/L	92	11	SW846 8270C
Benzo(k)fluoranthene	ND	39	34	ug/L	87		SW846 8270C
	ND	39	33	ug/L	84	3.8	SW846 8270C
Benzo(ghi)perylene	ND	39	35	ug/L	89		SW846 8270C
	ND	39	36	ug/L	92	3.4	SW846 8270C
Benzo(a)pyrene	ND	39	32	ug/L	81		SW846 8270C
	ND	39	34	ug/L	86	5.6	SW846 8270C
1,2-Dichlorobenzene	ND	39	33	ug/L	83		SW846 8270C
	ND	39	33	ug/L	84	1.1	SW846 8270C
1,3-Dichlorobenzene	ND	39	31	ug/L	78		SW846 8270C
	ND	39	31	ug/L	80	2.3	SW846 8270C
1,1'-Biphenyl	ND	39	30	ug/L	75		SW846 8270C
	ND	39	33	ug/L	84	10	SW846 8270C
bis(2-Chloroethoxy) methane	ND	39	32	ug/L	81		SW846 8270C
	ND	39	35	ug/L	89	9.3	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FD-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
bis(2-Chloroethyl)-ether	ND	39	28	ug/L	70		SW846 8270C
	ND	39	29	ug/L	75	6.5	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	39	34	ug/L	86		SW846 8270C
	ND	39	36	ug/L	91	5.4	SW846 8270C
4-Bromophenyl phenyl ether	ND	39	36	ug/L	92		SW846 8270C
	ND	39	38	ug/L	96	4.7	SW846 8270C
Butyl benzyl phthalate	ND	39	34	ug/L	87		SW846 8270C
	ND	39	36	ug/L	93	7.1	SW846 8270C
Caprolactam	ND	39	6.3	ug/L	16 a		SW846 8270C
	ND	39	7.2	ug/L	18 a	14	SW846 8270C
Carbazole	ND	39	34	ug/L	86		SW846 8270C
	ND	39	36	ug/L	91	5.6	SW846 8270C
4-Chloroaniline	ND	39	13	ug/L	33		SW846 8270C
	ND	39	19	ug/L	47 p	37	SW846 8270C
4-Chloro-3-methylphenol	**ND**	**39**	**32**	**ug/L**	**81**		**SW846 8270C**
	ND	**39**	**34**	**ug/L**	**86**	**6.3**	**SW846 8270C**
Benzoic acid	ND	39	8.0	ug/L	20		SW846 8270C
	ND	39		ug/L	6.6	102	SW846 8270C
	Qualifiers: a,p						
1,4-Dioxane	ND	39	14	ug/L	37		SW846 8270C
	ND	39	17	ug/L	44	18	SW846 8270C
2-Chloronaphthalene	ND	39	32	ug/L	82		SW846 8270C
	ND	39	36	ug/L	92	12	SW846 8270C
2-Chlorophenol	**ND**	**39**	**30**	**ug/L**	**77**		**SW846 8270C**
	ND	**39**	**32**	**ug/L**	**81**	**5.7**	**SW846 8270C**
Benzyl alcohol	ND	39	22	ug/L	55		SW846 8270C
	ND	39	24	ug/L	61	9.7	SW846 8270C
4-Chlorophenyl phenyl ether	ND	39	35	ug/L	90		SW846 8270C
	ND	39	37	ug/L	94	4.9	SW846 8270C
N-Nitrosodimethylamine	ND	39	16	ug/L	41		SW846 8270C
	ND	39	18	ug/L	45	11	SW846 8270C
1-Methylnaphthalene	ND	39	30	ug/L	77		SW846 8270C
	ND	39	32	ug/L	82	5.6	SW846 8270C
1,2-Dinitrobenzene	ND	39	37	ug/L	93		SW846 8270C
	ND	39	40	ug/L	103	9.8	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FD-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,3,5,6-Tetrachlorophenol	ND	39	30	ug/L	75		SW846 8270C
	ND	39	34	ug/L	88	15	SW846 8270C
Chrysene	ND	39	34	ug/L	87		SW846 8270C
	ND	39	34	ug/L	88	0.88	SW846 8270C
Dibenz(a,h)anthracene	ND	39	35	ug/L	89		SW846 8270C
	ND	39	36	ug/L	93	4.0	SW846 8270C
Dibenzofuran	ND	39	32	ug/L	82		SW846 8270C
	ND	39	34	ug/L	88	6.2	SW846 8270C
Di-n-butyl phthalate	ND	39	35	ug/L	90		SW846 8270C
	ND	39	37	ug/L	94	4.1	SW846 8270C
3,3'-Dichlorobenzidine	ND	39	26	ug/L	65		SW846 8270C
	ND	39	29	ug/L	73	11	SW846 8270C
2,4-Dichlorophenol	ND	39	34	ug/L	86		SW846 8270C
	ND	39	36	ug/L	93	7.9	SW846 8270C
Diethyl phthalate	ND	39	34	ug/L	87		SW846 8270C
	ND	39	37	ug/L	95	8.5	SW846 8270C
2,4-Dimethylphenol	ND	39	29	ug/L	73		SW846 8270C
	ND	39	32	ug/L	81	9.7	SW846 8270C
Dimethyl phthalate	ND	39	34	ug/L	88		SW846 8270C
	ND	39	38	ug/L	98	11	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	39	34	ug/L	88		SW846 8270C
	ND	39	35	ug/L	89	1.7	SW846 8270C
2,4-Dinitrophenol	ND	39	29	ug/L	75		SW846 8270C
	ND	39	28	ug/L	72	3.6	SW846 8270C
2,4-Dinitrotoluene	**ND**	**39**	**38**	**ug/L**	**96**		**SW846 8270C**
	ND	**39**	**40**	**ug/L**	**102**	**5.7**	**SW846 8270C**
2,6-Dinitrotoluene	ND	39	37	ug/L	94		SW846 8270C
	ND	39	39	ug/L	100	6.6	SW846 8270C
Di-n-octyl phthalate	ND	39	33	ug/L	85		SW846 8270C
	ND	39	35	ug/L	88	4.0	SW846 8270C
Fluoranthene	ND	39	36	ug/L	91		SW846 8270C
	ND	39	37	ug/L	95	3.3	SW846 8270C
Fluorene	ND	39	32	ug/L	81		SW846 8270C
	ND	39	35	ug/L	89	9.0	SW846 8270C
Hexachlorobenzene	ND	39	34	ug/L	88		SW846 8270C
	ND	39	35	ug/L	89	0.76	SW846 8270C
Hexachlorobutadiene	ND	39	34	ug/L	87		SW846 8270C
	ND	39	37	ug/L	95	9.2	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FD-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Hexachlorocyclopenta-diene	ND	39	35	ug/L	88		SW846 8270C
	ND	39	36	ug/L	92	4.8	SW846 8270C
Hexachloroethane	ND	39	29	ug/L	73		SW846 8270C
	ND	39	33	ug/L	83	13	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	39	35	ug/L	89		SW846 8270C
	ND	39	36	ug/L	93	4.8	SW846 8270C
Isophorone	ND	39	34	ug/L	86		SW846 8270C
	ND	39	37	ug/L	95	9.4	SW846 8270C
2-Methylnaphthalene	ND	39	34	ug/L	88		SW846 8270C
	ND	39	36	ug/L	93	5.3	SW846 8270C
2-Methylphenol	ND	39	26	ug/L	67		SW846 8270C
	ND	39	30	ug/L	77	13	SW846 8270C
4-Methylphenol	ND	78	54	ug/L	69		SW846 8270C
	ND	78	60	ug/L	77	11	SW846 8270C
Naphthalene	ND	39	31	ug/L	78		SW846 8270C
	ND	39	32	ug/L	83	6.3	SW846 8270C
2-Nitroaniline	ND	39	32	ug/L	82		SW846 8270C
	ND	39	37	ug/L	93	13	SW846 8270C
3-Nitroaniline	ND	39	33	ug/L	85		SW846 8270C
	ND	39	38	ug/L	97	13	SW846 8270C
4-Nitroaniline	ND	39	34	ug/L	86		SW846 8270C
	ND	39	35	ug/L	90	4.5	SW846 8270C
Nitrobenzene	ND	39	33	ug/L	83		SW846 8270C
	ND	39	37	ug/L	93	11	SW846 8270C
2-Nitrophenol	ND	39	33	ug/L	84		SW846 8270C
	ND	39	36	ug/L	91	7.6	SW846 8270C
4-Nitrophenol	**ND**	**39**	**20**	**ug/L**	**52**		**SW846 8270C**
	ND	**39**	**23**	**ug/L**	**58**	**11**	**SW846 8270C**
N-Nitrosodiphenylamine	ND	39	33	ug/L	84		SW846 8270C
	ND	39	34	ug/L	87	3.6	SW846 8270C
N-Nitrosodi-n-propyl-amine	**ND**	**39**	**30**	**ug/L**	**77**		**SW846 8270C**
	ND	**39**	**34**	**ug/L**	**86**	**11**	**SW846 8270C**
	ND	39	31	ug/L	80	6.5	SW846 8270C
Pentachlorophenol	**ND**	**39**	**24**	**ug/L**	**61**		**SW846 8270C**
	ND	**39**	**24**	**ug/L**	**62**	**2.0**	**SW846 8270C**
Phenanthrene	ND	39	32	ug/L	81		SW846 8270C
	ND	39	34	ug/L	86	5.7	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FD-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Phenol	**ND**	**39**	**16**	**ug/L**	**40**		**SW846 8270C**
	ND	**39**	**17**	**ug/L**	**44**	**8.4**	**SW846 8270C**
Pyrene	**ND**	**39**	**33**	**ug/L**	**85**		**SW846 8270C**
	ND	**39**	**35**	**ug/L**	**88**	**3.7**	**SW846 8270C**
2,4,5-Trichloro-phenol	ND	39	34	ug/L	88		SW846 8270C
	ND	39	37	ug/L	93	6.2	SW846 8270C
2,4,6-Trichloro-phenol	ND	39	34	ug/L	88		SW846 8270C
	ND	39	37	ug/L	95	8.4	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	77	(27 - 111)
	85	(27 - 111)
2-Fluorobiphenyl	81	(28 - 110)
	86	(28 - 110)
Terphenyl-d14	95	(37 - 119)
	101	(37 - 119)
Phenol-d5	36	(10 - 110)
	41	(10 - 110)
2-Fluorophenol	54	(10 - 110)
	57	(10 - 110)
2,4,6-Tribromophenol	86	(22 - 120)
	96	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\KJHVV1FD.D
Lab Smp Id: kjhvv1fd Client Smp ID: AMW-05B(20080311)
Inj Date : 20-MAR-2008 14:09
Operator : 001574 Inst ID: a4hp9.i
Smp Info : kjhvv1fd,80320a.b,8270p,1-827042d.sub
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Meth Date : 21-Mar-2008 10:12 ulmanm Quant Type: ISTD
Cal Date : 18-MAR-2008 12:31 Cal File: 9THHH318.D
Als bottle: 12 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)
Vo	510.000	Volume of sample extracted (mL)
Vi	0.50000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
* 1	1,4-Dichlorobenzene-d4	152	3.845	3.846	(1.000)	107455	2.00000	
* 2	Naphthalene-d8	136	4.806	4.807	(1.000)	391357	2.00000	
* 3	Acenaphthene-d10	164	6.104	6.105	(1.000)	241149	2.00000	
* 4	Phenanthrene-d10	188	7.199	7.200	(1.000)	412558	2.00000	
* 5	Chrysene-d12	240	9.175	9.181	(1.000)	430615	2.00000	
* 6	Perylene-d12	264	10.634	10.640	(1.000)	343428	2.00000	
9	Pyridine	79	Compound Not Detected.					
10	N-Nitrosodimethylamine	74	1.917	1.918	(0.499)	141875	2.02692	15.897
11	Ethyl methacrylate	69	Compound Not Detected.					
12	3-Chloropropionitrile	54	Compound Not Detected.					
13	Malononitrile	66	Compound Not Detected.					
209	Benzaldehyde	77	3.519	3.520	(0.915)	355374	4.00503	31.412(Q)
21	Aniline	93	3.594	3.595	(0.935)	17503	0.11121	0.87225(R)
22	Phenol	94	3.535	3.541	(0.919)	256980	2.01251	15.784
23	bis(2-Chloroethyl)ether	93	3.621	3.621	(0.942)	365325	3.51838	27.595
24	2-Chlorophenol	128	3.685	3.685	(0.958)	259580	3.84095	30.125
26	1,3-Dichlorobenzene	146	3.802	3.803	(0.989)	289968	3.90707	30.644
27	1,4-Dichlorobenzene	146	3.856	3.856	(1.003)	300111	6.37820	50.025(R)

28 1,2-Dichlorobenzene	146	3.973	3.974 (1.033)	293650	4.15425	32.582
29 Benzyl Alcohol	108	3.930	3.931 (1.022)	162249	2.76280	21.669

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
30	2-Methylphenol	108	4.000	4.001	(1.040)	272131	3.36275	26.374
31	bis(2-Chloroisopropyl)ether	45	4.027	4.027	(1.047)	352027	3.75278	29.434
37	Acetophenone	105	4.139	4.139	(1.076)	490310	3.62064	28.397
32	N-Nitroso-di-n-propylamine	70	4.128	4.129	(1.074)	391184	3.85706	30.251
192	4-Methylphenol	108	4.117	4.118	(1.071)	580856	6.89559	54.083
34	Hexachloroethane	117	4.230	4.236	(1.100)	128238	3.65828	28.692
35	Nitrobenzene	77	4.278	4.278	(0.890)	570587	4.16837	32.693
41	Isophorone	82	4.449	4.449	(0.926)	973971	4.30017	33.727
42	2-Nitrophenol	139	4.513	4.513	(0.939)	154392	4.21429	33.053(QM)
43	2,4-Dimethylphenol	107	4.518	4.519	(0.940)	390324	3.66533	28.748
44	bis(2-Chloroethoxy)methane	93	4.587	4.588	(0.954)	444077	4.04204	31.702
46	2,4-Toluenediamene	121	Compound Not Detected.					
47	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
48	2,4-Dichlorophenol	162	4.689	4.690	(0.976)	252626	4.29623	33.696
49	Benzoic Acid	122	4.555	4.593	(0.948)	50091	1.02452	8.0354
50	1,2,4-Trichlorobenzene	180	4.753	4.754	(0.989)	281740	4.45952	34.976
51	Naphthalene	128	4.822	4.823	(1.003)	812175	3.89067	30.515(QM)
52	4-Chloroaniline	127	4.844	4.850	(1.008)	132724	1.63160	12.797(R)
56	Hexachlorobutadiene	225	4.897	4.898	(1.019)	178334	4.33044	33.964
210	Caprolactam	113	5.100	5.117	(1.061)	20053	0.79933	6.2692(Q)
57	1,2,3-Trichlorobenzene	180	Compound Not Detected.					
59	4-Chloro-3-Methylphenol	107	5.191	5.192	(1.080)	339959	4.02798	31.592
62	2-Methylnaphthalene	142	5.330	5.330	(1.109)	537260	4.39860	34.499(R)
63	1-Methylnaphthalene	142	5.405	5.411	(1.124)	510075	3.86022	30.276
64	Hexachlorocyclopentadiene	237	5.437	5.443	(0.891)	212942	4.41030	34.590(R)
66	2,4,6-Trichlorophenol	196	5.527	5.533	(0.906)	209476	4.38846	34.419
67	2,4,5-Trichlorophenol	196	5.560	5.565	(0.911)	215807	4.39003	34.432
211	1,1'-Biphenyl	154	5.666	5.667	(0.928)	691675	3.77172	29.582(Q)
68	1,2,3,5-Tetrachlorobenzene	216	Compound Not Detected.					
70	2-Chloronaphthalene	162	5.693	5.699	(0.933)	544362	4.08335	32.026
73	2-Nitroaniline	65	5.757	5.758	(0.943)	314362	4.10263	32.177
74	1,2,3,4-Tetrachlorobenzene	216	Compound Not Detected.					
76	Dimethylphthalate	163	5.875	5.870	(0.962)	695391	4.39493	34.470
78	2,6-Dinitrotoluene	165	5.928	5.929	(0.971)	160690	4.70288	36.885
79	Acenaphthylene	152	6.008	6.009	(0.984)	898798	4.03997	31.686
80	1,2-Dinitrobenzene	168	5.976	5.977	(0.979)	80227	4.67462	36.664
81	3-Nitroaniline	138	6.056	6.062	(0.992)	141234	4.26932	33.485
82	Acenaphthene	153	6.131	6.132	(1.004)	568855	3.96104	31.067
83	2,4-Dinitrophenol	184	6.131	6.137	(1.004)	87821	3.74634	29.383(QM)
85	4-Nitrophenol	109	6.158	6.164	(1.009)	102168	2.59103	20.322
86	Dibenzofuran	168	6.254	6.254	(1.024)	810797	4.11232	32.254(R)
87	2,4-Dinitrotoluene	165	6.222	6.228	(1.019)	218135	4.79749	37.627
91	2,3,5,6-Tetrachlorophenol	232	6.302	6.303	(1.032)	160323	3.76740	29.548
93	Diethylphthalate	149	6.382	6.383	(1.045)	700911	4.35774	34.178
94	Fluorene	166	6.505	6.506	(1.066)	701903	4.06916	31.915
95	4-Chlorophenyl-phenylether	204	6.489	6.490	(1.063)	348016	4.47987	35.136
96	4-Nitroaniline	138	6.505	6.511	(1.066)	170468	4.28885	33.638
98	4,6-Dinitro-2-methylphenol	198	6.521	6.527	(0.906)	127114	4.39411	34.464
99	N-Nitrosodiphenylamine	169	6.569	6.575	(0.912)	472279	4.17888	32.776
100	1,2-Diphenylhydrazine	77	6.601	6.607	(0.917)	1231173	4.22037	33.101
106	4-Bromophenyl-phenylether	248	6.847	6.847	(0.951)	196838	4.59681	36.053
107	Hexachlorobenzene	284	6.911	6.911	(0.960)	191408	4.39564	34.476

212 Atrazine	200	6.938	6.943 (0.964)	218614	4.52599	35.498(Q)
111 Pentachlorophenol	266	7.050	7.050 (0.979)	86648	3.05153	23.934

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
115	Phenanthrene	178	7.215	7.216	(1.002)	1010845	4.04437	31.720
116	Anthracene	178	7.253	7.253	(1.007)	1047513	4.23062	33.181
119	Carbazole	167	7.359	7.360	(1.022)	900151	4.32256	33.902
120	Di-n-Butylphthalate	149	7.562	7.563	(1.050)	1181074	4.48935	35.211
123	Fluoranthene	202	8.091	8.092	(1.124)	1167351	4.57430	35.877
124	Benzidine	184	Compound Not Detected.					
125	Pyrene	202	8.262	8.268	(0.900)	1162276	4.25948	33.408
131	Butylbenzylphthalate	149	8.684	8.685	(0.946)	509931	4.32742	33.940
133	3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
135	3,3'-Dichlorobenzidine	252	9.122	9.128	(0.994)	318578	3.26877	25.637
136	Benzo(a)Anthracene	228	9.170	9.171	(0.999)	1056062	3.94598	30.949
137	Chrysene	228	9.197	9.203	(1.002)	1040758	4.34763	34.099
138	4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
139	bis(2-ethylhexyl)Phthalate	149	9.095	9.101	(0.991)	716122	4.31620	33.852
140	Di-n-octylphthalate	149	9.645	9.651	(0.907)	1131123	4.23642	33.227
141	Benzo(b)fluoranthene	252	10.180	10.186	(0.957)	1014066	4.12635	32.364
142	Benzo(k)fluoranthene	252	10.206	10.212	(0.960)	1097252	4.37309	34.299
146	Benzo(a)pyrene	252	10.569	10.575	(0.994)	908770	4.06172	31.857
149	Indeno(1,2,3-cd)pyrene	276	12.236	12.247	(1.151)	1016467	4.42530	34.708
150	Dibenz(a,h)anthracene	278	12.252	12.263	(1.152)	871964	4.44588	34.870
151	Benzo(g,h,i)perylene	276	12.733	12.744	(1.197)	845732	4.44335	34.850
198	1,4-Dioxane	88	1.714	1.715	(0.446)	66422	1.82585	14.320
$ 154	Nitrobenzene-d5	82	4.262	4.262	(0.887)	518137	3.86939	30.348
$ 155	2-Fluorobiphenyl	172	5.592	5.592	(0.916)	622152	4.03362	31.636
$ 156	Terphenyl-d14	244	8.342	8.343	(0.909)	864515	4.75294	37.278
$ 157	Phenol-d5	99	3.530	3.531	(0.918)	326480	2.71420	21.288
$ 158	2-Fluorophenol	112	2.841	2.842	(0.739)	310970	4.01527	31.492
$ 159	2,4,6-Tribromophenol	330	6.681	6.682	(1.094)	116536	6.43741	50.490
$ 186	2-Chlorophenol-d4	132	3.674	3.675	(0.956)	381518	6.04452	47.408
$ 187	1,2-Dichlorobenzene-d4	152	3.963	3.963	(1.031)	179824	3.76756	29.549
M 195	Cresols, total	100				852987	10.2583	80.458
101	Diphenylamine	169	6.569	6.575	(0.912)	472279	4.17888	32.776

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp9.i
Lab File ID: KJHVV1FD.D
Lab Smp Id: kjhvv1fd
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Misc Info:

Calibration Date: 20-MAR-2008
Calibration Time: 10:48
Client Smp ID: AMW-05B(20080311)
Level: LOW
Sample Type: WATER

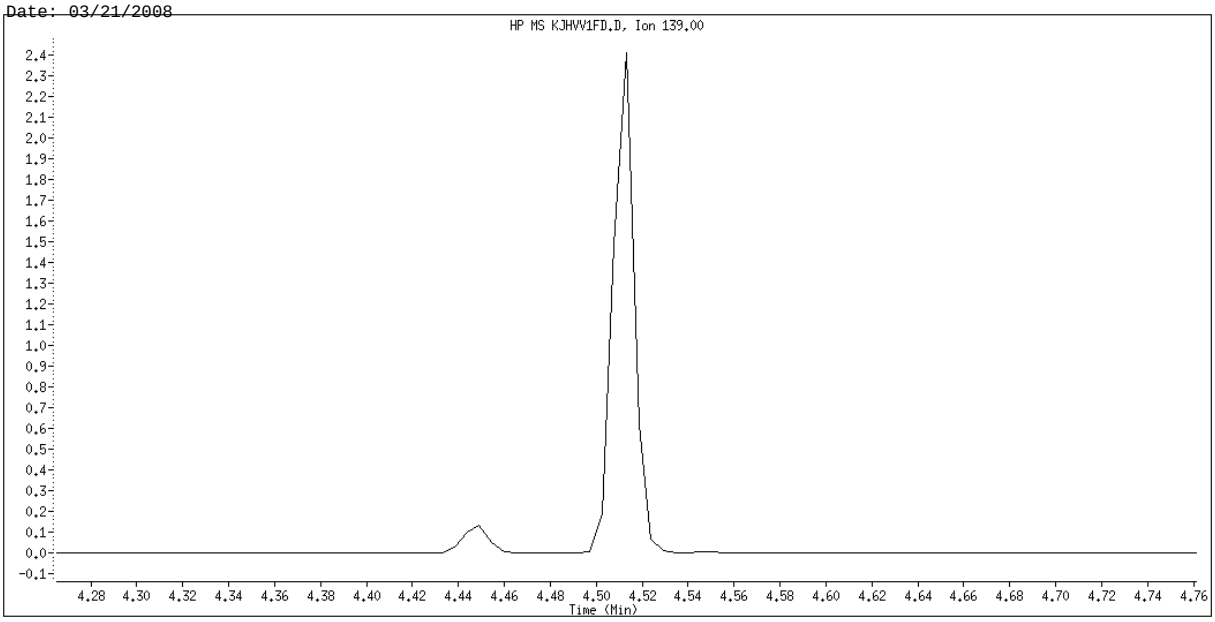
		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	104755	52378	209510	107455	2.58
2 Naphthalene-d8	382651	191326	765302	391357	2.28
3 Acenaphthene-d10	239536	119768	479072	241149	0.67
4 Phenanthrene-d10	417645	208823	835290	412558	-1.22
5 Chrysene-d12	418554	209277	837108	430615	2.88
6 Perylene-d12	338155	169078	676310	343428	1.56

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.85	3.35	4.35	3.85	-0.02
2 Naphthalene-d8	4.81	4.31	5.31	4.81	-0.01
3 Acenaphthene-d10	6.11	5.61	6.61	6.10	-0.01
4 Phenanthrene-d10	7.20	6.70	7.70	7.20	-0.01
5 Chrysene-d12	9.18	8.68	9.68	9.18	-0.07
6 Perylene-d12	10.64	10.14	11.14	10.63	-0.06

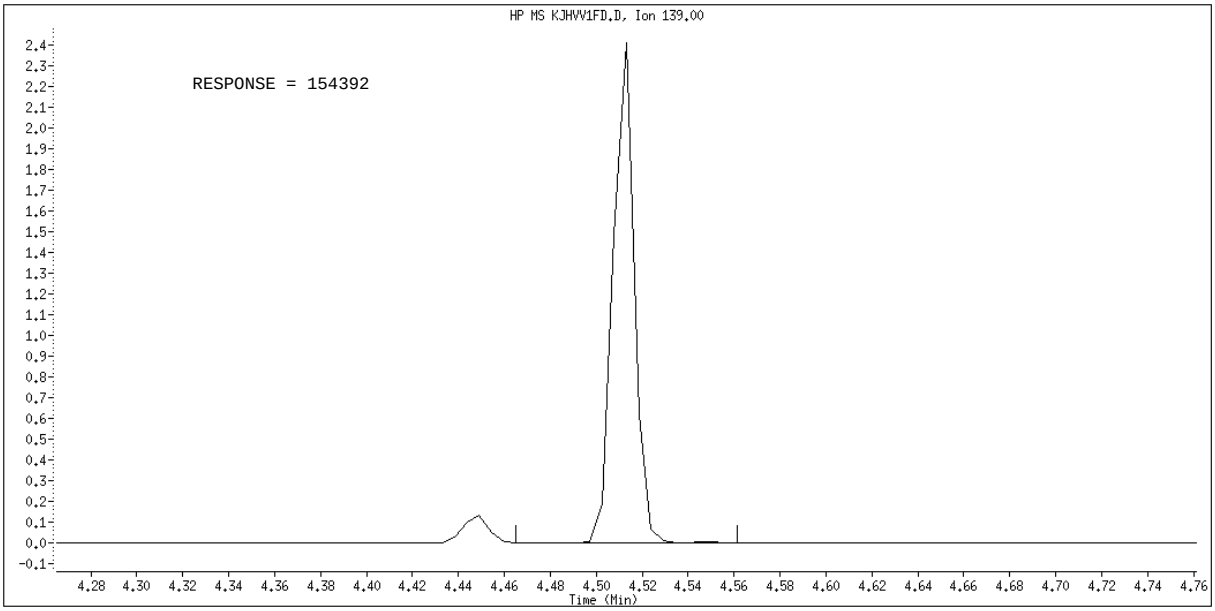
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\KJHWV1FD.D
Date : 20-MAR-2008 14:09
Client ID: AHW-05B(20080311)
Sample Info: kjhwv1fd,80320a,b,8270p,1-8270d2d,sub
Volume Injected (uL): 0.5
Column phase: db5.625
Instrument: a4hp9.i
Operator: 001574
Column diameter: 0.32
\\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\KJHWV1FD.D
Y (x10^6)
Min
-N-Nitrosodimethylamine+
-2-Fluorophenol
-Benzaldehyde+
-Aniline+
-2-Chlorophenol+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-d4+
-Benzyl Alcohol
-1,2-Dichlorobenzene+
-Acetophenone+
-Hexachloroethane+
-Isophorone
-2,4-Dimethylphenol+
-bis(2-Chloroethoxy)methane+
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Naphthalene-d8+
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene
-1-Methylnaphthalene+
-2,4,6-Trichlorophenol+
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethylphthalate+
-Acenaphthylene+
-Acenaphthene-d10+
-Dibenzofuran+
-2,3,5,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene+
-N-Nitrosodiphenylamine+
-2,4,6-Tribromophenol
-4-Bromophenyl-phenylether
-Hexachlorobenzene+
-Pentachlorophenol
-Phenanthrene-d10+
-Anthracene
-Carbazole
-Di-n-Butylphthalate
-Fluoranthene
-Pyrene
-Terphenyl-d14
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene-d12+
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-d12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File Name: KJHVV1FD.D
Inj. Date and Time: 20-MAR-2008 14:09
Instrument ID: a4hp9.i
Client ID: AMW-05B(20080311)
Compound Name: 2-Nitrophenol
CAS #: 88-75-5
Report Date: 03/21/2008



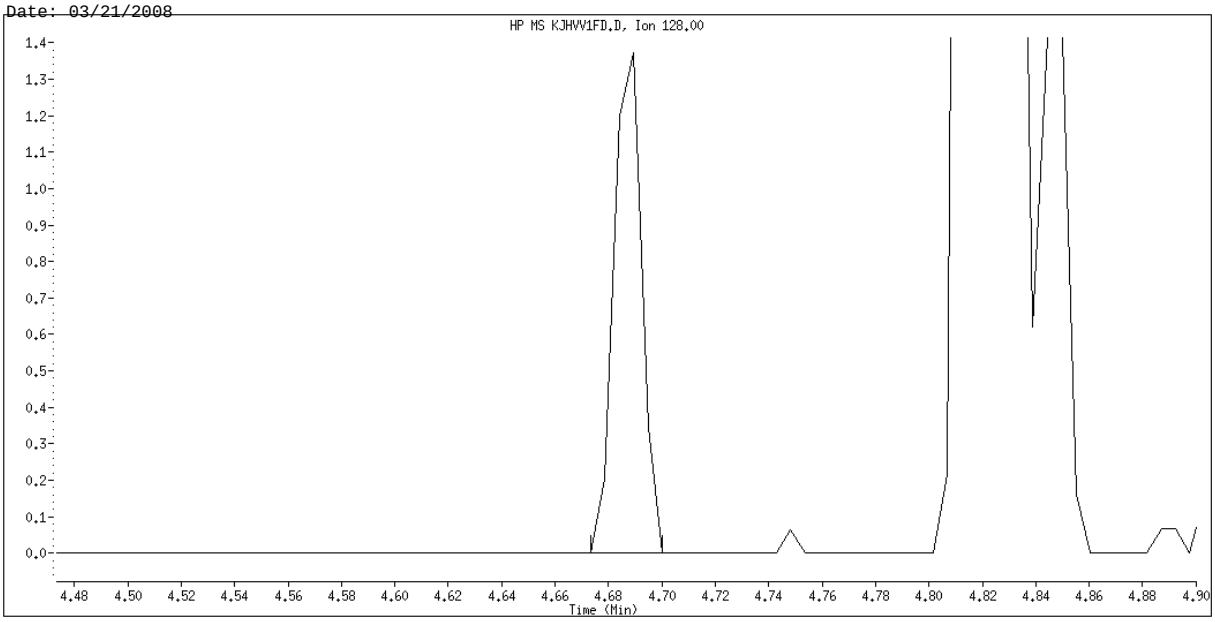
Original Integration



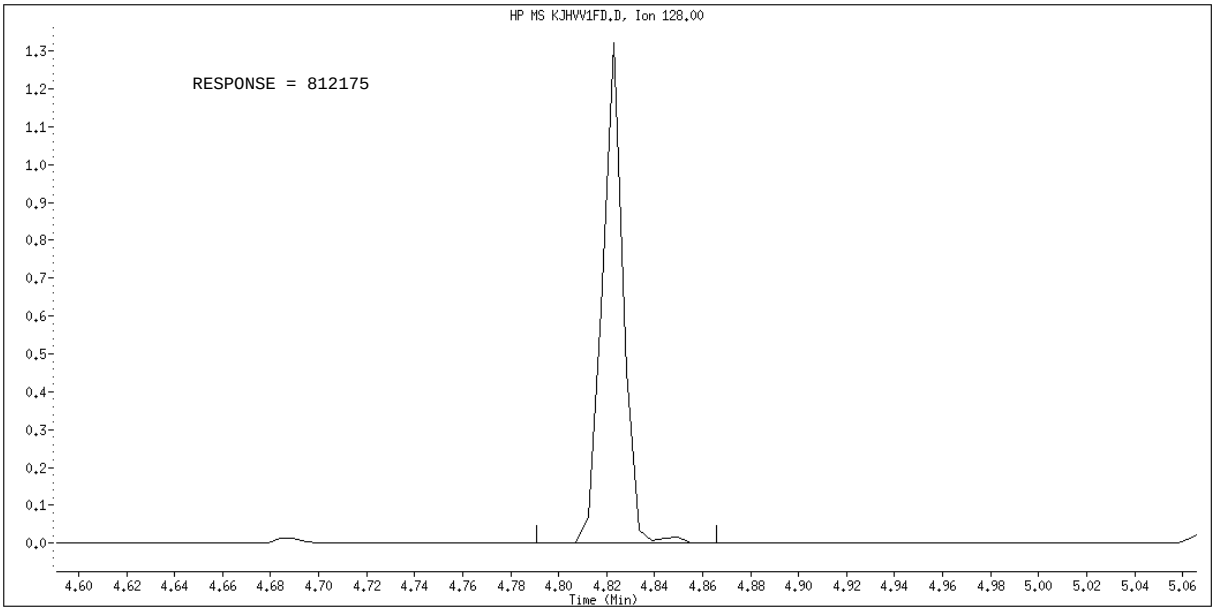
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

Data File Name: KJHVV1FD.D
Inj. Date and Time: 20-MAR-2008 14:09
Instrument ID: a4hp9.i
Client ID: AMW-05B(20080311)
Compound Name: Naphthalene
CAS #: 91-20-3
Report Date: 03/21/2008



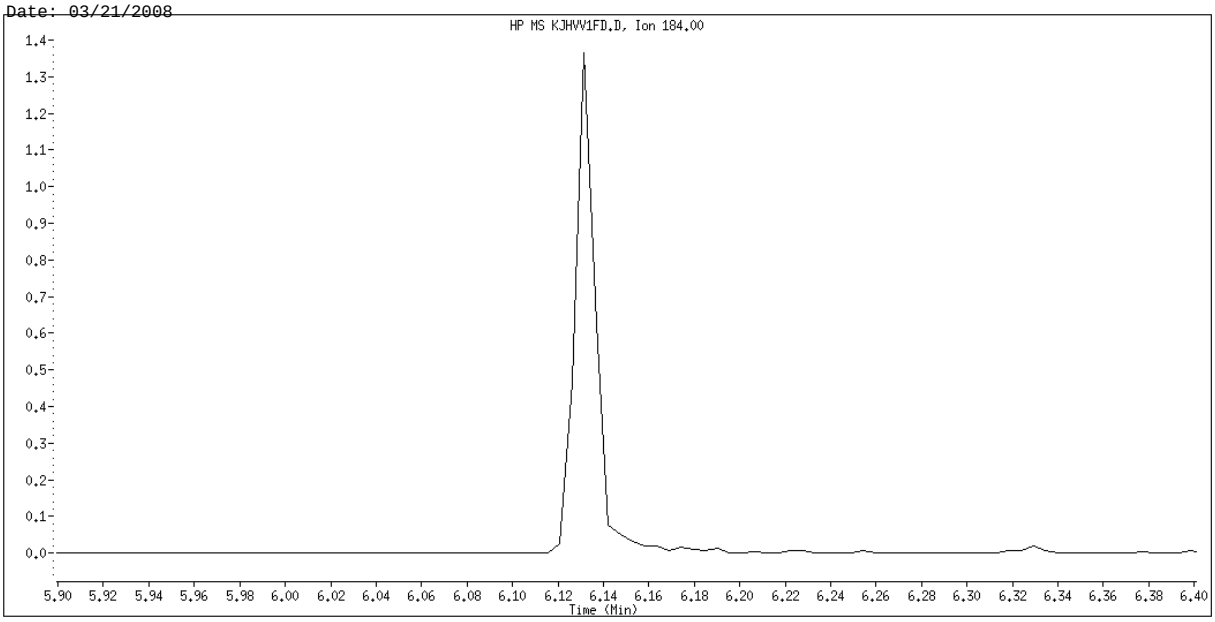
Original Integration



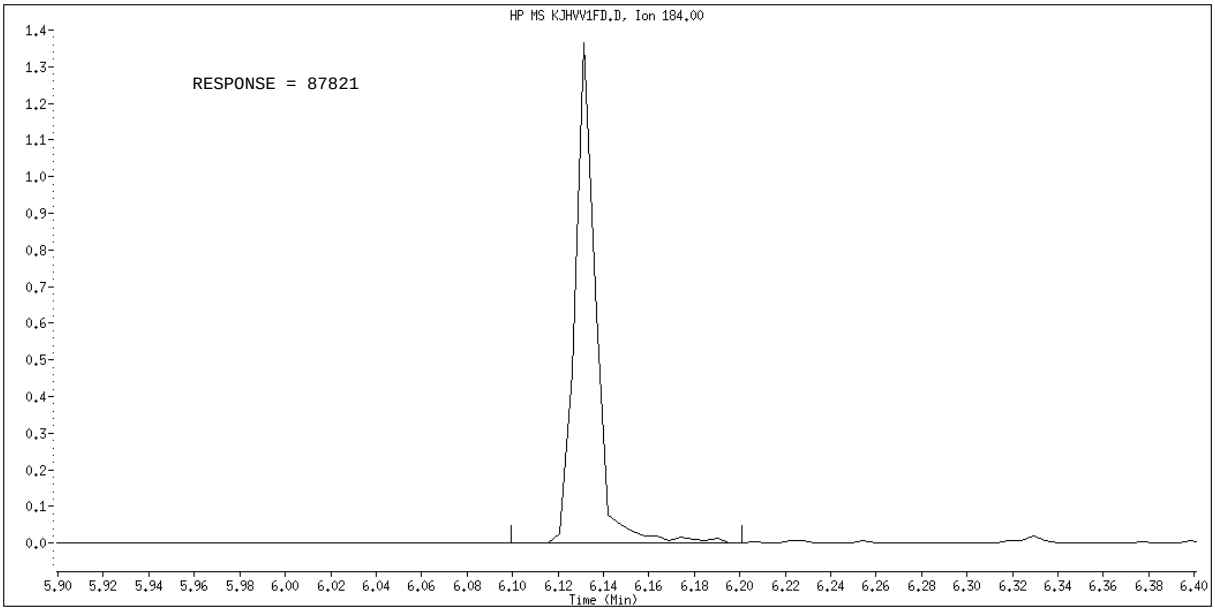
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

Data File Name: KJHVV1FD.D
Inj. Date and Time: 20-MAR-2008 14:09
Instrument ID: a4hp9.i
Client ID: AMW-05B(20080311)
Compound Name: 2,4-Dinitrophenol
CAS #: 51-28-5
Report Date: 03/21/2008



Original Integration



Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\KJHVV1FE.D
Lab Smp Id: kjhvv1fe Client Smp ID: AMW-05B(20080311)
Inj Date : 20-MAR-2008 14:29
Operator : 001574 Inst ID: a4hp9.i
Smp Info : kjhvv1fe,80320a.b,8270p,1-827042d.sub
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Meth Date : 21-Mar-2008 10:12 ulmanm Quant Type: ISTD
Cal Date : 18-MAR-2008 12:31 Cal File: 9THHH318.D
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)
Vo	510.000	Volume of sample extracted (mL)
Vi	0.50000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
* 1	1,4-Dichlorobenzene-d4	152	3.845	3.846	(1.000)	88167	2.00000	(Q)
* 2	Naphthalene-d8	136	4.806	4.807	(1.000)	324451	2.00000	
* 3	Acenaphthene-d10	164	6.104	6.105	(1.000)	195930	2.00000	
* 4	Phenanthrene-d10	188	7.199	7.200	(1.000)	349917	2.00000	
* 5	Chrysene-d12	240	9.181	9.181	(1.000)	360923	2.00000	
* 6	Perylene-d12	264	10.639	10.640	(1.000)	284753	2.00000	
9	Pyridine	79	Compound Not Detected.					
10	N-Nitrosodimethylamine	74	1.917	1.918	(0.499)	129686	2.25811	17.711
11	Ethyl methacrylate	69	Compound Not Detected.					
12	3-Chloropropionitrile	54	Compound Not Detected.					
13	Malononitrile	66	Compound Not Detected.					
209	Benzaldehyde	77	3.519	3.520	(0.915)	324712	4.46004	34.981(Q)
21	Aniline	93	3.589	3.595	(0.933)	23515	0.18210	1.4282(R)
22	Phenol	94	3.535	3.541	(0.919)	229417	2.18970	17.174
23	bis(2-Chloroethyl)ether	93	3.621	3.621	(0.942)	319976	3.75579	29.457
24	2-Chlorophenol	128	3.685	3.685	(0.958)	225477	4.06622	31.892
26	1,3-Dichlorobenzene	146	3.802	3.803	(0.989)	243530	3.99921	31.366
27	1,4-Dichlorobenzene	146	3.856	3.856	(1.003)	253633	6.56966	51.527(R)

28 1,2-Dichlorobenzene	146	3.973	3.974 (1.033)	243545	4.19916	32.934
29 Benzyl Alcohol	108	3.930	3.931 (1.022)	146647	3.04341	23.870

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
30	2-Methylphenol	108	4.000	4.001	(1.040)	254159	3.82774	30.021
31	bis(2-Chloroisopropyl)ether	45	4.027	4.027	(1.047)	308252	4.00501	31.412
37	Acetophenone	105	4.139	4.139	(1.076)	449673	4.04699	31.741
32	N-Nitroso-di-n-propylamine	70	4.128	4.129	(1.074)	359316	4.31790	33.866
192	4-Methylphenol	108	4.117	4.118	(1.071)	530580	7.67670	60.209
34	Hexachloroethane	117	4.230	4.236	(1.100)	119712	4.16215	32.644
35	Nitrobenzene	77	4.272	4.278	(0.889)	528294	4.65526	36.512
41	Isophorone	82	4.443	4.449	(0.924)	887541	4.72663	37.072
42	2-Nitrophenol	139	4.513	4.513	(0.939)	138854	4.54856	35.675(QM)
43	2,4-Dimethylphenol	107	4.518	4.519	(0.940)	356496	4.03800	31.671(R)
44	bis(2-Chloroethoxy)methane	93	4.587	4.588	(0.954)	404011	4.43567	34.790
46	2,4-Toluenediamene	121	Compound Not Detected.					
47	1,3,5-Trichlorobenzene	180	Compound Not Detected.					
48	2,4-Dichlorophenol	162	4.689	4.690	(0.976)	226769	4.65176	36.484(R)
49	Benzoic Acid	122	4.539	4.593	(0.944)	13388	0.33029	2.5905(QRM)
50	1,2,4-Trichlorobenzene	180	4.753	4.754	(0.989)	235389	4.49417	35.248
51	Naphthalene	128	4.822	4.823	(1.003)	717066	4.14341	32.497
52	4-Chloroaniline	127	4.844	4.850	(1.008)	159215	2.36088	18.517
56	Hexachlorobutadiene	225	4.897	4.898	(1.019)	162141	4.74914	37.248
210	Caprolactam	113	5.095	5.117	(1.060)	19177	0.92204	7.2317(Q)
57	1,2,3-Trichlorobenzene	180	Compound Not Detected.					
59	4-Chloro-3-Methylphenol	107	5.186	5.192	(1.079)	300276	4.29146	33.658
62	2-Methylnaphthalene	142	5.330	5.330	(1.109)	469664	4.63811	36.377(R)
63	1-Methylnaphthalene	142	5.405	5.411	(1.124)	447463	4.08469	32.037
64	Hexachlorocyclopentadiene	237	5.442	5.443	(0.892)	181433	4.62496	36.274(R)
66	2,4,6-Trichlorophenol	196	5.533	5.533	(0.906)	185096	4.77265	37.432
67	2,4,5-Trichlorophenol	196	5.559	5.565	(0.911)	186601	4.67198	36.643
211	1,1'-Biphenyl	154	5.666	5.667	(0.928)	622613	4.17869	32.774(Q)
68	1,2,3,5-Tetrachlorobenzene	216	Compound Not Detected.					
70	2-Chloronaphthalene	162	5.693	5.699	(0.933)	497775	4.59565	36.044
73	2-Nitroaniline	65	5.757	5.758	(0.943)	290696	4.66934	36.622
74	1,2,3,4-Tetrachlorobenzene	216	Compound Not Detected.					
76	Dimethylphthalate	163	5.869	5.870	(0.962)	630116	4.90149	38.443
78	2,6-Dinitrotoluene	165	5.928	5.929	(0.971)	139466	5.02375	39.402
79	Acenaphthylene	152	6.008	6.009	(0.984)	789372	4.36699	34.251
80	1,2-Dinitrobenzene	168	5.976	5.977	(0.979)	71900	5.15631	40.442(R)
81	3-Nitroaniline	138	6.056	6.062	(0.992)	130132	4.84159	37.973
82	Acenaphthene	153	6.131	6.132	(1.004)	499304	4.27915	33.562
83	2,4-Dinitrophenol	184	6.131	6.137	(1.004)	68639	3.61495	28.352(QM)
85	4-Nitrophenol	109	6.158	6.164	(1.009)	92911	2.90008	22.746
86	Dibenzofuran	168	6.254	6.254	(1.025)	701257	4.37761	34.334
87	2,4-Dinitrotoluene	165	6.222	6.228	(1.019)	187696	5.08075	39.849
91	2,3,5,6-Tetrachlorophenol	232	6.302	6.303	(1.032)	153231	4.39561	34.475
93	Diethylphthalate	149	6.377	6.383	(1.045)	620054	4.74474	37.214
94	Fluorene	166	6.505	6.506	(1.066)	623821	4.45115	34.911
95	4-Chlorophenyl-phenylether	204	6.489	6.490	(1.063)	296974	4.70511	36.903
96	4-Nitroaniline	138	6.505	6.511	(1.066)	144922	4.48763	35.197
98	4,6-Dinitro-2-methylphenol	198	6.521	6.527	(0.906)	109677	4.47005	35.059
99	N-Nitrosodiphenylamine	169	6.569	6.575	(0.912)	415159	4.33108	33.969
100	1,2-Diphenylhydrazine	77	6.601	6.607	(0.917)	1094907	4.42516	34.707
106	4-Bromophenyl-phenylether	248	6.847	6.847	(0.951)	175044	4.81964	37.801
107	Hexachlorobenzene	284	6.911	6.911	(0.960)	163593	4.42942	34.740

212 Atrazine	200	6.937	6.943 (0.964)	193567	4.72484	37.058(Q)
111 Pentachlorophenol	266	7.050	7.050 (0.979)	75152	3.11463	24.428

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)
115	Phenanthrene	178	7.215	7.216	(1.002)	907916	4.28284	33.591
116	Anthracene	178	7.253	7.253	(1.007)	911835	4.34191	34.054
119	Carbazole	167	7.359	7.360	(1.022)	807685	4.57286	35.866
120	Di-n-Butylphthalate	149	7.562	7.563	(1.050)	1044131	4.67931	36.700
123	Fluoranthene	202	8.091	8.092	(1.124)	1023339	4.72784	37.081
124	Benzidine	184	Compound Not Detected.					
125	Pyrene	202	8.267	8.268	(0.901)	1011241	4.42157	34.679
131	Butylbenzylphthalate	149	8.689	8.685	(0.946)	458676	4.64407	36.424
133	3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
135	3,3'-Dichlorobenzidine	252	9.127	9.128	(0.994)	298155	3.64994	28.627
136	Benzo(a)Anthracene	228	9.175	9.171	(0.999)	935744	4.17155	32.718
137	Chrysene	228	9.202	9.203	(1.002)	880075	4.38628	34.402
138	4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
139	bis(2-ethylhexyl)Phthalate	149	9.106	9.101	(0.992)	633525	4.55568	35.731
140	Di-n-octylphthalate	149	9.656	9.651	(0.908)	976166	4.40941	34.584
141	Benzo(b)fluoranthene	252	10.185	10.186	(0.957)	940360	4.61489	36.195
142	Benzo(k)fluoranthene	252	10.217	10.212	(0.960)	875434	4.20798	33.004
146	Benzo(a)pyrene	252	10.575	10.575	(0.994)	797239	4.29746	33.706
149	Indeno(1,2,3-cd)pyrene	276	12.246	12.247	(1.151)	884358	4.64350	36.420
150	Dibenz(a,h)anthracene	278	12.257	12.263	(1.152)	752282	4.62602	36.282
151	Benzo(g,h,i)perylene	276	12.738	12.744	(1.197)	725320	4.59594	36.047
198	1,4-Dioxane	88	1.714	1.715	(0.446)	65449	2.19268	17.198
$ 154	Nitrobenzene-d5	82	4.262	4.262	(0.887)	469427	4.22854	33.165
$ 155	2-Fluorobiphenyl	172	5.586	5.592	(0.915)	538808	4.29949	33.721
$ 156	Terphenyl-d14	244	8.342	8.343	(0.909)	768914	5.04362	39.558
$ 157	Phenol-d5	99	3.525	3.531	(0.917)	303448	3.07462	24.115
$ 158	2-Fluorophenol	112	2.841	2.842	(0.739)	273902	4.31034	33.807
$ 159	2,4,6-Tribromophenol	330	6.681	6.682	(1.094)	105606	7.18000	56.314
$ 186	2-Chlorophenol-d4	132	3.674	3.675	(0.956)	329667	6.36565	49.927
$ 187	1,2-Dichlorobenzene-d4	152	3.962	3.963	(1.031)	151413	3.86631	30.324
M 195	Cresols, total	100				784739	11.5044	90.231
101	Diphenylamine	169	6.569	6.575	(0.912)	415159	4.33108	33.969

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

TestAmerica North Canton

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: a4hp9.i
Lab File ID: KJHVV1FE.D
Lab Smp Id: kjhvv1fe
Analysis Type: SV
Quant Type: ISTD
Operator: 001574
Method File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\8270p.m
Misc Info:

Calibration Date: 20-MAR-2008
Calibration Time: 10:48
Client Smp ID: AMW-05B(20080311)
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	104755	52378	209510	88167	-15.84
2 Naphthalene-d8	382651	191326	765302	324451	-15.21
3 Acenaphthene-d10	239536	119768	479072	195930	-18.20
4 Phenanthrene-d10	417645	208823	835290	349917	-16.22
5 Chrysene-d12	418554	209277	837108	360923	-13.77
6 Perylene-d12	338155	169078	676310	284753	-15.79

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	3.85	3.35	4.35	3.85	-0.02
2 Naphthalene-d8	4.81	4.31	5.31	4.81	-0.01
3 Acenaphthene-d10	6.11	5.61	6.61	6.10	-0.01
4 Phenanthrene-d10	7.20	6.70	7.70	7.20	-0.01
5 Chrysene-d12	9.18	8.68	9.68	9.18	-0.01
6 Perylene-d12	10.64	10.14	11.14	10.64	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\cansvr11\dd\chem\MSS\a4hp9.i\80320a.b\KJHVV1FE.D

Page 1

Date : 20-MAR-2008 14:29

Client ID: AMW-05B(20080311)

Instrument: a4hp9.i

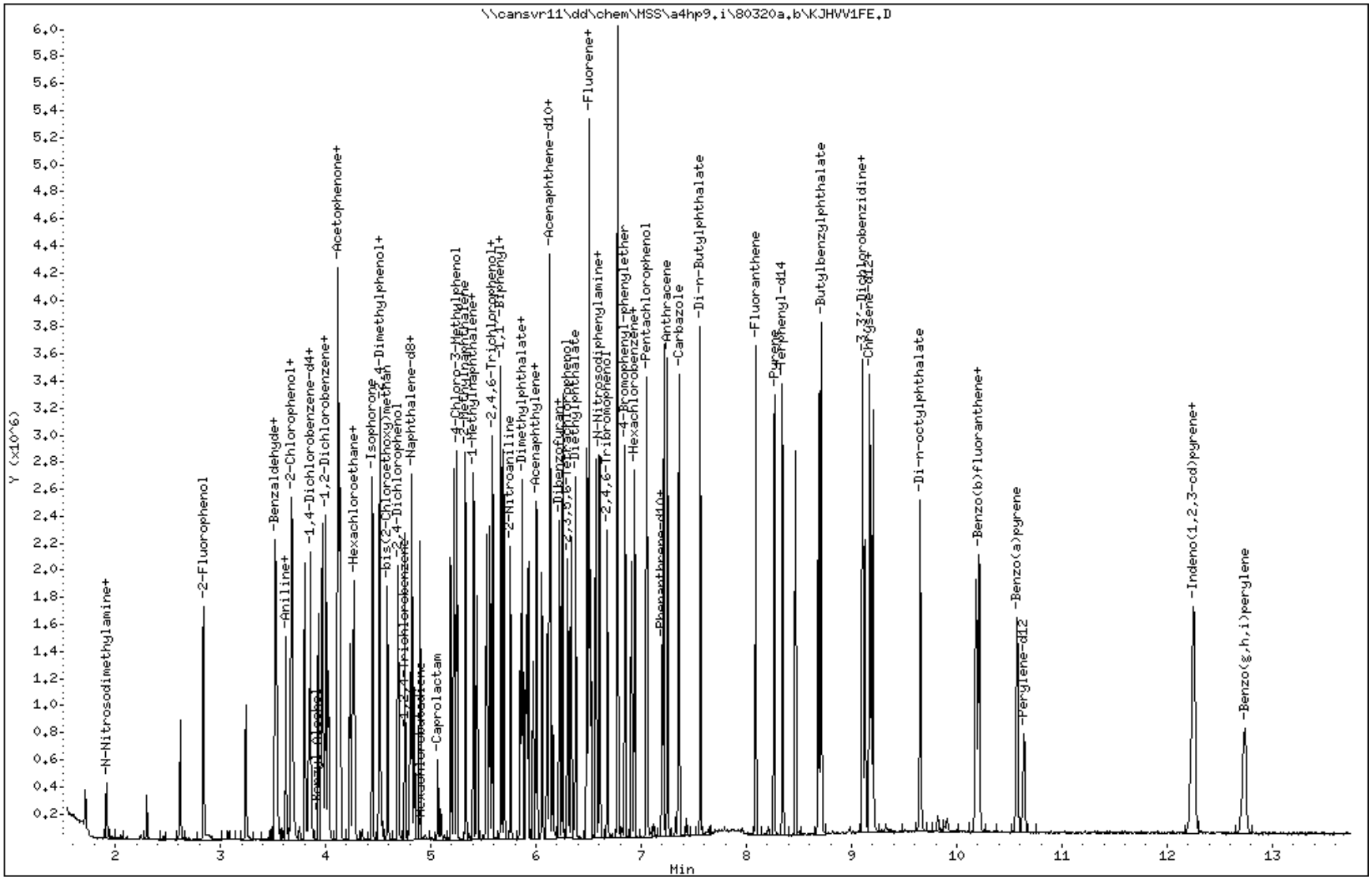
Sample Info: kjhvv1fe,80320a.b,8270p,1-827042d.sub

Volume Injected (uL): 0.5

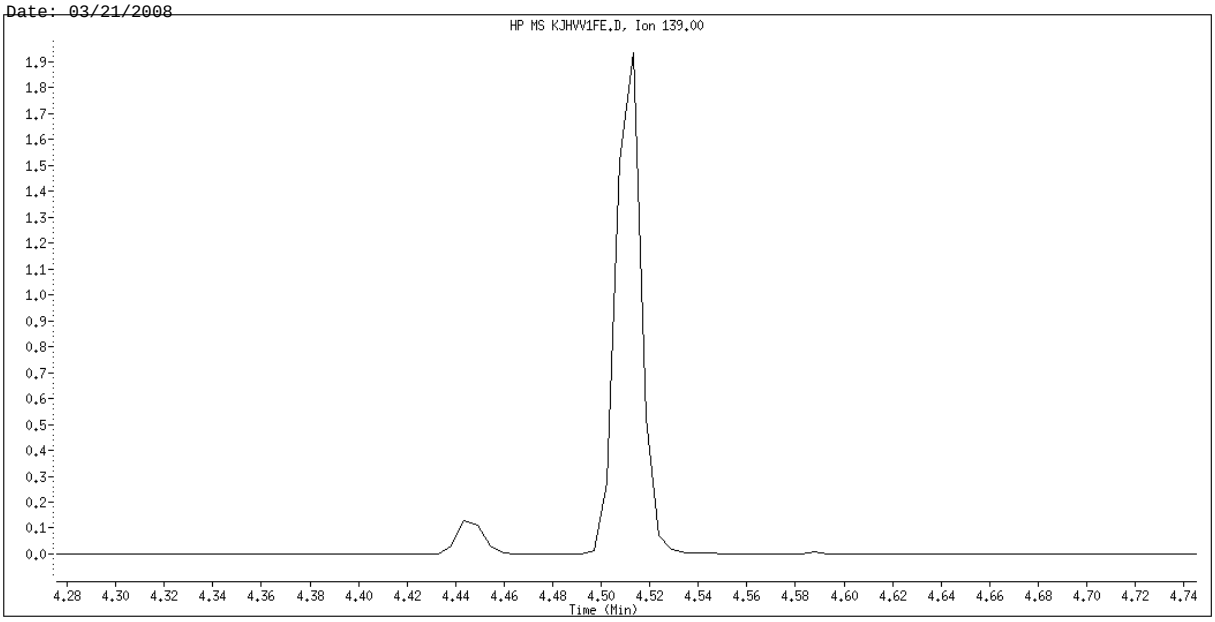
Operator: 001574

Column phase: db5.625

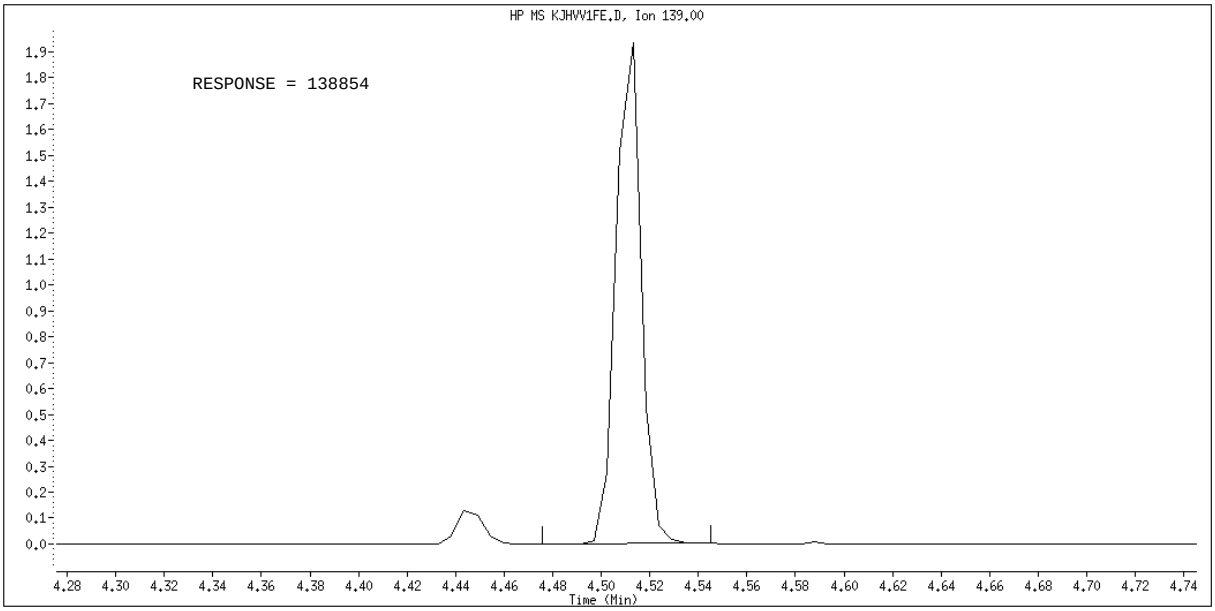
Column diameter: 0.32



Data File Name: KJHVV1FE.D
Inj. Date and Time: 20-MAR-2008 14:29
Instrument ID: a4hp9.i
Client ID: AMW-05B(20080311)
Compound Name: 2-Nitrophenol
CAS #: 88-75-5
Report Date: 03/21/2008



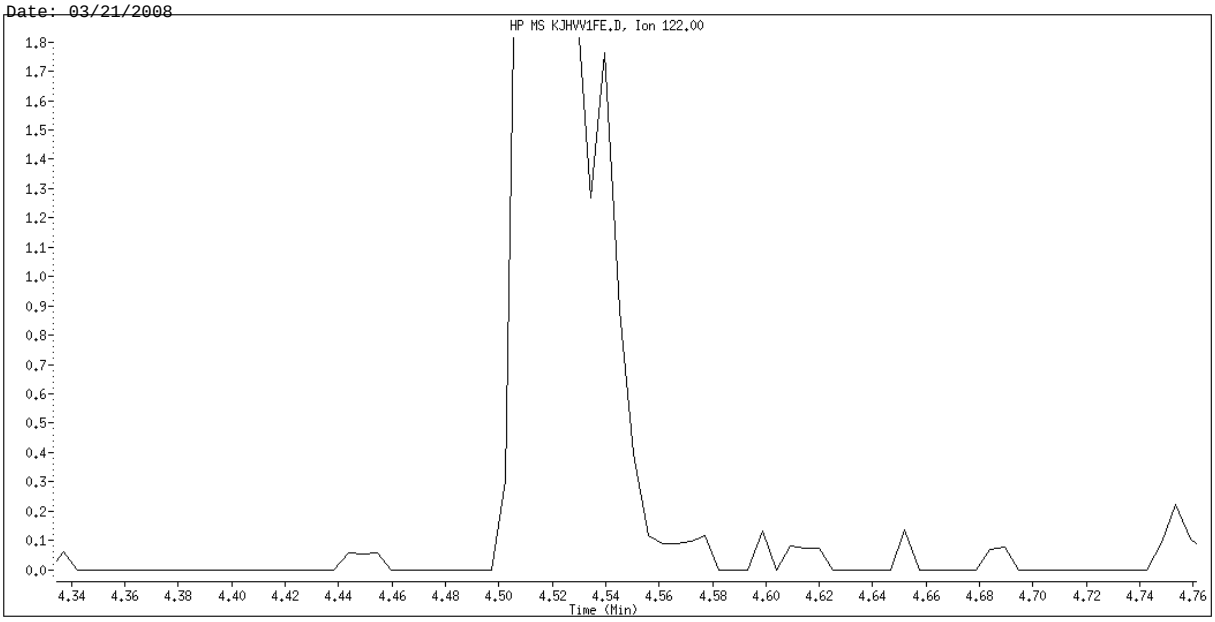
Original Integration



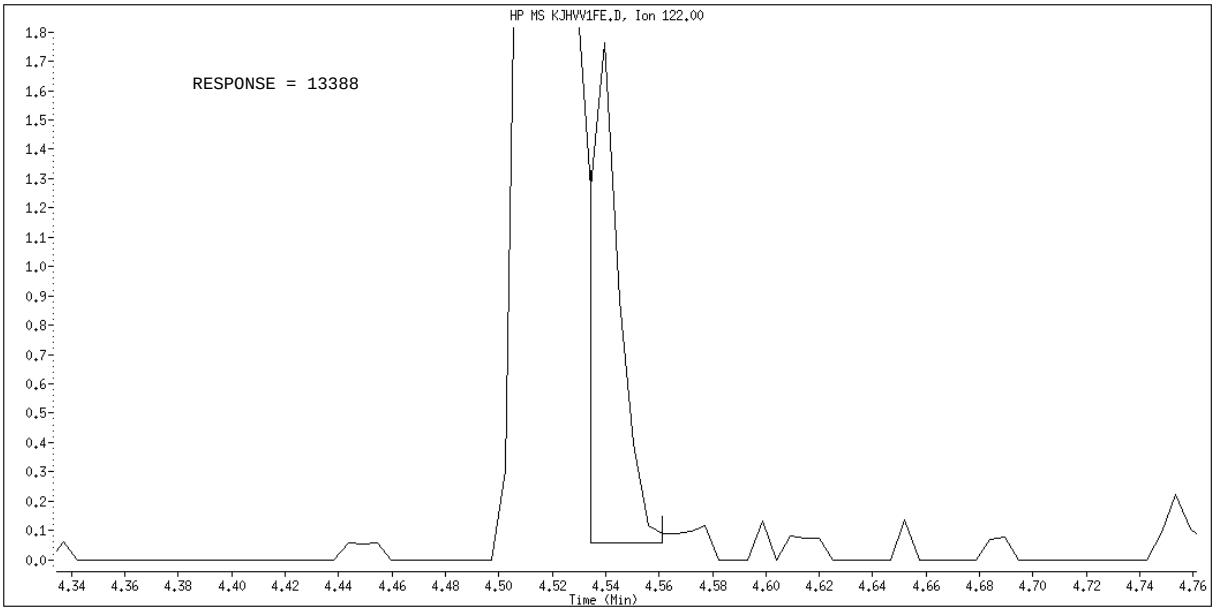
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

Data File Name: KJHVV1FE.D
Inj. Date and Time: 20-MAR-2008 14:29
Instrument ID: a4hp9.i
Client ID: AMW-05B(20080311)
Compound Name: Benzoic Acid
CAS #: 65-85-0
Report Date: 03/21/2008



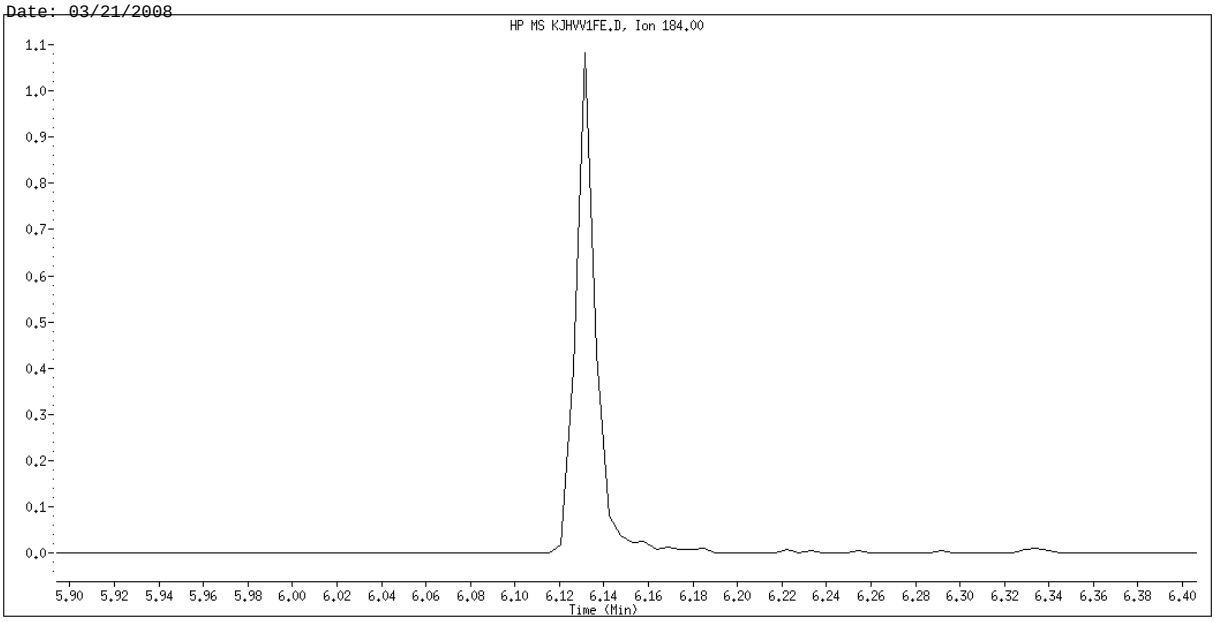
Original Integration



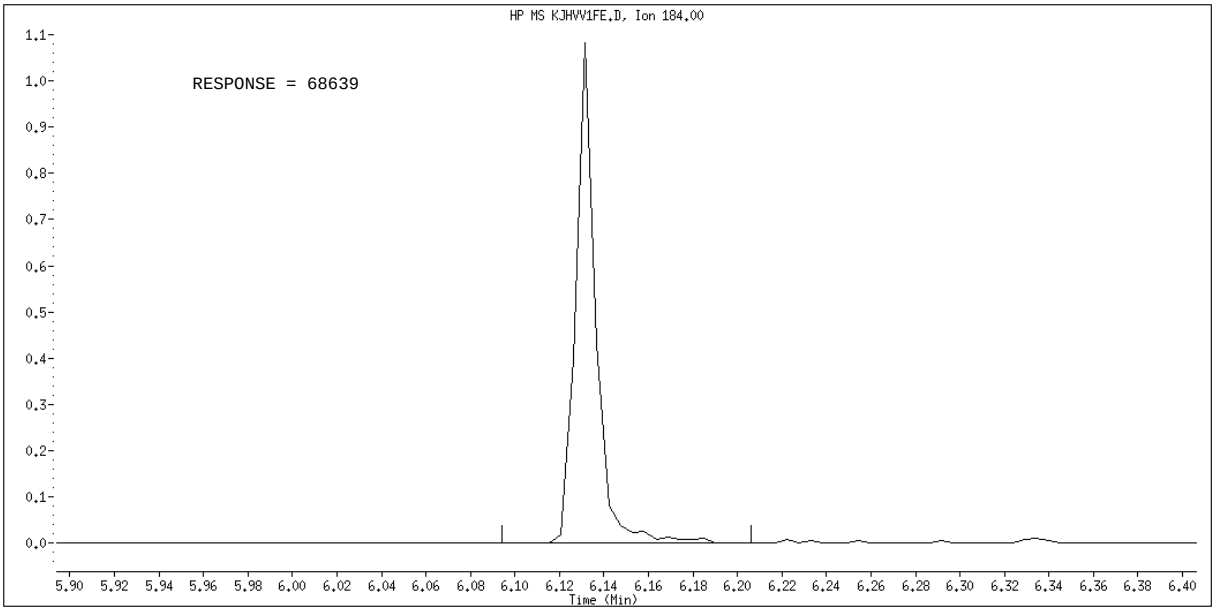
Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

Data File Name: KJHVV1FE.D
Inj. Date and Time: 20-MAR-2008 14:29
Instrument ID: a4hp9.i
Client ID: AMW-05B(20080311)
Compound Name: 2,4-Dinitrophenol
CAS #: 51-28-5
Report Date: 03/21/2008



Original Integration



Manual Integration

Manually Integrated By: ulmanm
Manual Integration Reason: Peak not found

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

MISCELLANEOUS DATA

TESTAMERICA NORTH CANTON MS SEMIVOLATILE RUN LOG

INSTRUMENT: A4HP8 DATE: 2-18-08

I.S.#: SV3385 $MecI_2$ Lot#: E51E29 GC Program #: 2

FILE NAME	LOT No. / FILE NAME	SAMPLE PREP	D.F.	QUAL	COMMENTS	ANALYST
8DF0218+T	SV3341			OK	(12:04)	JP
8SMM0218	SV3364			OK	Level II Review By:	
8SM0218	SV3363			OK	2/19	
8SML0218	SV3362			OK		
8SL0218	SV3361			OK		
8SLL0218	SV3360			OK		
8HHH0218	SV3368			OK		
8SHH0218	SV3367			OK		
8SH0218	SV3366			OK		
8SMH0218	SV3365			OK		
ICVTCL	SV3369			OK		
8AHHH218	SV3324			OK		
8AHH0218	SV3323			OK		
8AH0218	SV3322			OK		
8AMH0218	SV3321			OK		
8AMM0218	SV3320			OK		
8AM0218	SV3319			OK		
8AML0218	SV3318			OK		
8AL0218	SV3317			OK		
~~ICVTCL~~ AP9	ICVAP9 SV3325			OK		
JP 2-18-08						
						JP 2-18-08

JP 2-18-08

TESTAMERICA NORTH CANTON MS SEMIVOLATILE RUN LOG

INSTRUMENT: A4HP8 DATE: 3-19-08

I.S.#: SV3385 $MeCl_2$ Lot#: ES1E29 GC Program #: 2

FILE NAME	LOT No. / FILE NAME	SAMPLE PREP	D.F.	QUAL	COMMENTS	ANALYST
8DF0319+T	SV3341			OK	(11:07)	
8SmH0319	SV3365			OK	Level II Review By: OKMV 3/21/08	
KJPH71AA	B KJPF3	3-17 1L-2-1	5+	OK		
KJPH71AC	C KJPF3	" "		OK		
KJPH71AD	L KJPF3	" "		OK		
KJPF71AA	B KJPF8	3-17 30g-2-1		OK		
KJPF71AC	C KJPF8	" "		OK		
KJRPP1AA	B	3-18 30g-2-1		OK		
KJRPP1AC	C	" "		OK		
KJG332AG		" "		OK		
KJLRE1AC		3-17 1L-2-1		OK		
KJNK61AC		" "		OK		
KJNLC1AC		" "		OK		
KJNLE1AC		" "		OK		
KJNQ11AG		3-17 30g-2-1		OK		
KJNQ21AG		" "		OK		
KJNQ31AG		" "		OK		
KJNJJW1AC		" "		OK		
KJCH51AC		" "		OK		
KJJJ31A6		" "		OK		
KJK3H1AC		" "		OK		
KJK4A1AV		" "		OK		
KJCJ01AK		" "		OK		
KJJKX1AH		" "		OK		
KJK211AC		" "		OK		
KJK3C1AK		" "		OK		
KJCHW1AC	= -1AF MSD	" "		OK	* Samples switched	
KJCHW1AE	MS	" "		OK		
KJCHW1AF	~~MSD~~ =1AC	" "		OK	* Samples switched	
KJJJR1AC		" "	4.100	OK		
KJK341AK		" "	5.100	OK		
KJCH71AC		" "	10.100	OK		

3-19-08

3-19-08

TESTAMERICA NORTH CANTON MS SEMIVOLATILE RUN LOG

INSTRUMENT: A4HP8 DATE: 3-19-08

I.S.#: SV3385 $MeCl_2$ Lot#: E51E29 GC Program #: 2

FILE NAME	LOT No. / FILE NAME	SAMPLE PREP	D.F.	QUAL	COMMENTS	ANALYST
8DF0319FT	SV3341			OK	(11:07)	
SEE PAGE 22		for stds		—	Level II Review By:	
KJNQM1A5		3-17 30g-2ml	20:100	OK		
KJNQM1EM	MS	" "	20:100	OK		
KJNQM1EN	MSD	" "	20:100	OK		
KJQ531AL		3-18 8g-2ml	1:100	OK rerun	4-7 5	
KJQ531AM	MS	" "	1:100	OK		
KJQ531AN	MSD	" "	1:100	OK		

3-19-08

TESTAMERICA NORTH CANTON MS SEMIVOLATILE RUN LOG

INSTRUMENT: A4HP9 DATE: 3/17/08

I.S.#: SV3385 $MeCl_2$ Lot#: ESIE29 GC Program #: 2

FILE NAME	LOT No. / FILE NAME	SAMPLE PREP	D.F.	QUAL	COMMENTS	ANALYST
9DF0317ATT	SV3386	12.5NG DFTPP STD	—	OK	(10:27)	MU
9SMH0317	SV3365	5NG TCL STD	—	OK	Level II Review By:	
9SMM0317	SV3364	2.5NG TCL STD	—	OK	3/18	
9SM0317	SV3363	1.0NG TCL STD	—	OK		
9SML0317	SV3362	0.5NG TCL STD	—	OK		
9SL0317	SV3361	0.25NG TCL STD	—	OK	New 8270C	
9SLL0317	SV3360	0.05NG TCL STD	—	OK	+625	
9SH0317	SV3366	7.5NG TCL STD	—	OK	I-Cal	
9SHH0317	SV3367	10NG TCL STD	—	OK		
9HHH0317	SV3368	12.5NG TCL STD	—	OK		
9TCLICV	SV3369	5NG TCL STD	—	OK	2nd Source	
KJHVK1AA	B	3-13 1L→2ml	5t	OK	short TCLs	
KJHVK1AC	C	3-13 1L→2ml	"	OK		
KJHVK1AD	L	3-13 1L→2ml	"	REEXT	1,2,4-TCB	
KJGKP1AA	B	3-13 30g→2ml	"	OK	TCLP List Soils	
KJGKP1AC	C	3-13 30g→2ml	"	OK		
KJGT71AK	ABC130124	3-13 1L→2ml	"	REEXT	bad QC short TCLs	
KJGVC1AK		3-13 1L→2ml	"	REEXT		
KJGVG1AK		3-13 1L→2ml	"	REEXT		
KJGVH1AK		3-13 1L→2ml	"	REEXT		
KJGVL1AK		3-13 1L→2ml	"	REEXT		
KJGVN1AK		3-13 1L→2ml	"	REEXT		
KJGVQ1AK		3-13 1L→2ml	"	REEXT		
KJGVV1AK		3-13 1L→2ml	"	REEXT		
KJGW01AA	ABC130130	3-13 1L→2ml	"	REEXT	1,4-Diox	
KJFL01AN	ABC120252	3-13 30g→2ml	"	REEXT	TCLP List Soils No acids	
KJFL11AN		3-13 30g→2ml	"	REEXT		
KJFL21AN		3-13 30g→2ml	"	REEXT		
KJFLN1AN		3-13 30g→2ml	40/100	Rerun	5t	
KJFLW1AN		3-13 30g→2ml	2/100	OK		
KJFLR1AN		3-13 30g→2ml	5/100	OK		
	(Additional Samples on following page)					

TESTAMERICA NORTH CANTON MS SEMIVOLATILE RUN LOG

INSTRUMENT: A4HP9 DATE: 3/17/08

I.S.#: SV3385 $MeCl_2$ Lot#: E5IE29 GC Program #: 2

FILE NAME	LOT No. / FILE NAME	SAMPLE PREP	D.F.	QUAL	COMMENTS	ANALYST
9DFO317A+T	SV3386	12.5NG DFTPP STD	—	(OK)	(10:27)	MU
(See	Previous	Page for Standards)		—	Level II Review By:	
KJFL31AN	A8C120252	3-13 30g→2ml	5/100	OK	TCLP List Soils	
KJFKX1AD	A8C120250	3-13 30g→2ml	5/100	OK		
KJFKX1AP	MS	3-13 30g→2ml	5/100	OK		
KJFKX1AQ	MSD	3-13 30g→2ml	5/100	OK		
KJFK11AD		3-13 30g→2ml	2/100	Rerun	out of tune	

MU 3/17/08

TESTAMERICA NORTH CANTON MS SEMIVOLATILE RUN LOG

INSTRUMENT: A4HP9 DATE: 3/20/08

I.S.#: 5V 3385 $MeCl_2$ Lot#: E5IE29 GC Program #: 2

FILE NAME	LOT No. / FILE NAME	SAMPLE PREP	D.F.	QUAL	COMMENTS	ANALYST
9DF0320B+T	5V 3386	12.5NG DFTPP STD	—	OK	(10:11)	MU
9SMH0320	5V 3365	5NG TCL STD	—	OK	Level II Review By:	
9TMH0320	5V 3397	5NG Thiol STD	—	OK		
KJM29 1AA	B	3-15 1L→2ml	5+	OK	TCL+ 2 Thiols	
KJM29 1AC	C	3-15 1L→2ml	"	OK	↓	
KJTNH 1AA	B	3-19 1L→2ml	"	OK	4.2 REEXTS	
KJTNH 1AC	C	3-19 1L→2ml	"	OK	↓	
KJRPK 1AA	B	3-18 1L→2ml	"	OK	short TCL REEXTS	
KJRPK 1AC	C	3-18 1L→2ml	"	OK	↓	
KJRPK 1AD	L	3-18 1L→2ml	"	OK	↓	
KJHVV 2AC	ABC 130254	3-19 1L→2ml	"	OK	4.2 REEXTS	
KJHVV 1FD	MS	3-19 500ml→2ml	"	OK	↓	
KJHVV 1FE	MSD	3-19 500ml→2ml	"	OK		
KJHRE 2AC	ABC 130246	3-19 1L→2ml	5+	OK		
KJHTA 2AC	↓	3-19 1L→2ml	"	OK	↓	
KJKN7 1AM	ABC 140106	3-15 1L→2ml	"	OK	TCL+ 2 Thiols	
KJKN9 1AM		3-15 1L→2ml	"	OK	↓	
KJKPA 1AM		3-15 1L→2ml	"	Rerun	bad inj	
KJKPC 1CA		3-15 1L→2ml	"	OK		
KJKPC 1EA	MS	3-15 500ml→2ml	"	OK		
KJKPC 1EC	MSD	3-15 500ml→2ml	"	OK		
KJKPJ 1AM		3-15 1L→2ml	"	OK		
KJKPN 1AM		3-15 1L→2ml	"	OK		
KJKPP 1AM		3-15 1L→2ml	"	OK		
KJKPQ 1AM	↓	3-15 1L→2ml	"	REEXT	acid <10%	
KJGT7 2AK	ABC 130124	3-18 1L→2ml	"	OK	short TCL REEXTS	
KJGVC 2AK		3-18 1L→2ml	"	OK		
KJGVG 2AK		3-18 1L→2ml	"	OK		
KJGVH 2AK		3-18 1L→2ml	"	OK		
KJGVL 2AK		3-18 1L→2ml	"	OK		
KJGVN 2AS	↓	3-18 1L→2ml	"	OK	↓	
	(Additional Samples on following page)					

TESTAMERICA NORTH CANTON MS SEMIVOLATILE RUN LOG

INSTRUMENT: A4HP9 **DATE:** 3/20/08

I.S.#: 5V 3385 **$MeCl_2$ Lot#:** E51E29 **GC Program #:** 2

FILE NAME	LOT No. / FILE NAME	SAMPLE PREP	D.F.	QUAL	COMMENTS	ANALYST
9 DFG320B+T	5V 3385	12.5 NG DFTPP STD	—	OK	(10:11)	MU
(See	Previous	Page for Standards)		—	Level II Review By:	
KJGVQ 2AK	ABC 130124	3-18 1L → 2ml	5+	OK	short TCL REEXTS	
KJGVV 2AK	↓	3-18 1L → 2ml	"	OK	↓	
KJGW0 2AA	ABC130130	3-18 1L → 2ml	"	OK	1,4-Diox REEXT	
KJVKG 1A5	ABC190220	3-19 1L → 2ml	"	Rerun	Need APP cal. Rush 4-25	
KJVK6 1AC	↓	3-19 1L → 2ml	"	Rerun	↓ ↓ ↓	↓

MU
3/21/08

North Canton

TestAmerica Laboratories, Inc.
EXTRACTION BENCH SHEET

Run Date: 3/25/2008
Time: 10:21:19

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
Y	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct &
					Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
= Package Submitted to AnalyticalGroup
Bench Sheet Copied per COC

Extractionist: 403120

Concentrationist: 403254 Leslie Keen

QC BATCH: 8074037

PREP DATE: 3/14/08
COMP DATE: 3/16/08

Reviewer/Date: FREELANS / 3/16/08

Base/Neutrals and Acids (8270C)
LIQ/LIQ, CONT (A/B/N) - Acid->Base

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
3/18/08	3/21/08	A8C130246-001 **KJHRE-1-AC**	B	49	QL	WATER	1000mL 2.00mL	7.0	2	12	DCM	250.0		0.0	.2ML BNA SURR#52829
COMMENTS:															
3/18/08	3/21/08	A8C130246-002 **KJHTA-1-AC**	B	49	QL	WATER	1010mL 2.00mL	7.0	2	12	DCM	250.0		0.0	.2ML BNA SURR#52829
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-1-AC**	D	49	QL	WATER	1040mL 2.00mL	7.0	2	12	DCM	250.0		0.0	.2ML BNA SURR#52829
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-1-AT S**	D	49	QL	WATER	510mL 2.00mL	7.0	2	12	DCM	250.0		0.0	.2ML#52099/#A054479 .2ML BNA SURR#52829
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-1-AU D**	D	49	QL	WATER	510mL 2.00mL	7.0	2	12	DCM	250.0		0.0	.2ML#52099/#A054479 .2ML BNA SURR#52829
COMMENTS:															
3/18/08	3/21/08	A8C140000-037 **KJKJ6-1-AA B**		49	QL	WATER	1000mL 2.00mL	7.0	2	12	DCM	250.0		0.0	.2ML BNA SURR#52829
COMMENTS:															

708

North Canton

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 8074037

PREP DATE: 3/14/08
COMP DATE: 3/16/08

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/18/08	3/21/08	A8C140000-037 **KJKJ6-1-AC C**		49	QL	WATER	1000mL 2.00mL	7.0	2	12	DCM	250.0		0.0	.2ML#52099/#A054479 .2ML BNA SURR#52829

COMMENTS:

S/S BM

DCM #G06E25 1:1 #E08027 10N #A12596 NA2S04 #E47601

ASSOC QC W/8074038 ACID=11:45AM-6AM BASE=10:00A-6:00A

NUMBER OF WORK ORDERS IN BATCH: 7

709

North Canton

TestAmerica Laboratories, Inc.
EXTRACTION BENCH SHEET

Run Date: 3/25/2008
Time: 10:21:19

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
Y	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct &
			_	_	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
= Package Submitted to AnalyticalGroup
Bench Sheet Copied per COC

Extractionist: 402608 Eric Mills

Concentrationist: 001560 Thomas Fausnight

Reviewer/Date: EARLES / 3/19/08

QC BATCH: 8079104

PREP DATE: 3/19/08
COMP DATE: 3/19/08

Base/Neutrals and Acids (8270C)
LIQ/LIQ, SEP FUNNEL (ACIDS,PHENOLS) - Acid

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/18/08	3/21/08	A8C130246-001 **KJHRE-2-AC**	B	54	QL	WATER	1010mL 2.00mL	7.0	2	NA	DCM	180.0		0.0	.2ML BNA SURR #52829
COMMENTS:															
3/18/08	3/21/08	A8C130246-002 **KJHTA-2-AC**	B	54	QL	WATER	980mL 2.00mL	7.0	2	NA	DCM	180.0		0.0	.2ML BNA SURR #52829
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-2-AC**	D	54	QL	WATER	1030mL 2.00mL	7.0	2	NA	DCM	180.0		0.0	.2ML BNA SURR #52829
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-1-FD S**	D	54	QL	WATER	510mL 2.00mL	7.0	2	NA	DCM	180.0		0.0	.2ML #52099/A054479 .2ML BNA SURR #52829
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-1-FE D**	D	54	QL	WATER	510mL 2.00mL	7.0	2	NA	DCM	180.0		0.0	.2ML #52099/A054479 .2ML BNA SURR #52829
COMMENTS:															
3/18/08	3/20/08	A8C190000-104 **KJTNH-1-AA B**		54	QL	WATER	1000mL 2.00mL	7.0	2	NA	DCM	180.0		0.0	.2ML BNA SURR #52829
COMMENTS:															

710

North Canton

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 8079104

PREP DATE: 3/19/08
COMP DATE: 3/19/08

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/18/08	3/20/08	A8C190000-104 **KJTNH-1-AC C**		54	QL	WATER	1000mL 2.00mL	7.0	2	NA	DCM	180.0		0.0	.2ML #52099/A054479 .2ML BNA SURR #52829

COMMENTS:

S/S SDE

DCM #G06E25 NA2SO4 #E47601 H2SO4 #E08027

NUMBER OF WORK ORDERS IN BATCH: 7

711

Lot/SDG Number: **8C13254**

Sample Control Chain of Custody - TAL North Canton
GC/MS Semivolatiles

Lot Number	Work Order	Analysis Type	Prep Date	Prep Analyst	Date of Transfer	Transferred By	Analysis Date	Analyst
A8C130254-001	KJHVV1AC	Base/Neutrals and Acids (8270C)	03/14/08	Ben Makau	03/16/08	Sherryl Freeland	03/18/08	John Gruber
A8C130254-001	KJHVV2AC	Base/Neutrals and Acids (8270C)	03/19/08	Eric Mills	03/19/08	Steve Earle	03/20/08	Mark Ulman

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

GC VOLATILE DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QC SUMMARY DATA

WI-GRO GRO CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C140000 WO #: KJL4J1AC
BATCH: 8074294

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
Gasoline Range Organics	200	180	88	80- 120	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS:

FORM III

WI-GRO GRO CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C140000 WO #: KJL4J1AD
BATCH: 8074294

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
Gasoline Range Organics	200	180	91	80- 120	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS:

WI-GRO GRO MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1AX
BATCH: 8074294

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
Gasoline Range Organics	200	ND	180	89	80- 120	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 1 outside limits

COMMENTS:

FORM III

WI-GRO GRO MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1A0
BATCH: 8074294

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENT. (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Gasoline Range Organics	200	190	96	7.7	20	80- 120	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 1 outside limits

COMMENTS:

FORM III

WI-GRO GRO METHOD BLANK SUMMARY

BLANK WORKORDER NO.: KJL4J1AA

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN SDG Number:8C13254

Lab File ID: YF031306. Lot Number: A8C130254

Date Analyzed: 03/13/08 Time Analyzed: 18:11

Matrix: WATER Date Extracted:03/13/08

GC Column: RTX-VRX ID: .45 Extraction Method: 5030

Instrument ID: Y Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	AMW-05B(20080311)	KJHVV1AE	YF031310.	03/13/08	20:39
02	AMW-05B(20080311)	KJHVV1AX S	YF031311.	03/13/08	21:16
03	AMW-05B(20080311)	KJHVV1A0 D	YF031312.	03/13/08	21:53
04	CHECK SAMPLE	KJL4J1AC C	YF031305.	03/13/08	17:35
05	DUPLICATE CHECK	KJL4J1AD L	YF031313.	03/13/08	22:30
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IV

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SAMPLE DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

GC Volatiles

Lot-Sample #...: A8C130254-001 **Work Order #...:** KJHVV1AE **Matrix.....:** WG
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/13/08 **Analysis Date..:** 03/13/08
Prep Batch #...: 8074294
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031310.D
Lab Smp Id: KJHVV1AE Client Smp ID: AMW-05B(20080311)
Inj Date : 13-MAR-2008 20:39
Operator : 01616 Inst ID: ypid.i
Smp Info : KJHVV1AE,5.0ML
Misc Info : Y80313.B
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YFGRO.m
Meth Date : 13-Mar-2008 17:28 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 18:30 Cal File: YF020617.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
S 4 Total GRO	4.700-22.000			28340994	10.5239	2.104(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031310.D

Date : 13-MAR-2008 20:39

Client ID: AMW-05B(20080311)

Instrument: ypid.i

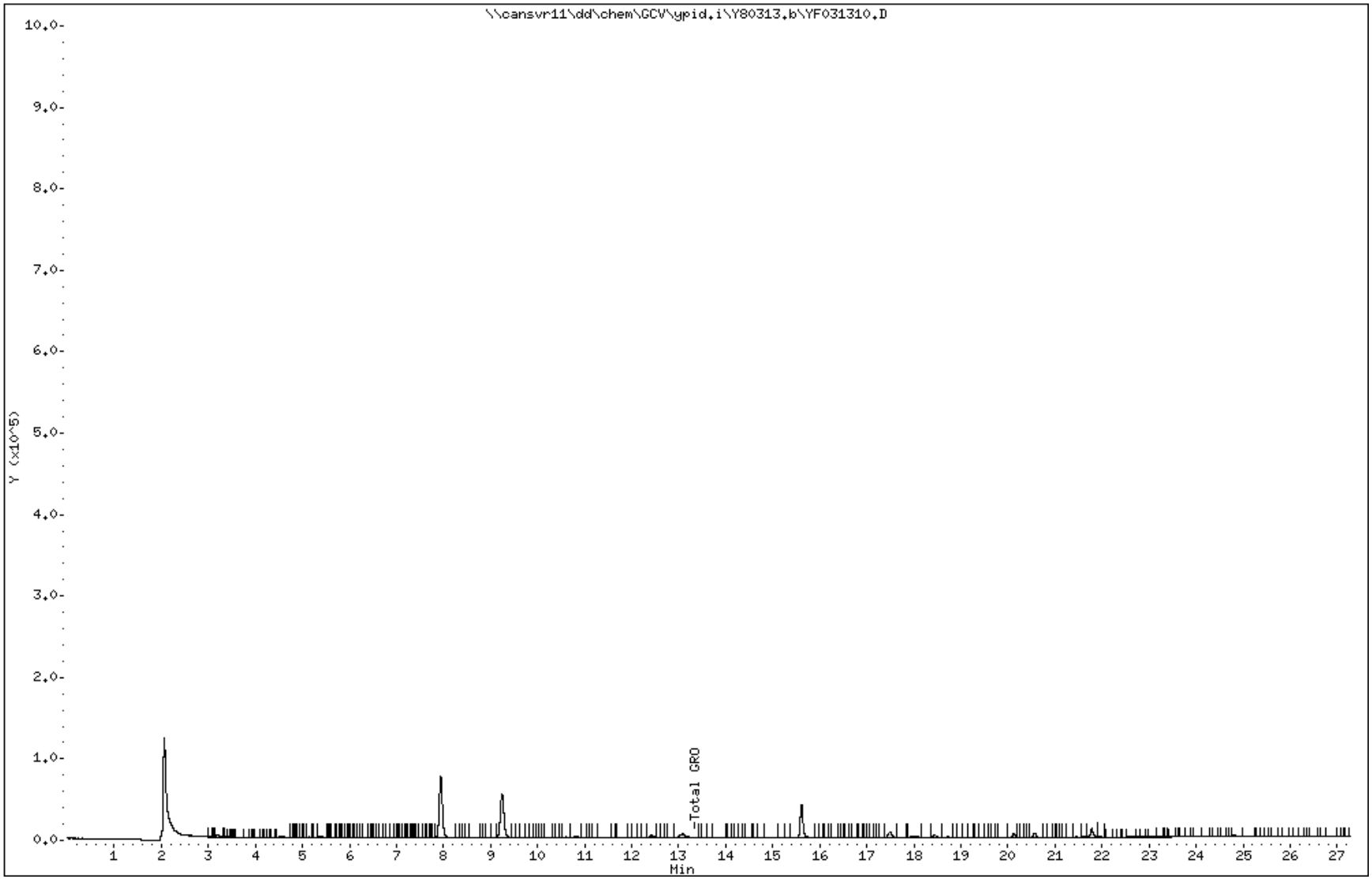
Sample Info: KJHVV1AE,5.0ML

Purge Volume: 5.0

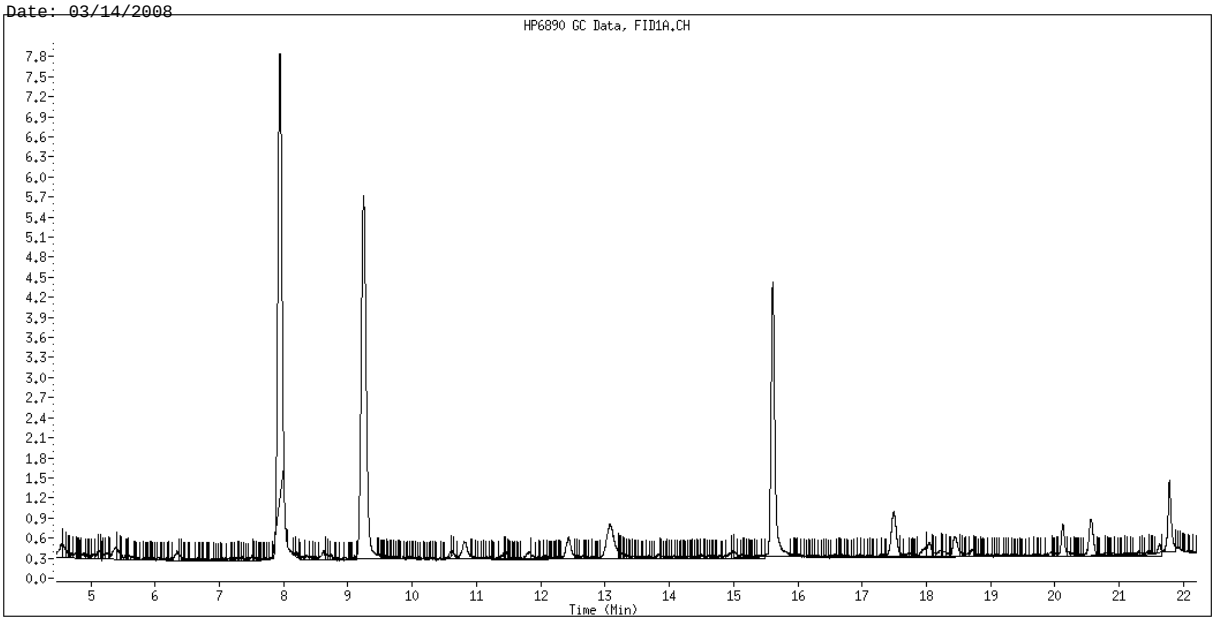
Operator: 01616

Column phase:

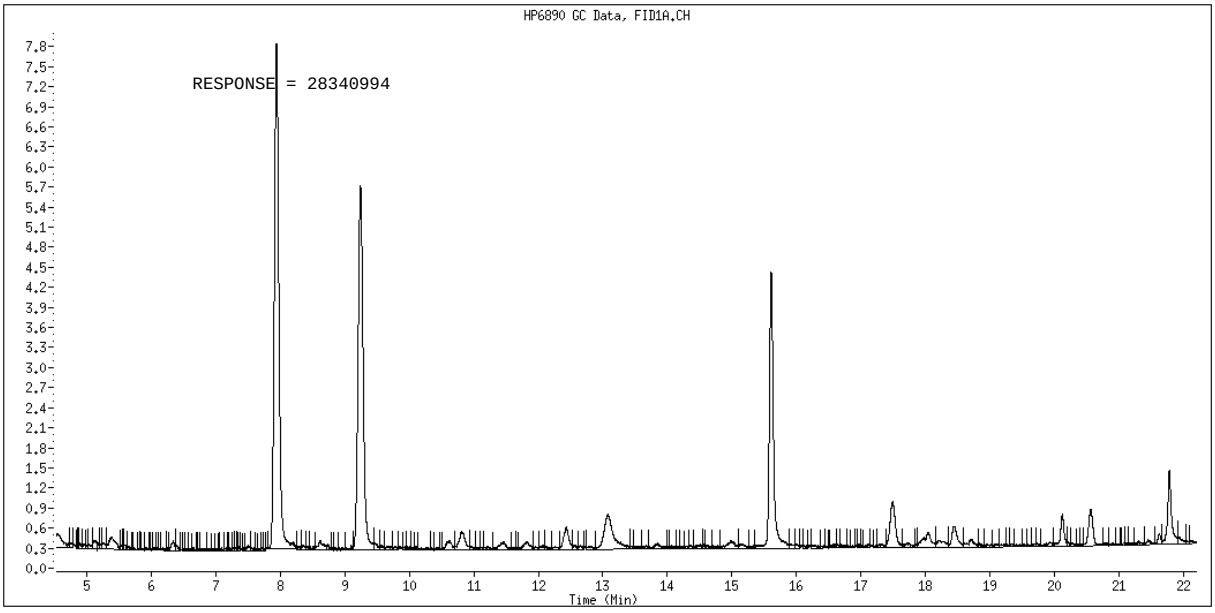
Column diameter: 2.00



Data File Name: YF031310.D
Inj. Date and Time: 13-MAR-2008 20:39
Instrument ID: ypid.i
Client ID: AMW-05B(20080311)
Compound Name: Total GRO
CAS #: Q796
Report Date: 03/14/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

STANDARD DATA

Report Date: 07-Feb-2008 08:44

Calibration History

Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YFGRO.m
Start Cal Date: 06-FEB-2008 14:51
End Cal Date : 06-FEB-2008 18:30
Last Cal Level: 7
Last Cal Type : Initial Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 250.00000		
06-FEB-2008 14:51	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020611.D
Cal Level: 2 , Cal Amount: 500.00000		
06-FEB-2008 15:28	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020612.D
Cal Level: 3 , Cal Amount: 1000.00000		
06-FEB-2008 16:04	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020613.D
Cal Level: 4 , Cal Amount: 2000.00000		
06-FEB-2008 16:41	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020614.D
Cal Level: 5 , Cal Amount: 4000.00000		
06-FEB-2008 17:17	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020615.D
Cal Level: 6 , Cal Amount: 5000.00000		
06-FEB-2008 17:54	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020616.D
Cal Level: 7 , Cal Amount: 8000.00000		
06-FEB-2008 18:30	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020617.D

Continuing Calibration

Report Date : 07-Feb-2008 08:44

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2008 14:51
End Cal Date : 06-FEB-2008 18:30
Quant Method : ESTD
Target Version : 4.14
Integrator : HP Genie
Method file : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YFGRO.m
Last Edit : 06-Feb-2008 19:00 fausnightb

Calibration File Names:
Level 1: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020611.D
Level 2: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020612.D
Level 3: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020613.D
Level 4: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020614.D
Level 5: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020615.D
Level 6: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020616.D
Level 7: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020617.D

Compound	250.0000 Level 1	500.0000 Level 2	1000.0000 Level 3	2000.0000 Level 4	4000.0000 Level 5	5000.0000 Level 6	8000.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
S 4 Total GRO	68759335	117818529	182667838	371549296	720991575	880923468	1.388e+009	LINR	-155	170831		0.99971

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 06-FEB-2008 14:51
End Cal Date : 06-FEB-2008 18:30
Quant Method : ESTD
Target Version : 4.14
Integrator : HP Genie
Method file : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YFGRO.m
Last Edit : 06-Feb-2008 19:00 fausnightb

Curve	Formula	Units
Linear	Amt = b + Rsp/ml	Response

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020611.D
Lab Smp Id: 250NG GRO CAL
Inj Date : 06-FEB-2008 14:51
Operator : 042476   Inst ID: ypid.i
Smp Info : 250NG GRO CAL
Misc Info : Y80206.B,,,,1,1
Comment   :
Method   : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YFGRO.m
Meth Date : 06-Feb-2008 19:00 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 14:51   Cal File: YF020611.D
Als bottle: 1   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANPGCV06

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
S 4 Total GRO	4.700	-22.000		68759335	250.000	250.000(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020611.D

Date : 06-FEB-2008 14:51

Client ID:

Instrument: ypid.i

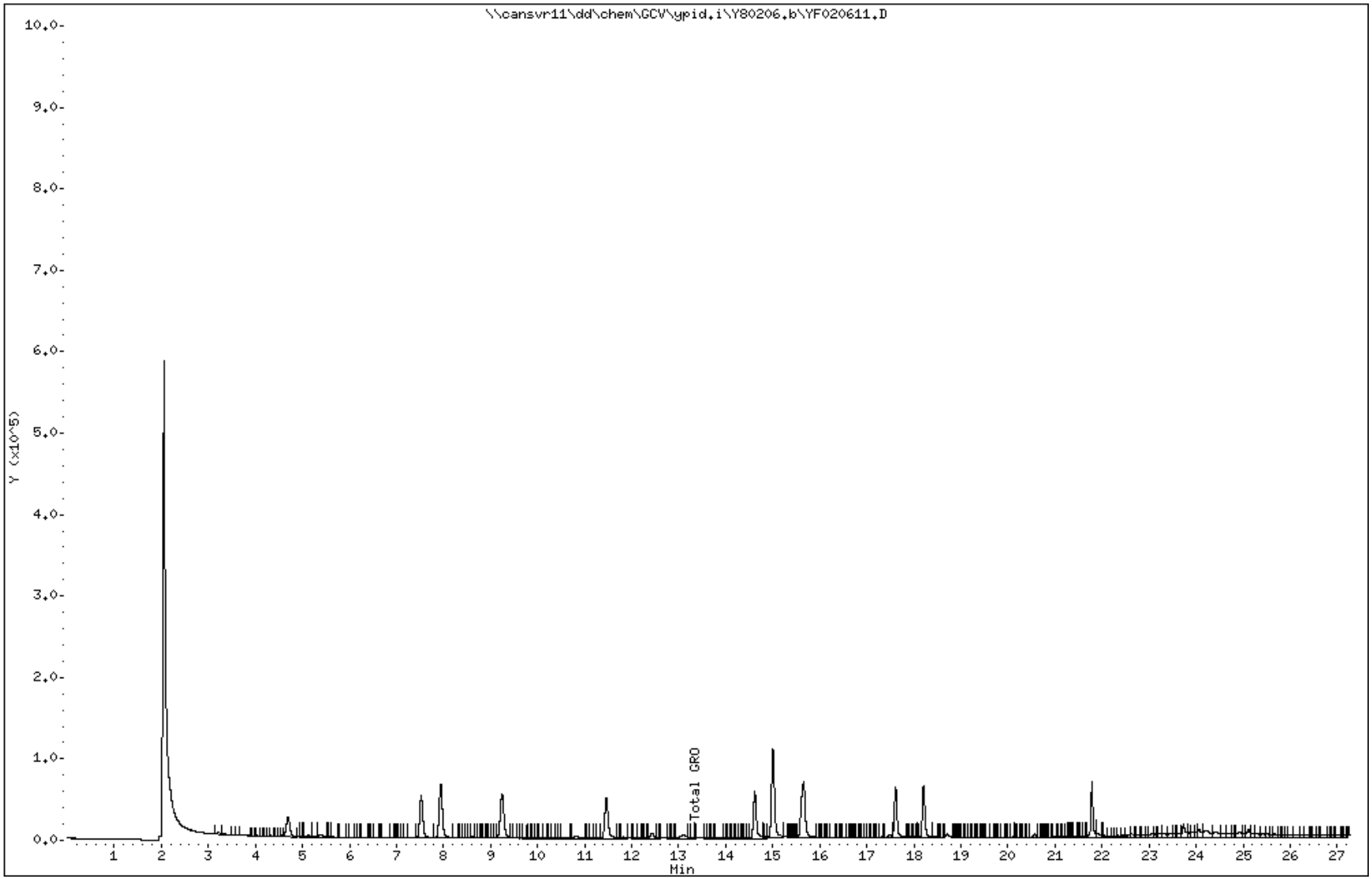
Sample Info: 250NG GRO CAL

Purge Volume: 5.0

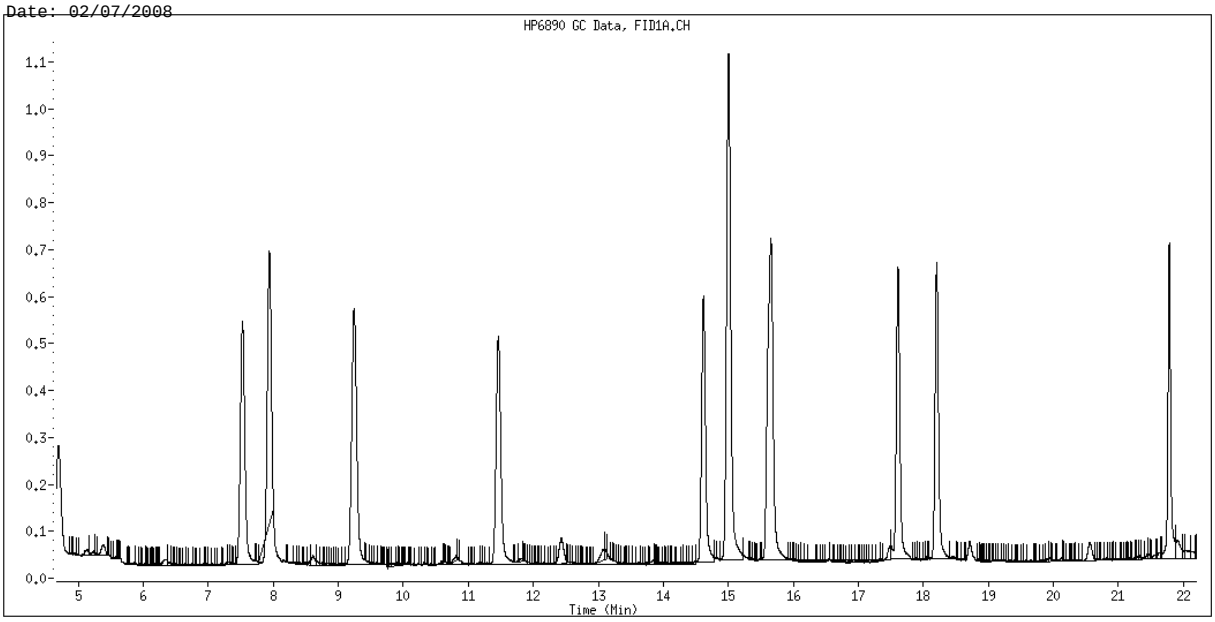
Operator: 042476

Column phase:

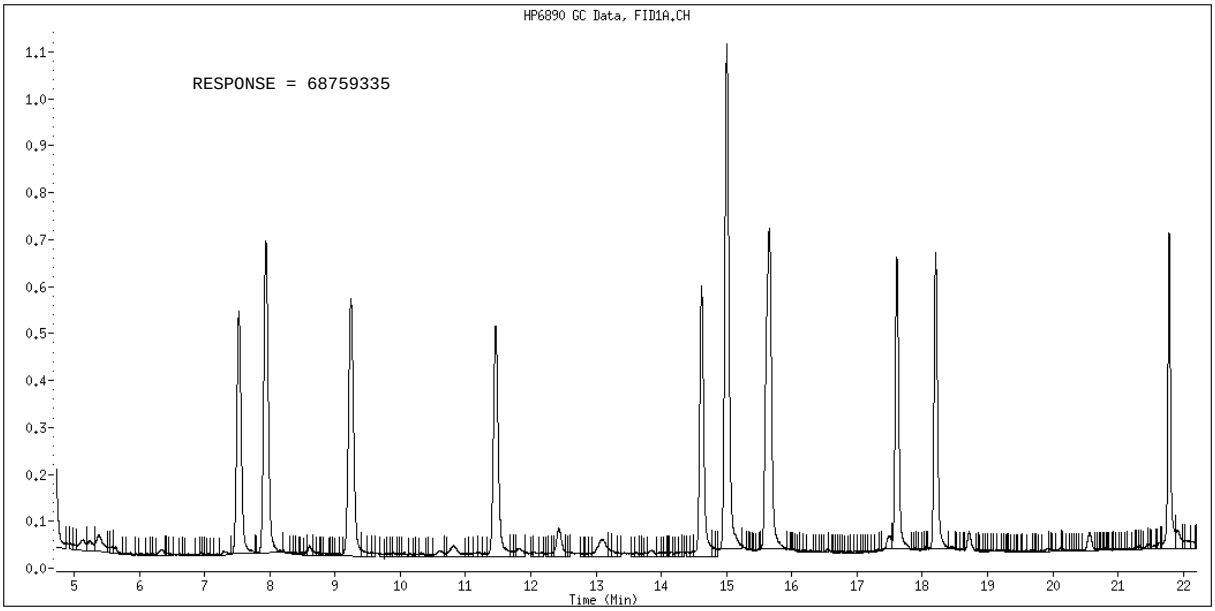
Column diameter: 2.00



Data File Name: YF020611.D
Inj. Date and Time: 06-FEB-2008 14:51
Instrument ID: ypid.i
Client ID:
Compound Name: Total GRO
CAS #: Q796
Report Date: 02/07/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020612.D
Lab Smp Id: 500NG GRO CAL
Inj Date : 06-FEB-2008 15:28
Operator : 042476 Inst ID: ypid.i
Smp Info : 500NG GRO CAL
Misc Info : Y80206.B,,,,1,2
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YFGRO.m
Meth Date : 06-Feb-2008 19:00 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 15:28 Cal File: YF020612.D
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANPGCV06

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
S 4 Total GRO	4.700	-22.000		117818529	500.000	500.000(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020612.D

Date : 06-FEB-2008 15:28

Client ID:

Instrument: ypid.i

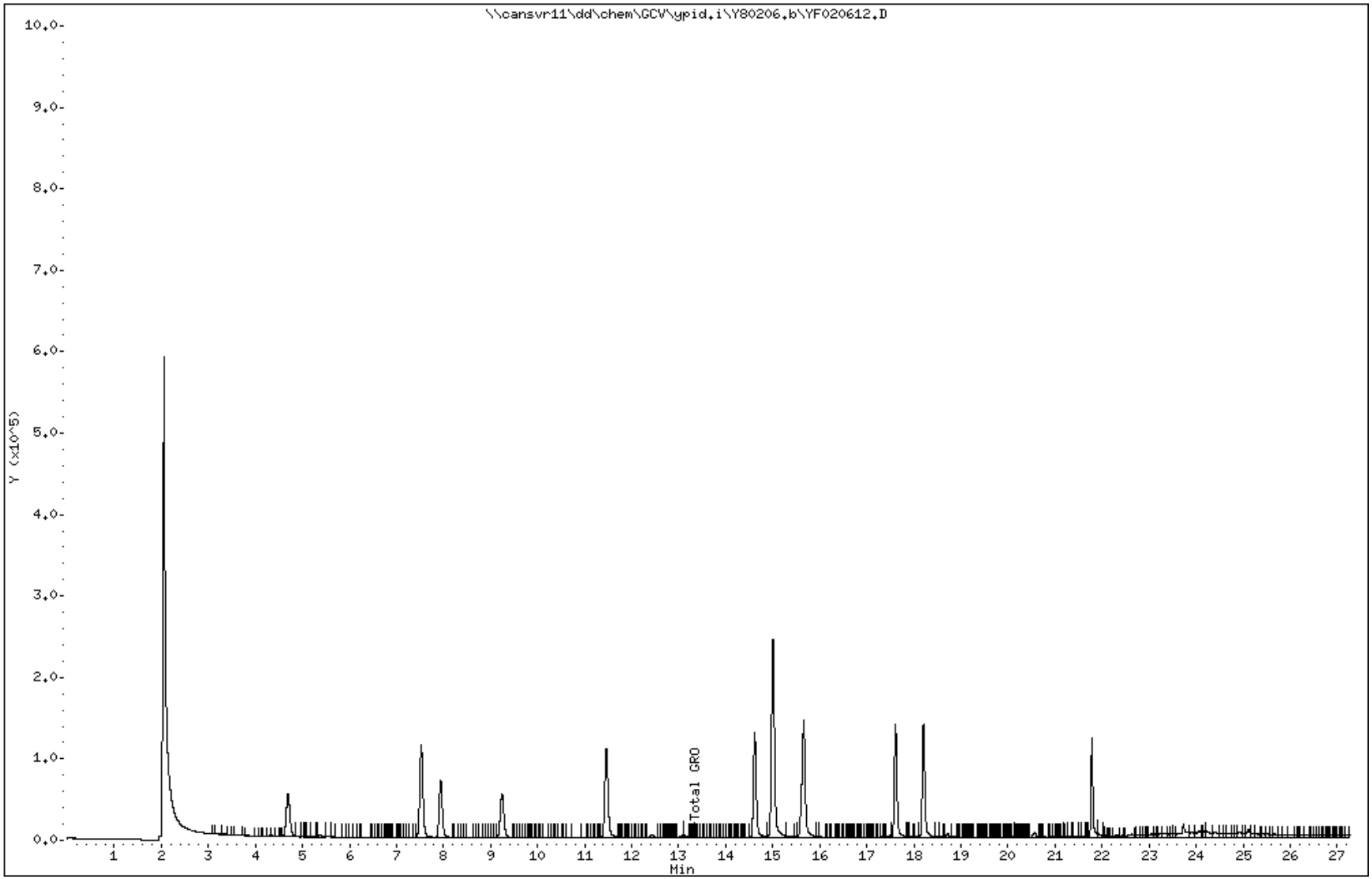
Sample Info: 500NG GRO CAL

Purge Volume: 5.0

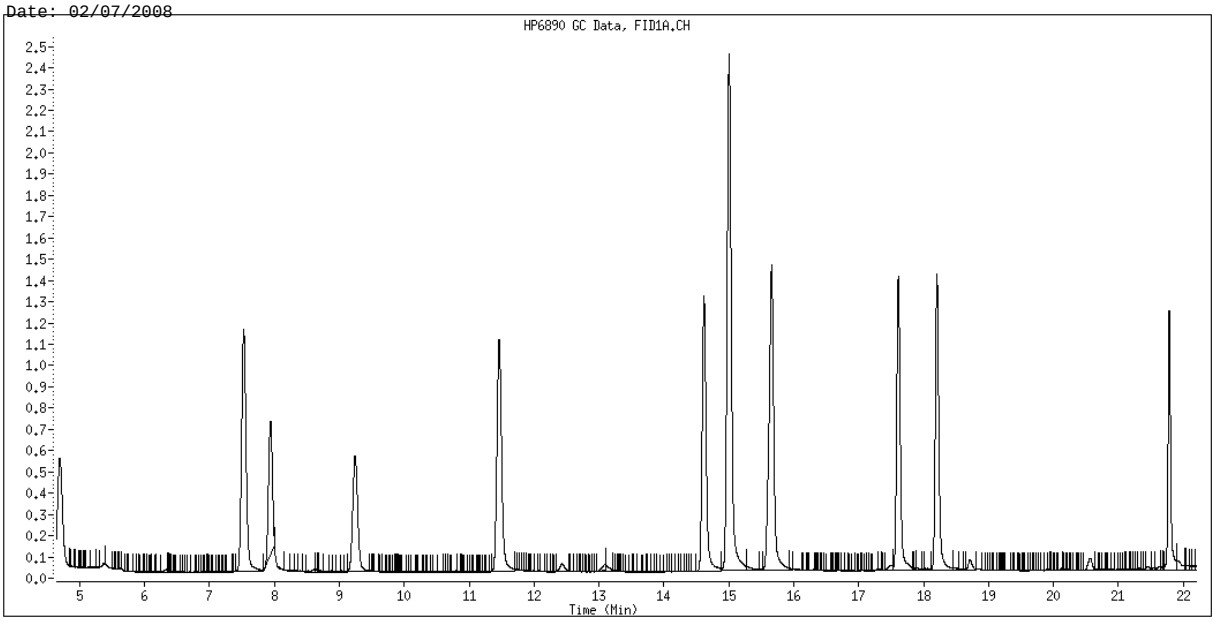
Operator: 042476

Column phase:

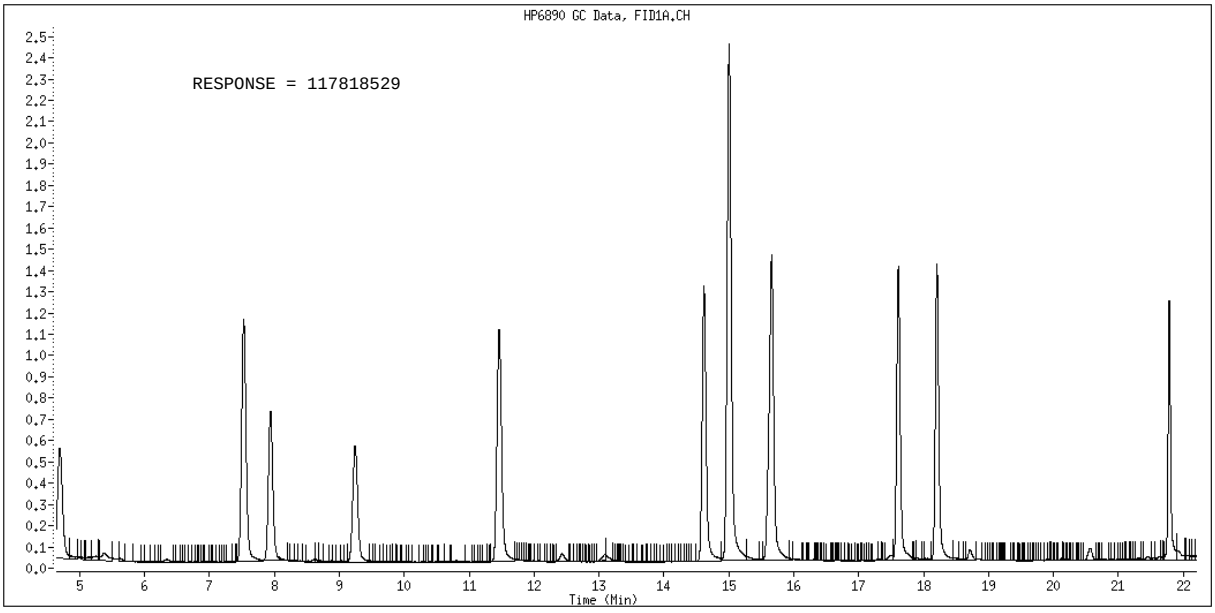
Column diameter: 2.00



Data File Name: YF020612.D
Inj. Date and Time: 06-FEB-2008 15:28
Instrument ID: ypid.i
Client ID:
Compound Name: Total GRO
CAS #: Q796
Report Date: 02/07/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020613.D
Lab Smp Id: 1000NG GRO CAL
Inj Date : 06-FEB-2008 16:04
Operator : 042476 Inst ID: ypid.i
Smp Info : 1000NG GRO CAL
Misc Info : Y80206.B,,,,1,3
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YFGRO.m
Meth Date : 06-Feb-2008 19:00 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 16:04 Cal File: YF020613.D
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
S 4 Total GRO	4.700	22.000		182667838	1000.00	918.418(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020613.D

Date : 06-FEB-2008 16:04

Client ID:

Instrument: ypid.i

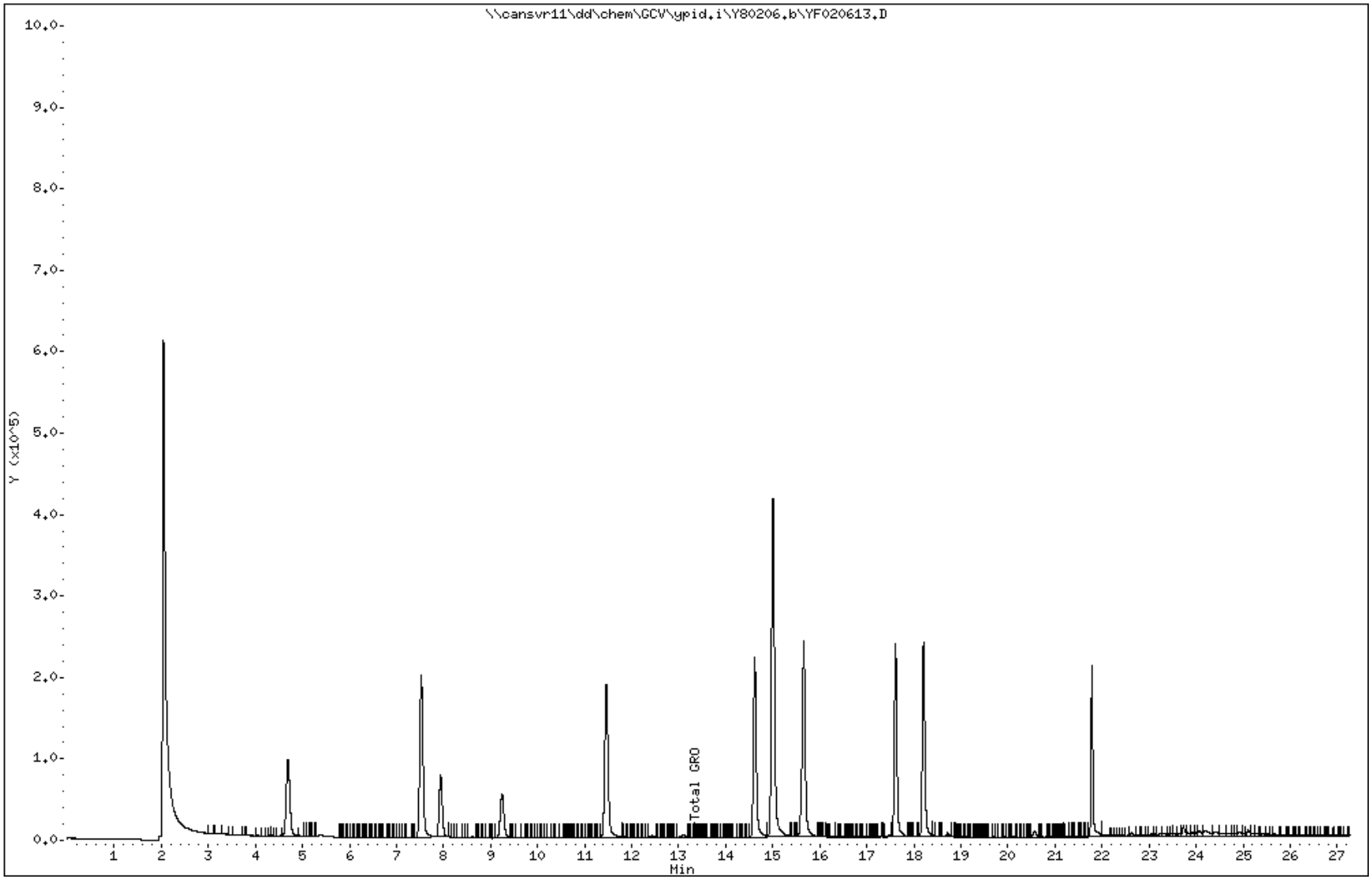
Sample Info: 1000NG GRO CAL

Purge Volume: 5.0

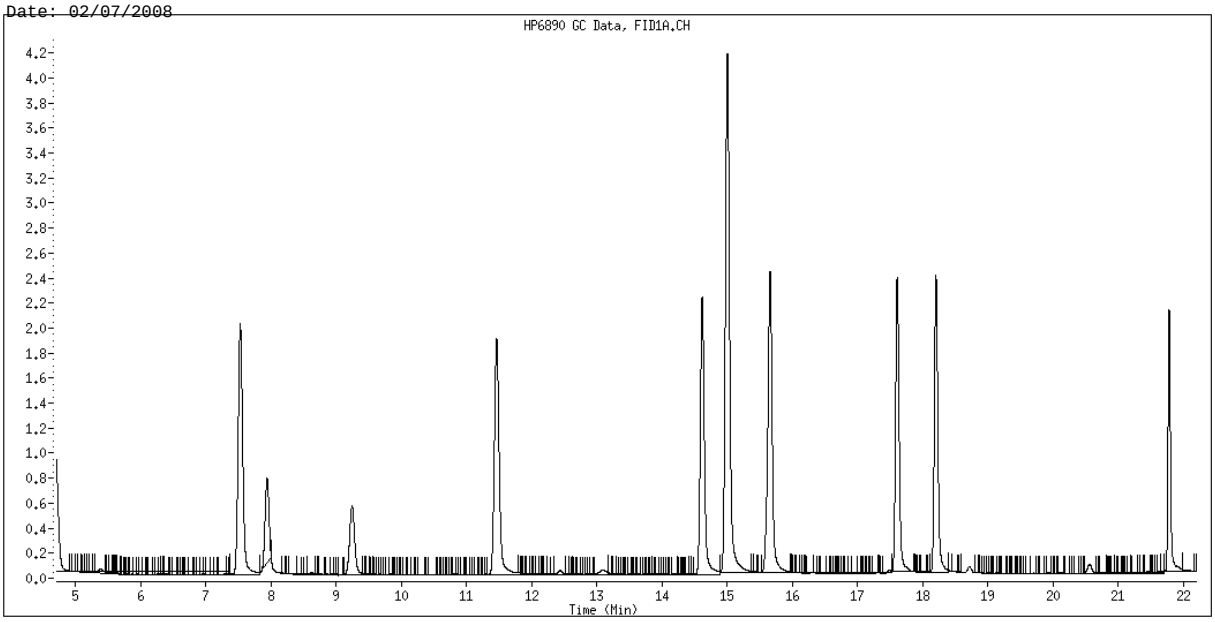
Operator: 042476

Column phase:

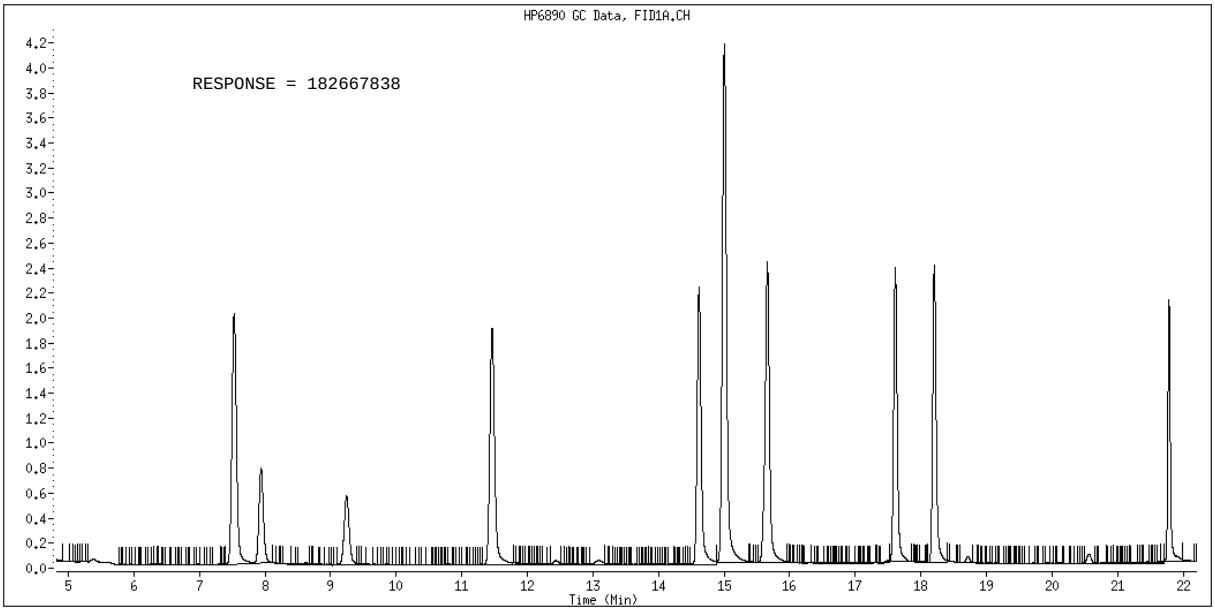
Column diameter: 2.00



Data File Name: YF020613.D
Inj. Date and Time: 06-FEB-2008 16:04
Instrument ID: ypid.i
Client ID:
Compound Name: Total GRO
CAS #: Q796
Report Date: 02/07/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020614.D
Lab Smp Id: 2000NG GRO CAL
Inj Date : 06-FEB-2008 16:41
Operator : 042476 Inst ID: ypid.i
Smp Info : 2000NG GRO CAL
Misc Info : Y80206.B,,,,1,4
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YFGRO.m
Meth Date : 06-Feb-2008 19:00 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 16:41 Cal File: YF020614.D
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
S 4 Total GRO	4.700	22.000		371549296	2000.00	2024.759(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020614.D

Date : 06-FEB-2008 16:41

Client ID:

Instrument: ypid.i

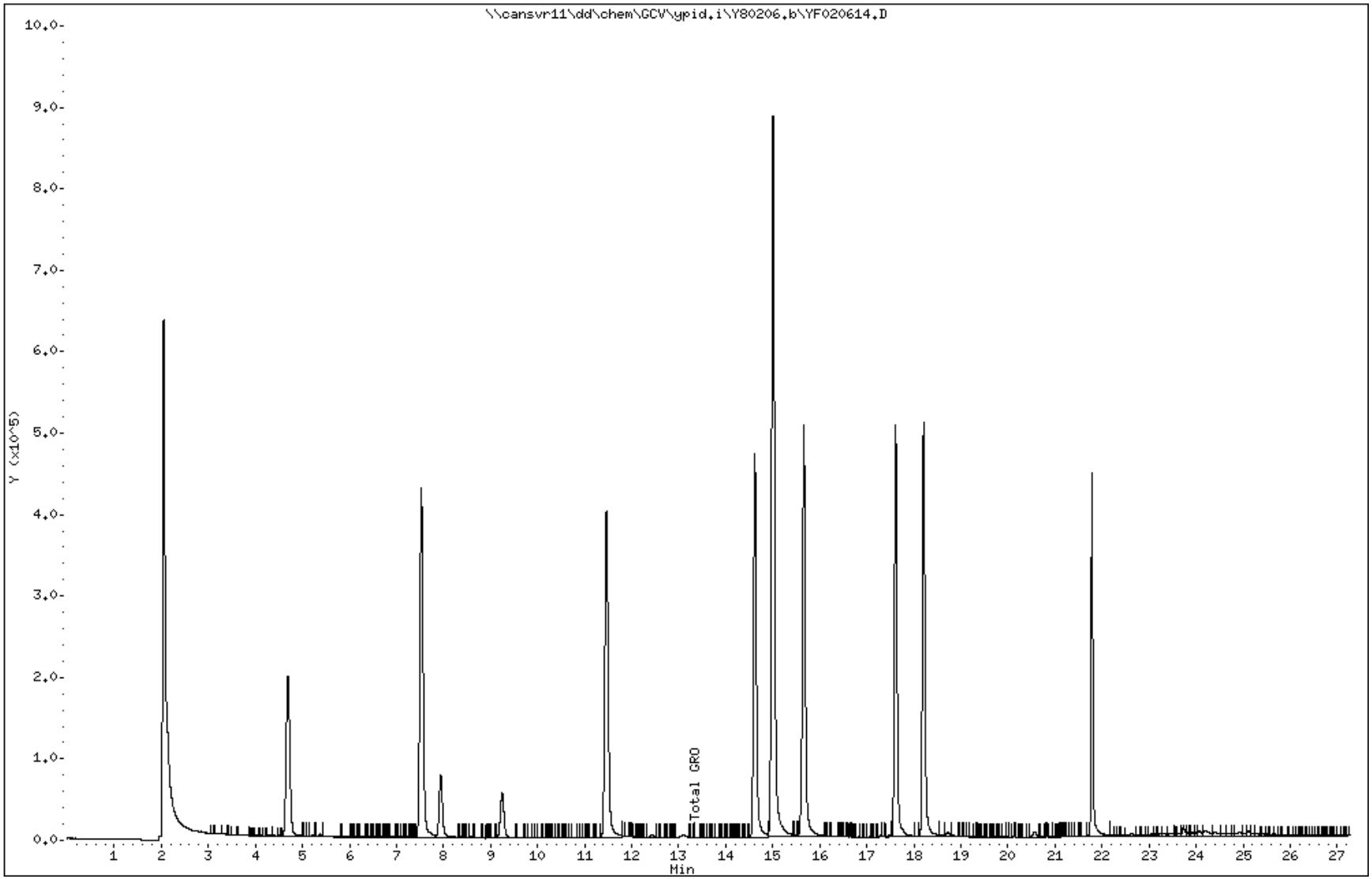
Sample Info: 2000NG GRO CAL

Purge Volume: 5.0

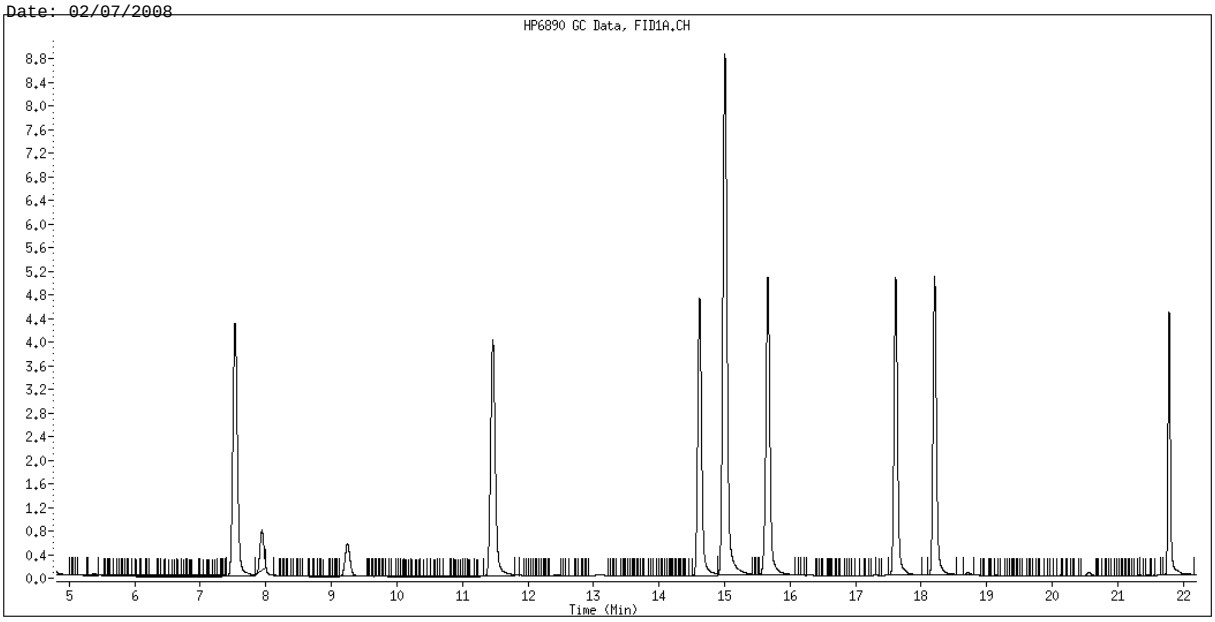
Operator: 042476

Column phase:

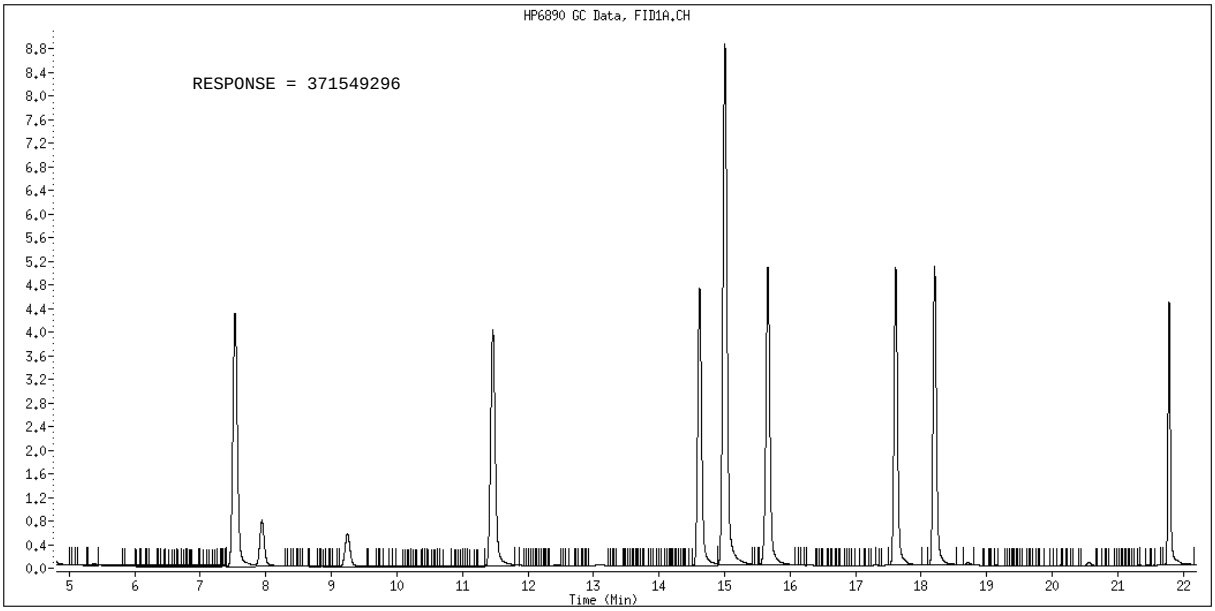
Column diameter: 2.00



Data File Name: YF020614.D
Inj. Date and Time: 06-FEB-2008 16:41
Instrument ID: ypid.i
Client ID:
Compound Name: Total GRO
CAS #: Q796
Report Date: 02/07/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020615.D
Lab Smp Id: 4000NG GRO CAL
Inj Date : 06-FEB-2008 17:17
Operator : 042476 Inst ID: ypid.i
Smp Info : 4000NG GRO CAL
Misc Info : Y80206.B,,,,1,5
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YFGRO.m
Meth Date : 06-Feb-2008 19:00 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 17:17 Cal File: YF020615.D
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
S 4 Total GRO	4.700	-22.000		720991575	4000.00	4074.064(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020615.D

Date : 06-FEB-2008 17:17

Client ID:

Instrument: ypid.i

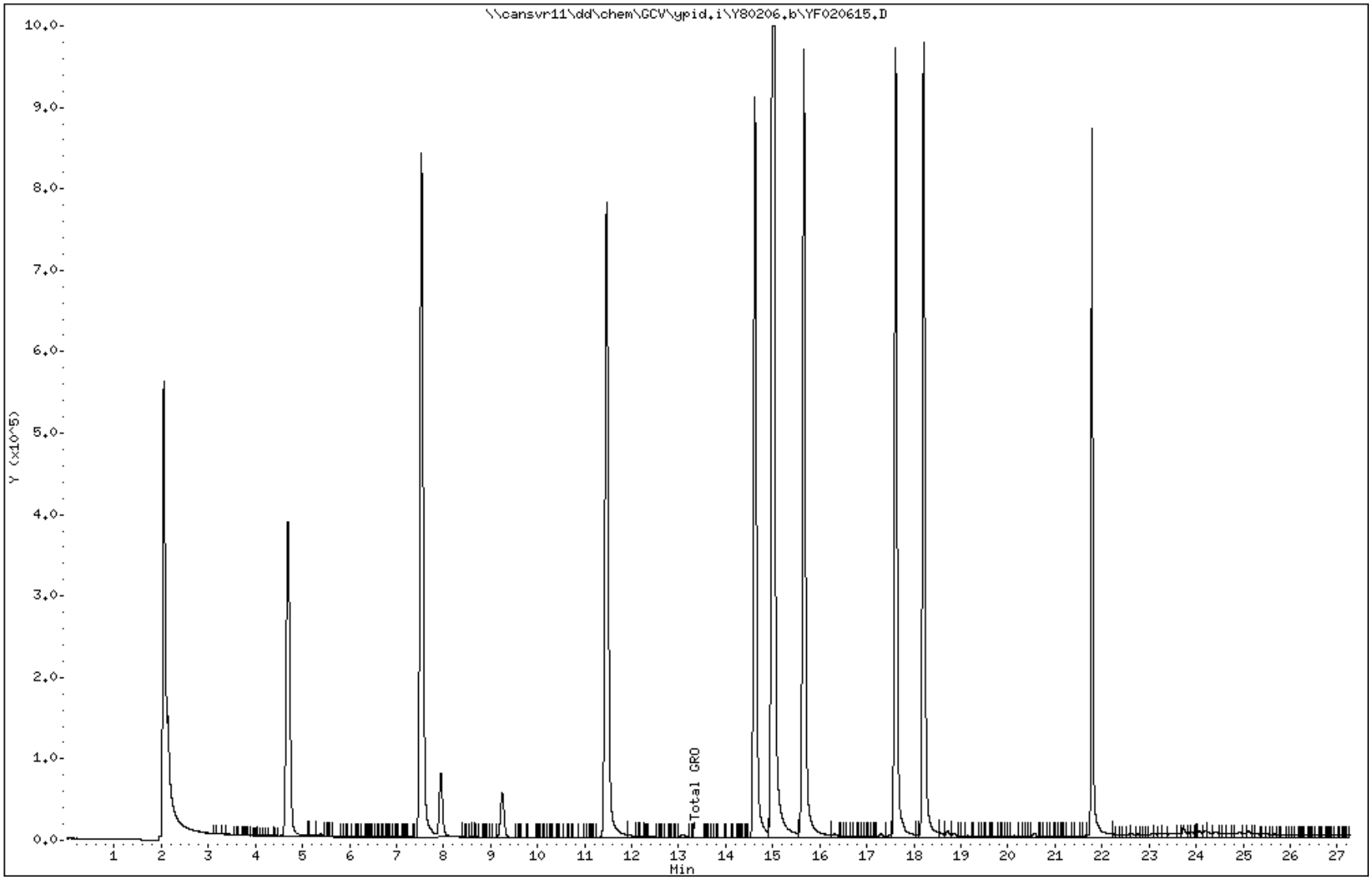
Sample Info: 4000NG GRO CAL

Purge Volume: 5.0

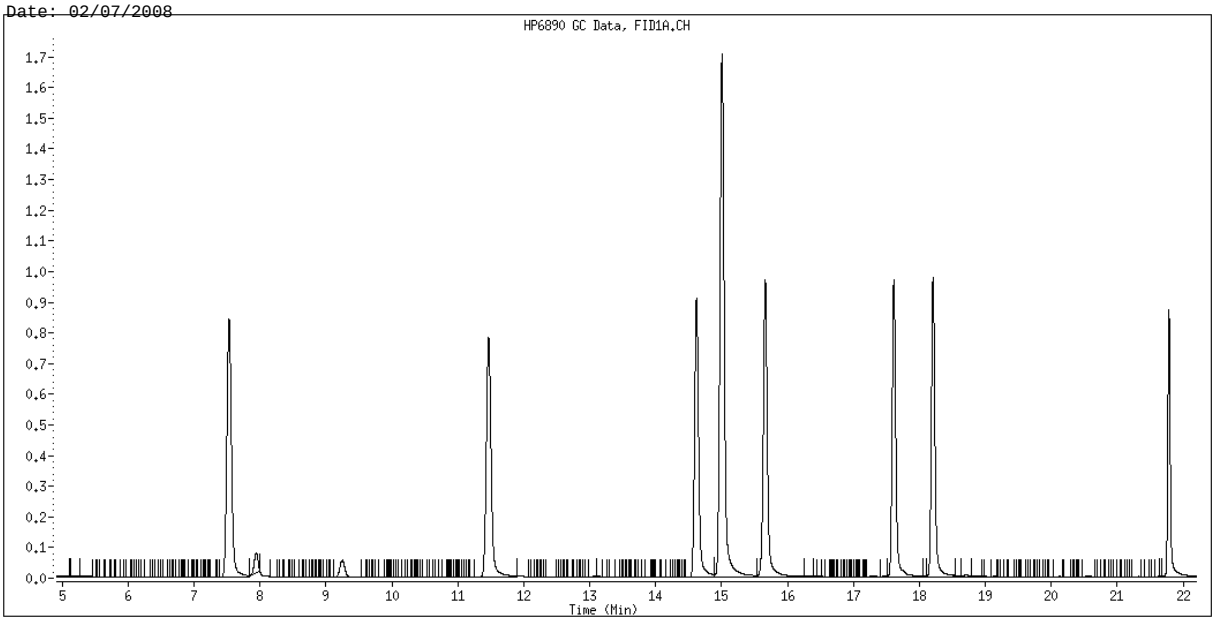
Operator: 042476

Column phase:

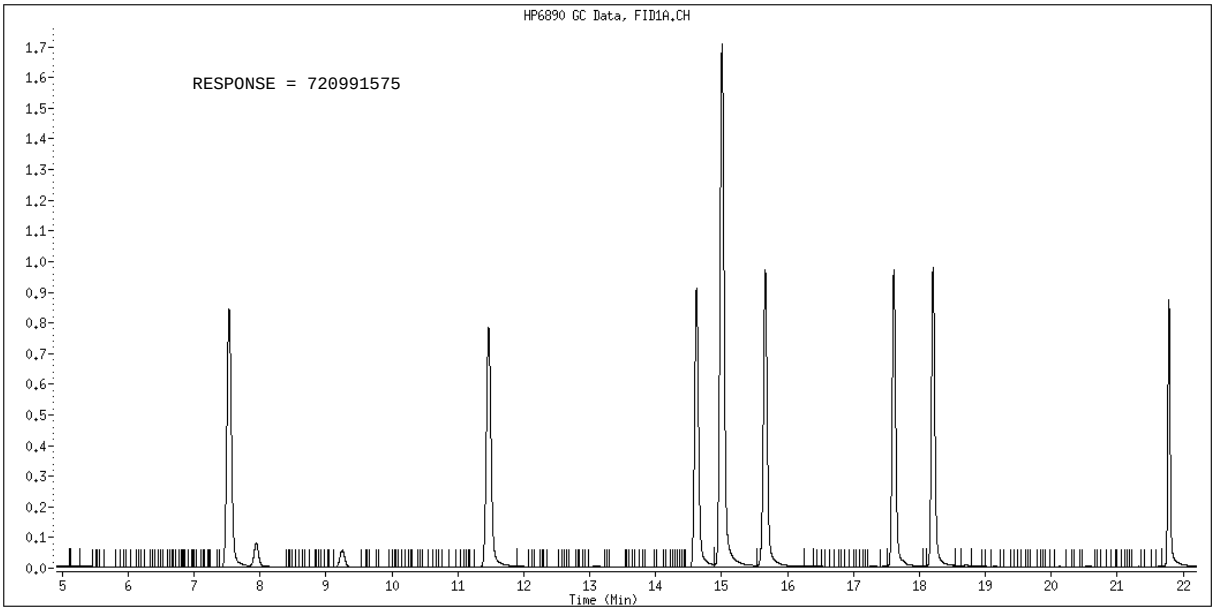
Column diameter: 2.00



Data File Name: YF020615.D
Inj. Date and Time: 06-FEB-2008 17:17
Instrument ID: ypid.i
Client ID:
Compound Name: Total GRO
CAS #: Q796
Report Date: 02/07/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020616.D
Lab Smp Id: 5000NG GRO CAL
Inj Date : 06-FEB-2008 17:54
Operator : 042476 Inst ID: ypid.i
Smp Info : 5000NG GRO CAL
Misc Info : Y80206.B,,,,1,6
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YFGRO.m
Meth Date : 06-Feb-2008 19:00 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 17:54 Cal File: YF020616.D
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
S 4 Total GRO	4.700	-	22.000	880923468	5000.00	5009.120(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020616.D

Date : 06-FEB-2008 17:54

Client ID:

Instrument: ypid.i

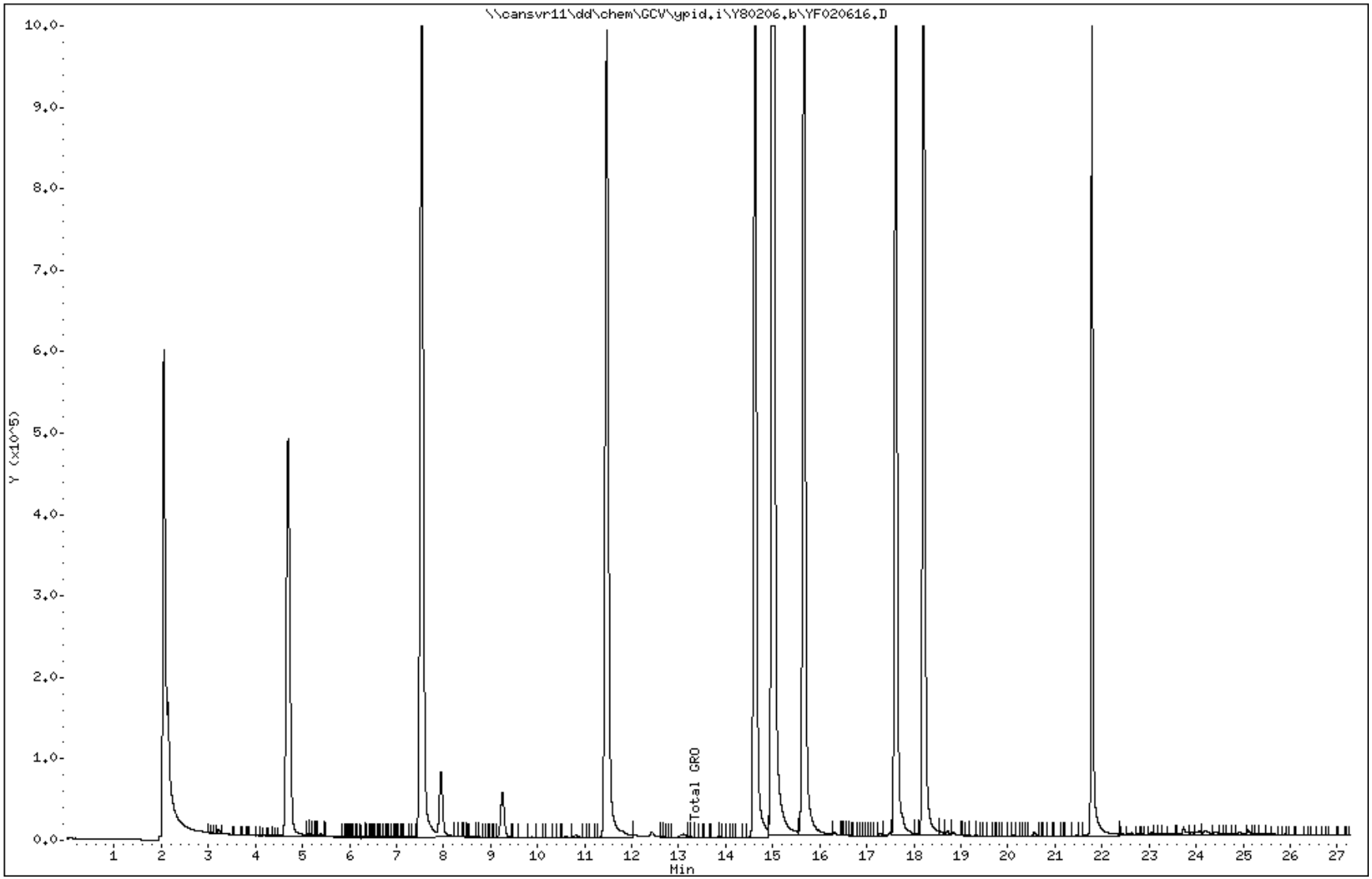
Sample Info: 5000NG GRO CAL

Purge Volume: 5.0

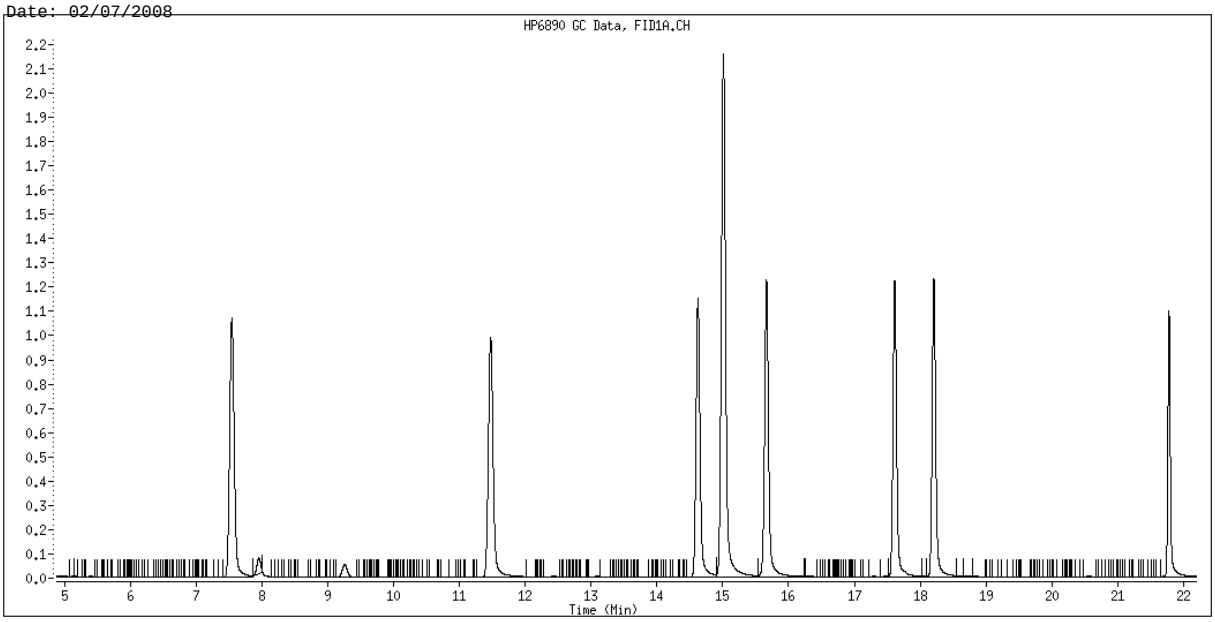
Operator: 042476

Column phase:

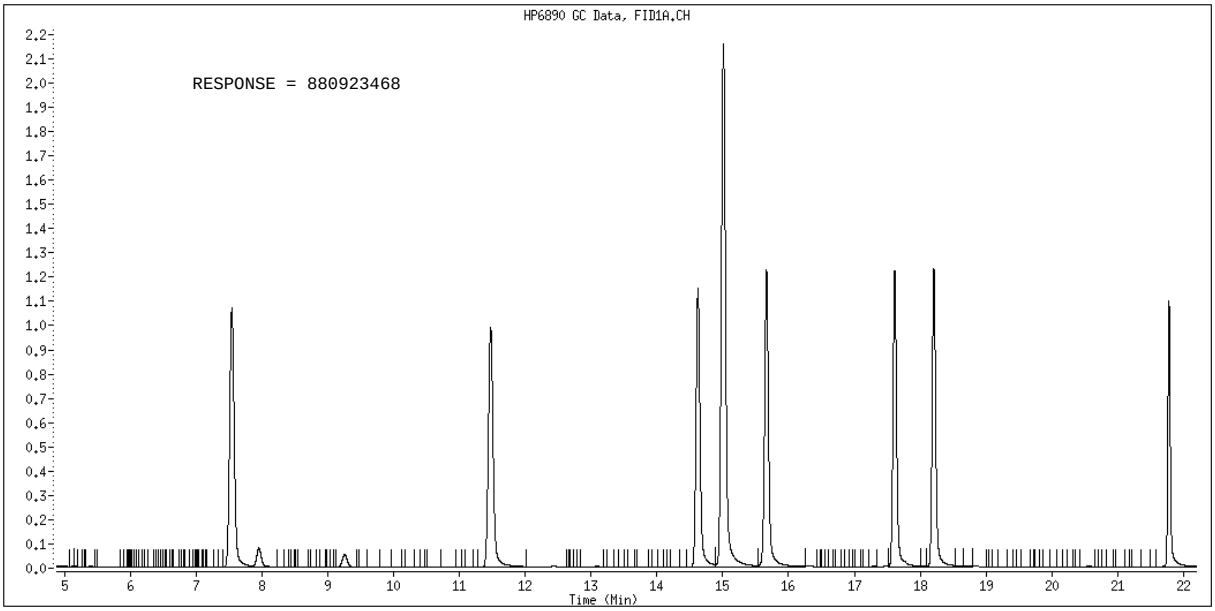
Column diameter: 2.00



Data File Name: YF020616.D
Inj. Date and Time: 06-FEB-2008 17:54
Instrument ID: ypid.i
Client ID:
Compound Name: Total GRO
CAS #: Q796
Report Date: 02/07/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020617.D
Lab Smp Id: 8000NG GRO CAL
Inj Date : 06-FEB-2008 18:30
Operator : 042476 Inst ID: ypid.i
Smp Info : 8000NG GRO CAL
Misc Info : Y80206.B,,,,1,7
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YFGRO.m
Meth Date : 06-Feb-2008 19:00 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 18:30 Cal File: YF020617.D
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
S 4 Total GRO	4.700	22.000		1387837837	8000.00	7968.657(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020617.D

Date : 06-FEB-2008 18:30

Client ID:

Instrument: ypid.i

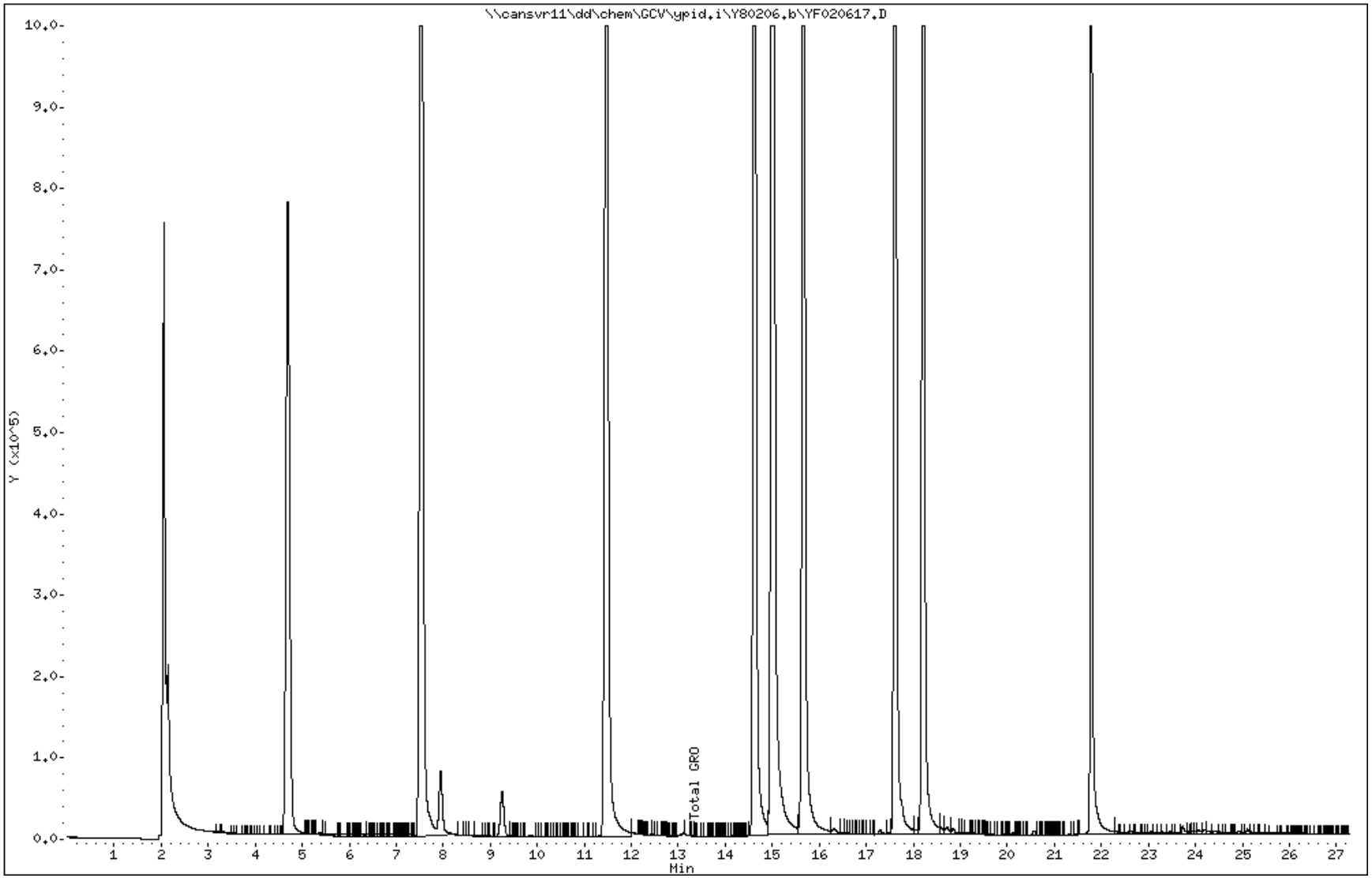
Sample Info: 8000NG GRO CAL

Purge Volume: 5.0

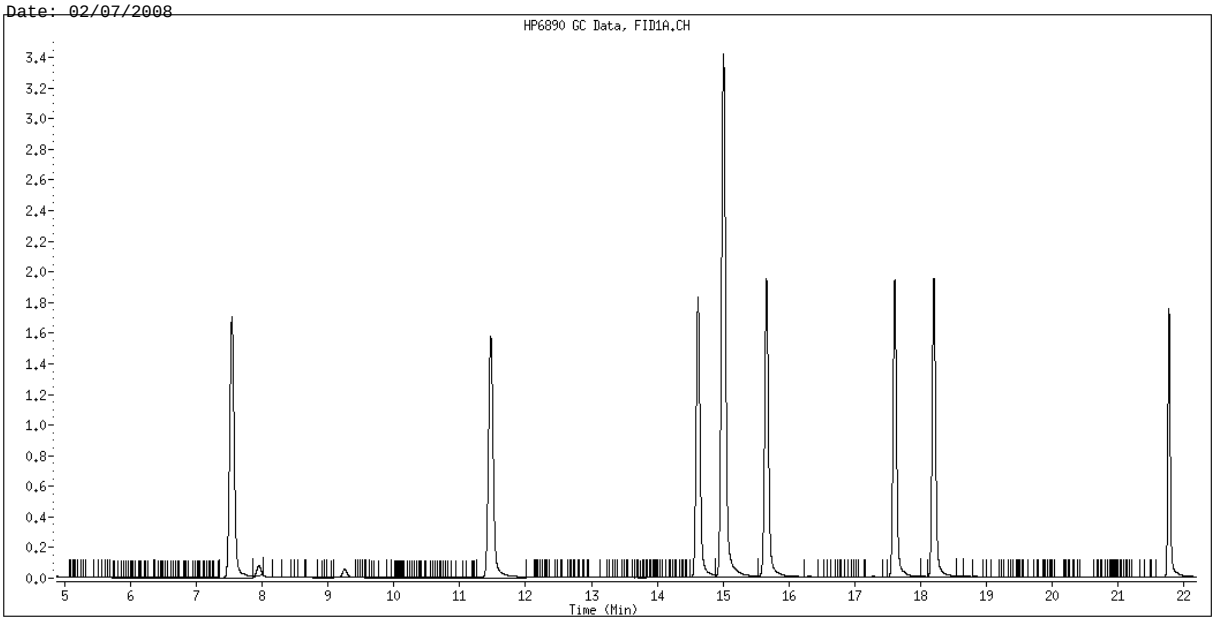
Operator: 042476

Column phase:

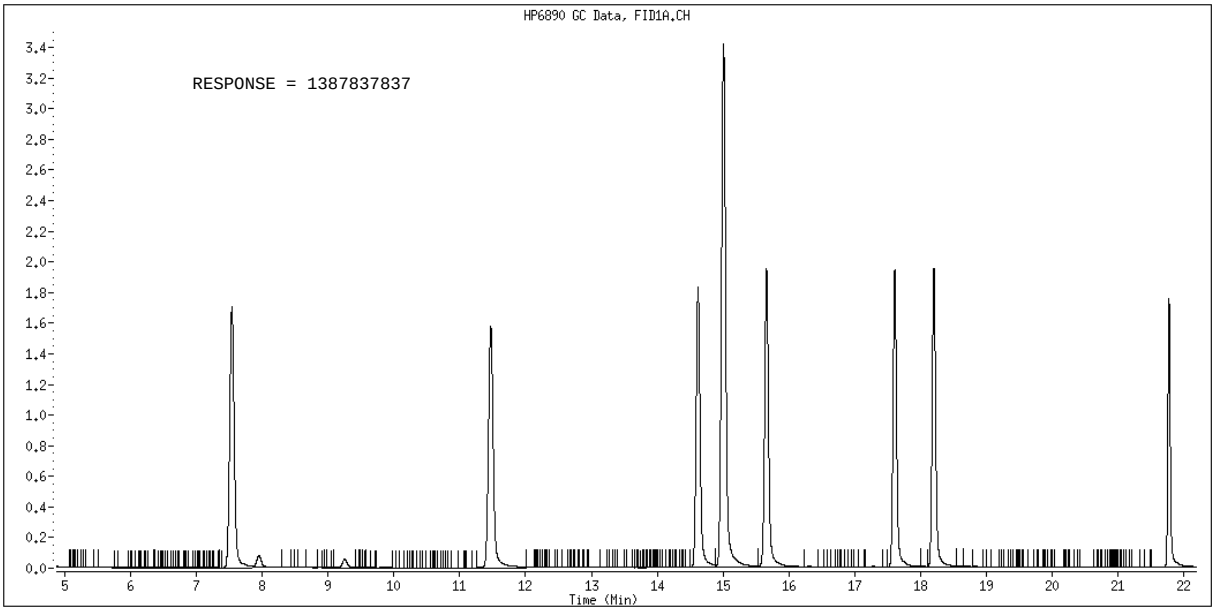
Column diameter: 2.00



Data File Name: YF020617.D
Inj. Date and Time: 06-FEB-2008 18:30
Instrument ID: ypid.i
Client ID:
Compound Name: Total GRO
CAS #: Q796
Report Date: 02/07/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

Report Date: 14-Mar-2008 15:18

Calibration History

Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YFGRO.m
Start Cal Date: 06-FEB-2008 14:51
End Cal Date : 06-FEB-2008 18:30
Last Cal Level: 7
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 250.00000		
06-FEB-2008 14:51	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020611.D
Cal Level: 2 , Cal Amount: 500.00000		
06-FEB-2008 15:28	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020612.D
Cal Level: 3 , Cal Amount: 1000.00000		
06-FEB-2008 16:04	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020613.D
Cal Level: 4 , Cal Amount: 2000.00000		
06-FEB-2008 16:41	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020614.D
Cal Level: 5 , Cal Amount: 4000.00000		
06-FEB-2008 17:17	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020615.D
Cal Level: 6 , Cal Amount: 5000.00000		
06-FEB-2008 17:54	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020616.D
Cal Level: 7 , Cal Amount: 8000.00000		
06-FEB-2008 18:30	all	\\cansvr11\dd\chem\GCV\ypid.i\Y80206.b\YF020617.D

Continuing Calibration

Report Date: 13-Mar-2008 17:39

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: ypid.i Injection Date: 13-MAR-2008 16:58
Lab File ID: YF031304.D Init. Cal. Date(s): 06-FEB-2008 06-FEB-2008
Analysis Type: WATER Init. Cal. Times: 14:51 18:30
Lab Sample ID: gRO CAL Quant Type: ESTD
Method: \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YFGRO.m

			CCAL	MIN		MAX	
COMPOUND	RRF / AMOUNT	RF1000	RRF1000	RRF	%D / %DRIFT	%D / %DRIFT	CURVE TYPE
S 4 Total GRO	1000	1001	197506	0.010	-0.07700	15.00000	Linear

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031304.D
Lab Smp Id: gRO CAL
Inj Date : 13-MAR-2008 16:58
Operator : 01616 Inst ID: ypid.i
Smp Info : gRO CAL
Misc Info : Y80313.B,,,,2,,1000NGGROCAL.SPK,METHSPIKE,1
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YFGRO.m
Meth Date : 13-Mar-2008 17:28 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 18:30 Cal File: YF020617.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
S 4 Total GRO	4.700	-22.000		197505839	1000.00	1000.770

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031304.D

Date : 13-MAR-2008 16:58

Client ID:

Instrument: ypid.i

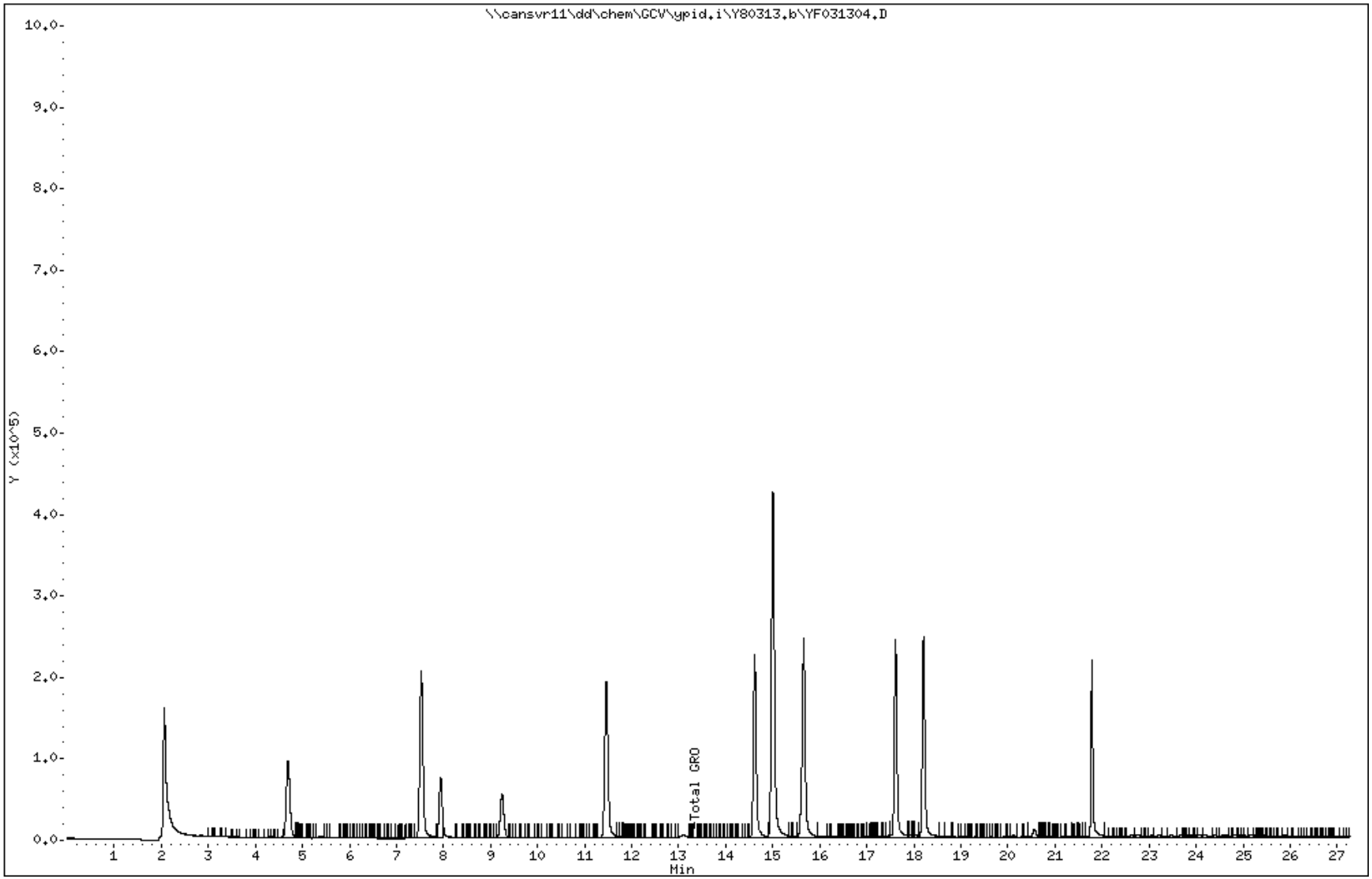
Sample Info: gRO CAL

Purge Volume: 5.0

Operator: 01616

Column phase:

Column diameter: 2.00



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

RAW QC DATA

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJL4J1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-294 KJL4J1AD-LCSD
Prep Date.....: 03/13/08 **Analysis Date..:** 03/13/08
Prep Batch #...: 8074294
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**88**	**(80 - 120)**			**WI-GRO GRO**
	91	**(80 - 120)**	**3.2**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJL4J1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-294 KJL4J1AD-LCSD
Prep Date.....: 03/13/08 **Analysis Date..:** 03/13/08
Prep Batch #...: 8074294
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**200**	**180**	**ug/L**	**88**		**WI-GRO GRO**
	200	**180**	**ug/L**	**91**	**3.2**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031305.D
Lab Smp Id: KJL4J1AC
Inj Date : 13-MAR-2008 17:35
Operator : 01616 Inst ID: ypid.i
Smp Info : KJL4J1AC
Misc Info : Y80313.B
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YFGRO.m
Meth Date : 13-Mar-2008 17:28 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 18:30 Cal File: YF020617.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANPGCV06

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700-22.000			177657356	884.582	176.916

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031305.D

Date : 13-MAR-2008 17:35

Client ID:

Instrument: ypid.i

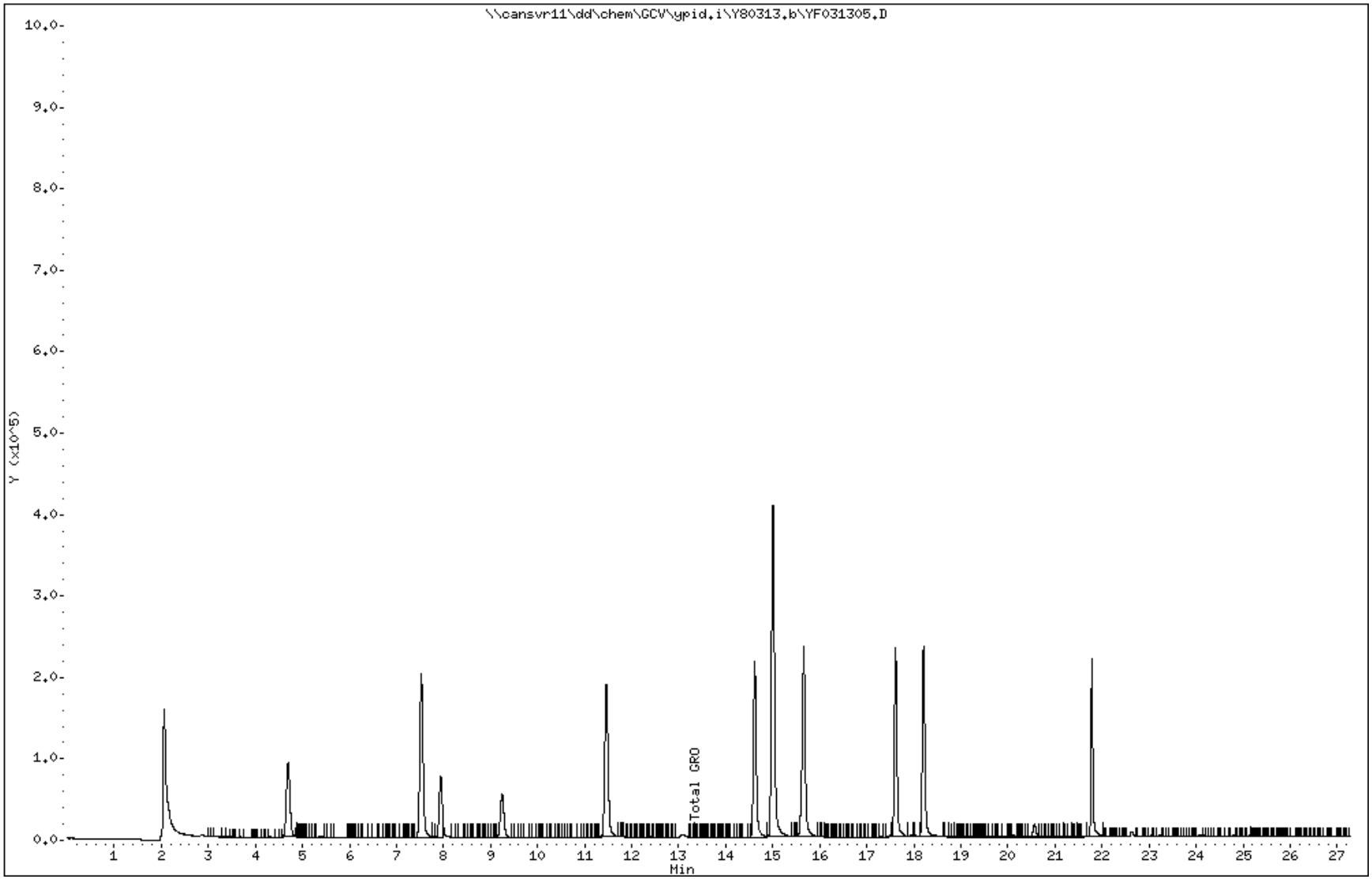
Sample Info: KJL4J1AC

Purge Volume: 5.0

Operator: 01616

Column phase:

Column diameter: 2.00



TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031313.D
Lab Smp Id: KJL4J1AD
Inj Date : 13-MAR-2008 22:30
Operator : 01616 Inst ID: ypid.i
Smp Info : KJL4J1AD
Misc Info : Y80313.B
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YFGRO.m
Meth Date : 13-Mar-2008 17:28 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 18:30 Cal File: YF020617.D
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANPGCV06

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700	-	22.000	182562078	913.293	182.658(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031313.D

Date : 13-MAR-2008 22:30

Client ID:

Instrument: ypid.i

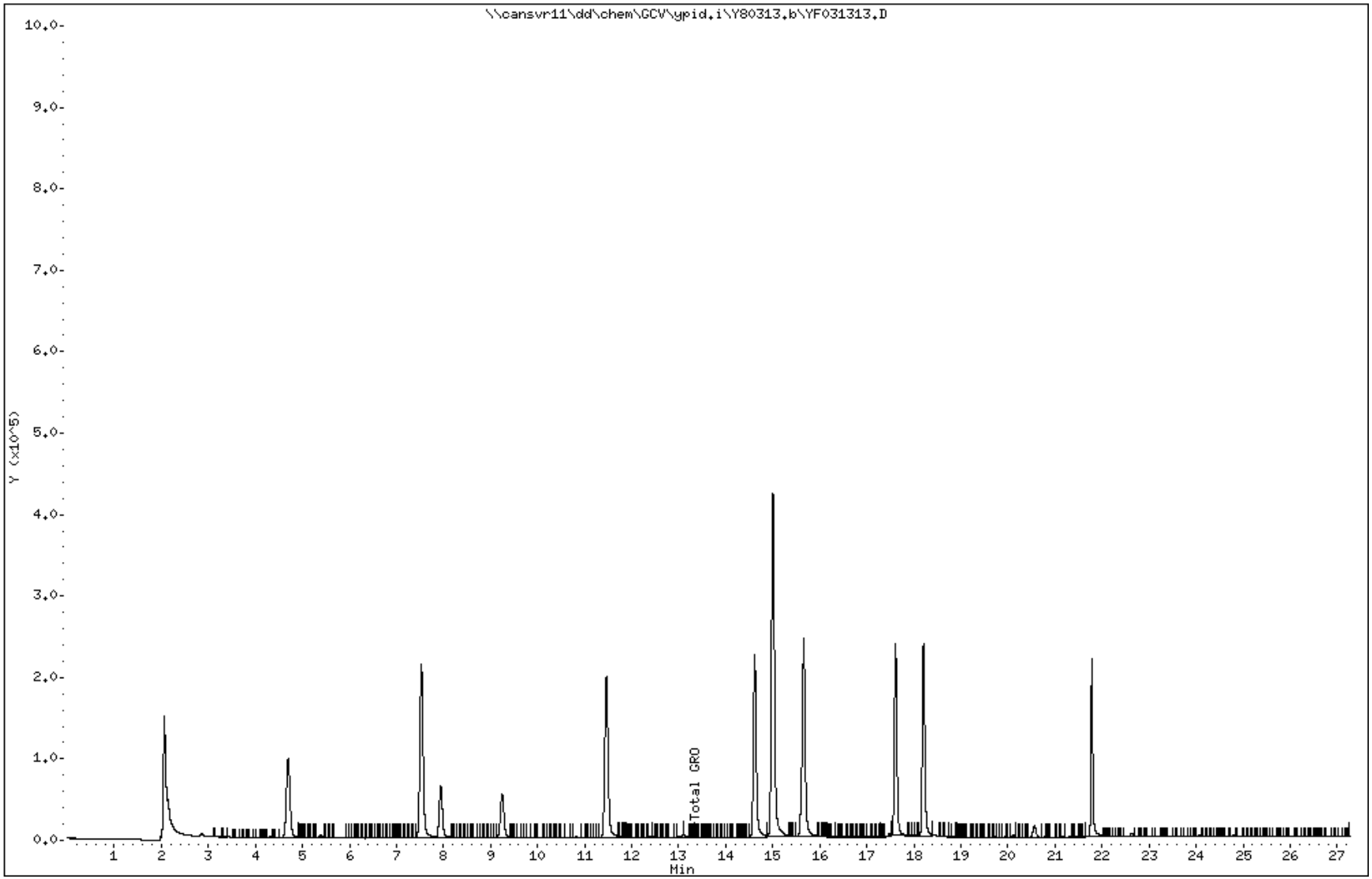
Sample Info: KJL4J1AD

Purge Volume: 5.0

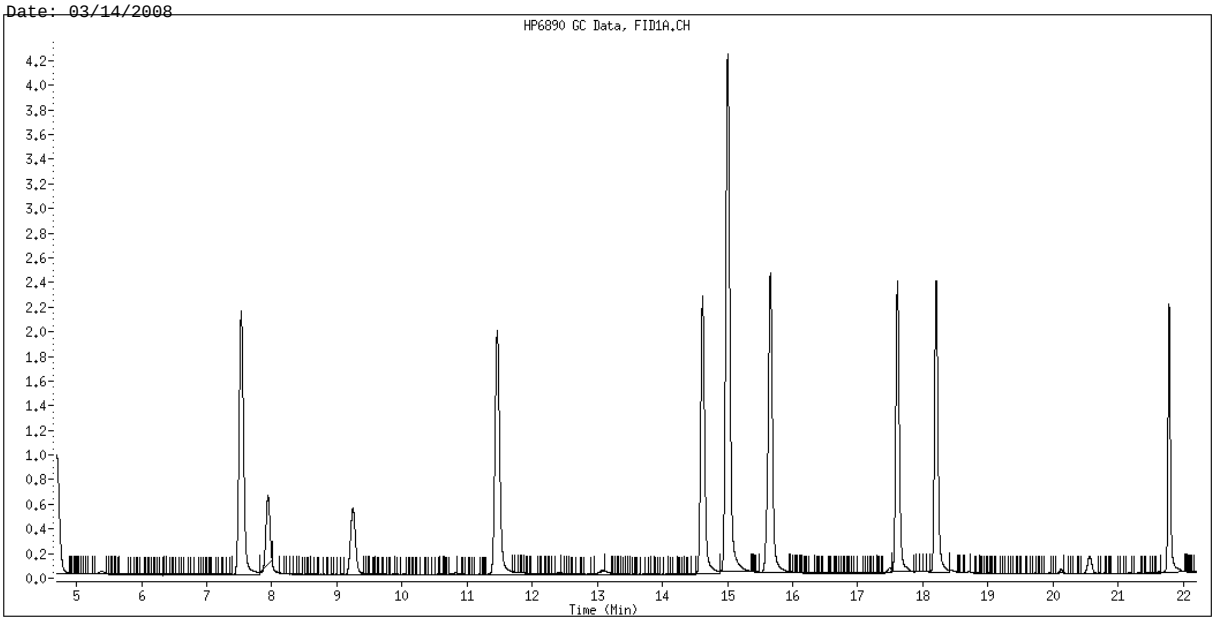
Operator: 01616

Column phase:

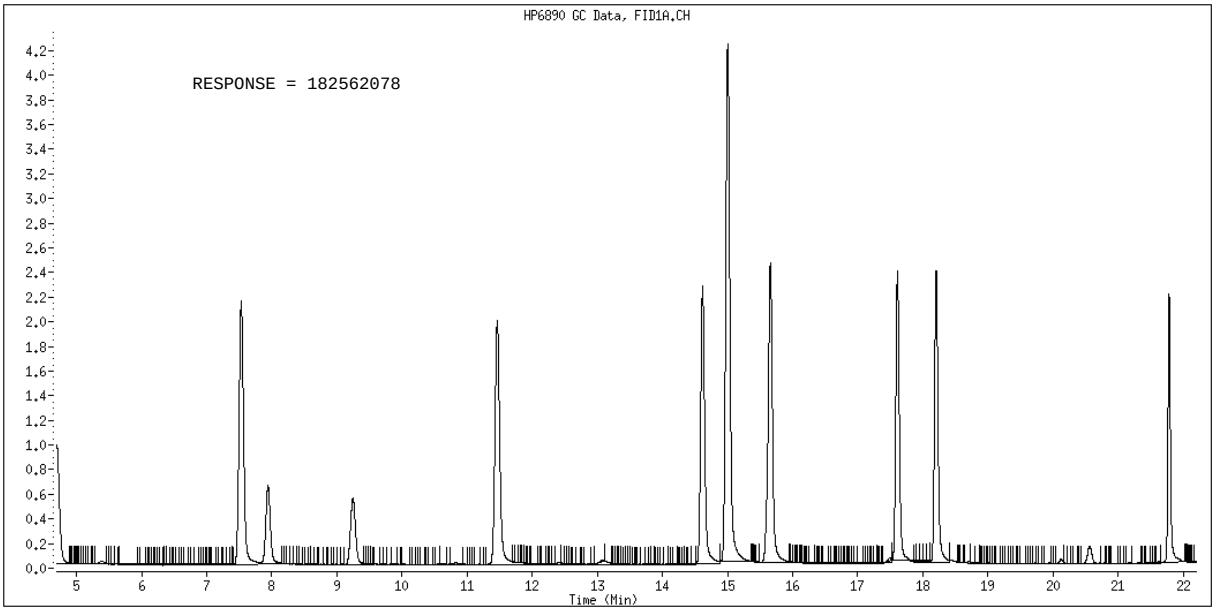
Column diameter: 2.00



Data File Name: YF031313.D
Inj. Date and Time: 13-MAR-2008 22:30
Instrument ID: ypid.i
Client ID:
Compound Name: Total GRO
CAS #: Q796
Report Date: 03/14/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJL4J1AA **Matrix.....:** WATER
MB Lot-Sample #: A8C140000-294

Prep Date.....: 03/13/08 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 03/13/08 **Prep Batch #...:** 8074294
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/L	WI-GRO GRO

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031306.D
Lab Smp Id: KJL4J1AA
Inj Date : 13-MAR-2008 18:11
Operator : 01616 Inst ID: ypid.i
Smp Info : KJL4J1AA
Misc Info : Y80313.B
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YFGRO.m
Meth Date : 13-Mar-2008 17:28 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 18:30 Cal File: YF020617.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANPGCV06

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700-22.000			28613949	12.1217	2.424(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031306.D

Date : 13-MAR-2008 18:11

Client ID:

Instrument: ypid.i

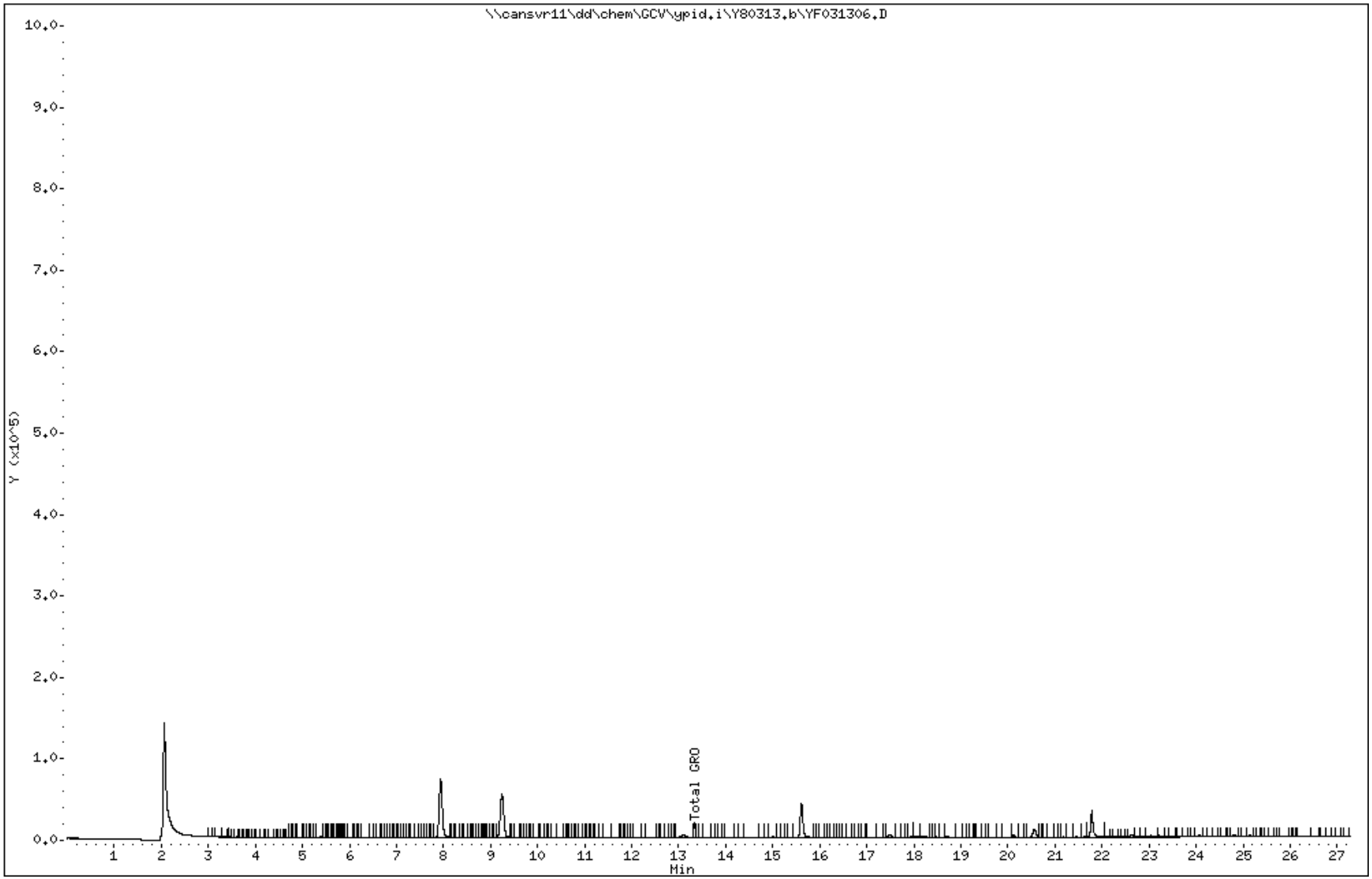
Sample Info: KJL4J1AA

Purge Volume: 5.0

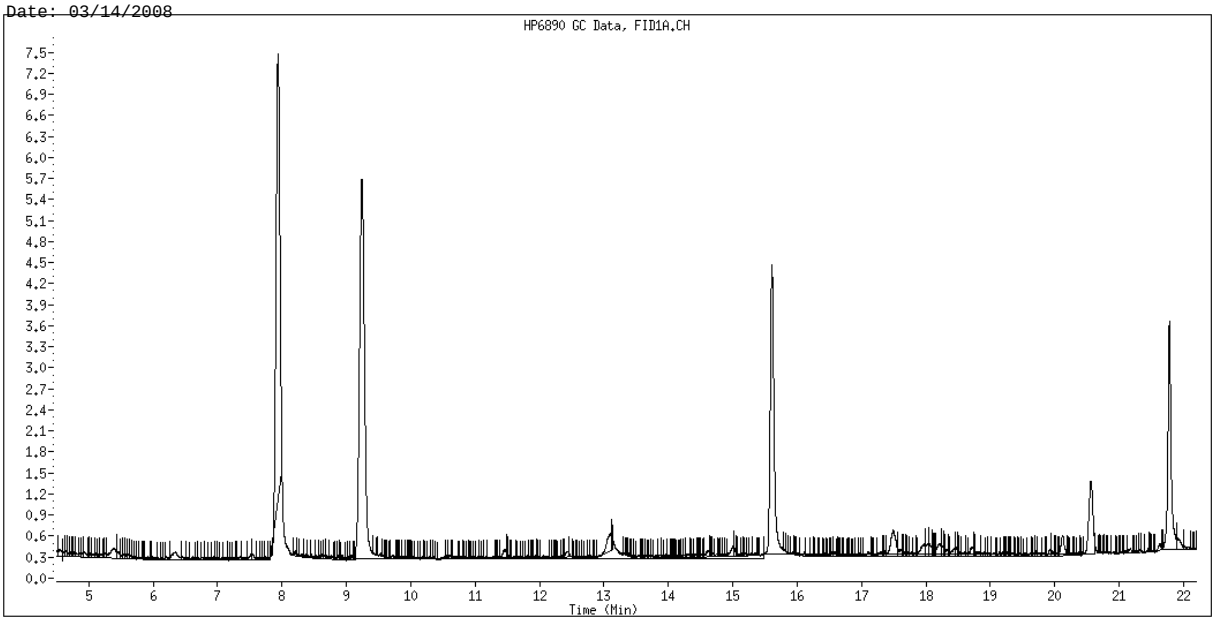
Operator: 01616

Column phase:

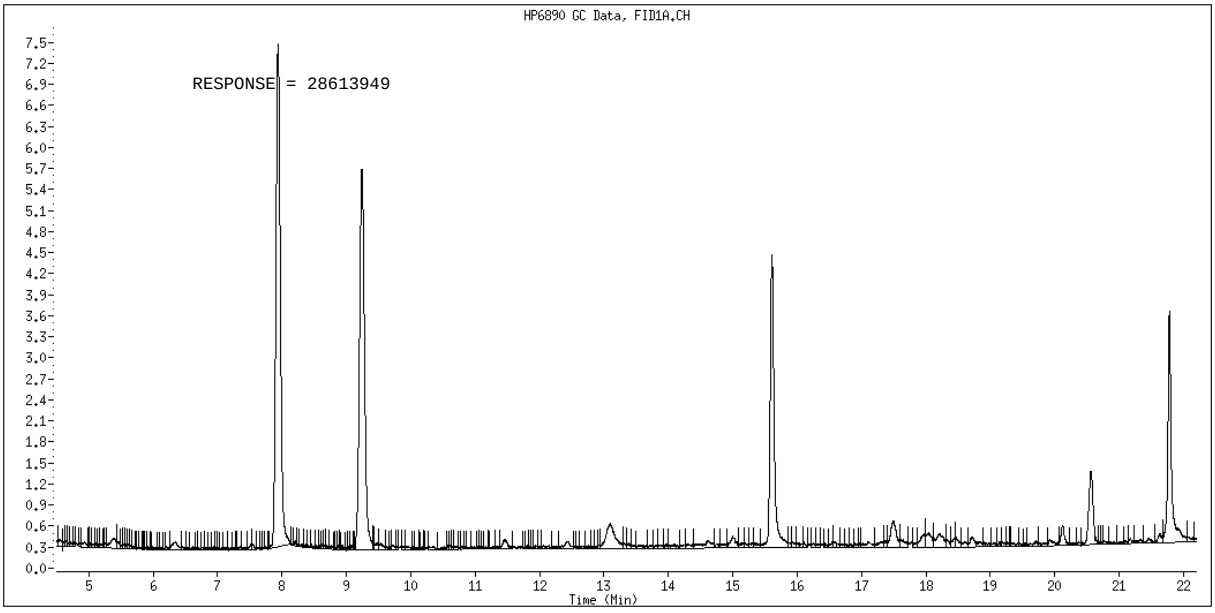
Column diameter: 2.00



Data File Name: YF031306.D
Inj. Date and Time: 13-MAR-2008 18:11
Instrument ID: ypid.i
Client ID:
Compound Name: Total GRO
CAS #: Q796
Report Date: 03/14/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AX-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1A0-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/13/08 **Analysis Date..:** 03/13/08
Prep Batch #...: 8074294
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**89**	**(80 - 120)**			**WI-GRO GRO**
	96	**(80 - 120)**	**7.7**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1AX-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1A0-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/13/08 **Analysis Date..:** 03/13/08
Prep Batch #...: 8074294
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	**ND**	**200**	**180**	**ug/L**	**89**		**WI-GRO GRO**
	ND	**200**	**190**	**ug/L**	**96**	**7.7**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031311.D
Lab Smp Id: KJHVV1AX Client Smp ID: AMW-05B(20080311)
Inj Date : 13-MAR-2008 21:16
Operator : 01616 Inst ID: ypid.i
Smp Info : KJHVV1AX,5.0ML
Misc Info : Y80313.B
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YFGRO.m
Meth Date : 13-Mar-2008 17:28 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 18:30 Cal File: YF020617.D
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700-22.000			180494522	901.190	180.238(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031311.D

Date : 13-MAR-2008 21:16

Client ID: AMW-05B(20080311)

Instrument: ypid.i

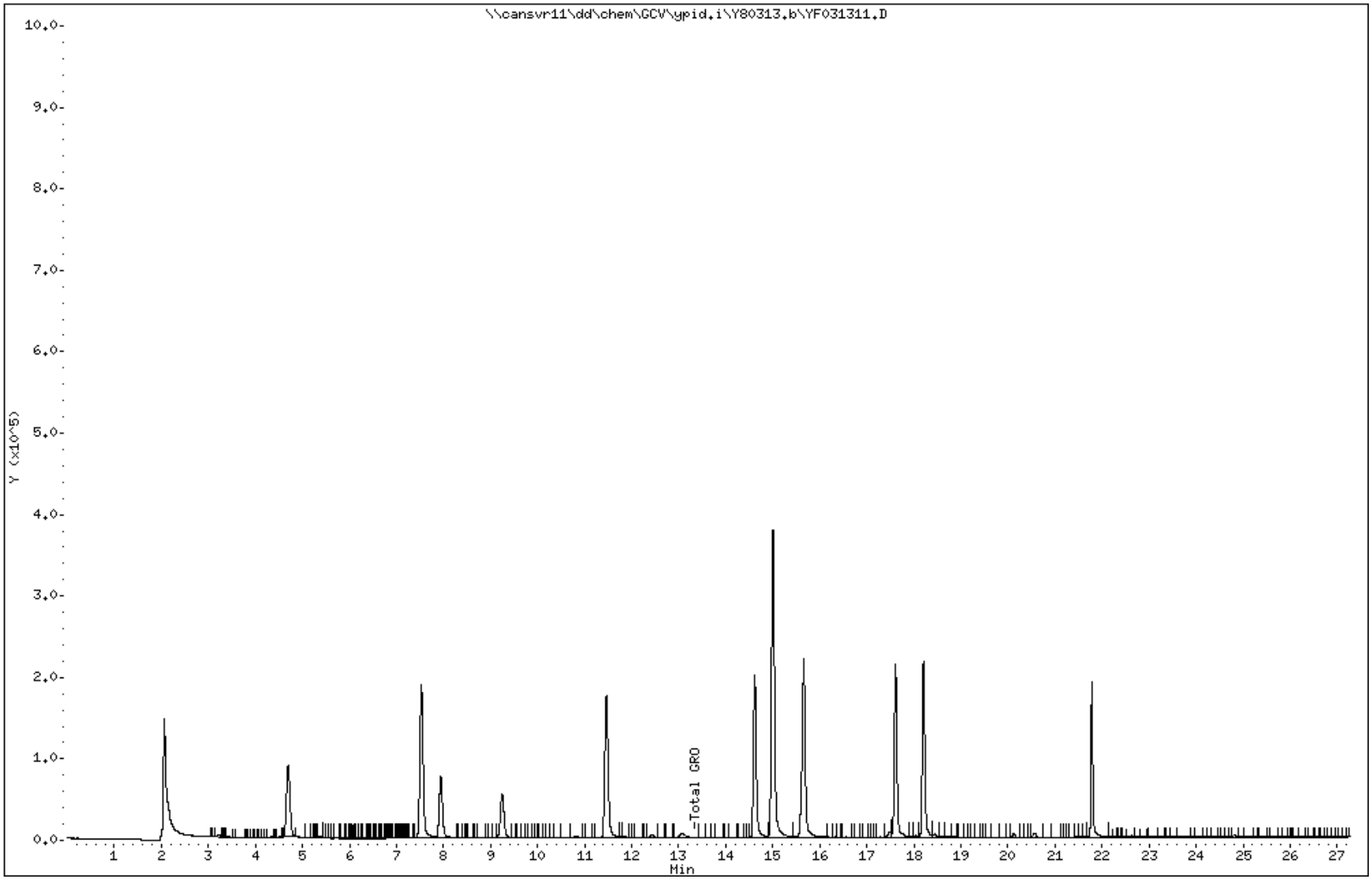
Sample Info: KJHVV1AX,5.0ML

Purge Volume: 5.0

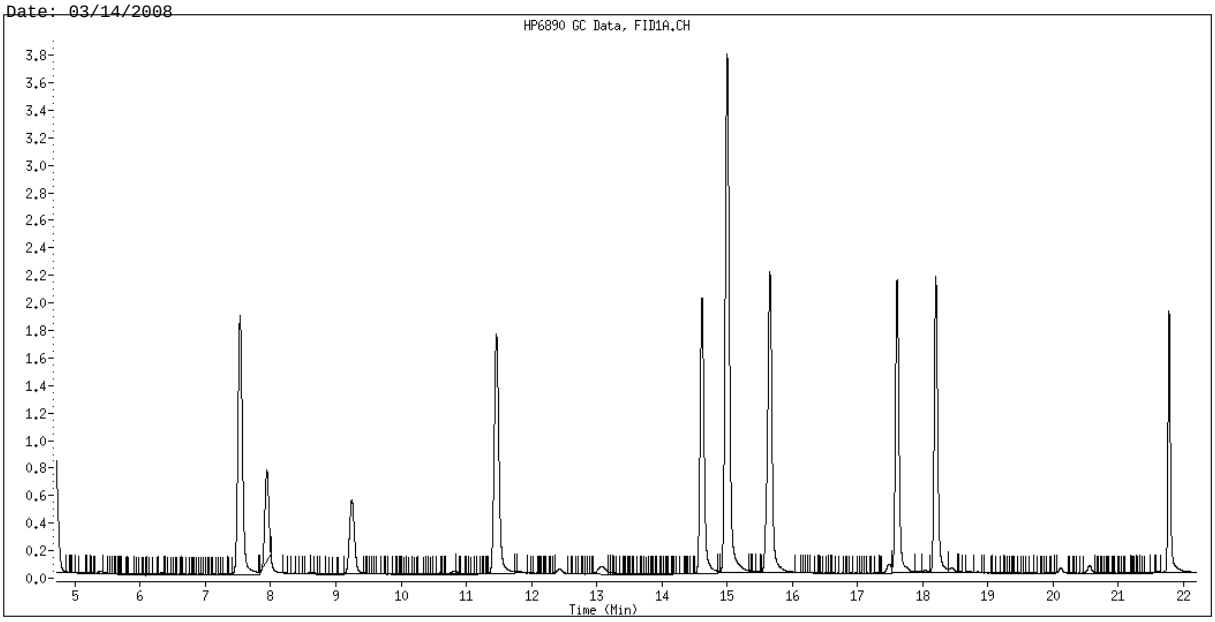
Operator: 01616

Column phase:

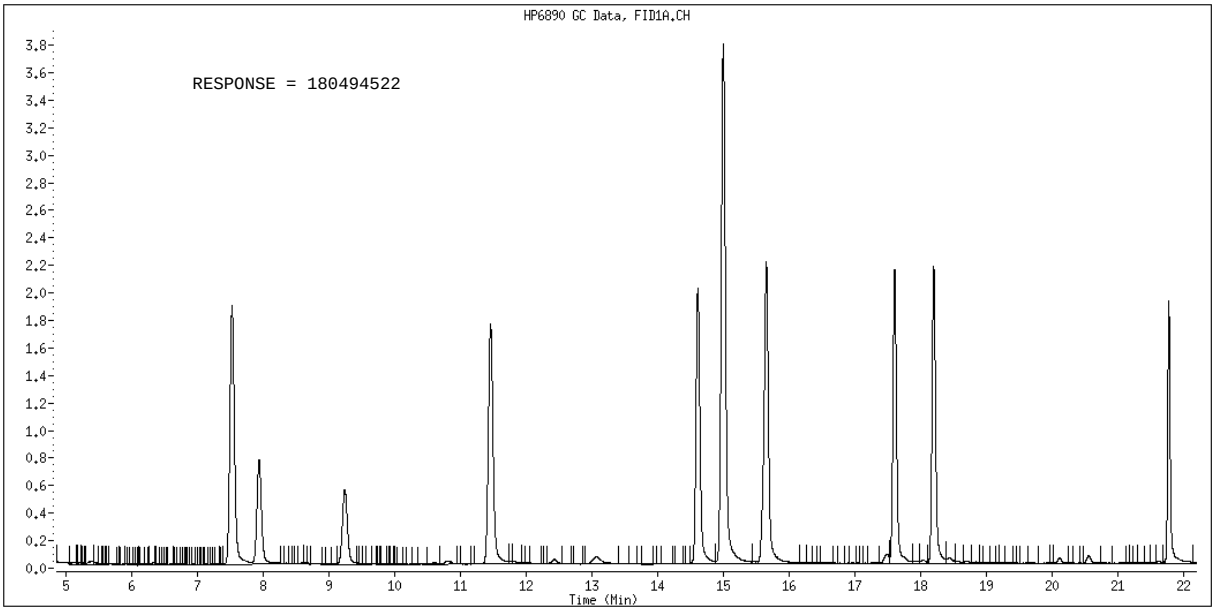
Column diameter: 2.00



Data File Name: YF031311.D
Inj. Date and Time: 13-MAR-2008 21:16
Instrument ID: ypid.i
Client ID: AMW-05B(20080311)
Compound Name: Total GRO
CAS #: Q796
Report Date: 03/14/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031312.D
Lab Smp Id: KJHVV1A0 Client Smp ID: AMW-05B(20080311)
Inj Date : 13-MAR-2008 21:53
Operator : 01616 Inst ID: ypid.i
Smp Info : KJHVV1A0,5.0ML
Misc Info : Y80313.B
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YFGRO.m
Meth Date : 13-Mar-2008 17:28 fausnightb Quant Type: ESTD
Cal Date : 06-FEB-2008 18:30 Cal File: YF020617.D
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700-22.000			192850220	973.517	194.703(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80313.b\YF031312.D

Date : 13-MAR-2008 21:53

Client ID: AMW-05B(20080311)

Instrument: ypid.i

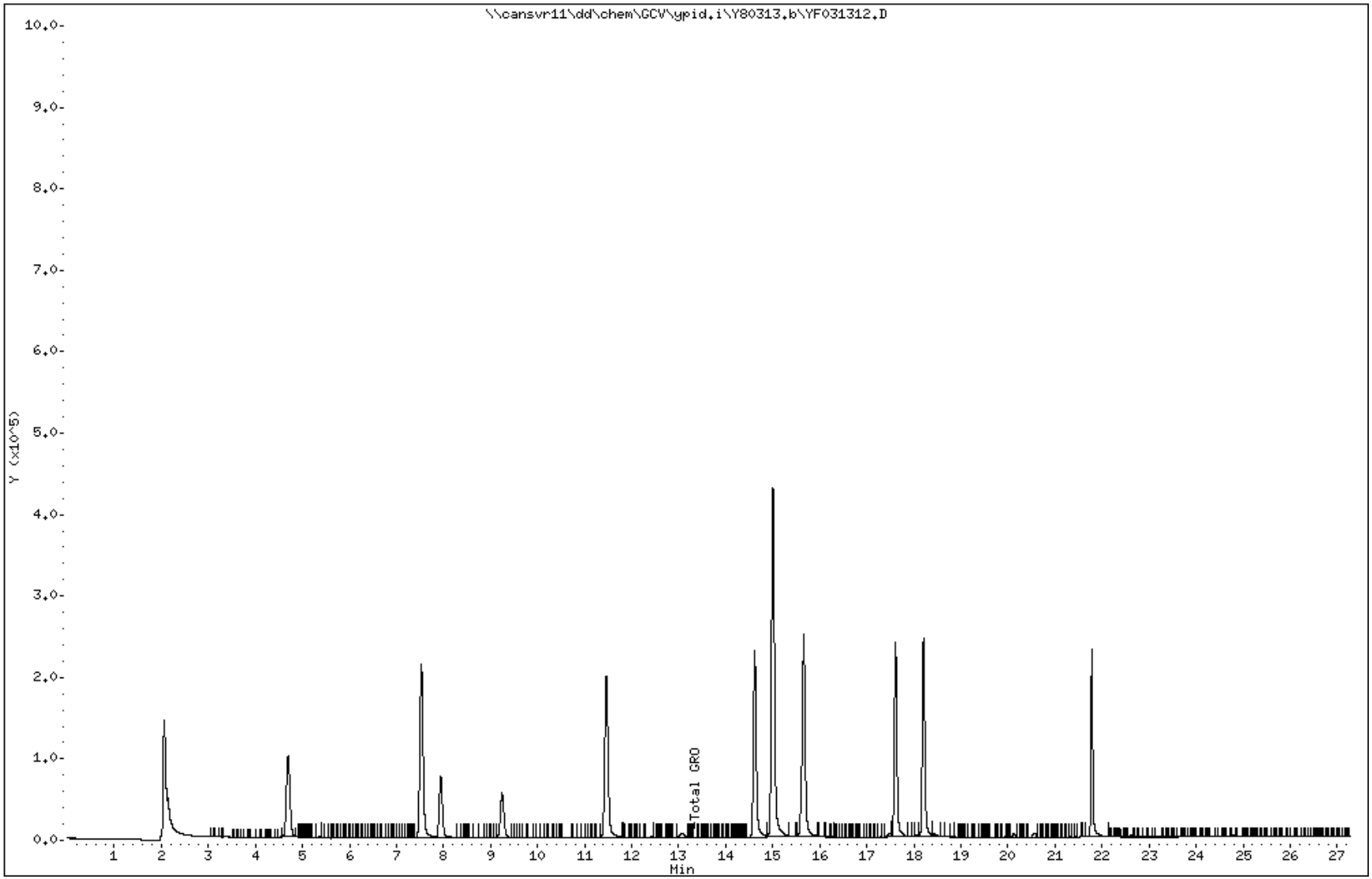
Sample Info: KJHVV1A0,5.0ML

Purge Volume: 5.0

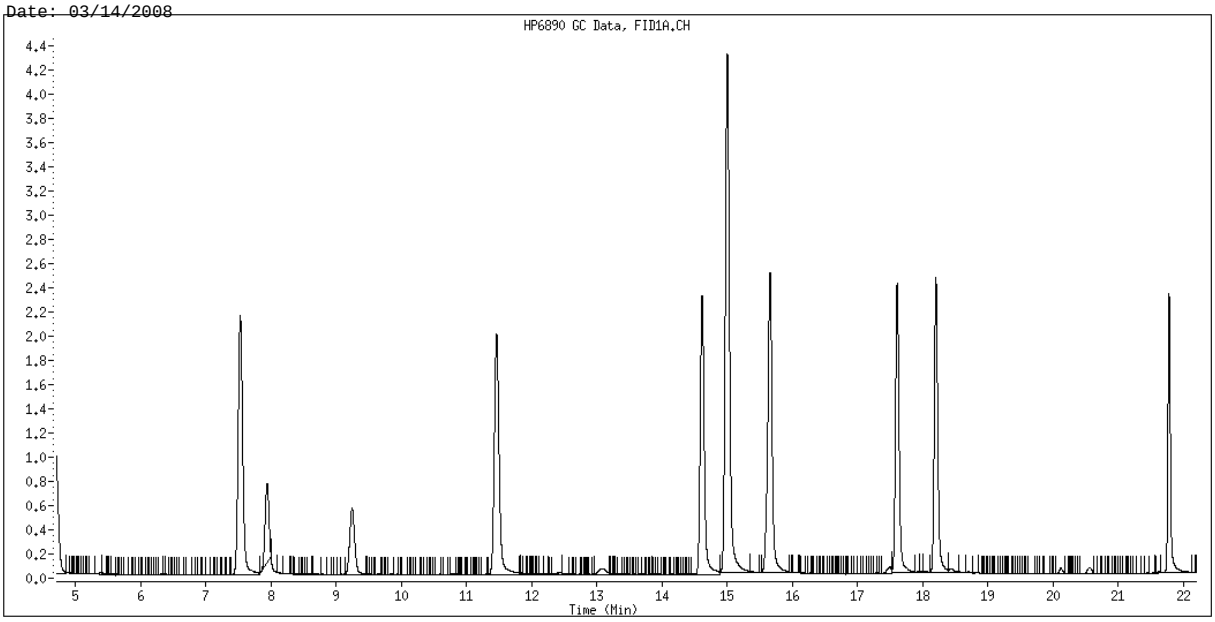
Operator: 01616

Column phase:

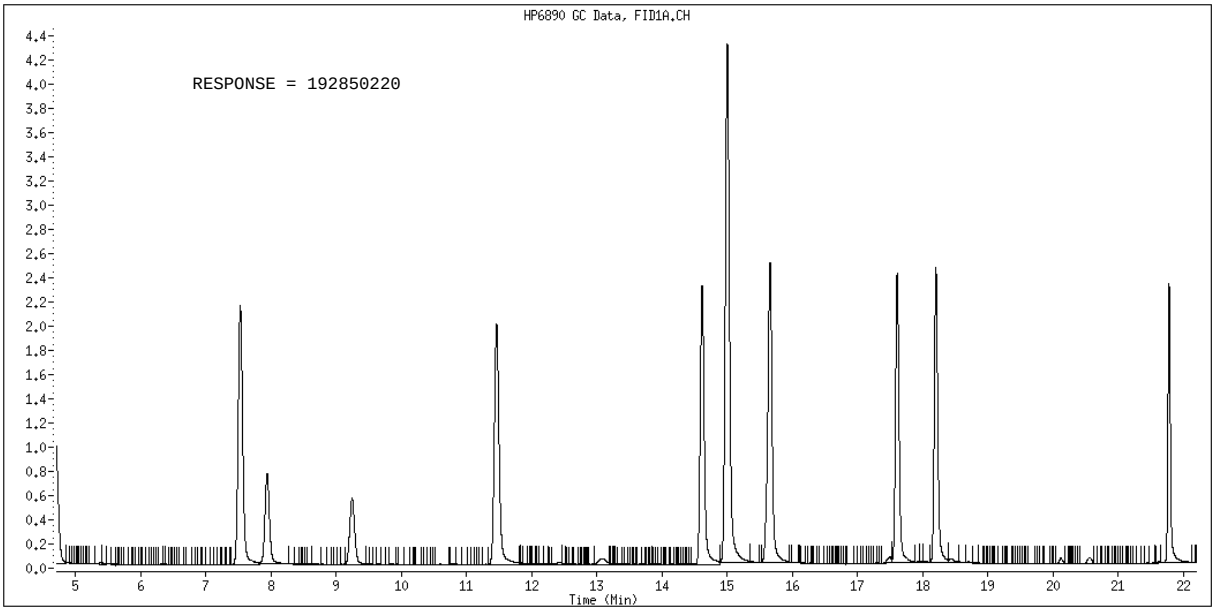
Column diameter: 2.00



Data File Name: YF031312.D
Inj. Date and Time: 13-MAR-2008 21:53
Instrument ID: ypid.i
Client ID: AMW-05B(20080311)
Compound Name: Total GRO
CAS #: Q796
Report Date: 03/14/2008



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

MISCELLANEOUS DATA

Sequence: C:\HPCHEM\2\SEQUENCE\Y80206IC.S

Sequence Parameters:

Operator:	042476
Data File Naming:	Prefix/Counter
Signal 1 Prefix:	YF
Counter:	020601
Signal 2 Prefix:	YP
Counter:	020601
Data Directory:	C:\HPCHEM\2\DATA\
Data Subdirectory:	Y80206
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
INJ: 180c INT.TEMP: 45 FINAL TEMP: 150/250c RATE:30/40c/min
DET: 250c INT TIME: 9min FINAL TIME: 1min
DETECTORS:PID/FID COLUMN: RTX-VRX (75m/0.45um)

IS: 3560 SS: 3563 SS ICAL: _____

CAL: 3518 / _____ LCS/MS: 3565 / _____

LEVEL I REVIEW Barbara Fausnight DATE 2-7-08

LEVEL II REVIEW David S. Heaton DATE 2/7/08

PDF BAF

WI GRO I-CAL 8038118 ✓ KGNTA
PE,

Sequence Table (Front Injector): 8021B H2O PE 8038119 ✓ KGNTN

Method and Injection Info Part: 8021B LLS PE 8038195 ✓ KGNTJ

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	RINSE	YFGRO	1	Sample		
2	1	2.5NG CAL	YFGAS	1	Sample		
3	1		YFGAS	1	Sample		
4	1		YFGAS	1	Sample		
5	1		YFGAS	1	Sample		
6	1		YFGAS	1	Sample		
7	1		YFGAS	1	Sample		
8	1		YFGAS	1	Sample		
9	1		YFGAS	1	Sample		

Sequence: C:\HPCHEM\2\SEQUENCE\Y80206IC.S

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
10	1	RINSE	YFGRO	1	Sample		
11	1	250NG GRO CAL	YFGRO	1	Sample		
12	1	500NG GRO CAL	YFGRO	1	Sample		
13	1	1000NG GRO CAL	YFGRO	1	Sample		
14	1	2000NG GRO CAL	YFGRO	1	Sample		
15	1	4000NG GRO CAL	YFGRO	1	Sample		
16	1	5000NG GRO CAL	YFGRO	1	Sample		
17	1	8000NG GRO CAL	YFGRO	1	Sample		
18	1	RINSE	YFGRO	1	Sample		
19	1	GRO CHK	YFGRO	1	Sample		
20	1	BTEX SOIL CHK	YFGRO	1	Sample		
21	1	BTEX SOIL CHK	YFGRO	1	Sample		
22	1	BLANK,5.0ML	YFGRO	1	Sample		
23	1	BLANK,,5.0G	YFGRO	1	Sample		
24	1	KFVG11AA,5.0ML	YFGRO	1	Sample		
25	1	8V3	YFGRO	1	Sample		
26	1	8V3	YFGRO	1	Sample		
27	1	GRO CHK	YFGRO	1	Sample		
28	1	BTEX CAL	YFGRO	1	Sample		
29	1		YFGRO	1	Sample		
30	1		YFGRO	1	Sample		
31	1		YFGAS	1	Sample		
32	1		YFGAS	1	Sample		
33	1		YFGAS	1	Sample		
34	1		YFGAS	1	Sample		
35	1		YFGAS	1	Sample		
36	1		YFGAS	1	Sample		
37	1		YFGAS	1	Sample		
38	1		YFGAS	1	Sample		

Sequence Table (Back Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	2	RINSE	YPID	1	Sample		
2	2	2.5NG 8021 CAL	YPID	1	Sample		
3	2	5NG 8021 CAL	YPID	1	Sample		
4	2	10NG 8021 CAL	YPID	1	Sample		
5	2	20NG 8021 CAL	YPID	1	Sample		
6	2	50NG 8021 CAL	YPID	1	Sample		
7	2	100NG 8021 CAL	YPID	1	Sample		
8	2	200NG 8021 CAL	YPID	1	Sample		
9	2	400NG 8021 CAL	YPID	1	Sample		
10	2	RINSE	YPID	1	Sample		
11	2	GRO CAL	YPID	1	Sample		
12	2	GRO CAL	YPID	1	Sample		
13	2	GRO CAL	YPID	1	Sample		
14	2	GRO CAL	YPID	1	Sample		

Sequence: C:\HPCHEM\2\SEQUENCE\Y80206IC.S

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
15	2	GRO CAL	YPID	1	Sample		
16	2	GRO CAL	YPID	1	Sample		
17	2	GRO CAL	YPID	1	Sample		
18	2	RINSE	YPID	1	Sample		
19	2	WATER GRO CHK	YPID	1	Sample		
20	2	SOIL BTEX CHK	YPID	1	Sample		
21	2	SOILBTEX CHK	YPID	1	Sample		
22	2	BLANK,5.0ML	YPID	1	Sample		
23	2	BLANK,,5G	YPID	1	Sample		
24	2	KFVG11AC,5.0ML	YPID	1	Sample		
25	2	KF8V31AA,,1.0G	YPID	1	Sample		
26	2	KF8V31AA,,1.0G	YPID	1	Sample		
27	2	WATER GRO CHK	YPID	1	Sample		
28	2	BTEX CAL	YPID	1	Sample		
29	2		YPID	1	Sample		
30	2		YPID	1	Sample		

Sequence: C:\HPCHEM\2\SEQUENCE\Y80313.S

Sequence Parameters:

Operator:

Data File Naming:	Prefix/Counter
Signal 1 Prefix:	YF
Counter:	031301
Signal 2 Prefix:	YP
Counter:	031301
Data Directory:	C:\HPCHEM\2\DATA\
Data Subdirectory:	Y80313
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
INJ: 180c INT.TEMP: 45 FINAL TEMP: 150/250c RATE:30/40c/min
DET: 250c INT TIME: 9min FINAL TIME: 1min
DETECTORS:PID/FID COLUMN: RTX-VRX (75m/0.45um)

IS: 3560 SS: 3572 SS ICAL: _____

CAL: 3518 / _____ LCS/MS: 3564 / _____

LEVEL I REVIEW Barbara Fairweight DATE 3/13/08

LEVEL II REVIEW [signature] DATE 3/17 - 3/18/08

PDF BAF 3/14/08

WI GRO 8074294 KJL 4J

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	RINSE	YFGAS	1	Sample		
2	1	BTEX CAL - used as closer 3/12/08	YFGAS	1	Sample		
3	1	Blank	YFGAS	1	Sample		
4	1	gRO CAL✓	YFGRO	1	Sample		
5	1	gRO CHK✓	YFGRO	1	Sample		
6	1	BLANK,5.0ML✓	YFGRO	1	Sample		
(7)	1	KJHVV1AE,.1ML	YFGRO	1	Sample		
8	1	KJHTA1AE,5.0ML✓	YFGRO	1	Sample		
9	1	KJHRE1AE,5.0ML✓	YFGRO	1	Sample		

5ml

Sequence: C:\HPCHEM\2\SEQUENCE\Y80313.S

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
10	1	KJHVV1AE,5.0ML	YFGRO	1	Sample		
11	1	KJHVV1AX,5.0ML	YFGRO	1	Sample		
12	1	KJHVV1A0,5.0ML	YFGRO	1	Sample		
13	1	gRO CHK	YFGRO	1	Sample		
14	1		YFGRO	1	Sample		
15	1		YFGRO	1	Sample		
16	1		YFGAS	1	Sample		
17	1		YFGAS	1	Sample		
18	1		YFGAS	1	Sample		
19	1		YFGAS	1	Sample		
20	1		YFGAS	1	Sample		
21	1		YFGAS	1	Sample		
22	1		YFGAS	1	Sample		
23	1		YFGAS	1	Sample		
24	1		YFGAS	1	Sample		
25	1		YFGAS	1	Sample		
26	1		YFGAS	1	Sample		
27	1		YFGAS	1	Sample		
28	1		YFGAS	1	Sample		

Sequence Table (Back Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	2	RINSE	YPID	1	Sample		
2	2	BTEX CAL	YPID	1	Sample		
3	2		YPID	1	Sample		
4	2	BTEX CAL	YPID	1	Sample		
5	2	BTEX CHK	YPID	1	Sample		
6	2	BTEX CHK	YPID	1	Sample		
7	2	BLANK,5.0ML	YPID	1	Sample		
8	2		YPID	1	Sample		
9	2		YPID	1	Sample		
10	2		YPID	1	Sample		
11	2		YPID	1	Sample		
12	2		YPID	1	Sample		
13	2		YPID	1	Sample		
14	2		YPID	1	Sample		
15	2		YPID	1	Sample		
16	2		YPID	1	Sample		
17	2		YPID	1	Sample		
18	2		YPID	1	Sample		
19	2		YPID	1	Sample		
20	2		YPID	1	Sample		

SDG: 8C13254

A8C130254

Sample	Work Order	SAC	Client Sample ID	pH	Free Chlorine
1	KJHVV-1AE	XX I 15 C5 01	AMW-05B(20080311)	<2	N

Lot/SDG Number:

Sample Control Chain of Custody – TAL North Canton
GC Volatiles

Lot Number	Sample	Work Order	Analysis Type	Analysis Date	Analyst
A8C130254	1	KJHVV1AE	Organics, Gasoline Range - Wisconsin	03/13/08	Barbara Fausnight

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

DIESEL RANGE ORGANICS DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QC SUMMARY DATA

WI-DRO DRO SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C130254

Extraction: XXI10C601

	CLIENT ID.	SRG01	TOT OUT
01	AMW-05B(20080311)	114*	01
02	METHOD BLK. KJKKH1AD	126*	01
03	LCS KJKKH1AE	100	00
04	AMW-05B(20080311) D	99	00
05	LCSD KJKKH1AF	105	00
06	AMW-05B(20080311) S	87	00

SURROGATES	QC LIMITS
SRG01 = C9 (nonane)	(10-110)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

WI-DRO DRO CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C140000 WO #: KJKKH1AE
BATCH: 8074048

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
Diesel Range Organics	0.50	0.39	78	75- 115	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS:

WI-DRO DRO CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C140000 WO #: KJKKH1AF
BATCH: 8074048

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
Diesel Range Organics	0.50	0.40	80	75- 115	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS:

WI-DRO DRO MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1A1
BATCH: 8074048

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
Diesel Range Organics	1.1	0.097	0.86	72	60- 130	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 1 outside limits

COMMENTS:

FORM III

WI-DRO DRO MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1A2
BATCH: 8074048

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENT. (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Diesel Range Organics	1.1	0.92	77	6.9	25	60- 130	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 1 outside limits

COMMENTS:

FORM III

WI-DRO DRO METHOD BLANK SUMMARY

BLANK WORKORDER NO.: KJKKH1AD

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN — SDG Number:8C13254

Lab File ID: 003F0301. — Lot Number: A8C130254

Matrix: WATER — Extraction Method: 3520C

Date Extracted: 03/14/08

Date Analyzed(1): 03/14/08 — Date Analyzed(2): N/A

Time Analyzed(1): 15:02 — Time Analyzed(2): N/A

Instrument ID(1): P6 — Instrument ID(2): N/A

GC Column(1): RTX-5 ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	AMW-05B(20080311)	KJHVV1AF	03/14/08	N/A
02	AMW-05B(20080311)	KJHVV1A1 S	03/14/08	N/A
03	AMW-05B(20080311)	KJHVV1A2 D	03/14/08	N/A
04	CHECK SAMPLE	KJKKH1AE C	03/14/08	N/A
05	DUPLICATE CHECK	KJKKH1AF L	03/14/08	N/A
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SAMPLE DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

GC Semivolatiles

Lot-Sample #...: A8C130254-001 **Work Order #...:** KJHVV1AF **Matrix.....:** WG
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8074048
Dilution Factor: 1 **Initial Wgt/Vol:** 930 mL **Final Wgt/Vol..:** 1 mL
Method.....: WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**0.097 J,B**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	114 *	(10 - 110)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

TestAmerica North Canton

Diesel DRO

Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\007F0701.D
Lab Smp Id: KJHVV1AF Client Smp ID: AMW-05B(20080311)
Inj Date : 14-MAR-2008 16:54
Operator : 2398 Inst ID: a2hp6.i
Smp Info : KJHVV1AF
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\DRO6f.m
Meth Date : 14-Mar-2008 15:54 Quant Type: ESTD
Cal Date : 12-MAR-2008 19:44 Cal File: 017F1701.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	930.000	initial vol.
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 DRO	5.295	13.932		28278778	90.3466	97.15
$ 2 Nonane	4.436	4.432	0.004	578882	45.6362	49.07

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\007F0701.D

Page 1

Date : 14-MAR-2008 16:54

Client ID: AMW-05B(20080311)

Instrument: a2hp6.i

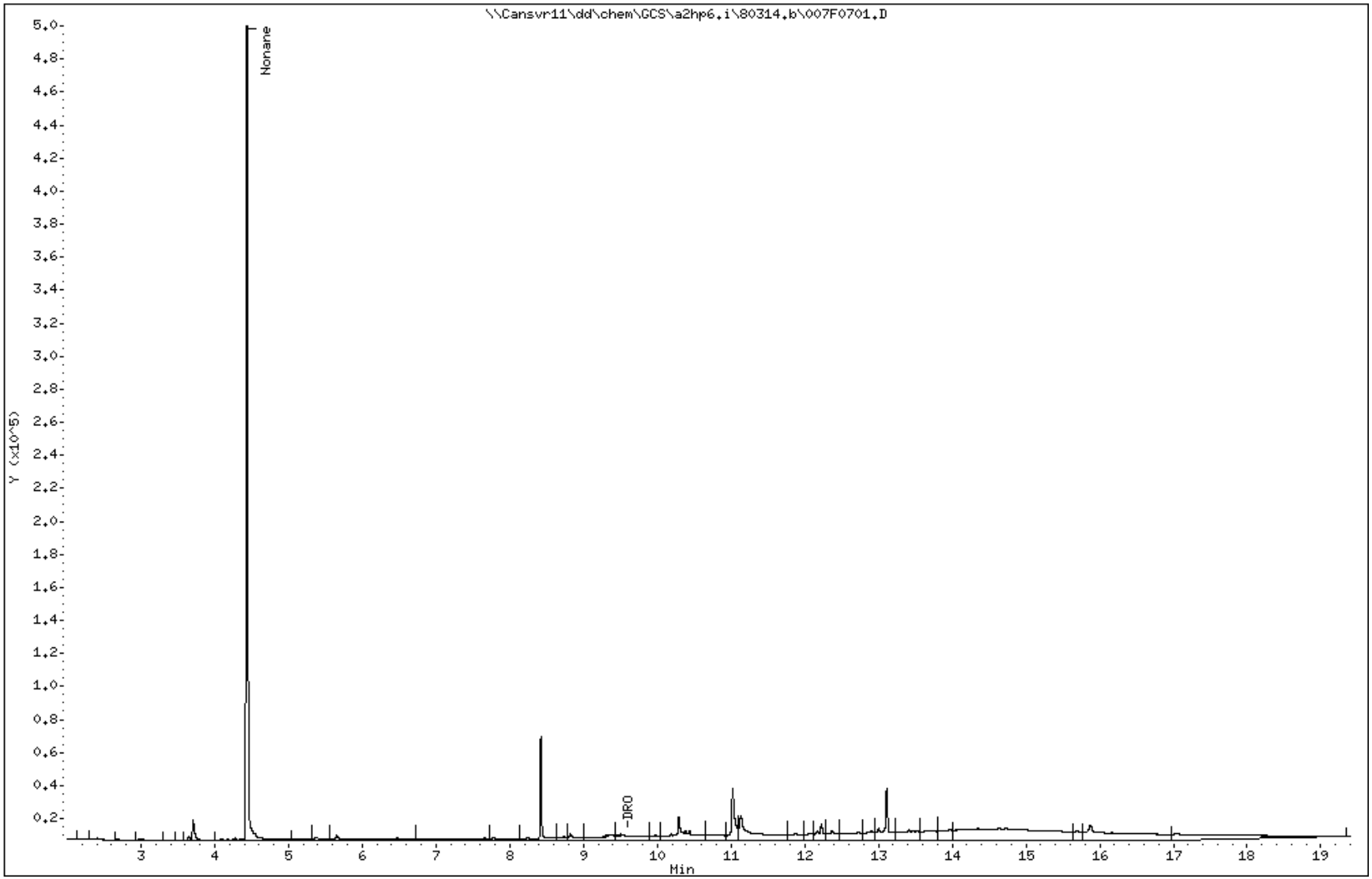
Sample Info: KJHVV1AF

Volume Injected (uL): 1.0

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

STANDARD DATA

Report Date: 13-Mar-2008 10:56

Calibration History

Method : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\DRO6f.m
Start Cal Date: 17-OCT-2007 20:16
End Cal Date : 12-MAR-2008 19:44
Last Cal Level: 5
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
12-MAR-2008 17:51	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\013F1301.D
Cal Level: 2 , Cal Amount: 200.00000		
12-MAR-2008 18:19	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\014F1401.D
Cal Level: 3 , Cal Amount: 500.00000		
12-MAR-2008 18:48	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\015F1501.D
Cal Level: 4 , Cal Amount: 1000.00000		
12-MAR-2008 19:16	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\016F1601.D
Cal Level: 5 , Cal Amount: 2000.00000		
12-MAR-2008 19:44	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\017F1701.D

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3

12-MAR-2008 20:12	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\018F1801.D
12-MAR-2008 18:48	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\015F1501.D

Report Date : 13-Mar-2008 10:56

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-OCT-2007 20:16
End Cal Date : 12-MAR-2008 19:44
Quant Method : ESTD
Target Version : 4.14
Integrator : HP Genie
Method file : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\DRO6f.m
Last Edit : 13-Mar-2008 10:56 geiss

Calibration File Names:
Level 1: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\013F1301.D
Level 2: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\014F1401.D
Level 3: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\015F1501.D
Level 4: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\016F1601.D
Level 5: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\017F1701.D

Compound	100.0000 Level 1	200.0000 Level 2	500.0000 Level 3	1000.0000 Level 4	2000.0000 Level 5	Curve	Coefficients b	m1	m2	%RSD or R^2
S 4 DRO	32024518	63969088	161270399	343016298	674291629	LINR	6.96346	339143		0.99974
$ 2 Nonane	122344	241325	625364	1309064	2536005	LINR	0.32734	12776		0.99957

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-OCT-2007 20:16
End Cal Date : 12-MAR-2008 19:44
Quant Method : ESTD
Target Version : 4.14
Integrator : HP Genie
Method file : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\DRO6f.m
Last Edit : 13-Mar-2008 10:56 geiss

Curve	Formula	Units
Linear	Amt = b + Rsp/m1	Response

TestAmerica North Canton

Diesel DRO

Data file : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\013F1301.D
Lab Smp Id: F045
Inj Date : 12-MAR-2008 17:51
Operator : 2398 Inst ID: a2hp6.i
Smp Info : F045,,1,1
Misc Info :
Comment   :
Method   : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\DRO6f.m
Meth Date : 13-Mar-2008 09:52 geiss Quant Type: ESTD
Cal Date : 12-MAR-2008 17:51 Cal File: 013F1301.D
Als bottle: 13 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANPEXT04

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
S 4 DRO	5.295	-13.932		32024518	100.000	101.4
$ 2 Nonane	4.432	4.432	0.000	122344	10.0000	9.903

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\013F1301.D

Date : 12-MAR-2008 17:51

Client ID:

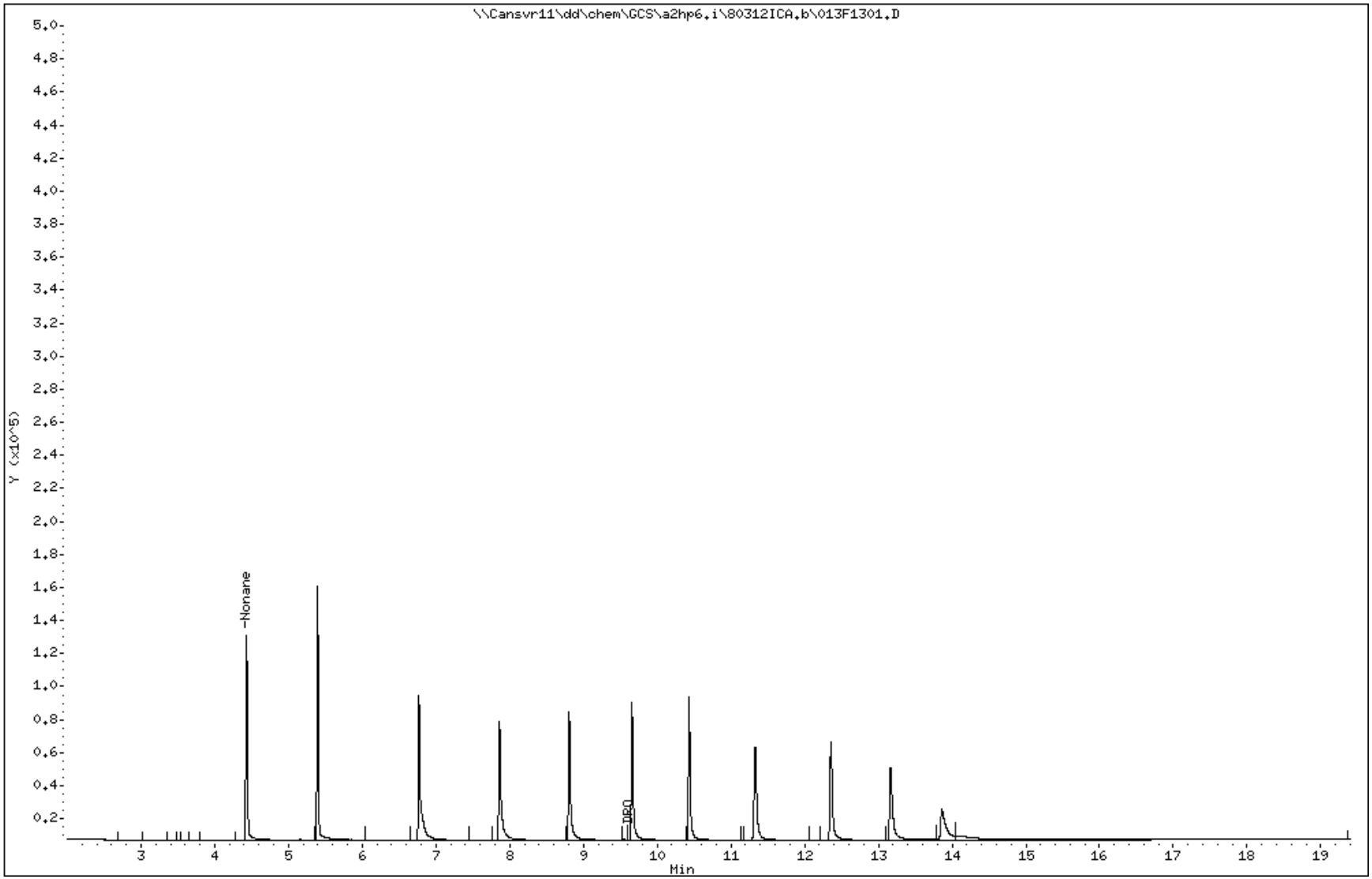
Instrument: a2hp6.i

Sample Info: F045,,1,1

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica North Canton

Diesel DRO

Data file : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\014F1401.D
Lab Smp Id: F045
Inj Date : 12-MAR-2008 18:19
Operator : 2398 Inst ID: a2hp6.i
Smp Info : F045,,1,2
Misc Info :
Comment   :
Method   : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\DRO6f.m
Meth Date : 13-Mar-2008 09:52 geiss Quant Type: ESTD
Cal Date : 12-MAR-2008 18:19 Cal File: 014F1401.D
Als bottle: 14 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANPEXT04

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
S 4 DRO	5.295	13.932		63969088	200.000	195.6
$ 2 Nonane	4.431	4.432	-0.001	241325	20.0000	19.22

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\014F1401.D

Date : 12-MAR-2008 18:19

Client ID:

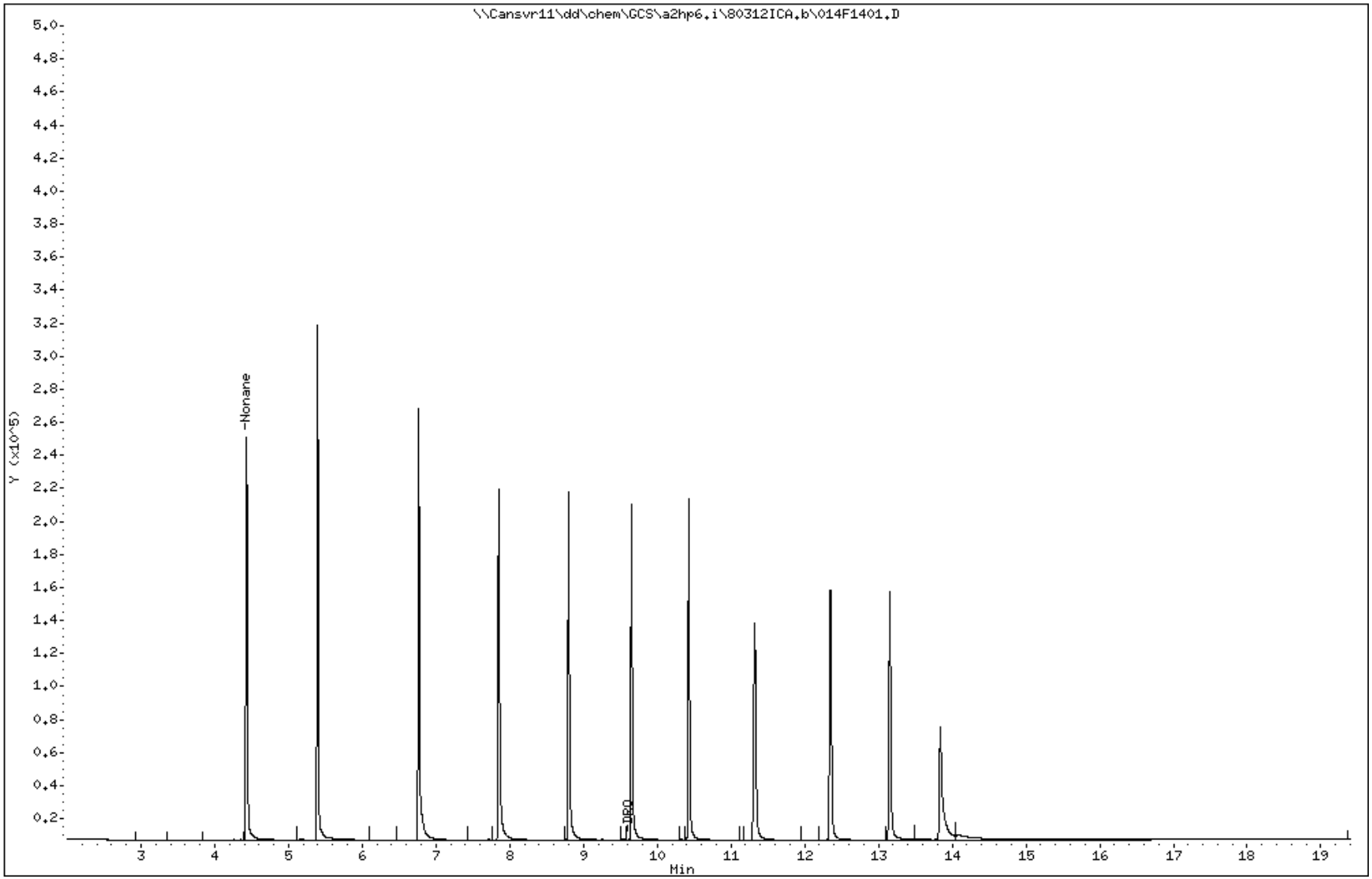
Instrument: a2hp6.i

Sample Info: F045,,1,2

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica North Canton

Diesel DRO

Data file : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\015F1501.D
Lab Smp Id: F045
Inj Date : 12-MAR-2008 18:48
Operator : 2398 Inst ID: a2hp6.i
Smp Info : F045,,1,3
Misc Info :
Comment   :
Method   : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\DRO6f.m
Meth Date : 13-Mar-2008 09:52 geiss Quant Type: ESTD
Cal Date : 12-MAR-2008 18:48 Cal File: 015F1501.D
Als bottle: 15 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANPEXT04

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
S 4 DRO	5.295	13.932		161270399	500.000	482.5
$ 2 Nonane	4.431	4.432	-0.001	625364	50.0000	49.27

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\015F1501.D

Page 1

Date : 12-MAR-2008 18:48

Client ID:

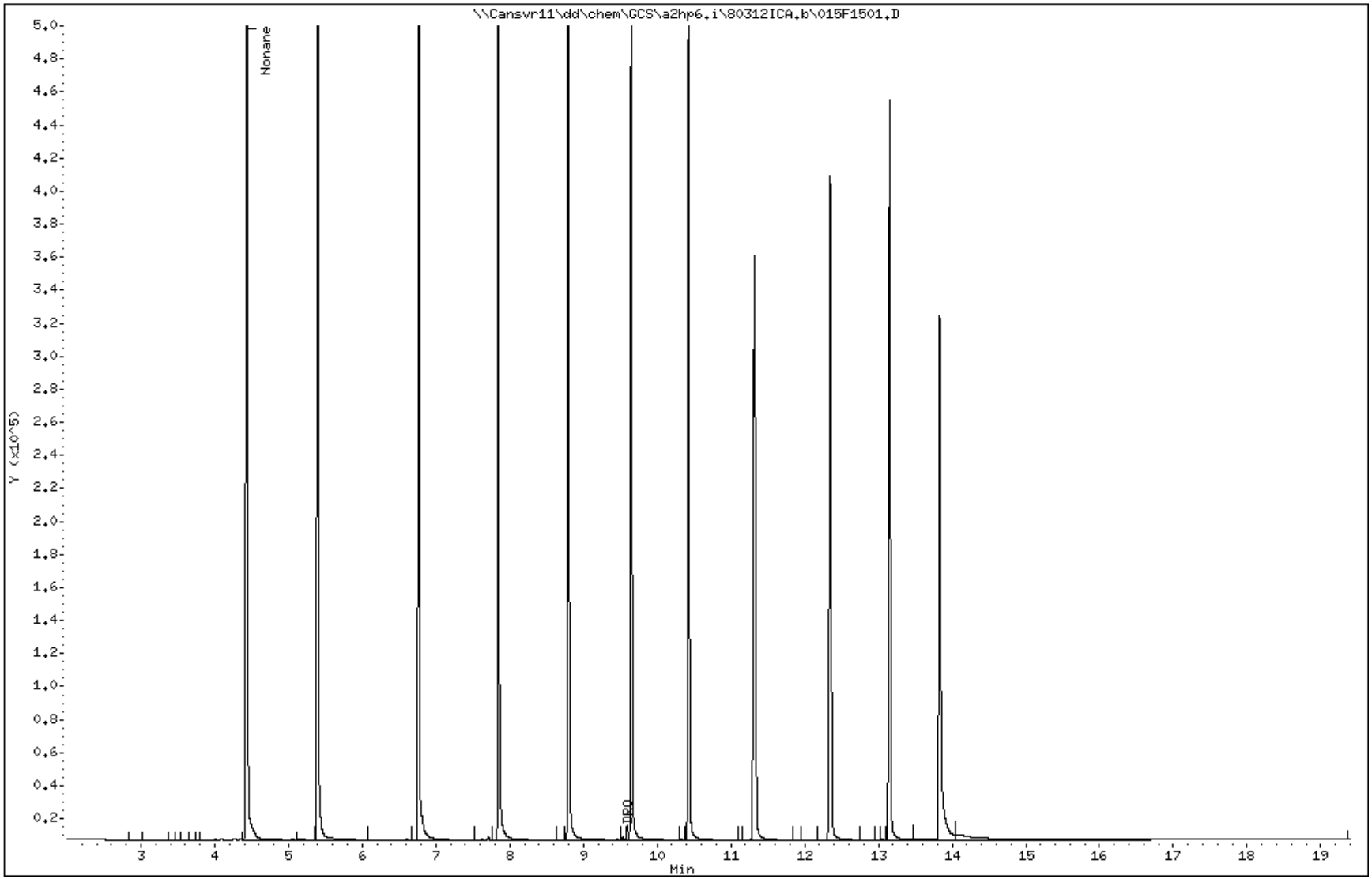
Instrument: a2hp6.i

Sample Info: F045,,1,3

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica North Canton

Diesel DRO

Data file : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\016F1601.D
Lab Smp Id: F045
Inj Date : 12-MAR-2008 19:16
Operator : 2398 Inst ID: a2hp6.i
Smp Info : F045,,1,4
Misc Info :
Comment   :
Method   : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\DRO6f.m
Meth Date : 13-Mar-2008 09:52 geiss Quant Type: ESTD
Cal Date : 12-MAR-2008 19:16 Cal File: 016F1601.D
Als bottle: 16 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANPEXT04

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
S 4 DRO	5.295	-13.932		343016298	1000.00	1018
$ 2 Nonane	4.431	4.432	-0.001	1309064	100.000	102.8

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\016F1601.D

Page 1

Date : 12-MAR-2008 19:16

Client ID:

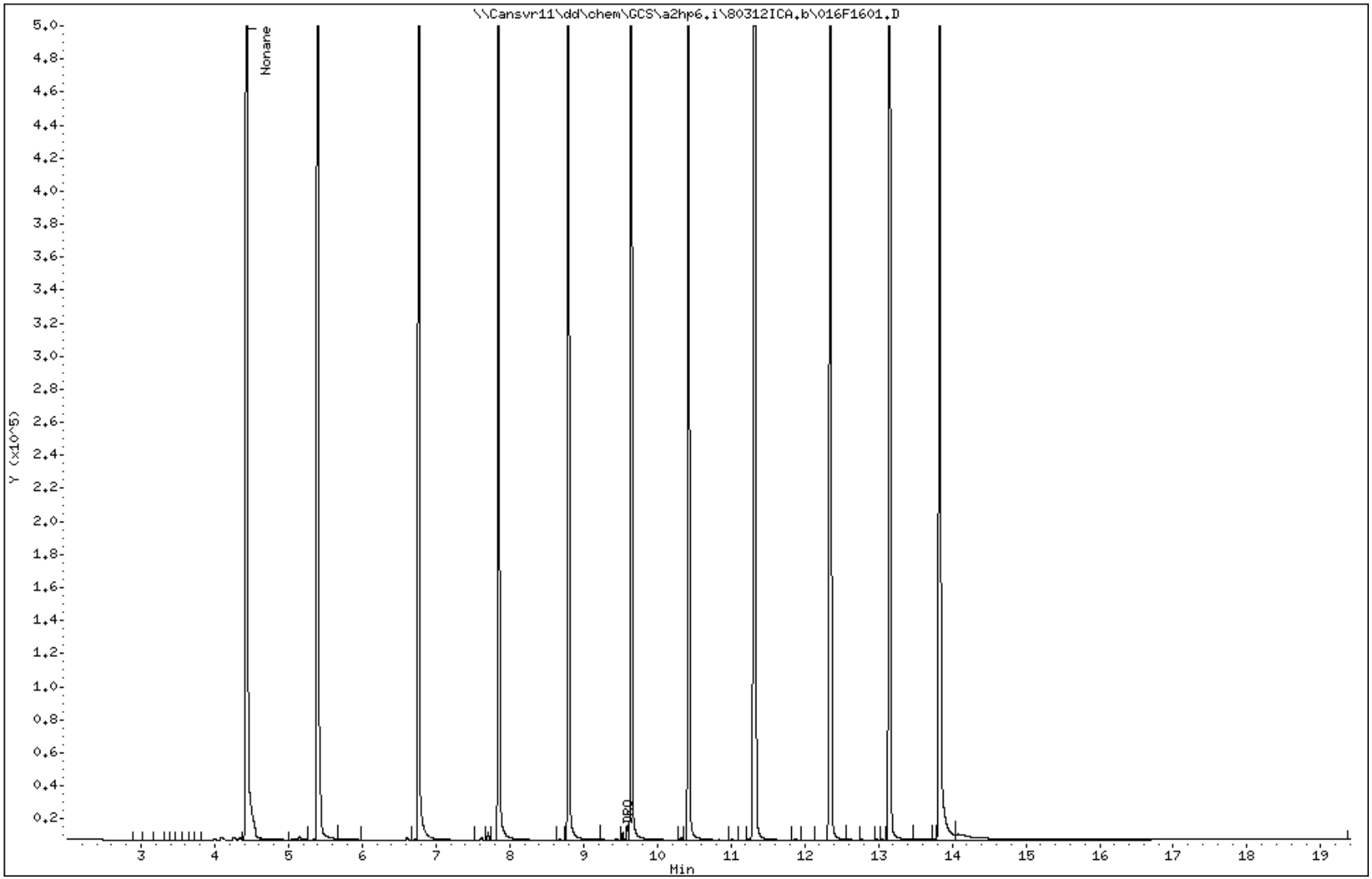
Instrument: a2hp6.i

Sample Info: F045,,1,4

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica North Canton

Diesel DRO

Data file : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\017F1701.D
Lab Smp Id: F045
Inj Date : 12-MAR-2008 19:44
Operator : 2398 Inst ID: a2hp6.i
Smp Info : F045,,1,5
Misc Info :
Comment   :
Method   : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\DRO6f.m
Meth Date : 13-Mar-2008 09:52 geiss Quant Type: ESTD
Cal Date : 12-MAR-2008 19:44 Cal File: 017F1701.D
Als bottle: 17 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANPEXT04

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
S 4 DRO	5.295	-13.932		674291629	2000.00	1995
$ 2 Nonane	4.434	4.432	0.002	2536005	200.000	198.8

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\017F1701.D

Page 1

Date : 12-MAR-2008 19:44

Client ID:

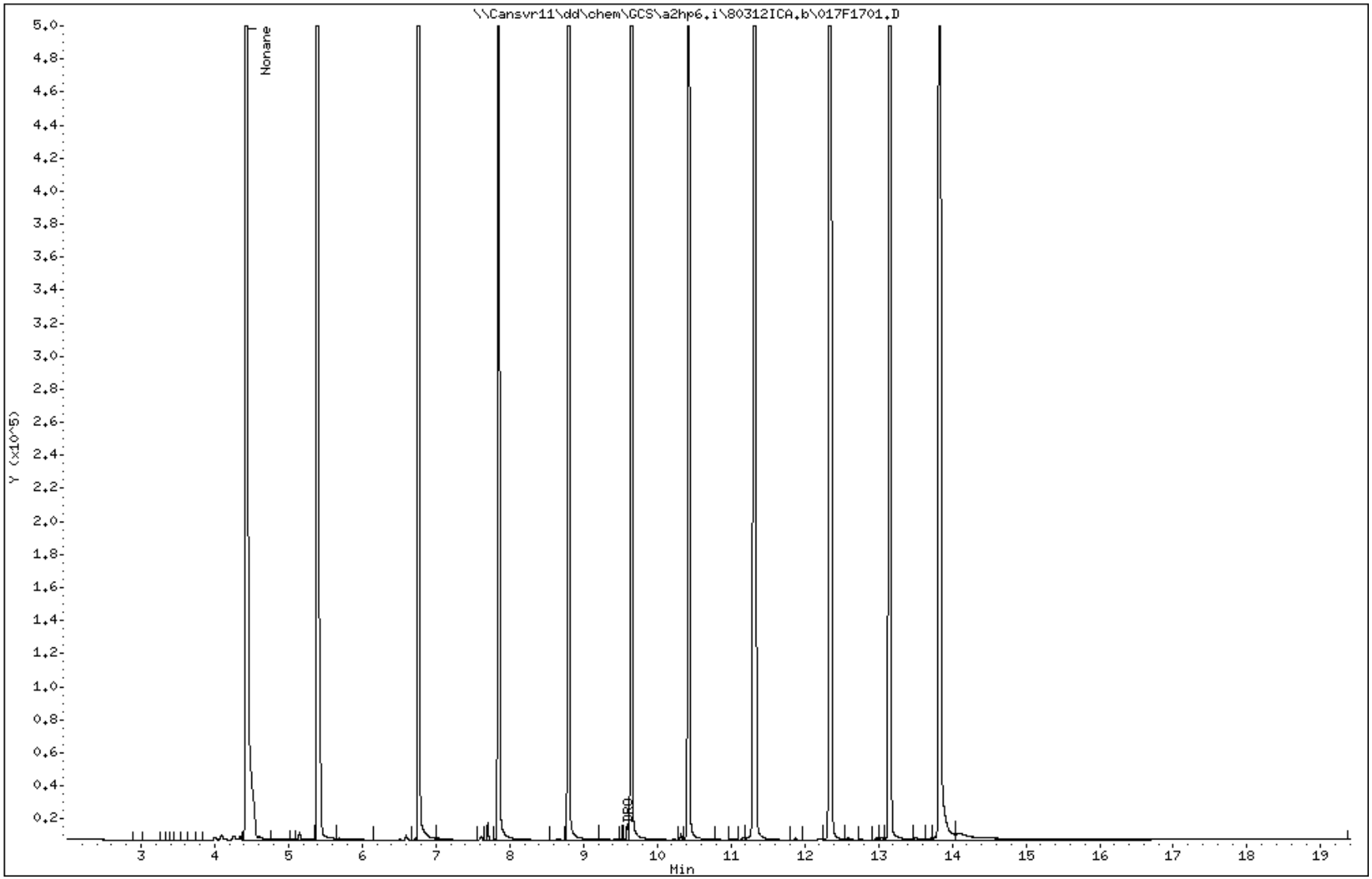
Instrument: a2hp6.i

Sample Info: F045,,1,5

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp6.i Injection Date: 12-MAR-2008 20:12
Lab File ID: 018F1801.D Init. Cal. Date(s): 17-OCT-2007 12-MAR-2008
Analysis Type: Init. Cal. Times: 20:16 19:44
Lab Sample ID: ICV4469 Quant Type: ESTD
Method: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\DRO6f.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
S 4 DRO	500	492	329103	0.010	1.56754	0.000e+000	Linear	
$ 2 Nonane	++++	++++	0.00000	0.010	++++	0.000e+000	Linear	<-

TestAmerica North Canton

Diesel DRO

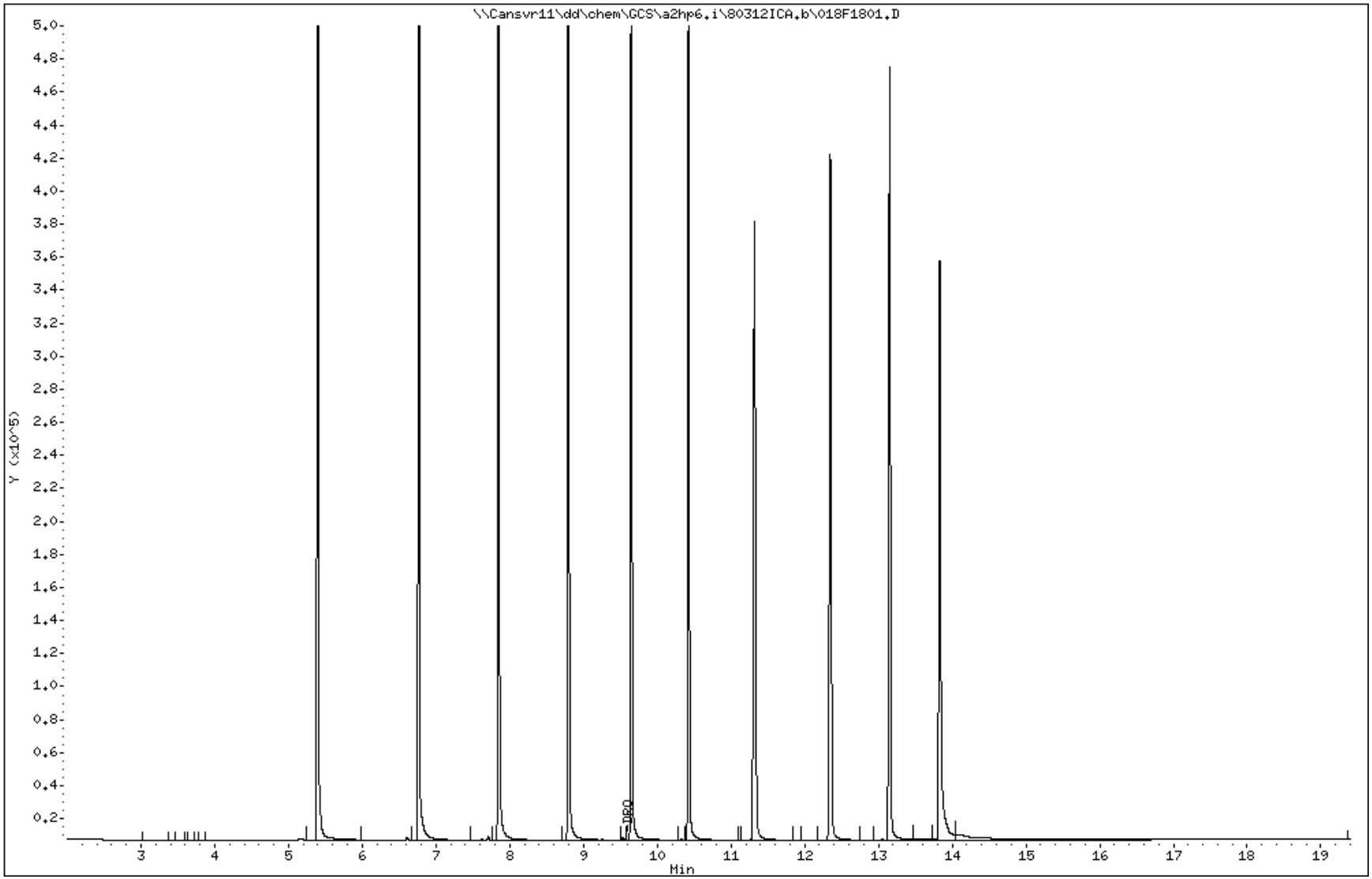
Data file : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\018F1801.D
Lab Smp Id: ICV4469
Inj Date : 12-MAR-2008 20:12
Operator : 2398 Inst ID: a2hp6.i
Smp Info : ICV4469,,2
Misc Info :
Comment   :
Method   : \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\DRO6f.m
Meth Date : 13-Mar-2008 10:13 geiss Quant Type: ESTD
Cal Date : 12-MAR-2008 19:44 Cal File: 017F1701.D
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANPEXT04

				AMOUNTS	
				CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT RESPONSE	(ng)	(ng)
S 4 DRO	5.295	-13.932	164551562	500.000	492.2
$ 2 Nonane	Compound Not Detected.				

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\018F1801.D
Date : 12-MAR-2008 20:12
Client ID:
Sample Info: ICV4469,,2

Instrument: a2hp6.i
Operator: 2398
Column diameter: 0.32

Column phase: db-625



North Canton
810

FORM 8
TPH ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 8C13254

GC Column: DB-625 ID: 0.32 (mm) Init. Calib. Date(s): 10/17/07 03/12/08

Instrument ID: A2HP6

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 4.43

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01		F045	03/14/08	1434	4.44	
02	KJKKHBLK	KJKKH1AD	03/14/08	1502	4.44	
03	KJKKHCHK	KJKKH1AE	03/14/08	1530	4.44	
04	AMW-05B(2008	KJHVV1AF	03/14/08	1654	4.44	
05	AMW-05B(2008	KJHVV1A1	03/14/08	1722	4.44	
06	AMW-05B(2008	KJHVV1A2	03/14/08	1750	4.44	
07	KJKKHCKDUP	KJKKH1AF	03/14/08	1818	4.44	
08		F045	03/14/08	1846	4.44	
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = Nonane (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Report Date: 17-Mar-2008 09:50

Calibration History

Method : \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\DRO6f.m
Start Cal Date: 17-OCT-2007 20:16
End Cal Date : 12-MAR-2008 19:44
Last Cal Level: 5
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
12-MAR-2008 17:51	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\013F1301.D
Cal Level: 2 , Cal Amount: 200.00000		
12-MAR-2008 18:19	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\014F1401.D
Cal Level: 3 , Cal Amount: 500.00000		
12-MAR-2008 18:48	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\015F1501.D
Cal Level: 4 , Cal Amount: 1000.00000		
12-MAR-2008 19:16	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\016F1601.D
Cal Level: 5 , Cal Amount: 2000.00000		
12-MAR-2008 19:44	1-dro_vap	\\Cansvr11\dd\chem\GCS\a2hp6.i\80312ICA.b\017F1701.D

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3

14-MAR-2008 18:46	1-dro_vap	\\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\011F1101.D
14-MAR-2008 14:34	1-dro_vap	\\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\002F0201.D

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp6.i Injection Date: 14-MAR-2008 14:34
Lab File ID: 002F0201.D Init. Cal. Date(s): 17-OCT-2007 12-MAR-2008
Analysis Type: Init. Cal. Times: 20:16 19:44
Lab Sample ID: F045 Quant Type: ESTD
Method: \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\DRO6f.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 4 DRO	500	457	304951	0.010	8.68898	0.000e+000	Linear
$ 2 Nonane	50.00000	48.33346	12267	0.010	3.33308	0.000e+000	Linear

TestAmerica North Canton

Diesel DRO

Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\002F0201.D
Lab Smp Id: F045
Inj Date : 14-MAR-2008 14:34
Operator : 2398 Inst ID: a2hp6.i
Smp Info : F045,,2
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\DRO6f.m
Meth Date : 14-Mar-2008 15:54 Quant Type: ESTD
Cal Date : 12-MAR-2008 19:44 Cal File: 017F1701.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
S 4 DRO	5.295	-13.932		152475634	500.000	456.6
$ 2 Nonane	4.436	4.432	0.004	613343	50.0000	48.33

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\002F0201.D

Page 1

Date : 14-MAR-2008 14:34

Client ID:

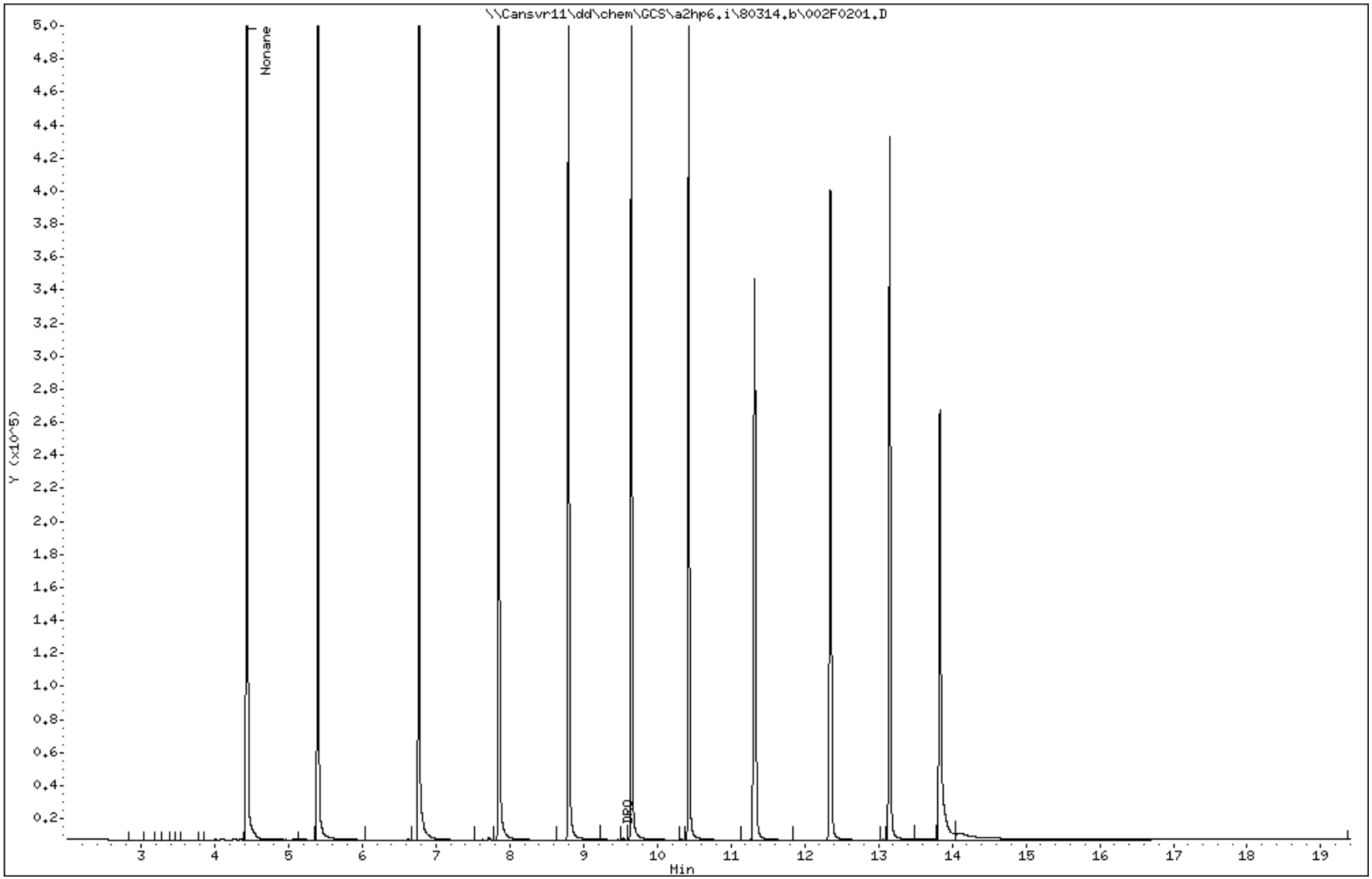
Instrument: a2hp6.i

Sample Info: F045,,2

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp6.i Injection Date: 14-MAR-2008 18:46
Lab File ID: 011F1101.D Init. Cal. Date(s): 17-OCT-2007 12-MAR-2008
Analysis Type: Init. Cal. Times: 20:16 19:44
Lab Sample ID: F045 Quant Type: ESTD
Method: \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\DRO6f.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 4 DRO	500	504	336794	0.010	-0.70006	0.000e+000	Linear
$ 2 Nonane	50.00000	50.55679	12835	0.010	-1.11357	0.000e+000	Linear

TestAmerica North Canton

Diesel DRO

Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\011F1101.D
Lab Smp Id: F045
Inj Date : 14-MAR-2008 18:46
Operator : 2398 Inst ID: a2hp6.i
Smp Info : F045,,2
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\DRO6f.m
Meth Date : 14-Mar-2008 20:06 Quant Type: ESTD
Cal Date : 12-MAR-2008 19:44 Cal File: 017F1701.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
S 4 DRO	5.295	-13.932		168396760	500.000	503.5
$ 2 Nonane	4.436	4.432	0.004	641749	50.0000	50.56

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\011F1101.D

Page 1

Date : 14-MAR-2008 18:46

Client ID:

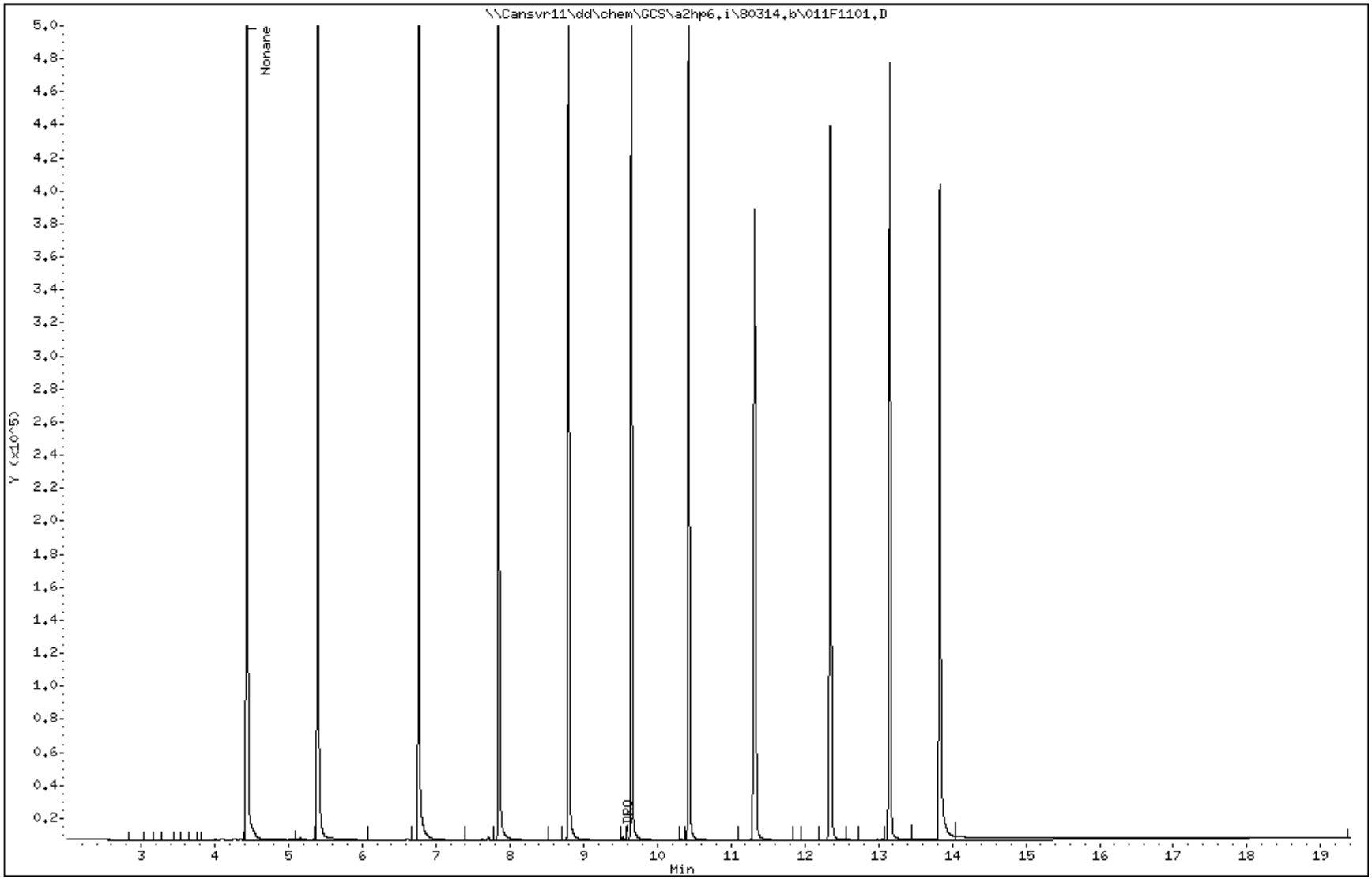
Instrument: a2hp6.i

Sample Info: F045,,2

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

RAW QC DATA

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKKH1AE-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-048 KJKKH1AF-LCSD
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8074048
Dilution Factor: 1 **Final Wgt/Vol..:** 1 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**78**	**(75 - 115)**			**WI-DRO DRO**
	80	**(75 - 115)**	**2.8**	**(0-20)**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	100	(10 - 110)
	105	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKKH1AE-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-048 KJKKH1AF-LCSD
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8074048
Dilution Factor: 1 **Final Wgt/Vol..:** 1 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Diesel Range Organics	**0.50**	**0.39**	**mg/L**	**78**		**WI-DRO DRO**
	0.50	**0.40**	**mg/L**	**80**	**2.8**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	100	(10 - 110)
	105	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

TestAmerica North Canton

Diesel DRO

Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\004F0401.D
Lab Smp Id: KJKKH1AE Client Smp ID: INTRA-LAB CHECK
Inj Date : 14-MAR-2008 15:30
Operator : 2398 Inst ID: a2hp6.i
Smp Info : KJKKH1AE
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\DRO6f.m
Meth Date : 14-Mar-2008 15:54 Quant Type: ESTD
Cal Date : 12-MAR-2008 19:44 Cal File: 017F1701.D
Als bottle: 4 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	1000.000	initial vol.
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE		(ng)	(ug/L)
S 4 DRO	5.295	13.932		129376989		388.446	388.4
$ 2 Nonane	4.435	4.432	0.003	505304		39.8773	39.88

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\004F0401.D

Page 1

Date : 14-MAR-2008 15:30

Client ID: INTRA-LAB CHECK

Instrument: a2hp6.i

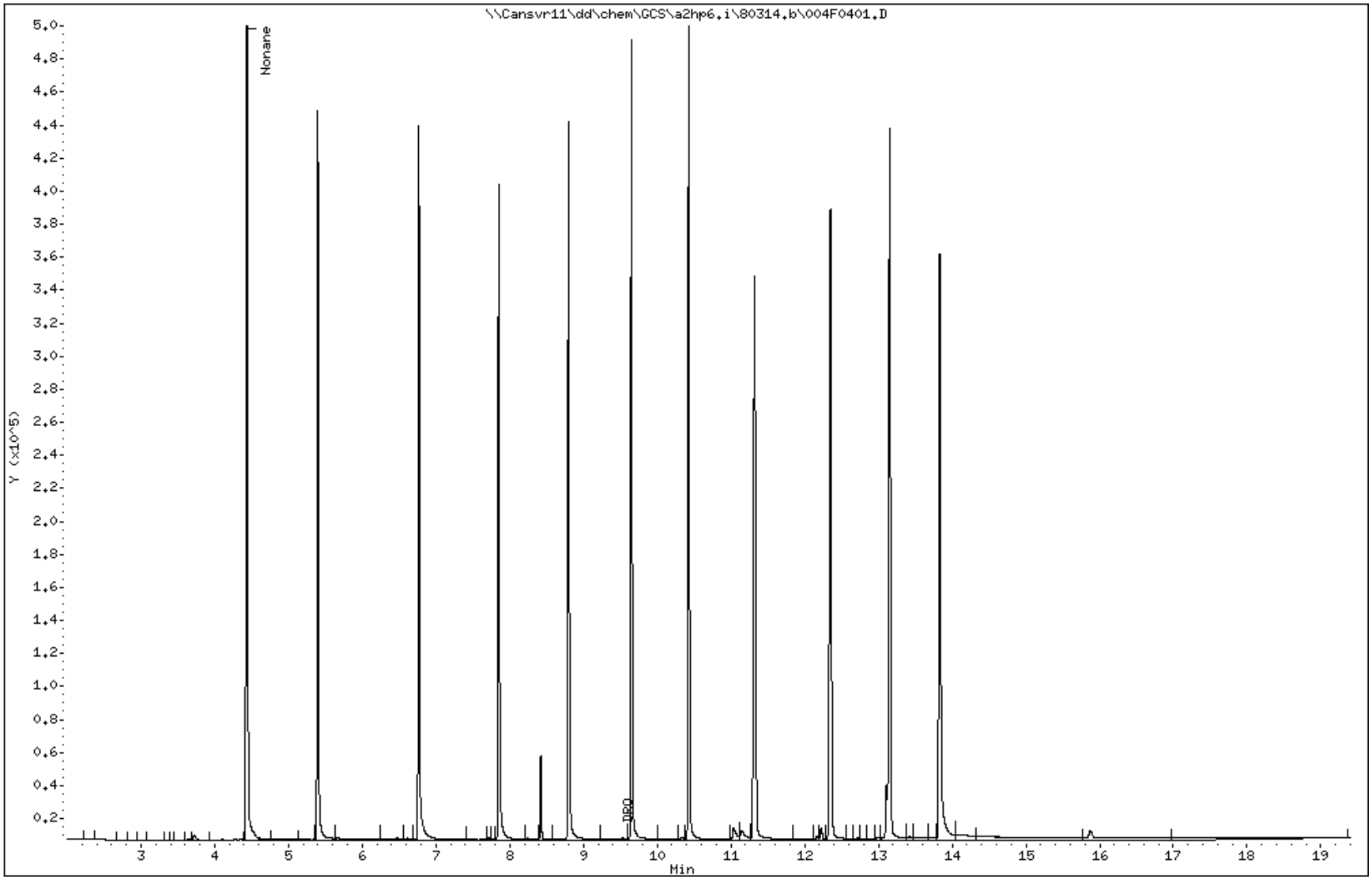
Sample Info: KJKKH1AE

Volume Injected (uL): 1.0

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica North Canton

Diesel DRO

Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\010F1001.D
Lab Smp Id: KJKKH1AF Client Smp ID: INTRA-LAB CHECK
Inj Date : 14-MAR-2008 18:18
Operator : 2398 Inst ID: a2hp6.i
Smp Info : KJKKH1AF
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\DRO6f.m
Meth Date : 14-Mar-2008 15:54 Quant Type: ESTD
Cal Date : 12-MAR-2008 19:44 Cal File: 017F1701.D
Als bottle: 10 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	1000.000	initial vol.
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 DRO	5.295	13.932		133087012	399.386	399.4
$ 2 Nonane	4.436	4.432	0.004	530827	41.8750	41.87

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\010F1001.D

Page 1

Date : 14-MAR-2008 18:18

Client ID: INTRA-LAB CHECK

Instrument: a2hp6.i

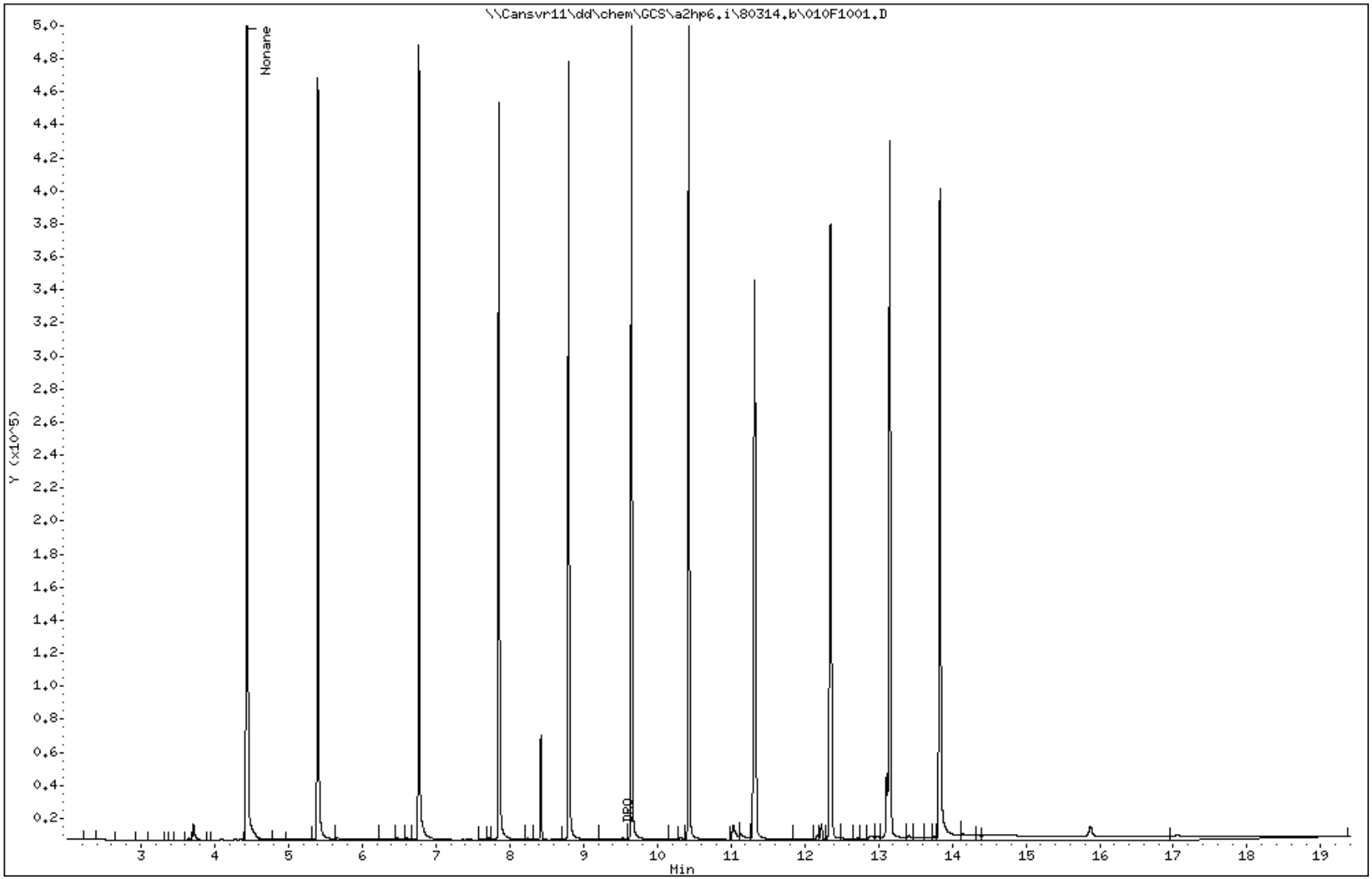
Sample Info: KJKKH1AF

Volume Injected (uL): 1.0

Operator: 2398

Column phase: db-625

Column diameter: 0.32



METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKKH1AD **Matrix.....:** WATER
MB Lot-Sample #: A8C140000-048

Prep Date.....: 03/14/08 **Final Wgt/Vol..:** 1 mL
Analysis Date..: 03/14/08 **Prep Batch #...:** 8074048
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	**0.020 J**	**0.10**	**mg/L**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	126 *	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

TestAmerica North Canton

Diesel DRO

Data file : \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\003F0301.D
Lab Smp Id: KJKKH1AD Client Smp ID: INTRA-LAB BLANK
Inj Date : 14-MAR-2008 15:02
Operator : 2398 Inst ID: a2hp6.i
Smp Info : KJKKH1AD
Misc Info :
Comment :
Method : \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\DRO6f.m
Meth Date : 14-Mar-2008 20:06 Quant Type: ESTD
Cal Date : 12-MAR-2008 19:44 Cal File: 017F1701.D
Als bottle: 3 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANPEXT04

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	1000.000	initial vol.
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 DRO	5.295	13.932		4587651	20.4907	20.49
$ 2 Nonane	4.436	4.432	0.004	639225	50.3592	50.36

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\003F0301.D

Page 1

Date : 14-MAR-2008 15:02

Client ID: INTRA-LAB BLANK

Instrument: a2hp6.i

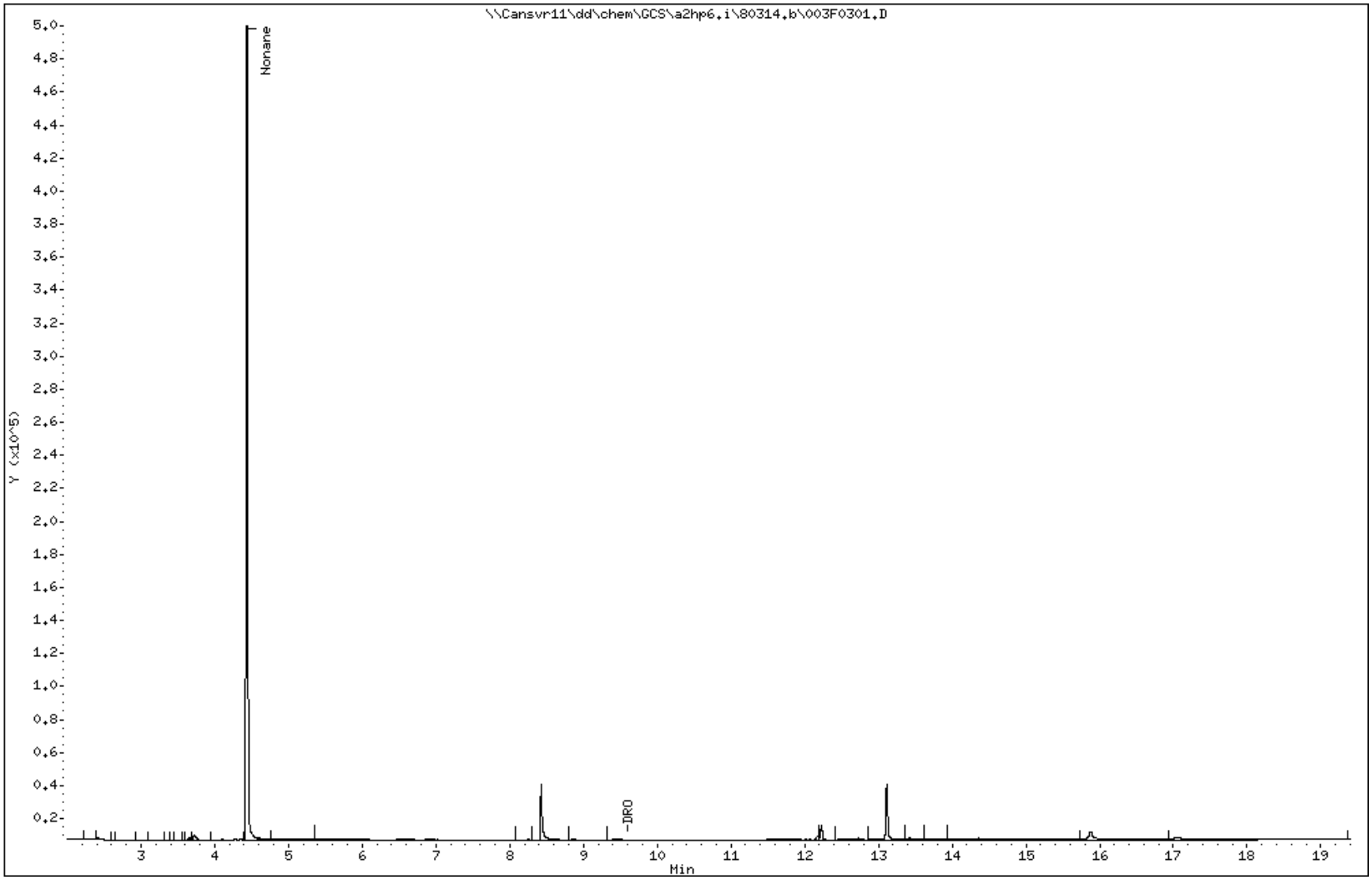
Sample Info: KJKKH1AD

Volume Injected (uL): 1.0

Operator: 2398

Column phase: db-625

Column diameter: 0.32



MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1A1-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1A2-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8074048
Dilution Factor: 1 **Initial Wgt/Vol:** 470 mL **Final Wgt/Vol..:** 1 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**72**	**(60 - 130)**			**WI-DRO DRO**
	77	**(60 - 130)**	**6.9**	**(0-25)**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	87	(10 - 110)
	99	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1A1-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1A2-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8074048
Dilution Factor: 1 **Initial Wgt/Vol:** 470 mL **Final Wgt/Vol..:** 1 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	**0.097**	**1.1**	**0.86**	**mg/L**	**72**		**WI-DRO DRO**
	0.097	**1.1**	**0.92**	**mg/L**	**77**	**6.9**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	87	(10 - 110)
	99	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

TestAmerica North Canton

Diesel DRO

Data file : \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\008F0801.D
Lab Smp Id: KJHVV1A1 Client Smp ID: AMW-05B(20080311)
Inj Date : 14-MAR-2008 17:22
Operator : 2398 Inst ID: a2hp6.i
Smp Info : KJHVV1A1
Misc Info :
Comment   :
Method   : \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\DRO6f.m
Meth Date : 14-Mar-2008 20:06 Quant Type: ESTD
Cal Date : 12-MAR-2008 19:44 Cal File: 017F1701.D
Als bottle: 8 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANPEXT04

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	470.000	initial vol.
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 DRO	5.295	13.932		134685408	404.099	859.8
$ 2 Nonane	4.436	4.432	0.004	438374	34.6387	73.70

Data File: \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\008F0801.D

Page 1

Date : 14-MAR-2008 17:22

Client ID: AMW-05B(20080311)

Instrument: a2hp6.i

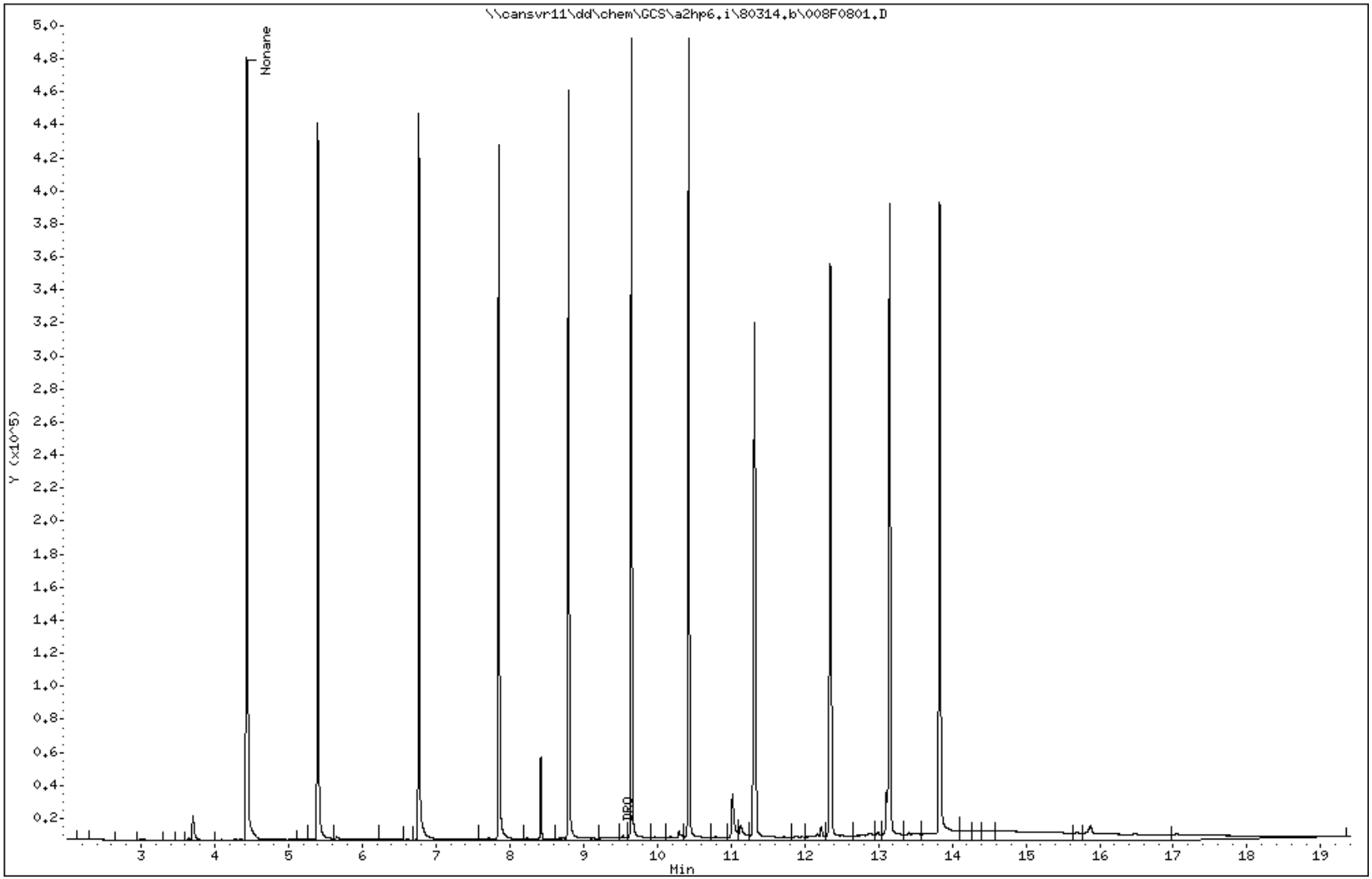
Sample Info: KJHVV1A1

Volume Injected (uL): 1.0

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica North Canton

Diesel DRO

Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\009F0901.D
Lab Smp Id: KJHVV1A2 Client Smp ID: AMW-05B(20080311)
Inj Date : 14-MAR-2008 17:50
Operator : 2398 Inst ID: a2hp6.i
Smp Info : KJHVV1A2
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\GCS\a2hp6.i\80314.b\DRO6f.m
Meth Date : 14-Mar-2008 15:54 Quant Type: ESTD
Cal Date : 12-MAR-2008 19:44 Cal File: 017F1701.D
Als bottle: 9 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	470.000	initial vol.
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE		(ng)	(ug/L)
S 4 DRO	5.295	13.932		144518656		433.093	921.5
$ 2 Nonane	4.436	4.432	0.004	503813		39.7606	84.60

Data File: \\Cansvr11\dd\chem\GCS\a2hp6.i\80314.b\009F0901.D

Page 1

Date : 14-MAR-2008 17:50

Client ID: AMW-05B(20080311)

Instrument: a2hp6.i

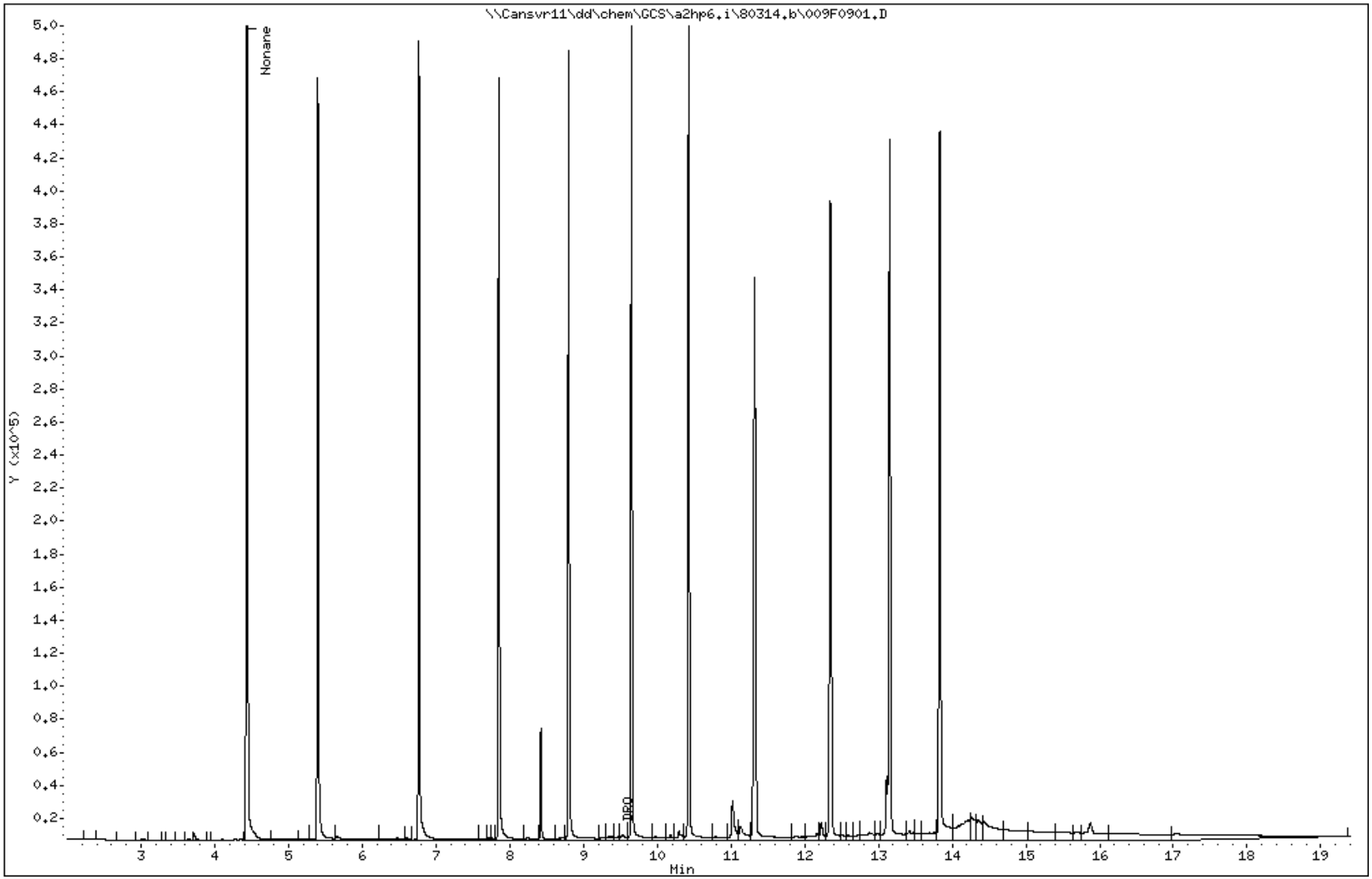
Sample Info: KJHVV1A2

Volume Injected (uL): 1.0

Operator: 2398

Column phase: db-625

Column diameter: 0.32



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MISCELLANEOUS DATA

HP6890 GC METHOD

OVEN
- Initial temp: 45 'C (On)
- Initial time: 3.00 min
- Ramps:

#	Rate	Final temp	Final time
1	25.00	225	1.00
2	25.00	300	3.00
3	0.0(Off)		

- Post temp: 50 'C
- Post time: 0.00 min
- Run time: 17.20 min
- Maximum temp: 325 'C
- Equilibration time: 1.00 min

FRONT INLET (SPLIT/SPLITLESS)
- Mode: Splitless
- Initial temp: 250 'C (On)
- Pressure: 12.00 psi (On)
- Purge flow: 40.0 mL/min
- Purge time: 0.50 min
- Total flow: 53.5 mL/min
- Gas saver: Off
- Gas type: Hydrogen

BACK INLET (SPLIT/SPLITLESS)
- Mode: Splitless
- Initial temp: 250 'C (On)
- Pressure: 12.00 psi (On)
- Purge flow: 40.0 mL/min
- Purge time: 0.50 min
- Total flow: 66.7 mL/min
- Gas saver: Off
- Gas type: Hydrogen

COLUMN 1
- Capillary Column
- Model Number: HP 19091J-413
- HP-5 5% Phenyl Methyl Siloxane
- Max temperature: 325 'C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 0.25 um
- Mode: constant pressure
- Pressure: 12.00 psi
- Nominal initial flow: 6.1 mL/min
- Average velocity: 93 cm/sec
- Inlet: Front Inlet
- Outlet: Front Detector
- Outlet pressure: ambient

COLUMN 2
- Capillary Column
- Model Number: RESTEK RTX-5
- RTX-5
- Max temperature: 300 'C
- Nominal length: 30.0 m
- Nominal diameter: 520.00 um
- Nominal film thickness: 50.00 um
- Mode: constant pressure
- Pressure: 12.00 psi
- Nominal initial flow: 18.1 mL/min
- Average velocity: 160 cm/sec
- Inlet: Back Inlet
- Outlet: Back Detector
- Outlet pressure: ambient

FRONT DETECTOR (FID)
- Temperature: 300 'C (Off)
- Hydrogen flow: 40.0 mL/min (Off)
- Air flow: 450.0 mL/min (Off)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (Off)
- Makeup Gas Type: Nitrogen
- Flame: Off
- Electrometer: On
- Lit offset: 2.0

BACK DETECTOR (FID)
- Temperature: 300 'C (On)
- Hydrogen flow: 40.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

SIGNAL 1
- Data rate: 20 Hz
- Type: front detector

SIGNAL 2
- Data rate: 20 Hz
- Type: back det - col comp 2

Method: C:\HPCHEM\1\METHODS\TPH6.M of 11/27/02 6:25:11 PM

Save Data: On
Zero: 0.0 (Off)
Range: 0
Fast Peaks: Off
Attenuation: 0

Save Data: On
Zero: 0.0 (Off)
Range: 0
Fast Peaks: Off
Attenuation: 0

COLUMN COMP 1
Derive from front detector

COLUMN COMP 2
Derive from back detector

POST RUN
Post Time: 0.00 min

TIME TABLE

Time	Specifier	Parameter & Setpoint

7673 Injector

Front Injector:
No parameters specified

Back Injector:

Sample Washes	1	
Sample Pumps	3	
Injection Volume	1.0	microliters
Syringe Size	10.0	microliters
PostInj Solvent A Washes	4	
PostInj Solvent B Washes	4	
Viscosity Delay	1	seconds
Plunger Speed	Fast	
PreInjection Dwell	0.00	minutes
PostInjection Dwell	0.00	minutes

Sequence: C:\HPCHEM\1\SEQUENCE\80312IC.S

Sequence Parameters:

Operator:	2398
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\1\DATA\
Data Subdirectory:	80312ICA
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
E193 TPH
F059 BUSTR TPHE075
E119 dro DCM E44E36

Sequence Table (Front Injector):

Calibration Part:

Line	Vial	SampleName	Method	CalLev	Update RF	Update RT	Interval

Quantification Part:

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
1	1	M				
2	2	E193,,1,1				
3	3	E193,,1,2				
4	4	E193,,1,3				
5	5	E193,,1,4				
6	6	E193,,1,5				
7	7	ICVE198				
8	8	F059 1				
9	9	F059 2				
10	10	F059 3				
11	11	F059 4				
12	12	F059 5				
13	13	F045,,1,1				
14	14	F045,,1,2				
15	15	F045,,1,3				
16	16	F045,,1,4				
17	17	F045,,1,5				
18	18	ICV4469				

C10 - C32 5.294 - 15.141 pass

C10 - C20 - 5.294 - 10.407 - pass
C20 - C34 - 10.417 - 15.964

C10 - C28 - 5.295 - 13.932 pass

pass SG

Sequence Table (Back Injector):

Calibration Part:

Line	Vial	SampleName	Method	CalLev	Update RF	Update RT	Interval

Sequence: C:\HPCHEM\1\SEQUENCE\803121C.S

Quantification Part:

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
1	51	M				
2	52	E193,,1,1				
3	53	E193,,1,2				
4	54	E193,,1,3				
5	55	E193,,1,4				
6	56	E193,,1,5				
7	57	ICVE198				
8	58	F059 1				
9	59	F059 2				
10	60	F059 3				
11	61	F059 4				
12	62	F059 5				
13	63	F045,,1,1				
14	64	F045,,1,2				
15	65	F045,,1,3				
16	66	F045,,1,4				
17	67	F045,,1,5				
18	68	ICV4469				

C10 - C32 5.414 - 15.191 pass

pass

C10 - C20 C10 - 5.414 - 10.474 pass

C20 - C34 10.484 - 16.025

C10 - C28 5.412 - 13.982 pass

Sequence Output Parameters:

Print Sequence Summary Report (SSR):	No
Dest of individual reports for each run:	as specified in Method

Sequence Summary Parameters:

One page header:	No
Print Configuration:	No
Print Sequence:	No
Print Logbook:	No
Print Method(s):	No
Print Analysis reports:	No
Print Statistics for Calib. runs:	No
Print Statistics for Sample runs:	No
Summary style:	Sample Summary

Sequence: C:\HPCHEM\1\SEQUENCE\80314.S

Sequence Parameters:

Operator:	2398
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\1\DATA\
Data Subdirectory:	80314
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
E193 TPH
F059 BUSTR TPHE075
E119 dro DCM E44E36

Sequence Table (Front Injector):

Calibration Part:

Line	Vial	SampleName	Method	CalLev	Update RF	Update RT	Interval

Quantification Part:

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
1	1	M				
2	2	F045,,2 pass				
3	3	KJKKH1AD				
4	4	KJKKH1AE				
5	5	KJARE1AF				
6	6	KJHTA1AF				
7	7	KJHVV1AF				
8	8	KJHHV1A1				
9	9	KJHVV1A2				
10	10	KJKKH1AF				
11	11	F045,,2 pass				

Sequence Table (Back Injector):

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR):	No
Dest of individual reports for each run:	as specified in Method

Sequence Summary Parameters:

North Canton

TestAmerica Laboratories, Inc.
EXTRACTION BENCH SHEET

Run Date: 3/19/2008
Time: 10:25:27

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
Y	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct &
					Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
= Package Submitted to AnalyticalGroup
Bench Sheet Copied per COC

Extractionist: 006088 Steve Earle

Concentrationist: 001560 Thomas Fausnight
402582 RAY SHOCK

Reviewer/Date: MAKAUB / 3/14/08

QC BATCH: 8074048

PREP DATE: 3/14/08
COMP DATE: 3/15/08

Organics, Diesel Range - Wisconsin
LIQ/LIQ, CONT (PAH,P/P,TPH) - Nominal

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/18/08	3/21/08	A8C130246-001 **KJHRE-1-AF**	B	10	C6	WATER	880mL 1.00mL	2.0	NA	NA	DCM	120.0		0.0	1ML TPH SURR #4456
COMMENTS:															
3/18/08	3/21/08	A8C130246-002 **KJHTA-1-AF**	B	10	C6	WATER	890mL 1.00mL	2.0	NA	NA	DCM	120.0		0.0	1ML TPH SURR #4456
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-1-AF**	D	10	C6	WATER	930mL 1.00mL	2.0	NA	NA	DCM	120.0		0.0	1ML TPH SURR #4456
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-1-A1 S**	D	10	C6	WATER	470mL 1.00mL	2.0	NA	NA	DCM	120.0		0.0	1ML DRO SPK #4469 1ML TPH SURR #4456
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-1-A2 D**	D	10	C6	WATER	470mL 1.00mL	2.0	NA	NA	DCM	120.0		0.0	1ML DRO SPK #4469 1ML TPH SURR #4456
COMMENTS:															
3/18/08	3/20/08	A8C140000-048 **KJKKH-1-AD B**		10	C6	WATER	1000mL 1.00mL	7.0	NA	NA	DCM	120.0		0.0	1ML TPH SURR #4456
COMMENTS:															

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North Canton

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 8074048

PREP DATE: 3/14/08
COMP DATE: 3/15/08

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/18/08		A8C140000-048 **KJKKH-1-AE C**		10	C6	WATER	1000mL 1.00mL	7.0	NA	NA	DCM	120.0		0.0	1ML DRO SPK #4469 1ML TPH SURR #4456
COMMENTS:															
3/18/08		A8C140000-048 **KJKKH-1-AF L**		10	C6	WATER	1000mL 1.00mL	7.0	NA	NA	DCM	120.0		0.0	1ML DRO SPK #4469 1ML TPH SURR #4456
COMMENTS:															

S/S SE
DCM #G06E25, NA2S04 #E47601

NUMBER OF WORK ORDERS IN BATCH: 8

842

Lot/SDG Number: **8C13254**

Sample Control Chain of Custody - TAL North Canton
GC Semivolatiles

Lot Number	Work Order	Analysis Type	Prep Date	Prep Analyst	Date of Transfer	Transferred By	Analysis Date	Analyst
A8C130254-001	KJHVV1AF	Organics, Diesel Range - Wisconsin	03/14/08	Steve Earle	03/14/08	Ben Makau	03/14/08	Sharon Geis

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POLYCHLORINATED BIPHENYLS DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QC SUMMARY DATA

SW846 8082 SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C130254

Extraction: XXI60QH8E

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	INTRA-LAB QC	85	70	00
02	AMW-05B(20080311)	82	49	00
03	METHOD BLK. KJKKE1AE	90	101	00
04	LCS KJKKE1AF	97	35	00
05	LAB MS/MSD D	98	82	00
06	AMW-05B(20080311) D	86	61	00
07	LAB MS/MSD S	94	80	00
08	AMW-05B(20080311) S	88	57	00

SURROGATES		QC LIMITS
SRG01	= Tetrachloro-m-xylene	(27-130)
SRG02	= Decachlorobiphenyl	(10-127)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Lot #: A8C140000 WO #: KJKKE1AF
BATCH: 8074044

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	% REC	QC LIMITS REC	QUAL
PCB-1016	10	9.1	91	44- 119	
PCB-1260	10	8.3	83	41- 118	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1FA
BATCH: 8074044

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
PCB-1016	20	ND	16	80	10- 166	
PCB-1260	20	ND	14	74	21- 140	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: AMW-05B(20080311)

Lot #: A8C130254 WO #: KJHVV1FC
BATCH: 8074044

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENT. (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
PCB-1016	20	17	85	6.9	30	10- 166	
PCB-1260	20	14	72	2.8	30	21- 140	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: LAB MS/MSD

Lot #: A8C120148 WO #: KJEML1G1
BATCH: 8074044

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
PCB-1016	19	ND	16	85	10- 166	
PCB-1260	19	ND	16	84	21- 140	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: ARCADIS U.S., Inc.

Lab Code: TALCAN SDG No: 8C13254

Matrix Spike ID: LAB MS/MSD

Lot #: A8C120148 WO #: KJEML1G2
BATCH: 8074044

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENT. (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
PCB-1016	19	17	88	3.2	30	10- 166	
PCB-1260	19	17	88	3.7	30	21- 140	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 METHOD BLANK SUMMARY

BLANK WORKORDER NO.: KJKKE1AE

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN

SDG Number:8C13254

Lab File ID: 040F4001.

Lot Number: A8C130254

Matrix: WATER

Extraction Method: 3510C

Date Extracted: 03/14/08

Date Analyzed(1): 03/17/08

Date Analyzed(2): N/A

Time Analyzed(1): 22:00

Time Analyzed(2): N/A

Instrument ID(1): P10

Instrument ID(2): N/A

GC Column(1): RTXOPPPEST ID: 032 GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	INTRA-LAB QC	KJEML1EE	03/17/08	N/A
02	LAB MS/MSD	KJEML1G1 S	03/17/08	N/A
03	LAB MS/MSD	KJEML1G2 D	03/17/08	N/A
04	AMW-05B(20080311)	KJHVV1AD	03/17/08	N/A
05	AMW-05B(20080311)	KJHVV1FA S	03/17/08	N/A
06	AMW-05B(20080311)	KJHVV1FC D	03/18/08	N/A
07	CHECK SAMPLE	KJKKE1AF C	03/18/08	N/A
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SAMPLE DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

GC Semivolatiles

Lot-Sample #...: A8C130254-001 **Work Order #...:** KJHVV1AD **Matrix.....:** WG
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/17/08
Prep Batch #...: 8074044
Dilution Factor: 1 **Initial Wgt/Vol:** 1030 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	82	(27 - 130)
Decachlorobiphenyl	49	(10 - 127)

Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\037F3701.D
Report Date: 18-Mar-2008 08:05

TestAmerica North Canton

Data file : \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\037F3701.D
Lab Smp Id: KJHVV1AD Client Smp ID: AMW-05B(20080311)
Inj Date : 17-MAR-2008 21:14
Operator : Inst ID: a2hp10.i
Smp Info : KJHVV1AD
Misc Info :
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\80317A-1.b\PCB10.m
Meth Date : 18-Mar-2008 07:26 Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 37
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: WATER
Processing Host: CANSVR11

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	2000.000	final volume
Vo	1030.000	intitial volume
Cpnd Variable		Local Compound Variable

				CONCENTRATIONS ON-COL (ng)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 1 TCMX						CAS #: 877-09-8	
1.293	1.292	0.001	6013286	0.08176	0.1588		

---

2 AROCLOR-1221 CAS #: 11104-28-2

Peaks not detected for Quant. or Qual. signal(s).

---

3 AROCLOR-1016 CAS #: 12674-11-2

Compound Not Detected

---

4 AROCLOR-1232 CAS #: 11141-16-5

Peaks not detected for Quant. or Qual. signal(s).

Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\037F3701.D
Report Date: 18-Mar-2008 08:05

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO

5 AROCLOR-1242 CAS #: 53469-21-9

Compound Not Detected

---

6 AROCLOR-1248 CAS #: 12672-29-6

Peaks not detected for Quant. or Qual. signal(s).

---

7 AROCLOR-1254 CAS #: 11097-69-1

Peaks not detected for Quant. or Qual. signal(s).

---

8 AROCLOR-1260 CAS #: 11096-82-5

Peaks not detected for Quant. or Qual. signal(s).

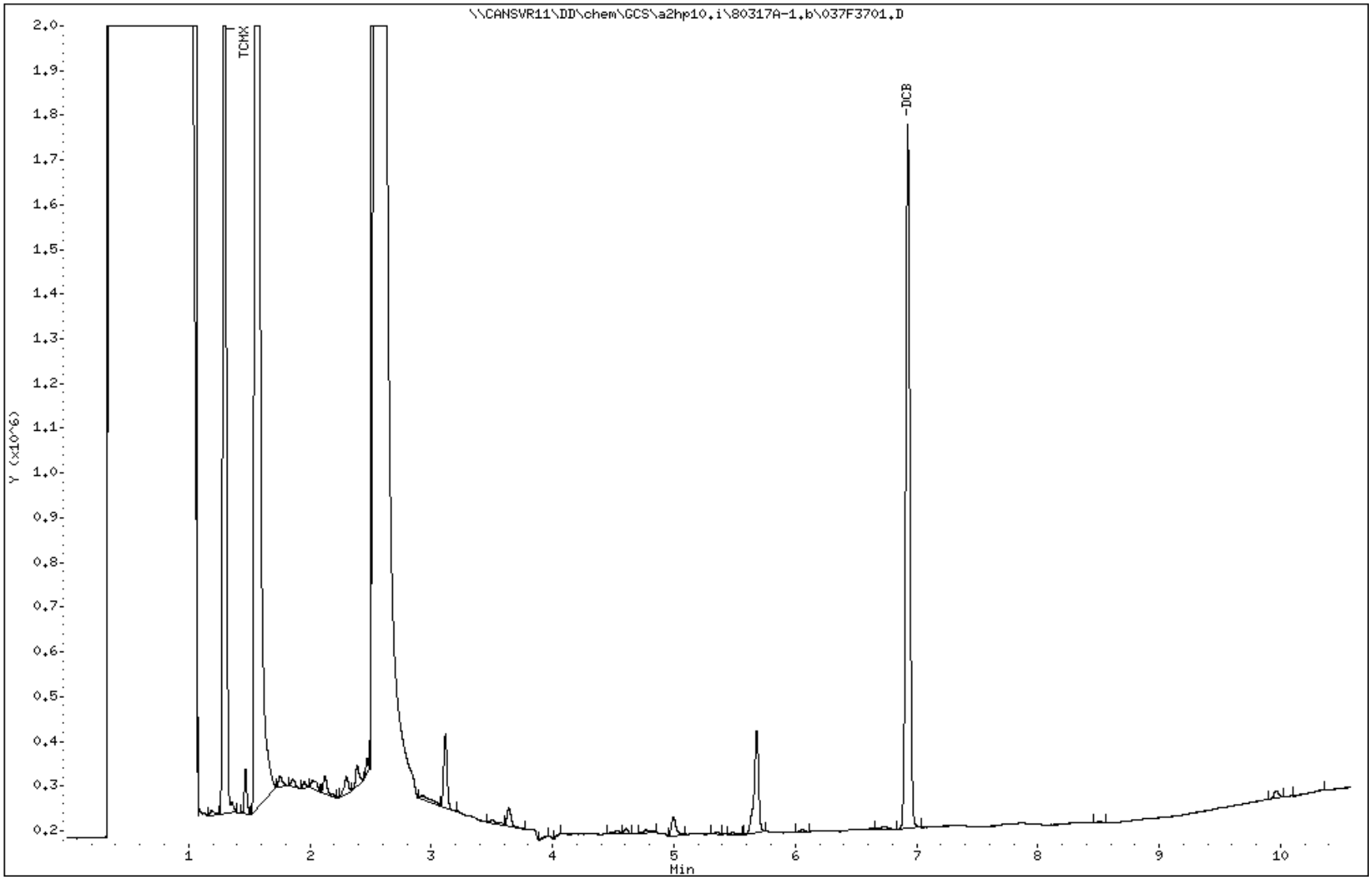
$ 12 DCB CAS #: 2051-24-3

6.927 6.927 0.000 3689368 0.04878 0.09471

M 11 TOTAL PCB CAS #: 1336-36-3

Compound Not Detected

Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\037F3701.D
Date : 17-MAR-2008 21:14
Client ID: AMW-05B(20080311)
Instrument: a2hp10.i
Sample Info: KJHVV1AD
Purge Volume: 1030.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

STANDARD DATA

Report Date: 10-Mar-2008 10:42

Calibration History

Method : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Start Cal Date: 29-JAN-2008 01:45
End Cal Date : 07-MAR-2008 23:28
Last Cal Level: 6
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.05000		
07-MAR-2008 22:12	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\038F3801.D
07-MAR-2008 20:41	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\032F3201.D
07-MAR-2008 19:09	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\026F2601.D
07-MAR-2008 17:37	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\020F2001.D
07-MAR-2008 16:06	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\014F1401.D
07-MAR-2008 14:34	2-AR1242	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\008F0801.D
07-MAR-2008 13:02	1-AR1232	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\002F0201.D
Cal Level: 2 , Cal Amount: 0.10000		
07-MAR-2008 22:27	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\039F3901.D
07-MAR-2008 20:56	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\033F3301.D
07-MAR-2008 19:24	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\027F2701.D
07-MAR-2008 17:53	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\021F2101.D
07-MAR-2008 16:21	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\015F1501.D
07-MAR-2008 14:49	2-AR1242	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\009F0901.D
07-MAR-2008 13:18	1-AR1232	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\003F0301.D
Cal Level: 3 , Cal Amount: 0.20000		
07-MAR-2008 22:43	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\040F4001.D
07-MAR-2008 21:11	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\034F3401.D
07-MAR-2008 19:40	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\028F2801.D
07-MAR-2008 18:08	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\022F2201.D
07-MAR-2008 16:36	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\016F1601.D

07-MAR-2008 15:05	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\010F1001.D		
07-MAR-2008 13:33	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\004F0401.D		

Cal Level: 4 , Cal Amount: 0.50000		
07-MAR-2008 22:58	14-AR1268	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\041F4101.D		
07-MAR-2008 21:26	13-AR1262	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\035F3501.D		
07-MAR-2008 19:55	12-AR1660TD	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\029F2901.D		
07-MAR-2008 18:23	9-AR2154	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\023F2301.D		
07-MAR-2008 16:52	3-AR1248	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\017F1701.D		
07-MAR-2008 15:20	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\011F1101.D		
07-MAR-2008 13:48	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\005F0501.D		

Cal Level: 5 , Cal Amount: 1.00000		
07-MAR-2008 23:13	14-AR1268	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\042F4201.D		
07-MAR-2008 21:42	13-AR1262	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\036F3601.D		
07-MAR-2008 20:10	12-AR1660TD	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\030F3001.D		
07-MAR-2008 18:39	9-AR2154	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\024F2401.D		
07-MAR-2008 17:07	3-AR1248	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\018F1801.D		
07-MAR-2008 15:35	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\012F1201.D		
07-MAR-2008 14:04	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\006F0601.D		

Cal Level: 6 , Cal Amount: 2.00000		
07-MAR-2008 23:28	14-AR1268	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\043F4301.D		
07-MAR-2008 21:57	13-AR1262	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\037F3701.D		
07-MAR-2008 20:25	12-AR1660TD	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\031F3101.D		
07-MAR-2008 18:54	9-AR2154	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\025F2501.D		
07-MAR-2008 17:22	3-AR1248	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\019F1901.D		
07-MAR-2008 15:51	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\013F1301.D		
07-MAR-2008 14:19	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\007F0701.D		

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Report Date : 10-Mar-2008 10:20

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 29-JAN-2008 01:45
End Cal Date : 07-MAR-2008 23:28
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Last Edit : 10-Mar-2008 10:20 a2hp10.i
Curve Type : Average

Calibration File Names:
Level 1: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\038F3801.D
Level 2: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\039F3901.D
Level 3: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\040F4001.D
Level 4: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\041F4101.D
Level 5: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\042F4201.D
Level 6: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\043F4301.D

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	___ RRF	% RSD	
2 AROCLOR-1221 (1)	889600	843140	768565	712714	666690	638108	753136	13.184	
(2)	662320	578770	481695	396774	363190	353074	472637	26.655	<-
(3)	2178360	2023410	1875785	1745086	1652408	1566653	1840284	12.588	<-
3 AROCLOR-1016 (1)	993340	893840	821525	778812	716228	679593	813890	14.271	
(2)	1463180	1333770	1245585	1197868	1107573	1056318	1234049	12.099	
(3)	2331320	2200300	2084645	2136858	2022187	1954318	2121605	6.311	
(4)	1214140	1092590	1013550	1011236	953334	928101	1035492	10.085	
(5)	1036180	941620	856340	855276	803270	785393	879680	10.688	
4 AROCLOR-1232 (1)	1031440	874820	848410	787372	760391	714879	836219	13.382	
(2)	670240	612330	575430	532054	508035	483708	563633	12.382	
(3)	1073480	989340	946880	894272	885010	880302	944881	8.037	
(4)	443420	414520	385960	354908	340155	329678	378107	11.814	
(5)	504800	470080	435755	412082	400068	397980	436794	9.820	
5 AROCLOR-1242 (1)	1311560	1242000	1107555	1015646	952150	913407	1090386	14.686	
(2)	2412060	2310770	2119140	1929286	1825274	1753356	2058314	12.973	
(3)	5000700	4741340	4471510	4227824	3936473	3872715	4375094	10.228	
(4)	1736400	1906530	1848110	1721400	1674388	1643088	1754986	5.818	
(5)	2142040	2029510	1883225	1733832	1687362	1654714	1855114	10.687	
6 AROCLOR-1248 (1)	590400	562500	511120	469512	447287	420556	500229	13.327	
(2)	1203860	1104480	1072080	1009538	1001469	975900	1061221	7.980	
(3)	1189060	1187420	1155300	1077080	1062652	1018796	1115051	6.441	
(4)	1687620	1583340	1572400	1489050	1493260	1451112	1546130	5.577	
(5)	667200	658150	649565	616592	598574	585296	629229	5.376	
7 AROCLOR-1254 (1)	1193860	1119850	1039780	979360	967094	954409	1042392	9.235	
(2)	1583820	1507590	1395510	1329108	1322681	1305757	1407411	8.098	
(3)	2106060	2160760	1995320	1984716	1981274	1936682	2027469	4.253	
(4)	1567580	1569580	1460925	1433558	1462854	1425791	1486715	4.378	
(5)	1798260	1886140	1742635	1735600	1758638	1709418	1771782	3.570	

Report Date : 10-Mar-2008 10:20

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 29-JAN-2008 01:45
End Cal Date : 07-MAR-2008 23:28
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Last Edit : 10-Mar-2008 10:20 a2hp10.i
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	___ RRF	% RSD	
8 AROCLOR-1260 (1)	3882300	3592260	3398595	3366620	3134031	3081403	3409202	8.725	
(2)	7116820	6617110	6203955	6251518	5818237	5709504	6286191	8.293	
(3)	7005620	6375480	5937810	6018554	5618569	5544985	6083503	8.904	
(4)	9108960	8648240	8274945	8669136	8123235	8009003	8472253	4.868	
(5)	4543940	4283710	4066785	4247792	3989110	3950858	4180366	5.344	
9 AROCLOR-1262 (1)	1403240	1290300	1217520	1131972	1158299	1111416	1218791	9.126	
(2)	1877920	1795980	1683660	1578706	1628750	1552500	1686253	7.573	
(3)	2237300	2188710	2039475	1950602	1978557	1905777	2050070	6.552	
(4)	4235440	4118190	3968440	3882102	4028246	3786798	4003203	4.035	
(5)	1671960	1587880	1498185	1422264	1493686	1437580	1518593	6.261	
10 AROCLOR-1268 (1)	1212380	1101700	1020940	997648	999651	973287	1050934	8.621	
(2)	5176340	4915130	4628470	4788490	4778991	4606006	4815571	4.366	
(3)	4904060	4644760	4371295	4556052	4577903	4444302	4583062	4.043	
(4)	4171680	3888000	3673475	3831392	3831779	3726161	3853748	4.525	
(5)	13277040	12565360	11748495	12439734	11682750	11497354	12201789	5.578	
M 11 TOTAL PCB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 1 TCMX	77598800	76739200	74190500	74255360	70285780	68195670	73544218	4.970	
$ 12 DCB	82330000	79010800	75634700	76922800	71312060	68613830	75637365	6.633	

TestAmerica North Canton

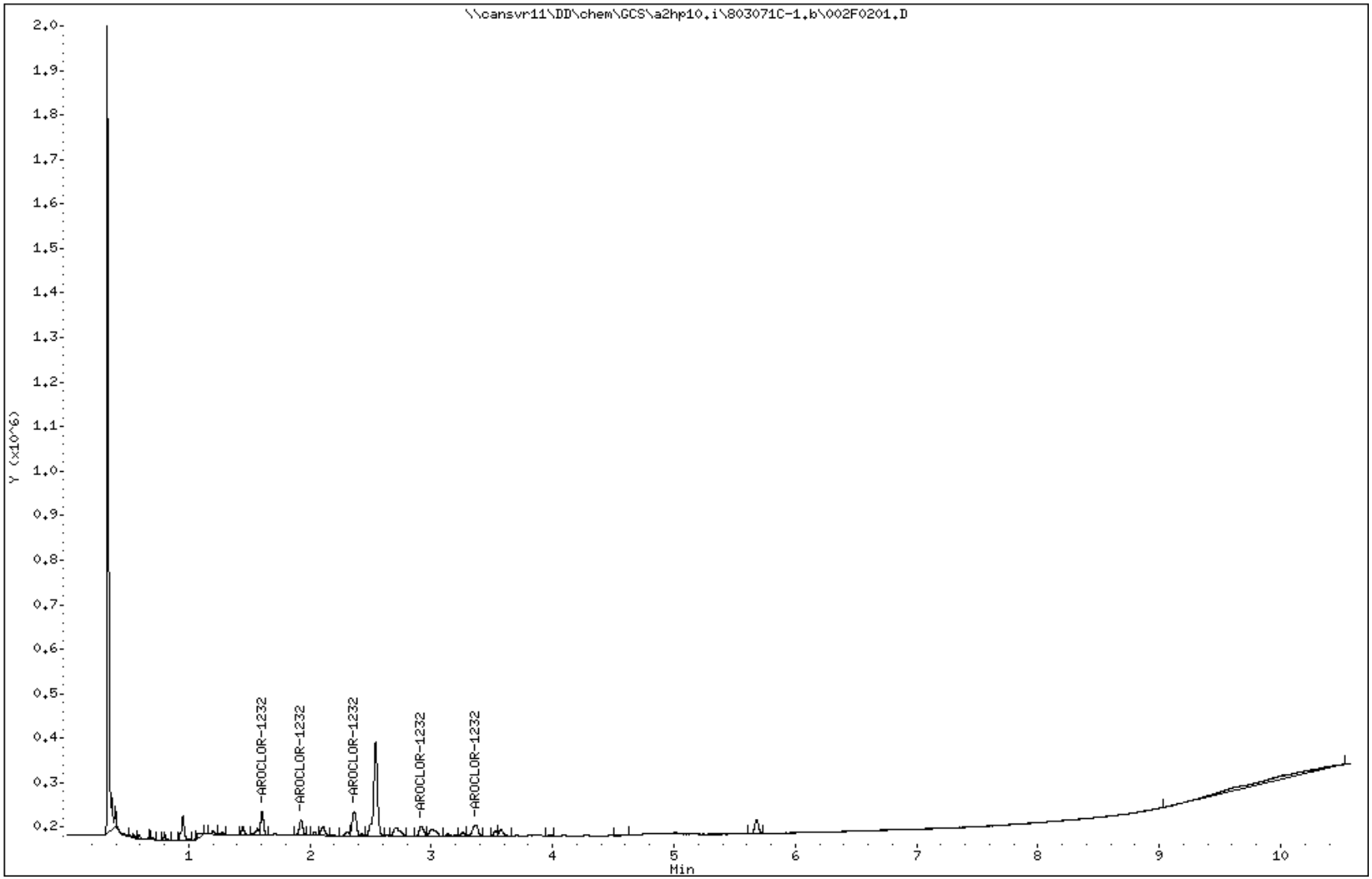
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\002F0201.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 13:02
Operator : Inst ID: a2hp10.i
Smp Info : 1232,,1,1
Misc Info : 1-AR1232.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
4 AROCLOR-1232					CAS #: 11141-16-5			
1.605	1.607	-0.002	51572	0.05000	0.06167	75.00-	125.00	100.00
1.926	1.929	-0.003	33512	0.05000	0.05946	50.68-	84.47	64.98
2.366	2.370	-0.004	53674	0.05000	0.05680	85.18-	141.97	104.08
2.915	2.919	-0.004	22171	0.05000	0.05864	33.81-	56.34	42.99
3.365	3.365	0.000	25240	0.05000	0.05778	39.25-	65.42	48.94
		Average of Peak Amounts =			0.05887			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\002F0201.D
Date : 07-MAR-2008 13:02
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

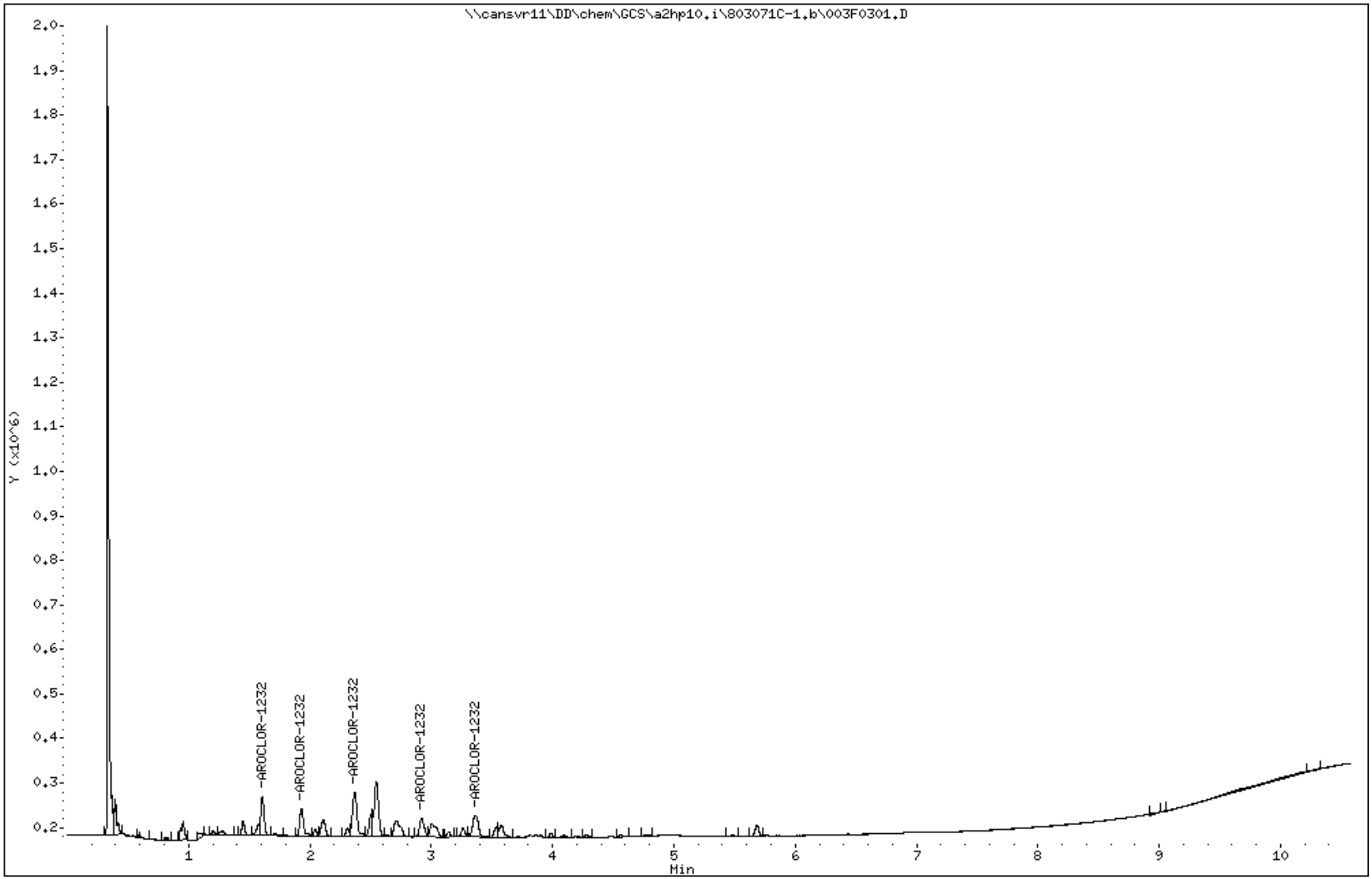
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\003F0301.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 13:18
Operator : Inst ID: a2hp10.i
Smp Info : 1232,,1,2
Misc Info : 1-AR1232.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
4 AROCLOR-1232					CAS #: 11141-16-5			
1.608	1.607	0.001	87482	0.10000	0.1046	75.00-	125.00	100.00
1.931	1.929	0.002	61233	0.10000	0.1086	50.68-	84.47	69.99
2.370	2.370	0.000	98934	0.10000	0.1047	85.18-	141.97	113.09
2.920	2.919	0.001	41452	0.10000	0.1096	33.81-	56.34	47.38
3.364	3.365	-0.001	47008	0.10000	0.1076	39.25-	65.42	53.73
Average of Peak Amounts =					0.10702			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\003F0301.D
Date : 07-MAR-2008 13:18
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

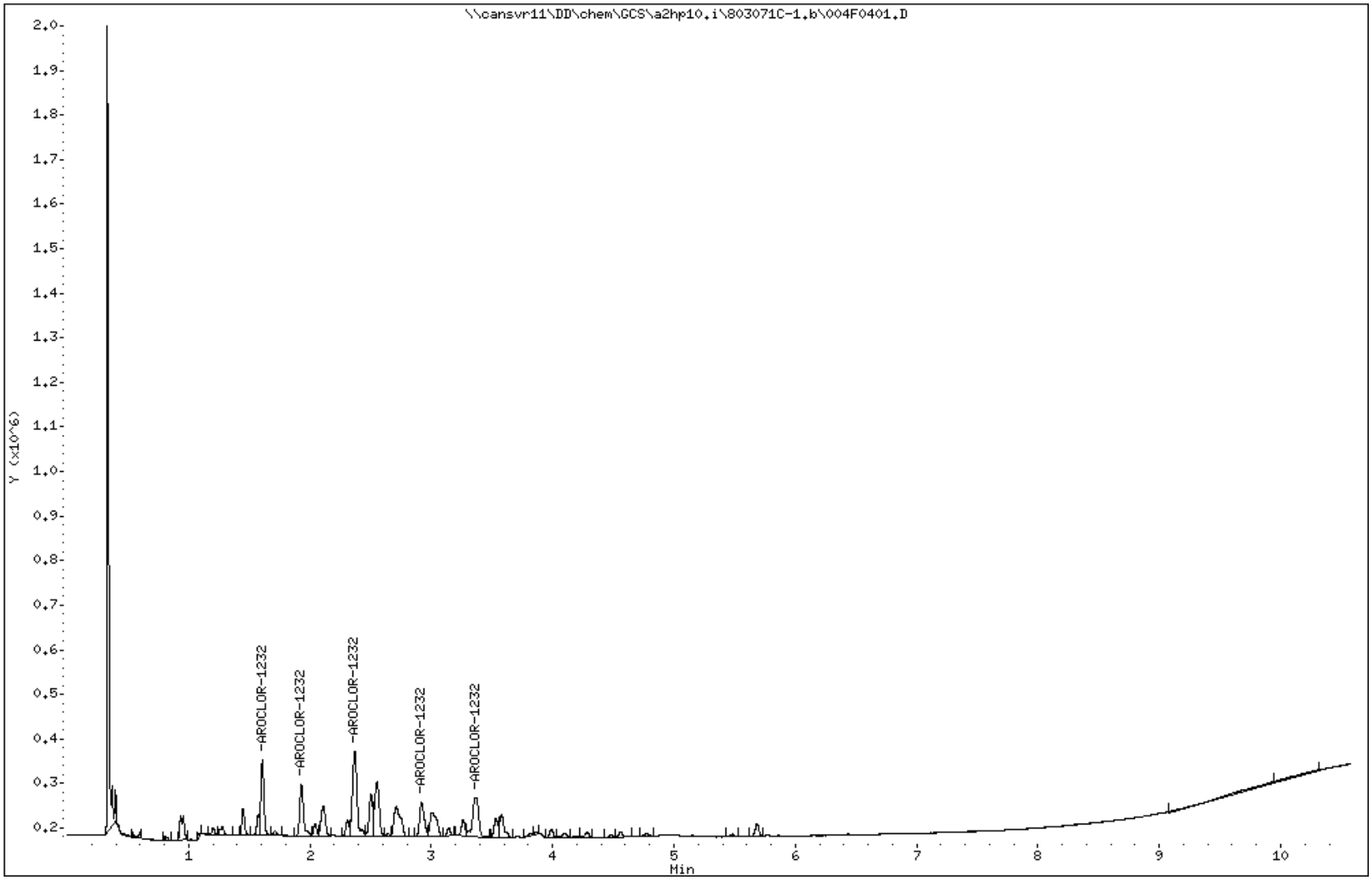
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\004F0401.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 13:33
Operator : Inst ID: a2hp10.i
Smp Info : 1232,,1,3
Misc Info : 1-AR1232.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
1.608	1.607	0.001	169682	0.20000	0.2029	75.00- 125.00	100.00
1.930	1.929	0.001	115086	0.20000	0.2042	50.68- 84.47	67.82
2.370	2.370	0.000	189376	0.20000	0.2004	85.18- 141.97	111.61
2.919	2.919	0.000	77192	0.20000	0.2042	33.81- 56.34	45.49
3.365	3.365	0.000	87151	0.20000	0.1995	39.25- 65.42	51.36
		Average of Peak Amounts =			0.20224		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\004F0401.D
Date : 07-MAR-2008 13:33
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

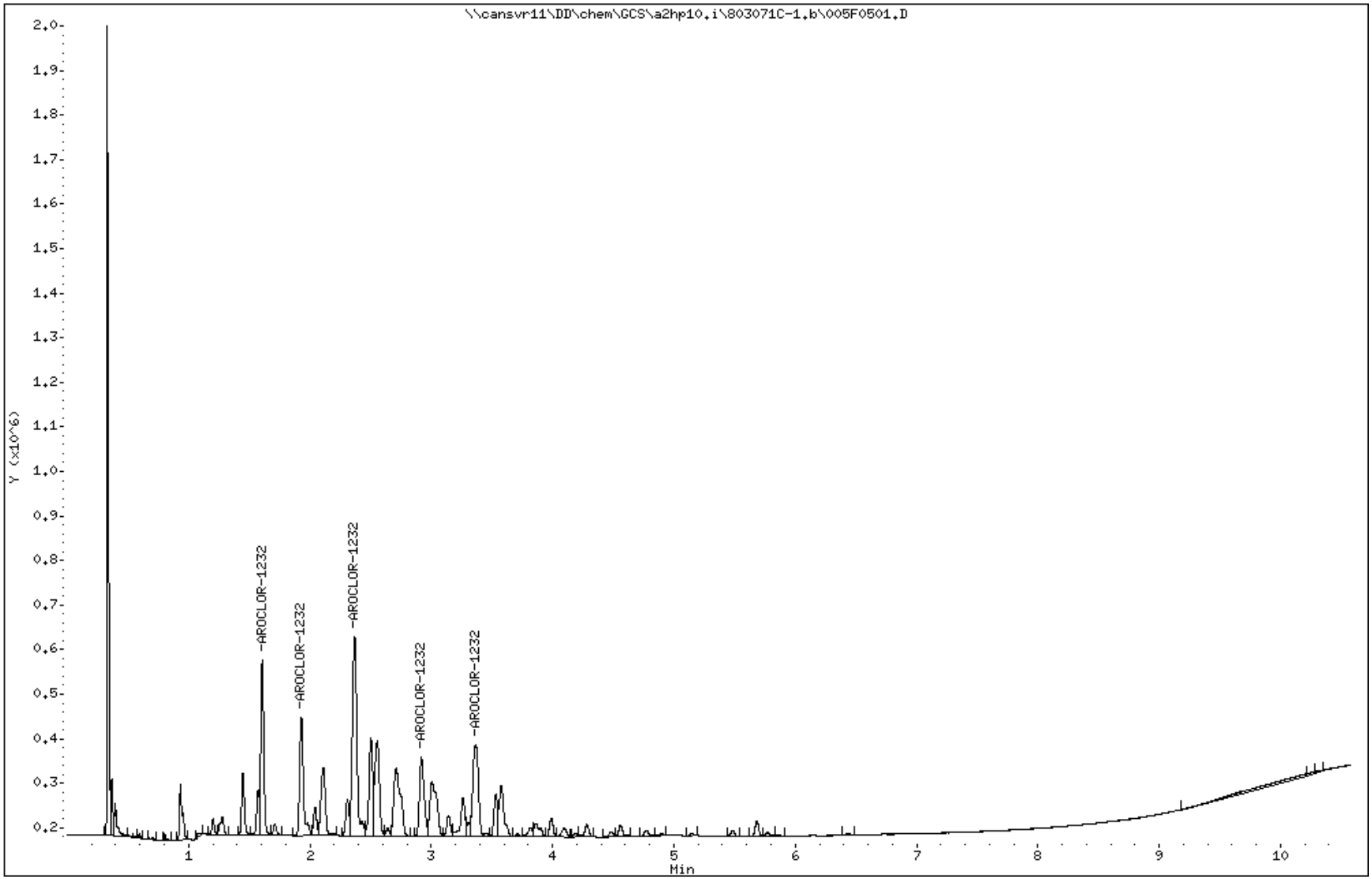
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\005F0501.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 13:48
Operator : Inst ID: a2hp10.i
Smp Info : 1232,,1,4
Misc Info : 1-AR1232.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
1.607	1.607	0.000	393686	0.50000	0.4708	75.00- 125.00	100.00
1.929	1.929	0.000	266027	0.50000	0.4720	50.68- 84.47	67.57
2.368	2.370	-0.002	447136	0.50000	0.4732	85.18- 141.97	113.58
2.918	2.919	-0.001	177454	0.50000	0.4693	33.81- 56.34	45.08
3.365	3.365	0.000	206041	0.50000	0.4717	39.25- 65.42	52.34
		Average of Peak Amounts =			0.47140		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\005F0501.D
Date : 07-MAR-2008 13:48
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

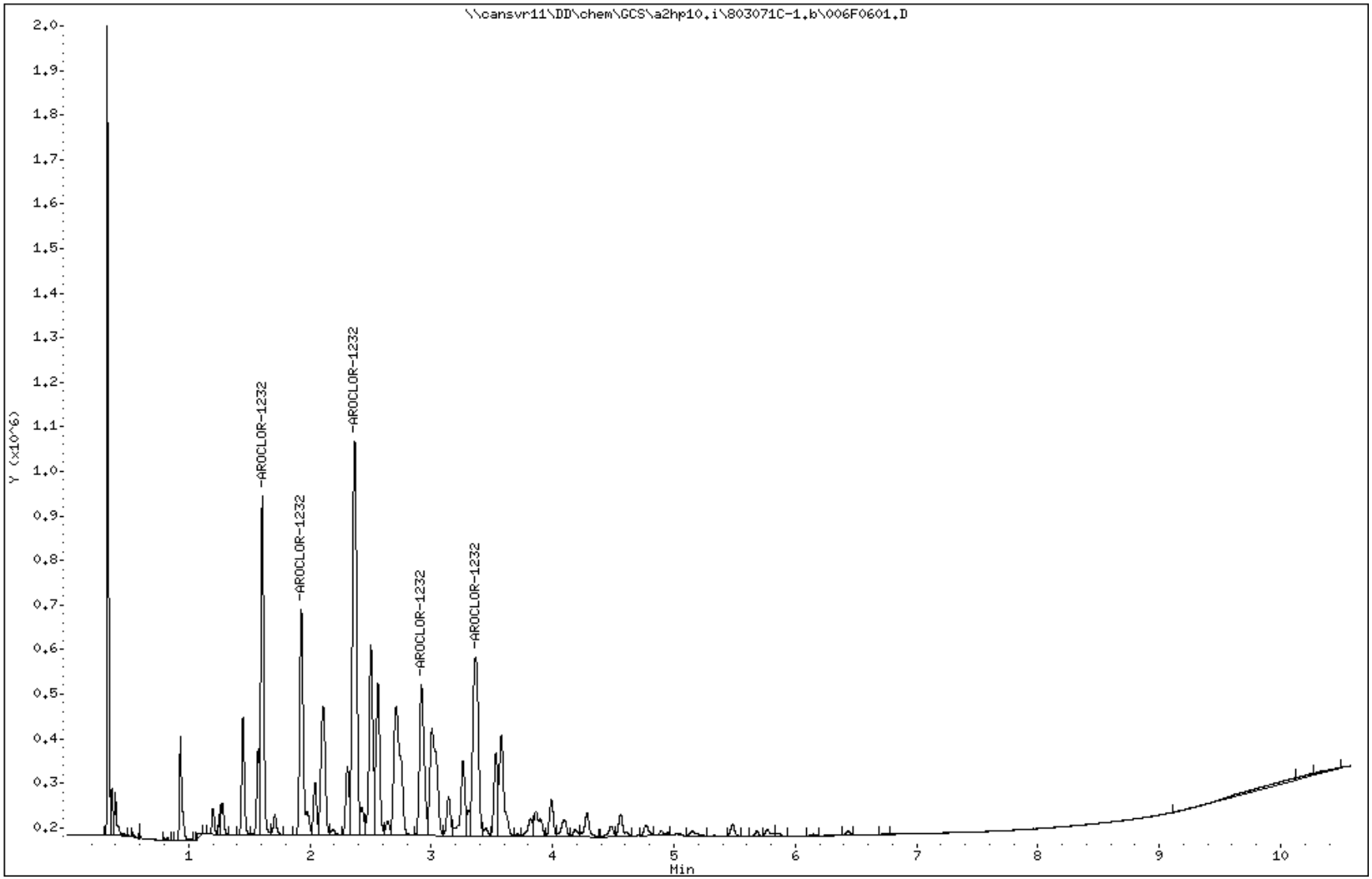
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\006F0601.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 14:04
Operator : Inst ID: a2hp10.i
Smp Info : 1232,,1,5
Misc Info : 1-AR1232.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
4 AROCLOR-1232					CAS #: 11141-16-5			
1.607	1.607	0.000	760391	1.00000	0.9093	75.00-	125.00	100.00
1.929	1.929	0.000	508035	1.00000	0.9014	50.68-	84.47	66.81
2.369	2.370	-0.001	885010	1.00000	0.9366	85.18-	141.97	116.39
2.918	2.919	-0.001	340155	1.00000	0.8996	33.81-	56.34	44.73
3.365	3.365	0.000	400068	1.00000	0.9159	39.25-	65.42	52.61
Average of Peak Amounts =					0.91256			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\006F0601.D
Date : 07-MAR-2008 14:04
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

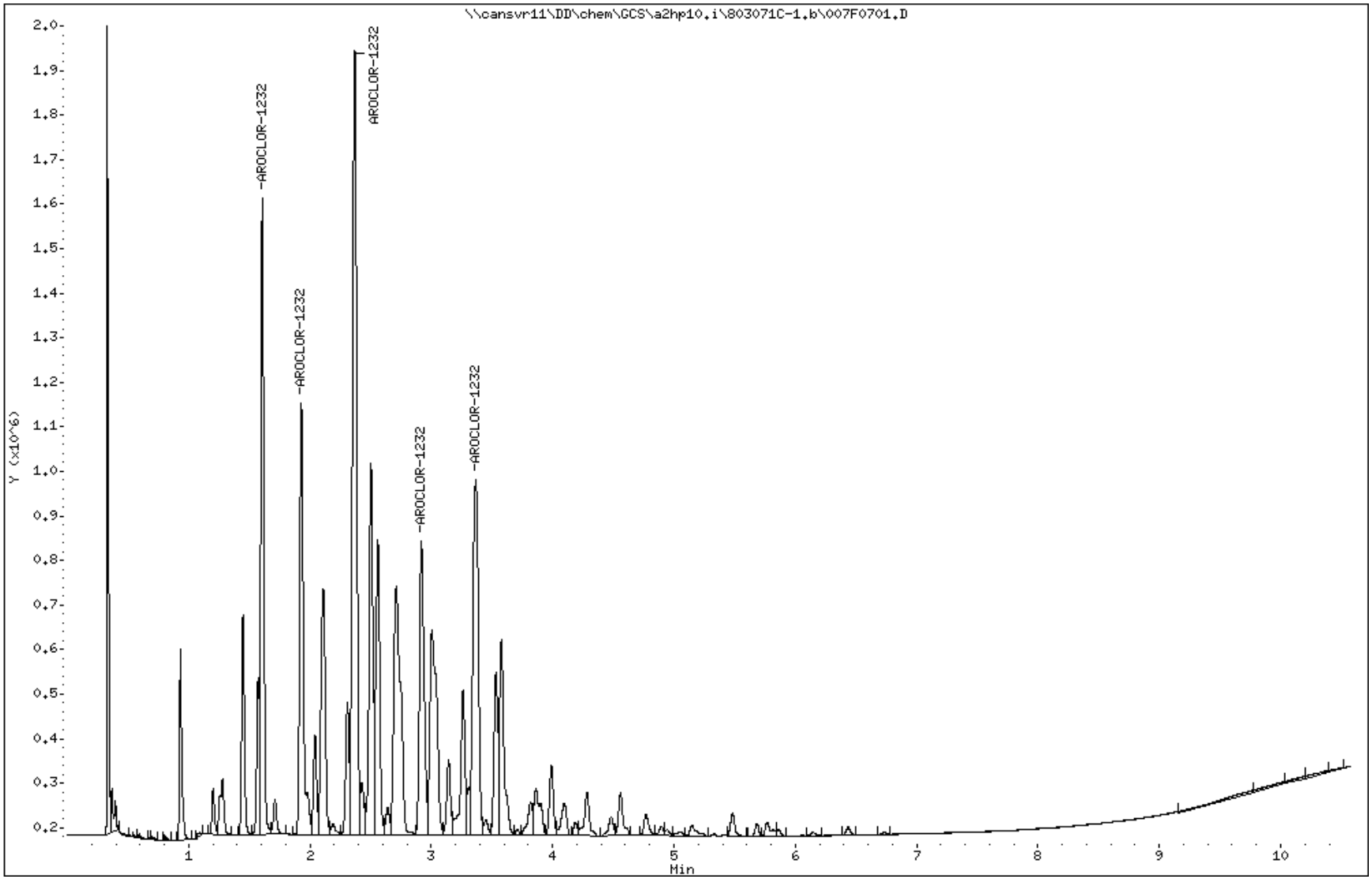
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\007F0701.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 14:19
Operator : Inst ID: a2hp10.i
Smp Info : 1232,,1,6
Misc Info : 1-AR1232.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
1.607	1.607	0.000	1429757	2.00000	1.710	75.00- 125.00	100.00
1.929	1.929	0.000	967416	2.00000	1.716	50.68- 84.47	67.66
2.370	2.370	0.000	1760604	2.00000	1.863	85.18- 141.97	123.14
2.919	2.919	0.000	659356	2.00000	1.744	33.81- 56.34	46.12
3.365	3.365	0.000	795959	2.00000	1.822	39.25- 65.42	55.67
		Average of Peak Amounts =			1.77100		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\007F0701.D
Date : 07-MAR-2008 14:19
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

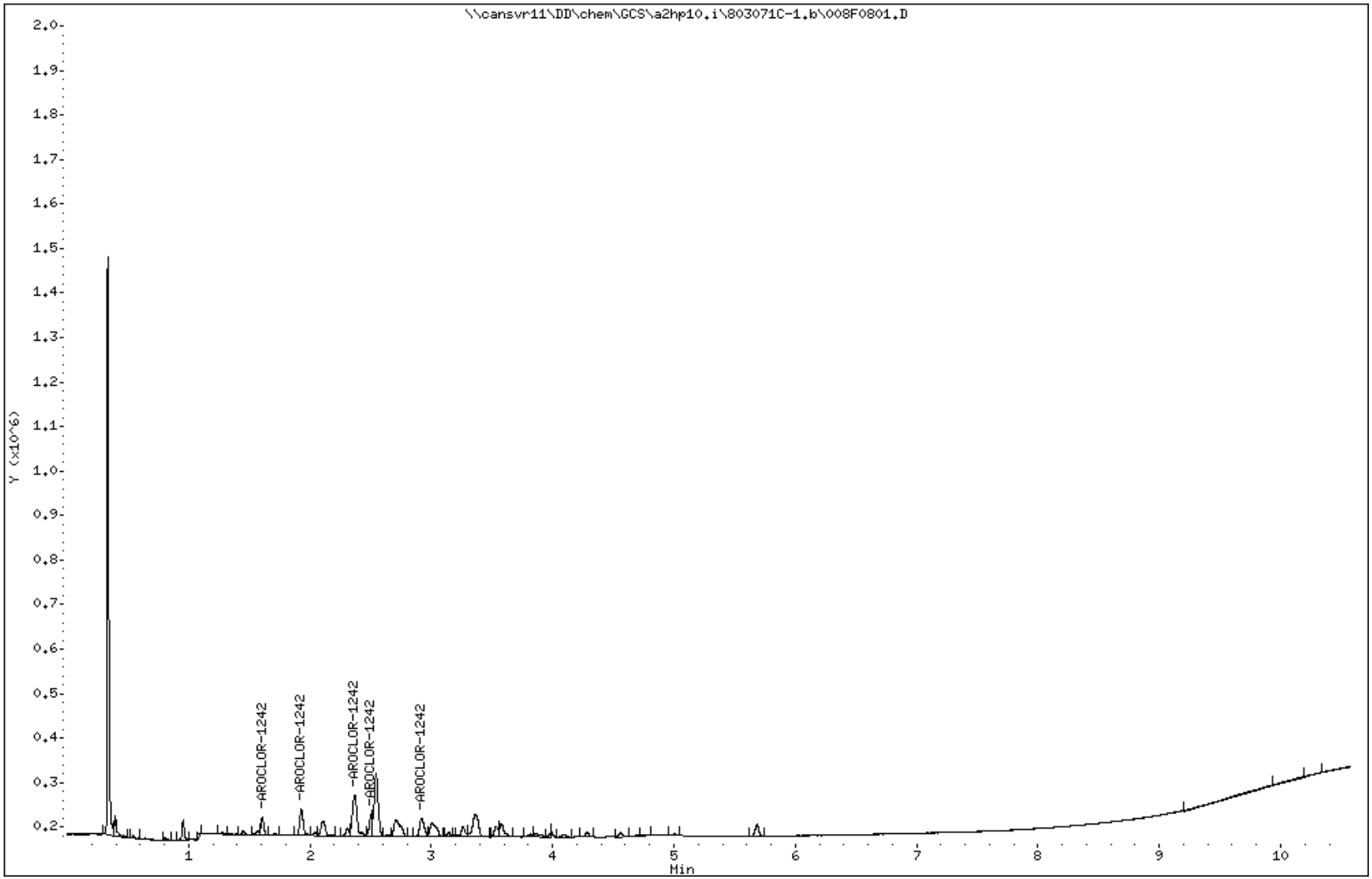
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\008F0801.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 14:34
Operator : Inst ID: a2hp10.i
Smp Info : 1242,,1,1
Misc Info : 2-AR1242.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 8 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
5 AROCLOR-1242					CAS #: 53469-21-9			
1.608	1.608	0.000	65578	0.05000	0.06014	75.00-	125.00	100.00
1.929	1.929	0.000	120603	0.05000	0.05859	142.47-	237.45	183.91
2.370	2.369	0.001	250035	0.05000	0.05715	312.20-	520.34	381.28
2.504	2.503	0.001	86820	0.05000	0.04947	127.12-	211.86	132.39
2.918	2.920	-0.002	107102	0.05000	0.05773	128.03-	213.39	163.32
		Average of Peak Amounts =			0.05662			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\008F0801.D
Date : 07-MAR-2008 14:34
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

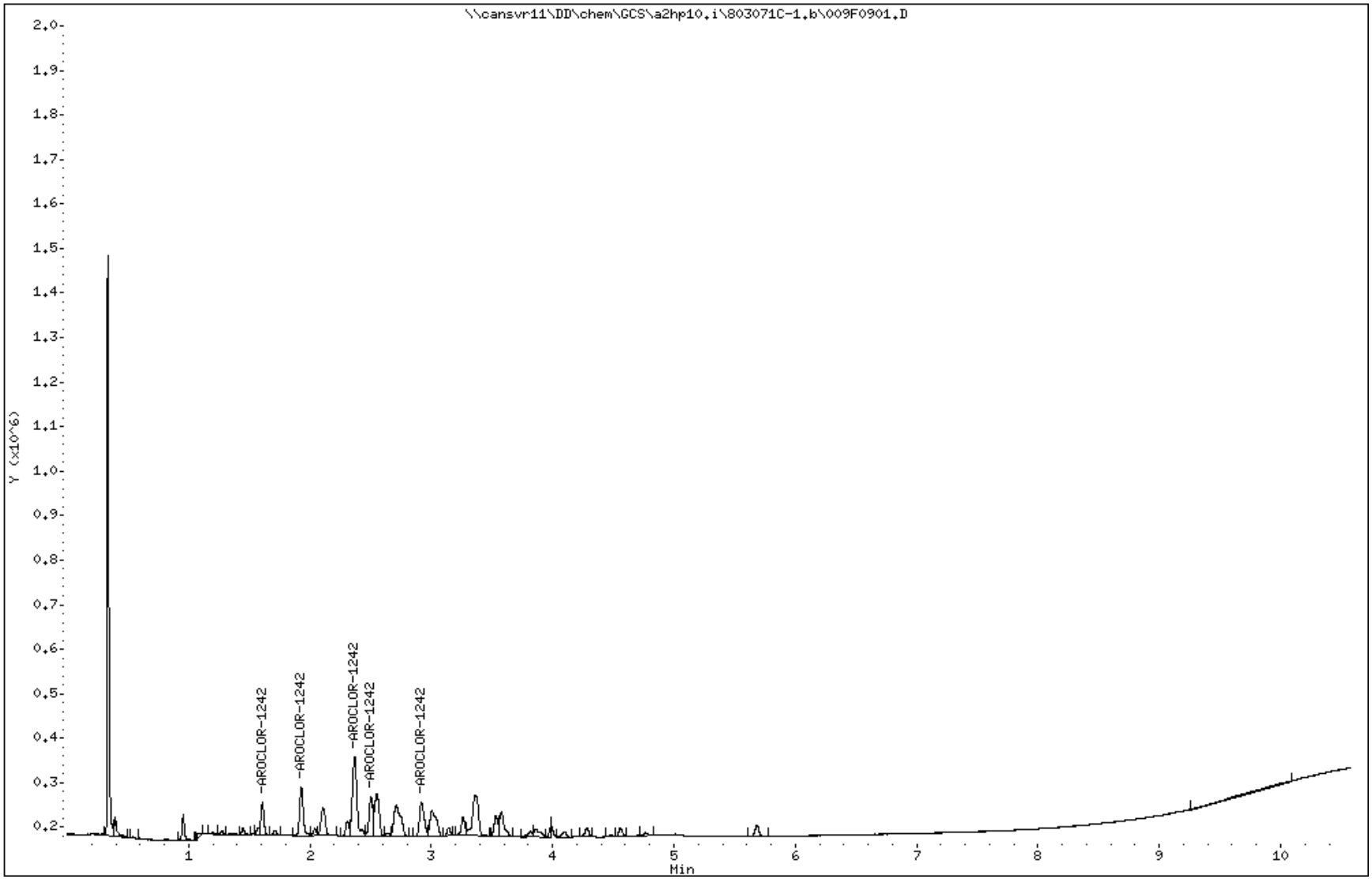
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\009F0901.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 14:49
Operator : Inst ID: a2hp10.i
Smp Info : 1242,,1,2
Misc Info : 2-AR1242.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
5 AROCLOR-1242						CAS #: 53469-21-9		
1.608	1.608	0.000	124200	0.10000	0.1139	75.00-	125.00	100.00
1.929	1.929	0.000	231077	0.10000	0.1123	142.47-	237.45	186.05
2.369	2.369	0.000	474134	0.10000	0.1084	312.20-	520.34	381.75
2.503	2.503	0.000	190653	0.10000	0.1086	127.12-	211.86	153.50
2.917	2.920	-0.003	202951	0.10000	0.1094	128.03-	213.39	163.41
		Average of Peak Amounts =			0.11052			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\009F0901.D
Date : 07-MAR-2008 14:49
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

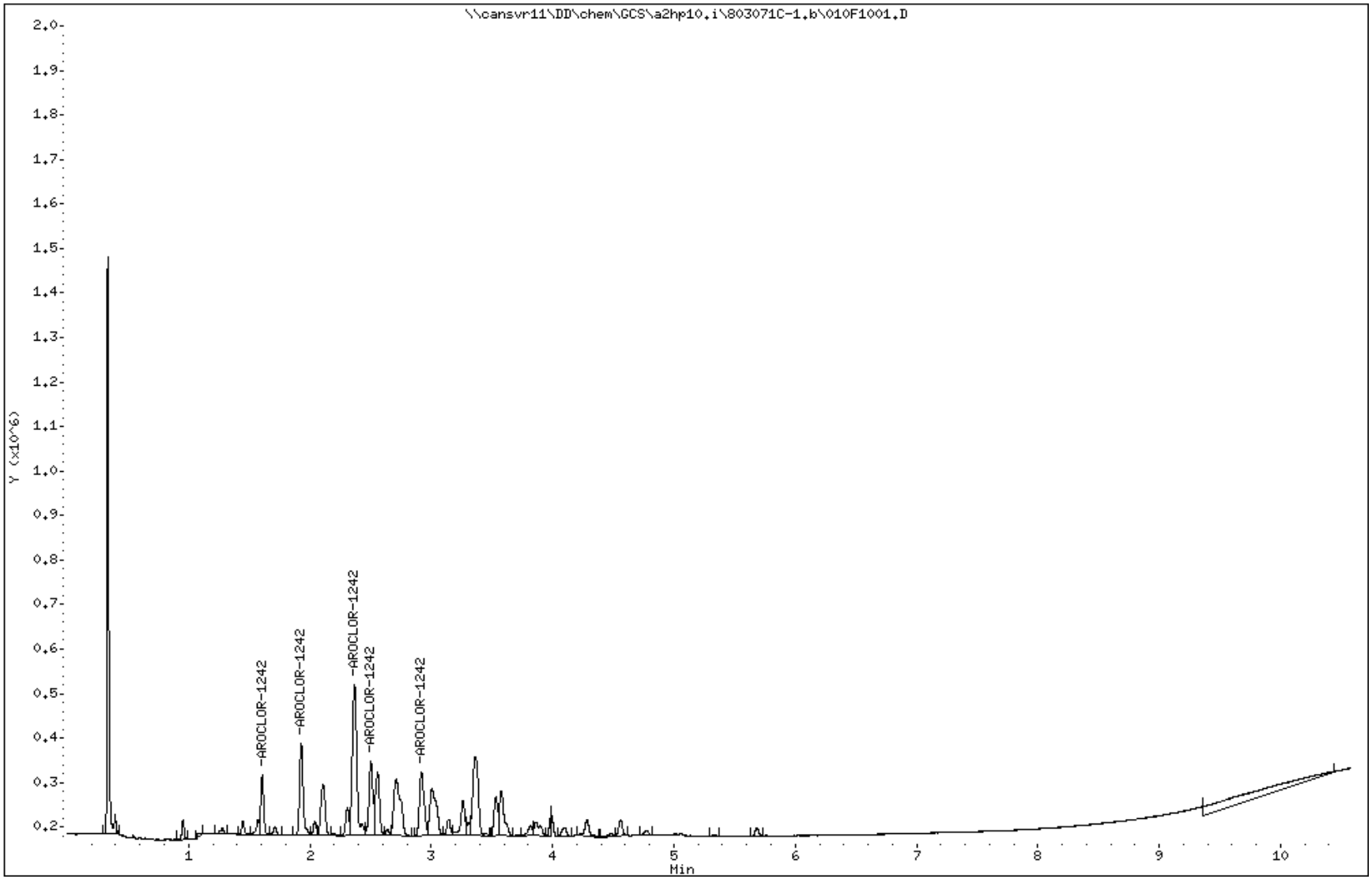
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\010F1001.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 15:05
Operator : Inst ID: a2hp10.i
Smp Info : 1242,,1,3
Misc Info : 2-AR1242.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 10 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.607	1.608	-0.001	221511	0.20000	0.2031	75.00- 125.00	100.00
1.929	1.929	0.000	423828	0.20000	0.2059	142.47- 237.45	191.33
2.368	2.369	-0.001	894302	0.20000	0.2044	312.20- 520.34	403.73
2.503	2.503	0.000	369622	0.20000	0.2106	127.12- 211.86	166.86
2.919	2.920	-0.001	376645	0.20000	0.2030	128.03- 213.39	170.03
Average of Peak Amounts =					0.20540		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\010F1001.D
Date : 07-MAR-2008 15:05
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

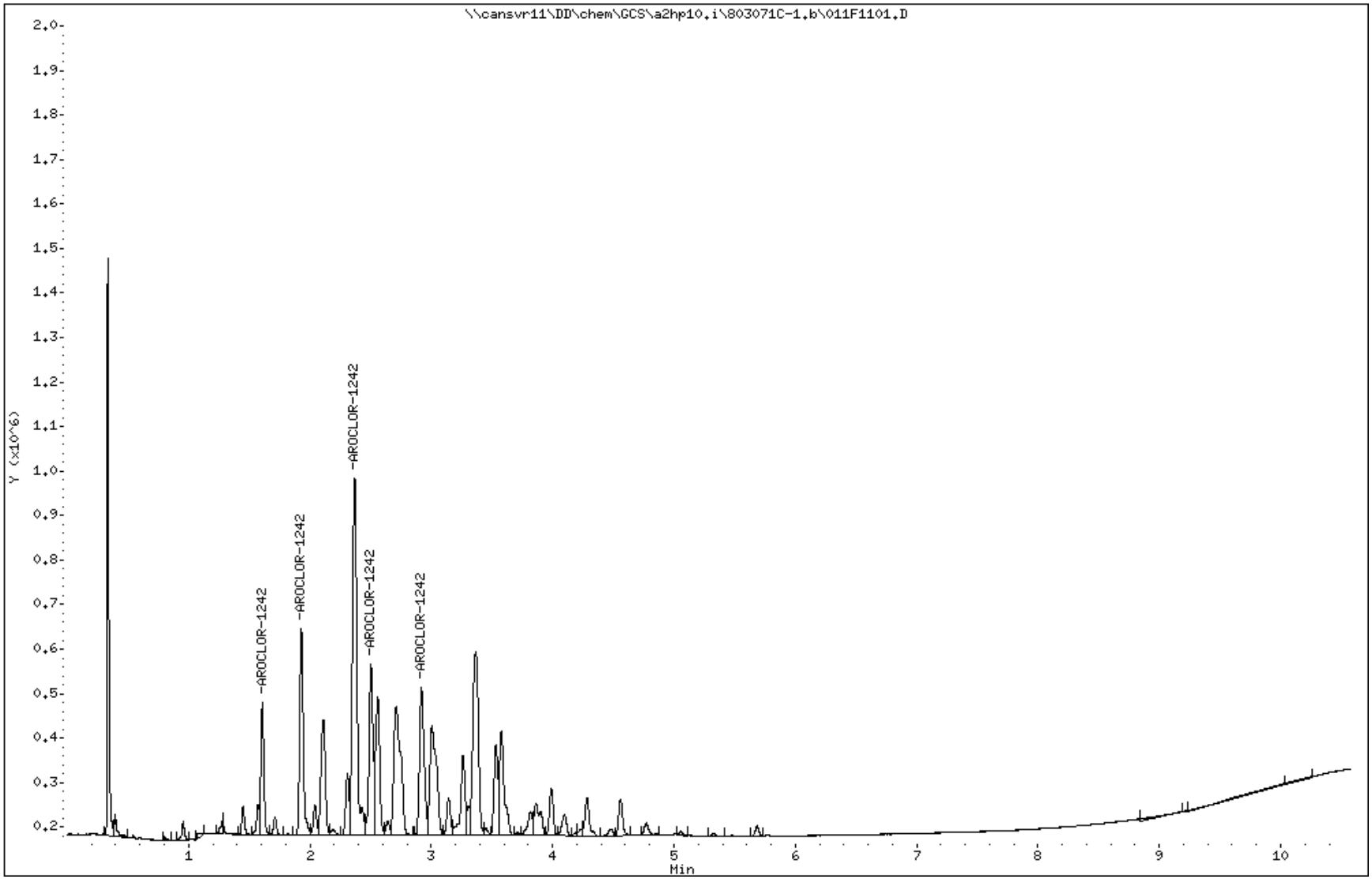
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\011F1101.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 15:20
Operator : Inst ID: a2hp10.i
Smp Info : 1242,,1,4
Misc Info : 2-AR1242.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 11 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.607	1.608	-0.001	507823	0.50000	0.4657	75.00- 125.00	100.00
1.929	1.929	0.000	964643	0.50000	0.4686	142.47- 237.45	189.96
2.369	2.369	0.000	2113912	0.50000	0.4832	312.20- 520.34	416.27
2.502	2.503	-0.001	860700	0.50000	0.4904	127.12- 211.86	169.49
2.919	2.920	-0.001	866916	0.50000	0.4673	128.03- 213.39	170.71
Average of Peak Amounts =					0.47504		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\011F1101.D
Date : 07-MAR-2008 15:20
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

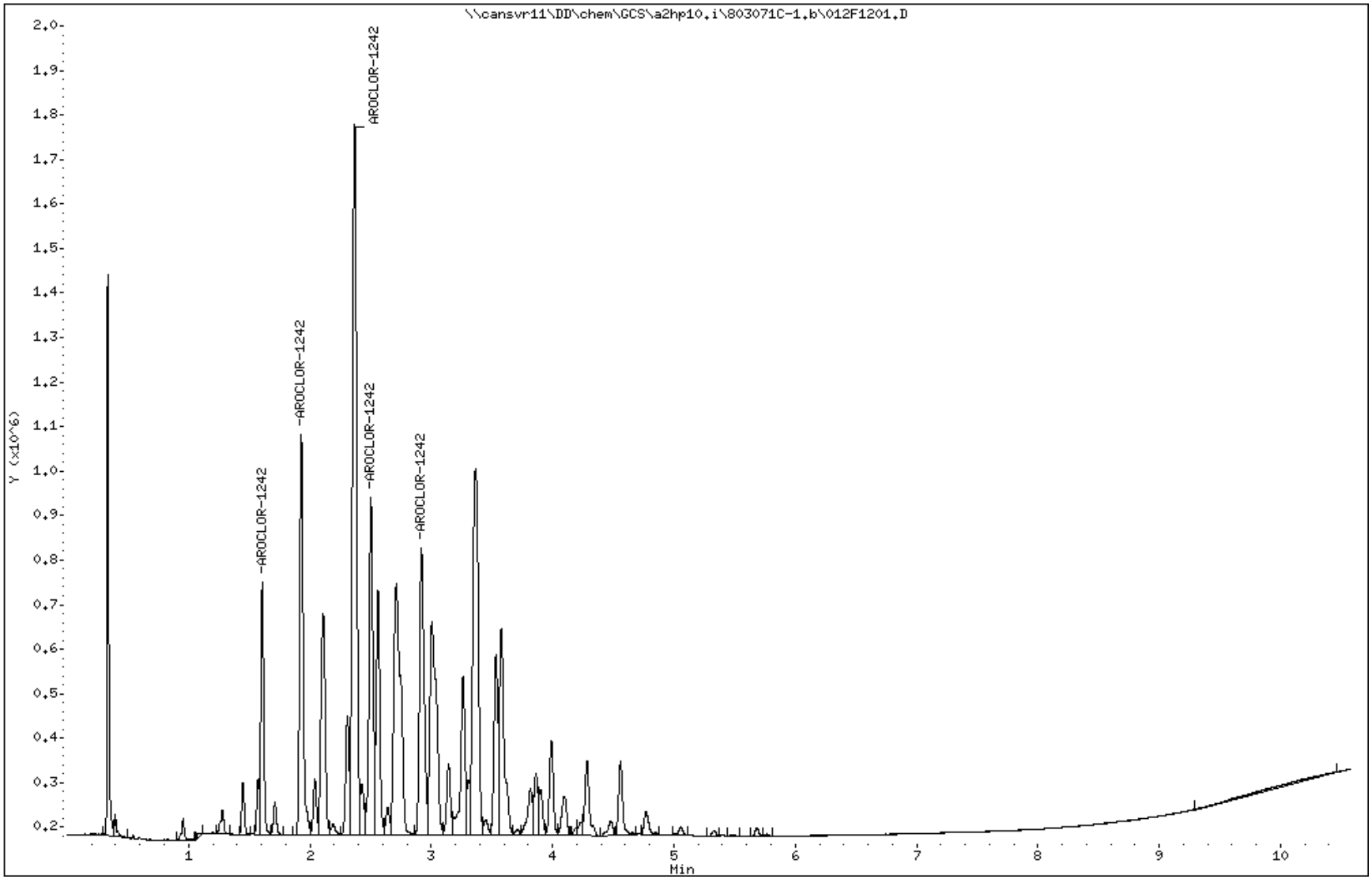
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\012F1201.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 15:35
Operator : Inst ID: a2hp10.i
Smp Info : 1242,,1,5
Misc Info : 2-AR1242.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 12 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
5 AROCLOR-1242					CAS #: 53469-21-9			
1.608	1.608	0.000	952150	1.00000	0.8732	75.00-	125.00	100.00
1.929	1.929	0.000	1825274	1.00000	0.8868	142.47-	237.45	191.70
2.369	2.369	0.000	3936473	1.00000	0.8997	312.20-	520.34	413.43
2.503	2.503	0.000	1674388	1.00000	0.9541	127.12-	211.86	175.85
2.919	2.920	-0.001	1687362	1.00000	0.9096	128.03-	213.39	177.22
Average of Peak Amounts =					0.90468			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\012F1201.D
Date : 07-MAR-2008 15:35
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

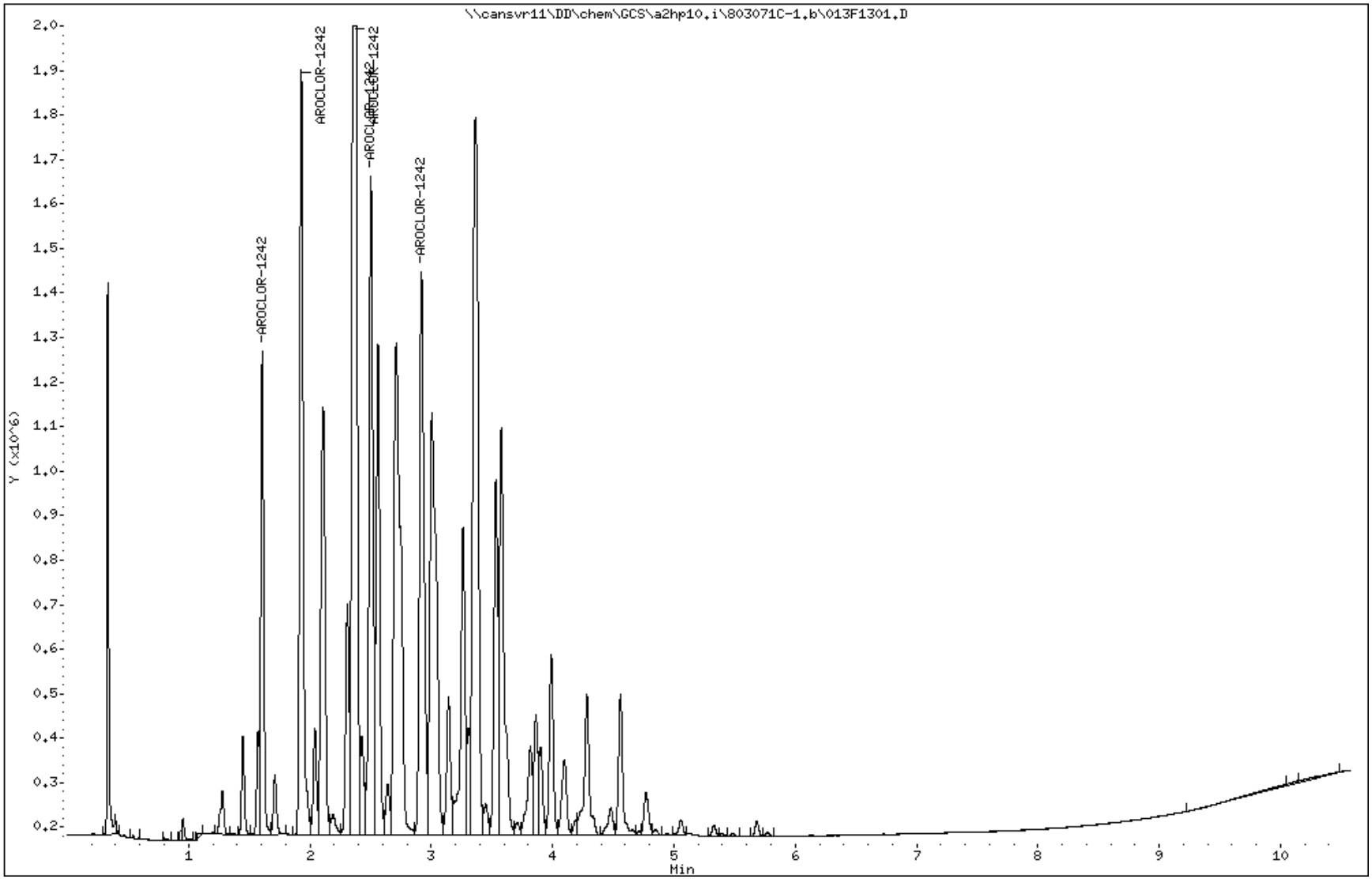
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\013F1301.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 15:51
Operator : Inst ID: a2hp10.i
Smp Info : 1242,,1,6
Misc Info : 2-AR1242.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 13 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.608	1.608	0.000	1826813	2.00000	1.675	75.00- 125.00	100.00
1.929	1.929	0.000	3506711	2.00000	1.704	142.47- 237.45	191.96
2.369	2.369	0.000	7745429	2.00000	1.770	312.20- 520.34	423.99
2.503	2.503	0.000	3286175	2.00000	1.872	127.12- 211.86	179.89
2.920	2.920	0.000	3309428	2.00000	1.784	128.03- 213.39	181.16
		Average of Peak Amounts =			1.76100		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\013F1301.D
Date : 07-MAR-2008 15:51
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

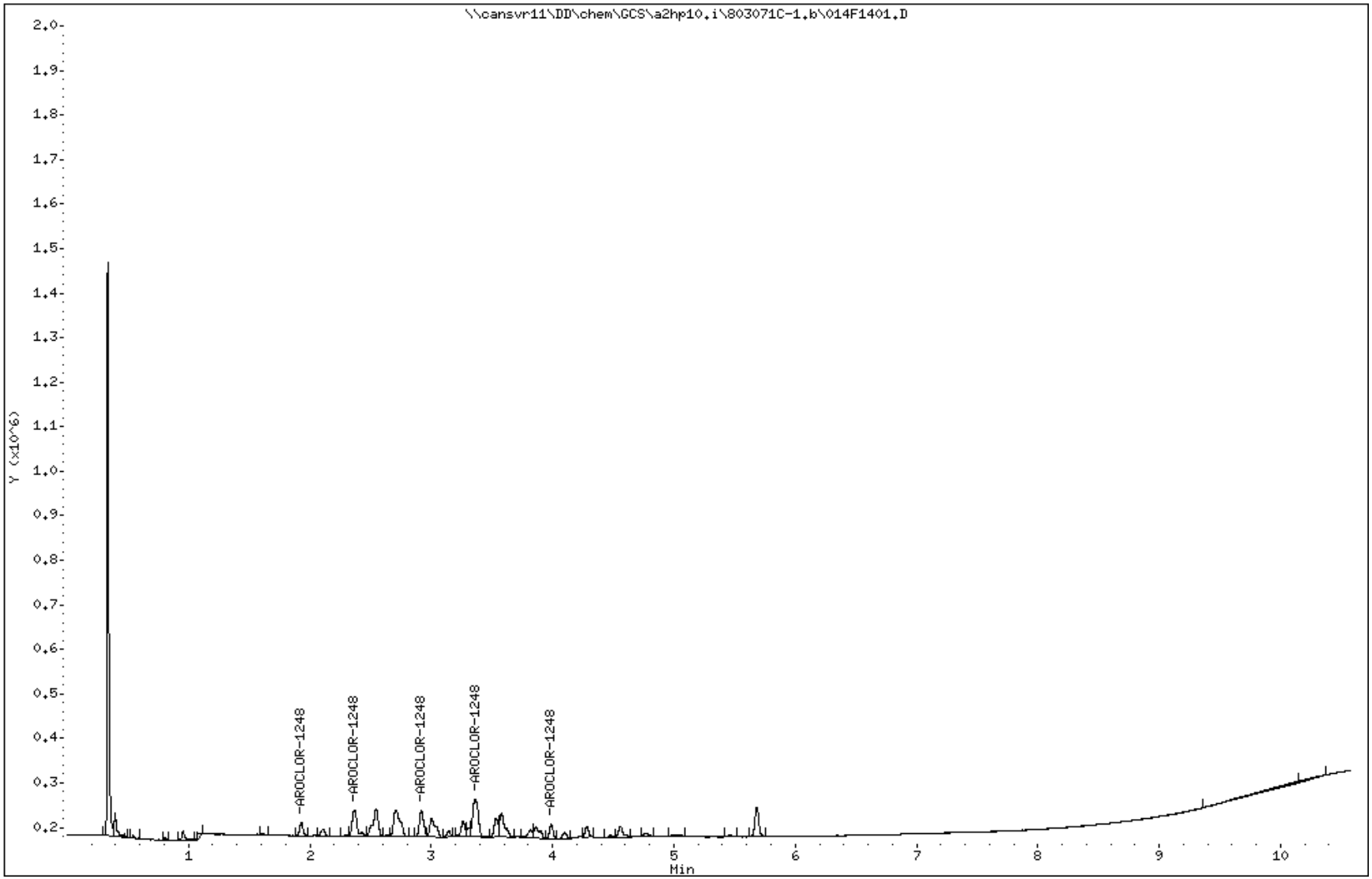
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\014F1401.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 16:06
Operator : Inst ID: a2hp10.i
Smp Info : 1248,,1,1
Misc Info : 3-AR1248.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 14 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
6 AROCLOR-1248					CAS #: 12672-29-6			
1.929	1.928	0.001	29520	0.05000	0.05901	75.00-	125.00	100.00
2.366	2.367	-0.001	60193	0.05000	0.05672	161.26-	268.77	203.91
2.918	2.918	0.000	59453	0.05000	0.05332	172.05-	286.76	201.40
3.364	3.363	0.001	84381	0.05000	0.05458	237.86-	396.44	285.84
3.990	3.990	0.000	33360	0.05000	0.05302	98.49-	164.16	113.01
		Average of Peak Amounts =			0.05533			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\014F1401.D
Date : 07-MAR-2008 16:06
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

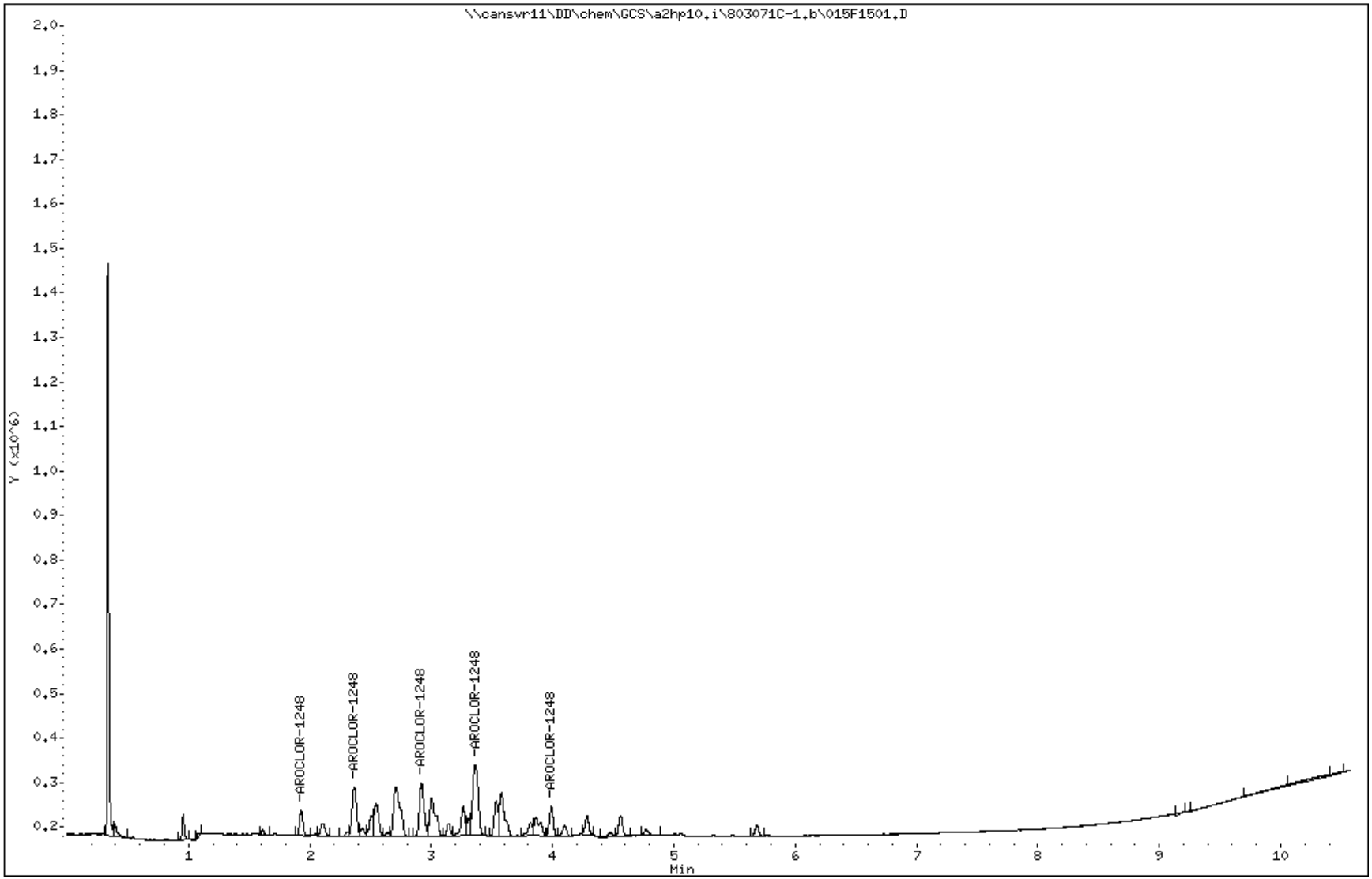
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\015F1501.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 16:21
Operator : Inst ID: a2hp10.i
Smp Info : 1248,,1,2
Misc Info : 3-AR1248.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 15 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
6 AROCLOR-1248					CAS #: 12672-29-6			
1.928	1.928	0.000	56250	0.10000	0.1124	75.00-	125.00	100.00
2.366	2.367	-0.001	110448	0.10000	0.1041	161.26-	268.77	196.35
2.918	2.918	0.000	118742	0.10000	0.1065	172.05-	286.76	211.10
3.362	3.363	-0.001	158334	0.10000	0.1024	237.86-	396.44	281.48
3.988	3.990	-0.002	65815	0.10000	0.1046	98.49-	164.16	117.00
Average of Peak Amounts =				0.10600				

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\015F1501.D
Date : 07-MAR-2008 16:21
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

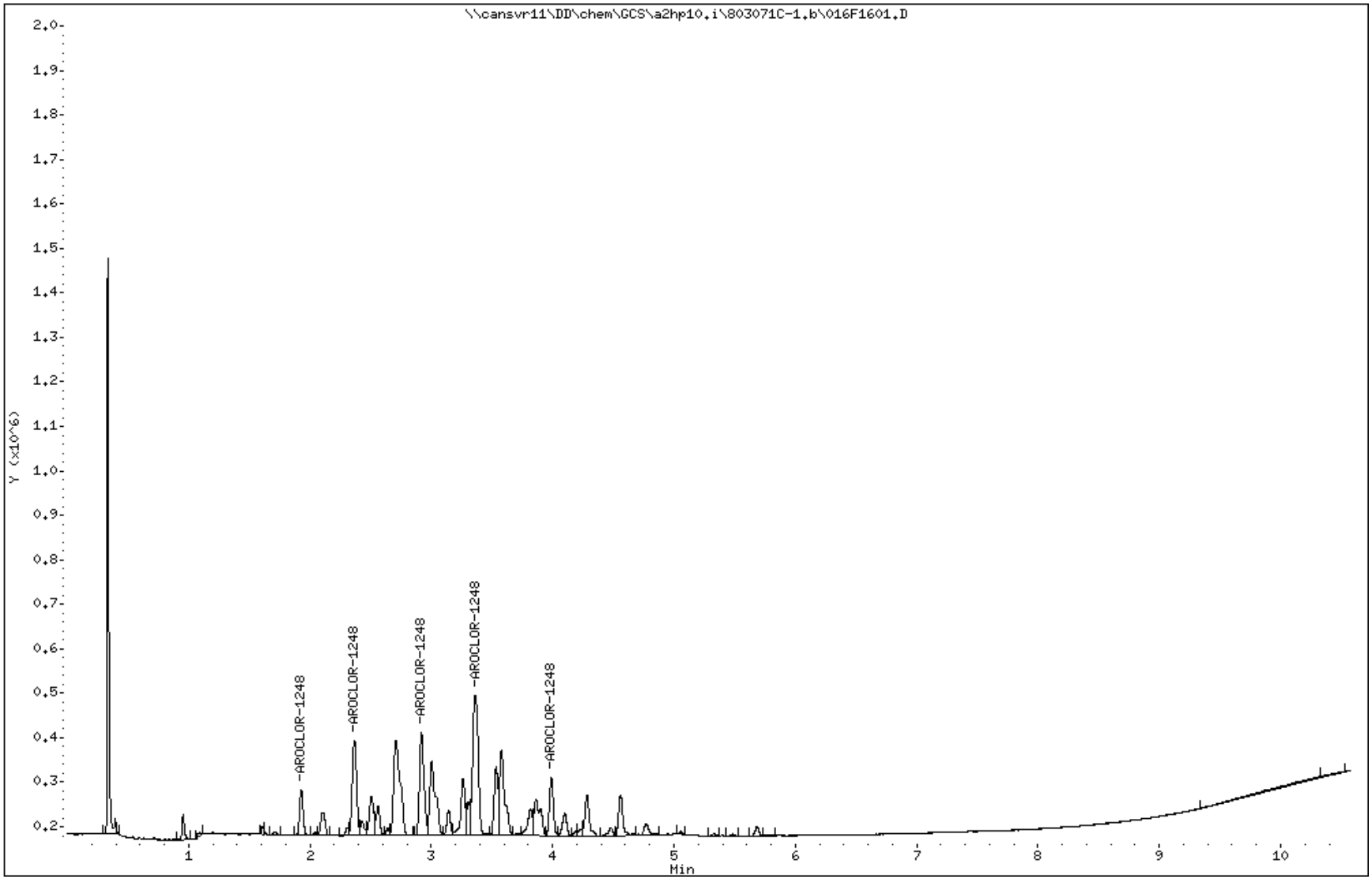
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\016F1601.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 16:36
Operator : Inst ID: a2hp10.i
Smp Info : 1248,,1,3
Misc Info : 3-AR1248.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 16 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
6 AROCLOR-1248					CAS #: 12672-29-6			
1.929	1.928	0.001	102224	0.20000	0.2044	75.00-	125.00	100.00
2.367	2.367	0.000	214416	0.20000	0.2020	161.26-	268.77	209.75
2.919	2.918	0.001	231060	0.20000	0.2072	172.05-	286.76	226.03
3.361	3.363	-0.002	314480	0.20000	0.2034	237.86-	396.44	307.64
3.989	3.990	-0.001	129913	0.20000	0.2065	98.49-	164.16	127.09
Average of Peak Amounts =					0.20470			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\016F1601.D
Date : 07-MAR-2008 16:36
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

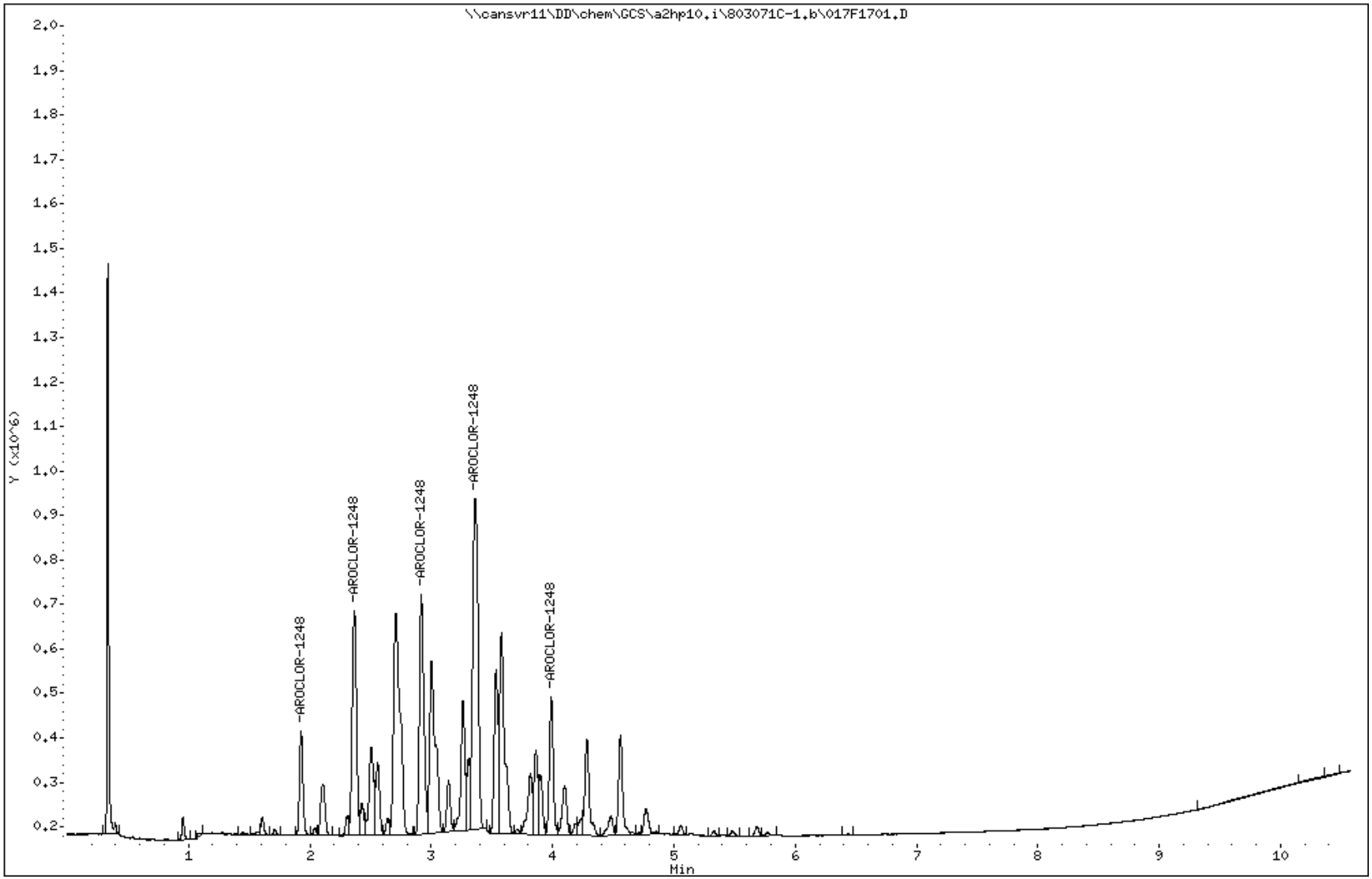
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\017F1701.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 16:52
Operator : Inst ID: a2hp10.i
Smp Info : 1248,,1,4
Misc Info : 3-AR1248.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 17 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
6 AROCLOR-1248					CAS #: 12672-29-6			
1.928	1.928	0.000	234756	0.50000	0.4693	75.00-	125.00	100.00
2.367	2.367	0.000	504769	0.50000	0.4756	161.26-	268.77	215.02
2.918	2.918	0.000	538540	0.50000	0.4830	172.05-	286.76	229.40
3.361	3.363	-0.002	744525	0.50000	0.4815	237.86-	396.44	317.15
3.989	3.990	-0.001	308296	0.50000	0.4900	98.49-	164.16	131.33
Average of Peak Amounts =					0.47988			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\017F1701.D
Date : 07-MAR-2008 16:52
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

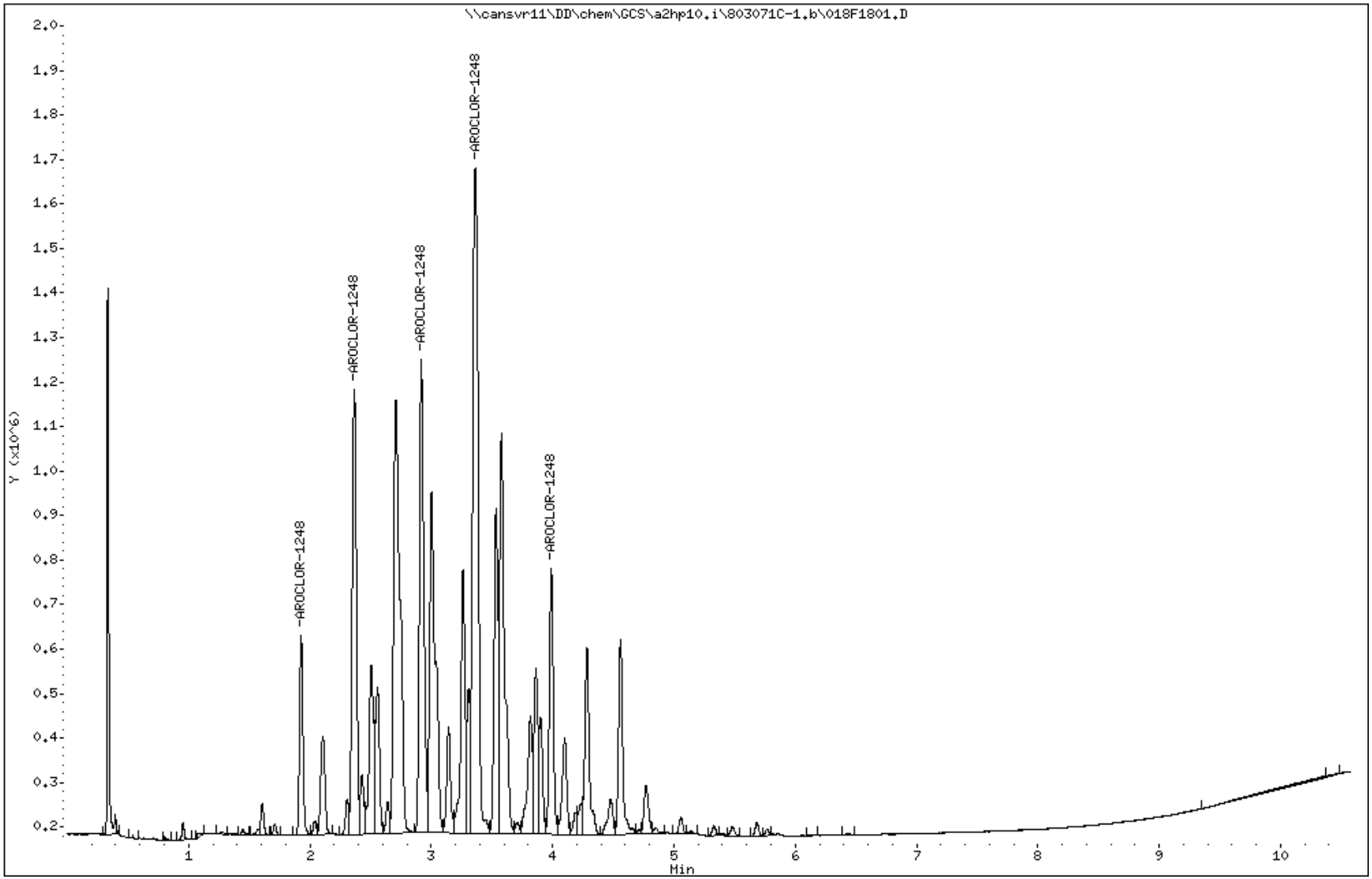
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\018F1801.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 17:07
Operator : Inst ID: a2hp10.i
Smp Info : 1248,,1,5
Misc Info : 3-AR1248.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 18 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
1.927	1.928	-0.001	447287	1.00000	0.8942	75.00- 125.00	100.00
2.367	2.367	0.000	1001469	1.00000	0.9437	161.26- 268.77	223.90
2.917	2.918	-0.001	1062652	1.00000	0.9530	172.05- 286.76	237.58
3.362	3.363	-0.001	1493260	1.00000	0.9658	237.86- 396.44	333.85
3.989	3.990	-0.001	598574	1.00000	0.9513	98.49- 164.16	133.82
		Average of Peak Amounts =			0.94160		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\018F1801.D
Date : 07-MAR-2008 17:07
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

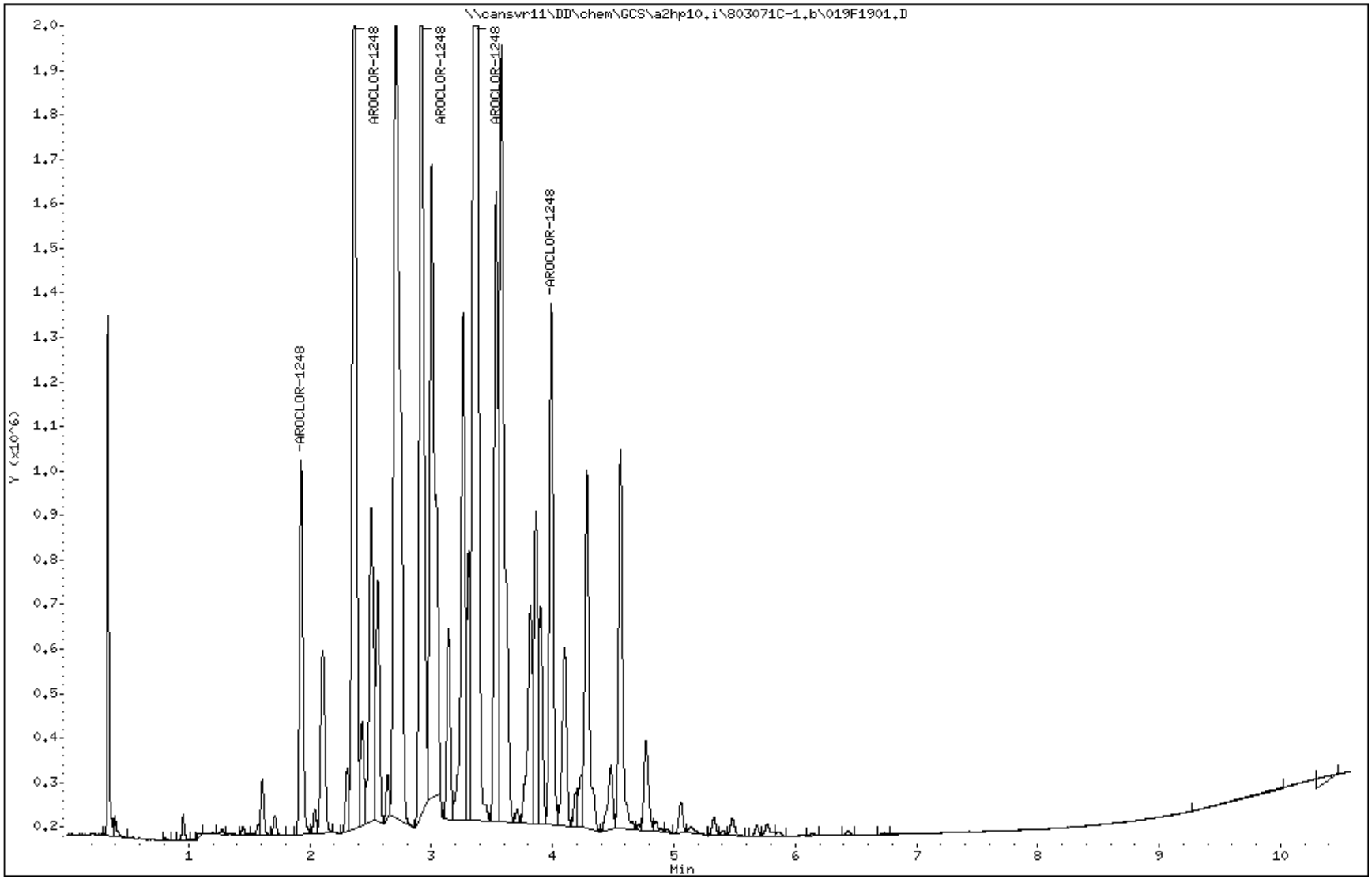
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\019F1901.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 17:22
Operator : Inst ID: a2hp10.i
Smp Info : 1248,,1,6
Misc Info : 3-AR1248.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 19 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
6 AROCLOR-1248					CAS #: 12672-29-6			
1.928	1.928	0.000	841112	2.00000	1.681	75.00- 125.00		100.00
2.367	2.367	0.000	1951799	2.00000	1.839	161.26- 268.77		232.05
2.918	2.918	0.000	2037591	2.00000	1.827	172.05- 286.76		242.25
3.363	3.363	0.000	2902224	2.00000	1.877	237.86- 396.44		345.05
3.990	3.990	0.000	1170591	2.00000	1.860	98.49- 164.16		139.17
		Average of Peak Amounts =			1.81680			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\019F1901.D
Date : 07-MAR-2008 17:22
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

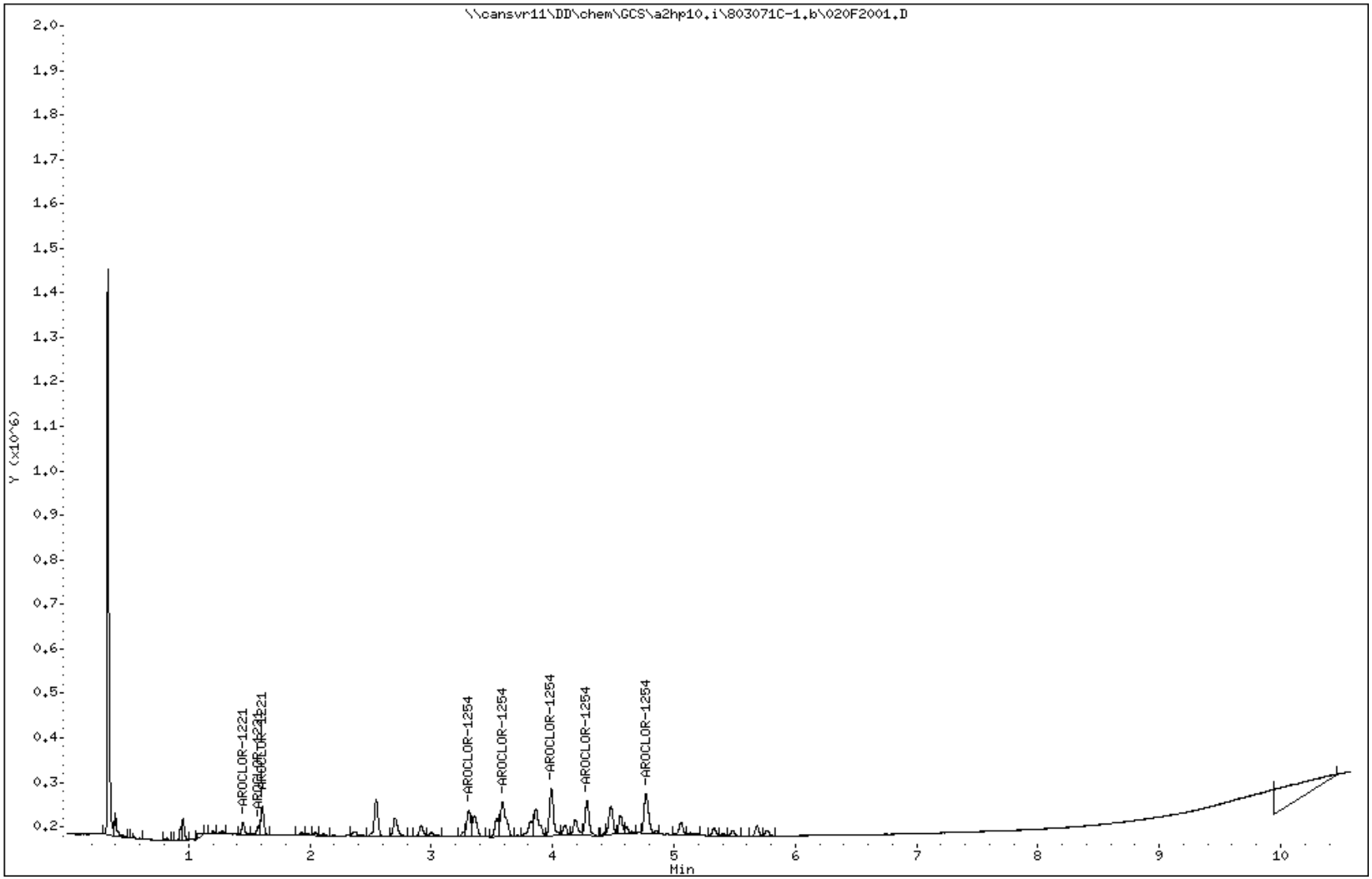
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\020F2001.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 17:37
Operator : Inst ID: a2hp10.i
Smp Info : 2154,,1,1
Misc Info : 9-AR2154.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 20 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
7 AROCLOR-1254					CAS #: 11097-69-1			
3.309	3.308	0.001	59693	0.05000	0.05726	75.00-	125.00	100.00
3.587	3.587	0.000	79191	0.05000	0.05627	101.78-	169.64	132.66
3.989	3.990	-0.001	105303	0.05000	0.05194	151.99-	253.32	176.41
4.284	4.282	0.002	78379	0.05000	0.05272	109.78-	182.97	131.30
4.770	4.769	0.001	89913	0.05000	0.05075	132.91-	221.52	150.63
		Average of Peak Amounts =			0.05379			
2 AROCLOR-1221					CAS #: 11104-28-2			
1.448	1.447	0.001	44480	0.05000	0.05906	75.00-	125.00	100.00
1.574	1.573	0.001	33116	0.05000	0.07007	41.75-	69.59	74.45
1.608	1.607	0.001	108918	0.05000	0.05918	183.64-	306.06	244.87
		Average of Peak Amounts =			0.06277			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\020F2001.D
Date : 07-MAR-2008 17:37
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

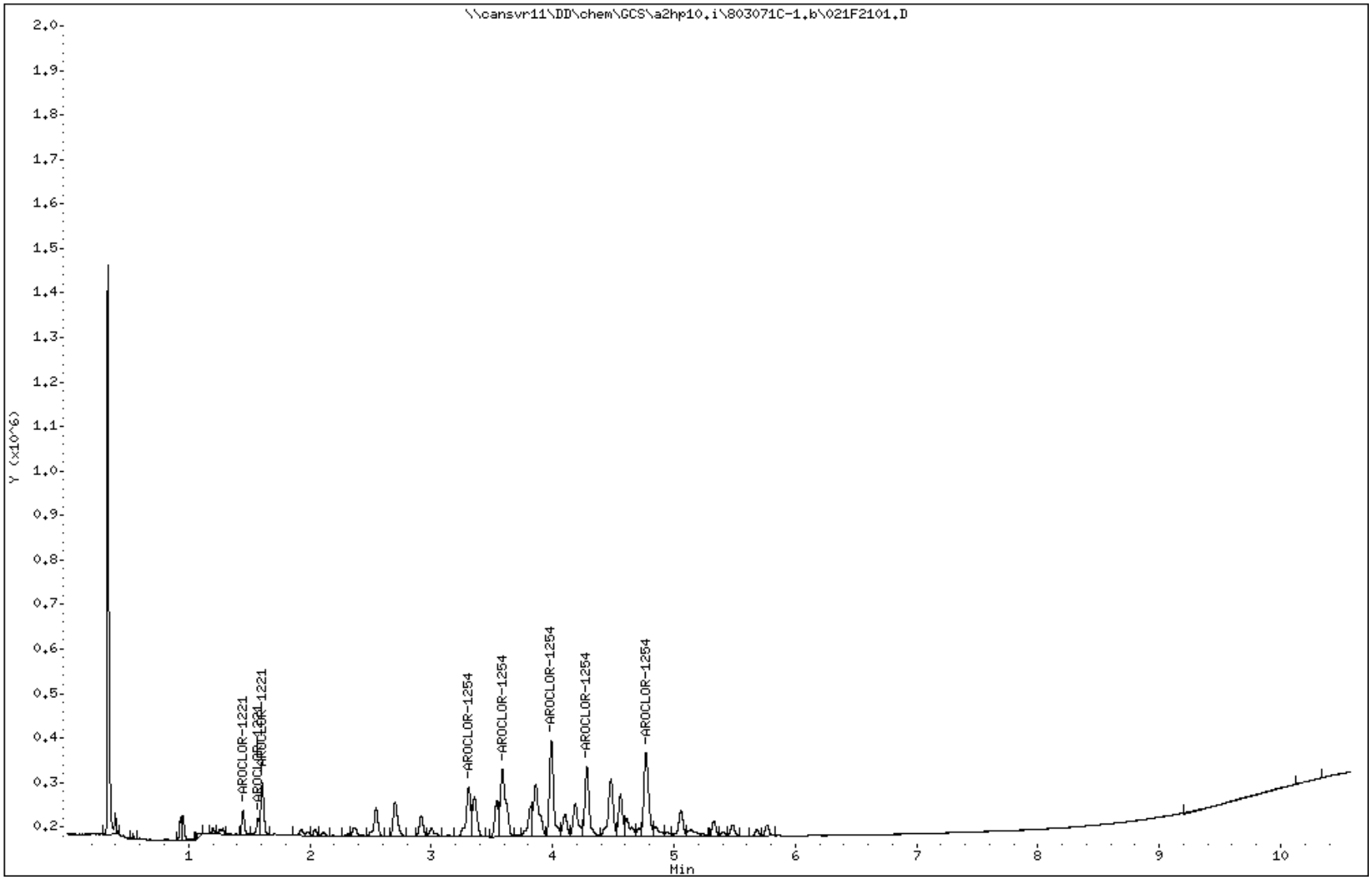
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\021F2101.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 17:53
Operator : Inst ID: a2hp10.i
Smp Info : 2154,,1,2
Misc Info : 9-AR2154.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 21 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.308	3.308	0.000	111985	0.10000	0.1074	75.00- 125.00	100.00
3.586	3.587	-0.001	150759	0.10000	0.1071	101.78- 169.64	134.62
3.989	3.990	-0.001	216076	0.10000	0.1066	151.99- 253.32	192.95
4.283	4.282	0.001	156958	0.10000	0.1056	109.78- 182.97	140.16
4.770	4.769	0.001	188614	0.10000	0.1064	132.91- 221.52	168.43
Average of Peak Amounts =					0.10662		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.448	1.447	0.001	84314	0.10000	0.1120	75.00- 125.00	100.00
1.572	1.573	-0.001	57877	0.10000	0.1224	41.75- 69.59	68.64
1.607	1.607	0.000	202341	0.10000	0.1100	183.64- 306.06	239.99
Average of Peak Amounts =					0.11480		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\021F2101.D
Date : 07-MAR-2008 17:53
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

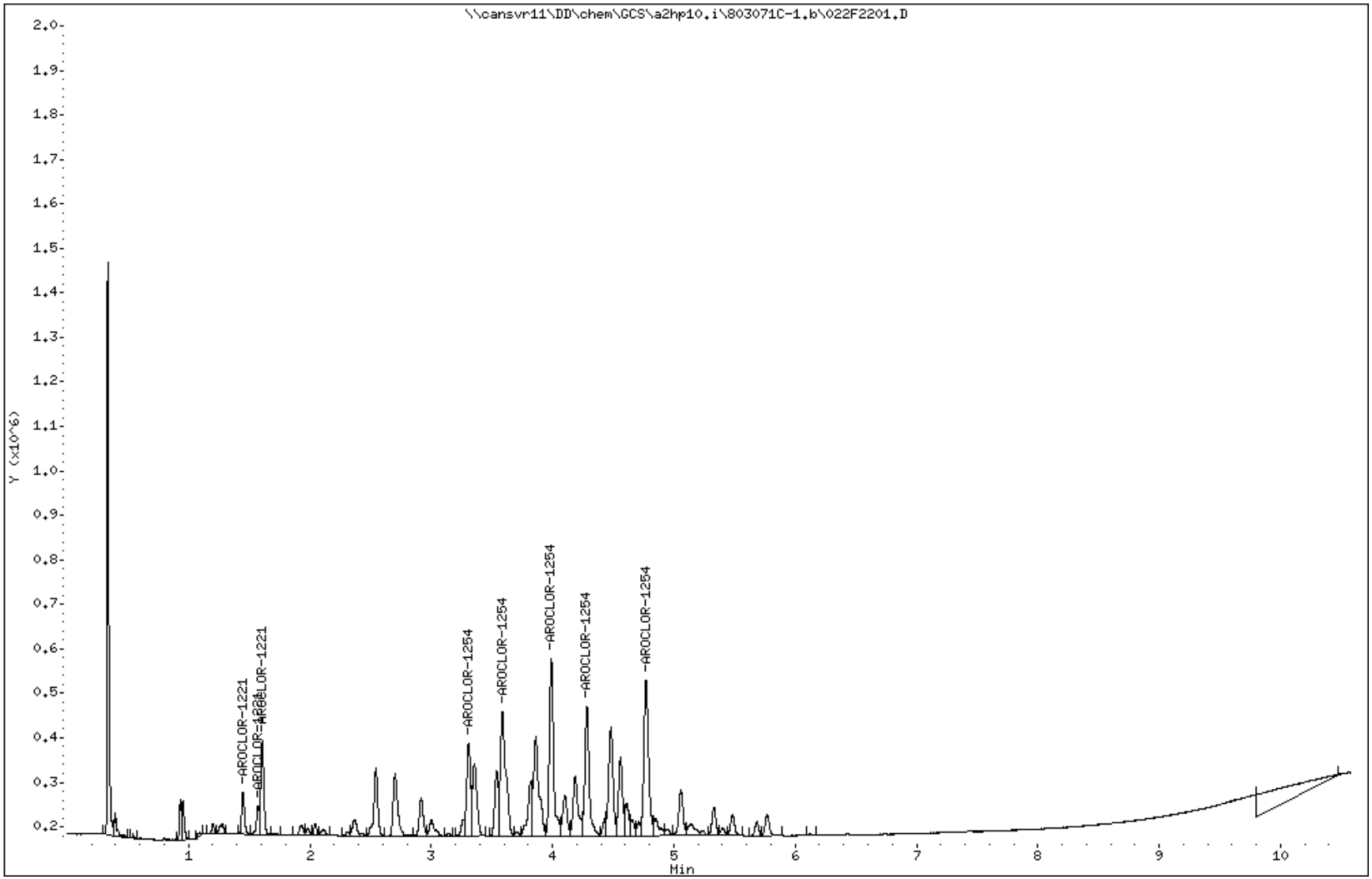
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\022F2201.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 18:08
Operator : Inst ID: a2hp10.i
Smp Info : 2154,,1,3
Misc Info : 9-AR2154.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 22 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.309	3.308	0.001	207956	0.20000	0.1995	75.00- 125.00	100.00
3.587	3.587	0.000	279102	0.20000	0.1983	101.78- 169.64	134.21
3.989	3.990	-0.001	399064	0.20000	0.1968	151.99- 253.32	191.90
4.283	4.282	0.001	292185	0.20000	0.1965	109.78- 182.97	140.50
4.769	4.769	0.000	348527	0.20000	0.1967	132.91- 221.52	167.60
		Average of Peak Amounts =			0.19756		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.448	1.447	0.001	153713	0.20000	0.2041	75.00- 125.00	100.00
1.574	1.573	0.001	96339	0.20000	0.2038	41.75- 69.59	62.67
1.607	1.607	0.000	375157	0.20000	0.2038	183.64- 306.06	244.06
		Average of Peak Amounts =			0.20390		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\022F2201.D
Date : 07-MAR-2008 18:08
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

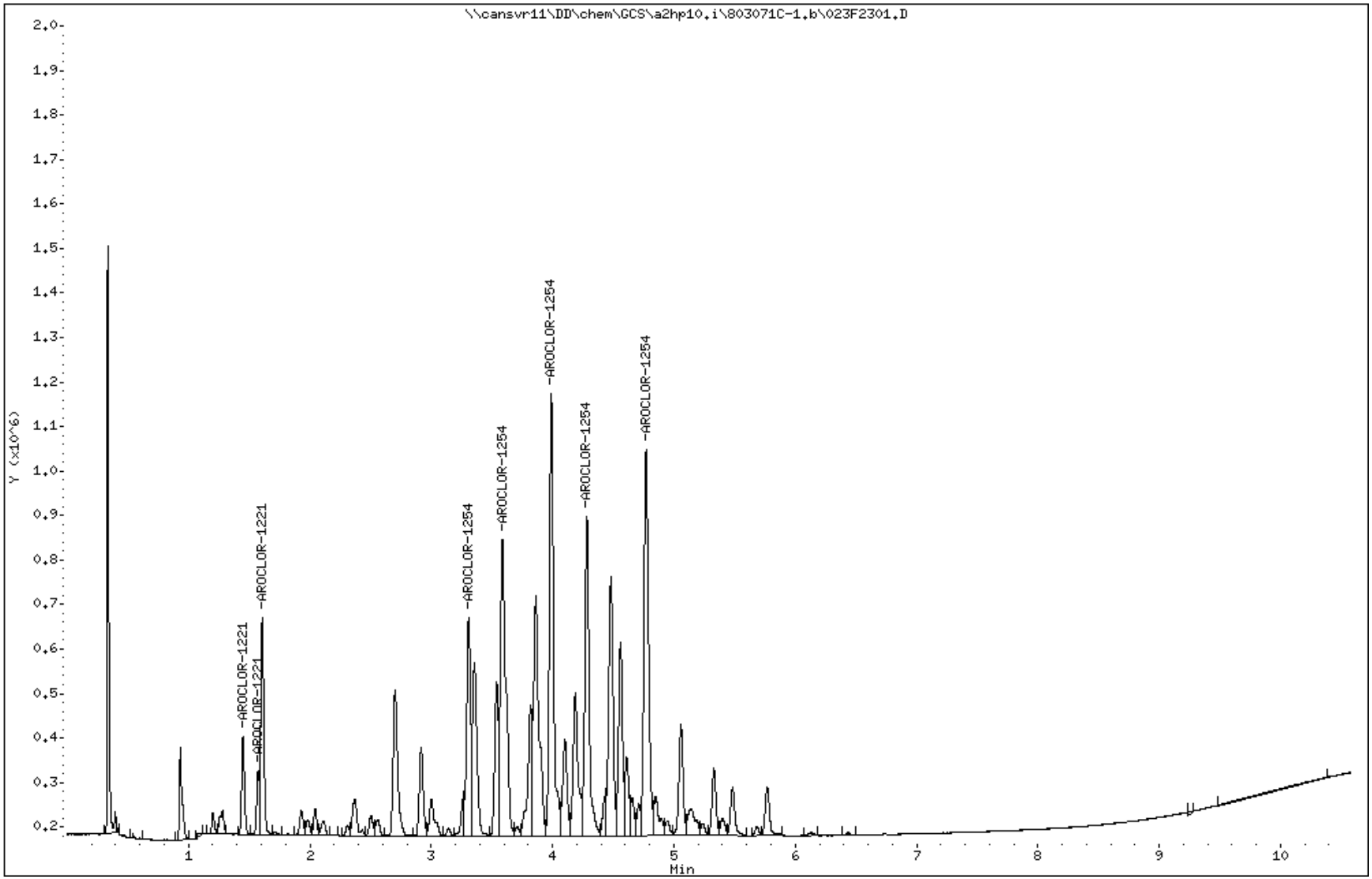
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\023F2301.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 18:23
Operator : Inst ID: a2hp10.i
Smp Info : 2154,,1,4
Misc Info : 9-AR2154.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 23 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.309	3.308	0.001	489680	0.50000	0.4698	75.00- 125.00	100.00
3.587	3.587	0.000	664554	0.50000	0.4722	101.78- 169.64	135.71
3.989	3.990	-0.001	992358	0.50000	0.4894	151.99- 253.32	202.65
4.283	4.282	0.001	716779	0.50000	0.4821	109.78- 182.97	146.38
4.771	4.769	0.002	867800	0.50000	0.4898	132.91- 221.52	177.22
Average of Peak Amounts =					0.48066		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.448	1.447	0.001	356357	0.50000	0.4732	75.00- 125.00	100.00
1.574	1.573	0.001	198387	0.50000	0.4197	41.75- 69.59	55.67
1.608	1.607	0.001	872543	0.50000	0.4741	183.64- 306.06	244.85
Average of Peak Amounts =					0.45567		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\023F2301.D
Date : 07-MAR-2008 18:23
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

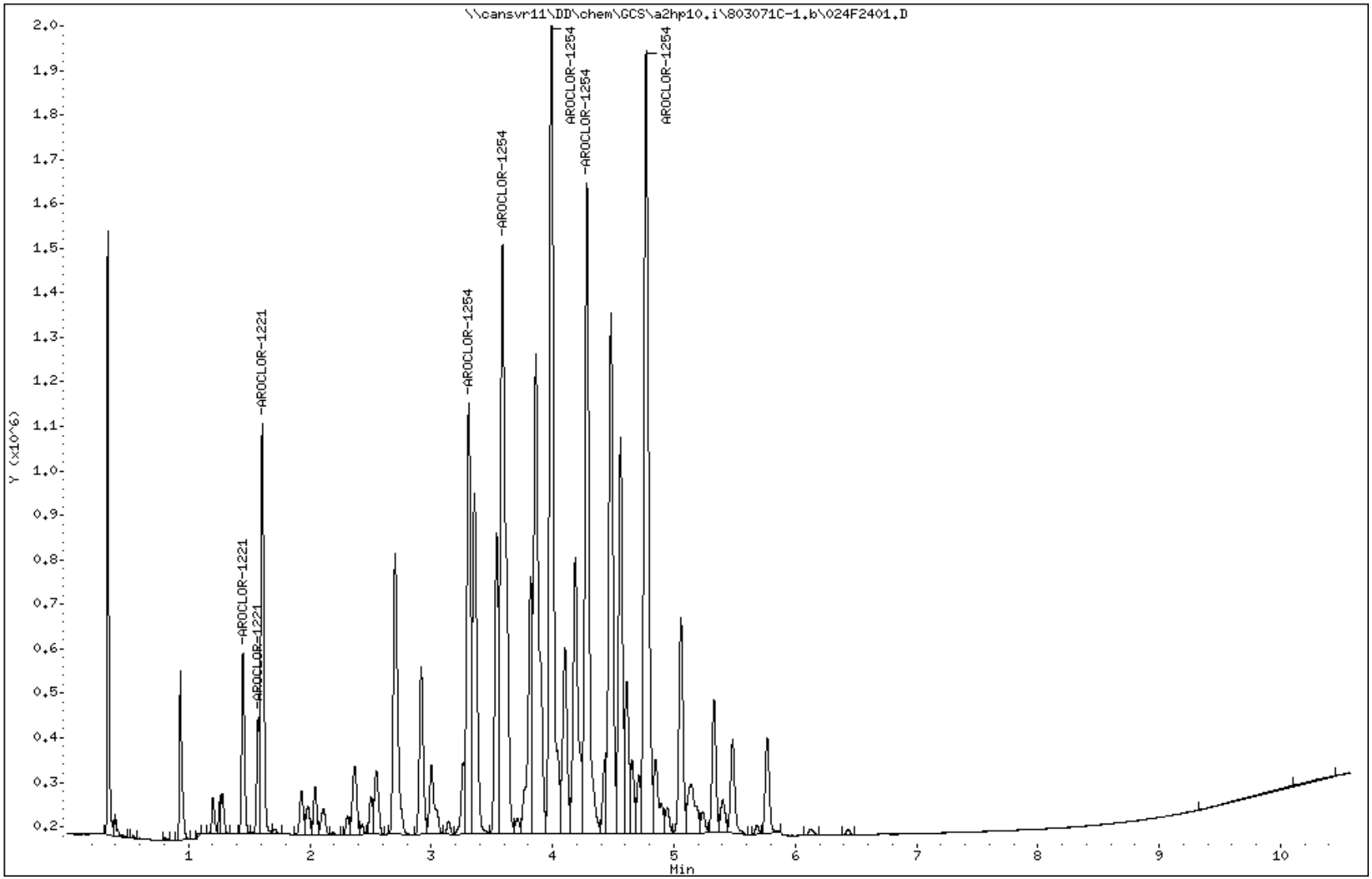
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\024F2401.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 18:39
Operator : Inst ID: a2hp10.i
Smp Info : 2154,,1,5
Misc Info : 9-AR2154.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 24 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.309	3.308	0.001	967094	1.00000	0.9278	75.00- 125.00	100.00
3.587	3.587	0.000	1322681	1.00000	0.9398	101.78- 169.64	136.77
3.990	3.990	0.000	1981274	1.00000	0.9772	151.99- 253.32	204.87
4.284	4.282	0.002	1462854	1.00000	0.9840	109.78- 182.97	151.26
4.770	4.769	0.001	1758638	1.00000	0.9926	132.91- 221.52	181.85
Average of Peak Amounts =					0.96428		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.449	1.447	0.002	666690	1.00000	0.8852	75.00- 125.00	100.00
1.574	1.573	0.001	363190	1.00000	0.7684	41.75- 69.59	54.48
1.608	1.607	0.001	1652408	1.00000	0.8979	183.64- 306.06	247.85
Average of Peak Amounts =					0.85050		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\024F2401.D
Date : 07-MAR-2008 18:39
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

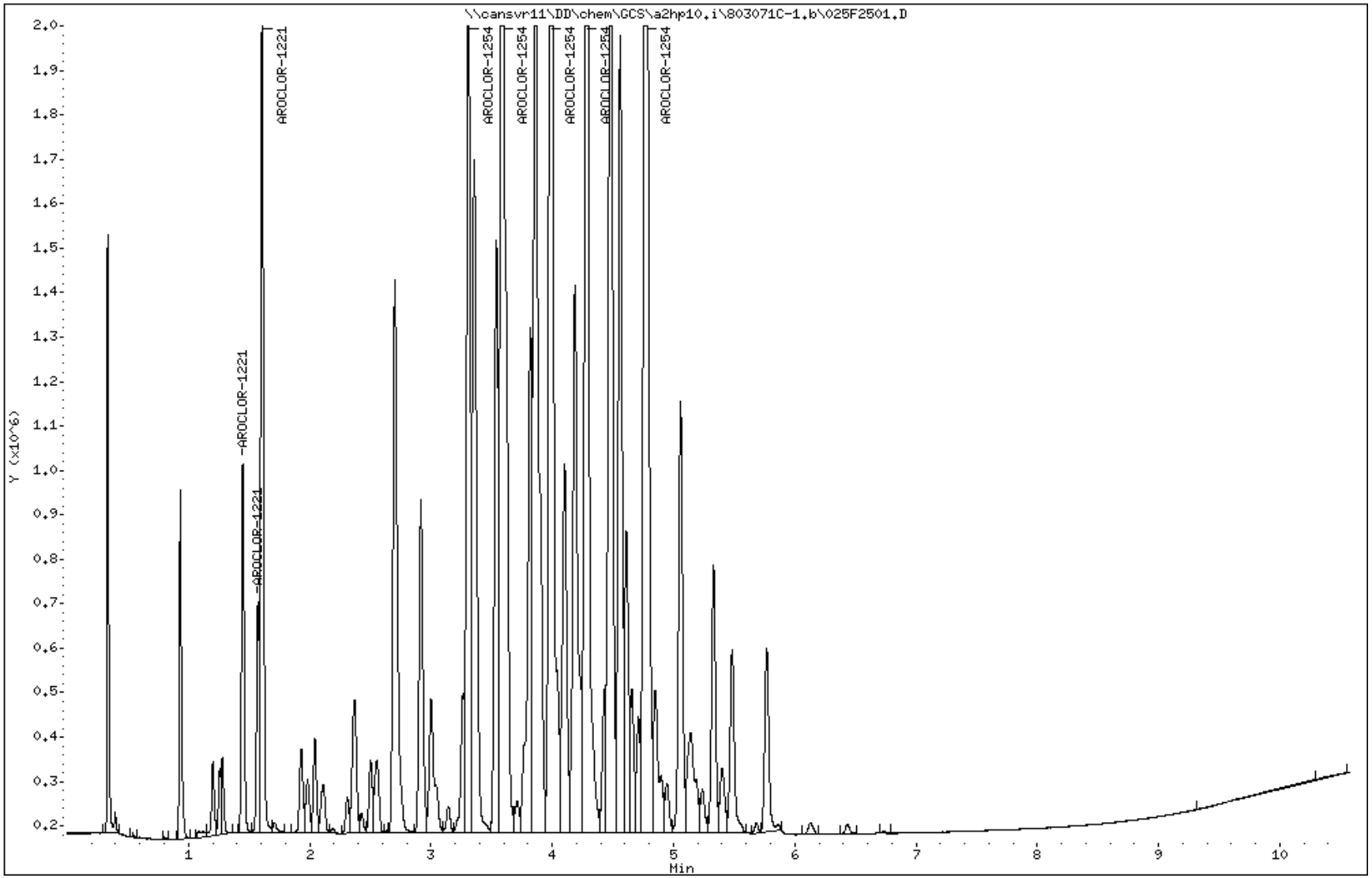
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\025F2501.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 18:54
Operator : Inst ID: a2hp10.i
Smp Info : 2154,,1,6
Misc Info : 9-AR2154.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 25 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.308	3.308	0.000	1908817	2.00000	1.831	75.00- 125.00	100.00
3.587	3.587	0.000	2611514	2.00000	1.856	101.78- 169.64	136.81
3.990	3.990	0.000	3873364	2.00000	1.910	151.99- 253.32	202.92
4.282	4.282	0.000	2851581	2.00000	1.918	109.78- 182.97	149.39
4.769	4.769	0.000	3418835	2.00000	1.930	132.91- 221.52	179.11
	Average of Peak Amounts =				1.88900		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.447	1.447	0.000	1276215	2.00000	1.694	75.00- 125.00	100.00
1.573	1.573	0.000	706148	2.00000	1.494	41.75- 69.59	55.33
1.607	1.607	0.000	3133306	2.00000	1.703	183.64- 306.06	245.52
	Average of Peak Amounts =				1.63033		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\025F2501.D
Date : 07-MAR-2008 18:54
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\026F2601.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 19:09
Operator : Inst ID: a2hp10.i
Smp Info : 1660,,1,1
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 26 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

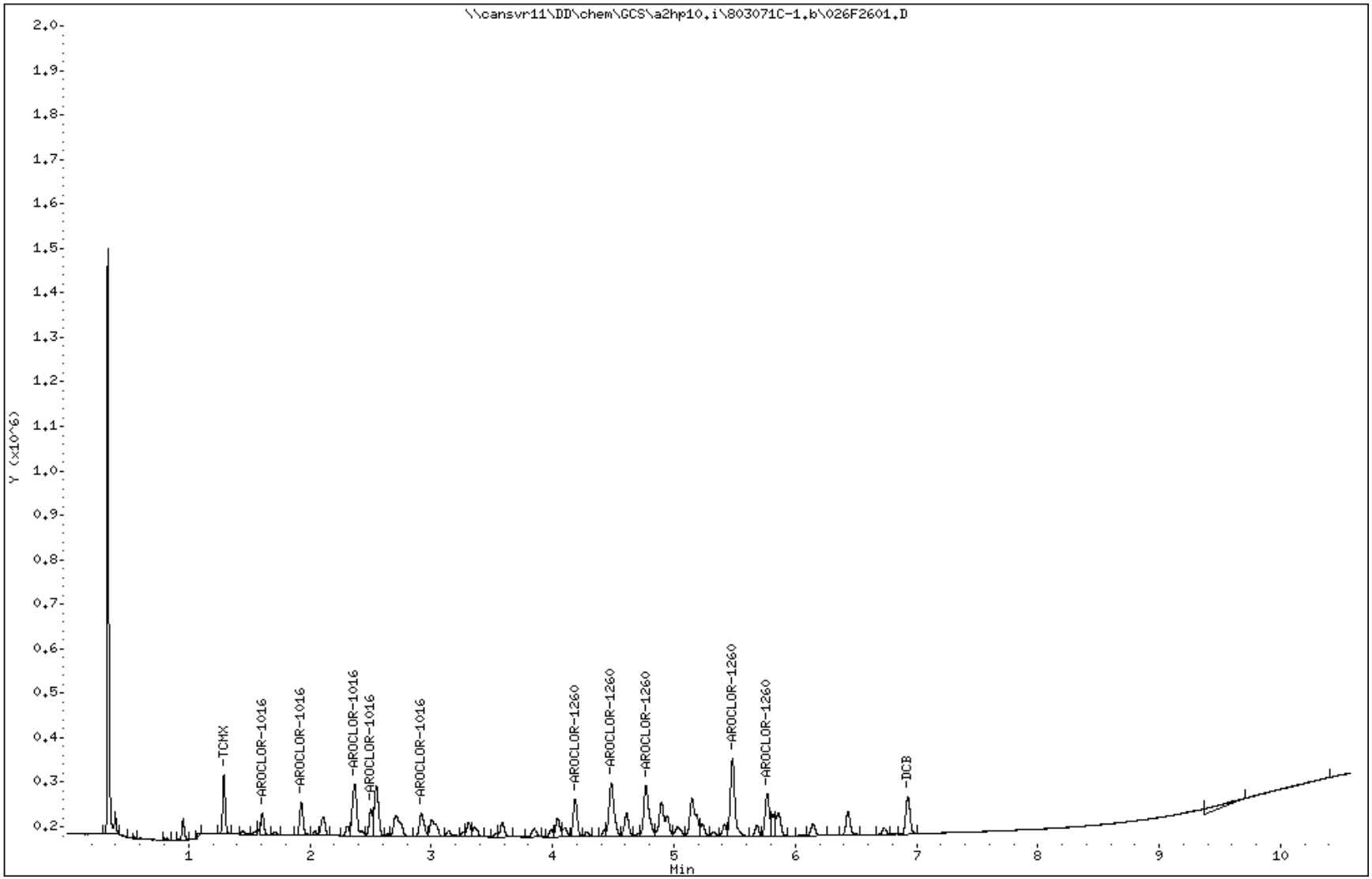
Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.291	1.292	-0.001	193997	0.00250	0.002638		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.607	1.608	-0.001	49667	0.05000	0.06102	80.00- 120.00	100.00
1.928	1.930	-0.002	73159	0.05000	0.05928	129.52- 215.86	147.30
2.368	2.370	-0.002	116566	0.05000	0.05494	229.50- 382.50	234.70
2.503	2.503	0.000	60707	0.05000	0.05863	111.95- 186.59	122.23
2.918	2.919	-0.001	51809	0.05000	0.05890	94.80- 158.00	104.31
Average of Peak Amounts =					0.05855		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.186	4.187	-0.001	194115	0.05000	0.05694	80.00- 120.00	100.00
4.484	4.482	0.002	355841	0.05000	0.05661	140.86- 234.77	183.31
4.769	4.769	0.000	350281	0.05000	0.05758	150.86- 251.44	180.45
5.483	5.482	0.001	455448	0.05000	0.05376	174.29- 290.48	234.63
5.768	5.768	0.000	227197	0.05000	0.05435	93.68- 156.14	117.04
Average of Peak Amounts =					0.05585		

```
$  12 DCB                                        CAS #: 2051-24-3
6.927    6.927    0.000          205825 0.00250  0.002721
------------------------------------------------------------------------------
```

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\026F2601.D
Date : 07-MAR-2008 19:09
Client ID:
Instrument: a2hp10.i
Sample Info: 1660,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\027F2701.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 19:24
Operator : Inst ID: a2hp10.i
Smp Info : 1660,,1,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 27 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.291	1.292	-0.001	383696	0.00500	0.005217		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.608	1.608	0.000	89384	0.10000	0.1098	80.00- 120.00	100.00
1.930	1.930	0.000	133377	0.10000	0.1081	129.52- 215.86	149.22
2.368	2.370	-0.002	220030	0.10000	0.1037	229.50- 382.50	246.16
2.503	2.503	0.000	109259	0.10000	0.1055	111.95- 186.59	122.24
2.920	2.919	0.001	94162	0.10000	0.1070	94.80- 158.00	105.35
Average of Peak Amounts =					0.10682		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.186	4.187	-0.001	359226	0.10000	0.1054	80.00- 120.00	100.00
4.483	4.482	0.001	661711	0.10000	0.1053	140.86- 234.77	184.20
4.770	4.769	0.001	637548	0.10000	0.1048	150.86- 251.44	177.48
5.482	5.482	0.000	864824	0.10000	0.1021	174.29- 290.48	240.75
5.768	5.768	0.000	428371	0.10000	0.1025	93.68- 156.14	119.25
Average of Peak Amounts =					0.10402		

```
$  12 DCB                                        CAS #: 2051-24-3
6.927    6.927    0.000          395054 0.00500  0.005223
------------------------------------------------------------------------------
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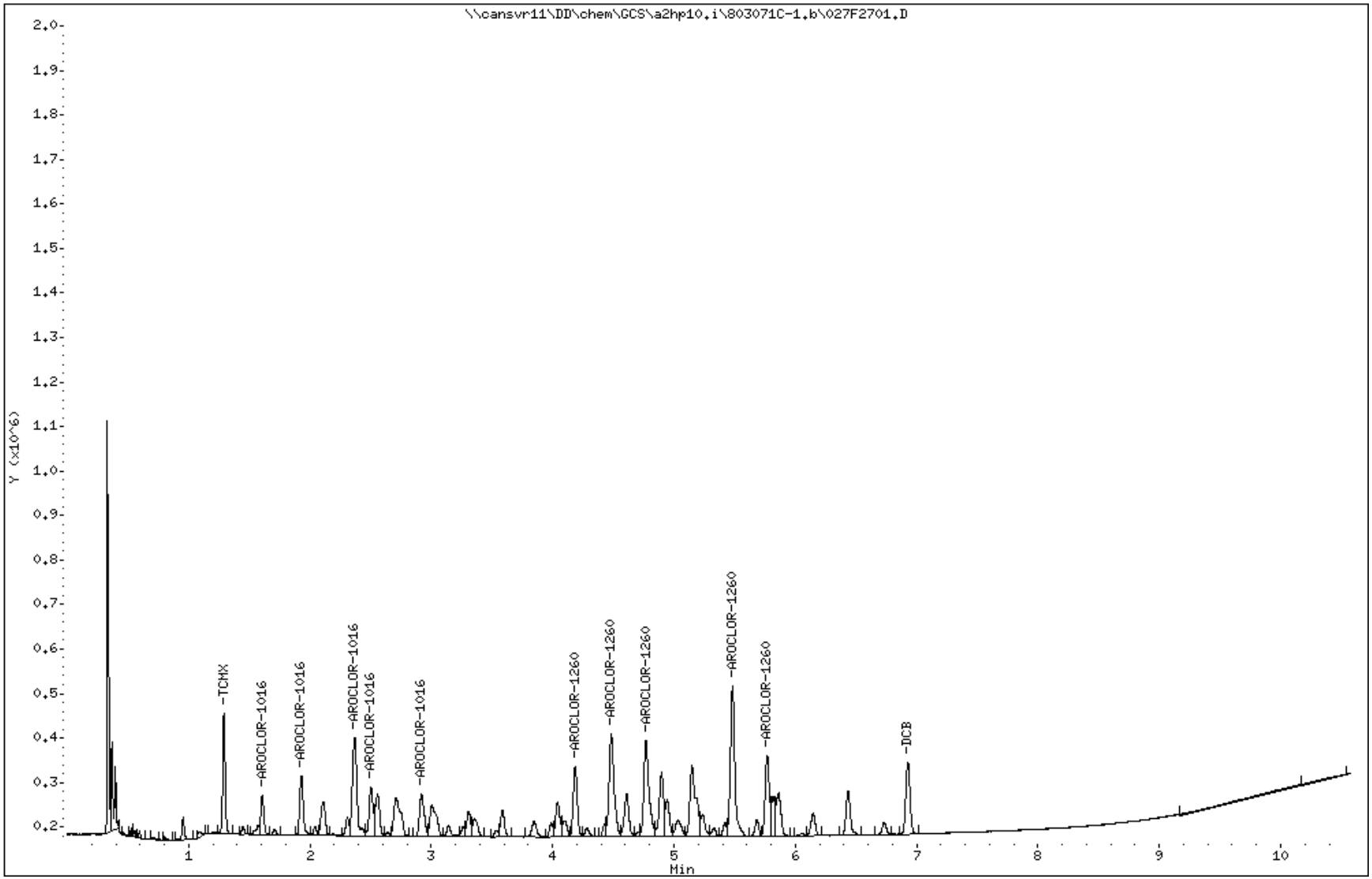
Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\027F2701.D
Date : 07-MAR-2008 19:24
Client ID:
Instrument: a2hp10.i
Sample Info: 1660,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\028F2801.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 19:40
Operator : Inst ID: a2hp10.i
Smp Info : 1660,,1,3
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 28 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

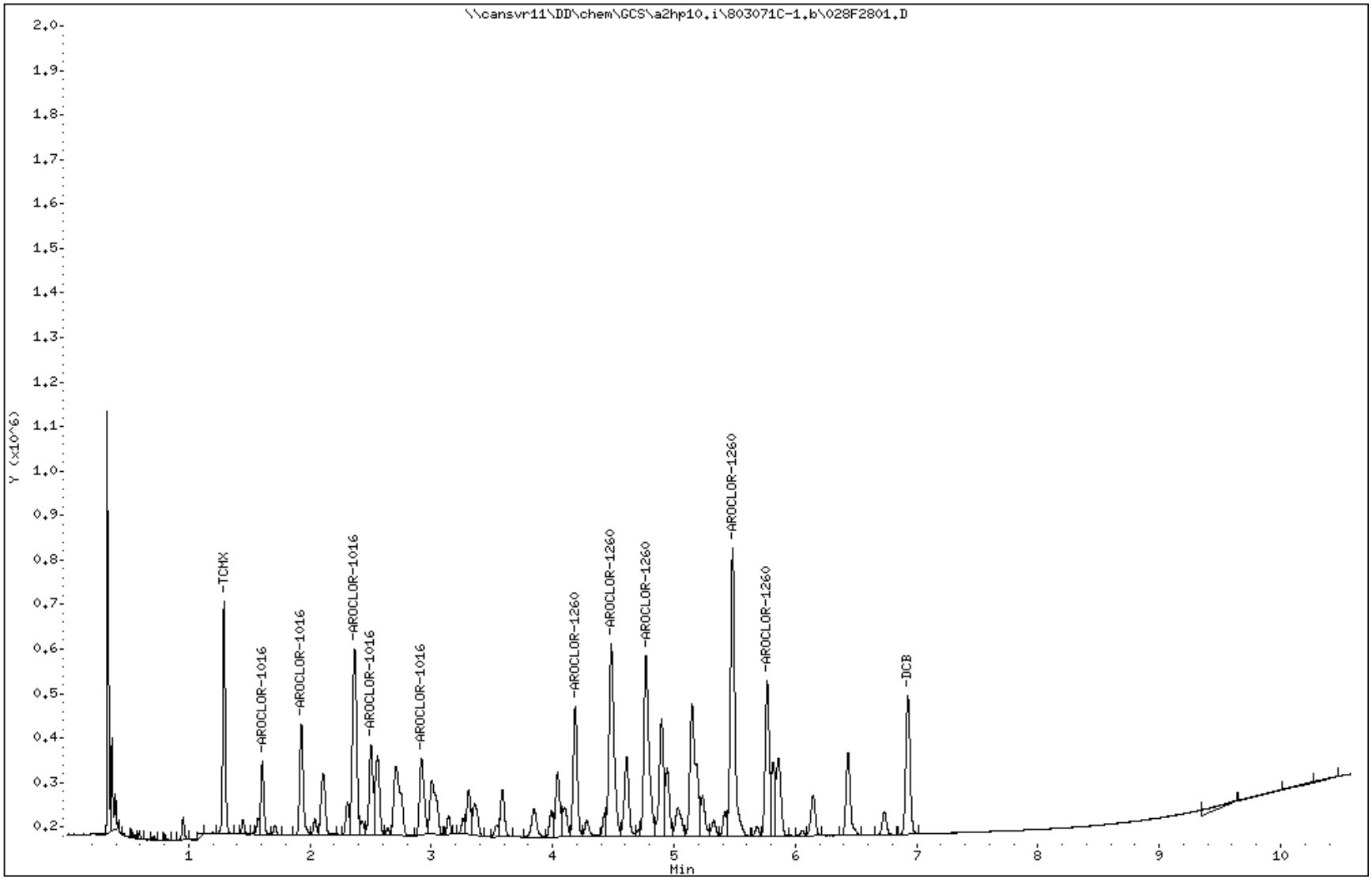
Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.291	1.292	-0.001	741905	0.01000	0.01009		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.607	1.608	-0.001	164305	0.20000	0.2019	80.00- 120.00	100.00
1.930	1.930	0.000	249117	0.20000	0.2019	129.52- 215.86	151.62
2.370	2.370	0.000	416929	0.20000	0.1965	229.50- 382.50	253.75
2.502	2.503	-0.001	202710	0.20000	0.1958	111.95- 186.59	123.37
2.918	2.919	-0.001	171268	0.20000	0.1947	94.80- 158.00	104.24
Average of Peak Amounts =					0.19816		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.186	4.187	-0.001	679719	0.20000	0.1994	80.00- 120.00	100.00
4.484	4.482	0.002	1240791	0.20000	0.1974	140.86- 234.77	182.54
4.769	4.769	0.000	1187562	0.20000	0.1952	150.86- 251.44	174.71
5.483	5.482	0.001	1654989	0.20000	0.1953	174.29- 290.48	243.48
5.768	5.768	0.000	813357	0.20000	0.1946	93.68- 156.14	119.66
Average of Peak Amounts =					0.19638		

```
$  12 DCB                                        CAS #: 2051-24-3
6.928    6.927    0.001          756347 0.01000  0.010000
-------------------------------------------------------------------------------
```

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\028F2801.D
Date : 07-MAR-2008 19:40
Client ID:
Instrument: a2hp10.i
Sample Info: 1660,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\029F2901.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 19:55
Operator : Inst ID: a2hp10.i
Smp Info : 1660,,1,4
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 29 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

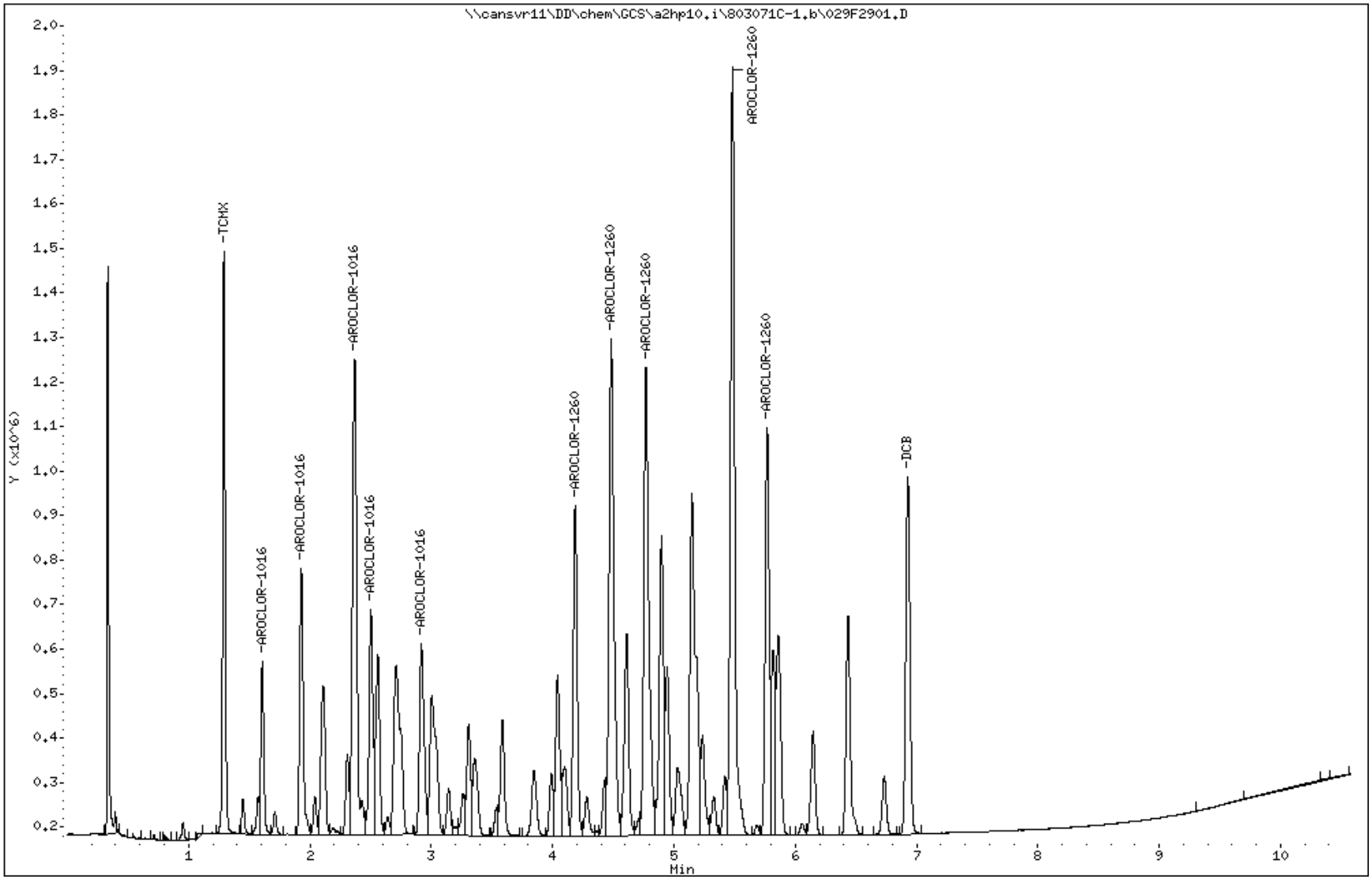
Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.292	1.292	0.000	1856384	0.02500	0.02524		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.607	1.608	-0.001	389406	0.50000	0.4784	80.00- 120.00	100.00
1.929	1.930	-0.001	598934	0.50000	0.4853	129.52- 215.86	153.81
2.369	2.370	-0.001	1068429	0.50000	0.5036	229.50- 382.50	274.37
2.502	2.503	-0.001	505618	0.50000	0.4883	111.95- 186.59	129.84
2.919	2.919	0.000	427638	0.50000	0.4861	94.80- 158.00	109.82
Average of Peak Amounts =					0.48834		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.187	4.187	0.000	1683310	0.50000	0.4938	80.00- 120.00	100.00
4.484	4.482	0.002	3125759	0.50000	0.4972	140.86- 234.77	185.69
4.769	4.769	0.000	3009277	0.50000	0.4947	150.86- 251.44	178.77
5.482	5.482	0.000	4334568	0.50000	0.5116	174.29- 290.48	257.50
5.768	5.768	0.000	2123896	0.50000	0.5081	93.68- 156.14	126.17
Average of Peak Amounts =					0.50108		

```
$  12 DCB                                        CAS #: 2051-24-3
6.927    6.927    0.000         1923070 0.02500  0.02542
-------------------------------------------------------------------------------
```

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\029F2901.D
Date : 07-MAR-2008 19:55
Client ID:
Instrument: a2hp10.i
Sample Info: 1660,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\030F3001.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 20:10
Operator : Inst ID: a2hp10.i
Smp Info : 1660,,1,5
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 30 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

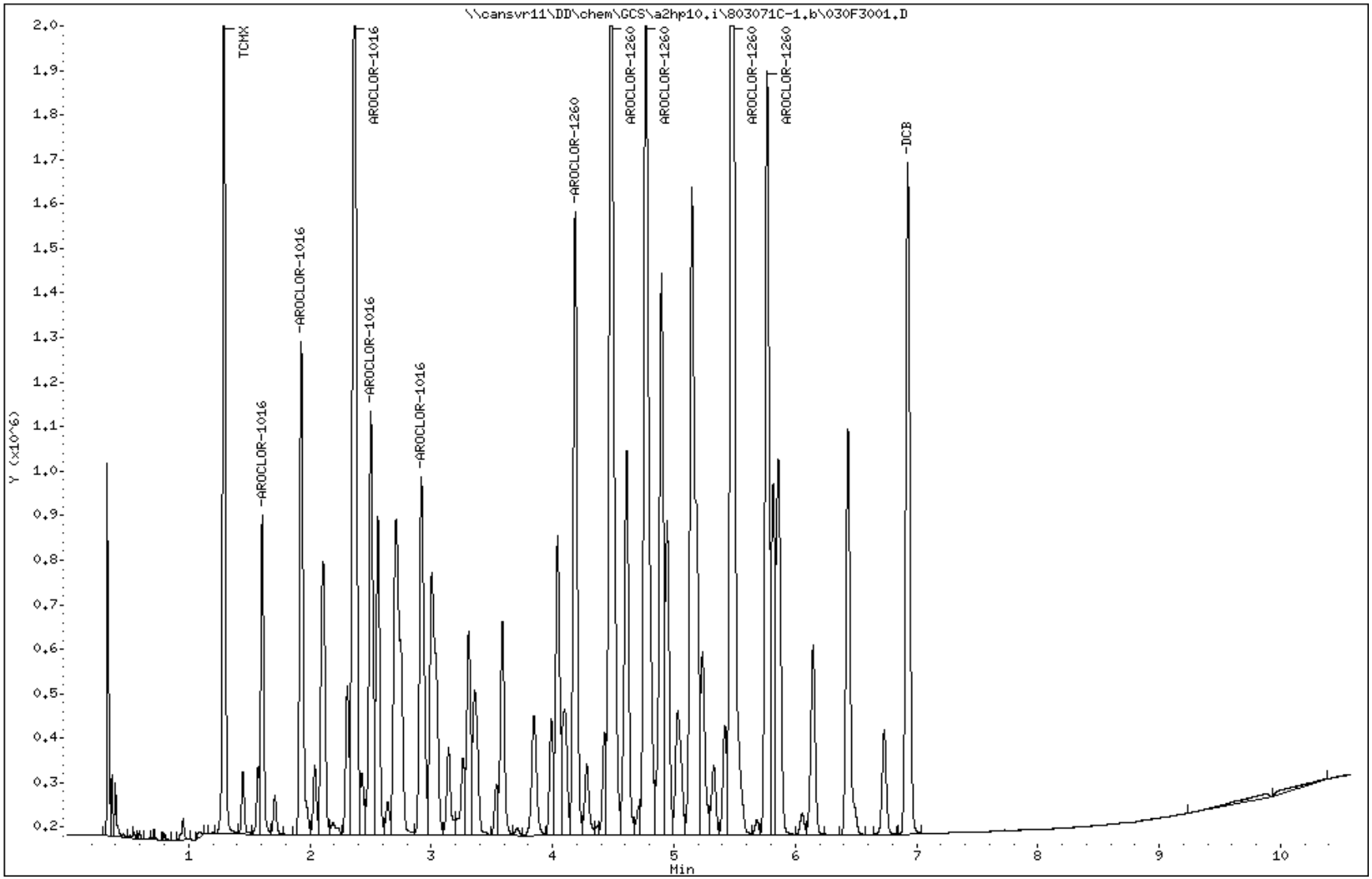
Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.291	1.292	-0.001	3514289	0.05000	0.04778		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.607	1.608	-0.001	716228	1.00000	0.8800	80.00- 120.00	100.00
1.928	1.930	-0.002	1107573	1.00000	0.8975	129.52- 215.86	154.64
2.368	2.370	-0.002	2022187	1.00000	0.9531	229.50- 382.50	282.34
2.502	2.503	-0.001	953334	1.00000	0.9206	111.95- 186.59	133.10
2.918	2.919	-0.001	803270	1.00000	0.9131	94.80- 158.00	112.15
Average of Peak Amounts =					0.91286		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.186	4.187	-0.001	3134031	1.00000	0.9193	80.00- 120.00	100.00
4.483	4.482	0.001	5818237	1.00000	0.9256	140.86- 234.77	185.65
4.768	4.769	-0.001	5618569	1.00000	0.9236	150.86- 251.44	179.28
5.482	5.482	0.000	8123235	1.00000	0.9588	174.29- 290.48	259.19
5.768	5.768	0.000	3989110	1.00000	0.9542	93.68- 156.14	127.28
Average of Peak Amounts =					0.93630		

```
$  12 DCB                                        CAS #: 2051-24-3
6.927    6.927    0.000         3565603 0.05000  0.04714
------------------------------------------------------------------------------
```

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\030F3001.D
Date : 07-MAR-2008 20:10
Client ID:
Instrument: a2hp10.i
Sample Info: 1660,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\031F3101.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 20:25
Operator : Inst ID: a2hp10.i
Smp Info : 1660,,1,6
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 31 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

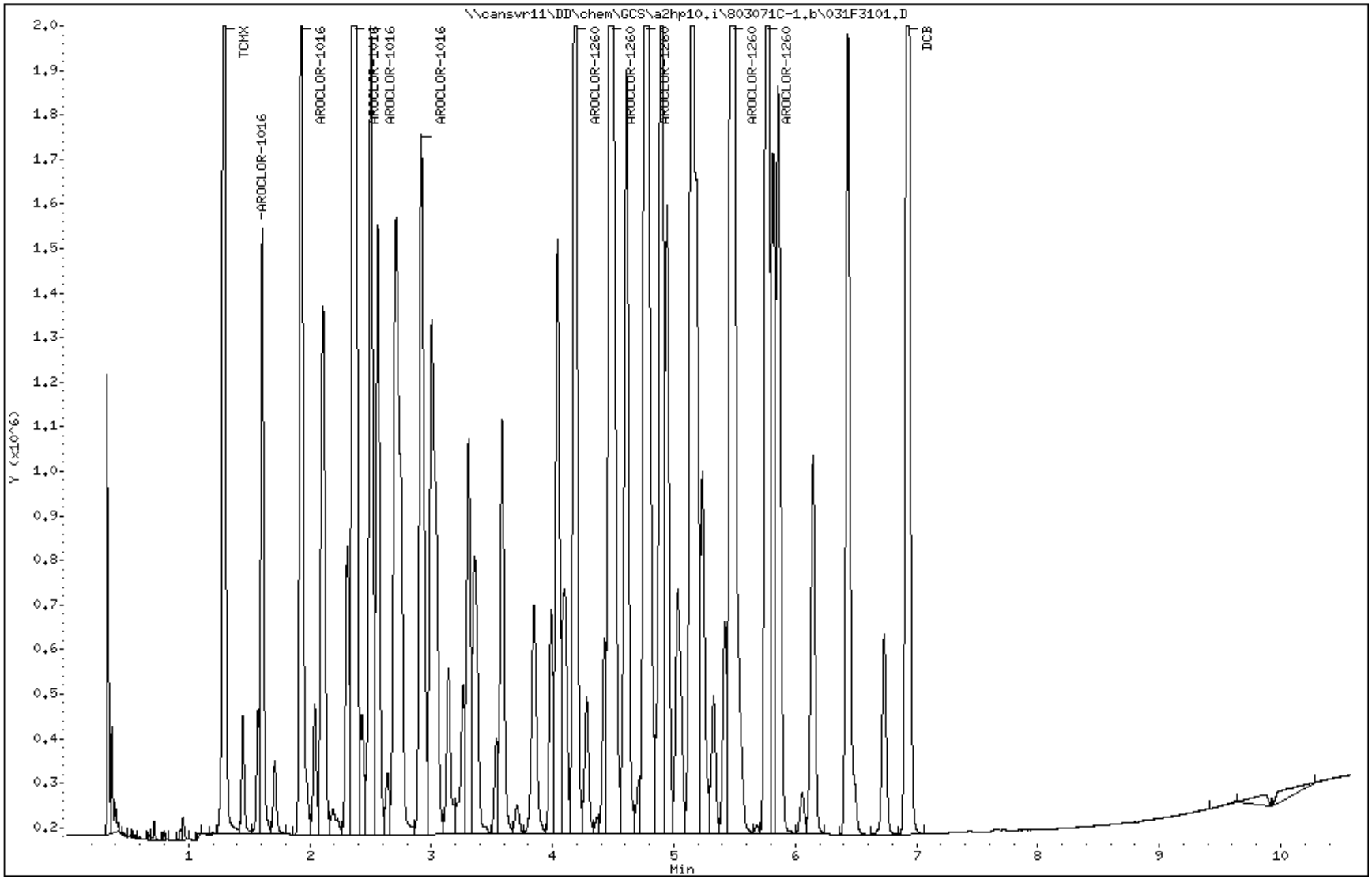
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.292	1.292	0.000	6819567	0.10000	0.09273		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.607	1.608	-0.001	1359185	2.00000	1.670	80.00- 120.00	100.00
1.929	1.930	-0.001	2112636	2.00000	1.712	129.52- 215.86	155.43
2.369	2.370	-0.001	3908636	2.00000	1.842	229.50- 382.50	287.57
2.501	2.503	-0.002	1856202	2.00000	1.792	111.95- 186.59	136.57
2.918	2.919	-0.001	1570786	2.00000	1.786	94.80- 158.00	115.57
Average of Peak Amounts =					1.76040		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.185	4.187	-0.002	6162806	2.00000	1.808	80.00- 120.00	100.00
4.482	4.482	0.000	11419008	2.00000	1.816	140.86- 234.77	185.29
4.768	4.769	-0.001	11089970	2.00000	1.823	150.86- 251.44	179.95
5.482	5.482	0.000	16018006	2.00000	1.891	174.29- 290.48	259.91
5.767	5.768	-0.001	7901715	2.00000	1.890	93.68- 156.14	128.22
Average of Peak Amounts =					1.84560		

```
$  12 DCB                                        CAS #: 2051-24-3
6.927    6.927    0.000         6861383 0.10000  0.09071
-------------------------------------------------------------------------------
```

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\031F3101.D
Date : 07-MAR-2008 20:25
Client ID:
Sample Info: 1660,,1,6
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp10.i
Operator:
Column diameter: 0.53



TestAmerica North Canton

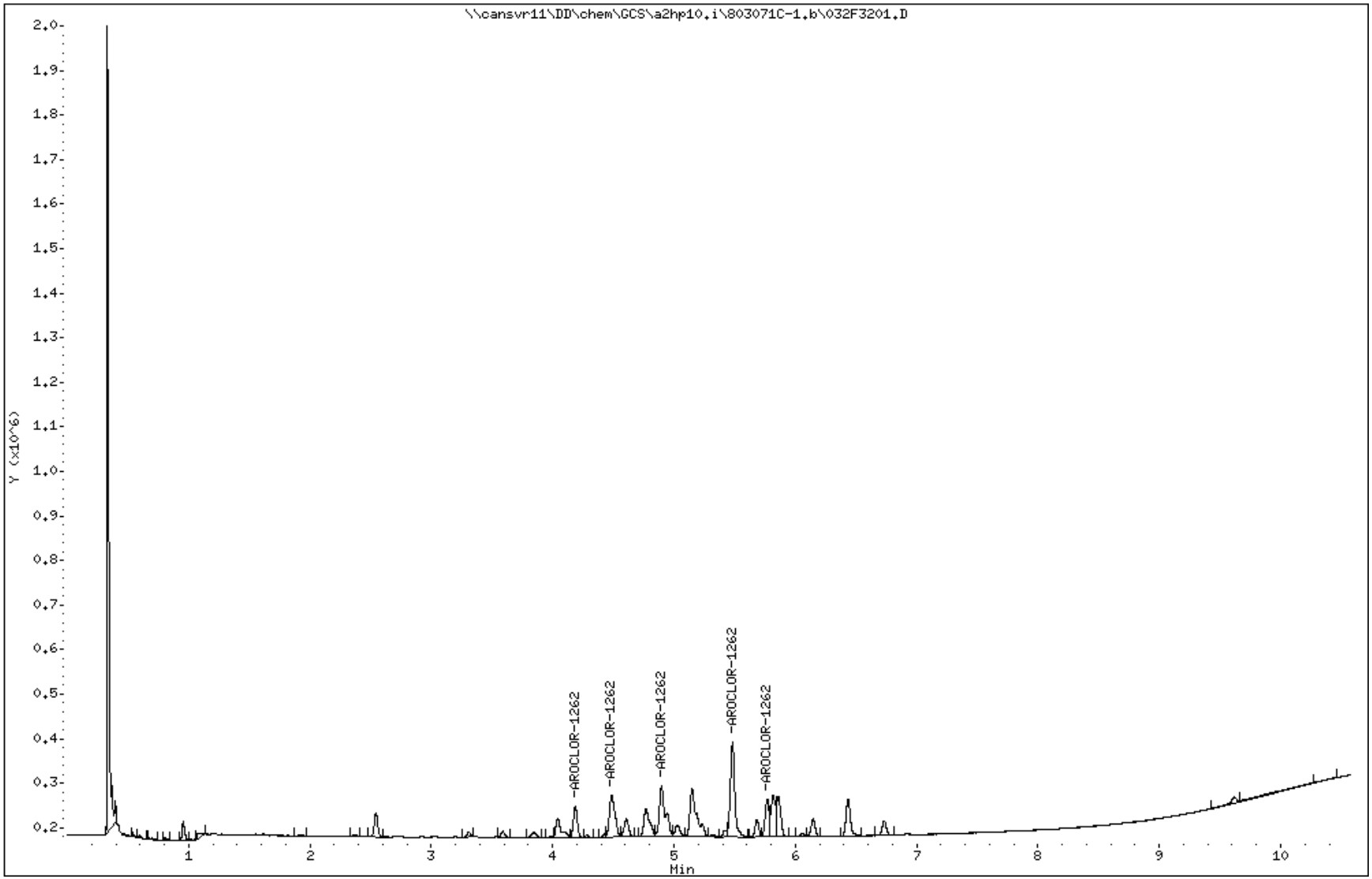
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\032F3201.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 20:41
Operator : Inst ID: a2hp10.i
Smp Info : 1262,,1,1
Misc Info : 13-AR1262.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 32 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
9 AROCLOR-1262					CAS #: 37324-23-5			
4.187	4.186	0.001	70162	0.05000	0.05757	75.00- 125.00		100.00
4.486	4.484	0.002	93896	0.05000	0.05568	104.60- 174.33		133.83
4.896	4.897	-0.001	111865	0.05000	0.05457	129.24- 215.40		159.44
5.482	5.481	0.001	211772	0.05000	0.05290	257.21- 428.69		301.83
5.768	5.767	0.001	83598	0.05000	0.05505	94.23- 157.06		119.15
		Average of Peak Amounts =			0.05515			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\032F3201.D
Date : 07-MAR-2008 20:41
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

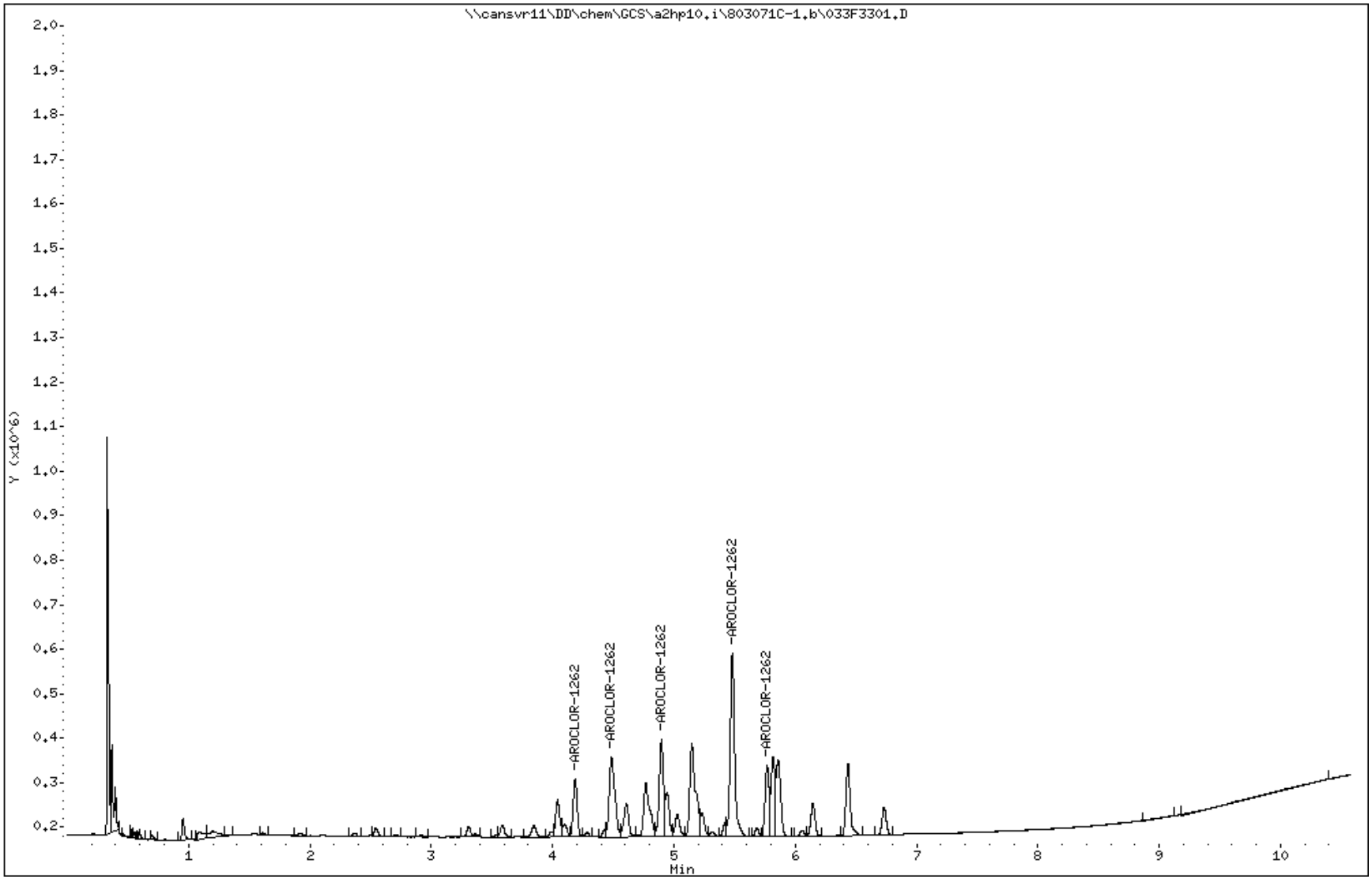
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\033F3301.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 20:56
Operator : Inst ID: a2hp10.i
Smp Info : 1262,,1,2
Misc Info : 13-AR1262.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 33 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
9 AROCLOR-1262					CAS #: 37324-23-5		
4.186	4.186	0.000	129030	0.10000	0.1059	75.00- 125.00	100.00
4.485	4.484	0.001	179598	0.10000	0.1065	104.60- 174.33	139.19
4.897	4.897	0.000	218871	0.10000	0.1068	129.24- 215.40	169.63
5.482	5.481	0.001	411819	0.10000	0.1029	257.21- 428.69	319.17
5.768	5.767	0.001	158788	0.10000	0.1046	94.23- 157.06	123.06
Average of Peak Amounts =					0.10534		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\033F3301.D
Date : 07-MAR-2008 20:56
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

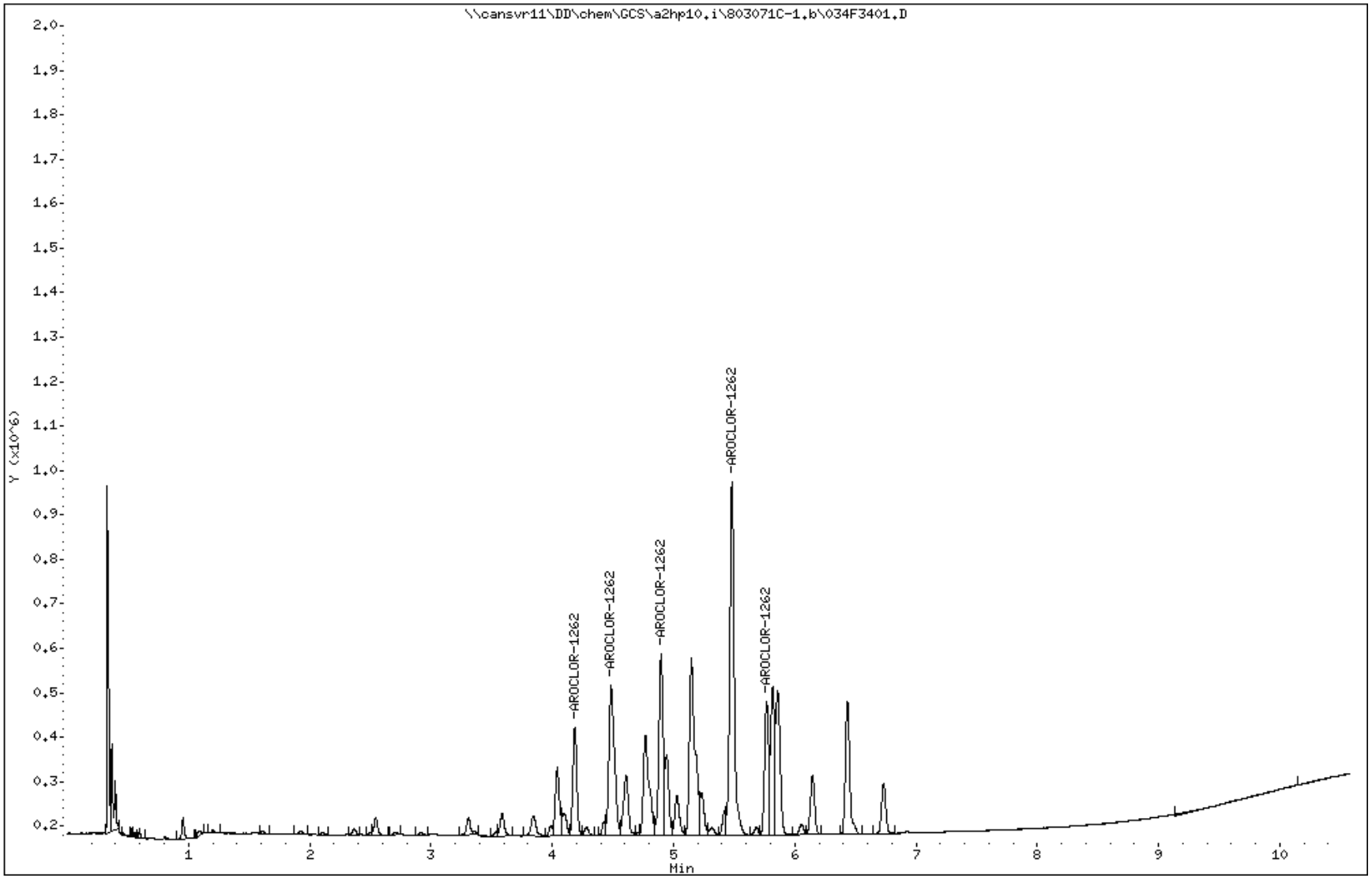
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\034F3401.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 21:11
Operator : Inst ID: a2hp10.i
Smp Info : 1262,,1,3
Misc Info : 13-AR1262.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 34 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
9 AROCLOR-1262					CAS #: 37324-23-5		
4.186	4.186	0.000	243504	0.20000	0.1998	75.00- 125.00	100.00
4.485	4.484	0.001	336732	0.20000	0.1997	104.60- 174.33	138.29
4.897	4.897	0.000	407895	0.20000	0.1990	129.24- 215.40	167.51
5.481	5.481	0.000	793688	0.20000	0.1983	257.21- 428.69	325.94
5.767	5.767	0.000	299637	0.20000	0.1973	94.23- 157.06	123.05
Average of Peak Amounts =					0.19882		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\034F3401.D
Date : 07-MAR-2008 21:11
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

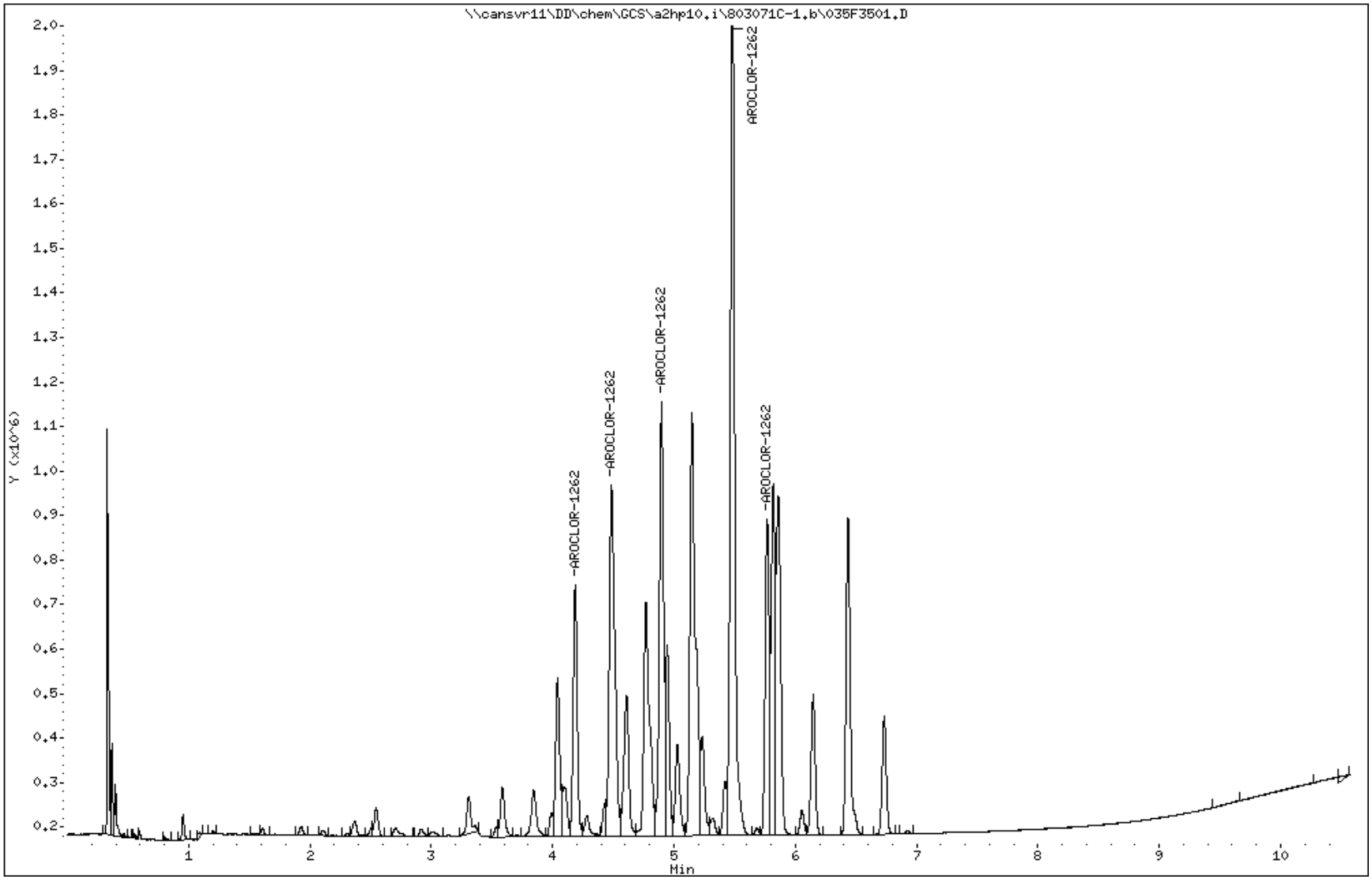
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\035F3501.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 21:26
Operator : Inst ID: a2hp10.i
Smp Info : 1262,,1,4
Misc Info : 13-AR1262.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 35 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
9 AROCLOR-1262					CAS #: 37324-23-5		
4.186	4.186	0.000	565986	0.50000	0.4644	75.00- 125.00	100.00
4.486	4.484	0.002	789353	0.50000	0.4681	104.60- 174.33	139.47
4.897	4.897	0.000	975301	0.50000	0.4757	129.24- 215.40	172.32
5.482	5.481	0.001	1941051	0.50000	0.4849	257.21- 428.69	342.95
5.768	5.767	0.001	711132	0.50000	0.4683	94.23- 157.06	125.64
Average of Peak Amounts =					0.47228		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\035F3501.D
Date : 07-MAR-2008 21:26
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

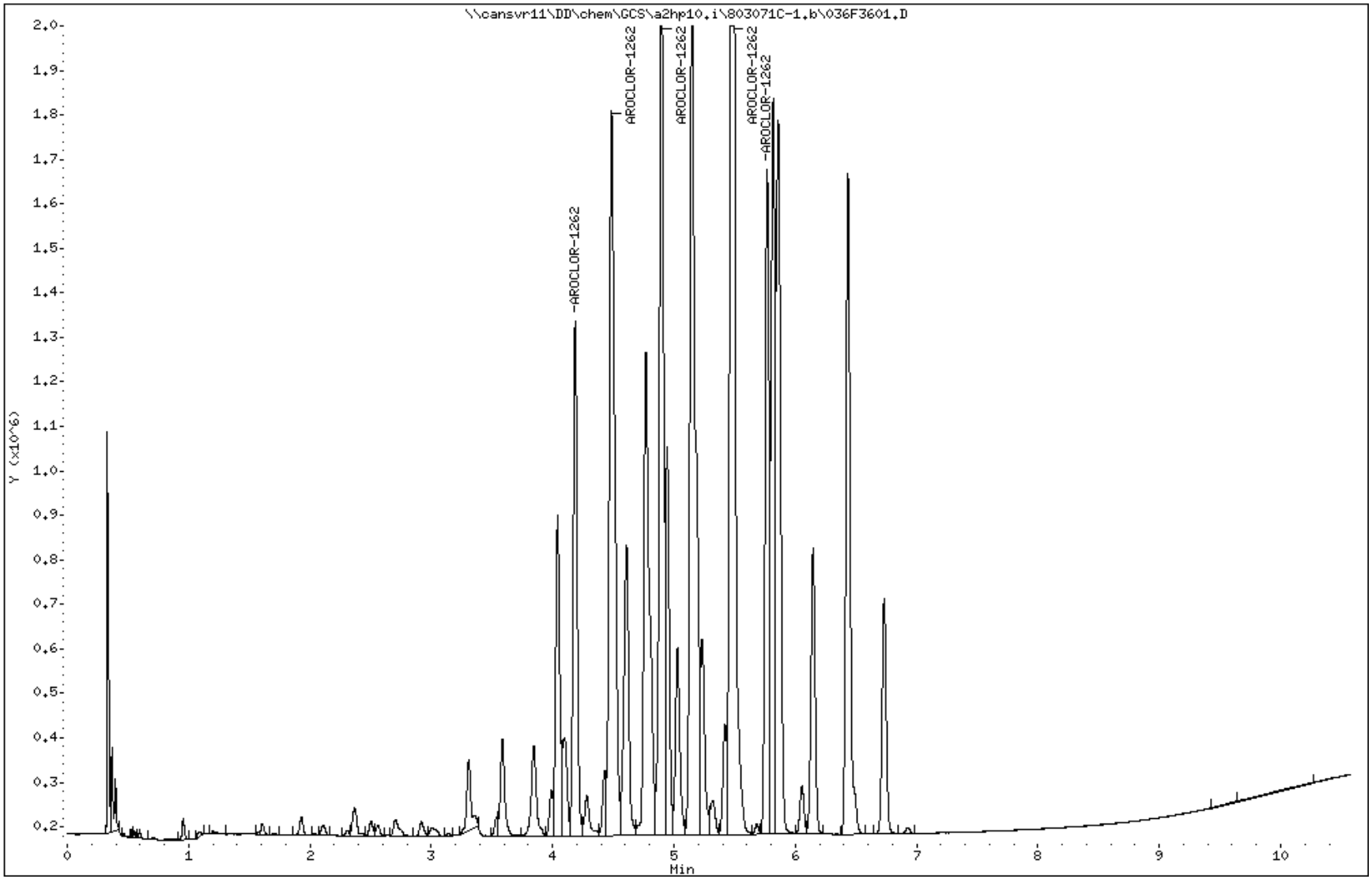
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\036F3601.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 21:42
Operator : Inst ID: a2hp10.i
Smp Info : 1262,,1,5
Misc Info : 13-AR1262.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 36 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
9 AROCLOR-1262					CAS #: 37324-23-5			
4.185	4.186	-0.001	1158299	1.00000	0.9504	75.00-	125.00	100.00
4.485	4.484	0.001	1628750	1.00000	0.9659	104.60-	174.33	140.62
4.897	4.897	0.000	1978557	1.00000	0.9651	129.24-	215.40	170.82
5.481	5.481	0.000	4028246	1.00000	1.006	257.21-	428.69	347.77
5.768	5.767	0.001	1493686	1.00000	0.9836	94.23-	157.06	128.96
Average of Peak Amounts =					0.97420			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\036F3601.D
Date : 07-MAR-2008 21:42
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

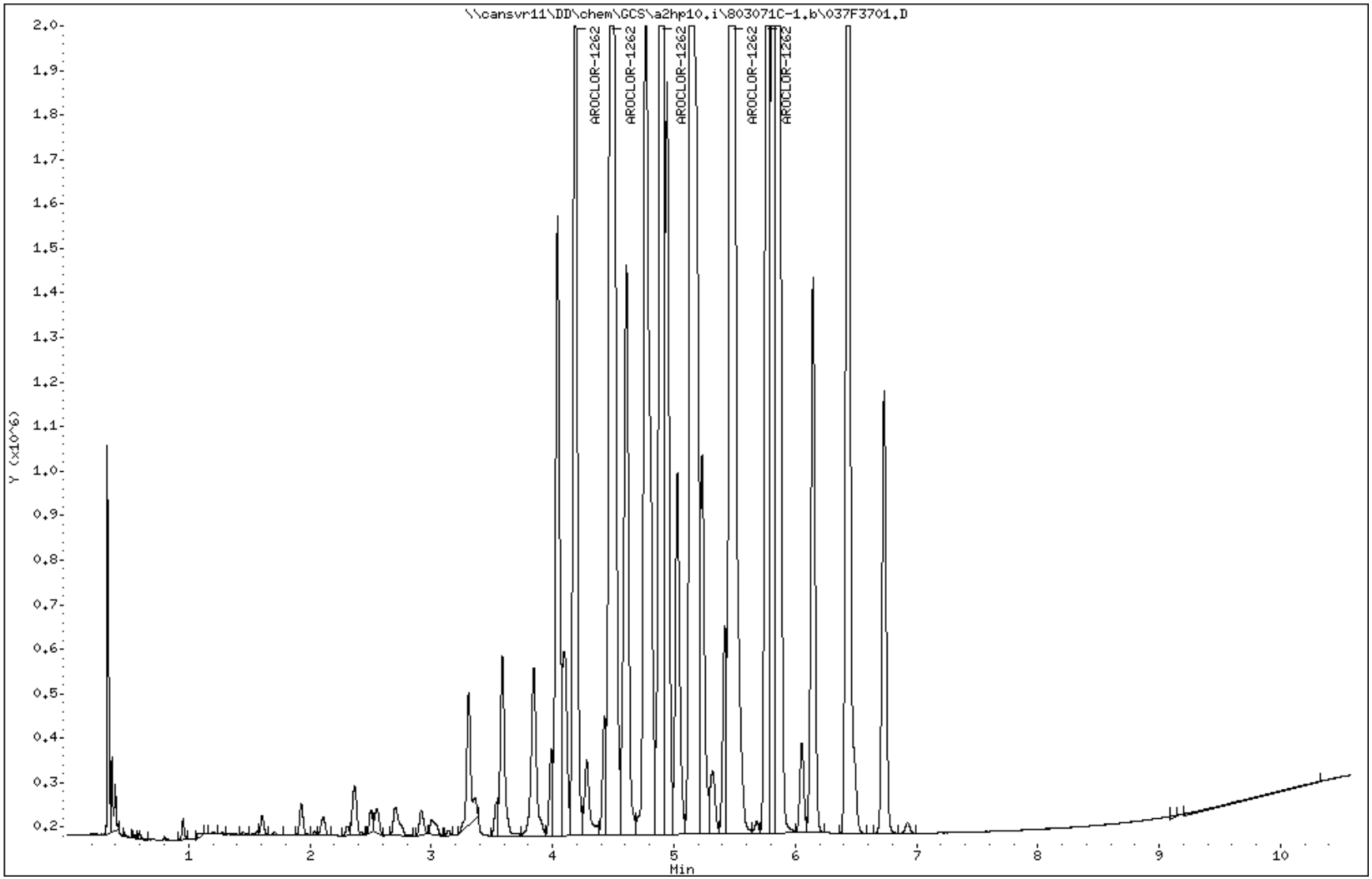
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\037F3701.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 21:57
Operator : Inst ID: a2hp10.i
Smp Info : 1262,,1,6
Misc Info : 13-AR1262.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 37 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
9 AROCLOR-1262					CAS #: 37324-23-5			
4.186	4.186	0.000	2222831	2.00000	1.824	75.00- 125.00		100.00
4.484	4.484	0.000	3104999	2.00000	1.841	104.60- 174.33		139.69
4.897	4.897	0.000	3811553	2.00000	1.859	129.24- 215.40		171.47
5.481	5.481	0.000	7573596	2.00000	1.892	257.21- 428.69		340.72
5.767	5.767	0.000	2875160	2.00000	1.893	94.23- 157.06		129.35
		Average of Peak Amounts =			1.86180			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\037F3701.D
Date : 07-MAR-2008 21:57
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



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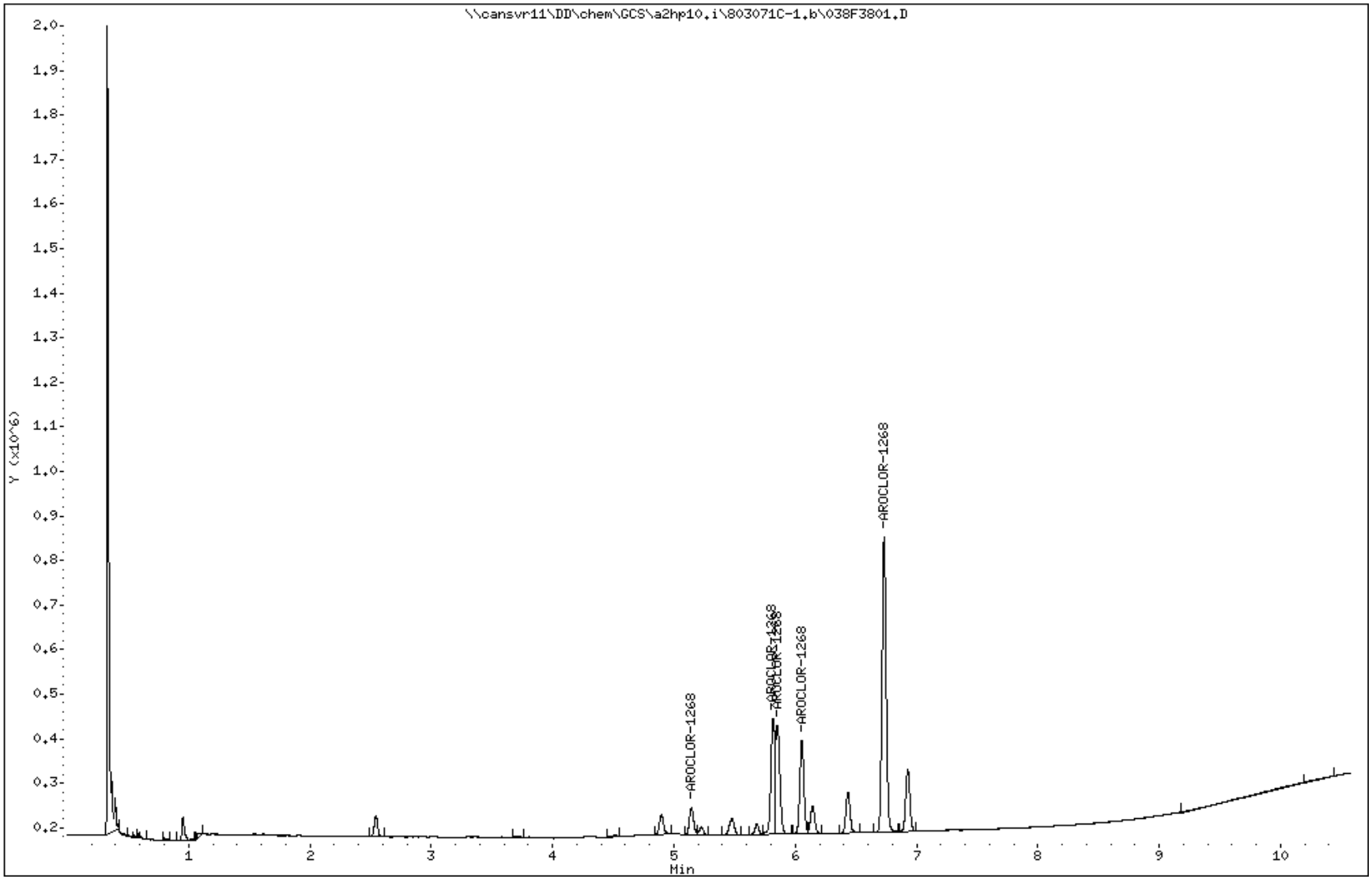
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\038F3801.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 22:12
Operator : Inst ID: a2hp10.i
Smp Info : 1268,,1,1
Misc Info : 14-AR1268.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 38 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 14-AR1268.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
10 AROCLOR-1268					CAS #: 11100-14-4			
5.143	5.143	0.000	60619	0.05000	0.05768	75.00- 125.00		100.00
5.816	5.818	-0.002	258817	0.05000	0.05374	359.98- 599.97		426.96
5.853	5.852	0.001	245203	0.05000	0.05350	342.51- 570.85		404.50
6.054	6.054	0.000	208584	0.05000	0.05412	288.03- 480.05		344.09
6.732	6.731	0.001	663852	0.05000	0.05441	935.18-1558.63		1095.12
		Average of Peak Amounts =			0.05469			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\038F3801.D
Date : 07-MAR-2008 22:12
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



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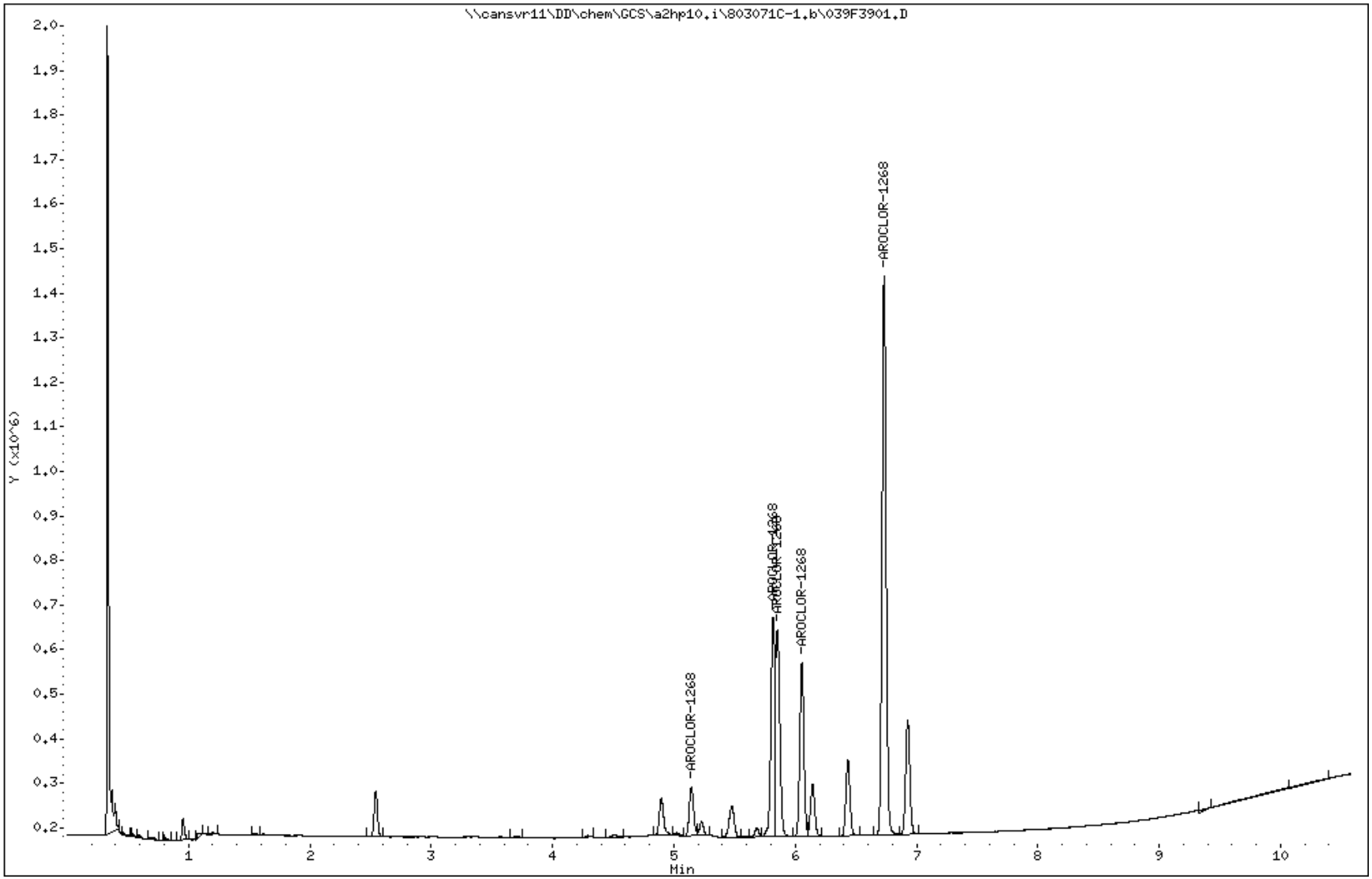
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\039F3901.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 22:27
Operator : Inst ID: a2hp10.i
Smp Info : 1268,,1,2
Misc Info : 14-AR1268.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 39 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 14-AR1268.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
10 AROCLOR-1268					CAS #: 11100-14-4		
5.144	5.143	0.001	110170	0.10000	0.1048	75.00- 125.00	100.00
5.817	5.818	-0.001	491513	0.10000	0.1021	359.98- 599.97	446.14
5.854	5.852	0.002	464476	0.10000	0.1013	342.51- 570.85	421.60
6.054	6.054	0.000	388800	0.10000	0.1009	288.03- 480.05	352.91
6.733	6.731	0.002	1256536	0.10000	0.1030	935.18-1558.63	1140.54
		Average of Peak Amounts =			0.10242		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\039F3901.D
Date : 07-MAR-2008 22:27
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



TestAmerica North Canton

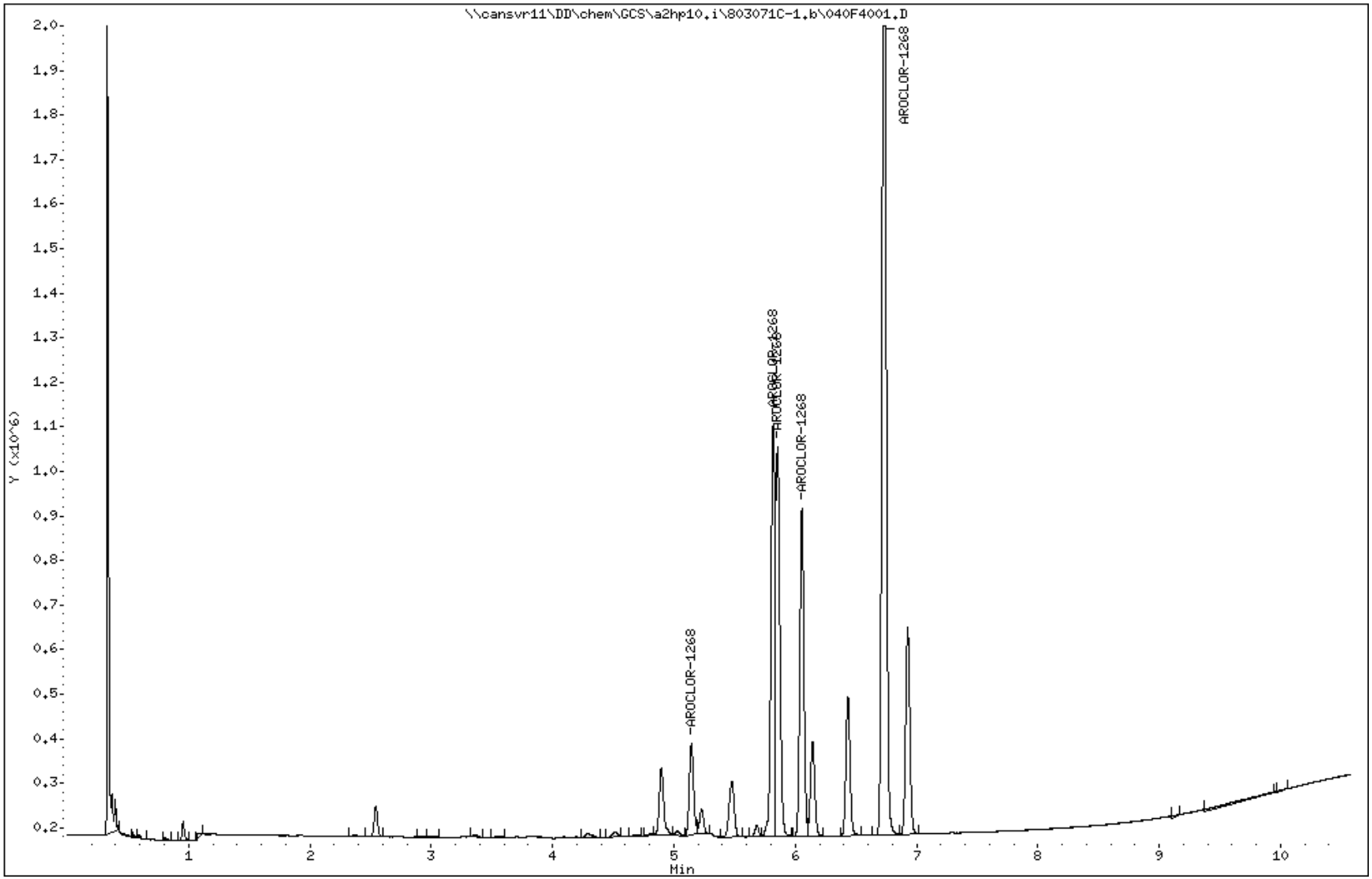
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\040F4001.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 22:43
Operator : Inst ID: a2hp10.i
Smp Info : 1268,,1,3
Misc Info : 14-AR1268.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 40 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 14-AR1268.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
10 AROCLOR-1268					CAS #: 11100-14-4		
5.143	5.143	0.000	204188	0.20000	0.1943	75.00- 125.00	100.00
5.818	5.818	0.000	925694	0.20000	0.1922	359.98- 599.97	453.35
5.854	5.852	0.002	874259	0.20000	0.1908	342.51- 570.85	428.16
6.054	6.054	0.000	734695	0.20000	0.1906	288.03- 480.05	359.81
6.732	6.731	0.001	2349699	0.20000	0.1926	935.18-1558.63	1150.75
		Average of Peak Amounts =			0.19210		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\040F4001.D
Date : 07-MAR-2008 22:43
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



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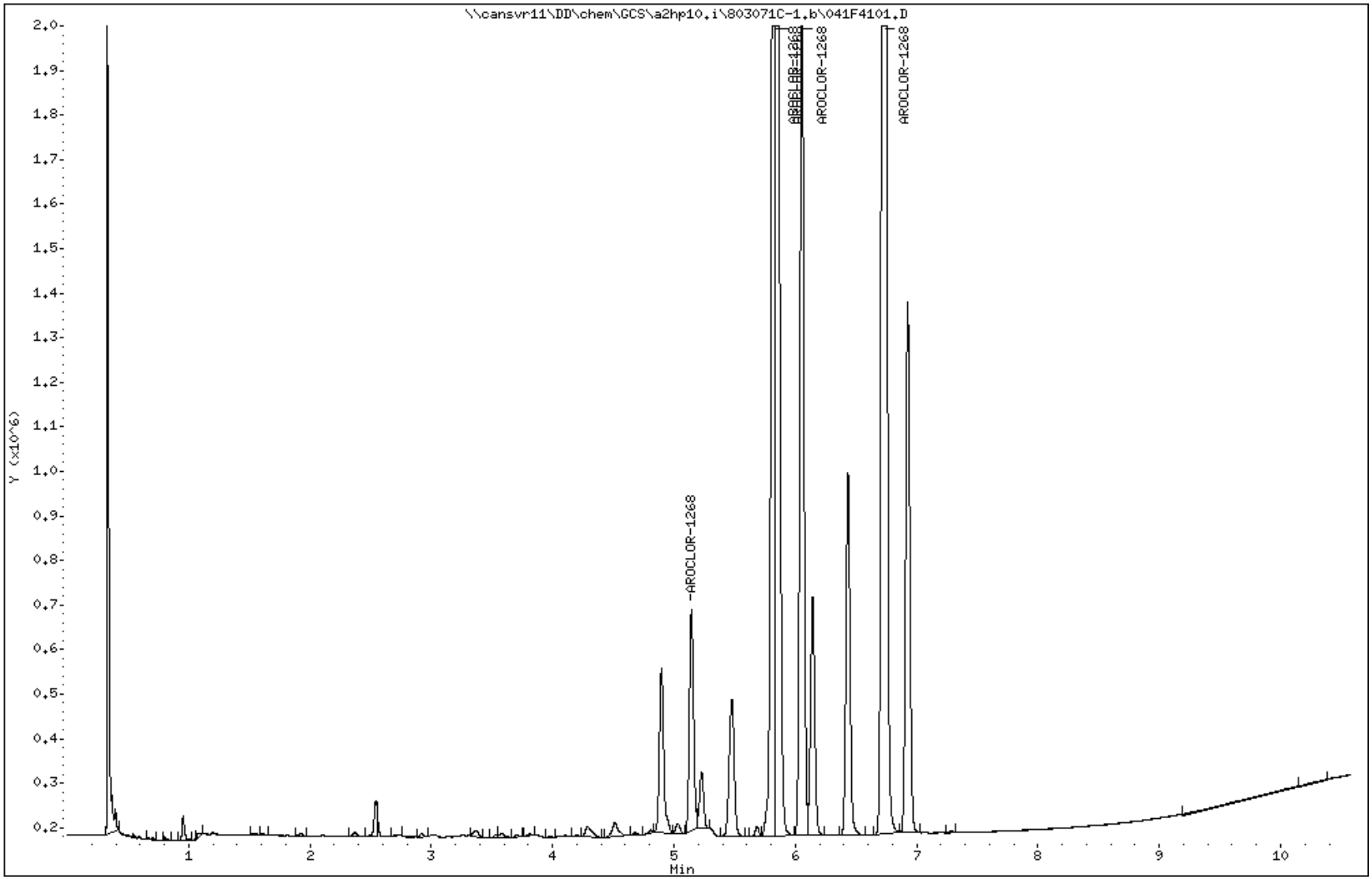
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\041F4101.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 22:58
Operator : Inst ID: a2hp10.i
Smp Info : 1268,,1,4
Misc Info : 14-AR1268.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 41 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 14-AR1268.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
10 AROCLOR-1268					CAS #: 11100-14-4			
5.144	5.143	0.001	498824	0.50000	0.4746	75.00-	125.00	100.00
5.817	5.818	-0.001	2394245	0.50000	0.4972	359.98-	599.97	479.98
5.852	5.852	0.000	2278026	0.50000	0.4970	342.51-	570.85	456.68
6.054	6.054	0.000	1915696	0.50000	0.4971	288.03-	480.05	384.04
6.731	6.731	0.000	6219867	0.50000	0.5098	935.18-	1558.63	1246.91
Average of Peak Amounts =					0.49514			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\041F4101.D
Date : 07-MAR-2008 22:58
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



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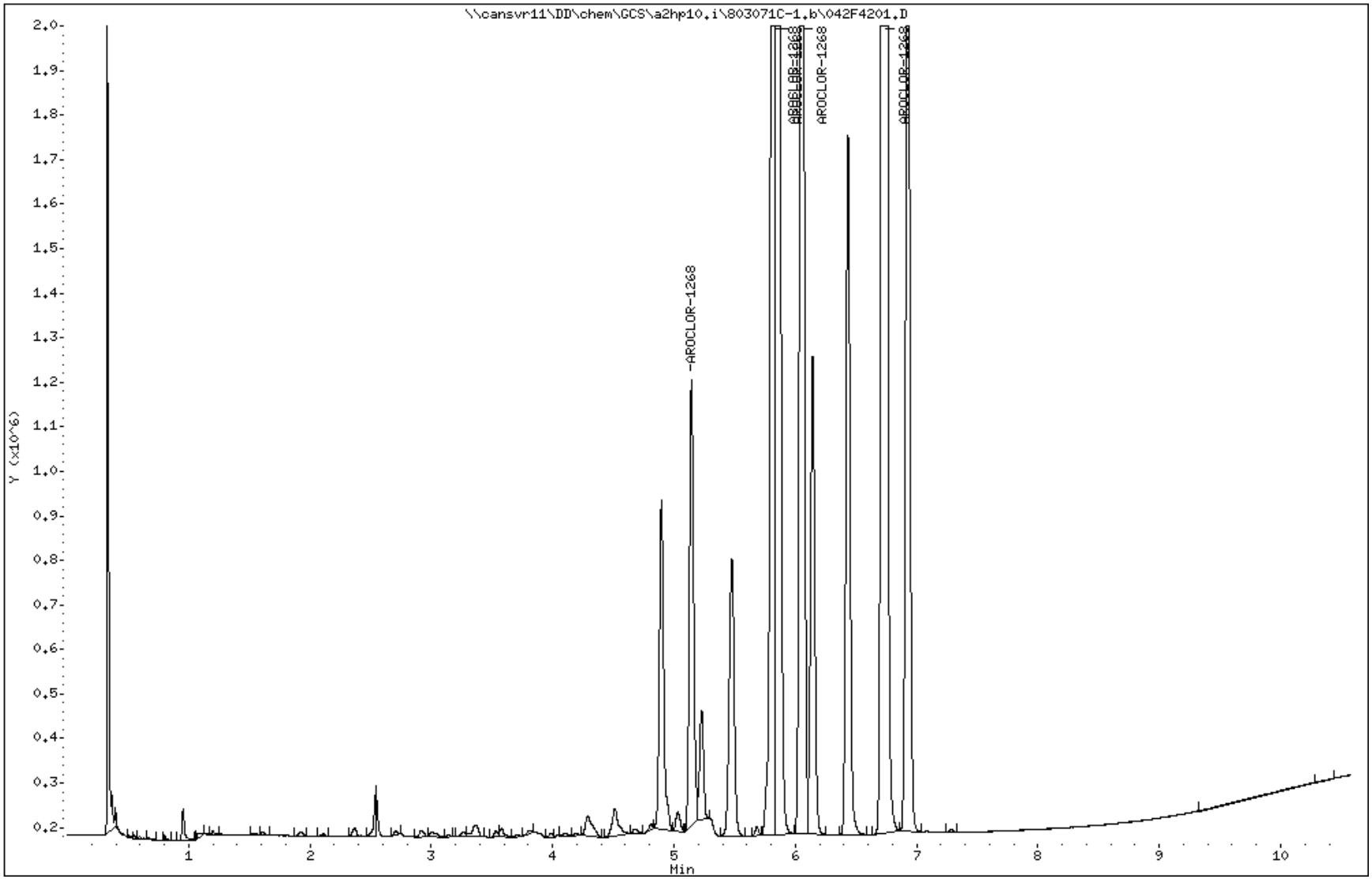
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\042F4201.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 23:13
Operator : Inst ID: a2hp10.i
Smp Info : 1268,,1,5
Misc Info : 14-AR1268.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 42 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 14-AR1268.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
10 AROCLOR-1268					CAS #: 11100-14-4			
5.143	5.143	0.000	999651	1.00000	0.9512	75.00- 125.00		100.00
5.817	5.818	-0.001	4778991	1.00000	0.9924	359.98- 599.97		478.07
5.852	5.852	0.000	4577903	1.00000	0.9989	342.51- 570.85		457.95
6.054	6.054	0.000	3831779	1.00000	0.9943	288.03- 480.05		383.31
6.731	6.731	0.000	11682750	1.00000	0.9575	935.18-1558.63		1168.68
		Average of Peak Amounts =			0.97886			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\042F4201.D
Date : 07-MAR-2008 23:13
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



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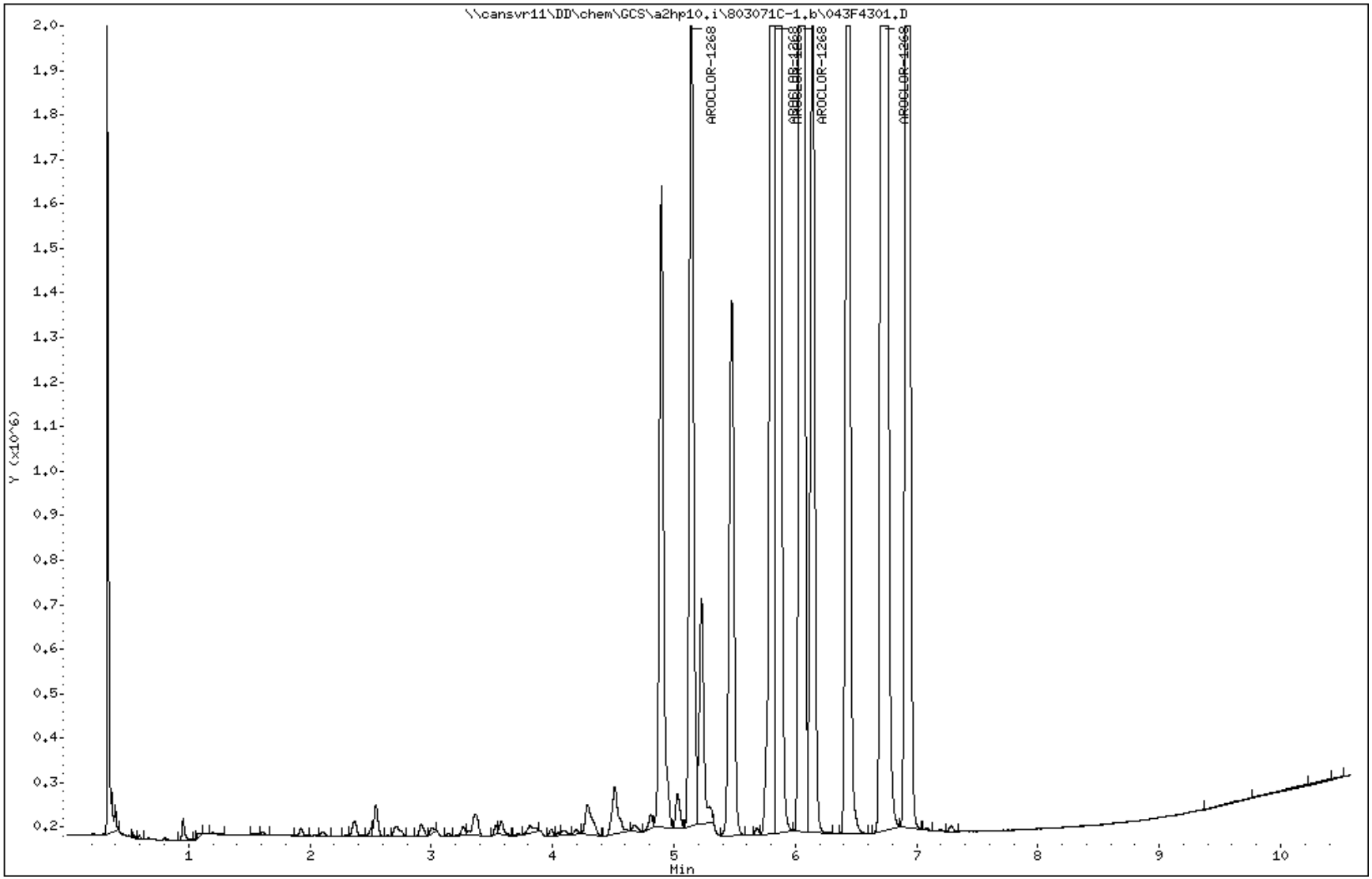
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\043F4301.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 23:28
Operator : Inst ID: a2hp10.i
Smp Info : 1268,,1,6
Misc Info : 14-AR1268.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 43 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 14-AR1268.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
10 AROCLOR-1268					CAS #: 11100-14-4			
5.143	5.143	0.000	1946573	2.00000	1.852	75.00- 125.00		100.00
5.818	5.818	0.000	9212011	2.00000	1.913	359.98- 599.97		473.24
5.852	5.852	0.000	8888604	2.00000	1.939	342.51- 570.85		456.63
6.054	6.054	0.000	7452322	2.00000	1.934	288.03- 480.05		382.84
6.731	6.731	0.000	22994708	2.00000	1.884	935.18-1558.63		1181.29
		Average of Peak Amounts =			1.90440			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\043F4301.D
Date : 07-MAR-2008 23:28
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\044F4401.D
Report Date: 10-Mar-2008 10:21

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 07-MAR-2008 23:44
Lab File ID: 044F4401.D Init. Cal. Date(s): 29-JAN-2008 07-MAR-2008
Analysis Type: wipe Init. Cal. Times: 01:45 23:28
Lab Sample ID: ICV Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
3 AROCLOR-1016(1)	813890	620080	0.010	23.81276	15.00000	Averaged	<-
(2)	1234049	1070828	0.010	13.22646	15.00000	Averaged	
(3)	2121605	1897436	0.010	10.56600	15.00000	Averaged	
(4)	1035492	925583	0.010	10.61417	15.00000	Averaged	
(5)	879680	783802	0.010	10.89917	15.00000	Averaged	
8 AROCLOR-1260(1)	3409202	3205837	0.010	5.96517	15.00000	Averaged	
(2)	6286191	6021200	0.010	4.21544	15.00000	Averaged	
(3)	6083503	6448570	0.010	-6.00093	15.00000	Averaged	
(4)	8472253	7449779	0.010	12.06850	15.00000	Averaged	
(5)	4180366	4004396	0.010	4.20943	15.00000	Averaged	

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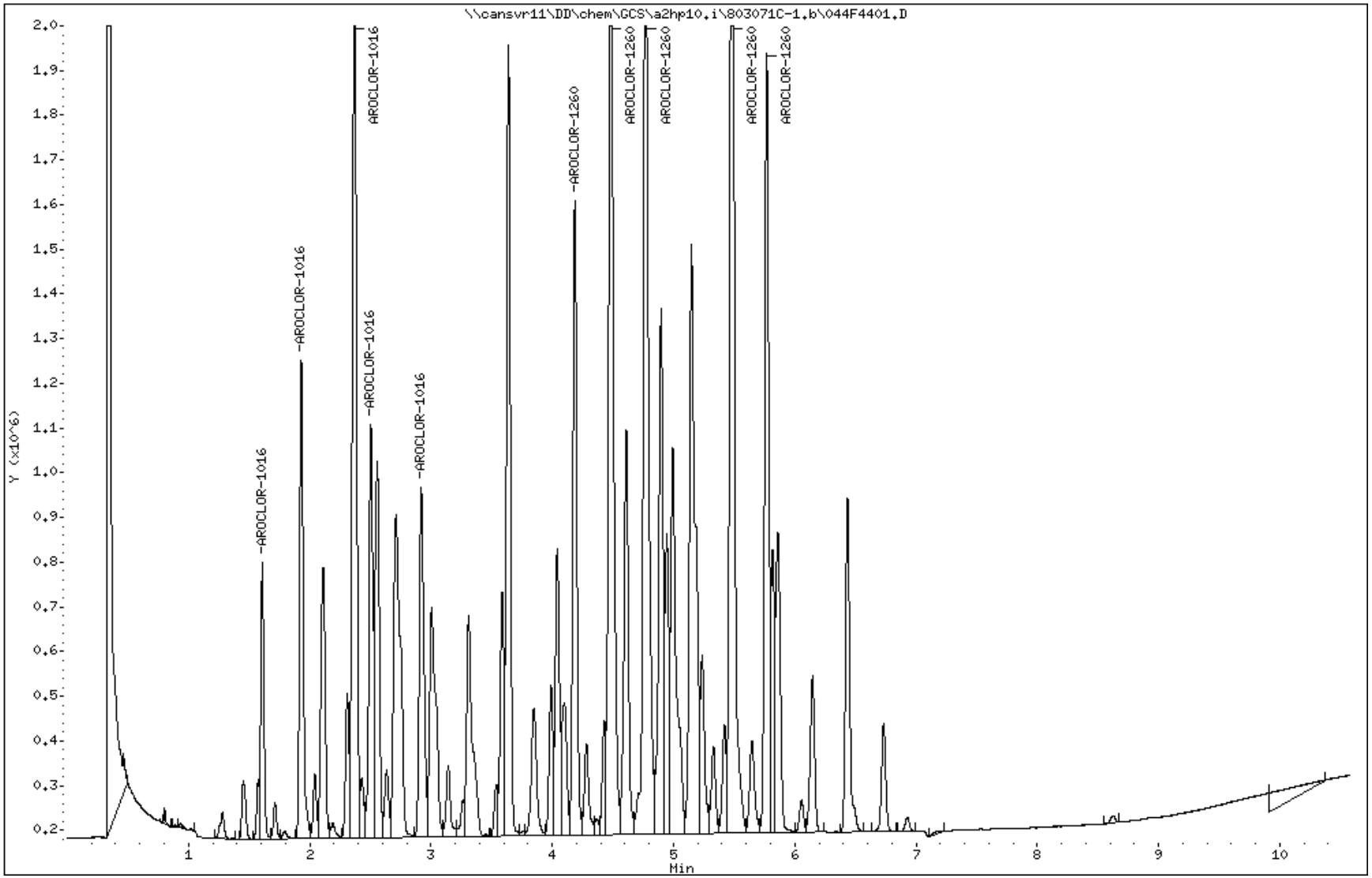
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\044F4401.D
Lab Smp Id: ICV
Inj Date : 07-MAR-2008 23:44
Operator : Inst ID: a2hp10.i
Smp Info : ICV,,2
Misc Info :
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m
Meth Date : 10-Mar-2008 10:22 serraa Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 44 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 6-AR1660.sub
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
3 AROCLOR-1016						CAS #: 12674-11-2		
1.608	1.608	0.000	620080	0.50000	0.7619	80.00- 120.00		100.00
1.930	1.930	0.000	1070828	0.50000	0.8677	129.52- 215.86		172.69
2.370	2.370	0.000	1897436	0.50000	0.8943	229.50- 382.50		306.00
2.503	2.503	0.000	925583	0.50000	0.8938	111.95- 186.59		149.27
2.919	2.919	0.000	783802	0.50000	0.8910	94.80- 158.00		126.40
		Average of Peak Amounts =			0.86174			
8 AROCLOR-1260						CAS #: 11096-82-5		
4.187	4.187	0.000	3205837	0.50000	0.9403	80.00- 120.00		100.00
4.482	4.482	0.000	6021200	0.50000	0.9578	140.86- 234.77		187.82
4.769	4.769	0.000	6448570	0.50000	1.060	150.86- 251.44		201.15
5.482	5.482	0.000	7449779	0.50000	0.8793	174.29- 290.48		232.38
5.768	5.768	0.000	4004396	0.50000	0.9579	93.68- 156.14		124.91
		Average of Peak Amounts =			0.95906			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\044F4401.D
Date : 07-MAR-2008 23:44
Client ID:
Instrument: a2hp10.i
Sample Info: ICV,,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



Report Date: 10-Mar-2008 10:43

Calibration History

Method : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Start Cal Date: 29-JAN-2008 01:45
End Cal Date : 07-MAR-2008 23:28
Last Cal Level: 6
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.05000		
07-MAR-2008 22:12	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\038F3801.D
07-MAR-2008 20:41	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\032F3201.D
07-MAR-2008 19:09	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\026F2601.D
07-MAR-2008 17:37	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\020F2001.D
07-MAR-2008 16:06	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\014F1401.D
07-MAR-2008 14:34	2-AR1242	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\008F0801.D
07-MAR-2008 13:02	1-AR1232	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\002F0201.D

Injection Date	Sublist	Calibration File
Cal Level: 2 , Cal Amount: 0.10000		
07-MAR-2008 22:27	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\039F3901.D
07-MAR-2008 20:56	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\033F3301.D
07-MAR-2008 19:24	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\027F2701.D
07-MAR-2008 17:53	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\021F2101.D
07-MAR-2008 16:21	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\015F1501.D
07-MAR-2008 14:49	2-AR1242	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\009F0901.D
07-MAR-2008 13:18	1-AR1232	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\003F0301.D

Injection Date	Sublist	Calibration File
Cal Level: 3 , Cal Amount: 0.20000		
07-MAR-2008 22:43	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\040F4001.D
07-MAR-2008 21:11	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\034F3401.D
07-MAR-2008 19:40	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\028F2801.D
07-MAR-2008 18:08	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\022F2201.D
07-MAR-2008 16:36	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\016F1601.D

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|07-MAR-2008 15:05 |2-AR1242          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\010F1001.D                |
|07-MAR-2008 13:33 |1-AR1232          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\004F0401.D                |
+------------------+------------------+----------------------------------------+

+------------------+------------------+----------------------------------------+
| Cal Level: 4 , Cal Amount: 0.50000                                            |
+================================================================================+
|07-MAR-2008 22:58 |14-AR1268         |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\041F4101.D                |
|07-MAR-2008 21:26 |13-AR1262         |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\035F3501.D                |
|07-MAR-2008 19:55 |12-AR1660TD       |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\029F2901.D                |
|07-MAR-2008 18:23 |9-AR2154          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\023F2301.D                |
|07-MAR-2008 16:52 |3-AR1248          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\017F1701.D                |
|07-MAR-2008 15:20 |2-AR1242          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\011F1101.D                |
|07-MAR-2008 13:48 |1-AR1232          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\005F0501.D                |
+------------------+------------------+----------------------------------------+

+------------------+------------------+----------------------------------------+
| Cal Level: 5 , Cal Amount: 1.00000                                            |
+================================================================================+
|07-MAR-2008 23:13 |14-AR1268         |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\042F4201.D                |
|07-MAR-2008 21:42 |13-AR1262         |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\036F3601.D                |
|07-MAR-2008 20:10 |12-AR1660TD       |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\030F3001.D                |
|07-MAR-2008 18:39 |9-AR2154          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\024F2401.D                |
|07-MAR-2008 17:07 |3-AR1248          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\018F1801.D                |
|07-MAR-2008 15:35 |2-AR1242          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\012F1201.D                |
|07-MAR-2008 14:04 |1-AR1232          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\006F0601.D                |
+------------------+------------------+----------------------------------------+

+------------------+------------------+----------------------------------------+
| Cal Level: 6 , Cal Amount: 2.00000                                            |
+================================================================================+
|07-MAR-2008 23:28 |14-AR1268         |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\043F4301.D                |
|07-MAR-2008 21:57 |13-AR1262         |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\037F3701.D                |
|07-MAR-2008 20:25 |12-AR1660TD       |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\031F3101.D                |
|07-MAR-2008 18:54 |9-AR2154          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\025F2501.D                |
|07-MAR-2008 17:22 |3-AR1248          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\019F1901.D                |
|07-MAR-2008 15:51 |2-AR1242          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\013F1301.D                |
|07-MAR-2008 14:19 |1-AR1232          |                                        |
|\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\007F0701.D                |
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```

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Report Date : 10-Mar-2008 10:35

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 29-JAN-2008 01:45
End Cal Date : 07-MAR-2008 23:28
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R
Last Edit : 10-Mar-2008 10:31 a2hp10.i
Curve Type : Average

Calibration File Names:
Level 1: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\038F3801.D
Level 2: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\039F3901.D
Level 3: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\040F4001.D
Level 4: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\041F4101.D
Level 5: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\042F4201.D
Level 6: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\043F4301.D

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	RRF	% RSD	
2 AROCLOR-1221 (1)	881640	849280	762700	686592	630209	590006	733405	16.094	
(2)	550420	545590	508365	456964	415627	379989	476159	14.747	
(3)	2048800	1923320	1730050	1578460	1468543	1384505	1688946	15.430	
3 AROCLOR-1016 (1)	1583920	1470080	1278715	1183890	1055895	989990	1260415	18.429	
(2)	2676940	2440640	2557265	2238858	1994679	1873440	2296970	13.862	
(3)	5466260	5080140	4648905	4571920	4266046	4131129	4694067	10.704	
(4)	2451840	2304490	2020335	1903942	1725574	1642717	2008150	15.890	
(5)	2150980	2018990	1836815	1733526	1674913	1613922	1838191	11.371	
4 AROCLOR-1232 (1)	845060	746640	666090	602926	568650	533449	660469	17.839	
(2)	546140	489510	443615	434428	397062	371290	447008	14.160	
(3)	1062460	950410	883440	826156	794964	776655	882347	12.315	
(4)	477140	441830	410170	369412	343757	327079	394898	14.793	
(5)	372940	344230	319515	281596	268503	258375	307526	14.817	
5 AROCLOR-1242 (1)	1216240	1163700	1091070	942688	865834	818981	1016419	16.123	
(2)	2121740	2002940	1839755	1882452	1633887	1541014	1836965	11.915	
(3)	4339520	4122480	3869985	3498100	3409458	3332738	3762047	10.981	
(4)	1781940	1866530	1665495	1470522	1388617	1329060	1583694	13.883	
(5)	1697040	1670180	1543840	1384220	1331303	1315495	1490346	11.429	
6 AROCLOR-1248 (1)	494300	473630	433045	382128	356160	332467	411955	15.862	
(2)	1158900	1061440	1007125	933964	914173	890921	994421	10.306	
(3)	1090640	994690	936660	868196	835256	826209	925275	11.176	
(4)	1434240	1278010	1158145	1085714	1064388	1030511	1175168	13.138	
(5)	639080	619230	582075	533618	505316	490683	561667	10.895	
7 AROCLOR-1254 (1)	1642780	1244940	1189585	953468	952984	923516	1151212	24.014	<-
(2)	1367280	1267620	1134040	1055230	1026904	1022580	1145609	12.440	<-
(3)	1917180	1841550	1695365	1625434	1624825	1579960	1714052	7.899	<-
(4)	1154900	1146080	1049365	1007754	1024519	1011700	1065720	6.316	<-
(5)	1536220	1530080	1390040	1355388	1349711	1330796	1415373	6.588	<-

Report Date : 10-Mar-2008 10:35

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 29-JAN-2008 01:45
End Cal Date : 07-MAR-2008 23:28
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R
Last Edit : 10-Mar-2008 10:31 a2hp10.i
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	___ RRF	% RSD	
8 AROCLOR-1260(1)	3860080	3479800	3145790	3075678	2852177	2755648	3194862	12.910	
(2)	3938120	3693940	3465555	3415470	3180857	3069222	3460527	9.283	
(3)	5371280	5498480	5073810	5032040	4694666	4557621	5037983	7.283	
(4)	6762440	6291650	5863370	6523338	6065546	5946554	6242150	5.615	
(5)	5435360	5009380	4931535	5006406	4589011	4537452	4918191	6.664	
9 AROCLOR-1262(1)	1261840	1146290	1037675	933354	931325	893790	1034046	14.005	
(2)	1935040	1798680	1650285	1525288	1553890	1480991	1657362	10.671	
(3)	1774960	1639280	1507535	1492438	1525052	1457341	1566101	7.628	
(4)	3309740	3143330	2991670	2907962	2994574	2842552	3031638	5.595	
(5)	2295720	2207160	2053615	1947116	2003901	1891779	2066548	7.534	
10 AROCLOR-1268(1)	1092040	1001320	890450	838308	827495	782638	905375	13.059	
(2)	3982920	3715350	3426645	3459054	3483048	3346206	3568871	6.656	
(3)	3445800	3234000	2999030	3120260	3095855	3017165	3152018	5.286	
(4)	3085160	2850130	2628655	2722796	2712463	2646633	2774306	6.167	
(5)	9290500	8640240	8185610	8536328	8135004	7969621	8459550	5.668	
M 11 TOTAL PCB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 1 TCMX	71575200	69621400	67374200	82630700	63101040	62285150	69431282	10.666	
$ 12 DCB	62064000	59083600	55588300	68521300	50090140	47864440	57201963	13.444	

Data File: 002F0201.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

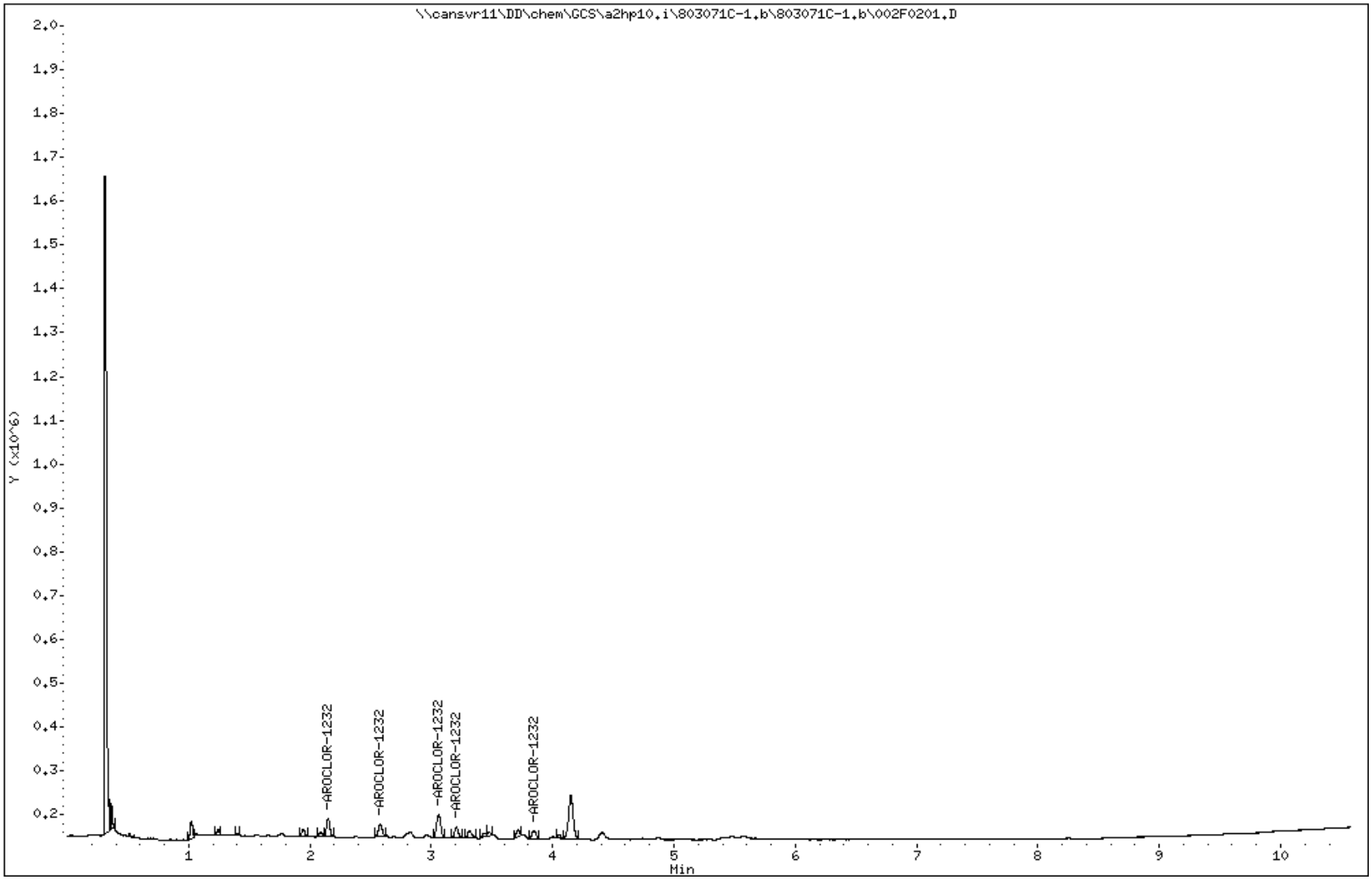
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\002F0201.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 13:02
Operator : Inst ID: a2hp10.i
Smp Info : 1232,,1,1
Misc Info : 1-AR1232.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
4 AROCLOR-1232					CAS #: 11141-16-5			
2.150	2.150	0.000	42253	0.05000	0.06397	75.00-	125.00	100.00
2.579	2.579	0.000	27307	0.05000	0.06109	54.04-	90.07	64.63
3.060	3.060	0.000	53123	0.05000	0.06021	102.77-	171.28	125.73
3.207	3.207	0.000	23857	0.05000	0.06041	45.95-	76.59	56.46
3.846	3.846	0.000	18647	0.05000	0.06064	35.03-	58.38	44.13
		Average of Peak Amounts =			0.06126			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\002F0201.D
Date : 07-MAR-2008 13:02
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 003F0301.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

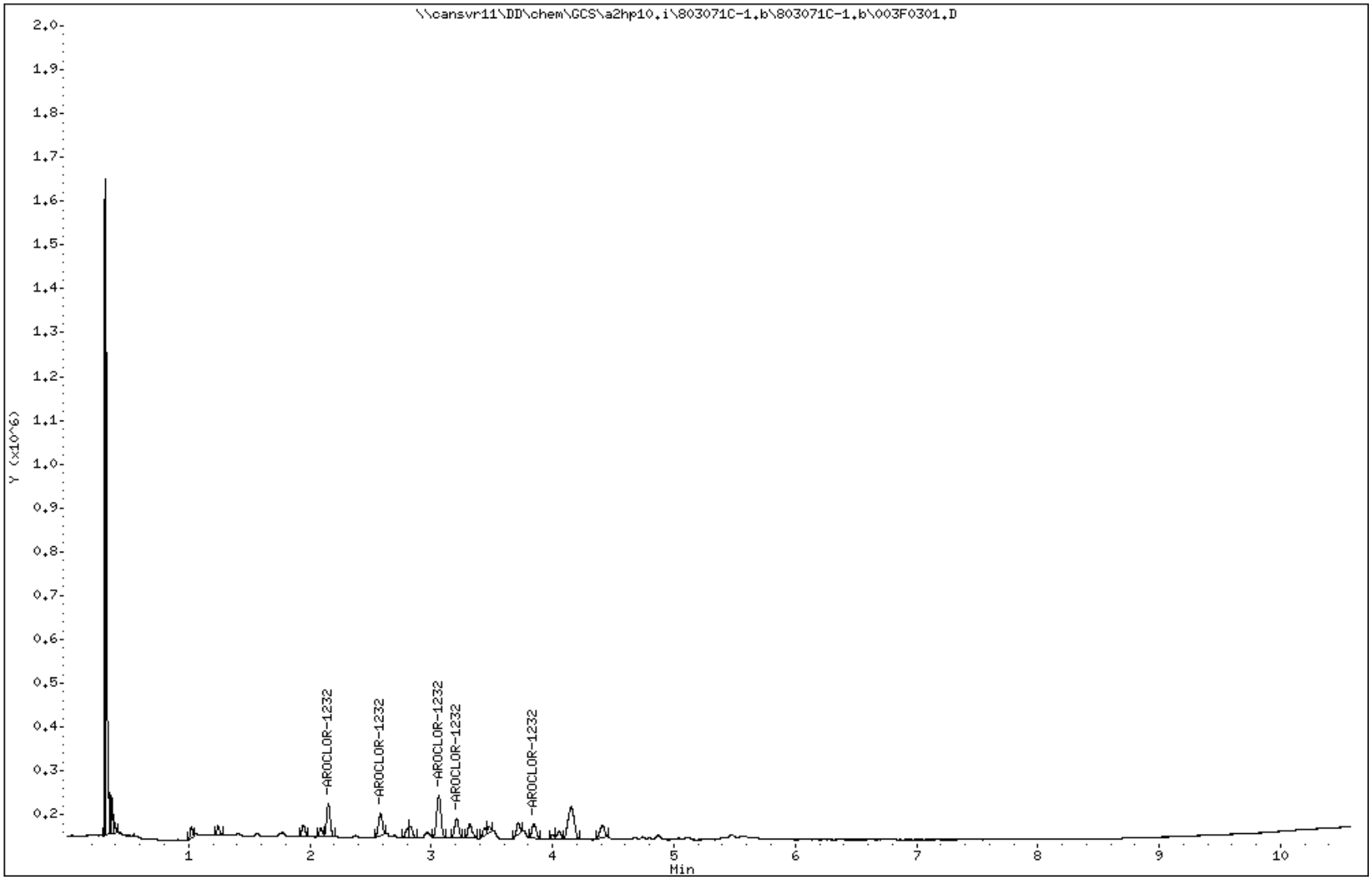
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\003F0301.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 13:18
Operator :   Inst ID: a2hp10.i
Smp Info : 1232,,1,2
Misc Info : 1-AR1232.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:12   Cal File: 038F3801.D
Als bottle: 3   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 1-AR1232.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.152	2.152	0.000	74664	0.10000	0.1130	75.00- 125.00	100.00
2.582	2.582	0.000	48951	0.10000	0.1095	54.04- 90.07	65.56
3.062	3.062	0.000	95041	0.10000	0.1077	102.77- 171.28	127.29
3.208	3.208	0.000	44183	0.10000	0.1119	45.95- 76.59	59.18
3.845	3.845	0.000	34423	0.10000	0.1119	35.03- 58.38	46.10
		Average of Peak Amounts =			0.11080		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\003F0301.D
Date : 07-MAR-2008 13:18
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 004F0401.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

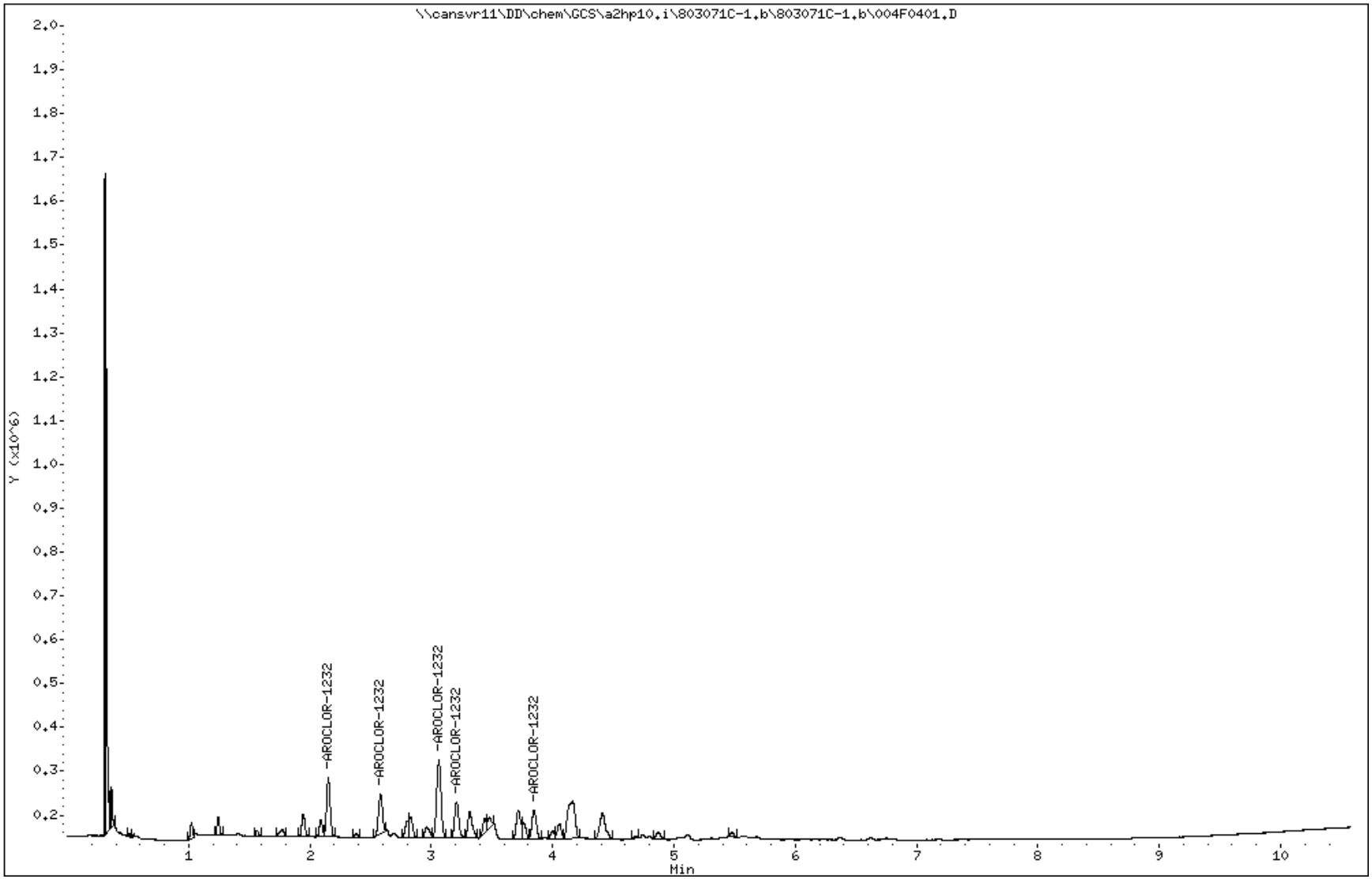
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\004F0401.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 13:33
Operator :   Inst ID: a2hp10.i
Smp Info : 1232,,1,3
Misc Info : 1-AR1232.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:27   Cal File: 039F3901.D
Als bottle: 4   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 1-AR1232.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
4 AROCLOR-1232					CAS #: 11141-16-5			
2.151	2.151	0.000	133218	0.20000	0.2017	75.00-	125.00	100.00
2.580	2.580	0.000	88723	0.20000	0.1985	49.95-	83.25	66.60
3.062	3.062	0.000	176688	0.20000	0.2002	99.47-	165.79	132.63
3.209	3.209	0.000	82034	0.20000	0.2077	46.18-	76.97	61.58
3.845	3.845	0.000	63903	0.20000	0.2078	35.98-	59.96	47.97
		Average of Peak Amounts =			0.20318			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\004F0401.D
Date : 07-MAR-2008 13:33
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 005F0501.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

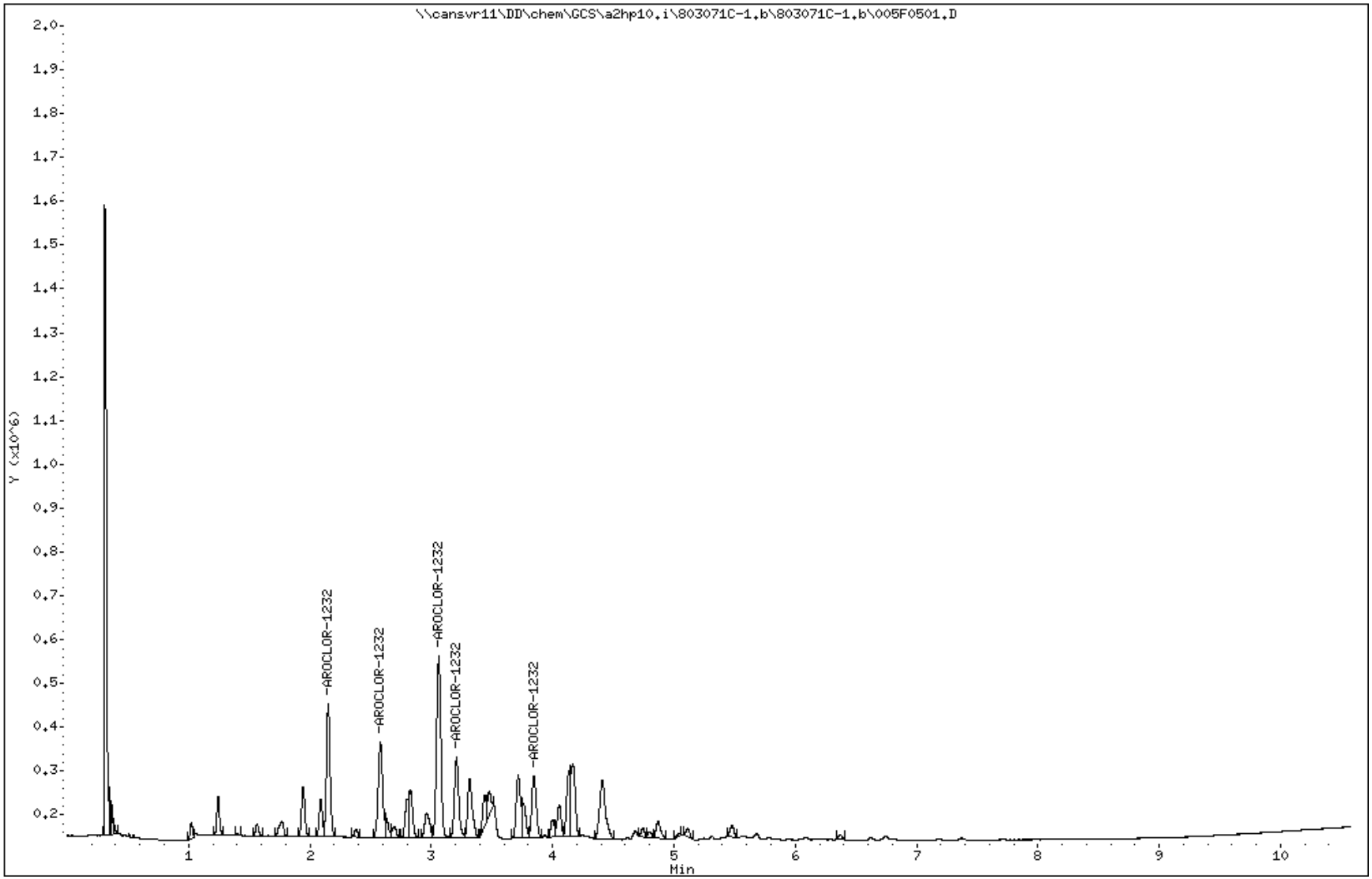
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\005F0501.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 13:48
Operator :   Inst ID: a2hp10.i
Smp Info : 1232,,1,4
Misc Info : 1-AR1232.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:43   Cal File: 040F4001.D
Als bottle: 5   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 1-AR1232.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
4 AROCLOR-1232					CAS #: 11141-16-5			
2.150	2.150	0.000	301463	0.50000	0.4564	80.00-	120.00	100.00
2.581	2.581	0.000	217214	0.50000	0.4859	54.04-	90.07	72.05
3.061	3.061	0.000	413078	0.50000	0.4682	102.77-	171.28	137.02
3.208	3.208	0.000	184706	0.50000	0.4677	45.95-	76.59	61.27
3.846	3.846	0.000	140798	0.50000	0.4578	35.03-	58.38	46.70
		Average of Peak Amounts =			0.46720			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\005F0501.D
Date : 07-MAR-2008 13:48
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 006F0601.D
Report Date: 10-Mar-2008 10:30

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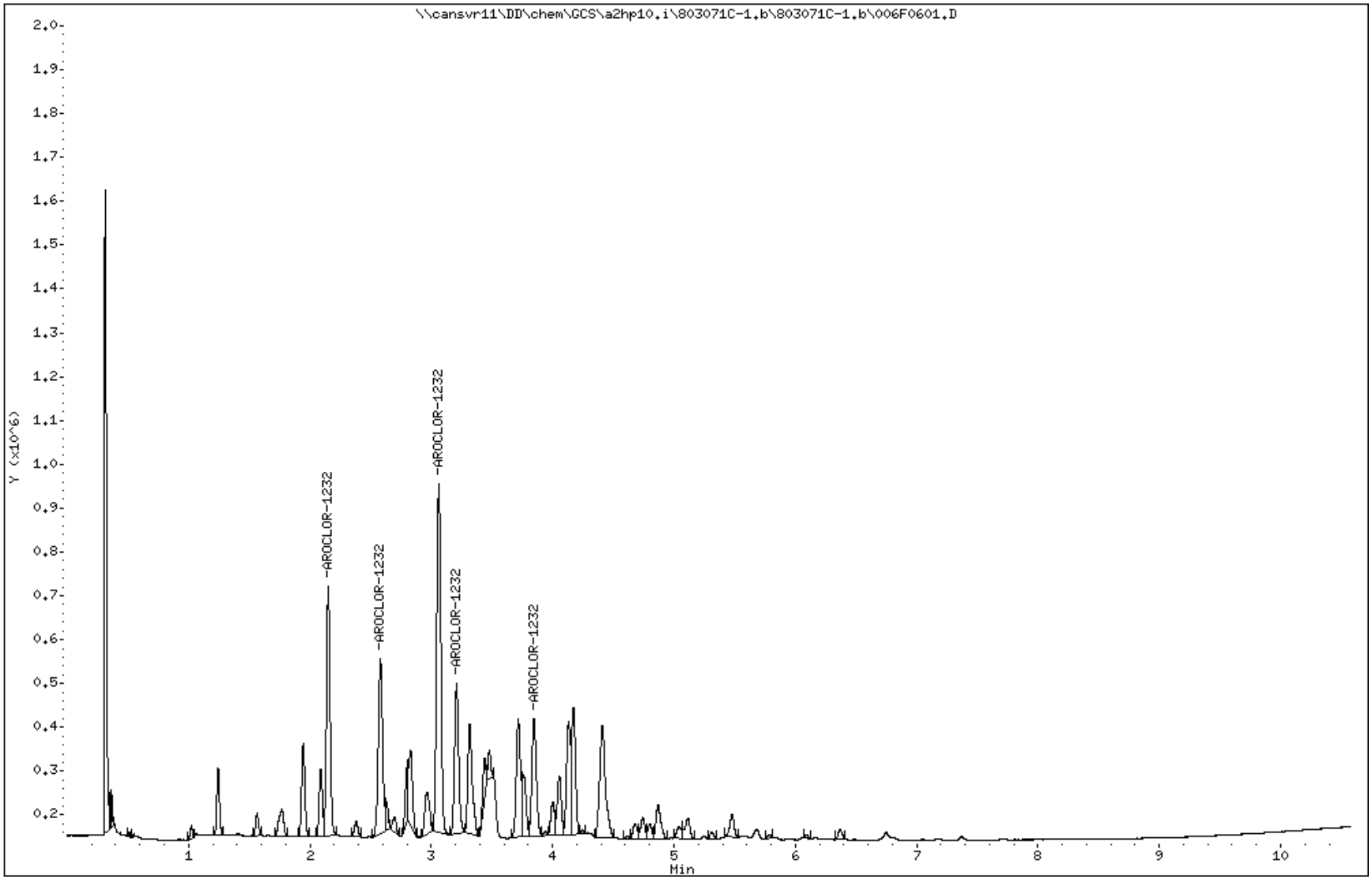
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\006F0601.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 14:04
Operator : Inst ID: a2hp10.i
Smp Info : 1232,,1,5
Misc Info : 1-AR1232.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i Quant Type: ESTD
Cal Date : 07-MAR-2008 22:58 Cal File: 041F4101.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET	RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5			
2.151	2.151	0.000	568650	1.00000	0.8610	75.00-	125.00	100.00
2.581	2.581	0.000	397062	1.00000	0.8883	54.04-	90.07	69.83
3.061	3.061	0.000	794964	1.00000	0.9010	102.77-	171.28	139.80
3.208	3.208	0.000	343757	1.00000	0.8705	45.95-	76.59	60.45
3.846	3.846	0.000	268503	1.00000	0.8731	35.03-	58.38	47.22
		Average of Peak Amounts =			0.87878			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\006F0601.D
Date : 07-MAR-2008 14:04
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 007F0701.D
Report Date: 10-Mar-2008 10:30

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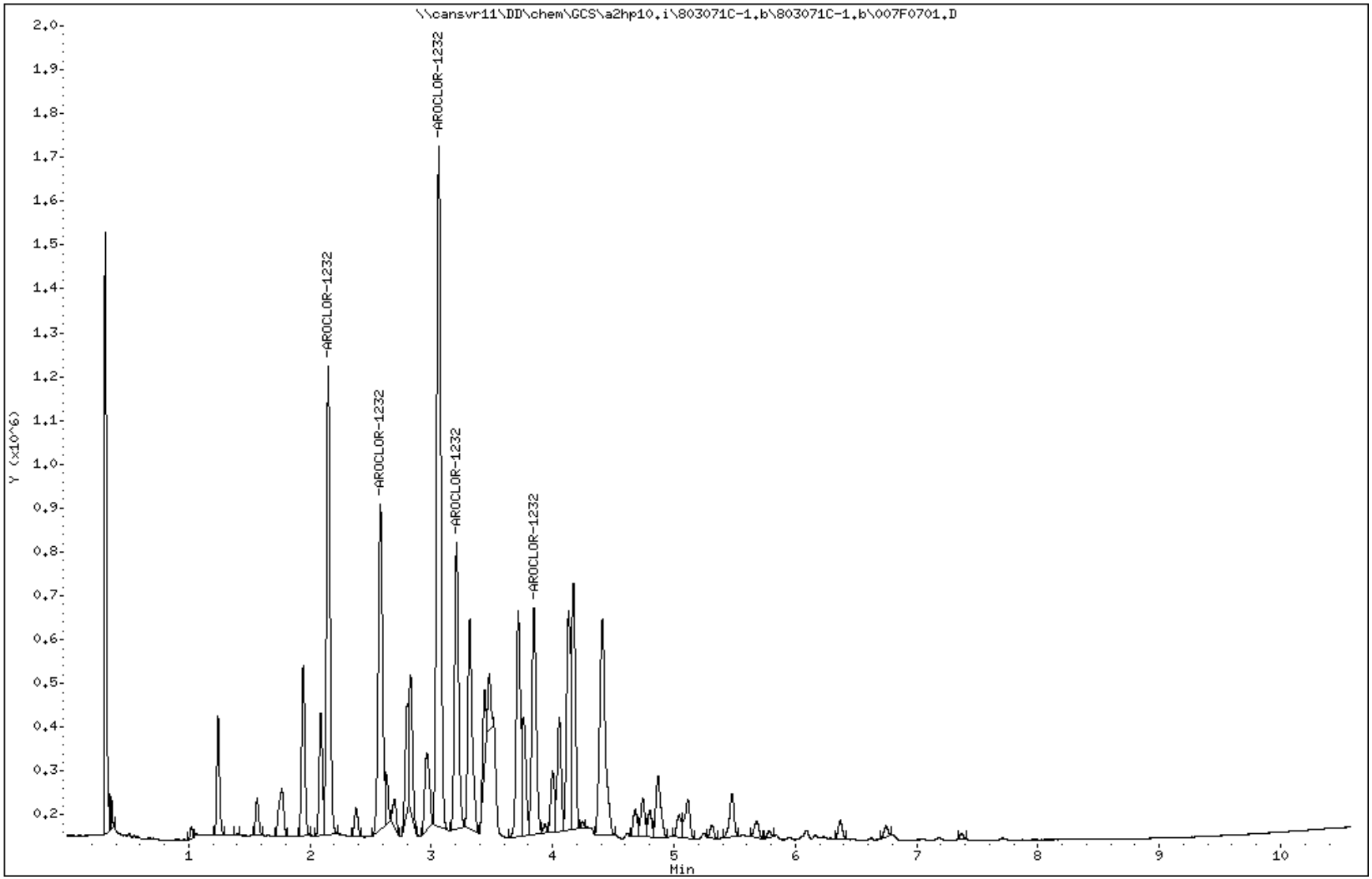
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\007F0701.D
Lab Smp Id: 1232
Inj Date : 07-MAR-2008 14:19
Operator :   Inst ID: a2hp10.i
Smp Info : 1232,,1,6
Misc Info : 1-AR1232.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:13   Cal File: 042F4201.D
Als bottle: 7   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 1-AR1232.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.150	2.150	0.000	1066898	2.00000	1.615	75.00- 125.00	100.00
2.580	2.580	0.000	742580	2.00000	1.661	54.04- 90.07	69.60
3.061	3.061	0.000	1553309	2.00000	1.760	102.77- 171.28	145.59
3.208	3.208	0.000	654158	2.00000	1.656	45.95- 76.59	61.31
3.845	3.845	0.000	516749	2.00000	1.680	35.03- 58.38	48.43
		Average of Peak Amounts =			1.67440		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\007F0701.D
Date : 07-MAR-2008 14:19
Client ID:
Instrument: a2hp10.i
Sample Info: 1232,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 008F0801.D
Report Date: 10-Mar-2008 10:30

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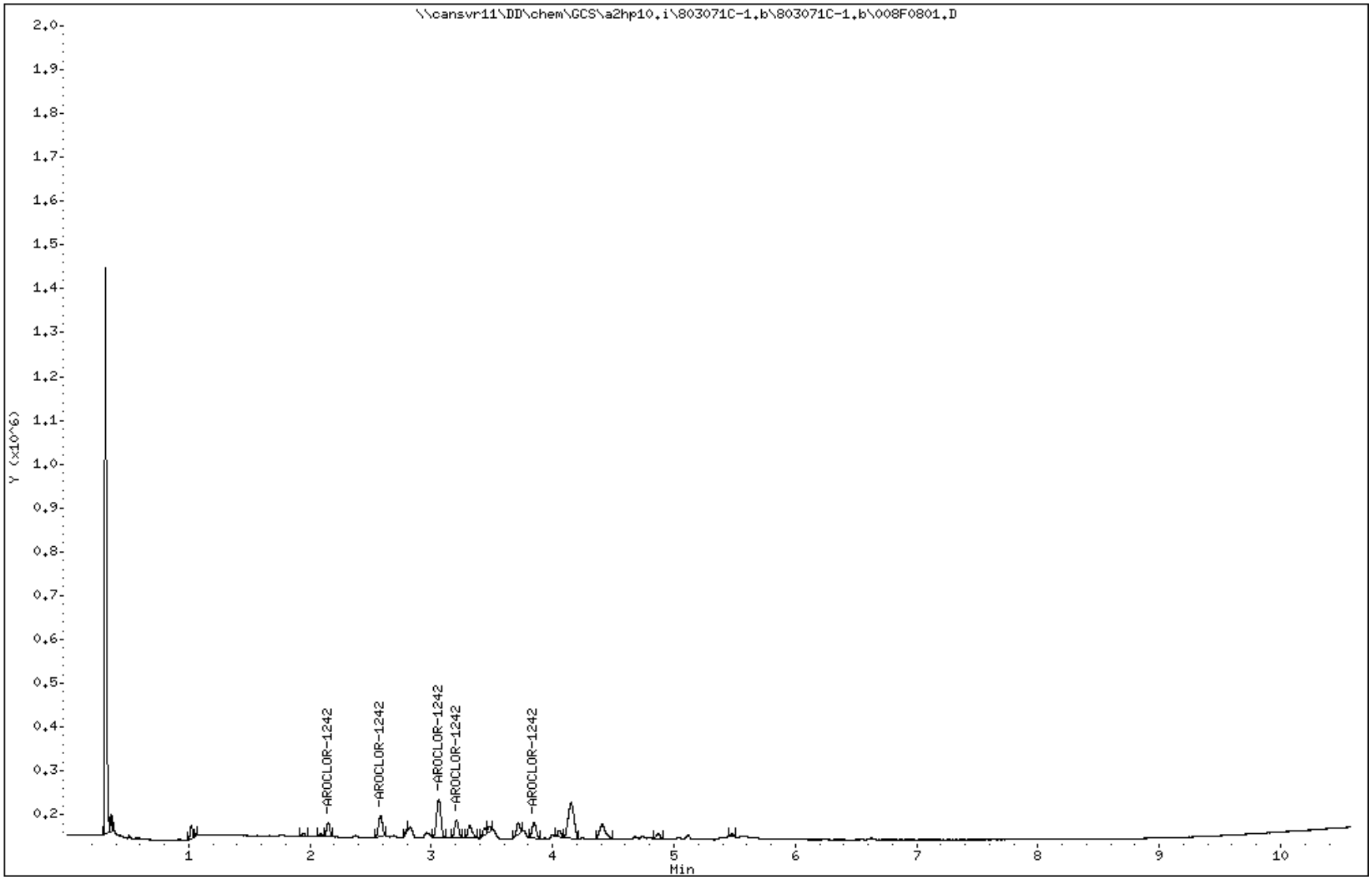
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\008F0801.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 14:34
Operator :   Inst ID: a2hp10.i
Smp Info : 1242,,1,1
Misc Info : 2-AR1242.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28   Cal File: 043F4301.D
Als bottle: 8   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 2-AR1242.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
5 AROCLOR-1242						CAS #: 53469-21-9		
2.150	2.150	0.000	60812	0.05000	0.05983	75.00-	125.00	100.00
2.580	2.580	0.000	106087	0.05000	0.05775	149.77-	249.61	174.45
3.060	3.060	0.000	216976	0.05000	0.05767	278.31-	463.85	356.80
3.209	3.209	0.000	89097	0.05000	0.05626	116.99-	194.99	146.51
3.845	3.845	0.000	84852	0.05000	0.05693	110.13-	183.55	139.53
		Average of Peak Amounts =			0.05769			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\008F0801.D
Date : 07-MAR-2008 14:34
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 009F0901.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

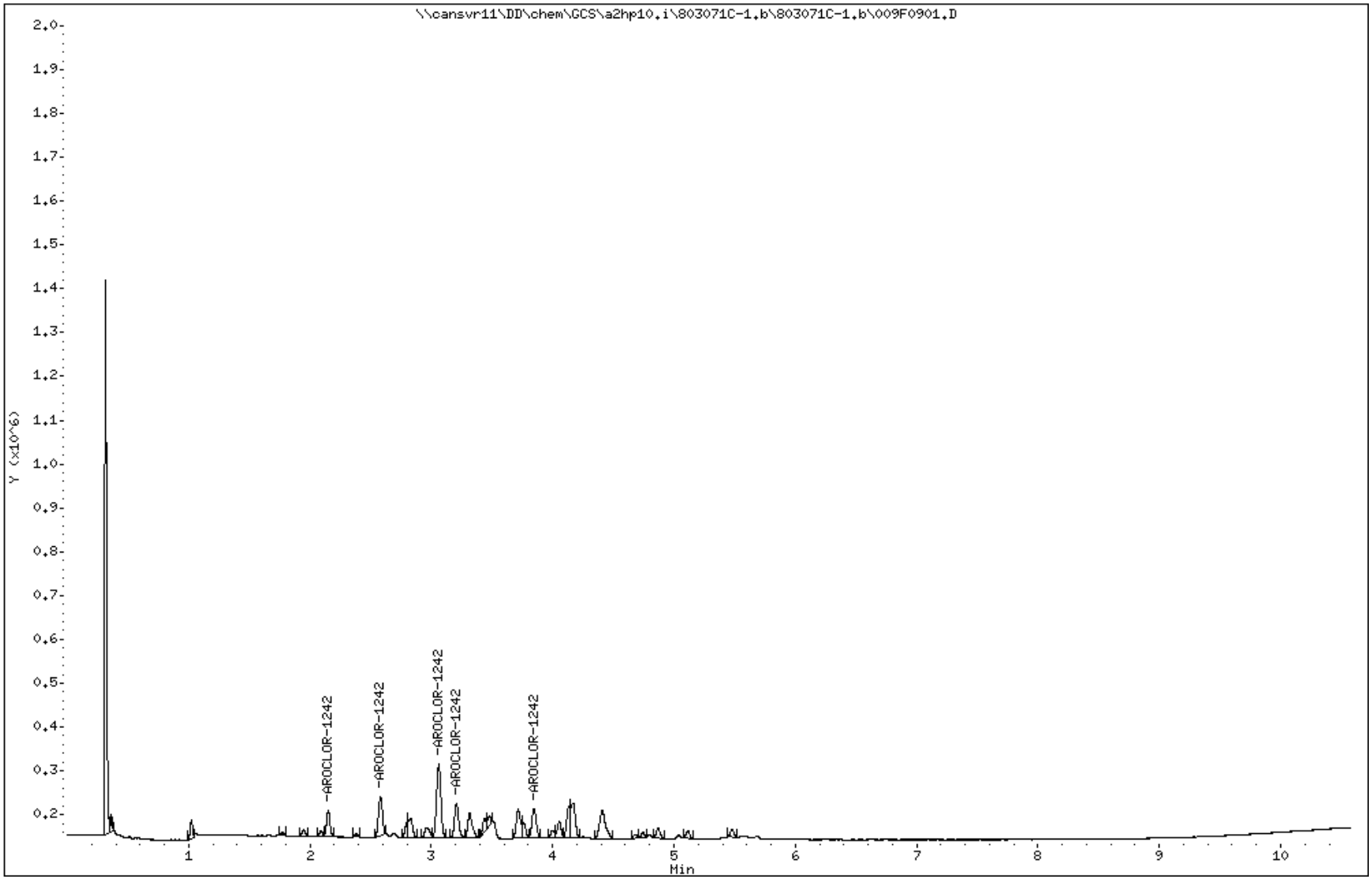
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\009F0901.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 14:49
Operator :   Inst ID: a2hp10.i
Smp Info : 1242,,1,2
Misc Info : 2-AR1242.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:12   Cal File: 038F3801.D
Als bottle: 9   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 2-AR1242.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
5 AROCLOR-1242					CAS #: 53469-21-9			
2.150	2.150	0.000	116370	0.10000	0.1145	75.00-	125.00	100.00
2.581	2.581	0.000	200294	0.10000	0.1090	149.77-	249.61	172.12
3.061	3.061	0.000	412248	0.10000	0.1096	278.31-	463.85	354.26
3.207	3.207	0.000	186653	0.10000	0.1178	116.99-	194.99	160.40
3.846	3.846	0.000	167018	0.10000	0.1121	110.13-	183.55	143.52
Average of Peak Amounts =					0.11260			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\009F0901.D
Date : 07-MAR-2008 14:49
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 010F1001.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

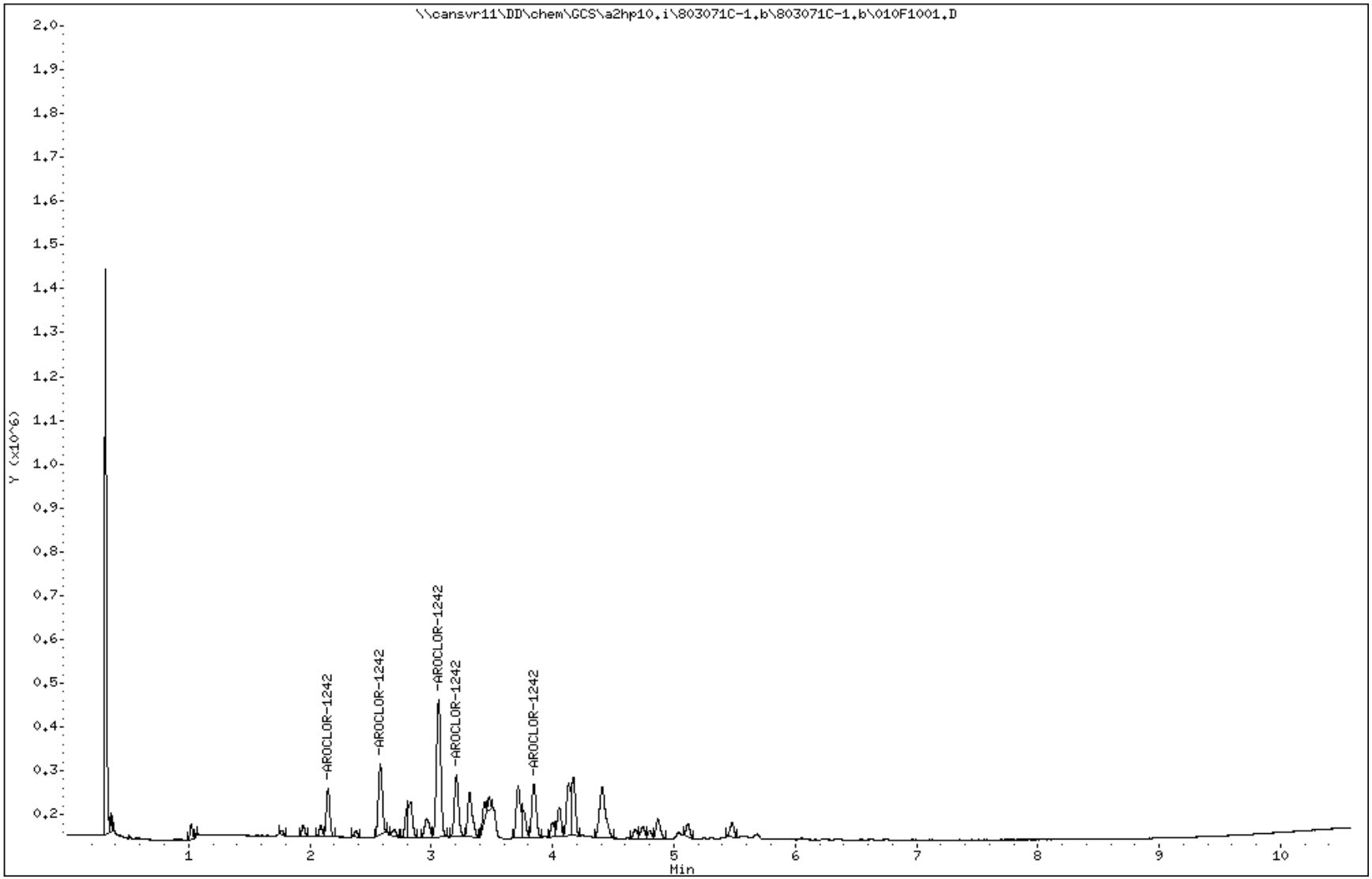
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\010F1001.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 15:05
Operator :   Inst ID: a2hp10.i
Smp Info : 1242,,1,3
Misc Info : 2-AR1242.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:27   Cal File: 039F3901.D
Als bottle: 10   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 2-AR1242.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.150	2.150	0.000	218214	0.20000	0.2147	75.00- 125.00	100.00
2.581	2.581	0.000	367951	0.20000	0.2003	126.46- 210.77	168.62
3.061	3.061	0.000	773997	0.20000	0.2057	266.02- 443.37	354.70
3.208	3.208	0.000	333099	0.20000	0.2103	114.49- 190.81	152.65
3.846	3.846	0.000	308768	0.20000	0.2072	106.12- 176.87	141.50
		Average of Peak Amounts =			0.20764		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\010F1001.D
Date : 07-MAR-2008 15:05
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 011F1101.D
Report Date: 10-Mar-2008 10:30

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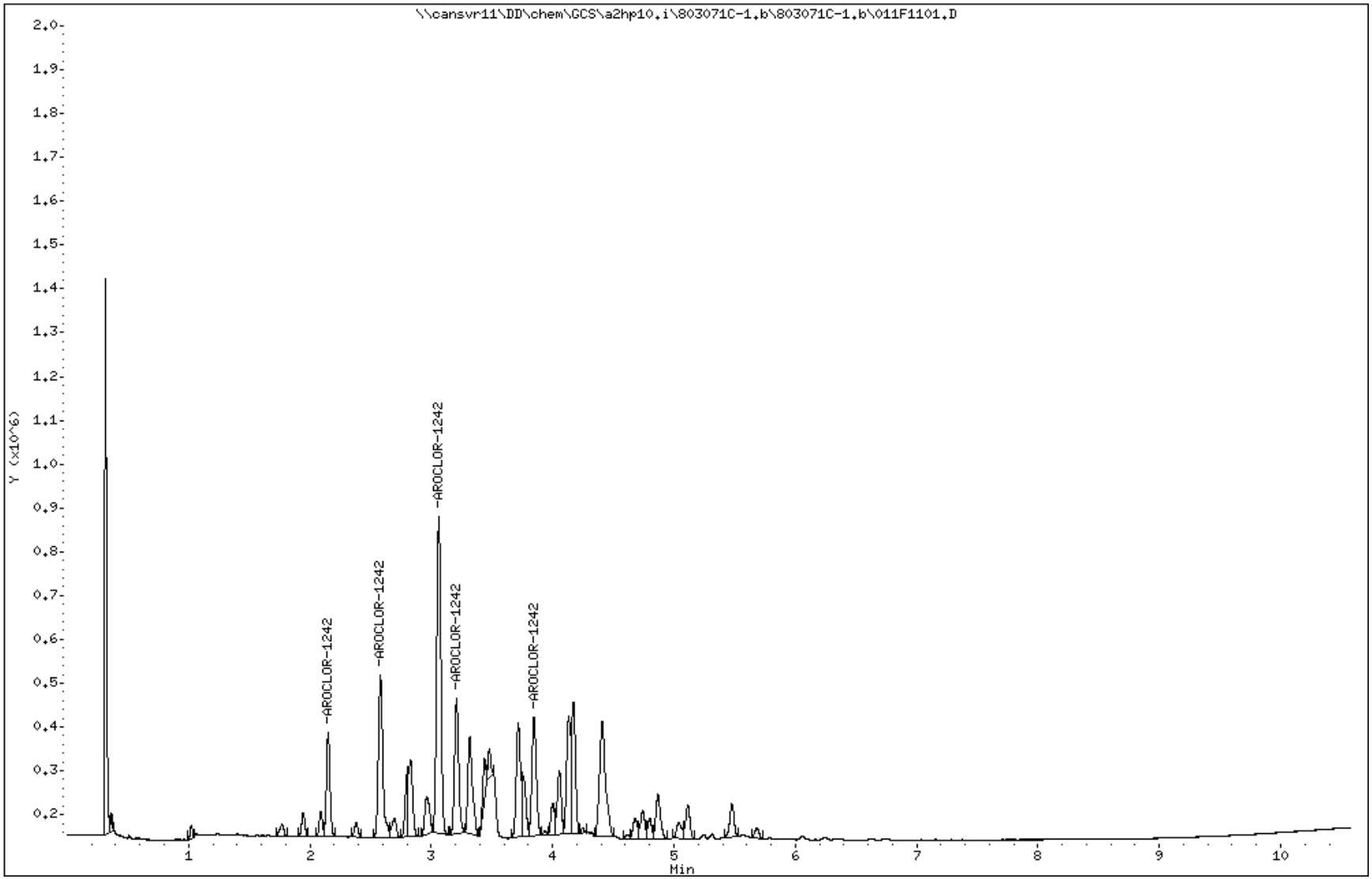
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\011F1101.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 15:20
Operator :   Inst ID: a2hp10.i
Smp Info : 1242,,1,4
Misc Info : 2-AR1242.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:43   Cal File: 040F4001.D
Als bottle: 11   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 2-AR1242.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
5 AROCLOR-1242					CAS #: 53469-21-9			
2.150	2.150	0.000	471344	0.50000	0.4637	80.00-	120.00	100.00
2.581	2.581	0.000	941226	0.50000	0.5124	149.77-	249.61	199.69
3.061	3.061	0.000	1749050	0.50000	0.4649	278.31-	463.85	371.08
3.208	3.208	0.000	735261	0.50000	0.4643	116.99-	194.99	155.99
3.846	3.846	0.000	692110	0.50000	0.4644	110.13-	183.55	146.84
Average of Peak Amounts =					0.47394			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\011F1101.D
Date : 07-MAR-2008 15:20
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 012F1201.D
Report Date: 10-Mar-2008 10:30

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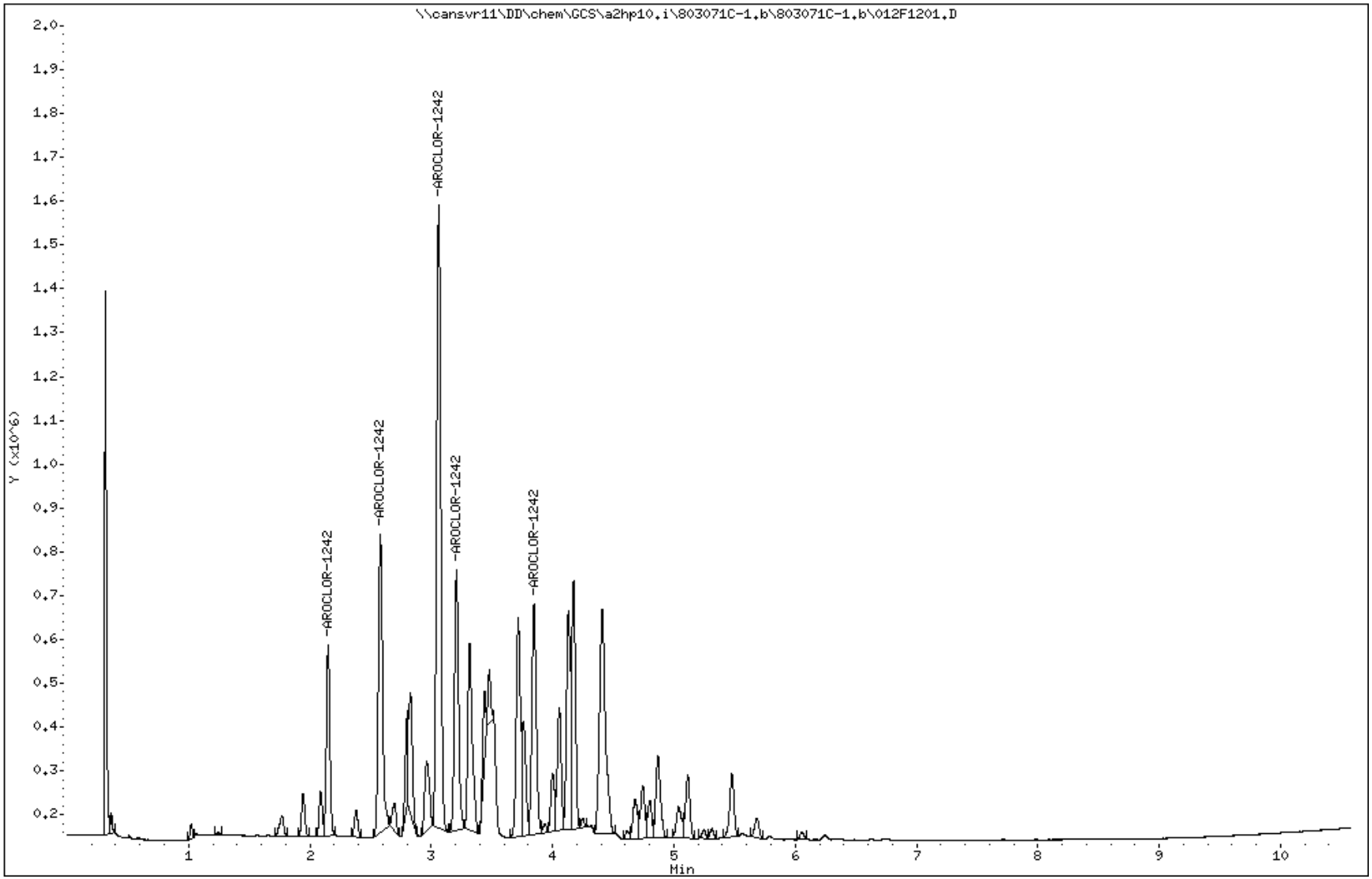
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\012F1201.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 15:35
Operator :   Inst ID: a2hp10.i
Smp Info : 1242,,1,5
Misc Info : 2-AR1242.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:58   Cal File: 041F4101.D
Als bottle: 12   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 2-AR1242.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
5 AROCLOR-1242					CAS #: 53469-21-9			
2.149	2.149	0.000	865834	1.00000	0.8518	75.00-	125.00	100.00
2.581	2.581	0.000	1633887	1.00000	0.8894	149.77-	249.61	188.71
3.062	3.062	0.000	3409458	1.00000	0.9063	278.31-	463.85	393.78
3.208	3.208	0.000	1388617	1.00000	0.8768	116.99-	194.99	160.38
3.846	3.846	0.000	1331303	1.00000	0.8933	110.13-	183.55	153.76
		Average of Peak Amounts =			0.88352			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\012F1201.D
Date : 07-MAR-2008 15:35
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 013F1301.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

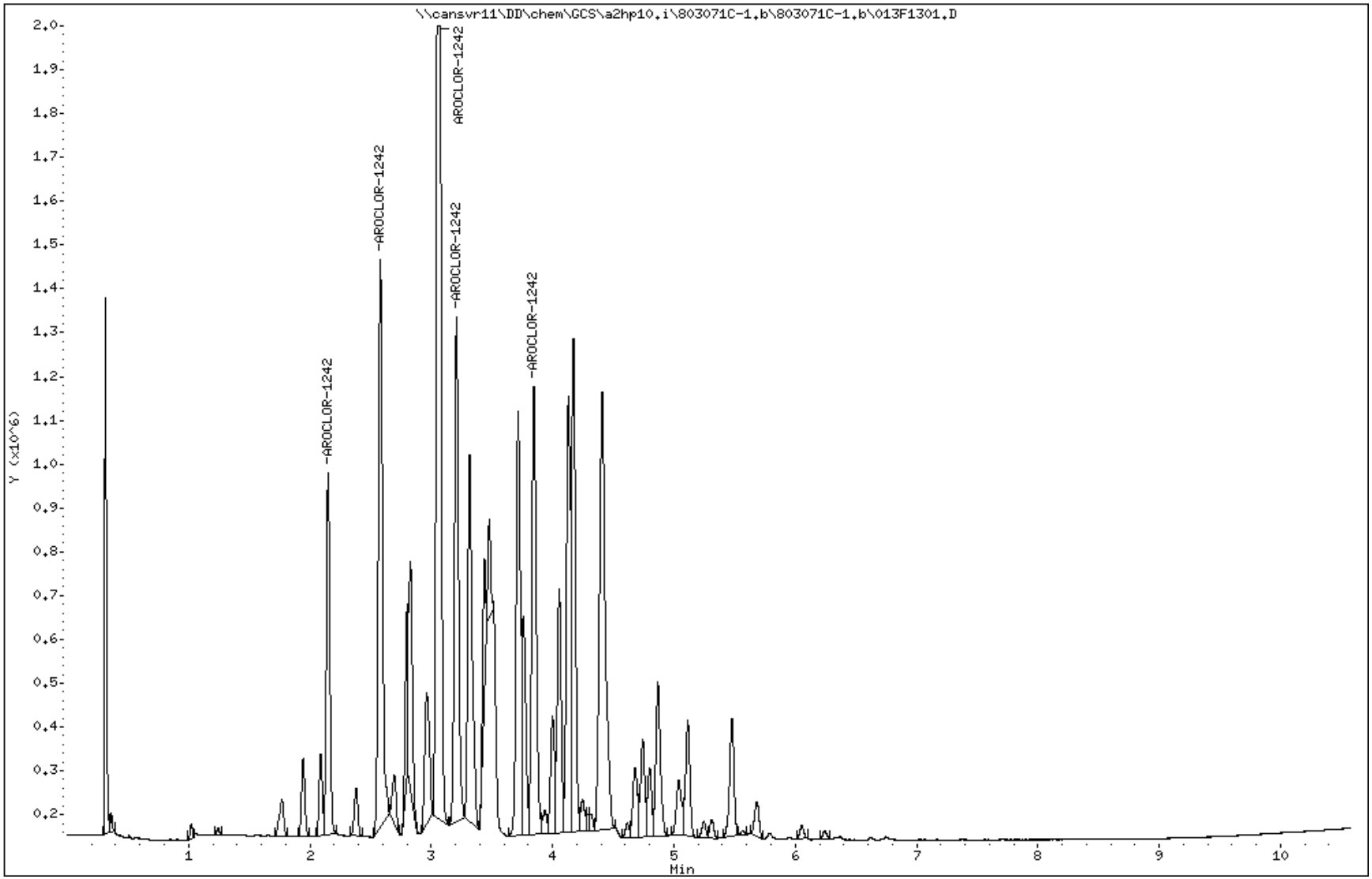
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\013F1301.D
Lab Smp Id: 1242
Inj Date : 07-MAR-2008 15:51
Operator : Inst ID: a2hp10.i
Smp Info : 1242,,1,6
Misc Info : 2-AR1242.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i Quant Type: ESTD
Cal Date : 07-MAR-2008 23:13 Cal File: 042F4201.D
Als bottle: 13 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.150	2.150	0.000	1637962	2.00000	1.612	75.00- 125.00	100.00
2.581	2.581	0.000	3082028	2.00000	1.678	149.77- 249.61	188.16
3.062	3.062	0.000	6665476	2.00000	1.772	278.31- 463.85	406.94
3.208	3.208	0.000	2658119	2.00000	1.678	116.99- 194.99	162.28
3.845	3.845	0.000	2630989	2.00000	1.765	110.13- 183.55	160.63
Average of Peak Amounts =					1.70100		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\013F1301.D
Date : 07-MAR-2008 15:51
Client ID:
Instrument: a2hp10.i
Sample Info: 1242,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 014F1401.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

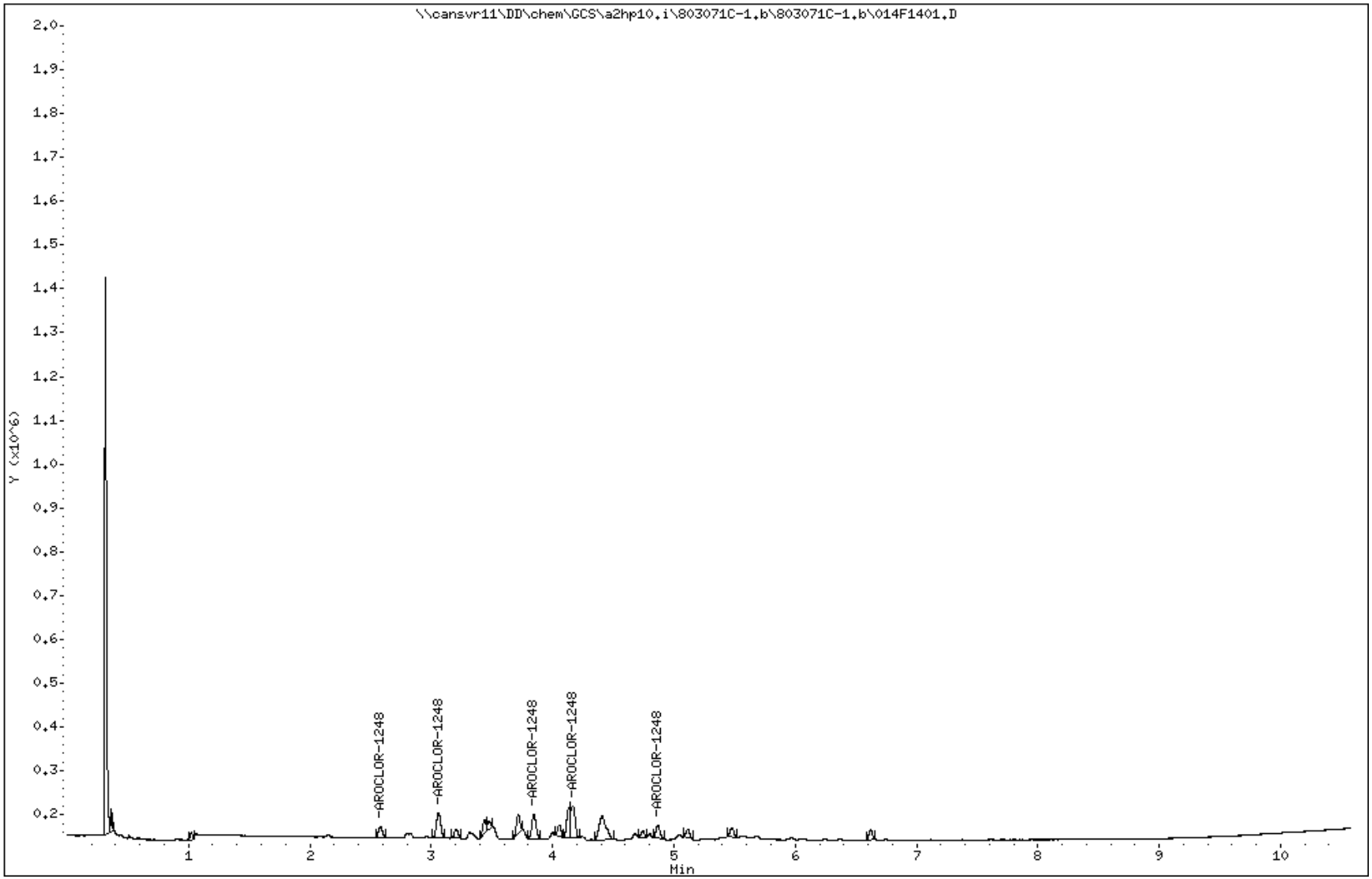
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\014F1401.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 16:06
Operator :   Inst ID: a2hp10.i
Smp Info : 1248,,1,1
Misc Info : 3-AR1248.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28   Cal File: 043F4301.D
Als bottle: 14   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 3-AR1248.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.580	2.580	0.000	24715	0.05000	0.05999	75.00- 125.00	100.00
3.060	3.060	0.000	57945	0.05000	0.05827	183.31- 305.51	234.45
3.844	3.844	0.000	54532	0.05000	0.05894	170.40- 284.00	220.64
4.168	4.168	0.000	71712	0.05000	0.06102	213.09- 355.15	290.16
4.868	4.868	0.000	31954	0.05000	0.05689	104.73- 174.55	129.29
		Average of Peak Amounts =			0.05902		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\014F1401.D
Date : 07-MAR-2008 16:06
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 015F1501.D
Report Date: 10-Mar-2008 10:30

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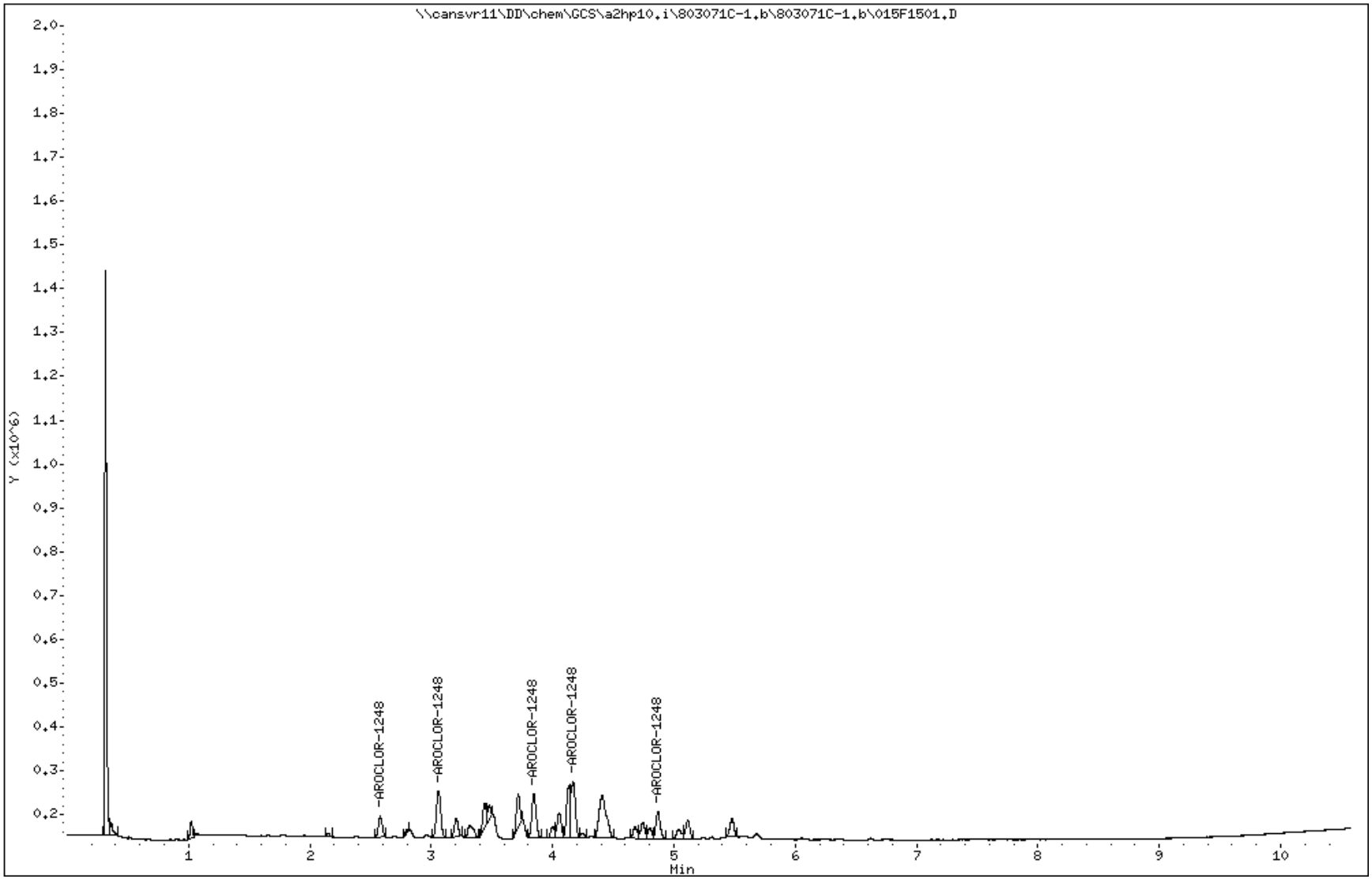
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\015F1501.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 16:21
Operator :   Inst ID: a2hp10.i
Smp Info : 1248,,1,2
Misc Info : 3-AR1248.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:12   Cal File: 038F3801.D
Als bottle: 15   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 3-AR1248.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.580	2.580	0.000	47363	0.10000	0.1150	75.00- 125.00	100.00
3.060	3.060	0.000	106144	0.10000	0.1067	183.31- 305.51	224.11
3.845	3.845	0.000	99469	0.10000	0.1075	170.40- 284.00	210.01
4.169	4.169	0.000	127801	0.10000	0.1088	213.09- 355.15	269.83
4.867	4.867	0.000	61923	0.10000	0.1102	104.73- 174.55	130.74
		Average of Peak Amounts =			0.10964		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\015F1501.D
Date : 07-MAR-2008 16:21
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 016F1601.D
Report Date: 10-Mar-2008 10:30

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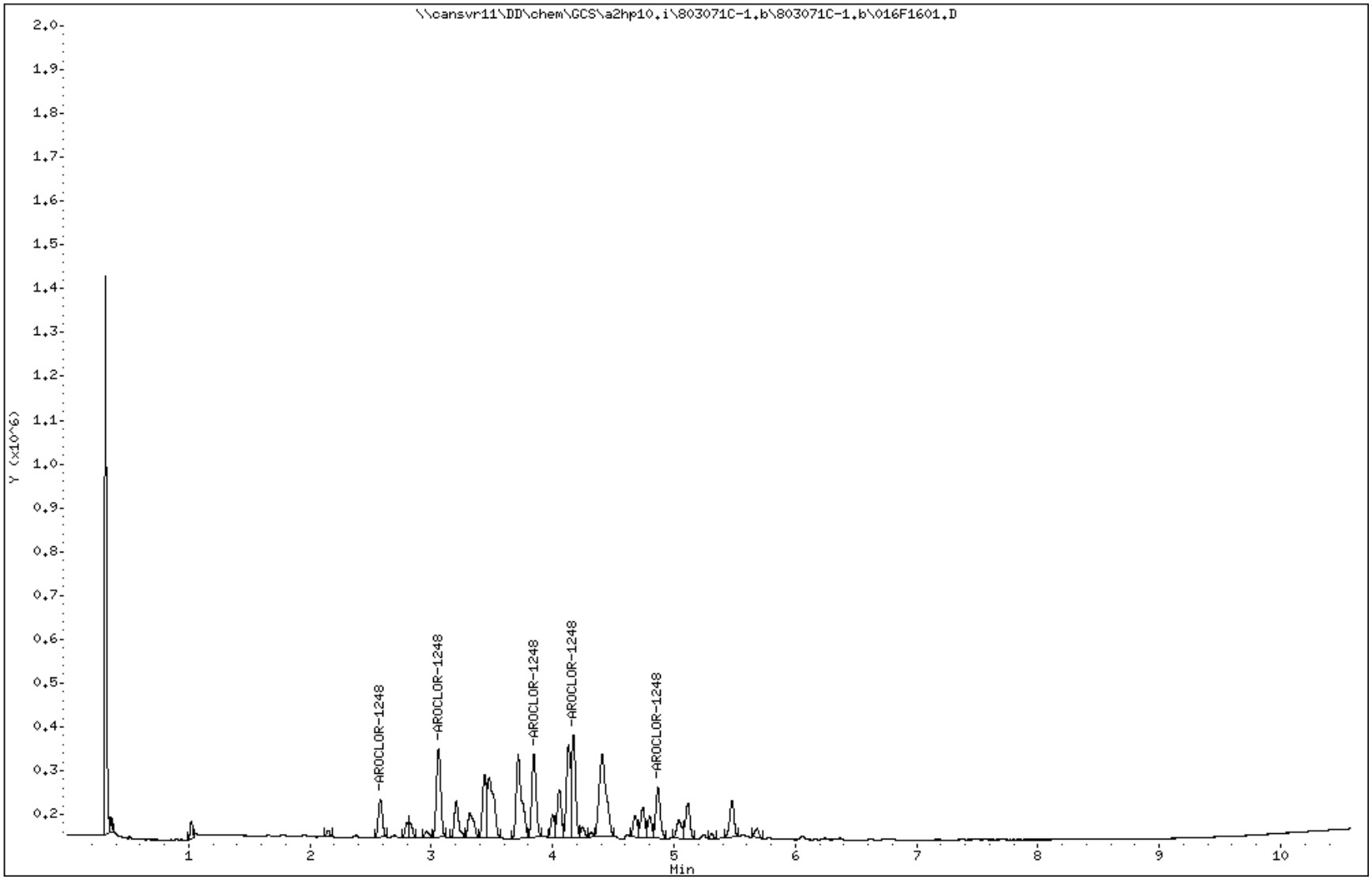
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\016F1601.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 16:36
Operator :   Inst ID: a2hp10.i
Smp Info : 1248,,1,3
Misc Info : 3-AR1248.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:27   Cal File: 039F3901.D
Als bottle: 16   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 3-AR1248.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.580	2.580	0.000	86609	0.20000	0.2102	75.00- 125.00	100.00
3.060	3.060	0.000	201425	0.20000	0.2026	174.43- 290.71	232.57
3.846	3.846	0.000	187332	0.20000	0.2025	162.22- 270.37	216.30
4.171	4.171	0.000	231629	0.20000	0.1971	200.58- 334.30	267.44
4.867	4.867	0.000	116415	0.20000	0.2073	100.81- 168.02	134.41
		Average of Peak Amounts =			0.20394		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\016F1601.D
Date : 07-MAR-2008 16:36
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 017F1701.D
Report Date: 10-Mar-2008 10:30

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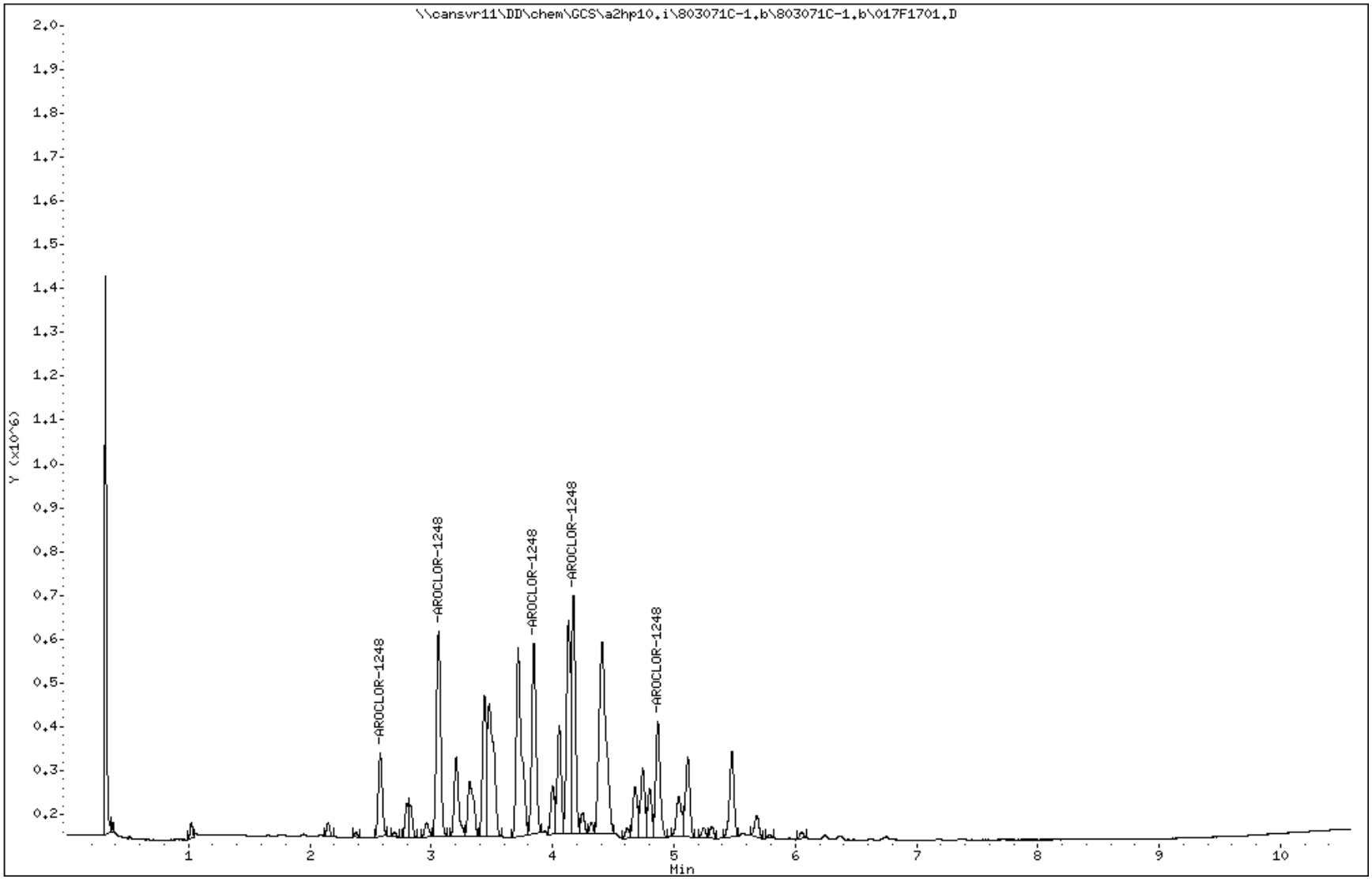
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\017F1701.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 16:52
Operator :   Inst ID: a2hp10.i
Smp Info : 1248,,1,4
Misc Info : 3-AR1248.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:43   Cal File: 040F4001.D
Als bottle: 17   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 3-AR1248.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.579	2.579	0.000	191064	0.50000	0.4638	80.00- 120.00	100.00
3.060	3.060	0.000	466982	0.50000	0.4696	183.31- 305.51	244.41
3.845	3.845	0.000	434098	0.50000	0.4692	170.40- 284.00	227.20
4.172	4.172	0.000	542857	0.50000	0.4619	213.09- 355.15	284.12
4.867	4.867	0.000	266809	0.50000	0.4750	104.73- 174.55	139.64
		Average of Peak Amounts =			0.46790		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\017F1701.D
Date : 07-MAR-2008 16:52
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 018F1801.D
Report Date: 10-Mar-2008 10:30

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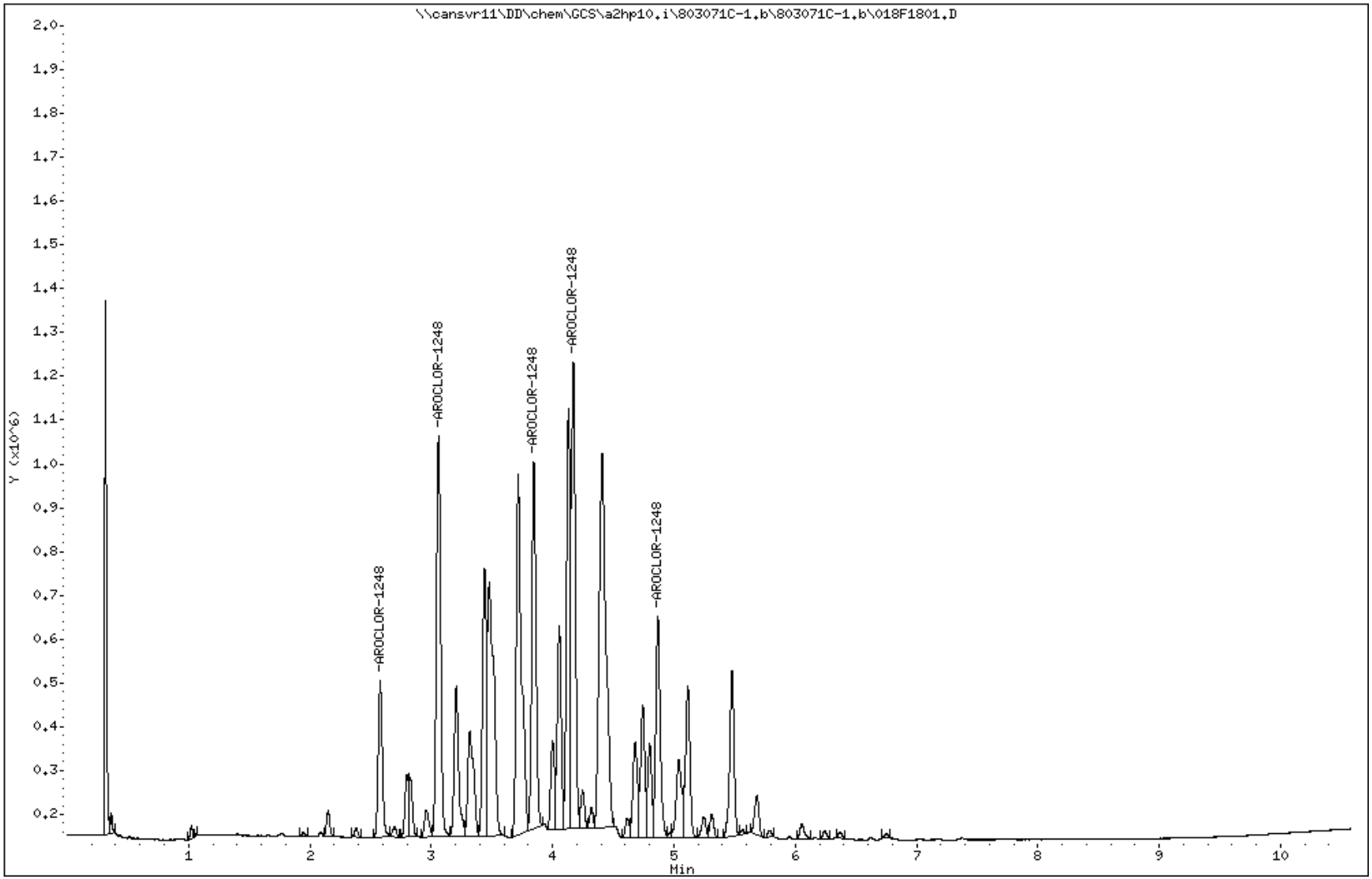
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\018F1801.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 17:07
Operator :   Inst ID: a2hp10.i
Smp Info : 1248,,1,5
Misc Info : 3-AR1248.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:58   Cal File: 041F4101.D
Als bottle: 18   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 3-AR1248.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.579	2.579	0.000	356160	1.00000	0.8646	75.00- 125.00	100.00
3.060	3.060	0.000	914173	1.00000	0.9193	183.31- 305.51	256.67
3.845	3.845	0.000	835256	1.00000	0.9027	170.40- 284.00	234.52
4.172	4.172	0.000	1064388	1.00000	0.9057	213.09- 355.15	298.85
4.867	4.867	0.000	505316	1.00000	0.8997	104.73- 174.55	141.88
		Average of Peak Amounts =			0.89840		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\018F1801.D
Date : 07-MAR-2008 17:07
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 019F1901.D
Report Date: 10-Mar-2008 10:30

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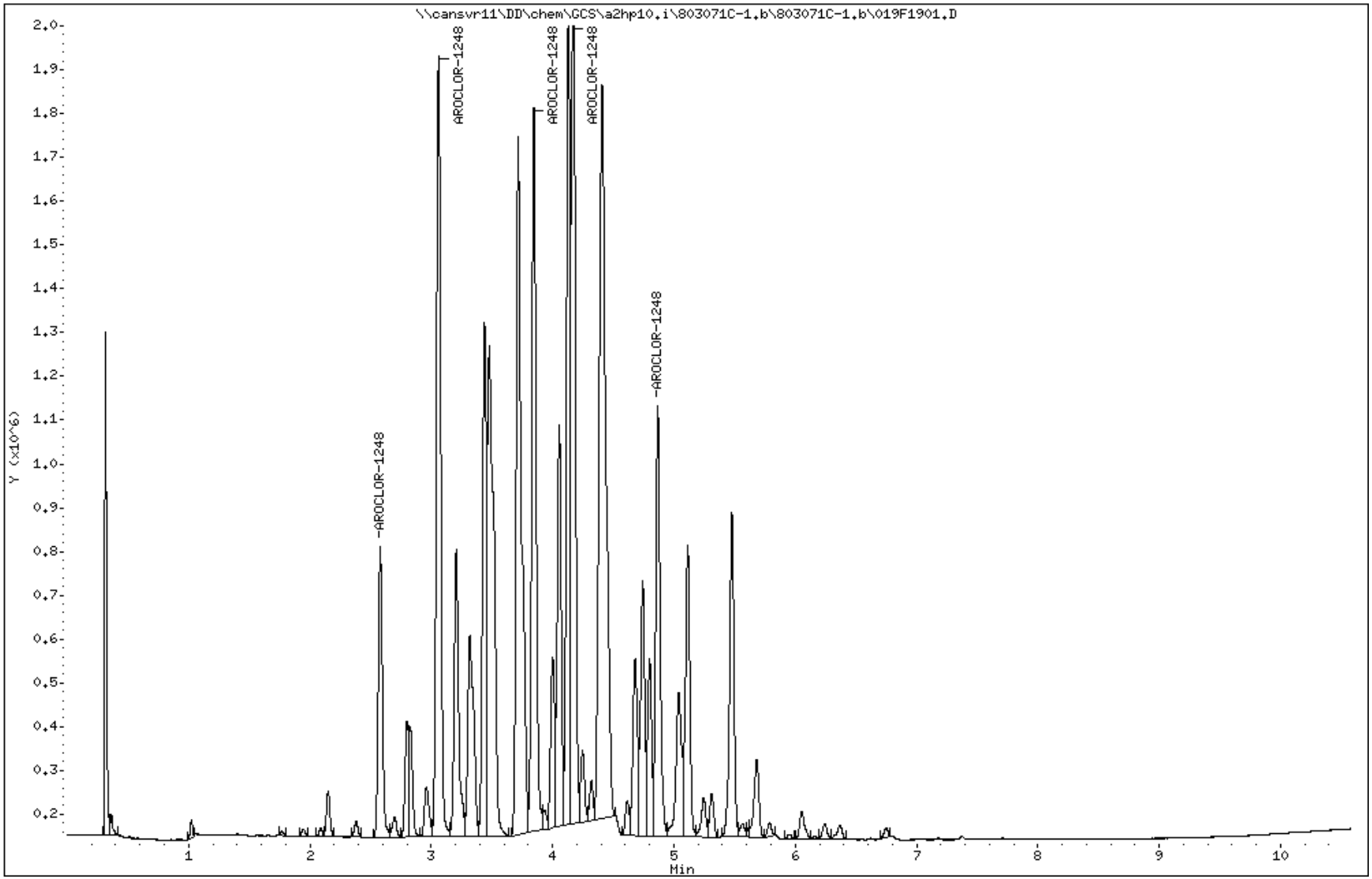
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\019F1901.D
Lab Smp Id: 1248
Inj Date : 07-MAR-2008 17:22
Operator : Inst ID: a2hp10.i
Smp Info : 1248,,1,6
Misc Info : 3-AR1248.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i Quant Type: ESTD
Cal Date : 07-MAR-2008 23:13 Cal File: 042F4201.D
Als bottle: 19 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.579	2.579	0.000	664934	2.00000	1.614	75.00- 125.00	100.00
3.061	3.061	0.000	1781842	2.00000	1.792	183.31- 305.51	267.97
3.845	3.845	0.000	1652418	2.00000	1.786	170.40- 284.00	248.51
4.171	4.171	0.000	2061021	2.00000	1.754	213.09- 355.15	309.96
4.867	4.867	0.000	981366	2.00000	1.747	104.73- 174.55	147.59
			Average of Peak Amounts =		1.73860		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\019F1901.D
Date : 07-MAR-2008 17:22
Client ID:
Instrument: a2hp10.i
Sample Info: 1248,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 020F2001.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

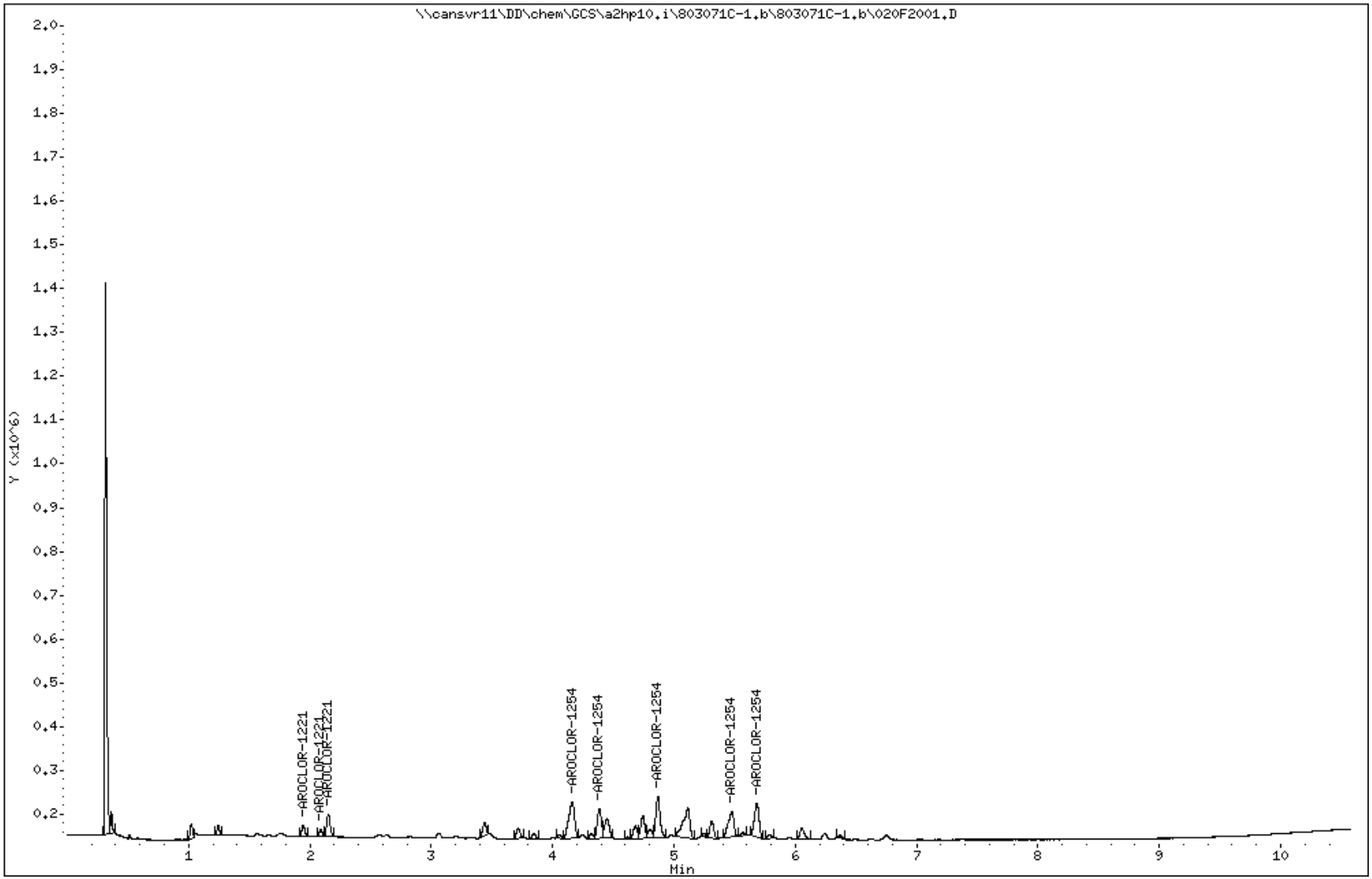
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\020F2001.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 17:37
Operator :   Inst ID: a2hp10.i
Smp Info : 2154,,1,1
Misc Info : 9-AR2154.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28   Cal File: 043F4301.D
Als bottle: 20   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 9-AR2154.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
4.161	4.161	0.000	82139	0.05000	0.07135	75.00- 125.00	100.00
4.385	4.385	0.000	68364	0.05000	0.05967	83.00- 138.34	83.23
4.867	4.867	0.000	95859	0.05000	0.05592	127.86- 213.09	116.70
5.477	5.477	0.000	57745	0.05000	0.05418	79.27- 132.12	70.30
5.682	5.682	0.000	76811	0.05000	0.05427	106.62- 177.69	93.51
		Average of Peak Amounts =			0.05908		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.946	1.946	0.000	44082	0.05000	0.06010	75.00- 125.00	100.00
2.088	2.088	0.000	27521	0.05000	0.05780	49.92- 83.19	62.43
2.151	2.151	0.000	102440	0.05000	0.06065	172.42- 287.37	232.39
		Average of Peak Amounts =			0.05952		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\020F2001.D
Date : 07-MAR-2008 17:37
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 021F2101.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

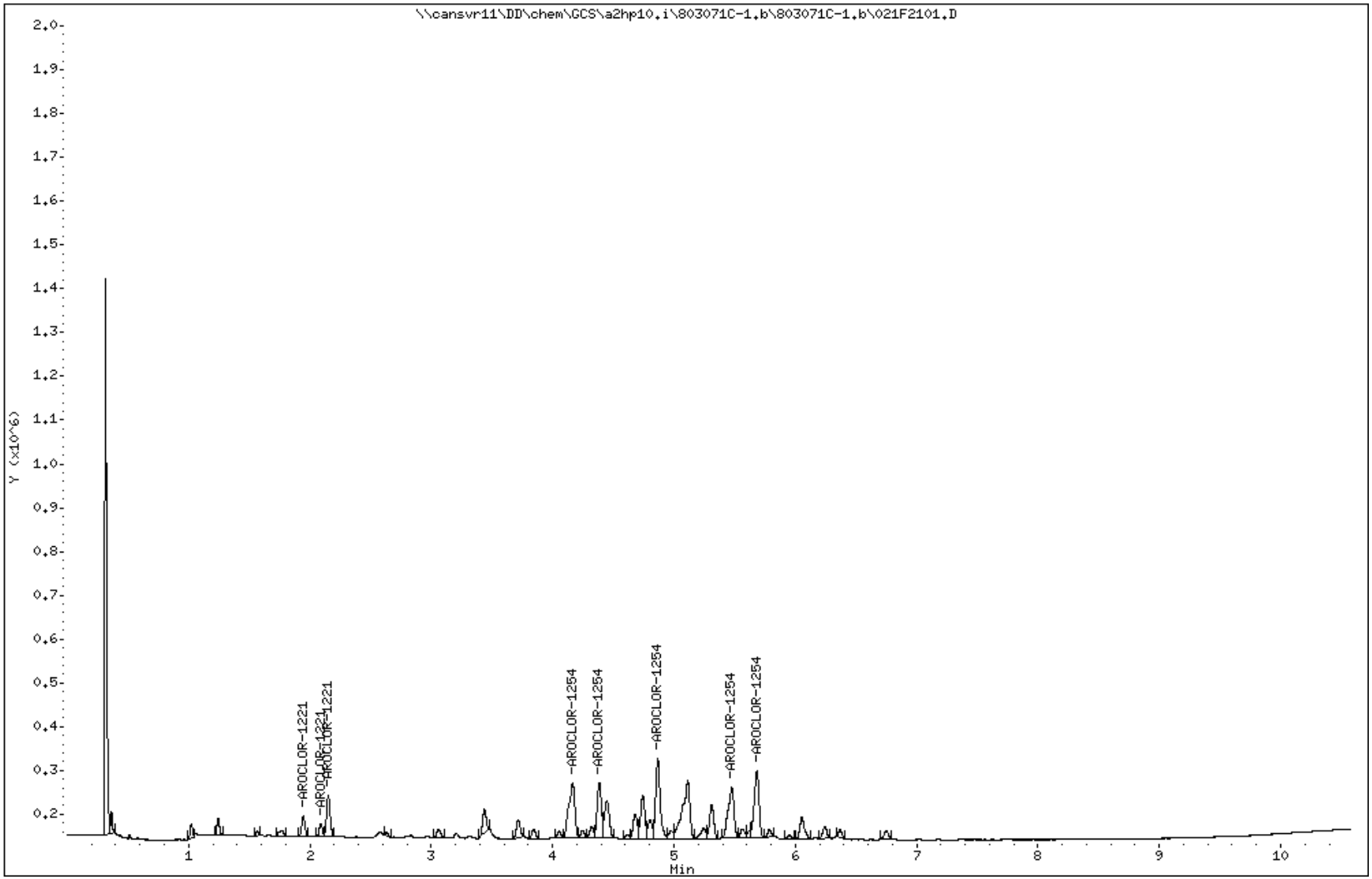
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\021F2101.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 17:53
Operator :   Inst ID: a2hp10.i
Smp Info : 2154,,1,2
Misc Info : 9-AR2154.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:12   Cal File: 038F3801.D
Als bottle: 21   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 9-AR2154.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
4.165	4.165	0.000	124494	0.10000	0.1081	75.00- 125.00	100.00
4.383	4.383	0.000	126762	0.10000	0.1106	83.00- 138.34	101.82
4.866	4.866	0.000	184155	0.10000	0.1074	127.86- 213.09	147.92
5.476	5.476	0.000	114608	0.10000	0.1075	79.27- 132.12	92.06
5.683	5.683	0.000	153008	0.10000	0.1081	106.62- 177.69	122.90
Average of Peak Amounts =					0.10834		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.945	1.945	0.000	84928	0.10000	0.1158	75.00- 125.00	100.00
2.090	2.090	0.000	54559	0.10000	0.1146	49.92- 83.19	64.24
2.151	2.151	0.000	192332	0.10000	0.1139	172.42- 287.37	226.46
Average of Peak Amounts =					0.11477		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\021F2101.D
Date : 07-MAR-2008 17:53
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 022F2201.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

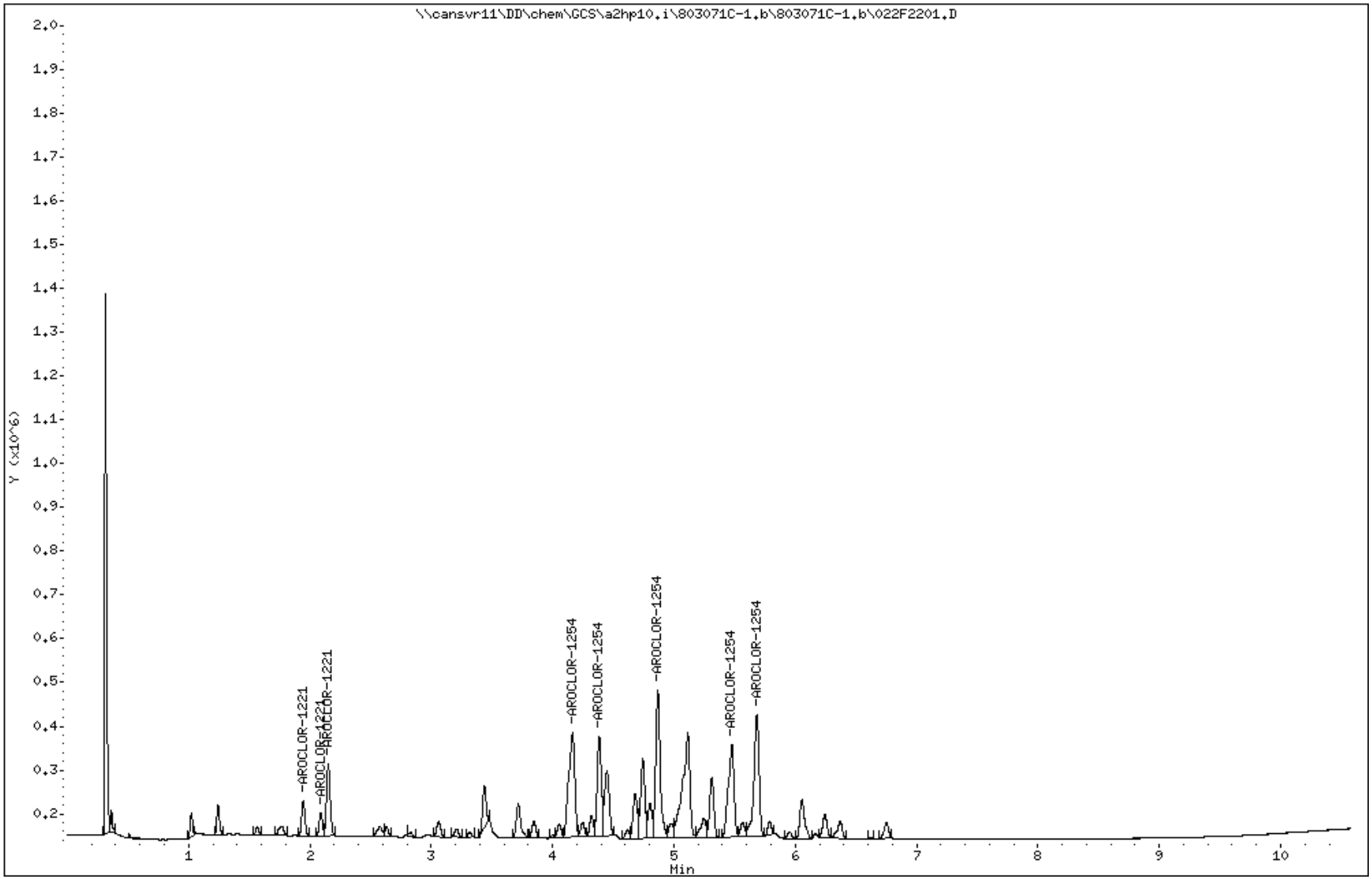
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\022F2201.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 18:08
Operator :   Inst ID: a2hp10.i
Smp Info : 2154,,1,3
Misc Info : 9-AR2154.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:27   Cal File: 039F3901.D
Als bottle: 22   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 9-AR2154.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
4.164	4.164	0.000	237917	0.20000	0.2067	75.00- 125.00	100.00
4.384	4.384	0.000	226808	0.20000	0.1980	71.50- 119.16	95.33
4.868	4.868	0.000	339073	0.20000	0.1978	106.89- 178.15	142.52
5.478	5.478	0.000	209873	0.20000	0.1969	66.16- 110.27	88.21
5.684	5.684	0.000	278008	0.20000	0.1964	87.64- 146.06	116.85
Average of Peak Amounts =					0.19916		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.945	1.945	0.000	152540	0.20000	0.2080	75.00- 125.00	100.00
2.090	2.090	0.000	101673	0.20000	0.2135	49.99- 83.32	66.65
2.151	2.151	0.000	346010	0.20000	0.2049	170.12- 283.54	226.83
Average of Peak Amounts =					0.20880		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\022F2201.D
Date : 07-MAR-2008 18:08
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 023F2301.D
Report Date: 10-Mar-2008 10:30

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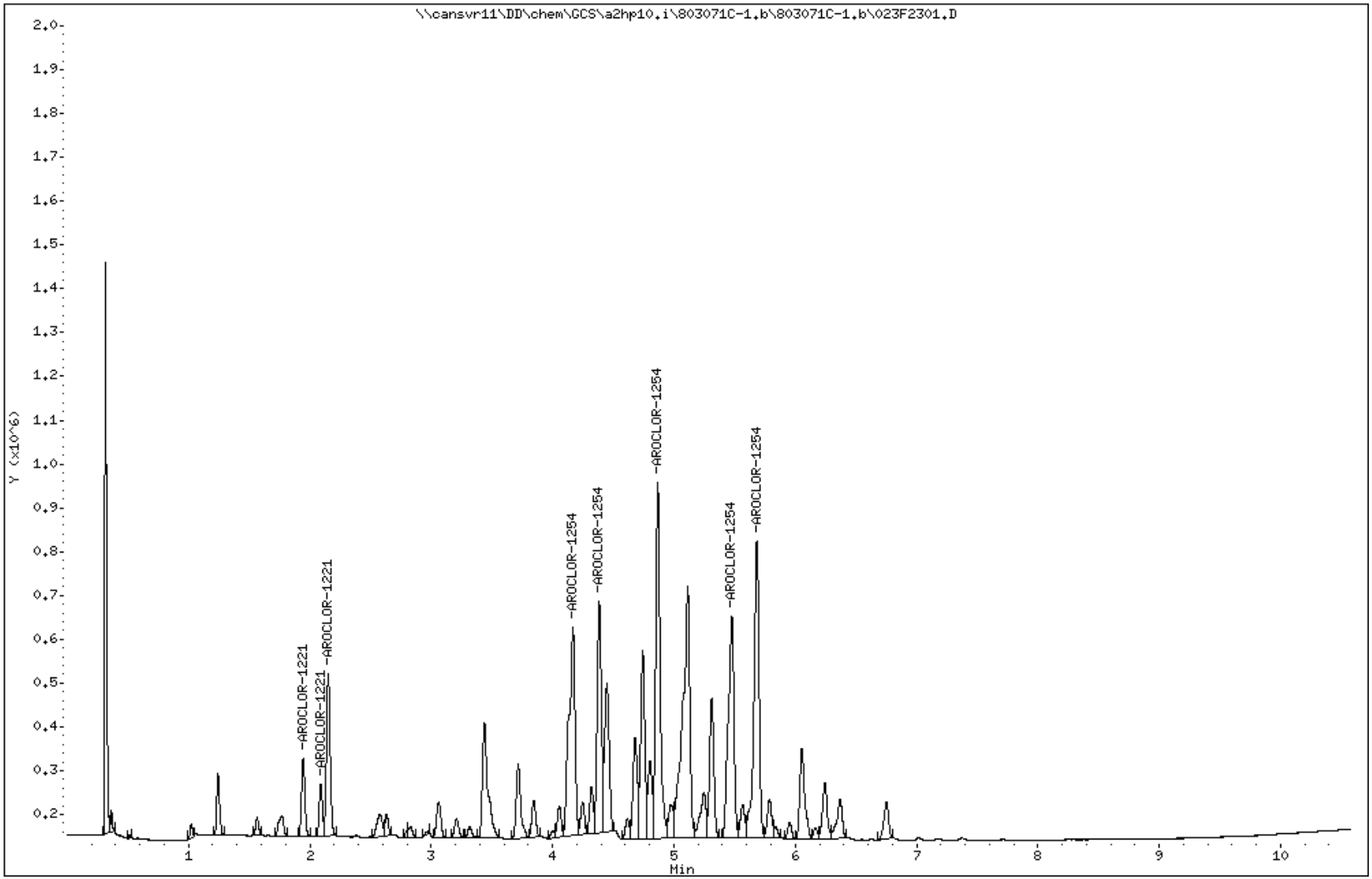
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\023F2301.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 18:23
Operator :   Inst ID: a2hp10.i
Smp Info : 2154,,1,4
Misc Info : 9-AR2154.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:43   Cal File: 040F4001.D
Als bottle: 23   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 9-AR2154.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
4.168	4.168	0.000	476734	0.50000	0.4141	80.00- 120.00	100.00
4.384	4.384	0.000	527615	0.50000	0.4606	83.00- 138.34	110.67
4.867	4.867	0.000	812717	0.50000	0.4741	127.86- 213.09	170.48
5.478	5.478	0.000	503877	0.50000	0.4728	79.27- 132.12	105.69
5.684	5.684	0.000	677694	0.50000	0.4788	106.62- 177.69	142.15
	Average of Peak Amounts =				0.46008		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.945	1.945	0.000	343296	0.50000	0.4681	80.00- 120.00	100.00
2.090	2.090	0.000	228482	0.50000	0.4798	49.92- 83.19	66.56
2.151	2.151	0.000	789230	0.50000	0.4673	172.42- 287.37	229.90
	Average of Peak Amounts =				0.47173		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\023F2301.D
Date : 07-MAR-2008 18:23
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 024F2401.D
Report Date: 10-Mar-2008 10:30

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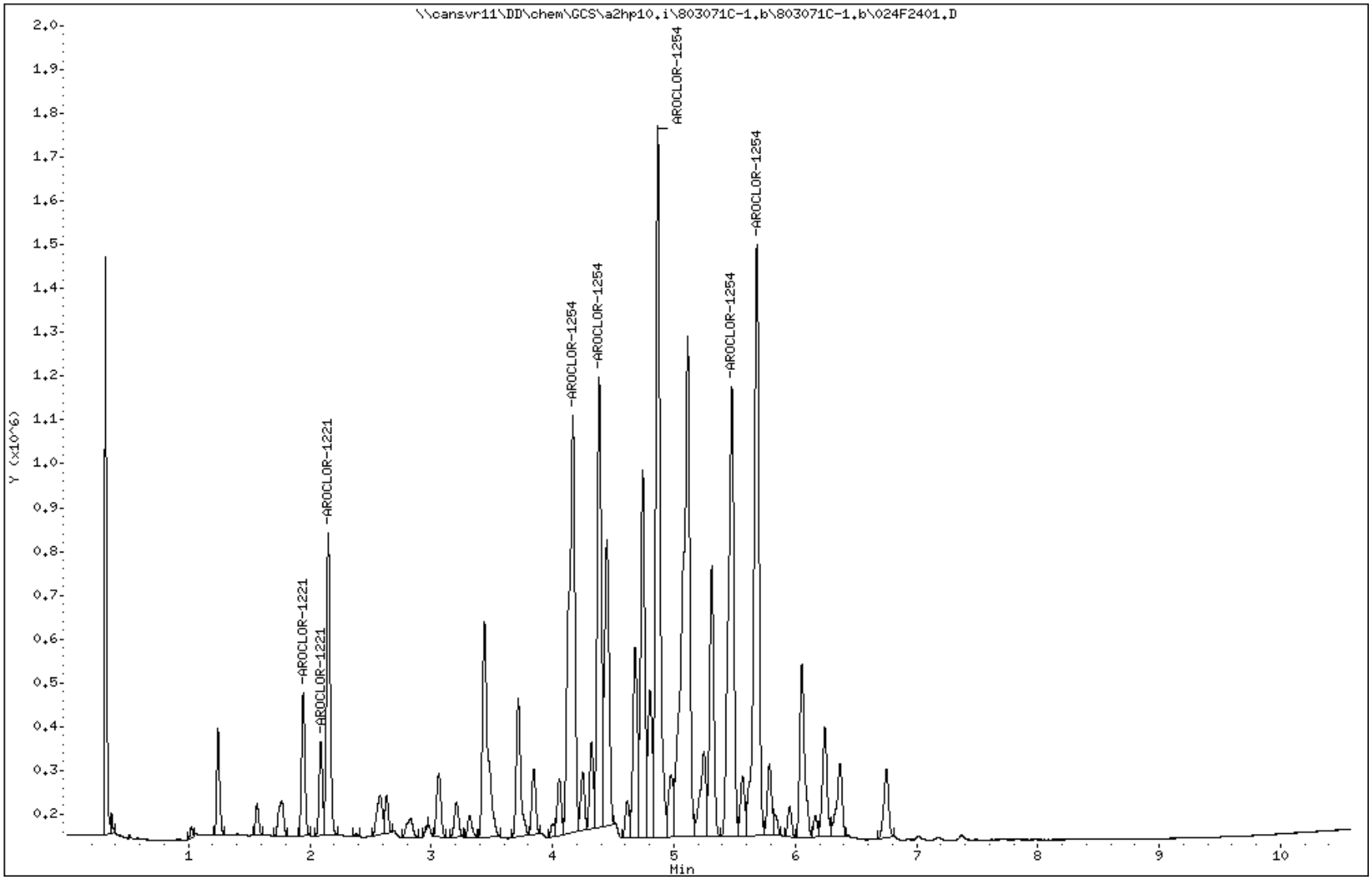
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\024F2401.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 18:39
Operator :   Inst ID: a2hp10.i
Smp Info : 2154,,1,5
Misc Info : 9-AR2154.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:58   Cal File: 041F4101.D
Als bottle: 24   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 9-AR2154.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
7 AROCLOR-1254						CAS #: 11097-69-1		
4.167	4.167	0.000	952984	1.00000	0.8278	75.00- 125.00		100.00
4.384	4.384	0.000	1026904	1.00000	0.8964	83.00- 138.34		107.76
4.867	4.867	0.000	1624825	1.00000	0.9479	127.86- 213.09		170.50
5.478	5.478	0.000	1024519	1.00000	0.9613	79.27- 132.12		107.51
5.684	5.684	0.000	1349711	1.00000	0.9536	106.62- 177.69		141.63
	Average of Peak Amounts =				0.91740			
2 AROCLOR-1221						CAS #: 11104-28-2		
1.945	1.945	0.000	630209	1.00000	0.8593	75.00- 125.00		100.00
2.090	2.090	0.000	415627	1.00000	0.8729	49.92- 83.19		65.95
2.151	2.151	0.000	1468543	1.00000	0.8695	172.42- 287.37		233.02
	Average of Peak Amounts =				0.86723			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\024F2401.D
Date : 07-MAR-2008 18:39
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 025F2501.D
Report Date: 10-Mar-2008 10:30

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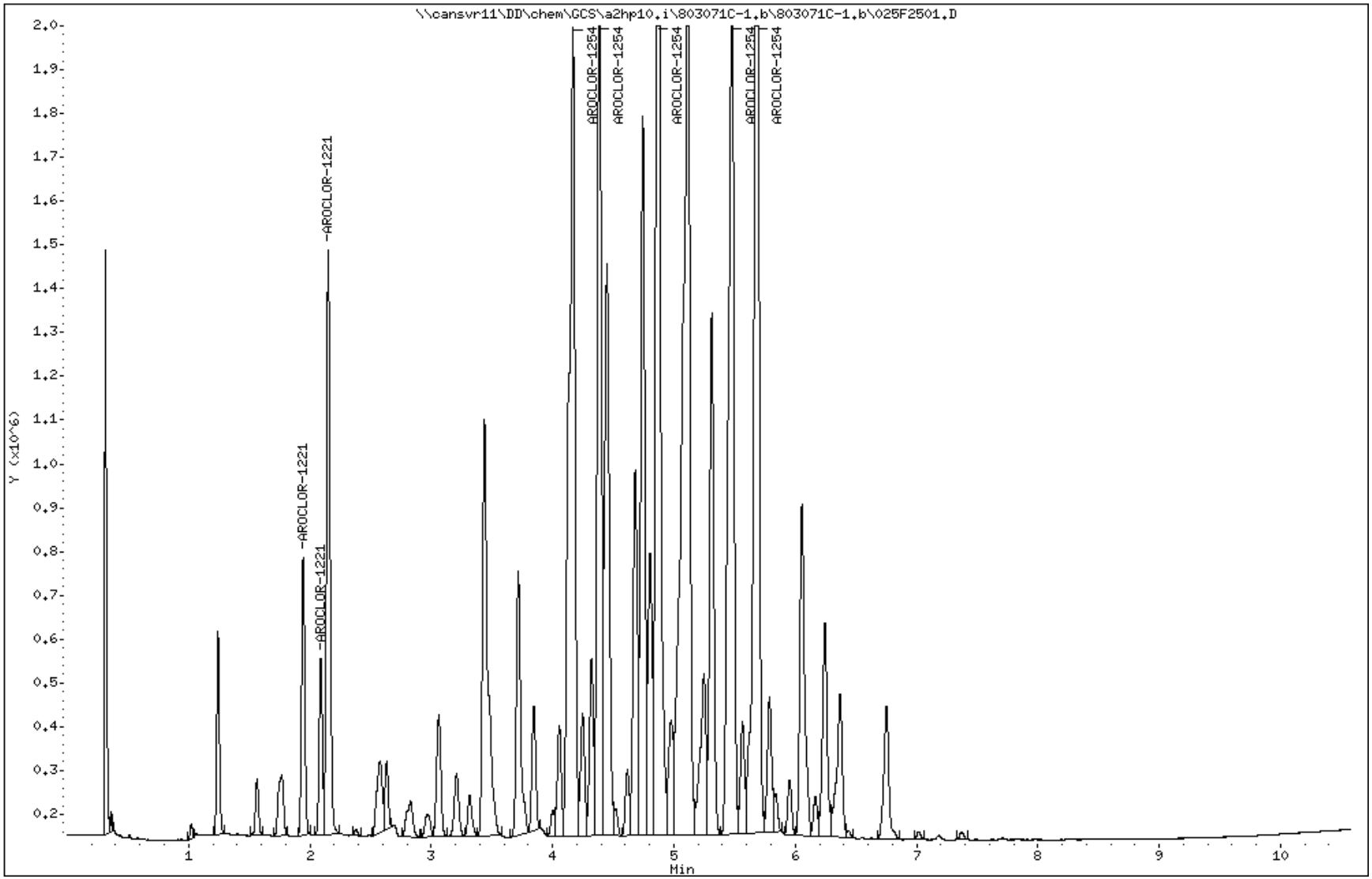
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\025F2501.D
Lab Smp Id: 2154
Inj Date : 07-MAR-2008 18:54
Operator :   Inst ID: a2hp10.i
Smp Info : 2154,,1,6
Misc Info : 9-AR2154.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:13   Cal File: 042F4201.D
Als bottle: 25   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 9-AR2154.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
4.167	4.167	0.000	1847031	2.00000	1.604	75.00- 125.00	100.00
4.384	4.384	0.000	2045159	2.00000	1.785	83.00- 138.34	110.73
4.867	4.867	0.000	3159920	2.00000	1.844	127.86- 213.09	171.08
5.478	5.478	0.000	2023399	2.00000	1.899	79.27- 132.12	109.55
5.682	5.682	0.000	2661592	2.00000	1.880	106.62- 177.69	144.10
Average of Peak Amounts =					1.80240		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.944	1.944	0.000	1180012	2.00000	1.609	75.00- 125.00	100.00
2.089	2.089	0.000	759978	2.00000	1.596	49.92- 83.19	64.40
2.151	2.151	0.000	2769010	2.00000	1.639	172.42- 287.37	234.66
Average of Peak Amounts =					1.61467		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\025F2501.D
Date : 07-MAR-2008 18:54
Client ID:
Instrument: a2hp10.i
Sample Info: 2154,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 026F2601.D
Report Date: 10-Mar-2008 10:30

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Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\026F2601.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 19:09
Operator :   Inst ID: a2hp10.i
Smp Info : 1660,,1,1
Misc Info : 12-AR1660TD.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28   Cal File: 043F4301.D
Als bottle: 26   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

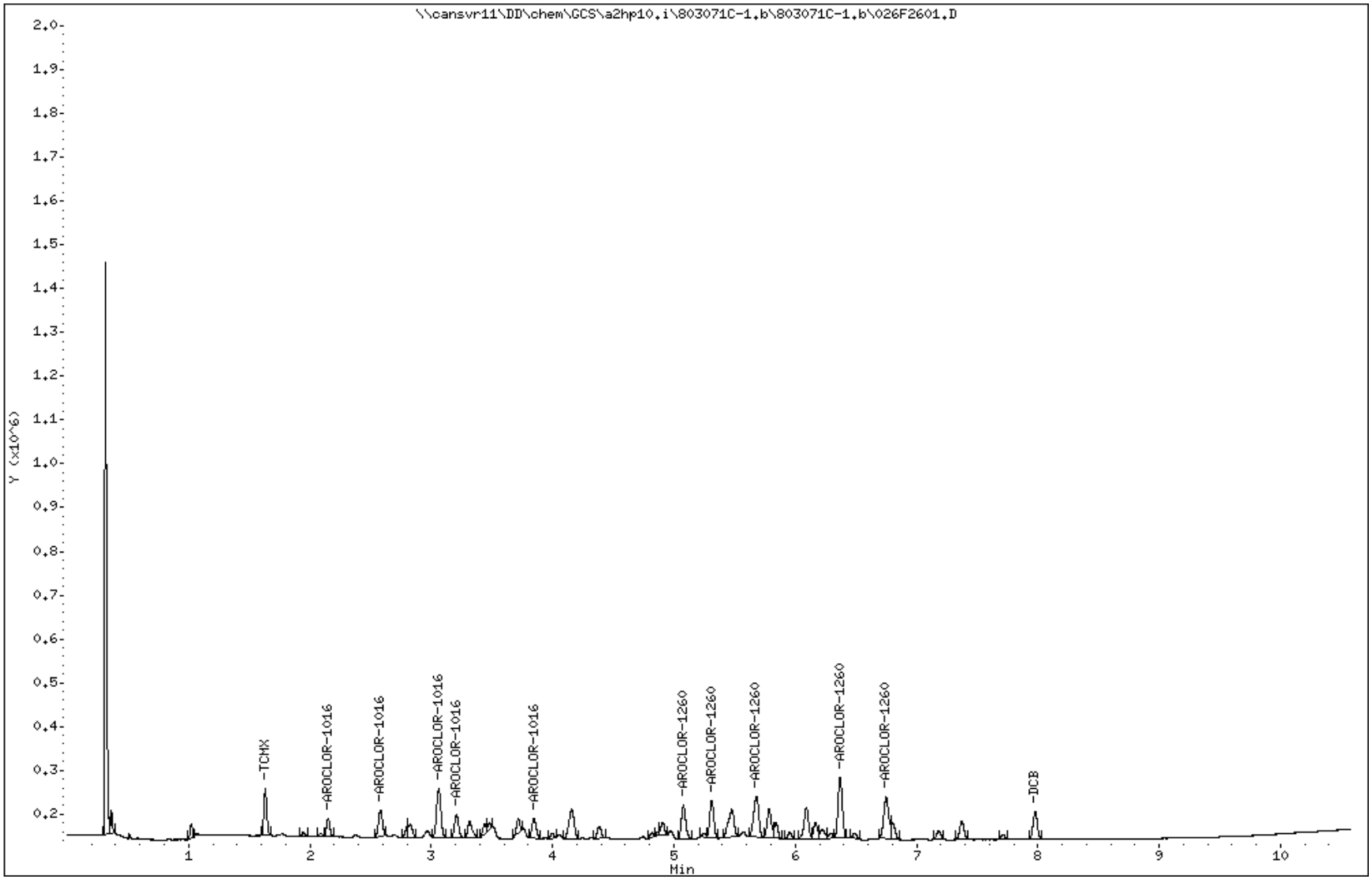
Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
$ 1 TCMX						CAS #: 877-09-8		
1.632	1.632	0.000	178938	0.00250	0.002577			
3 AROCLOR-1016						CAS #: 12674-11-2		
2.149	2.149	0.000	79196	0.05000	0.06283	75.00-	125.00	100.00
2.581	2.581	0.000	133847	0.05000	0.05827	141.83-	236.39	169.01
3.062	3.062	0.000	273313	0.05000	0.05822	289.63-	482.72	345.11
3.207	3.207	0.000	122592	0.05000	0.06105	120.62-	201.03	154.80
3.846	3.846	0.000	107549	0.05000	0.05851	109.82-	183.03	135.80
Average of Peak Amounts =					0.05978			
8 AROCLOR-1260						CAS #: 11096-82-5		
5.078	5.078	0.000	193004	0.05000	0.06041	75.00-	125.00	100.00
5.312	5.312	0.000	196906	0.05000	0.05690	83.29-	138.81	102.02
5.679	5.679	0.000	268564	0.05000	0.05331	122.71-	204.51	139.15
6.368	6.368	0.000	338122	0.05000	0.05417	159.07-	265.12	175.19
6.748	6.748	0.000	271768	0.05000	0.05526	122.08-	203.47	140.81
Average of Peak Amounts =					0.05601			

```
$  12 DCB                                        CAS #: 2051-24-3
7.977    7.977    0.000          155160 0.00250  0.002712
-------------------------------------------------------------------------------
```

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\026F2601.D
Date : 07-MAR-2008 19:09
Client ID:
Instrument: a2hp10.i
Sample Info: 1660,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 027F2701.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\027F2701.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 19:24
Operator :   Inst ID: a2hp10.i
Smp Info : 1660,,1,2
Misc Info : 12-AR1660TD.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:12   Cal File: 038F3801.D
Als bottle: 27   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

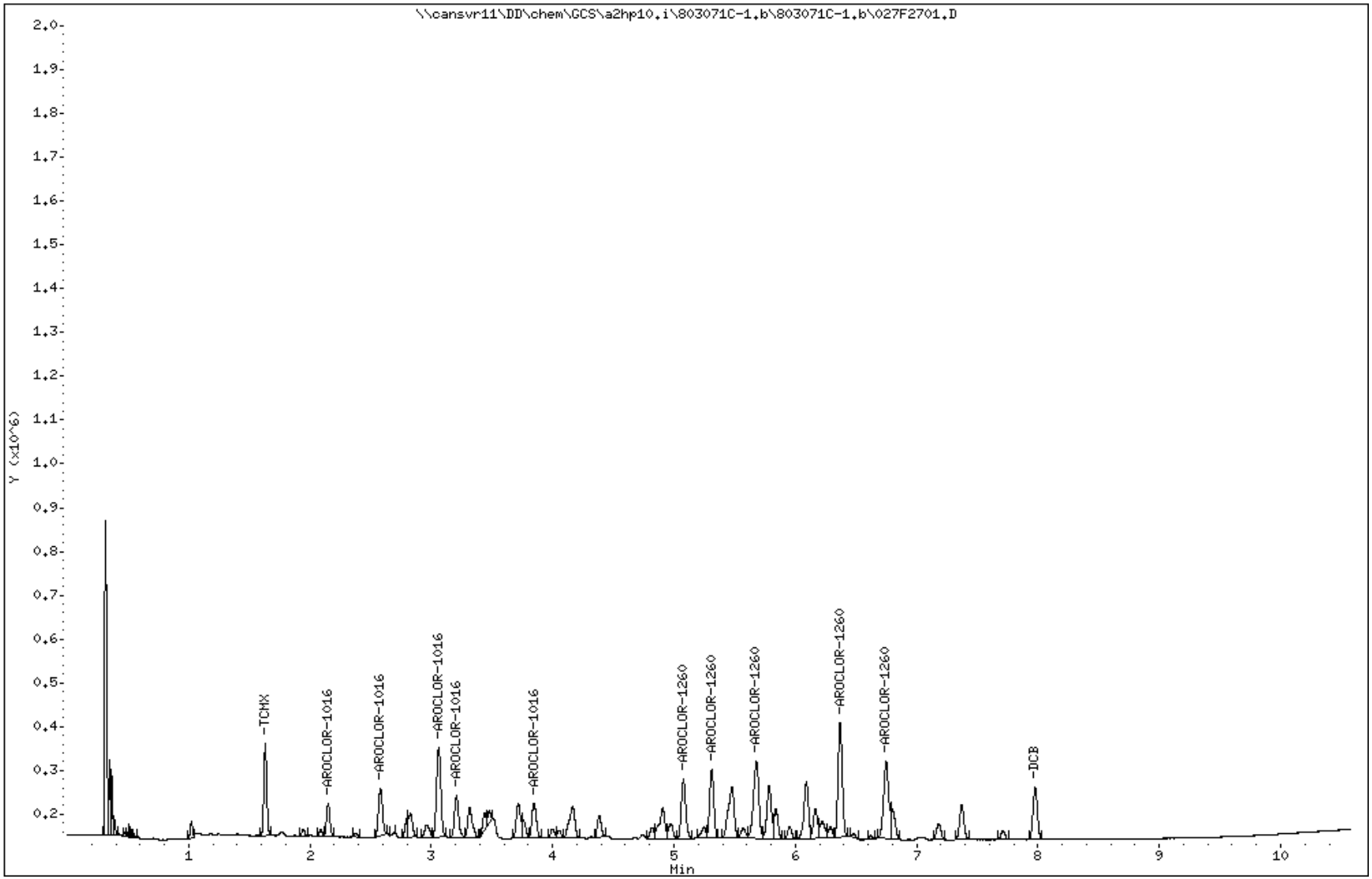
Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.631	1.631	0.000	348107	0.00500	0.005014		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.149	2.149	0.000	147008	0.10000	0.1166	75.00- 125.00	100.00
2.581	2.581	0.000	244064	0.10000	0.1062	141.83- 236.39	166.02
3.061	3.061	0.000	508014	0.10000	0.1082	289.63- 482.72	345.57
3.208	3.208	0.000	230449	0.10000	0.1148	120.62- 201.03	156.76
3.846	3.846	0.000	201899	0.10000	0.1098	109.82- 183.03	137.34
Average of Peak Amounts =					0.11112		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.077	5.077	0.000	347980	0.10000	0.1089	75.00- 125.00	100.00
5.311	5.311	0.000	369394	0.10000	0.1067	83.29- 138.81	106.15
5.681	5.681	0.000	549848	0.10000	0.1091	122.71- 204.51	158.01
6.370	6.370	0.000	629165	0.10000	0.1008	159.07- 265.12	180.80
6.748	6.748	0.000	500938	0.10000	0.1018	122.08- 203.47	143.96
Average of Peak Amounts =					0.10546		

```
$  12 DCB                                        CAS #: 2051-24-3
7.976    7.976    0.000          295418 0.00500  0.005164
-------------------------------------------------------------------------------
```

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\027F2701.D
Date : 07-MAR-2008 19:24
Client ID:
Instrument: a2hp10.i
Sample Info: 1660,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 028F2801.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\028F2801.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 19:40
Operator :   Inst ID: a2hp10.i
Smp Info : 1660,,1,3
Misc Info : 12-AR1660TD.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:27   Cal File: 039F3901.D
Als bottle: 28   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

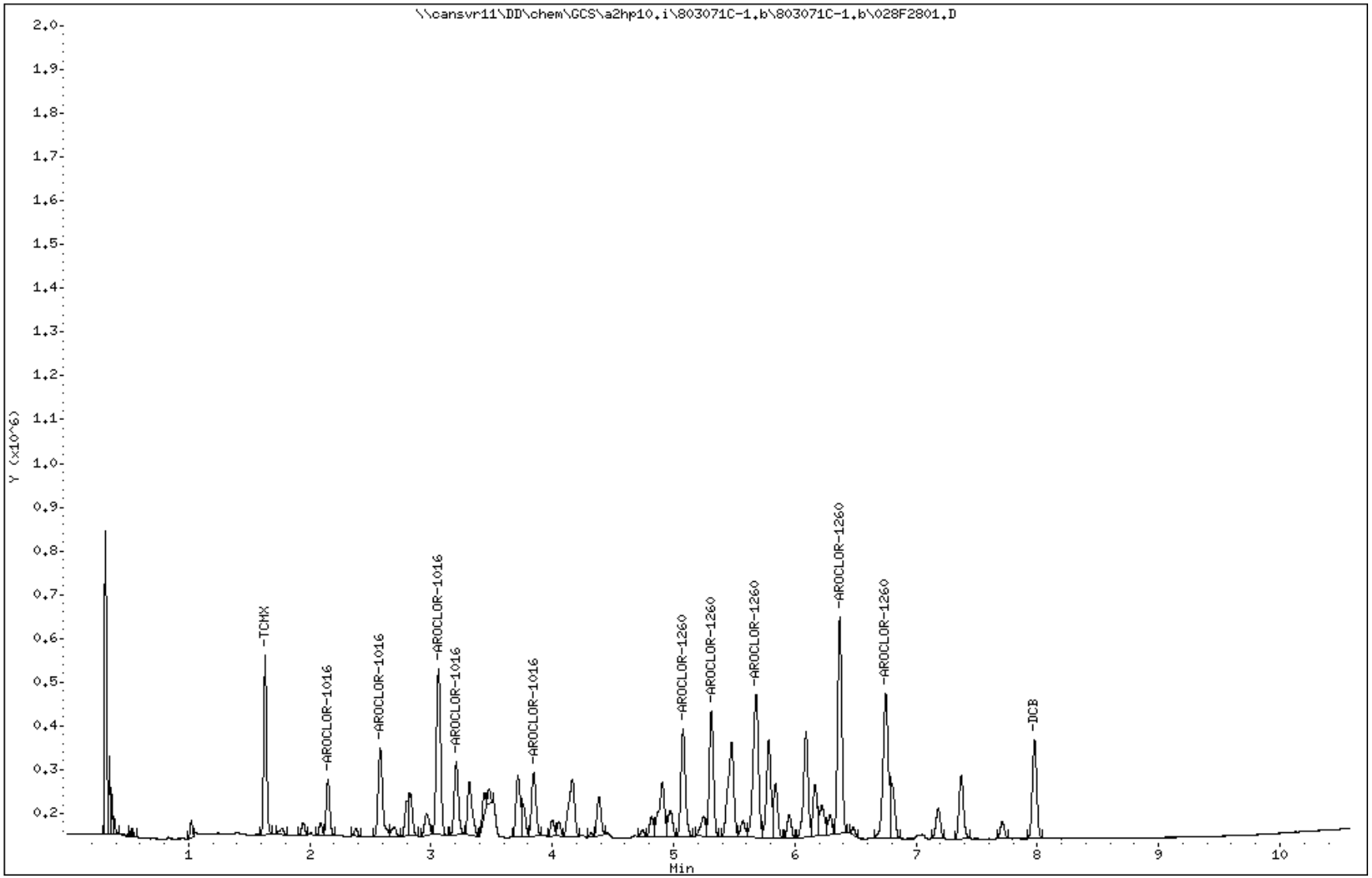
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
$ 1 TCMX						CAS #: 877-09-8		
1.632	1.632	0.000	673742	0.01000	0.009704			
3 AROCLOR-1016						CAS #: 12674-11-2		
2.150	2.150	0.000	255743	0.20000	0.2029	75.00- 125.00		100.00
2.580	2.580	0.000	511453	0.20000	0.2227	149.99- 249.98		199.99
3.061	3.061	0.000	929781	0.20000	0.1981	272.67- 454.45		363.56
3.208	3.208	0.000	404067	0.20000	0.2012	118.50- 197.50		158.00
3.846	3.846	0.000	367363	0.20000	0.1998	107.73- 179.56		143.65
Average of Peak Amounts =					0.20494			
8 AROCLOR-1260						CAS #: 11096-82-5		
5.078	5.078	0.000	629158	0.20000	0.1969	75.00- 125.00		100.00
5.311	5.311	0.000	693111	0.20000	0.2003	82.62- 137.71		110.16
5.680	5.680	0.000	1014762	0.20000	0.2014	120.97- 201.61		161.29
6.370	6.370	0.000	1172674	0.20000	0.1879	139.79- 232.98		186.39
6.749	6.749	0.000	986307	0.20000	0.2005	117.57- 195.96		156.77
Average of Peak Amounts =					0.19740			

```
$  12 DCB                                        CAS #: 2051-24-3
7.976    7.976    0.000          555883 0.01000  0.009718
------------------------------------------------------------------------------
```

1016

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\028F2801.D
Date : 07-MAR-2008 19:40
Client ID:
Instrument: a2hp10.i
Sample Info: 1660,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



North Canton

Data File: 029F2901.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\029F2901.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 19:55
Operator :   Inst ID: a2hp10.i
Smp Info : 1660,,1,4
Misc Info : 12-AR1660TD.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:43   Cal File: 040F4001.D
Als bottle: 29   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

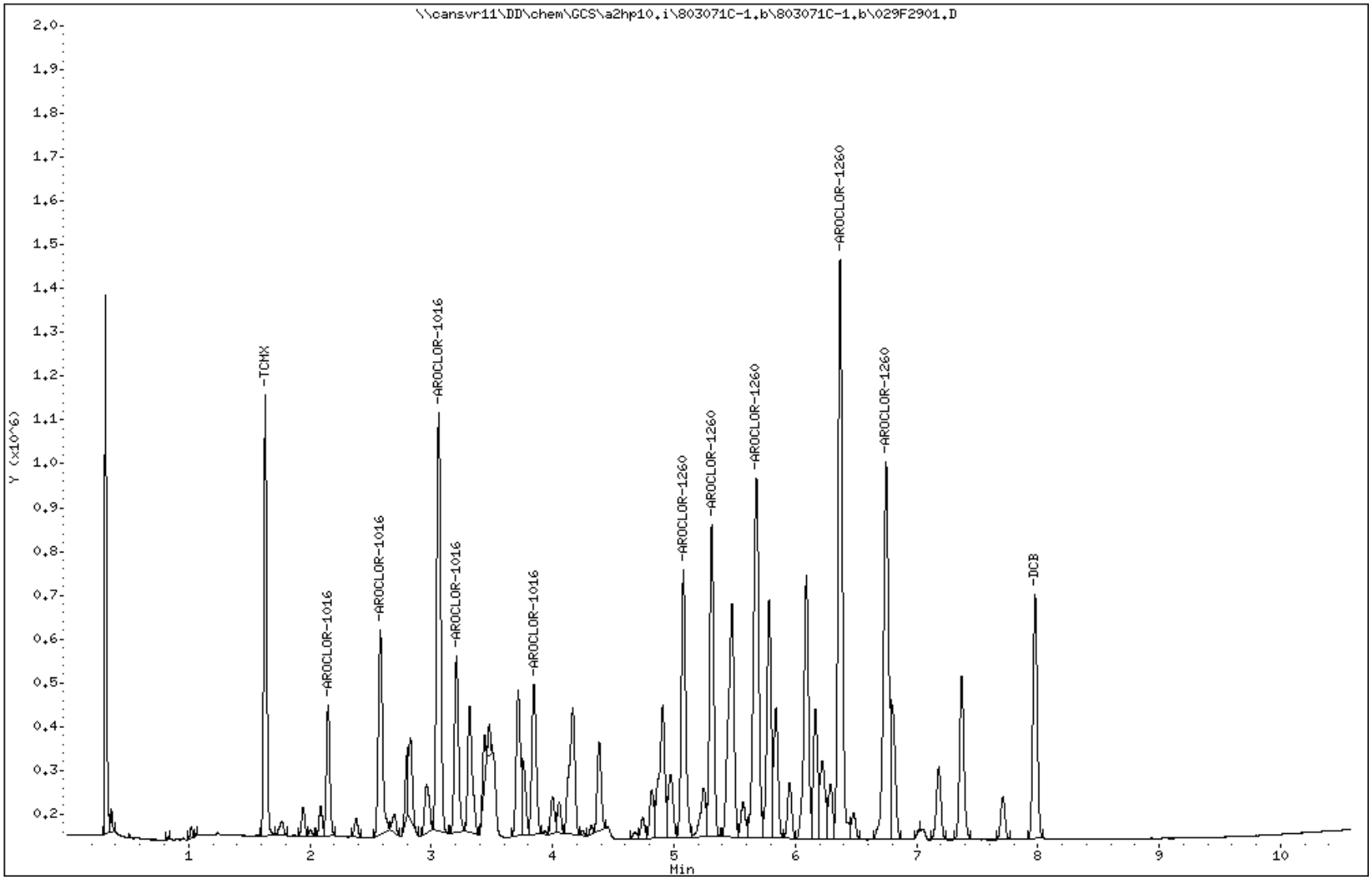
Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
$ 1 TCMX						CAS #: 877-09-8		
1.632	1.632	0.000	1652614	0.02000	0.02380			
3 AROCLOR-1016						CAS #: 12674-11-2		
2.150	2.150	0.000	591945	0.50000	0.4696	80.00- 120.00		100.00
2.581	2.581	0.000	1119429	0.50000	0.4874	141.83- 236.39		189.11
3.061	3.061	0.000	2285960	0.50000	0.4870	289.63- 482.72		386.18
3.207	3.207	0.000	951971	0.50000	0.4740	120.62- 201.03		160.82
3.846	3.846	0.000	866763	0.50000	0.4715	109.82- 183.03		146.43
Average of Peak Amounts =					0.47790			
8 AROCLOR-1260						CAS #: 11096-82-5		
5.078	5.078	0.000	1537839	0.50000	0.4813	80.00- 120.00		100.00
5.312	5.312	0.000	1707735	0.50000	0.4935	83.29- 138.81		111.05
5.679	5.679	0.000	2516020	0.50000	0.4994	122.71- 204.51		163.61
6.369	6.369	0.000	3261669	0.50000	0.5225	159.07- 265.12		212.09
6.749	6.749	0.000	2503203	0.50000	0.5090	122.08- 203.47		162.77
Average of Peak Amounts =					0.50114			

```
$  12 DCB                                        CAS #: 2051-24-3
7.977    7.977    0.000         1370426 0.02000  0.02396
-------------------------------------------------------------------------------
```

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\029F2901.D
Date : 07-MAR-2008 19:55
Client ID:
Instrument: a2hp10.i
Sample Info: 1660,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 030F3001.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\030F3001.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 20:10
Operator :   Inst ID: a2hp10.i
Smp Info : 1660,,1,5
Misc Info : 12-AR1660TD.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:58   Cal File: 041F4101.D
Als bottle: 30   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

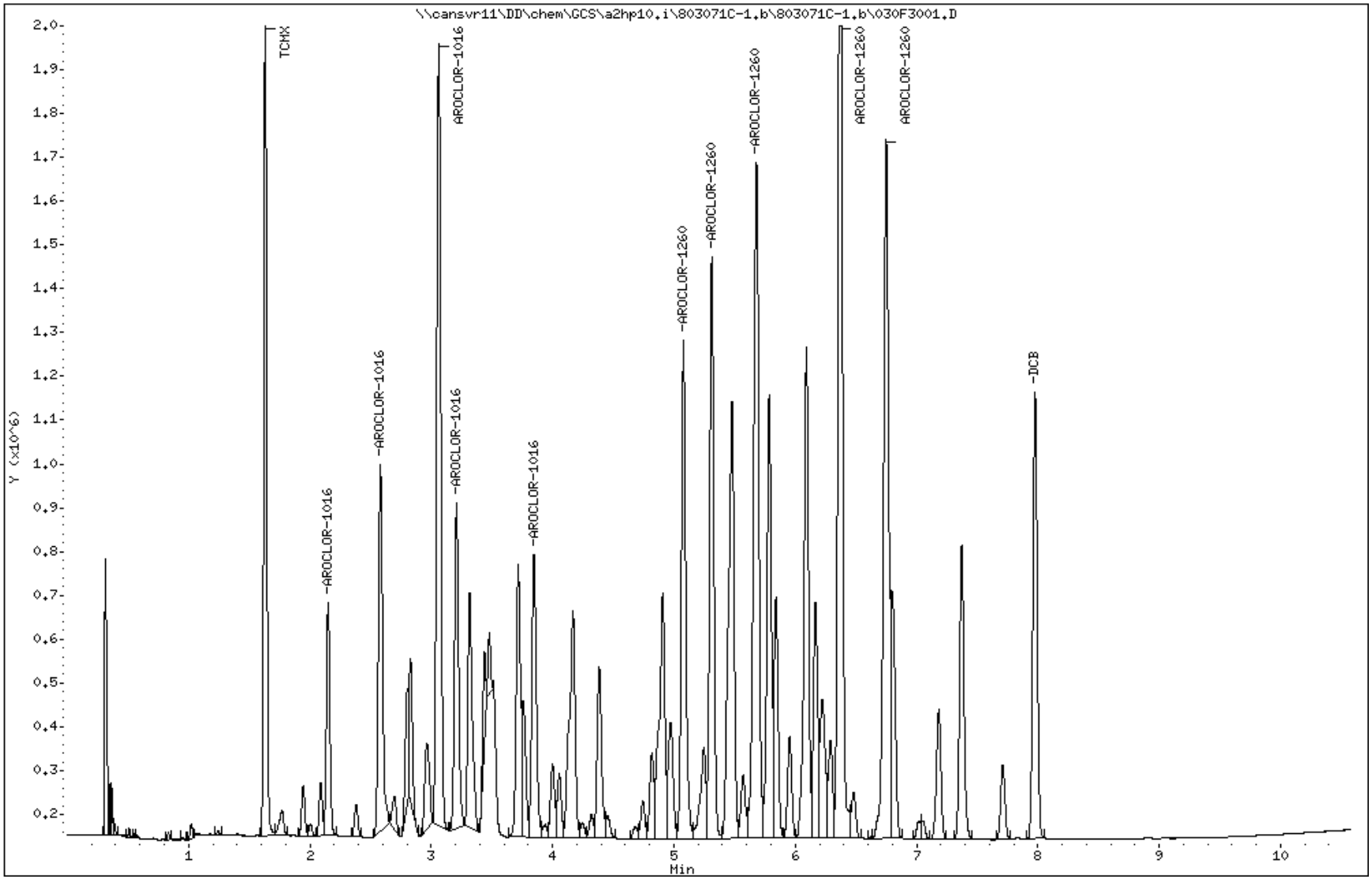
Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.632	1.632	0.000	3155052	0.05000	0.04544		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.150	2.150	0.000	1055895	1.00000	0.8377	75.00- 125.00	100.00
2.581	2.581	0.000	1994679	1.00000	0.8684	141.83- 236.39	188.91
3.062	3.062	0.000	4266046	1.00000	0.9088	289.63- 482.72	404.02
3.208	3.208	0.000	1725574	1.00000	0.8593	120.62- 201.03	163.42
3.846	3.846	0.000	1674913	1.00000	0.9112	109.82- 183.03	158.62
		Average of Peak Amounts =			0.87708		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.078	5.078	0.000	2852177	1.00000	0.8927	75.00- 125.00	100.00
5.312	5.312	0.000	3180857	1.00000	0.9192	83.29- 138.81	111.52
5.680	5.680	0.000	4694666	1.00000	0.9318	122.71- 204.51	164.60
6.370	6.370	0.000	6065546	1.00000	0.9717	159.07- 265.12	212.66
6.749	6.749	0.000	4589011	1.00000	0.9331	122.08- 203.47	160.90
		Average of Peak Amounts =			0.92970		

```
$  12 DCB                                        CAS #: 2051-24-3
7.977    7.977    0.000         2504507 0.05000  0.04378
-------------------------------------------------------------------------------
```

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\030F3001.D
Date : 07-MAR-2008 20:10
Client ID:
Instrument: a2hp10.i
Sample Info: 1660,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 031F3101.D
Report Date: 10-Mar-2008 10:30

TestAmerica North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\031F3101.D
Lab Smp Id: 1660
Inj Date : 07-MAR-2008 20:25
Operator :   Inst ID: a2hp10.i
Smp Info : 1660,,1,6
Misc Info : 12-AR1660TD.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:13   Cal File: 042F4201.D
Als bottle: 31   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

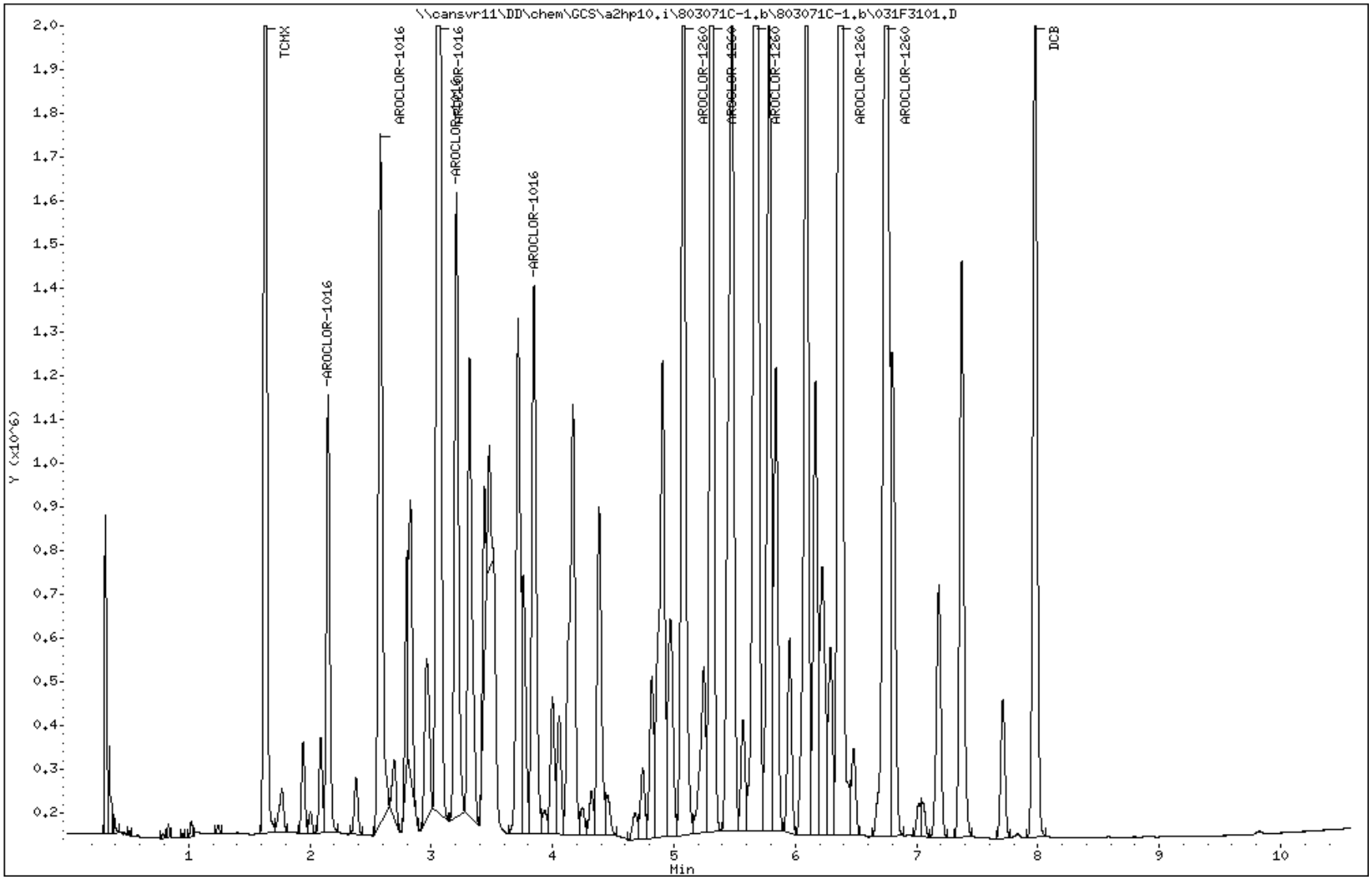
Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
$ 1 TCMX						CAS #: 877-09-8		
1.632	1.632	0.000	6228515	0.10000	0.08971			
3 AROCLOR-1016						CAS #: 12674-11-2		
2.150	2.150	0.000	1979979	2.00000	1.571	75.00-	125.00	100.00
2.580	2.580	0.000	3746880	2.00000	1.631	141.83-	236.39	189.24
3.061	3.061	0.000	8262258	2.00000	1.760	289.63-	482.72	417.29
3.207	3.207	0.000	3285434	2.00000	1.636	120.62-	201.03	165.93
3.846	3.846	0.000	3227843	2.00000	1.756	109.82-	183.03	163.02
Average of Peak Amounts =					1.67080			
8 AROCLOR-1260						CAS #: 11096-82-5		
5.077	5.077	0.000	5511295	2.00000	1.725	75.00-	125.00	100.00
5.311	5.311	0.000	6138443	2.00000	1.774	83.29-	138.81	111.38
5.679	5.679	0.000	9115241	2.00000	1.809	122.71-	204.51	165.39
6.368	6.368	0.000	11893108	2.00000	1.905	159.07-	265.12	215.80
6.749	6.749	0.000	9074904	2.00000	1.845	122.08-	203.47	164.66
Average of Peak Amounts =					1.81160			

```
$  12 DCB                                        CAS #: 2051-24-3
7.977    7.977    0.000         4786444 0.10000  0.08368
-------------------------------------------------------------------------------
```

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\031F3101.D
Date : 07-MAR-2008 20:25
Client ID:
Instrument: a2hp10.i
Sample Info: 1660,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 032F3201.D
Report Date: 10-Mar-2008 10:30

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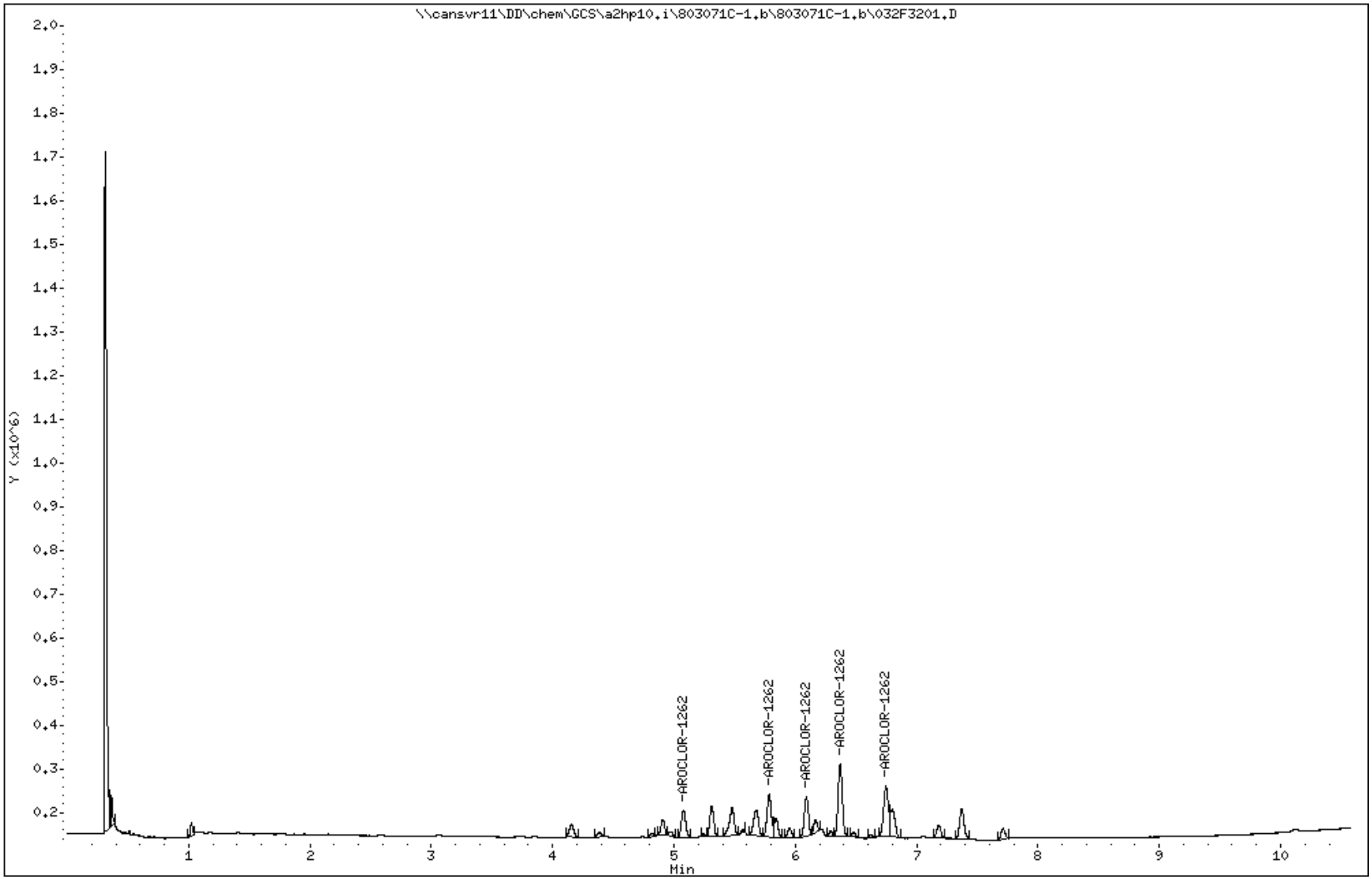
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\032F3201.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 20:41
Operator :   Inst ID: a2hp10.i
Smp Info : 1262,,1,1
Misc Info : 13-AR1262.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:30 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28   Cal File: 043F4301.D
Als bottle: 32   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 13-AR1262.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
9 AROCLOR-1262					CAS #: 37324-23-5		
5.078	5.078	0.000	63092	0.05000	0.06101	75.00- 125.00	100.00
5.784	5.784	0.000	96752	0.05000	0.05838	122.57- 204.28	153.35
6.091	6.091	0.000	88748	0.05000	0.05667	119.93- 199.88	140.66
6.369	6.369	0.000	165487	0.05000	0.05459	233.67- 389.45	262.29
6.746	6.746	0.000	114786	0.05000	0.05554	156.46- 260.77	181.93
		Average of Peak Amounts =			0.05724		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\032F3201.D
Date : 07-MAR-2008 20:41
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 033F3301.D
Report Date: 10-Mar-2008 10:31

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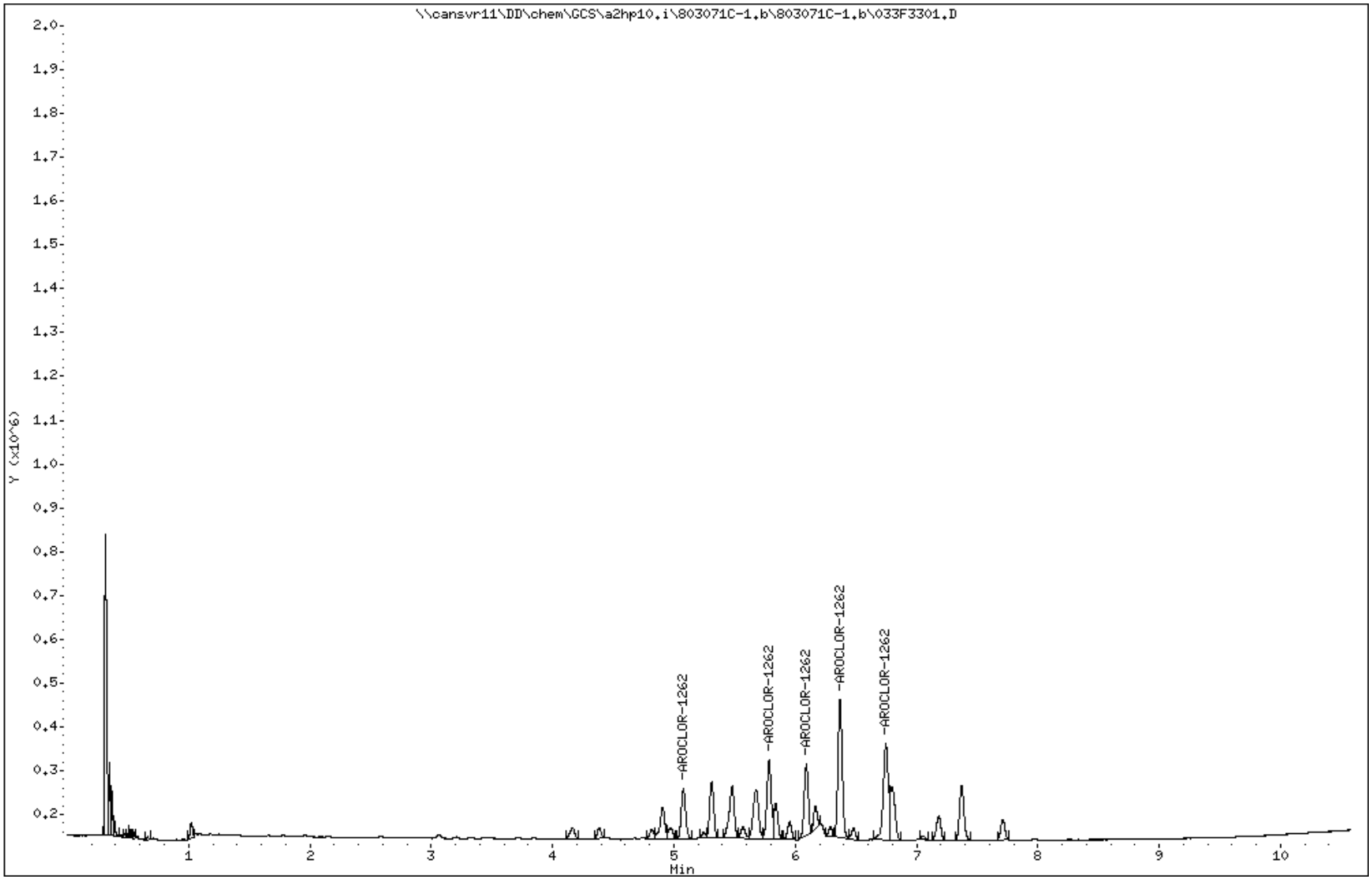
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\033F3301.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 20:56
Operator : Inst ID: a2hp10.i
Smp Info : 1262,,1,2
Misc Info : 13-AR1262.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:31 a2hp10.i Quant Type: ESTD
Cal Date : 07-MAR-2008 22:12 Cal File: 038F3801.D
Als bottle: 33 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
9 AROCLOR-1262					CAS #: 37324-23-5		
5.078	5.078	0.000	114629	0.10000	0.1108	75.00- 125.00	100.00
5.783	5.783	0.000	179868	0.10000	0.1085	122.57- 204.28	156.91
6.091	6.091	0.000	163928	0.10000	0.1047	119.93- 199.88	143.01
6.368	6.368	0.000	314333	0.10000	0.1037	233.67- 389.45	274.22
6.746	6.746	0.000	220716	0.10000	0.1068	156.46- 260.77	192.55
Average of Peak Amounts =				0.10690			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\033F3301.D
Date : 07-MAR-2008 20:56
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 034F3401.D
Report Date: 10-Mar-2008 10:31

TestAmerica North Canton

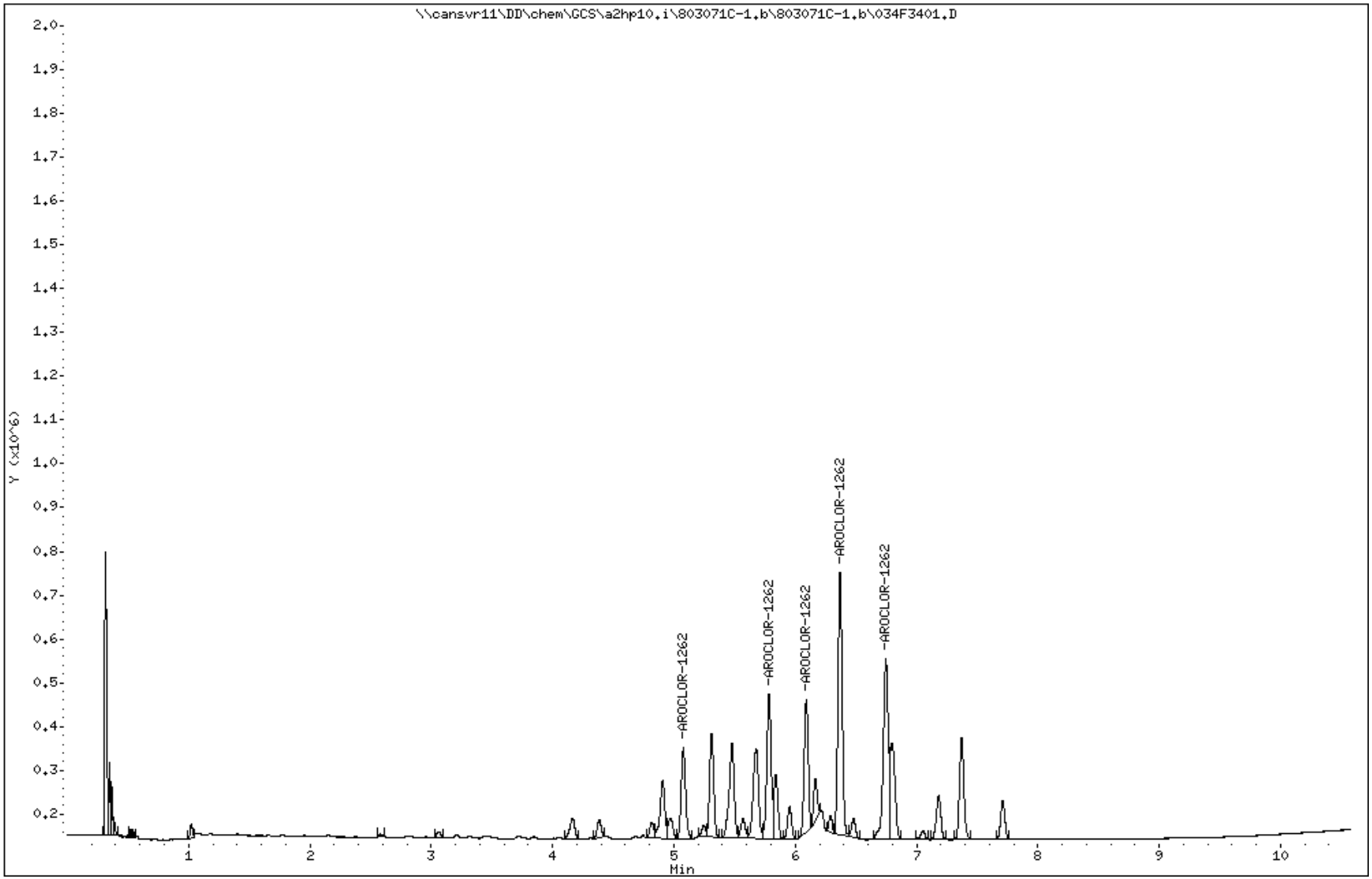
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\034F3401.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 21:11
Operator :   Inst ID: a2hp10.i
Smp Info : 1262,,1,3
Misc Info : 13-AR1262.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:31 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:27   Cal File: 039F3901.D
Als bottle: 34   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 13-AR1262.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
9 AROCLOR-1262					CAS #: 37324-23-5		
5.077	5.077	0.000	207535	0.20000	0.2007	75.00- 125.00	100.00
5.784	5.784	0.000	330057	0.20000	0.1991	119.28- 198.80	159.04
6.090	6.090	0.000	301507	0.20000	0.1925	108.96- 181.60	145.28
6.368	6.368	0.000	598334	0.20000	0.1974	216.23- 360.38	288.31
6.746	6.746	0.000	410723	0.20000	0.1987	148.43- 247.38	197.91
		Average of Peak Amounts =			0.19768		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\034F3401.D
Date : 07-MAR-2008 21:11
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 035F3501.D
Report Date: 10-Mar-2008 10:31

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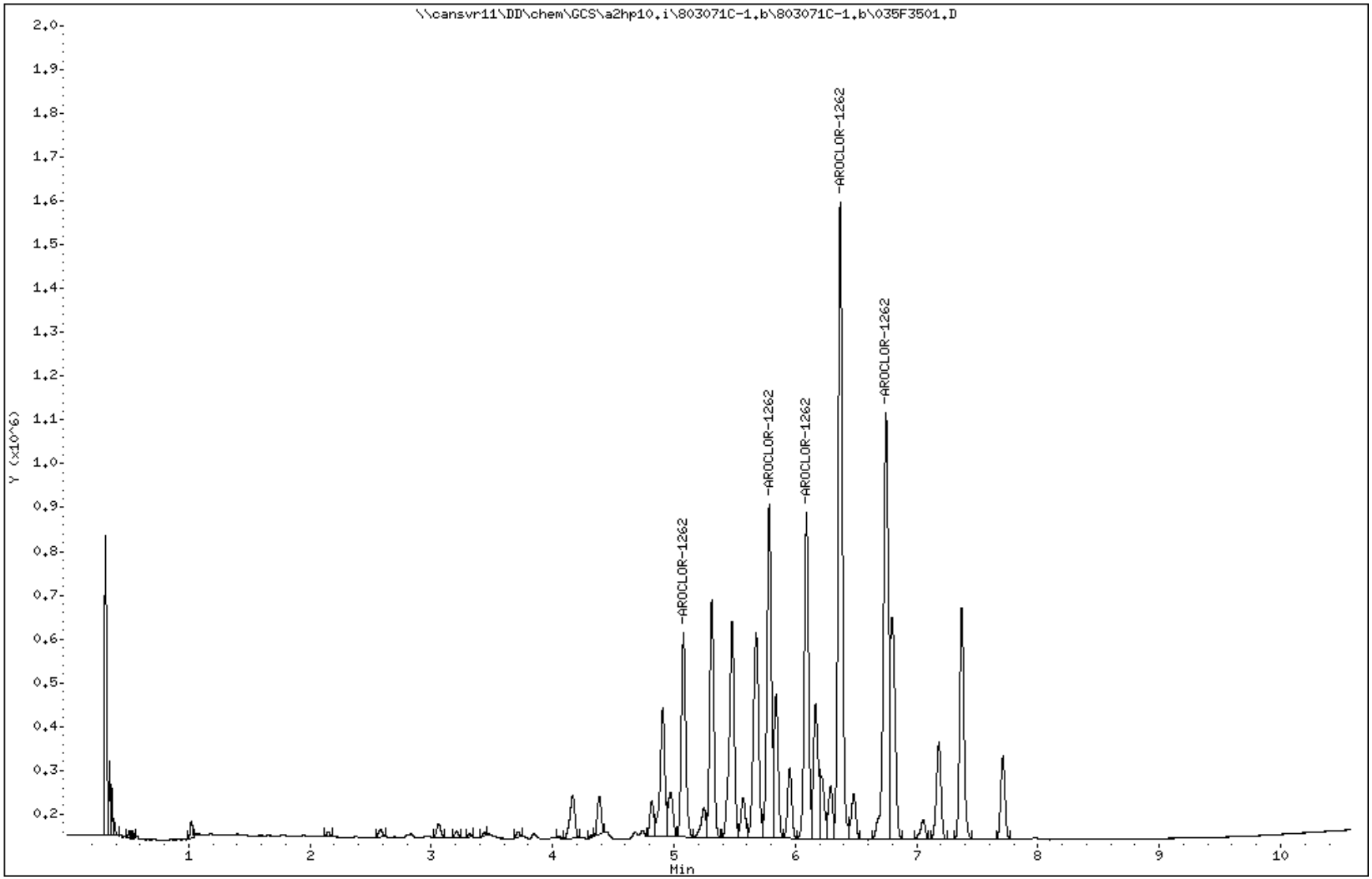
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\035F3501.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 21:26
Operator :   Inst ID: a2hp10.i
Smp Info : 1262,,1,4
Misc Info : 13-AR1262.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:31 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:43   Cal File: 040F4001.D
Als bottle: 35   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 13-AR1262.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
9 AROCLOR-1262					CAS #: 37324-23-5			
5.078	5.078	0.000	466677	0.50000	0.4513	80.00-	120.00	100.00
5.785	5.785	0.000	762644	0.50000	0.4602	122.57-	204.28	163.42
6.092	6.092	0.000	746219	0.50000	0.4765	119.93-	199.88	159.90
6.370	6.370	0.000	1453981	0.50000	0.4796	233.67-	389.45	311.56
6.748	6.748	0.000	973558	0.50000	0.4711	156.46-	260.77	208.61
Average of Peak Amounts =					0.46774			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\035F3501.D
Date : 07-MAR-2008 21:26
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 036F3601.D
Report Date: 10-Mar-2008 10:31

TestAmerica North Canton

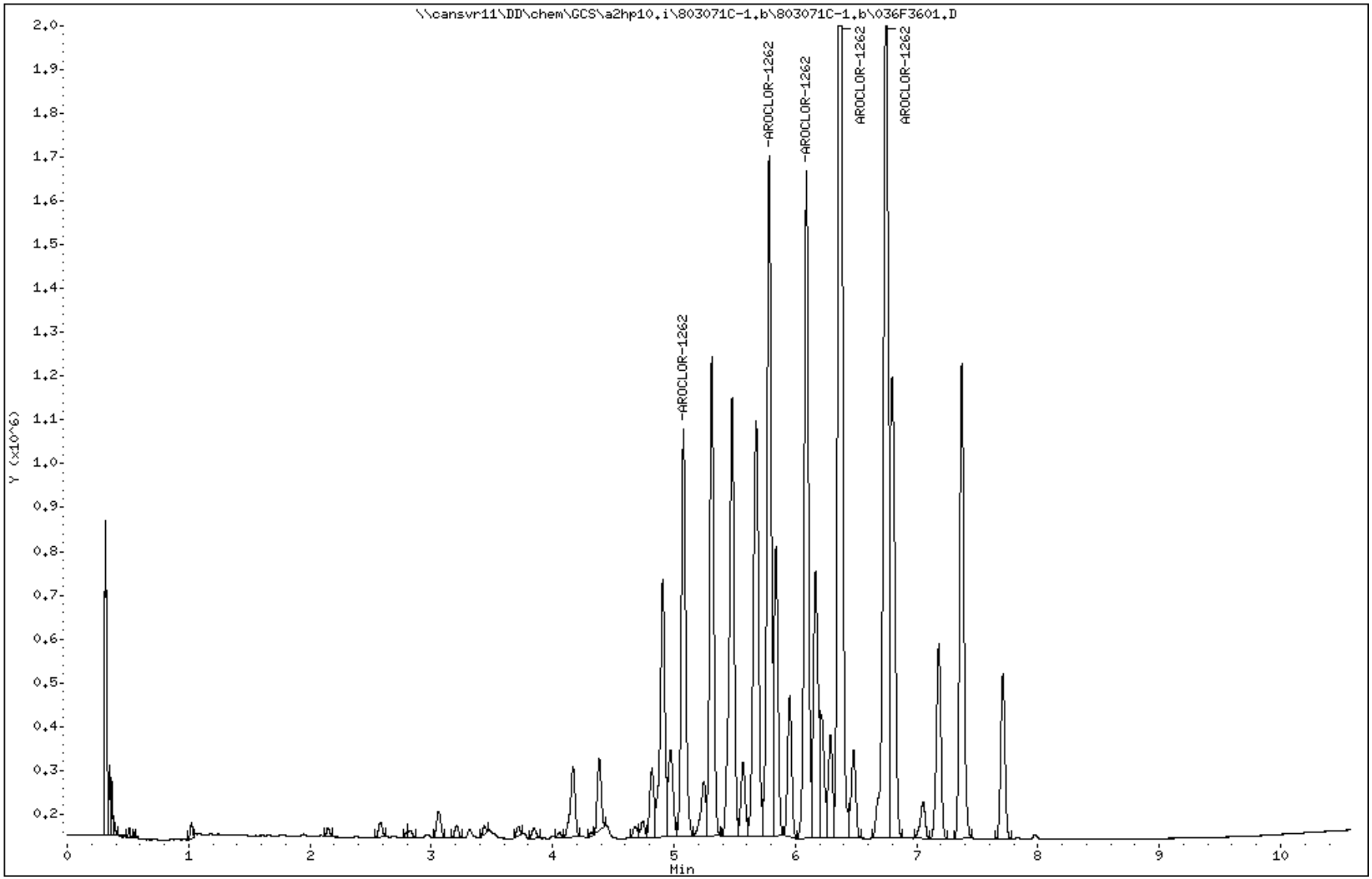
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\036F3601.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 21:42
Operator : Inst ID: a2hp10.i
Smp Info : 1262,,1,5
Misc Info : 13-AR1262.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:31 a2hp10.i Quant Type: ESTD
Cal Date : 07-MAR-2008 22:58 Cal File: 041F4101.D
Als bottle: 36 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
9 AROCLOR-1262					CAS #: 37324-23-5			
5.078	5.078	0.000	931325	1.00000	0.9007	75.00-	125.00	100.00
5.784	5.784	0.000	1553890	1.00000	0.9376	122.57-	204.28	166.85
6.091	6.091	0.000	1525052	1.00000	0.9738	119.93-	199.88	163.75
6.370	6.370	0.000	2994574	1.00000	0.9878	233.67-	389.45	321.54
6.746	6.746	0.000	2003901	1.00000	0.9697	156.46-	260.77	215.17
Average of Peak Amounts =					0.95392			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\036F3601.D
Date : 07-MAR-2008 21:42
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 037F3701.D
Report Date: 10-Mar-2008 10:31

TestAmerica North Canton

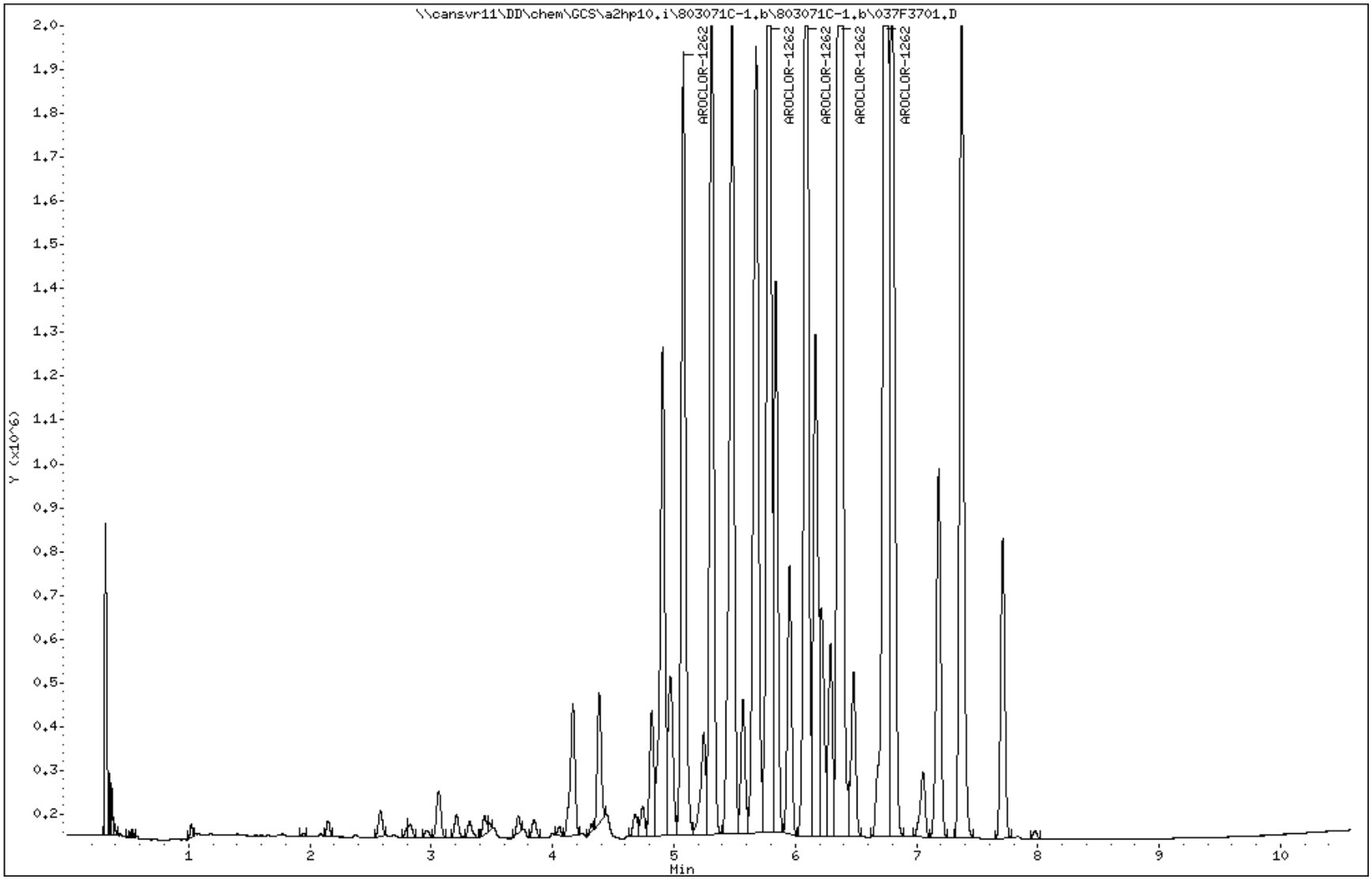
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\037F3701.D
Lab Smp Id: 1262
Inj Date : 07-MAR-2008 21:57
Operator : Inst ID: a2hp10.i
Smp Info : 1262,,1,6
Misc Info : 13-AR1262.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:31 a2hp10.i Quant Type: ESTD
Cal Date : 07-MAR-2008 23:13 Cal File: 042F4201.D
Als bottle: 37 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
9 AROCLOR-1262					CAS #: 37324-23-5		
5.077	5.077	0.000	1787579	2.00000	1.729	75.00- 125.00	100.00
5.783	5.783	0.000	2961982	2.00000	1.787	122.57- 204.28	165.70
6.091	6.091	0.000	2914681	2.00000	1.861	119.93- 199.88	163.05
6.369	6.369	0.000	5685104	2.00000	1.875	233.67- 389.45	318.03
6.747	6.747	0.000	3783557	2.00000	1.831	156.46- 260.77	211.66
Average of Peak Amounts =					1.81660		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\037F3701.D
Date : 07-MAR-2008 21:57
Client ID:
Instrument: a2hp10.i
Sample Info: 1262,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 038F3801.D
Report Date: 10-Mar-2008 10:31

TestAmerica North Canton

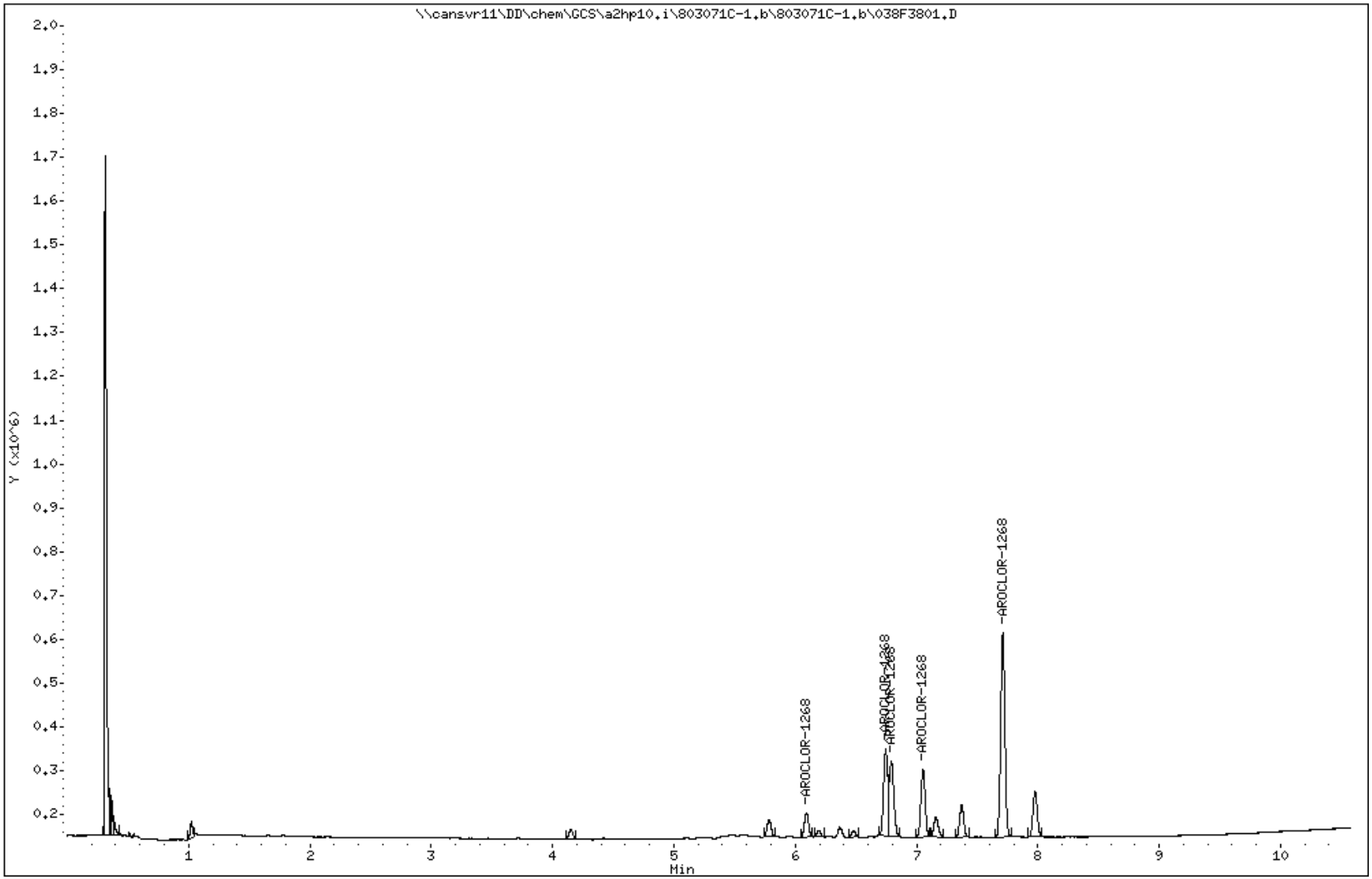
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\038F3801.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 22:12
Operator :   Inst ID: a2hp10.i
Smp Info : 1268,,1,1
Misc Info : 14-AR1268.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:31 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28   Cal File: 043F4301.D
Als bottle: 38   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 14-AR1268.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
10 AROCLOR-1268					CAS #: 11100-14-4		
6.093	6.093	0.000	54602	0.05000	0.06031	75.00- 125.00	100.00
6.744	6.744	0.000	199146	0.05000	0.05580	309.47- 515.78	364.72
6.792	6.792	0.000	172290	0.05000	0.05466	279.16- 465.26	315.54
7.053	7.053	0.000	154258	0.05000	0.05560	243.60- 406.00	282.51
7.709	7.709	0.000	464525	0.05000	0.05491	763.71-1272.85	850.75
		Average of Peak Amounts =			0.05626		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\038F3801.D
Date : 07-MAR-2008 22:12
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,1
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 039F3901.D
Report Date: 10-Mar-2008 10:31

TestAmerica North Canton

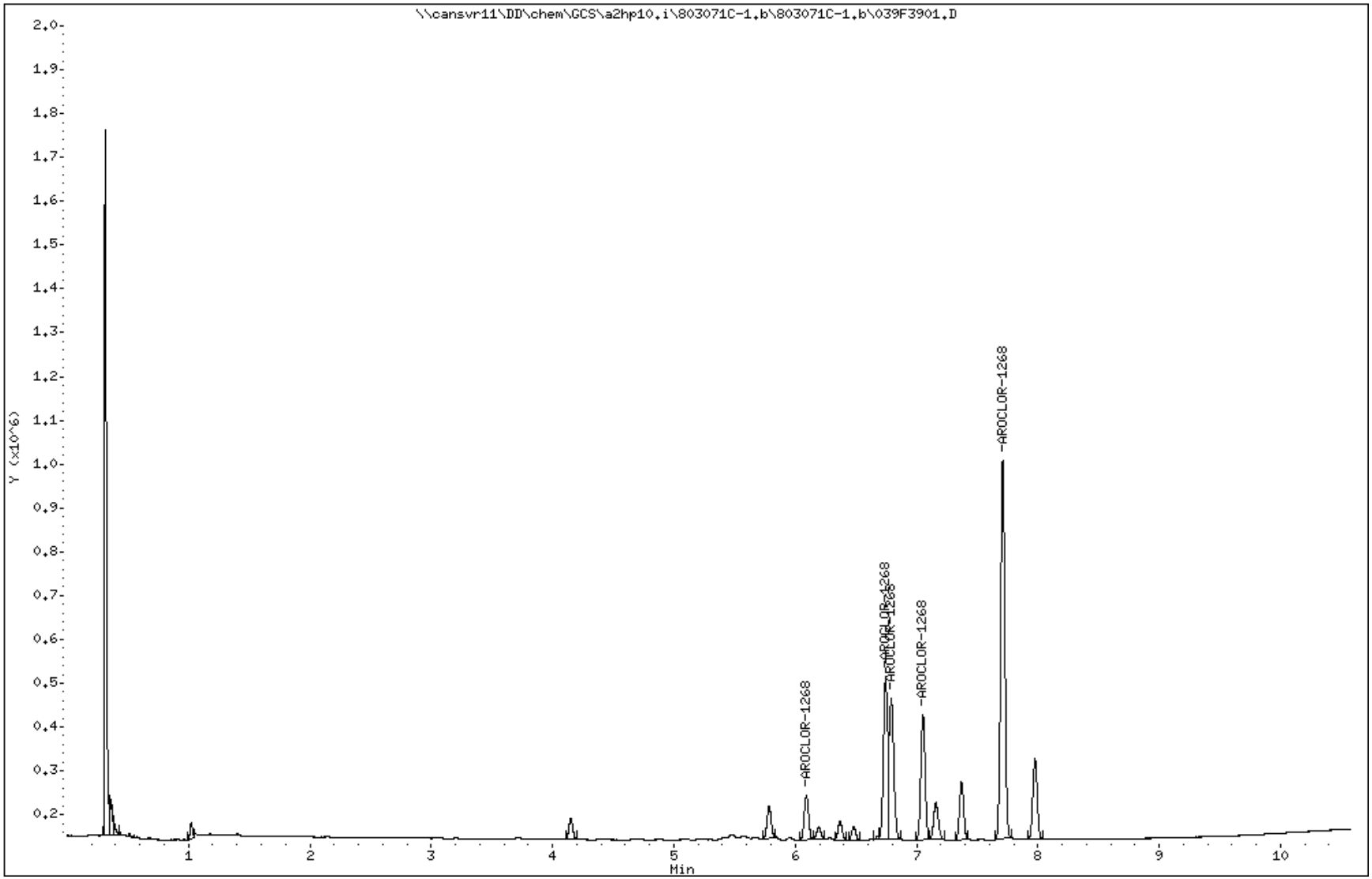
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\039F3901.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 22:27
Operator :   Inst ID: a2hp10.i
Smp Info : 1268,,1,2
Misc Info : 14-AR1268.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:31 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:12   Cal File: 038F3801.D
Als bottle: 39   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 14-AR1268.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
10 AROCLOR-1268					CAS #: 11100-14-4		
6.092	6.092	0.000	100132	0.10000	0.1106	75.00- 125.00	100.00
6.744	6.744	0.000	371535	0.10000	0.1041	309.47- 515.78	371.05
6.791	6.791	0.000	323400	0.10000	0.1026	279.16- 465.26	322.97
7.053	7.053	0.000	285013	0.10000	0.1027	243.60- 406.00	284.64
7.709	7.709	0.000	864024	0.10000	0.1021	763.71-1272.85	862.88
		Average of Peak Amounts =		0.10442			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\039F3901.D
Date : 07-MAR-2008 22:27
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 040F4001.D
Report Date: 10-Mar-2008 10:31

TestAmerica North Canton

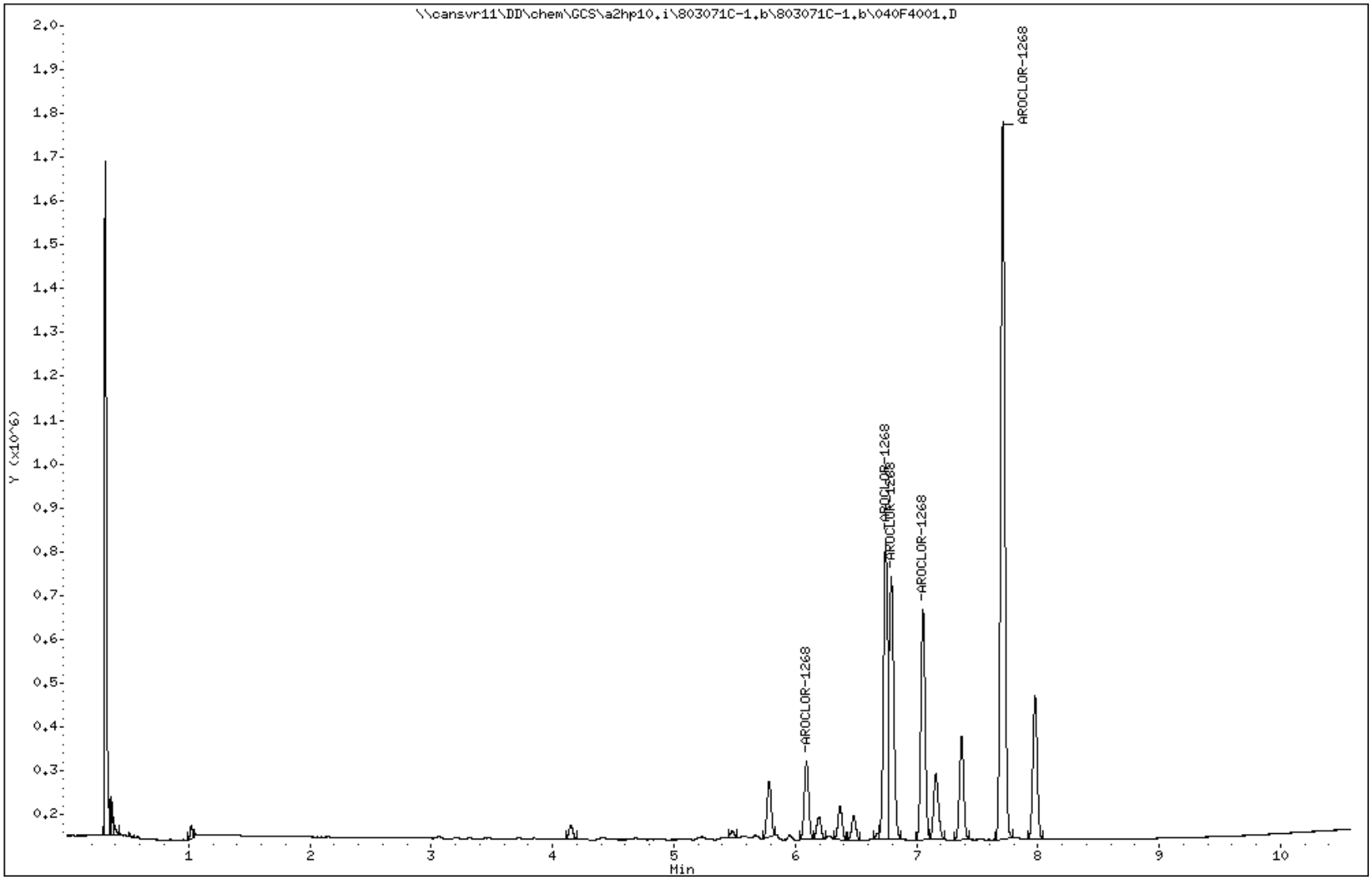
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\040F4001.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 22:43
Operator :   Inst ID: a2hp10.i
Smp Info : 1268,,1,3
Misc Info : 14-AR1268.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:31 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:27   Cal File: 039F3901.D
Als bottle: 40   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 14-AR1268.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
10 AROCLOR-1268					CAS #: 11100-14-4		
6.092	6.092	0.000	178090	0.20000	0.1967	75.00- 125.00	100.00
6.744	6.744	0.000	685329	0.20000	0.1920	288.62- 481.03	384.82
6.792	6.792	0.000	599806	0.20000	0.1903	252.60- 421.00	336.80
7.053	7.053	0.000	525731	0.20000	0.1895	221.40- 369.01	295.21
7.710	7.710	0.000	1637122	0.20000	0.1935	689.45-1149.08	919.27
		Average of Peak Amounts =			0.19240		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\040F4001.D
Date : 07-MAR-2008 22:43
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,3
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 041F4101.D
Report Date: 10-Mar-2008 10:31

TestAmerica North Canton

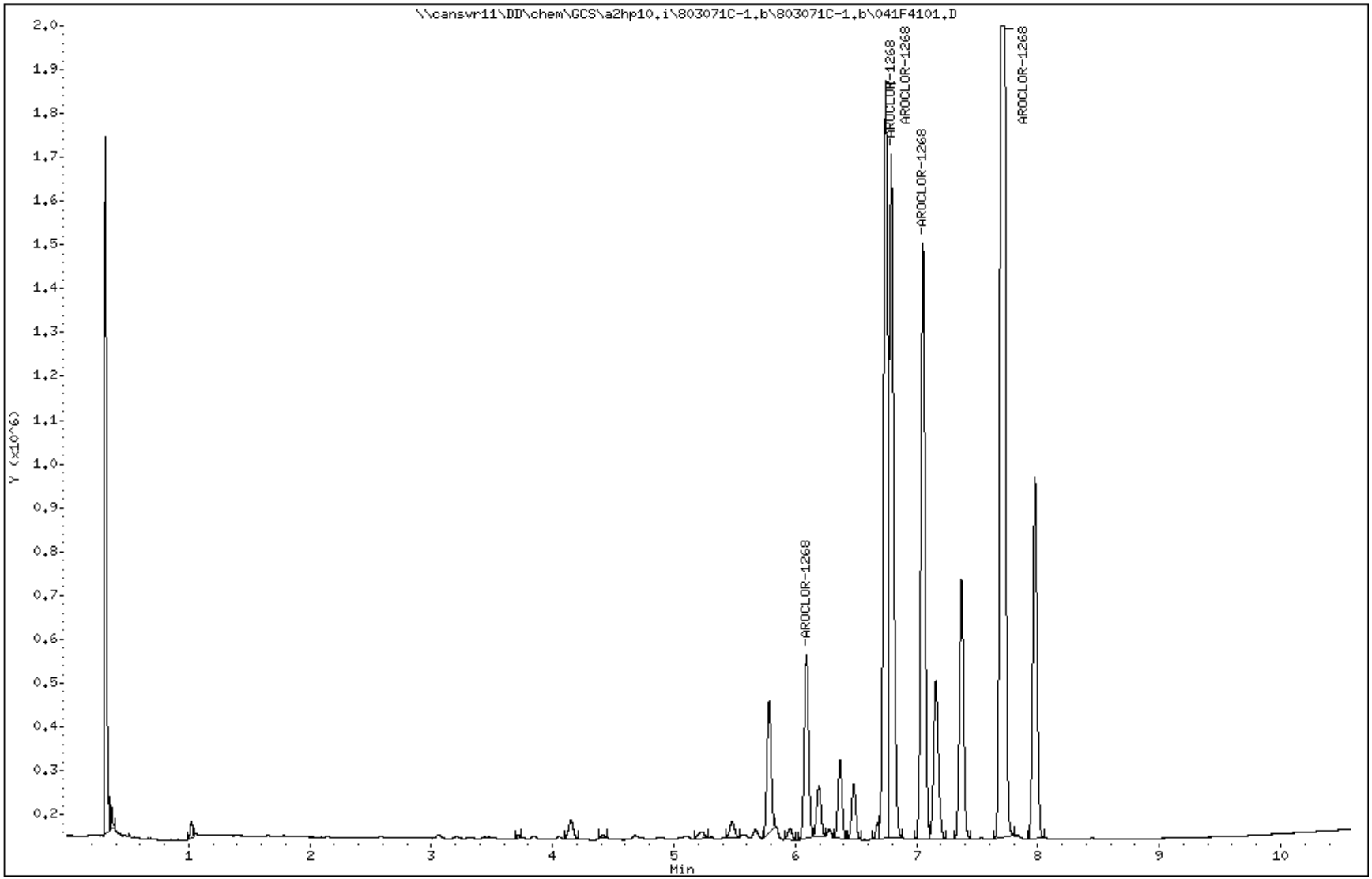
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\041F4101.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 22:58
Operator :   Inst ID: a2hp10.i
Smp Info : 1268,,1,4
Misc Info : 14-AR1268.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:31 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:43   Cal File: 040F4001.D
Als bottle: 41   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 14-AR1268.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
10 AROCLOR-1268					CAS #: 11100-14-4			
6.091	6.091	0.000	419154	0.50000	0.4630	80.00- 120.00		100.00
6.745	6.745	0.000	1729527	0.50000	0.4846	309.47- 515.78		412.62
6.790	6.790	0.000	1560130	0.50000	0.4950	279.16- 465.26		372.21
7.052	7.052	0.000	1361398	0.50000	0.4907	243.60- 406.00		324.80
7.709	7.709	0.000	4268164	0.50000	0.5045	763.71-1272.85		1018.28
		Average of Peak Amounts =			0.48756			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\041F4101.D
Date : 07-MAR-2008 22:58
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,4
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 042F4201.D
Report Date: 10-Mar-2008 10:31

TestAmerica North Canton

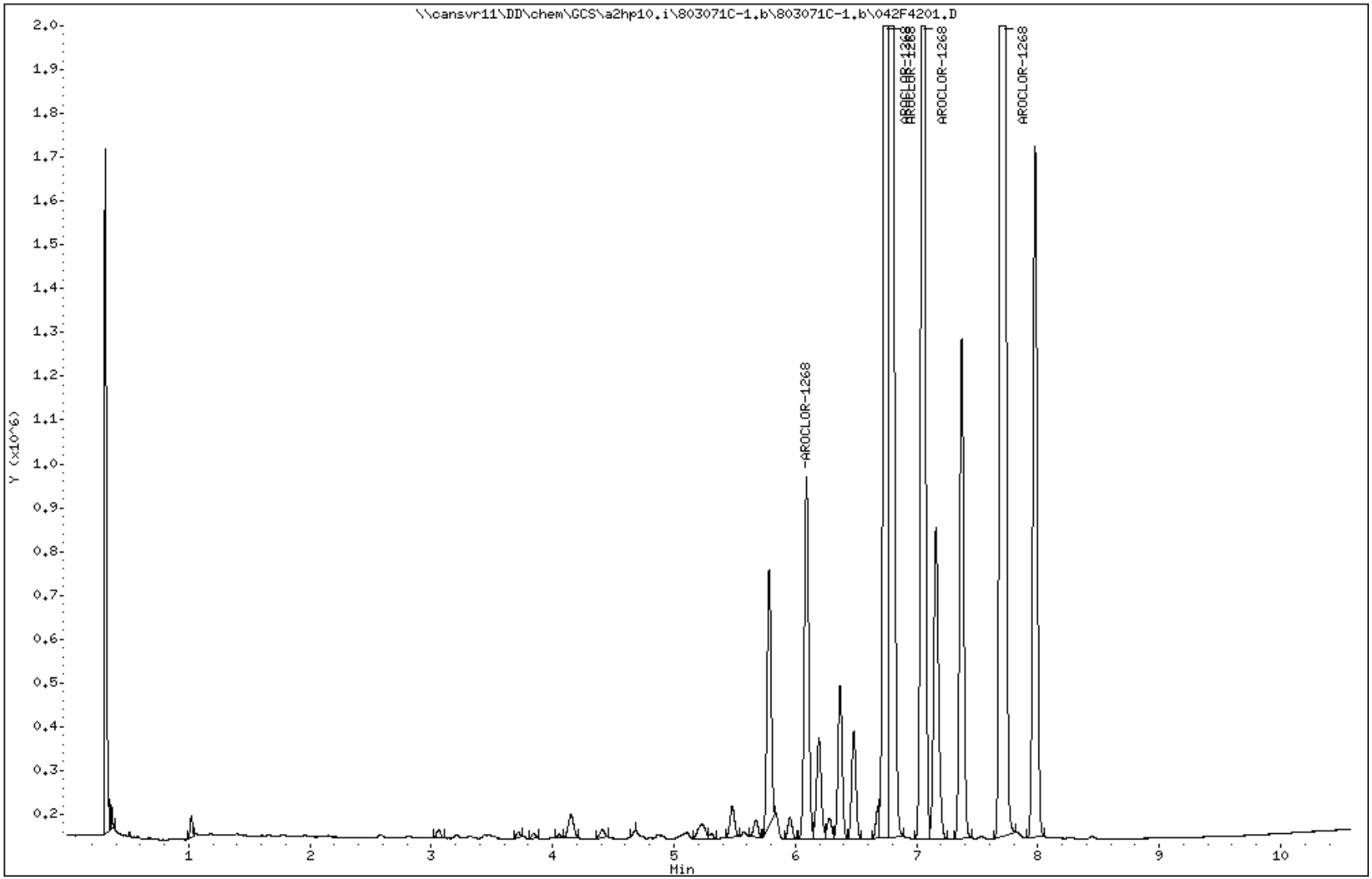
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\042F4201.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 23:13
Operator :   Inst ID: a2hp10.i
Smp Info : 1268,,1,5
Misc Info : 14-AR1268.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:31 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 22:58   Cal File: 041F4101.D
Als bottle: 42   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 14-AR1268.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
10 AROCLOR-1268					CAS #: 11100-14-4			
6.091	6.091	0.000	827495	1.00000	0.9140	75.00- 125.00		100.00
6.745	6.745	0.000	3483048	1.00000	0.9760	309.47- 515.78		420.91
6.791	6.791	0.000	3095855	1.00000	0.9822	279.16- 465.26		374.12
7.053	7.053	0.000	2712463	1.00000	0.9777	243.60- 406.00		327.79
7.710	7.710	0.000	8135004	1.00000	0.9616	763.71-1272.85		983.09
		Average of Peak Amounts =			0.96230			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\042F4201.D
Date : 07-MAR-2008 23:13
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,5
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 043F4301.D
Report Date: 10-Mar-2008 10:31

TestAmerica North Canton

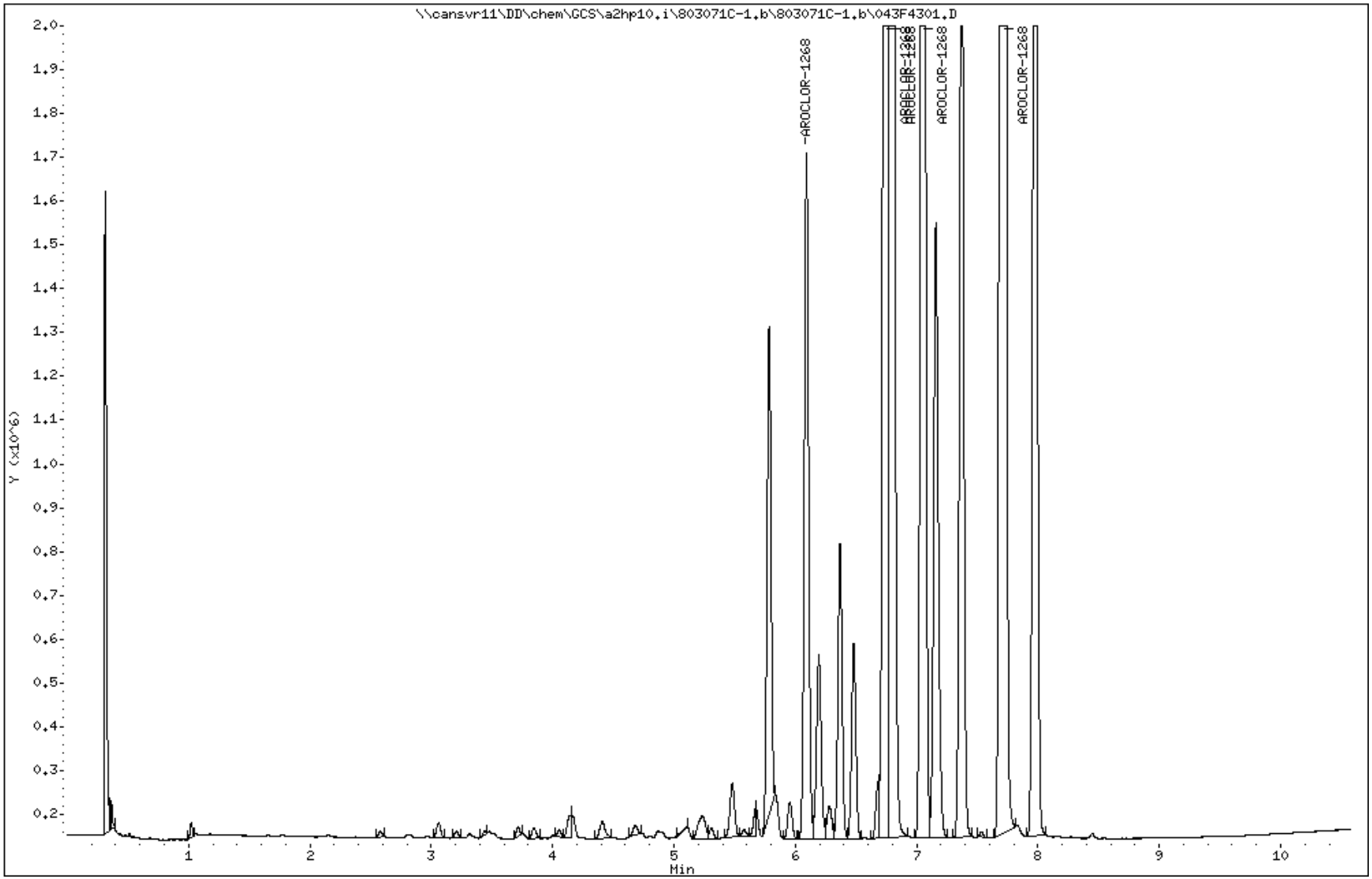
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\043F4301.D
Lab Smp Id: 1268
Inj Date : 07-MAR-2008 23:28
Operator :   Inst ID: a2hp10.i
Smp Info : 1268,,1,6
Misc Info : 14-AR1268.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:31 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:13   Cal File: 042F4201.D
Als bottle: 43   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 14-AR1268.SUB
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
10 AROCLOR-1268					CAS #: 11100-14-4		
6.092	6.092	0.000	1565275	2.00000	1.729	75.00- 125.00	100.00
6.744	6.744	0.000	6692412	2.00000	1.875	309.47- 515.78	427.56
6.791	6.791	0.000	6034330	2.00000	1.914	279.16- 465.26	385.51
7.052	7.052	0.000	5293265	2.00000	1.908	243.60- 406.00	338.17
7.710	7.710	0.000	15939241	2.00000	1.884	763.71-1272.85	1018.30
		Average of Peak Amounts =			1.86200		

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\043F4301.D
Date : 07-MAR-2008 23:28
Client ID:
Instrument: a2hp10.i
Sample Info: 1268,,1,6
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 044F4401.D
Report Date: 10-Mar-2008 10:35

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 07-MAR-2008 23:44
Lab File ID: 044F4401.D Init. Cal. Date(s): 29-JAN-2008 07-MAR-2008
Analysis Type: wipe Init. Cal. Times: 01:45 23:28
Lab Sample ID: ICV Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
3 AROCLOR-1016(1)	1260415	983020	0.010	22.00822	15.00000	Averaged	<-
(2)	2296970	1987963	0.010	13.45282	15.00000	Averaged	
(3)	4694067	4226206	0.010	9.96706	15.00000	Averaged	
(4)	2008150	1848080	0.010	7.97100	15.00000	Averaged	
(5)	1838191	1260265	0.010	31.43993	15.00000	Averaged	<-
8 AROCLOR-1260(1)	3194862	2835782	0.010	11.23930	15.00000	Averaged	
(2)	3460527	3152960	0.010	8.88787	15.00000	Averaged	
(3)	5037983	4916541	0.010	2.41052	15.00000	Averaged	
(4)	6242150	5117537	0.010	18.01643	15.00000	Averaged	<-
(5)	4918191	4413687	0.010	10.25791	15.00000	Averaged	

Data File: 044F4401.D
Report Date: 10-Mar-2008 10:35

TestAmerica North Canton

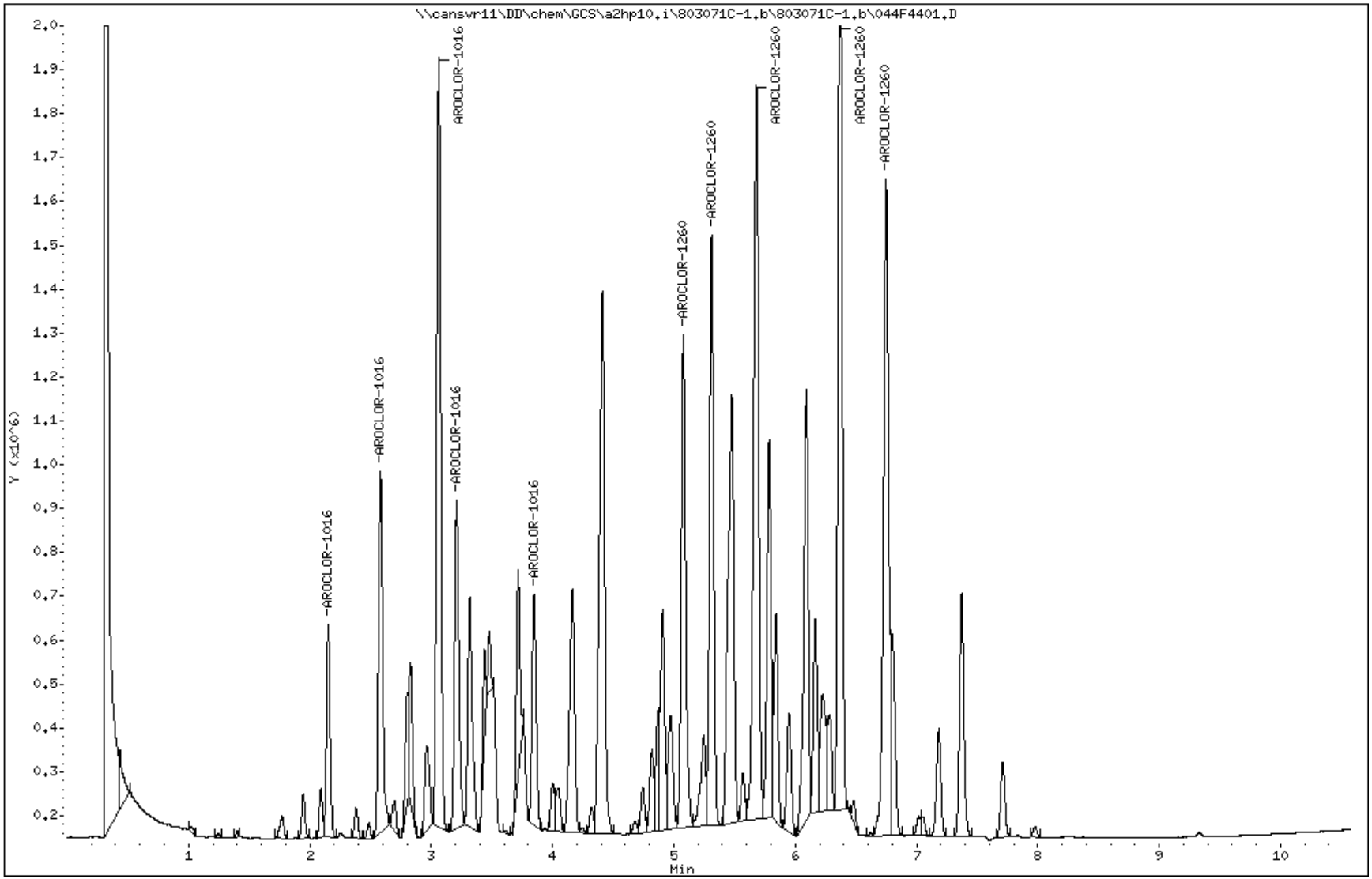
Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\044F4401.D
Lab Smp Id: ICV
Inj Date : 07-MAR-2008 23:44
Operator :   Inst ID: a2hp10.i
Smp Info : ICV,,2
Misc Info :
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\803071C-1.b\PCB10.m\PCB10R.m
Meth Date : 10-Mar-2008 10:35 serraa   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28   Cal File: 043F4301.D
Als bottle: 44   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 6-AR1660.sub
Target Version: 4.14   Sample Matrix: wipe
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
3 AROCLOR-1016						CAS #: 12674-11-2		
2.151	2.151	0.000	983020	1.00000	0.7799	80.00- 120.00		100.00
2.582	2.582	0.000	1987963	1.00000	0.8655	151.67- 252.79		202.23
3.062	3.062	0.000	4226206	1.00000	0.9003	322.44- 537.40		429.92
3.209	3.209	0.000	1848080	1.00000	0.9203	141.00- 235.00		188.00
3.847	3.847	0.000	1260265	1.00000	0.6856	96.15- 160.25		128.20
		Average of Peak Amounts =			0.83032			
8 AROCLOR-1260						CAS #: 11096-82-5		
5.077	5.077	0.000	2835782	1.00000	0.8876	80.00- 120.00		100.00
5.311	5.311	0.000	3152960	1.00000	0.9111	83.39- 138.98		111.18
5.680	5.680	0.000	4916541	1.00000	0.9759	130.03- 216.72		173.38
6.369	6.369	0.000	5117537	1.00000	0.8198	135.35- 225.58		180.46
6.749	6.749	0.000	4413687	1.00000	0.8974	116.73- 194.55		155.64
		Average of Peak Amounts =			0.89836			

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\044F4401.D
Date : 07-MAR-2008 23:44
Client ID:
Instrument: a2hp10.i
Sample Info: ICV,,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 8C13254

GC Column: RESTEK PEST CLPI ID: 0.53 (mm) Init. Calib. Date(s): 01/29/08 03/07/08

Instrument ID: A2HP10

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.29 S2 : 6.93

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		F067	03/17/08	1857	1.29	6.92
02	AMW-05B(2008	KJHVV1AD	03/17/08	2114	1.29	6.93
03	AMW-05B(2008	KJHVV1FA	03/17/08	2130	1.29	6.93
04	KJKKEBLK	KJKKE1AE	03/17/08	2200	1.29	6.93
05		F067	03/17/08	2215	1.29	6.93
06	KJKKECHK	KJKKE1AF	03/18/08	0133	1.29	6.93
07		F067	03/18/08	0148	1.29	6.93
08						
09						
10						
11						
12						
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32						

QC LIMITS

S1 = TCMX (+/- 0.10 MINUTES)
S2 = DCB (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Report Date: 18-Mar-2008 12:34

Calibration History

Method : \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\PCB10.m
Start Cal Date: 29-JAN-2008 01:45
End Cal Date : 07-MAR-2008 23:28
Last Cal Level: 6
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.05000		
07-MAR-2008 22:12	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\038F3801.D
07-MAR-2008 20:41	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\032F3201.D
07-MAR-2008 19:09	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\026F2601.D
07-MAR-2008 17:37	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\020F2001.D
07-MAR-2008 16:06	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\014F1401.D
07-MAR-2008 14:34	2-AR1242	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\008F0801.D
07-MAR-2008 13:02	1-AR1232	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\002F0201.D
Cal Level: 2 , Cal Amount: 0.10000		
07-MAR-2008 22:27	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\039F3901.D
07-MAR-2008 20:56	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\033F3301.D
07-MAR-2008 19:24	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\027F2701.D
07-MAR-2008 17:53	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\021F2101.D
07-MAR-2008 16:21	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\015F1501.D
07-MAR-2008 14:49	2-AR1242	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\009F0901.D
07-MAR-2008 13:18	1-AR1232	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\003F0301.D
Cal Level: 3 , Cal Amount: 0.20000		
07-MAR-2008 22:43	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\040F4001.D
07-MAR-2008 21:11	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\034F3401.D
07-MAR-2008 19:40	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\028F2801.D
07-MAR-2008 18:08	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\022F2201.D
07-MAR-2008 16:36	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\016F1601.D

07-MAR-2008 15:05	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\010F1001.D		
07-MAR-2008 13:33	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\004F0401.D		

Cal Level: 4 , Cal Amount: 0.50000		
07-MAR-2008 22:58	14-AR1268	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\041F4101.D		
07-MAR-2008 21:26	13-AR1262	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\035F3501.D		
07-MAR-2008 19:55	12-AR1660TD	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\029F2901.D		
07-MAR-2008 18:23	9-AR2154	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\023F2301.D		
07-MAR-2008 16:52	3-AR1248	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\017F1701.D		
07-MAR-2008 15:20	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\011F1101.D		
07-MAR-2008 13:48	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\005F0501.D		

Cal Level: 5 , Cal Amount: 1.00000		
07-MAR-2008 23:13	14-AR1268	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\042F4201.D		
07-MAR-2008 21:42	13-AR1262	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\036F3601.D		
07-MAR-2008 20:10	12-AR1660TD	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\030F3001.D		
07-MAR-2008 18:39	9-AR2154	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\024F2401.D		
07-MAR-2008 17:07	3-AR1248	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\018F1801.D		
07-MAR-2008 15:35	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\012F1201.D		
07-MAR-2008 14:04	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\006F0601.D		

Cal Level: 6 , Cal Amount: 2.00000		
07-MAR-2008 23:28	14-AR1268	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\043F4301.D		
07-MAR-2008 21:57	13-AR1262	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\037F3701.D		
07-MAR-2008 20:25	12-AR1660TD	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\031F3101.D		
07-MAR-2008 18:54	9-AR2154	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\025F2501.D		
07-MAR-2008 17:22	3-AR1248	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\019F1901.D		
07-MAR-2008 15:51	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\013F1301.D		
07-MAR-2008 14:19	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\007F0701.D		

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Data File: \\cansvr11\dd\chem\GCS\a2hp10.i\80317A-1.b\028F2801.D
Report Date: 18-Mar-2008 15:58

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 17-MAR-2008 18:57
Lab File ID: 028F2801.D Init. Cal. Date(s): 29-JAN-2008 07-MAR-2008
Analysis Type: Init. Cal. Times: 01:45 23:28
Lab Sample ID: F067 Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\80317A-1.b\PCB10.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	73544218	74115240	0.010	-0.77643	15.00000	Averaged
3 AROCLOR-1016(1)	813890	759496	0.010	6.68316	15.00000	Averaged
(2)	1234049	1182408	0.010	4.18468	15.00000	Averaged
(3)	2121605	2100640	0.010	0.98815	15.00000	Averaged
(4)	1035492	986218	0.010	4.75850	15.00000	Averaged
(5)	879680	829832	0.010	5.66659	15.00000	Averaged
8 AROCLOR-1260(1)	3409202	3342744	0.010	1.94936	15.00000	Averaged
(2)	6286191	6154172	0.010	2.10014	15.00000	Averaged
(3)	6083503	5885328	0.010	3.25758	15.00000	Averaged
(4)	8472253	8261164	0.010	2.49154	15.00000	Averaged
(5)	4180366	4003010	0.010	4.24259	15.00000	Averaged
$ 12 DCB	75637365	69421440	0.010	8.21806	15.00000	Averaged

Data File: \\cansvr11\dd\chem\GCS\a2hp10.i\80317A-1.b\028F2801.D
Report Date: 18-Mar-2008 15:58

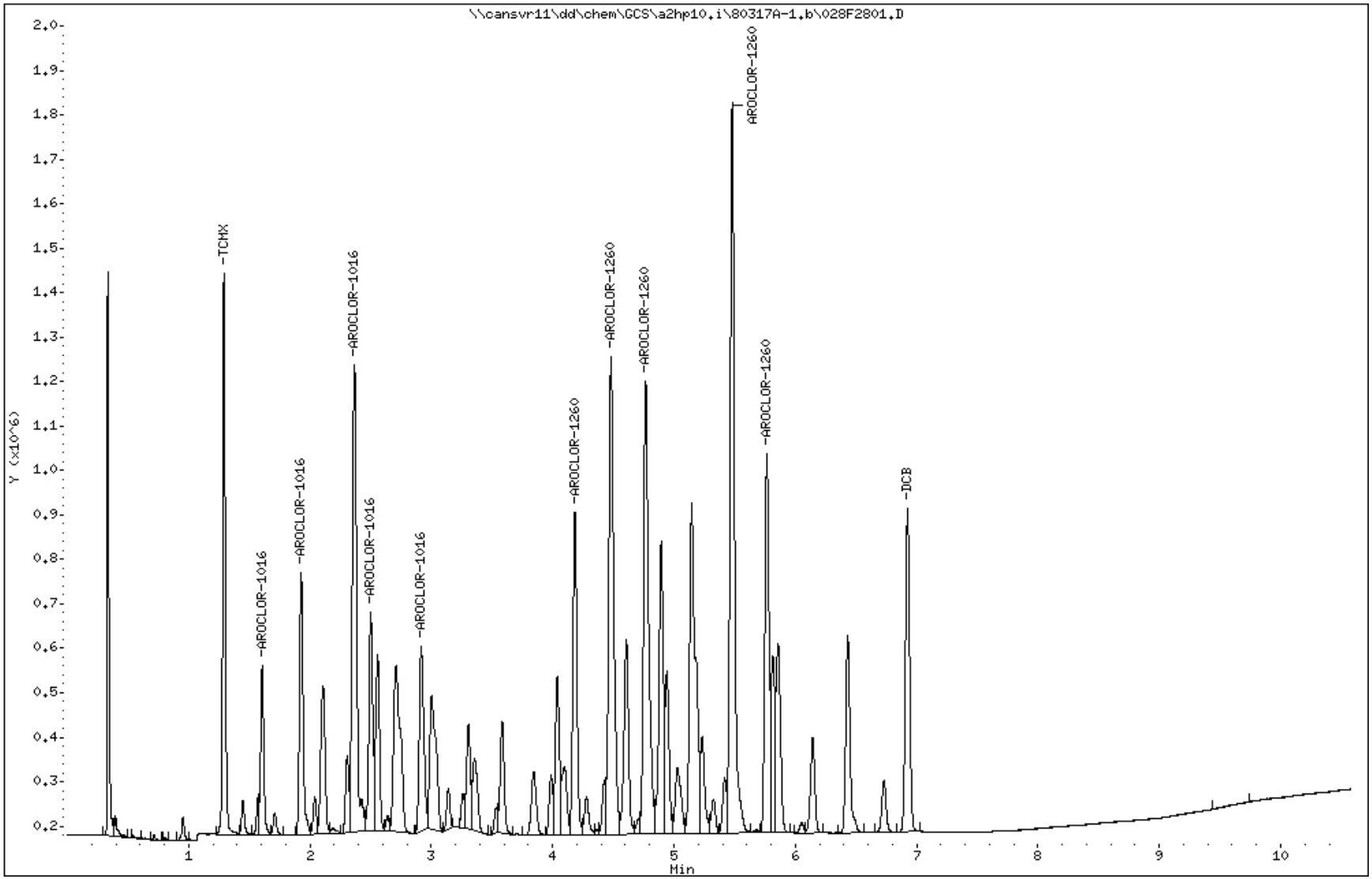
TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCS\a2hp10.i\80317A-1.b\028F2801.D
Lab Smp Id: F067
Inj Date : 17-MAR-2008 18:57
Operator :   Inst ID: a2hp10.i
Smp Info : F067,,2
Misc Info : 12-AR1660TD.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\80317A-1.b\PCB10.m
Meth Date : 18-Mar-2008 15:58 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28   Cal File: 043F4301.D
Als bottle: 28   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14   Sample Matrix: None
Processing Host: CANPGCSV23

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.290	1.290	0.000	1852881	0.02500	0.02519		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.606	1.606	0.000	379748	0.50000	0.4666	80.00- 120.00	100.00
1.927	1.927	0.000	591204	0.50000	0.4791	116.76- 194.60	155.68
2.367	2.367	0.000	1050320	0.50000	0.4950	207.44- 345.73	276.58
2.500	2.500	0.000	493109	0.50000	0.4762	97.39- 162.31	129.85
2.917	2.917	0.000	414916	0.50000	0.4717	81.95- 136.58	109.26
		Average of Peak Amounts =			0.47772		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.184	4.184	0.000	1671372	0.50000	0.4902	80.00- 120.00	100.00
4.480	4.480	0.000	3077086	0.50000	0.4895	138.08- 230.13	184.11
4.765	4.765	0.000	2942664	0.50000	0.4837	132.05- 220.08	176.06
5.480	5.480	0.000	4130582	0.50000	0.4875	185.35- 308.92	247.14
5.765	5.765	0.000	2001505	0.50000	0.4788	89.81- 149.69	119.75
		Average of Peak Amounts =			0.48594		
$ 12 DCB					CAS #: 2051-24-3		
6.924	6.924	0.000	1735536	0.02500	0.02294		

Data File: \\cansvr11\dd\chem\GCS\a2hp10.i\80317A-1.b\028F2801.D
Date : 17-MAR-2008 18:57
Client ID:
Sample Info: F067,,2

Instrument: a2hp10.i
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



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North Canton

Data File: \\cansvr11\dd\chem\GCS\a2hp10.i\80317A-1.b\041F4101.D
Report Date: 18-Mar-2008 15:58

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 17-MAR-2008 22:15
Lab File ID: 041F4101.D Init. Cal. Date(s): 29-JAN-2008 07-MAR-2008
Analysis Type: Init. Cal. Times: 01:45 23:28
Lab Sample ID: F067 Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\80317A-1.b\PCB10.m

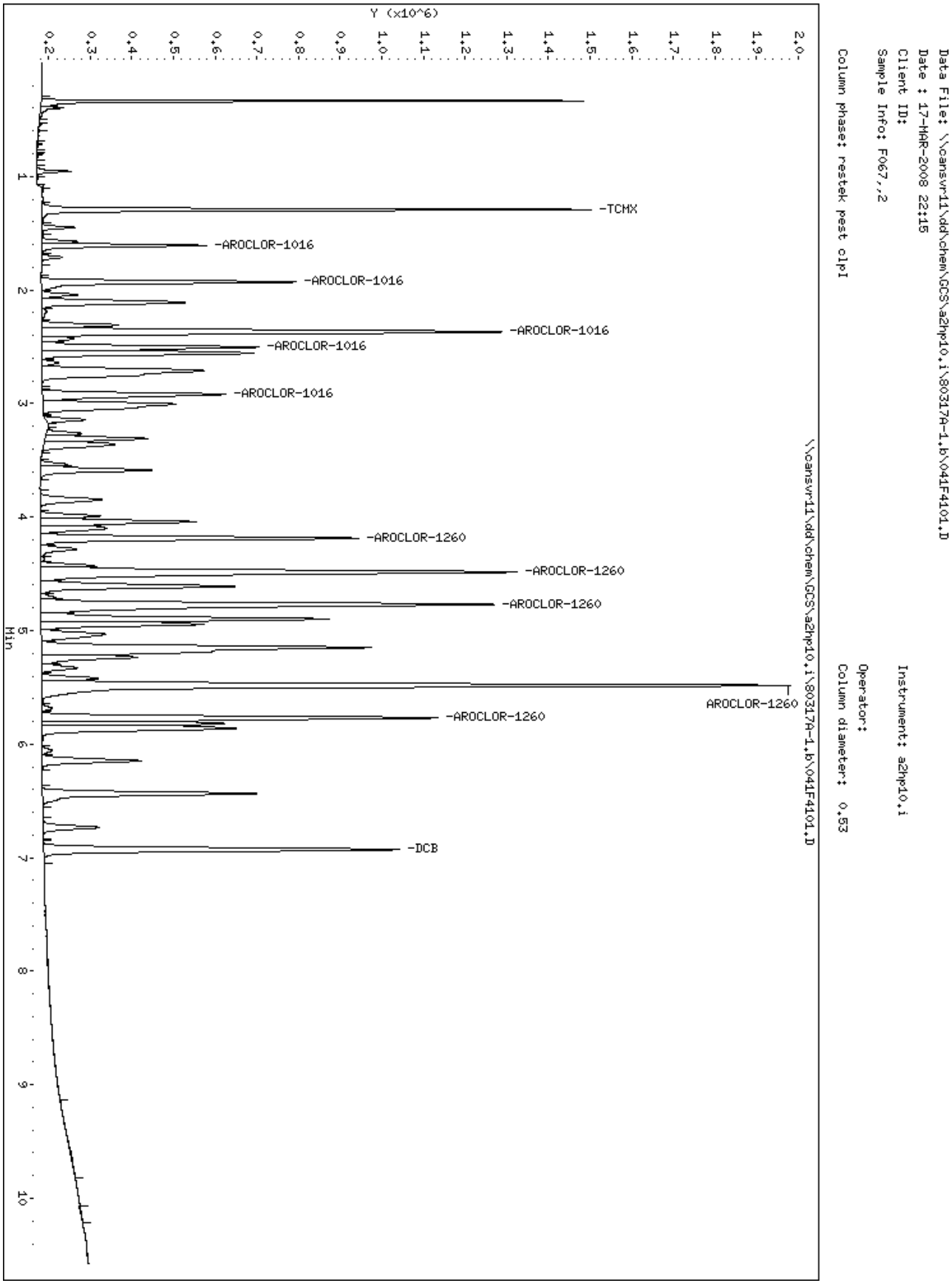
COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	73544218	75626480	0.010	-2.83131	15.00000	Averaged
3 AROCLOR-1016(1)	813890	794076	0.010	2.43443	15.00000	Averaged
(2)	1234049	1224746	0.010	0.75386	15.00000	Averaged
(3)	2121605	2209756	0.010	-4.15494	15.00000	Averaged
(4)	1035492	1043372	0.010	-0.76101	15.00000	Averaged
(5)	879680	879740	0.010	-0.00684	15.00000	Averaged
8 AROCLOR-1260(1)	3409202	3480170	0.010	-2.08168	15.00000	Averaged
(2)	6286191	6467896	0.010	-2.89055	15.00000	Averaged
(3)	6083503	6210132	0.010	-2.08151	15.00000	Averaged
(4)	8472253	9010978	0.010	-6.35870	15.00000	Averaged
(5)	4180366	4411082	0.010	-5.51904	15.00000	Averaged
$ 12 DCB	75637365	81386760	0.010	-7.60126	15.00000	Averaged

Data File: \\cansvr11\dd\chem\GCS\a2hp10.i\80317A-1.b\041F4101.D
Report Date: 18-Mar-2008 15:58

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCS\a2hp10.i\80317A-1.b\041F4101.D
Lab Smp Id: F067
Inj Date : 17-MAR-2008 22:15
Operator :   Inst ID: a2hp10.i
Smp Info : F067,,2
Misc Info : 12-AR1660TD.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\80317A-1.b\PCB10.m
Meth Date : 18-Mar-2008 15:58 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28   Cal File: 043F4301.D
Als bottle: 41   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14   Sample Matrix: None
Processing Host: CANPGCSV23

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.291	1.291	0.000	1890662	0.02500	0.02571		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.608	1.608	0.000	397038	0.50000	0.4878	80.00- 120.00	100.00
1.929	1.929	0.000	612373	0.50000	0.4962	115.68- 192.79	154.24
2.369	2.369	0.000	1104878	0.50000	0.5208	208.71- 347.85	278.28
2.503	2.503	0.000	521686	0.50000	0.5038	98.55- 164.24	131.39
2.918	2.918	0.000	439870	0.50000	0.5000	83.09- 138.48	110.79
	Average of Peak Amounts =				0.50172		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.186	4.186	0.000	1740085	0.50000	0.5104	80.00- 120.00	100.00
4.484	4.484	0.000	3233948	0.50000	0.5144	139.39- 232.31	185.85
4.769	4.769	0.000	3105066	0.50000	0.5104	133.83- 223.05	178.44
5.483	5.483	0.000	4505489	0.50000	0.5318	194.19- 323.65	258.92
5.769	5.769	0.000	2205541	0.50000	0.5276	95.06- 158.44	126.75
	Average of Peak Amounts =				0.51892		
$ 12 DCB					CAS #: 2051-24-3		
6.928	6.928	0.000	2034669	0.02500	0.02690		


Data File: \\cansvr11\dd\chem\GCS\a2hp10,i\803179-1,b\041F4101,D
Date : 17-MAR-2008 22:15
Client ID:
Sample Info: F067,2
Column phase: restek pest clpI
Instrument: a2hp10,i
Operator:
Column diameter: 0.53
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
-DCB
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Data File: \\cansvr11\dd\chem\GCS\a2hp10.i\80317A-1.b\055F5501.D
Report Date: 18-Mar-2008 15:58

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 18-MAR-2008 01:48
Lab File ID: 055F5501.D Init. Cal. Date(s): 29-JAN-2008 07-MAR-2008
Analysis Type: Init. Cal. Times: 01:45 23:28
Lab Sample ID: F067 Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\80317A-1.b\PCB10.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	73544218	76192280	0.010	-3.60064	15.00000	Averaged
3 AROCLOR-1016(1)	813890	796616	0.010	2.12235	15.00000	Averaged
(2)	1234049	1230268	0.010	0.30639	15.00000	Averaged
(3)	2121605	2227272	0.010	-4.98054	15.00000	Averaged
(4)	1035492	1053742	0.010	-1.76246	15.00000	Averaged
(5)	879680	885260	0.010	-0.63434	15.00000	Averaged
8 AROCLOR-1260(1)	3409202	3429572	0.010	-0.59752	15.00000	Averaged
(2)	6286191	6326516	0.010	-0.64149	15.00000	Averaged
(3)	6083503	6000542	0.010	1.36370	15.00000	Averaged
(4)	8472253	8352778	0.010	1.41019	15.00000	Averaged
(5)	4180366	4045098	0.010	3.23579	15.00000	Averaged
$ 12 DCB	75637365	68183400	0.010	9.85487	15.00000	Averaged

Data File: \\cansvr11\dd\chem\GCS\a2hp10.i\80317A-1.b\055F5501.D
Report Date: 18-Mar-2008 15:58

TestAmerica North Canton

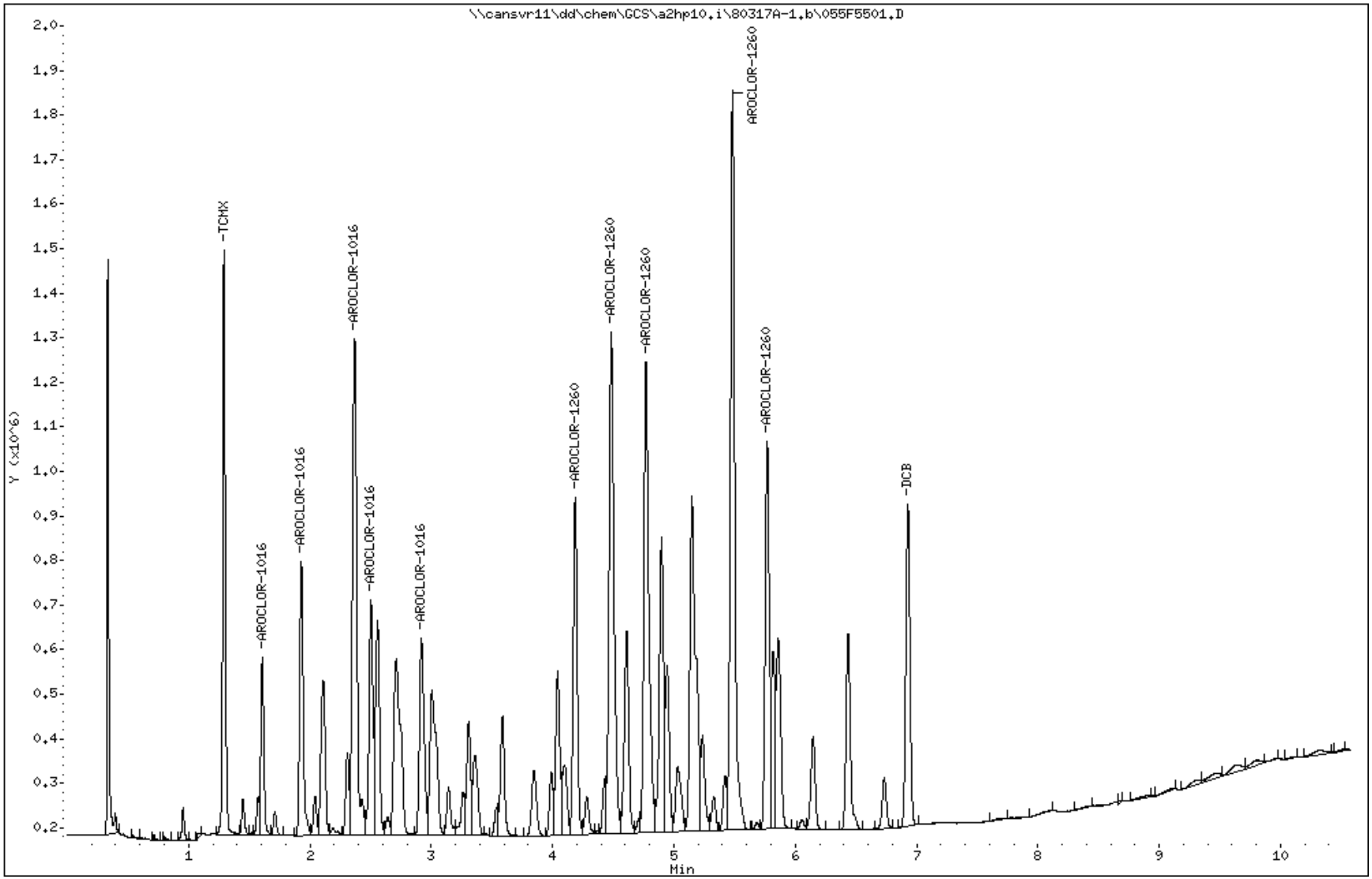
Data file : \\cansvr11\dd\chem\GCS\a2hp10.i\80317A-1.b\055F5501.D
Lab Smp Id: F067
Inj Date : 18-MAR-2008 01:48
Operator :   Inst ID: a2hp10.i
Smp Info : F067,,2
Misc Info : 12-AR1660TD.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\80317A-1.b\PCB10.m
Meth Date : 18-Mar-2008 15:58 a2hp10.i   Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28   Cal File: 043F4301.D
Als bottle: 55   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14   Sample Matrix: None
Processing Host: CANPGCSV23

				AMOUNTS			
				CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.292	1.292	0.000	1904807	0.02500	0.02590		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.608	1.608	0.000	398308	0.50000	0.4894	80.00- 120.00	100.00
1.929	1.929	0.000	615134	0.50000	0.4985	115.83- 193.05	154.44
2.369	2.369	0.000	1113636	0.50000	0.5249	209.69- 349.49	279.59
2.503	2.503	0.000	526871	0.50000	0.5088	99.21- 165.35	132.28
2.919	2.919	0.000	442630	0.50000	0.5032	83.35- 138.91	111.13
	Average of Peak Amounts =				0.50496		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.186	4.186	0.000	1714786	0.50000	0.5030	80.00- 120.00	100.00
4.484	4.484	0.000	3163258	0.50000	0.5032	138.35- 230.59	184.47
4.769	4.769	0.000	3000271	0.50000	0.4932	131.22- 218.71	174.96
5.482	5.482	0.000	4176389	0.50000	0.4929	182.66- 304.44	243.55
5.769	5.769	0.000	2022549	0.50000	0.4838	88.46- 147.43	117.95
	Average of Peak Amounts =				0.49522		
$ 12 DCB					CAS #: 2051-24-3		
6.928	6.928	0.000	1704585	0.02500	0.02254		

Data File: \\cansvr11\dd\chem\GCS\a2hp10.i\80317A-1.b\055F5501.D
Date : 18-MAR-2008 01:48
Client ID:
Sample Info: F067,,2

Instrument: a2hp10.i
Operator:
Column diameter: 0.53

Column phase: restek pest clpI



FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 8C13254

GC Column: RESTEK PEST CLPII ID: 0.53 (mm) Init. Calib. Date(s): 01/29/08 03/07/08

Instrument ID: A2HP10

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.63 S2 : 7.98

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		F067	03/18/08	1637	1.63	7.98
02	AMW-05B(2008	KJHVV1FC	03/18/08	1652	1.63	7.98
03		F067	03/18/08	1940	1.63	7.98
04						
05						
06						
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QC LIMITS

S1 = TCMX (+/- 0.10 MINUTES)
S2 = DCB (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Report Date: 19-Mar-2008 13:13

Calibration History

Method : \\CANSVR11\DD\chem\GCS\a2hp10.i\80318-1.b\PCB10.m\PCB10R.m
Start Cal Date: 29-JAN-2008 01:45
End Cal Date : 07-MAR-2008 23:28
Last Cal Level: 6
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.05000		
07-MAR-2008 22:12	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\038F3801.D
07-MAR-2008 20:41	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\032F3201.D
07-MAR-2008 19:09	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\026F2601.D
07-MAR-2008 17:37	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\020F2001.D
07-MAR-2008 16:06	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\014F1401.D
07-MAR-2008 14:34	2-AR1242	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\008F0801.D
07-MAR-2008 13:02	1-AR1232	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\002F0201.D
Cal Level: 2 , Cal Amount: 0.10000		
07-MAR-2008 22:27	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\039F3901.D
07-MAR-2008 20:56	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\033F3301.D
07-MAR-2008 19:24	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\027F2701.D
07-MAR-2008 17:53	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\021F2101.D
07-MAR-2008 16:21	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\015F1501.D
07-MAR-2008 14:49	2-AR1242	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\009F0901.D
07-MAR-2008 13:18	1-AR1232	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\003F0301.D
Cal Level: 3 , Cal Amount: 0.20000		
07-MAR-2008 22:43	14-AR1268	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\040F4001.D
07-MAR-2008 21:11	13-AR1262	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\034F3401.D
07-MAR-2008 19:40	12-AR1660TD	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\028F2801.D
07-MAR-2008 18:08	9-AR2154	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\022F2201.D
07-MAR-2008 16:36	3-AR1248	\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\016F1601.D

07-MAR-2008 15:05	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\010F1001.D		
07-MAR-2008 13:33	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\004F0401.D		

Cal Level: 4 , Cal Amount: 0.50000		
07-MAR-2008 22:58	14-AR1268	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\041F4101.D		
07-MAR-2008 21:26	13-AR1262	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\035F3501.D		
07-MAR-2008 19:55	12-AR1660TD	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\029F2901.D		
07-MAR-2008 18:23	9-AR2154	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\023F2301.D		
07-MAR-2008 16:52	3-AR1248	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\017F1701.D		
07-MAR-2008 15:20	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\011F1101.D		
07-MAR-2008 13:48	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\005F0501.D		

Cal Level: 5 , Cal Amount: 1.00000		
07-MAR-2008 23:13	14-AR1268	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\042F4201.D		
07-MAR-2008 21:42	13-AR1262	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\036F3601.D		
07-MAR-2008 20:10	12-AR1660TD	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\030F3001.D		
07-MAR-2008 18:39	9-AR2154	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\024F2401.D		
07-MAR-2008 17:07	3-AR1248	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\018F1801.D		
07-MAR-2008 15:35	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\012F1201.D		
07-MAR-2008 14:04	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\006F0601.D		

Cal Level: 6 , Cal Amount: 2.00000		
07-MAR-2008 23:28	14-AR1268	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\043F4301.D		
07-MAR-2008 21:57	13-AR1262	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\037F3701.D		
07-MAR-2008 20:25	12-AR1660TD	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\031F3101.D		
07-MAR-2008 18:54	9-AR2154	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\025F2501.D		
07-MAR-2008 17:22	3-AR1248	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\019F1901.D		
07-MAR-2008 15:51	2-AR1242	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\013F1301.D		
07-MAR-2008 14:19	1-AR1232	
\\cansvr11\DD\chem\GCS\a2hp10.i\803071C-1.b\803071C-1.b\007F0701.D		

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Data File: 024F2401.D
Report Date: 18-Mar-2008 17:00

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 18-MAR-2008 16:37
Lab File ID: 024F2401.D Init. Cal. Date(s): 29-JAN-2008 07-MAR-2008
Analysis Type: wipe Init. Cal. Times: 01:45 23:28
Lab Sample ID: F067 Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\80318-1.b\PCB10.m\PCB10R.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	69431282	79643450	0.010	-14.70831	15.00000	Averaged
3 AROCLOR-1016(1)	1260415	1142504	0.010	9.35493	15.00000	Averaged
(2)	2296970	2314766	0.010	-0.77475	15.00000	Averaged
(3)	4694067	4468634	0.010	4.80250	15.00000	Averaged
(4)	2008150	1857094	0.010	7.52213	15.00000	Averaged
(5)	1838191	1705546	0.010	7.21606	15.00000	Averaged
8 AROCLOR-1260(1)	3194862	2972776	0.010	6.95135	15.00000	Averaged
(2)	3460527	3333232	0.010	3.67849	15.00000	Averaged
(3)	5037983	4891430	0.010	2.90896	15.00000	Averaged
(4)	6242150	6295318	0.010	-0.85176	15.00000	Averaged
(5)	4918191	4799000	0.010	2.42347	15.00000	Averaged
$ 12 DCB	57201963	65140250	0.010	-13.87765	15.00000	Averaged

TestAmerica North Canton

Data file : \\CANSVR11\dd\chem\GCS\a2hp10.i\80318-1.b\80318-1.b\024F2401.D
Lab Smp Id: F067
Inj Date : 18-MAR-2008 16:37
Operator : Inst ID: a2hp10.i
Smp Info : F067,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\80318-1.b\PCB10.m\PCB10R.m
Meth Date : 18-Mar-2008 17:00 Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 24 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANSVR11

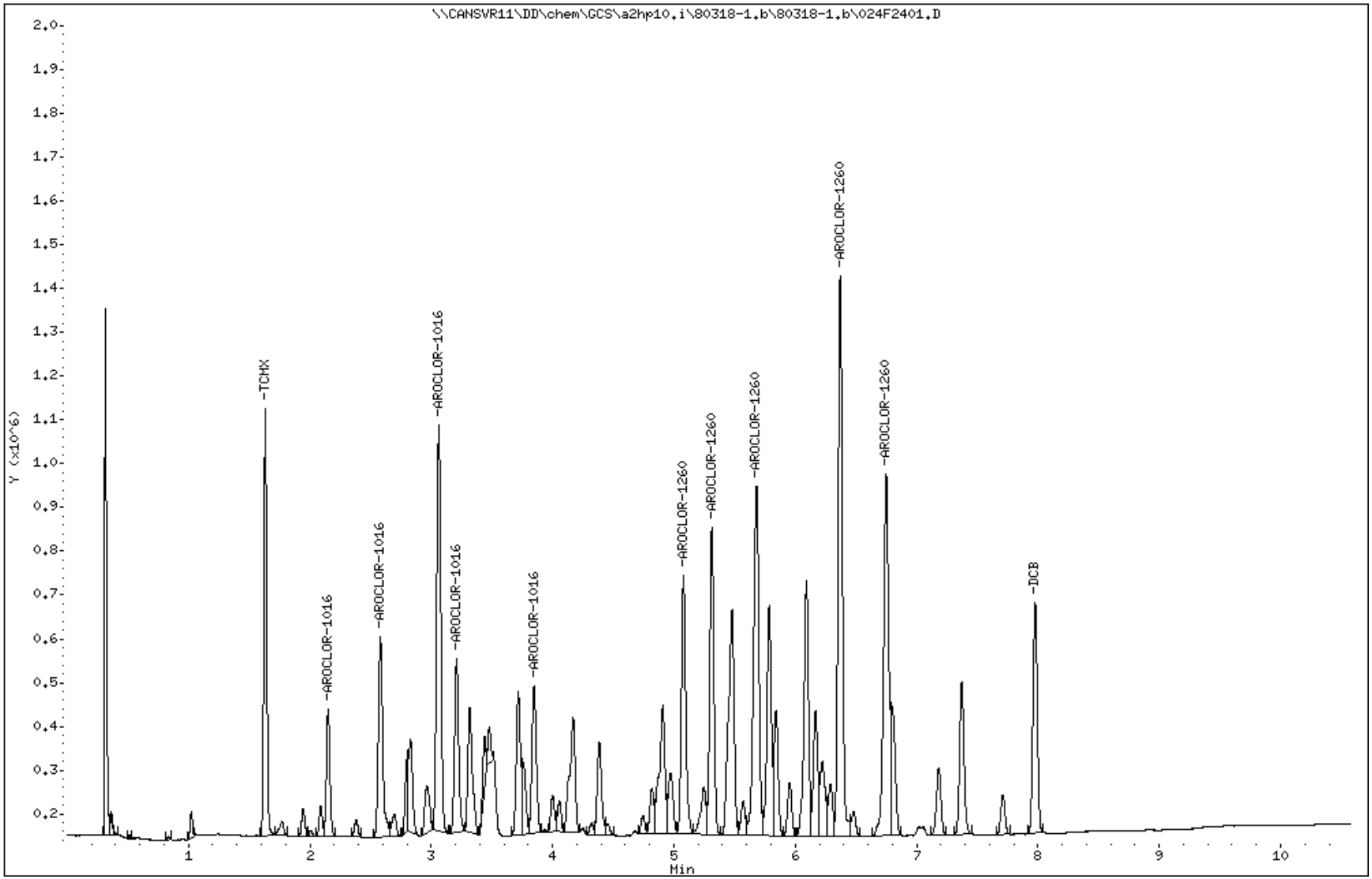
Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE		RATIO
$ 1 TCMX						CAS #: 877-09-8		
1.633	1.633	0.000	1592869	0.02000	0.02294			
3 AROCLOR-1016						CAS #: 12674-11-2		
2.150	2.150	0.000	571252	0.50000	0.4532	80.00-	120.00	100.00
2.581	2.581	0.000	1157383	0.50000	0.5039	151.95-	253.26	202.60
3.062	3.062	0.000	2234317	0.50000	0.4760	293.34-	488.91	391.13
3.209	3.209	0.000	928547	0.50000	0.4624	121.91-	203.18	162.55
3.846	3.846	0.000	852773	0.50000	0.4639	111.96-	186.60	149.28
Average of Peak Amounts =					0.47188			
8 AROCLOR-1260						CAS #: 11096-82-5		
5.078	5.078	0.000	1486388	0.50000	0.4652	80.00-	120.00	100.00
5.312	5.312	0.000	1666616	0.50000	0.4816	84.09-	140.16	112.13
5.680	5.680	0.000	2445715	0.50000	0.4854	123.41-	205.68	164.54
6.370	6.370	0.000	3147659	0.50000	0.5042	158.82-	264.71	211.77
6.749	6.749	0.000	2399500	0.50000	0.4879	121.07-	201.79	161.43
Average of Peak Amounts =					0.48486			

```
--------------------------------------------------------------------------------
$  12 DCB                                        CAS #: 2051-24-3
7.976    7.976    0.000         1302805 0.02000  0.02278
--------------------------------------------------------------------------------
```

Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80318-1.b\80318-1.b\024F2401.D
Date : 18-MAR-2008 16:37
Client ID:
Instrument: a2hp10.i
Sample Info: F067,,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



Data File: 036F3601.D
Report Date: 18-Mar-2008 20:04

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 18-MAR-2008 19:40
Lab File ID: 036F3601.D Init. Cal. Date(s): 29-JAN-2008 07-MAR-2008
Analysis Type: wipe Init. Cal. Times: 01:45 23:28
Lab Sample ID: F067 Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\80318-1.b\PCB10.m\PCB10R.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	69431282	83194250	0.010	-19.82243	15.00000	Averaged	<-
3 AROCLOR-1016(1)	1260415	1191676	0.010	5.45367	15.00000	Averaged	
(2)	2296970	2399242	0.010	-4.45246	15.00000	Averaged	
(3)	4694067	4819824	0.010	-2.67907	15.00000	Averaged	
(4)	2008150	2068310	0.010	-2.99581	15.00000	Averaged	
(5)	1838191	1771250	0.010	3.64167	15.00000	Averaged	
8 AROCLOR-1260(1)	3194862	2997732	0.010	6.17022	15.00000	Averaged	
(2)	3460527	3330016	0.010	3.77143	15.00000	Averaged	
(3)	5037983	4825114	0.010	4.22528	15.00000	Averaged	
(4)	6242150	6093886	0.010	2.37520	15.00000	Averaged	
(5)	4918191	4591836	0.010	6.63567	15.00000	Averaged	
$ 12 DCB	57201963	58088850	0.010	-1.55045	15.00000	Averaged	

TestAmerica North Canton

Data file : \\CANSVR11\dd\chem\GCS\a2hp10.i\80318-1.b\80318-1.b\036F3601.D
Lab Smp Id: F067
Inj Date : 18-MAR-2008 19:40
Operator : Inst ID: a2hp10.i
Smp Info : F067,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\80318-1.b\PCB10.m\PCB10R.m
Meth Date : 18-Mar-2008 20:03 Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 36 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: wipe
Processing Host: CANSVR11

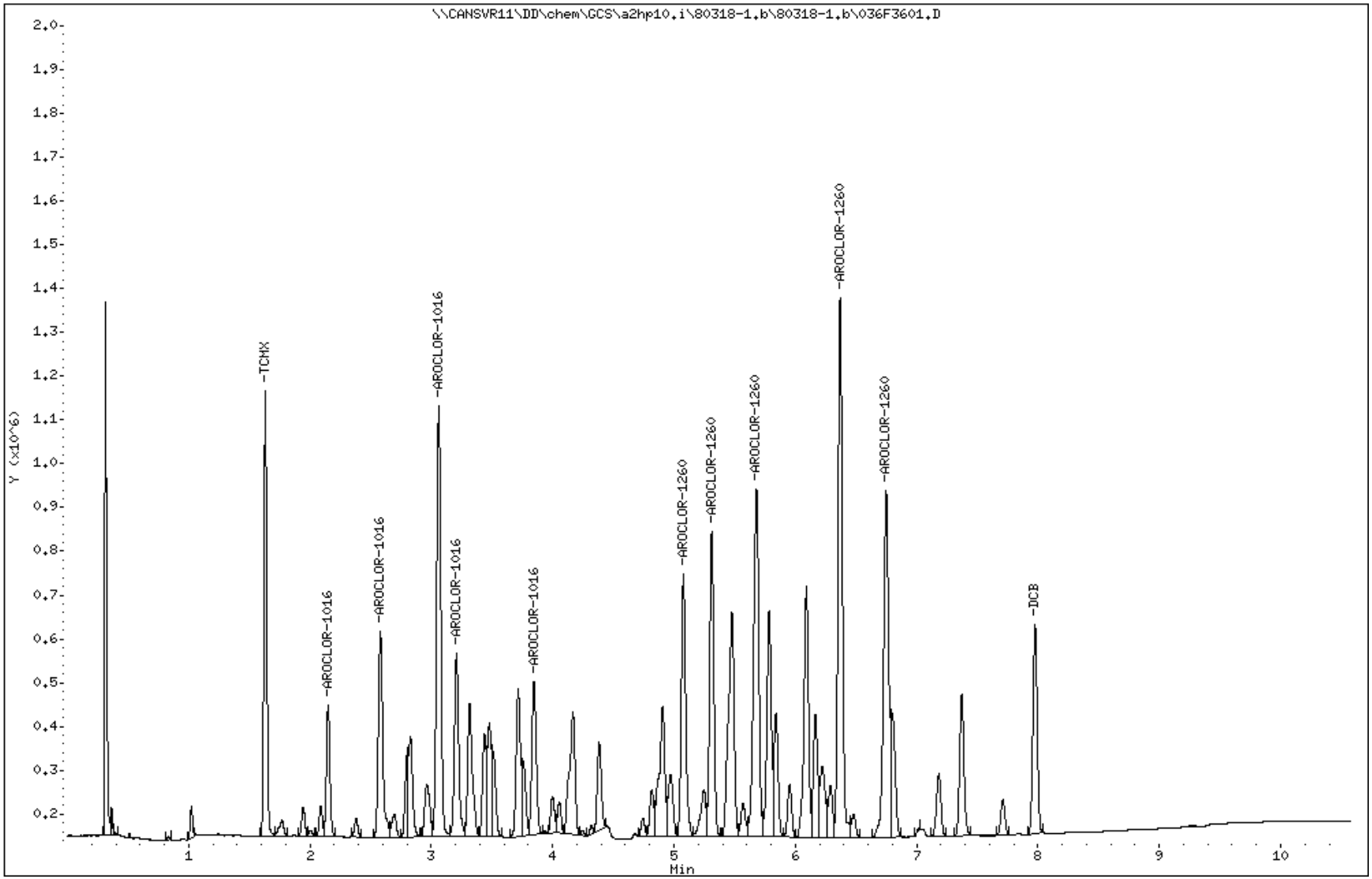
Concentration Formula: Amt * DF * Vt/Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final volume
Vi	1.000	Volume injected
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.632	1.632	0.000	1663885	0.02000	0.02396		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.150	2.150	0.000	595838	0.50000	0.4727	80.00- 120.00	100.00
2.580	2.580	0.000	1199621	0.50000	0.5223	151.00- 251.67	201.33
3.061	3.061	0.000	2409912	0.50000	0.5134	303.34- 505.57	404.46
3.207	3.207	0.000	1034155	0.50000	0.5150	130.17- 216.95	173.56
3.845	3.845	0.000	885625	0.50000	0.4818	111.48- 185.79	148.64
Average of Peak Amounts =					0.50104		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.077	5.077	0.000	1498866	0.50000	0.4691	80.00- 120.00	100.00
5.311	5.311	0.000	1665008	0.50000	0.4811	83.31- 138.86	111.08
5.680	5.680	0.000	2412557	0.50000	0.4789	120.72- 201.20	160.96
6.369	6.369	0.000	3046943	0.50000	0.4881	152.46- 254.10	203.28
6.749	6.749	0.000	2295918	0.50000	0.4668	114.88- 191.47	153.18
Average of Peak Amounts =					0.47680		

```
--------------------------------------------------------------------------------
$  12 DCB                                        CAS #: 2051-24-3
7.975    7.975    0.000         1161777 0.02000  0.02031
--------------------------------------------------------------------------------
```

Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80318-1.b\80318-1.b\036F3601.D
Date : 18-MAR-2008 19:40
Client ID:
Instrument: a2hp10.i
Sample Info: F067,,2
Volume Injected (uL): 1.0
Operator:
Column phase: restek pest clpII
Column diameter: 0.53



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

RAW QC DATA

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKKE1AF **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-044
Prep Date.....: 03/14/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8074044
Dilution Factor: 5 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
PCB-1016	**91**	**(44 - 119)**	**SW846 8082**
PCB-1260	**83**	**(41 - 118)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(27 - 130)
Decachlorobiphenyl	35	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKKE1AF **Matrix.....:** WATER
LCS Lot-Sample#: A8C140000-044
Prep Date.....: 03/14/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8074044
Dilution Factor: 5 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
PCB-1016	**10**	**9.1**	**ug/L**	**91**	**SW846 8082**
PCB-1260	**10**	**8.3**	**ug/L**	**83**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(27 - 130)
Decachlorobiphenyl	35	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\054F5401.D
Report Date: 18-Mar-2008 12:41

TestAmerica North Canton

Data file : \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\054F5401.D
Lab Smp Id: KJKKE1AF Client Smp ID: INTRA-LAB CHECK
Inj Date : 18-MAR-2008 01:33
Operator : Inst ID: a2hp10.i
Smp Info : KJKKE1AF,5
Misc Info : 12-AR1660TD.SUB,HLCS.SPK
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\80317A-1.b\PCB10.m
Meth Date : 18-Mar-2008 12:34 hassl Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 54 QC Sample: METHOD SPIKE
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: WATER
Processing Host: CANPMSV21

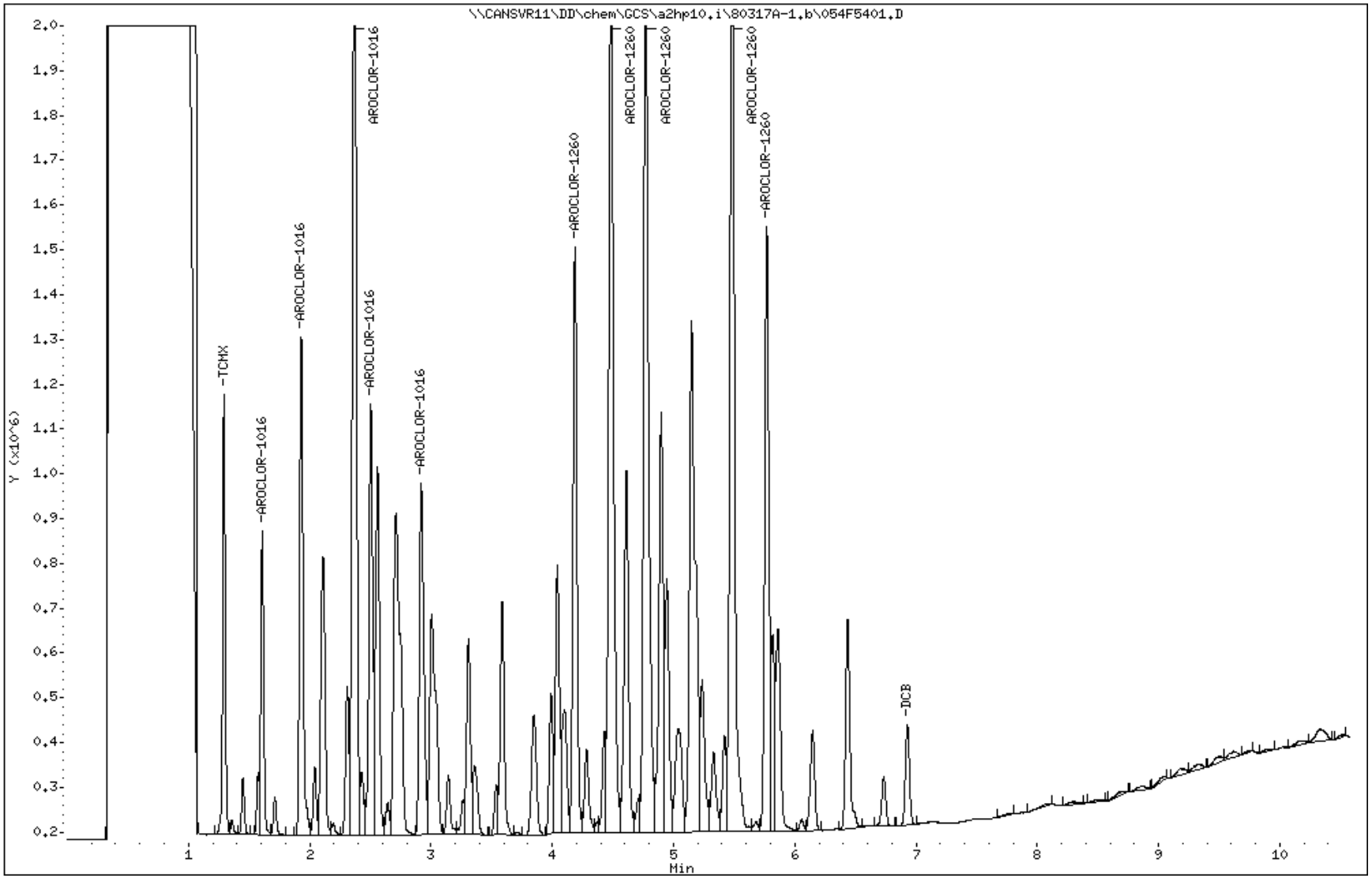
Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	5.000	Dilution Factor
Vt	2000.000	final volume
Vo	1000.000	intitial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.293	1.292	0.001	1432070	0.01947	0.1947		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.608	1.607	0.001	678031	0.83307	8.331	80.00- 120.00	100.00
1.930	1.929	0.001	1114424	0.90306	9.031	115.91- 193.18	164.36
2.370	2.369	0.001	2064444	0.97306	9.730	208.19- 346.99	304.48
2.503	2.502	0.001	963110	0.93010	9.301	98.81- 164.69	142.05
2.919	2.918	0.001	784478	0.89178	8.918	82.94- 138.23	115.70
Average of Peak Concentrations =					9.062		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.187	4.186	0.001	2940318	0.86247	8.625	80.00- 120.00	100.00
4.484	4.484	0.000	5418941	0.86204	8.620	139.46- 232.43	184.30
4.770	4.769	0.001	5613439	0.92273	9.227	134.27- 223.79	190.91
5.483	5.483	0.000	6071599	0.71665	7.166	193.35- 322.25	206.49
5.769	5.768	0.001	3185684	0.76206	7.620	94.35- 157.26	108.34
Average of Peak Concentrations =					8.252		

```
$  12 DCB                                        CAS #: 2051-24-3
6.929    6.927    0.002          527345 0.00697  0.06972
--------------------------------------------------------------------------------
```

Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\054F5401.D
Date : 18-MAR-2008 01:33
Client ID: INTRA-LAB CHECK
Instrument: a2hp10.i
Sample Info: KJKKE1AF,5
Purge Volume: 1000.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJKKE1AE **Matrix.....:** WATER
MB Lot-Sample #: A8C140000-044

Prep Date.....: 03/14/08 **Final Wgt/Vol..:** 2 mL
Analysis Date..: 03/17/08 **Prep Batch #...:** 8074044
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
PCB-1016	ND	0.20	ug/L	SW846 8082
PCB-1221	ND	0.20	ug/L	SW846 8082
PCB-1232	ND	0.20	ug/L	SW846 8082
PCB-1242	ND	0.20	ug/L	SW846 8082
PCB-1248	ND	0.20	ug/L	SW846 8082
PCB-1254	ND	0.20	ug/L	SW846 8082
PCB-1260	ND	0.20	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90	(27 - 130)
Decachlorobiphenyl	101	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

TestAmerica North Canton

Data file : \\CANSVR11\dd\chem\GCS\a2hp10.i\80317A-1.b\040F4001.D
Lab Smp Id: KJKKE1AE Client Smp ID: INTRA-LAB BLANK
Inj Date : 17-MAR-2008 22:00
Operator : Inst ID: a2hp10.i
Smp Info : KJKKE1AE
Misc Info :
Comment :
Method : \\CANSVR11\dd\chem\GCS\a2hp10.i\80317A-1.b\PCB10.m
Meth Date : 17-Mar-2008 19:18 Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 40 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: WATER
Processing Host: CANSVR11

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	2000.000	final volume
Vo	1000.000	intitial volume
Cpnd Variable		Local Compound Variable

				CONCENTRATIONS ON-COL (ng)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 1 TCMX						CAS #: 877-09-8	
1.294	1.290	0.004	6630576	0.09016	0.1803		
2 AROCLOR-1221						CAS #: 11104-28-2	

Peaks not detected for Quant. or Qual. signal(s).

3 AROCLOR-1016						CAS #: 12674-11-2	

Peaks not detected for Quant. or Qual. signal(s).

4 AROCLOR-1232						CAS #: 11141-16-5	

Peaks not detected for Quant. or Qual. signal(s).

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO

5 AROCLOR-1242 CAS #: 53469-21-9

Peaks not detected for Quant. or Qual. signal(s).

---

6 AROCLOR-1248 CAS #: 12672-29-6

Peaks not detected for Quant. or Qual. signal(s).

---

7 AROCLOR-1254 CAS #: 11097-69-1

Peaks not detected for Quant. or Qual. signal(s).

---

8 AROCLOR-1260 CAS #: 11096-82-5

Peaks not detected for Quant. or Qual. signal(s).

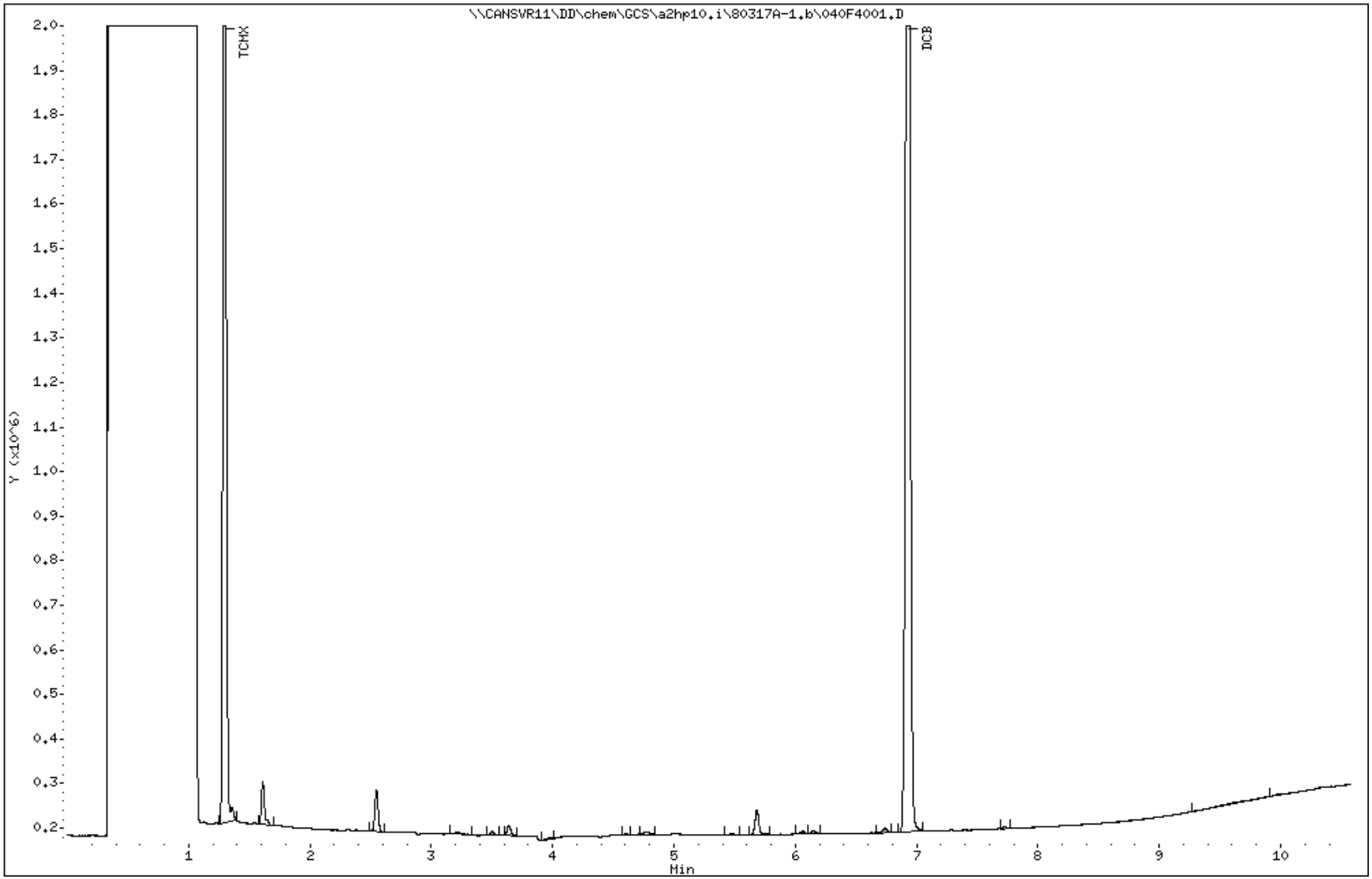
$ 12 DCB CAS #: 2051-24-3

6.926	6.924	0.002	7643599	0.10106	0.2021		

M 11 TOTAL PCB CAS #: 1336-36-3

Compound Not Detected

Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\040F4001.D
Date : 17-MAR-2008 22:00
Client ID: INTRA-LAB BLANK
Instrument: a2hp10.i
Sample Info: KJKKE1AE
Purge Volume: 1000.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FA-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FC-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/17/08
Prep Batch #...: 8074044
Dilution Factor: 5 **Initial Wgt/Vol:** 510 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
PCB-1016	**80**	**(10 - 166)**			**SW846 8082**
	85	**(10 - 166)**	**6.9**	**(0-30)**	**SW846 8082**
PCB-1260	**74**	**(21 - 140)**			**SW846 8082**
	72	**(21 - 140)**	**2.8**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	88	(27 - 130)
	86	(27 - 130)
Decachlorobiphenyl	57	(10 - 127)
	61	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: 8C13254 **Work Order #...:** KJHVV1FA-MS **Matrix.....:** WG
MS Lot-Sample #: A8C130254-001 KJHVV1FC-MSD
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/17/08
Prep Batch #...: 8074044
Dilution Factor: 5 **Initial Wgt/Vol:** 510 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
PCB-1016	**ND**	**20**	**16**	**ug/L**	**80**		**SW846 8082**
	ND	**20**	**17**	**ug/L**	**85**	**6.9**	**SW846 8082**
PCB-1260	**ND**	**20**	**14**	**ug/L**	**74**		**SW846 8082**
	ND	**20**	**14**	**ug/L**	**72**	**2.8**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	88	(27 - 130)
	86	(27 - 130)
Decachlorobiphenyl	57	(10 - 127)
	61	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\038F3801.D
Report Date: 18-Mar-2008 08:06

TestAmerica North Canton

Data file : \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\038F3801.D
Lab Smp Id: KJHVV1FA Client Smp ID: AMW-05B(20080311)
Inj Date : 17-MAR-2008 21:30
Operator : Inst ID: a2hp10.i
Smp Info : KJHVV1FA,5
Misc Info : 12-AR1660TD.SUB,HMS.SPK
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\80317A-1.b\PCB10.m
Meth Date : 18-Mar-2008 07:26 Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 38 QC Sample: MS
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: WATER
Processing Host: CANSVR11

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	5.000	Dilution Factor
Vt	2000.000	final volume
Vo	510.000	intitial volume
Cpnd Variable		Local Compound Variable

				CONCENTRATIONS ON-COL (ng)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.292	1.292	0.000	1291462	0.01756	0.3443		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.608	1.607	0.001	612434	0.75248	14.75	80.00- 120.00	100.00(M)
1.930	1.930	0.000	977739	0.79230	15.54	117.38- 195.64	159.65
2.370	2.370	0.000	1833554	0.86423	16.94	217.16- 361.94	299.39
2.503	2.503	0.000	0	0.0000	0.0000	102.14- 170.24	0.00
2.919	2.919	0.000	684646	0.77829	15.26	86.73- 144.55	111.79
Average of Peak Concentrations =					15.62		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.187	4.186	0.001	2642921	0.77523	15.20	80.00- 120.00	100.00
4.483	4.483	0.000	4851712	0.77180	15.13	139.75- 232.92	183.57
4.769	4.768	0.001	4986204	0.81963	16.07	134.63- 224.38	188.66
5.482	5.482	0.000	5344780	0.63086	12.37	191.64- 319.39	202.23
5.769	5.769	0.000	2847797	0.68123	13.36	93.71- 156.19	107.75
Average of Peak Concentrations =					14.43		

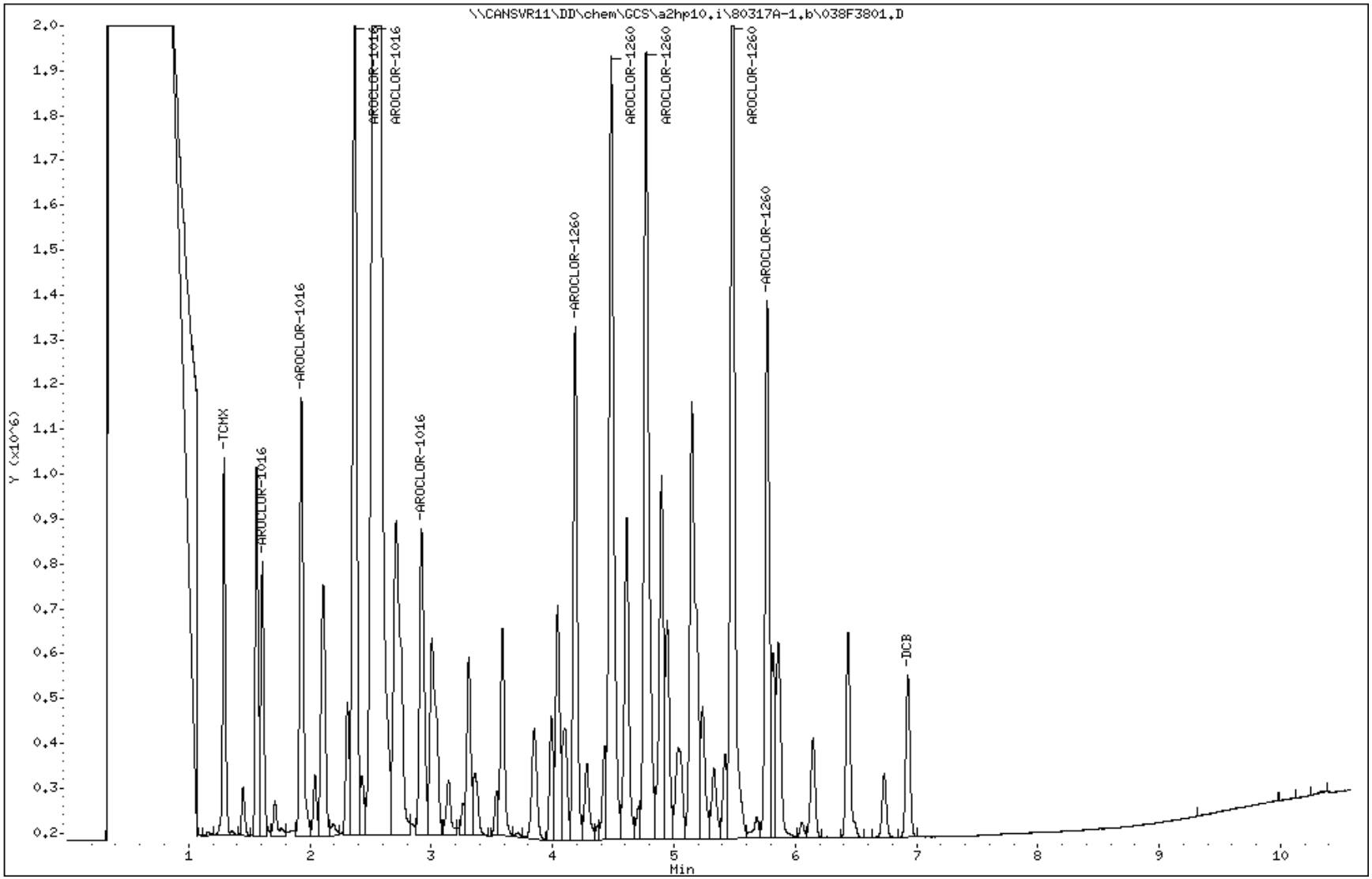
```
$  12 DCB                                        CAS #: 2051-24-3
6.928    6.927    0.001          869068 0.01149   0.2253
--------------------------------------------------------------------------------
```

Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\038F3801.D
Report Date: 18-Mar-2008 08:06

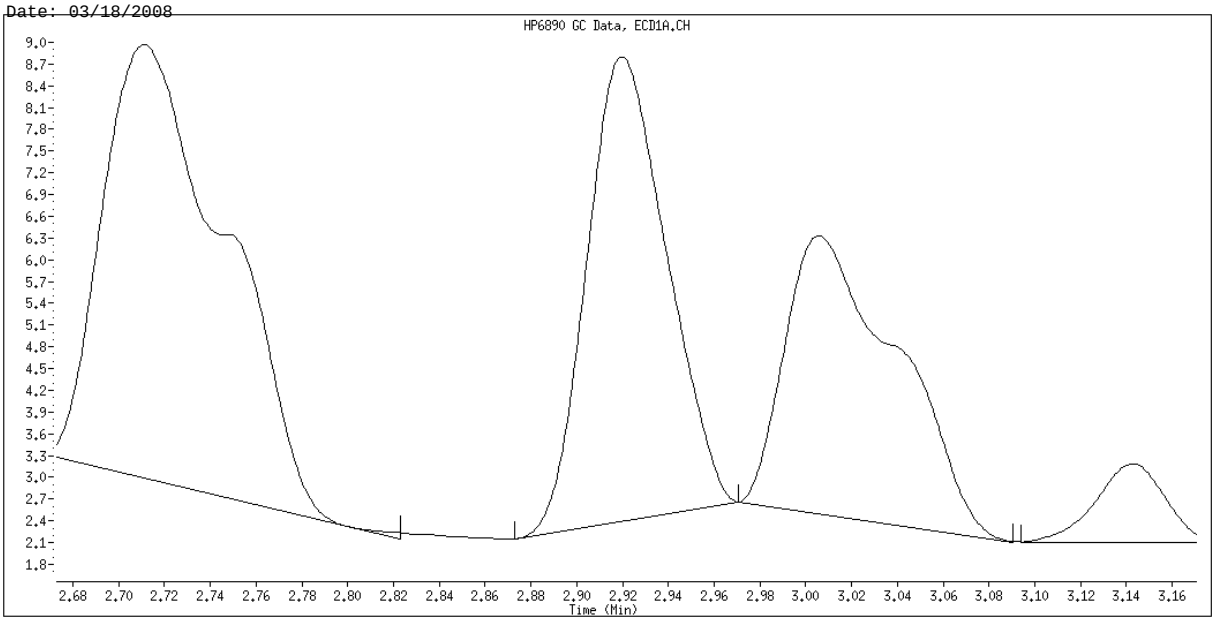
QC Flag Legend

M - Compound response manually integrated.

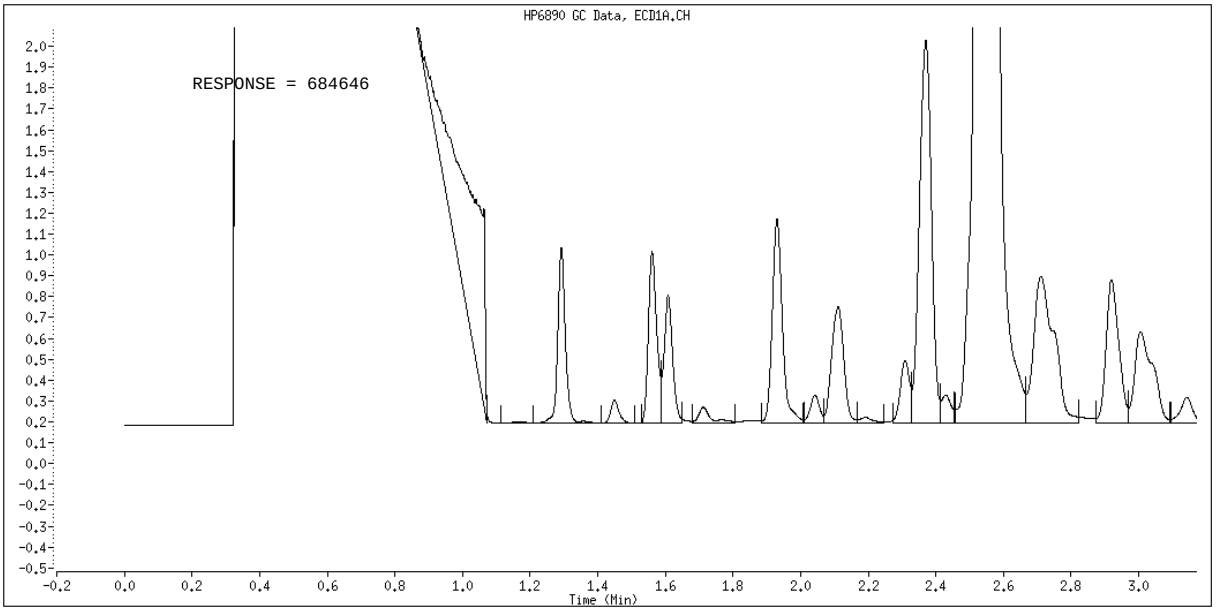
Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80317A-1.b\038F3801.D
Date : 17-MAR-2008 21:30
Client ID: AMW-05B(20080311)
Instrument: a2hp10.i
Sample Info: KJHVV1FA,5
Purge Volume: 510.0
Operator:
Column phase: restek pest clpI
Column diameter: 0.53



Data File Name: 038F3801.D
Inj. Date and Time: 17-MAR-2008 21:30
Instrument ID: a2hp10.i
Client ID: AMW-05B(20080311)
Compound Name: AROCLOR-1016
CAS #: 12674-11-2
Report Date: 03/18/2008



Original Integration



Manual Integration

Manually Integrated By: hassl
Manual Integration Reason: Manually Assigned

Data File: 025F2501.D
Report Date: 19-Mar-2008 08:11

TestAmerica North Canton

Data file : \\CANSVR11\DD\chem\GCS\a2hp10.i\80318-1.b\80318-1.b\025F2501.D
Lab Smp Id: KJHVV1FC Client Smp ID: AMW-05B(20080311)
Inj Date : 18-MAR-2008 16:52
Operator : Inst ID: a2hp10.i
Smp Info : KJHVV1FC,5
Misc Info : 12-AR1660TD.SUB,HMS.SPK
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\80318-1.b\PCB10.m\PCB10R.m
Meth Date : 19-Mar-2008 06:24 Quant Type: ESTD
Cal Date : 07-MAR-2008 23:28 Cal File: 043F4301.D
Als bottle: 25 QC Sample: MSD
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: WATER
Processing Host: CANSVR11

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	5.000	Dilution Factor
Vt	2000.000	final volume
Vo	510.000	intitial volume
Cpnd Variable		Local Compound Variable

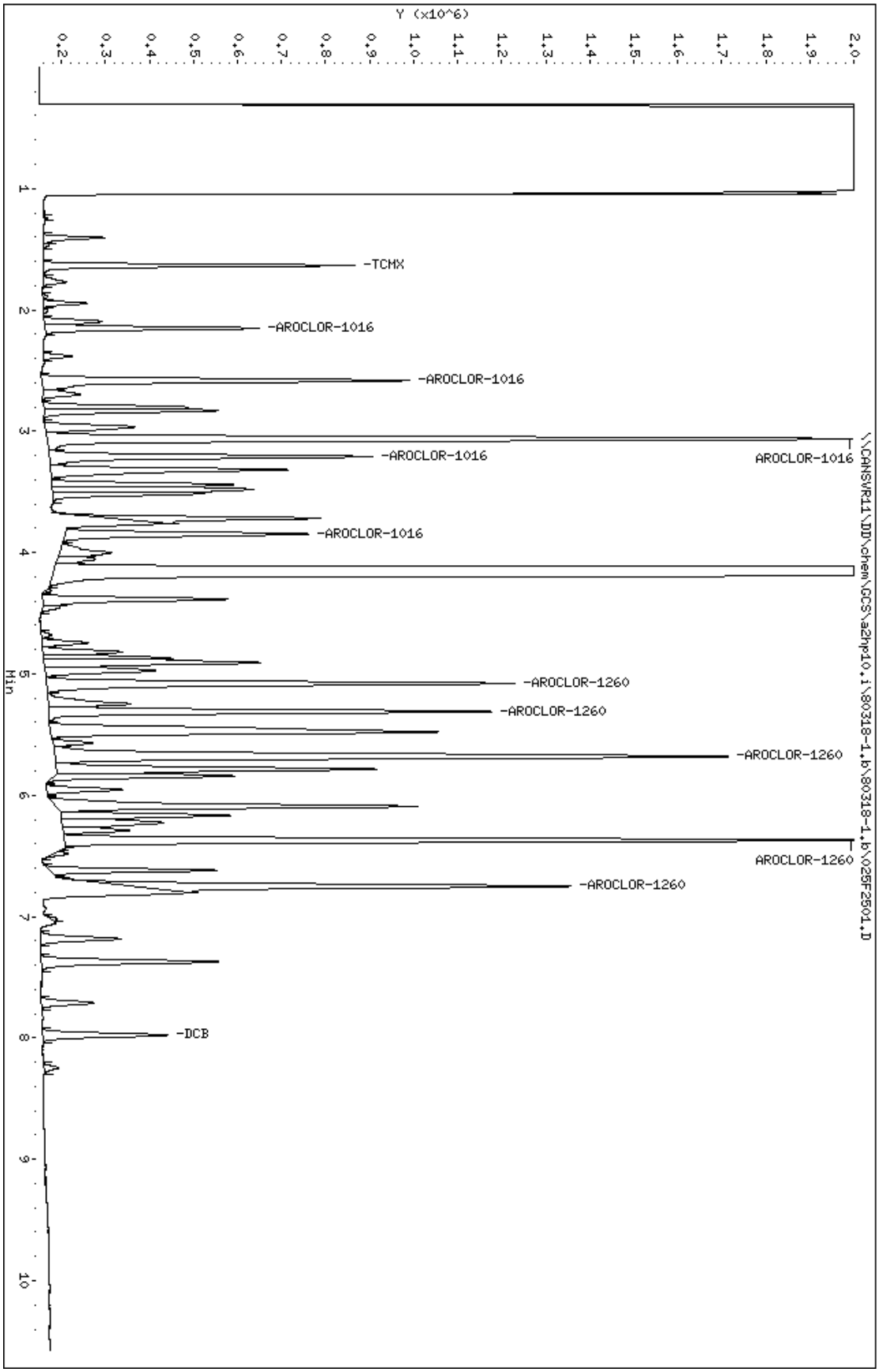
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/L)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.633	1.633	0.000	1197666	0.01725	0.3382		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.151	2.151	0.000	976401	0.77467	15.19	80.00- 120.00	100.00
2.582	2.582	0.000	2086643	0.90843	17.81	151.48- 252.47	213.71
3.062	3.062	0.000	4516428	0.96216	18.86	295.69- 492.82	462.56
3.209	3.209	0.000	1765671	0.87925	17.24	122.37- 203.94	180.83
3.847	3.847	0.000	1364741	0.74244	14.56	111.11- 185.18	139.77
Average of Peak Concentrations =					16.73		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.078	5.079	-0.001	2660660	0.83279	16.33	80.00- 120.00	100.00(M)
5.310	5.313	-0.003	2376395	0.68671	13.46	83.36- 138.93	89.32
5.681	5.682	-0.001	4467870	0.88684	17.39	123.62- 206.04	167.92
6.370	6.371	-0.001	4261185	0.68265	13.38	158.19- 263.66	160.16
6.750	6.751	-0.001	2405906	0.48919	9.592	117.94- 196.57	90.43
Average of Peak Concentrations =					14.03		

$ 12 DCB   CAS #: 2051-24-3
7.977   7.977   0.000   702224 0.01228   0.2407

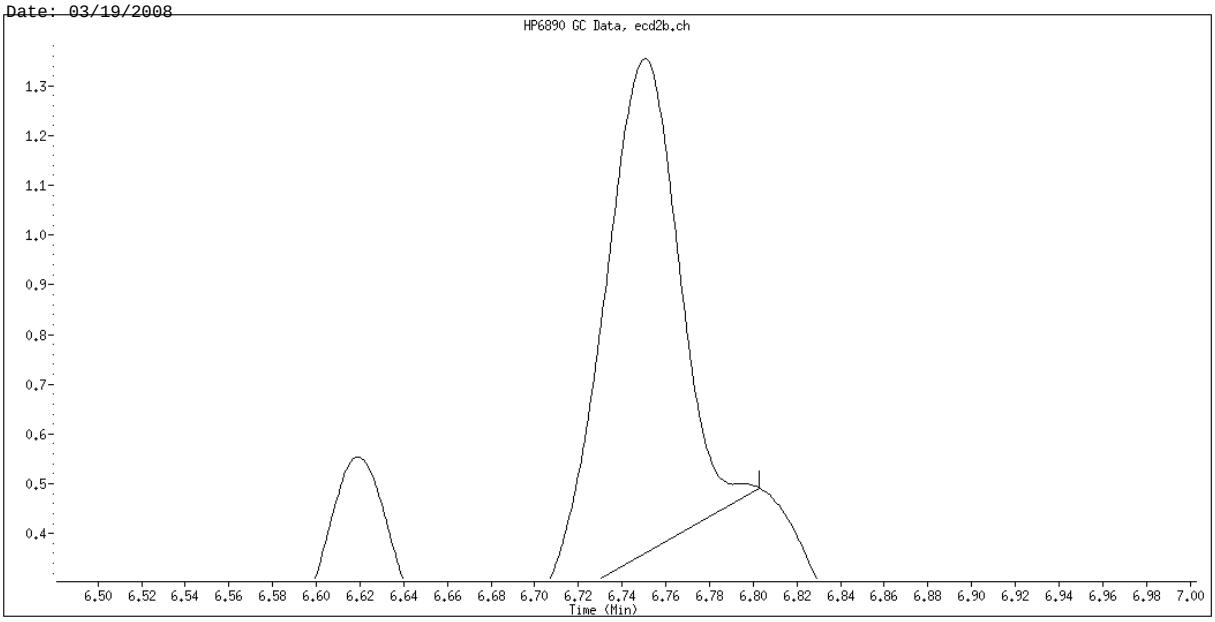
Data File: 025F2501.D
Report Date: 19-Mar-2008 08:11

QC Flag Legend

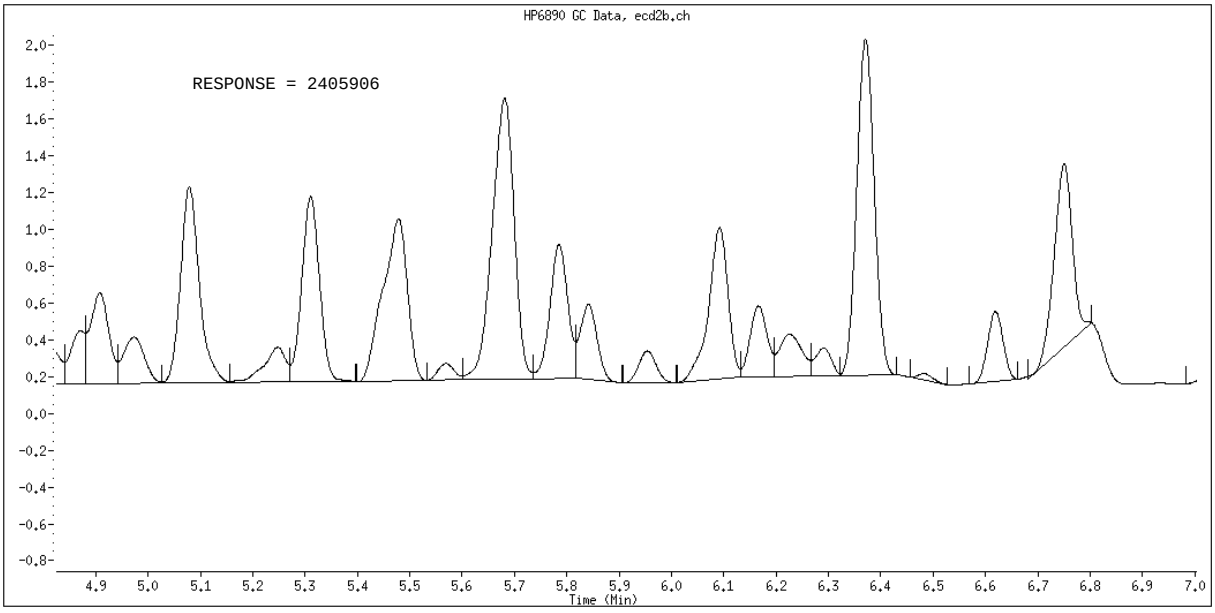
M - Compound response manually integrated.


Data File: \\CANSVR11\DD\chem\GCS\a2hp10.i\80318-1.b\80318-1.b\025F2501.D
Date : 18-MAR-2008 16:52
Client ID: AHW-05B(20080311)
Sample Info: KJHVV1FC,5
Purge Volume: 510.0
Column phase: restek pest clpII
Instrument: a2hp10.i
Operator:
Column diameter: 0.53
Y (x10^6)
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
-DCB
Min
\\CANSVR11\DD\chem\GCS\a2hp10.i\80318-1.b\80318-1.b\025F2501.D

Data File Name: 025F2501.D
Inj. Date and Time: 18-MAR-2008 16:52
Instrument ID: a2hp10.i
Client ID: AMW-05B(20080311)
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/19/2008



Original Integration



Manual Integration

Manually Integrated By: hassl
Manual Integration Reason: Manually Assigned

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

MISCELLANEOUS DATA

Method Information

PEST

Method Change History

Operator	Date	Change Information
	8/8/06 9:41:18 AM	
	8/8/06 12:06:52 PM	
	8/8/06 1:20:49 PM	
	8/9/06 10:34:59 AM	
401840	9/5/06 7:10:31 AM	

Run Time Checklist

Pre-Run Cmd/Macro:	off
Data Acquisition:	on
Standard Data Analysis:	on
Customized Data Analysis:	off
Save GLP Data:	off
Post-Run Cmd/Macro:	on
Name:	macro "gcacq10.mac", go
Save Method with Data:	off

Injection Source and Location

Injection Source: HP GC Injector

Injection Location: Front

North Canton 1099

HP6890 GC METHOD

OVEN
- Initial temp: 140 'C (On)
- Initial time: 0.50 min
- Ramps:

#	Rate	Final temp	Final time
1	15.00	150	1.00
2	20.00	300	1.00
3	0.0(Off)		

- Post temp: 0 'C
- Post time: 0.00 min
- Run time: 10.67 min
- Maximum temp: 325 'C
- Equilibration time: 1.00 min

FRONT INLET (UNKNOWN)
- Mode: Splitless
- Initial temp: 225 'C (On)
- Pressure: 9.50 psi (On)
- Purge flow: 40.0 mL/min
- Purge time: 0.75 min
- Total flow: 67.1 mL/min
- Gas saver: Off
- Gas type: Hydrogen

BACK INLET ()

COLUMN 1
- Capillary Column
- Model Number: RESTEK CLP2
- CLP2
- Max temperature: 320 'C
- Nominal length: 30.0 m
- Nominal diameter: 520.00 um
- Nominal film thickness: 0.42 um
- Mode: constant pressure
- Pressure: 9.50 psi
- Nominal initial flow: 20.2 mL/min
- Average velocity: 163 cm/sec
- Inlet: Front Inlet
- Outlet: Front Detector
- Outlet pressure: ambient

COLUMN 2
- (not installed)

FRONT DETECTOR (μECD)
- Temperature: 325 'C (On)
- Mode: Constant makeup flow
- Makeup flow: 60.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Electrometer: On

BACK DETECTOR (μECD)
- Temperature: 325 'C (On)
- Mode: Constant makeup flow
- Makeup flow: 60.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Electrometer: On

SIGNAL 1
- Data rate: 20 Hz
- Type: front detector
- Save Data: On
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

SIGNAL 2
- Data rate: 20 Hz
- Type: back detector
- Save Data: On
- Zero: 0.0 (Off)
- Range: 0
- Fast Peaks: Off
- Attenuation: 0

COLUMN COMP 1
- Derive from front detector

COLUMN COMP 2
- Derive from back detector

North Canton 1100

POST RUN
Post Time: 0.00 min

TIME TABLE

Time	Specifier	Parameter & Setpoint

7673 Injector

Front Injector:

Sample Washes	2	
Sample Pumps	3	
Injection Volume	1.0	microliters
Syringe Size	10.0	microliters
PostInj Solvent A Washes	4	
PostInj Solvent B Washes	4	
Viscosity Delay	0	seconds
Plunger Speed	Fast	
PreInjection Dwell	0.00	minutes
PostInjection Dwell	0.00	minutes

Back Injector:
No parameters specified

North Canton 1101

Sequence: C:\HPCHEM\1\SEQUENCE\803071IC.S

Sequence Parameters:

Operator:

Data File Naming:	Auto
Data Directory:	C:\HPCHEM\1\DATA\
Data Subdirectory:	803071C
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none
Sequence Comment:	

Sequence Table (Front Injector):

Calibration Part:

Line	Vial	SampleName	Method	CalLev	Update RF	Update RT	Interval

Quantification Part:

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
1	1	HEX E21E34				
2	2	1232,,1,1				
3	3	1232,,1,2				
4	4	1232,,1,3				
5	5	1232,,1,4				
6	6	1232,,1,5				
7	7	1232,,1,6				
8	8	1242,,1,1				
9	9	1242,,1,2				
10	10	1242,,1,3				
11	11	1242,,1,4				
12	12	1242,,1,5				
13	13	1242,,1,6				
14	14	1248,,1,1				
15	15	1248,,1,2				
16	16	1248,,1,3				
17	17	1248,,1,4				
18	18	1248,,1,5				
19	19	1248,,1,6				
20	20	2154,,1,1				
21	21	2154,,1,2				
22	22	2154,,1,3				
23	23	2154,,1,4				
24	24	2154,,1,5				
25	25	2154,,1,6				
26	26	1660,,1,1				
27	27	1660,,1,2				
28	28	1660,,1,3				
29	29	1660,,1,4				

Pass F 8082
Pass R 8082

North Canton
1102

Sequence: C:\HPCHEM\1\SEQUENCE\80307IC.S

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
30	30	1660,,1,5				
31	31	1660,,1,6				
32	32	1262,,1,1				
33	33	1262,,1,2				
34	34	1262,,1,3				
35	35	1262,,1,4				
36	36	1262,,1,5				
37	37	1262,,1,6				
38	38	1268,,1,1				
39	39	1268,,1,2				
40	40	1268,,1,3				
41	41	1268,,1,4				
42	42	1268,,1,5				
43	43	1268,,1,6				
44	44	ICV,,2				

Pass F < 15%
Pass R < 15%

Sequence Table (Back Injector):

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR):	No
Dest of individual reports for each run:	as specified in Method

Sequence Summary Parameters:

One page header:	No
Print Configuration:	No
Print Sequence:	No
Print Logbook:	No
Print Method(s):	No
Print Analysis reports:	No
Print Statistics for Calib. runs:	No
Print Statistics for Sample runs:	No
Summary style:	Sample Summary

Sequence: C:\HPCHEM\1\SEQUENCE\80317A.S

Sequence Parameters:

Operator:

Data File Naming:	Auto
Data Directory:	C:\HPCHEM\1\DATA\
Data Subdirectory:	80317A
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
D969 1660
D976 1232
D900 1242
D936 1248
D917 2154

Sequence Table (Front Injector):

Calibration Part:

Line	Vial	SampleName	Method	CalLev	Update RF	Update RT	Interval
====	====	==========	========	======	=========	=========	=========

Quantification Part:

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
====	====	==========	==========	=======	==========	=========
1	1	HEX LOT#E37E27				
2	2	1660,,2 F067,,2 PASS F/R				
3	3	1232,,2 F017				
4	4	1242,,2 F063				
5	5	1248,,2 F071				
6	6	2154,,2 F076				
7	7	KH6QN1AA,5				
8	8	KH9291AD,10 GO -X1000				
9	9	MATRIXRINSE				
10	10	F067,,2 PASS F/R				
11	11	KH6Q91AA				
12	12	KH6RA1AA				
13	13	KH6RA1AA,10 DUP				
14	14	KH6RC1AA				
15	15	KH6R11AA				
16	16	KH6R11AA,10 DUP				
17	17	KJE7K1AA				
18	18	KJE7K1AA,10 DUP				
19	19	KJE7P1AA				
20	20	KJE7P1AA,10 DUP				
21	21	KJE7Q1AA				
22	22	KJE7Q1AA,10 DUP				

Front

Sequence: C:\HPCHEM\1\SEQUENCE\80317A.S

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
23	23	KJE7V1AA				
24	24	KJE7V1AA,10				
25	25	KJFJ01AA				
26	26	KJFJ01AA,10				
27	27	MATRIXRINSE				
28	28	F067,,2				
29	29	KJCGR1AA				
30	30	KJD8D1AA				
31	31	KJEML1EE				
32	32	KJEML1G1,5				
33	33	KJEML1G2,5				
34	34	KJG2G1AA				
35	35	KJHRE1AD				
36	36	KJHTA1AD				
37	37	KJHVV1AD				
38	38	KJHVV1FA,5				
39	39	KJHVV1FC,5				
40	40	KJKKE1AE				
41	41	F067,,2				
42	42	KJDG41AC				
43	43	KJDG61AC				
44	44	KJDG71AC,2				
45	45	KJDHA1AC				
46	46	KJDHC1AC				
47	47	KJDHD1AC				
48	48	KJDHE1AC				
49	49	KJDHF1AC,5				
50	50	KJDHG1AC				
51	51	KJDHH1AC				
52	52	KJDH11AC				
53	53	KJDH21AC				
54	54	KJKKE1AF				
55	55	F067,,2				
56	56	KJNCK1AC				
57	57	KJNCN1AC				
58	58	KJNCP1AC				
59	59	KJNCR1AC				
60	60	KJNCT1AC				
61	61	KJNCV1AC				
62	62	KJNCW1AC				
63	63	KJNC01AC				
64	64	KJNC31AC,5				
65	65	KJNC51AC,5				
66	66	KJNC71AC,5				
67	67	KJNC91AC				
68	68	KJNDD1AC				
69	69	KJNDF1AC,5				
70	70	KJNDF1AF,5				
71	71	KJNDF1AG,5				
72	72	KJNDM1AC,20				
73	73	KJNKN1AA				
74	74	KJNKN1AC				
75	75	F067,,2				
76	76	KJFLN1AM				
77	77	KJFLN1AP				
78	78	KJFLN1AQ				
79	79	KJFLR1AM				
80	80	KJFLW1AM				
81	81	KJFL01AM				
82	82	KJFL11AM				

equence: C:\HPCHEM\1\SEQUENCE\80317A.S

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
83	83	KJFL21AM				
84	84	KJFL31AM,5 GO				
85	85	KJNCP1AC				
86	86	KJGKN1AA				
87	87	KJGKN1AC				
88	88	F067,,2 PASS F/N				

Sequence Table (Back Injector):

Front

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR):	No
Dest of individual reports for each run:	as specified in Method

Sequence Summary Parameters:

One page header:	No
Print Configuration:	No
Print Sequence:	No
Print Logbook:	No
Print Method(s):	No
Print Analysis reports:	No
Print Statistics for Calib. runs:	No
Print Statistics for Sample runs:	No
Summary style:	Sample Summary

Sequence: C:\HPCHEM\1\SEQUENCE\80318.S

Sequence Parameters:

Operator:

Data File Naming:	Auto
Data Directory:	C:\HPCHEM\1\DATA\
Data Subdirectory:	80318
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
D969 1660
D976 1232
D900 1242
D936 1248
D917 2154

Sequence Table (Front Injector):

Calibration Part:

Line	Vial	SampleName	Method	CalLev	Update RF	Update RT	Interval
====	====	==========	========	======	=========	=========	=========

Quantification Part:

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
====	====	==========	==========	=======	==========	=========
1	1	HEX LOT#E37E27				
2	2	1660,,2 F067,,2				
3	3	1232,,2 F017				
4	4	1242,,2 F063				
5	5	1248,,2 F071				
6	6	2154,,2 F076				
7	7	KJHCN1AC				
8	8	KJHCN1AH				
9	9	KJHCN1AJ				
10	10	KJHCV1AC				
11	11	KJHCX1AC				
12	12	KJHC01AC,10				
13	13	KJHC21AC				
14	14	KJHC31AC				
15	15	KJHC51AC				
16	16	KJHC61AC				
17	17	KJHC81AC				
18	18	KJHC91AC				
19	19	KJHDT1AC,10				
20	20	KJHDW1AC,1000				
21	21	KJHEA1AC				
22	22	KJHTX1AA				

Sequence: C:\HPCHEM\1\SEQUENCE\80318.S

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
23	23	KJHTX1AC				
24	24	F067,,2				
25	25	KJHVV1FC,5				
26	26	KJDHF1AC				
27	27	KJDHG1AC				
28	28	KJDHG1AC,10				
29	29	KJDHH1AC				
30	30	KJDHH1AC,10				
31	31	KH6TC1AC,100 GO				
32	32	KH6TC1AP,100 GO				
33	33	KH6TC1AQ,100 GO				
34	34	KH7G31AA				
35	35	KH7G31AC				
36	36	F067,,2				
37	37	KJE7D1AC,10 GO				
38	38	KJE7E1AC,10 GO				
39	39	KJE7F1AC,10 GO				
40	40	KJE7G1AC,10 GO				
41	41	KJE7H1AC,10				
42	42	KJE7W1AC				
43	43	KJE7X1AC				
44	44	KJE7X1AD				
45	45	KJE7X1AE				
46	46	MATRIXRINSE				
47	47	KJGKL1AD				
48	48	F067,,2				
49	49	KJE731AC,10 GO				
50	50	KJE8C1AC,50 GO				
51	51	KJE8D1AC,10 GO				
52	52	KJFF51AC,50				
53	53	KJFF91AC,10				
54	54	KJFGE1AC,50				
55	55	KJFGF1AC,10 GO				
56	56	KJFGG1AC,10 GO				
57	57	KJFGH1AC,10 GO				
58	58	KJFGJ1AC,10 GO				
59	59	MATRIXRINSE				
60	60	KJGKL1AE				
61	61	F067,,2				
62	62	KJFHH1AC				
63	63	KJFHP1AC				
64	64	KJFHQ1AC,10 GO				
65	65	KJFHT1AC,10				
66	66	KJFHT1AD,10				
67	67	KJFHT1AE,10				
68	68	KJFH01AC,10				
69	69	KJFH11AC,5				
70	70	KJFH31AC,2				
71	71	KJFH91AC,10 GO				
72	72	KJFJC1AC,10 GO				
73	73	KJFJ11AC,10				
74	74	KJFKX1AN				
75	75	MATRIXRINSE				
76	76	KJGKM1AD				
77	77	F067,,2				
78	78	KJFK11AN,2				
79	79	KJFK21AN				
80	80	KJFK41AN,5				
81	81	KJFK51AN				
82	82	KJFK61AN				

Sequence: C:\HPCHEM\1\SEQUENCE\80318.S

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
83	83	KJFK81AN				
84	84	KJFLF1AN				
85	85	KJFLG1AN,5				
86	86	MATRIXRINSE				
87	87	KJFL31AM				
88	88	KJGKM1AE				
89	89	F067,,2 PM3 F/M				

Sequence Table (Back Injector):

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR):	No
Dest of individual reports for each run:	as specified in Method

Sequence Summary Parameters:

One page header:	No
Print Configuration:	No
Print Sequence:	No
Print Logbook:	No
Print Method(s):	No
Print Analysis reports:	No
Print Statistics for Calib. runs:	No
Print Statistics for Sample runs:	No
Summary style:	Sample Summary

North Canton

TestAmerica Laboratories, Inc.
EXTRACTION BENCH SHEET

Run Date: 3/20/2008
Time: 16:59:56

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
Y	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
			_	_	computer batch: correct & Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
= Package Submitted to AnalyticalGroup
Bench Sheet Copied per COC

Extractionist: 006088 Steve Earle

Concentrationist: 001560 Thomas Fausnight
402582 RAY SHOCK

Reviewer/Date: MILLSL / 3/14/08

QC BATCH: 8074044

PREP DATE: 3/14/08
COMP DATE: 3/14/08

PCBs (8082)
LIQ/LIQ, SEP FUNNEL w/ACID STRIP (PCB) - Nominal

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/17/08	3/25/08	A8C110136-001 **KJCGR-1-AA**	D	60	QH	WATER	1040mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 2/.2 SURR#4473
COMMENTS:															
3/18/08	3/26/08	A8C120107-001 **KJD8D-1-AA**	D	60	QH	WATER	1050mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 2/.2 SURR#4473
COMMENTS:															
3/18/08	3/31/08	A8C120148-001 **KJEML-1-EE**	D	60	QH	WATER	1040mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 2/.2 SURR#4473
COMMENTS:															
3/18/08	3/31/08	A8C120148-001 **KJEML-1-G1 S**	D	60	QH	WATER	520mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 10PPM#4468 1ML 2/.2 SURR#4473
COMMENTS:															
3/18/08	3/31/08	A8C120148-001 **KJEML-1-G2 D**	D	60	QH	WATER	520mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 10PPM#4468 1ML 2/.2 SURR#4473
COMMENTS:															
3/19/08	3/27/08	A8C130152-001 **KJG2G-1-AA**	D	60	QH	WATER	1050mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 2/.2 SURR#4473
COMMENTS:															

1110

North Canton

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 8074044

PREP DATE: 3/14/08
COMP DATE: 3/14/08

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/18/08	3/21/08	A8C130246-001 **KJHRE-1-AD**	B	60	QH	WATER	1020mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 2/.2 SURR#4473
COMMENTS:															
3/18/08	3/21/08	A8C130246-002 **KJHTA-1-AD**	B	60	QH	WATER	920mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 2/.2 SURR#4473
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-1-AD**	D	60	QH	WATER	1030mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 2/.2 SURR#4473
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-1-FA S**	D	60	QH	WATER	510mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 10PPM#4468 1ML 2/.2 SURR#4473
COMMENTS:															
3/18/08	3/20/08	A8C130254-001 **KJHVV-1-FC D**	D	60	QH	WATER	510mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 10PPM#4468 1ML 2/.2 SURR#4473
COMMENTS:															
3/17/08	3/20/08	A8C140000-044 **KJKKE-1-AE B**		60	QH	WATER	1000mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 2/.2 SURR#4473
COMMENTS:															
3/17/08	3/20/08	A8C140000-044 **KJKKE-1-AF C**		60	QH	WATER	1000mL 2.00mL	7.0	NA	NA	DCM	180.0	HEXANE	18.0	1ML 10PPM#4468 1ML 2/.2 SURR#4473
COMMENTS:															

S/S SE

DCM #G06E25, NA2S04 #E47601, HEXANE #E42E20

NUMBER OF WORK ORDERS IN BATCH: 13

1111

North Canton

Lot/SDG Number: **8C13254**

Sample Control Chain of Custody - TAL North Canton
GC Semivolatiles

Lot Number	Work Order	Analysis Type	Prep Date	Prep Analyst	Date of Transfer	Transferred By	Analysis Date	Analyst
A8C130254-001	KJHVV1AD	PCBs (8082)	03/14/08	Steve Earle	03/14/08	Lisa Mills	03/17/08	Lori Hass

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

METALS DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

FORMS DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080311)

DISSOLVED Metals

Lot-Sample #...: A8C130254-001 **Matrix.....:** WG
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8074016						
Arsenic	ND	10.0	ug/L	SW846 6010B	03/14/08	KJHVV1AH
		Dilution Factor: 1		Analysis Time..: 17:12	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 3.2		
Barium	**79.7 B,J**	**200**	**ug/L**	**SW846 6010B**	**03/14/08**	**KJHVV1AL**
		Dilution Factor: 1		Analysis Time..: 17:12	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	03/14/08	KJHVV1AM
		Dilution Factor: 1		Analysis Time..: 17:12	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	03/14/08	KJHVV1AJ
		Dilution Factor: 1		Analysis Time..: 17:12	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 1.9		
Chromium	**3.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**03/14/08**	**KJHVV1AN**
		Dilution Factor: 1		Analysis Time..: 17:12	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	03/14/08	KJHVV1AK
		Dilution Factor: 1		Analysis Time..: 17:12	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	03/14/08	KJHVV1AP
		Dilution Factor: 1		Analysis Time..: 17:12	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	03/14-03/18/08	KJHVV1AG
		Dilution Factor: 1		Analysis Time..: 08:24	Analyst ID.....: 001086	
		Instrument ID..: H4		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: 8C13254 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A8C140000-016 **Prep Batch #...:** 8074016						
Arsenic	ND	10.0	ug/L	SW846 6010B	03/14/08	KJKH31AC
		Dilution Factor: 1				
		Analysis Time..: 16:43	Analyst ID.....: 002260		Instrument ID..: I5	
Barium	**0.92 B**	**200**	**ug/L**	**SW846 6010B**	**03/14/08**	**KJKH31AF**
		Dilution Factor: 1				
		Analysis Time..: 16:43	Analyst ID.....: 002260		Instrument ID..: I5	
Cadmium	ND	5.0	ug/L	SW846 6010B	03/14/08	KJKH31AG
		Dilution Factor: 1				
		Analysis Time..: 16:43	Analyst ID.....: 002260		Instrument ID..: I5	
Lead	ND	3.0	ug/L	SW846 6010B	03/14/08	KJKH31AD
		Dilution Factor: 1				
		Analysis Time..: 16:43	Analyst ID.....: 002260		Instrument ID..: I5	
Chromium	ND	10.0	ug/L	SW846 6010B	03/14/08	KJKH31AH
		Dilution Factor: 1				
		Analysis Time..: 16:43	Analyst ID.....: 002260		Instrument ID..: I5	
Selenium	ND	5.0	ug/L	SW846 6010B	03/14/08	KJKH31AE
		Dilution Factor: 1				
		Analysis Time..: 16:43	Analyst ID.....: 002260		Instrument ID..: I5	
Silver	ND	10.0	ug/L	SW846 6010B	03/14/08	KJKH31AJ
		Dilution Factor: 1				
		Analysis Time..: 16:43	Analyst ID.....: 002260		Instrument ID..: I5	
Mercury	ND	0.20	ug/L	SW846 7470A	03/14-03/18/08	KJKH31AA
		Dilution Factor: 1				
		Analysis Time..: 08:17	Analyst ID.....: 001086		Instrument ID..: H4	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: 8C13254 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A8C140000-016 **Prep Batch #...:** 8074016					
Arsenic	89	(80 - 120)	SW846 6010B	03/14/08	KJKH31AL
		Dilution Factor: 1	Analysis Time..: 16:58	Analyst ID.....: 002260	
		Instrument ID..: I5			
Barium	95	(80 - 120)	SW846 6010B	03/14/08	KJKH31AP
		Dilution Factor: 1	Analysis Time..: 16:58	Analyst ID.....: 002260	
		Instrument ID..: I5			
Lead	92	(80 - 120)	SW846 6010B	03/14/08	KJKH31AM
		Dilution Factor: 1	Analysis Time..: 16:58	Analyst ID.....: 002260	
		Instrument ID..: I5			
Cadmium	96	(80 - 120)	SW846 6010B	03/14/08	KJKH31AQ
		Dilution Factor: 1	Analysis Time..: 16:58	Analyst ID.....: 002260	
		Instrument ID..: I5			
Selenium	91	(80 - 120)	SW846 6010B	03/14/08	KJKH31AN
		Dilution Factor: 1	Analysis Time..: 16:58	Analyst ID.....: 002260	
		Instrument ID..: I5			
Chromium	91	(80 - 120)	SW846 6010B	03/14/08	KJKH31AR
		Dilution Factor: 1	Analysis Time..: 16:58	Analyst ID.....: 002260	
		Instrument ID..: I5			
Silver	104	(80 - 120)	SW846 6010B	03/14/08	KJKH31AT
		Dilution Factor: 1	Analysis Time..: 16:58	Analyst ID.....: 002260	
		Instrument ID..: I5			
Mercury	90	(81 - 123)	SW846 7470A	03/14-03/18/08	KJKH31AK
		Dilution Factor: 1	Analysis Time..: 08:21	Analyst ID.....: 001086	
		Instrument ID..: H4			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: 8C13254 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A8C140000-016 **Prep Batch #...:** 8074016							
Arsenic	2000	1790	ug/L	89	SW846 6010B	03/14/08	KJKH31AL
			Dilution Factor: 1		Analysis Time..: 16:58	Analyst ID.....: 002260	
			Instrument ID..: I5				
Barium	2000	1900	ug/L	95	SW846 6010B	03/14/08	KJKH31AP
			Dilution Factor: 1		Analysis Time..: 16:58	Analyst ID.....: 002260	
			Instrument ID..: I5				
Lead	500	459	ug/L	92	SW846 6010B	03/14/08	KJKH31AM
			Dilution Factor: 1		Analysis Time..: 16:58	Analyst ID.....: 002260	
			Instrument ID..: I5				
Cadmium	50.0	47.9	ug/L	96	SW846 6010B	03/14/08	KJKH31AQ
			Dilution Factor: 1		Analysis Time..: 16:58	Analyst ID.....: 002260	
			Instrument ID..: I5				
Selenium	2000	1830	ug/L	91	SW846 6010B	03/14/08	KJKH31AN
			Dilution Factor: 1		Analysis Time..: 16:58	Analyst ID.....: 002260	
			Instrument ID..: I5				
Chromium	200	182	ug/L	91	SW846 6010B	03/14/08	KJKH31AR
			Dilution Factor: 1		Analysis Time..: 16:58	Analyst ID.....: 002260	
			Instrument ID..: I5				
Silver	50.0	51.8	ug/L	104	SW846 6010B	03/14/08	KJKH31AT
			Dilution Factor: 1		Analysis Time..: 16:58	Analyst ID.....: 002260	
			Instrument ID..: I5				
Mercury	5.0	4.5	ug/L	90	SW846 7470A	03/14-03/18/08	KJKH31AK
			Dilution Factor: 1		Analysis Time..: 08:21	Analyst ID.....: 001086	
			Instrument ID..: H4				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: 8C13254 **Matrix.....:** WG
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A8C130254-001 **Prep Batch #...:** 8074016							
Arsenic	98	(75 - 125)			SW846 6010B	03/14/08	KJHVV1A5
	103	(75 - 125)	4.2	(0-20)	SW846 6010B	03/14/08	KJHVV1A6
		Dilution Factor: 1					
		Analysis Time..: 17:17			Instrument ID..: I5	Analyst ID.....: 002260	
Barium	105	(75 - 125)			SW846 6010B	03/14/08	KJHVV1CC
	109	(75 - 125)	3.5	(0-20)	SW846 6010B	03/14/08	KJHVV1CD
		Dilution Factor: 1					
		Analysis Time..: 17:17			Instrument ID..: I5	Analyst ID.....: 002260	
Cadmium	99	(75 - 125)			SW846 6010B	03/14/08	KJHVV1CE
	104	(75 - 125)	4.9	(0-20)	SW846 6010B	03/14/08	KJHVV1CF
		Dilution Factor: 1					
		Analysis Time..: 17:17			Instrument ID..: I5	Analyst ID.....: 002260	
Lead	98	(75 - 125)			SW846 6010B	03/14/08	KJHVV1A7
	103	(75 - 125)	4.7	(0-20)	SW846 6010B	03/14/08	KJHVV1A8
		Dilution Factor: 1					
		Analysis Time..: 17:17			Instrument ID..: I5	Analyst ID.....: 002260	
Chromium	98	(75 - 125)			SW846 6010B	03/14/08	KJHVV1CG
	102	(75 - 125)	4.1	(0-20)	SW846 6010B	03/14/08	KJHVV1CH
		Dilution Factor: 1					
		Analysis Time..: 17:17			Instrument ID..: I5	Analyst ID.....: 002260	
Selenium	101	(75 - 125)			SW846 6010B	03/14/08	KJHVV1A9
	104	(75 - 125)	3.5	(0-20)	SW846 6010B	03/14/08	KJHVV1CA
		Dilution Factor: 1					
		Analysis Time..: 17:17			Instrument ID..: I5	Analyst ID.....: 002260	
Silver	109	(75 - 125)			SW846 6010B	03/14/08	KJHVV1CJ
	112	(75 - 125)	2.7	(0-20)	SW846 6010B	03/14/08	KJHVV1CK
		Dilution Factor: 1					
		Analysis Time..: 17:17			Instrument ID..: I5	Analyst ID.....: 002260	
Mercury	94	(69 - 134)			SW846 7470A	03/14-03/18/08	KJHVV1A3
	102	(69 - 134)	9.0	(0-20)	SW846 7470A	03/14-03/18/08	KJHVV1A4
		Dilution Factor: 1					
		Analysis Time..: 08:25			Instrument ID..: H4	Analyst ID.....: 001086	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: 8C13254 **Matrix.....:** WG
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A8C130254-001 **Prep Batch #...:** 8074016									
Arsenic									
	ND	2000	1970	ug/L	98		SW846 6010B	03/14/08	KJHVV1A5
	ND	2000	2050	ug/L	103	4.2	SW846 6010B	03/14/08	KJHVV1A6
			Dilution Factor: 1						
			Analysis Time..: 17:17		Instrument ID..: I5			Analyst ID.....: 002260	
Barium									
	79.7	2000	2190	ug/L	105		SW846 6010B	03/14/08	KJHVV1CC
	79.7	2000	2270	ug/L	109	3.5	SW846 6010B	03/14/08	KJHVV1CD
			Dilution Factor: 1						
			Analysis Time..: 17:17		Instrument ID..: I5			Analyst ID.....: 002260	
Cadmium									
	ND	50.0	49.6	ug/L	99		SW846 6010B	03/14/08	KJHVV1CE
	ND	50.0	52.1	ug/L	104	4.9	SW846 6010B	03/14/08	KJHVV1CF
			Dilution Factor: 1						
			Analysis Time..: 17:17		Instrument ID..: I5			Analyst ID.....: 002260	
Lead									
	ND	500	490	ug/L	98		SW846 6010B	03/14/08	KJHVV1A7
	ND	500	514	ug/L	103	4.7	SW846 6010B	03/14/08	KJHVV1A8
			Dilution Factor: 1						
			Analysis Time..: 17:17		Instrument ID..: I5			Analyst ID.....: 002260	
Chromium									
	3.4	200	199	ug/L	98		SW846 6010B	03/14/08	KJHVV1CG
	3.4	200	207	ug/L	102	4.1	SW846 6010B	03/14/08	KJHVV1CH
			Dilution Factor: 1						
			Analysis Time..: 17:17		Instrument ID..: I5			Analyst ID.....: 002260	
Selenium									
	ND	2000	2010	ug/L	101		SW846 6010B	03/14/08	KJHVV1A9
	ND	2000	2090	ug/L	104	3.5	SW846 6010B	03/14/08	KJHVV1CA
			Dilution Factor: 1						
			Analysis Time..: 17:17		Instrument ID..: I5			Analyst ID.....: 002260	
Silver									
	ND	50.0	54.7	ug/L	109		SW846 6010B	03/14/08	KJHVV1CJ
	ND	50.0	56.2	ug/L	112	2.7	SW846 6010B	03/14/08	KJHVV1CK
			Dilution Factor: 1						
			Analysis Time..: 17:17		Instrument ID..: I5			Analyst ID.....: 002260	

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: 8C13254 **Matrix.....:** WG
Date Sampled...: 03/11/08 11:15 **Date Received..:** 03/13/08

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Mercury									
	ND	1.0	0.94	ug/L	94		SW846 7470A	03/14-03/18/08	KJHVV1A3
	ND	1.0	1.0	ug/L	102	9.0	SW846 7470A	03/14-03/18/08	KJHVV1A4

Dilution Factor: 1
Analysis Time..: 08:25 Instrument ID..: H4 Analyst ID.....: 001086

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

TestAmerica North Canton

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: CVAA **Units:** ug/L

Chart Number: hg40318b.prn **Acceptable Range:** 90% - 110%

Standard Source: Ultra **Standard ID:**

Element	WL/ Mass	True Conc	Ck2ICV 03/18/08 7:58 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	2.5	2.44	**97.4**								

TestAmerica North Canton

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICPST **Units:** ug/L

Chart Number: I50312A.ARC **Acceptable Range:** 90% - 110%

Standard Source: Ultra **Standard ID:**

Element	WL/ Mass	True Conc	ICV 03/12/08 8:48 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	189.042	250.0	253.40	**101.4**								
Barium	493.409	1000.0	1054.93	**105.5**								
Cadmium	226.502	250.0	257.62	**103.0**								
Chromium	267.716	1000.0	1024.68	**102.5**								
Lead	220.353	250.0	256.57	**102.6**								
Selenium	196.026	250.0	256.40	**102.6**								
Silver	328.068	500.0	498.24	**99.6**								

TestAmerica North Canton

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: CVAA **Units:** ug/L

Chart Number: hg40318b.prn **Acceptable Range:** 80% - 120%

Standard Source: Ultra **Standard ID:**

Element	WL/ Mass	True Conc	Ck6CCV 03/18/08 8:01 AM Found	% Rec	Ck6CCV 03/18/08 8:19 AM Found	% Rec	Ck6CCV 03/18/08 8:36 AM Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5.0	4.95	**99.0**	5.01	**100.2**	5.00	**100.1**				

TestAmerica North Canton

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPST **Units:** ug/L

Chart Number: I50312A.ARC **Acceptable Range:** 90% - 110%

Standard Source: Ultra **Standard ID:**

Element	WL/ Mass	True Conc	CCV 03/12/08 9:42 AM Found	% Rec	CCV 03/14/08 3:07 PM Found	% Rec	CCV 03/14/08 4:47 PM Found	% Rec	CCV 03/14/08 5:46 PM Found	% Rec	Found	% Rec
Arsenic	189.042	500.0	506.83	**101.4**	497.63	**99.5**	492.90	**98.6**	495.72	**99.1**		
Barium	493.409	2000.0	2065.47	**103.3**	2062.80	**103.1**	2045.50	**102.3**	2051.75	**102.6**		
Cadmium	226.502	500.0	509.88	**102.0**	508.72	**101.7**	507.80	**101.6**	505.64	**101.1**		
Chromium	267.716	2000.0	2042.08	**102.1**	1999.42	**100.0**	1995.83	**99.8**	1988.77	**99.4**		
Lead	220.353	500.0	511.79	**102.4**	507.75	**101.6**	506.94	**101.4**	505.25	**101.1**		
Selenium	196.026	500.0	509.89	**102.0**	495.89	**99.2**	498.16	**99.6**	497.73	**99.5**		
Silver	328.068	1000.0	1005.33	**100.5**	990.00	**99.0**	990.22	**99.0**	993.59	**99.4**		

TestAmerica North Canton

Metals Data Reporting Form

Contract Required Detection Limit Standard

Instrument: CVAA **Units:** ug/L

Chart Number: hg40318b.prn **Acceptable Range:** 50% - 150%

Standard Source: Ultra **Standard ID:**

Element	WL/ Mass	True Conc	Ck4CRA\MRL 03/18/08 8:00 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	0.2	0.21	**105.5**								

TestAmerica North Canton

Metals Data Reporting Form

Contract Required Detection Limit Standard

Instrument: ICPST **Units:** ug/L

Chart Number: I50312A.ARC **Acceptable Range:** 50% - 150%

Standard Source: Ultra **Standard ID:**

Element	WL/ Mass	True Conc	CRI\MRL 03/12/08 8:59 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	189.042	15.0	14.54	**97.0**								
Barium	493.409	10.0	10.63	**106.3**								
Cadmium	226.502	5.0	5.23	**104.6**								
Chromium	267.716	5.0	5.66	**113.1**								
Lead	220.353	10.0	9.60	**96.0**								
Selenium	196.026	20.0	22.19	**110.9**								
Silver	328.068	5.0	5.30	**106.0**								

TestAmerica North Canton

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: hg40318b.prn

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	Ck3ICB 03/18/08 7:59 AM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.1	U								

U Result is less than the IDL

B Result is between IDL and RL

Form 3 Equivalent

TestAmerica North Canton

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: I50312A.ARC

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	ICB 03/12/08 8:54 AM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Arsenic	189.042	10	1.9	U								
Barium	493.409	200	0.2	U								
Cadmium	226.502	5	0.2	U								
Chromium	267.716	10	0.6	U								
Lead	220.353	3	1.1	U								
Selenium	196.026	5	2.5	U								
Silver	328.068	10	1.2	U								

U Result is less than the IDL

B Result is between IDL and RL

Form 3 Equivalent

TestAmerica North Canton

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: hg40318b.prn

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	Ck5CCB 03/18/08 8:03 AM Found	Q	Ck5CCB 03/18/08 8:20 AM Found	Q	Ck5CCB 03/18/08 8:38 AM Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.1	U	0.1	U	**0.2**	**B**				

5.21.0

U Result is less than the IDL

B Result is between IDL and RL

Form 3 Equivalent

TestAmerica North Canton

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: I50312A.ARC

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB 03/12/08 9:49 AM Found	Q	CCB 03/14/08 3:13 PM Found	Q	CCB 03/14/08 4:54 PM Found	Q	CCB 03/14/08 5:52 PM Found	Q	Found	Q
Arsenic	189.042	10	**-3.2**	**B**	1.9	U	1.9	U	1.9	U		
Barium	493.409	200	0.2	U	0.2	U	0.2	U	0.2	U		
Cadmium	226.502	5	0.2	U	0.2	U	0.2	U	0.2	U		
Chromium	267.716	10	0.6	U	0.6	U	0.6	U	0.6	U		
Lead	220.353	3	1.1	U	1.1	U	**1.7**	**B**	**2.0**	**B**		
Selenium	196.026	5	**2.7**	**B**	2.5	U	**3.1**	**B**	**2.7**	**B**		
Silver	328.068	10	1.2	U	1.2	U	1.2	U	1.2	U		

U Result is less than the IDL

B Result is between IDL and RL

Form 3 Equivalent

TestAmerica North Canton

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPST **Units:** ug/L

Chart Number: I50312A.ARC **Acceptable Range:** 0% - 0%

Standard Source: Ultra **Standard ID:**

Element	WL/ Mass	Reporting Limit	True Conc	ICSA 03/12/08 9:31 AM Found	Found	Found	Found	Found
Arsenic	189.042	10		1				
Barium	493.409	200		2				
Cadmium	226.502	5		0				
Chromium	267.716	10		4				
Lead	220.353	3		0				
Selenium	196.026	5		0				
Silver	328.068	10		0				

U Result is less than the IDL

B Result is between IDL and RL

Form 4 Equivalent

TestAmerica North Canton

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPST **Units:** ug/L

Chart Number: I50312A.ARC **Acceptable Range:** 80% - 120%

Standard Source: Ultra **Standard ID:**

Element	WL/ Mass	True Conc	ICSAB 03/12/08 9:36 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	189.042	1000	1030.6	**103.1**								
Barium	493.409	500	551.4	**110.3**								
Cadmium	226.502	1000	983.7	**98.4**								
Chromium	267.716	500	501.7	**100.3**								
Lead	220.353	1000	984.7	**98.5**								
Selenium	196.026	1000	986.1	**98.6**								
Silver	328.068	1000	1057.8	**105.8**								

N Spike recovery failed
NC Percent recovery was not calculated
U Result is less than the IDL

Form 4 Equivalent

TestAmerica North Canton

Metals Data Reporting Form

Instrument Detection Limits

Instrument: CVAA **Units:** ppb

Element	Wavelength	Reporting Limit	IDL	Date of IDL
Mercury	253.700	0.2	0.10	11/07/07

TestAmerica North Canton

Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICPST **Units:** ppb

Element	Wavelength	Reporting Limit	IDL	Date of IDL
Arsenic	189.042	10.0	1.9	06/05/07
Barium	493.409	200.0	0.20	06/05/07
Cadmium	226.502	5.0	0.15	06/05/07
Chromium	267.716	10.0	0.60	06/05/07
Lead	220.353	3.0	1.1	06/05/07
Selenium	196.026	5.0	2.5	06/05/07
Silver	328.068	10.0	1.2	06/05/07

TestAmerica North Canton

Metals Data Reporting Form

Inter-Element Correction Factors

Instrument: ICPST **Date of IEC's:** 12/05/07

Interfering Element	Wavelength /Mass	Correction Factor(s)
Aluminum	308.215	Cd(0.000008), Pb(-0.00002), Sb(-0.00000667), Se(0.00001), Tl(-0.00002), Zn(0.000011)
Chromium	267.716	As(-0.00324), Fe(0.001539), Sb(0.01358), Tl(0.000317)
Copper	324.753	Pb(0.00025133), Zn(0.000506)
Iron	271.441	As(0.000006), Cd(0.000083), Mn(0.000006), Mo(-0.00001), Pb(0.00004533), Sb(0.000026), Se(-0.00015), Tl(-0.00006), V(0.000027), Zn(0.000106)
Manganese	257.61	Ag(0.000126), Al(0.013466), Mg(-0.00193), Pb(0.00005733), Se(0.00056933), Tl(-0.00168)
Molybdenum	202.03	Al(0.014499), As(-0.00091), Cu(0.00048), Fe(0.002719), Pb(-0.00066333), Sb(-0.00739233), V(-0.00073)
Nickel	231.604	Cd(0.000027), Co(0.00022), Pb(0.00018667), Sb(-0.00258), Zn(0.005936)
Titanium	334.941	Be(-0.00134)
Vanadium	292.402	Al(0.028359), Be(0.000207), Cr(0.000165), Cu(-0.00024), Fe(0.011236), Pb(-0.00021), Sb(-0.00009333), Tl(0.002281)

TestAmerica North Canton

Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: ICPST **Units:** ppb

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Arsenic	189.04	10000	12/05/07
Barium	493.41	25000	12/05/07
Cadmium	226.50	2500	12/05/07
Chromium	267.72	50000	12/05/07
Lead	220.35	15000	12/05/07
Selenium	196.03	10000	12/05/07
Silver	328.07	2000	12/05/07

Batch Number: **8074016**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: Lisa McGall (e-Signature)

Prep Date: 03/14/08
Due Date: 03/17/08

Lot	Work Order			ICP Weight	ICPMS Weight	Hg Weight
A8C140000 Water	KJKH3	B	Due Date: SDG:	50 mL		100 mL
A8C140000 Water	KJKH3	C	Due Date: SDG:	50 mL		100 mL
A8C130236 Water	KJHPV Total		Due Date: 03/17/08 SDG: 8C11241 Preserve InLab	50 mL		
A8C130240 Water	KJHQR Total		Due Date: 03/18/08 SDG:	50 mL		100 mL
A8C130254 Water	KJHVV Dissolved		Due Date: 03/20/08 SDG: 8C13254	50 mL		100 mL
A8C130254 Water	KJHVV Dissolved	S	Due Date: 03/20/08 SDG: 8C13254	50 mL		100 mL
A8C130254 Water	KJHVV Dissolved	D	Due Date: 03/20/08 SDG: 8C13254	50 mL		100 mL
A8C130254 Water	KJHVV Total	*spike	Due Date: 03/20/08 SDG: 8C13254	50 mL		100 mL
A8C130254 Water	KJHVV Total	S *spike	Due Date: 03/20/08 SDG: 8C13254	50 mL		100 mL
A8C130254 Water	KJHVV Total	D *spike	Due Date: 03/20/08 SDG: 8C13254	50 mL		100 mL
A8C130246 Water	KJHRE Dissolved		Due Date: 03/21/08 SDG:	50 mL		100 mL
A8C130246 Water	KJHTA Dissolved		Due Date: 03/21/08 SDG:	50 mL		100 mL
A8C130107 Water	KJGNL Total		Due Date: 03/25/08 SDG:	50 mL		
A8C130116 Water	KJGRW Total		Due Date: 03/25/08 SDG:	50 mL		100 mL
A8C130120 Water	KJGTP Total		Due Date: 03/25/08 SDG:	50 mL		100 mL
A8C130162 Water	KJG3P Total		Due Date: 03/25/08 SDG:	50 mL		100 mL
A8C130222 Water	KJHKP Total		Due Date: 03/25/08 SDG:	50 mL		
A8C130222 Water	KJHK2 Total		Due Date: 03/25/08 SDG:	50 mL		
A8C130222 Water	KJHK4 Total		Due Date: 03/25/08 SDG:	50 mL		100 mL
A8C130223 Water	KJHM6 Total		Due Date: 03/25/08 SDG: > 10X DIL- ICP only matrix	50 mL		100 mL
A8C130223 Water	KJHNW Total		Due Date: 03/25/08 SDG:	50 mL		
A8C130110 Water	KJGPC Total		Due Date: 03/27/08 SDG:	50 mL		

Batch Number: **8074016**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By:
Lisa McGall
(e-Signature)

Prep Date: 03/14/08
Due Date: 03/17/08

Lot	Work Order		ICP Weight	ICPMS Weight	Hg Weight
A8C130165 Water	KJG32 Total	Due Date: 03/27/08 SDG: 8C13165	50 mL		
A8C130170 Water	KJG4T Total	Due Date: 03/27/08 SDG: 8C13165	50 mL		
A8C130266 Water	KJH2V Total	Due Date: 03/27/08 SDG:	50 mL		
A8C130298 Water	KJJDL Total	Due Date: 03/27/08 SDG:	50 mL		100 mL
A8C130298 Water	KJJEC Total	Due Date: 03/27/08 SDG:	50 mL		100 mL

LEVEL 2

BLANK AND CHECK STANDARD ON BATCH	X
MS/MSD AND PDS ON BATCH	X
CORRECT SPIKES ADDED	X
SPIKING SOLUTIONS DOCUMENTED ON BATCH LOG	X

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICP ELEMENTS WITHIN THE BATCH:

AG AS BA BE CD CO CR CU FE MN MO NI PB SE SN ZN

Matrix Spike Information:

KJHVV	ICP-1	Hg	Ag

Check Sample Information:

KJKH3	ICP-1	Hg	Ag

Prep Method(s): MCAWW 200.7, MCAWW 245.1, SW846 3005A, SW846 7470A

: Instrument Upload Run Log - Page 1 :
: Started Wed Mar 19 05:53:11 2008 by LISTM :
: Data File: UPL$CAN_DATA_ROOT:<LHG>HG40318B.PRN;1 :

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
1	WATER		19-MAR-2008				H4
2	STD01REP1	1	18-MAR-2008	07:49:12			H4
3	STD02REP1	1	18-MAR-2008	07:50:25			H4
4	STD03REP1	1	18-MAR-2008	07:52:01			H4
5	STD04REP1	1	18-MAR-2008	07:53:16			H4
6	STD05REP1	1	18-MAR-2008	07:54:56			H4
7	STD06REP1	1	18-MAR-2008	07:56:30			H4
8	CK2ICV	1	18-MAR-2008	07:58:02			H4
9	CK3ICB	1	18-MAR-2008	07:59:18			H4
10	CK4CRA\MRL	1	18-MAR-2008	08:00:32			H4
11	CK6CCV	1	18-MAR-2008	08:01:59			H4
12	CK5CCB	1	18-MAR-2008	08:03:18			H4
13	KJHAMBT	1	18-MAR-2008	08:04:37			H4
14	KJKJJBT	1	18-MAR-2008	08:05:53			H4
15	KJKJJCT	1	18-MAR-2008	08:07:45			H4
16	KJE1HT	10	18-MAR-2008	08:09:00			H4
17	KJE1NT	1	18-MAR-2008	08:10:18			H4
18	KJE1NTS	1	18-MAR-2008	08:11:32			H4
19	KJE1NTD	1	18-MAR-2008	08:13:56			H4
20	KJE1QT	1	18-MAR-2008	08:15:10			H4
21	KH916T	1	18-MAR-2008	08:16:24	8074023	A8C100148	H4
22	KJKH3B	1	18-MAR-2008	08:17:37			H4
23	CK6CCV	1	18-MAR-2008	08:19:01			H4
24	CK5CCB	1	18-MAR-2008	08:20:24			H4
25	KJKH3C	1	18-MAR-2008	08:21:39			H4
26	KJHQR	1	18-MAR-2008	08:23:06			H4
27	KJHVVF	1	18-MAR-2008	08:24:33	8074016	8C13254	H4
28	KJHVVFS	1	18-MAR-2008	08:25:46	8074016	8C13254	H4
29	KJHVVFD	1	18-MAR-2008	08:27:11	8074016	8C13254	H4
30	KJGRW	1	18-MAR-2008	08:28:55	8074016	A8C130116	H4
31	KJGTP	1	18-MAR-2008	08:30:39	8074016	A8C130120	H4
32	KJG3P	1	18-MAR-2008	08:32:13	8074016	A8C130162	H4
33	KJHK4	1	18-MAR-2008	08:33:57	8074016	A8C130222	H4
34	KJHM6	1	18-MAR-2008	08:35:13	8074016	A8C130223	H4
35	CK6CCV	1	18-MAR-2008	08:36:39			H4
36	CK5CCB	1	18-MAR-2008	08:38:06			H4
37	KJJDL	1	18-MAR-2008	08:39:32	8074016	A8C130298	H4
38	KJJEC	1	18-MAR-2008	08:40:49	8074016	A8C130298	H4
39	KJHREF	1	18-MAR-2008	08:42:24	8074016	A8C130246	H4
40	KJHTAF	1	18-MAR-2008	08:43:37	8074016	A8C130246	H4
41	CK6CCV	1	18-MAR-2008	08:45:04			H4
42	CK5CCB	1	18-MAR-2008	08:46:20			H4
43	CK6CCV	1	18-MAR-2008	11:06:30			H4
44	CK5CCB	1	18-MAR-2008	11:07:48			H4

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
45	KJPE6B	1	18-MAR-2008	11:09:35	8077023	A8C170000	H4
46	KJPE6C	1	18-MAR-2008	11:10:51	8077023	A8C170000	H4
47	KJLP7F	1	18-MAR-2008	11:12:06	8077023	A8C140216	H4
48	KJLPLF	1	18-MAR-2008	11:13:20	8077023	A8C140216	H4
49	KJLRCF	1	18-MAR-2008	11:14:36	8077023	A8C140216	H4
50	KJLREF	1	18-MAR-2008	11:15:55	8077023	A8C140216	H4
51	KJLRHF	1	18-MAR-2008	11:17:24	8077023	A8C140216	H4
52	KJNK6F	1	18-MAR-2008	11:18:50	8077023	A8C150158	H4
53	KJNLCF	1	18-MAR-2008	11:20:04	8077023	A8C150158	H4
54	KJNLEF	1	18-MAR-2008	11:21:18	8077023	A8C150158	H4
55	CK6CCV	1	18-MAR-2008	11:22:31			H4
56	CK5CCB	1	18-MAR-2008	11:24:14			H4
57	KJKML	1	18-MAR-2008	11:25:38	8077023	A8C140103	H4
58	KJKN4	1	18-MAR-2008	11:26:52	8077023	A8C140107	H4
59	KJKR1	1	18-MAR-2008	11:28:25	8077023	A8C140113	H4
60	KJKR1S	1	18-MAR-2008	11:29:44	8077023	A8C140113	H4
61	KJKR1D	1	18-MAR-2008	11:30:58	8077023	A8C140113	H4
62	KJLLL	1	18-MAR-2008	11:32:12	8077023	8C14203	H4
63	KJLLM	1	18-MAR-2008	11:33:27	8077023	8C14203	H4
64	KJKH9B	1	18-MAR-2008	11:34:41	8074019	A8C140000	H4
65	KJKH9C	1	18-MAR-2008	11:35:54	8074019	A8C140000	H4
66	KJHE9	1	18-MAR-2008	11:37:25	8074019	A8C130206	H4
67	CK6CCV	1	18-MAR-2008	11:38:41			H4
68	CK5CCB	1	18-MAR-2008	11:39:57			H4
69	KJHE9S	1	18-MAR-2008	11:41:30	8074019	A8C130206	H4
70	KJHE9D	1	18-MAR-2008	11:43:19	8074019	A8C130206	H4
71	KJHF0	1	18-MAR-2008	11:44:43	8074019	A8C130206	H4
72	KJHF1	1	18-MAR-2008	11:45:58	8074019	A8C130206	H4
73	KJHF2	1	18-MAR-2008	11:47:11	8074019	A8C130206	H4
74	KJHF3	1	18-MAR-2008	11:48:26	8074019	A8C130206	H4
75	KJHF6	1	18-MAR-2008	11:50:12	8074019	A8C130206	H4
76	KJHFQ	1	18-MAR-2008	11:51:25	8074019	A8C130206	H4
77	KJHFW	1	18-MAR-2008	11:52:39	8074019	A8C130206	H4
78	KJHFX	1	18-MAR-2008	11:54:05	8074019	A8C130206	H4
79	CK6CCV	1	18-MAR-2008	11:55:25			H4
80	CK5CCB	1	18-MAR-2008	11:56:39			H4
81	KJGM1	1	18-MAR-2008	11:57:58	8074019	A8C130103	H4
82	KJGM2	1	18-MAR-2008	11:59:16	8074019	A8C130103	H4
83	KJGM4	1	18-MAR-2008	12:00:32	8074019	A8C130103	H4
84	KJGM5	1	18-MAR-2008	12:01:51	8074019	A8C130103	H4
85	KJGM6	1	18-MAR-2008	12:03:17	8074019	A8C130103	H4
86	KJGM7	1	18-MAR-2008	12:04:44	8074019	A8C130103	H4
87	KJGM8	1	18-MAR-2008	12:06:42	8074019	A8C130103	H4
88	KJGNA	1	18-MAR-2008	12:08:16	8074019	A8C130103	H4

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
89	KJKH7BF	1	18-MAR-2008	12:09:55	8074018	A8C140000	H4
90	KJKH7C	1	18-MAR-2008	12:11:13	8074018	A8C140000	H4
91	CK6CCV	1	18-MAR-2008	12:12:41			H4
92	CK5CCB	1	18-MAR-2008	12:13:56			H4
93	KJG0D	1	18-MAR-2008	12:15:09	8074018	8C13142	H4
94	KJG0DF	1	18-MAR-2008	12:16:30	8074018	8C13142	H4
95	KJG0H	1	18-MAR-2008	12:17:48	8074018	8C13142	H4
96	KJG0HF	1	18-MAR-2008	12:19:15	8074018	8C13142	H4
97	KJG0K	1	18-MAR-2008	12:20:31	8074018	8C13142	H4
98	KJG0KF	1	18-MAR-2008	12:21:47	8074018	8C13142	H4
99	KJG0N	1	18-MAR-2008	12:23:13	8074018	8C13142	H4
100	KJG0NF	1	18-MAR-2008	12:24:42	8074018	8C13142	H4
101	KJG0Q	1	18-MAR-2008	12:26:00	8074018	8C13142	H4
102	KJG0QS	1	18-MAR-2008	12:27:15	8074018	8C13142	H4
103	CK6CCV	1	18-MAR-2008	12:28:49			H4
104	CK5CCB	1	18-MAR-2008	12:30:03			H4
105	KJG0QD	1	18-MAR-2008	12:31:16	8074018	8C13142	H4
106	KJG0QF	1	18-MAR-2008	12:32:46	8074018	8C13142	H4
107	KJG0QFS	1	18-MAR-2008	12:34:01	8074018	8C13142	H4
108	KJG0QFD	1	18-MAR-2008	12:35:21	8074018	8C13142	H4
109	KJGX1	1	18-MAR-2008	12:36:48	8074018	8C13142	H4
110	KJGX1F	1	18-MAR-2008	12:38:03	8074018	8C13142	H4
111	KJGX3	1	18-MAR-2008	12:39:32	8074018	8C13142	H4
112	KJGX3F	1	18-MAR-2008	12:40:48	8074018	8C13142	H4
113	KJGX8	1	18-MAR-2008	12:42:06	8074018	8C13142	H4
114	KJKJCB	1	18-MAR-2008	12:43:42	8074020	A8C140000	H4
115	CK6CCV	1	18-MAR-2008	12:44:58			H4
116	CK5CCB	1	18-MAR-2008	12:46:21			H4
117	KJKJCC	1	18-MAR-2008	12:47:34	8074020	A8C140000	H4
118	KJEM0	1	18-MAR-2008	12:48:52	8074020	8C11131	H4
119	KJEM0F	1	18-MAR-2008	12:50:13	8074020	8C11131	H4
120	KJEM3	1	18-MAR-2008	12:51:29	8074020	8C11131	H4
121	KJEM3F	1	18-MAR-2008	12:52:45	8074020	8C11131	H4
122	KJEM4	1	18-MAR-2008	12:54:00	8074020	8C11131	H4
123	KJEM4F	1	18-MAR-2008	12:55:21	8074020	8C11131	H4
124	KJEML	1	18-MAR-2008	12:56:38	8074020	8C11131	H4
125	KJEMLS	1	18-MAR-2008	12:57:56	8074020	8C11131	H4
126	KJEMLD	1	18-MAR-2008	12:59:14	8074020	8C11131	H4
127	CK6CCV	1	18-MAR-2008	13:00:30			H4
128	CK5CCB	1	18-MAR-2008	13:02:06			H4
129	KJEMLF	1	18-MAR-2008	13:04:01	8074020	8C11131	H4
130	KJEMLFS	1	18-MAR-2008	13:05:20	8074020	8C11131	H4
131	KJEMLFD	1	18-MAR-2008	13:06:35	8074020	8C11131	H4
132	KJGVAF	1	18-MAR-2008	13:08:03	8074020	8C11131	H4

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
133	KJGW1F	1	18-MAR-2008	13:09:18	8074020	8C11131	H4
134	KJGW2	1	18-MAR-2008	13:10:34	8074020	8C11131	H4
135	KJGW2F	1	18-MAR-2008	13:12:00	8074020	8C11131	H4
136	KJGW3F	1	18-MAR-2008	13:13:30	8074020	8C11131	H4
137	KJGW4F	1	18-MAR-2008	13:14:46	8074020	8C11131	H4
138	KJGW5	1	18-MAR-2008	13:16:01	8074020	8C11131	H4
139	CK6CCV	1	18-MAR-2008	13:17:26			H4
140	CK5CCB	1	18-MAR-2008	13:19:29			H4
141	KJGW5F	1	18-MAR-2008	13:20:43	8074020	8C11131	H4
142	KJGWPF	1	18-MAR-2008	13:22:24	8074020	8C11131	H4
143	KJGWQF	1	18-MAR-2008	13:23:39	8074020	8C11131	H4
144	KJGWWF	1	18-MAR-2008	13:25:04	8074020	8C11131	H4
145	KJGWXF	1	18-MAR-2008	13:26:20	8074020	8C11131	H4
146	CK6CCV	1	18-MAR-2008	13:27:35			H4
147	CK5CCB	1	18-MAR-2008	13:29:08			H4
148	CK6CCV	1	18-MAR-2008	14:32:55			H4
149	CK6CCV	1	18-MAR-2008	14:34:31			H4
150	CK5CCB	1	18-MAR-2008	14:35:45			H4
151	KJPE2B	1	18-MAR-2008	14:36:58	8077021	A8C170000	H4
152	KJPE2C	1	18-MAR-2008	14:38:24	8077021	A8C170000	H4
153	KJKM0	1	18-MAR-2008	14:39:52	8077021	A8C140103	H4
154	KJKM1	1	18-MAR-2008	14:41:17	8077021	A8C140103	H4
155	KJKM2	1	18-MAR-2008	14:42:39	8077021	A8C140103	H4
156	KJKM4	1	18-MAR-2008	14:43:54	8077021	A8C140103	H4
157	KJKM5	1	18-MAR-2008	14:45:08	8077021	A8C140103	H4
158	KJKM6	1	18-MAR-2008	14:46:22	8077021	A8C140103	H4
159	KJKM7	1	18-MAR-2008	14:47:46	8077021	A8C140103	H4
160	KJKM8	1	18-MAR-2008	14:49:02	8077021	A8C140103	H4
161	CK6CCV	1	18-MAR-2008	14:50:31			H4
162	CK5CCB	1	18-MAR-2008	14:51:43			H4
163	KJKM9	1	18-MAR-2008	14:52:57	8077021	A8C140103	H4
164	KJKMP	1	18-MAR-2008	14:54:50	8077021	A8C140103	H4
165	KJKMPS	1	18-MAR-2008	14:56:08	8077021	A8C140103	H4
166	KJKMPD	1	18-MAR-2008	14:57:21	8077021	A8C140103	H4
167	KJKMQ	1	18-MAR-2008	14:58:59	8077021	A8C140103	H4
168	KJKMR	1	18-MAR-2008	15:00:27	8077021	A8C140103	H4
169	KJKMT	1	18-MAR-2008	15:01:44	8077021	A8C140103	H4
170	KJKMX	1	18-MAR-2008	15:03:00	8077021	A8C140103	H4
171	KJKNC	1	18-MAR-2008	15:04:16	8077021	A8C140103	H4
172	KJKNE	1	18-MAR-2008	15:05:32	8077021	A8C140103	H4
173	CK6CCV	1	18-MAR-2008	15:06:50			H4
174	CK5CCB	1	18-MAR-2008	15:08:09			H4
175	KJKNF	1	18-MAR-2008	15:09:32	8077021	A8C140103	H4
176	KJKNG	1	18-MAR-2008	15:10:50	8077021	A8C140103	H4

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
177	KJKNJ	1	18-MAR-2008	15:12:45	8077021	A8C140103	H4
178	KJKNL	1	18-MAR-2008	15:13:58	8077021	A8C140103	H4
179	KJPEWB	1	18-MAR-2008	15:15:11	8077019	A8C170000	H4
180	KJPEWC	1	18-MAR-2008	15:16:49	8077019	A8C170000	H4
181	KJKN0	1	18-MAR-2008	15:18:04	8077019	A8C140106	H4
182	KJKN0F	1	18-MAR-2008	15:19:28	8077019	A8C140106	H4
183	KJKN1	1	18-MAR-2008	15:20:45	8077019	A8C140106	H4
184	KJKN1F	1	18-MAR-2008	15:22:10	8077019	A8C140106	H4
185	CK6CCV	1	18-MAR-2008	15:23:24			H4
186	CK5CCB	1	18-MAR-2008	15:24:38			H4
187	KJKN2	1	18-MAR-2008	15:25:57	8077019	A8C140106	H4
188	KJKN2F	1	18-MAR-2008	15:27:21	8077019	A8C140106	H4
189	KJKN3	1	18-MAR-2008	15:28:46	8077019	A8C140106	H4
190	KJKN3F	1	18-MAR-2008	15:30:02	8077019	A8C140106	H4
191	KJKNQ	1	18-MAR-2008	15:31:56	8077019	A8C140106	H4
192	KJKNQS	1	18-MAR-2008	15:33:21	8077019	A8C140106	H4
193	KJKNQD	1	18-MAR-2008	15:34:47	8077019	A8C140106	H4
194	KJKNQF	1	18-MAR-2008	15:36:14	8077019	A8C140106	H4
195	KJKNV	1	18-MAR-2008	15:37:30	8077019	A8C140106	H4
196	KJKNVF	1	18-MAR-2008	15:38:45	8077019	A8C140106	H4
197	CK6CCV	1	18-MAR-2008	15:40:02			H4
198	CK5CCB	1	18-MAR-2008	15:41:26			H4
199	KJKNW	1	18-MAR-2008	15:42:40	8077019	A8C140106	H4
200	KJKNWF	1	18-MAR-2008	15:43:54	8077019	A8C140106	H4
201	KJKNX	1	18-MAR-2008	15:45:19	8077019	A8C140106	H4
202	KJKNXF	1	18-MAR-2008	15:46:38	8077019	A8C140106	H4
203	KJPE0B	1	18-MAR-2008	15:48:48	8077020	A8C170000	H4
204	KJPE0C	1	18-MAR-2008	15:50:02	8077020	A8C170000	H4
205	KJKN5	1	18-MAR-2008	15:51:16	8077020	A8C140106	H4
206	KJKN5F	1	18-MAR-2008	15:52:31	8077020	A8C140106	H4
207	KJKN6	1	18-MAR-2008	15:53:57	8077020	A8C140106	H4
208	KJKN6F	1	18-MAR-2008	15:55:42	8077020	A8C140106	H4
209	CK6CCV	1	18-MAR-2008	15:56:56			H4
210	CK5CCB	1	18-MAR-2008	15:58:29			H4
211	KJKN7	1	18-MAR-2008	15:59:43	8077020	A8C140106	H4
212	KJKN7F	1	18-MAR-2008	16:00:58	8077020	A8C140106	H4
213	KJKN9	1	18-MAR-2008	16:02:16	8077020	A8C140106	H4
214	KJKN9F	1	18-MAR-2008	16:03:34	8077020	A8C140106	H4
215	KJKPA	1	18-MAR-2008	16:05:03	8077020	A8C140106	H4
216	KJKPAF	1	18-MAR-2008	16:06:18	8077020	A8C140106	H4
217	KJKPC	1	18-MAR-2008	16:07:32	8077020	A8C140106	H4
218	KJKPCS	1	18-MAR-2008	16:08:59	8077020	A8C140106	H4
219	KJKPCD	1	18-MAR-2008	16:11:14	8077020	A8C140106	H4
220	KJKPCF	1	18-MAR-2008	16:12:43	8077020	A8C140106	H4

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
221	CK6CCV	1	18-MAR-2008	16:13:57			H4
222	CK5CCB	1	18-MAR-2008	16:15:20			H4
223	KJKPCFS	1	18-MAR-2008	16:16:39	8077020	A8C140106	H4
224	KJKPCFD	1	18-MAR-2008	16:17:56	8077020	A8C140106	H4
225	KJKPJ	1	18-MAR-2008	16:19:12	8077020	A8C140106	H4
226	KJKPJF	1	18-MAR-2008	16:20:27	8077020	A8C140106	H4
227	KJKPN	1	18-MAR-2008	16:21:44	8077020	A8C140106	H4
228	KJKPNF	1	18-MAR-2008	16:23:00	8077020	A8C140106	H4
229	KJKPP	1	18-MAR-2008	16:24:26	8077020	A8C140106	H4
230	KJKPPF	1	18-MAR-2008	16:25:47	8077020	A8C140106	H4
231	KJKPQ	1	18-MAR-2008	16:27:05	8077020	A8C140106	H4
232	KJKPQF	1	18-MAR-2008	16:28:22	8077020	A8C140106	H4
233	CK6CCV	1	18-MAR-2008	16:29:46			H4
234	CK5CCB	1	18-MAR-2008	16:31:14			H4
235	KJPE4B	1	18-MAR-2008	16:32:41	8077022	A8C170000	H4
236	KJPE4C	1	18-MAR-2008	16:34:11	8077022	A8C170000	H4
237	KJME9	1	18-MAR-2008	16:35:27	8077022	A8C140283	H4
238	KJME9S	1	18-MAR-2008	16:36:53	8077022	A8C140283	H4
239	KJME9D	1	18-MAR-2008	16:38:18	8077022	A8C140283	H4
240	KJME9F	1	18-MAR-2008	16:39:48	8077022	A8C140283	H4
241	KJME9FS	1	18-MAR-2008	16:41:03	8077022	A8C140283	H4
242	KJME9FD	1	18-MAR-2008	16:42:31	8077022	A8C140283	H4
243	KJCFCF	1	18-MAR-2008	16:43:49	8077022	8C11131	H4
244	KJCFGF	1	18-MAR-2008	16:45:04	8077022	8C11131	H4
245	CK6CCV	1	18-MAR-2008	16:46:20			H4
246	CK5CCB	1	18-MAR-2008	16:47:38			H4
247	KJCFHF	1	18-MAR-2008	16:49:05	8077022	8C11131	H4
248	KJCFJF	1	18-MAR-2008	16:50:42	8077022	8C11131	H4
249	KJCFKF	1	18-MAR-2008	16:52:17	8077022	8C11131	H4
250	KJNVDF	1	18-MAR-2008	16:53:43	8077022	8C11131	H4
251	KJNVPF	1	18-MAR-2008	16:54:59	8077022	8C11131	H4
252	KJNVTF	1	18-MAR-2008	16:56:15	8077022	8C11131	H4
253	KJPE6C	1	18-MAR-2008	16:58:01	8077023	A8C170000	H4
254	CRA	1	18-MAR-2008	16:59:38			H4
255	CK6CCV	1	18-MAR-2008	17:00:54			H4
256	CK5CCB	1	18-MAR-2008	17:02:17			H4

End of Report

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:       Instrument Upload                                    Run Log - Page  1 :
:       Started Mon Mar 17 05:10:43 2008 by DAVIESB                            :
:       Data File: UPL$CAN_DATA_ROOT:<TJA>I50312A.ARC;1                        :
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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
1	STD1	1	12-MAR-2008	08:33:00			I5
2	CALSTD	1	12-MAR-2008	08:38:00			I5
3	CAL	1	12-MAR-2008	08:43:00			I5
4	ICV	1	12-MAR-2008	08:48:00			I5
5	ICB	1	12-MAR-2008	08:54:00			I5
6	CRI\MRL	1	12-MAR-2008	08:59:00			I5
7	ICSA	1	12-MAR-2008	09:06:00			I5
8	FE	1	12-MAR-2008	09:14:00			I5
9	ICSA	1	12-MAR-2008	09:31:00			I5
10	ICSAB	1	12-MAR-2008	09:36:00			I5
11	CCV	1	12-MAR-2008	09:42:00			I5
12	CCB	1	12-MAR-2008	09:49:00			I5
13	DW	1	12-MAR-2008	09:59:00			I5
14	DW	1	12-MAR-2008	10:04:00			I5
15	DW	1	12-MAR-2008	10:08:00			I5
16	DW	1	12-MAR-2008	10:13:00			I5
17	KJA2VB	1	12-MAR-2008	10:19:00			I5
18	KJA2VC	1	12-MAR-2008	10:24:00			I5
19	KH9XG	1	12-MAR-2008	10:30:00			I5
20	KH9XGS	1	12-MAR-2008	10:35:00			I5
21	KH9XGD	1	12-MAR-2008	10:39:00			I5
22	KH9XGF	1	12-MAR-2008	10:45:00			I5
23	CCV	1	12-MAR-2008	10:52:00			I5
24	CCB	1	12-MAR-2008	11:00:00			I5
25	KH9XN	1	12-MAR-2008	11:04:00			I5
26	KH9XNF	1	12-MAR-2008	11:09:00			I5
27	KH9XQ	1	12-MAR-2008	11:14:00			I5
28	KH9XQF	1	12-MAR-2008	11:19:00			I5
29	KH9XR	1	12-MAR-2008	11:43:00			I5
30	KH9XRF	1	12-MAR-2008	11:48:00			I5
31	KH9XT	1	12-MAR-2008	11:52:00			I5
32	KH9XTF	1	12-MAR-2008	11:57:00			I5
33	KH9XW	1	12-MAR-2008	12:02:00			I5
34	KH9XWF	1	12-MAR-2008	12:07:00			I5
35	CCV	1	12-MAR-2008	12:14:00			I5
36	CCB	1	12-MAR-2008	12:21:00			I5
37	KH9XX	1	12-MAR-2008	12:26:00			I5
38	KH9XXF	1	12-MAR-2008	12:31:00			I5
39	KH9W6	1	12-MAR-2008	12:35:00			I5
40	KH9XA	1	12-MAR-2008	12:40:00			I5
41	KH9XC	1	12-MAR-2008	12:45:00			I5
42	KH9XD	1	12-MAR-2008	12:50:00			I5
43	KH9XDL	1	12-MAR-2008	12:54:00			I5
44	KJA2XB	1	12-MAR-2008	13:00:00	8071019	A8C110000	I5

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
45	KJA2XC	1	12-MAR-2008	13:05:00	8071019	A8C110000	I5
46	KH97F	1	12-MAR-2008	13:11:00	8071019	A8C100162	I5
47	CCV	1	12-MAR-2008	13:18:00			I5
48	CCB	1	12-MAR-2008	13:26:00			I5
49	KH97FF	1	12-MAR-2008	13:30:00	8071019	A8C100162	I5
50	KH97K	1	12-MAR-2008	13:35:00	8071019	A8C100162	I5
51	KH97KF	1	12-MAR-2008	13:40:00	8071019	A8C100162	I5
52	KH97R	1	12-MAR-2008	13:45:00	8071019	A8C100162	I5
53	KH97RF	1	12-MAR-2008	13:49:00	8071019	A8C100162	I5
54	KH97T	1	12-MAR-2008	13:54:00	8071019	A8C100162	I5
55	KH97TF	1	12-MAR-2008	13:59:00	8071019	A8C100162	I5
56	KH97V	1	12-MAR-2008	14:04:00	8071019	A8C100162	I5
57	KH97VF	1	12-MAR-2008	14:09:00	8071019	A8C100162	I5
58	KH97W	1	12-MAR-2008	14:13:00	8071019	A8C100162	I5
59	CCV	1	12-MAR-2008	14:21:00			I5
60	CCB	1	12-MAR-2008	14:31:00			I5
61	KH97WF	1	12-MAR-2008	14:36:00	8071019	A8C100162	I5
62	KH97X	1	12-MAR-2008	14:41:00	8071019	A8C100162	I5
63	KH97XF	1	12-MAR-2008	14:45:00	8071019	A8C100162	I5
64	KH970	1	12-MAR-2008	14:50:00	8071019	A8C100162	I5
65	KH970S	1	12-MAR-2008	14:55:00	8071019	A8C100162	I5
66	KH970D	1	12-MAR-2008	15:00:00	8071019	A8C100162	I5
67	KH970F	1	12-MAR-2008	15:06:00	8071019	A8C100162	I5
68	KH970FS	1	12-MAR-2008	15:10:00	8071019	A8C100162	I5
69	KH970FD	1	12-MAR-2008	15:15:00	8071019	A8C100162	I5
70	KH973	1	12-MAR-2008	15:21:00	8071019	A8C100162	I5
71	CCV	1	12-MAR-2008	15:28:00			I5
72	CCB	1	12-MAR-2008	15:36:00			I5
73	KH973F	1	12-MAR-2008	15:40:00	8071019	A8C100162	I5
74	KH976	1	12-MAR-2008	15:45:00	8071019	A8C100162	I5
75	KH976F	1	12-MAR-2008	15:50:00	8071019	A8C100162	I5
76	KH976FL	1	12-MAR-2008	15:55:00			I5
77	KJA2PB	1	12-MAR-2008	16:01:00			I5
78	KJA2PC	1	12-MAR-2008	16:05:00			I5
79	KH6LV	1	12-MAR-2008	16:11:00			I5
80	KH6LVL	1	12-MAR-2008	16:16:00			I5
81	KH6LVS	1	12-MAR-2008	16:21:00			I5
82	KH6LVD	1	12-MAR-2008	16:26:00			I5
83	CCV	1	12-MAR-2008	16:33:00			I5
84	CCB	1	12-MAR-2008	16:40:00			I5
85	KH6LW	1	12-MAR-2008	16:45:00			I5
86	KH6LX	1	12-MAR-2008	16:50:00			I5
87	KH6L0	1	12-MAR-2008	16:55:00			I5
88	KH6V5	1	12-MAR-2008	16:59:00			I5

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
89	KH6V6	1	12-MAR-2008	17:04:00			I5
90	KH6V7	1	12-MAR-2008	17:09:00			I5
91	KH6V8	1	12-MAR-2008	17:14:00			I5
92	KH6V9	1	12-MAR-2008	17:18:00			I5
93	KH611	1	12-MAR-2008	17:23:00			I5
94	KH614	1	12-MAR-2008	17:28:00			I5
95	CCV	1	12-MAR-2008	17:35:00			I5
96	CCB	1	12-MAR-2008	17:42:00			I5
97	KH616	1	12-MAR-2008	17:47:00			I5
98	KH617	1	12-MAR-2008	17:51:00			I5
99	KH618	1	12-MAR-2008	17:56:00			I5
100	KH619	1	12-MAR-2008	18:01:00			I5
101	KH62A	1	12-MAR-2008	18:06:00			I5
102	KH7N2	1	12-MAR-2008	18:10:00	8071016	A8C070242	I5
103	KH7N7	1	12-MAR-2008	18:15:00	8071016	A8C070242	I5
104	KH7PD	1	12-MAR-2008	18:20:00	8071016	A8C070242	I5
105	KH7PF	1	12-MAR-2008	18:25:00	8071016	A8C070242	I5
106	KJA2MB	1	12-MAR-2008	18:31:00			I5
107	CCV	1	12-MAR-2008	18:38:00			I5
108	CCB	1	12-MAR-2008	18:45:00			I5
109	KJA2MC	1	12-MAR-2008	18:50:00			I5
110	KH77P	1	12-MAR-2008	18:56:00			I5
111	ZZZZZ	1	12-MAR-2008	19:01:00			I5
112	KH78MF	1	12-MAR-2008	19:06:00			I5
113	KH78P	1	12-MAR-2008	19:10:00			I5
114	KH78RF	1	12-MAR-2008	19:15:00			I5
115	KH782	1	12-MAR-2008	19:20:00			I5
116	KH782S	1	12-MAR-2008	19:25:00			I5
117	KH782D	1	12-MAR-2008	19:29:00			I5
118	KH791F	1	12-MAR-2008	19:35:00			I5
119	CCV	1	12-MAR-2008	19:43:00			I5
120	CCB	1	12-MAR-2008	19:50:00			I5
121	KH791FS	1	12-MAR-2008	19:55:00			I5
122	KH791FD	1	12-MAR-2008	19:59:00			I5
123	KH8ARF	1	12-MAR-2008	20:05:00			I5
124	KH46W	1	12-MAR-2008	20:10:00			I5
125	KH47M	1	12-MAR-2008	20:15:00			I5
126	KH47P	1	12-MAR-2008	20:20:00			I5
127	KH47Q	1	12-MAR-2008	20:24:00			I5
128	KH47QL	1	12-MAR-2008	20:29:00			I5
129	CRI\MRL	1	12-MAR-2008	20:36:00			I5
130	CCV	1	12-MAR-2008	20:42:00			I5
131	CCB	1	12-MAR-2008	20:49:00			I5
132	CCV	1	12-MAR-2008	21:46:00			I5

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
133	CCB	1	12-MAR-2008	21:53:00			I5
134	KJD39B	1	12-MAR-2008	22:00:00			I5
135	KJD39C	1	12-MAR-2008	22:05:00			I5
136	KJCQN	1	12-MAR-2008	22:10:00			I5
137	KJDGH	1	12-MAR-2008	22:15:00			I5
138	KJCHG	1	12-MAR-2008	22:19:00			I5
139	KJCHGS	1	12-MAR-2008	22:24:00			I5
140	KJCHGD	1	12-MAR-2008	22:29:00			I5
141	KJCHM	1	12-MAR-2008	22:34:00			I5
142	KJCHN	1	12-MAR-2008	22:38:00			I5
143	KJCHP	1	12-MAR-2008	22:43:00			I5
144	CCV	1	12-MAR-2008	22:49:00			I5
145	CCB	1	12-MAR-2008	22:55:00			I5
146	KJCQC	1	12-MAR-2008	23:00:00			I5
147	KJC24	1	12-MAR-2008	23:05:00			I5
148	KJCF5	1	12-MAR-2008	23:09:00			I5
149	KJCGF	1	12-MAR-2008	23:14:00			I5
150	KJCGFL	1	12-MAR-2008	23:18:00			I5
151	KJD5HB	1	12-MAR-2008	23:24:00			I5
152	KJD5HC	1	12-MAR-2008	23:29:00			I5
153	KJA91	1	12-MAR-2008	23:34:00			I5
154	KH6RD	1	12-MAR-2008	23:39:00			I5
155	KJDFL	1	12-MAR-2008	23:43:00			I5
156	CCV	1	12-MAR-2008	23:50:00			I5
157	CCB	1	12-MAR-2008	23:56:00			I5
158	KJDFQ	1	13-MAR-2008	00:00:00			I5
159	KJDFV	1	13-MAR-2008	00:05:00			I5
160	KJDFW	1	13-MAR-2008	00:10:00			I5
161	KJDFX	1	13-MAR-2008	00:14:00			I5
162	KJDFXL	1	13-MAR-2008	00:19:00			I5
163	KJC46	1	13-MAR-2008	00:23:00	8072032	A8C110202	I5
164	KJC46S	1	13-MAR-2008	00:28:00	8072032	A8C110202	I5
165	KJC46D	1	13-MAR-2008	00:32:00	8072032	A8C110202	I5
166	KJA5TBT	1	13-MAR-2008	00:39:00			I5
167	KJD40BT	1	13-MAR-2008	00:43:00			I5
168	CCV	1	13-MAR-2008	00:49:00			I5
169	CCB	1	13-MAR-2008	00:56:00			I5
170	KJD40CT	1	13-MAR-2008	01:00:00			I5
171	KH7PPT	1	13-MAR-2008	01:06:00			I5
172	KH7PXT	10	13-MAR-2008	01:10:00			I5
173	KH7PXTL	50	13-MAR-2008	01:15:00			I5
174	KH7PXTS	50	13-MAR-2008	01:19:00			I5
175	KH7PXTD	50	13-MAR-2008	01:24:00			I5
176	KH7P7T	1	13-MAR-2008	01:29:00			I5

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
177	KH7QDT	1	13-MAR-2008	01:34:00			I5
178	KH7QHT	1	13-MAR-2008	01:38:00			I5
179	KH7QMT	1	13-MAR-2008	01:43:00			I5
180	CCV	1	13-MAR-2008	01:49:00			I5
181	CCB	1	13-MAR-2008	01:55:00			I5
182	KH7QNT	10	13-MAR-2008	02:00:00			I5
183	KJD4WBT	1	13-MAR-2008	02:06:00			I5
184	KJD4WCT	1	13-MAR-2008	02:11:00			I5
185	KH7PPT	1	13-MAR-2008	02:16:00			I5
186	KH7P7T	1	13-MAR-2008	02:21:00			I5
187	KH7QDT	1	13-MAR-2008	02:25:00			I5
188	KH7QHT	1	13-MAR-2008	02:30:00			I5
189	KH7QHTL	1	13-MAR-2008	02:34:00			I5
190	KH7QHTS	5	13-MAR-2008	02:39:00			I5
191	KH7QHTD	5	13-MAR-2008	02:43:00			I5
192	CCV	1	13-MAR-2008	02:50:00			I5
193	CCB	1	13-MAR-2008	02:56:00			I5
194	KH7QMT	1	13-MAR-2008	03:00:00			I5
195	KH7QNT	1	13-MAR-2008	03:05:00			I5
196	KJD4EB	1	13-MAR-2008	03:12:00			I5
197	KJD4EC	1	13-MAR-2008	03:16:00			I5
198	KJCHA	1	13-MAR-2008	03:22:00			I5
199	KJCHAS	1	13-MAR-2008	03:26:00			I5
200	KJCHAD	1	13-MAR-2008	03:31:00			I5
201	KJCHD	1	13-MAR-2008	03:36:00			I5
202	KJC41F	1	13-MAR-2008	03:41:00			I5
203	KJC5AF	1	13-MAR-2008	03:45:00			I5
204	CCV	1	13-MAR-2008	03:51:00			I5
205	CCB	1	13-MAR-2008	03:58:00			I5
206	KJC5DF	1	13-MAR-2008	04:03:00			I5
207	KJC5EF	1	13-MAR-2008	04:07:00			I5
208	KJC5HF	1	13-MAR-2008	04:12:00			I5
209	KJC5NF	1	13-MAR-2008	04:16:00			I5
210	KJC5QF	1	13-MAR-2008	04:21:00			I5
211	KJC5RF	1	13-MAR-2008	04:25:00			I5
212	KJA46	1	13-MAR-2008	04:30:00			I5
213	KJA47	1	13-MAR-2008	04:35:00			I5
214	KJA48	1	13-MAR-2008	04:39:00			I5
215	KJA49	1	13-MAR-2008	04:44:00			I5
216	CCV	1	13-MAR-2008	04:50:00			I5
217	CCB	1	13-MAR-2008	04:56:00			I5
218	KJA5A	1	13-MAR-2008	05:01:00			I5
219	KJA5C	1	13-MAR-2008	05:05:00			I5
220	KJA5D	1	13-MAR-2008	05:10:00			I5

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
221	KJA5E	1	13-MAR-2008	05:14:00			I5
222	KJA5EL	1	13-MAR-2008	05:19:00			I5
223	CRI\MRL	1	13-MAR-2008	05:26:00			I5
224	CCV	1	13-MAR-2008	05:31:00			I5
225	CCB	1	13-MAR-2008	05:38:00			I5
226	CCV	1	13-MAR-2008	07:58:00			I5
227	CCB	1	13-MAR-2008	08:05:00			I5
228	KJA2XB	1	13-MAR-2008	08:10:00	8071019	A8C110000	I5
229	KJA2XC	1	13-MAR-2008	08:15:00	8071019	A8C110000	I5
230	KH97FF	1	13-MAR-2008	08:20:00	8071019	A8C100162	I5
231	KH976	1	13-MAR-2008	08:24:00	8071019	A8C100162	I5
232	KH976F	1	13-MAR-2008	08:29:00	8071019	A8C100162	I5
233	KJDFX	5	13-MAR-2008	08:34:00			I5
234	KJDFXL	25	13-MAR-2008	08:38:00			I5
235	KH77P	100	13-MAR-2008	08:45:00			I5
236	KH78MF	100	13-MAR-2008	08:49:00			I5
237	KH78P	1	13-MAR-2008	08:54:00			I5
238	CCV	1	13-MAR-2008	09:00:00			I5
239	CCB	1	13-MAR-2008	09:07:00			I5
240	KH782	10	13-MAR-2008	09:12:00			I5
241	KH782S	10	13-MAR-2008	09:16:00			I5
242	KH782D	10	13-MAR-2008	09:21:00			I5
243	KH9XR	5	13-MAR-2008	09:26:00			I5
244	KH9XRF	5	13-MAR-2008	09:31:00			I5
245	KH9XW	10	13-MAR-2008	09:35:00			I5
246	KH9XWF	10	13-MAR-2008	09:40:00			I5
247	KJC5HF	50	13-MAR-2008	09:51:00			I5
248	CCV	1	13-MAR-2008	09:57:00			I5
249	CCB	1	13-MAR-2008	10:03:00			I5
250	CCV	1	13-MAR-2008	13:20:00			I5
251	CCB	1	13-MAR-2008	13:26:00			I5
252	KJFA4BT	1	13-MAR-2008	13:31:00			I5
253	KJGJRBT	1	13-MAR-2008	13:35:00			I5
254	KJGJRCT	1	13-MAR-2008	13:40:00			I5
255	KJD64T	1	13-MAR-2008	13:45:00			I5
256	KJD64TL	1	13-MAR-2008	13:49:00			I5
257	KJD64TS	5	13-MAR-2008	13:54:00			I5
258	KJD64TD	5	13-MAR-2008	13:58:00			I5
259	KJD66T	1	13-MAR-2008	14:03:00			I5
260	KJD67T	1	13-MAR-2008	14:08:00			I5
261	KJD68T	1	13-MAR-2008	14:13:00			I5
262	CCV	1	13-MAR-2008	14:19:00			I5
263	CCB	1	13-MAR-2008	14:27:00			I5
264	KJD69T	1	13-MAR-2008	14:31:00			I5

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
265	KJD68T	20	13-MAR-2008	14:41:00			I5
266	CCV	1	13-MAR-2008	14:48:00			I5
267	CCB	1	13-MAR-2008	14:54:00			I5
268	CCV	1	13-MAR-2008	21:21:00			I5
269	CCB	1	13-MAR-2008	21:27:00			I5
270	KJGJFB	1	13-MAR-2008	21:37:00			I5
271	KJGJFC	1	13-MAR-2008	21:42:00			I5
272	KH7C1R	1	13-MAR-2008	21:47:00			I5
273	KH7C1RF	1	13-MAR-2008	21:52:00			I5
274	KJGJPBT	1	13-MAR-2008	21:58:00			I5
275	KJFCLBT	1	13-MAR-2008	22:02:00			I5
276	KJGJPCT	1	13-MAR-2008	22:07:00			I5
277	KJAM9T	1	13-MAR-2008	22:12:00			I5
278	KH8ADT	1	13-MAR-2008	22:17:00			I5
279	KH8ADTL	1	13-MAR-2008	22:21:00			I5
280	CCV	1	13-MAR-2008	22:28:00			I5
281	CCB	1	13-MAR-2008	22:34:00			I5
282	KH8ADTS	5	13-MAR-2008	22:38:00			I5
283	KH8ADTD	5	13-MAR-2008	22:43:00			I5
284	KJC53BT	1	13-MAR-2008	22:49:00			I5
285	KJD4NBT	1	13-MAR-2008	22:53:00			I5
286	KJD4NCT	1	13-MAR-2008	22:58:00			I5
287	KH77CT	1	13-MAR-2008	23:03:00			I5
288	KH77CTL	1	13-MAR-2008	23:08:00			I5
289	KH77CTS	5	13-MAR-2008	23:13:00			I5
290	KH77CTD	5	13-MAR-2008	23:17:00			I5
291	KH77TT	10	13-MAR-2008	23:23:00			I5
292	CCV	1	13-MAR-2008	23:29:00			I5
293	CCB	1	13-MAR-2008	23:35:00			I5
294	KH771T	1	13-MAR-2008	23:40:00			I5
295	KJC5WBT	1	13-MAR-2008	23:45:00			I5
296	KJD4QBT	1	13-MAR-2008	23:50:00			I5
297	KJD4QCT	1	13-MAR-2008	23:55:00			I5
298	KH6RFT	1	14-MAR-2008	00:00:00			I5
299	KH6RFTL	1	14-MAR-2008	00:05:00			I5
300	KH6RFTS	5	14-MAR-2008	00:09:00			I5
301	KH6RFTD	5	14-MAR-2008	00:14:00			I5
302	KH6RGT	1	14-MAR-2008	00:19:00			I5
303	KH6RNT	1	14-MAR-2008	00:24:00			I5
304	CCV	1	14-MAR-2008	00:30:00			I5
305	CCB	1	14-MAR-2008	00:36:00			I5
306	KH6RPT	1	14-MAR-2008	00:41:00			I5
307	KJGJ5B	1	14-MAR-2008	00:47:00	8073027	A8C130000	I5
308	KJGJ5C	1	14-MAR-2008	00:51:00	8073027	A8C130000	I5

(continued)

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
309	KJFH6	1	14-MAR-2008	00:57:00	8073027	8C12241	I5
310	KJFH6	20	14-MAR-2008	01:01:00	8073027	8C12241	I5
311	KJFJ8	1	14-MAR-2008	01:06:00	8073027	8C12241	I5
312	KJFJ8	10	14-MAR-2008	01:10:00	8073027	8C12241	I5
313	KJFJ8S	10	14-MAR-2008	01:15:00	8073027	8C12241	I5
314	KJFJ8D	10	14-MAR-2008	01:20:00	8073027	8C12241	I5
315	KJFKA	10	14-MAR-2008	01:25:00	8073027	8C12241	I5
316	CCV	1	14-MAR-2008	01:32:00			I5
317	CCB	1	14-MAR-2008	01:39:00			I5
318	KJFKA	1	14-MAR-2008	01:44:00	8073027	8C12241	I5
319	KJFKJ	1	14-MAR-2008	01:48:00	8073027	8C12241	I5
320	KJFKK	1	14-MAR-2008	01:53:00	8073027	8C12241	I5
321	KJFKL	1	14-MAR-2008	01:57:00	8073027	8C12241	I5
322	KJFKLL	1	14-MAR-2008	02:02:00			I5
323	KJFKN	1	14-MAR-2008	02:07:00	8073027	8C12241	I5
324	KJFKP	1	14-MAR-2008	02:11:00	8073027	8C12241	I5
325	KJC55BT	1	14-MAR-2008	02:18:00			I5
326	KJD4TBT	1	14-MAR-2008	02:23:00			I5
327	KJD4TCT	1	14-MAR-2008	02:27:00			I5
328	CCV	1	14-MAR-2008	02:35:00			I5
329	CCB	1	14-MAR-2008	02:42:00			I5
330	KH6RET	1	14-MAR-2008	02:46:00			I5
331	KH6RETL	1	14-MAR-2008	02:51:00			I5
332	KH6RETS	5	14-MAR-2008	02:55:00			I5
333	KH6REDT	5	14-MAR-2008	03:00:00			I5
334	KH6RHT	1	14-MAR-2008	03:05:00			I5
335	KH6RMT	1	14-MAR-2008	03:10:00			I5
336	KH6R2T	1	14-MAR-2008	03:15:00			I5
337	KH6R3T	1	14-MAR-2008	03:19:00			I5
338	KH6R6T	1	14-MAR-2008	03:24:00			I5
339	KH6R8T	1	14-MAR-2008	03:28:00			I5
340	CCV	1	14-MAR-2008	03:35:00			I5
341	CCB	1	14-MAR-2008	03:43:00			I5
342	KH6R9T	1	14-MAR-2008	03:47:00			I5
343	KH6TAT	1	14-MAR-2008	03:52:00			I5
344	KH6TCT	10	14-MAR-2008	03:56:00			I5
345	KJGJ7B	1	14-MAR-2008	04:03:00	8073029	A8C130000	I5
346	KJGJ7C	1	14-MAR-2008	04:08:00	8073029	A8C130000	I5
347	KJEXT	1	14-MAR-2008	04:13:00	8073029	8C11158	I5
348	KJEXTS	1	14-MAR-2008	04:18:00	8073029	8C11158	I5
349	KJEXTD	1	14-MAR-2008	04:22:00	8073029	8C11158	I5
350	KJE0K	1	14-MAR-2008	04:27:00	8073029	8C11158	I5
351	KJE0P	1	14-MAR-2008	04:32:00	8073029	8C11158	I5
352	CCV	1	14-MAR-2008	04:39:00			I5

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
353	CCB	1	14-MAR-2008	04:46:00			I5
354	KJE0T	1	14-MAR-2008	04:50:00	8073029	8C11158	I5
355	KJE01	1	14-MAR-2008	04:55:00	8073029	8C11158	I5
356	KJE02	1	14-MAR-2008	04:59:00	8073029	8C11158	I5
357	KJE03	1	14-MAR-2008	05:04:00	8073029	8C11158	I5
358	KJE04	1	14-MAR-2008	05:09:00	8073029	8C11158	I5
359	KJCPC	1	14-MAR-2008	05:13:00	8073029	8C11158	I5
360	KJCPE	1	14-MAR-2008	05:18:00	8073029	8C11158	I5
361	KJCPF	1	14-MAR-2008	05:22:00	8073029	8C11158	I5
362	KJCPJ	1	14-MAR-2008	05:27:00	8073029	8C11158	I5
363	KJCPJL	1	14-MAR-2008	05:31:00			I5
364	CCV	1	14-MAR-2008	05:38:00			I5
365	CCB	1	14-MAR-2008	05:44:00			I5
366	CRI\MRL	1	14-MAR-2008	05:49:00			I5
367	CCV	1	14-MAR-2008	05:55:00			I5
368	CCB	1	14-MAR-2008	06:02:00			I5
369	CCV	1	14-MAR-2008	08:31:00			I5
370	CCB	1	14-MAR-2008	08:38:00			I5
371	KJEXT	5	14-MAR-2008	08:42:00	8073029	8C11158	I5
372	KJEXTS	5	14-MAR-2008	08:47:00	8073029	8C11158	I5
373	KJEXTD	5	14-MAR-2008	08:51:00	8073029	8C11158	I5
374	KJE0K	1	14-MAR-2008	08:56:00	8073029	8C11158	I5
375	KJE04	5	14-MAR-2008	09:00:00	8073029	8C11158	I5
376	KJCPE	5	14-MAR-2008	09:05:00	8073029	8C11158	I5
377	KH6R3T	10	14-MAR-2008	09:10:00			I5
378	KJFH6	500	14-MAR-2008	09:14:00	8073027	8C12241	I5
379	KJFKJ	10	14-MAR-2008	09:19:00	8073027	8C12241	I5
380	KJFKK	50	14-MAR-2008	09:23:00	8073027	8C12241	I5
381	CCV	1	14-MAR-2008	09:30:00			I5
382	CCB	1	14-MAR-2008	09:36:00			I5
383	KJFKL	5	14-MAR-2008	09:40:00	8073027	8C12241	I5
384	KJFKLL	25	14-MAR-2008	09:45:00			I5
385	KJFKN	50	14-MAR-2008	09:50:00	8073027	8C12241	I5
386	CCV	1	14-MAR-2008	09:56:00			I5
387	CCB	1	14-MAR-2008	10:02:00			I5
388	KJD5FB	1	14-MAR-2008	10:11:00	8072030	A8C120000	I5
389	KJD5FC	1	14-MAR-2008	10:16:00	8072030	A8C120000	I5
390	KJCPL	1	14-MAR-2008	10:21:00	8072030	8C11158	I5
391	KJCPLL	1	14-MAR-2008	10:26:00			I5
392	KJCPLS	1	14-MAR-2008	10:30:00	8072030	8C11158	I5
393	KJCPLD	1	14-MAR-2008	10:35:00	8072030	8C11158	I5
394	KJCPM	1	14-MAR-2008	10:40:00	8072030	8C11158	I5
395	KJCPN	1	14-MAR-2008	10:44:00	8072030	8C11158	I5
396	KJCPP	1	14-MAR-2008	10:49:00	8072030	8C11158	I5

(continued)

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
397	KJCPQ	1	14-MAR-2008	10:53:00	807.2030	8C11158	I5
398	CCV	1	14-MAR-2008	11:00:00			I5
399	CCB	1	14-MAR-2008	11:06:00			I5
400	KJCPR	1	14-MAR-2008	11:11:00	807.2030	8C11158	I5
401	KJCPT	1	14-MAR-2008	11:15:00	807.2030	8C11158	I5
402	KJCPV	1	14-MAR-2008	11:20:00	807.2030	8C11158	I5
403	KJCPW	1	14-MAR-2008	11:24:00	807.2030	8C11158	I5
404	KJCPX	1	14-MAR-2008	11:29:00	807.2030	8C11158	I5
405	KJCP0	1	14-MAR-2008	11:33:00	807.2030	8C11158	I5
406	KJCP1	1	14-MAR-2008	11:38:00	807.2030	8C11158	I5
407	KJCP2	1	14-MAR-2008	11:43:00	807.2030	8C11158	I5
408	KJCP3	1	14-MAR-2008	11:47:00	807.2030	8C11158	I5
409	KJCP4	1	14-MAR-2008	11:52:00	807.2030	8C11158	I5
410	CCV	1	14-MAR-2008	11:58:00			I5
411	CCB	1	14-MAR-2008	12:04:00			I5
412	KJCQA	1	14-MAR-2008	12:09:00	807.2030	8C11158	I5
413	KJCQD	1	14-MAR-2008	12:14:00	807.2030	8C11158	I5
414	KJCQF	1	14-MAR-2008	12:18:00	807.2030	8C11158	I5
415	KJCQG	1	14-MAR-2008	12:23:00	807.2030	8C11158	I5
416	KJCQH	1	14-MAR-2008	12:27:00	807.2030	8C11158	I5
417	CCV	1	14-MAR-2008	12:34:00			I5
418	CCB	1	14-MAR-2008	12:40:00			I5
419	KJHMWBT	1	14-MAR-2008	12:50:00			I5
420	KJKJEBT	1	14-MAR-2008	12:54:00			I5
421	KJKJECT	1	14-MAR-2008	12:59:00			I5
422	KJGL4T	1	14-MAR-2008	13:04:00			I5
423	KJGL4TL	1	14-MAR-2008	13:08:00			I5
424	KJGL4TS	5	14-MAR-2008	13:13:00			I5
425	KJGL4TD	5	14-MAR-2008	13:17:00			I5
426	KJGL5T	1	14-MAR-2008	13:22:00			I5
427	KJHM2BT	1	14-MAR-2008	13:28:00			I5
428	KJKJGBT	1	14-MAR-2008	13:33:00			I5
429	CCV	1	14-MAR-2008	13:37:00			I5
430	CCB	1	14-MAR-2008	13:43:00			I5
431	KJKJGCT	1	14-MAR-2008	13:48:00			I5
432	KJGLXT	1	14-MAR-2008	13:53:00			I5
433	KJGLXTL	1	14-MAR-2008	13:57:00			I5
434	KJGLXTS	5	14-MAR-2008	14:02:00			I5
435	KJGLXTD	5	14-MAR-2008	14:07:00			I5
436	KJGL0T	1	14-MAR-2008	14:11:00			I5
437	KJGL1T	1	14-MAR-2008	14:16:00			I5
438	KJGL2T	1	14-MAR-2008	14:20:00			I5
439	KJGL3T	1	14-MAR-2008	14:25:00			I5
440	CCV	1	14-MAR-2008	14:31:00			I5

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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
441	CCB	1	14-MAR-2008	14:37:00			I5
442	KJGL4T	500	14-MAR-2008	14:43:00			I5
443	KJGL4TL	2500	14-MAR-2008	14:48:00			I5
444	KJGL4TS	500	14-MAR-2008	14:52:00			I5
445	KJGL4TD	500	14-MAR-2008	14:57:00			I5
446	KJGL5T	500	14-MAR-2008	15:01:00			I5
447	CCV	1	14-MAR-2008	15:07:00			I5
448	CCB	1	14-MAR-2008	15:13:00			I5
449	KJKXLB	1	14-MAR-2008	15:59:00	8074159	A8C140000	I5
450	KJKXLC	1	14-MAR-2008	16:04:00	8074159	A8C140000	I5
451	KJKWL	1	14-MAR-2008	16:09:00	8074159	A8C140123	I5
452	KJKWLS	1	14-MAR-2008	16:14:00	8074159	A8C140123	I5
453	KJKWLD	1	14-MAR-2008	16:18:00	8074159	A8C140123	I5
454	KJKWR	1	14-MAR-2008	16:23:00	8074159	A8C140123	I5
455	KJKWT	1	14-MAR-2008	16:28:00	8074159	A8C140123	I5
456	KJKWW	1	14-MAR-2008	16:32:00	8074159	A8C140123	I5
457	KJKWWL	1	14-MAR-2008	16:37:00			I5
458	KJKH3B	1	14-MAR-2008	16:43:00	8074016	A8C140000	I5
459	CCV	1	14-MAR-2008	16:47:00			I5
460	CCB	1	14-MAR-2008	16:54:00			I5
461	KJKH3C	1	14-MAR-2008	16:58:00	8074016	A8C140000	I5
462	KJHPV	1	14-MAR-2008	17:03:00	8074016	8C11241	I5
463	KJHQR	1	14-MAR-2008	17:08:00	8074016	A8C130240	I5
464	KJHVV	1	14-MAR-2008	17:12:00	8074016	8C13254	I5
465	KJHVVS	1	14-MAR-2008	17:17:00	8074016	8C13254	I5
466	KJHVVD	1	14-MAR-2008	17:21:00	8074016	8C13254	I5
467	KJHREF	1	14-MAR-2008	17:26:00	8074016	A8C130246	I5
468	KJHTAF	1	14-MAR-2008	17:31:00	8074016	A8C130246	I5
469	KJGNL	1	14-MAR-2008	17:35:00	8074016	A8C130107	I5
470	KJGRW	1	14-MAR-2008	17:40:00	8074016	A8C130116	I5
471	CCV	1	14-MAR-2008	17:46:00			I5
472	CCB	1	14-MAR-2008	17:52:00			I5
473	KJGTP	1	14-MAR-2008	17:57:00	8074016	A8C130120	I5
474	KJG3P	1	14-MAR-2008	18:01:00	8074016	A8C130162	I5
475	KJHKP	1	14-MAR-2008	18:06:00	8074016	A8C130222	I5
476	KJHK2	1	14-MAR-2008	18:10:00	8074016	A8C130222	I5
477	KJHK4	1	14-MAR-2008	18:15:00	8074016	A8C130222	I5
478	KJHM6	10	14-MAR-2008	18:20:00	8074016	A8C130223	I5
479	KJHNW	1	14-MAR-2008	18:24:00	8074016	A8C130223	I5
480	KJGPC	1	14-MAR-2008	18:29:00	8074016	A8C130110	I5
481	KJG32	1	14-MAR-2008	18:33:00	8074016	8C13165	I5
482	KJG4T	1	14-MAR-2008	18:38:00	8074016	8C13165	I5
483	CCV	1	14-MAR-2008	18:44:00			I5
484	CCB	1	14-MAR-2008	18:50:00			I5

(continued)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

INSTRUMENT PRINTOUTS

Test America North Canton Hg Data Review Checklist

Run/Project Information

Run Date: 3-18-08 Analyst: ML Instrument: H4

Prep Batches Run: See Run Log

Circle Methods used: (7470A / 245.1 : CORP-MT-0005 Rev 1) 7471 / 245.1 : CORP-MT-0007 Rev 1

Review Items

A. Calibration/Instrument Run QC	Yes	No	N/A	2nd Level
1. Instrument calibrated per manufacturer's instructions and at SOP specified levels?	✓			✓
2. ICV/CCV analyzed at appropriate frequency and within control limits?	✓			✓
3. ICB/CCB analyzed at appropriate frequency and within +/- RL?	✓			✓
4. CRA run?	✓			✓
B. Sample Results				
1. Were samples with concentrations > high calibration standard diluted and reanalyzed?	✓			✓
2. All reported results bracketed by in control QC?	✓			✓
3. Sample analyses done within holding time?	✓			✓
C. Preparation/ Matrix QC				
1. LCS done per prep batch and within QC limits?	✓			✓
2. Method blank done per prep batch and < RL?	✓			✓
3. MS run at required frequency and within limits?	✓			✓
4. MSD or DU run at required frequency and RPD within SOP limits?	✓			✓
D. Other				
1. Are all nonconformances documented appropriately?	✓			✓
2. Current IDL/MDL data on file?	✓			✓
3. Calculations and Transcription checked for error?	✓			✓
4. All client/project specific requirements met?	✓			✓
5. Date of analysis verified as correct?	✓			✓

Level I Analyst: Michelle Lust Date: 3-18-08 7:49-8:46
3-19-08 11:06-17:02

Comments: Michelle Lust

2nd Level Reviewer: Katie L Counts Date: 3.18.08 7:49-8:46
3-19-08 11:06-17:02

Curve Prepared Date: 3-17-08 Time: 9:00 Am

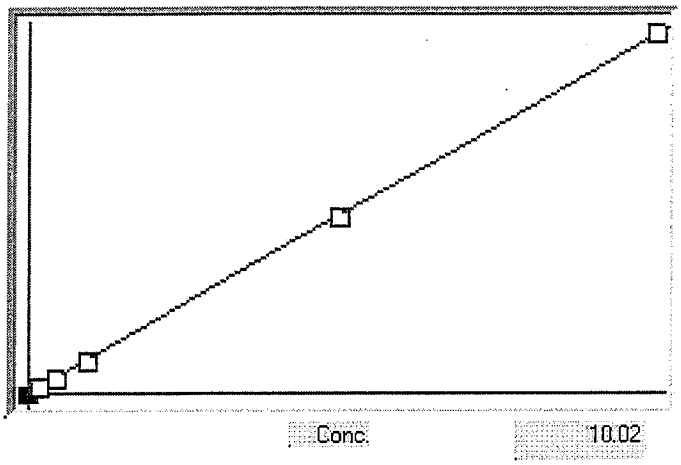
ICV HG 0735409 $SnCl_2$ 8mg197

CAL/CCV HG 0735410 NACL $NH_2OH{\cdot}HCL$ 8mg189

Revised 09/21/2007

Protocol: 0318HG4

Linear



Calibrated

Accepted

A

B 3.66192e-4

C 3.69535e-2

Rhc .999925

Accepted Date: 18-Mar-08 07:57

S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
01	.00000	.0743	.0743	103	0	102				
02	.20000	.2230	.0230	508	0%	508				
03	.50000	.4720	-.0280	1188	0%	1188				
04	1.0000	.9451	-.0549	2480	0%	2480				
05	5.0000	4.961	-.0392	13447	0%	13446				
06	10.000	10.02	.0248	27276	0%	27275				
07										
08										
09										
10										

Line	Conc.	Units	SD/RSD	1	2	3	4	5	
*** Standard: 1 Rep: 1				Seq: 1		07:49:12 18 Mar 08			HG
Hg	.0000	ppb	102						
*** Standard: 2 Rep: 1				Seq: 2		07:50:25 18 Mar 08			HG
Hg	.2000	ppb	508						
*** Standard: 3 Rep: 1				Seq: 3		07:52:01 18 Mar 08			HG
Hg	.5000	ppb	1188						
*** Standard: 4 Rep: 1				Seq: 4		07:53:16 18 Mar 08			HG
Hg	1.000	ppb	2480						
*** Standard: 5 Rep: 1				Seq: 5		07:54:56 18 Mar 08			HG
Hg	5.000	ppb	13446						
*** Standard: 6 Rep: 1				Seq: 6		07:56:30 18 Mar 08			HG
Hg	10.00	ppb	27275						

*** Check Standard: 2 Ck2ICV					Seq: 7	07:58:02 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD	
Hg		97.42	2.436	2.500	ppb	.0000	

*** Check Standard: 3 Ck3ICB					Seq: 8	07:59:18 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD	
Hg		^^^^^^	.0322	.0000	ppb	.0000	

*** Check Standard: 4 Ck4CRA\MRL					Seq: 9	08:00:32 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD	
Hg		105.4	.2109	.2000	ppb	.0000	

*** Check Standard: 6 Ck6CCV					Seq: 10	08:01:59 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD	
Hg		99.04	4.952	5.000	ppb	.0000	

*** Check Standard: 5 Ck5CCB					Seq: 11	08:03:18 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD	
Hg		^^^^^^	.0296	.0000	ppb	.0000	

*** Sample ID: KJHAMBT				Seq: 12	08:04:37 18 Mar 08	HG
			8074023			
Hg	.0893	ppb	.0000	.0893		

*** Sample ID: KJKJJBT				Seq: 13	08:05:53 18 Mar 08	HG
Hg	.0186	ppb	.0000	.0186		

*** Sample ID: KJKJJCT				Seq: 14	08:07:45 18 Mar 08	HG
Hg	4.011	ppb	.0000	4.011		

*** Sample ID: KJE1HT/10				Seq: 15	08:09:00 18 Mar 08	HG
Hg	.1296	ppb	.0000	.1296		

Allison done in prep

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJE1NT				Seq: 16	08:10:18 18 Mar 08	HG		
Hg	.0717	ppb	.0000	.0717				
*** Sample ID: KJE1NTS				Seq: 17	08:11:32 18 Mar 08	HG		
Hg	4.682	ppb	.0000	4.682				
*** Sample ID: KJE1NTD				Seq: 18	08:13:56 18 Mar 08	HG		
Hg	4.799	ppb	.0000	4.799				
*** Sample ID: KJE1QT				Seq: 19	08:15:10 18 Mar 08	HG		
Hg	.0080	ppb	.0000	.0080				
*** Sample ID: KH916T				Seq: 20	08:16:24 18 Mar 08	HG		
Hg	.0765	ppb	.0000	.0765				
*** Sample ID: KJKH3B				Seq: 21	08:17:37 18 Mar 08	HG		
				8074016				
Hg	.0333	ppb	.0000	.0333				
*** Check Standard: 6 Ck6CCV				Seq: 22	08:19:01 18 Mar 08	HG		
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		100.2	5.009	5.000	ppb	.0000		
*** Check Standard: 5 Ck5CCB				Seq: 23	08:20:24 18 Mar 08	HG		
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		^^^^^^	.0234	.0000	ppb	.0000		
*** Sample ID: KJKH3C				Seq: 24	08:21:39 18 Mar 08	HG		
Hg	4.493	ppb	.0000	4.493				
*** Sample ID: KJHQR				Seq: 25	08:23:06 18 Mar 08	HG		
Hg	.1582	ppb	.0000	.1582				
*** Sample ID: KJHVVF				Seq: 26	08:24:33 18 Mar 08	HG		
Hg	.1036	ppb	.0000	.1036				
*** Sample ID: KJHVVFS				Seq: 27	08:25:46 18 Mar 08	HG		
Hg	.9367	ppb	.0000	.9367				
*** Sample ID: KJHVVFD				Seq: 28	08:27:11 18 Mar 08	HG		
Hg	1.025	ppb	.0000	1.025				

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: KJGRW Seq: 29 08:28:55 18 Mar 08 HG

Hg .1406 ppb .0000 .1406

*** Sample ID: KJGTP Seq: 30 08:30:39 18 Mar 08 HG

Hg .0754 ppb .0000 .0754

*** Sample ID: KJG3P Seq: 31 08:32:13 18 Mar 08 HG

Hg .0424 ppb .0000 .0424

*** Sample ID: KJHK4 Seq: 32 08:33:57 18 Mar 08 HG

Hg .1446 ppb .0000 .1446

*** Sample ID: KJHM6 Seq: 33 08:35:13 18 Mar 08 HG

Hg .0604 ppb .0000 .0604

*** Check Standard: 6 Ck6CCV Seq: 34 08:36:39 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		100.1	5.003	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB Seq: 35 08:38:06 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.1505	.0000	ppb	.0000

*** Sample ID: KJJDL Seq: 36 08:39:32 18 Mar 08 HG

Hg .1417 ppb .0000 .1417

*** Sample ID: KJJEC Seq: 37 08:40:49 18 Mar 08 HG

Hg .0981 ppb .0000 .0981

*** Sample ID: KJHREF Seq: 38 08:42:24 18 Mar 08 HG

Hg .1150 ppb .0000 .1150

*** Sample ID: KJHTAF Seq: 39 08:43:37 18 Mar 08 HG

Hg .0351 ppb .0000 .0351

*** Check Standard: 6 Ck6CCV Seq: 40 08:45:04 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		99.49	4.974	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB Seq: 41 08:46:20 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.0662	.0000	ppb	.0000

*** Check Standard: 6 Ck6CCV Seq: 42 11:06:30 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		89.85	4.492	5.000	ppb	.0000

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 5 Ck5CCB Seq: 43 11:07:48 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	-.1520	.0000	ppb	.0000

*** Sample ID: KJPE6B Seq: 44 11:09:35 18 Mar 08 HG

8077023

Hg -.1007 ppb .0000 -.1007

*** Sample ID: KJPE6C Seq: 45 11:10:51 18 Mar 08 HG

rerun

Hg 3.917 ppb .0000 3.917

*** Sample ID: KJLP7F Seq: 46 11:12:06 18 Mar 08 HG

Hg -.0696 ppb .0000 -.0696

*** Sample ID: KJLPLF Seq: 47 11:13:20 18 Mar 08 HG

Hg -.0008 ppb .0000 -.0008

*** Sample ID: KJLRCF Seq: 48 11:14:36 18 Mar 08 HG

Hg .0553 ppb .0000 .0553

*** Sample ID: KJLREF Seq: 49 11:15:55 18 Mar 08 HG

Hg .0593 ppb .0000 .0593

*** Sample ID: KJLRHF Seq: 50 11:17:24 18 Mar 08 HG

Hg .0809 ppb .0000 .0809

*** Sample ID: KJNK6F Seq: 51 11:18:50 18 Mar 08 HG

Hg .0648 ppb .0000 .0648

*** Sample ID: KJNLCF Seq: 52 11:20:04 18 Mar 08 HG

Hg .0051 ppb .0000 .0051

*** Sample ID: KJNLEF Seq: 53 11:21:18 18 Mar 08 HG

Hg .0348 ppb .0000 .0348

*** Check Standard: 6 Ck6CCV Seq: 54 11:22:31 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		101.2	5.059	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB Seq: 55 11:24:14 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	-.0077	.0000	ppb	.0000

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJKML				Seq: 56	11:25:38 18 Mar 08	HG		
Hg	.1278	ppb	.0000	.1278				
*** Sample ID: KJKN4				Seq: 57	11:26:52 18 Mar 08	HG		
Hg	.0710	ppb	.0000	.0710				
*** Sample ID: KJKR1				Seq: 58	11:28:25 18 Mar 08	HG		
Hg	.0739	ppb	.0000	.0739				
*** Sample ID: KJKR1S				Seq: 59	11:29:44 18 Mar 08	HG		
Hg	.9184	ppb	.0000	.9184				
*** Sample ID: KJKR1D				Seq: 60	11:30:58 18 Mar 08	HG		
Hg	1.025	ppb	.0000	1.025				
*** Sample ID: KJLLL				Seq: 61	11:32:12 18 Mar 08	HG		
Hg	1.710	ppb	.0000	1.710				
*** Sample ID: KJLLM				Seq: 62	11:33:27 18 Mar 08	HG		
Hg	.0516	ppb	.0000	.0516				
*** Sample ID: KJKH9B				Seq: 63	11:34:41 18 Mar 08	HG		
			8074019					
Hg	.0761	ppb	.0000	.0761				
*** Sample ID: KJKH9C				Seq: 64	11:35:54 18 Mar 08	HG		
Hg	4.200	ppb	.0000	4.200				
*** Sample ID: KJHE9				Seq: 65	11:37:25 18 Mar 08	HG		
Hg	.1025	ppb	.0000	.1025				
*** Check Standard: 6 Ck6CCV				Seq: 66	11:38:41 18 Mar 08	HG		
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		99.22	4.961	5.000	ppb	.0000		
*** Check Standard: 5 Ck5CCB				Seq: 67	11:39:57 18 Mar 08	HG		
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		^^^^^^	.0285	.0000	ppb	.0000		
*** Sample ID: KJHE9S				Seq: 68	11:41:30 18 Mar 08	HG		
Hg	.9162	ppb	.0000	.9162				

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJHE9D				Seq: 69	11:43:19 18 Mar 08	HG		
Hg	.9766	ppb	.0000	.9766				
*** Sample ID: KJHF0				Seq: 70	11:44:43 18 Mar 08	HG		
Hg	.1073	ppb	.0000	.1073				
*** Sample ID: KJHF1				Seq: 71	11:45:58 18 Mar 08	HG		
Hg	.0996	ppb	.0000	.0996				
*** Sample ID: KJHF2				Seq: 72	11:47:11 18 Mar 08	HG		
Hg	.0864	ppb	.0000	.0864				
*** Sample ID: KJHF3				Seq: 73	11:48:26 18 Mar 08	HG		
Hg	.0948	ppb	.0000	.0948				
*** Sample ID: KJHF6				Seq: 74	11:50:12 18 Mar 08	HG		
Hg	.0816	ppb	.0000	.0816				
*** Sample ID: KJHFQ				Seq: 75	11:51:25 18 Mar 08	HG		
Hg	.1618	ppb	.0000	.1618				
*** Sample ID: KJHFW				Seq: 76	11:52:39 18 Mar 08	HG		
Hg	.1410	ppb	.0000	.1410				
*** Sample ID: KJHFX				Seq: 77	11:54:05 18 Mar 08	HG		
Hg	.1062	ppb	.0000	.1062				

*** Check Standard: 6 Ck6CCV		Seq: 78	11:55:25 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		100.6	5.028	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB		Seq: 79	11:56:39 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	-.0348	.0000	ppb	.0000

*** Sample ID: KJGM1				Seq: 80	11:57:58 18 Mar 08	HG		
Hg	.1560	ppb	.0000	.1560				
*** Sample ID: KJGM2				Seq: 81	11:59:16 18 Mar 08	HG		
Hg	.1153	ppb	.0000	.1153				

POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJGM4				Seq: 82	12:00:32 18 Mar 08	HG		
Hg	.0838	ppb	.0000	.0838				
*** Sample ID: KJGM5				Seq: 83	12:01:51 18 Mar 08	HG		
Hg	.0838	ppb	.0000	.0838				
*** Sample ID: KJGM6				Seq: 84	12:03:17 18 Mar 08	HG		
Hg	.0857	ppb	.0000	.0857				
*** Sample ID: KJGM7				Seq: 85	12:04:44 18 Mar 08	HG		
Hg	.0267	ppb	.0000	.0267				
*** Sample ID: KJGM8				Seq: 86	12:06:42 18 Mar 08	HG		
Hg	.0743	ppb	.0000	.0743				
*** Sample ID: KJGNA				Seq: 87	12:08:16 18 Mar 08	HG		
Hg	.1062	ppb	.0000	.1062				
*** Sample ID: KJKH7BF				Seq: 88	12:09:55 18 Mar 08	HG		
				8074018				
Hg	.0340	ppb	.0000	.0340				
*** Sample ID: KJKH7C				Seq: 89	12:11:13 18 Mar 08	HG		
Hg	4.411	ppb	.0000	4.411				
*** Check Standard: 6 Ck6CCV				Seq: 90	12:12:41 18 Mar 08	HG		
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		100.7	5.035	5.000	ppb	.0000		
*** Check Standard: 5 Ck5CCB				Seq: 91	12:13:56 18 Mar 08	HG		
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		^^^^^^	.0842	.0000	ppb	.0000		
*** Sample ID: KJG0D				Seq: 92	12:15:09 18 Mar 08	HG		
Hg	.0868	ppb	.0000	.0868				
*** Sample ID: KJG0DF				Seq: 93	12:16:30 18 Mar 08	HG		
Hg	.0582	ppb	.0000	.0582				
*** Sample ID: KJG0H				Seq: 94	12:17:48 18 Mar 08	HG		
Hg	.1091	ppb	.0000	.1091				

Line	Conc.	Units	SD/RSD	1	2	3	4	5	
*** Sample ID: KJG0HF				Seq: 95	12:19:15 18 Mar 08				HG
Hg	.0567	ppb	.0000	.0567					=
*** Sample ID: KJG0K				Seq: 96	12:20:31 18 Mar 08				HG
Hg	.0410	ppb	.0000	.0410					=
*** Sample ID: KJG0KF				Seq: 97	12:21:47 18 Mar 08				HG
Hg	.0985	ppb	.0000	.0985					=
*** Sample ID: KJG0N				Seq: 98	12:23:13 18 Mar 08				HG
Hg	.0853	ppb	.0000	.0853					=
*** Sample ID: KJG0NF				Seq: 99	12:24:42 18 Mar 08				HG
Hg	.1322	ppb	.0000	.1322					=
*** Sample ID: KJG0Q				Seq: 100	12:26:00 18 Mar 08				HG
Hg	.1212	ppb	.0000	.1212					=
*** Sample ID: KJG0QS				Seq: 101	12:27:15 18 Mar 08				HG
Hg	.9473	ppb	.0000	.9473					=
*** Check Standard: 6 Ck6CCV				Seq: 102	12:28:49 18 Mar 08				HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD			
Hg		100.0	5.000	5.000	ppb	.0000			=
*** Check Standard: 5 Ck5CCB				Seq: 103	12:30:03 18 Mar 08				HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD			
Hg		^^^^^^	.0747	.0000	ppb	.0000			=
*** Sample ID: KJG0QD				Seq: 104	12:31:16 18 Mar 08				HG
Hg	1.051	ppb	.0000	1.051					=
*** Sample ID: KJG0QF				Seq: 105	12:32:46 18 Mar 08				HG
Hg	.0450	ppb	.0000	.0450					=
*** Sample ID: KJG0QFS				Seq: 106	12:34:01 18 Mar 08				HG
Hg	1.007	ppb	.0000	1.007					=
*** Sample ID: KJG0QFD				Seq: 107	12:35:21 18 Mar 08				HG
Hg	.9480	ppb	.0000	.9480					=

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJGX1				Seq: 108	12:36:48 18 Mar 08	HG		
Hg	.0567	ppb	.0000	.0567				
*** Sample ID: KJGX1F				Seq: 109	12:38:03 18 Mar 08	HG		
Hg	.0732	ppb	.0000	.0732				
*** Sample ID: KJGX3				Seq: 110	12:39:32 18 Mar 08	HG		
Hg	.1076	ppb	.0000	.1076				
*** Sample ID: KJGX3F				Seq: 111	12:40:48 18 Mar 08	HG		
Hg	.0922	ppb	.0000	.0922				
*** Sample ID: KJGX8				Seq: 112	12:42:06 18 Mar 08	HG		
Hg	.0966	ppb	.0000	.0966				
*** Sample ID: KJKJCB				Seq: 113	12:43:42 18 Mar 08	HG		
			8074020					
Hg	.0922	ppb	.0000	.0922				

*** Check Standard: 6 Ck6CCV			Seq: 114	12:44:58 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		99.98	4.999	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB			Seq: 115	12:46:21 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.0329	.0000	ppb	.0000

*** Sample ID: KJKJCC				Seq: 116	12:47:34 18 Mar 08	HG		
Hg	4.703	ppb	.0000	4.703				
*** Sample ID: KJEM0				Seq: 117	12:48:52 18 Mar 08	HG		
Hg	.0494	ppb	.0000	.0494				
*** Sample ID: KJEM0F				Seq: 118	12:50:13 18 Mar 08	HG		
Hg	.0857	ppb	.0000	.0857				
*** Sample ID: KJEM3				Seq: 119	12:51:29 18 Mar 08	HG		
Hg	.0842	ppb	.0000	.0842				
*** Sample ID: KJEM3F				Seq: 120	12:52:45 18 Mar 08	HG		
Hg	.0732	ppb	.0000	.0732				

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJEM4				Seq: 121	12:54:00 18 Mar 08	HG		
Hg	.1344	ppb	.0000	.1344				
*** Sample ID: KJEM4F				Seq: 122	12:55:21 18 Mar 08	HG		
Hg	.0922	ppb	.0000	.0922				
*** Sample ID: KJEML				Seq: 123	12:56:38 18 Mar 08	HG		
Hg	.0860	ppb	.0000	.0860				
*** Sample ID: KJEMLS				Seq: 124	12:57:56 18 Mar 08	HG		
Hg	1.014	ppb	.0000	1.014				
*** Sample ID: KJEMLD				Seq: 125	12:59:14 18 Mar 08	HG		
Hg	1.041	ppb	.0000	1.041				

*** Check Standard: 6 Ck6CCV Seq: 126 13:00:30 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		99.73	4.986	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB Seq: 127 13:02:06 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.0721	.0000	ppb	.0000

*** Sample ID: KJEMLF				Seq: 128	13:04:01 18 Mar 08	HG		
Hg	.1307	ppb	.0000	.1307				
*** Sample ID: KJEMLFS				Seq: 129	13:05:20 18 Mar 08	HG		
Hg	1.051	ppb	.0000	1.051				
*** Sample ID: KJEMLFD				Seq: 130	13:06:35 18 Mar 08	HG		
Hg	.9301	ppb	.0000	.9301				
*** Sample ID: KJGVAF				Seq: 131	13:08:03 18 Mar 08	HG		
Hg	.0838	ppb	.0000	.0838				
*** Sample ID: KJGW1F				Seq: 132	13:09:18 18 Mar 08	HG		
Hg	.0597	ppb	.0000	.0597				
*** Sample ID: KJGW2				Seq: 133	13:10:34 18 Mar 08	HG		
Hg	.0802	ppb	.0000	.0802				

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJGW2F				Seq: 134	13:12:00 18 Mar 08	HG		
Hg	.1292	ppb	.0000	.1292				
*** Sample ID: KJGW3F				Seq: 135	13:13:30 18 Mar 08	HG		
Hg	.0483	ppb	.0000	.0483				
*** Sample ID: KJGW4F				Seq: 136	13:14:46 18 Mar 08	HG		
Hg	.0351	ppb	.0000	.0351				
*** Sample ID: KJGW5				Seq: 137	13:16:01 18 Mar 08	HG		
Hg	.0047	ppb	.0000	.0047				

*** Check Standard: 6 Ck6CCV				Seq: 138	13:17:26 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		99.75	4.988	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB				Seq: 139	13:19:29 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.1179	.0000	ppb	.0000

*** Sample ID: KJGW5F				Seq: 140	13:20:43 18 Mar 08	HG		
Hg	.0743	ppb	.0000	.0743				
*** Sample ID: KJGWPF				Seq: 141	13:22:24 18 Mar 08	HG		
Hg	.0370	ppb	.0000	.0370				
*** Sample ID: KJGWQF				Seq: 142	13:23:39 18 Mar 08	HG		
Hg	.0677	ppb	.0000	.0677				
*** Sample ID: KJGWWF				Seq: 143	13:25:04 18 Mar 08	HG		
Hg	.0824	ppb	.0000	.0824				
*** Sample ID: KJGWXF				Seq: 144	13:26:20 18 Mar 08	HG		
Hg	.0959	ppb	.0000	.0959				

*** Check Standard: 6 Ck6CCV				Seq: 145	13:27:35 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		98.97	4.949	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB				Seq: 146	13:29:08 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.0197	.0000	ppb	.0000

*** Check Standard: 6 Ck6CCV				Seq: 147	14:32:55 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg	L	79.35	3.967	5.000	ppb	.0000

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 6 Ck6CCV Seq: 148 14:34:31 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		90.26	4.513	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB Seq: 149 14:35:45 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	-.0758	.0000	ppb	.0000

*** Sample ID: KJPE2B Seq: 150 14:36:58 18 Mar 08 HG

8077021

Hg	.0216	ppb	.0000	.0216

*** Sample ID: KJPE2C Seq: 151 14:38:24 18 Mar 08 HG

Hg	4.114	ppb	.0000	4.114

*** Sample ID: KJKM0 Seq: 152 14:39:52 18 Mar 08 HG

Hg	.0633	ppb	.0000	.0633

*** Sample ID: KJKM1 Seq: 153 14:41:17 18 Mar 08 HG

Hg	.1193	ppb	.0000	.1193

*** Sample ID: KJKM2 Seq: 154 14:42:39 18 Mar 08 HG

Hg	.1040	ppb	.0000	.1040

*** Sample ID: KJKM4 Seq: 155 14:43:54 18 Mar 08 HG

Hg	.1395	ppb	.0000	.1395

*** Sample ID: KJKM5 Seq: 156 14:45:08 18 Mar 08 HG

Hg	.0988	ppb	.0000	.0988

*** Sample ID: KJKM6 Seq: 157 14:46:22 18 Mar 08 HG

Hg	.0509	ppb	.0000	.0509

*** Sample ID: KJKM7 Seq: 158 14:47:46 18 Mar 08 HG

Hg	.0952	ppb	.0000	.0952

*** Sample ID: KJKM8 Seq: 159 14:49:02 18 Mar 08 HG

Hg	.1600	ppb	.0000	.1600

*** Check Standard: 6 Ck6CCV Seq: 160 14:50:31 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		93.46	4.673	5.000	ppb	.0000

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 5 Ck5CCB Seq: 161 14:51:43 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.0373	.0000	ppb	.0000

*** Sample ID: KJKM9 Seq: 162 14:52:57 18 Mar 08 HG

Hg .0666 ppb .0000 .0666

*** Sample ID: KJKMP Seq: 163 14:54:50 18 Mar 08 HG

Hg .0699 ppb .0000 .0699

*** Sample ID: KJKMPS Seq: 164 14:56:08 18 Mar 08 HG

Hg .9770 ppb .0000 .9770

*** Sample ID: KJKMPD Seq: 165 14:57:21 18 Mar 08 HG

Hg 1.045 ppb .0000 1.045

*** Sample ID: KJKMQ Seq: 166 14:58:59 18 Mar 08 HG

Hg .0424 ppb .0000 .0424

*** Sample ID: KJKMR Seq: 167 15:00:27 18 Mar 08 HG

Hg .0487 ppb .0000 .0487

*** Sample ID: KJKMT Seq: 168 15:01:44 18 Mar 08 HG

Hg .1289 ppb .0000 .1289

*** Sample ID: KJKMX Seq: 169 15:03:00 18 Mar 08 HG

Hg .0501 ppb .0000 .0501

*** Sample ID: KJKNC Seq: 170 15:04:16 18 Mar 08 HG

Hg .0044 ppb .0000 .0044

*** Sample ID: KJKNE Seq: 171 15:05:32 18 Mar 08 HG

Hg .1439 ppb .0000 .1439

*** Check Standard: 6 Ck6CCV Seq: 172 15:06:50 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.66	4.783	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB Seq: 173 15:08:09 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.0077	.0000	ppb	.0000

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJKNF				Seq: 174	15:09:32 18 Mar 08	HG		
Hg	.1263	ppb	.0000	.1263				
*** Sample ID: KJKNG				Seq: 175	15:10:50 18 Mar 08	HG		
Hg	.0175	ppb	.0000	.0175				
*** Sample ID: KJKNJ				Seq: 176	15:12:45 18 Mar 08	HG		
Hg	.0780	ppb	.0000	.0780				
*** Sample ID: KJKNL				Seq: 177	15:13:58 18 Mar 08	HG		
Hg	.1574	ppb	.0000	.1574				
*** Sample ID: KJPEWB				Seq: 178	15:15:11 18 Mar 08	HG		
				8077019				
Hg	.0758	ppb	.0000	.0758				
*** Sample ID: KJPEWC				Seq: 179	15:16:49 18 Mar 08	HG		
Hg	4.438	ppb	.0000	4.438				
*** Sample ID: KJKN0				Seq: 180	15:18:04 18 Mar 08	HG		
Hg	-.0216	ppb	.0000	-.0216				
*** Sample ID: KJKN0F				Seq: 181	15:19:28 18 Mar 08	HG		
Hg	.0505	ppb	.0000	.0505				
*** Sample ID: KJKN1				Seq: 182	15:20:45 18 Mar 08	HG		
Hg	.0849	ppb	.0000	.0849				
*** Sample ID: KJKN1F				Seq: 183	15:22:10 18 Mar 08	HG		
Hg	.1139	ppb	.0000	.1139				
*** Check Standard: 6 Ck6CCV				Seq: 184	15:23:24 18 Mar 08	HG		
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		96.21	4.810	5.000	ppb	.0000		
*** Check Standard: 5 Ck5CCB				Seq: 185	15:24:38 18 Mar 08	HG		
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		^^^^^^	.0534	.0000	ppb	.0000		
*** Sample ID: KJKN2				Seq: 186	15:25:57 18 Mar 08	HG		
Hg	.0725	ppb	.0000	.0725				

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJKN2F				Seq: 187	15:27:21 18 Mar 08	HG		
Hg	.1508	ppb	.0000	.1508				
*** Sample ID: KJKN3				Seq: 188	15:28:46 18 Mar 08	HG		
Hg	.0739	ppb	.0000	.0739				
*** Sample ID: KJKN3F				Seq: 189	15:30:02 18 Mar 08	HG		
Hg	.1241	ppb	.0000	.1241				
*** Sample ID: KJKNQ				Seq: 190	15:31:56 18 Mar 08	HG		
Hg	.1677	ppb	.0000	.1677				
*** Sample ID: KJKNQS				Seq: 191	15:33:21 18 Mar 08	HG		
Hg	1.021	ppb	.0000	1.021				
*** Sample ID: KJKNQD				Seq: 192	15:34:47 18 Mar 08	HG		
Hg	1.055	ppb	.0000	1.055				
*** Sample ID: KJKNQF				Seq: 193	15:36:14 18 Mar 08	HG		
Hg	.0538	ppb	.0000	.0538				
*** Sample ID: KJKNV				Seq: 194	15:37:30 18 Mar 08	HG		
Hg	.1223	ppb	.0000	.1223				
*** Sample ID: KJKNVF				Seq: 195	15:38:45 18 Mar 08	HG		
Hg	.0183	ppb	.0000	.0183				

*** Check Standard: 6 Ck6CCV Seq: 196 15:40:02 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.88	4.794	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB Seq: 197 15:41:26 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.0842	.0000	ppb	.0000

*** Sample ID: KJKNW				Seq: 198	15:42:40 18 Mar 08	HG		
Hg	.0692	ppb	.0000	.0692				
*** Sample ID: KJKNWF				Seq: 199	15:43:54 18 Mar 08	HG		
Hg	.0644	ppb	.0000	.0644				

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJKNX				Seq: 200	15:45:19 18 Mar 08	HG		
Hg	.0260	ppb	.0000	.0260				
*** Sample ID: KJKNXF				Seq: 201	15:46:38 18 Mar 08	HG		
Hg	.0388	ppb	.0000	.0388				
*** Sample ID: KJPE0B				Seq: 202	15:48:48 18 Mar 08	HG		
				8077020				
Hg	.1413	ppb	.0000	.1413				
*** Sample ID: KJPE0C				Seq: 203	15:50:02 18 Mar 08	HG		
Hg	4.056	ppb	.0000	4.056				
*** Sample ID: KJKN5				Seq: 204	15:51:16 18 Mar 08	HG		
Hg	-.0066	ppb	.0000	-.0066				
*** Sample ID: KJKN5F				Seq: 205	15:52:31 18 Mar 08	HG		
Hg	.0465	ppb	.0000	.0465				
*** Sample ID: KJKN6				Seq: 206	15:53:57 18 Mar 08	HG		
Hg	.0560	ppb	.0000	.0560				
*** Sample ID: KJKN6F				Seq: 207	15:55:42 18 Mar 08	HG		
Hg	.0472	ppb	.0000	.0472				

*** Check Standard: 6 Ck6CCV Seq: 208 15:56:56 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.45	4.773	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB Seq: 209 15:58:29 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.0095	.0000	ppb	.0000

*** Sample ID: KJKN7				Seq: 210	15:59:43 18 Mar 08	HG		
Hg	.0787	ppb	.0000	.0787				
*** Sample ID: KJKN7F				Seq: 211	16:00:58 18 Mar 08	HG		
Hg	.0476	ppb	.0000	.0476				
*** Sample ID: KJKN9				Seq: 212	16:02:16 18 Mar 08	HG		
Hg	.0406	ppb	.0000	.0406				

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJKN9F				Seq: 213	16:03:34 18 Mar 08	HG		
Hg	.0553	ppb	.0000	.0553				
*** Sample ID: KJKPA				Seq: 214	16:05:03 18 Mar 08	HG		
Hg	.0468	ppb	.0000	.0468				
*** Sample ID: KJKPAF				Seq: 215	16:06:18 18 Mar 08	HG		
Hg	.0373	ppb	.0000	.0373				
*** Sample ID: KJKPC				Seq: 216	16:07:32 18 Mar 08	HG		
Hg	.0670	ppb	.0000	.0670				
*** Sample ID: KJKPCS				Seq: 217	16:08:59 18 Mar 08	HG		
Hg	1.007	ppb	.0000	1.007				
*** Sample ID: KJKPCD				Seq: 218	16:11:14 18 Mar 08	HG		
Hg	1.002	ppb	.0000	1.002				
*** Sample ID: KJKPCF				Seq: 219	16:12:43 18 Mar 08	HG		
Hg	.1274	ppb	.0000	.1274				

*** Check Standard: 6 Ck6CCV Seq: 220 16:13:57 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.47	4.774	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB Seq: 221 16:15:20 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	-.0363	.0000	ppb	.0000

*** Sample ID: KJKPCFS				Seq: 222	16:16:39 18 Mar 08	HG		
Hg	1.105	ppb	.0000	1.105				
*** Sample ID: KJKPCFD				Seq: 223	16:17:56 18 Mar 08	HG		
Hg	.9876	ppb	.0000	.9876				
*** Sample ID: KJKPJ				Seq: 224	16:19:12 18 Mar 08	HG		
Hg	.0190	ppb	.0000	.0190				
*** Sample ID: KJKPJF				Seq: 225	16:20:27 18 Mar 08	HG		
Hg	.0370	ppb	.0000	.0370				

Line	Conc.	Units	SD/RSD	1	2	3	4	5	
*** Sample ID: KJKPN				Seq: 226	16:21:44 18 Mar 08	HG			
Hg	.0608	ppb	.0000	.0608					=
*** Sample ID: KJKPNF				Seq: 227	16:23:00 18 Mar 08	HG			
Hg	.0483	ppb	.0000	.0483					=
*** Sample ID: KJKPP				Seq: 228	16:24:26 18 Mar 08	HG			
Hg	.0626	ppb	.0000	.0626					=
*** Sample ID: KJKPPF				Seq: 229	16:25:47 18 Mar 08	HG			
Hg	.0531	ppb	.0000	.0531					=
*** Sample ID: KJKPQ				Seq: 230	16:27:05 18 Mar 08	HG			
Hg	.0216	ppb	.0000	.0216					=
*** Sample ID: KJKPQF				Seq: 231	16:28:22 18 Mar 08	HG			
Hg	.1062	ppb	.0000	.1062					=
*** Check Standard: 6 Ck6CCV				Seq: 232	16:29:46 18 Mar 08	HG			
Line	Flag	%Rcv.	Found	True	Units	SD/RSD			
Hg		94.38	4.719	5.000	ppb	.0000			=
*** Check Standard: 5 Ck5CCB				Seq: 233	16:31:14 18 Mar 08	HG			
Line	Flag	%Rcv.	Found	True	Units	SD/RSD			
Hg		^^^^^^	.0933	.0000	ppb	.0000			=
*** Sample ID: KJPE4B				Seq: 234	16:32:41 18 Mar 08	HG			
			8077022						
Hg	.0750	ppb	.0000	.0750					=
*** Sample ID: KJPE4C				Seq: 235	16:34:11 18 Mar 08	HG			
Hg	4.533	ppb	.0000	4.533					=
*** Sample ID: KJME9				Seq: 236	16:35:27 18 Mar 08	HG			
Hg	.0849	ppb	.0000	.0849					=
*** Sample ID: KJME9S				Seq: 237	16:36:53 18 Mar 08	HG			
Hg	1.001	ppb	.0000	1.001					=
*** Sample ID: KJME9D				Seq: 238	16:38:18 18 Mar 08	HG			
Hg	.9059	ppb	.0000	.9059					=

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: KJME9F				Seq: 239	16:39:48 18 Mar 08		HG	
Hg	.0941	ppb	.0000	.0941				
*** Sample ID: KJME9FS				Seq: 240	16:41:03 18 Mar 08		HG	
Hg	1.093	ppb	.0000	1.093				
*** Sample ID: KJME9FD				Seq: 241	16:42:31 18 Mar 08		HG	
Hg	.9338	ppb	.0000	.9338				
*** Sample ID: KJCFCF				Seq: 242	16:43:49 18 Mar 08		HG	
Hg	.0747	ppb	.0000	.0747				
*** Sample ID: KJCFGF				Seq: 243	16:45:04 18 Mar 08		HG	
Hg	.0875	ppb	.0000	.0875				

*** Check Standard: 6 Ck6CCV Seq: 244 16:46:20 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		96.03	4.801	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB Seq: 245 16:47:38 18 Mar 08 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.0252	.0000	ppb	.0000

*** Sample ID: KJCFHF				Seq: 246	16:49:05 18 Mar 08		HG	
Hg	.0446	ppb	.0000	.0446				
*** Sample ID: KJCFJF				Seq: 247	16:50:42 18 Mar 08		HG	
Hg	.1541	ppb	.0000	.1541				
*** Sample ID: KJCFKF				Seq: 248	16:52:17 18 Mar 08		HG	
Hg	.0113	ppb	.0000	.0113				
*** Sample ID: KJNVDF				Seq: 249	16:53:43 18 Mar 08		HG	
Hg	.0930	ppb	.0000	.0930				
*** Sample ID: KJNVPF				Seq: 250	16:54:59 18 Mar 08		HG	
Hg	.1117	ppb	.0000	.1117				
*** Sample ID: KJNVTF				Seq: 251	16:56:15 18 Mar 08		HG	
Hg	.0384	ppb	.0000	.0384				

Line	Conc.	Units	SD/RSD	1	2	3	4	5	
*** Sample ID: KJPE6C				Seq: 252	16:58:01 18 Mar 08				HG
Hg	4.629	ppb	.0000	4.629					=
*** Sample ID: CRA				Seq: 253	16:59:38 18 Mar 08				HG
Hg	.2149	ppb	.0000	.2149					=

*** Check Standard: 6 Ck6CCV				Seq: 254	17:00:54 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.05	4.703	5.000	ppb	.0000

*** Check Standard: 5 Ck5CCB				Seq: 255	17:02:17 18 Mar 08	HG
Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	.0838	.0000	ppb	.0000

SCAL	STD 8C124	ICSA	STD 8A50	CAL1/CRI	STD —
SCAL2	STD 8B103	ICSAB	STD 8B107	CAL2 (2X)- CAL3	STD —
CRI	STD 8B74	ICV	STD 8A33	SCAL (2X)- CAL 2	STD —
		CCV	STD 8C123		

Test America North Canton ICP Data Review Checklist

Run/Project Information:

Run Date: 3.12.08 **Analyst:** LRW **Instrument:** I 5

Prep Batches Run: SEE RUN LOG

Circle Methods used: (6010B / 200.7:) CORP-MT-0001 Rev 3.2
6010A/200.7: CORP-MT-0001NC, Rev 2

Review Items

A. Calibration/Instrument Run QC	Yes	No	N/A	2nd Level
1. Instrument calibrated per manufacturer's instructions (2 exposures/sample) and at SOP specified levels ?	✓			✓
2. ICV/CCV analyzed at appropriate frequency and within control limits ? *(ICV (2nd source):200.7=95 –105%, 6010B 90-110%) (CCV: 90 – 110%)*	✓			✓
3. ICB/CCB analyzed at appropriate frequency and within +/- RL ?	✓			✓
4. High Std. (HCAL) reanalyzed before samples and recovered within QC limits ? (6010A only 95-105%)			✓	
5. CRI run at SOP or project-specific frequency? Recovered within QC limits? (6010A +/- 50%, project specific limits may vary)	✓			✓
6. ICSA/ICSAB run at required frequency and within SOP limits ?	✓			✓
B. Sample Results				
1. Were samples with concentrations > the linear range for any parameter diluted and reanalyzed ?	✓			✓
2. All reported results bracketed by in control QC ?	✓			✓
3. Sample analyses done within holding time ?	✓			✓
C. Preparation/Matrix QC				
1. LCS done per prep batch and within QC limits ?	✓			✓
2. Method blank done per prep batch and < RL ?	✓			✓
3. MS/MSD run at required frequency and within limits ?	✓			✓
4. MSD or DU run at required frequency and RPD within SOP limits ?	✓			✓
5. Serial dilution done per prep batch ?	✓			✓
6. Post digest spike analyzed if required?			✓	
D. ther				
1. Are all nonconformances documented appropriately ?	✓			✓
2. Current IDL/MDL/LR/IEC data on file ?	✓			✓
3. Calculations checked for error ?	✓			✓
4. Transcriptions checked for error ?	✓			✓
5. All client/project specific requirements met ?	✓			✓
6. Date/time of analysis verified as correct ?	✓			✓

Level I Analyst: Karen R Counts	Date: 3-13-08	Time: 08:33 – 10:03
Level I Analyst:	Date: 3.13.08	Time: 13:20 – 14:54
Level I Analyst: Karen R Counts	Date: 3-14-08	Time: 21:21 – 10:02
Level I Analyst:	Date: 3.14.08 / 3.17.08	Time: 10:11 – 15:13 / 15:59 – 19:27
Level II Reviewer:	Date: 3.13.08	Time: 08:33 – 10:03
Level II Reviewer: Karen R Counts	Date: 3-13-08	Time: 13:20 – 14:54
Level II Reviewer:	Date: 3.14.08	Time: 21:21 – 10:02
Level II Reviewer:	Date: 3-14-08 / 3.17.08	Time: 10:11 – 15:13 / 15:59 – 19:27

Comments:

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: 01-10836
NCM Initiated By: Dorothy Leeson
Date Opened: 03/05/2004
Date Closed: 03/08/2004

Classification: Anomaly
Status: CLOSED
Production Area: Metals
Tests: None
Lot #'s (Sample #'s): ,
QC Batches: None.,

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
Dorothy Leeson	03/05/2004	Stock standard solutions used for ICP ICSA solutions commonly have low level contamination for certain elements, especially zinc.

Verified contamination is not corrected by interelement correction factors (IECs) since instrumental determination of the presence of the analyte is due not to spectral interference but due to actual presence of the element in the solution. Contamination can be verified by performing a wavelength scan of the standard solution. If contamination exists, the peak apex will be directly at the expected wavelength for the element of concern. If the presence of the analyte is due to interference from another analyte which produces a peak near the element of concern, the peak apex of the interfering analyte will not be exactly at the wavelength for the element of concern, and an IEC would be generated.

If contamination for an element such as zinc is suspected, an IEC would be inappropriate, and the concentration during analysis of the daily ICSA solution may exceed SOP criteria. In these cases, this NCM will be referenced and a copy of this NCM will be included with the run.

Zinc contamination in ICSA stock solutions has been verified in this lab at various times with wavelength scans. Similarly, contamination for other elements has been verified when suspected. An example scan is included with the I6 ICP analytical run from 4/3/01.

Corrective Action

Name	Date	Corrective Action
Dorothy Leeson	03/05/2004	

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

Verified By	Due Date	Status	Notes
LAMBERTB		Verified/completed	

Method: TOTAL Sample Name: STD1-Blank Operator:
Run Time: 03/12/08 08:33 Filename: I50312A
Mode: IR Type: X Corr. Factor: 1.00000
Lab ID.: Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	count	count	count	count	count	count
Avge	-.00112	.03918	.01811	.00074	.00017	.00291
SDev	.00028	.00017	.00568	0	0	.00004
%RSD	25.3202	.45506	31.3639	.06525	.06525	1.46545

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	count	count	count	count	count	count
Avge	.00415	-.00855	-.00051	.00193	.00957	-.00095
SDev	0	.00006	.00008	.0002	.00023	.00069
%RSD	.06524	.7807	15.7779	10.4889	2.49058	72.8055

Elems	K	Mg	Mn	Mo	Na	Ni
Units	count	count	count	count	count	count
Avge	.01231	.00046	.00054	.00014	.00037	.00028
SDev	.00133	.00057	.00004	.00004	.00053	0
%RSD	10.8646	123.759	7.50829	28.3469	141.421	.06525

Elems	Sn	Ti	Tl	V	Zn	2203\1
Units	count	count	count	count	count	count
Avge	-.00054	-.00002	-.02742	-.00023	.00123	.01539
SDev	.00183	.00004	.00209	.00008	.0002	.00839
%RSD	334.645	141.421	7.64917	35.2942	16.38	54.5003

Elems	2203\2	1960\1	1960\2	2068/2	2068/1	Y_3710
Units	count	count	count	count	count	count
Avge	-.0066	-.01436	.00325	.00074	-.01709	4.99999
SDev	.00329	.00367	.00003	.00048	.00304	0
%RSD	49.9653	25.6212	1.18627	65.3227	17.8221	0

Elems	*Y
Units	
Avge	17339.2
SDev	11.3137
%RSD	.06524

Method: TOTAL Sample Name: CALSTD Operator:
Run Time: 03/12/08 08:38 Filename: I50312A
Mode: IR Type: X Corr. Factor: 1.00000
Lab ID.: Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	As	B	Ba	Be	Cd
Units	count	count	count	count	count	count
Avge	7.401	3.12723	2.55978	3.82681	14.9545	22.0332
SDev	.0026	.02451	.00447	.00453	.01483	.00056
%RSD	.03521	.78376	.17464	.1184	.09922	.00257

Elems	Co	Cr	Cu	Mn	Mo	Ni
Units	count	count	count	count	count	count
Avge	4.02989	5.13586	3.13303	12.9116	.69378	2.24158
SDev	.00151	.00294	.0036	.02158	.00032	.00127
%RSD	.03766	.05733	.1151	.16717	.04672	.05685

Elems	Sn	Ti	Tl	V	Zn	2203\1
Units	count	count	count	count	count	count
Avge	4.95271	3.30875	3.22822	4.21636	5.84407	3.15594
SDev	.00297	.00325	.02095	.00135	.00401	.00708
%RSD	.06008	.09828	.64919	.03219	.06874	.22439

Elems	2203\2	1960\1	1960\2	2068/2	2068/1	*Y
Units	count	count	count	count	count	
Avge	4.08738	1.44318	1.53817	.2492	2.66092	16983.7
SDev	.00281	.00792	.00156	.00071	.01604	22.2034
%RSD	.06891	.54904	.10204	.28693	.60309	.13073

Method: TOTAL Sample Name: CAL 2 Operator:
Run Time: 03/12/08 08:43 Filename: I50312A
Mode: IR Type: X Corr. Factor: 1.00000
Lab ID.: Cust. Smpl. ID.: Cust. ID.:

Elems	Al	Ca	Fe	K	Mg	Na
Units	count	count	count	count	count	count
Avge	9.81468	7.903	4.34045	20.5889	17.3748	.97846
SDev	.01114	.01674	.00762	.0218	.04098	.00123
%RSD	.11358	.21184	.17559	.10588	.23586	.12602

Elems	*Y
Units	
Avge	16930.6
SDev	15.5563
%RSD	.09188

Method: TOTAL Sample Name: ICV Operator: KLC
Run Time: 03/12/08 08:48 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	498.2	12390.	253.40	1003.	Q1055.	1049.
SDev	1.51	9.366	2.1668	2.004	.8225	.071
%RSD	.303	.0756	.85512	.1998	.078	.0068

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	25710.	257.6	1039.	1025.	1011.	12730.
SDev	11.41	.4946	.2173	.2006	.6609	14.6
%RSD	.0444	.192	.0209	.0196	.0654	.1147

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	26200.	24840.	1041.	1021.	24700.	1042.
SDev	52.88	13.67	.8399	1.946	57.3	2.55
%RSD	.2018	.055	.0807	.1906	.232	.2447

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	256.40	256.57	256.75	1029.	1027.	510.13
SDev	.61677	.49178	.01212	1.757	.2307	10.383
%RSD	.24055	.19167	.00472	.1707	.0225	2.0353

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1020.	1052.	257.92	255.90	255.73	256.74
SDev	.3473	.9132	3.0118	.76636	4.5266	3.1846
%RSD	.034	.0868	1.1677	.29948	1.7701	1.2404

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	255.93	257.15	5.0000	17239.2
SDev	4.8665	2.4478	0	28.8491
%RSD	1.9015	.95188	0	.16734

Method: TOTAL Sample Name: ICB Operator: KLC
Run Time: 03/12/08 08:54 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.4076	-.0964	-.50370	6.454	.0913	.0026
SDev	.0557	2.009	.54632	.4744	.0429	.0113
%RSD	13.66	2082	108.46	7.35	46.99	437

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.9066	.0382	-.3463	-.3333	.5967	6.621
SDev	1.006	.2066	.2433	.5732	.6877	5.176
%RSD	110.9	540.7	70.26	172	115.2	78.19

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	163.3	4.172	.0274	.5038	-176.0	.1049
SDev	4.215	4.949	.0254	1.888	260.7	.4378
%RSD	2.581	118.6	92.76	374.8	148.1	417.5

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.8382	.56013	-.67279	6.072	.0872	1.9733
SDev	.77376	.5724	.28727	.0854	0	1.8463
%RSD	42.093	102.19	42.699	1.407	0	93.564

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.4657	.0611	-.48153	1.0802	-1.3458	3.4279
SDev	.0402	.0586	1.2999	.20921	1.7512	2.0344
%RSD	8.626	95.99	269.94	19.369	130.13	59.348

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	-3.2029	.59038	5.0000	17281.9
SDev	.61748	.73897	0	9.75862
%RSD	19.279	125.17	0	.05646

Method: TOTAL Sample Name: CRI\MRL Operator: KLC
Run Time: 03/12/08 08:59 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	5.300	203.7	14.543	200.0	10.63	5.222
SDev	.4409	4.415	1.5503	.1393	.1267	.0005
%RSD	8.318	2.168	10.66	.0697	1.192	.01

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	5037.	5.230	5.142	5.657	16.26	309.7
SDev	3.076	.0118	.0005	.8578	.1597	8.941
%RSD	.0611	.2258	.0097	15.17	.9827	2.886

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	5102.	4870.	15.77	10.97	5201.	26.78
SDev	8.594	6.573	.1025	.7035	340.2	.2154
%RSD	.1684	.135	.6499	6.416	6.54	.8044

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	22.185	9.5975	7.7517	104.7	51.63	16.090
SDev	1.1681	.01298	.66303	2.293	.005	4.6637
%RSD	5.2652	.13531	8.5535	2.189	.0098	28.985

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	7.810	44.28	10.434	9.1798	24.065	21.247
SDev	.3089	.0046	1.1967	.61692	1.795	.85512
%RSD	3.956	.0105	11.469	6.7205	7.459	4.0247

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	8.2144	7.5206	5.0000	17357.6
SDev	1.1151	1.5508	0	1.69733
%RSD	13.575	20.62	0	.00977

Method: TOTAL Sample Name: ICSA Operator: KLC
Run Time: 03/12/08 09:06 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.4426	484900.	-1.3684	-.5121	2.115	.0200
SDev	.2722	385.8	1.8208	.3412	.0464	.0003
%RSD	61.49	.0796	133.05	66.64	2.194	1.405

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	485200.	Q2.056	2.818	2.915	4.459	196500.
SDev	129.1	.1083	.131	.2719	.2295	166.5
%RSD	.0266	5.268	4.648	9.327	5.146	.0847

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	153.9	516200.	18.79	1.848	-167.4	3.184
SDev	7.149	551.5	.0338	2.521	227.3	.077
%RSD	4.645	.1068	.1802	136.5	135.8	2.418

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-1.2351	.94736	-3.9841	2.293	3.453	11.144
SDev	5.2876	1.9111	3.1809	3.798	.2635	2.7448
%RSD	428.09	201.73	79.84	165.6	7.63	24.631

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.5499	-3.516	22.295	-9.7103	8.3941	-6.0425
SDev	.7541	.2098	.83228	2.4497	15.853	.01288
%RSD	137.1	5.967	3.7331	25.228	188.86	.21324

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	-2.1631	-4.8933	5.0000	16162.5
SDev	.13177	4.7032	0	4.66662
%RSD	6.0923	96.116	0	.02887

Method: TOTAL Sample Name: FE 200PPM Operator: KLC
Run Time: 03/12/08 09:14 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.6021	154.0	-.51274	125.4	1.670	.0433
SDev	.7986	86.09	.88779	.3039	.3859	.0214
%RSD	132.7	55.9	173.15	.2423	23.11	49.37

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	137.4	3.035	-.1767	1.730	1.491	201200.
SDev	84.72	.0065	.6517	.2245	1.47	59.97
%RSD	61.67	.2149	368.9	12.98	98.59	.0298

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	173.0	91.06	-.3249	.0089	134.1	2.697
SDev	2.622	84.82	.1396	.2371	91.96	.2934
%RSD	1.516	93.15	42.98	2668	68.6	10.88

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.9524	1.3044	-.85327	.9904	-.1760	-1.1515
SDev	3.3699	.23689	2.4296	3.48	.3721	.07591
%RSD	114.14	18.161	284.74	351.4	211.5	6.5927

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.6167	.0770	3.4698	.22331	3.9518	2.4535
SDev	.5829	.0054	.74847	.01851	7.3687	1.3735
%RSD	94.52	6.969	21.571	8.289	186.46	55.982

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	-3.4604	.44833	5.0000	17229
SDev	.65266	3.9684	0	2.26218
%RSD	18.861	885.14	0	.01313

Method: TOTAL Sample Name: ICSA Operator: KLC
Run Time: 03/12/08 09:31 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.0587	483200.	1.1084	-3.051	2.149	.0374
SDev	.6981	238.5	3.0924	.1711	.0014	.0228
%RSD	1189	.0494	278.99	5.609	.0664	60.98

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	485200.	.2377	3.034	3.729	5.300	195700.
SDev	356	.2241	.0884	.2033	.0455	95.34
%RSD	.0734	94.25	2.913	5.454	.8582	.0487

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	161.8	515000.	18.94	-.1240	-319.1	3.407
SDev	1.195	296.1	.0266	.2507	195	.2368
%RSD	.7381	.0575	.1403	202.1	61.11	6.949

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.34359	.41971	-1.1312	1.543	3.829	9.4719
SDev	8.0543	.06494	3.8904	5.39	.0023	4.273
%RSD	2344.2	15.473	343.91	349.3	.0599	45.113

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.2923	-3.313	24.509	-11.607	3.7432	-1.3536
SDev	.2434	.0205	7.2716	3.533	1.4358	11.359
%RSD	83.26	.6184	29.67	30.439	38.357	839.12

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	-3.5175	.06009	5.0000	16154.8
SDev	3.4969	4.0868	0	9.89949
%RSD	99.416	6800.2	0	.06127

Method: TOTAL Sample Name: ICSAB Operator: KLC
Run Time: 03/12/08 09:36 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1058.	480100.	1030.6	1050.	551.4	522.1
SDev	.977	35.86	.09184	3.974	.4583	.3732
%RSD	.0924	.0075	.00891	.3787	.0831	.0715

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	484700.	983.7	504.5	501.7	531.3	195200.
SDev	999.7	.9326	.3372	.1982	.1007	176.6
%RSD	.2062	.0948	.0668	.0395	.019	.0904

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	11520.	516000.	522.6	1007.	10650.	969.8
SDev	11.36	1708	.0439	2.134	54.34	1.264
%RSD	.0986	.331	.0084	.212	.5104	.1304

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	986.07	984.72	1033.9	1019.	1022.	975.53
SDev	.2211	2.1464	.67465	4.928	.6035	9.4311
%RSD	.02242	.21797	.06525	.4837	.059	.96676

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	520.8	1057.	1007.6	973.32	989.35	984.43
SDev	.0573	.1274	6.214	.1157	8.5309	4.5905
%RSD	.011	.012	.61674	.01188	.86227	.46631

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	1019.2	1041.2	5.0000	16070.6
SDev	.73295	.64547	0	46.9515
%RSD	.07191	.06199	0	.29215

Method: TOTAL Sample Name: CCV Operator: KLC
Run Time: 03/12/08 09:42 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1005.	24740.	506.83	5003.	2065.	2079.
SDev	1.286	5.176	2.1157	10.72	.2836	.4364
%RSD	.1279	.0209	.41742	.2143	.0137	.021

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	50710.	509.9	2058.	2042.	2031.	25300.
SDev	7.759	.3101	1.691	.9707	1.298	.8604
%RSD	.0153	.0608	.0822	.0475	.0639	.0034

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	51470.	49830.	2103.	2041.	48470.	2049.
SDev	37.49	53.18	.3465	3.918	109.1	2.173
%RSD	.0728	.1067	.0165	.192	.2252	.106

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	509.89	511.79	509.15	5103.	5095.	1016.2
SDev	2.2049	.80988	7.1496	5.321	3.019	1.1635
%RSD	.43242	.15824	1.4042	.1043	.0592	.11449

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2029.	2069.	514.82	510.28	507.61	511.03
SDev	.2936	1.608	.71271	.85839	.29736	3.1573
%RSD	.0145	.0777	.13844	.16822	.05858	.61783

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	503.78	511.83	5.0000	17165.9
SDev	3.7686	8.8376	0	64.9129
%RSD	.74805	1.7267	0	.37815

Method: TOTAL Sample Name: CCB Operator: KLC
Run Time: 03/12/08 09:49 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.1794	-.0139	-3.2154	10.12	.1201	.0149
SDev	.5283	1.895	.33392	2.225	.0001	.0109
%RSD	294.5	13670	10.385	21.98	.0469	73.04

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.6506	.0909	-.1994	.0426	.1667	5.646
SDev	.01	.0363	.2018	.2223	.1591	6.557
%RSD	1.533	39.95	101.2	521.5	95.43	116.1

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	168.3	4.138	.0175	-.6655	23.99	.7701
SDev	6.826	.7044	.0126	.2347	143.3	.7996
%RSD	4.057	17.02	71.91	35.27	597.5	103.8

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.7059	.10017	-1.2592	7.269	.6093	.46713
SDev	2.2948	.42637	.03167	.4944	.0001	2.6108
%RSD	84.805	425.63	2.5156	6.801	.016	558.89

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.6821	.0729	-.05333	.17681	4.2142	1.9529
SDev	.7331	.3033	.92255	.17865	4.8187	1.0347
%RSD	107.5	416	1729.7	101.04	114.34	52.983

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	-2.4209	-.67918	5.0000	17365.1
SDev	1.128	.51568	0	3.25241
%RSD	46.596	75.926	0	.01872

Method: TOTAL Sample Name: CCV Operator: KLC
Run Time: 03/14/08 15:07 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	990.0	24400.	497.63	4834.	2063.	2039.
SDev	.1161	4.911	3.3265	13.19	.5391	.3337
%RSD	.0117	.0201	.66847	.273	.0261	.0164

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	50740.	508.7	2030.	1999.	1985.	24560.
SDev	51.92	.3873	1.08	.4291	1.001	6.11
%RSD	.1023	.0761	.0532	.0215	.0504	.0249

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	50350.	48900.	2119.	1996.	47220.	2039.
SDev	17.55	73.89	1.206	3.298	179.6	4.782
%RSD	.0348	.1511	.0569	.1652	.3804	.2345

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	495.89	507.75	492.36	5032.	4963.	1009.5
SDev	.60184	1.2678	.1853	9.026	1.803	2.8231
%RSD	.12136	.24967	.03763	.1794	.0363	.27965

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1992.	2011.	516.40	503.44	491.19	498.23
SDev	.3547	1.776	2.7751	3.2862	.46488	1.1344
%RSD	.0178	.0883	.53739	.65274	.09464	.22768

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	496.79	490.15	5.0000	17307.2
SDev	.77855	.11087	0	36.7696
%RSD	.15671	.02262	0	.21245

Method: TOTAL Sample Name: CCB Operator: KLC
Run Time: 03/14/08 15:13 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.2281	23.31	-1.1258	18.60	.1771	.1075
SDev	.2721	1.697	1.104	1.128	.084	.0015
%RSD	119.3	7.281	98.071	6.067	47.42	1.359

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	166.4	-.0047	-.1646	-.3932	-.1264	8.648
SDev	.2457	.0189	.0007	.5044	.0138	1.399
%RSD	.1477	405	.4057	128.3	10.88	16.17

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	167.3	6.213	.0866	.9788	-239.0	-.1074
SDev	4.915	1.384	.0622	.2307	167.6	.4317
%RSD	2.939	22.28	71.87	23.57	70.15	402

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-1.1507	.96998	.17917	3.586	1.036	1.8942
SDev	1.9447	.54179	1.0874	1.225	.367	2.1288
%RSD	169	55.856	606.91	34.17	35.42	112.38

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.5168	2.567	2.4475	.23235	.72646	-2.0879
SDev	.115	.3272	2.3743	1.9976	7.9507	1.0538
%RSD	22.25	12.75	97.01	859.75	1094.4	50.472

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	-.35121	.44397	5.0000	17519.5
SDev	4.0082	.37079	0	19.6581
%RSD	1141.2	83.517	0	.1122

Method: TOTAL Sample Name: KJKXLB 8074159 Operator: KLC
Run Time: 03/14/08 15:59 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.2571	-.9356	-1.5413	-3.032	1.436	.0960
SDev	.1973	1.544	4.3187	6.492	.4186	.0419
%RSD	76.75	165	280.2	214.1	29.16	43.61

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	363.5	.0375	-.1111	.5933	.5791	-26.86
SDev	1.297	.1948	.2431	.0566	1.725	74.05
%RSD	.3569	518.7	218.9	9.542	297.9	275.7

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	188.2	51.97	.3993	.6556	134.7	1.070
SDev	3.211	26.52	.4783	.2389	24.38	.5014
%RSD	1.706	51.03	119.8	36.44	18.11	46.87

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	3.1596	.91844	H9.1931	H25.30	.9524	4.7588
SDev	1.9426	.27052	13.341	6.291	.4872	5.5507
%RSD	61.482	29.455	145.12	24.87	51.16	116.64

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-2.138	5.458	18.284	-7.7512	19.204	-4.8505
SDev	3.179	.5431	22.806	10.98	23.969	9.0542
%RSD	148.7	9.95	124.73	141.66	124.81	186.67

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	7.0302	10.273	5.0000	17450.4
SDev	13.832	13.096	0	53.1739
%RSD	196.75	127.48	0	.30471

Method: TOTAL Sample Name: KJKXLC Operator: KLC
Run Time: 03/14/08 16:04 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	50.41	1822.	1804.3	864.2	1967.	48.46
SDev	.0809	8.626	5.4694	4.125	7.668	.2465
%RSD	.1605	.4734	.30313	.4773	.3898	.5086

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	46890.	47.40	471.4	187.5	231.4	1011.
SDev	175.7	.2477	1.665	.7686	.5898	3.157
%RSD	.3748	.5225	.3533	.4098	.2549	.3123

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	44690.	44700.	491.5	928.6	44120.	473.3
SDev	73.75	219.7	2.159	3.541	35.08	.3197
%RSD	.165	.4915	.4393	.3813	.0795	.0675

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1790.8	467.09	430.32	1871.	929.5	1834.2
SDev	10.32	2.1594	12.012	5.904	3.878	13.15
%RSD	.57626	.4623	2.7915	.3155	.4172	.71694

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	466.5	479.7	473.30	463.99	1764.7	1803.8
SDev	2.287	1.591	1.1299	3.8016	6.361	12.296
%RSD	.4902	.3317	.23873	.81933	.36045	.68168

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	434.98	427.99	5.0000	17258.8
SDev	9.1657	13.434	0	78.9128
%RSD	2.1071	3.1388	0	.45723

Method: TOTAL Sample Name: KJKWL Operator: KLC
Run Time: 03/14/08 16:09 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.3686	13500.	.99196	2.371	71.18	.9315
SDev	.7709	38.14	1.5812	.3454	.1948	.0617
%RSD	209.1	.2826	159.4	14.57	.2737	6.623

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	710.8	-.4050	3.009	10.05	2.507	4546.
SDev	9.4	.7674	.3414	5.409	.7265	36.11
%RSD	1.323	189.5	11.35	53.81	28.98	.7945

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	459.3	492.8	45.44	.0265	-1432.	6.494
SDev	97.45	3.348	.2225	.6866	2007	.1702
%RSD	21.22	.6794	.4897	2589	140.2	2.621

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	3.7248	7.9466	4.7289	24.67	292.8	6.5136
SDev	1.4511	1.6082	1.649	.2563	.1365	1.9474
%RSD	38.959	20.238	34.871	1.039	.0466	29.897

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	22.04	24.27	7.6461	8.0967	3.7299	3.7222
SDev	.0237	.0812	.18582	2.3184	1.9092	3.1288
%RSD	.1078	.3344	2.4303	28.633	51.186	84.056

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	1.1055	6.5379	5.0000	17695.1
SDev	1.3485	1.799	0	110.451
%RSD	121.98	27.517	0	.62418

Method: TOTAL Sample Name: KJKWLS Operator: KLC
Run Time: 03/14/08 16:14 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	50.42	27880.	1810.2	880.3	2082.	50.62
SDev	.6398	288.6	17.927	7.288	24.04	.5319
%RSD	1.269	1.035	.99034	.828	1.155	1.051

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	47980.	47.87	486.7	208.9	236.4	8722.
SDev	467	.5707	4.992	2.318	2.971	94.15
%RSD	.9734	1.192	1.026	1.11	1.257	1.079

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	45890.	46000.	695.7	928.1	44680.	487.2
SDev	384.9	458.3	7.262	11.98	295.6	4.707
%RSD	.8388	.9962	1.044	1.291	.6617	.9661

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1795.4	480.62	401.39	1878.	1138.	1851.4
SDev	10.619	4.4731	6.0719	20.67	12.01	11.103
%RSD	.59148	.93068	1.5127	1.101	1.055	.59973

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	501.8	507.9	486.55	477.67	1779.8	1803.2
SDev	5.399	5.13	2.688	5.3643	3.293	14.277
%RSD	1.076	1.01	.55246	1.123	.18502	.79178

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	404.67	399.75	5.0000	17424.5
SDev	1.4624	9.8334	0	150.048
%RSD	.36137	2.4599	0	.86112

Method: TOTAL Sample Name: KJKWLD Operator: KLC
Run Time: 03/14/08 16:18 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	51.11	31780.	1821.8	891.1	2083.	50.43
SDev	.5177	27.92	2.9437	.4336	.8626	.0829
%RSD	1.013	.0878	.16158	.0487	.0414	.1645

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	48540.	47.95	484.3	213.2	239.2	7878.
SDev	42.83	.1463	.2277	.2782	.6148	9.546
%RSD	.0882	.3051	.047	.1305	.257	.1212

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	46500.	46610.	549.3	933.4	45170.	490.3
SDev	96.03	62.34	.3448	1.751	91.17	1.5
%RSD	.2065	.1338	.0628	.1876	.2019	.3059

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1815.0	482.30	417.09	1896.	1161.	1860.8
SDev	8.6387	2.8369	2.7472	1.618	1.644	7.4793
%RSD	.47595	.5882	.65865	.0854	.1416	.40193

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	498.3	517.2	485.54	480.68	1793.0	1826.0
SDev	.7337	.9672	.43074	4.4683	4.2149	10.847
%RSD	.1472	.187	.08871	.92957	.23507	.59403

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	415.09	418.08	5.0000	17572
SDev	2.9319	5.5824	0	28.5674
%RSD	.70632	1.3352	0	.16257

Method: TOTAL Sample Name: KJKWR Operator: KLC
Run Time: 03/14/08 16:23 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.1892	16180.	.95991	4.098	75.53	.8919
SDev	.3661	50.47	.83298	1.257	.2431	.0069
%RSD	193.6	.3119	86.777	30.67	.3219	.7766

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	604.4	-.0522	4.307	15.22	2.929	4847.
SDev	8.169	.0037	.0084	.2212	.3372	20.29
%RSD	1.352	7.002	.1941	1.454	11.51	.4186

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	583.4	545.3	53.14	.6758	171.3	7.005
SDev	1.282	4.33	.1373	.6907	15.36	1.544
%RSD	.2198	.7941	.2583	102.2	8.962	22.04

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	4.0734	9.8378	8.8433	28.39	319.1	.82267
SDev	.7881	1.516	5.5754	2.544	3.196	1.801
%RSD	19.348	15.41	63.046	8.961	1.002	218.92

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	20.94	26.95	13.347	8.0861	8.5097	1.8585
SDev	.0064	.0119	.71211	1.9174	4.6217	1.1258
%RSD	.0305	.044	5.3355	23.712	54.312	60.578

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	8.9619	8.7840	5.0000	17796.2
SDev	3.5104	6.6063	0	37.6189
%RSD	39.17	75.208	0	.21138

Method: TOTAL Sample Name: KJKWT Operator: KLC
Run Time: 03/14/08 16:28 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.1477	17340.	1.0241	3.560	81.39	.9386
SDev	.193	18.95	.11344	.7677	.128	.003
%RSD	130.6	.1093	11.077	21.56	.1572	.3161

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	753.6	-.0370	6.075	16.24	3.465	5339.
SDev	2.273	.0496	.2854	.4932	.1264	13.4
%RSD	.3016	133.9	4.698	3.037	3.648	.2509

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	601.9	576.1	83.22	1.333	-45.83	9.886
SDev	2.098	1.137	.0691	.6922	.1835	.0874
%RSD	.3486	.1973	.083	51.93	.4004	.8838

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-2.4016	9.4753	1.2690	32.77	341.3	2.5142
SDev	2.122	.67031	1.1511	.7731	.7759	9.1164
%RSD	88.358	7.0743	90.71	2.359	.2273	362.6

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	24.04	31.15	9.8966	9.2650	-4.9134	-1.1475
SDev	.2642	.1702	.98023	1.4943	.07782	3.1425
%RSD	1.099	.5463	9.9048	16.129	1.5839	273.85

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	.22555	1.7900	5.0000	17760.5
SDev	.32614	1.8887	0	27.8603
%RSD	144.6	105.51	0	.15686

Method: TOTAL Sample Name: KJKWW Operator: KLC
Run Time: 03/14/08 16:32 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.0759	16360.	.04388	1.592	102.8	1.037
SDev	.2049	15.81	3.3197	1.089	.1928	.0317
%RSD	269.9	.0966	7565.2	68.44	.1876	3.059

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	726.3	.0656	4.968	16.88	3.506	5483.
SDev	3.607	.0812	.2008	.9433	1.014	18.08
%RSD	.4966	123.9	4.041	5.588	28.93	.3298

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	620.2	547.1	54.38	-.7766	473.2	8.753
SDev	11.13	9.801	.2414	.4602	215.5	.8496
%RSD	1.795	1.791	.444	59.25	45.55	9.706

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.2586	8.1594	-2.8790	20.88	295.0	2.4696
SDev	2.3609	.44456	3.549	6.999	.5589	7.8931
%RSD	104.53	5.4485	123.27	33.53	.1894	319.61

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	27.84	29.56	12.832	5.8268	4.6604	1.0596
SDev	.816	.1403	3.9132	2.6202	.71711	3.1815
%RSD	2.931	.4744	30.496	44.968	15.388	300.26

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	.64123	-4.6364	5.0000	17716.2
SDev	2.5391	6.5885	0	9.89949
%RSD	395.97	142.1	0	.05587

Method: TOTAL Sample Name: KJKWWL Operator: KLC
Run Time: 03/14/08 16:37 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.0511	3413.	.95682	5.770	21.44	.2738
SDev	.6739	50.26	.15882	.2679	.3621	.0026
%RSD	1320	1.472	16.599	4.643	1.689	.9582

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	240.7	.1227	1.072	3.843	.2989	1144.
SDev	3.781	.0345	.3094	.5346	.1626	14.61
%RSD	1.571	28.12	28.86	13.91	54.39	1.277

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	278.2	121.4	11.16	1.449	101.2	1.955
SDev	7.704	.9122	.2201	.8898	139.1	.8141
%RSD	2.769	.7512	1.973	61.41	137.4	41.65

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.46688	2.7664	-.30842	8.909	61.32	1.9276
SDev	1.3681	.4185	1.6801	1.307	.6691	4.1466
%RSD	293.02	15.128	544.74	14.67	1.091	215.12

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	6.524	6.974	1.7163	3.2907	-.96995	-.21572
SDev	.7228	.0412	.00446	.62521	.77038	1.6665
%RSD	11.08	.591	.26011	19	79.425	772.48

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	-1.4775	.27525	5.0000	17745.2
SDev	.63488	2.202	0	228.819
%RSD	42.969	799.98	0	1.28947

Method: TOTAL Sample Name: KJKH3B 8074016 Operator: KLC
Run Time: 03/14/08 16:43 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.1813	16.17	-.20715	6.068	.9186	.1027
SDev	.4996	1.343	.11655	.7985	.1277	.0013
%RSD	275.6	8.309	56.264	13.16	13.9	1.313

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	340.0	.1976	.1489	-.6846	.0443	H140.9
SDev	1.077	.097	.5181	.1578	.5328	4.35
%RSD	.3167	49.07	347.9	23.05	1202	3.087

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	167.8	50.35	.8157	-.5023	-268.3	-.2604
SDev	.7397	.0767	.0014	.0005	6.119	.7895
%RSD	.4407	.1524	.1718	.1031	2.281	303.2

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.4380	.14500	-1.2533	1.682	.1732	2.6966
SDev	2.8264	1.3723	.74035	1.624	.1216	3.1138
%RSD	115.93	946.38	59.073	96.53	70.22	115.47

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.5112	4.440	-2.0904	1.2610	2.6488	2.3327
SDev	.4195	.03	1.1361	1.4903	1.5382	5.0054
%RSD	82.05	.6752	54.347	118.18	58.069	214.58

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	-1.7457	-1.0075	5.0000	17590.2
SDev	2.0793	.0719	0	25.4558
%RSD	119.11	7.1368	0	.14471

Method: TOTAL Sample Name: CCV Operator: KLC
Run Time: 03/14/08 16:47 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	990.2	24320.	492.90	4810.	2045.	2037.
SDev	11.82	327.3	7.3554	46.2	27.89	26.57
%RSD	1.194	1.345	1.4923	.9605	1.364	1.304

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	50630.	507.8	2024.	1996.	1979.	24490.
SDev	626.1	6.582	26.15	26.98	26.63	292.8
%RSD	1.236	1.296	1.292	1.352	1.346	1.196

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	50290.	48930.	2096.	1990.	47180.	2031.
SDev	630.6	592.1	24.91	25.08	742.6	27.13
%RSD	1.254	1.21	1.188	1.26	1.574	1.336

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	498.16	506.94	492.38	5015.	4943.	1005.5
SDev	8.1914	7.4225	.68796	70.96	64.63	14.656
%RSD	1.6443	1.4642	.13972	1.415	1.308	1.4576

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1985.	2007.	510.98	504.92	492.01	501.24
SDev	25.75	26.06	13.054	4.611	5.7133	9.4286
%RSD	1.297	1.298	2.5547	.91321	1.1612	1.8811

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	498.71	489.21	5.0000	17252.8
SDev	7.3638	2.6449	0	231.648
%RSD	1.4766	.54064	0	1.34266

Method: TOTAL Sample Name: CCB Operator: KLC
Run Time: 03/14/08 16:54 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.1936	33.57	-.13762	18.32	.0864	.0825
SDev	.8153	2.569	.93508	2.406	.1229	.0213
%RSD	421.1	7.653	679.47	13.13	142.3	25.8

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	198.1	.0954	.0340	.4759	-.4040	10.61
SDev	2.684	.1874	.0464	.873	.1075	1.395
%RSD	1.355	196.5	136.7	183.4	26.62	13.15

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	181.6	7.998	.0772	1.146	.7338	1.121
SDev	5.519	.56	.0218	.9545	41.66	1.315
%RSD	3.038	7.001	28.25	83.28	5677	117.3

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	3.1375	1.7452	-1.6366	3.920	.5154	5.6574
SDev	2.063	.65937	1.208	.8589	.3598	5.3495
%RSD	65.752	37.783	73.809	21.91	69.82	94.559

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.5404	2.670	3.2504	.99367	-.61537	5.0112
SDev	.4535	.1847	5.3293	3.6493	1.4737	3.8287
%RSD	83.92	6.918	163.96	367.25	239.49	76.403

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	1.0324	-2.9692	5.0000	17550.3
SDev	5.9855	1.1772	0	223.587
%RSD	579.79	39.647	0	1.27397

Method: TOTAL Sample Name: KJKH3C Operator: KLC
Run Time: 03/14/08 16:58 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	51.78	1800.	1787.0	884.6	1896.	46.71
SDev	4.657	26.22	20.071	11.91	5.392	.4268
%RSD	8.994	1.457	1.1231	1.346	.2843	.9138

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	L398.0	47.88	467.5	182.2	228.4	1075.
SDev	8.44	1.471	8.184	4.503	4.078	92.29
%RSD	2.12	3.072	1.751	2.471	1.785	8.587

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	L215.7	L81.57	477.9	894.6	L192.9	469.7
SDev	58.61	28.97	2.848	13.11	1192	11.82
%RSD	27.18	35.52	.5959	1.466	617.8	2.517

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1827.6	459.36	449.63	1816.	892.4	1813.9
SDev	5.376	1.5683	.50801	32.87	3.49	20.493
%RSD	.29414	.3414	.11298	1.81	.3911	1.1298

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	450.0	474.3	457.48	460.29	1795.2	1843.8
SDev	5.811	2.893	2.3351	1.1854	6.2789	4.9252
%RSD	1.292	.6099	.51041	.25754	.34975	.26711

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	441.53	453.67	5.0000	17714.1
SDev	.34925	.93601	0	45.6788
%RSD	.0791	.20632	0	.25786

Method: TOTAL Sample Name: KJHPV Operator: KLC
Run Time: 03/14/08 17:03 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.4497	855.2	1.6400	23.41	18.18	.2383
SDev	.5129	.51	.05966	.6388	.1215	.011
%RSD	114.1	.0596	3.6381	2.729	.6682	4.599

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	16610.	.4179	.7118	2394.	2.479	256.6
SDev	63.81	.0296	.3607	6.625	.2546	3.64
%RSD	.3842	7.094	50.68	.2767	10.27	1.419

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1582.	3439.	128.7	1.971	36220.	8.711
SDev	3.223	20.65	.4265	.2337	73.48	.3578
%RSD	.2037	.6003	.3313	11.86	.2028	4.108

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	3.6466	-.28120	-5.6768	5.201	1.727	3.3029
SDev	2.5234	1.2164	5.0772	2.529	.3657	.6191
%RSD	69.198	432.56	89.439	48.62	21.18	18.745

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.242	231.5	1.8829	-1.3616	6.6601	2.1421
SDev	.076	.8778	2.4694	.59086	1.5552	3.0067
%RSD	6.12	.3791	131.15	43.393	23.35	140.36

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	-6.6412	-5.1953	5.0000	17507.3
SDev	1.0367	7.0945	0	4.94974
%RSD	15.61	136.56	0	.02827

Method: TOTAL Sample Name: KJHQR Operator: KLC
Run Time: 03/14/08 17:08 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	5.906	216.2	4.9345	626.5	138.0	.1536
SDev	.2837	.2579	.44392	.1148	.0408	.0063
%RSD	4.803	.1193	8.9964	.0183	.0296	4.073

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	26250.	2.032	18.00	791.9	13230.	1143.
SDev	20.19	.0426	.3322	.4261	11.5	16.21
%RSD	.0769	2.097	1.845	.0538	.087	1.418

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	390500.	3392.	226.8	61.54	H1160e3	449.5
SDev	655.8	4.847	.3019	.5369	202.7	.3571
%RSD	.1679	.1429	.1331	.8724	.0175	.0794

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	8.5619	32.967	13.693	6.658	25.75	12.050
SDev	.51474	.37644	.01396	2.445	4.194	3.1669
%RSD	6.012	1.1419	.10201	36.73	16.28	26.281

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.884	332.6	34.084	32.410	21.674	2.0155
SDev	.2848	.4452	.03126	.54878	1.3899	1.4656
%RSD	15.12	.1339	.09173	1.6933	6.4126	72.719

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	11.168	14.954	5.0000	16368.2
SDev	2.3888	1.1717	0	10.1826
%RSD	21.39	7.8353	0	.0622

Method: TOTAL Sample Name: KJHVV Operator: KLC
Run Time: 03/14/08 17:12 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.2659	26.48	.31809	60.27	79.66	.1359
SDev	.415	.0996	1.305	1.087	.2034	.0019
%RSD	156.1	.3763	410.25	1.804	.2553	1.435

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	137900.	.2394	6.838	3.412	3.622	4603.
SDev	104.9	.0589	.106	.1467	.7607	1.465
%RSD	.0761	24.61	1.551	4.3	21	.0318

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2892.	42040.	174.8	1.355	12560.	9.326
SDev	5.995	43.78	.0872	1.626	94.86	1.348
%RSD	.2073	.1042	.0498	120.1	.7554	14.46

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.3180	.01143	.94460	3.357	-1.295	8.7013
SDev	2.7167	.16727	.08522	.0866	.0031	.4774
%RSD	206.13	1463	9.0226	2.578	.2364	5.4865

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.4497	16.95	-3.3261	1.6777	4.2400	-.14082
SDev	.3444	.2711	1.2528	.37465	2.9312	2.6096
%RSD	76.58	1.6	37.665	22.331	69.133	1853.1

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	1.1343	.84991	5.0000	17498.8
SDev	1.9413	.84141	0	38.75
%RSD	171.15	99	0	.22144

Method: TOTAL Sample Name: KJHVVS Operator: KLC
Run Time: 03/14/08 17:17 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	54.66	1982.	1966.8	1025.	2189.	51.31
SDev	.1989	2.601	.96692	2.35	2.173	.1991
%RSD	.364	.1312	.04916	.2292	.0993	.3881

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	134300.	49.61	505.7	198.8	251.6	5591.
SDev	579	.2748	.5726	.4429	.5388	24.15
%RSD	.431	.554	.1132	.2228	.2142	.432

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2754.	40920.	693.0	978.7	11770.	504.6
SDev	5.378	167.3	2.777	8.326	38.05	5.063
%RSD	.1953	.4087	.4007	.8507	.3232	1.003

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2014.4	490.04	496.48	1952.	979.0	1936.2
SDev	2.2565	.76668	.60736	14.12	3.297	.44772
%RSD	.11202	.15645	.12233	.7234	.3367	.02312

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	491.6	511.6	495.63	487.26	1993.6	2024.7
SDev	1.921	1.495	1.0742	.61315	1.0518	2.8579
%RSD	.3906	.2922	.21673	.12583	.05275	.14115

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	498.89	495.28	5.0000	17518.4
SDev	2.2349	.20521	0	21.7794
%RSD	.44798	.04143	0	.12432

Method: TOTAL Sample Name: KJHVVD Operator: KLC
Run Time: 03/14/08 17:21 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	56.16	2058.	2050.8	1061.	2266.	53.64
SDev	.2295	1.534	1.8092	.41	.1271	.0323
%RSD	.4087	.0746	.08821	.0386	.0056	.0601

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	138700.	52.11	528.7	207.1	258.6	5720.
SDev	181.6	.1336	.4614	.6751	.4336	9.776
%RSD	.131	.2563	.0873	.326	.1677	.1709

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2766.	42250.	721.2	1024.	11950.	528.0
SDev	.7585	58.4	.8404	1.915	34.09	1.254
%RSD	.0274	.1382	.1165	.187	.2852	.2375

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2086.5	513.78	520.26	2054.	1020.	2042.7
SDev	1.1907	1.3497	3.221	.1799	.5758	6.4467
%RSD	.05706	.2627	.6191	.0088	.0565	.31559

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	512.7	532.3	516.25	512.55	2061.5	2098.9
SDev	.0492	.1329	.82751	2.4367	4.2268	.32506
%RSD	.0096	.025	.16029	.4754	.20503	.01548

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	515.87	522.46	5.0000	17354.9
SDev	3.9764	2.8438	0	24.467
%RSD	.77082	.54432	0	.14098

Method: TOTAL Sample Name: KJHREF Operator: KLC
Run Time: 03/14/08 17:26 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.2515	21.58	2.3546	29.57	84.18	.0989
SDev	.2625	.0138	.55622	.4993	.1028	.01
%RSD	104.4	.0638	23.623	1.689	.1222	10.07

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	64590.	.0382	.2307	-.0004	-.4031	1452.
SDev	129.4	.2727	.3215	.1562	.1982	1.601
%RSD	.2004	713.7	139.4	39040	49.16	.1103

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1474.	19760.	237.9	2.150	2431.	3.464
SDev	.9581	40.34	.4269	.4685	113.1	1.301
%RSD	.065	.2041	.1794	21.79	4.654	37.57

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.8859	-.66076	-.37556	4.339	-.6038	12.682
SDev	3.7508	.10079	2.6094	.4921	.0005	8.1561
%RSD	198.88	15.254	694.8	11.34	.0897	64.313

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.2356	20.73	-3.0127	.51341	2.4075	1.6256
SDev	.6127	.0928	1.5731	.93646	2.2853	4.4825
%RSD	260.1	.4477	52.215	182.4	94.923	275.75

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	.85625	-.99054	5.0000	17495.1
SDev	1.5966	3.115	0	13.7181
%RSD	186.46	314.48	0	.07841

Method: TOTAL Sample Name: KJHTAF Operator: KLC
Run Time: 03/14/08 17:31 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.1810	19.71	.47289	10.97	.2356	.1112
SDev	.4246	.8233	.73275	.4843	.0004	.0116
%RSD	234.6	4.177	154.95	4.415	.1594	10.4

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	227.3	.2484	.6562	-.4850	.4210	36.51
SDev	1.276	.1633	.1199	.5654	.3208	2.756
%RSD	.5613	65.75	18.27	116.6	76.19	7.55

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	174.7	11.76	1.593	1.630	-357.1	1.568
SDev	4.775	1.377	.0265	.2299	59.55	.361
%RSD	2.734	11.71	1.666	14.1	16.68	23.03

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.6076	1.1604	-2.3593	4.785	.0872	9.4912
SDev	.19095	.35951	1.8244	2.603	0	.35332
%RSD	7.3228	30.982	77.326	54.4	0	3.7227

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.5965	4.504	-.27875	1.8789	6.5693	.62971
SDev	.1523	.0526	2.0231	.47106	3.8509	2.2089
%RSD	25.54	1.169	725.78	25.071	58.62	350.77

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	-1.3711	-2.8527	5.0000	17571
SDev	.96909	3.219	0	15.8395
%RSD	70.681	112.84	0	.09014

Method: TOTAL Sample Name: KJGNL Operator: KLC
Run Time: 03/14/08 17:35 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.083	40.93	.71825	191.2	79.99	.1782
SDev	1.679	4.778	1.2746	2.603	.0829	.0861
%RSD	155	11.67	177.46	1.361	.1036	48.34

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	142700.	.4424	1.517	1.358	3.815	115.2
SDev	36.61	.3968	1.824	.9169	2.576	8.294
%RSD	.0257	89.69	120.3	67.54	67.52	7.196

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	5020.	39910.	5.252	4.006	98780.	4.387
SDev	1.36	34.93	.0526	1.638	173.4	2.396
%RSD	.0271	.0875	1.002	40.9	.1756	54.62

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.3013	.42879	.85677	.8721	-1.313	7.8152
SDev	.7027	.39518	4.9639	1.157	.993	11.432
%RSD	54.001	92.161	579.37	132.7	75.62	146.28

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.1374	60.98	6.8809	-2.7924	16.845	-6.4591
SDev	.4243	.4948	13.84	6.3171	14.082	8.0838
%RSD	308.7	.8114	201.14	226.22	83.594	125.15

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	6.2531	-1.8373	5.0000	17282.2
SDev	6.8252	4.0346	0	46.669
%RSD	109.15	219.59	0	.27004

Method: TOTAL Sample Name: KJGRW Operator: KLC
Run Time: 03/14/08 17:40 Filename: I50312A
Mode: CONC Type: S Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.040	9444.	2.8143	H135800.	141.6	.1374
SDev	.0446	15.71	2.4429	136.8	.196	.0115
%RSD	4.286	.1663	86.803	.1007	.1384	8.36

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	53310.	23.18	12.15	32.23	874.2	12900.
SDev	89.81	.0848	.0799	.842	.1186	6.88
%RSD	.1685	.3656	.6576	2.613	.0136	.0533

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	72780.	15690.	914.8	214.6	458700.	48.09
SDev	217.5	7.82	1.392	1.226	1727	.5077
%RSD	.2989	.0499	.1521	.5713	.3764	1.056

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	14.121	272.98	10.152	1077.	15.97	7.3642
SDev	5.4594	.70212	1.9524	2.989	.4964	6.0984
%RSD	38.661	.2572	19.231	.2774	3.109	82.812

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	12.12	3051.	275.20	271.88	29.412	6.4873
SDev	.1929	5.228	2.4455	2.2736	13.206	1.5917
%RSD	1.591	.1714	.88862	.83625	44.901	24.536

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	9.5696	10.443	5.0000	17130
SDev	.5019	3.1776	0	2.82842
%RSD	5.2448	30.428	0	.01651

Method: TOTAL Sample Name: CCV Operator: KLC
Run Time: 03/14/08 17:46 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	993.6	24420.	495.72	4990.	2052.	2032.
SDev	1.559	15.25	2.4616	67.4	3.495	1.77
%RSD	.1569	.0624	.49658	1.351	.1703	.0871

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	50350.	505.6	2018.	1989.	1989.	24390.
SDev	131	1.456	2.349	2.631	5.819	55.34
%RSD	.2602	.2879	.1164	.1323	.2926	.2269

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	50270.	48870.	2107.	1985.	47080.	2017.
SDev	94.01	107.8	3.179	5.21	19.11	8.836
%RSD	.187	.2205	.1509	.2625	.0406	.438

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	497.73	505.25	494.80	5003.	4941.	997.62
SDev	4.6428	3.3006	2.9963	15.34	.9847	8.9576
%RSD	.9328	.65325	.60554	.3065	.0199	.89789

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1982.	2007.	508.68	503.54	492.20	500.49
SDev	3.222	.4463	1.2993	5.5972	11.929	1.0052
%RSD	.1626	.0222	.25543	1.1116	2.4236	.20084

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	498.96	492.73	5.0000	17398.8
SDev	2.7549	5.8675	0	66.1849
%RSD	.55212	1.1908	0	.38039

Method: TOTAL Sample Name: CCB Operator: KLC
Run Time: 03/14/08 17:52 Filename: I50312A
Mode: CONC Type: Q Corr. Factor: 1.00000
Lab ID.: N.CANTON Cust. Smpl. ID.: Cust. ID.:

Elems	Ag	Al	As	B	Ba	Be
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.2963	35.49	.67914	Q101.0	.0884	.1097
SDev	.2516	1.144	2.8971	.6216	.0427	.001
%RSD	84.89	3.223	426.57	.6157	48.28	.8789

Elems	Ca	Cd	Co	Cr	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	198.5	.1025	.0043	.2120	-.1664	9.962
SDev	.8681	.0012	.3206	.4124	.2938	2.322
%RSD	.4373	1.192	7541	194.5	176.5	23.3

Elems	K	Mg	Mn	Mo	Na	Ni
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	174.4	5.253	.0874	.8189	-27.23	-.4633
SDev	7.002	4.67	.063	.0024	203.7	.3612
%RSD	4.015	88.9	72.17	.2883	748.2	77.97

Elems	Se	Pb	Sb	Sn	Ti	Tl
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.7114	1.9709	-.79163	8.387	.8655	1.1486
SDev	1.2418	.32034	1.2359	.3165	.1212	1.7423
%RSD	45.8	16.253	156.12	3.774	14	151.68

Elems	V	Zn	2203\1	2203\2	1960\1	1960\2
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.4365	3.032	1.0349	2.4382	3.0067	2.5640
SDev	.6141	.0311	1.076	1.0174	3.267	.23072
%RSD	140.7	1.027	103.97	41.729	108.66	8.9989

Elems	2068/2	2068/1	Y_3710	*Y
Units	ppb	ppb	ppb	
Avge	-.46732	-.95354	5.0000	17471.3
SDev	3.2192	3.4601	0	24.7487
%RSD	688.86	362.87	0	.14165

TestAmerica
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MISCELLANEOUS DATA

North Canton

Metals Internal Chain of Custody

Date Prepared: 03/14/08 **Prep Analyst:** Lisa McGall

Laboratory Sample ID			Lab ID	Method	Analysis Date	Analyst	Instrument
A8C130254	1		KJHVV	MCAWW 200.7	03/14/08	Brian Davies	I5
A8C130254	1	S	KJHVV	MCAWW 200.7	03/14/08	Brian Davies	I5
A8C130254	1	D	KJHVV	MCAWW 200.7	03/14/08	Brian Davies	I5
A8C130254	1		KJHVV	MCAWW 245.1	03/18/08	Michaelyn List	H4
A8C130254	1	S	KJHVV	MCAWW 245.1	03/18/08	Michaelyn List	H4
A8C130254	1	D	KJHVV	MCAWW 245.1	03/18/08	Michaelyn List	H4
A8C130254	1		KJHVV F	SW846 6010B	03/14/08	Brian Davies	I5
A8C130254	1	S	KJHVV F	SW846 6010B	03/14/08	Brian Davies	I5
A8C130254	1	D	KJHVV F	SW846 6010B	03/14/08	Brian Davies	I5
A8C130254	1		KJHVV F	SW846 7470A	03/18/08	Michaelyn List	H4
A8C130254	1	S	KJHVV F	SW846 7470A	03/18/08	Michaelyn List	H4
A8C130254	1	D	KJHVV F	SW846 7470A	03/18/08	Michaelyn List	H4

U - Unfiltered F - Filtered T - TCLP L - SPLP East W - SPLP West

METALS PREPARATION SUMMARY

Preparation Type	Matrix	Amount of Standard added to LCS & MS/MSD		Initial Sample Vol/Wt	Final Sample Volume
		Amount	Standard name		
ICP	water	1 mL 1 mL 1.0 mL	Ag ICP-1 ICP-2A	50 mL	50 mL
ICPMS	water	0.5ml 0.5ml	ICPMS-1 ICPMS-2	50 mL	50 mL
Hg - CVAA	water	5 mL (LCS) 1 mL (MS/MSD)	HG-1 HG-1	100 mL	100 mL
Hg - CVAF (low level)	water	0.2 mL (LCS/MS/MSD)	HG ICAL	40 ml	40 ml
ICP	solid	2 mL 2 mL 2 mL	Ag ICP-1 ICP-2A	1.00 +/- .02g	100 mL
ICPMS	solid	1ml 1ml	ICPMS-1 ICPMS-2	1.00 +/- .02g	100ml
Hg - CVAA	solid	5 mL (LCS) 1 mL (MS/MSD)	HG-1 HG-1	0.60 +/- .01g	100 mL
ICP	TCLP	1 mL (LCS) 1 mL(LCS)	Ag ICP-1	50 mL	50 mL
ICP	TCLP	0.5 mL(MS/MSD)	TCLP Spike I RCRA	50 mL	50 mL
ICP	TCLP	1 mL(MS/MSD)	TCLP Spike II Non-RCRA	50 mL	50 mL
Hg - CVAA	TCLP	5 mL (LCS) 5 mL (MS/MSD)	HG-1 HG-1	100 mL	100 mL

Mercury Standards Preparation				
Final Concentration		Spiking Standard		
		Amount	Standard	Concentration
Calibration Standards:				
0.0002 ppm		0.2 mL	HG-2	0.1 ppm
0.0005 ppm		0.5 mL	HG-2	0.1 ppm
0.001 ppm		1 mL	HG-2	0.1 ppm
0.005 ppm		5 mL	HG-2	0.1 ppm
0.010 ppm		10 mL	HG-2	0.1 ppm
ICV Preparation				
0.0025 ppm		2.5 mL	HG-1	0.1 ppm
CCV Preparation:				
0.005 ppm		5 mL	HG-2	0.1 ppm

Low Level Mercury Standards Preparation				
Final Concentration		Spiking Standard		
		Amount	Standard	Concentration
Calibration Standards:				
0.5 ppt		20 ul	HG ICAL	1.0 ppb
1.0 ppt		40 ul	HG ICAL	1.0 ppb
2 ppt		80 ul	HG ICAL	1.0 ppb
5 ppt		200 ul	HG ICAL	1.0 ppb
10 ppt		400 ul	HG ICAL	1.0 ppb
25 ppt		1000 ul	HG ICAL	1.0 ppb
ICV Preparation				
5 ppt		200 ul	HG ICV	1.0 ppb
CCV Preparation:				
5 ppt		200 ul	HG ICAL	1.0 ppb

SPIKING STANDARD DEFINITIONS

Elements	Ag	ICP-1	ICP-2A	ICPMS-1	ICPMS-2	HG-1	HG-2	HG ICAL	HG ICV	TCLP Spike I	TCLP Spike II
Ag	2.5 ppm			10ppm						100 ppm	
Al		100 ppm			100ppm						100 ppm
As		100 ppm		10ppm						500 ppm	
Ba		100 ppm		10ppm						5000 ppm	
Be		2.5 ppm		10ppm							2.5 ppm
Cd		2.5 ppm		10ppm						100 ppm	
Ca			2500 ppm		100ppm						
Co		25 ppm		10ppm							25 ppm
Cr		10 ppm		10ppm						500 ppm	
Cu		12.5 ppm		10ppm							12.5 ppm
Fe		50 ppm			100ppm						50 ppm
Hg						0.1 ppm	0.1 ppm	1.0 ppb	1.0 ppb		
K			2500 ppm		100ppm						
Mg			2500 ppm		100ppm						
Mn		25 ppm		10ppm							25 ppm
Na			2500 ppm		100ppm						
Ni		25 ppm		10ppm							25 ppm
Pb		25 ppm		10ppm						500 ppm	
Sb		25 ppm		10ppm							25 ppm
Se		100 ppm		10ppm						100 ppm	
Tl		100 ppm		10ppm							100 ppm
V		25 ppm		10ppm							25 ppm
Zn		25 ppm		10ppm							25 ppm
B		50 ppm		10ppm							50 ppm
Sr		50 ppm		10ppm							
Mo		50 ppm		10ppm							50 ppm
W		50 ppm		10ppm							
Sn		100 ppm		10ppm							100 ppm
Zr		50 ppm		10ppm							
Ti		50 ppm		10ppm							

TestAmerica North Canton
Revised 4/5/02
N:\Metals\Preplog.xls

DATE: 3-14-08

METALS PREPARATION REAGENTS/STANDARDS

Reagents and Standards listed on this form are used for the entire day's prep batches unless otherwise noted on the individual prep log.

REAGENT NAME	REAGENT NUMBER
1:1 HNO_3 (nitric acid)	8MR190
1:1 HCl (hydrochloric acid)	8MR151
HNO_3 (nitric acid)	8MR184
HCl (hydrochloric acid)	8MR185
$KMnO_4$ (potassium permanganate)	8MR186
$K_2S_2O_8$ (potassium persulfate)	8MR187
H_2O_2 (hydrogen peroxide)	8MR95
H_2SO_4 (sulfuric acid)	8MR94
HCl/HNO_3 (aqua regia)	8MR191

STANDARD NAME	STANDARD/LOT NUMBER
ICP-1	8C135
ICP-2A	8C136
RCRA	HPS 0733328
non-RCRA	HPS 0712210
Ag	8C122
Hg	8C134
ICPMS-1	HPS0736509-A + HPS0736510-B
ICPMS-2	HPS 0721205

Waters

Hg time in the water bath 8:00 > 8074021, 8074022
Hg time out of the water bath 10:00

Waters
In 2:00
Out 4:00

Solids

Hg time in the water bath 1:30
Hg time out of the water bath 2:00

Times listed are for the waters and solids for that day unless otherwise noted.

Daily Batch Level II Michaly Lust

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END OF REPORT

April 04, 2008

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000591.0001.0001
Laboratory: TestAmerica - North Canton
Laboratory submittal: 8C13254
Sample date: 2008-03-11
Report received by Enovis: 2008-03-26
Initial Data Verification completed by Enovis: 2008-04-04

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

1 Water sample was analyzed for GCMS VOC, GCMS SVOC, PCB, Wisconsin GRO, Wisconsin DRO and Metals parameters and 1 Trip Blank for GCMS VOC parameters. Refer to the attached Sampling and Analysis Summary table.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Equipment blank associated with this sample event was reported in submittal A8C130246. Equipment Blank results were reported above the MDL. Refer to the minor QC exception listed below.

Analytical results reported between the MDL and RDL are flagged J and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the Enovis CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The following minor QC exceptions or missing information were noted:

GCMS VOC LCS for 4-Methyl-2-pentanone, trans-1,3-Dichloropropene and 1,1,2,2-Tetrachloroethane recovered low outside of the labs acceptance window in QC batch 8079081. The LCSD recovered in control. The LCS/LCSD RPD was in
control. No qualification required.

GCMS VOC LCSD for Tetrachloroethene, 1,1,2-Trichloro-1,2,2,-trifluoroethane and Trichlorofluoromethane recovered high outside of the labs acceptance window in QC batch 8079081. The LCS recovered in control. The LCS.LCSD RPD was in control. No qualification required.

GCMS VOC MS/MSD for 2-Hexanone recovered low outside of the labs acceptance window in QC batch 8079081. The sample was project specific A8C130254-001. The sample result was reported non-detect and is flagged UJ and considered estimated.

GCMS VOC MS/MSD for 1,1,2-Trichloro-1,2,2-trifluoroethane recovered high outside of the labs acceptance window in QC batch 8079081. The sample was project specific A8C130254-001. The sample result was reported non-detect. No qualification required.

GCMS VOC MS for cis-1,3-Dichloropropene, 1,1-Dichloroethane, 1,1,2,2-Tetrachloroethane, Vinyl chloride, 1,2-Dichloropropane and 4-Methyl-2-pentanone recovered low outside of the labs acceptance window in QC batch 8079081. The MSD recovered in control. The MS/MSD RPD was in control. The sample was project specific A8C130254-001. No qualification required.

GCMS VOC MSD for Tetrachloroethene recovered slightly (1%) high outside of the labs acceptance window in QC batch 8079081. The MS recovered in control. The MS/MSD RPD was in control. The sample was project specific A8C130254-001. No qualification required.

GCMS VOC Method Blank for Acetone and 1,2,3-Trichlorobenzene were reported between the MDL and RDL in QC batch 8079081. The Acetone concentration reported in the Trip Blank was higher than the method blank. The associated field sample result for A8C130254-001 was reported non-detect. No qualification required. The 1,2,3-Trichlorobenzene concentration in the Trip Blank was slightly less than the method blank concentration. The associated field sample result for A8C130254-001 was reported non-detect. No qualification required.

GCMS VOC Trip Blank reported Methyl ethyl ketone, Methylcyclohexane and Naphthalene results between the MDL and RDL. The associated results for A8C130254-001 were reported non-detect. No qualification required.

GCMS SVOC Surrogates for the method blank in QC batch 8074037 did not recover. The lab re-extract and re-analyzed the associated samples in QC batch 8079104. The sample surrogates recovered in control in both the initial and re-extracts. The lab reported both sets of analyses. The re-extraction occurred 1 day outside of hold time. Enovis recommends that the results from the initial sample analysis be considered acceptable. The re-extract results are flagged R to indicate which results to report.

GCMS SVOC LCS for 1,1-Biphenyl recovered slightly (3%) low outside of the labs acceptance window in QC batch 8074037. The project specific MS/MSD for A8C130254-001 recovered in control. No qualification required.

GCMS SVOC LCS for Caprolactam recovered low outside of the labs acceptance window in QC batch 8079104. The associated sample results were reported non-detect. The sample results associated with this QC batch are not being reported. If the results from the re-extract were reported then the result would be flagged UJ and considered estimated.

GCMS VOC Equipment Blank for Acetone and Methyl ethyl ketone were reported between the MDL and RDL. The associated sample results for A8C130256-001 were reported non-detect. No qualification required.

GCMS SVOC MS/MSD for Caprolactam recovered low outside of the labs acceptance window in QC batch 8079104. The associated sample results were reported non-detect. The sample results associated with this QC batch are not being reported. If the results from the re-extract were reported then the result would be flagged UJ and considered estimated.

GCMS SVOC MS/MSD RPD for bis(2-Chloroethyl)ether was above the labs acceptance limit in QC batch 8074037. Both the MS and MSD recovered in control. No qualification required.

GCMS SVOC MS/MSD RPD for 4-Chloroanaline was above the labs acceptance limit in QC batch 8079104. Both the MS and MSD recovered in control. No qualification required.

GCMS SVOC Method Blank for bis(2-Ethylhexyl)phthalate was reported between the MDL and RDL in QC batch 8074037. The associated result for A8C130254-001 was reported between the MDL and RDL and less than 10x the method blank concentration and is flagged UB and considered non-detect at the RDL.

PCB Equipment Blank reported a concentration between the MDL and RDL for PCB-1260. The associated sample result for A8C130256-001 was reported non-detect. No qualification required.

DRO Surrogate recovered high outside of the labs acceptance window in samples A8C130254-001 and the associated method blank. The surrogate recovery for this method is only advisory. Qualification is not based on surrogate recovery. The method blank reported a concentration between the MDL and RDL. The Equipment Blank reported a concentration slightly higher than the method blank. The result for A8C130254-001 was less than 5x the Equipment Blank concentration and is flagged UB and considered non-detect at the RDL.

Metals Method Blank for Barium was reported between the MDL and RDL in QC batch 8074016. The associated sample result for A8C130254-001 was reported between the MDL and RDL and greater than 10x the method blank concentration and is flagged J as an estimated value. No further qualification required.

Evaluation of blank contamination includes directions on the interpretation of the affected analytical results; however it is beyond the scope of Enovis verification to apply changes to the result and quantitation limit in the Ford Master Analytical database. The end data user must implement any corrections to the electronic data downloaded from the Enovis CLMS based on project requirements.

Enovis does not have enough information regarding the nature and consistency of the investigative field samples to apply the valid qualifiers to additional samples beyond the parent sample for the MS/MSD outlier. The end data user must determine whether or not to extend qualification based on knowledge of the investigative field samples and project requirements.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Tim Abston

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
<	Less than
>	Greater than
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JB	The analyte / compound was detected in the associated blank between the MDL and the laboratory`s reporting detection limit. For Inorganic methods the sample concentration was < 10x the blank concentration and is considered estimated. For Organic methods the sample concentration was < 5x or 10x for common laboratory contaminates, the blank concentration and is considered estimated.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 8C13254

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Polychlorinated Biphenyls by GCECD	Wisconsin GRO Method	Wisconsin DRO Method	ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)	Comment
A8C130254001	AMW-05B(20080311)	3/11/2008	11:15:00	X	X	X	X	X	X	X	MS/MSD
A8C130254002	TB-001(20080311)	3/11/2008	12:00:00	X							

Qualified Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 8C13254

Analyte	Cas No.	Sample Name:	AMW-05B(20080311)				AMW-05B(20080311)R2			
		Lab Sample ID:	A8C130254001				A8C130254001			
		Sample Date:	3/11/2008				3/11/2008			
			Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC										
OSW-8260B										
2-Hexanone	591-78-6		ND	10	ug/l	UJ				
GC/MS SVOC										
OSW-8270C										
1,1-Biphenyl	92-52-4						ND	10	ug/l	R
2,2-oxybis(1-Chloropropane)	108-60-1						ND	10	ug/l	R
2,4,5-Trichlorophenol	95-95-4						ND	10	ug/l	R
2,4,6-Trichlorophenol	88-06-2						ND	10	ug/l	R
2,4-Dichlorophenol	120-83-2						ND	10	ug/l	R
2,4-Dimethylphenol	105-67-9						ND	10	ug/l	R
2,4-Dinitrophenol	51-28-5						ND	50	ug/l	R
2,4-Dinitrotoluene	121-14-2						ND	10	ug/l	R
2,6-Dinitrotoluene	606-20-2						ND	10	ug/l	R
2-Chloronaphthalene	91-58-7						ND	10	ug/l	R
2-Chlorophenol	95-57-8						ND	10	ug/l	R
2-Methylnaphthalene	91-57-6						ND	10	ug/l	R
2-Methylphenol	95-48-7						ND	10	ug/l	R
2-Nitroaniline	88-74-4						ND	50	ug/l	R
2-Nitrophenol	88-75-5						ND	10	ug/l	R
3,3-Dichlorobenzidine	91-94-1						ND	50	ug/l	R
3-Nitroaniline	99-09-2						ND	50	ug/l	R
4,6-Dinitro-2-methylphenol	534-52-1						ND	50	ug/l	R
4-Bromophenyl phenyl ether	101-55-3						ND	10	ug/l	R
4-Chloro-3-methylphenol	59-50-7						ND	10	ug/l	R
4-Chloroaniline	106-47-8						ND	10	ug/l	R
4-Chlorophenyl phenyl ether	7005-72-3						ND	10	ug/l	R
4-Methylphenol	106-44-5						ND	10	ug/l	R
4-Nitroaniline	100-01-6						ND	50	ug/l	R
4-Nitrophenol	100-02-7						ND	50	ug/l	R
Acenaphthene	83-32-9						ND	10	ug/l	R
Acenaphthylene	208-96-8						ND	10	ug/l	R
Acetophenone	98-86-2						ND	10	ug/l	R
Anthracene	120-12-7						ND	10	ug/l	R
Atrazine	1912-24-9						ND	10	ug/l	R
Benzaldehyde	100-52-7						ND	10	ug/l	R
Benzo(a)anthracene	56-55-3						ND	10	ug/l	R
Benzo(a)pyrene	50-32-8						ND	10	ug/l	R
Benzo(b)fluoranthene	205-99-2						ND	10	ug/l	R
Benzo(ghi)perylene	191-24-2						ND	10	ug/l	R
Benzo(k)fluoranthene	207-08-9						ND	10	ug/l	R
bis(2-Chloroethoxy)methane	111-91-1						ND	10	ug/l	R
bis(2-Chloroethyl) ether	111-44-4						ND	10	ug/l	R
bis(2-Ethylhexyl) phthalate	117-81-7		3.9	10	ug/l	UB	ND	10	ug/l	R
Butyl benzyl phthalate	85-68-7						ND	10	ug/l	R
Caprolactam	105-60-2						ND	10	ug/l	R
Carbazole	86-74-8						ND	10	ug/l	R
Chrysene	218-01-9						ND	10	ug/l	R
Di-n-butyl phthalate	84-74-2						ND	10	ug/l	R
Di-n-octyl phthalate	117-84-0						ND	10	ug/l	R
Dibenz(a,h)anthracene	53-70-3						ND	10	ug/l	R
Dibenzofuran	132-64-9						ND	10	ug/l	R
Diethyl phthalate	84-66-2						ND	10	ug/l	R
Dimethyl phthalate	131-11-3						ND	10	ug/l	R
Fluoranthene	206-44-0						ND	10	ug/l	R
Fluorene	86-73-7						ND	10	ug/l	R
Hexachlorobenzene	118-74-1						ND	10	ug/l	R
Hexachlorobutadiene	87-68-3						ND	10	ug/l	R
Hexachlorocyclopentadiene	77-47-4						ND	50	ug/l	R
Hexachloroethane	67-72-1						ND	10	ug/l	R
Indeno(1,2,3-cd)pyrene	193-39-5						ND	10	ug/l	R
Isophorone	78-59-1						ND	10	ug/l	R
N-Nitrosodi-n-propylamine	621-64-7						ND	10	ug/l	R
N-Nitrosodiphenylamine	86-30-6						ND	10	ug/l	R
Naphthalene	91-20-3						ND	10	ug/l	R
Nitrobenzene	98-95-3						ND	10	ug/l	R
Pentachlorophenol	87-86-5						ND	10	ug/l	R
Phenanthrene	85-01-8						ND	10	ug/l	R
Phenol	108-95-2						ND	10	ug/l	R
Pyrene	129-00-0						ND	10	ug/l	R
GC Other										
OSW-8015B-MOD										
Diesel Range Organics	E-1004		0.097	0.10	mg/l	UB				

Note: UJ - Non-detect result is considered estimated due to associated QC outlier.
R - Result is considered unusable due to associated QC outlier.
UB - Result is considered non-detect at the report limit due to associated blank contamination.

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ANALYTICAL DATA VALIDATION REPORT
Twin Cities Assembly Plant
Ford Motor Company
PROJECT MN000591.0001.0001
ENOVIS PROJECT E200572
SAMPLES COLLECTED March 2008

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1.0 INTRODUCTION

The following document details an assessment of analytical data reported by TestAmerica-North Canton for water samples collected from Ford Twin Cities Assembly. The samples were collected March 11, 2008. A sampling and analysis summary is presented in Table 1. A summary of the analytical data is presented in Table 3. Copies of sample Chain of Custody (COC) documents and cooler receipt forms for samples discussed in this report are included in Attachment A.

This data review covers a single analytical report submitted under the following cover:

Laboratory Submittal	***Sample Date***	***Laboratory Receipt Date***
A8C130254	3/11/2008	3/13/2008

The samples were analyzed for one or more of the following:

Parameter	***Reference Method***	***Comment***
Volatile Organics	OSW-8260B	
Semi-Volatile Organics	OSW-8270C	
PCBs	OSW-8082	
GRO	WI-GRO	
DRO	WI-DRO	
Dissolved Metals	OSW-6010B	
Dissolved Mercury	OSW-7471A	

All "OSW" analytical methods were referenced from "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", Third Edition, November 1986 (with all subsequent revisions). "APHA" methods were referenced from "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992. "EMSLC" methods were referenced from "Methods for Chemical Analysis of Water and Wastes" EPA-600/4-79-020, March 1983 (with all subsequent revisions).

Some method references included in the analytical reports did not match the method references cited in the Electronic Data Deliverable (EDD), however the methods cited were equivalent and both cited as references in laboratory SOPs. Method citations in this report cite the methods referenced in EDD.

A Level 4 data review was performed on the data by Enovis, Inc (Enovis). A review of 100 percent of the data, which allows for complete independent data review without reconstruction of analytical data, was conducted. Approximately 10 percent of the data underwent a comprehensive or extensive review which allowed for complete reconstruction of the chemical analysis. A table of the laboratory documents reviewed in preparing this report is included in Table 2. The data was reviewed in accordance with the analytical methods and the documents entitled:

i.) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA 540/R-99/008, October 1999;

ii.) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", EPA 540/R-94/013, February 1994; and

The Level 4 review findings are presented in the following subsections.

An overview of the review findings is presented in table format. Several data qualifier flags were utilized in the review process. The definitions of these qualifier flags are as follows:

- J Indicates an estimated value.
- U Indicates the compound or analyte was analyzed for, but not detected at or above the stated limit.
- UJ The analyte/compound was not detected above the reported sample quantitation limit. However, the quantitation limit is considered to be approximate due to associated quality assurance results.
- UB The analyte was detected in the sample at a level between the MDL and RDL. For organics the sample concentration for common lab contaminates was less than 10 times the blank concentration or 5x for other organic compounds and for inorganics the sample concentration was less than 10 times the blank concentration. The sample result should be considered non-detect at the reporting limit.
- B The analyte was detected in the sample at a level above the RDL. For organics the sample concentration for common lab contaminates was less than 10 times the blank concentration or 5x for other organic compounds and for inorganics the sample concentration was less than 10 times the blank concentration. The sample result should be considered non-detect at the reporting limit.

All flags have been incorporated into the data tables in this report.

2.0 VOLATILE ORGANIC COMPOUNDS (VOCs)

2.1 GAS CHROMATOGRAPH/MASS SPECTORMETER (GC/MS) CALIBRATION – VOCs

2.1.1 TUNING AND MASS CAILBRATION

Prior to analysis GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the VOC method requires the analysis of the specific tuning compound Bromofluorobenzene (BFB). The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Instrument tuning data were reviewed. Tuning compounds were analyzed at the required frequency throughout the VOC analysis periods. All tuning criteria were met for the analyses, indicating proper optimization of the instrumentation.

2.1.2 INITIAL CALIBRATION

A multi-point point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific calibration range. Calibration data including the documented integrity of standards used for all quantitated analysis were reviewed for all samples. Linearity of the calibration curve and instrument sensitivity were evaluated against the following criteria:

i.) All average relative response factors (RRFs) must be greater than or equal to 0.01 (lab criteria - not a method specific criteria); all method specific requirements for SPCC responses for selective compounds are met; and

ii.) All response factors are stable over the concentration range of the calibration with a percent relative standard deviation (%RSD) of less than 15% for linearity to be assumed, else appropriate calibration curve correlation coefficients must be not less than 0.990 and not forced through the origin; and method specific CCC criteria for selective compounds are met.

iii.) If instrument response for analyte is considered to be typically non-linear lab must have protocol in place for acceptance criteria. For all analyte calibrations lowest concentration must be at or near reporting limit (not adjusted for dilutions or dry weight corrections).

Initial calibration data for VOCs were reviewed and met the above criteria for linearity and sensitivity, without exception.

General observation: Lab used either weighted linear regression or quadratic calibrations for all analytes that did not pass response factor criteria noted above (greater than 15% RSD).

2.2 CONTINUING CALIBRATION

Continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours. The following criteria are employed to evaluate continuing calibration data:

i.) All RRF values for System Performance Check Compounds (SPCCs) must meet method and compound specific minimal sensitivity criteria of 0.1 or 0.3; and

ii.) Percent difference (%D) or percent drift values between expected and observed standard concentrations or initial and continuing RRF must not exceed 20 percent for the calibration check compounds (CCCs) and should not exceed 20 % for the remaining target compounds.

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response with no exceptions.

All continuing calibrations met method specified sensitivity and precision/accuracy criteria noted in paragraph (i) above. There were a few non CCC analytes that exceeded the 20% recommendation for continuing calibration and initial calibration verifications, but none of these outliers resulted in the requirement for qualification of client sample final report results.

2.3 INTERNAL STANDARD (IS) RECOVERIES – GC/MS VOCs

To correct for changes in GC/MS response and sensitivity, several IS compounds are added to each investigative and QC sample prior to VOC analysis. All results are calculated relative to the IS response. The criteria by which the IS results are assessed are as follows:

i.) IS area counts for every investigative and QC sample must not vary by more than a factor of two (-50% to +100%) from the associated calibration standard; and

ii.) The retention time of the IS must not vary more than ±30 seconds from the associated calibration standard.

The sample results were calculated properly and al IS recoveries met the above criteria, with no exceptions.

2.4 SURROGATE SPIKE RECOVERIES – VOCs

In accordance with the methods employed, all standards, blanks and samples for VOCs are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of individual sample matrices on analytical efficiency and are assessed against either method, laboratory established or project-specific control limits. If surrogate recoveries are outside of established control limits presumably due to matrix effects these interferences must be confirmed by sample re-analysis or other standard accepted techniques. Investigative sample surrogate results that have been diluted to below the laboratories limits of quantitation in order to overcome sample matrix interferences or quantitate elevated target analyte levels will not be utilized to qualify data.

All surrogate recoveries were within the laboratory control limits, with no exceptions.

2.5 LABORATORY CONTROL SAMPLE (LCS) ANALYSES

The LCS serves as a measure of overall analytical performance (sample preparation and analysis) and the analyte recoveries are used to determine if an analytical method/system is of acceptable quality and considered in control. LCSs are prepared with all analytes of interest and analyzed with each sample batch and a frequency of 1 in 20.

LCS and LCS duplicates were prepared and analyzed for VOCs. The LCS and LCS duplicate recoveries and RPDs were within the laboratory control limits for all analytes of interest, with the following exceptions:

GCMS VOC LCS for 4-Methyl-2-pentanone, trans-1,3-Dichloropropene and 1,1,2,2-Tetrachloroethane recovered low outside of the labs acceptance window in QC batch 8079081. The LCSD recovered in control. The LCS/LCSD RPD was in control. No qualification required.

GCMS VOC LCSD for Tetrachloroethene, 1,1,2-Trichloro-1,2,2,-trifluoroethane and Trichlorofluoromethane recovered high outside of the labs acceptance window in QC

batch 8079081. The LCS recovered in control. The LCS.LCSD RPD was in control. No qualification required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

Matrix spike analysis serves as a measure of the affects of the specific investigative sample matrix on the capability of the analytical technique/method to generate acceptable sample results. Aliquots of original sample are spiked with a subset of the analytes of interest for each parameter and prepared and analyzed with each sample batch for the parameters. Recoveries of these spiked analytes are compared to laboratory established control limits to determine if sample matrix interferences are present. MS/MSD criteria apply only to the original investigative sample and the associated MS/MSD samples. The relative percent difference (RPD) between the MS and MSD are used to assess analytical precision.

Client specific MS/MSD samples were prepared for VOCs.

Client Specified MS/MSD Samples	***Parameters***
AMW-05B (20080311)	VOC's

The spike recoveries showed acceptable accuracy and the lab duplicate results showed acceptable overall precision with the following exceptions (see Table 4 for a summary of data qualifications):

GCMS VOC MS/MSD for 2-Hexanone recovered low outside of the labs acceptance window in QC batch 8079081. The sample was project specific A8C130254-001. The sample result was reported non-detect and is flagged UJ and considered estimated.

GCMS VOC MS/MSD for 1,1,2-Trichloro-1,2,2-trifluoroethane recovered high outside of the labs acceptance window in QC batch 8079081. The sample was project specific A8C130254-001. The sample result was reported non-detect. No qualification required.

GCMS VOC MS for cis-1,3-Dichloropropene, 1,1-Dichloroethane, 1,1,2,2-Tetrachloroethane, Vinyl chloride, 1,2-Dichloropropane,1,1,2-Trichloroethane and 4-Methyl-2-pentanone recovered low outside of the labs acceptance window in QC batch 8079081. The MSD recovered in control. The MS/MSD RPD was in control. The sample was project specific A8C130254-001. No qualification required.

GCMS VOC MSD for Tetrachloroethene and Trichlorofluoromethane recovered slightly high outside of the labs acceptance windows in QC batch 8079081. The MS recovered in control. The MS/MSD RPD was in control. The sample was project specific A8C130254-001. No qualification required.

2.7 FIELD QA/QC – FIELD DUPLICATE ANALYSES

To assess the analytical and sampling protocol precision, field duplicates were collected and submitted "blind" to the laboratory as follows:

Sample Duplicate	*Original Sample*	*Parameters*
NA	NA	NA

A field duplicate was not identified for this submittal.

Project or regulatory specific field duplicate criteria was not provided to Enovis for this project, therefore Enovis default specific criteria would have been utilized.

Water field duplicate criteria is 20% RPD when the results are greater than 5x the RDL. If the results are less than 5x the RDL the RDL value itself is utilized. If both results are less than the RDL no qualification is required. If the RPD is above criteria then the original result will be flagged J or UJ for non-detect result.

2.8 TARGET ANALYTES AND REQUIRED LIMITS OF DETECTION

The analyte lists reported by the laboratory must comply with the requested target analyte list according to the client statement of work or regulatory requirement if known. The laboratory analyte reporting limits must also meet (equal to or less than) than those specified in the client statement of work or applicable regulatory requirement if known. Reporting limits not meeting the specified criteria due to dilutions required to overcome sample matrix interferences or because of dry weight corrections will not be noted here.

There were no specified target analyte lists or detection limits provided to Enovis for evaluation.

2.9 COMPOUND IDENTIFICATION AND QUANTITATION

Lab generated standard mass spectra for all identified target analyte compounds are compared to the method criteria for qualitative analysis (compound identification). The chromatographic performance is also evaluated during this review. All reported detections must pass both mass spectral and retention time criteria and un-reported target analytes will also be reviewed to verify that false negatives are not present.

Detected target analyte results are selectively evaluated to ensure that correct internal standard, quantitation ion and appropriate calibration response factors are utilized to quantitate final results. The potential for transcription and calculational errors were also evaluated.

All laboratory target analyte hits, reported results and associated limits of detection for the client samples and QC were acceptable with no exceptions.

2.10 TENTATIVELY IDENTIFIED COMPOUNDS (TICS)

If tentatively identified compounds were required for this project, all associated mass spectra and best match spectra were evaluated against the same qualitative criteria as used for target analytes. Quantitation of TICs is already considered estimated per the nature of the quantitation technique defined so evaluation of the quantitated results beyond the identification level will not be performed.

TICs were not requested for this project.

3.0 SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)

3.1 GC/MS CALIBRATION –SVOCs

3.1.1 TUNING AND MASS CAILBRATION

Prior to analysis GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the SVOC method requires the analysis of the specific tuning compound Decafluorotriphenylphosphine (DFTPP). The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument. This performance solution must also contain compounds that are used to verify injection port inertness and column performance which are evaluated to determine if the chromatographic system is suitable for analysis of investigative samples.

Instrument tuning data were reviewed. Tuning compounds were analyzed at the required frequency throughout the SVOC analysis periods. All tuning criteria were met for the analyses, indicating proper optimization of the instrumentation.

3.1.2 INITIAL CALIBRATION

A multi-point point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific calibration range. Calibration data including the documented integrity of standards used for all quantitated analysis were reviewed for all samples. Linearity of the calibration curve and instrument sensitivity were evaluated against the following criteria:

i.) All average relative response factors (RRFs) must be greater than or equal to 0.05; all method specific requirements for SPCC responses for selective compounds are met; and

ii.) All response factors are stable over the concentration range of the calibration with a percent relative standard deviation (%RSD) of less than 15% for linearity to be assumed, else correlation coefficients must be not less than 0.990; and method specific CCC criteria for selective compounds are met.

iii.) The appropriate method was used to determine linearity of the initial calibration if less than 15% RSD is not achievable.

Initial calibration data for SVOCs were reviewed and met the above criteria for linearity and sensitivity, with no exceptions.

Note: For non-linear initial calibrations (RSD greater than 15%) the lab utilized a quadratic equation with a minimum of 6 data points and up to 8 data points.

Two initial calibration sets were included with the raw data package reflecting the re-analysis sequence performed on a different instrument due to a method blank surrogate outlier situation.

3.2 CONTINUING CALIBRATION

Continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours. The following criteria are employed to evaluate continuing calibration data:

i.) All RRF values for System Performance Check Compounds (SPCCs) must meet method and compound specific minimal sensitivity criteria of 0.05; and

ii.) Percent difference (%D) values between expected and observed standard concentrations or initial and continuing RRF must not exceed 20 percent for the calibration check compounds (CCCs) and should not exceed 20 % for the remaining target compounds.

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response.

All method required calibration check criteria were acceptable. The lab utilized a 50% difference/drift control limit for compounds not evaluated by method required criteria.

3.3 INTERNAL STANDARD (IS) RECOVERIES – GC/MS SVOCs

To correct for changes in GC/MS response and sensitivity, several IS compounds are added to each investigative and QC sample prior to SVOC analysis. All results are calculated relative to the IS response. The criteria by which the IS results are assessed are as follows:

i.) IS area counts for every investigative and QC sample must not vary by more than a factor of two (-50% to +100%) from the associated calibration standard; and

ii.) The retention time of the IS must not vary more than ±30 seconds from the associated calibration standard.

The sample results were calculated properly and al IS recoveries met the above criteria, with no exceptions.

3.4 SURROGATE SPIKE RECOVERIES – SVOCs

In accordance with the methods employed, all standards, blanks and samples for SVOCs are spiked with surrogate compounds prior to sample extraction and analysis. Surrogate recoveries provide a means to evaluate the effects of individual sample matrices on analytical efficiency and are assessed against either method, laboratory established or project-specific control limits. If surrogate recoveries are outside of established control limits presumably due to matrix effects these interferences must be confirmed by sample re-analysis or other standard accepted techniques. Investigative sample surrogate results that have been diluted to below the

laboratories limits of quantitation in order to overcome sample matrix interferences or quantitate elevated target analyte levels will not be utilized to qualify data.

All surrogate recoveries were within the laboratory control limits, with the following exceptions (see Table 5 for a summary of data qualifications):

GCMS SVOC Surrogates for the method blank in QC batch 8074037 did not recover. The lab re-extract and re-analyzed the associated samples in QC batch 8079104. The sample surrogates recovered in control in both the initial and re-extracts. The lab reported both sets of analyses. The re-extraction occurred 1 day outside of hold time. Enovis recommends that the results from the initial sample analysis be considered acceptable. The re-extract results are flagged R to indicate which results to report.

3.5 LABORATORY CONTROL SAMPLE (LCS) ANALYSES

The LCS serves as a measure of overall analytical performance (sample preparation and analysis) and the analyte recoveries are used to determine if an analytical method/system is of acceptable quality and considered in control. LCSs are prepared with all analytes of interest and analyzed with each sample batch and a frequency of 1 in 20.

LCSs were prepared and analyzed for SVOCs. The LCS recoveries were within the laboratory control limits for all analytes of interest, with the following exceptions:

GCMS SVOC LCS for 1,1-Biphenyl recovered slightly (3%) low outside of the labs acceptance window in QC batch 8074037. The project specific MS/MSD for A8C130254-001 recovered in control. No qualification required.

GCMS SVOC LCS for Caprolactam recovered low outside of the labs acceptance window in QC batch 8079104. The associated sample results were reported non-detect. The sample results associated with this QC batch are not being reported. If the results from the re-extract were reported then the result would be flagged UJ and considered estimated.

3.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

Matrix spike analysis serves as a measure of the affects of the specific investigative sample matrix on the capability of the analytical technique/method to generate acceptable sample results. Aliquots of original sample are spiked with a subset of the analytes of interest for each parameter and prepared and analyzed with each sample batch for the parameters. Recoveries of these spiked analytes are compared to laboratory established control limits to determine if sample matrix interferences are present. MS/MSD criteria apply only to the original investigative sample and the associated MS/MSD samples. The relative percent difference (RPD) between the MS and MSD are used to assess analytical precision.

Client specific MS/MSD samples were prepared for SVOCs.

Client Specified MS/MSD Samples	*Parameters*
AMW-05B (20080311)	SVOC's

The spike recoveries showed acceptable accuracy and the lab duplicate results showed acceptable overall precision with the following exceptions (see Table 4 for a summary of data qualifications):

GCMS SVOC MS/MSD for Caprolactam recovered low outside of the labs acceptance window in QC batch 8079104. The associated sample results were reported non-detect. The sample results associated with this QC batch are not being reported. If the results from the re-extract were reported then the result would be flagged UJ and considered estimated.

GCMS SVOC MS/MSD RPD for bis(2-Chloroethyl)ether was above the labs acceptance limit in QC batch 8074037. Both the MS and MSD recovered in control. No qualification required.

GCMS SVOC MS/MSD RPD for 4-Chloroanaline was above the labs acceptance limit in QC batch 8079104. Both the MS and MSD recovered in control. No qualification required.

Remaining batch MS/MSD recovery outliers were not target analytes for this analysis for these samples so did not translate into qualification of client sample results and are not addressed in this validation report.

Enovis does not have enough information regarding the nature and consistency of the investigative field samples to apply the valid qualifiers to additional samples beyond the parent sample for the MS/MSD outlier. The end data user must determine whether or not to extend qualification based on knowledge of the investigative field samples and project requirements.

3.7 FIELD QA/QC – FIELD DUPLICATE ANALYSES

To assess the analytical and sampling protocol precision, field duplicates were collected and submitted "blind" to the laboratory as follows:

Sample Duplicate	*Original Sample*	*Parameters*
NA	NA	NA

A field duplicate was not identified for this submittal.
Project or regulatory specific field duplicate criteria was not provided to Enovis for this project, therefore Enovis default specific criteria would have been utilized.

Water field duplicate criteria is 20% RPD when the results are greater than 5x the RDL. If the results are less than 5x the RDL the RDL value itself is utilized. If both results are less than the RDL no qualification is required. If the RPD is above criteria then the original result will be flagged J or UJ for non-detect result.

3.8 TARGET ANALYTES AND REQUIRED LIMITS OF DETECTION

The analyte lists reported by the laboratory must comply with the requested target analyte list according to the client statement of work or regulatory requirement if known. The laboratory analyte reporting limits must also meet (equal to or less than) than those specified in the client statement of work or applicable regulatory requirement if known. Reporting limits not meeting the specified criteria due to dilutions required to overcome sample matrix interferences or because of dry weight corrections will not be noted here.

There were no specified target analyte lists or detection limits provided to Enovis for evaluation.

3.9 COMPOUND IDENTIFICATION AND QUANTITATION

Lab generated standard mass spectra for all identified target analyte compounds are compared to the method criteria for qualitative analysis (compound identification). The chromatographic performance is also evaluated during this review. All reported detections must pass both mass spectral and retention time criteria and un-reported target analytes will also be reviewed to verify that false negatives are not present.

Detected target analyte results are selectively evaluated to ensure that correct internal standard, quantitation ion and appropriate calibration response factors are utilized to quantitate final results. The potential for transcription and calculational errors were also evaluated.

It could not be determined from the Level 4 data package provided if cleanup of sample extracts was performed or was an available option for samples showing the presence of matrix interferences.

All laboratory target analyte hits, reported results and associated limits of detection for the client samples and QC were acceptable with no exceptions.

General observations:

Chromatography was acceptable with good resolution between peaks and adequate sensitivity.

3.10 TENTATIVELY IDENTIFIED COMPOUNDS (TICS)

If tentatively identified compounds were required for this project, all associated mass spectra and best match spectra were evaluated against the same qualitative criteria as used for target analytes. Quantitation of TICs is already considered estimated per the nature of the quantitation technique defined so evaluation of the quantitated results beyond the identification level will not be performed.

TICs were not requested for this project.

4.0 POLYCHLORINATED BIPHENYLS (PCBs)

4.1 INITIAL CALIBRATION – GAS CHROMATOGRAPHY/ ELECTRON CAPTURE DETECTOR (GC/ECD) CALIBRATION

A multi-point calibration curve containing all compounds or congeners of interest is analyzed to characterize instrument response for each analyte over a specific calibration range. Calibration data were reviewed for all samples. Linearity of the calibration curve, retention time window generation and instrument sensitivity were evaluated against the following criteria:

i.) RT windows established based on a minimum of a 3 pt. calibration.

ii.) %RSD values must not exceed 20 percent, else linearity cannot be assumed and the method used for calibration must be identified and supported.

iii.) If a two-column system is utilized for PCB analysis both detectors (if both were used for sample quantitation) must be evaluated.

Initial calibration data for PCBs were reviewed and met the above criteria for linearity and sensitivity, with no exceptions.

A two column system was used for confirmation of PCB detections. Raw data from both systems was included with the validation package and both columns initial calibration results were acceptable.

4.2 CONTINUING CALIBRATION

Continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours. The following criteria are employed to evaluate continuing calibration data:

i.) All analytes must fall within established retention time windows.

ii.) %D values must not exceed 15 percent for the calibration compounds on either column used for quantitation of that analyte.

Calibration standards were analyzed at the required frequency for both columns and the results met the above criteria for instrument sensitivity and linearity of response with no exceptions.

4.3 SURROGATE SPIKE RECOVERIES – PCBs

In accordance with the methods employed, all standards, blanks and samples for PCBs are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means of evaluate the effects of individual sample matrices on analytical efficiency and are assessed against method control limits. For PCB analysis at least one of the two surrogate recoveries must be within laboratory established control limits.

All surrogate recoveries were within the laboratory control limits, with no exceptions.

4.4 LCS ANALYSES

The LCS serves as a measure of overall analytical performance. LCSs may be prepared with a subset of the analytes of interest (PCB Aroclors) as long as all contaminant types are represented. One LCS will be analyzed with each sample batch and possibly a second LCS-Duplicate will also be analyzed if analytical precision information cannot be obtained by sample duplicate or MS/MSD analysis.

LCSs were prepared and analyzed for PCBs. The LCS recoveries were within the laboratory control limits for all analytes of interest, with no exceptions.

4.5 MS/MSD ANALYSES

MS/MSD samples are spiked with a subset of the analytes of interest for each parameter and prepared and analyzed with each sample batch for the parameters. The relative percent difference (RPD) between the MS and MSD are used to assess analytical precision.

Client specific MS/MSD samples were prepared for PCBs.

Client Specified MS/MSD Samples	***Parameters***
AMW-05B (20080311)	PCB's

The spike recoveries showed acceptable accuracy and the lab duplicate results showed acceptable overall precision with no exceptions (see Table 4 for a summary of data qualifications).

Enovis does not have enough information regarding the nature and consistency of the investigative field samples to apply the valid qualifiers to additional samples beyond the parent sample for the MS/MSD outlier. The end data user must determine whether or not to extend qualification based on knowledge of the investigative field samples and project requirements.

4.6 FIELD QA/QC – FIELD DUPLICATE ANALYSES

To assess the analytical and sampling protocol precision, field duplicates were collected and submitted "blind" to the laboratory as follows:

Sample Duplicate	***Original Sample***	***Parameters***
NA	NA	NA

A field duplicate was not identified for this submittal.

Project or regulatory specific field duplicate criteria was not provided to Enovis for this project, therefore Enovis default specific criteria would have been utilized.

Water field duplicate criteria is 20% RPD when the results are greater than 5x the RDL. If the results are less than 5x the RDL the RDL value itself is utilized. If both results are less than the

RDL no qualification is required. If the RPD is above criteria then the original result will be flagged J or UJ for non-detect result.

4.7 EXTRACT CLEANUP – EFFICIENCY VERIFICATION

The method references several allowable cleanup techniques to reduce the level of matrix interferences for PCB's in the final sample prep extract. Any cleanup technique utilized for this sample delivery group must demonstrate that acceptable PCB recovery can be obtained by using this method.

The following cleanup techniques were utilized by the lab and with acceptable demonstrated efficiencies:

> According to the extraction bench sheets an acid strip (sulfuric acid wash) is utilized for all samples and QC. The batch QC reported verifies that this cleanup technique has met required efficiencies and recoveries.

4.8 TARGET ANALYTES AND REQUIRED LIMITS OF DETECTION

The analyte lists reported by the laboratory must comply with the requested target analyte list according to the client statement of work or regulatory requirement if known. The laboratory analyte reporting limits must also meet (equal to or less than) than those specified in the client statement of work or applicable regulatory requirement if known. Reporting limits not meeting the specified criteria due to dilutions required to overcome sample matrix interferences or because of dry weight corrections will not be noted here.

There were no specified target analyte lists or detection limits provided to Enovis for evaluation.

4.9 COMPOUND IDENTIFICATION AND QUANTITATION

Second column confirmation is required for all GC identifications, unless historical data is available to verify the PCB Aroclor identity. PCB identification is verified by comparing second column results; basic pattern recognition and retention time data comparisons as well as evaluating for interferences. The chromatographic performance is also evaluated during this review. All reported detections must be accompanied by a daily calibration check standard of the same Aroclor type which was used for quantitation purposes.

Detected target analyte results are selectively evaluated to ensure that correct calibration response factors and calculations are utilized to quantitate final results. The potential for transcription and calculational errors were also evaluated.

All laboratory target analyte hits, reported results and associated limits of detection for the client samples and QC were acceptable with the following exceptions:

Please see section on initial calibration for comments on the peak ratio algorithm utilized by the lab to aid in Aroclor identification.

5.0 GASOLINE RANGE ORGANICS (TPH-GRO)

5.1 INITIAL CALIBRATION – GAS CHROMATOGRAPHY CALIBRATION

A five point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific calibration range. Calibration data were reviewed for all samples. Linearity of the calibration curve and instrument sensitivity were evaluated against the following criteria:

i.) Linear calibration curve using 5 calibration levels or more with correlation coefficients not less than 0.990.

Initial calibration data for GRO were reviewed and met the above criteria for linearity and sensitivity.

5.2 CONTINUING CALIBRATION

Continuing calibration standards must be analyzed and compared to the initial calibration curve at the beginning of each working day. The following criteria are employed to evaluate continuing calibration data:

i.) %D values must not exceed 20 percent from the known concentration

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity.

5.3 SURROGATE SPIKE RECOVERIES

In accordance with the methods employed, all standards, blanks and samples for GROs are spiked with a surrogate compound prior to sample extraction and/or analysis. Surrogate recoveries provide a means of evaluate the effects of individual sample matrices on analytical efficiency and are assessed against method control limits.

Use of surrogate spikes and recoveries is not explicitly required by the Wisconsin GRO method unless the test is performed as part of a PVOC analysis. Surrogate recoveries were not reported for client sample results or any QC analysis for this data submittal. The below MDL response for the client sample was similar to that of the batch method blank so analytical performance appeared to be in control for the sample analysis.

5.4 LCS ANALYSES

The LCS serves as a measure of overall analytical performance. LCSs are prepared with all analytes of interest and analyzed with each sample batch.

LCS/LCSD samples were prepared and analyzed for GROs.

The LCS/LCSD recoveries and RPD were within the laboratory control limits for all analytes of interest.

5.5 MS/MSD ANALYSES

MS/MSD samples are spiked with a subset of the analytes of interest for each parameter and prepared and analyzed with each sample batch for the parameters. The relative percent difference (RPD) between the MS and MSD are used to assess analytical precision.

Client specific MS/MSD samples were prepared for GRO.

Client Specified MS/MSD Samples	***Parameters***
AMW-05B (20080311)	GRO

The spike recoveries showed acceptable accuracy and the lab duplicate results showed acceptable overall precision with no exceptions (see Table 4 for a summary of data qualifications).

Enovis does not have enough information regarding the nature and consistency of the investigative field samples to apply the valid qualifiers to additional samples beyond the parent sample for the MS/MSD outlier. The end data user must determine whether or not to extend qualification based on knowledge of the investigative field samples and project requirements.

5.6 TARGET ANALYTES AND REQUIRED LIMITS OF DETECTION

The analyte lists reported by the laboratory must comply with the requested target analyte list according to the client statement of work or regulatory requirement if known. The laboratory analyte reporting limits must also meet (equal to or less than) than those specified in the client statement of work or applicable regulatory requirement if known. Reporting limits not meeting the specified criteria due to dilutions required to overcome sample matrix interferences or because of dry weight corrections will not be noted here.

No specific limits of detection were provided for this project.

5.7 COMPOUND IDENTIFICATION AND QUANTITATION

Chromatographic performance is also evaluated during this review. All reported detections must be accompanied by a daily calibration check standard of the type which was used for quantitation purposes.

Detected target analyte results are selectively evaluated to ensure that correct calibration response factors and calculations are utilized to quantitate final results. The potential for transcription and calculational errors were also evaluated.

All laboratory target analyte hits, reported results and associated limits of detection for the client samples and QC were acceptable.

6.0 DIESEL RANGE ORGANICS (DRO)

6.1 INITIAL CALIBRATION – GAS CHROMATOGRAPHY CALIBRATION

A five point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific calibration range. Calibration data were reviewed for all samples. Linearity of the calibration curve and instrument sensitivity were evaluated against the following criteria:

i.) Linear calibration curve with correlation coefficients not less than 0.990.

Initial calibration data for DRO were reviewed and met the above criteria for linearity and sensitivity.

6.2 CONTINUING CALIBRATION

Continuing calibration standards must be analyzed and compared to the initial calibration curve at the beginning of each working day. The following criteria are employed to evaluate continuing calibration data:

i.) %D values must not exceed 20 percent from the known concentration

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response with no exceptions.

6.3 SURROGATE SPIKE RECOVERIES – (DRO)

In accordance with the methods employed, all standards, blanks and samples for DROs are spiked with a surrogate compound prior to sample extraction and/or analysis. Surrogate recoveries provide a means of evaluate the effects of individual sample matrices on analytical efficiency and are assessed against method control limits.

Surrogates are not mandatory in the Wisconsin DRO method. However, if the laboratory intends to use surrogates, they must be chosen so that they do not elute within the DRO retention time window. Surrogates known to meet this criterion are Nonane (C_9) and Nonacosane (C_{29}).
The laboratory reported Nonane (C_9) as the surrogate.

All surrogate recoveries were within the laboratory control limits, with the following exceptions:

DRO Surrogate recovered high outside of the labs acceptance window in samples A8C130254-001 and the associated method blank. The surrogate recovery for this method is only advisory. Qualification is not based on surrogate recovery. Surrogate recovery was also biased high in the method blank.

6.4 LCS ANALYSES

The LCS serves as a measure of overall analytical performance. LCSs are prepared with all analytes of interest and analyzed with each sample batch.

LCSs were prepared and analyzed for DROs. The LCS recoveries were within the laboratory control limits for all analytes of interest.

6.5 MS/MSD ANALYSES

MS/MSD samples are spiked with a subset of the analytes of interest for each parameter and prepared and analyzed with each sample batch for the parameters. The relative percent difference (RPD) between the MS and MSD are used to assess analytical precision.

Client specific MS/MSD samples were prepared for DRO.

Client Specified MS/MSD Samples	***Parameters***
AMW-05B (20080311)	DRO

The spike recoveries showed acceptable accuracy and the lab duplicate results showed acceptable overall precision with no exceptions (see Table 4 for a summary of data qualifications).

Enovis does not have enough information regarding the nature and consistency of the investigative field samples to apply the valid qualifiers to additional samples beyond the parent sample for the MS/MSD outlier. The end data user must determine whether or not to extend qualification based on knowledge of the investigative field samples and project requirements.

6.6 TARGET ANALYTES AND REQUIRED LIMITS OF DETECTION

The analyte lists reported by the laboratory must comply with the requested target analyte list according to the client statement of work or regulatory requirement if known. The laboratory analyte reporting limits must also meet (equal to or less than) than those specified in the client statement of work or applicable regulatory requirement if known. Reporting limits not meeting the specified criteria due to dilutions required to overcome sample matrix interferences or because of dry weight corrections will not be noted here.

All analyte lists and limits of detection met the specified criteria.

6.7 COMPOUND IDENTIFICATION AND QUANTITATION

Chromatographic performance is also evaluated during this review. All reported detections must be accompanied by a daily calibration check standard of the type which was used for quantitation purposes.

Detected target analyte results are selectively evaluated to ensure that correct calibration response factors and calculations are utilized to quantitate final results. The potential for transcription and calculational errors were also evaluated.

All laboratory target analyte hits, reported results and associated limits of detection for the client samples and QC were acceptable.

7.0 METALS

7.1 INDUCTIVELY COUPLED PLASMA (ICP)– METALS AND MERCURY INITIAL CALIBRATION

To calibrate the ICP, a calibration blank and at least one standard must be analyzed at each wavelength to establish the analytical curve. For mercury analyses, a calibration blank and a minimum of five standards must be analyzed to establish the analytical curve. Resulting correlation coefficients for mercury curves must be at least 0.995.

After calibration, an initial calibration verification (ICV) standard must be analyzed to verify the analytical accuracy of the calibration curves. All analyte recoveries from the analyses of the ICVs must be within the following control limits:

Analytical Method	***Inorganic Species***	***Control Limits (Percent)***
ICP	Metals	90-110
Cold Vapor Atomic Absorption (AA)	Mercury	80-120

A review of the data showed that all metals calibration curves and ICVs were analyzed at the proper frequencies and that all of the above criteria were met. The laboratory effectively demonstrated that instrumentation used for these analyses were properly calibrated prior to sample analyses.

7.2 CONTINUING CALIBRATION

Continuing Calibration Verification (CCV) standards are analyzed on a regular basis. Each CCV is deemed acceptable if all analyte recoveries are within the control limits specified above for the ICVs. If some of the CCV analyte recoveries are outside of the control limits, samples analyzed before and after the CCV, up until the previous and proceeding CCV analyses, are affected.

For this study, CCVs were analyzed at the proper frequency. All analyte recoveries reported for the CCVs were within the specified limits with out exception.

7.3 CONTRACT REQUIRED DETECTION LIMIT (CRDL) STANDARD ANALYSES

To verify the linearity of the ICP calibration near the CRDL, a standard must be analyzed which contains specific analytes at a concentration of two times the CRDL, or twice the Instrument

Detection Limit (IDL), whichever is greater. This standard must be analyzed at the beginning and end of each sample analysis run or a minimum of twice per 8-hour working shift.

To verify linearity near the CRDL during mercury analysis, a standard must be analyzed at the CRDL or the IDL, whichever is greater. The standard must be analyzed at the beginning of each sample analysis run.

CRDL standards were analyzed at the proper frequencies. Control limits of 50 to 150 percent were used to evaluate the ICP data. The laboratory also utilized the 50-150 percent recovery control limits for mercury. Analytes were within the control limits.

7.4 LCS ANALYSIS

The LCS serves as a measure of overall analytical performance. LCSs are prepared with all analytes of interest and analyzed with each sample batch.

LCSs were prepared and analyzed for all parameters. The LCS recoveries were within the laboratory control limits for all analytes of interest.

7.5 MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

For metals analyses, MS/MSD samples are prepared and analyzed. The recoveries of spike analyses are used to assess the analytical accuracy achieved on individual sample matrices. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed. The RPD between the MS and the MSD are used to assess analytical precision.

Client specific MS/MSD samples were prepared total metals and mercury.

Client Specified MS/MSD Samples	***Parameters***
AMW-05B (20080311)	ICP metals and Mercury

The spike recoveries showed acceptable accuracy and the lab duplicate results showed acceptable overall precision with no exceptions (see Table 4 for a summary of data qualifications).

Enovis does not have enough information regarding the nature and consistency of the investigative field samples to apply the valid qualifiers to additional samples beyond the parent sample for the MS/MSD outlier. The end data user must determine whether or not to extend qualification based on knowledge of the investigative field samples and project requirements.

7.6 ICP SERIAL DILUTION

The serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. A minimum of one investigative sample is analyzed at a five-fold dilution. For samples yielding analyte concentrations greater than 50 times the IDL, the serial dilution results must agree within 10 percent of the original results

Serial dilutions were not performed on a client sample from this submittal. PDS analysis was not performed for this QC batch (not a method requirement).

7.7 FIELD QA/QC – FIELD DUPLICATE ANALYSES

To assess the analytical and sampling protocol precision, field duplicates were collected and submitted "blind" to the laboratory as follows:

Sample Duplicate	***Original Sample***	***Parameters***
NA	NA	NA

A field duplicate was not identified for this submittal.

Project or regulatory specific field duplicate criteria was not provided to Enovis for this project, therefore Enovis default specific criteria would have been utilized.

Water field duplicate criteria is 20% RPD when the results are greater than 5x the RDL. If the results are less than 5x the RDL the RDL value itself is utilized. If both results are less than the RDL no qualification is required. If the RPD is above criteria then the original result will be flagged J or UJ for non-detect result.

7.8 TARGET ANALYTES AND REQUIRED LIMITS OF DETECTION

The analyte lists reported by the laboratory must comply with the requested target analyte list according to the client statement of work or regulatory requirement if known. The laboratory analyte reporting limits must also meet (equal to or less than) than those specified in the client statement of work or applicable regulatory requirement if known. Reporting limits not meeting the specified criteria due to dilutions required to overcome sample matrix interferences or because of dry weight corrections will not be noted here.

There were no specified target analyte lists or detection limits provided to Enovis for evaluation.

8.0 REPRESENTATIVENESS EVALUATION

Representativeness is a qualitative evaluation of whether the data represents actual environmental conditions. Representativeness was evaluated using holding time criteria, which reflect the length of time after sample collection that a sample or extract remains representative of environmental conditions. Depending on the analysis, either one or two holding times were evaluated. For those analyses that do not include a sample extraction, only one holding time was evaluated: the length of time between sample collection and analysis. For analyses that require sample extraction prior to analysis, two holding times were evaluated: the length of time from sampling until extraction and the length of time from extraction to analysis. Holding times were compared to standard method specific holding times accepted by the United States Environmental Protection Agency (USEPA). All holding times that are within acceptance criteria are considered representative. Those holding times outside of USEPA acceptance criteria are qualitatively evaluated to determine their effect on sample representativeness.

Representativeness was also evaluated by analysis of laboratory method blanks and equipment blanks which were used to identify sources of contamination not associated with environmental conditions.

8.1 SAMPLE HOLDING TIMES

Sample holding time and preservation requirements are summarized in Table 7. All sample extractions and/or analyses were performed within the specified holding times with the following exceptions:

All samples were properly preserved and cooled to 0-6°C after collection.

8.2 METHOD BLANK ANALYSES

Method Blank (MB) samples are prepared from de-ionized water and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the procedures.

The criterion for qualifying analytical results due to blank contamination is as follows:

For Organic methods the sample concentration was < the RDL and < 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reporting detection limit. For results reported above the RDL but within the listed criteria the results are considered non-detect at the listed sample concentration.

For Inorganic methods the sample concentration was < the RDL and 10x the blank concentration and is considered non-detect at the reporting detection limit. For results reported above the RDL but within the listed criteria the results are considered non-detect at the listed sample concentration.

For this study, method blanks were analyzed at a minimum frequency of one per analytical batch.
The method blank results for samples from the lab reports covered in this evaluation were all non-detect at the method detection limit with the following exceptions (see Table 6 for a summary of data qualifications):

GCMS VOC Method Blank for Acetone and 1,2,3-Trichlorobenzene were reported between the MDL and RDL in QC batch 8079081. The Acetone concentration reported in the Trip Blank was higher than the method blank. The associated field sample result for A8C130254-001 was reported non-detect. No qualification required. The 1,2,3-Trichlorobenzene concentration in the Trip Blank was slightly less than the method blank concentration. The associated field sample result for A8C130254-001 was reported non-detect. No qualification required.

GCMS VOC Trip Blank reported Acetone, Methyl ethyl ketone, Methylcyclohexane, 1,2,3-Trichlorobenzene and Naphthalene results between the MDL and RDL. The

associated results for A8C130254-001 were reported non-detect. No qualification required.

GCMS SVOC Method Blank for bis(2-Ethylhexyl)phthalate was reported between the MDL and RDL in QC batch 8074037. The associated result for A8C130254-001 was reported between the MDL and RDL and less than 10x the method blank concentration and is flagged UB and considered non-detect at the RDL.

DRO method blank for QC batch 8074048 showed a detection between the MDL and RL. Client sample result A8C130254-001 also had a detection between the MDL and RL for DRO. This sample result should be considered non-detect at the reporting limit and qualified with a UB flag.

Metals Method Blank for Barium was reported between the MDL and RDL in QC batch 8074016. The associated sample result for A8C130254-001 was reported between the MDL and RDL and greater than 10x the method blank concentration and is flagged J as an estimated value. No further qualification required.

Evaluation of blank contamination includes directions on the interpretation of the affected analytical results; however it is beyond the scope of Enovis validation to apply changes to the result and quantitation limit in the Ford Master Analytical database. The end data user must implement any corrections to the electronic data downloaded from the Enovis CLMS based on project requirements.

9.0 USABILITY AND COMPARABIILTY

Usability of data was evaluated by assuring that all the analytical requests were met, samples were received in the proper condition, and all analyses were performed within the appropriate holding times.

No data evaluated within this delivery group was considered unusable (qualified with an R flag) due to sample integrity, sample matrix interference or batch quality control issues. Semivolatile organic results for the re-extract of sample AMW-05B (20080311) were flagged R to indicate the valuators' choice of results to report.

10.0 QC SUMMARY

All sample results meet the standard for usability and are considered acceptable as qualified. Please reference the following tables for a summary of the investigative field sample data and their valid qualifiers based on Level 4 technical review of the analytical data.

TABLE 1

SAMPLING AND ANALYSIS SUMMARY

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 8C13254

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Polychlorinated Biphenyls by GCECD	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)	Comment
A8C130254001	AMW-05B(20080311)	3/11/2008	11:15:00	X	X	X	X	X	X	X	MS/MSD
A8C130254002	TB-001(20080311)	3/11/2008	12:00:00	X							

TABLE 2

LABORATORY DOCUMENTS SUBMITTED FOR REVIEW
Ford Twin Cities Phase B MN000591.0001.0001
E200572 - 8C13254
March 2008

SDG	Laboratory Submittal	Description
8C13254	A8C130254	Table of Contents
		Standard Report Cover page
		SDG Case Narrative
		Quality Control elements narrative
		Executive Summary detection highlights
		Method Summary
		Sample Summary
		Shipping and Receiving Documents
		COC forms
		Cooler Receipt Form and narrative
		GCMS Volatiles Data
		QC Summary Data
		Surrogate recoveries (form II)
		Check Sample recoveries (form III)
		Check Sample duplicate recoveries (form III)
		Matrix spike/Matrix spike duplicate report (form III)
		Method blank report (form IV)
		Tuning and mass calibrations (form VA)
		Internal Standard and RT area summary (form 8A)
		Sample Data
		Client report of sample data
		Raw integration data from instrument
		Total Ion Profile Chromatogram
		Ion profiles of detected target analyte peaks
		Standards Data
		Calibration History
		Initial Calibration data summary of average RF
		Initial Calibration data summary of correlation coefficients
		ICAL Raw integration data from instrument
		ICAL Internal standard and RT summary
		ICAL Total Ion Profile Chromatogram
		ICV check standard recovery report
		ICV check standard total ion profile with integration
		Standards raw data for additional analytes not on primary list
		CCV calibration history
		CCV summary
		CCV raw integration data from instrument
		CCV Total Ion Profile Chromatogram
		Raw QC Data
		Tune information
		LCS and LCSDuplicate integration/internal standard and total ion profile raw data
		Method Blank integration/internal standard and total ion profile raw data
		MS and MSD integration/internal standard and total ion profile raw data
		Miscellaneous Data
		Run logs
		pH/Free chlorine worksheet
		Sample Control COC
		GCMS Semivolatiles Data
		QC Summary Data
		Surrogate recoveries (form II)
		Check Sample recoveries (form III)
		Matrix spike/Matrix spike duplicate report (form III)
		Method blank report (form IV)
		Tuning and mass calibrations (form VA)

SDG	Laboratory Submittal	Description
		Internal Standard and RT area summary (form 8A)
		Sample Data
		Client report of sample data
		Raw integration data from instrument
		Internal standard and RT summary
		Total Ion Profile Chromatogram
		Ion profiles of detected target analyte peaks
		Standards Data (Two sets of calibration data)
		Calibration History
		Internal Standard Compounds area and RT summary
		Initial Calibration data summary of average RF
		Initial Calibration data summary of correlation coefficients
		ICAL Raw integration data from instrument
		ICAL Internal standard and RT summary
		ICAL Total Ion Profile Chromatogram
		manual integration reports
		CCV data summary of average RF
		CCV Internal standard and RT summary
		CCV calibration history
		CCV data summary of correlation coefficients
		CCV raw integration data from instrument
		CCV Total Ion Profile Chromatogram
		Raw QC Data
		Tune information
		Column performance checks including tailing and degradation
		LCS Evaluation Report and Sample Data Report
		LCS integration/internal standard and total ion profile raw data
		Method Blank integration/internal standard and total ion profile raw data
		MS and MSD integration/internal standard and total ion profile raw data
		Miscellaneous Data
		Instrument run logs
		Extraction bench sheets
		Sample Control COC
		GC Volatile Data - GRO
		QC Summary data
		Check Sample Recovery data (form III)
		Check Sample duplicate recoveries (form III)
		Matrix spike/Matrix spike duplicate report (form III)
		Method Blank data (form IV)
		Sample Data
		Client report of sample data
		Raw integration data from instrument
		Chromatogram
		Standards Data
		Calibration History
		Initial Calibration Data Summary with average RF
		Raw integration data from instrument with manual integrations where applicable
		ICAL chromatograms
		ICV raw integration and chromatograms
		Raw QC Data
		LCS sample data report and integration and chromatograms
		Method blank integration and chromatograms
		MS and MSD integration and chromatogram raw data
		Miscellaneous Data
		Instrument sequence parameters and integration events
		Sequence table (run log)
		Lab sample control COC
		TPH Extractable Date (DRO)
		QC Summary data
		Surrogate recoveries (form II)

SDG	Laboratory Submittal	Description
		Check Sample Recovery data (form III)
		MS/MSD recovery data (form III)
		Method Blank data (form IV)
		Sample Data
		Client report of sample data with surrogate recoveries
		Raw integration data from instrument
		Chromatogram
		Standards Data
		Calibration History
		Initial Calibration Data Summary with average RF
		Raw integration data from instrument with manual integrations where applicable
		ICAL chromatograms
		ICV raw integration and chromatograms
		Raw QC Data
		LCS sample data report and integration and chromatograms
		Method blank integration and chromatograms
		MS and MSD integration and chromatogram raw data
		Miscellaneous Data
		Instrument sequence parameters and integration events
		Sequence table (run log)
		Extraction bench sheet
		Lab sample control COC
		Polychlorinated Biphenyls Data (PCB)
		QC Summary data
		Surrogate recoveries (form II)
		Check Sample Recovery data (form III)
		Check Sample duplicate recoveries (form III)
		Matrix spike/Matrix spike duplicate report (form III)
		Method Blank data (form IV)
		Sample Data
		Client report of sample data with surrogate recoveries
		Raw integration data from instrument
		Chromatogram
		Standards Data
		Calibration History
		Initial Calibration Data Summary with average RF
		Raw integration data from instrument with manual integrations where applicable
		ICAL chromatograms
		ICV raw integration and chromatograms
		Analytical sequence with RT check
		Calibration History
		CCV summary
		CCV raw integration data from instrument
		CCV chromatogram
		Raw QC Data
		LCS sample data report and integration and chromatograms
		Method blank integration and chromatograms
		MS and MSD integration and chromatogram raw data
		Miscellaneous Data
		Method change history
		Instrument sequence parameters and integration events
		Sequence table (run log)
		Extraction bench sheets
		Lab sample control COC
		Metals Data (ICP and mercury)
		Forms Data
		Client sample reports
		QC sample reports
		ICV standard report - mercury and ICP
		CCV standard report - mercury and ICP

SDG	Laboratory Submittal	Description
		CRDL report - mercury and ICP
		ICB report - mercury and ICP
		CCB report - mercury and ICP
		Interference check standard A - ICP
		Interference check standard AB - ICP
		IDL report - mercury and ICP
		Inter-element correction factors - ICP
		Linear dynamic ranges - ICP
		Prep log - mercury and ICP
		Run log - mercury
		Run log - ICP
	Instrument Printouts	
		Mercury data run check list with raw instrument data and calibrations
		ICP data review check list
		non-conformance memo
		Raw integration data from instrument
	Miscellaneous Data	
		Metals internal COC
		Metals prep summary
		Spiking standards definition
		Metals prep reagents and standards log

TABLE 3

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 8C13254

	Sample Name:	AMW-05B(20080311)				AMW-05B(20080311)R2				TB-001(20080311)TB			
	Lab Sample ID:	A8C130254001				A8C130254001				A8C130254002			
	Sample Date:	3/11/2008				3/11/2008				3/11/2008			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---					0.25	1.0	ug/l	J
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	ND	2.0	ug/l	---					ND	2.0	ug/l	---
1,2-Dibromoethane (EDB)	106-93-4	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---					ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---					ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---					ND	1.0	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---					ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	UJ					ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---					ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	5.0	ug/l	---					ND	5.0	ug/l	---
Acetone	67-64-1	ND	10	ug/l	---					7.2	10	ug/l	J
Allyl chloride	107-05-1	ND	2.0	ug/l	---					ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---					ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---					ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Ethyl ether	60-29-7	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---					ND	1.0	ug/l	---
m-Xylene & p-Xylene	136777-61-2	ND	2.0	ug/l	---					ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---					ND	10	ug/l	---
Methyl ethyl ketone	78-93-3	ND	10	ug/l	---					2.2	10	ug/l	J
Methyl tert-butyl ether (MTBE)	1634-04-4	ND	2.0	ug/l	---					ND	2.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---					0.50	1.0	ug/l	J
Methylene chloride	75-09-2	ND	1.0	ug/l	---					ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---					ND	1.0	ug/l	---
n-Propylbenzene	103-65-1	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---					0.26	1.0	ug/l	J
o-Xylene	95-47-6	ND	1.0	ug/l	---					ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---					ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---					ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---					ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---					ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---					ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---					ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---					ND	1.0	ug/l	---

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 8C13254

		Sample Name:	AMW-05B(20080311)				AMW-05B(20080311)R2				TB-001(20080311)TB			
		Lab Sample ID:	A8C130254001				A8C130254001				A8C130254002			
		Sample Date:	3/11/2008				3/11/2008				3/11/2008			
Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC														
OSW-8270C														
1,1-Biphenyl	92-52-4		ND	10	ug/l	---	ND	10	ug/l	R				
2,2-oxybis(1-Chloropropane)	108-60-1		ND	10	ug/l	---	ND	10	ug/l	R				
2,4,5-Trichlorophenol	95-95-4		ND	10	ug/l	---	ND	10	ug/l	R				
2,4,6-Trichlorophenol	88-06-2		ND	10	ug/l	---	ND	10	ug/l	R				
2,4-Dichlorophenol	120-83-2		ND	10	ug/l	---	ND	10	ug/l	R				
2,4-Dimethylphenol	105-67-9		ND	10	ug/l	---	ND	10	ug/l	R				
2,4-Dinitrophenol	51-28-5		ND	50	ug/l	---	ND	50	ug/l	R				
2,4-Dinitrotoluene	121-14-2		ND	10	ug/l	---	ND	10	ug/l	R				
2,6-Dinitrotoluene	606-20-2		ND	10	ug/l	---	ND	10	ug/l	R				
2-Chloronaphthalene	91-58-7		ND	10	ug/l	---	ND	10	ug/l	R				
2-Chlorophenol	95-57-8		ND	10	ug/l	---	ND	10	ug/l	R				
2-Methylnaphthalene	91-57-6		ND	10	ug/l	---	ND	10	ug/l	R				
2-Methylphenol	95-48-7		ND	10	ug/l	---	ND	10	ug/l	R				
2-Nitroaniline	88-74-4		ND	50	ug/l	---	ND	50	ug/l	R				
2-Nitrophenol	88-75-5		ND	10	ug/l	---	ND	10	ug/l	R				
3,3-Dichlorobenzidine	91-94-1		ND	50	ug/l	---	ND	50	ug/l	R				
3-Nitroaniline	99-09-2		ND	50	ug/l	---	ND	50	ug/l	R				
4,6-Dinitro-2-methylphenol	534-52-1		ND	50	ug/l	---	ND	50	ug/l	R				
4-Bromophenyl phenyl ether	101-55-3		ND	10	ug/l	---	ND	10	ug/l	R				
4-Chloro-3-methylphenol	59-50-7		ND	10	ug/l	---	ND	10	ug/l	R				
4-Chloroaniline	106-47-8		ND	10	ug/l	---	ND	10	ug/l	R				
4-Chlorophenyl phenyl ether	7005-72-3		ND	10	ug/l	---	ND	10	ug/l	R				
4-Methylphenol	106-44-5		ND	10	ug/l	---	ND	10	ug/l	R				
4-Nitroaniline	100-01-6		ND	50	ug/l	---	ND	50	ug/l	R				
4-Nitrophenol	100-02-7		ND	50	ug/l	---	ND	50	ug/l	R				
Acenaphthene	83-32-9		ND	10	ug/l	---	ND	10	ug/l	R				
Acenaphthylene	208-96-8		ND	10	ug/l	---	ND	10	ug/l	R				
Acetophenone	98-86-2		ND	10	ug/l	---	ND	10	ug/l	R				
Anthracene	120-12-7		ND	10	ug/l	---	ND	10	ug/l	R				
Atrazine	1912-24-9		ND	10	ug/l	---	ND	10	ug/l	R				
Benzaldehyde	100-52-7		ND	10	ug/l	---	ND	10	ug/l	R				
Benzo(a)anthracene	56-55-3		ND	10	ug/l	---	ND	10	ug/l	R				
Benzo(a)pyrene	50-32-8		ND	10	ug/l	---	ND	10	ug/l	R				
Benzo(b)fluoranthene	205-99-2		ND	10	ug/l	---	ND	10	ug/l	R				
Benzo(ghi)perylene	191-24-2		ND	10	ug/l	---	ND	10	ug/l	R				
Benzo(k)fluoranthene	207-08-9		ND	10	ug/l	---	ND	10	ug/l	R				
bis(2-Chloroethoxy)methane	111-91-1		ND	10	ug/l	---	ND	10	ug/l	R				
bis(2-Chloroethyl) ether	111-44-4		ND	10	ug/l	---	ND	10	ug/l	R				
bis(2-Ethylhexyl) phthalate	117-81-7		3.9	10	ug/l	UB	ND	10	ug/l	R				
Butyl benzyl phthalate	85-68-7		ND	10	ug/l	---	ND	10	ug/l	R				
Caprolactam	105-60-2		ND	10	ug/l	---	ND	10	ug/l	R				
Carbazole	86-74-8		ND	10	ug/l	---	ND	10	ug/l	R				
Chrysene	218-01-9		ND	10	ug/l	---	ND	10	ug/l	R				
Di-n-butyl phthalate	84-74-2		ND	10	ug/l	---	ND	10	ug/l	R				
Di-n-octyl phthalate	117-84-0		ND	10	ug/l	---	ND	10	ug/l	R				
Dibenz(a,h)anthracene	53-70-3		ND	10	ug/l	---	ND	10	ug/l	R				
Dibenzofuran	132-64-9		ND	10	ug/l	---	ND	10	ug/l	R				
Diethyl phthalate	84-66-2		ND	10	ug/l	---	ND	10	ug/l	R				
Dimethyl phthalate	131-11-3		ND	10	ug/l	---	ND	10	ug/l	R				
Fluoranthene	206-44-0		ND	10	ug/l	---	ND	10	ug/l	R				
Fluorene	86-73-7		ND	10	ug/l	---	ND	10	ug/l	R				
Hexachlorobenzene	118-74-1		ND	10	ug/l	---	ND	10	ug/l	R				
Hexachlorobutadiene	87-68-3		ND	10	ug/l	---	ND	10	ug/l	R				
Hexachlorocyclopentadiene	77-47-4		ND	50	ug/l	---	ND	50	ug/l	R				
Hexachloroethane	67-72-1		ND	10	ug/l	---	ND	10	ug/l	R				
Indeno(1,2,3-cd)pyrene	193-39-5		ND	10	ug/l	---	ND	10	ug/l	R				
Isophorone	78-59-1		ND	10	ug/l	---	ND	10	ug/l	R				
N-Nitrosodi-n-propylamine	621-64-7		ND	10	ug/l	---	ND	10	ug/l	R				
N-Nitrosodiphenylamine	86-30-6		ND	10	ug/l	---	ND	10	ug/l	R				
Naphthalene	91-20-3		ND	10	ug/l	---	ND	10	ug/l	R				
Nitrobenzene	98-95-3		ND	10	ug/l	---	ND	10	ug/l	R				
Pentachlorophenol	87-86-5		ND	10	ug/l	---	ND	10	ug/l	R				
Phenanthrene	85-01-8		ND	10	ug/l	---	ND	10	ug/l	R				
Phenol	108-95-2		ND	10	ug/l	---	ND	10	ug/l	R				
Pyrene	129-00-0		ND	10	ug/l	---	ND	10	ug/l	R				

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 8C13254

Analyte	Cas No.	Sample Name:	Result	Report Limit	Units	Valid Qualifier
		Lab Sample ID:				
		Sample Date:				
Pest & PCB						
OSW-8082						
PCB-1016	12674-11-2	AMW-05B(20080311)	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1221	11104-28-2	AMW-05B(20080311)	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1232	11141-16-5	AMW-05B(20080311)	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1242	53469-21-9	AMW-05B(20080311)	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1248	12672-29-6	AMW-05B(20080311)	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1254	11097-69-1	AMW-05B(20080311)	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1260	11096-82-5	AMW-05B(20080311)	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
GC VOC						
PUBL-SW-140						
Gasoline Range Organics	E-1005	AMW-05B(20080311)	ND	100	ug/l	---
		A8C130254001				
		3/11/2008				
GC Other						
OSW-8015B-MOD						
Diesel Range Organics	E-1004	AMW-05B(20080311)	0.097	0.10	mg/l	UB
		A8C130254001				
		3/11/2008				
Metals						
OSW-6010B						
Arsenic - Dissolved	7440-38-2	AMW-05B(20080311)	ND	10.0	ug/l	---
		A8C130254001				
		3/11/2008				
Barium - Dissolved	7440-39-3	AMW-05B(20080311)	79.7	200	ug/l	J
		A8C130254001				
		3/11/2008				
Cadmium - Dissolved	7440-43-9	AMW-05B(20080311)	ND	5.0	ug/l	---
		A8C130254001				
		3/11/2008				
Chromium - Dissolved	7440-47-3	AMW-05B(20080311)	3.4	10.0	ug/l	J
		A8C130254001				
		3/11/2008				
Lead - Dissolved	7439-92-1	AMW-05B(20080311)	ND	3.0	ug/l	---
		A8C130254001				
		3/11/2008				
Selenium - Dissolved	7782-49-2	AMW-05B(20080311)	ND	5.0	ug/l	---
		A8C130254001				
		3/11/2008				
Silver - Dissolved	7440-22-4	AMW-05B(20080311)	ND	10.0	ug/l	---
		A8C130254001				
		3/11/2008				
OSW-7470A						
Mercury - Dissolved	7439-97-6	AMW-05B(20080311)	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				

Analyte	Cas No.	Sample Name:	Result	Report Limit	Units	Valid Qualifier
		Lab Sample ID:				
		Sample Date:				
Pest & PCB						
OSW-8082						
PCB-1016	12674-11-2	AMW-05B(20080311)R2	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1221	11104-28-2	AMW-05B(20080311)R2	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1232	11141-16-5	AMW-05B(20080311)R2	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1242	53469-21-9	AMW-05B(20080311)R2	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1248	12672-29-6	AMW-05B(20080311)R2	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1254	11097-69-1	AMW-05B(20080311)R2	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
PCB-1260	11096-82-5	AMW-05B(20080311)R2	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				
GC VOC						
PUBL-SW-140						
Gasoline Range Organics	E-1005	AMW-05B(20080311)R2	ND	100	ug/l	---
		A8C130254001				
		3/11/2008				
GC Other						
OSW-8015B-MOD						
Diesel Range Organics	E-1004	AMW-05B(20080311)R2	0.097	0.10	mg/l	UB
		A8C130254001				
		3/11/2008				
Metals						
OSW-6010B						
Arsenic - Dissolved	7440-38-2	AMW-05B(20080311)R2	ND	10.0	ug/l	---
		A8C130254001				
		3/11/2008				
Barium - Dissolved	7440-39-3	AMW-05B(20080311)R2	79.7	200	ug/l	J
		A8C130254001				
		3/11/2008				
Cadmium - Dissolved	7440-43-9	AMW-05B(20080311)R2	ND	5.0	ug/l	---
		A8C130254001				
		3/11/2008				
Chromium - Dissolved	7440-47-3	AMW-05B(20080311)R2	3.4	10.0	ug/l	J
		A8C130254001				
		3/11/2008				
Lead - Dissolved	7439-92-1	AMW-05B(20080311)R2	ND	3.0	ug/l	---
		A8C130254001				
		3/11/2008				
Selenium - Dissolved	7782-49-2	AMW-05B(20080311)R2	ND	5.0	ug/l	---
		A8C130254001				
		3/11/2008				
Silver - Dissolved	7440-22-4	AMW-05B(20080311)R2	ND	10.0	ug/l	---
		A8C130254001				
		3/11/2008				
OSW-7470A						
Mercury - Dissolved	7439-97-6	AMW-05B(20080311)R2	ND	0.20	ug/l	---
		A8C130254001				
		3/11/2008				

Analyte	Cas No.	Sample Name:	Result	Report Limit	Units	Valid Qualifier
		Lab Sample ID:				
		Sample Date:				
Pest & PCB						
OSW-8082						
PCB-1016	12674-11-2	TB-001(20080311)TB	ND	0.20	ug/l	---
		A8C130254002				
		3/11/2008				
PCB-1221	11104-28-2	TB-001(20080311)TB	ND	0.20	ug/l	---
		A8C130254002				
		3/11/2008				
PCB-1232	11141-16-5	TB-001(20080311)TB	ND	0.20	ug/l	---
		A8C130254002				
		3/11/2008				
PCB-1242	53469-21-9	TB-001(20080311)TB	ND	0.20	ug/l	---
		A8C130254002				
		3/11/2008				
PCB-1248	12672-29-6	TB-001(20080311)TB	ND	0.20	ug/l	---
		A8C130254002				
		3/11/2008				
PCB-1254	11097-69-1	TB-001(20080311)TB	ND	0.20	ug/l	---
		A8C130254002				
		3/11/2008				
PCB-1260	11096-82-5	TB-001(20080311)TB	ND	0.20	ug/l	---
		A8C130254002				
		3/11/2008				
GC VOC						
PUBL-SW-140						
Gasoline Range Organics	E-1005	TB-001(20080311)TB	ND	100	ug/l	---
		A8C130254002				
		3/11/2008				
GC Other						
OSW-8015B-MOD						
Diesel Range Organics	E-1004	TB-001(20080311)TB	0.097	0.10	mg/l	UB
		A8C130254002				
		3/11/2008				
Metals						
OSW-6010B						
Arsenic - Dissolved	7440-38-2	TB-001(20080311)TB	ND	10.0	ug/l	---
		A8C130254002				
		3/11/2008				
Barium - Dissolved	7440-39-3	TB-001(20080311)TB	79.7	200	ug/l	J
		A8C130254002				
		3/11/2008				
Cadmium - Dissolved	7440-43-9	TB-001(20080311)TB	ND	5.0	ug/l	---
		A8C130254002				
		3/11/2008				
Chromium - Dissolved	7440-47-3	TB-001(20080311)TB	3.4	10.0	ug/l	J
		A8C130254002				
		3/11/2008				
Lead - Dissolved	7439-92-1	TB-001(20080311)TB	ND	3.0	ug/l	---
		A8C130254002				
		3/11/2008				
Selenium - Dissolved	7782-49-2	TB-001(20080311)TB	ND	5.0	ug/l	---
		A8C130254002				
		3/11/2008				
Silver - Dissolved	7440-22-4	TB-001(20080311)TB	ND	10.0	ug/l	---
		A8C130254002				
		3/11/2008				
OSW-7470A						
Mercury - Dissolved	7439-97-6	TB-001(20080311)TB	ND	0.20	ug/l	---
		A8C130254002				
		3/11/2008				

TABLE 4

Qualified Results Summary

Due to LCS or MS/MSD Outlier

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 8C13254

Sample Name: AMW-05B(20080311)
Lab Sample ID: A8C130254001
Sample Date: 3/11/2008

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC					
OSW-8260B					
2-Hexanone	591-78-6	ND	10	ug/l	UJ

TABLE 5

Qualified Results Summary

Due to Validators Choice of Re-extract

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 8C13254

		Sample Name:	AMW-05B(20080311)R2			
		Lab Sample ID:	A8C130254001			
		Sample Date:	3/11/2008			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS SVOC					
OSW-8270C					
1,1-Biphenyl	92-52-4	ND	10	ug/l	R
2,2-oxybis(1-Chloropropane)	108-60-1	ND	10	ug/l	R
2,4,5-Trichlorophenol	95-95-4	ND	10	ug/l	R
2,4,6-Trichlorophenol	88-06-2	ND	10	ug/l	R
2,4-Dichlorophenol	120-83-2	ND	10	ug/l	R
2,4-Dimethylphenol	105-67-9	ND	10	ug/l	R
2,4-Dinitrophenol	51-28-5	ND	50	ug/l	R
2,4-Dinitrotoluene	121-14-2	ND	10	ug/l	R
2,6-Dinitrotoluene	606-20-2	ND	10	ug/l	R
2-Chloronaphthalene	91-58-7	ND	10	ug/l	R
2-Chlorophenol	95-57-8	ND	10	ug/l	R
2-Methylnaphthalene	91-57-6	ND	10	ug/l	R
2-Methylphenol	95-48-7	ND	10	ug/l	R
2-Nitroaniline	88-74-4	ND	50	ug/l	R
2-Nitrophenol	88-75-5	ND	10	ug/l	R
3,3-Dichlorobenzidine	91-94-1	ND	50	ug/l	R
3-Nitroaniline	99-09-2	ND	50	ug/l	R
4,6-Dinitro-2-methylphenol	534-52-1	ND	50	ug/l	R
4-Bromophenyl phenyl ether	101-55-3	ND	10	ug/l	R
4-Chloro-3-methylphenol	59-50-7	ND	10	ug/l	R
4-Chloroaniline	106-47-8	ND	10	ug/l	R
4-Chlorophenyl phenyl ether	7005-72-3	ND	10	ug/l	R
4-Methylphenol	106-44-5	ND	10	ug/l	R
4-Nitroaniline	100-01-6	ND	50	ug/l	R
4-Nitrophenol	100-02-7	ND	50	ug/l	R
Acenaphthene	83-32-9	ND	10	ug/l	R
Acenaphthylene	208-96-8	ND	10	ug/l	R
Acetophenone	98-86-2	ND	10	ug/l	R
Anthracene	120-12-7	ND	10	ug/l	R
Atrazine	1912-24-9	ND	10	ug/l	R
Benzaldehyde	100-52-7	ND	10	ug/l	R
Benzo(a)anthracene	56-55-3	ND	10	ug/l	R
Benzo(a)pyrene	50-32-8	ND	10	ug/l	R
Benzo(b)fluoranthene	205-99-2	ND	10	ug/l	R
Benzo(ghi)perylene	191-24-2	ND	10	ug/l	R
Benzo(k)fluoranthene	207-08-9	ND	10	ug/l	R
bis(2-Chloroethoxy)methane	111-91-1	ND	10	ug/l	R
bis(2-Chloroethyl) ether	111-44-4	ND	10	ug/l	R
bis(2-Ethylhexyl) phthalate	117-81-7	ND	10	ug/l	R
Butyl benzyl phthalate	85-68-7	ND	10	ug/l	R
Caprolactam	105-60-2	ND	10	ug/l	R
Carbazole	86-74-8	ND	10	ug/l	R
Chrysene	218-01-9	ND	10	ug/l	R
Di-n-butyl phthalate	84-74-2	ND	10	ug/l	R
Di-n-octyl phthalate	117-84-0	ND	10	ug/l	R
Dibenz(a,h)anthracene	53-70-3	ND	10	ug/l	R
Dibenzofuran	132-64-9	ND	10	ug/l	R
Diethyl phthalate	84-66-2	ND	10	ug/l	R
Dimethyl phthalate	131-11-3	ND	10	ug/l	R
Fluoranthene	206-44-0	ND	10	ug/l	R
Fluorene	86-73-7	ND	10	ug/l	R
Hexachlorobenzene	118-74-1	ND	10	ug/l	R
Hexachlorobutadiene	87-68-3	ND	10	ug/l	R
Hexachlorocyclopentadiene	77-47-4	ND	50	ug/l	R
Hexachloroethane	67-72-1	ND	10	ug/l	R
Indeno(1,2,3-cd)pyrene	193-39-5	ND	10	ug/l	R
Isophorone	78-59-1	ND	10	ug/l	R
N-Nitrosodi-n-propylamine	621-64-7	ND	10	ug/l	R
N-Nitrosodiphenylamine	86-30-6	ND	10	ug/l	R
Naphthalene	91-20-3	ND	10	ug/l	R
Nitrobenzene	98-95-3	ND	10	ug/l	R
Pentachlorophenol	87-86-5	ND	10	ug/l	R
Phenanthrene	85-01-8	ND	10	ug/l	R
Phenol	108-95-2	ND	10	ug/l	R
Pyrene	129-00-0	ND	10	ug/l	R

Note: R - Result is considered unusable due to associated QC outlier.

TABLE 6

Qualified Results Summary

Due to Blank Contamination

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 8C13254

		Sample Name:	AMW-05B(20080311)			
		Lab Sample ID:	A8C130254001			
		Sample Date:	3/11/2008			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS SVOC					
OSW-8270C					
bis(2-Ethylhexyl) phthalate	117-81-7	3.9	10	ug/l	UB
GC Other					
OSW-8015B-MOD					
Diesel Range Organics	E-1004	0.097	0.10	mg/l	UB

Note: UB - Result is considered non-detect at the report limit due to associated blank conta

TABLE 7

EPA Sample Holding Time and Preservation Requirements

Parameter	*Reference Method*	*Matrix*	*Preservation & Storage*	*Holding Times*
VOCs	OSW-8260B	Water	pH<2 w/HCl Refrigeration 0-6°C	14 days
SVOCs	OSW-8270C	Water	Refrigeration 0-6°C	7 days Ext. 40 days Anal.
PCBs	OSW-8082	Water	Refrigeration 0-6°C	7 days Ext. 40 days Anal.
Wisconsin GRO	WI-GRO	Water	pH<2 w/HCl Refrigeration 0-6°C	14 days
Wisconsin DRO	WI-DRO	Water	pH<2 w/HCl Refrigeration 0-6°C	7 days Ext. 40 days Anal.
ICP Metals	OSW-6010B	Water	pH<2 w/HNO3 Refrigeration 0-6°C	180 days
Mercury	OSW-7470A	Water	pH<2 w/HNO3 Refrigeration 0-6°C	28 days

ATTACHMENT A

CHAIN OF CUSTODY DOCUMENT(S)

Chain of Custody Record

[redacted]

* SEND TO NORTH CANTON

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4142 (0907)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	BRYAN ZINDA	3/11/08	373999
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
430 1ST AVE N., SUITE 720	612-339-9434 / 612-336-4538		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
MINNEAPOLIS, MN / MN / 55401		DENISE POHL	
Project Name and Location (State)	**Carrier/Waybill Number**		
FORD TWIN CITIES PHASE B, MN			
Contract/Purchase Order/Quote No.			
FORD-TCAP-03/E200575-2			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	VOC (8260)	SVOC	PCB	RCRA Metals (Field Filtered)	DRO (with SG)	GRO (with SG)			Temp Blank			
AMW-05B(20080311)	3/11/08	1115		X			4		1	8			3	2	2	1		2	3					
AMW-05B(20080311)MS	3/11/08	1115		X			4		1	8			3	2	2	1		2	3					
AMW-05B(20080311)MSD	3/11/08	1115		X			4		1	8			3	2	2	1		2	3					
~~Trip Blank~~ TB-001(20080311)	3/11/08	—		X			4		1	8			1											
Temp Blank -001(20080311)	3/11/08	—		X			1														1			

Special Instructions/ Conditions of Receipt

* LEVEL 4 *

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	3/12/08	14:00	1. Received By	3-12	1400
2. Relinquished By	3-12		2. Received By	3/13/08	0930
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: ABC130254

Client Arcadis | Project Ford TCAP | Quote # _____

Cooler Received on 3/13/08 | Opened on 3/13/08 | By _____ (Signature)

FedEx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ TestAmerica Courier ☐

Stetson ☐ US Cargo ☐ Other _____

TestAmerica Cooler # See back | Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity _____
   Were custody seals on the outside of cooler signed and dated? Yes ☐ No ☐ NA ☒
   Were custody seals on the bottles? Yes ☐ No ☒
   If YES, are there any exceptions _____
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other _____
6. Cooler temperature upon receipt _____ °C (see back of form for multiple coolers/temps)

METHOD: IR ☒ Other ☐ _____

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH upon receipt? Yes ☒ No ☐ NA ☐
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a Trip Blank present in the cooler? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM _____ Date _____ by _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:
Received 1xHCl VOA vial for sample AMW-05B (20080311) Empty There is plenty of volume to run analysis.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #071707-HNO3 - Sulfuric Acid Lot # 092006-H2SO4; Sodium Hydroxide Lot # 122805 -NaOH; Hydrochloric Acid Lot # 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot # 050205-CH3COO2ZN/NaOH*

What time was preservative added to sample(s)? _____

Sample(s) _____ were received with bubble > 6 mm in diameter (Notify PM)

Client ID	pH	Date	Initials
AMW-05B	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2	3/13/08	gw

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID		pH	Date	Initials

Cooler	Temp °C	Method	Coolant
485	3.2°C	IR	Ice
834	1.6	"	"
854	2.4	"	"
346	1.8	"	"
Client Blue	3.4	"	"

Discrepancies Cont'd

February 11, 2010

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant - 03
Project number: MN000593.0002.MN
Laboratory: TestAmerica - North Canton
Laboratory submittal: A0B030456
Sample date: 2009-10-06
Report received by Enovis: 2010-02-10
Initial Data Verification completed by Enovis: 2010-02-11

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

3 Water sample(s), 1 duplicate and 1 equipment blank water were analyzed for PCB parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

The following minor QC exceptions or missing information were noted:

PCB sample prep hold times were reported as exceeded on the laboratory analytical report. Based on recent EPA method update rule changes addressing PCB hold times Enovis is utilizing 1 year as the recommended hold time between sample collection and prep for water matrices. Therefore qualification is not required for the PCB results based on the analytical hold times noted in the laboratory report.

PCB equipment blank was non-detect for all target PCB aroclors.

PCB MSD recoveries and MS/MSD RPD's performed on client sample -001 were outside of laboratory control limits with the recoveries biased high for aroclors 1016 and 1260. Client sample -001 results for PCB's were non-detect so qualification is not required based on these high bias MSD's.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. MN000593.0002 MN

FORD TCAP 03 E200572

Lot #: A0B030456

Rebecca Forbort

ARCADIS U.S., Inc.
430 1st. Ave. North
Suite 720
Minneapolis, MN 55401

TESTAMERICA LABORATORIES, INC.

Denise Pohl
Project Manager

February 9, 2010

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CASE NARRATIVE

A0B030456

The following report contains the analytical results for five water samples submitted to TestAmerica North Canton by ARCADIS U.S., Inc. from the Ford TCAP 03 E200572 Site, project number MN000593.0002 MN. The samples were received October 08, 2009, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the method detection limit and include qualified results where applicable.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 0.9 and 2.7°C.

The sample(s) AMW-05B(20091006), AMW-07(20091006), AMW-03B(20091006), DUP-001(20091006) and EB-001(20091006) could not be analyzed within holding time for method, 8082 PCB's, because the request for the test was made after the holding time for the samples expired. The samples were collected on 10-6-09, received in the Laboratory on10-8-09 and 8082 PCB's was requested on 2-3-10.

POLYCHLORINATED BIPHENYLS-8082

The matrix spike/matrix spike duplicate(s) for AMW-05B(20091006) had RPD's and recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available upon request.

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),
Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada (#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit

TestAmerica
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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A0B030456

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
NO DETECTABLE PARAMETERS				

TestAmerica
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METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A0B030456

PARAMETER	ANALYTICAL METHOD
PCBs by SW-846 8082	SW846 8082

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

TestAmerica
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SAMPLE SUMMARY

SAMPLE SUMMARY

A0B030456

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LT5N7	001	AMW-05B(20091006)	10/06/09	08:20
LT5PF	002	AMW-07(20091006)	10/06/09	10:00
LT5PQ	003	AMW-03B(20091006)	10/06/09	11:40
LT5PV	004	DUP-001(20091006)	10/06/09	
LT5P1	005	EB-001(20091006)	10/06/09	09:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SHIPPING AND RECEIVING DOCUMENTS

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
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TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	Bryan Zinda		126463
Address 430 1st Ave N Suite 720	**Telephone Number (Area Code)/Fax Number** 612-373-0234 / 612-336-4538	**Lab Number**	**Page** 1 of 1
City Minneapolis **State** MN **Zip Code** 55401	**Site Contact**	**Lab Contact** Denice Pohl	
Project Name and Location (State) MN000593.0002 MN	**Carrier/Waybill Number**		
Contract/Purchase Order/Quote No. Ford-TCAP-03/E200575-2			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOCs	PCBs	Special Instructions/ Conditions of Receipt
AMW-05B(20091006)	10-6-09	0820		X			2			2			2	2	*LEVEL 4*
AMW-05B(20091006)MS	10-6-09	0820		X			2			2			2	2	Hold 1 PCB Bottle from each Sample pending additional analysis.
AMW-05B(20091006)MSD	10-6-09	0820		X			2			3			3	2	
AMW-07(20091006)	10-6-09	1000		X			2			3			3	2	
AMW-03B(20091006)	10-6-09	1140		X			2			3			3	2	
DUP-001(20091006)	—	—		X			2			3			3	2	
EB-001(20091006)	10-6-09	0930		X			2			3			3	2	
TB-002(20091006)	—	—		X						1			1		
Tank-01	10-6-09	1230		X						3			3		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard

QC Requirements (Specify) LEVEL 4

		Date	Time
1. Relinquished By	Josh McCulloch	10/07/09	1530
2. Relinquished By	A. Beck	10-7-09	1800
3. Relinquished By			
1. Received By	A. Beck	10-7-09	1530
2. Received By	[illegible]	10/8/09	9:10
3. Received By			

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: A9J080262

Client ARCADIS Project Ford-TCAP-03 By: [signature] (Signature)

Cooler Received on 10/8/09 Opened on 10/8/09

FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____

TestAmerica Cooler # _____ Multiple Coolers ☒ Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☒ CSL Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 1 Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt _____ °C See back of form for multiple coolers/temps ☒
   METHOD: IR ☒ Other ☐ _____
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

_____

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 031909-HNO_3; *Sulfuric Acid Lot#* 082509-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN/NaOH$. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant
Client	2.7	IR	Ice
680220	0.9	IR	Ice

Discrepancies Cont'd:

SOP: NC-SC-0005, Sample Receiving
\\cansvr10\public\QAQC\NARRATIVE\TestAmerica\Cooler Receipt TestAmerica\COOLER_TestAmerica_Rev 73_092309.doc

POLYCHLORINATED BIPHENYLS DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20091006)

GC Semivolatiles

Lot-Sample #...: A0B030456-001 **Work Order #...:** LT5N71AA **Matrix.....:** WG
Date Sampled...: 10/06/09 08:20 **Date Received..:** 10/08/09
Prep Date.....: 02/03/10 **Analysis Date..:** 02/04/10
Prep Batch #...: 0034232
Dilution Factor: 1 **Initial Wgt/Vol:** 930 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aroclor 1016	ND	0.20	ug/L	0.044
Aroclor 1221	ND	0.20	ug/L	0.045
Aroclor 1232	ND	0.20	ug/L	0.073
Aroclor 1242	ND	0.20	ug/L	0.060
Aroclor 1248	ND	0.20	ug/L	0.061
Aroclor 1254	ND	0.20	ug/L	0.032
Aroclor 1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	74	(27 - 130)
Decachlorobiphenyl	46	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20091006)

GC Semivolatiles

Lot-Sample #...: A0B030456-002 **Work Order #...:** LT5PF1AA **Matrix.....:** WG
Date Sampled...: 10/06/09 10:00 **Date Received..:** 10/08/09
Prep Date.....: 02/03/10 **Analysis Date..:** 02/04/10
Prep Batch #...: 0034232
Dilution Factor: 1 **Initial Wgt/Vol:** 940 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aroclor 1016	ND	0.20	ug/L	0.044
Aroclor 1221	ND	0.20	ug/L	0.045
Aroclor 1232	ND	0.20	ug/L	0.073
Aroclor 1242	ND	0.20	ug/L	0.060
Aroclor 1248	ND	0.20	ug/L	0.061
Aroclor 1254	ND	0.20	ug/L	0.032
Aroclor 1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(27 - 130)
Decachlorobiphenyl	40	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-03B(20091006)

GC Semivolatiles

Lot-Sample #...: A0B030456-003 **Work Order #...:** LT5PQ1AA **Matrix.....:** WG
Date Sampled...: 10/06/09 11:40 **Date Received..:** 10/08/09
Prep Date.....: 02/03/10 **Analysis Date..:** 02/04/10
Prep Batch #...: 0034232
Dilution Factor: 1 **Initial Wgt/Vol:** 930 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aroclor 1016	ND	0.20	ug/L	0.044
Aroclor 1221	ND	0.20	ug/L	0.045
Aroclor 1232	ND	0.20	ug/L	0.073
Aroclor 1242	ND	0.20	ug/L	0.060
Aroclor 1248	ND	0.20	ug/L	0.061
Aroclor 1254	ND	0.20	ug/L	0.032
Aroclor 1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	77	(27 - 130)
Decachlorobiphenyl	45	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: DUP-001(20091006)

GC Semivolatiles

Lot-Sample #...: A0B030456-004 **Work Order #...:** LT5PV1AA **Matrix.....:** WG
Date Sampled...: 10/06/09 **Date Received..:** 10/08/09
Prep Date.....: 02/03/10 **Analysis Date..:** 02/04/10
Prep Batch #...: 0034232
Dilution Factor: 1 **Initial Wgt/Vol:** 950 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aroclor 1016	ND	0.20	ug/L	0.044
Aroclor 1221	ND	0.20	ug/L	0.045
Aroclor 1232	ND	0.20	ug/L	0.073
Aroclor 1242	ND	0.20	ug/L	0.060
Aroclor 1248	ND	0.20	ug/L	0.061
Aroclor 1254	ND	0.20	ug/L	0.032
Aroclor 1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(27 - 130)
Decachlorobiphenyl	40	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: EB-001(20091006)

GC Semivolatiles

Lot-Sample #...: A0B030456-005 **Work Order #...:** LT5P11AA **Matrix.....:** WQ
Date Sampled...: 10/06/09 09:30 **Date Received..:** 10/08/09
Prep Date.....: 02/03/10 **Analysis Date..:** 02/04/10
Prep Batch #...: 0034232
Dilution Factor: 1 **Initial Wgt/Vol:** 870 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aroclor 1016	ND	0.20	ug/L	0.044
Aroclor 1221	ND	0.20	ug/L	0.045
Aroclor 1232	ND	0.20	ug/L	0.073
Aroclor 1242	ND	0.20	ug/L	0.060
Aroclor 1248	ND	0.20	ug/L	0.061
Aroclor 1254	ND	0.20	ug/L	0.032
Aroclor 1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	71	(27 - 130)
Decachlorobiphenyl	37	(10 - 127)

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A0B030456 **Work Order #...:** LT5P81AA **Matrix.....:** WATER
MB Lot-Sample #: A0B030000-232

Prep Date.....: 02/03/10 **Final Wgt/Vol..:** 2 mL
Analysis Date..: 02/04/10 **Prep Batch #...:** 0034232
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	0.20	ug/L	SW846 8082
Aroclor 1221	ND	0.20	ug/L	SW846 8082
Aroclor 1232	ND	0.20	ug/L	SW846 8082
Aroclor 1242	ND	0.20	ug/L	SW846 8082
Aroclor 1248	ND	0.20	ug/L	SW846 8082
Aroclor 1254	ND	0.20	ug/L	SW846 8082
Aroclor 1260	ND	0.20	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	81	(27 - 130)
Decachlorobiphenyl	37	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A0B030456 **Work Order #...:** LT5P81AC **Matrix.....:** WATER
LCS Lot-Sample#: A0B030000-232
Prep Date.....: 02/03/10 **Analysis Date..:** 02/04/10
Prep Batch #...: 0034232
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	**92**	**(44 - 119)**	**SW846 8082**
Aroclor 1260	**94**	**(41 - 118)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	80	(27 - 130)
Decachlorobiphenyl	35	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A0B030456 **Work Order #...:** LT5P81AC **Matrix.....:** WATER
LCS Lot-Sample#: A0B030000-232
Prep Date.....: 02/03/10 **Analysis Date..:** 02/04/10
Prep Batch #...: 0034232
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aroclor 1016	**2.5**	**2.3**	**ug/L**	**92**	**SW846 8082**
Aroclor 1260	**2.5**	**2.4**	**ug/L**	**94**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	80	(27 - 130)
Decachlorobiphenyl	35	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A0B030456 **Work Order #...:** LT5N71AE-MS **Matrix.....:** WG
MS Lot-Sample #: A0B030456-001 LT5N71AF-MSD
Date Sampled...: 10/06/09 08:20 **Date Received..:** 10/08/09
Prep Date.....: 02/03/10 **Analysis Date..:** 02/04/10
Prep Batch #...: 0034232
Dilution Factor: 1 **Initial Wgt/Vol:** 450 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**185 a**	**(10 - 166)**			**SW846 8082**
	99 p	**(10 - 166)**	**61**	**(0-30)**	**SW846 8082**
Aroclor 1260	**161 a**	**(21 - 140)**			**SW846 8082**
	107 p	**(21 - 140)**	**41**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	73	(27 - 130)
	40	(27 - 130)
Decachlorobiphenyl	54	(10 - 127)
	34	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A0B030456 **Work Order #...:** LT5N71AE-MS **Matrix.....:** WG
MS Lot-Sample #: A0B030456-001 LT5N71AF-MSD
Date Sampled...: 10/06/09 08:20 **Date Received..:** 10/08/09
Prep Date.....: 02/03/10 **Analysis Date..:** 02/04/10
Prep Batch #...: 0034232
Dilution Factor: 1 **Initial Wgt/Vol:** 450 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aroclor 1016	**ND**	**2.5**	**4.6**	**ug/L**	**185 a**		**SW846 8082**
	ND	**2.5**	**2.5**	**ug/L**	**99 p**	**61**	**SW846 8082**
Aroclor 1260	**ND**	**2.5**	**4.0**	**ug/L**	**161 a**		**SW846 8082**
	ND	**2.5**	**2.7**	**ug/L**	**107 p**	**41**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	73	(27 - 130)
	40	(27 - 130)
Decachlorobiphenyl	54	(10 - 127)
	34	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

August 29, 2007

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, US

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000593.5
Laboratory: TestAmerica, formerly STL - North Canton
Laboratory submittal: A7G180138
Sample date: 2007-07-17
Report received by Enovis: 2007-08-02
Revised Data Verification completed by Enovis: 2007-08-29

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Verification report revised to include evaluation of field duplicate analysis. Valid qualifier flags added to database for estimated values and qualified analytical results. Blank contamination recommendation language revised.

Field duplicate sample ID DUP-001(20070717)FD was identified as AMW-03A(20070717). All FD results reported above the MDL were less than 2x the sample results for AMW-03 and showed good correlation with compounds consistently reported.

The following minor QC exceptions or missing information were noted:

VOC trip blank reported a concentration of Methyl ethyl ketone between the MDL and the RDL. Results for samples A7G180138-001, 002, 003, 005 and 006 also reported concentrations between the MDL and the RDL are flagged UB and should be considered non-detect at the RDL.

VOC method blank for 1,2,3-Trichlorobenzene concentration reported between the MDL and the RDL. Results for samples A7G180138-001 and 002 were reported between the MDL and the RDL are flagged UB and should be considered non-detect at the RDL

VOC method blank results were reported for Naphthalene, 2-Methylnaphthalene and Chloroform above the MDL. The associated samples were reported not detected so data qualification of client sample results for these analytes is not required based on the method blank results.

SVOC method blank for bis-2-Ethylhexyl phthalate reported a concentration above the MDL. Sample results for A7G180138-001, 002, 003, 004, 005 and 006 had concentrations that were reported between the MDL and the RDL are flagged UB and should be considered non-detect at the RDL.

SVOC method blank for Caprolactam reported a concentration above the MDL. Samples results for A7G180138-001, 003, 004 and 005 had concentrations that were reported between the MDL and the RDL are flagged UB and should be considered non-detect at the RDL.

SVOC method blank for Di-n-butyl phthalate reported a concentration above the MDL. Sample results for A7G180138-001, 002, 003, 004, 005 and 006 had concentrations that were reported between the MDL and the RDL are flagged UB and should be considered non-detect at the RDL.

PCB LCS/LCSD RPD for Aroclor 1260 was outside of lab control limits. Data qualification of investigative samples is not required based on this QC outlier.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://63.106.80.11/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JB	The analyte / compound was detected in the associated blank between the MDL and the laboratory`s reporting detection limit. For Inorganic methods the sample concentration was < 10x the blank concentration and is considered estimated. For Organic methods the sample concentration was < 5x or 10x for common laboratory contaminates, the blank concentration and is considered estimated.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

STL

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ANALYTICAL REPORT

PROJECT NO. MN000593.5

FORD BUNDLE SITES E200572

Lot #: A7G180138

Rebecca Forbort

ARCADIS U.S., Inc.
430 1st. Ave. North
Suite 720
Minneapolis, MN 55401

TESTAMERICA LABORATORIES, INC. (FKA STL)

Denise Pohl
Project Manager

July 31, 2007

CASE NARRATIVE

A7G180138

The following report contains the analytical results for six water samples and one quality control sample submitted to TestAmerica (formerly STL North Canton) by ARCADIS Geraghty & Miller, Inc from the Ford Bundle Sites E200572 Site, project number MN000593.5. The samples were received July 18, 2007, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 80.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 0.8, 0.9, 1.3 and 1.6°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 7201103. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

GC/MS SEMIVOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 7200133. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

POLYCHLORINATED BIPHENYLS-8082

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 7200123. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

CASE NARRATIVE (continued)

POLYCHLORINATED BIPHENYLS-8082 (continued)

Batch(es) 7200123 had RPDs outside QC criteria in the LCS/LCSD, but recoveries were within QC criteria; therefore, no corrective action was required.

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton (formerly STL North Canton) conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton (formerly STL North Canton) requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A7G180138

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
AMW-01(20070717) 07/17/07 13:00 001				
Barium	145 B	200	ug/L	SW846 6010B
Chromium	14.8	10.0	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	1.9 J,B	10	ug/L	SW846 8270C
Caprolactam	5.0 J,B	10	ug/L	SW846 8270C
Di-n-butyl phthalate	0.79 J,B	10	ug/L	SW846 8270C
Acetone	4.2 J	10	ug/L	SW846 8260B
Methyl ethyl ketone	1.3 J	10	ug/L	SW846 8260B
Chloroform	0.33 J	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	0.75 J,B	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	0.48 J	1.0	ug/L	SW846 8260B
AMW-02(20070717) 07/17/07 13:25 002				
Barium	48.4 B	200	ug/L	SW846 6010B
Chromium	5.6 B	10.0	ug/L	SW846 6010B
Acetophenone	0.77 J	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	9.1 J,B	10	ug/L	SW846 8270C
Di-n-butyl phthalate	0.68 J,B	10	ug/L	SW846 8270C
Phenol	3.2 J	10	ug/L	SW846 8270C
Acetone	3.1 J	10	ug/L	SW846 8260B
Methyl ethyl ketone	1.1 J	10	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	0.65 J,B	1.0	ug/L	SW846 8260B
AMW-03A(20070717) 07/17/07 11:15 003				
Barium	162 B	200	ug/L	SW846 6010B
Chromium	4.7 B	10.0	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	4.7 J,B	10	ug/L	SW846 8270C
Caprolactam	3.7 J,B	10	ug/L	SW846 8270C
Di-n-butyl phthalate	0.78 J,B	10	ug/L	SW846 8270C
Methyl ethyl ketone	1.1 J	10	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.45 J	1.0	ug/L	SW846 8260B
AMW-07(20070717) 07/17/07 13:55 004				
Lead	3.1	3.0	ug/L	SW846 6010B
Barium	142 B	200	ug/L	SW846 6010B
Chromium	19.3	10.0	ug/L	SW846 6010B
Benzo(b)fluoranthene	0.78 J	10	ug/L	SW846 8270C
Benzo(a)pyrene	0.79 J	10	ug/L	SW846 8270C

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A7G180138

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
AMW-07(20070717) 07/17/07 13:55 004				
bis(2-Ethylhexyl) phthalate	4.6 J,B	10	ug/L	SW846 8270C
Caprolactam	1.3 J,B	10	ug/L	SW846 8270C
Di-n-butyl phthalate	0.84 J,B	10	ug/L	SW846 8270C
Fluoranthene	0.84 J	10	ug/L	SW846 8270C
Phenanthrene	0.39 J	10	ug/L	SW846 8270C
Pyrene	1.0 J	10	ug/L	SW846 8270C
Chloroform	0.35 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.9	1.0	ug/L	SW846 8260B
DUP-001(20070717) 07/17/07 005				
Barium	161 B	200	ug/L	SW846 6010B
Chromium	3.9 B	10.0	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	2.9 J,B	10	ug/L	SW846 8270C
Caprolactam	2.7 J,B	10	ug/L	SW846 8270C
Di-n-butyl phthalate	0.77 J,B	10	ug/L	SW846 8270C
Methyl ethyl ketone	0.68 J	10	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.53 J	1.0	ug/L	SW846 8260B
AMW-04(20070717) 07/17/07 11:55 006				
Lead	4.8	3.0	ug/L	SW846 6010B
Barium	130 B	200	ug/L	SW846 6010B
Chromium	33.7	10.0	ug/L	SW846 6010B
Acetophenone	0.93 J	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	1.3 J,B	10	ug/L	SW846 8270C
Caprolactam	44 B	10	ug/L	SW846 8270C
Di-n-butyl phthalate	0.76 J,B	10	ug/L	SW846 8270C
Acetone	2.1 J	10	ug/L	SW846 8260B
Methyl ethyl ketone	0.97 J	10	ug/L	SW846 8260B
Carbon disulfide	0.82 J	1.0	ug/L	SW846 8260B
Chloroform	0.70 J	1.0	ug/L	SW846 8260B
Styrene	0.57 J	1.0	ug/L	SW846 8260B
Toluene	0.20 J	1.0	ug/L	SW846 8260B
TRIP BLANK01(20070717) 07/17/07 007				
Methyl ethyl ketone	1.2 J	10	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A7G180138

PARAMETER	ANALYTICAL METHOD
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
PCBs by SW-846 8082	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A7G180138

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
J23WX	001	AMW-01(20070717)	07/17/07	13:00
J23X4	002	AMW-02(20070717)	07/17/07	13:25
J230A	003	AMW-03A(20070717)	07/17/07	11:15
J230H	004	AMW-07(20070717)	07/17/07	13:55
J230T	005	DUP-001(20070717)	07/17/07	
J2302	006	AMW-04(20070717)	07/17/07	11:55
J231A	007	TRIP BLANK01(20070717)	07/17/07	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-001 **Work Order #...:** J23WX1AA **Matrix.....:** WG
Date Sampled...: 07/17/07 13:00 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/19/07
Prep Batch #...: 7201103
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**4.2 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**1.3 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**0.33 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-001 **Work Order #...:** J23WX1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	**0.75 J,B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	**0.48 J**	**1.0**	**ug/L**	**0.096**
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	113	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-001 **Work Order #...:** J23WX1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-001 **Work Order #...:** J23WX1AC **Matrix.....:** WG
Date Sampled...: 07/17/07 13:00 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/27/07
Prep Batch #...: 7200133
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	**1.9 J,B**	**10**	**ug/L**	**0.88**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	**5.0 J,B**	**10**	**ug/L**	**0.61**
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	**0.79 J,B**	**10**	**ug/L**	**0.61**
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-001 **Work Order #...:** J23WX1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	63	(27 - 111)
2-Fluorobiphenyl	60	(28 - 110)
Terphenyl-d14	79	(37 - 119)
Phenol-d5	72	(10 - 110)
2-Fluorophenol	63	(10 - 110)
2,4,6-Tribromophenol	80	(22 - 120)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-001 **Work Order #...:** J23WX1AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20070717)

GC Semivolatiles

Lot-Sample #...: A7G180138-001 **Work Order #...:** J23WX1AD **Matrix.....:** WG
Date Sampled...: 07/17/07 13:00 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/23/07
Prep Batch #...: 7200123
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	72	(35 - 130)
Decachlorobiphenyl	45	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20070717)

TOTAL Metals

Lot-Sample #...: A7G180138-001 **Matrix.....:** WG
Date Sampled...: 07/17/07 13:00 **Date Received..:** 07/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7200012						
Arsenic	ND	10.0	ug/L	SW846 6010B	07/19/07	J23WX1AF
		Dilution Factor: 1		MDL.....: 4.3		
Barium	**145 B**	**200**	**ug/L**	**SW846 6010B**	**07/19/07**	**J23WX1AJ**
		Dilution Factor: 1		MDL.....: 3.2		
Cadmium	ND	5.0	ug/L	SW846 6010B	07/19/07	J23WX1AK
		Dilution Factor: 1		MDL.....: 0.42		
Lead	ND	3.0	ug/L	SW846 6010B	07/19/07	J23WX1AG
		Dilution Factor: 1		MDL.....: 1.7		
Chromium	**14.8**	**10.0**	**ug/L**	**SW846 6010B**	**07/19/07**	**J23WX1AL**
		Dilution Factor: 1		MDL.....: 1.6		
Selenium	ND	5.0	ug/L	SW846 6010B	07/19/07	J23WX1AH
		Dilution Factor: 1		MDL.....: 2.4		
Silver	ND	10.0	ug/L	SW846 6010B	07/19/07	J23WX1AM
		Dilution Factor: 1		MDL.....: 2.1		
Mercury	ND	0.20	ug/L	SW846 7470A	07/19-07/20/07	J23WX1AE
		Dilution Factor: 1		MDL.....: 0.090		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-002 **Work Order #...:** J23X41AA **Matrix.....:** WG
Date Sampled...: 07/17/07 13:25 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/19/07
Prep Batch #...: 7201103
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.1 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**1.1 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-002 **Work Order #...:** J23X41AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	**0.65 J,B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	114	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-002 **Work Order #...:** J23X41AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-002 **Work Order #...:** J23X41AC **Matrix.....:** WG
Date Sampled...: 07/17/07 13:25 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/27/07
Prep Batch #...: 7200133
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	**0.77 J**	**10**	**ug/L**	**0.55**
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	**9.1 J,B**	**10**	**ug/L**	**0.88**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	**0.68 J,B**	**10**	**ug/L**	**0.61**
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

(Continued on next page)

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-002 **Work Order #...:** J23X41AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	**3.2 J**	**10**	**ug/L**	**0.96**
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(27 - 111)
2-Fluorobiphenyl	57	(28 - 110)
Terphenyl-d14	75	(37 - 119)
Phenol-d5	68	(10 - 110)
2-Fluorophenol	55	(10 - 110)
2,4,6-Tribromophenol	68	(22 - 120)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-002 **Work Order #...:** J23X41AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20070717)

GC Semivolatiles

Lot-Sample #...: A7G180138-002 **Work Order #...:** J23X41AD **Matrix.....:** WG
Date Sampled...: 07/17/07 13:25 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/23/07
Prep Batch #...: 7200123
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	59	(35 - 130)
Decachlorobiphenyl	23	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20070717)

TOTAL Metals

Lot-Sample #...: A7G180138-002 **Matrix.....:** WG
Date Sampled...: 07/17/07 13:25 **Date Received..:** 07/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7200012						
Arsenic	ND	10.0	ug/L	SW846 6010B	07/19/07	J23X41AF
		Dilution Factor: 1		MDL.....: 4.3		
Barium	**48.4 B**	**200**	**ug/L**	**SW846 6010B**	**07/19/07**	**J23X41AJ**
		Dilution Factor: 1		MDL.....: 3.2		
Cadmium	ND	5.0	ug/L	SW846 6010B	07/19/07	J23X41AK
		Dilution Factor: 1		MDL.....: 0.42		
Lead	ND	3.0	ug/L	SW846 6010B	07/19/07	J23X41AG
		Dilution Factor: 1		MDL.....: 1.7		
Chromium	**5.6 B**	**10.0**	**ug/L**	**SW846 6010B**	**07/19/07**	**J23X41AL**
		Dilution Factor: 1		MDL.....: 1.6		
Selenium	ND	5.0	ug/L	SW846 6010B	07/19/07	J23X41AH
		Dilution Factor: 1		MDL.....: 2.4		
Silver	ND	10.0	ug/L	SW846 6010B	07/19/07	J23X41AM
		Dilution Factor: 1		MDL.....: 2.1		
Mercury	ND	0.20	ug/L	SW846 7470A	07/19-07/20/07	J23X41AE
		Dilution Factor: 1		MDL.....: 0.090		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-03A(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-003 **Work Order #...:** J230A1AA **Matrix.....:** WG
Date Sampled...: 07/17/07 11:15 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/19/07
Prep Batch #...: 7201103
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**1.1 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	**0.45 J**	**1.0**	**ug/L**	**0.17**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-03A(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-003 **Work Order #...:** J230A1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	112	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-03A(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-003 **Work Order #...:** J230A1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-03A(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-003 **Work Order #...:** J230A1AC **Matrix.....:** WG
Date Sampled...: 07/17/07 11:15 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/27/07
Prep Batch #...: 7200133
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	**4.7 J,B**	**10**	**ug/L**	**0.88**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	**3.7 J,B**	**10**	**ug/L**	**0.61**
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	**0.78 J,B**	**10**	**ug/L**	**0.61**
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-03A(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-003 **Work Order #...:** J230A1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	55	(27 - 111)
2-Fluorobiphenyl	62	(28 - 110)
Terphenyl-d14	80	(37 - 119)
Phenol-d5	79	(10 - 110)
2-Fluorophenol	59	(10 - 110)
2,4,6-Tribromophenol	86	(22 - 120)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-03A(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-003 **Work Order #...:** J230A1AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-03A(20070717)

GC Semivolatiles

Lot-Sample #...: A7G180138-003 **Work Order #...:** J230A1AD **Matrix.....:** WG
Date Sampled...: 07/17/07 11:15 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/23/07
Prep Batch #...: 7200123
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	74	(35 - 130)
Decachlorobiphenyl	59	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: AMW-03A(20070717)

TOTAL Metals

Lot-Sample #...: A7G180138-003 **Matrix.....:** WG
Date Sampled...: 07/17/07 11:15 **Date Received..:** 07/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7200012						
Arsenic	ND	10.0	ug/L	SW846 6010B	07/19/07	J230A1AF
		Dilution Factor: 1		MDL.....: 4.3		
Barium	**162 B**	**200**	**ug/L**	**SW846 6010B**	**07/19/07**	**J230A1AJ**
		Dilution Factor: 1		MDL.....: 3.2		
Cadmium	ND	5.0	ug/L	SW846 6010B	07/19/07	J230A1AK
		Dilution Factor: 1		MDL.....: 0.42		
Lead	ND	3.0	ug/L	SW846 6010B	07/19/07	J230A1AG
		Dilution Factor: 1		MDL.....: 1.7		
Chromium	**4.7 B**	**10.0**	**ug/L**	**SW846 6010B**	**07/19/07**	**J230A1AL**
		Dilution Factor: 1		MDL.....: 1.6		
Selenium	ND	5.0	ug/L	SW846 6010B	07/19/07	J230A1AH
		Dilution Factor: 1		MDL.....: 2.4		
Silver	ND	10.0	ug/L	SW846 6010B	07/19/07	J230A1AM
		Dilution Factor: 1		MDL.....: 2.1		
Mercury	ND	0.20	ug/L	SW846 7470A	07/19-07/20/07	J230A1AE
		Dilution Factor: 1		MDL.....: 0.090		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-004 **Work Order #...:** J230H1AA **Matrix.....:** WG
Date Sampled...: 07/17/07 13:55 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/19/07
Prep Batch #...: 7201103
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**0.35 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-004 **Work Order #...:** J230H1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	**2.9**	**1.0**	**ug/L**	**0.17**
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	123	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-004 **Work Order #...:** J230H1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-004 **Work Order #...:** J230H1AC **Matrix.....:** WG
Date Sampled...: 07/17/07 13:55 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/27/07
Prep Batch #...: 7200133
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	**0.78 J**	**10**	**ug/L**	**0.049**
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	**0.79 J**	**10**	**ug/L**	**0.048**
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	**4.6 J,B**	**10**	**ug/L**	**0.88**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	**1.3 J,B**	**10**	**ug/L**	**0.61**
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	**0.84 J,B**	**10**	**ug/L**	**0.61**
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-004 **Work Order #...:** J230H1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	**0.84 J**	**10**	**ug/L**	**0.036**
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	**0.39 J**	**10**	**ug/L**	**0.087**
Phenol	ND	10	ug/L	0.96
Pyrene	**1.0 J**	**10**	**ug/L**	**0.048**
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	55	(27 - 111)
2-Fluorobiphenyl	59	(28 - 110)
Terphenyl-d14	97	(37 - 119)
Phenol-d5	67	(10 - 110)
2-Fluorophenol	55	(10 - 110)
2,4,6-Tribromophenol	83	(22 - 120)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-004 **Work Order #...:** J230H1AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20070717)

GC Semivolatiles

Lot-Sample #...: A7G180138-004 **Work Order #...:** J230H1AD **Matrix.....:** WG
Date Sampled...: 07/17/07 13:55 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/23/07
Prep Batch #...: 7200123
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	68	(35 - 130)
Decachlorobiphenyl	20	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20070717)

TOTAL Metals

Lot-Sample #...: A7G180138-004 **Matrix.....:** WG
Date Sampled...: 07/17/07 13:55 **Date Received..:** 07/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7200012						
Arsenic	ND	10.0	ug/L	SW846 6010B	07/19/07	J230H1AF
		Dilution Factor: 1		MDL.....: 4.3		
Barium	**142 B**	**200**	**ug/L**	**SW846 6010B**	**07/19/07**	**J230H1AJ**
		Dilution Factor: 1		MDL.....: 3.2		
Cadmium	ND	5.0	ug/L	SW846 6010B	07/19/07	J230H1AK
		Dilution Factor: 1		MDL.....: 0.42		
Lead	**3.1**	**3.0**	**ug/L**	**SW846 6010B**	**07/19/07**	**J230H1AG**
		Dilution Factor: 1		MDL.....: 1.7		
Chromium	**19.3**	**10.0**	**ug/L**	**SW846 6010B**	**07/19/07**	**J230H1AL**
		Dilution Factor: 1		MDL.....: 1.6		
Selenium	ND	5.0	ug/L	SW846 6010B	07/19/07	J230H1AH
		Dilution Factor: 1		MDL.....: 2.4		
Silver	ND	10.0	ug/L	SW846 6010B	07/19/07	J230H1AM
		Dilution Factor: 1		MDL.....: 2.1		
Mercury	ND	0.20	ug/L	SW846 7470A	07/19-07/20/07	J230H1AE
		Dilution Factor: 1		MDL.....: 0.090		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: DUP-001(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-005 **Work Order #...:** J230T1AA **Matrix.....:** WG
Date Sampled...: 07/17/07 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/19/07
Prep Batch #...: 7201103
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**0.68 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	**0.53 J**	**1.0**	**ug/L**	**0.17**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: DUP-001(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-005 **Work Order #...:** J230T1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	113	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: DUP-001(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-005 **Work Order #...:** J230T1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: DUP-001(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-005 **Work Order #...:** J230T1AC **Matrix.....:** WG
Date Sampled...: 07/17/07 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/27/07
Prep Batch #...: 7200133
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	**2.9 J,B**	**10**	**ug/L**	**0.88**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	**2.7 J,B**	**10**	**ug/L**	**0.61**
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	**0.77 J,B**	**10**	**ug/L**	**0.61**
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: DUP-001(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-005 **Work Order #...:** J230T1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	62	(27 - 111)
2-Fluorobiphenyl	57	(28 - 110)
Terphenyl-d14	71	(37 - 119)
Phenol-d5	79	(10 - 110)
2-Fluorophenol	63	(10 - 110)
2,4,6-Tribromophenol	80	(22 - 120)

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ARCADIS U.S., Inc.

Client Sample ID: DUP-001(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-005 **Work Order #...:** J230T1AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: DUP-001(20070717)

GC Semivolatiles

Lot-Sample #...: A7G180138-005 **Work Order #...:** J230T1AD **Matrix.....:** WG
Date Sampled...: 07/17/07 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/23/07
Prep Batch #...: 7200123
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(35 - 130)
Decachlorobiphenyl	41	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: DUP-001(20070717)

TOTAL Metals

Lot-Sample #...: A7G180138-005 **Matrix.....:** WG
Date Sampled...: 07/17/07 **Date Received..:** 07/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7200012						
Arsenic	ND	10.0	ug/L	SW846 6010B	07/19/07	J230T1AF
		Dilution Factor: 1		MDL.....: 4.3		
Barium	**161 B**	**200**	**ug/L**	**SW846 6010B**	**07/19/07**	**J230T1AJ**
		Dilution Factor: 1		MDL.....: 3.2		
Cadmium	ND	5.0	ug/L	SW846 6010B	07/19/07	J230T1AK
		Dilution Factor: 1		MDL.....: 0.42		
Lead	ND	3.0	ug/L	SW846 6010B	07/19/07	J230T1AG
		Dilution Factor: 1		MDL.....: 1.7		
Chromium	**3.9 B**	**10.0**	**ug/L**	**SW846 6010B**	**07/19/07**	**J230T1AL**
		Dilution Factor: 1		MDL.....: 1.6		
Selenium	ND	5.0	ug/L	SW846 6010B	07/19/07	J230T1AH
		Dilution Factor: 1		MDL.....: 2.4		
Silver	ND	10.0	ug/L	SW846 6010B	07/19/07	J230T1AM
		Dilution Factor: 1		MDL.....: 2.1		
Mercury	ND	0.20	ug/L	SW846 7470A	07/19-07/20/07	J230T1AE
		Dilution Factor: 1		MDL.....: 0.090		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-04(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-006 **Work Order #...:** J23021AA **Matrix.....:** WG
Date Sampled...: 07/17/07 11:55 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/19/07
Prep Batch #...: 7201103
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.1 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**0.97 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	**0.82 J**	**1.0**	**ug/L**	**0.13**
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**0.70 J**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-04(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-006 **Work Order #...:** J23021AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	**0.57 J**	**1.0**	**ug/L**	**0.11**
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	**0.20 J**	**1.0**	**ug/L**	**0.13**
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	114	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-04(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-006 **Work Order #...:** J23021AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-04(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-006 **Work Order #...:** J23021AC **Matrix.....:** WG
Date Sampled...: 07/17/07 11:55 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/27/07
Prep Batch #...: 7200133
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	**0.93 J**	**10**	**ug/L**	**0.55**
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	**1.3 J,B**	**10**	**ug/L**	**0.88**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	**44 B**	**10**	**ug/L**	**0.61**
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	**0.76 J,B**	**10**	**ug/L**	**0.61**
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-04(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-006 **Work Order #...:** J23021AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	57	(27 - 111)
2-Fluorobiphenyl	45	(28 - 110)
Terphenyl-d14	38	(37 - 119)
Phenol-d5	79	(10 - 110)
2-Fluorophenol	57	(10 - 110)
2,4,6-Tribromophenol	79	(22 - 120)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-04(20070717)

GC/MS Semivolatiles

Lot-Sample #...: A7G180138-006 **Work Order #...:** J23021AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-04(20070717)

GC Semivolatiles

Lot-Sample #...: A7G180138-006 **Work Order #...:** J23021AD **Matrix.....:** WG
Date Sampled...: 07/17/07 11:55 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/23/07
Prep Batch #...: 7200123
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	55	(35 - 130)
Decachlorobiphenyl	23	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: AMW-04(20070717)

TOTAL Metals

Lot-Sample #...: A7G180138-006 **Matrix.....:** WG
Date Sampled...: 07/17/07 11:55 **Date Received..:** 07/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7200012						
Arsenic	ND	10.0	ug/L	SW846 6010B	07/19/07	J23021AF
		Dilution Factor: 1		MDL.....: 4.3		
Barium	**130 B**	**200**	**ug/L**	**SW846 6010B**	**07/19/07**	**J23021AJ**
		Dilution Factor: 1		MDL.....: 3.2		
Cadmium	ND	5.0	ug/L	SW846 6010B	07/19/07	J23021AK
		Dilution Factor: 1		MDL.....: 0.42		
Lead	**4.8**	**3.0**	**ug/L**	**SW846 6010B**	**07/19/07**	**J23021AG**
		Dilution Factor: 1		MDL.....: 1.7		
Chromium	**33.7**	**10.0**	**ug/L**	**SW846 6010B**	**07/19/07**	**J23021AL**
		Dilution Factor: 1		MDL.....: 1.6		
Selenium	ND	5.0	ug/L	SW846 6010B	07/19/07	J23021AH
		Dilution Factor: 1		MDL.....: 2.4		
Silver	ND	10.0	ug/L	SW846 6010B	07/19/07	J23021AM
		Dilution Factor: 1		MDL.....: 2.1		
Mercury	ND	0.20	ug/L	SW846 7470A	07/19-07/20/07	J23021AE
		Dilution Factor: 1		MDL.....: 0.090		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: TRIP BLANK01(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-007 **Work Order #...:** J231A1AA **Matrix.....:** WQ
Date Sampled...: 07/17/07 **Date Received..:** 07/18/07
Prep Date.....: 07/19/07 **Analysis Date..:** 07/19/07
Prep Batch #...: 7201103
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**1.2 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: TRIP BLANK01(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-007 **Work Order #...:** J231A1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	114	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: TRIP BLANK01(20070717)

GC/MS Volatiles

Lot-Sample #...: A7G180138-007 **Work Order #...:** J231A1AA **Matrix.....:** WQ

NOTE(S):

J Estimated result. Result is less than RL.

STL

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7G180138 **Work Order #...:** J28TN1AA **Matrix.....:** WATER
MB Lot-Sample #: A7G200000-103
Prep Date.....: 07/19/07
Analysis Date..: 07/19/07 **Prep Batch #...:** 7201103
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7G180138 **Work Order #...:** J28TN1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	**0.47 J**	**1.0**	**ug/L**	**SW846 8260B**
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	**0.51 J**	**1.0**	**ug/L**	**SW846 8260B**
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	**0.24 J**	**1.0**	**ug/L**	**SW846 8260B**
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	**0.74 J**	**1.0**	**ug/L**	**SW846 8260B**
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7G180138 **Work Order #...:** J28TN1AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A7G180138 **Work Order #...:** J246T1AA **Matrix.....:** WATER
MB Lot-Sample #: A7G190000-133

Prep Date.....: 07/19/07
Analysis Date..: 07/30/07 **Prep Batch #...:** 7200133
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Atrazine	ND	10	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	**1.2 J**	**10**	**ug/L**	**SW846 8270C**
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Caprolactam	**0.99 J**	**10**	**ug/L**	**SW846 8270C**
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	**1.2 J**	**10**	**ug/L**	**SW846 8270C**
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A7G180138 **Work Order #...:** J246T1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	73	(27 - 111)
2-Fluorobiphenyl	70	(28 - 110)
Terphenyl-d14	97	(37 - 119)
Phenol-d5	78	(10 - 110)
2-Fluorophenol	75	(10 - 110)
2,4,6-Tribromophenol	75	(22 - 120)

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A7G180138 **Work Order #...:** J246T1AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A7G180138 **Work Order #...:** J24551AA **Matrix.....:** WATER
MB Lot-Sample #: A7G190000-123
Prep Date.....: 07/19/07
Analysis Date..: 07/23/07 **Prep Batch #...:** 7200123
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
PCB-1016	ND	0.20	ug/L	SW846 8082
PCB-1221	ND	0.20	ug/L	SW846 8082
PCB-1232	ND	0.20	ug/L	SW846 8082
PCB-1242	ND	0.20	ug/L	SW846 8082
PCB-1248	ND	0.20	ug/L	SW846 8082
PCB-1254	ND	0.20	ug/L	SW846 8082
PCB-1260	ND	0.20	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(35 - 130)
Decachlorobiphenyl	78	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A7G180138 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A7G190000-012 **Prep Batch #...:** 7200012						
Arsenic	ND	10.0	ug/L	SW846 6010B	07/19/07	J24MD1AX
		Dilution Factor: 1				
Barium	ND	200	ug/L	SW846 6010B	07/19/07	J24MD1AD
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	07/19/07	J24MD1AF
		Dilution Factor: 1				
Lead	ND	3.0	ug/L	SW846 6010B	07/19/07	J24MD1A0
		Dilution Factor: 1				
Chromium	ND	10.0	ug/L	SW846 6010B	07/19/07	J24MD1AH
		Dilution Factor: 1				
Selenium	ND	5.0	ug/L	SW846 6010B	07/19/07	J24MD1A1
		Dilution Factor: 1				
Silver	ND	10.0	ug/L	SW846 6010B	07/19/07	J24MD1AR
		Dilution Factor: 1				
Mercury	ND	0.20	ug/L	SW846 7470A	07/19-07/20/07	J24MD1AW
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G180138 **Work Order #...:** J28TN1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G200000-103 J28TN1AD-LCSD
Prep Date.....: 07/19/07 **Analysis Date..:** 07/19/07
Prep Batch #...: 7201103
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**89**	**(80 - 116)**			**SW846 8260B**
	104	**(80 - 116)**	**16**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**88**	**(76 - 117)**			**SW846 8260B**
	101	**(76 - 117)**	**13**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**92**	**(63 - 130)**			**SW846 8260B**
	101	**(63 - 130)**	**9.0**	**(0-20)**	**SW846 8260B**
Toluene	**97**	**(74 - 119)**			**SW846 8260B**
	111	**(74 - 119)**	**13**	**(0-20)**	**SW846 8260B**
Trichloroethene	**80**	**(75 - 122)**			**SW846 8260B**
	92	**(75 - 122)**	**15**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	95	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
	104	(61 - 128)
Toluene-d8	107	(76 - 110)
	109	(76 - 110)
4-Bromofluorobenzene	112	(74 - 116)
	115	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G180138 **Work Order #...:** J246T1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G190000-133 J246T1AD-LCSD
Prep Date.....: 07/19/07 **Analysis Date..:** 07/30/07
Prep Batch #...: 7200133
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichloro-benzene	**64**	**(25 - 110)**			**SW846 8270C**
	53	**(25 - 110)**	**20**	**(0-30)**	**SW846 8270C**
Acenaphthene	**79**	**(40 - 110)**			**SW846 8270C**
	72	**(40 - 110)**	**9.7**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**59**	**(19 - 110)**			**SW846 8270C**
	48	**(19 - 110)**	**21**	**(0-30)**	**SW846 8270C**
4-Chloro-3-methylphenol	**75**	**(39 - 110)**			**SW846 8270C**
	69	**(39 - 110)**	**8.2**	**(0-30)**	**SW846 8270C**
2-Chlorophenol	**82**	**(27 - 110)**			**SW846 8270C**
	68	**(27 - 110)**	**19**	**(0-30)**	**SW846 8270C**
2,4-Dinitrotoluene	**84**	**(52 - 123)**			**SW846 8270C**
	82	**(52 - 123)**	**2.2**	**(0-30)**	**SW846 8270C**
4-Nitrophenol	**79**	**(12 - 130)**			**SW846 8270C**
	74	**(12 - 130)**	**6.5**	**(0-30)**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**76**	**(37 - 121)**			**SW846 8270C**
	66	**(37 - 121)**	**14**	**(0-30)**	**SW846 8270C**
Pentachlorophenol	**64**	**(26 - 110)**			**SW846 8270C**
	60	**(26 - 110)**	**6.0**	**(0-30)**	**SW846 8270C**
Phenol	**88**	**(14 - 112)**			**SW846 8270C**
	72	**(14 - 112)**	**20**	**(0-30)**	**SW846 8270C**
Pyrene	**90**	**(55 - 120)**			**SW846 8270C**
	88	**(55 - 120)**	**2.9**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	76	(27 - 111)
	66	(27 - 111)
2-Fluorobiphenyl	75	(28 - 110)
	67	(28 - 110)
Terphenyl-d14	96	(37 - 119)
	94	(37 - 119)
Phenol-d5	88	(10 - 110)
	74	(10 - 110)
2-Fluorophenol	80	(10 - 110)
	67	(10 - 110)
2,4,6-Tribromophenol	82	(22 - 120)

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G180138 **Work Order #...:** J246T1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G190000-133 J246T1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	81	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A7G180138 **Work Order #...:** J24551AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G190000-123 J24551AD-LCSD
Prep Date.....: 07/19/07 **Analysis Date..:** 07/23/07
Prep Batch #...: 7200123
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
PCB-1016	**95**	**(50 - 115)**			**SW846 8082**
	81	**(50 - 115)**	**16**	**(0-30)**	**SW846 8082**
PCB-1260	**96**	**(45 - 112)**			**SW846 8082**
	68 p	**(45 - 112)**	**33**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85	(35 - 130)
	93	(35 - 130)
Decachlorobiphenyl	40	(10 - 110)
	21	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G180138 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7G190000-012 **Prep Batch #...:** 7200012					
Barium	91	(80 - 120)	SW846 6010B	07/19/07	J24MD1A5
		Dilution Factor: 1			
Arsenic	89	(80 - 120)	SW846 6010B	07/19/07	J24MD1CP
		Dilution Factor: 1			
Cadmium	91	(80 - 120)	SW846 6010B	07/19/07	J24MD1A7
		Dilution Factor: 1			
Lead	89	(80 - 120)	SW846 6010B	07/19/07	J24MD1CQ
		Dilution Factor: 1			
Chromium	89	(80 - 120)	SW846 6010B	07/19/07	J24MD1A9
		Dilution Factor: 1			
Selenium	92	(80 - 120)	SW846 6010B	07/19/07	J24MD1CR
		Dilution Factor: 1			
Silver	101	(80 - 120)	SW846 6010B	07/19/07	J24MD1CJ
		Dilution Factor: 1			
Mercury	106	(81 - 123)	SW846 7470A	07/19-07/20/07	J24MD1CN
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G180138 **Matrix.....:** WATER
Date Sampled...: 07/17/07 08:05 **Date Received..:** 07/18/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G180179-001 **Prep Batch #...:** 7200012							
Arsenic	100	(75 - 125)			SW846 6010B	07/19/07	J24C21DE
	95	(75 - 125)	4.6	(0-20)	SW846 6010B	07/19/07	J24C21DF
		Dilution Factor: 1					
Barium	101	(75 - 125)			SW846 6010B	07/19/07	J24C21A9
	97	(75 - 125)	4.8	(0-20)	SW846 6010B	07/19/07	J24C21CA
		Dilution Factor: 1					
Cadmium	103	(75 - 125)			SW846 6010B	07/19/07	J24C21CE
	98	(75 - 125)	5.1	(0-20)	SW846 6010B	07/19/07	J24C21CF
		Dilution Factor: 1					
Lead	100	(75 - 125)			SW846 6010B	07/19/07	J24C21DG
	95	(75 - 125)	4.6	(0-20)	SW846 6010B	07/19/07	J24C21DH
		Dilution Factor: 1					
Chromium	100	(75 - 125)			SW846 6010B	07/19/07	J24C21CJ
	95	(75 - 125)	5.0	(0-20)	SW846 6010B	07/19/07	J24C21CK
		Dilution Factor: 1					
Selenium	103	(75 - 125)			SW846 6010B	07/19/07	J24C21DJ
	98	(75 - 125)	4.7	(0-20)	SW846 6010B	07/19/07	J24C21DK
		Dilution Factor: 1					
Silver	114	(75 - 125)			SW846 6010B	07/19/07	J24C21C3
	109	(75 - 125)	4.8	(0-20)	SW846 6010B	07/19/07	J24C21C4
		Dilution Factor: 1					
Mercury	103	(69 - 134)			SW846 7470A	07/19-07/20/07	J24C21DC
	105	(69 - 134)	2.1	(0-20)	SW846 7470A	07/19-07/20/07	J24C21DD
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: ~~HA~~ ARCADIS U.S. Inc.	Project Manager: Bryan Zinda	Date: 7-17-07	Chain of Custody Number: 357071
Address: 430 1st Ave N	Telephone Number (Area Code)/Fax Number: (612) 339-9434 / (612) 336-4538	Lab Number: STL N. Canton	Page 1 of 1
City: Mpls / State: MN / Zip Code: 55401	Site Contact: Rebecca Forbert	Lab Contact:	
Project Name and Location (State): FORD BUNDLE SITES (Illinois)	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: FORD-TCAP-02 / E200575-2			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis (Attach list if more space is needed): VOC (8260)	SVOC (8270)	RCRA metals (6010)	PCBs (8082)	Temperature	Special Instructions/ Conditions of Receipt
AMW01 (20070717)	7.17.07	1300		X			4		1	3			3	2	1	2		
AMW-02 (20070717)	7.17.07	1325		X			4		1	3			3	2	1	2		
AMW-03A (20070717)	7.17.07	1115		X			4		1	3			3	2	1	2		
AMW-07 (20070717)	7.17.07	1355		X			4		1	3			3	2	1	2		
DUP-001 (20070717)	7.17.07	—		X			4		1	3			3	2	1	2		
AMW04 (20070717)	7.17.07	1155		X			4		1	3			3	2	1	2		
Trip Blank 01 (20070717)	7.17.07												X					
Temp Blank																	X	

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By	Date: 7-17-07	Time: 1540	1. Received By	Date: 7-17	Time: 1560
2. Relinquished By	Date: 7-17	Time: 1600	2. Received By	Date: 7.18-07	Time: 0935
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: ATG 180138

Client: ARCADIS - Project: FORD Quote#:

Cooler Received on: 7.18.07 Opened on: 7.18.07 By: (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ TestAmerica Courier ☐

Stetson ☐ US Cargo ☐ Other:

TestAmerica Cooler No# back-4 Foam Box ☐ Client Cooler ☐ Other

1. Were custody seals on the outside of the cooler? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 4
   Were the custody seals signed and dated?
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Yes ☒ No ☐ NA ☐
4. Did you sign the custody papers in the appropriate place? Relinquished by client? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Yes ☒ No ☐
6. Cooler temperature upon receipt _____ °C (see back of form for multiple coolers/temp) Other :

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_20 Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH upon receipt? Yes ☒ No ☐ NA ☐
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a Trip Blank present in the cooler? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

1. CHAIN OF CUSTODY

The following discrepancies occurred:

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #042607-HNO3 - Sulfuric Acid Lot # 092006-H2SO4; Sodium Hydroxide Lot # 122805 -NaOH; Hydrochloric Acid Lot # 100504-HCl; Sodium Hydroxide and Zinc Acetate Lot # 050205-CH3COO2ZN/NaOH*

Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials
AMW-01	<2	7.18.07	US
02	<2		
03A	<2		
07	<2		
04	<2		
Dup-001	<2		

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant
L785	0.9°C	IR	ICE
Not	1.3°C	"	"
Client cooler	1.6°C		
241352	0.8°C		

Discrepancies Cont'd

STL

END OF REPORT

August 30, 2007

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, US

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000593.5
Laboratory: TestAmerica, formerly STL - North Canton
Laboratory submittal: A7G250252
Sample date: 2007-07-24
Report received by Enovis: 2007-08-08
Revised Data Verification completed by Enovis: 2007-08-30

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

Verification report revised to change blank contamination recommendation language. Valid qualifier flags changed in the database.

The following minor QC exceptions or missing information were noted:

The lab report case narrative noted that VOC analysis of water samples for 2-Chloroethylvinylether on an acid preserved vial, such as the vials analyzed for this deliverable, are subject to chemical reactions that result in a low bias. The 2-Chloroethylvinylether results for samples A7G250252-01 and 02 were non-detect so the associated reporting limits should be considered estimated and qualified with UJ flags.

VOC LCS recovery outliers for Acrolein and 1,1,2,2-Trichloroethane did not translate into the requirement for qualification of client investigative sample VOC results.

VOC MS/MSD analysis was not performed on a sample from this client delivery group. Data qualification of client sample results based on these QC outliers is not required.

GCMS VOC method blank concentration for Methylene chloride reported between the MDL and the RDL. The associated sample was reported non-detect. No qualification required.

GCMS VOC method blank concentration for 1,2,3-Trichlorobenzene reported between the MDL and the RDL. The associated sample was reported non-detect. No qualification required.

GCMS SVOC method blank for bis-2-Ethylhexylphthalte was reported above the MDL. Results for sample A7G250252-01 are flagged UB and should be considered non-detect at the RDL.

SVOC LCS/LCSD recoveries for Atrazine, Acetophenone, Benzaldehyde, 1,1-Biphenyl, Caprolactam and 1,4-Dioxane were outside of lab control limits biased high. Data qualification of client sample results for these analytes based on these QC outliers is not required.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://63.106.80.11/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JB	The analyte / compound was detected in the associated blank between the MDL and the laboratory`s reporting detection limit. For Inorganic methods the sample concentration was < 10x the blank concentration and is considered estimated. For Organic methods the sample concentration was < 5x or 10x for common laboratory contaminates, the blank concentration and is considered estimated.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. MN000593.5

FORD TWIN CITIES B, E200572

Lot #: A7G250252

Rebecca Forbort

ARCADIS U.S., Inc.
430 1st. Ave. North
Suite 720
Minneapolis, MN 55401

TESTAMERICA LABORATORIES, INC. (FKA STL)

Denise Pohl

Denise Pohl
Project Manager

August 6, 2007

CASE NARRATIVE

A7G250252

The following report contains the analytical results for one water sample and one quality control sample submitted to TestAmerica (formerly STL North Canton) by Arcadis, Geraghty & Miller, Inc from the Ford Twin Cities B, E200572 Site, project number MN000593.5. The samples were received July 25, 2007, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 60.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 5.2°C.

See TestAmerica’s Cooler Receipt Form for additional information.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for batch(es) 7211291 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 7212551. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

GC/MS SEMIVOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 7207089. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

The associated LCS/LCSD was double spiked for Acetophenone, Atrazine, Benzaldehyde, 1,1’-Biphenyl and Caprolactam.

CASE NARRATIVE (continued)

POLYCHLORINATED BIPHENYLS-8082

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 7207108. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton (formerly STL North Canton) conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton (formerly STL North Canton) requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A7G250252

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
AMW-05B(20070724) 07/24/07 13:45 001				
Lead	77.6	3.0	ug/L	SW846 6010B
Barium	371	200	ug/L	SW846 6010B
Cadmium	0.63 B	5.0	ug/L	SW846 6010B
Chromium	54.6	10.0	ug/L	SW846 6010B
Silver	2.4 B	10.0	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	2.0 J,B	10	ug/L	SW846 8270C
Chloromethane	0.54 J	1.0	ug/L	SW846 8260B
TRIP BLANK 07/24/07 002				
Acetone	1.4 J	10	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	0.18 J	1.0	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A7G250252

PARAMETER	ANALYTICAL METHOD
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
PCBs by SW-846 8082	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A7G250252

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
J3JNQ	001	AMW-05B(20070724)	07/24/07	13:45
J3JPA	002	TRIP BLANK	07/24/07	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20070724)

GC/MS Volatiles

Lot-Sample #...: A7G250252-001 **Work Order #...:** J3JNQ1AA **Matrix.....:** WG
Date Sampled...: 07/24/07 13:45 **Date Received..:** 07/25/07
Prep Date.....: 08/01/07 **Analysis Date..:** 08/01/07
Prep Batch #...: 7212551
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	**0.54 J**	**1.0**	**ug/L**	**0.30**
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20070724)

GC/MS Volatiles

Lot-Sample #...: A7G250252-001 **Work Order #...:** J3JNQ1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20070724)

GC/MS Volatiles

Lot-Sample #...: A7G250252-001 **Work Order #...:** J3JNQ1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20070724)

GC/MS Semivolatiles

Lot-Sample #...: A7G250252-001 **Work Order #...:** J3JNQ1AC **Matrix.....:** WG
Date Sampled...: 07/24/07 13:45 **Date Received..:** 07/25/07
Prep Date.....: 07/26/07 **Analysis Date..:** 07/31/07
Prep Batch #...: 7207089
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	**2.0 J,B**	**10**	**ug/L**	**0.88**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20070724)

GC/MS Semivolatiles

Lot-Sample #...: A7G250252-001 **Work Order #...:** J3JNQ1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	55	(27 - 111)
2-Fluorobiphenyl	55	(28 - 110)
Terphenyl-d14	82	(37 - 119)
Phenol-d5	57	(10 - 110)
2-Fluorophenol	52	(10 - 110)
2,4,6-Tribromophenol	67	(22 - 120)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20070724)

GC/MS Semivolatiles

Lot-Sample #...: A7G250252-001 **Work Order #...:** J3JNQ1AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20070724)

GC Semivolatiles

Lot-Sample #...: A7G250252-001 **Work Order #...:** J3JNQ1AD **Matrix.....:** WG
Date Sampled...: 07/24/07 13:45 **Date Received..:** 07/25/07
Prep Date.....: 07/26/07 **Analysis Date..:** 07/31/07
Prep Batch #...: 7207108
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86	(35 - 130)
Decachlorobiphenyl	38	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20070724)

TOTAL Metals

Lot-Sample #...: A7G250252-001 **Matrix.....:** WG
Date Sampled...: 07/24/07 13:45 **Date Received..:** 07/25/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7207015						
Arsenic	ND	10.0	ug/L	SW846 6010B	07/26/07	J3JNQ1AE
		Dilution Factor: 1		MDL.....: 4.3		
Barium	**371**	**200**	**ug/L**	**SW846 6010B**	**07/26/07**	**J3JNQ1AH**
		Dilution Factor: 1		MDL.....: 3.2		
Cadmium	**0.63 B**	**5.0**	**ug/L**	**SW846 6010B**	**07/26/07**	**J3JNQ1AJ**
		Dilution Factor: 1		MDL.....: 0.42		
Lead	**77.6**	**3.0**	**ug/L**	**SW846 6010B**	**07/26/07**	**J3JNQ1AF**
		Dilution Factor: 1		MDL.....: 1.7		
Chromium	**54.6**	**10.0**	**ug/L**	**SW846 6010B**	**07/26/07**	**J3JNQ1AK**
		Dilution Factor: 1		MDL.....: 1.6		
Selenium	ND	5.0	ug/L	SW846 6010B	07/26/07	J3JNQ1AG
		Dilution Factor: 1		MDL.....: 2.4		
Silver	**2.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**07/26/07**	**J3JNQ1AL**
		Dilution Factor: 1		MDL.....: 2.1		
Prep Batch #...: 7208013						
Mercury	ND	0.20	ug/L	SW846 7470A	07/27-07/31/07	J3JNQ1AM
		Dilution Factor: 1		MDL.....: 0.090		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A7G250252-002 **Work Order #...:** J3JPA1AA **Matrix.....:** WQ
Date Sampled...: 07/24/07 **Date Received..:** 07/25/07
Prep Date.....: 07/27/07 **Analysis Date..:** 07/27/07
Prep Batch #...: 7211291
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.4 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A7G250252-002 **Work Order #...:** J3JPA1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	**0.18 J**	**1.0**	**ug/L**	**0.12**
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
1,2-Dichloroethane-d4	84	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	103	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A7G250252-002 **Work Order #...:** J3JPA1AA **Matrix.....:** WQ

NOTE(S):

J Estimated result. Result is less than RL.

STL

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3T941AA **Matrix.....:** WATER
MB Lot-Sample #: A7G300000-291
Prep Date.....: 07/27/07
Analysis Date..: 07/27/07 **Prep Batch #...:** 7211291
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3T941AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	**0.99 J**	**1.0**	**ug/L**	**SW846 8260B**
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

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GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3T941AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3X721AA **Matrix.....:** WATER
MB Lot-Sample #: A7G310000-551

Prep Date.....: 07/31/07
Analysis Date..: 07/31/07 **Prep Batch #...:** 7212551
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3X721AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	**0.23 J**	**1.0**	**ug/L**	**SW846 8260B**
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3X721AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A7G250252 **Work Order #...:** J3KVV1AA **Matrix.....:** WATER
MB Lot-Sample #: A7G260000-089

Prep Date.....: 07/26/07
Analysis Date..: 07/31/07 **Prep Batch #...:** 7207089
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Atrazine	ND	10	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	**4.0 J**	**10**	**ug/L**	**SW846 8270C**
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A7G250252 **Work Order #...:** J3KVV1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(27 - 111)
2-Fluorobiphenyl	49	(28 - 110)
Terphenyl-d14	85	(37 - 119)
Phenol-d5	53	(10 - 110)
2-Fluorophenol	52	(10 - 110)
2,4,6-Tribromophenol	57	(22 - 120)

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A7G250252 **Work Order #...:** J3KVV1AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A7G250252 **Work Order #...:** J3KV31AA **Matrix.....:** WATER
MB Lot-Sample #: A7G260000-108

Prep Date.....: 07/26/07
Analysis Date..: 07/31/07 **Prep Batch #...:** 7207108
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
PCB-1016	ND	0.20	ug/L	SW846 8082
PCB-1221	ND	0.20	ug/L	SW846 8082
PCB-1232	ND	0.20	ug/L	SW846 8082
PCB-1242	ND	0.20	ug/L	SW846 8082
PCB-1248	ND	0.20	ug/L	SW846 8082
PCB-1254	ND	0.20	ug/L	SW846 8082
PCB-1260	ND	0.20	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	67	(35 - 130)
Decachlorobiphenyl	62	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A7G250252 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A7G260000-015 **Prep Batch #...:** 7207015						
Arsenic	ND	10.0	ug/L	SW846 6010B	07/26/07	J3KP81A8
		Dilution Factor: 1				
Barium	ND	200	ug/L	SW846 6010B	07/26/07	J3KP81CC
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	07/26/07	J3KP81AA
		Dilution Factor: 1				
Lead	ND	3.0	ug/L	SW846 6010B	07/26/07	J3KP81A9
		Dilution Factor: 1				
Chromium	ND	10.0	ug/L	SW846 6010B	07/26/07	J3KP81AC
		Dilution Factor: 1				
Selenium	ND	5.0	ug/L	SW846 6010B	07/26/07	J3KP81CA
		Dilution Factor: 1				
Silver	ND	10.0	ug/L	SW846 6010B	07/26/07	J3KP81CD
		Dilution Factor: 1				
MB Lot-Sample #: A7G270000-013 **Prep Batch #...:** 7208013						
Mercury	ND	0.20	ug/L	SW846 7470A	07/27-07/31/07	J3NN51CH
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3T941AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G300000-291 J3T941AD-LCSD
Prep Date.....: 07/27/07 **Analysis Date..:** 07/27/07
Prep Batch #...: 7211291
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	60	(22 - 200)			SW846 8260B
	60	(22 - 200)	0.13	(0-95)	SW846 8260B
Benzene	**96**	**(80 - 116)**			**SW846 8260B**
	97	**(80 - 116)**	**1.5**	**(0-20)**	**SW846 8260B**
1,2-Dichloroethene (total)	100	(82 - 116)			SW846 8260B
	99	(82 - 116)	1.1	(0-30)	SW846 8260B
Bromobenzene	86	(70 - 130)			SW846 8260B
	87	(70 - 130)	0.86	(0-30)	SW846 8260B
Bromochloromethane	91	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.68	(0-30)	SW846 8260B
Bromodichloromethane	98	(87 - 130)			SW846 8260B
	99	(87 - 130)	0.86	(0-30)	SW846 8260B
Bromoform	90	(76 - 150)			SW846 8260B
	93	(76 - 150)	2.9	(0-30)	SW846 8260B
Bromomethane	82	(64 - 129)			SW846 8260B
	83	(64 - 129)	0.71	(0-30)	SW846 8260B
Methyl ethyl ketone	79	(28 - 237)			SW846 8260B
	81	(28 - 237)	2.1	(0-65)	SW846 8260B
n-Butylbenzene	106	(70 - 130)			SW846 8260B
	105	(70 - 130)	1.3	(0-30)	SW846 8260B
Xylenes (total)	106	(87 - 116)			SW846 8260B
	102	(87 - 116)	3.1	(0-30)	SW846 8260B
sec-Butylbenzene	105	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.33	(0-30)	SW846 8260B
tert-Butylbenzene	110	(70 - 130)			SW846 8260B
	108	(70 - 130)	2.3	(0-30)	SW846 8260B
Carbon disulfide	94	(73 - 139)			SW846 8260B
	95	(73 - 139)	1.3	(0-30)	SW846 8260B
Carbon tetrachloride	95	(75 - 149)			SW846 8260B
	94	(75 - 149)	0.30	(0-30)	SW846 8260B
Chlorobenzene	**99**	**(76 - 117)**			**SW846 8260B**
	101	**(76 - 117)**	**1.2**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	97	(81 - 138)			SW846 8260B
	97	(81 - 138)	0.55	(0-30)	SW846 8260B
Chloroethane	82	(66 - 126)			SW846 8260B
	83	(66 - 126)	0.75	(0-30)	SW846 8260B
n-Hexane	105	(70 - 130)			SW846 8260B
	99	(70 - 130)	5.2	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3T941AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G300000-291 J3T941AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	100	(84 - 128)			SW846 8260B
	100	(84 - 128)	0.020	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	75	(70 - 130)			SW846 8260B
	75	(70 - 130)	0.22	(0-30)	SW846 8260B
Acetonitrile	113	(50 - 130)			SW846 8260B
	112	(50 - 130)	0.74	(0-30)	SW846 8260B
Chloromethane	98	(48 - 123)			SW846 8260B
	99	(48 - 123)	0.28	(0-30)	SW846 8260B
Acrolein	50	(50 - 130)			SW846 8260B
	48 a	(50 - 130)	5.0	(0-30)	SW846 8260B
Vinyl acetate	78	(70 - 130)			SW846 8260B
	76	(70 - 130)	2.4	(0-30)	SW846 8260B
Acrylonitrile	83	(50 - 130)			SW846 8260B
	83	(50 - 130)	0.52	(0-30)	SW846 8260B
2-Chlorotoluene	91	(70 - 130)			SW846 8260B
	92	(70 - 130)	0.61	(0-30)	SW846 8260B
4-Chlorotoluene	93	(70 - 130)			SW846 8260B
	92	(70 - 130)	1.1	(0-30)	SW846 8260B
Cyclohexane	100	(70 - 130)			SW846 8260B
	102	(70 - 130)	2.7	(0-30)	SW846 8260B
Iodomethane	83	(70 - 130)			SW846 8260B
	85	(70 - 130)	2.1	(0-30)	SW846 8260B
Isopropyl ether	106	(70 - 130)			SW846 8260B
	108	(70 - 130)	1.3	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	83	(70 - 130)			SW846 8260B
	84	(70 - 130)	0.95	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	93	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.0	(0-30)	SW846 8260B
Dibromomethane	89	(70 - 130)			SW846 8260B
	84	(70 - 130)	6.5	(0-30)	SW846 8260B
1,2-Dichlorobenzene	98	(70 - 130)			SW846 8260B
	96	(70 - 130)	1.3	(0-30)	SW846 8260B
1,3-Dichlorobenzene	94	(70 - 130)			SW846 8260B
	95	(70 - 130)	1.6	(0-30)	SW846 8260B
1,4-Dichlorobenzene	98	(70 - 130)			SW846 8260B
	95	(70 - 130)	2.9	(0-30)	SW846 8260B
Dichlorodifluoromethane	76	(70 - 130)			SW846 8260B
	75	(70 - 130)	1.9	(0-30)	SW846 8260B
1,1-Dichloroethane	106	(86 - 123)			SW846 8260B
	107	(86 - 123)	0.60	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3T941AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G300000-291 J3T941AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	95	(79 - 136)			SW846 8260B
	95	(79 - 136)	0.21	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	101	(85 - 113)			SW846 8260B
	99	(85 - 113)	2.3	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	99	(80 - 120)			SW846 8260B
	99	(80 - 120)	0.060	(0-30)	SW846 8260B
1,1-Dichloroethene	**87**	**(63 - 130)**			**SW846 8260B**
	88	**(63 - 130)**	**1.1**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	99	(82 - 115)			SW846 8260B
	97	(82 - 115)	2.0	(0-30)	SW846 8260B
1,3-Dichloropropane	92	(70 - 130)			SW846 8260B
	92	(70 - 130)	0.43	(0-30)	SW846 8260B
2,2-Dichloropropane	118	(70 - 130)			SW846 8260B
	121	(70 - 130)	2.7	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	92	(84 - 130)			SW846 8260B
	94	(84 - 130)	2.1	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	105	(84 - 130)			SW846 8260B
	103	(84 - 130)	2.2	(0-30)	SW846 8260B
1,1-Dichloropropene	94	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.2	(0-30)	SW846 8260B
Ethylbenzene	101	(86 - 116)			SW846 8260B
	101	(86 - 116)	0.55	(0-30)	SW846 8260B
Hexachlorobutadiene	88	(70 - 130)			SW846 8260B
	88	(70 - 130)	0.46	(0-30)	SW846 8260B
2-Hexanone	89	(35 - 200)			SW846 8260B
	88	(35 - 200)	0.55	(0-52)	SW846 8260B
Isopropylbenzene	120	(70 - 130)			SW846 8260B
	119	(70 - 130)	0.55	(0-30)	SW846 8260B
p-Isopropyltoluene	102	(70 - 130)			SW846 8260B
	102	(70 - 130)	0.11	(0-30)	SW846 8260B
Methyl acetate	70	(70 - 130)			SW846 8260B
	73	(70 - 130)	4.5	(0-30)	SW846 8260B
Methylcyclohexane	94	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.50	(0-30)	SW846 8260B
Methylene chloride	90	(78 - 118)			SW846 8260B
	89	(78 - 118)	1.2	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	82	(78 - 141)			SW846 8260B
	82	(78 - 141)	0.13	(0-32)	SW846 8260B
Methyl tert-butyl ether (MTBE)	84	(70 - 130)			SW846 8260B
	82	(70 - 130)	1.5	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3T941AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G300000-291 J3T941AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	80	(70 - 130)			SW846 8260B
	80	(70 - 130)	0.36	(0-30)	SW846 8260B
n-Propylbenzene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.4	(0-30)	SW846 8260B
Styrene	102	(85 - 117)			SW846 8260B
	102	(85 - 117)	0.55	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	102	(70 - 130)			SW846 8260B
	98	(70 - 130)	4.3	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	86	(85 - 118)			SW846 8260B
	84 a	(85 - 118)	2.7	(0-30)	SW846 8260B
Tetrachloroethene	98	(88 - 113)			SW846 8260B
	100	(88 - 113)	2.4	(0-30)	SW846 8260B
Toluene	**106**	**(74 - 119)**			**SW846 8260B**
	106	**(74 - 119)**	**0.31**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	89	(70 - 130)			SW846 8260B
	93	(70 - 130)	4.2	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	94	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.50	(0-30)	SW846 8260B
1,1,1-Trichloroethane	107	(78 - 140)			SW846 8260B
	109	(78 - 140)	1.6	(0-30)	SW846 8260B
1,1,2-Trichloroethane	96	(83 - 122)			SW846 8260B
	95	(83 - 122)	0.58	(0-30)	SW846 8260B
Trichloroethene	**88**	**(75 - 122)**			**SW846 8260B**
	89	**(75 - 122)**	**1.9**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	112	(70 - 130)			SW846 8260B
	109	(70 - 130)	2.3	(0-30)	SW846 8260B
1,2,3-Trichloropropane	80	(70 - 130)			SW846 8260B
	82	(70 - 130)	2.4	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	92	(70 - 130)			SW846 8260B
	94	(70 - 130)	1.9	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	103	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.87	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	103	(70 - 130)			SW846 8260B
	105	(70 - 130)	1.5	(0-30)	SW846 8260B
Vinyl chloride	87	(61 - 120)			SW846 8260B
	89	(61 - 120)	2.4	(0-30)	SW846 8260B
m-Xylene & p-Xylene	105	(70 - 130)			SW846 8260B
	101	(70 - 130)	4.6	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3T941AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G300000-291 J3T941AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	106	(70 - 130)			SW846 8260B
	106	(70 - 130)	0.12	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
	91	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	88	(61 - 128)
Toluene-d8	104	(76 - 110)
	103	(76 - 110)
4-Bromofluorobenzene	106	(74 - 116)
	104	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3X721AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G310000-551 J3X721AD-LCSD
Prep Date.....: 07/31/07 **Analysis Date..:** 07/31/07
Prep Batch #...: 7212551
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	98	(22 - 200)			SW846 8260B
	102	(22 - 200)	4.8	(0-95)	SW846 8260B
Benzene	**98**	**(80 - 116)**			**SW846 8260B**
	99	**(80 - 116)**	**1.3**	**(0-20)**	**SW846 8260B**
1,2-Dichloroethene (total)	97	(82 - 116)			SW846 8260B
	101	(82 - 116)	3.5	(0-30)	SW846 8260B
Bromobenzene	99	(70 - 130)			SW846 8260B
	101	(70 - 130)	2.2	(0-30)	SW846 8260B
Bromochloromethane	101	(70 - 130)			SW846 8260B
	100	(70 - 130)	1.1	(0-30)	SW846 8260B
Bromodichloromethane	98	(87 - 130)			SW846 8260B
	99	(87 - 130)	1.4	(0-30)	SW846 8260B
Bromoform	104	(76 - 150)			SW846 8260B
	109	(76 - 150)	4.4	(0-30)	SW846 8260B
Bromomethane	84	(64 - 129)			SW846 8260B
	86	(64 - 129)	1.9	(0-30)	SW846 8260B
Methyl ethyl ketone	108	(28 - 237)			SW846 8260B
	110	(28 - 237)	1.3	(0-65)	SW846 8260B
n-Butylbenzene	102	(70 - 130)			SW846 8260B
	102	(70 - 130)	0.38	(0-30)	SW846 8260B
Xylenes (total)	100	(87 - 116)			SW846 8260B
	103	(87 - 116)	2.8	(0-30)	SW846 8260B
sec-Butylbenzene	101	(70 - 130)			SW846 8260B
	99	(70 - 130)	2.1	(0-30)	SW846 8260B
tert-Butylbenzene	99	(70 - 130)			SW846 8260B
	97	(70 - 130)	1.4	(0-30)	SW846 8260B
Carbon disulfide	98	(73 - 139)			SW846 8260B
	100	(73 - 139)	1.3	(0-30)	SW846 8260B
Carbon tetrachloride	98	(75 - 149)			SW846 8260B
	100	(75 - 149)	1.3	(0-30)	SW846 8260B
Chlorobenzene	**96**	**(76 - 117)**			**SW846 8260B**
	99	**(76 - 117)**	**3.0**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	102	(81 - 138)			SW846 8260B
	104	(81 - 138)	1.4	(0-30)	SW846 8260B
Chloroethane	94	(66 - 126)			SW846 8260B
	88	(66 - 126)	6.8	(0-30)	SW846 8260B
n-Hexane	108	(70 - 130)			SW846 8260B
	110	(70 - 130)	2.1	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3X721AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G310000-551 J3X721AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	100	(84 - 128)			SW846 8260B
	99	(84 - 128)	1.0	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	106	(70 - 130)			SW846 8260B
	107	(70 - 130)	1.4	(0-30)	SW846 8260B
Acetonitrile	97	(50 - 130)			SW846 8260B
	97	(50 - 130)	0.55	(0-30)	SW846 8260B
Chloromethane	94	(48 - 123)			SW846 8260B
	93	(48 - 123)	0.16	(0-30)	SW846 8260B
Acrolein	101	(50 - 130)			SW846 8260B
	100	(50 - 130)	0.080	(0-30)	SW846 8260B
Vinyl acetate	119	(70 - 130)			SW846 8260B
	119	(70 - 130)	0.42	(0-30)	SW846 8260B
Acrylonitrile	103	(50 - 130)			SW846 8260B
	106	(50 - 130)	2.1	(0-30)	SW846 8260B
2-Chlorotoluene	99	(70 - 130)			SW846 8260B
	96	(70 - 130)	3.1	(0-30)	SW846 8260B
4-Chlorotoluene	99	(70 - 130)			SW846 8260B
	101	(70 - 130)	2.3	(0-30)	SW846 8260B
Cyclohexane	87	(70 - 130)			SW846 8260B
	86	(70 - 130)	0.94	(0-30)	SW846 8260B
Iodomethane	97	(70 - 130)			SW846 8260B
	96	(70 - 130)	0.27	(0-30)	SW846 8260B
Isopropyl ether	104	(70 - 130)			SW846 8260B
	103	(70 - 130)	1.5	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	109	(70 - 130)			SW846 8260B
	111	(70 - 130)	1.4	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	103	(70 - 130)			SW846 8260B
	101	(70 - 130)	2.0	(0-30)	SW846 8260B
Dibromomethane	97	(70 - 130)			SW846 8260B
	99	(70 - 130)	2.2	(0-30)	SW846 8260B
1,2-Dichlorobenzene	98	(70 - 130)			SW846 8260B
	97	(70 - 130)	1.1	(0-30)	SW846 8260B
1,3-Dichlorobenzene	98	(70 - 130)			SW846 8260B
	97	(70 - 130)	0.52	(0-30)	SW846 8260B
1,4-Dichlorobenzene	100	(70 - 130)			SW846 8260B
	100	(70 - 130)	0.14	(0-30)	SW846 8260B
Dichlorodifluoromethane	97	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.4	(0-30)	SW846 8260B
1,1-Dichloroethane	102	(86 - 123)			SW846 8260B
	99	(86 - 123)	2.1	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3X721AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G310000-551 J3X721AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	101	(79 - 136)			SW846 8260B
	103	(79 - 136)	1.2	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	96	(85 - 113)			SW846 8260B
	97	(85 - 113)	0.88	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	98	(80 - 120)			SW846 8260B
	104	(80 - 120)	6.1	(0-30)	SW846 8260B
1,1-Dichloroethene	**101**	**(63 - 130)**			**SW846 8260B**
	100	**(63 - 130)**	**0.68**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	101	(82 - 115)			SW846 8260B
	98	(82 - 115)	3.2	(0-30)	SW846 8260B
1,3-Dichloropropane	100	(70 - 130)			SW846 8260B
	103	(70 - 130)	3.3	(0-30)	SW846 8260B
2,2-Dichloropropane	98	(70 - 130)			SW846 8260B
	98	(70 - 130)	0.32	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	102	(84 - 130)			SW846 8260B
	103	(84 - 130)	0.69	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	102	(84 - 130)			SW846 8260B
	104	(84 - 130)	1.4	(0-30)	SW846 8260B
1,1-Dichloropropene	98	(70 - 130)			SW846 8260B
	96	(70 - 130)	2.2	(0-30)	SW846 8260B
Ethylbenzene	100	(86 - 116)			SW846 8260B
	102	(86 - 116)	2.4	(0-30)	SW846 8260B
Hexachlorobutadiene	94	(70 - 130)			SW846 8260B
	97	(70 - 130)	2.3	(0-30)	SW846 8260B
2-Hexanone	105	(35 - 200)			SW846 8260B
	107	(35 - 200)	1.8	(0-52)	SW846 8260B
Isopropylbenzene	111	(70 - 130)			SW846 8260B
	113	(70 - 130)	2.5	(0-30)	SW846 8260B
p-Isopropyltoluene	105	(70 - 130)			SW846 8260B
	104	(70 - 130)	1.5	(0-30)	SW846 8260B
Methyl acetate	96	(70 - 130)			SW846 8260B
	99	(70 - 130)	3.0	(0-30)	SW846 8260B
Methylcyclohexane	85	(70 - 130)			SW846 8260B
	86	(70 - 130)	1.2	(0-30)	SW846 8260B
Methylene chloride	99	(78 - 118)			SW846 8260B
	99	(78 - 118)	0.020	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	108	(78 - 141)			SW846 8260B
	108	(78 - 141)	0.030	(0-32)	SW846 8260B
Methyl tert-butyl ether (MTBE)	99	(70 - 130)			SW846 8260B
	104	(70 - 130)	5.0	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3X721AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G310000-551 J3X721AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	110	(70 - 130)			SW846 8260B
	109	(70 - 130)	1.2	(0-30)	SW846 8260B
n-Propylbenzene	100	(70 - 130)			SW846 8260B
	99	(70 - 130)	0.74	(0-30)	SW846 8260B
Styrene	102	(85 - 117)			SW846 8260B
	104	(85 - 117)	0.99	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	99	(70 - 130)			SW846 8260B
	98	(70 - 130)	1.5	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	102	(85 - 118)			SW846 8260B
	102	(85 - 118)	0.25	(0-30)	SW846 8260B
Tetrachloroethene	99	(88 - 113)			SW846 8260B
	99	(88 - 113)	0.37	(0-30)	SW846 8260B
Toluene	**99**	**(74 - 119)**			**SW846 8260B**
	100	**(74 - 119)**	**0.63**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	100	(70 - 130)			SW846 8260B
	100	(70 - 130)	0.48	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	98	(70 - 130)			SW846 8260B
	100	(70 - 130)	2.1	(0-30)	SW846 8260B
1,1,1-Trichloroethane	100	(78 - 140)			SW846 8260B
	100	(78 - 140)	0.060	(0-30)	SW846 8260B
1,1,2-Trichloroethane	100	(83 - 122)			SW846 8260B
	102	(83 - 122)	1.9	(0-30)	SW846 8260B
Trichloroethene	**99**	**(75 - 122)**			**SW846 8260B**
	98	**(75 - 122)**	**0.96**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	94	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.6	(0-30)	SW846 8260B
1,2,3-Trichloropropane	114	(70 - 130)			SW846 8260B
	112	(70 - 130)	2.6	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	105	(70 - 130)			SW846 8260B
	106	(70 - 130)	0.80	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	100	(70 - 130)			SW846 8260B
	100	(70 - 130)	0.040	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	102	(70 - 130)			SW846 8260B
	102	(70 - 130)	0.74	(0-30)	SW846 8260B
Vinyl chloride	94	(61 - 120)			SW846 8260B
	93	(61 - 120)	0.94	(0-30)	SW846 8260B
m-Xylene & p-Xylene	100	(70 - 130)			SW846 8260B
	103	(70 - 130)	2.9	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3X721AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G310000-551 J3X721AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	99	(70 - 130)			SW846 8260B
	102	(70 - 130)	2.5	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
	95	(61 - 128)
Toluene-d8	95	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	100	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G250252 **Work Order #...:** J3KVV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G260000-089 J3KVV1AD-LCSD
Prep Date.....: 07/26/07 **Analysis Date..:** 07/31/07
Prep Batch #...: 7207089
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichlorobenzene	**61**	**(25 - 110)**			**SW846 8270C**
	62	**(25 - 110)**	**0.96**	**(0-30)**	**SW846 8270C**
Acenaphthene	**77**	**(40 - 110)**			**SW846 8270C**
	75	**(40 - 110)**	**1.6**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**60**	**(19 - 110)**			**SW846 8270C**
	58	**(19 - 110)**	**3.1**	**(0-30)**	**SW846 8270C**
Acenaphthylene	79	(43 - 110)			SW846 8270C
	80	(43 - 110)	0.56	(0-30)	SW846 8270C
Acetophenone	498 a	(50 - 130)			SW846 8270C
	486 a	(50 - 130)	2.5	(0-30)	SW846 8270C
Anthracene	81	(54 - 114)			SW846 8270C
	82	(54 - 114)	1.2	(0-30)	SW846 8270C
Atrazine	653 a	(50 - 130)			SW846 8270C
	674 a	(50 - 130)	3.1	(0-30)	SW846 8270C
1,2-Dichlorobenzene	61	(23 - 110)			SW846 8270C
	61	(23 - 110)	0.59	(0-30)	SW846 8270C
1,3-Dichlorobenzene	57	(19 - 110)			SW846 8270C
	57	(19 - 110)	0.36	(0-30)	SW846 8270C
Benzaldehyde	524 a	(10 - 130)			SW846 8270C
	532 a	(10 - 130)	1.6	(0-30)	SW846 8270C
Benzo(a)anthracene	83	(55 - 115)			SW846 8270C
	84	(55 - 115)	1.0	(0-30)	SW846 8270C
Benzo(b)fluoranthene	92	(43 - 122)			SW846 8270C
	91	(43 - 122)	2.0	(0-30)	SW846 8270C
Benzo(k)fluoranthene	90	(43 - 124)			SW846 8270C
	90	(43 - 124)	0.66	(0-30)	SW846 8270C
Benzo(ghi)perylene	87	(45 - 120)			SW846 8270C
	88	(45 - 120)	2.2	(0-30)	SW846 8270C
Benzo(a)pyrene	88	(43 - 116)			SW846 8270C
	88	(43 - 116)	0.78	(0-30)	SW846 8270C
1,1'-Biphenyl	306 a	(50 - 130)			SW846 8270C
	306 a	(50 - 130)	0.0	(0-30)	SW846 8270C
bis(2-Chloroethoxy) methane	75	(39 - 110)			SW846 8270C
	77	(39 - 110)	2.0	(0-30)	SW846 8270C
bis(2-Chloroethyl)-ether	80	(34 - 113)			SW846 8270C
	80	(34 - 113)	0.010	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G250252 **Work Order #...:** J3KVV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G260000-089 J3KVV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
bis(2-Ethylhexyl) phthalate	105	(36 - 163)			SW846 8270C
	97	(36 - 163)	8.6	(0-30)	SW846 8270C
4-Bromophenyl phenyl ether	90	(51 - 114)			SW846 8270C
	89	(51 - 114)	0.34	(0-30)	SW846 8270C
Butyl benzyl phthalate	88	(53 - 126)			SW846 8270C
	88	(53 - 126)	0.14	(0-30)	SW846 8270C
Caprolactam	457 a	(50 - 130)			SW846 8270C
	477 a	(50 - 130)	4.3	(0-30)	SW846 8270C
Carbazole	71	(53 - 120)			SW846 8270C
	76	(53 - 120)	6.6	(0-30)	SW846 8270C
4-Chloroaniline	55	(10 - 110)			SW846 8270C
	59	(10 - 110)	6.3	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	**82**	**(39 - 110)**			**SW846 8270C**
	86	**(39 - 110)**	**4.5**	**(0-30)**	**SW846 8270C**
Benzoic acid	14	(10 - 129)			SW846 8270C
	12	(10 - 129)	12	(0-30)	SW846 8270C
1,4-Dioxane	381 a	(10 - 110)			SW846 8270C
	384 a	(10 - 110)	0.92	(0-30)	SW846 8270C
	4.3 a,p	(10 - 110)	39	(0-30)	SW846 8270C
2-Chloronaphthalene	78	(39 - 110)			SW846 8270C
	78	(39 - 110)	0.80	(0-30)	SW846 8270C
2-Chlorophenol	**79**	**(27 - 110)**			**SW846 8270C**
	81	**(27 - 110)**	**2.6**	**(0-30)**	**SW846 8270C**
Aniline	47	(10 - 130)			SW846 8270C
	38	(10 - 130)	21	(0-30)	SW846 8270C
Benzyl alcohol	77	(10 - 130)			SW846 8270C
	78	(10 - 130)	1.1	(0-30)	SW846 8270C
4-Chlorophenyl phenyl ether	92	(50 - 115)			SW846 8270C
	94	(50 - 115)	2.2	(0-30)	SW846 8270C
N-Nitrosodimethylamine	77	(10 - 130)			SW846 8270C
	80	(10 - 130)	3.6	(0-30)	SW846 8270C
1-Methylnaphthalene	69	(10 - 130)			SW846 8270C
	68	(10 - 130)	1.7	(0-30)	SW846 8270C
1,2-Dinitrobenzene	89	(10 - 130)			SW846 8270C
	94	(10 - 130)	5.5	(0-30)	SW846 8270C
2,3,5,6-Tetrachlorophenol	88	(10 - 130)			SW846 8270C
	90	(10 - 130)	3.0	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G250252 **Work Order #...:** J3KVV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G260000-089 J3KVV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chrysene	87	(55 - 115)			SW846 8270C
	85	(55 - 115)	2.8	(0-30)	SW846 8270C
Dibenz(a,h)anthracene	91	(46 - 122)			SW846 8270C
	91	(46 - 122)	0.27	(0-30)	SW846 8270C
Dibenzofuran	84	(46 - 111)			SW846 8270C
	83	(46 - 111)	0.20	(0-30)	SW846 8270C
Di-n-butyl phthalate	89	(55 - 122)			SW846 8270C
	91	(55 - 122)	2.1	(0-30)	SW846 8270C
3,3'-Dichlorobenzidine	30	(19 - 110)			SW846 8270C
	32	(19 - 110)	5.8	(0-30)	SW846 8270C
2,4-Dichlorophenol	79	(33 - 110)			SW846 8270C
	82	(33 - 110)	3.5	(0-30)	SW846 8270C
Diethyl phthalate	95	(33 - 134)			SW846 8270C
	96	(33 - 134)	1.4	(0-30)	SW846 8270C
2,4-Dimethylphenol	54	(12 - 110)			SW846 8270C
	58	(12 - 110)	6.4	(0-30)	SW846 8270C
Dimethyl phthalate	89	(15 - 143)			SW846 8270C
	93	(15 - 143)	4.6	(0-30)	SW846 8270C
4,6-Dinitro-2-methylphenol	75	(28 - 112)			SW846 8270C
	77	(28 - 112)	1.5	(0-30)	SW846 8270C
2,4-Dinitrophenol	65	(17 - 112)			SW846 8270C
	69	(17 - 112)	7.0	(0-30)	SW846 8270C
2,4-Dinitrotoluene	**97**	**(52 - 123)**			**SW846 8270C**
	99	**(52 - 123)**	**2.9**	**(0-30)**	**SW846 8270C**
2,6-Dinitrotoluene	92	(52 - 119)			SW846 8270C
	93	(52 - 119)	0.54	(0-30)	SW846 8270C
Di-n-octyl phthalate	95	(44 - 128)			SW846 8270C
	94	(44 - 128)	1.3	(0-30)	SW846 8270C
Fluoranthene	94	(54 - 122)			SW846 8270C
	95	(54 - 122)	0.69	(0-30)	SW846 8270C
Fluorene	83	(47 - 112)			SW846 8270C
	82	(47 - 112)	1.1	(0-30)	SW846 8270C
Hexachlorobenzene	85	(51 - 112)			SW846 8270C
	87	(51 - 112)	1.9	(0-30)	SW846 8270C
Hexachlorobutadiene	53	(13 - 110)			SW846 8270C
	50	(13 - 110)	4.7	(0-30)	SW846 8270C
Hexachlorocyclopenta-diene	29	(10 - 110)			SW846 8270C
	26	(10 - 110)	8.0	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G250252 **Work Order #...:** J3KVV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G260000-089 J3KVV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Hexachloroethane	47	(12 - 110)			SW846 8270C
	46	(12 - 110)	2.0	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	89	(46 - 121)			SW846 8270C
	90	(46 - 121)	1.0	(0-30)	SW846 8270C
Isophorone	87	(44 - 128)			SW846 8270C
	89	(44 - 128)	2.7	(0-30)	SW846 8270C
2-Methylnaphthalene	78	(35 - 110)			SW846 8270C
	79	(35 - 110)	1.2	(0-30)	SW846 8270C
2-Methylphenol	76	(30 - 110)			SW846 8270C
	77	(30 - 110)	1.4	(0-30)	SW846 8270C
4-Methylphenol	83	(32 - 110)			SW846 8270C
	85	(32 - 110)	2.8	(0-30)	SW846 8270C
Naphthalene	69	(31 - 110)			SW846 8270C
	69	(31 - 110)	0.45	(0-30)	SW846 8270C
2-Nitroaniline	92	(43 - 130)			SW846 8270C
	93	(43 - 130)	0.11	(0-30)	SW846 8270C
3-Nitroaniline	62	(45 - 116)			SW846 8270C
	69	(45 - 116)	12	(0-30)	SW846 8270C
4-Nitroaniline	67	(45 - 120)			SW846 8270C
	69	(45 - 120)	2.5	(0-30)	SW846 8270C
Nitrobenzene	82	(37 - 115)			SW846 8270C
	81	(37 - 115)	0.28	(0-30)	SW846 8270C
2-Nitrophenol	74	(29 - 110)			SW846 8270C
	76	(29 - 110)	3.3	(0-30)	SW846 8270C
4-Nitrophenol	**93**	**(12 - 130)**			**SW846 8270C**
	92	**(12 - 130)**	**1.1**	**(0-30)**	**SW846 8270C**
N-Nitrosodiphenylamine	81	(53 - 113)			SW846 8270C
	84	(53 - 113)	3.8	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**86**	**(37 - 121)**			**SW846 8270C**
	86	**(37 - 121)**	**0.39**	**(0-30)**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	76	(25 - 128)			SW846 8270C
	72	(25 - 128)	5.5	(0-30)	SW846 8270C
Pentachlorophenol	**62**	**(26 - 110)**			**SW846 8270C**
	62	**(26 - 110)**	**0.58**	**(0-30)**	**SW846 8270C**
Phenanthrene	83	(52 - 114)			SW846 8270C
	84	(52 - 114)	1.2	(0-30)	SW846 8270C
Phenol	**82**	**(14 - 112)**			**SW846 8270C**
	84	**(14 - 112)**	**1.6**	**(0-30)**	**SW846 8270C**

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G250252 **Work Order #...:** J3KVV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G260000-089 J3KVV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Pyrene	**86**	**(55 - 120)**			**SW846 8270C**
	84	**(55 - 120)**	**2.0**	**(0-30)**	**SW846 8270C**
2,4,5-Trichloro-phenol	91	(39 - 110)			SW846 8270C
	91	(39 - 110)	0.63	(0-30)	SW846 8270C
2,4,6-Trichloro-phenol	88	(35 - 110)			SW846 8270C
	87	(35 - 110)	1.8	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	78	(27 - 111)
	80	(27 - 111)
2-Fluorobiphenyl	77	(28 - 110)
	81	(28 - 110)
Terphenyl-d14	96	(37 - 119)
	98	(37 - 119)
Phenol-d5	92	(10 - 110)
	95	(10 - 110)
2-Fluorophenol	84	(10 - 110)
	84	(10 - 110)
2,4,6-Tribromophenol	94	(22 - 120)
	95	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A7G250252 **Work Order #...:** J3KV31AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G260000-108 J3KV31AD-LCSD
Prep Date.....: 07/26/07 **Analysis Date..:** 07/31/07
Prep Batch #...: 7207108
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
PCB-1016	**89**	**(50 - 115)**			**SW846 8082**
	75	**(50 - 115)**	**16**	**(0-30)**	**SW846 8082**
PCB-1260	**88**	**(45 - 112)**			**SW846 8082**
	75	**(45 - 112)**	**15**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(35 - 130)
	74	(35 - 130)
Decachlorobiphenyl	38	(10 - 110)
	42	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G250252 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7G260000-015 **Prep Batch #...:** 7207015					
Arsenic	91	(80 - 120)	SW846 6010B	07/26/07	J3KP81C0
		Dilution Factor: 1			
Barium	93	(80 - 120)	SW846 6010B	07/26/07	J3KP81C3
		Dilution Factor: 1			
Cadmium	91	(80 - 120)	SW846 6010B	07/26/07	J3KP81AG
		Dilution Factor: 1			
Lead	91	(80 - 120)	SW846 6010B	07/26/07	J3KP81C1
		Dilution Factor: 1			
Chromium	92	(80 - 120)	SW846 6010B	07/26/07	J3KP81AH
		Dilution Factor: 1			
Selenium	93	(80 - 120)	SW846 6010B	07/26/07	J3KP81C2
		Dilution Factor: 1			
Silver	100	(80 - 120)	SW846 6010B	07/26/07	J3KP81C4
		Dilution Factor: 1			
LCS Lot-Sample#: A7G270000-013 **Prep Batch #...:** 7208013					
Mercury	93	(81 - 123)	SW846 7470A	07/27-07/31/07	J3NN51DP
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3G841AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A7G250105-003 J3G841AD-MSD
Date Sampled...: 07/24/07 11:30 **Date Received..:** 07/24/07
Prep Date.....: 07/27/07 **Analysis Date..:** 07/27/07
Prep Batch #...: 7211291
Dilution Factor: 6.25

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	47	(45 - 128)			SW846 8260B
	50	(45 - 128)	3.6	(0-30)	SW846 8260B
Benzene	**96**	**(78 - 118)**			**SW846 8260B**
	96	**(78 - 118)**	**0.64**	**(0-20)**	**SW846 8260B**
Bromobenzene	85	(70 - 130)			SW846 8260B
	88	(70 - 130)	3.6	(0-30)	SW846 8260B
1,2-Dichloroethene (total)	98	(86 - 115)			SW846 8260B
	100	(86 - 115)	2.2	(0-30)	SW846 8260B
Bromochloromethane	88	(70 - 130)			SW846 8260B
	88	(70 - 130)	0.15	(0-30)	SW846 8260B
Bromodichloromethane	92	(80 - 146)			SW846 8260B
	94	(80 - 146)	2.1	(0-30)	SW846 8260B
Bromoform	84	(58 - 176)			SW846 8260B
	80	(58 - 176)	4.7	(0-30)	SW846 8260B
Bromomethane	81	(55 - 145)			SW846 8260B
	82	(55 - 145)	1.7	(0-30)	SW846 8260B
Methyl ethyl ketone	80	(71 - 123)			SW846 8260B
	78	(71 - 123)	1.5	(0-30)	SW846 8260B
n-Butylbenzene	104	(70 - 130)			SW846 8260B
	106	(70 - 130)	2.6	(0-30)	SW846 8260B
sec-Butylbenzene	101	(70 - 130)			SW846 8260B
	104	(70 - 130)	2.4	(0-30)	SW846 8260B
Xylenes (total)	104	(89 - 121)			SW846 8260B
	105	(89 - 121)	1.1	(0-30)	SW846 8260B
tert-Butylbenzene	109	(70 - 130)			SW846 8260B
	113	(70 - 130)	4.4	(0-30)	SW846 8260B
Carbon disulfide	90	(69 - 138)			SW846 8260B
	92	(69 - 138)	2.0	(0-41)	SW846 8260B
Carbon tetrachloride	85	(63 - 176)			SW846 8260B
	86	(63 - 176)	1.6	(0-30)	SW846 8260B
Chlorobenzene	**101**	**(76 - 117)**			**SW846 8260B**
	100	**(76 - 117)**	**1.1**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	89	(71 - 158)			SW846 8260B
	87	(71 - 158)	2.9	(0-30)	SW846 8260B
Chloroethane	84	(59 - 142)			SW846 8260B
	85	(59 - 142)	0.97	(0-30)	SW846 8260B
n-Hexane	94	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.89	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3G841AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A7G250105-003 J3G841AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	97	(83 - 141)			SW846 8260B
	98	(83 - 141)	0.74	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acetonitrile	109	(50 - 130)			SW846 8260B
	110	(50 - 130)	0.93	(0-30)	SW846 8260B
Chloromethane	98	(40 - 137)			SW846 8260B
	100	(40 - 137)	2.6	(0-39)	SW846 8260B
Acrolein	42 a	(50 - 130)			SW846 8260B
	45 a	(50 - 130)	5.2	(0-30)	SW846 8260B
Acrylonitrile	77	(50 - 130)			SW846 8260B
	78	(50 - 130)	0.61	(0-30)	SW846 8260B
Vinyl acetate	82	(70 - 130)			SW846 8260B
	80	(70 - 130)	3.0	(0-30)	SW846 8260B
2-Chlorotoluene	89	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.6	(0-30)	SW846 8260B
4-Chlorotoluene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.5	(0-30)	SW846 8260B
Cyclohexane	95	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.52	(0-30)	SW846 8260B
Iodomethane	80	(70 - 130)			SW846 8260B
	84	(70 - 130)	5.8	(0-30)	SW846 8260B
Isopropyl ether	107	(70 - 130)			SW846 8260B
	106	(70 - 130)	0.20	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	71	(70 - 130)			SW846 8260B
	75	(70 - 130)	4.5	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	90	(70 - 130)			SW846 8260B
	89	(70 - 130)	1.4	(0-30)	SW846 8260B
Dibromomethane	86	(70 - 130)			SW846 8260B
	85	(70 - 130)	0.60	(0-30)	SW846 8260B
1,2-Dichlorobenzene	97	(70 - 130)			SW846 8260B
	99	(70 - 130)	2.2	(0-30)	SW846 8260B
1,3-Dichlorobenzene	91	(70 - 130)			SW846 8260B
	94	(70 - 130)	3.3	(0-30)	SW846 8260B
1,4-Dichlorobenzene	94	(70 - 130)			SW846 8260B
	96	(70 - 130)	2.1	(0-30)	SW846 8260B
Dichlorodifluoromethane	68 a	(70 - 130)			SW846 8260B
	68 a	(70 - 130)	0.31	(0-30)	SW846 8260B
1,1-Dichloroethane	105	(88 - 127)			SW846 8260B
	106	(88 - 127)	1.3	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3G841AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A7G250105-003 J3G841AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	91	(71 - 160)			SW846 8260B
	88	(71 - 160)	2.8	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	100	(87 - 114)			SW846 8260B
	103	(87 - 114)	2.9	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	95	(85 - 116)			SW846 8260B
	97	(85 - 116)	1.5	(0-30)	SW846 8260B
1,1-Dichloroethene	**83**	**(62 - 130)**			**SW846 8260B**
	86	**(62 - 130)**	**2.9**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	98	(87 - 114)			SW846 8260B
	98	(87 - 114)	0.29	(0-30)	SW846 8260B
1,3-Dichloropropane	94	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.3	(0-30)	SW846 8260B
2,2-Dichloropropane	107	(70 - 130)			SW846 8260B
	110	(70 - 130)	2.9	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	87	(82 - 130)			SW846 8260B
	88	(82 - 130)	1.2	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	98	(73 - 147)			SW846 8260B
	98	(73 - 147)	0.18	(0-30)	SW846 8260B
1,1-Dichloropropene	91	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.51	(0-30)	SW846 8260B
Ethylbenzene	101	(86 - 132)			SW846 8260B
	104	(86 - 132)	2.3	(0-30)	SW846 8260B
Hexachlorobutadiene	86	(70 - 130)			SW846 8260B
	88	(70 - 130)	2.0	(0-30)	SW846 8260B
2-Hexanone	90	(81 - 128)			SW846 8260B
	88	(81 - 128)	2.2	(0-30)	SW846 8260B
Isopropylbenzene	117	(70 - 130)			SW846 8260B
	119	(70 - 130)	1.7	(0-30)	SW846 8260B
p-Isopropyltoluene	100	(70 - 130)			SW846 8260B
	103	(70 - 130)	2.8	(0-30)	SW846 8260B
Methyl acetate	65 a	(70 - 130)			SW846 8260B
	68 a	(70 - 130)	5.4	(0-30)	SW846 8260B
Methylcyclohexane	88	(70 - 130)			SW846 8260B
	90	(70 - 130)	2.0	(0-30)	SW846 8260B
Methylene chloride	79 a	(82 - 115)			SW846 8260B
	76 a	(82 - 115)	3.1	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	79 a	(82 - 135)			SW846 8260B
	76 a	(82 - 135)	3.2	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	81	(70 - 130)			SW846 8260B
	82	(70 - 130)	1.8	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3G841AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A7G250105-003 J3G841AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	80	(70 - 130)			SW846 8260B
	81	(70 - 130)	1.8	(0-30)	SW846 8260B
n-Propylbenzene	91	(70 - 130)			SW846 8260B
	92	(70 - 130)	0.95	(0-30)	SW846 8260B
Styrene	101	(83 - 120)			SW846 8260B
	100	(83 - 120)	0.93	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	96	(70 - 130)			SW846 8260B
	98	(70 - 130)	2.4	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	84 a	(88 - 116)			SW846 8260B
	86 a	(88 - 116)	2.2	(0-30)	SW846 8260B
Tetrachloroethene	37 a	(85 - 121)			SW846 8260B
	36 a	(85 - 121)	0.16	(0-30)	SW846 8260B
Toluene	**107**	**(70 - 119)**			**SW846 8260B**
	108	**(70 - 119)**	**0.75**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	93	(70 - 130)			SW846 8260B
	92	(70 - 130)	0.07	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	97	(70 - 130)			SW846 8260B
	97	(70 - 130)	0.60	(0-30)	SW846 8260B
1,1,1-Trichloroethane	103	(71 - 162)			SW846 8260B
	102	(71 - 162)	0.87	(0-30)	SW846 8260B
1,1,2-Trichloroethane	95	(86 - 129)			SW846 8260B
	95	(86 - 129)	0.31	(0-30)	SW846 8260B
Trichloroethene	**84**	**(62 - 130)**			**SW846 8260B**
	88	**(62 - 130)**	**3.2**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	95	(70 - 130)			SW846 8260B
	100	(70 - 130)	5.5	(0-30)	SW846 8260B
1,2,3-Trichloropropane	80	(70 - 130)			SW846 8260B
	82	(70 - 130)	2.6	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	81	(70 - 130)			SW846 8260B
	83	(70 - 130)	2.6	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	103	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.27	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	102	(70 - 130)			SW846 8260B
	104	(70 - 130)	2.0	(0-30)	SW846 8260B
Vinyl chloride	90	(88 - 126)			SW846 8260B
	90	(88 - 126)	0.05	(0-30)	SW846 8260B
m-Xylene & p-Xylene	103	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.58	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G250252 **Work Order #...:** J3G841AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A7G250105-003 J3G841AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	106	(70 - 130)			SW846 8260B
	108	(70 - 130)	2.1	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	85	(61 - 128)
	84	(61 - 128)
Toluene-d8	106	(76 - 110)
	106	(76 - 110)
4-Bromofluorobenzene	109	(74 - 116)
	107	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G250252 **Matrix.....:** WATER
Date Sampled...: 07/24/07 14:40 **Date Received..:** 07/25/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G250138-003 **Prep Batch #...:** 7207015							
Arsenic	100	(75 - 125)			SW846 6010B	07/26/07	J3HLV1DC
	107	(75 - 125)	6.3	(0-20)	SW846 6010B	07/26/07	J3HLV1DD
		Dilution Factor: 1					
Barium	101	(75 - 125)			SW846 6010B	07/26/07	J3HLV1DM
	108	(75 - 125)	6.2	(0-20)	SW846 6010B	07/26/07	J3HLV1DN
		Dilution Factor: 1					
Cadmium	96	(75 - 125)			SW846 6010B	07/26/07	J3HLV1AM
	102	(75 - 125)	6.2	(0-20)	SW846 6010B	07/26/07	J3HLV1AN
		Dilution Factor: 1					
Lead	96	(75 - 125)			SW846 6010B	07/26/07	J3HLV1DF
	103	(75 - 125)	6.6	(0-20)	SW846 6010B	07/26/07	J3HLV1DG
		Dilution Factor: 1					
Chromium	98	(75 - 125)			SW846 6010B	07/26/07	J3HLV1AP
	104	(75 - 125)	6.1	(0-20)	SW846 6010B	07/26/07	J3HLV1AQ
		Dilution Factor: 1					
Selenium	102	(75 - 125)			SW846 6010B	07/26/07	J3HLV1DJ
	108	(75 - 125)	6.1	(0-20)	SW846 6010B	07/26/07	J3HLV1DK
		Dilution Factor: 1					
Silver	114	(75 - 125)			SW846 6010B	07/26/07	J3HLV1DQ
	119	(75 - 125)	4.3	(0-20)	SW846 6010B	07/26/07	J3HLV1DR
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G250252 **Matrix.....:** WATER
Date Sampled...: 07/25/07 09:40 **Date Received..:** 07/26/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G260162-003 **Prep Batch #...:** 7208013							
Mercury	94	(69 - 134)			SW846 7470A	07/27-07/31/07	J3LEW1DD
	98	(69 - 134)	3.8	(0-20)	SW846 7470A	07/27-07/31/07	J3LEW1DE
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Chain of Custody Record

SEVERN TRENT STL
Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS U.S. Inc.	Bryan Zinda	7/24/07	327981

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page
430 1st Ave N.	(612) 339-9434 / (612) 336-4538	STL N Canton	Page 1 of 1

City	State	Zip Code	Site Contact	Lab Contact
Mpls	MN	55401	Rebecca Corbert	

Project Name and Location (State): FORD TWIN Cities Phase B

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.: FORD-TCAP-02 / E200575-2

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Matrix: Aqueous	Matrix: Sed.	Matrix: Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	VOC (modified/short)	SVOC (8270)	RCRA Metals (6010)	PCBs (8082)	Temp.	Special Instructions/ Conditions of Receipt
AMW-05B (20070724)	7-24-07	1345		X			4		1	3			3	2	1	2		
Trip Blank													X					
Temperature Blank																	X	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal: ☐ Return To Client ☑ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☑ 14 Days ☐ 21 Days ☐ Other____

QC Requirements (Specify)

Relinquished By	Date	Time	Received By	Date	Time
1. [signature]	7/24/07	1510	1. [signature]		
2. [signature]	7-24		2. [signature]	7/25/07	9:30am
3.			3.		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** ATG25252
North Canton Facility

Client: Arcadis Project: Quote#:
Cooler Received on: 7/25/07 Opened on: 7/25/07 By: JMeddy
Fedx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ TestAmerica Courier ☐ (Signature)
Stetson ☐ US Cargo ☐ Other:

TestAmerica Cooler No#: Foam Box ☐ Client Cooler ☒ Other

1. Were custody seals on the outside of the cooler? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 1
   Were the custody seals signed and dated? Yes ☒ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other :
6. Cooler temperature upon receipt 5.2 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O Slurry ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH upon receipt? Yes ☒ No ☐ NA ☐
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a Trip Blank present in the cooler? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM DUP Date: 7/25/07 by: JB via Voice Mail ☐ Verbal ☐ Other ☒ EMAIL
Concerning: #1

1. CHAIN OF CUSTODY

✓ The following discrepancies occurred:
NO DATE LISTED FOR TRIP BLANK - WILL LOG FOR 7/24/07 PER OTHER SAMPLE

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #042607-HNO3 - Sulfuric Acid Lot # 092006-H2SO4; Sodium Hydroxide Lot # 122805 -NaOH; Hydrochloric Acid Lot # 100504-HCl; Sodium Hydroxide and Zinc Acetate Lot # 050205-CH3COO2ZN/NaOH*
Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials
AMW-05B	6.2	7/25/07	AM

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont'd

STL

END OF REPORT

December 31, 2007

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000591.0001.0001
Laboratory: TestAmerica - North Canton
Laboratory submittal: A7L180274
Sample date: 2007-12-17
Report received by Enovis: 2007-12-31
Initial Data Verification completed by Enovis: 2007-12-31

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

The following minor QC exceptions or missing information were noted:

GCMS VOC MS recovereies for Dichlorodiflyuoromethane, cis-1,2-Dichloropropene, Methylene chloride, 2-Hexanone and trans-1,2-Dichloroethene recovered slightly low outside of the labs acceptance limit in QC batch 7361128. The sample was project specific A7L180274-001. The MSD recovered in control. No qualification required.

GCMS VOC MS/MSD for Vinyl chloride recovered low outside of the labs acceptance window in QC batch 7361128. The sample was project specific A7L180274-001. The sample concentration was reported non-detect and should be considered estimated and flagged UJ.

GCMS VOC Method Blank concntrations for Naphthalene, 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene were reported between the MDL and the RDL in QC batch 7361128. The associated results for the Trip Blank reported similiar concentrations and should be considered non-detect at the RDL and are flagged UB. The field samples and equipment blank results were reported non-detect so no qualification is required.

GCMS SVOC LCS and MS/MSD for Caprolactam recovered low outside of the labs acceptance window in QC batch 7353054. The associated results were all reported non-detect and should be considered estimated and flagged UJ. The matrix spike was project specific A7L180274-001. The result was reported non-detect and is flagged UJ.

GCMS SVOC MS recovery for 1,4-Dichlorobenzene was above the labs acceptance window in QC batch 7353054. The sample was project specific A7L180274-001. The MSD recovered in control. No qualification required.

GCMS SVOC MS/MSD RPD for 4-Chloroaniline was above the labs acceptance limit in QC batch 7353054. The sample was project specific A7L180274-001. Both the MS and the MSD recovered in control. No qualification required.

Metals Method Blank for Barium reported a concentration between the MDL and the RDL in QC batch 7353019. The Total Barium result for Equipment blank EB-001 (A7L180274-003) reported a similiar concentration and should be considered non-detect at the RDL and is flagged UB.

Metals Method Blank for Lead reported a concentration between the MDL and the RDL in QC batch 7353019. The total Lead result for sample A7L180274-001 was reported above the RDL and less than 10x the method blank concentration and should be considered non-detect at the reported concentration and is flagged B.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://63.106.80.11/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Tim Abston

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JB	The analyte / compound was detected in the associated blank between the MDL and the laboratory`s reporting detection limit. For Inorganic methods the sample concentration was < 10x the blank concentration and is considered estimated. For Organic methods the sample concentration was < 5x or 10x for common laboratory contaminates, the blank concentration and is considered estimated.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. MN000593.5

FORD TWIN CITIES E200572

Lot #: A7L180274

Rebecca Forbort

ARCADIS U.S., Inc.
430 1st. Ave. North
Suite 720
Minneapolis, MN 55401

TESTAMERICA LABORATORIES, INC.

Denise Pohl
Project Manager

December 30, 2007

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

CASE NARRATIVE

A7L180274

The following report contains the analytical results for three water samples and one quality control sample submitted to TestAmerica North Canton by ARCADIS Geraghty & Miller, Inc. from the Ford Twin Cities E200572 Site, project number MN000593.5. The samples were received December 18, 2007, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 70.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 0.2, 2.6, and 5.2°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for AMW-05B(12172007) had RPD's and recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GC/MS SEMIVOLATILES

The matrix spike/matrix spike duplicate(s) for AMW-05B(12172007) had RPD's and recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

POLYCHLORINATED BIPHENYLS-8082

The analytical results met the requirements of the laboratory's QA/QC program.

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton (formerly STL North Canton) conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton (formerly STL North Canton) requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A7L180274

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
AMW-05B(12172007) 12/17/07 10:25 001				
Barium - DISSOLVED	82.3 B,J	200	ug/L	SW846 6010B
Chromium - DISSOLVED	4.2 B	10.0	ug/L	SW846 6010B
Lead	9.3 J	3.0	ug/L	SW846 6010B
Barium	88.8 B,J	200	ug/L	SW846 6010B
Chromium	7.9 B	10.0	ug/L	SW846 6010B
AMW-3B(20071217) 12/17/07 13:50 002				
Barium - DISSOLVED	85.3 B,J	200	ug/L	SW846 6010B
Barium	89.6 B,J	200	ug/L	SW846 6010B
Chromium	4.2 B	10.0	ug/L	SW846 6010B
EB-001(20071217) 12/17/07 15:00 003				
Barium	0.74 B,J	200	ug/L	SW846 6010B
Acetone	3.6 J	10	ug/L	SW846 8260B
Methyl ethyl ketone	0.73 J	10	ug/L	SW846 8260B
Toluene	0.39 J	1.0	ug/L	SW846 8260B
TRIP BLANK TB-001(20071217) 12/17/07 004				
Acetone	3.9 J	10	ug/L	SW846 8260B
Naphthalene	0.50 J,B	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	0.56 J,B	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	0.26 J,B	1.0	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A7L180274

PARAMETER	ANALYTICAL METHOD
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
PCBs by SW-846 8082	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A7L180274

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KED5A	001	AMW-05B(12172007)	12/17/07	10:25
KED5W	002	AMW-3B(20071217)	12/17/07	13:50
KED5X	003	EB-001(20071217)	12/17/07	15:00
KED51	004	TRIP BLANK TB-001(20071217)	12/17/07	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(12172007)

GC/MS Volatiles

Lot-Sample #...: A7L180274-001 **Work Order #...:** KED5A1AA **Matrix.....:** WG
Date Sampled...: 12/17/07 10:25 **Date Received..:** 12/18/07
Prep Date.....: 12/26/07 **Analysis Date..:** 12/26/07
Prep Batch #...: 7361128
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(12172007)

GC/MS Volatiles

Lot-Sample #...: A7L180274-001 **Work Order #...:** KED5A1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	86	(73 - 122)
1,2-Dichloroethane-d4	78	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(12172007)

GC/MS Semivolatiles

Lot-Sample #...: A7L180274-001 **Work Order #...:** KED5A1AE **Matrix.....:** WG
Date Sampled...: 12/17/07 10:25 **Date Received..:** 12/18/07
Prep Date.....: 12/19/07 **Analysis Date..:** 12/20/07
Prep Batch #...: 7353054
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(12172007)

GC/MS Semivolatiles

Lot-Sample #...: A7L180274-001 **Work Order #...:** KED5A1AE **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(27 - 111)
2-Fluorobiphenyl	62	(28 - 110)
Terphenyl-d14	79	(37 - 119)
Phenol-d5	15	(10 - 110)
2-Fluorophenol	28	(10 - 110)
2,4,6-Tribromophenol	59	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(12172007)

GC Semivolatiles

Lot-Sample #...: A7L180274-001 **Work Order #...:** KED5A1AH **Matrix.....:** WG
Date Sampled...: 12/17/07 10:25 **Date Received..:** 12/18/07
Prep Date.....: 12/19/07 **Analysis Date..:** 12/27/07
Prep Batch #...: 7353055
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(27 - 130)
Decachlorobiphenyl	50	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(12172007)

TOTAL Metals

Lot-Sample #...: A7L180274-001 **Matrix.....:** WG
Date Sampled...: 12/17/07 10:25 **Date Received..:** 12/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7353019						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5A1AP
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**88.8 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KED5A1A1**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5A1A4
		Dilution Factor: 1		MDL.....: 0.66		
Lead	**9.3 J**	**3.0**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KED5A1AT**
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	**7.9 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KED5A1A7**
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5A1AW
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5A1CA
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/19/07	KED5A1AL
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(12172007)

DISSOLVED Metals

Lot-Sample #...: A7L180274-001 **Matrix.....:** WG
Date Sampled...: 12/17/07 10:25 **Date Received..:** 12/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7353019						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5A1CH
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**82.3 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KED5A1CT**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5A1CW
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/19-12/20/07	KED5A1CL
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	**4.2 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KED5A1C1**
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5A1CP
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5A1C4
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/19/07	KED5A1CE
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-3B(20071217)

GC/MS Volatiles

Lot-Sample #...: A7L180274-002 **Work Order #...:** KED5W1AE **Matrix.....:** WG
Date Sampled...: 12/17/07 13:50 **Date Received..:** 12/18/07
Prep Date.....: 12/26/07 **Analysis Date..:** 12/26/07
Prep Batch #...: 7361128
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-3B(20071217)

GC/MS Volatiles

Lot-Sample #...: A7L180274-002 **Work Order #...:** KED5W1AE **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(73 - 122)
1,2-Dichloroethane-d4	79	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

ARCADIS U.S., Inc.

Client Sample ID: AMW-3B(20071217)

GC/MS Semivolatiles

Lot-Sample #...: A7L180274-002 **Work Order #...:** KED5W1AF **Matrix.....:** WG
Date Sampled...: 12/17/07 13:50 **Date Received..:** 12/18/07
Prep Date.....: 12/19/07 **Analysis Date..:** 12/20/07
Prep Batch #...: 7353054
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-3B(20071217)

GC/MS Semivolatiles

Lot-Sample #...: A7L180274-002 **Work Order #...:** KED5W1AF **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	66	(27 - 111)
2-Fluorobiphenyl	64	(28 - 110)
Terphenyl-d14	82	(37 - 119)
Phenol-d5	17	(10 - 110)
2-Fluorophenol	32	(10 - 110)
2,4,6-Tribromophenol	56	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: AMW-3B(20071217)

GC Semivolatiles

Lot-Sample #...: A7L180274-002 **Work Order #...:** KED5W1AG **Matrix.....:** WG
Date Sampled...: 12/17/07 13:50 **Date Received..:** 12/18/07
Prep Date.....: 12/19/07 **Analysis Date..:** 12/21/07
Prep Batch #...: 7353055
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85	(27 - 130)
Decachlorobiphenyl	50	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-3B(20071217)

TOTAL Metals

Lot-Sample #...: A7L180274-002 **Matrix.....:** WG
Date Sampled...: 12/17/07 13:50 **Date Received..:** 12/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7353019						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5W1AJ
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**89.6 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KED5W1AA**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5W1AC
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/19-12/20/07	KED5W1AK
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	**4.2 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KED5W1AD**
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5W1AL
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5W1AP
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/19/07	KED5W1AH
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-3B(20071217)

DISSOLVED Metals

Lot-Sample #...: A7L180274-002 **Matrix.....:** WG
Date Sampled...: 12/17/07 13:50 **Date Received..:** 12/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7353019						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5W1AR
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**85.3 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KED5W1AV**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5W1AW
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/19-12/20/07	KED5W1AT
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5W1AM
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5W1AU
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5W1AN
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/19/07	KED5W1AQ
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: EB-001(20071217)

GC/MS Volatiles

Lot-Sample #...: A7L180274-003 **Work Order #...:** KED5X1AE **Matrix.....:** WQ
Date Sampled...: 12/17/07 15:00 **Date Received..:** 12/18/07
Prep Date.....: 12/26/07 **Analysis Date..:** 12/26/07
Prep Batch #...: 7361128
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.6 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**0.73 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: EB-001(20071217)

GC/MS Volatiles

Lot-Sample #...: A7L180274-003 **Work Order #...:** KED5X1AE **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	**0.39 J**	**1.0**	**ug/L**	**0.13**
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	86	(73 - 122)
1,2-Dichloroethane-d4	78	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: EB-001(20071217)

GC/MS Volatiles

Lot-Sample #...: A7L180274-003 **Work Order #...:** KED5X1AE **Matrix.....:** WQ

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: EB-001(20071217)

GC/MS Semivolatiles

Lot-Sample #...: A7L180274-003 **Work Order #...:** KED5X1AF **Matrix.....:** WQ
Date Sampled...: 12/17/07 15:00 **Date Received..:** 12/18/07
Prep Date.....: 12/19/07 **Analysis Date..:** 12/20/07
Prep Batch #...: 7353054
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: EB-001(20071217)

GC/MS Semivolatiles

Lot-Sample #...: A7L180274-003 **Work Order #...:** KED5X1AF **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	69	(27 - 111)
2-Fluorobiphenyl	67	(28 - 110)
Terphenyl-d14	68	(37 - 119)
Phenol-d5	20	(10 - 110)
2-Fluorophenol	35	(10 - 110)
2,4,6-Tribromophenol	59	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: EB-001(20071217)

GC Semivolatiles

Lot-Sample #...: A7L180274-003 **Work Order #...:** KED5X1AG **Matrix.....:** WQ
Date Sampled...: 12/17/07 15:00 **Date Received..:** 12/18/07
Prep Date.....: 12/19/07 **Analysis Date..:** 12/21/07
Prep Batch #...: 7353055
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	70	(27 - 130)
Decachlorobiphenyl	32	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: EB-001(20071217)

TOTAL Metals

Lot-Sample #...: A7L180274-003 **Matrix.....:** WQ
Date Sampled...: 12/17/07 15:00 **Date Received..:** 12/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7353019						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AJ
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**0.74 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KED5X1AA**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AC
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AK
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AD
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AL
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AP
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/19/07	KED5X1AH
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: EB-001(20071217)

DISSOLVED Metals

Lot-Sample #...: A7L180274-003 **Matrix.....:** WQ
Date Sampled...: 12/17/07 15:00 **Date Received..:** 12/18/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7353019						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AR
		Dilution Factor: 1		MDL.....: 3.2		
Barium	ND	200	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AV
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AW
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AT
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AM
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AU
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KED5X1AN
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/19/07	KED5X1AQ
		Dilution Factor: 1		MDL.....: 0.12		

ARCADIS U.S., Inc.

Client Sample ID: TRIP BLANK TB-001(20071217)

GC/MS Volatiles

Lot-Sample #...: A7L180274-004 **Work Order #...:** KED511AA **Matrix.....:** WQ
Date Sampled...: 12/17/07 **Date Received..:** 12/18/07
Prep Date.....: 12/26/07 **Analysis Date..:** 12/26/07
Prep Batch #...: 7361128
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.9 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: TRIP BLANK TB-001(20071217)

GC/MS Volatiles

Lot-Sample #...: A7L180274-004 **Work Order #...:** KED511AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	**0.50 J,B**	**1.0**	**ug/L**	**0.24**
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	**0.56 J,B**	**1.0**	**ug/L**	**0.17**
1,2,4-Trichloro-benzene	**0.26 J,B**	**1.0**	**ug/L**	**0.15**
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	85	(73 - 122)
1,2-Dichloroethane-d4	77	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: TRIP BLANK TB-001(20071217)

GC/MS Volatiles

Lot-Sample #...: A7L180274-004 **Work Order #...:** KED511AA **Matrix.....:** WQ

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KETQ21AA **Matrix.....:** WATER
MB Lot-Sample #: A7L270000-128

Prep Date.....: 12/26/07
Analysis Date..: 12/26/07 **Prep Batch #...:** 7361128
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KETQ21AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	**0.43 J**	**1.0**	**ug/L**	**SW846 8260B**
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	**0.52 J**	**1.0**	**ug/L**	**SW846 8260B**
1,2,4-Trichloro-benzene	**0.23 J**	**1.0**	**ug/L**	**SW846 8260B**
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(73 - 122)
1,2-Dichloroethane-d4	80	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KETQ21AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KEEXR1AA **Matrix.....:** WATER
MB Lot-Sample #: A7L190000-054

Prep Date.....: 12/19/07
Analysis Date..: 12/20/07 **Prep Batch #...:** 7353054
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Atrazine	ND	10	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)- ether	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
4,6-Dinitro- 2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KEEXR1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	69	(27 - 111)
2-Fluorobiphenyl	65	(28 - 110)
Terphenyl-d14	81	(37 - 119)
Phenol-d5	31	(10 - 110)
2-Fluorophenol	47	(10 - 110)
2,4,6-Tribromophenol	61	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KEEXT1AA **Matrix.....:** WATER
MB Lot-Sample #: A7L190000-055

Prep Date.....: 12/19/07
Analysis Date..: 12/21/07 **Prep Batch #...:** 7353055
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
PCB-1016	ND	0.20	ug/L	SW846 8082
PCB-1221	ND	0.20	ug/L	SW846 8082
PCB-1232	ND	0.20	ug/L	SW846 8082
PCB-1242	ND	0.20	ug/L	SW846 8082
PCB-1248	ND	0.20	ug/L	SW846 8082
PCB-1254	ND	0.20	ug/L	SW846 8082
PCB-1260	ND	0.20	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	88	(27 - 130)
Decachlorobiphenyl	39	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A7L180274 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A7L190000-019 **Prep Batch #...:** 7353019						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KEEV21AC
		Dilution Factor: 1				
Barium	**1.1 B**	**200**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KEEV21AF**
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KEEV21AG
		Dilution Factor: 1				
Lead	**2.0 B**	**3.0**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KEEV21AD**
		Dilution Factor: 1				
Chromium	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KEEV21AH
		Dilution Factor: 1				
Selenium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KEEV21AE
		Dilution Factor: 1				
Silver	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KEEV21AJ
		Dilution Factor: 1				
Mercury	ND	0.20	ug/L	SW846 7470A	12/19/07	KEEV21AA
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: A7L180274 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A7L190000-019 **Prep Batch #...:** 7353019						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KEEV21AL
		Dilution Factor: 1				
Barium	**1.1 B**	**200**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KEEV21AP**
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KEEV21AQ
		Dilution Factor: 1				
Lead	**2.0 B**	**3.0**	**ug/L**	**SW846 6010B**	**12/19-12/20/07**	**KEEV21AM**
		Dilution Factor: 1				
Chromium	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KEEV21AR
		Dilution Factor: 1				
Selenium	ND	5.0	ug/L	SW846 6010B	12/19-12/20/07	KEEV21AN
		Dilution Factor: 1				
Silver	ND	10.0	ug/L	SW846 6010B	12/19-12/20/07	KEEV21AT
		Dilution Factor: 1				
Mercury	ND	0.20	ug/L	SW846 7470A	12/19/07	KEEV21AK
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KETQ21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L270000-128 KETQ21AD-LCSD
Prep Date.....: 12/26/07 **Analysis Date..:** 12/26/07
Prep Batch #...: 7361128
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	63	(22 - 200)			SW846 8260B
	68	(22 - 200)	7.7	(0-95)	SW846 8260B
Benzene	**94**	**(80 - 116)**			**SW846 8260B**
	97	**(80 - 116)**	**3.3**	**(0-20)**	**SW846 8260B**
1,2-Dichloroethene (total)	91	(82 - 116)			SW846 8260B
	95	(82 - 116)	4.3	(0-30)	SW846 8260B
Bromobenzene	94	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.62	(0-30)	SW846 8260B
Bromochloromethane	96	(70 - 130)			SW846 8260B
	98	(70 - 130)	2.4	(0-30)	SW846 8260B
Bromodichloromethane	91	(87 - 130)			SW846 8260B
	94	(87 - 130)	3.7	(0-30)	SW846 8260B
Bromoform	84	(76 - 150)			SW846 8260B
	88	(76 - 150)	5.4	(0-30)	SW846 8260B
Bromomethane	81	(64 - 129)			SW846 8260B
	83	(64 - 129)	1.6	(0-30)	SW846 8260B
Methyl ethyl ketone	95	(28 - 237)			SW846 8260B
	97	(28 - 237)	1.9	(0-65)	SW846 8260B
n-Butylbenzene	101	(70 - 130)			SW846 8260B
	104	(70 - 130)	2.7	(0-30)	SW846 8260B
Xylenes (total)	100	(87 - 116)			SW846 8260B
	103	(87 - 116)	2.9	(0-30)	SW846 8260B
sec-Butylbenzene	100	(70 - 130)			SW846 8260B
	102	(70 - 130)	2.4	(0-30)	SW846 8260B
tert-Butylbenzene	98	(70 - 130)			SW846 8260B
	105	(70 - 130)	6.8	(0-30)	SW846 8260B
Carbon disulfide	91	(73 - 139)			SW846 8260B
	94	(73 - 139)	3.3	(0-30)	SW846 8260B
Carbon tetrachloride	87	(75 - 149)			SW846 8260B
	94	(75 - 149)	7.7	(0-30)	SW846 8260B
Chlorobenzene	**96**	**(76 - 117)**			**SW846 8260B**
	99	**(76 - 117)**	**2.5**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	99	(81 - 138)			SW846 8260B
	102	(81 - 138)	3.0	(0-30)	SW846 8260B
Chloroethane	84	(66 - 126)			SW846 8260B
	86	(66 - 126)	2.5	(0-30)	SW846 8260B
n-Hexane	101	(70 - 130)			SW846 8260B
	109	(70 - 130)	6.8	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KETQ21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L270000-128 KETQ21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	89	(84 - 128)			SW846 8260B
	93	(84 - 128)	5.0	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	83	(70 - 130)			SW846 8260B
	89	(70 - 130)	7.1	(0-30)	SW846 8260B
Acetonitrile	84	(50 - 130)			SW846 8260B
	85	(50 - 130)	1.2	(0-30)	SW846 8260B
Chloromethane	84	(48 - 123)			SW846 8260B
	88	(48 - 123)	3.8	(0-30)	SW846 8260B
Acrolein	71	(50 - 130)			SW846 8260B
	80	(50 - 130)	12	(0-30)	SW846 8260B
Vinyl acetate	125	(70 - 130)			SW846 8260B
	125	(70 - 130)	0.58	(0-30)	SW846 8260B
Acrylonitrile	83	(50 - 130)			SW846 8260B
	86	(50 - 130)	4.4	(0-30)	SW846 8260B
2-Chlorotoluene	98	(70 - 130)			SW846 8260B
	99	(70 - 130)	1.2	(0-30)	SW846 8260B
4-Chlorotoluene	93	(70 - 130)			SW846 8260B
	98	(70 - 130)	4.3	(0-30)	SW846 8260B
Cyclohexane	89	(70 - 130)			SW846 8260B
	93	(70 - 130)	5.0	(0-30)	SW846 8260B
Iodomethane	90	(70 - 130)			SW846 8260B
	94	(70 - 130)	4.5	(0-30)	SW846 8260B
Isopropyl ether	100	(70 - 130)			SW846 8260B
	102	(70 - 130)	2.3	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	90	(70 - 130)			SW846 8260B
	92	(70 - 130)	2.9	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	91	(70 - 130)			SW846 8260B
	95	(70 - 130)	4.9	(0-30)	SW846 8260B
Dibromomethane	92	(70 - 130)			SW846 8260B
	94	(70 - 130)	2.9	(0-30)	SW846 8260B
1,2-Dichlorobenzene	96	(70 - 130)			SW846 8260B
	99	(70 - 130)	3.1	(0-30)	SW846 8260B
1,3-Dichlorobenzene	96	(70 - 130)			SW846 8260B
	98	(70 - 130)	1.9	(0-30)	SW846 8260B
1,4-Dichlorobenzene	94	(70 - 130)			SW846 8260B
	97	(70 - 130)	2.8	(0-30)	SW846 8260B
Dichlorodifluoromethane	72	(70 - 130)			SW846 8260B
	75	(70 - 130)	3.1	(0-30)	SW846 8260B
1,1-Dichloroethane	93	(86 - 123)			SW846 8260B
	97	(86 - 123)	3.4	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KETQ21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L270000-128 KETQ21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	85	(79 - 136)			SW846 8260B
	87	(79 - 136)	2.5	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	93	(85 - 113)			SW846 8260B
	96	(85 - 113)	3.7	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	89	(80 - 120)			SW846 8260B
	94	(80 - 120)	4.9	(0-30)	SW846 8260B
1,1-Dichloroethene	**89**	**(63 - 130)**			**SW846 8260B**
	94	**(63 - 130)**	**5.3**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	97	(82 - 115)			SW846 8260B
	100	(82 - 115)	3.3	(0-30)	SW846 8260B
1,3-Dichloropropane	93	(70 - 130)			SW846 8260B
	97	(70 - 130)	4.8	(0-30)	SW846 8260B
2,2-Dichloropropane	85	(70 - 130)			SW846 8260B
	87	(70 - 130)	2.9	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	86	(84 - 130)			SW846 8260B
	91	(84 - 130)	5.4	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	84	(84 - 130)			SW846 8260B
	86	(84 - 130)	3.2	(0-30)	SW846 8260B
1,1-Dichloropropene	91	(70 - 130)			SW846 8260B
	95	(70 - 130)	4.7	(0-30)	SW846 8260B
Ethylbenzene	100	(86 - 116)			SW846 8260B
	102	(86 - 116)	2.0	(0-30)	SW846 8260B
Hexachlorobutadiene	93	(70 - 130)			SW846 8260B
	95	(70 - 130)	2.0	(0-30)	SW846 8260B
2-Hexanone	80	(35 - 200)			SW846 8260B
	87	(35 - 200)	8.9	(0-52)	SW846 8260B
Isopropylbenzene	113	(70 - 130)			SW846 8260B
	116	(70 - 130)	2.9	(0-30)	SW846 8260B
p-Isopropyltoluene	104	(70 - 130)			SW846 8260B
	107	(70 - 130)	2.4	(0-30)	SW846 8260B
Methyl acetate	74	(70 - 130)			SW846 8260B
	79	(70 - 130)	6.4	(0-30)	SW846 8260B
Methylcyclohexane	88	(70 - 130)			SW846 8260B
	94	(70 - 130)	6.3	(0-30)	SW846 8260B
Methylene chloride	89	(78 - 118)			SW846 8260B
	94	(78 - 118)	4.7	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	82	(78 - 141)			SW846 8260B
	88	(78 - 141)	6.8	(0-32)	SW846 8260B
Methyl tert-butyl ether (MTBE)	81	(70 - 130)			SW846 8260B
	86	(70 - 130)	5.2	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KETQ21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L270000-128 KETQ21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	79	(70 - 130)			SW846 8260B
	87	(70 - 130)	9.8	(0-30)	SW846 8260B
n-Propylbenzene	99	(70 - 130)			SW846 8260B
	102	(70 - 130)	3.4	(0-30)	SW846 8260B
Styrene	97	(85 - 117)			SW846 8260B
	99	(85 - 117)	2.3	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	98	(70 - 130)			SW846 8260B
	104	(70 - 130)	5.8	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	89	(85 - 118)			SW846 8260B
	93	(85 - 118)	4.4	(0-30)	SW846 8260B
Tetrachloroethene	102	(88 - 113)			SW846 8260B
	103	(88 - 113)	0.70	(0-30)	SW846 8260B
Toluene	**102**	**(74 - 119)**			**SW846 8260B**
	105	**(74 - 119)**	**3.2**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	84	(70 - 130)			SW846 8260B
	91	(70 - 130)	7.6	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	91	(70 - 130)			SW846 8260B
	95	(70 - 130)	4.7	(0-30)	SW846 8260B
1,1,1-Trichloroethane	91	(78 - 140)			SW846 8260B
	93	(78 - 140)	2.4	(0-30)	SW846 8260B
1,1,2-Trichloroethane	95	(83 - 122)			SW846 8260B
	99	(83 - 122)	4.2	(0-30)	SW846 8260B
Trichloroethene	**96**	**(75 - 122)**			**SW846 8260B**
	100	**(75 - 122)**	**4.1**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	105	(70 - 130)			SW846 8260B
	100	(70 - 130)	5.5	(0-30)	SW846 8260B
1,2,3-Trichloropropane	96	(70 - 130)			SW846 8260B
	96	(70 - 130)	0.11	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	101	(70 - 130)			SW846 8260B
	106	(70 - 130)	4.5	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	98	(70 - 130)			SW846 8260B
	101	(70 - 130)	3.1	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	99	(70 - 130)			SW846 8260B
	102	(70 - 130)	2.9	(0-30)	SW846 8260B
Vinyl chloride	79	(61 - 120)			SW846 8260B
	83	(61 - 120)	5.1	(0-30)	SW846 8260B
m-Xylene & p-Xylene	99	(70 - 130)			SW846 8260B
	102	(70 - 130)	2.6	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KETQ21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L270000-128 KETQ21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	102	(70 - 130)			SW846 8260B
	106	(70 - 130)	3.3	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	86	(73 - 122)
	89	(73 - 122)
1,2-Dichloroethane-d4	81	(61 - 128)
	83	(61 - 128)
Toluene-d8	96	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)
	91	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KEEXR1AC **Matrix.....:** WATER
LCS Lot-Sample#: A7L190000-054
Prep Date.....: 12/19/07 **Analysis Date..:** 12/20/07
Prep Batch #...: 7353054
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2,4-Trichloro-benzene	**40**	**(25 - 110)**	**SW846 8270C**
Acenaphthene	**66**	**(40 - 110)**	**SW846 8270C**
1,4-Dichlorobenzene	**59**	**(19 - 110)**	**SW846 8270C**
Acenaphthylene	67	(43 - 110)	SW846 8270C
Acetophenone	69	(50 - 130)	SW846 8270C
Anthracene	68	(54 - 114)	SW846 8270C
Atrazine	83	(50 - 130)	SW846 8270C
1,2-Dichlorobenzene	39	(23 - 110)	SW846 8270C
1,3-Dichlorobenzene	34	(19 - 110)	SW846 8270C
Benzaldehyde	75	(10 - 130)	SW846 8270C
Benzo(a)anthracene	63	(55 - 115)	SW846 8270C
Benzo(b)fluoranthene	62	(43 - 122)	SW846 8270C
Benzo(k)fluoranthene	67	(43 - 124)	SW846 8270C
Benzo(ghi)perylene	65	(45 - 120)	SW846 8270C
Benzo(a)pyrene	61	(43 - 116)	SW846 8270C
1,1'-Biphenyl	68	(50 - 130)	SW846 8270C
bis(2-Chloroethoxy) methane	71	(39 - 110)	SW846 8270C
bis(2-Chloroethyl)-ether	67	(34 - 113)	SW846 8270C
bis(2-Ethylhexyl) phthalate	71	(36 - 163)	SW846 8270C
4-Bromophenyl phenyl ether	64	(51 - 114)	SW846 8270C
Butyl benzyl phthalate	70	(53 - 126)	SW846 8270C
Caprolactam	13 a	(50 - 130)	SW846 8270C
Carbazole	71	(53 - 120)	SW846 8270C
4-Chloroaniline	39	(10 - 110)	SW846 8270C
4-Chloro-3-methylphenol	**64**	**(39 - 110)**	**SW846 8270C**
Benzoic acid	0.0 a	(10 - 129)	SW846 8270C
1,4-Dioxane	27	(10 - 110)	SW846 8270C
2-Chloronaphthalene	58	(39 - 110)	SW846 8270C
2-Chlorophenol	**59**	**(27 - 110)**	**SW846 8270C**

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KEEXR1AC **Matrix.....:** WATER
LCS Lot-Sample#: A7L190000-054

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aniline	3.4 a	(10 - 130)	SW846 8270C
Benzyl alcohol	40	(10 - 130)	SW846 8270C
4-Chlorophenyl phenyl ether	67	(50 - 115)	SW846 8270C
N-Nitrosodimethylamine	30	(10 - 130)	SW846 8270C
1-Methylnaphthalene	54	(10 - 130)	SW846 8270C
1,2-Dinitrobenzene	75	(10 - 130)	SW846 8270C
2,3,5,6-Tetrachlorophenol	57	(10 - 130)	SW846 8270C
Chrysene	65	(55 - 115)	SW846 8270C
Dibenz(a,h)anthracene	63	(46 - 122)	SW846 8270C
Dibenzofuran	66	(46 - 111)	SW846 8270C
Di-n-butyl phthalate	75	(55 - 122)	SW846 8270C
3,3'-Dichlorobenzidine	57	(19 - 110)	SW846 8270C
2,4-Dichlorophenol	64	(33 - 110)	SW846 8270C
Diethyl phthalate	73	(33 - 134)	SW846 8270C
2,4-Dimethylphenol	60	(12 - 110)	SW846 8270C
Dimethyl phthalate	72	(15 - 143)	SW846 8270C
4,6-Dinitro-2-methylphenol	61	(28 - 112)	SW846 8270C
2,4-Dinitrophenol	49	(17 - 112)	SW846 8270C
2,4-Dinitrotoluene	**75**	**(52 - 123)**	**SW846 8270C**
2,6-Dinitrotoluene	73	(52 - 119)	SW846 8270C
Di-n-octyl phthalate	67	(44 - 128)	SW846 8270C
Fluoranthene	71	(54 - 122)	SW846 8270C
Fluorene	67	(47 - 112)	SW846 8270C
Hexachlorobenzene	63	(51 - 112)	SW846 8270C
Hexachlorobutadiene	28	(13 - 110)	SW846 8270C
Hexachlorocyclopenta-diene	40	(10 - 110)	SW846 8270C
Hexachloroethane	29	(12 - 110)	SW846 8270C
Indeno(1,2,3-cd)pyrene	63	(46 - 121)	SW846 8270C
Isophorone	77	(44 - 128)	SW846 8270C
2-Methylnaphthalene	59	(35 - 110)	SW846 8270C
2-Methylphenol	54	(30 - 110)	SW846 8270C
4-Methylphenol	51	(32 - 110)	SW846 8270C
Naphthalene	54	(31 - 110)	SW846 8270C
2-Nitroaniline	73	(43 - 130)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KEEXR1AC **Matrix.....:** WATER
LCS Lot-Sample#: A7L190000-054

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
3-Nitroaniline	70	(45 - 116)	SW846 8270C
4-Nitroaniline	73	(45 - 120)	SW846 8270C
Nitrobenzene	70	(37 - 115)	SW846 8270C
2-Nitrophenol	68	(29 - 110)	SW846 8270C
4-Nitrophenol	**37**	**(12 - 130)**	**SW846 8270C**
N-Nitrosodiphenylamine	61	(53 - 113)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**71**	**(37 - 121)**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	68	(25 - 128)	SW846 8270C
Pentachlorophenol	**40**	**(26 - 110)**	**SW846 8270C**
Phenanthrene	64	(52 - 114)	SW846 8270C
Phenol	**27**	**(14 - 112)**	**SW846 8270C**
Pyrene	**67**	**(55 - 120)**	**SW846 8270C**
2,4,5-Trichloro-phenol	65	(39 - 110)	SW846 8270C
2,4,6-Trichloro-phenol	64	(35 - 110)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	67	(27 - 111)
2-Fluorobiphenyl	58	(28 - 110)
Terphenyl-d14	75	(37 - 119)
Phenol-d5	26	(10 - 110)
2-Fluorophenol	41	(10 - 110)
2,4,6-Tribromophenol	60	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KEEXT1AC **Matrix.....:** WATER
LCS Lot-Sample#: A7L190000-055
Prep Date.....: 12/19/07 **Analysis Date..:** 12/21/07
Prep Batch #...: 7353055
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
PCB-1016	**84**	**(44 - 119)**	**SW846 8082**
PCB-1260	**74**	**(41 - 118)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(27 - 130)
Decachlorobiphenyl	31	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7L180274 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7L190000-019 **Prep Batch #...:** 7353019					
Arsenic	90	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21AV
		Dilution Factor: 1			
Barium	93	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21A0
		Dilution Factor: 1			
Lead	88	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21AW
		Dilution Factor: 1			
Cadmium	91	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21A1
		Dilution Factor: 1			
Selenium	91	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21AX
		Dilution Factor: 1			
Chromium	89	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21A2
		Dilution Factor: 1			
Silver	104	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21A3
		Dilution Factor: 1			
Mercury	95	(81 - 123)	SW846 7470A	12/19/07	KEEV21AU
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: A7L180274 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7L190000-019 **Prep Batch #...:** 7353019					
Arsenic	90	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21A5
		Dilution Factor: 1			
Barium	93	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21A8
		Dilution Factor: 1			
Lead	88	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21A6
		Dilution Factor: 1			
Cadmium	91	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21A9
		Dilution Factor: 1			
Selenium	91	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21A7
		Dilution Factor: 1			
Chromium	89	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21CA
		Dilution Factor: 1			
Silver	104	(80 - 120)	SW846 6010B	12/19-12/20/07	KEEV21CC
		Dilution Factor: 1			
Mercury	95	(81 - 123)	SW846 7470A	12/19/07	KEEV21A4
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KED5A1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A7L180274-001 KED5A1AD-MSD
Date Sampled...: 12/17/07 10:25 **Date Received..:** 12/18/07
Prep Date.....: 12/26/07 **Analysis Date..:** 12/26/07
Prep Batch #...: 7361128
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	79	(45 - 128)			SW846 8260B
	75	(45 - 128)	6.4	(0-30)	SW846 8260B
Benzene	**90**	**(78 - 118)**			**SW846 8260B**
	94	**(78 - 118)**	**4.0**	**(0-20)**	**SW846 8260B**
Bromobenzene	91	(70 - 130)			SW846 8260B
	95	(70 - 130)	3.5	(0-30)	SW846 8260B
1,2-Dichloroethene (total)	86	(86 - 115)			SW846 8260B
	90	(86 - 115)	5.0	(0-30)	SW846 8260B
Bromochloromethane	89	(70 - 130)			SW846 8260B
	94	(70 - 130)	6.1	(0-30)	SW846 8260B
Bromodichloromethane	87	(80 - 146)			SW846 8260B
	91	(80 - 146)	4.6	(0-30)	SW846 8260B
Bromoform	77	(58 - 176)			SW846 8260B
	86	(58 - 176)	12	(0-30)	SW846 8260B
Bromomethane	72	(55 - 145)			SW846 8260B
	75	(55 - 145)	4.2	(0-30)	SW846 8260B
Methyl ethyl ketone	98	(71 - 123)			SW846 8260B
	100	(71 - 123)	1.8	(0-30)	SW846 8260B
n-Butylbenzene	95	(70 - 130)			SW846 8260B
	100	(70 - 130)	5.0	(0-30)	SW846 8260B
sec-Butylbenzene	97	(70 - 130)			SW846 8260B
	99	(70 - 130)	2.6	(0-30)	SW846 8260B
Xylenes (total)	97	(89 - 121)			SW846 8260B
	101	(89 - 121)	4.2	(0-30)	SW846 8260B
tert-Butylbenzene	99	(70 - 130)			SW846 8260B
	99	(70 - 130)	0.32	(0-30)	SW846 8260B
Carbon disulfide	86	(69 - 138)			SW846 8260B
	92	(69 - 138)	6.7	(0-41)	SW846 8260B
Carbon tetrachloride	75	(63 - 176)			SW846 8260B
	81	(63 - 176)	7.8	(0-30)	SW846 8260B
Chlorobenzene	**93**	**(76 - 117)**			**SW846 8260B**
	97	**(76 - 117)**	**4.1**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	93	(71 - 158)			SW846 8260B
	99	(71 - 158)	6.7	(0-30)	SW846 8260B
Chloroethane	77	(59 - 142)			SW846 8260B
	82	(59 - 142)	6.5	(0-30)	SW846 8260B
n-Hexane	104	(70 - 130)			SW846 8260B
	108	(70 - 130)	3.8	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KED5A1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A7L180274-001 KED5A1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	85	(83 - 141)			SW846 8260B
	88	(83 - 141)	4.1	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acetonitrile	68	(50 - 130)			SW846 8260B
	81	(50 - 130)	18	(0-30)	SW846 8260B
Chloromethane	72	(40 - 137)			SW846 8260B
	78	(40 - 137)	7.7	(0-39)	SW846 8260B
Acrolein	26 a	(50 - 130)			SW846 8260B
	43 a,p	(50 - 130)	38	(0-30)	SW846 8260B
Acrylonitrile	82	(50 - 130)			SW846 8260B
	85	(50 - 130)	4.2	(0-30)	SW846 8260B
Vinyl acetate	139 a	(70 - 130)			SW846 8260B
	142 a	(70 - 130)	2.2	(0-30)	SW846 8260B
2-Chlorotoluene	98	(70 - 130)			SW846 8260B
	99	(70 - 130)	0.49	(0-30)	SW846 8260B
4-Chlorotoluene	92	(70 - 130)			SW846 8260B
	96	(70 - 130)	4.5	(0-30)	SW846 8260B
Cyclohexane	83	(70 - 130)			SW846 8260B
	89	(70 - 130)	7.2	(0-30)	SW846 8260B
Iodomethane	82	(70 - 130)			SW846 8260B
	87	(70 - 130)	6.0	(0-30)	SW846 8260B
Isopropyl ether	92	(70 - 130)			SW846 8260B
	98	(70 - 130)	6.4	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	86	(70 - 130)			SW846 8260B
	95	(70 - 130)	9.6	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	91	(70 - 130)			SW846 8260B
	94	(70 - 130)	3.0	(0-30)	SW846 8260B
Dibromomethane	88	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.6	(0-30)	SW846 8260B
1,2-Dichlorobenzene	95	(70 - 130)			SW846 8260B
	98	(70 - 130)	3.5	(0-30)	SW846 8260B
1,3-Dichlorobenzene	92	(70 - 130)			SW846 8260B
	96	(70 - 130)	5.0	(0-30)	SW846 8260B
1,4-Dichlorobenzene	91	(70 - 130)			SW846 8260B
	94	(70 - 130)	3.0	(0-30)	SW846 8260B
Dichlorodifluoromethane	68 a	(70 - 130)			SW846 8260B
	71	(70 - 130)	4.0	(0-30)	SW846 8260B
1,1-Dichloroethane	88	(88 - 127)			SW846 8260B
	95	(88 - 127)	7.0	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KED5A1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A7L180274-001 KED5A1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	83	(71 - 160)			SW846 8260B
	86	(71 - 160)	3.4	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	88	(87 - 114)			SW846 8260B
	92	(87 - 114)	4.6	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	83 a	(85 - 116)			SW846 8260B
	88	(85 - 116)	5.5	(0-30)	SW846 8260B
1,1-Dichloroethene	**83**	**(62 - 130)**			**SW846 8260B**
	87	**(62 - 130)**	**5.1**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	95	(87 - 114)			SW846 8260B
	99	(87 - 114)	4.6	(0-30)	SW846 8260B
1,3-Dichloropropane	93	(70 - 130)			SW846 8260B
	96	(70 - 130)	3.6	(0-30)	SW846 8260B
2,2-Dichloropropane	73	(70 - 130)			SW846 8260B
	80	(70 - 130)	9.4	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	78 a	(82 - 130)			SW846 8260B
	85	(82 - 130)	8.6	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	77	(73 - 147)			SW846 8260B
	82	(73 - 147)	7.3	(0-30)	SW846 8260B
1,1-Dichloropropene	90	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.4	(0-30)	SW846 8260B
Ethylbenzene	97	(86 - 132)			SW846 8260B
	100	(86 - 132)	2.3	(0-30)	SW846 8260B
Hexachlorobutadiene	84	(70 - 130)			SW846 8260B
	92	(70 - 130)	8.4	(0-30)	SW846 8260B
2-Hexanone	79 a	(81 - 128)			SW846 8260B
	88	(81 - 128)	11	(0-30)	SW846 8260B
Isopropylbenzene	106	(70 - 130)			SW846 8260B
	111	(70 - 130)	5.0	(0-30)	SW846 8260B
p-Isopropyltoluene	99	(70 - 130)			SW846 8260B
	102	(70 - 130)	2.8	(0-30)	SW846 8260B
Methyl acetate	79	(70 - 130)			SW846 8260B
	76	(70 - 130)	5.0	(0-30)	SW846 8260B
Methylcyclohexane	83	(70 - 130)			SW846 8260B
	90	(70 - 130)	7.9	(0-30)	SW846 8260B
Methylene chloride	79 a	(82 - 115)			SW846 8260B
	82	(82 - 115)	4.6	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	84	(82 - 135)			SW846 8260B
	89	(82 - 135)	6.2	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	78	(70 - 130)			SW846 8260B
	82	(70 - 130)	5.9	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KED5A1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A7L180274-001 KED5A1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	81	(70 - 130)			SW846 8260B
	92	(70 - 130)	13	(0-30)	SW846 8260B
n-Propylbenzene	99	(70 - 130)			SW846 8260B
	100	(70 - 130)	1.6	(0-30)	SW846 8260B
Styrene	90	(83 - 120)			SW846 8260B
	96	(83 - 120)	6.5	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	90	(70 - 130)			SW846 8260B
	96	(70 - 130)	6.9	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	90	(88 - 116)			SW846 8260B
	94	(88 - 116)	3.9	(0-30)	SW846 8260B
Tetrachloroethene	99	(85 - 121)			SW846 8260B
	102	(85 - 121)	2.6	(0-30)	SW846 8260B
Toluene	**102**	**(70 - 119)**			**SW846 8260B**
	103	**(70 - 119)**	**1.4**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	76	(70 - 130)			SW846 8260B
	90	(70 - 130)	17	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	86	(70 - 130)			SW846 8260B
	96	(70 - 130)	11	(0-30)	SW846 8260B
1,1,1-Trichloroethane	82	(71 - 162)			SW846 8260B
	87	(71 - 162)	6.8	(0-30)	SW846 8260B
1,1,2-Trichloroethane	97	(86 - 129)			SW846 8260B
	97	(86 - 129)	0.13	(0-30)	SW846 8260B
Trichloroethene	**94**	**(62 - 130)**			**SW846 8260B**
	98	**(62 - 130)**	**3.9**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	73	(70 - 130)			SW846 8260B
	73	(70 - 130)	0.01	(0-30)	SW846 8260B
1,2,3-Trichloropropane	94	(70 - 130)			SW846 8260B
	96	(70 - 130)	2.0	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	93	(70 - 130)			SW846 8260B
	100	(70 - 130)	7.2	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	95	(70 - 130)			SW846 8260B
	98	(70 - 130)	3.8	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	96	(70 - 130)			SW846 8260B
	99	(70 - 130)	3.1	(0-30)	SW846 8260B
Vinyl chloride	71 a	(88 - 126)			SW846 8260B
	78 a	(88 - 126)	8.6	(0-30)	SW846 8260B
m-Xylene & p-Xylene	96	(70 - 130)			SW846 8260B
	101	(70 - 130)	4.6	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L180274 **Work Order #...:** KED5A1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A7L180274-001 KED5A1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	98	(70 - 130)			SW846 8260B
	101	(70 - 130)	3.3	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	85	(73 - 122)
	87	(73 - 122)
1,2-Dichloroethane-d4	77	(61 - 128)
	82	(61 - 128)
Toluene-d8	98	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)
	89	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KED5A1FE-MS **Matrix.....:** WG
MS Lot-Sample #: A7L180274-001 KED5A1FF-MSD
Date Sampled...: 12/17/07 10:25 **Date Received..:** 12/18/07
Prep Date.....: 12/19/07 **Analysis Date..:** 12/20/07
Prep Batch #...: 7353054
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichloro-benzene	**72**	**(25 - 110)**			**SW846 8270C**
	63	**(25 - 110)**	**12**	**(0-30)**	**SW846 8270C**
Acenaphthene	**79**	**(36 - 110)**			**SW846 8270C**
	73	**(36 - 110)**	**7.9**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**117 a**	**(17 - 110)**			**SW846 8270C**
	97	**(17 - 110)**	**19**	**(0-30)**	**SW846 8270C**
Acenaphthylene	79	(39 - 110)			SW846 8270C
	74	(39 - 110)	7.7	(0-30)	SW846 8270C
Acetophenone	75	(50 - 130)			SW846 8270C
	69	(50 - 130)	9.0	(0-30)	SW846 8270C
Anthracene	82	(46 - 110)			SW846 8270C
	76	(46 - 110)	8.0	(0-30)	SW846 8270C
Atrazine	93	(50 - 130)			SW846 8270C
	88	(50 - 130)	5.9	(0-30)	SW846 8270C
Benzaldehyde	84	(10 - 130)			SW846 8270C
	73	(10 - 130)	13	(0-30)	SW846 8270C
Benzo(a)anthracene	77	(52 - 110)			SW846 8270C
	71	(52 - 110)	8.3	(0-30)	SW846 8270C
Benzo(b)fluoranthene	81	(33 - 114)			SW846 8270C
	75	(33 - 114)	7.8	(0-30)	SW846 8270C
Benzo(k)fluoranthene	80	(32 - 121)			SW846 8270C
	75	(32 - 121)	6.2	(0-30)	SW846 8270C
Benzo(ghi)perylene	80	(34 - 116)			SW846 8270C
	73	(34 - 116)	8.9	(0-30)	SW846 8270C
Benzo(a)pyrene	76	(33 - 110)			SW846 8270C
	70	(33 - 110)	7.9	(0-30)	SW846 8270C
1,2-Dichlorobenzene	71	(22 - 110)			SW846 8270C
	64	(22 - 110)	11	(0-30)	SW846 8270C
1,3-Dichlorobenzene	68	(19 - 110)			SW846 8270C
	60	(19 - 110)	12	(0-30)	SW846 8270C
1,1'-Biphenyl	78	(50 - 130)			SW846 8270C
	73	(50 - 130)	7.6	(0-30)	SW846 8270C
bis(2-Chloroethoxy) methane	77	(35 - 110)			SW846 8270C
	72	(35 - 110)	6.9	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KED5A1FE-MS **Matrix.....:** WG
MS Lot-Sample #: A7L180274-001 KED5A1FF-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
bis(2-Chloroethyl)-ether	76	(27 - 110)			SW846 8270C
	66	(27 - 110)	14	(0-30)	SW846 8270C
bis(2-Ethylhexyl) phthalate	89	(40 - 140)			SW846 8270C
	86	(40 - 140)	3.6	(0-30)	SW846 8270C
4-Bromophenyl phenyl ether	80	(42 - 113)			SW846 8270C
	74	(42 - 113)	8.1	(0-30)	SW846 8270C
Butyl benzyl phthalate	85	(51 - 121)			SW846 8270C
	78	(51 - 121)	8.5	(0-30)	SW846 8270C
Caprolactam	21 a	(50 - 130)			SW846 8270C
	17 a	(50 - 130)	18	(0-30)	SW846 8270C
Carbazole	83	(49 - 114)			SW846 8270C
	78	(49 - 114)	5.9	(0-30)	SW846 8270C
4-Chloroaniline	28	(10 - 110)			SW846 8270C
	18 p	(10 - 110)	44	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	**71**	**(33 - 110)**			**SW846 8270C**
	66	**(33 - 110)**	**8.0**	**(0-30)**	**SW846 8270C**
Benzoic acid	0.0 a	(10 - 165)			SW846 8270C
	0.0 a	(10 - 165)	0.0	(0-30)	SW846 8270C
1,4-Dioxane	32	(10 - 110)			SW846 8270C
	33	(10 - 110)	3.4	(0-30)	SW846 8270C
2-Chloronaphthalene	74	(34 - 110)			SW846 8270C
	69	(34 - 110)	7.7	(0-30)	SW846 8270C
2-Chlorophenol	**67**	**(26 - 110)**			**SW846 8270C**
	59	**(26 - 110)**	**13**	**(0-30)**	**SW846 8270C**
Aniline	0.0 a	(10 - 130)			SW846 8270C
	0.0 a	(10 - 130)	0.0	(0-30)	SW846 8270C
Benzyl alcohol	55	(10 - 130)			SW846 8270C
	48	(10 - 130)	14	(0-30)	SW846 8270C
4-Chlorophenyl phenyl ether	81	(43 - 113)			SW846 8270C
	76	(43 - 113)	7.4	(0-30)	SW846 8270C
N-Nitrosodimethylamine	40	(10 - 130)			SW846 8270C
	39	(10 - 130)	3.8	(0-30)	SW846 8270C
1-Methylnaphthalene	73	(10 - 130)			SW846 8270C
	67	(10 - 130)	9.7	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KED5A1FE-MS **Matrix.....:** WG
MS Lot-Sample #: A7L180274-001 KED5A1FF-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dinitrobenzene	79	(10 - 130)			SW846 8270C
	77	(10 - 130)	3.4	(0-30)	SW846 8270C
2,3,5,6-Tetrachlorophenol	60	(10 - 130)			SW846 8270C
	59	(10 - 130)	2.2	(0-30)	SW846 8270C
Chrysene	80	(52 - 111)			SW846 8270C
	71	(52 - 111)	12	(0-30)	SW846 8270C
Dibenz(a,h)anthracene	77	(35 - 118)			SW846 8270C
	72	(35 - 118)	7.1	(0-30)	SW846 8270C
Dibenzofuran	77	(41 - 110)			SW846 8270C
	72	(41 - 110)	7.4	(0-30)	SW846 8270C
Di-n-butyl phthalate	94	(50 - 117)			SW846 8270C
	86	(50 - 117)	9.2	(0-30)	SW846 8270C
3,3'-Dichlorobenzidine	68	(10 - 110)			SW846 8270C
	65	(10 - 110)	3.8	(0-30)	SW846 8270C
2,4-Dichlorophenol	71	(30 - 110)			SW846 8270C
	65	(30 - 110)	8.5	(0-30)	SW846 8270C
Diethyl phthalate	84	(33 - 130)			SW846 8270C
	79	(33 - 130)	6.5	(0-30)	SW846 8270C
2,4-Dimethylphenol	65	(11 - 110)			SW846 8270C
	60	(11 - 110)	9.0	(0-30)	SW846 8270C
Dimethyl phthalate	81	(36 - 124)			SW846 8270C
	76	(36 - 124)	5.3	(0-30)	SW846 8270C
4,6-Dinitro-2-methylphenol	50	(25 - 110)			SW846 8270C
	51	(25 - 110)	1.9	(0-30)	SW846 8270C
2,4-Dinitrophenol	35	(11 - 119)			SW846 8270C
	38	(11 - 119)	6.4	(0-30)	SW846 8270C
2,4-Dinitrotoluene	**83**	**(46 - 119)**			**SW846 8270C**
	80	**(46 - 119)**	**4.6**	**(0-30)**	**SW846 8270C**
2,6-Dinitrotoluene	80	(48 - 115)			SW846 8270C
	77	(48 - 115)	3.8	(0-30)	SW846 8270C
Di-n-octyl phthalate	86	(36 - 124)			SW846 8270C
	79	(36 - 124)	7.8	(0-30)	SW846 8270C
Fluoranthene	87	(53 - 111)			SW846 8270C
	80	(53 - 111)	8.0	(0-30)	SW846 8270C
Fluorene	79	(43 - 110)			SW846 8270C
	73	(43 - 110)	7.9	(0-30)	SW846 8270C
Hexachlorobenzene	75	(40 - 113)			SW846 8270C
	68	(40 - 113)	8.8	(0-30)	SW846 8270C
Hexachlorobutadiene	77	(14 - 110)			SW846 8270C
	66	(14 - 110)	15	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KED5A1FE-MS **Matrix.....:** WG
MS Lot-Sample #: A7L180274-001 KED5A1FF-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Hexachlorocyclopenta-diene	64	(10 - 110)			SW846 8270C
	60	(10 - 110)	6.3	(0-30)	SW846 8270C
Hexachloroethane	74	(10 - 110)			SW846 8270C
	63	(10 - 110)	15	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	77	(36 - 116)			SW846 8270C
	72	(36 - 116)	7.5	(0-30)	SW846 8270C
Isophorone	83	(34 - 125)			SW846 8270C
	77	(34 - 125)	8.2	(0-30)	SW846 8270C
2-Methylnaphthalene	84	(35 - 110)			SW846 8270C
	75	(35 - 110)	11	(0-30)	SW846 8270C
2-Methylphenol	68	(26 - 110)			SW846 8270C
	59	(26 - 110)	14	(0-30)	SW846 8270C
4-Methylphenol	65	(25 - 110)			SW846 8270C
	58	(25 - 110)	12	(0-30)	SW846 8270C
Naphthalene	76	(32 - 110)			SW846 8270C
	67	(32 - 110)	12	(0-30)	SW846 8270C
2-Nitroaniline	80	(31 - 129)			SW846 8270C
	76	(31 - 129)	5.2	(0-30)	SW846 8270C
3-Nitroaniline	77	(23 - 112)			SW846 8270C
	70	(23 - 112)	9.1	(0-30)	SW846 8270C
4-Nitroaniline	85	(26 - 115)			SW846 8270C
	83	(26 - 115)	2.6	(0-30)	SW846 8270C
Nitrobenzene	75	(26 - 118)			SW846 8270C
	68	(26 - 118)	10	(0-30)	SW846 8270C
2-Nitrophenol	72	(30 - 110)			SW846 8270C
	66	(30 - 110)	7.7	(0-30)	SW846 8270C
4-Nitrophenol	**46**	**(13 - 127)**			**SW846 8270C**
	42	**(13 - 127)**	**8.2**	**(0-30)**	**SW846 8270C**
N-Nitrosodiphenylamine	79	(28 - 118)			SW846 8270C
	75	(28 - 118)	5.4	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**76**	**(25 - 119)**			**SW846 8270C**
	70	**(25 - 119)**	**7.4**	**(0-30)**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	77	(13 - 124)			SW846 8270C
	70	(13 - 124)	9.2	(0-30)	SW846 8270C
Pentachlorophenol	**47**	**(23 - 110)**			**SW846 8270C**
	45	**(23 - 110)**	**5.0**	**(0-30)**	**SW846 8270C**

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KED5A1FE-MS **Matrix.....:** WG
MS Lot-Sample #: A7L180274-001 KED5A1FF-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Phenanthrene	78	(47 - 110)			SW846 8270C
	72	(47 - 110)	8.7	(0-30)	SW846 8270C
Phenol	**42**	**(16 - 110)**			**SW846 8270C**
	38	**(16 - 110)**	**9.3**	**(0-30)**	**SW846 8270C**
Pyrene	**82**	**(54 - 115)**			**SW846 8270C**
	75	**(54 - 115)**	**8.8**	**(0-30)**	**SW846 8270C**
2,4,5-Trichloro-phenol	74	(36 - 110)			SW846 8270C
	70	(36 - 110)	5.8	(0-30)	SW846 8270C
2,4,6-Trichloro-phenol	66	(34 - 110)			SW846 8270C
	63	(34 - 110)	4.2	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	72	(27 - 111)
	66	(27 - 111)
2-Fluorobiphenyl	70	(28 - 110)
	64	(28 - 110)
Terphenyl-d14	88	(37 - 119)
	82	(37 - 119)
Phenol-d5	40	(10 - 110)
	36	(10 - 110)
2-Fluorophenol	54	(10 - 110)
	49	(10 - 110)
2,4,6-Tribromophenol	67	(22 - 120)
	64	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A7L180274 **Work Order #...:** KED5A1FG-MS **Matrix.....:** WG
MS Lot-Sample #: A7L180274-001 KED5A1FH-MSD
Date Sampled...: 12/17/07 10:25 **Date Received..:** 12/18/07
Prep Date.....: 12/19/07 **Analysis Date..:** 12/21/07
Prep Batch #...: 7353055
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
PCB-1016	**87**	**(10 - 166)**			**SW846 8082**
	98	**(10 - 166)**	**12**	**(0-30)**	**SW846 8082**
PCB-1260	**64**	**(21 - 140)**			**SW846 8082**
	70	**(21 - 140)**	**8.2**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(27 - 130)
	85	(27 - 130)
Decachlorobiphenyl	58	(10 - 127)
	64	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7L180274 **Matrix.....:** WG
Date Sampled...: 12/17/07 10:25 **Date Received..:** 12/18/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7L180274-001 **Prep Batch #...:** 7353019							
Arsenic	100	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1AQ
	100	(75 - 125)	0.23	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1AR
		Dilution Factor: 1					
Barium	104	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1A2
	105	(75 - 125)	0.46	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1A3
		Dilution Factor: 1					
Cadmium	99	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1A5
	99	(75 - 125)	0.06	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1A6
		Dilution Factor: 1					
Lead	96	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1AU
	96	(75 - 125)	0.26	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1AV
		Dilution Factor: 1					
Chromium	99	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1A8
	99	(75 - 125)	0.22	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1A9
		Dilution Factor: 1					
Selenium	101	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1AX
	101	(75 - 125)	0.22	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1A0
		Dilution Factor: 1					
Silver	116	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1CC
	118	(75 - 125)	1.4	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1CD
		Dilution Factor: 1					
Mercury	98	(69 - 134)			SW846 7470A	12/19/07	KED5A1AM
	98	(69 - 134)	0.04	(0-20)	SW846 7470A	12/19/07	KED5A1AN
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: A7L180274 **Matrix.....:** WG
Date Sampled...: 12/17/07 10:25 **Date Received..:** 12/18/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7L180274-001 **Prep Batch #...:** 7353019							
Arsenic	101	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1CJ
	101	(75 - 125)	0.19	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1CK
		Dilution Factor: 1					
Barium	105	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1CU
	105	(75 - 125)	0.25	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1CV
		Dilution Factor: 1					
Cadmium	100	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1CX
	99	(75 - 125)	0.98	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1C0
		Dilution Factor: 1					
Lead	98	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1CM
	97	(75 - 125)	0.78	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1CN
		Dilution Factor: 1					
Chromium	98	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1C2
	97	(75 - 125)	0.44	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1C3
		Dilution Factor: 1					
Selenium	102	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1CQ
	102	(75 - 125)	0.18	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1CR
		Dilution Factor: 1					
Silver	116	(75 - 125)			SW846 6010B	12/19-12/20/07	KED5A1C5
	117	(75 - 125)	0.47	(0-20)	SW846 6010B	12/19-12/20/07	KED5A1C6
		Dilution Factor: 1					
Mercury	90	(69 - 134)			SW846 7470A	12/19/07	KED5A1CF
	95	(69 - 134)	5.9	(0-20)	SW846 7470A	12/19/07	KED5A1CG
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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TAL-4142 (0907)

Client: ARCADIS	Project Manager: BRYAN ZINDA	Date: 12/17/07	Chain of Custody Number: 379768
Address: 430 1ST AVE N, SUITE 720	Telephone Number (Area Code)/Fax Number: 612-339-0231 / 612-336-4538	Lab Number:	Page 1 of 1
City: MINNEAPOLIS; State: MN; Zip Code: 55401	Site Contact: REBECCA FORBORT	Lab Contact: Denise Pohl	
Project Name and Location (State): FORD TWIN CITIES PHASE B	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: FORD-TCAP-03/E200575-2			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: VOC (Method 8260)	RCRA Metals	SVOC	PCB	RCRA Metals (Field Filtered)				Temperature				Special Instructions/ Conditions of Receipt
AMW-05B (20071217)	12/17/07	1025		X			4		2	3			3	1	2	2	1								
AMW-05B (20071217) MS	12/17/07	1025		X			4		2	3			3	1	2	2	1								
AMW-05B (20071217) MSD	12/17/07	1025		X			4		2	3			3	1	2	2	1								
AMW-3B (20071217)	12/17/07	1350		X			4		2	3			3	1	2	2	1								
EB-001 (20071217)	12/17/07	1500		X			4		2	3			3	1	2	2	1								
Trip Blank TB-001 (20071217)	12/17/07	—		X						1			1												
Temp Blank	12/17/07	—		X			1														1				

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By	Date: 12/17/07	Time: 1710	1. Received By	Date:	Time:
2. Relinquished By	Date: 12-17	Time:	2. Received By	Date: 18DEC07	Time: 1105
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

TestAmerica Cooler Receipt Form/Narrative — Lot Number: ATL180274

North Canton Facility

Client ARCADIS — Project TWIN CITIES — Quote # _____

Cooler Received on 18 DEC 2007 — Opened on 18 DEC 2007 — By _____ (Signature)

FedEx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ TestAmerica Courier ☐

Stetson ☐ US Cargo ☐ Other _____

TestAmerica Cooler # BACK — Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ — Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity _____
   Were custody seals on the outside of cooler signed and dated? Yes ☐ No ☐ NA ☑
   Were custody seals on the bottles? Yes ☐ No ☑
   If YES, are there any exceptions _____
2. Shipper's packing slip attached to this form? Yes ☑ No ☐
3. Did custody papers accompany the sample(s)? Yes ☑ No ☐ — Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other PLASTIC BAG ICE CARDBOARD
6. Cooler temperature upon receipt BACK °C (see back of form for multiple coolers/temps)

METHOD: IR ☑ Other ☐

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH upon receipt? Yes ☑ No ☐ NA ☐
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a Trip Blank present in the cooler? Yes ☑ No ☐ Were VOAs on the COC? Yes ☑ No ☐

Contacted PM _____ Date _____ by _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #071707-HNO3 - Sulfuric Acid Lot # 092006-H2SO4; Sodium Hydroxide Lot # 122805 -NaOH; Hydrochloric Acid Lot # 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot # 050205-CH3COO2ZN/NaOH*

What time was preserved added to sample(s)? _____

Sample(s) _____ were received with bubble > 6 mm in diameter (Notify PM)

Client ID	pH	Date	Initials
5B	<2 <2 <2 <2 <2 <2 <2 <2	18 DEC 2007	MAE
3B	<2 <2		
EB-001	<2 <2		

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID		pH	Date	Initials
Cooler		**Temp °C**	**Method**	**Coolant**
ORANGE 43		2.6	IR	WET ICE
BLUE		5.2		
GRAY		0.2		

Discrepancies Cont'd

TestAmerica
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END OF REPORT

January 09, 2008

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000591.0001.0001
Laboratory: TestAmerica - North Canton
Laboratory submittal: A7L210396
Sample date: 2007-12-20 2007-12-18 2007-12-19
Report received by Enovis: 2008-01-08
Initial Data Verification completed by Enovis: 2008-01-09

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

The following minor QC exceptions or missing information were noted:

GCMS VOC LCS/LCSD for 4-Methyl-2-pentanone and cis-1,3-Dichloropropene recovered low outside of the labs acceptance window in QC batch 7365086. The associated results for sample A7L210396-009 were reported non-detect and are flagged UJ and should be considered estimated.

GCMS VOC LCS for Methylene chloride recovered slightly high outside of the labs acceptance window in QC batch 7365086. The LCSD recovered in control. No qualification required.

GCMS VOC LCS for Naphthalene and Dichlorodifluoromethane recovered low outside of the labs acceptance window in QC batch 7365086. The LCS recovered in control. No qualification required.

GCMS VOC LCS/LCSD for Methylene chloride recovered high outside of the labs acceptance window in QC batch 7361138. The associated sample results were all reported non-detect. No qualification required.

GCMS VOC LC/LCSD for 4-Methyl-2-pentanone and Naphthalene recovered low outside of the labs acceptance window in QC batch 7361138. The associated results A7L210396-001, 2,3,4,5,6 and 7 were reported non-detect and are flagged UJ and should be considered estimated.

GCMS VOC LCS for 1,2,4-Trichlorobenzene recovered slightly low outside of the labs acceptance window in QC batch 7361138. The LCSD recovered in control. No qualification required.

GCMS VOC Method blank for Hexachlorobutadiene in QC batch 7365086. The associated sample results was reported non-detect. No qualification required.

GCMS VOC Trip blanks TB-003, 4 and 5 reported concentrations of Acetone between the MDL and the RDL. All associated field sample results were reported non-detect. No qualification required.

Total and Dissolved Metals Method blank for Barium was reported between the MDL and the RDL in QC batch 7358139. The associated sample results were all reported between the MDL and the RDL and greater than 10x the method blank concentration except for A7L210396-001 Total Barium which was reported above the RDL. Qualification for the method blank is not required. Results reported between the MDL and thr RDL are flagged J.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://63.106.80.11/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Tim Abston

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JB	The analyte / compound was detected in the associated blank between the MDL and the laboratory`s reporting detection limit. For Inorganic methods the sample concentration was < 10x the blank concentration and is considered estimated. For Organic methods the sample concentration was < 5x or 10x for common laboratory contaminates, the blank concentration and is considered estimated.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

FORD TWIN CITIES E200572

Lot #: A7L210396

Rebecca Forbort

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TESTAMERICA LABORATORIES, INC.

Denise Pohl
Project Manager

January 7, 2008

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CASE NARRATIVE

A7L210396

The following report contains the analytical results for six water samples and three quality control samples submitted to TestAmerica North Canton by ARCADIS Geraghty & Miller, Inc. from the Ford Twin Cities E200572 Site. The samples were received December 21, 2007, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

Any reference within this document to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.)

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 107.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 1.9, 2.0, 2.3, and 2.7°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for batch(es) 7361138 and 7365086 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate data for batch(es) 7360023 are not included in this report. The batch QC samples, which document the effect of a specific sample matrix on method performance, were not associated with a sample reported in this lot. The data, therefore, has no bearing on the samples reported herein. In order to document compliance with the QC requirement for an MS/MSD per 20 environmental samples, a summary of sample/QC associations has been provided following this case narrative.

POLYCHLORINATED BIPHENYLS-8082

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 7356025. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

CASE NARRATIVE (continued)

METALS (continued)

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

TESTAMERICA LABORATORIES, INC.

MS RUN NUMBER REVIEW

Lot ID	Smp#	Work Order	Batch	MS Run#	SDG	Prep Date	Method
A7L210275	005	KENJ91AC	7360022	7360007		12/26/07	SW846 8270C
A7L210275	006	KENKG1AC	7360022	7360007		12/26/07	SW846 8270C
A7L210275	007	KENKJ1AC	7360022	7360007		12/26/07	SW846 8270C
A7L210299	025	KENWR1AC	7360022	7360007	7L21229	12/26/07	SW846 8270C
A7L210299	026	KENWW1AD	7360022	7360007	7L21229	12/26/07	SW846 8270C
A7L220140	001	KEP751AA	7360022	7360007		12/26/07	SW846 8270C
A7L220140	002	KEP771AA	7360022	7360007		12/26/07	SW846 8270C
A7L220140	003	KEP781AA	7360022	7360007		12/26/07	SW846 8270C
A7L220140	003	KEP781AD D	7360022	7360007		12/26/07	SW846 8270C
A7L220140	003	KEP781AC S	7360022	7360007		12/26/07	SW846 8270C
A7L220140	004	KEP8Q1AA	7360022	7360007		12/26/07	SW846 8270C
A7L220140	005	KEP8R1AA	7360022	7360007		12/26/07	SW846 8270C
A7L210392	001	KEPF01AC	7360023	7360007	7L21392	12/26/07	SW846 8270C
A7L210396	001	KEPGX1AC	7360023	7360007		12/26/07	SW846 8270C
A7L210396	002	KEPG11AC	7360023	7360007		12/26/07	SW846 8270C
A7L210396	004	KEPG31AC	7360023	7360007		12/26/07	SW846 8270C
A7L210396	005	KEPG51AC	7360023	7360007		12/26/07	SW846 8270C
A7L210396	008	KEPHD1AC	7360023	7360007		12/26/07	SW846 8270C
A7L220136	001	KEP7F1AC	7360023	7360007		12/26/07	SW846 8270C
A7L220136	002	KEP7J1AC	7360023	7360007		12/26/07	SW846 8270C
A7L220136	003	KEP7K1AC	7360023	7360007		12/26/07	SW846 8270C
A7L220136	004	KEP7L1AC	7360023	7360007		12/26/07	SW846 8270C

EXECUTIVE SUMMARY - Detection Highlights

A7L210396

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
AMW-08(20071220) 12/20/07 11:25 001				
Barium - DISSOLVED	152 B,J	200	ug/L	SW846 6010B
Arsenic	6.1 B	10.0	ug/L	SW846 6010B
Lead	4.0	3.0	ug/L	SW846 6010B
Barium	380 J	200	ug/L	SW846 6010B
Chromium	43.3	10.0	ug/L	SW846 6010B
Carbon disulfide	0.41 J	1.0	ug/L	SW846 8260B
AMW-07(20071220) 12/20/07 07:40 002				
Barium - DISSOLVED	49.4 B,J	200	ug/L	SW846 6010B
Cadmium - DISSOLVED	1.3 B	5.0	ug/L	SW846 6010B
Arsenic	4.9 B	10.0	ug/L	SW846 6010B
Lead	6.4	3.0	ug/L	SW846 6010B
Barium	84.7 B,J	200	ug/L	SW846 6010B
Cadmium	1.1 B	5.0	ug/L	SW846 6010B
Chromium	26.8	10.0	ug/L	SW846 6010B
Trichloroethene	2.7	1.0	ug/L	SW846 8260B
TB-003(20071220) 12/20/07 003				
Acetone	4.3 J	10	ug/L	SW846 8260B
AMW-3A(20071218) 12/18/07 09:05 004				
Barium - DISSOLVED	170 B,J	200	ug/L	SW846 6010B
Barium	182 B,J	200	ug/L	SW846 6010B
Chromium	3.5 B	10.0	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	0.97 J	10	ug/L	SW846 8270C
cis-1,2-Dichloroethene	0.57 J	1.0	ug/L	SW846 8260B
DUP001(20071218) 12/18/07 005				
Barium - DISSOLVED	177 B,J	200	ug/L	SW846 6010B
Barium	184 B,J	200	ug/L	SW846 6010B
Chromium	3.1 B	10.0	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	1.7 J	10	ug/L	SW846 8270C
cis-1,2-Dichloroethene	0.55 J	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A7L210396

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
TRIPBLANK-TB-004(20071218) 12/18/07 006				
Acetone	5.0 J	10	ug/L	SW846 8260B
MW-4(20071219) 12/19/07 13:10 007				
Barium - DISSOLVED	107 B,J	200	ug/L	SW846 6010B
Lead	2.7 B	3.0	ug/L	SW846 6010B
Barium	142 B,J	200	ug/L	SW846 6010B
Chromium	79.6	10.0	ug/L	SW846 6010B
AMW-4(20071219) 12/19/07 13:36 008				
Barium - DISSOLVED	118 B,J	200	ug/L	SW846 6010B
Lead	2.7 B	3.0	ug/L	SW846 6010B
Barium	136 B,J	200	ug/L	SW846 6010B
Chromium	15.3	10.0	ug/L	SW846 6010B
TRIPBLANK-TB-005(20071220) 12/20/07 009				
Acetone	3.9 J	10	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A7L210396

PARAMETER	ANALYTICAL METHOD
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
PCBs by SW-846 8082	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A7L210396

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KEPGX	001	AMW-08(20071220)	12/20/07	11:25
KEPG1	002	AMW-07(20071220)	12/20/07	07:40
KEPG2	003	TB-003(20071220)	12/20/07	
KEPG3	004	AMW-3A(20071218)	12/18/07	09:05
KEPG5	005	DUP001(20071218)	12/18/07	
KEPG6	006	TRIPBLANK-TB-004(20071218)	12/18/07	
KEPG8	007	MW-4(20071219)	12/19/07	13:10
KEPHD	008	AMW-4(20071219)	12/19/07	13:36
KEPHH	009	TRIPBLANK-TB-005(20071220)	12/20/07	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20071220)

GC/MS Volatiles

Lot-Sample #...: A7L210396-001 **Work Order #...:** KEPGX1AA **Matrix.....:** WG
Date Sampled...: 12/20/07 11:25 **Date Received..:** 12/21/07
Prep Date.....: 12/27/07 **Analysis Date..:** 12/27/07
Prep Batch #...: 7361138
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	**0.41 J**	**1.0**	**ug/L**	**0.13**
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20071220)

GC/MS Volatiles

Lot-Sample #...: A7L210396-001 **Work Order #...:** KEPGX1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20071220)

GC/MS Volatiles

Lot-Sample #...: A7L210396-001 **Work Order #...:** KEPGX1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20071220)

GC/MS Semivolatiles

Lot-Sample #...: A7L210396-001 **Work Order #...:** KEPGX1AC **Matrix.....:** WG
Date Sampled...: 12/20/07 11:25 **Date Received..:** 12/21/07
Prep Date.....: 12/26/07 **Analysis Date..:** 12/29/07
Prep Batch #...: 7360023
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20071220)

GC/MS Semivolatiles

Lot-Sample #...: A7L210396-001 **Work Order #...:** KEPGX1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	77	(27 - 111)
2-Fluorobiphenyl	70	(28 - 110)
Terphenyl-d14	81	(37 - 119)
Phenol-d5	69	(10 - 110)
2-Fluorophenol	68	(10 - 110)
2,4,6-Tribromophenol	94	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20071220)

GC Semivolatiles

Lot-Sample #...: A7L210396-001 **Work Order #...:** KEPGX1AD **Matrix.....:** WG
Date Sampled...: 12/20/07 11:25 **Date Received..:** 12/21/07
Prep Date.....: 12/22/07 **Analysis Date..:** 12/28/07
Prep Batch #...: 7356025
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	100	(27 - 130)
Decachlorobiphenyl	22	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20071220)

TOTAL Metals

Lot-Sample #...: A7L210396-001 **Matrix.....:** WG
Date Sampled...: 12/20/07 11:25 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	**6.1 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPGX1AF**
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**380 J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPGX1AJ**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPGX1AK
		Dilution Factor: 1		MDL.....: 0.66		
Lead	**4.0**	**3.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPGX1AG**
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	**43.3**	**10.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPGX1AL**
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPGX1AH
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPGX1AM
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPGX1AE
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20071220)

DISSOLVED Metals

Lot-Sample #...: A7L210396-001 **Matrix.....:** WG
Date Sampled...: 12/20/07 11:25 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPGX1AP
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**152 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPGX1AT**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPGX1AU
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/26-12/27/07	KEPGX1AQ
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPGX1AV
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPGX1AR
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPGX1AW
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPGX1AN
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20071220)

GC/MS Volatiles

Lot-Sample #...: A7L210396-002 **Work Order #...:** KEPG11AA **Matrix.....:** WG
Date Sampled...: 12/20/07 07:40 **Date Received..:** 12/21/07
Prep Date.....: 12/27/07 **Analysis Date..:** 12/27/07
Prep Batch #...: 7361138
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20071220)

GC/MS Volatiles

Lot-Sample #...: A7L210396-002 **Work Order #...:** KEPG11AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	**2.7**	**1.0**	**ug/L**	**0.17**
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20071220)

GC/MS Semivolatiles

Lot-Sample #...: A7L210396-002 **Work Order #...:** KEPG11AC **Matrix.....:** WG
Date Sampled...: 12/20/07 07:40 **Date Received..:** 12/21/07
Prep Date.....: 12/26/07 **Analysis Date..:** 12/29/07
Prep Batch #...: 7360023
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20071220)

GC/MS Semivolatiles

Lot-Sample #...: A7L210396-002 **Work Order #...:** KEPG11AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	77	(27 - 111)
2-Fluorobiphenyl	68	(28 - 110)
Terphenyl-d14	84	(37 - 119)
Phenol-d5	69	(10 - 110)
2-Fluorophenol	69	(10 - 110)
2,4,6-Tribromophenol	85	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20071220)

GC Semivolatiles

Lot-Sample #...: A7L210396-002 **Work Order #...:** KEPG11AD **Matrix.....:** WG
Date Sampled...: 12/20/07 07:40 **Date Received..:** 12/21/07
Prep Date.....: 12/22/07 **Analysis Date..:** 12/28/07
Prep Batch #...: 7356025
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(27 - 130)
Decachlorobiphenyl	44	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20071220)

TOTAL Metals

Lot-Sample #...: A7L210396-002 **Matrix.....:** WG
Date Sampled...: 12/20/07 07:40 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	**4.9 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG11AF**
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**84.7 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG11AJ**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	**1.1 B**	**5.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG11AK**
		Dilution Factor: 1		MDL.....: 0.66		
Lead	**6.4**	**3.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG11AG**
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	**26.8**	**10.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG11AL**
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG11AH
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG11AM
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPG11AE
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20071220)

DISSOLVED Metals

Lot-Sample #...: A7L210396-002 **Matrix.....:** WG
Date Sampled...: 12/20/07 07:40 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG11AP
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**49.4 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG11AT**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	**1.3 B**	**5.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG11AU**
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG11AQ
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG11AV
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG11AR
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG11AW
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPG11AN
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: TB-003(20071220)

GC/MS Volatiles

Lot-Sample #...: A7L210396-003 **Work Order #...:** KEPG21AA **Matrix.....:** WQ
Date Sampled...: 12/20/07 **Date Received..:** 12/21/07
Prep Date.....: 12/27/07 **Analysis Date..:** 12/27/07
Prep Batch #...: 7361138
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**4.3 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: TB-003(20071220)

GC/MS Volatiles

Lot-Sample #...: A7L210396-003 **Work Order #...:** KEPG21AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: TB-003(20071220)

GC/MS Volatiles

Lot-Sample #...: A7L210396-003 **Work Order #...:** KEPG21AA **Matrix.....:** WQ

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-3A(20071218)

GC/MS Volatiles

Lot-Sample #...: A7L210396-004 **Work Order #...:** KEPG31AA **Matrix.....:** WG
Date Sampled...: 12/18/07 09:05 **Date Received..:** 12/21/07
Prep Date.....: 12/27/07 **Analysis Date..:** 12/27/07
Prep Batch #...: 7361138
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	**0.57 J**	**1.0**	**ug/L**	**0.17**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-3A(20071218)

GC/MS Volatiles

Lot-Sample #...: A7L210396-004 **Work Order #...:** KEPG31AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-3A(20071218)

GC/MS Volatiles

Lot-Sample #...: A7L210396-004 **Work Order #...:** KEPG31AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-3A(20071218)

GC/MS Semivolatiles

Lot-Sample #...: A7L210396-004 **Work Order #...:** KEPG31AC **Matrix.....:** WG
Date Sampled...: 12/18/07 09:05 **Date Received..:** 12/21/07
Prep Date.....: 12/26/07 **Analysis Date..:** 12/29/07
Prep Batch #...: 7360023
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	**0.97 J**	**10**	**ug/L**	**0.88**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-3A(20071218)

GC/MS Semivolatiles

Lot-Sample #...: A7L210396-004 **Work Order #...:** KEPG31AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	73	(27 - 111)
2-Fluorobiphenyl	65	(28 - 110)
Terphenyl-d14	85	(37 - 119)
Phenol-d5	64	(10 - 110)
2-Fluorophenol	65	(10 - 110)
2,4,6-Tribromophenol	84	(22 - 120)

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-3A(20071218)

GC Semivolatiles

Lot-Sample #...: A7L210396-004 **Work Order #...:** KEPG31AD **Matrix.....:** WG
Date Sampled...: 12/18/07 09:05 **Date Received..:** 12/21/07
Prep Date.....: 12/22/07 **Analysis Date..:** 12/30/07
Prep Batch #...: 7356025
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(27 - 130)
Decachlorobiphenyl	65	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-3A(20071218)

TOTAL Metals

Lot-Sample #...: A7L210396-004 **Matrix.....:** WG
Date Sampled...: 12/18/07 09:05 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG31AF
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**182 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG31AJ**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG31AK
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG31AG
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	**3.5 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG31AL**
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG31AH
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG31AM
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPG31AE
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-3A(20071218)

DISSOLVED Metals

Lot-Sample #...: A7L210396-004 **Matrix.....:** WG
Date Sampled...: 12/18/07 09:05 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG31AP
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**170 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG31AT**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG31AU
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG31AQ
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG31AV
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG31AR
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG31AW
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPG31AN
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: DUP001(20071218)

GC/MS Volatiles

Lot-Sample #...: A7L210396-005 **Work Order #...:** KEPG51AA **Matrix.....:** WG
Date Sampled...: 12/18/07 **Date Received..:** 12/21/07
Prep Date.....: 12/27/07 **Analysis Date..:** 12/27/07
Prep Batch #...: 7361138
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	**0.55 J**	**1.0**	**ug/L**	**0.17**
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: DUP001(20071218)

GC/MS Volatiles

Lot-Sample #...: A7L210396-005 **Work Order #...:** KEPG51AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: DUP001(20071218)

GC/MS Volatiles

Lot-Sample #...: A7L210396-005 **Work Order #...:** KEPG51AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: DUP001(20071218)

GC/MS Semivolatiles

Lot-Sample #...: A7L210396-005 **Work Order #...:** KEPG51AC **Matrix.....:** WG
Date Sampled...: 12/18/07 **Date Received..:** 12/21/07
Prep Date.....: 12/26/07 **Analysis Date..:** 12/29/07
Prep Batch #...: 7360023
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	**1.7 J**	**10**	**ug/L**	**0.88**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: DUP001(20071218)

GC/MS Semivolatiles

Lot-Sample #...: A7L210396-005 **Work Order #...:** KEPG51AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	78	(27 - 111)
2-Fluorobiphenyl	69	(28 - 110)
Terphenyl-d14	83	(37 - 119)
Phenol-d5	67	(10 - 110)
2-Fluorophenol	69	(10 - 110)
2,4,6-Tribromophenol	94	(22 - 120)

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: DUP001(20071218)

GC Semivolatiles

Lot-Sample #...: A7L210396-005 **Work Order #...:** KEPG51AD **Matrix.....:** WG
Date Sampled...: 12/18/07 **Date Received..:** 12/21/07
Prep Date.....: 12/22/07 **Analysis Date..:** 12/30/07
Prep Batch #...: 7356025
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	107	(27 - 130)
Decachlorobiphenyl	70	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: DUP001(20071218)

TOTAL Metals

Lot-Sample #...: A7L210396-005 **Matrix.....:** WG
Date Sampled...: 12/18/07 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG51AF
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**184 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG51AJ**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG51AK
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG51AG
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	**3.1 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG51AL**
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG51AH
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG51AM
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPG51AE
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: DUP001(20071218)

DISSOLVED Metals

Lot-Sample #...: A7L210396-005 **Matrix.....:** WG
Date Sampled...: 12/18/07 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG51AP
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**177 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG51AT**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG51AU
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG51AQ
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG51AV
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG51AR
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG51AW
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPG51AN
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: TRIPBLANK-TB-004(20071218)

GC/MS Volatiles

Lot-Sample #...: A7L210396-006 **Work Order #...:** KEPG61AA **Matrix.....:** WQ
Date Sampled...: 12/18/07 **Date Received..:** 12/21/07
Prep Date.....: 12/27/07 **Analysis Date..:** 12/27/07
Prep Batch #...: 7361138
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**5.0 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: TRIPBLANK-TB-004(20071218)

GC/MS Volatiles

Lot-Sample #...: A7L210396-006 **Work Order #...:** KEPG61AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: TRIPBLANK-TB-004(20071218)

GC/MS Volatiles

Lot-Sample #...: A7L210396-006 **Work Order #...:** KEPG61AA **Matrix.....:** WQ

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: MW-4(20071219)

GC/MS Volatiles

Lot-Sample #...: A7L210396-007 **Work Order #...:** KEPG81AA **Matrix.....:** WG
Date Sampled...: 12/19/07 13:10 **Date Received..:** 12/21/07
Prep Date.....: 12/27/07 **Analysis Date..:** 12/27/07
Prep Batch #...: 7361138
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: MW-4(20071219)

GC/MS Volatiles

Lot-Sample #...: A7L210396-007 **Work Order #...:** KEPG81AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

ARCADIS U.S., Inc.

Client Sample ID: MW-4(20071219)

TOTAL Metals

Lot-Sample #...: A7L210396-007 **Matrix.....:** WG
Date Sampled...: 12/19/07 13:10 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG81AD
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**142 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG81AG**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG81AH
		Dilution Factor: 1		MDL.....: 0.66		
Lead	**2.7 B**	**3.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG81AE**
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	**79.6**	**10.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG81AJ**
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG81AF
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG81AK
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPG81AC
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: MW-4(20071219)

DISSOLVED Metals

Lot-Sample #...: A7L210396-007 **Matrix.....:** WG
Date Sampled...: 12/19/07 13:10 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG81AM
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**107 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPG81AQ**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG81AR
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG81AN
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG81AT
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG81AP
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPG81AU
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPG81AL
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-4(20071219)

GC/MS Volatiles

Lot-Sample #...: A7L210396-008 **Work Order #...:** KEPHD1AA **Matrix.....:** WG
Date Sampled...: 12/19/07 13:36 **Date Received..:** 12/21/07
Prep Date.....: 12/27/07 **Analysis Date..:** 12/27/07
Prep Batch #...: 7361138
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-4(20071219)

GC/MS Volatiles

Lot-Sample #...: A7L210396-008 **Work Order #...:** KEPHD1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

ARCADIS U.S., Inc.

Client Sample ID: AMW-4(20071219)

GC/MS Semivolatiles

Lot-Sample #...: A7L210396-008 **Work Order #...:** KEPHD1AC **Matrix.....:** WG
Date Sampled...: 12/19/07 13:36 **Date Received..:** 12/21/07
Prep Date.....: 12/26/07 **Analysis Date..:** 12/29/07
Prep Batch #...: 7360023
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-4(20071219)

GC/MS Semivolatiles

Lot-Sample #...: A7L210396-008 **Work Order #...:** KEPHD1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	72	(27 - 111)
2-Fluorobiphenyl	63	(28 - 110)
Terphenyl-d14	85	(37 - 119)
Phenol-d5	63	(10 - 110)
2-Fluorophenol	62	(10 - 110)
2,4,6-Tribromophenol	90	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: AMW-4(20071219)

GC Semivolatiles

Lot-Sample #...: A7L210396-008 **Work Order #...:** KEPHD1AD **Matrix.....:** WG
Date Sampled...: 12/19/07 13:36 **Date Received..:** 12/21/07
Prep Date.....: 12/22/07 **Analysis Date..:** 12/30/07
Prep Batch #...: 7356025
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	118	(27 - 130)
Decachlorobiphenyl	36	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-4(20071219)

TOTAL Metals

Lot-Sample #...: A7L210396-008 **Matrix.....:** WG
Date Sampled...: 12/19/07 13:36 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPHD1AF
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**136 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPHD1AJ**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPHD1AK
		Dilution Factor: 1		MDL.....: 0.66		
Lead	**2.7 B**	**3.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPHD1AG**
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	**15.3**	**10.0**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPHD1AL**
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPHD1AH
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPHD1AM
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPHD1AE
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-4(20071219)

DISSOLVED Metals

Lot-Sample #...: A7L210396-008 **Matrix.....:** WG
Date Sampled...: 12/19/07 13:36 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPHD1AP
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**118 B,J**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEPHD1AT**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPHD1AU
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	12/26-12/27/07	KEPHD1AQ
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPHD1AV
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEPHD1AR
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEPHD1AW
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEPHD1AN
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: TRIPBLANK-TB-005(20071220)

GC/MS Volatiles

Lot-Sample #...: A7L210396-009 **Work Order #...:** KEPHH1AA **Matrix.....:** WQ
Date Sampled...: 12/20/07 **Date Received..:** 12/21/07
Prep Date.....: 12/28/07 **Analysis Date..:** 12/28/07
Prep Batch #...: 7365086
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.9 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: TRIPBLANK-TB-005(20071220)

GC/MS Volatiles

Lot-Sample #...: A7L210396-009 **Work Order #...:** KEPHH1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: TRIPBLANK-TB-005(20071220)

GC/MS Volatiles

Lot-Sample #...: A7L210396-009 **Work Order #...:** KEPHH1AA **Matrix.....:** WQ

NOTE(S):

J Estimated result. Result is less than RL.

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KETRV1AA **Matrix.....:** WATER
MB Lot-Sample #: A7L270000-138

Prep Date.....: 12/26/07
Analysis Date..: 12/26/07 **Prep Batch #...:** 7361138
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KETRV1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	84	(74 - 116)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KETRV1AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEX7X1AA **Matrix.....:** WATER
MB Lot-Sample #: A7L310000-086
Prep Date.....: 12/28/07
Analysis Date..: 12/28/07 **Prep Batch #...:** 7365086
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEX7X1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	**0.36 J**	**1.0**	**ug/L**	**SW846 8260B**
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	84	(74 - 116)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEX7X1AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A7L210396 **Work Order #...:** KERH41AA **Matrix.....:** WATER
MB Lot-Sample #: A7L260000-023

Prep Date.....: 12/26/07
Analysis Date..: 12/29/07 **Prep Batch #...:** 7360023
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Atrazine	ND	10	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)- ether	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
4,6-Dinitro- 2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A7L210396 **Work Order #...:** KERH41AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	79	(27 - 111)
2-Fluorobiphenyl	69	(28 - 110)
Terphenyl-d14	93	(37 - 119)
Phenol-d5	72	(10 - 110)
2-Fluorophenol	72	(10 - 110)
2,4,6-Tribromophenol	92	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A7L210396 **Work Order #...:** KEPVE1AA **Matrix.....:** WATER
MB Lot-Sample #: A7L220000-025

Prep Date.....: 12/22/07
Analysis Date..: 12/28/07 **Prep Batch #...:** 7356025
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
PCB-1016	ND	0.20	ug/L	SW846 8082
PCB-1221	ND	0.20	ug/L	SW846 8082
PCB-1232	ND	0.20	ug/L	SW846 8082
PCB-1242	ND	0.20	ug/L	SW846 8082
PCB-1248	ND	0.20	ug/L	SW846 8082
PCB-1254	ND	0.20	ug/L	SW846 8082
PCB-1260	ND	0.20	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(27 - 130)
Decachlorobiphenyl	76	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A7L210396 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A7L240000-139 **Prep Batch #...:** 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611AC
		Dilution Factor: 1				
Barium	**1.2 B**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEQ611AF**
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611AG
		Dilution Factor: 1				
Lead	ND	3.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611AD
		Dilution Factor: 1				
Chromium	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611AH
		Dilution Factor: 1				
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611AE
		Dilution Factor: 1				
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611AJ
		Dilution Factor: 1				
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEQ611AA
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: A7L210396 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A7L240000-139 **Prep Batch #...:** 7358139						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611AV
		Dilution Factor: 1				
Barium	**1.2 B**	**200**	**ug/L**	**SW846 6010B**	**12/26-12/27/07**	**KEQ611A0**
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611A1
		Dilution Factor: 1				
Lead	ND	3.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611AW
		Dilution Factor: 1				
Chromium	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611A2
		Dilution Factor: 1				
Selenium	ND	5.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611AX
		Dilution Factor: 1				
Silver	ND	10.0	ug/L	SW846 6010B	12/26-12/27/07	KEQ611A3
		Dilution Factor: 1				
Mercury	ND	0.20	ug/L	SW846 7470A	12/26-12/28/07	KEQ611AU
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KETRV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L270000-138 KETRV1AD-LCSD
Prep Date.....: 12/26/07 **Analysis Date..:** 12/26/07
Prep Batch #...: 7361138
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	93	(22 - 200)			SW846 8260B
	87	(22 - 200)	6.0	(0-95)	SW846 8260B
Benzene	**99**	**(80 - 116)**			**SW846 8260B**
	100	**(80 - 116)**	**0.60**	**(0-20)**	**SW846 8260B**
1,2-Dichloroethene (total)	106	(82 - 116)			SW846 8260B
	106	(82 - 116)	0.68	(0-30)	SW846 8260B
Bromobenzene	87	(70 - 130)			SW846 8260B
	87	(70 - 130)	0.17	(0-30)	SW846 8260B
Bromochloromethane	100	(70 - 130)			SW846 8260B
	102	(70 - 130)	1.3	(0-30)	SW846 8260B
Bromodichloromethane	92	(87 - 130)			SW846 8260B
	93	(87 - 130)	0.32	(0-30)	SW846 8260B
Bromoform	102	(76 - 150)			SW846 8260B
	100	(76 - 150)	1.8	(0-30)	SW846 8260B
Bromomethane	106	(64 - 129)			SW846 8260B
	108	(64 - 129)	1.5	(0-30)	SW846 8260B
Methyl ethyl ketone	72	(28 - 237)			SW846 8260B
	74	(28 - 237)	2.8	(0-65)	SW846 8260B
n-Butylbenzene	82	(70 - 130)			SW846 8260B
	82	(70 - 130)	0.010	(0-30)	SW846 8260B
Xylenes (total)	104	(87 - 116)			SW846 8260B
	102	(87 - 116)	1.8	(0-30)	SW846 8260B
sec-Butylbenzene	84	(70 - 130)			SW846 8260B
	85	(70 - 130)	0.16	(0-30)	SW846 8260B
tert-Butylbenzene	84	(70 - 130)			SW846 8260B
	85	(70 - 130)	0.21	(0-30)	SW846 8260B
Carbon disulfide	118	(73 - 139)			SW846 8260B
	116	(73 - 139)	1.4	(0-30)	SW846 8260B
Carbon tetrachloride	100	(75 - 149)			SW846 8260B
	98	(75 - 149)	2.2	(0-30)	SW846 8260B
Chlorobenzene	**100**	**(76 - 117)**			**SW846 8260B**
	98	**(76 - 117)**	**1.9**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	98	(81 - 138)			SW846 8260B
	97	(81 - 138)	0.69	(0-30)	SW846 8260B
Chloroethane	115	(66 - 126)			SW846 8260B
	117	(66 - 126)	2.0	(0-30)	SW846 8260B
n-Hexane	104	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.64	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KETRV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L270000-138 KETRV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	100	(84 - 128)			SW846 8260B
	100	(84 - 128)	0.62	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	69 a	(70 - 130)			SW846 8260B
	73	(70 - 130)	4.6	(0-30)	SW846 8260B
Acetonitrile	95	(50 - 130)			SW846 8260B
	80	(50 - 130)	17	(0-30)	SW846 8260B
Chloromethane	92	(48 - 123)			SW846 8260B
	93	(48 - 123)	0.89	(0-30)	SW846 8260B
Acrolein	84	(50 - 130)			SW846 8260B
	85	(50 - 130)	0.29	(0-30)	SW846 8260B
Vinyl acetate	109	(70 - 130)			SW846 8260B
	109	(70 - 130)	0.21	(0-30)	SW846 8260B
Acrylonitrile	99	(50 - 130)			SW846 8260B
	100	(50 - 130)	1.3	(0-30)	SW846 8260B
2-Chlorotoluene	87	(70 - 130)			SW846 8260B
	88	(70 - 130)	0.25	(0-30)	SW846 8260B
4-Chlorotoluene	94	(70 - 130)			SW846 8260B
	92	(70 - 130)	1.7	(0-30)	SW846 8260B
Cyclohexane	77	(70 - 130)			SW846 8260B
	79	(70 - 130)	2.4	(0-30)	SW846 8260B
Iodomethane	104	(70 - 130)			SW846 8260B
	101	(70 - 130)	2.7	(0-30)	SW846 8260B
Isopropyl ether	92	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.29	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	74	(70 - 130)			SW846 8260B
	76	(70 - 130)	2.7	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	96	(70 - 130)			SW846 8260B
	94	(70 - 130)	2.1	(0-30)	SW846 8260B
Dibromomethane	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.6	(0-30)	SW846 8260B
1,2-Dichlorobenzene	89	(70 - 130)			SW846 8260B
	87	(70 - 130)	2.3	(0-30)	SW846 8260B
1,3-Dichlorobenzene	90	(70 - 130)			SW846 8260B
	89	(70 - 130)	1.6	(0-30)	SW846 8260B
1,4-Dichlorobenzene	89	(70 - 130)			SW846 8260B
	89	(70 - 130)	0.64	(0-30)	SW846 8260B
Dichlorodifluoromethane	77	(70 - 130)			SW846 8260B
	76	(70 - 130)	0.93	(0-30)	SW846 8260B
1,1-Dichloroethane	107	(86 - 123)			SW846 8260B
	106	(86 - 123)	0.42	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KETRV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L270000-138 KETRV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	94	(79 - 136)			SW846 8260B
	93	(79 - 136)	0.88	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	100	(85 - 113)			SW846 8260B
	100	(85 - 113)	0.21	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	113	(80 - 120)			SW846 8260B
	112	(80 - 120)	1.1	(0-30)	SW846 8260B
1,1-Dichloroethene	**113**	**(63 - 130)**			**SW846 8260B**
	109	**(63 - 130)**	**3.2**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	99	(82 - 115)			SW846 8260B
	98	(82 - 115)	0.65	(0-30)	SW846 8260B
1,3-Dichloropropane	96	(70 - 130)			SW846 8260B
	97	(70 - 130)	0.28	(0-30)	SW846 8260B
2,2-Dichloropropane	90	(70 - 130)			SW846 8260B
	87	(70 - 130)	3.8	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	89	(84 - 130)			SW846 8260B
	90	(84 - 130)	0.97	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	93	(84 - 130)			SW846 8260B
	93	(84 - 130)	0.34	(0-30)	SW846 8260B
1,1-Dichloropropene	94	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.22	(0-30)	SW846 8260B
Ethylbenzene	96	(86 - 116)			SW846 8260B
	94	(86 - 116)	1.3	(0-30)	SW846 8260B
Hexachlorobutadiene	81	(70 - 130)			SW846 8260B
	80	(70 - 130)	1.3	(0-30)	SW846 8260B
2-Hexanone	75	(35 - 200)			SW846 8260B
	74	(35 - 200)	0.84	(0-52)	SW846 8260B
Isopropylbenzene	113	(70 - 130)			SW846 8260B
	112	(70 - 130)	0.92	(0-30)	SW846 8260B
p-Isopropyltoluene	90	(70 - 130)			SW846 8260B
	89	(70 - 130)	0.61	(0-30)	SW846 8260B
Methyl acetate	98	(70 - 130)			SW846 8260B
	100	(70 - 130)	2.0	(0-30)	SW846 8260B
Methylcyclohexane	77	(70 - 130)			SW846 8260B
	78	(70 - 130)	1.6	(0-30)	SW846 8260B
Methylene chloride	125 a	(78 - 118)			SW846 8260B
	124 a	(78 - 118)	0.77	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	68 a	(78 - 141)			SW846 8260B
	68 a	(78 - 141)	0.20	(0-32)	SW846 8260B
Methyl tert-butyl ether (MTBE)	103	(70 - 130)			SW846 8260B
	105	(70 - 130)	2.3	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KETRV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L270000-138 KETRV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	64 a	(70 - 130)			SW846 8260B
	66 a	(70 - 130)	2.1	(0-30)	SW846 8260B
n-Propylbenzene	88	(70 - 130)			SW846 8260B
	88	(70 - 130)	0.060	(0-30)	SW846 8260B
Styrene	109	(85 - 117)			SW846 8260B
	107	(85 - 117)	1.9	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	103	(70 - 130)			SW846 8260B
	101	(70 - 130)	1.9	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	87	(85 - 118)			SW846 8260B
	88	(85 - 118)	1.0	(0-30)	SW846 8260B
Tetrachloroethene	98	(88 - 113)			SW846 8260B
	94	(88 - 113)	4.4	(0-30)	SW846 8260B
Toluene	**106**	**(74 - 119)**			**SW846 8260B**
	104	**(74 - 119)**	**1.9**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	76	(70 - 130)			SW846 8260B
	77	(70 - 130)	0.98	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	69 a	(70 - 130)			SW846 8260B
	70	(70 - 130)	1.6	(0-30)	SW846 8260B
1,1,1-Trichloroethane	97	(78 - 140)			SW846 8260B
	98	(78 - 140)	1.8	(0-30)	SW846 8260B
1,1,2-Trichloroethane	100	(83 - 122)			SW846 8260B
	96	(83 - 122)	4.3	(0-30)	SW846 8260B
Trichloroethene	**93**	**(75 - 122)**			**SW846 8260B**
	92	**(75 - 122)**	**0.96**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	109	(70 - 130)			SW846 8260B
	106	(70 - 130)	3.2	(0-30)	SW846 8260B
1,2,3-Trichloropropane	90	(70 - 130)			SW846 8260B
	92	(70 - 130)	2.4	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	116	(70 - 130)			SW846 8260B
	111	(70 - 130)	4.6	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	90	(70 - 130)			SW846 8260B
	88	(70 - 130)	1.1	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	90	(70 - 130)			SW846 8260B
	89	(70 - 130)	1.3	(0-30)	SW846 8260B
Vinyl chloride	96	(61 - 120)			SW846 8260B
	91	(61 - 120)	5.6	(0-30)	SW846 8260B
m-Xylene & p-Xylene	104	(70 - 130)			SW846 8260B
	101	(70 - 130)	2.5	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KETRV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L270000-138 KETRV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	106	(70 - 130)			SW846 8260B
	105	(70 - 130)	0.27	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
	92	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
	87	(61 - 128)
Toluene-d8	102	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	113	(74 - 116)
	110	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEX7X1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L310000-086 KEX7X1AD-LCSD
Prep Date.....: 12/28/07 **Analysis Date..:** 12/28/07
Prep Batch #...: 7365086
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	72	(22 - 200)			SW846 8260B
	73	(22 - 200)	1.8	(0-95)	SW846 8260B
Benzene	**97**	**(80 - 116)**			**SW846 8260B**
	97	**(80 - 116)**	**0.070**	**(0-20)**	**SW846 8260B**
1,2-Dichloroethene (total)	102	(82 - 116)			SW846 8260B
	104	(82 - 116)	2.5	(0-30)	SW846 8260B
Bromobenzene	92	(70 - 130)			SW846 8260B
	94	(70 - 130)	1.9	(0-30)	SW846 8260B
Bromochloromethane	99	(70 - 130)			SW846 8260B
	98	(70 - 130)	0.77	(0-30)	SW846 8260B
Bromodichloromethane	87	(87 - 130)			SW846 8260B
	88	(87 - 130)	0.90	(0-30)	SW846 8260B
Bromoform	81	(76 - 150)			SW846 8260B
	76	(76 - 150)	7.2	(0-30)	SW846 8260B
Bromomethane	101	(64 - 129)			SW846 8260B
	102	(64 - 129)	1.0	(0-30)	SW846 8260B
Methyl ethyl ketone	67	(28 - 237)			SW846 8260B
	74	(28 - 237)	9.5	(0-65)	SW846 8260B
n-Butylbenzene	87	(70 - 130)			SW846 8260B
	91	(70 - 130)	4.3	(0-30)	SW846 8260B
Xylenes (total)	107	(87 - 116)			SW846 8260B
	110	(87 - 116)	2.9	(0-30)	SW846 8260B
sec-Butylbenzene	89	(70 - 130)			SW846 8260B
	93	(70 - 130)	4.2	(0-30)	SW846 8260B
tert-Butylbenzene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.7	(0-30)	SW846 8260B
Carbon disulfide	107	(73 - 139)			SW846 8260B
	108	(73 - 139)	1.5	(0-30)	SW846 8260B
Carbon tetrachloride	97	(75 - 149)			SW846 8260B
	99	(75 - 149)	1.1	(0-30)	SW846 8260B
Chlorobenzene	**100**	**(76 - 117)**			**SW846 8260B**
	103	**(76 - 117)**	**3.4**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	90	(81 - 138)			SW846 8260B
	90	(81 - 138)	0.38	(0-30)	SW846 8260B
Chloroethane	108	(66 - 126)			SW846 8260B
	112	(66 - 126)	3.6	(0-30)	SW846 8260B
n-Hexane	103	(70 - 130)			SW846 8260B
	116	(70 - 130)	12	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEX7X1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L310000-086 KEX7X1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	95	(84 - 128)			SW846 8260B
	96	(84 - 128)	0.51	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	70	(70 - 130)			SW846 8260B
	73	(70 - 130)	4.1	(0-30)	SW846 8260B
Acetonitrile	82	(50 - 130)			SW846 8260B
	81	(50 - 130)	1.7	(0-30)	SW846 8260B
Chloromethane	85	(48 - 123)			SW846 8260B
	86	(48 - 123)	0.56	(0-30)	SW846 8260B
Acrolein	70	(50 - 130)			SW846 8260B
	71	(50 - 130)	2.3	(0-30)	SW846 8260B
Vinyl acetate	99	(70 - 130)			SW846 8260B
	95	(70 - 130)	3.8	(0-30)	SW846 8260B
Acrylonitrile	93	(50 - 130)			SW846 8260B
	94	(50 - 130)	0.67	(0-30)	SW846 8260B
2-Chlorotoluene	92	(70 - 130)			SW846 8260B
	95	(70 - 130)	2.6	(0-30)	SW846 8260B
4-Chlorotoluene	99	(70 - 130)			SW846 8260B
	99	(70 - 130)	0.24	(0-30)	SW846 8260B
Cyclohexane	75	(70 - 130)			SW846 8260B
	81	(70 - 130)	6.9	(0-30)	SW846 8260B
Iodomethane	90	(70 - 130)			SW846 8260B
	96	(70 - 130)	6.8	(0-30)	SW846 8260B
Isopropyl ether	91	(70 - 130)			SW846 8260B
	88	(70 - 130)	3.0	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	73	(70 - 130)			SW846 8260B
	75	(70 - 130)	2.0	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	95	(70 - 130)			SW846 8260B
	99	(70 - 130)	3.6	(0-30)	SW846 8260B
Dibromomethane	88	(70 - 130)			SW846 8260B
	88	(70 - 130)	0.26	(0-30)	SW846 8260B
1,2-Dichlorobenzene	93	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.86	(0-30)	SW846 8260B
1,3-Dichlorobenzene	96	(70 - 130)			SW846 8260B
	96	(70 - 130)	0.020	(0-30)	SW846 8260B
1,4-Dichlorobenzene	94	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.92	(0-30)	SW846 8260B
Dichlorodifluoromethane	64 a	(70 - 130)			SW846 8260B
	71	(70 - 130)	11	(0-30)	SW846 8260B
1,1-Dichloroethane	101	(86 - 123)			SW846 8260B
	105	(86 - 123)	3.3	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEX7X1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L310000-086 KEX7X1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	90	(79 - 136)			SW846 8260B
	90	(79 - 136)	0.050	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	96	(85 - 113)			SW846 8260B
	97	(85 - 113)	0.91	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	108	(80 - 120)			SW846 8260B
	112	(80 - 120)	3.8	(0-30)	SW846 8260B
1,1-Dichloroethene	**103**	**(63 - 130)**			**SW846 8260B**
	108	**(63 - 130)**	**4.4**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	95	(82 - 115)			SW846 8260B
	95	(82 - 115)	0.050	(0-30)	SW846 8260B
1,3-Dichloropropane	97	(70 - 130)			SW846 8260B
	98	(70 - 130)	0.52	(0-30)	SW846 8260B
2,2-Dichloropropane	89	(70 - 130)			SW846 8260B
	94	(70 - 130)	5.6	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	83 a	(84 - 130)			SW846 8260B
	82 a	(84 - 130)	1.2	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	89	(84 - 130)			SW846 8260B
	90	(84 - 130)	0.52	(0-30)	SW846 8260B
1,1-Dichloropropene	90	(70 - 130)			SW846 8260B
	95	(70 - 130)	4.9	(0-30)	SW846 8260B
Ethylbenzene	101	(86 - 116)			SW846 8260B
	103	(86 - 116)	2.6	(0-30)	SW846 8260B
Hexachlorobutadiene	85	(70 - 130)			SW846 8260B
	93	(70 - 130)	8.5	(0-30)	SW846 8260B
2-Hexanone	75	(35 - 200)			SW846 8260B
	83	(35 - 200)	9.7	(0-52)	SW846 8260B
Isopropylbenzene	117	(70 - 130)			SW846 8260B
	121	(70 - 130)	3.0	(0-30)	SW846 8260B
p-Isopropyltoluene	95	(70 - 130)			SW846 8260B
	99	(70 - 130)	4.2	(0-30)	SW846 8260B
Methyl acetate	102	(70 - 130)			SW846 8260B
	105	(70 - 130)	2.7	(0-30)	SW846 8260B
Methylcyclohexane	78	(70 - 130)			SW846 8260B
	84	(70 - 130)	8.2	(0-30)	SW846 8260B
Methylene chloride	119 a	(78 - 118)			SW846 8260B
	116	(78 - 118)	2.2	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	68 a	(78 - 141)			SW846 8260B
	69 a	(78 - 141)	0.46	(0-32)	SW846 8260B
Methyl tert-butyl ether (MTBE)	103	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.99	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEX7X1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L310000-086 KEX7X1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	67 a	(70 - 130)			SW846 8260B
	70	(70 - 130)	5.4	(0-30)	SW846 8260B
n-Propylbenzene	98	(70 - 130)			SW846 8260B
	98	(70 - 130)	0.33	(0-30)	SW846 8260B
Styrene	112	(85 - 117)			SW846 8260B
	113	(85 - 117)	1.0	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	104	(70 - 130)			SW846 8260B
	105	(70 - 130)	1.4	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	91	(85 - 118)			SW846 8260B
	89	(85 - 118)	2.6	(0-30)	SW846 8260B
Tetrachloroethene	100	(88 - 113)			SW846 8260B
	104	(88 - 113)	3.7	(0-30)	SW846 8260B
Toluene	**108**	**(74 - 119)**			**SW846 8260B**
	112	**(74 - 119)**	**4.0**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	79	(70 - 130)			SW846 8260B
	83	(70 - 130)	4.7	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	74	(70 - 130)			SW846 8260B
	77	(70 - 130)	4.1	(0-30)	SW846 8260B
1,1,1-Trichloroethane	94	(78 - 140)			SW846 8260B
	97	(78 - 140)	2.8	(0-30)	SW846 8260B
1,1,2-Trichloroethane	100	(83 - 122)			SW846 8260B
	102	(83 - 122)	1.9	(0-30)	SW846 8260B
Trichloroethene	**91**	**(75 - 122)**			**SW846 8260B**
	93	**(75 - 122)**	**2.0**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	100	(70 - 130)			SW846 8260B
	107	(70 - 130)	5.9	(0-30)	SW846 8260B
1,2,3-Trichloropropane	100	(70 - 130)			SW846 8260B
	96	(70 - 130)	4.0	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	107	(70 - 130)			SW846 8260B
	116	(70 - 130)	8.0	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	95	(70 - 130)			SW846 8260B
	96	(70 - 130)	0.99	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	95	(70 - 130)			SW846 8260B
	97	(70 - 130)	1.9	(0-30)	SW846 8260B
Vinyl chloride	78	(61 - 120)			SW846 8260B
	86	(61 - 120)	9.0	(0-30)	SW846 8260B
m-Xylene & p-Xylene	107	(70 - 130)			SW846 8260B
	110	(70 - 130)	2.9	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEX7X1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L310000-086 KEX7X1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	108	(70 - 130)			SW846 8260B
	111	(70 - 130)	2.9	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
	91	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
	87	(61 - 128)
Toluene-d8	105	(76 - 110)
	106	(76 - 110)
4-Bromofluorobenzene	109	(74 - 116)
	110	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7L210396 **Work Order #...:** KERH41AC **Matrix.....:** WATER
LCS Lot-Sample#: A7L260000-023
Prep Date.....: 12/26/07 **Analysis Date..:** 12/29/07
Prep Batch #...: 7360023
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2,4-Trichloro-benzene	**64**	**(25 - 110)**	**SW846 8270C**
Acenaphthene	**75**	**(40 - 110)**	**SW846 8270C**
1,4-Dichlorobenzene	**94**	**(19 - 110)**	**SW846 8270C**
Acenaphthylene	77	(43 - 110)	SW846 8270C
Acetophenone	81	(50 - 130)	SW846 8270C
Anthracene	73	(54 - 114)	SW846 8270C
Atrazine	84	(50 - 130)	SW846 8270C
1,2-Dichlorobenzene	63	(23 - 110)	SW846 8270C
1,3-Dichlorobenzene	58	(19 - 110)	SW846 8270C
Benzaldehyde	88	(10 - 130)	SW846 8270C
Benzo(a)anthracene	77	(55 - 115)	SW846 8270C
Benzo(b)fluoranthene	78	(43 - 122)	SW846 8270C
Benzo(k)fluoranthene	76	(43 - 124)	SW846 8270C
Benzo(ghi)perylene	78	(45 - 120)	SW846 8270C
Benzo(a)pyrene	70	(43 - 116)	SW846 8270C
1,1'-Biphenyl	78	(50 - 130)	SW846 8270C
bis(2-Chloroethoxy) methane	78	(39 - 110)	SW846 8270C
bis(2-Chloroethyl)-ether	81	(34 - 113)	SW846 8270C
bis(2-Ethylhexyl) phthalate	82	(36 - 163)	SW846 8270C
4-Bromophenyl phenyl ether	86	(51 - 114)	SW846 8270C
Butyl benzyl phthalate	81	(53 - 126)	SW846 8270C
Caprolactam	72	(50 - 130)	SW846 8270C
Carbazole	82	(53 - 120)	SW846 8270C
4-Chloroaniline	70	(10 - 110)	SW846 8270C
4-Chloro-3-methylphenol	**78**	**(39 - 110)**	**SW846 8270C**
Benzoic acid	15	(10 - 129)	SW846 8270C
1,4-Dioxane	63	(10 - 110)	SW846 8270C
2-Chloronaphthalene	70	(39 - 110)	SW846 8270C
2-Chlorophenol	**75**	**(27 - 110)**	**SW846 8270C**

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7L210396 **Work Order #...:** KERH41AC **Matrix.....:** WATER
LCS Lot-Sample#: A7L260000-023

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aniline	63	(10 - 130)	SW846 8270C
Benzyl alcohol	79	(10 - 130)	SW846 8270C
N-Nitrosodimethylamine	79	(10 - 130)	SW846 8270C
4-Chlorophenyl phenyl ether	86	(50 - 115)	SW846 8270C
1-Methylnaphthalene	68	(10 - 130)	SW846 8270C
1,2-Dinitrobenzene	87	(10 - 130)	SW846 8270C
2,3,5,6-Tetrachlorophenol	77	(10 - 130)	SW846 8270C
Chrysene	75	(55 - 115)	SW846 8270C
Dibenz(a,h)anthracene	83	(46 - 122)	SW846 8270C
Dibenzofuran	78	(46 - 111)	SW846 8270C
Di-n-butyl phthalate	85	(55 - 122)	SW846 8270C
3,3'-Dichlorobenzidine	61	(19 - 110)	SW846 8270C
2,4-Dichlorophenol	73	(33 - 110)	SW846 8270C
Diethyl phthalate	83	(33 - 134)	SW846 8270C
2,4-Dimethylphenol	53	(12 - 110)	SW846 8270C
Dimethyl phthalate	80	(15 - 143)	SW846 8270C
4,6-Dinitro-2-methylphenol	53	(28 - 112)	SW846 8270C
2,4-Dinitrophenol	36	(17 - 112)	SW846 8270C
2,4-Dinitrotoluene	**83**	**(52 - 123)**	**SW846 8270C**
2,6-Dinitrotoluene	83	(52 - 119)	SW846 8270C
Di-n-octyl phthalate	76	(44 - 128)	SW846 8270C
Fluoranthene	85	(54 - 122)	SW846 8270C
Fluorene	74	(47 - 112)	SW846 8270C
Hexachlorobenzene	81	(51 - 112)	SW846 8270C
Hexachlorobutadiene	57	(13 - 110)	SW846 8270C
Hexachlorocyclopenta-diene	15	(10 - 110)	SW846 8270C
Hexachloroethane	57	(12 - 110)	SW846 8270C
Indeno(1,2,3-cd)pyrene	80	(46 - 121)	SW846 8270C
Isophorone	92	(44 - 128)	SW846 8270C
2-Methylnaphthalene	76	(35 - 110)	SW846 8270C
2-Methylphenol	76	(30 - 110)	SW846 8270C
4-Methylphenol	73	(32 - 110)	SW846 8270C
Naphthalene	72	(31 - 110)	SW846 8270C
2-Nitroaniline	92	(43 - 130)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7L210396 **Work Order #...:** KERH41AC **Matrix.....:** WATER
LCS Lot-Sample#: A7L260000-023

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
3-Nitroaniline	83	(45 - 116)	SW846 8270C
4-Nitroaniline	86	(45 - 120)	SW846 8270C
Nitrobenzene	85	(37 - 115)	SW846 8270C
2-Nitrophenol	83	(29 - 110)	SW846 8270C
4-Nitrophenol	**75**	**(12 - 130)**	**SW846 8270C**
N-Nitrosodiphenylamine	74	(53 - 113)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**85**	**(37 - 121)**	**SW846 8270C**
2,2'-oxybis(1-Chloropropa	98	(25 - 128)	SW846 8270C
Pentachlorophenol	**70**	**(26 - 110)**	**SW846 8270C**
Phenanthrene	70	(52 - 114)	SW846 8270C
Phenol	**73**	**(14 - 112)**	**SW846 8270C**
Pyrene	**77**	**(55 - 120)**	**SW846 8270C**
2,4,5-Trichloro-phenol	77	(39 - 110)	SW846 8270C
2,4,6-Trichloro-phenol	79	(35 - 110)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	79	(27 - 111)
2-Fluorobiphenyl	72	(28 - 110)
Terphenyl-d14	90	(37 - 119)
Phenol-d5	72	(10 - 110)
2-Fluorophenol	72	(10 - 110)
2,4,6-Tribromophenol	95	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A7L210396 **Work Order #...:** KEPVE1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7L220000-025 KEPVE1AD-LCSD
Prep Date.....: 12/22/07 **Analysis Date..:** 12/28/07
Prep Batch #...: 7356025
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
PCB-1016	**83**	**(44 - 119)**			**SW846 8082**
	89	**(44 - 119)**	**6.4**	**(0-30)**	**SW846 8082**
PCB-1260	**78**	**(41 - 118)**			**SW846 8082**
	87	**(41 - 118)**	**11**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85	(27 - 130)
	85	(27 - 130)
Decachlorobiphenyl	42	(10 - 127)
	67	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7L210396 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7L240000-139 **Prep Batch #...:** 7358139					
Arsenic	93	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611AL
		Dilution Factor: 1			
Barium	93	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611AP
		Dilution Factor: 1			
Lead	90	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611AM
		Dilution Factor: 1			
Cadmium	90	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611AQ
		Dilution Factor: 1			
Selenium	94	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611AN
		Dilution Factor: 1			
Chromium	86	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611AR
		Dilution Factor: 1			
Silver	99	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611AT
		Dilution Factor: 1			
Mercury	96	(81 - 123)	SW846 7470A	12/26-12/28/07	KEQ611AK
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: A7L210396 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7L240000-139 **Prep Batch #...:** 7358139					
Arsenic	93	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611A5
		Dilution Factor: 1			
Barium	93	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611A8
		Dilution Factor: 1			
Lead	90	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611A6
		Dilution Factor: 1			
Cadmium	90	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611A9
		Dilution Factor: 1			
Selenium	94	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611A7
		Dilution Factor: 1			
Chromium	86	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611CA
		Dilution Factor: 1			
Silver	99	(80 - 120)	SW846 6010B	12/26-12/27/07	KEQ611CC
		Dilution Factor: 1			
Mercury	96	(81 - 123)	SW846 7470A	12/26-12/28/07	KEQ611A4
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEA7D1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: A7L170186-001 KEA7D1AE-MSD
Date Sampled...: 12/17/07 11:15 **Date Received..:** 12/17/07
Prep Date.....: 12/26/07 **Analysis Date..:** 12/26/07
Prep Batch #...: 7361138
Dilution Factor: 8

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	87	(45 - 128)			SW846 8260B
	88	(45 - 128)	1.2	(0-30)	SW846 8260B
Benzene	**102**	**(78 - 118)**			**SW846 8260B**
	101	**(78 - 118)**	**0.43**	**(0-20)**	**SW846 8260B**
Bromobenzene	87	(70 - 130)			SW846 8260B
	88	(70 - 130)	0.80	(0-30)	SW846 8260B
1,2-Dichloroethene (total)	108	(86 - 115)			SW846 8260B
	107	(86 - 115)	0.96	(0-30)	SW846 8260B
Bromochloromethane	103	(70 - 130)			SW846 8260B
	102	(70 - 130)	0.97	(0-30)	SW846 8260B
Bromodichloromethane	95	(80 - 146)			SW846 8260B
	95	(80 - 146)	0.61	(0-30)	SW846 8260B
Bromoform	104	(58 - 176)			SW846 8260B
	107	(58 - 176)	3.0	(0-30)	SW846 8260B
Bromomethane	114	(55 - 145)			SW846 8260B
	108	(55 - 145)	5.1	(0-30)	SW846 8260B
Methyl ethyl ketone	71	(71 - 123)			SW846 8260B
	72	(71 - 123)	0.29	(0-30)	SW846 8260B
n-Butylbenzene	75	(70 - 130)			SW846 8260B
	77	(70 - 130)	3.4	(0-30)	SW846 8260B
sec-Butylbenzene	77	(70 - 130)			SW846 8260B
	80	(70 - 130)	3.2	(0-30)	SW846 8260B
Xylenes (total)	102	(89 - 121)			SW846 8260B
	102	(89 - 121)	0.41	(0-30)	SW846 8260B
tert-Butylbenzene	80	(70 - 130)			SW846 8260B
	83	(70 - 130)	3.6	(0-30)	SW846 8260B
Carbon disulfide	116	(69 - 138)			SW846 8260B
	114	(69 - 138)	1.5	(0-41)	SW846 8260B
Carbon tetrachloride	100	(63 - 176)			SW846 8260B
	98	(63 - 176)	1.8	(0-30)	SW846 8260B
Chlorobenzene	**99**	**(76 - 117)**			**SW846 8260B**
	99	**(76 - 117)**	**0.63**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	100	(71 - 158)			SW846 8260B
	100	(71 - 158)	0.04	(0-30)	SW846 8260B
Chloroethane	117	(59 - 142)			SW846 8260B
	120	(59 - 142)	2.5	(0-30)	SW846 8260B
n-Hexane	86	(70 - 130)			SW846 8260B
	92	(70 - 130)	6.4	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEA7D1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: A7L170186-001 KEA7D1AE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	100	(83 - 141)			SW846 8260B
	100	(83 - 141)	0.45	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acetonitrile	94	(50 - 130)			SW846 8260B
	83	(50 - 130)	13	(0-30)	SW846 8260B
Chloromethane	95	(40 - 137)			SW846 8260B
	95	(40 - 137)	0.50	(0-39)	SW846 8260B
Acrolein	87	(50 - 130)			SW846 8260B
	88	(50 - 130)	1.2	(0-30)	SW846 8260B
Acrylonitrile	101	(50 - 130)			SW846 8260B
	101	(50 - 130)	0.32	(0-30)	SW846 8260B
Vinyl acetate	111	(70 - 130)			SW846 8260B
	110	(70 - 130)	0.52	(0-30)	SW846 8260B
2-Chlorotoluene	84	(70 - 130)			SW846 8260B
	89	(70 - 130)	4.8	(0-30)	SW846 8260B
4-Chlorotoluene	90	(70 - 130)			SW846 8260B
	91	(70 - 130)	1.9	(0-30)	SW846 8260B
Cyclohexane	69 a	(70 - 130)			SW846 8260B
	70	(70 - 130)	1.8	(0-30)	SW846 8260B
Iodomethane	113	(70 - 130)			SW846 8260B
	102	(70 - 130)	9.6	(0-30)	SW846 8260B
Isopropyl ether	90	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.4	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	73	(70 - 130)			SW846 8260B
	78	(70 - 130)	6.0	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	94	(70 - 130)			SW846 8260B
	96	(70 - 130)	2.1	(0-30)	SW846 8260B
Dibromomethane	93	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.48	(0-30)	SW846 8260B
1,2-Dichlorobenzene	55 a	(70 - 130)			SW846 8260B
	52 a	(70 - 130)	0.98	(0-30)	SW846 8260B
1,3-Dichlorobenzene	90	(70 - 130)			SW846 8260B
	87	(70 - 130)	2.0	(0-30)	SW846 8260B
1,4-Dichlorobenzene	74	(70 - 130)			SW846 8260B
	69 a	(70 - 130)	2.1	(0-30)	SW846 8260B
Dichlorodifluoromethane	71	(70 - 130)			SW846 8260B
	69 a	(70 - 130)	3.2	(0-30)	SW846 8260B
1,1-Dichloroethane	107	(88 - 127)			SW846 8260B
	107	(88 - 127)	0.46	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEA7D1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: A7L170186-001 KEA7D1AE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	96	(71 - 160)			SW846 8260B
	96	(71 - 160)	0.08	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	100	(87 - 114)			SW846 8260B
	99	(87 - 114)	1.1	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	113	(85 - 116)			SW846 8260B
	112	(85 - 116)	0.84	(0-30)	SW846 8260B
1,1-Dichloroethene	**111**	**(62 - 130)**			**SW846 8260B**
	108	**(62 - 130)**	**3.1**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	100	(87 - 114)			SW846 8260B
	99	(87 - 114)	1.2	(0-30)	SW846 8260B
1,3-Dichloropropane	98	(70 - 130)			SW846 8260B
	99	(70 - 130)	1.0	(0-30)	SW846 8260B
2,2-Dichloropropane	90	(70 - 130)			SW846 8260B
	87	(70 - 130)	3.9	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	84	(82 - 130)			SW846 8260B
	86	(82 - 130)	2.2	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	94	(73 - 147)			SW846 8260B
	95	(73 - 147)	0.92	(0-30)	SW846 8260B
1,1-Dichloropropene	89	(70 - 130)			SW846 8260B
	90	(70 - 130)	0.92	(0-30)	SW846 8260B
Ethylbenzene	92	(86 - 132)			SW846 8260B
	94	(86 - 132)	1.7	(0-30)	SW846 8260B
Hexachlorobutadiene	70	(70 - 130)			SW846 8260B
	75	(70 - 130)	6.8	(0-30)	SW846 8260B
2-Hexanone	73 a	(81 - 128)			SW846 8260B
	77 a	(81 - 128)	5.6	(0-30)	SW846 8260B
Isopropylbenzene	108	(70 - 130)			SW846 8260B
	110	(70 - 130)	2.2	(0-30)	SW846 8260B
p-Isopropyltoluene	84	(70 - 130)			SW846 8260B
	86	(70 - 130)	2.7	(0-30)	SW846 8260B
Methyl acetate	98	(70 - 130)			SW846 8260B
	99	(70 - 130)	1.6	(0-30)	SW846 8260B
Methylcyclohexane	66 a	(70 - 130)			SW846 8260B
	68 a	(70 - 130)	3.2	(0-30)	SW846 8260B
Methylene chloride	125 a	(82 - 115)			SW846 8260B
	124 a	(82 - 115)	0.40	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	66 a	(82 - 135)			SW846 8260B
	69 a	(82 - 135)	4.1	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	105	(70 - 130)			SW846 8260B
	105	(70 - 130)	0.28	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEA7D1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: A7L170186-001 KEA7D1AE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	63 a	(70 - 130)			SW846 8260B
	67 a	(70 - 130)	7.3	(0-30)	SW846 8260B
n-Propylbenzene	83	(70 - 130)			SW846 8260B
	85	(70 - 130)	3.1	(0-30)	SW846 8260B
Styrene	107	(83 - 120)			SW846 8260B
	108	(83 - 120)	1.0	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	103	(70 - 130)			SW846 8260B
	103	(70 - 130)	0.31	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	87 a	(88 - 116)			SW846 8260B
	89	(88 - 116)	2.2	(0-30)	SW846 8260B
Tetrachloroethene	92	(85 - 121)			SW846 8260B
	92	(85 - 121)	0.40	(0-30)	SW846 8260B
Toluene	**104**	**(70 - 119)**			**SW846 8260B**
	105	**(70 - 119)**	**1.2**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	73	(70 - 130)			SW846 8260B
	77	(70 - 130)	4.4	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	66 a	(70 - 130)			SW846 8260B
	70	(70 - 130)	5.1	(0-30)	SW846 8260B
1,1,1-Trichloroethane	97	(71 - 162)			SW846 8260B
	96	(71 - 162)	0.91	(0-30)	SW846 8260B
1,1,2-Trichloroethane	98	(86 - 129)			SW846 8260B
	99	(86 - 129)	1.6	(0-30)	SW846 8260B
Trichloroethene	**91**	**(62 - 130)**			**SW846 8260B**
	91	**(62 - 130)**	**0.12**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	103	(70 - 130)			SW846 8260B
	102	(70 - 130)	0.82	(0-30)	SW846 8260B
1,2,3-Trichloropropane	90	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.79	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	104	(70 - 130)			SW846 8260B
	102	(70 - 130)	2.3	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	86	(70 - 130)			SW846 8260B
	88	(70 - 130)	2.4	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	85	(70 - 130)			SW846 8260B
	88	(70 - 130)	2.9	(0-30)	SW846 8260B
Vinyl chloride	96	(88 - 126)			SW846 8260B
	91	(88 - 126)	5.0	(0-30)	SW846 8260B
m-Xylene & p-Xylene	100	(70 - 130)			SW846 8260B
	100	(70 - 130)	0.18	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEA7D1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: A7L170186-001 KEA7D1AE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	104	(70 - 130)			SW846 8260B
	105	(70 - 130)	1.6	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	90	(73 - 122)
1,2-Dichloroethane-d4	89	(61 - 128)
	86	(61 - 128)
Toluene-d8	101	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	111	(74 - 116)
	112	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEQA31AF-MS **Matrix.....:** WATER
MS Lot-Sample #: A7L220152-001 KEQA31AG-MSD
Date Sampled...: 12/20/07 09:25 **Date Received..:** 12/22/07
Prep Date.....: 12/28/07 **Analysis Date..:** 12/28/07
Prep Batch #...: 7365086
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	82	(45 - 128)			SW846 8260B
	75	(45 - 128)	9.7	(0-30)	SW846 8260B
Benzene	**100**	**(78 - 118)**			**SW846 8260B**
	92	**(78 - 118)**	**7.5**	**(0-20)**	**SW846 8260B**
Bromobenzene	89	(70 - 130)			SW846 8260B
	84	(70 - 130)	5.6	(0-30)	SW846 8260B
1,2-Dichloroethene (total)	106	(86 - 115)			SW846 8260B
	101	(86 - 115)	4.7	(0-30)	SW846 8260B
Bromochloromethane	104	(70 - 130)			SW846 8260B
	95	(70 - 130)	9.6	(0-30)	SW846 8260B
Bromodichloromethane	87	(80 - 146)			SW846 8260B
	81	(80 - 146)	8.0	(0-30)	SW846 8260B
Bromoform	54 a	(58 - 176)			SW846 8260B
	54 a	(58 - 176)	1.6	(0-30)	SW846 8260B
Bromomethane	96	(55 - 145)			SW846 8260B
	91	(55 - 145)	4.8	(0-30)	SW846 8260B
Methyl ethyl ketone	67 a	(71 - 123)			SW846 8260B
	67 a	(71 - 123)	0.34	(0-30)	SW846 8260B
n-Butylbenzene	83	(70 - 130)			SW846 8260B
	78	(70 - 130)	6.0	(0-30)	SW846 8260B
sec-Butylbenzene	86	(70 - 130)			SW846 8260B
	81	(70 - 130)	6.9	(0-30)	SW846 8260B
Xylenes (total)	109	(89 - 121)			SW846 8260B
	101	(89 - 121)	8.3	(0-30)	SW846 8260B
tert-Butylbenzene	85	(70 - 130)			SW846 8260B
	81	(70 - 130)	4.3	(0-30)	SW846 8260B
Carbon disulfide	111	(69 - 138)			SW846 8260B
	99	(69 - 138)	11	(0-41)	SW846 8260B
Carbon tetrachloride	91	(63 - 176)			SW846 8260B
	83	(63 - 176)	9.0	(0-30)	SW846 8260B
Chlorobenzene	**104**	**(76 - 117)**			**SW846 8260B**
	97	**(76 - 117)**	**6.6**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	80	(71 - 158)			SW846 8260B
	75	(71 - 158)	5.8	(0-30)	SW846 8260B
Chloroethane	116	(59 - 142)			SW846 8260B
	106	(59 - 142)	8.3	(0-30)	SW846 8260B
n-Hexane	109	(70 - 130)			SW846 8260B
	106	(70 - 130)	2.1	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEQA31AF-MS **Matrix.....:** WATER
MS Lot-Sample #: A7L220152-001 KEQA31AG-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	99	(83 - 141)			SW846 8260B
	93	(83 - 141)	6.1	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acetonitrile	80	(50 - 130)			SW846 8260B
	63	(50 - 130)	23	(0-30)	SW846 8260B
Chloromethane	88	(40 - 137)			SW846 8260B
	81	(40 - 137)	7.7	(0-39)	SW846 8260B
Acrolein	64	(50 - 130)			SW846 8260B
	65	(50 - 130)	2.6	(0-30)	SW846 8260B
Acrylonitrile	96	(50 - 130)			SW846 8260B
	95	(50 - 130)	1.4	(0-30)	SW846 8260B
Vinyl acetate	87	(70 - 130)			SW846 8260B
	92	(70 - 130)	5.8	(0-30)	SW846 8260B
2-Chlorotoluene	90	(70 - 130)			SW846 8260B
	86	(70 - 130)	4.5	(0-30)	SW846 8260B
4-Chlorotoluene	98	(70 - 130)			SW846 8260B
	91	(70 - 130)	7.3	(0-30)	SW846 8260B
Cyclohexane	77	(70 - 130)			SW846 8260B
	71	(70 - 130)	8.1	(0-30)	SW846 8260B
Iodomethane	90	(70 - 130)			SW846 8260B
	89	(70 - 130)	1.7	(0-30)	SW846 8260B
Isopropyl ether	87	(70 - 130)			SW846 8260B
	87	(70 - 130)	0.36	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	61 a	(70 - 130)			SW846 8260B
	65 a	(70 - 130)	6.0	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	97	(70 - 130)			SW846 8260B
	92	(70 - 130)	4.8	(0-30)	SW846 8260B
Dibromomethane	93	(70 - 130)			SW846 8260B
	85	(70 - 130)	8.7	(0-30)	SW846 8260B
1,2-Dichlorobenzene	90	(70 - 130)			SW846 8260B
	87	(70 - 130)	3.6	(0-30)	SW846 8260B
1,3-Dichlorobenzene	91	(70 - 130)			SW846 8260B
	88	(70 - 130)	3.6	(0-30)	SW846 8260B
1,4-Dichlorobenzene	92	(70 - 130)			SW846 8260B
	88	(70 - 130)	4.4	(0-30)	SW846 8260B
Dichlorodifluoromethane	72	(70 - 130)			SW846 8260B
	67 a	(70 - 130)	7.0	(0-30)	SW846 8260B
1,1-Dichloroethane	106	(88 - 127)			SW846 8260B
	106	(88 - 127)	0.26	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEQA31AF-MS **Matrix.....:** WATER
MS Lot-Sample #: A7L220152-001 KEQA31AG-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	95	(71 - 160)			SW846 8260B
	87	(71 - 160)	9.2	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	97	(87 - 114)			SW846 8260B
	93	(87 - 114)	4.6	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	115	(85 - 116)			SW846 8260B
	110	(85 - 116)	4.8	(0-30)	SW846 8260B
1,1-Dichloroethene	**114**	**(62 - 130)**			**SW846 8260B**
	106	**(62 - 130)**	**7.3**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	97	(87 - 114)			SW846 8260B
	90	(87 - 114)	6.8	(0-30)	SW846 8260B
1,3-Dichloropropane	100	(70 - 130)			SW846 8260B
	94	(70 - 130)	5.8	(0-30)	SW846 8260B
2,2-Dichloropropane	86	(70 - 130)			SW846 8260B
	81	(70 - 130)	6.7	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	57 a	(82 - 130)			SW846 8260B
	54 a	(82 - 130)	5.8	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	68 a	(73 - 147)			SW846 8260B
	63 a	(73 - 147)	8.8	(0-30)	SW846 8260B
1,1-Dichloropropene	93	(70 - 130)			SW846 8260B
	87	(70 - 130)	6.4	(0-30)	SW846 8260B
Ethylbenzene	100	(86 - 132)			SW846 8260B
	93	(86 - 132)	6.7	(0-30)	SW846 8260B
Hexachlorobutadiene	84	(70 - 130)			SW846 8260B
	82	(70 - 130)	2.2	(0-30)	SW846 8260B
2-Hexanone	72 a	(81 - 128)			SW846 8260B
	76 a	(81 - 128)	4.4	(0-30)	SW846 8260B
Isopropylbenzene	115	(70 - 130)			SW846 8260B
	108	(70 - 130)	6.6	(0-30)	SW846 8260B
p-Isopropyltoluene	91	(70 - 130)			SW846 8260B
	87	(70 - 130)	4.7	(0-30)	SW846 8260B
Methyl acetate	96	(70 - 130)			SW846 8260B
	99	(70 - 130)	3.0	(0-30)	SW846 8260B
Methylcyclohexane	78	(70 - 130)			SW846 8260B
	70	(70 - 130)	10	(0-30)	SW846 8260B
Methylene chloride	121 a	(82 - 115)			SW846 8260B
	114	(82 - 115)	6.7	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	62 a	(82 - 135)			SW846 8260B
	61 a	(82 - 135)	1.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	102	(70 - 130)			SW846 8260B
	98	(70 - 130)	4.1	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEQA31AF-MS **Matrix.....:** WATER
MS Lot-Sample #: A7L220152-001 KEQA31AG-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	57 a	(70 - 130)			SW846 8260B
	63 a	(70 - 130)	10	(0-30)	SW846 8260B
n-Propylbenzene	91	(70 - 130)			SW846 8260B
	85	(70 - 130)	7.0	(0-30)	SW846 8260B
Styrene	110	(83 - 120)			SW846 8260B
	100	(83 - 120)	9.9	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	105	(70 - 130)			SW846 8260B
	97	(70 - 130)	8.1	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	88	(88 - 116)			SW846 8260B
	85 a	(88 - 116)	3.7	(0-30)	SW846 8260B
Tetrachloroethene	107	(85 - 121)			SW846 8260B
	97	(85 - 121)	8.9	(0-30)	SW846 8260B
Toluene	**111**	**(70 - 119)**			**SW846 8260B**
	105	**(70 - 119)**	**6.0**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	72	(70 - 130)			SW846 8260B
	73	(70 - 130)	1.6	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	65 a	(70 - 130)			SW846 8260B
	69 a	(70 - 130)	5.2	(0-30)	SW846 8260B
1,1,1-Trichloroethane	95	(71 - 162)			SW846 8260B
	89	(71 - 162)	7.2	(0-30)	SW846 8260B
1,1,2-Trichloroethane	104	(86 - 129)			SW846 8260B
	98	(86 - 129)	6.2	(0-30)	SW846 8260B
Trichloroethene	**90**	**(62 - 130)**			**SW846 8260B**
	88	**(62 - 130)**	**2.5**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	108	(70 - 130)			SW846 8260B
	99	(70 - 130)	9.4	(0-30)	SW846 8260B
1,2,3-Trichloropropane	91	(70 - 130)			SW846 8260B
	90	(70 - 130)	2.0	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	119	(70 - 130)			SW846 8260B
	108	(70 - 130)	9.7	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	91	(70 - 130)			SW846 8260B
	86	(70 - 130)	4.9	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	91	(70 - 130)			SW846 8260B
	85	(70 - 130)	6.7	(0-30)	SW846 8260B
Vinyl chloride	89	(88 - 126)			SW846 8260B
	86 a	(88 - 126)	3.4	(0-30)	SW846 8260B
m-Xylene & p-Xylene	110	(70 - 130)			SW846 8260B
	101	(70 - 130)	9.0	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7L210396 **Work Order #...:** KEQA31AF-MS **Matrix.....:** WATER
MS Lot-Sample #: A7L220152-001 KEQA31AG-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	108	(70 - 130)			SW846 8260B
	101	(70 - 130)	6.9	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
	95	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
	90	(61 - 128)
Toluene-d8	108	(76 - 110)
	106	(76 - 110)
4-Bromofluorobenzene	112	(74 - 116)
	112	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7L210396 **Matrix.....:** WG
Date Sampled...: 12/20/07 11:25 **Date Received..:** 12/21/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7L210396-001 **Prep Batch #...:** 7358139							
Arsenic	88	(75 - 125)			SW846 6010B	12/26-12/27/07	KEPGX1A1
	91	(75 - 125)	3.4	(0-20)	SW846 6010B	12/26-12/27/07	KEPGX1A2
		Dilution Factor: 1					
Barium	97	(75 - 125)			SW846 6010B	12/26-12/27/07	KEPGX1A7
	100	(75 - 125)	2.7	(0-20)	SW846 6010B	12/26-12/27/07	KEPGX1A8
		Dilution Factor: 1					
Cadmium	79	(75 - 125)			SW846 6010B	12/26-12/27/07	KEPGX1A9
	82	(75 - 125)	3.5	(0-20)	SW846 6010B	12/26-12/27/07	KEPGX1CA
		Dilution Factor: 1					
Lead	81	(75 - 125)			SW846 6010B	12/26-12/27/07	KEPGX1A3
	84	(75 - 125)	3.2	(0-20)	SW846 6010B	12/26-12/27/07	KEPGX1A4
		Dilution Factor: 1					
Chromium	94	(75 - 125)			SW846 6010B	12/26-12/27/07	KEPGX1CC
	97	(75 - 125)	2.2	(0-20)	SW846 6010B	12/26-12/27/07	KEPGX1CD
		Dilution Factor: 1					
Selenium	88	(75 - 125)			SW846 6010B	12/26-12/27/07	KEPGX1A5
	91	(75 - 125)	3.4	(0-20)	SW846 6010B	12/26-12/27/07	KEPGX1A6
		Dilution Factor: 1					
Silver	94	(75 - 125)			SW846 6010B	12/26-12/27/07	KEPGX1CE
	98	(75 - 125)	4.6	(0-20)	SW846 6010B	12/26-12/27/07	KEPGX1CF
		Dilution Factor: 1					
Mercury	84	(69 - 134)			SW846 7470A	12/26-12/28/07	KEPGX1AX
	80	(69 - 134)	5.4	(0-20)	SW846 7470A	12/26-12/28/07	KEPGX1A0
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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TAL-4142 (0907)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	BRYAN ZINDA	12/20/07	379758
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
630 1st Ave N, Suite 720	612-337-5434 / 612-336-4538		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
MINNEAPOLIS / MN / 55401		DENISE POHL	
Project Name and Location (State)	**Carrier/Waybill Number**		
FORD-TWIN CITIES PHASE B			
Contract/Purchase Order/Quote No.			
FORD-TCP-03 / E200575-2			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	Analysis: VOC (8260)	SVOC	PCB	RCRA METALS (Total & FIELD FILTERED)	TEMPERATURE
AMW-05 (20071220)	12/20/07	1125		X			4		2	3			3	2	2	2	
AMW-07 (20071220)	12/20/07	0940		X			4		2	3			3	2	2	2	
TB-003 (20071220)	12/20/07	—		X						1			1				
Temp Blank-002 (20071220)	12/20/07	—		X			1										1

Special Instructions/ Conditions of Receipt

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other NORMAL

QC Requirements (Specify)

	Date	Time
1. Relinquished By	12/20/07	14:15
2. Relinquished By	12-20	1600
3. Relinquished By		

	Date	Time
1. Received By		
2. Received By	122107	1030
3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4142 (0907)

Client: ARCADIS	Project Manager: BRYAN ZINDA	Date: 12/20/07	Chain of Custody Number: 379756
Address: 430 1ST AVE N., SUITE 720	Telephone Number (Area Code)/Fax Number: 612-339-9434 / 612-336-4538	Lab Number:	Page 1 of 1
City: MINNEAPOLIS	State: MN	Zip Code: 55401	Site Contact:	Lab Contact: DENISE POHL
Project Name and Location (State): FORD TWIN CITIES PHASE B	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: FORD-TCAP-03 / E200575-2			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOC (8260)	SVOC	PCB	RCRA Metals (TOTAL & FIELD FILTERED)	TEMPERATURE	Special Instructions/ Conditions of Receipt
AMW-3A (20071218)	12/18/07	0905		X			4		2	3			3	2	2	2		
Dup 001 (20071218)	12/18/07	—		X			4		2	3			3	2	2	2		
TRIP BLANK - TB-004 (20071220)	—	—		X						1			1					
TEMP BLANK-003	—	—		X			1										1	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other NORMAL

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	12/20/07	14:15	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By	12-21-07	0830
Comments					

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

[redacted]

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4142 (0907)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	BRYAN ZUNDA	12/20/07	379759

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
430 1st AVE N, SUITE 720	612-339-9434 / 612-336-4538		

City	State	Zip Code	Site Contact	Lab Contact
MINNEAPOLIS	MN	55401		DENISE POHL

Project Name and Location (State)	Carrier/Waybill Number
FORD TWIN CITIES PHASE BF	

Contract/Purchase Order/Quote No.: FORD-JCAP-03 / E200575-2

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Matrix: Aqueous	Matrix: Sed.	Matrix: Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	VOC (8260)	SVOC	PCB	RCRA METALS (FIELD FILTERED & TOTAL)	Temperature	Special Instructions/ Conditions of Receipt
MW-4 (20071219)	12/19/07	1310		X					2	3			3			2		
AMW-4 (20071219)	12/19/07	1336		X			4		2	3			3	2	2	2		
TRIP BLANK TB-005 (20071220)	12/20/07	—		X						1			1					
TEMPERATURE BLANK	—	—		X			1										1	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other NORMAL

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By [signature]	12/20/07	14:15	1. Received By [signature]		
2. Relinquished By [signature]	12-20	1600	2. Received By [signature]	12-21-07	1030
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

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TestAmerica North Canton

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: A7L210396

Client ARCADIS Project _____ Quote # 75208

Cooler Received on 12-21-07 Opened on 12-21-07 By _____ (Signature)

FedEx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ TestAmerica Courier ☐

Stetson ☐ US Cargo ☐ Other _____

TestAmerica Cooler # Back-4 Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity _____
   Were custody seals on the outside of cooler signed and dated? Yes ☐ No ☐ NA ☑
   Were custody seals on the bottles? Yes ☐ No ☑
   If YES, are there any exceptions _____
2. Shipper's packing slip attached to this form? Yes ☑ No ☐
3. Did custody papers accompany the sample(s)? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt _____ °C (see back of form for multiple coolers/temps)

METHOD: IR ☑ Other ☐ _____

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH upon receipt? Yes ☑ No ☐ NA ☐
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a Trip Blank present in the cooler? Yes ☑ No ☐ Were VOAs on the COC? Yes ☑ No ☐

Contacted PM _____ Date _____ by _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #071707-HNO3 - Sulfuric Acid Lot # 092006-H2SO4; Sodium Hydroxide Lot # 122805 -NaOH; Hydrochloric Acid Lot # 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot # 050205-CH3COO2ZN/NaOH*

What time was preservative added to sample(s)? _____

Sample(s) _____ were received with bubble > 6 mm in diameter (Notify PM)

Client ID	pH	Date	Initials
1500	≤2 ≤2	12-21-07	JS
1125	≤2 ≤2		
0740	≤2 ≤2		
905	≤2 ≤2		
DUP 001	≤2 ≤2		
1310	≤2 ≤2		
1336	≤2 ≤2		

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp °C	Method	Coolant
D464	2.0	IR	Ice
K742	2.7	"	"
L572	1.9	"	"
K653	2.3	"	"

Discrepancies Cont'd

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

April 04, 2008

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000591.0001.0001
Laboratory: TestAmerica - North Canton
Laboratory submittal: A8C140216
Sample date: 2008-03-13
Report received by Enovis: 2008-03-28
Initial Data Verification completed by Enovis: 2008-04-04

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

6 Water samples were analyzed for GCMS VOC, GCMS SVOC, PCB, Wisconsin GRO and Wisconsin DRO, Metals and Free Cyanide parameters and 2 Trip Blanks for GCMS VOC parameters. Refer to the attached Sampling and Analysis Summary table.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time were reviewed as part of our verification.

Free Cyanide was subcontracted to TA-Savannah and reported under submittal 35083-1.

2 Trip Blanks were reported with this submittal. Refer to the minor QC exceptions listed below.

Analytical results reported between the MDL and RDL are flagged J and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the Enovis CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The following minor QC exceptions or missing information were noted:

GCMS VOC LCS/LCSD for 1,1,2,2-Tetrachloroethane recovered low outside of the labs acceptance window in QC batch 8080146. The associated results for A8C140216-001, 2, 3, 4, 5, 6, 7 and 8 were reported non-detect and are flagged UJ and considered estimated.

GCMS VOC LCS for trans-1,3-Dichloropropene recovered low outside of the labs acceptance window in QC batch 8080146. The LCSD recovered in control. The LCS/LCSD RPD was within limits. No qualification required.

GCMS VOC LCSD for 1,1,2-Trichloro-1,2,2-trifluoroethane, Trichlorofluoromethane and cis-1,2-Dichloroethene recovered high outside of the labs acceptance window in QC batch 8080146. The LCS recovered in control. The LCS/LCSD RPD was within limits. No qualification required.

GCMS VOC Method Blank for Acetone and 1,2,3-Trichlorobenzene were reported between the MDL and RDL in QC batch 8080146. Acetone was also reported in Trip Blanks -01 and -02 at the same concentration and higher than the method blank. The associated sample results for A8C140216-002, 3, 4, 5 and 7 were reported less than 10x the Trip Blank concentration and are flagged UB and considered non-detect at the RDL. The associated results for 1,2,3-Trichlorobenzene were all reported non-detect. No qualification required.

GCMS SVOC LCS/LCSD for Caprolactam recovered low outside of the labs acceptance window in QC batch 8077094. The associated result for A8C140216-005 was reported non-detect and is flagged UJ and considered estimated.

GCMS SVOC LCS/LCSD RPD for 2,4-Dinitrophenol was above the labs acceptance limit. Both the LCS and LCSD recovered in control. No qualification required.

DRO surrogate C9 recovered high outside of the labs acceptance window in samples A8C140216-001, 2, 3, 5, 7 and Method Blank and LCS/LCSD for QC batch 8081123. The surrogate recoveries for this method are only advisory. No qualification required.

DRO LCS/LCSD recovered low outside of the labs acceptance window in QC batch 8075016. The samples were re-extracted 1 day out of hold time in QC batch 8081123. The re-extract results are higher than the original results associated with the low LCS/LCSD. Enovis recommends that the re-extract results be utilized. The re-extract results are flagged J due to hold time exceedence. The original results are flagged R to indicate which results to use.

DRO Method Blank result reported between the MDL and RDL in QC batch 8081123. The associated result for A8C140216-001, 2, 3, 5 and 7 were reported above the RDL and greater than 5x the method blank concentration. No qualification required.

Metals Method Blank for Barium was reported between the MDL and RDL in QC batch 8077023. The associated sample results were all reported between the MDL and RDL and greater than 10x the method blank concentration. No qualification required.

Free Cyanide MS recovered high outside of the labs acceptance window in QC batch 101167. The MSD recovered in control. The MS/MSD RPD was in control. The sample was project specific 680-35-83-1. No qualification required.

Evaluation of blank contamination includes directions on the interpretation of the affected analytical results; however it is beyond the scope of Enovis verification to apply changes to the result and quantitation limit in the Ford Master Analytical database. The end data user must implement any corrections to the electronic data downloaded from the Enovis CLMS based on project requirements.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Tim Abston

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
<	Less than
>	Greater than
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JB	The analyte / compound was detected in the associated blank between the MDL and the laboratory`s reporting detection limit. For Inorganic methods the sample concentration was < 10x the blank concentration and is considered estimated. For Organic methods the sample concentration was < 5x or 10x for common laboratory contaminates, the blank concentration and is considered estimated.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A8C140216

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Polychlorinated Biphenyls by GCECD	Wisconsin GRO Method	Wisconsin DRO Method	ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)	Comment
A8C140216001	AMW-07(20080313)	3/13/2008	8:55:00	X	X	X	X	X	X	X	
A8C140216002	AMW-10(20080313)	3/13/2008	10:15:00	X	X	X	X	X	X	X	
A8C140216003	AMW-02(20080313)	3/13/2008	11:15:00	X	X	X	X	X	X	X	
A8C140216004	AMW-06(20080313)	3/13/2008	12:15:00	X	X						
A8C140216005	AMW-01(20080313)	3/13/2008	1:25:00	X	X	X	X	X	X	X	
A8C140216006	TB-001(20080313)	3/13/2008	12:00:00	X							
A8C140216007	AMW-08(20080313)	3/13/2008	2:55:00	X	X	X	X	X	X	X	
A8C140216008	TB-002(20080313)	3/13/2008	12:00:00	X							

SAMPLING AND ANALYSIS SUMMARY

Enovis Project ID: E200572
Laboratory: TestAmerica - Savannah
Laboratory Submittal: 35083-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Free Cyanide	Comment
6801011674	AWM-07(20080323)	3/13/2008	8:55:00	X	

Qualified Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A8C140216

Analyte	Cas No.	Sample Name:	Result	Report Limit	Units	Valid Qualifier
		Sample Name:	AMW-07(20080313)			
		Lab Sample ID:	A8C140216001			
		Sample Date:	3/13/2008			
GC/MS VOC						
OSW-8260B						
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.0	ug/l	UJ
Acetone	67-64-1					
GC/MS SVOC						
OSW-8270C						
Caprolactam	105-60-2					
GC Other						
OSW-8015B-MOD						
Diesel Range Organics	E-1004		0.11	0.10	mg/l	R

Analyte	Cas No.	Sample Name:	Result	Report Limit	Units	Valid Qualifier
		Sample Name:	AMW-07(20080313)R2			
		Lab Sample ID:	A8C140216001			
		Sample Date:	3/13/2008			
GC/MS VOC						
OSW-8260B						
1,1,2,2-Tetrachloroethane	79-34-5					
Acetone	67-64-1					
GC/MS SVOC						
OSW-8270C						
Caprolactam	105-60-2					
GC Other						
OSW-8015B-MOD						
Diesel Range Organics	E-1004		0.13	0.10	mg/l	J

Analyte	Cas No.	Sample Name:	Result	Report Limit	Units	Valid Qualifier
		Sample Name:	AMW-10(20080313)			
		Lab Sample ID:	A8C140216002			
		Sample Date:	3/13/2008			
GC/MS VOC						
OSW-8260B						
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.0	ug/l	UJ
Acetone	67-64-1		3.3	10	ug/l	UB
GC/MS SVOC						
OSW-8270C						
Caprolactam	105-60-2					
GC Other						
OSW-8015B-MOD						
Diesel Range Organics	E-1004		0.99	0.10	mg/l	R

Analyte	Cas No.	Sample Name:	Result	Report Limit	Units	Valid Qualifier
		Sample Name:	AMW-10(20080313)R2			
		Lab Sample ID:	A8C140216002			
		Sample Date:	3/13/2008			
GC/MS VOC						
OSW-8260B						
1,1,2,2-Tetrachloroethane	79-34-5					
Acetone	67-64-1					
GC/MS SVOC						
OSW-8270C						
Caprolactam	105-60-2					
GC Other						
OSW-8015B-MOD						
Diesel Range Organics	E-1004		1.2	0.10	mg/l	J

Note: UJ - Non-detect result is considered estimated due to associated QC outlier.
J - Result is considered estimated due to associated QC outlier.
R- Result is considered unusable due to associated QC outlier.
UB- Result is considered non-detect at the report limit due to blank contamination.

Qualified Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A8C140216

	Sample Name:	AMW-02(20080313)				AMW-02(20080313)R2				AMW-06(20080313)				AMW-01(20080313)			
	Lab Sample ID:	A8C140216003				A8C140216003				A8C140216004				A8C140216005			
	Sample Date:	3/13/2008				3/13/2008				3/13/2008				3/13/2008			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																	
OSW-8260B																	
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	UJ					ND	1.0	ug/l	UJ	ND	1.0	ug/l	UJ
Acetone	67-64-1	8.6	10	ug/l	UB					4.9	10	ug/l	UB	1.8	10	ug/l	UB
GC/MS SVOC																	
OSW-8270C																	
Caprolactam	105-60-2													ND	10	ug/l	UJ
GC Other																	
OSW-8015B-MOD																	
Diesel Range Organics	E-1004	0.37	0.10	mg/l	R	0.38	0.10	mg/l	J					1.5	0.10	mg/l	R

Qualified Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A8C140216

Analyte	Cas No.	Sample Name:	Result	Report Limit	Units	Valid Qualifier
		Lab Sample ID:				
		Sample Date:				
GC/MS VOC						
OSW-8260B						
1,1,2,2-Tetrachloroethane	79-34-5	AMW-01(20080313)DLR2				
		A8C140216005				
		3/13/2008				
Acetone	67-64-1	AMW-01(20080313)DLR2				
		A8C140216005				
		3/13/2008				
GC/MS SVOC						
OSW-8270C						
Caprolactam	105-60-2	AMW-01(20080313)DLR2				
		A8C140216005				
		3/13/2008				
GC Other						
OSW-8015B-MOD						
Diesel Range Organics	E-1004	AMW-01(20080313)DLR2	2.3	0.50	mg/l	J
		A8C140216005				
		3/13/2008				

Analyte	Cas No.	Sample Name:	Result	Report Limit	Units	Valid Qualifier
		Lab Sample ID:				
		Sample Date:				
GC/MS VOC						
OSW-8260B						
1,1,2,2-Tetrachloroethane	79-34-5	TB-001(20080313)TB	ND	1.0	ug/l	UJ
		A8C140216006				
		3/13/2008				
Acetone	67-64-1	TB-001(20080313)TB				
		A8C140216006				
		3/13/2008				
GC/MS SVOC						
OSW-8270C						
Caprolactam	105-60-2	TB-001(20080313)TB				
		A8C140216006				
		3/13/2008				
GC Other						
OSW-8015B-MOD						
Diesel Range Organics	E-1004	TB-001(20080313)TB				
		A8C140216006				
		3/13/2008				

Analyte	Cas No.	Sample Name:	Result	Report Limit	Units	Valid Qualifier
		Lab Sample ID:				
		Sample Date:				
GC/MS VOC						
OSW-8260B						
1,1,2,2-Tetrachloroethane	79-34-5	AMW-08(20080313)	ND	1.0	ug/l	UJ
		A8C140216007				
		3/13/2008				
Acetone	67-64-1	AMW-08(20080313)	2.9	10	ug/l	UB
		A8C140216007				
		3/13/2008				
GC/MS SVOC						
OSW-8270C						
Caprolactam	105-60-2	AMW-08(20080313)				
		A8C140216007				
		3/13/2008				
GC Other						
OSW-8015B-MOD						
Diesel Range Organics	E-1004	AMW-08(20080313)	0.58	0.10	mg/l	R
		A8C140216007				
		3/13/2008				

Analyte	Cas No.	Sample Name:	Result	Report Limit	Units	Valid Qualifier
		Lab Sample ID:				
		Sample Date:				
GC/MS VOC						
OSW-8260B						
1,1,2,2-Tetrachloroethane	79-34-5	AMW-08(20080313)R2				
		A8C140216007				
		3/13/2008				
Acetone	67-64-1	AMW-08(20080313)R2				
		A8C140216007				
		3/13/2008				
GC/MS SVOC						
OSW-8270C						
Caprolactam	105-60-2	AMW-08(20080313)R2				
		A8C140216007				
		3/13/2008				
GC Other						
OSW-8015B-MOD						
Diesel Range Organics	E-1004	AMW-08(20080313)R2	0.79	0.10	mg/l	J
		A8C140216007				
		3/13/2008				

Qualified Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A8C140216

		Sample Name:	TB-002(20080313)TB			
		Lab Sample ID:	A8C140216008			
		Sample Date:	3/13/2008			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC					
OSW-8260B					
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	UJ
Acetone	67-64-1				
GC/MS SVOC					
OSW-8270C					
Caprolactam	105-60-2				
GC Other					
OSW-8015B-MOD					
Diesel Range Organics	E-1004				

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. FORD-TCAP-03 E200575-2

FORD TWIN CITIES PHA B E200572

Lot #: A8C140216

Rebecca Forbort

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March 28, 2008

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CASE NARRATIVE

A8C140216

The following report contains the analytical results for six water samples and two quality control samples submitted to TestAmerica North Canton by ARCADIS Geraghty & Miller, Inc. from the Ford Twin Cities Pha B E200572 Site, project number FORD-TCAP-03 E200575-2. The samples were received March 14, 2008, according to documented sample acceptance procedures.

The ASTM D4282-89 Free Cyanide analysis was performed at the TestAmerica Savannah laboratory.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

Any reference within this document to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.)

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 132.

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 3.6, 3.8, 4.1 and 4.1°C.

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for batch(es) 8080146 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 8075065 and 8077094. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

Batch(es) 8077094 had recoveries and/or RPD’s out high in the LCS. Since there were no hits detected in any of the associated samples, no corrective action was necessary.

CASE NARRATIVE (continued)

GASOLINE RANGE ORGANICS

The analytical results met the requirements of the laboratory's QA/QC program.

POLYCHLORINATED BIPHENYLS-8082

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 8075061. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

DIESEL RANGE ORGANICS

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 8075016 and 8081123. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

For the reextract sample(s) AMW-07 (20080313), AMW-10 (20080313), AMW-02 (20080313), AMW-08 (20080313), and the Blank, LCS/LCSD associated with batch(es) 8081123, the surrogates failed criteria high. Since the limits are advisory only for DRO, no further action was required.

The LCS/LCSD associated with batch(es) 8075016 failed criteria low. The entire batch was sent back for reextraction outside of the recommended holding time; therefore, both batches have been reported.

CASE NARRATIVE (continued)

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

The QC batch 8077023 was reported without an MS/MSD. The MS/MSD was performed on another client's sample within the batch. The MS/MSD result does not have immediate bearing on any samples except for the actual sample spiked. Ongoing evaluation and monitoring of the LCS provides long-term precision and accuracy for the method.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A8C140216

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
AMW-07(20080313) 03/13/08 08:55 001				
Diesel Range Organics	0.13 B	0.10	mg/L	WI-DRO DRO
Diesel Range Organics	0.11	0.10	mg/L	WI-DRO DRO
Barium - DISSOLVED	26.0 B,J	200	ug/L	SW846 6010B
Cadmium - DISSOLVED	0.85 B	5.0	ug/L	SW846 6010B
Trichloroethene	2.9	1.0	ug/L	SW846 8260B
AMW-10(20080313) 03/13/08 10:15 002				
Diesel Range Organics	1.2 B	0.10	mg/L	WI-DRO DRO
Diesel Range Organics	0.99	0.10	mg/L	WI-DRO DRO
Barium - DISSOLVED	87.7 B,J	200	ug/L	SW846 6010B
Acetone	3.3 J,B	10	ug/L	SW846 8260B
Methyl ethyl ketone	1.5 J	10	ug/L	SW846 8260B
AMW-02(20080313) 03/13/08 11:15 003				
Diesel Range Organics	0.38 B	0.10	mg/L	WI-DRO DRO
Diesel Range Organics	0.37	0.10	mg/L	WI-DRO DRO
Barium - DISSOLVED	131 B,J	200	ug/L	SW846 6010B
Acetone	8.6 J,B	10	ug/L	SW846 8260B
Methyl ethyl ketone	2.0 J	10	ug/L	SW846 8260B
Carbon disulfide	1.3	1.0	ug/L	SW846 8260B
AMW-06(20080313) 03/13/08 12:15 004				
Acetone	4.9 J,B	10	ug/L	SW846 8260B
Methyl ethyl ketone	1.7 J	10	ug/L	SW846 8260B
Cyclohexane	0.50 J	1.0	ug/L	SW846 8260B
AMW-01(20080313) 03/13/08 13:25 005				
Diesel Range Organics	2.3 B	0.50	mg/L	WI-DRO DRO
Diesel Range Organics	1.5	0.10	mg/L	WI-DRO DRO
Barium - DISSOLVED	92.4 B,J	200	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	1.5 J	10	ug/L	SW846 8270C
Acetone	1.8 J,B	10	ug/L	SW846 8260B
TB-001(20080313) 03/13/08 006				
Acetone	7.8 J,B	10	ug/L	SW846 8260B
Methylene chloride	1.7	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A8C140216

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
AMW-08(20080313) 03/13/08 14:55 007				
Diesel Range Organics	0.79 B	0.10	mg/L	WI-DRO DRO
Diesel Range Organics	0.58	0.10	mg/L	WI-DRO DRO
Barium - DISSOLVED	105 B,J	200	ug/L	SW846 6010B
Acetone	2.9 J,B	10	ug/L	SW846 8260B
Carbon disulfide	0.33 J	1.0	ug/L	SW846 8260B
TB-002(20080313) 03/13/08 008				
Acetone	7.8 J,B	10	ug/L	SW846 8260B
Methylene chloride	2.0	1.0	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A8C140216

PARAMETER	ANALYTICAL METHOD
Diesel Range Organics	WI-DRO DRO
Gasoline Range Organics	WI-GRO GRO
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
PCBs by SW-846 8082	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

WI-DRO "Modified DRO: Method for Determining Diesel Range Organics", Wisconsin DNR, PUBL-SW-141, September, 1995.

WI-GRO "Modified GRO: Method for Determining Gasoline Range Organics", Wisconsin DNR, PUBL-SW-140, September, 1995.

SAMPLE SUMMARY

A8C140216

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KJLPL	001	AMW-07(20080313)	03/13/08	08:55
KJLP7	002	AMW-10(20080313)	03/13/08	10:15
KJLRC	003	AMW-02(20080313)	03/13/08	11:15
KJLRD	004	AMW-06(20080313)	03/13/08	12:15
KJLRE	005	AMW-01(20080313)	03/13/08	13:25
KJLRG	006	TB-001(20080313)	03/13/08	
KJLRH	007	AMW-08(20080313)	03/13/08	14:55
KJLRN	008	TB-002(20080313)	03/13/08	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-001 **Work Order #...:** KJLPL1AA **Matrix.....:** WG
Date Sampled...: 03/13/08 08:55 **Date Received..:** 03/14/08
Prep Date.....: 03/19/08 **Analysis Date..:** 03/19/08
Prep Batch #...: 8080146
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-001 **Work Order #...:** KJLPL1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	**2.9**	**1.0**	**ug/L**	**0.17**
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(73 - 122)
1,2-Dichloroethane-d4	104	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-001 **Work Order #...:** KJLPL1AC **Matrix.....:** WG
Date Sampled...: 03/13/08 08:55 **Date Received..:** 03/14/08
Prep Date.....: 03/16/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8075065
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-001 **Work Order #...:** KJLPL1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	74	(27 - 111)
2-Fluorobiphenyl	64	(28 - 110)
Terphenyl-d14	105	(37 - 119)
Phenol-d5	67	(10 - 110)
2-Fluorophenol	66	(10 - 110)
2,4,6-Tribromophenol	85	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080313)

GC Volatiles

Lot-Sample #...: A8C140216-001 **Work Order #...:** KJLPL1AE **Matrix.....:** WG
Date Sampled...: 03/13/08 08:55 **Date Received..:** 03/14/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8076020
Dilution Factor: 1 **Method.....:** WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-001 **Work Order #...:** KJLPL1AF **Matrix.....:** WG
Date Sampled...: 03/13/08 08:55 **Date Received..:** 03/14/08
Prep Date.....: 03/15/08 **Analysis Date..:** 03/17/08
Prep Batch #...: 8075016
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**0.11**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	93	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-001 **Work Order #...:** KJLPL2AF **Matrix.....:** WG
Date Sampled...: 03/13/08 08:55 **Date Received..:** 03/14/08
Prep Date.....: 03/21/08 **Analysis Date..:** 03/23/08
Prep Batch #...: 8081123
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**0.13 B**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	119 *	(10 - 110)

NOTE(S):

* Surrogate recovery is outside stated control limits.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-001 **Work Order #...:** KJLPL1AD **Matrix.....:** WG
Date Sampled...: 03/13/08 08:55 **Date Received..:** 03/14/08
Prep Date.....: 03/16/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8075061
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	68	(27 - 130)
Decachlorobiphenyl	23	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080313)

DISSOLVED Metals

Lot-Sample #...: A8C140216-001 **Matrix.....:** WG
Date Sampled...: 03/13/08 08:55 **Date Received..:** 03/14/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8077023						
Arsenic	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLPL1AH
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**26.0 B,J**	**200**	**ug/L**	**SW846 6010B**	**03/17-03/18/08**	**KJLPL1AL**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	**0.85 B**	**5.0**	**ug/L**	**SW846 6010B**	**03/17-03/18/08**	**KJLPL1AM**
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	03/17-03/18/08	KJLPL1AJ
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLPL1AN
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	03/17-03/18/08	KJLPL1AK
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLPL1AP
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	03/17-03/18/08	KJLPL1AG
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-10(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-002 **Work Order #...:** KJLP71AA **Matrix.....:** WG
Date Sampled...: 03/13/08 10:15 **Date Received..:** 03/14/08
Prep Date.....: 03/19/08 **Analysis Date..:** 03/19/08
Prep Batch #...: 8080146
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.3 J,B**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**1.5 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-10(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-002 **Work Order #...:** KJLP71AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-10(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-002 **Work Order #...:** KJLP71AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-10(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-002 **Work Order #...:** KJLP71AC **Matrix.....:** WG
Date Sampled...: 03/13/08 10:15 **Date Received..:** 03/14/08
Prep Date.....: 03/16/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8075065
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-10(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-002 **Work Order #...:** KJLP71AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	87	(27 - 111)
2-Fluorobiphenyl	72	(28 - 110)
Terphenyl-d14	97	(37 - 119)
Phenol-d5	76	(10 - 110)
2-Fluorophenol	74	(10 - 110)
2,4,6-Tribromophenol	89	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: AMW-10(20080313)

GC Volatiles

Lot-Sample #...: A8C140216-002 **Work Order #...:** KJLP71AE **Matrix.....:** WG
Date Sampled...: 03/13/08 10:15 **Date Received..:** 03/14/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8076020
Dilution Factor: 1 **Method.....:** WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

ARCADIS U.S., Inc.

Client Sample ID: AMW-10(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-002 **Work Order #...:** KJLP71AF **Matrix.....:** WG
Date Sampled...: 03/13/08 10:15 **Date Received..:** 03/14/08
Prep Date.....: 03/15/08 **Analysis Date..:** 03/17/08
Prep Batch #...: 8075016
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**0.99**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	86	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: AMW-10(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-002 **Work Order #...:** KJLP72AF **Matrix.....:** WG
Date Sampled...: 03/13/08 10:15 **Date Received..:** 03/14/08
Prep Date.....: 03/21/08 **Analysis Date..:** 03/23/08
Prep Batch #...: 8081123
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**1.2 B**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	119 *	(10 - 110)

NOTE(S):

* Surrogate recovery is outside stated control limits.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-10(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-002 **Work Order #...:** KJLP71AD **Matrix.....:** WG
Date Sampled...: 03/13/08 10:15 **Date Received..:** 03/14/08
Prep Date.....: 03/16/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8075061
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	76	(27 - 130)
Decachlorobiphenyl	32	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-10(20080313)

DISSOLVED Metals

Lot-Sample #...: A8C140216-002 **Matrix.....:** WG
Date Sampled...: 03/13/08 10:15 **Date Received..:** 03/14/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8077023						
Arsenic	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLP71AH
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**87.7 B,J**	**200**	**ug/L**	**SW846 6010B**	**03/17-03/18/08**	**KJLP71AL**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	03/17-03/18/08	KJLP71AM
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	03/17-03/18/08	KJLP71AJ
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLP71AN
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	03/17-03/18/08	KJLP71AK
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLP71AP
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	03/17-03/18/08	KJLP71AG
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-003 **Work Order #...:** KJLRC1AA **Matrix.....:** WG
Date Sampled...: 03/13/08 11:15 **Date Received..:** 03/14/08
Prep Date.....: 03/19/08 **Analysis Date..:** 03/19/08
Prep Batch #...: 8080146
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**8.6 J,B**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**2.0 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	**1.3**	**1.0**	**ug/L**	**0.13**
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-003 **Work Order #...:** KJLRC1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-003 **Work Order #...:** KJLRC1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-003 **Work Order #...:** KJLRC1AC **Matrix.....:** WG
Date Sampled...: 03/13/08 11:15 **Date Received..:** 03/14/08
Prep Date.....: 03/16/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8075065
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-003 **Work Order #...:** KJLRC1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	82	(27 - 111)
2-Fluorobiphenyl	71	(28 - 110)
Terphenyl-d14	91	(37 - 119)
Phenol-d5	69	(10 - 110)
2-Fluorophenol	67	(10 - 110)
2,4,6-Tribromophenol	89	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20080313)

GC Volatiles

Lot-Sample #...: A8C140216-003 **Work Order #...:** KJLRC1AE **Matrix.....:** WG
Date Sampled...: 03/13/08 11:15 **Date Received..:** 03/14/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8076020
Dilution Factor: 1 **Method.....:** WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-003 **Work Order #...:** KJLRC1AF **Matrix.....:** WG
Date Sampled...: 03/13/08 11:15 **Date Received..:** 03/14/08
Prep Date.....: 03/15/08 **Analysis Date..:** 03/17/08
Prep Batch #...: 8075016
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**0.37**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	98	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-003 **Work Order #...:** KJLRC2AF **Matrix.....:** WG
Date Sampled...: 03/13/08 11:15 **Date Received..:** 03/14/08
Prep Date.....: 03/21/08 **Analysis Date..:** 03/23/08
Prep Batch #...: 8081123
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**0.38 B**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	126 *	(10 - 110)

NOTE(S):

* Surrogate recovery is outside stated control limits.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-003 **Work Order #...:** KJLRC1AD **Matrix.....:** WG
Date Sampled...: 03/13/08 11:15 **Date Received..:** 03/14/08
Prep Date.....: 03/16/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8075061
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(27 - 130)
Decachlorobiphenyl	18	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-02(20080313)

DISSOLVED Metals

Lot-Sample #...: A8C140216-003 **Matrix.....:** WG
Date Sampled...: 03/13/08 11:15 **Date Received..:** 03/14/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8077023						
Arsenic	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRC1AH
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**131 B,J**	**200**	**ug/L**	**SW846 6010B**	**03/17-03/18/08**	**KJLRC1AL**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRC1AM
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRC1AJ
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRC1AN
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRC1AK
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRC1AP
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	03/17-03/18/08	KJLRC1AG
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-06(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-004 **Work Order #...:** KJLRD1AA **Matrix.....:** WG
Date Sampled...: 03/13/08 12:15 **Date Received..:** 03/14/08
Prep Date.....: 03/20/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8080146
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**4.9 J,B**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**1.7 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	**0.50 J**	**1.0**	**ug/L**	**0.12**
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-06(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-004 **Work Order #...:** KJLRD1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-06(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-004 **Work Order #...:** KJLRD1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-06(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-004 **Work Order #...:** KJLRD1AC **Matrix.....:** WG
Date Sampled...: 03/13/08 12:15 **Date Received..:** 03/14/08
Prep Date.....: 03/16/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8075065
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-06(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-004 **Work Order #...:** KJLRD1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	87	(27 - 111)
2-Fluorobiphenyl	72	(28 - 110)
Terphenyl-d14	101	(37 - 119)
Phenol-d5	74	(10 - 110)
2-Fluorophenol	76	(10 - 110)
2,4,6-Tribromophenol	96	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-005 **Work Order #...:** KJLRE1AA **Matrix.....:** WG
Date Sampled...: 03/13/08 13:25 **Date Received..:** 03/14/08
Prep Date.....: 03/20/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8080146
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.8 J,B**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-005 **Work Order #...:** KJLRE1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-005 **Work Order #...:** KJLRE1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-005 **Work Order #...:** KJLRE1AC **Matrix.....:** WG
Date Sampled...: 03/13/08 13:25 **Date Received..:** 03/14/08
Prep Date.....: 03/17/08 **Analysis Date..:** 03/19/08
Prep Batch #...: 8077094
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	**1.5 J**	**10**	**ug/L**	**0.88**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-005 **Work Order #...:** KJLRE1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(27 - 111)
2-Fluorobiphenyl	60	(28 - 110)
Terphenyl-d14	83	(37 - 119)
Phenol-d5	17	(10 - 110)
2-Fluorophenol	30	(10 - 110)
2,4,6-Tribromophenol	89	(22 - 120)

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20080313)

GC Volatiles

Lot-Sample #...: A8C140216-005 **Work Order #...:** KJLRE1AE **Matrix.....:** WG
Date Sampled...: 03/13/08 13:25 **Date Received..:** 03/14/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8076020
Dilution Factor: 1 **Method.....:** WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-005 **Work Order #...:** KJLRE1AF **Matrix.....:** WG
Date Sampled...: 03/13/08 13:25 **Date Received..:** 03/14/08
Prep Date.....: 03/15/08 **Analysis Date..:** 03/17/08
Prep Batch #...: 8075016
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**1.5**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	98	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-005 **Work Order #...:** KJLRE2AF **Matrix.....:** WG
Date Sampled...: 03/13/08 13:25 **Date Received..:** 03/14/08
Prep Date.....: 03/21/08 **Analysis Date..:** 03/24/08
Prep Batch #...: 8081123
Dilution Factor: 5 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**2.3 B**	**0.50**	**mg/L**	**0.080**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	128 DIL,*	(10 - 110)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-005 **Work Order #...:** KJLRE1AD **Matrix.....:** WG
Date Sampled...: 03/13/08 13:25 **Date Received..:** 03/14/08
Prep Date.....: 03/16/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8075061
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	82	(27 - 130)
Decachlorobiphenyl	38	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-01(20080313)

DISSOLVED Metals

Lot-Sample #...: A8C140216-005 **Matrix.....:** WG
Date Sampled...: 03/13/08 13:25 **Date Received..:** 03/14/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8077023						
Arsenic	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRE1AH
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**92.4 B,J**	**200**	**ug/L**	**SW846 6010B**	**03/17-03/18/08**	**KJLRE1AL**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRE1AM
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRE1AJ
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRE1AN
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRE1AK
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRE1AP
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	03/17-03/18/08	KJLRE1AG
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: TB-001(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-006 **Work Order #...:** KJLRG1AA **Matrix.....:** WQ
Date Sampled...: 03/13/08 **Date Received..:** 03/14/08
Prep Date.....: 03/20/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8080146
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**7.8 J,B**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: TB-001(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-006 **Work Order #...:** KJLRG1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	**1.7**	**1.0**	**ug/L**	**0.33**
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: TB-001(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-006 **Work Order #...:** KJLRG1AA **Matrix.....:** WQ

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-007 **Work Order #...:** KJLRH1AA **Matrix.....:** WG
Date Sampled...: 03/13/08 14:55 **Date Received..:** 03/14/08
Prep Date.....: 03/20/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8080146
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.9 J,B**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	**0.33 J**	**1.0**	**ug/L**	**0.13**
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-007 **Work Order #...:** KJLRH1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-007 **Work Order #...:** KJLRH1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-007 **Work Order #...:** KJLRH1AC **Matrix.....:** WG
Date Sampled...: 03/13/08 14:55 **Date Received..:** 03/14/08
Prep Date.....: 03/16/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8075065
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.054
Acenaphthylene	ND	10	ug/L	0.054
Acetophenone	ND	10	ug/L	0.55
Anthracene	ND	10	ug/L	0.054
Atrazine	ND	10	ug/L	0.65
Benzaldehyde	ND	10	ug/L	0.75
Benzo(a)anthracene	ND	10	ug/L	0.052
Benzo(b)fluoranthene	ND	10	ug/L	0.049
Benzo(k)fluoranthene	ND	10	ug/L	0.049
Benzo(ghi)perylene	ND	10	ug/L	0.053
Benzo(a)pyrene	ND	10	ug/L	0.048
1,1'-Biphenyl	ND	10	ug/L	0.55
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.49
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.088
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.88
4-Bromophenyl phenyl ether	ND	10	ug/L	0.52
Butyl benzyl phthalate	ND	10	ug/L	0.51
Caprolactam	ND	10	ug/L	0.61
Carbazole	ND	10	ug/L	0.54
4-Chloroaniline	ND	10	ug/L	0.56
4-Chloro-3-methylphenol	ND	10	ug/L	0.41
2-Chloronaphthalene	ND	10	ug/L	0.62
2-Chlorophenol	ND	10	ug/L	0.039
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.55
Chrysene	ND	10	ug/L	0.048
Dibenz(a,h)anthracene	ND	10	ug/L	0.039
Dibenzofuran	ND	10	ug/L	0.54
Di-n-butyl phthalate	ND	10	ug/L	0.61
3,3'-Dichlorobenzidine	ND	50	ug/L	0.48
2,4-Dichlorophenol	ND	10	ug/L	1.1
Diethyl phthalate	ND	10	ug/L	0.63
2,4-Dimethylphenol	ND	10	ug/L	0.56
Dimethyl phthalate	ND	10	ug/L	0.44
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.27

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ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20080313)

GC/MS Semivolatiles

Lot-Sample #...: A8C140216-007 **Work Order #...:** KJLRH1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	3.5
2,4-Dinitrotoluene	ND	10	ug/L	0.40
2,6-Dinitrotoluene	ND	10	ug/L	0.47
Di-n-octyl phthalate	ND	10	ug/L	0.39
Fluoranthene	ND	10	ug/L	0.036
Fluorene	ND	10	ug/L	0.043
Hexachlorobenzene	ND	10	ug/L	0.065
Hexachlorobutadiene	ND	10	ug/L	0.51
Hexachlorocyclopenta-diene	ND	50	ug/L	0.74
Hexachloroethane	ND	10	ug/L	0.58
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.065
Isophorone	ND	10	ug/L	0.50
2-Methylnaphthalene	ND	10	ug/L	0.061
2-Methylphenol	ND	10	ug/L	0.56
4-Methylphenol	ND	10	ug/L	0.64
Naphthalene	ND	10	ug/L	0.069
2-Nitroaniline	ND	50	ug/L	0.43
3-Nitroaniline	ND	50	ug/L	0.67
4-Nitroaniline	ND	50	ug/L	0.47
Nitrobenzene	ND	10	ug/L	0.053
2-Nitrophenol	ND	10	ug/L	1.3
4-Nitrophenol	ND	50	ug/L	0.63
N-Nitrosodiphenylamine	ND	10	ug/L	0.46
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.53
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	0.52
Pentachlorophenol	ND	10	ug/L	0.48
Phenanthrene	ND	10	ug/L	0.087
Phenol	ND	10	ug/L	0.96
Pyrene	ND	10	ug/L	0.048
2,4,5-Trichloro-phenol	ND	10	ug/L	0.96
2,4,6-Trichloro-phenol	ND	10	ug/L	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	78	(27 - 111)
2-Fluorobiphenyl	69	(28 - 110)
Terphenyl-d14	87	(37 - 119)
Phenol-d5	70	(10 - 110)
2-Fluorophenol	68	(10 - 110)
2,4,6-Tribromophenol	85	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20080313)

GC Volatiles

Lot-Sample #...: A8C140216-007 **Work Order #...:** KJLRH1AE **Matrix.....:** WG
Date Sampled...: 03/13/08 14:55 **Date Received..:** 03/14/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8076020
Dilution Factor: 1 **Method.....:** WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-007 **Work Order #...:** KJLRH1AF **Matrix.....:** WG
Date Sampled...: 03/13/08 14:55 **Date Received..:** 03/14/08
Prep Date.....: 03/15/08 **Analysis Date..:** 03/17/08
Prep Batch #...: 8075016
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**0.58**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	80	(10 - 110)

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-007 **Work Order #...:** KJLRH2AF **Matrix.....:** WG
Date Sampled...: 03/13/08 14:55 **Date Received..:** 03/14/08
Prep Date.....: 03/21/08 **Analysis Date..:** 03/23/08
Prep Batch #...: 8081123
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**0.79 B**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	118 *	(10 - 110)

NOTE(S):

* Surrogate recovery is outside stated control limits.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20080313)

GC Semivolatiles

Lot-Sample #...: A8C140216-007 **Work Order #...:** KJLRH1AD **Matrix.....:** WG
Date Sampled...: 03/13/08 14:55 **Date Received..:** 03/14/08
Prep Date.....: 03/16/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8075061
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	71	(27 - 130)
Decachlorobiphenyl	11	(10 - 127)

ARCADIS U.S., Inc.

Client Sample ID: AMW-08(20080313)

DISSOLVED Metals

Lot-Sample #...: A8C140216-007 **Matrix.....:** WG
Date Sampled...: 03/13/08 14:55 **Date Received..:** 03/14/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8077023						
Arsenic	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRH1AH
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**105 B,J**	**200**	**ug/L**	**SW846 6010B**	**03/17-03/18/08**	**KJLRH1AL**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRH1AM
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRH1AJ
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRH1AN
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRH1AK
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJLRH1AP
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	03/17-03/18/08	KJLRH1AG
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: TB-002(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-008 **Work Order #...:** KJLRN1AA **Matrix.....:** WQ
Date Sampled...: 03/13/08 **Date Received..:** 03/14/08
Prep Date.....: 03/20/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8080146
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**7.8 J,B**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: TB-002(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-008 **Work Order #...:** KJLRN1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	**2.0**	**1.0**	**ug/L**	**0.33**
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)

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ARCADIS U.S., Inc.

Client Sample ID: TB-002(20080313)

GC/MS Volatiles

Lot-Sample #...: A8C140216-008 **Work Order #...:** KJLRN1AA **Matrix.....:** WQ

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJW0J1AA **Matrix.....:** WATER
MB Lot-Sample #: A8C200000-146
Prep Date.....: 03/19/08
Analysis Date..: 03/19/08 **Prep Batch #...:** 8080146
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	**2.5 J**	**10**	**ug/L**	**SW846 8260B**
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJW0J1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	**0.25 J**	**1.0**	**ug/L**	**SW846 8260B**
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJW0J1AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJNKK1AA **Matrix.....:** WATER
MB Lot-Sample #: A8C150000-065

Prep Date.....: 03/16/08
Analysis Date..: 03/18/08 **Prep Batch #...:** 8075065
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Atrazine	ND	10	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)- ether	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
4,6-Dinitro- 2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJNKK1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	87	(27 - 111)
2-Fluorobiphenyl	73	(28 - 110)
Terphenyl-d14	97	(37 - 119)
Phenol-d5	73	(10 - 110)
2-Fluorophenol	67	(10 - 110)
2,4,6-Tribromophenol	75	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJPH71AA **Matrix.....:** WATER
MB Lot-Sample #: A8C170000-094

Prep Date.....: 03/17/08
Analysis Date..: 03/19/08 **Prep Batch #...:** 8077094
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Atrazine	ND	10	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)- ether	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
4,6-Dinitro- 2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJPH71AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	73	(27 - 111)
2-Fluorobiphenyl	68	(28 - 110)
Terphenyl-d14	91	(37 - 119)
Phenol-d5	34	(10 - 110)
2-Fluorophenol	52	(10 - 110)
2,4,6-Tribromophenol	83	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJPDN1AA **Matrix.....:** WATER
MB Lot-Sample #: A8C160000-020
Prep Date.....: 03/14/08
Analysis Date..: 03/14/08 **Prep Batch #...:** 8076020
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/L	WI-GRO GRO

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJM3C1AA **Matrix.....:** WATER
MB Lot-Sample #: A8C150000-016
Prep Date.....: 03/15/08
Analysis Date..: 03/17/08 **Prep Batch #...:** 8075016
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	ND	0.10	mg/L	WI-DRO DRO

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	83	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJ04L1AA **Matrix.....:** WATER
MB Lot-Sample #: A8C210000-123
Prep Date.....: 03/21/08
Analysis Date..: 03/23/08 **Prep Batch #...:** 8081123
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	**0.020 J**	**0.10**	**mg/L**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	137 *	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJNKC1AA **Matrix.....:** WATER
MB Lot-Sample #: A8C150000-061
Prep Date.....: 03/16/08
Analysis Date..: 03/20/08 **Prep Batch #...:** 8075061
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
PCB-1016	ND	0.20	ug/L	SW846 8082
PCB-1221	ND	0.20	ug/L	SW846 8082
PCB-1232	ND	0.20	ug/L	SW846 8082
PCB-1242	ND	0.20	ug/L	SW846 8082
PCB-1248	ND	0.20	ug/L	SW846 8082
PCB-1254	ND	0.20	ug/L	SW846 8082
PCB-1260	ND	0.20	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(27 - 130)
Decachlorobiphenyl	55	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: A8C140216 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A8C170000-023 **Prep Batch #...:** 8077023						
Arsenic	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJPE61CW
		Dilution Factor: 1				
Barium	**0.88 B**	**200**	**ug/L**	**SW846 6010B**	**03/17-03/18/08**	**KJPE61C1**
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	03/17-03/18/08	KJPE61C2
		Dilution Factor: 1				
Lead	ND	3.0	ug/L	SW846 6010B	03/17-03/18/08	KJPE61CX
		Dilution Factor: 1				
Chromium	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJPE61C3
		Dilution Factor: 1				
Selenium	ND	5.0	ug/L	SW846 6010B	03/17-03/18/08	KJPE61C0
		Dilution Factor: 1				
Silver	ND	10.0	ug/L	SW846 6010B	03/17-03/18/08	KJPE61C4
		Dilution Factor: 1				
Mercury	ND	0.20	ug/L	SW846 7470A	03/17-03/18/08	KJPE61CV
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJW0J1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C200000-146 KJW0J1AD-LCSD
Prep Date.....: 03/19/08 **Analysis Date..:** 03/19/08
Prep Batch #...: 8080146
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	127	(22 - 200)			SW846 8260B
	106	(22 - 200)	18	(0-95)	SW846 8260B
Benzene	**96**	**(80 - 116)**			**SW846 8260B**
	103	**(80 - 116)**	**7.1**	**(0-20)**	**SW846 8260B**
1,2-Dichloroethene (total)	105	(82 - 116)			SW846 8260B
	112	(82 - 116)	7.2	(0-30)	SW846 8260B
Bromobenzene	96	(70 - 130)			SW846 8260B
	107	(70 - 130)	11	(0-30)	SW846 8260B
Bromochloromethane	107	(70 - 130)			SW846 8260B
	118	(70 - 130)	9.4	(0-30)	SW846 8260B
Bromodichloromethane	99	(87 - 130)			SW846 8260B
	109	(87 - 130)	9.0	(0-30)	SW846 8260B
Bromoform	88	(76 - 150)			SW846 8260B
	96	(76 - 150)	8.6	(0-30)	SW846 8260B
Bromomethane	94	(64 - 129)			SW846 8260B
	114	(64 - 129)	19	(0-30)	SW846 8260B
Methyl ethyl ketone	93	(28 - 237)			SW846 8260B
	92	(28 - 237)	0.35	(0-65)	SW846 8260B
n-Butylbenzene	84	(70 - 130)			SW846 8260B
	93	(70 - 130)	10	(0-30)	SW846 8260B
Xylenes (total)	96	(87 - 116)			SW846 8260B
	104	(87 - 116)	8.6	(0-30)	SW846 8260B
sec-Butylbenzene	86	(70 - 130)			SW846 8260B
	96	(70 - 130)	11	(0-30)	SW846 8260B
tert-Butylbenzene	88	(70 - 130)			SW846 8260B
	99	(70 - 130)	11	(0-30)	SW846 8260B
Carbon disulfide	93	(73 - 139)			SW846 8260B
	102	(73 - 139)	9.5	(0-30)	SW846 8260B
Carbon tetrachloride	107	(75 - 149)			SW846 8260B
	118	(75 - 149)	9.7	(0-30)	SW846 8260B
Chlorobenzene	**100**	**(76 - 117)**			**SW846 8260B**
	108	**(76 - 117)**	**7.9**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	91	(81 - 138)			SW846 8260B
	99	(81 - 138)	8.4	(0-30)	SW846 8260B
Chloroethane	76	(66 - 126)			SW846 8260B
	94	(66 - 126)	22	(0-30)	SW846 8260B
n-Hexane	87	(70 - 130)			SW846 8260B
	97	(70 - 130)	10	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJW0J1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C200000-146 KJW0J1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	101	(84 - 128)			SW846 8260B
	111	(84 - 128)	8.9	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	90	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.3	(0-30)	SW846 8260B
Acetonitrile	149 a	(50 - 130)			SW846 8260B
	125	(50 - 130)	17	(0-30)	SW846 8260B
Chloromethane	70	(48 - 123)			SW846 8260B
	79	(48 - 123)	13	(0-30)	SW846 8260B
Acrolein	96	(50 - 130)			SW846 8260B
	96	(50 - 130)	0.37	(0-30)	SW846 8260B
Vinyl acetate	79	(70 - 130)			SW846 8260B
	93	(70 - 130)	17	(0-30)	SW846 8260B
Acrylonitrile	94	(50 - 130)			SW846 8260B
	99	(50 - 130)	4.8	(0-30)	SW846 8260B
2-Chlorotoluene	90	(70 - 130)			SW846 8260B
	100	(70 - 130)	11	(0-30)	SW846 8260B
4-Chlorotoluene	92	(70 - 130)			SW846 8260B
	103	(70 - 130)	12	(0-30)	SW846 8260B
Cyclohexane	73	(70 - 130)			SW846 8260B
	78	(70 - 130)	7.5	(0-30)	SW846 8260B
Iodomethane	112	(70 - 130)			SW846 8260B
	123	(70 - 130)	9.9	(0-30)	SW846 8260B
Isopropyl ether	104	(70 - 130)			SW846 8260B
	111	(70 - 130)	6.8	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	76	(70 - 130)			SW846 8260B
	81	(70 - 130)	7.0	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	92	(70 - 130)			SW846 8260B
	98	(70 - 130)	6.5	(0-30)	SW846 8260B
Dibromomethane	101	(70 - 130)			SW846 8260B
	108	(70 - 130)	7.2	(0-30)	SW846 8260B
1,2-Dichlorobenzene	96	(70 - 130)			SW846 8260B
	108	(70 - 130)	12	(0-30)	SW846 8260B
1,3-Dichlorobenzene	97	(70 - 130)			SW846 8260B
	108	(70 - 130)	11	(0-30)	SW846 8260B
1,4-Dichlorobenzene	97	(70 - 130)			SW846 8260B
	107	(70 - 130)	10	(0-30)	SW846 8260B
Dichlorodifluoromethane	75	(70 - 130)			SW846 8260B
	84	(70 - 130)	13	(0-30)	SW846 8260B
1,1-Dichloroethane	95	(86 - 123)			SW846 8260B
	103	(86 - 123)	8.7	(0-30)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJW0J1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C200000-146 KJW0J1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	103	(79 - 136)			SW846 8260B
	110	(79 - 136)	6.3	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	107	(85 - 113)			SW846 8260B
	114 a	(85 - 113)	6.3	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	103	(80 - 120)			SW846 8260B
	111	(80 - 120)	8.2	(0-30)	SW846 8260B
1,1-Dichloroethene	**94**	**(63 - 130)**			**SW846 8260B**
	103	**(63 - 130)**	**9.2**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	93	(82 - 115)			SW846 8260B
	100	(82 - 115)	6.8	(0-30)	SW846 8260B
1,3-Dichloropropane	89	(70 - 130)			SW846 8260B
	94	(70 - 130)	5.5	(0-30)	SW846 8260B
2,2-Dichloropropane	96	(70 - 130)			SW846 8260B
	105	(70 - 130)	9.1	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	91	(84 - 130)			SW846 8260B
	97	(84 - 130)	6.5	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	81 a	(84 - 130)			SW846 8260B
	88	(84 - 130)	9.0	(0-30)	SW846 8260B
1,1-Dichloropropene	96	(70 - 130)			SW846 8260B
	103	(70 - 130)	7.4	(0-30)	SW846 8260B
Ethylbenzene	97	(86 - 116)			SW846 8260B
	105	(86 - 116)	7.8	(0-30)	SW846 8260B
Hexachlorobutadiene	101	(70 - 130)			SW846 8260B
	107	(70 - 130)	6.0	(0-30)	SW846 8260B
2-Hexanone	72	(35 - 200)			SW846 8260B
	74	(35 - 200)	2.4	(0-52)	SW846 8260B
Isopropylbenzene	106	(70 - 130)			SW846 8260B
	116	(70 - 130)	8.8	(0-30)	SW846 8260B
p-Isopropyltoluene	90	(70 - 130)			SW846 8260B
	101	(70 - 130)	12	(0-30)	SW846 8260B
Methyl acetate	79	(70 - 130)			SW846 8260B
	85	(70 - 130)	7.6	(0-30)	SW846 8260B
Methylcyclohexane	78	(70 - 130)			SW846 8260B
	84	(70 - 130)	8.1	(0-30)	SW846 8260B
Methylene chloride	92	(78 - 118)			SW846 8260B
	101	(78 - 118)	9.6	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	82	(78 - 141)			SW846 8260B
	85	(78 - 141)	3.4	(0-32)	SW846 8260B
Methyl tert-butyl ether (MTBE)	93	(70 - 130)			SW846 8260B
	101	(70 - 130)	7.8	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJW0J1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C200000-146 KJW0J1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	85	(70 - 130)			SW846 8260B
	89	(70 - 130)	4.7	(0-30)	SW846 8260B
n-Propylbenzene	89	(70 - 130)			SW846 8260B
	100	(70 - 130)	11	(0-30)	SW846 8260B
Styrene	93	(85 - 117)			SW846 8260B
	101	(85 - 117)	9.1	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	98	(70 - 130)			SW846 8260B
	107	(70 - 130)	8.9	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	76 a	(85 - 118)			SW846 8260B
	84 a	(85 - 118)	10	(0-30)	SW846 8260B
Tetrachloroethene	110	(88 - 113)			SW846 8260B
	118 a	(88 - 113)	6.4	(0-30)	SW846 8260B
Toluene	**94**	**(74 - 119)**			**SW846 8260B**
	101	**(74 - 119)**	**6.6**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	100	(70 - 130)			SW846 8260B
	104	(70 - 130)	4.7	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	102	(70 - 130)			SW846 8260B
	106	(70 - 130)	4.1	(0-30)	SW846 8260B
1,1,1-Trichloroethane	107	(78 - 140)			SW846 8260B
	117	(78 - 140)	9.0	(0-30)	SW846 8260B
1,1,2-Trichloroethane	91	(83 - 122)			SW846 8260B
	98	(83 - 122)	7.9	(0-30)	SW846 8260B
Trichloroethene	**111**	**(75 - 122)**			**SW846 8260B**
	119	**(75 - 122)**	**7.2**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	121	(70 - 130)			SW846 8260B
	134 a	(70 - 130)	10	(0-30)	SW846 8260B
1,2,3-Trichloropropane	92	(70 - 130)			SW846 8260B
	100	(70 - 130)	8.4	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	123	(70 - 130)			SW846 8260B
	133 a	(70 - 130)	7.8	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	86	(70 - 130)			SW846 8260B
	96	(70 - 130)	11	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	86	(70 - 130)			SW846 8260B
	96	(70 - 130)	11	(0-30)	SW846 8260B
Vinyl chloride	78	(61 - 120)			SW846 8260B
	85	(61 - 120)	9.6	(0-30)	SW846 8260B
m-Xylene & p-Xylene	96	(70 - 130)			SW846 8260B
	104	(70 - 130)	8.3	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJW0J1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C200000-146 KJW0J1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	95	(70 - 130)			SW846 8260B
	104	(70 - 130)	9.1	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(73 - 122)
	109	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	98	(61 - 128)
Toluene-d8	98	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)
	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJNKK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C150000-065 KJNKK1AD-LCSD
Prep Date.....: 03/16/08 **Analysis Date..:** 03/18/08
Prep Batch #...: 8075065
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichloro-benzene	**66**	**(25 - 110)**			**SW846 8270C**
	65	**(25 - 110)**	**1.4**	**(0-30)**	**SW846 8270C**
Acenaphthene	**69**	**(40 - 110)**			**SW846 8270C**
	67	**(40 - 110)**	**3.1**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**97**	**(19 - 110)**			**SW846 8270C**
	99	**(19 - 110)**	**1.7**	**(0-30)**	**SW846 8270C**
Acenaphthylene	75	(43 - 110)			SW846 8270C
	74	(43 - 110)	1.7	(0-30)	SW846 8270C
Acetophenone	73	(50 - 130)			SW846 8270C
	74	(50 - 130)	1.5	(0-30)	SW846 8270C
Anthracene	77	(54 - 114)			SW846 8270C
	76	(54 - 114)	0.55	(0-30)	SW846 8270C
Atrazine	92	(50 - 130)			SW846 8270C
	92	(50 - 130)	0.080	(0-30)	SW846 8270C
1,2-Dichlorobenzene	64	(23 - 110)			SW846 8270C
	64	(23 - 110)	0.24	(0-30)	SW846 8270C
1,3-Dichlorobenzene	59	(19 - 110)			SW846 8270C
	60	(19 - 110)	0.70	(0-30)	SW846 8270C
Benzaldehyde	91	(10 - 130)			SW846 8270C
	90	(10 - 130)	1.2	(0-30)	SW846 8270C
Benzo(a)anthracene	75	(55 - 115)			SW846 8270C
	72	(55 - 115)	3.7	(0-30)	SW846 8270C
Benzo(b)fluoranthene	82	(43 - 122)			SW846 8270C
	75	(43 - 122)	8.1	(0-30)	SW846 8270C
Benzo(k)fluoranthene	75	(43 - 124)			SW846 8270C
	77	(43 - 124)	1.4	(0-30)	SW846 8270C
Benzo(ghi)perylene	81	(45 - 120)			SW846 8270C
	76	(45 - 120)	6.2	(0-30)	SW846 8270C
Benzo(a)pyrene	75	(43 - 116)			SW846 8270C
	72	(43 - 116)	4.0	(0-30)	SW846 8270C
1,1'-Biphenyl	62	(50 - 130)			SW846 8270C
	59	(50 - 130)	3.9	(0-30)	SW846 8270C
bis(2-Chloroethoxy) methane	74	(39 - 110)			SW846 8270C
	75	(39 - 110)	0.88	(0-30)	SW846 8270C
bis(2-Chloroethyl)-ether	71	(34 - 113)			SW846 8270C
	80	(34 - 113)	11	(0-30)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJNKK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C150000-065 KJNKK1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
bis(2-Ethylhexyl) phthalate	82	(36 - 163)			SW846 8270C
	80	(36 - 163)	1.7	(0-30)	SW846 8270C
4-Bromophenyl phenyl ether	85	(51 - 114)			SW846 8270C
	85	(51 - 114)	0.020	(0-30)	SW846 8270C
Butyl benzyl phthalate	85	(53 - 126)			SW846 8270C
	83	(53 - 126)	2.4	(0-30)	SW846 8270C
Caprolactam	86	(50 - 130)			SW846 8270C
	81	(50 - 130)	6.0	(0-30)	SW846 8270C
Carbazole	77	(53 - 120)			SW846 8270C
	76	(53 - 120)	0.89	(0-30)	SW846 8270C
4-Chloroaniline	69	(10 - 110)			SW846 8270C
	69	(10 - 110)	0.31	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	**76**	**(39 - 110)**			**SW846 8270C**
	76	**(39 - 110)**	**0.28**	**(0-30)**	**SW846 8270C**
Benzoic acid	22	(10 - 129)			SW846 8270C
	16	(10 - 129)	30	(0-30)	SW846 8270C
1,4-Dioxane	44	(10 - 110)			SW846 8270C
	49	(10 - 110)	9.6	(0-30)	SW846 8270C
2-Chloronaphthalene	72	(39 - 110)			SW846 8270C
	70	(39 - 110)	3.0	(0-30)	SW846 8270C
2-Chlorophenol	**71**	**(27 - 110)**			**SW846 8270C**
	73	**(27 - 110)**	**3.3**	**(0-30)**	**SW846 8270C**
Aniline	42	(10 - 130)			SW846 8270C
	41	(10 - 130)	2.5	(0-30)	SW846 8270C
Benzyl alcohol	75	(10 - 130)			SW846 8270C
	73	(10 - 130)	3.1	(0-30)	SW846 8270C
N-Nitrosodimethylamine	62	(10 - 130)			SW846 8270C
	63	(10 - 130)	0.76	(0-30)	SW846 8270C
4-Chlorophenyl phenyl ether	83	(50 - 115)			SW846 8270C
	80	(50 - 115)	4.5	(0-30)	SW846 8270C
1-Methylnaphthalene	67	(10 - 130)			SW846 8270C
	67	(10 - 130)	0.49	(0-30)	SW846 8270C
1,2-Dinitrobenzene	94	(10 - 130)			SW846 8270C
	91	(10 - 130)	3.3	(0-30)	SW846 8270C
2,3,5,6-Tetrachlorophenol	73	(10 - 130)			SW846 8270C
	69	(10 - 130)	4.7	(0-30)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJNKK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C150000-065 KJNKK1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chrysene	81	(55 - 115)			SW846 8270C
	76	(55 - 115)	6.0	(0-30)	SW846 8270C
Dibenz(a,h)anthracene	83	(46 - 122)			SW846 8270C
	80	(46 - 122)	3.8	(0-30)	SW846 8270C
Dibenzofuran	74	(46 - 111)			SW846 8270C
	72	(46 - 111)	2.2	(0-30)	SW846 8270C
Di-n-butyl phthalate	85	(55 - 122)			SW846 8270C
	87	(55 - 122)	2.0	(0-30)	SW846 8270C
3,3'-Dichlorobenzidine	47	(19 - 110)			SW846 8270C
	46	(19 - 110)	2.2	(0-30)	SW846 8270C
2,4-Dichlorophenol	76	(33 - 110)			SW846 8270C
	75	(33 - 110)	1.1	(0-30)	SW846 8270C
Diethyl phthalate	79	(33 - 134)			SW846 8270C
	80	(33 - 134)	0.66	(0-30)	SW846 8270C
2,4-Dimethylphenol	61	(12 - 110)			SW846 8270C
	61	(12 - 110)	0.87	(0-30)	SW846 8270C
Dimethyl phthalate	79	(15 - 143)			SW846 8270C
	78	(15 - 143)	1.6	(0-30)	SW846 8270C
4,6-Dinitro-2-methylphenol	65	(28 - 112)			SW846 8270C
	57	(28 - 112)	13	(0-30)	SW846 8270C
2,4-Dinitrophenol	45	(17 - 112)			SW846 8270C
	31 p	(17 - 112)	37	(0-30)	SW846 8270C
2,4-Dinitrotoluene	**83**	**(52 - 123)**			**SW846 8270C**
	80	**(52 - 123)**	**3.4**	**(0-30)**	**SW846 8270C**
2,6-Dinitrotoluene	83	(52 - 119)			SW846 8270C
	83	(52 - 119)	1.0	(0-30)	SW846 8270C
Di-n-octyl phthalate	77	(44 - 128)			SW846 8270C
	74	(44 - 128)	3.5	(0-30)	SW846 8270C
Fluoranthene	86	(54 - 122)			SW846 8270C
	85	(54 - 122)	0.36	(0-30)	SW846 8270C
Fluorene	74	(47 - 112)			SW846 8270C
	73	(47 - 112)	1.2	(0-30)	SW846 8270C
Hexachlorobenzene	80	(51 - 112)			SW846 8270C
	79	(51 - 112)	1.4	(0-30)	SW846 8270C
Hexachlorobutadiene	61	(13 - 110)			SW846 8270C
	62	(13 - 110)	0.41	(0-30)	SW846 8270C
Hexachlorocyclopenta-diene	38	(10 - 110)			SW846 8270C
	37	(10 - 110)	2.3	(0-30)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJNKK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C150000-065 KJNKK1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Hexachloroethane	59	(12 - 110)			SW846 8270C
	59	(12 - 110)	0.090	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	83	(46 - 121)			SW846 8270C
	79	(46 - 121)	4.9	(0-30)	SW846 8270C
Isophorone	83	(44 - 128)			SW846 8270C
	83	(44 - 128)	0.070	(0-30)	SW846 8270C
2-Methylnaphthalene	76	(35 - 110)			SW846 8270C
	75	(35 - 110)	1.3	(0-30)	SW846 8270C
2-Methylphenol	71	(30 - 110)			SW846 8270C
	72	(30 - 110)	1.4	(0-30)	SW846 8270C
4-Methylphenol	74	(32 - 110)			SW846 8270C
	74	(32 - 110)	0.96	(0-30)	SW846 8270C
Naphthalene	68	(31 - 110)			SW846 8270C
	66	(31 - 110)	3.0	(0-30)	SW846 8270C
2-Nitroaniline	79	(43 - 130)			SW846 8270C
	77	(43 - 130)	2.4	(0-30)	SW846 8270C
3-Nitroaniline	83	(45 - 116)			SW846 8270C
	81	(45 - 116)	2.4	(0-30)	SW846 8270C
4-Nitroaniline	76	(45 - 120)			SW846 8270C
	74	(45 - 120)	1.8	(0-30)	SW846 8270C
Nitrobenzene	84	(37 - 115)			SW846 8270C
	84	(37 - 115)	0.19	(0-30)	SW846 8270C
2-Nitrophenol	79	(29 - 110)			SW846 8270C
	79	(29 - 110)	0.69	(0-30)	SW846 8270C
4-Nitrophenol	**81**	**(12 - 130)**			**SW846 8270C**
	81	**(12 - 130)**	**0.26**	**(0-30)**	**SW846 8270C**
N-Nitrosodiphenylamine	72	(53 - 113)			SW846 8270C
	72	(53 - 113)	0.62	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**76**	**(37 - 121)**			**SW846 8270C**
	76	**(37 - 121)**	**0.25**	**(0-30)**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	75	(25 - 128)			SW846 8270C
	75	(25 - 128)	0.80	(0-30)	SW846 8270C
Pentachlorophenol	**70**	**(26 - 110)**			**SW846 8270C**
	64	**(26 - 110)**	**8.6**	**(0-30)**	**SW846 8270C**
Phenanthrene	74	(52 - 114)			SW846 8270C
	73	(52 - 114)	1.0	(0-30)	SW846 8270C
Phenol	**70**	**(14 - 112)**			**SW846 8270C**
	73	**(14 - 112)**	**3.1**	**(0-30)**	**SW846 8270C**
Pyrene	**80**	**(55 - 120)**			**SW846 8270C**
	77	**(55 - 120)**	**3.4**	**(0-30)**	**SW846 8270C**

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJNKK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C150000-065 KJNKK1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
2,4,5-Trichloro-phenol	80	(39 - 110)			SW846 8270C
	79	(39 - 110)	1.9	(0-30)	SW846 8270C
2,4,6-Trichloro-phenol	78	(35 - 110)			SW846 8270C
	78	(35 - 110)	0.040	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	88	(27 - 111)
	85	(27 - 111)
2-Fluorobiphenyl	73	(28 - 110)
	71	(28 - 110)
Terphenyl-d14	95	(37 - 119)
	87	(37 - 119)
Phenol-d5	77	(10 - 110)
	72	(10 - 110)
2-Fluorophenol	73	(10 - 110)
	70	(10 - 110)
2,4,6-Tribromophenol	86	(22 - 120)
	80	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJPH71AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C170000-094 KJPH71AD-LCSD
Prep Date.....: 03/17/08 **Analysis Date..:** 03/19/08
Prep Batch #...: 8077094
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichloro-benzene	**81**	**(25 - 110)**			**SW846 8270C**
	81	**(25 - 110)**	**0.26**	**(0-30)**	**SW846 8270C**
Acenaphthene	**73**	**(40 - 110)**			**SW846 8270C**
	70	**(40 - 110)**	**3.0**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**112 a**	**(19 - 110)**			**SW846 8270C**
	113 a	**(19 - 110)**	**0.77**	**(0-30)**	**SW846 8270C**
Acenaphthylene	78	(43 - 110)			SW846 8270C
	75	(43 - 110)	3.8	(0-30)	SW846 8270C
Acetophenone	71	(50 - 130)			SW846 8270C
	66	(50 - 130)	8.4	(0-30)	SW846 8270C
Anthracene	81	(54 - 114)			SW846 8270C
	77	(54 - 114)	5.4	(0-30)	SW846 8270C
Atrazine	90	(50 - 130)			SW846 8270C
	87	(50 - 130)	3.1	(0-30)	SW846 8270C
1,2-Dichlorobenzene	78	(23 - 110)			SW846 8270C
	70	(23 - 110)	10	(0-30)	SW846 8270C
1,3-Dichlorobenzene	73	(19 - 110)			SW846 8270C
	72	(19 - 110)	2.1	(0-30)	SW846 8270C
Benzaldehyde	85	(10 - 130)			SW846 8270C
	76	(10 - 130)	10	(0-30)	SW846 8270C
Benzo(a)anthracene	78	(55 - 115)			SW846 8270C
	73	(55 - 115)	6.4	(0-30)	SW846 8270C
Benzo(b)fluoranthene	79	(43 - 122)			SW846 8270C
	74	(43 - 122)	7.4	(0-30)	SW846 8270C
Benzo(k)fluoranthene	80	(43 - 124)			SW846 8270C
	81	(43 - 124)	0.55	(0-30)	SW846 8270C
Benzo(ghi)perylene	83	(45 - 120)			SW846 8270C
	81	(45 - 120)	2.8	(0-30)	SW846 8270C
Benzo(a)pyrene	79	(43 - 116)			SW846 8270C
	76	(43 - 116)	4.4	(0-30)	SW846 8270C
1,1'-Biphenyl	64	(50 - 130)			SW846 8270C
	62	(50 - 130)	3.2	(0-30)	SW846 8270C
bis(2-Chloroethoxy) methane	72	(39 - 110)			SW846 8270C
	70	(39 - 110)	2.9	(0-30)	SW846 8270C
bis(2-Chloroethyl)-ether	70	(34 - 113)			SW846 8270C
	63	(34 - 113)	11	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJPH71AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C170000-094 KJPH71AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
bis(2-Ethylhexyl) phthalate	79	(36 - 163)			SW846 8270C
	74	(36 - 163)	6.4	(0-30)	SW846 8270C
4-Bromophenyl phenyl ether	94	(51 - 114)			SW846 8270C
	88	(51 - 114)	5.9	(0-30)	SW846 8270C
Butyl benzyl phthalate	81	(53 - 126)			SW846 8270C
	77	(53 - 126)	5.6	(0-30)	SW846 8270C
Caprolactam	16 a	(50 - 130)			SW846 8270C
	18 a	(50 - 130)	8.0	(0-30)	SW846 8270C
Carbazole	79	(53 - 120)			SW846 8270C
	76	(53 - 120)	4.0	(0-30)	SW846 8270C
4-Chloroaniline	14	(10 - 110)			SW846 8270C
	13	(10 - 110)	14	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	**73**	**(39 - 110)**			**SW846 8270C**
	73	**(39 - 110)**	**0.18**	**(0-30)**	**SW846 8270C**
Benzoic acid	13	(10 - 129)			SW846 8270C
	13	(10 - 129)	0.46	(0-30)	SW846 8270C
1,4-Dioxane	32	(10 - 110)			SW846 8270C
	34	(10 - 110)	6.9	(0-30)	SW846 8270C
2-Chloronaphthalene	77	(39 - 110)			SW846 8270C
	74	(39 - 110)	4.3	(0-30)	SW846 8270C
2-Chlorophenol	**73**	**(27 - 110)**			**SW846 8270C**
	68	**(27 - 110)**	**6.6**	**(0-30)**	**SW846 8270C**
Benzyl alcohol	50	(10 - 130)			SW846 8270C
	46	(10 - 130)	8.1	(0-30)	SW846 8270C
4-Chlorophenyl phenyl ether	89	(50 - 115)			SW846 8270C
	85	(50 - 115)	4.2	(0-30)	SW846 8270C
N-Nitrosodimethylamine	39	(10 - 130)			SW846 8270C
	36	(10 - 130)	7.2	(0-30)	SW846 8270C
1-Methylnaphthalene	74	(10 - 130)			SW846 8270C
	73	(10 - 130)	1.3	(0-30)	SW846 8270C
1,2-Dinitrobenzene	95	(10 - 130)			SW846 8270C
	91	(10 - 130)	4.6	(0-30)	SW846 8270C
2,3,5,6-Tetrachlorophenol	69	(10 - 130)			SW846 8270C
	66	(10 - 130)	4.3	(0-30)	SW846 8270C
Chrysene	83	(55 - 115)			SW846 8270C
	78	(55 - 115)	5.2	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJPH71AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C170000-094 KJPH71AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Dibenz(a,h)anthracene	86	(46 - 122)			SW846 8270C
	83	(46 - 122)	3.4	(0-30)	SW846 8270C
Dibenzofuran	77	(46 - 111)			SW846 8270C
	74	(46 - 111)	3.6	(0-30)	SW846 8270C
Di-n-butyl phthalate	86	(55 - 122)			SW846 8270C
	82	(55 - 122)	5.2	(0-30)	SW846 8270C
3,3'-Dichlorobenzidine	63	(19 - 110)			SW846 8270C
	58	(19 - 110)	8.1	(0-30)	SW846 8270C
2,4-Dichlorophenol	80	(33 - 110)			SW846 8270C
	81	(33 - 110)	2.0	(0-30)	SW846 8270C
Diethyl phthalate	81	(33 - 134)			SW846 8270C
	80	(33 - 134)	1.2	(0-30)	SW846 8270C
2,4-Dimethylphenol	72	(12 - 110)			SW846 8270C
	71	(12 - 110)	1.2	(0-30)	SW846 8270C
Dimethyl phthalate	82	(15 - 143)			SW846 8270C
	81	(15 - 143)	1.4	(0-30)	SW846 8270C
4,6-Dinitro-2-methylphenol	66	(28 - 112)			SW846 8270C
	66	(28 - 112)	0.28	(0-30)	SW846 8270C
2,4-Dinitrophenol	44	(17 - 112)			SW846 8270C
	42	(17 - 112)	4.2	(0-30)	SW846 8270C
2,4-Dinitrotoluene	**88**	**(52 - 123)**			**SW846 8270C**
	85	**(52 - 123)**	**3.4**	**(0-30)**	**SW846 8270C**
2,6-Dinitrotoluene	86	(52 - 119)			SW846 8270C
	85	(52 - 119)	1.6	(0-30)	SW846 8270C
Di-n-octyl phthalate	70	(44 - 128)			SW846 8270C
	69	(44 - 128)	1.7	(0-30)	SW846 8270C
Fluoranthene	90	(54 - 122)			SW846 8270C
	86	(54 - 122)	4.5	(0-30)	SW846 8270C
Fluorene	78	(47 - 112)			SW846 8270C
	74	(47 - 112)	5.4	(0-30)	SW846 8270C
Hexachlorobenzene	91	(51 - 112)			SW846 8270C
	86	(51 - 112)	5.4	(0-30)	SW846 8270C
Hexachlorobutadiene	86	(13 - 110)			SW846 8270C
	86	(13 - 110)	0.18	(0-30)	SW846 8270C
Hexachlorocyclopenta-diene	69	(10 - 110)			SW846 8270C
	68	(10 - 110)	2.3	(0-30)	SW846 8270C
Hexachloroethane	78	(12 - 110)			SW846 8270C
	70	(12 - 110)	10	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJPH71AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C170000-094 KJPH71AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Indeno(1,2,3-cd)pyrene	87	(46 - 121)			SW846 8270C
	82	(46 - 121)	5.1	(0-30)	SW846 8270C
Isophorone	79	(44 - 128)			SW846 8270C
	78	(44 - 128)	2.1	(0-30)	SW846 8270C
2-Methylnaphthalene	85	(35 - 110)			SW846 8270C
	83	(35 - 110)	2.6	(0-30)	SW846 8270C
2-Methylphenol	69	(30 - 110)			SW846 8270C
	64	(30 - 110)	7.8	(0-30)	SW846 8270C
4-Methylphenol	66	(32 - 110)			SW846 8270C
	62	(32 - 110)	6.7	(0-30)	SW846 8270C
Naphthalene	72	(31 - 110)			SW846 8270C
	71	(31 - 110)	0.64	(0-30)	SW846 8270C
2-Nitroaniline	73	(43 - 130)			SW846 8270C
	70	(43 - 130)	2.9	(0-30)	SW846 8270C
3-Nitroaniline	73	(45 - 116)			SW846 8270C
	70	(45 - 116)	3.5	(0-30)	SW846 8270C
4-Nitroaniline	78	(45 - 120)			SW846 8270C
	72	(45 - 120)	7.2	(0-30)	SW846 8270C
Nitrobenzene	81	(37 - 115)			SW846 8270C
	80	(37 - 115)	1.4	(0-30)	SW846 8270C
2-Nitrophenol	88	(29 - 110)			SW846 8270C
	82	(29 - 110)	6.9	(0-30)	SW846 8270C
4-Nitrophenol	**42**	**(12 - 130)**			**SW846 8270C**
	42	**(12 - 130)**	**1.8**	**(0-30)**	**SW846 8270C**
N-Nitrosodiphenylamine	77	(53 - 113)			SW846 8270C
	73	(53 - 113)	5.3	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**72**	**(37 - 121)**			**SW846 8270C**
	68	**(37 - 121)**	**5.8**	**(0-30)**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	67	(25 - 128)			SW846 8270C
	62	(25 - 128)	7.4	(0-30)	SW846 8270C
Pentachlorophenol	**47**	**(26 - 110)**			**SW846 8270C**
	45	**(26 - 110)**	**4.5**	**(0-30)**	**SW846 8270C**
Phenanthrene	78	(52 - 114)			SW846 8270C
	73	(52 - 114)	5.6	(0-30)	SW846 8270C
Phenol	**38**	**(14 - 112)**			**SW846 8270C**
	38	**(14 - 112)**	**1.1**	**(0-30)**	**SW846 8270C**
Pyrene	**80**	**(55 - 120)**			**SW846 8270C**
	76	**(55 - 120)**	**5.0**	**(0-30)**	**SW846 8270C**

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJPH71AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C170000-094 KJPH71AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
2,4,5-Trichlorophenol	82	(39 - 110)			SW846 8270C
	80	(39 - 110)	2.3	(0-30)	SW846 8270C
2,4,6-Trichlorophenol	81	(35 - 110)			SW846 8270C
	79	(35 - 110)	1.6	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	84	(27 - 111)
	79	(27 - 111)
2-Fluorobiphenyl	79	(28 - 110)
	73	(28 - 110)
Terphenyl-d14	93	(37 - 119)
	88	(37 - 119)
Phenol-d5	41	(10 - 110)
	38	(10 - 110)
2-Fluorophenol	58	(10 - 110)
	55	(10 - 110)
2,4,6-Tribromophenol	95	(22 - 120)
	93	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJPDN1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C160000-020 KJPDN1AD-LCSD
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8076020
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**95**	**(80 - 120)**			**WI-GRO GRO**
	91	**(80 - 120)**	**4.0**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJM3C1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C150000-016 KJM3C1AD-LCSD
Prep Date.....: 03/15/08 **Analysis Date..:** 03/17/08
Prep Batch #...: 8075016
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**64 a**	**(75 - 115)**			**WI-DRO DRO**
	73 a	**(75 - 115)**	**13**	**(0-20)**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	76	(10 - 110)
	99	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJ04L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C210000-123 KJ04L1AD-LCSD
Prep Date.....: 03/21/08 **Analysis Date..:** 03/23/08
Prep Batch #...: 8081123
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**84**	**(75 - 115)**			**WI-DRO DRO**
	97	**(75 - 115)**	**14**	**(0-20)**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	131 *	(10 - 110)
	142 *	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A8C140216 **Work Order #...:** KJNKC1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8C150000-061 KJNKC1AD-LCSD
Prep Date.....: 03/16/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8075061
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
PCB-1016	**71**	**(44 - 119)**			**SW846 8082**
	79	**(44 - 119)**	**11**	**(0-30)**	**SW846 8082**
PCB-1260	**72**	**(41 - 118)**			**SW846 8082**
	83	**(41 - 118)**	**14**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	80	(27 - 130)
	89	(27 - 130)
Decachlorobiphenyl	31	(10 - 127)
	48	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: A8C140216 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A8C170000-023 **Prep Batch #...:** 8077023					
Arsenic	80	(80 - 120)	SW846 6010B	03/17-03/18/08	KJPE61DV
		Dilution Factor: 1			
Barium	84	(80 - 120)	SW846 6010B	03/17-03/18/08	KJPE61D0
		Dilution Factor: 1			
Lead	88	(80 - 120)	SW846 6010B	03/17-03/19/08	KJPE61DW
		Dilution Factor: 1			
Cadmium	80	(80 - 120)	SW846 6010B	03/17-03/18/08	KJPE61D1
		Dilution Factor: 1			
Selenium	82	(80 - 120)	SW846 6010B	03/17-03/18/08	KJPE61DX
		Dilution Factor: 1			
Chromium	84	(80 - 120)	SW846 6010B	03/17-03/19/08	KJPE61D2
		Dilution Factor: 1			
Silver	88	(80 - 120)	SW846 6010B	03/17-03/18/08	KJPE61D3
		Dilution Factor: 1			
Mercury	93	(81 - 123)	SW846 7470A	03/17-03/18/08	KJPE61DU
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJL761AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A8C140261-006 KJL761AD-MSD
Date Sampled...: 03/13/08 18:15 **Date Received..:** 03/14/08
Prep Date.....: 03/20/08 **Analysis Date..:** 03/20/08
Prep Batch #...: 8080146
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	93	(45 - 128)			SW846 8260B
	98	(45 - 128)	3.6	(0-30)	SW846 8260B
Benzene	**100**	**(78 - 118)**			**SW846 8260B**
	100	**(78 - 118)**	**0.36**	**(0-20)**	**SW846 8260B**
Bromobenzene	99	(70 - 130)			SW846 8260B
	100	(70 - 130)	1.2	(0-30)	SW846 8260B
1,2-Dichloroethene (total)	109	(86 - 115)			SW846 8260B
	109	(86 - 115)	0.0	(0-30)	SW846 8260B
Bromochloromethane	114	(70 - 130)			SW846 8260B
	116	(70 - 130)	1.7	(0-30)	SW846 8260B
Bromodichloromethane	106	(80 - 146)			SW846 8260B
	104	(80 - 146)	1.9	(0-30)	SW846 8260B
Bromoform	94	(58 - 176)			SW846 8260B
	89	(58 - 176)	6.5	(0-30)	SW846 8260B
Bromomethane	67	(55 - 145)			SW846 8260B
	70	(55 - 145)	5.2	(0-30)	SW846 8260B
Methyl ethyl ketone	84	(71 - 123)			SW846 8260B
	77	(71 - 123)	7.4	(0-30)	SW846 8260B
n-Butylbenzene	84	(70 - 130)			SW846 8260B
	80	(70 - 130)	5.1	(0-30)	SW846 8260B
sec-Butylbenzene	85	(70 - 130)			SW846 8260B
	83	(70 - 130)	3.3	(0-30)	SW846 8260B
Xylenes (total)	99	(89 - 121)			SW846 8260B
	96	(89 - 121)	2.3	(0-30)	SW846 8260B
tert-Butylbenzene	89	(70 - 130)			SW846 8260B
	85	(70 - 130)	4.4	(0-30)	SW846 8260B
Carbon disulfide	238 a	(69 - 138)			SW846 8260B
	241 a	(69 - 138)	1.0	(0-41)	SW846 8260B
Carbon tetrachloride	112	(63 - 176)			SW846 8260B
	115	(63 - 176)	2.5	(0-30)	SW846 8260B
Chlorobenzene	**103**	**(76 - 117)**			**SW846 8260B**
	102	**(76 - 117)**	**0.99**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	97	(71 - 158)			SW846 8260B
	94	(71 - 158)	2.6	(0-30)	SW846 8260B
Chloroethane	123	(59 - 142)			SW846 8260B
	112	(59 - 142)	9.2	(0-30)	SW846 8260B
n-Hexane	83	(70 - 130)			SW846 8260B
	99	(70 - 130)	18	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJL761AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A8C140261-006 KJL761AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	108	(83 - 141)			SW846 8260B
	108	(83 - 141)	0.51	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acetonitrile	166 a	(50 - 130)			SW846 8260B
	141 a	(50 - 130)	16	(0-30)	SW846 8260B
Chloromethane	36 a	(40 - 137)			SW846 8260B
	37 a	(40 - 137)	3.8	(0-39)	SW846 8260B
Acrolein	0.0 a	(50 - 130)			SW846 8260B
	0.0 a	(50 - 130)	0.0	(0-30)	SW846 8260B
Acrylonitrile	99	(50 - 130)			SW846 8260B
	100	(50 - 130)	0.72	(0-30)	SW846 8260B
Vinyl acetate	88	(70 - 130)			SW846 8260B
	92	(70 - 130)	4.9	(0-30)	SW846 8260B
2-Chlorotoluene	92	(70 - 130)			SW846 8260B
	89	(70 - 130)	3.3	(0-30)	SW846 8260B
4-Chlorotoluene	92	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.84	(0-30)	SW846 8260B
Cyclohexane	72	(70 - 130)			SW846 8260B
	80	(70 - 130)	10	(0-30)	SW846 8260B
Iodomethane	105	(70 - 130)			SW846 8260B
	106	(70 - 130)	1.3	(0-30)	SW846 8260B
Isopropyl ether	110	(70 - 130)			SW846 8260B
	112	(70 - 130)	2.2	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	86	(70 - 130)			SW846 8260B
	80	(70 - 130)	6.2	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	97	(70 - 130)			SW846 8260B
	97	(70 - 130)	0.26	(0-30)	SW846 8260B
Dibromomethane	105	(70 - 130)			SW846 8260B
	105	(70 - 130)	0.08	(0-30)	SW846 8260B
1,2-Dichlorobenzene	102	(70 - 130)			SW846 8260B
	99	(70 - 130)	3.2	(0-30)	SW846 8260B
1,3-Dichlorobenzene	99	(70 - 130)			SW846 8260B
	98	(70 - 130)	1.4	(0-30)	SW846 8260B
1,4-Dichlorobenzene	100	(70 - 130)			SW846 8260B
	96	(70 - 130)	3.8	(0-30)	SW846 8260B
Dichlorodifluoromethane	76	(70 - 130)			SW846 8260B
	100	(70 - 130)	27	(0-30)	SW846 8260B
1,1-Dichloroethane	101	(88 - 127)			SW846 8260B
	103	(88 - 127)	1.8	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJL761AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A8C140261-006 KJL761AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	108	(71 - 160)			SW846 8260B
	109	(71 - 160)	1.1	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	108	(87 - 114)			SW846 8260B
	107	(87 - 114)	0.13	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	110	(85 - 116)			SW846 8260B
	110	(85 - 116)	0.18	(0-30)	SW846 8260B
1,1-Dichloroethene	**101**	**(62 - 130)**			**SW846 8260B**
	104	**(62 - 130)**	**3.4**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	97	(87 - 114)			SW846 8260B
	98	(87 - 114)	0.77	(0-30)	SW846 8260B
1,3-Dichloropropane	93	(70 - 130)			SW846 8260B
	91	(70 - 130)	1.2	(0-30)	SW846 8260B
2,2-Dichloropropane	96	(70 - 130)			SW846 8260B
	98	(70 - 130)	2.6	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	78 a	(82 - 130)			SW846 8260B
	66 a	(82 - 130)	17	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	73	(73 - 147)			SW846 8260B
	60 a	(73 - 147)	20	(0-30)	SW846 8260B
1,1-Dichloropropene	102	(70 - 130)			SW846 8260B
	103	(70 - 130)	0.71	(0-30)	SW846 8260B
Ethylbenzene	99	(86 - 132)			SW846 8260B
	96	(86 - 132)	2.9	(0-30)	SW846 8260B
Hexachlorobutadiene	102	(70 - 130)			SW846 8260B
	91	(70 - 130)	12	(0-30)	SW846 8260B
2-Hexanone	72 a	(81 - 128)			SW846 8260B
	70 a	(81 - 128)	3.1	(0-30)	SW846 8260B
Isopropylbenzene	108	(70 - 130)			SW846 8260B
	105	(70 - 130)	3.4	(0-30)	SW846 8260B
p-Isopropyltoluene	92	(70 - 130)			SW846 8260B
	87	(70 - 130)	5.0	(0-30)	SW846 8260B
Methyl acetate	86	(70 - 130)			SW846 8260B
	89	(70 - 130)	3.2	(0-30)	SW846 8260B
Methylcyclohexane	75	(70 - 130)			SW846 8260B
	82	(70 - 130)	9.0	(0-30)	SW846 8260B
Methylene chloride	97	(82 - 115)			SW846 8260B
	96	(82 - 115)	1.0	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	83	(82 - 135)			SW846 8260B
	84	(82 - 135)	2.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	99	(70 - 130)			SW846 8260B
	101	(70 - 130)	1.4	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJL761AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A8C140261-006 KJL761AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	96	(70 - 130)			SW846 8260B
	85	(70 - 130)	13	(0-30)	SW846 8260B
n-Propylbenzene	89	(70 - 130)			SW846 8260B
	87	(70 - 130)	2.4	(0-30)	SW846 8260B
Styrene	95	(83 - 120)			SW846 8260B
	92	(83 - 120)	3.1	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	103	(70 - 130)			SW846 8260B
	102	(70 - 130)	1.1	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	82 a	(88 - 116)			SW846 8260B
	84 a	(88 - 116)	2.5	(0-30)	SW846 8260B
Tetrachloroethene	111	(85 - 121)			SW846 8260B
	107	(85 - 121)	3.7	(0-30)	SW846 8260B
Toluene	**98**	**(70 - 119)**			**SW846 8260B**
	97	**(70 - 119)**	**1.9**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	114	(70 - 130)			SW846 8260B
	94	(70 - 130)	19	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	113	(70 - 130)			SW846 8260B
	98	(70 - 130)	14	(0-30)	SW846 8260B
1,1,1-Trichloroethane	115	(71 - 162)			SW846 8260B
	116	(71 - 162)	1.5	(0-30)	SW846 8260B
1,1,2-Trichloroethane	94	(86 - 129)			SW846 8260B
	94	(86 - 129)	0.03	(0-30)	SW846 8260B
Trichloroethene	**116**	**(62 - 130)**			**SW846 8260B**
	115	**(62 - 130)**	**1.2**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	127	(70 - 130)			SW846 8260B
	143 a	(70 - 130)	12	(0-30)	SW846 8260B
1,2,3-Trichloropropane	93	(70 - 130)			SW846 8260B
	94	(70 - 130)	1.6	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	119	(70 - 130)			SW846 8260B
	146 a	(70 - 130)	20	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	89	(70 - 130)			SW846 8260B
	87	(70 - 130)	3.3	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	88	(70 - 130)			SW846 8260B
	85	(70 - 130)	2.7	(0-30)	SW846 8260B
Vinyl chloride	65 a	(88 - 126)			SW846 8260B
	68 a	(88 - 126)	3.3	(0-30)	SW846 8260B
m-Xylene & p-Xylene	98	(70 - 130)			SW846 8260B
	96	(70 - 130)	2.7	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJL761AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A8C140261-006 KJL761AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	99	(70 - 130)			SW846 8260B
	97	(70 - 130)	1.7	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(73 - 122)
	110	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	99	(61 - 128)
Toluene-d8	97	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)
	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A8C140216 **Work Order #...:** KJLRH1AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8C140216-007 KJLRH1AR-MSD
Date Sampled...: 03/13/08 14:55 **Date Received..:** 03/14/08
Prep Date.....: 03/14/08 **Analysis Date..:** 03/14/08
Prep Batch #...: 8076020
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**80**	**(80 - 120)**			**WI-GRO GRO**
	85	**(80 - 120)**	**6.4**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4142 (0907)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	BRYAN ZINDA	3/13/08	379765
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
430 1ST AVE N, SUITE 720	612-339-9434 / 612-336-4538		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
MINNEAPOLIS / MN / 55401		DENISE POHL	
Project Name and Location (State)	**Carrier/Waybill Number**		
FORD TWIN CITIES - PHASE B			
Contract/Purchase Order/Quote No.			
FORD-TCAP-03 / E200575-2			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOC (8260)	SVOC	PCB	RCRA METALS (TOTAL + FILTERED)	DRO	GRO	CYANIDE	TEMP BLANK
AMW-07(20080313)	3/13/08	855		X			4		1	8	1		3	2	2	1	2	3	1	
AMW-10(20080313)	3/13/08	1015		X						6			3					3		
AMW-02(20080313)	3/13/08	1115		X						6			3					3		
AMW-06(20080313)	3/13/08	1215		X						3			3							
AMW-01(20080313)	3/13/08	1325		X						6			3					3		
TB-001(20080313)	3/13/08	—		X						1			1							
TEMP BLANK	3/13/08	—		X			1													1

Special Instructions/ Conditions of Receipt

* LEVEL 2B

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time
1. Relinquished By	3/13/08	1625
2. Relinquished By		
3. Relinquished By		

	Date	Time
1. Received By		
2. Received By	3/14/08	0930
3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

SHIP TO NORTH CANTON

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4142 (0907)

Client: ARCADIS	Project Manager: BRYAN ZINDA	Date: 3/13/08	Chain of Custody Number: 379764
Address: 430 1ST AVE N, SUITE 780	Telephone Number (Area Code)/Fax Number: 612-339-9434 / 612-336-4538	Lab Number:	Page 1 of 1
City: MINNEAPOLIS; State: MN; Zip Code: 55401	Site Contact:	Lab Contact: DENISE POHL	
Project Name and Location (State): FORD-TWIN CITIES - PHASE B	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: FORD-TCAP-03/E200575-2			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOC(8260)	SVOC	PCB	RCRA METALS (FIELD FILTERED)	DRO	GRO		TEMP BLANK
AMW-10(20080313)	3/13/08	1015		X			4	1	1	2				2	2	1				
AMW-01(20080313	3/13/08	1325		X			4	1	1	2				2	2	1				
TEMP BLANK	3/13/08	—		X			1													1

Special Instructions/ Conditions of Receipt: *LEVEL 2*

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: [ ] 24 Hours [ ] 48 Hours [ ] 7 Days [X] 14 Days [ ] 21 Days [ ] Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	3/13/08	1625	1. Received By		
2. Relinquished By	3-13		2. Received By	3/14/08	0930
3. Relinquished By			3. Received By		

Comments:

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

SHIP TO NORTH CANTON

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4142 (0907)

Client: ARCADIS	Project Manager: BRYAN ZINDA	Date: 3/13/08	Chain of Custody Number: 379769
Address: 430 FIRST AVE N, SUITE 720	Telephone Number (Area Code)/Fax Number: 612-339-9434 / 612-336-4538	Lab Number:	Page 1 of 1
City: MINNEAPOLIS / State: MN / Zip Code: 55401	Site Contact:	Lab Contact: DENISE POTIC	
Project Name and Location (State): FORD-TWIN CITIES-PHASE B	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: FORD-TCAP-03 / E200575-2			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOC (8260)	SVOC	RCRA METALS (FIELD FILTERED)	DRO	GRO	TEMP BLANK
AMW-02(20080313)	3/13/08	1115		X			4		1	2				2	2	1	2	
AMW-06(20080313)	3/13/08	1215		X			2							2				
TEMP BLANK	3/13/08	—		X			1											1

Special Instructions/ Conditions of Receipt: *LEVEL IV*

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: [ ] 24 Hours [ ] 48 Hours [ ] 7 Days [X] 14 Days [ ] 21 Days [ ] Other _____

QC Requirements (Specify):

1. Relinquished By	Date: 3/13/08	Time: 1625	1. Received By	Date:	Time:
2. Relinquished By	Date: 3-13	Time:	2. Received By	Date: 3/14/08	Time: 0930
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments:

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4142 (0907)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	Bryan Zinda	3/13/08	379767
Address 4350 1st Ave North, Suite 720	**Telephone Number (Area Code)/Fax Number** 612-339-9434 / 612-336-4538	**Lab Number**	**Page** 1 of 1
City Minneapolis	**State** MN	**Zip Code** 55401	**Site Contact**	**Lab Contact** Denise Pohl
Project Name and Location (State) Ford Twin Cities - Phase B	**Carrier/Waybill Number**
Contract/Purchase Order/Quote No. Ford-TCAP-3 / 200575-E

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: VOC	SVOC	PCB	RCRA Metals + Field Filtered	GRO	DRO			Temp Blank				Special Instructions/ Conditions of Receipt
AMW-08(20080313)	3/13/08	1455		X			4		1	8			3	2	2	1	3	2							X LEVEL 2 X

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	3/13/08	1625	1. Received By		
2. Relinquished By	3-17		2. Received By	3/14/08	0930
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Cooler Receipt Form/Narrative Lot Number: 180140211
North Canton Facility

Client Arcadis Project Ford Twin Cities By: (Signature)
Cooler Received on 3/14/08 Opened on 3/14/08
FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other
TestAmerica Cooler # Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☒
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions?
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other
6. Cooler temperature upon receipt °C See back of form for multiple coolers/temps ☒
   METHOD: IR ☒ Other ☐
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☒ NA ☐
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM DJP Date 3/14 by QM via Verbal ☐ Voice Mail ☒ Other ☐
Concerning #14

14. CHAIN OF CUSTODY

The following discrepancies occurred:
Rec'd 2x2 (DRO) for samples AMW10@1015 & AMW-01@1325
Rec'd 1x40 labeled TB-002(20080313) collected on 3/13 not listed on COC# 379767. Will log 8260.

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) AMW-08 (20180313) 1x1 were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot#* 071707-HNO_3; *Sulfuric Acid Lot#* 092006-H_2SO_4; *Sodium Hydroxide Lot#* 122805 -NaOH; *Hydrochloric Acid Lot#* 092006-HCl; *Sodium Hydroxide and Zinc Acetate Lot#* 050205-CH_3COO_2ZN/NaOH.
What time was preservative added to sample(s)? 1310

Client ID	pH	Date	Initials
AMW-07	<2 <2 <2 >12	3/14/08	JM
AMW-10	<2 <2 <2	"	"
AMW-02	<2 <2 <2	"	"
AMW-01	<2 <2 <2	"	"
AMW-08	<2 <2 <2	"	"

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant
K709	4.1°C	IR	Ice
L625	3.6°C		
L474	4.1°C		
Client Bloc	3.8°C		

Discrepancies Cont'd:

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant
K709	4.1°C	IR	Ice
L625	3.6°C	〃	〃
L474	4.1°C	〃	〃
Client Blue	3.8°C		

Discrepancies Cont'd:

TestAmerica
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SAVANNAH DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-35083-1

Job Description: Ford - TCAP MN (Arcadis)

For:
TestAmerica Laboratories, Inc.
4101 Shuffel Street NW
North Canton, OH 44720

Attention: Mrs. Denise Pohl

Lidya Gulizia
Project Manager I
lidya.gulizia@testamericainc.com
03/26/2008

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager who signed this report.

Job Narrative
Savannah Job No. 680-J35083-1 / No. Canton Lot A8C140216

Receipt
No additional sample containers were submitted to perform a matrix spike / matrix spike duplicate (MS/MSD) or a sample duplicate.

All samples were received in good condition within temperature requirements.

General Chemistry
The recovery for the matrix spike (MS) sample conducted on lab sample 35083-1 for the analysis of free cyanide was above the upper control limit. The recovery for the MS was flagged F to denote that the recovery exceeded the quality control limit.

Comments
No additional comments.

METHOD SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 680-35083-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Free Cyanide by Micro Diffusion	TAL SAV	ASTM D4282 83	
Free Cyanide by Micro Diffusion - Preparation	TAL SAV		ASTM D4282 83

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

ASTM = ASTM International

METHOD / ANALYST SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 680-35083-1

Method	Analyst	Analyst ID
ASTM D4282 83	McDonald, Debbie	DM

SAMPLE SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 680-35083-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-35083-1	AWM-07(20080323)	Water	03/13/2008 0855	03/18/2008 0924

Client: TestAmerica Laboratories, Inc. Job Number: 680-35083-1

General Chemistry

Client Sample ID: **AWM-07(20080323)**

Lab Sample ID: 680-35083-1
Client Matrix: Water

Date Sampled: 03/13/2008 0855
Date Received: 03/18/2008 0924

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Free	0.0059	J	mg/L	0.0050	0.010	1.0	D4282 83
	Anly Batch: 680-101167		Date Analyzed	03/25/2008 0603			
	Prep Batch: 680-101054		Date Prepared:	03/24/2008 0909			

North Canton

DATA REPORTING QUALIFIERS

Client: TestAmerica Laboratories, Inc. Job Number: 680-35083-1

Lab Section	Qualifier	Description
General Chemistry		
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: TestAmerica Laboratories, Inc. Job Number: 680-35083-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 680-101054					
LCS 680-101054/2-A	Lab Control Spike	T	Water	D4282 83	
LCSD 680-101054/3-A	Lab Control Spike Duplicate	T	Water	D4282 83	
MB 680-101054/1-A	Method Blank	T	Water	D4282 83	
680-35083-1	AWM-07(20080323)	T	Water	D4282 83	
680-35083-1MS	Matrix Spike	T	Water	D4282 83	
680-35083-1MSD	Matrix Spike Duplicate	T	Water	D4282 83	
Analysis Batch:680-101167					
LCS 680-101054/2-A	Lab Control Spike	T	Water	D4282 83	680-101054
LCSD 680-101054/3-A	Lab Control Spike Duplicate	T	Water	D4282 83	680-101054
MB 680-101054/1-A	Method Blank	T	Water	D4282 83	680-101054
680-35083-1	AWM-07(20080323)	T	Water	D4282 83	680-101054
680-35083-1MS	Matrix Spike	T	Water	D4282 83	680-101054
680-35083-1MSD	Matrix Spike Duplicate	T	Water	D4282 83	680-101054

Report Basis
T = Total

Client: TestAmerica Laboratories, Inc. Job Number: 680-35083-1

Method Blank - Batch: 680-101054

Method: D4282 83
Preparation: D4282 83

Lab Sample ID: MB 680-101054/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/25/2008 0603
Date Prepared: 03/24/2008 0909

Analysis Batch: 680-101167
Prep Batch: 680-101054
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 3.0 mL
Final Weight/Volume: 1.3 mL

Analyte	Result	Qual	MDL	RL
Cyanide, Free	<0.010		0.0050	0.010

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 680-101054

Method: D4282 83
Preparation: D4282 83

LCS Lab Sample ID: LCS 680-101054/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/25/2008 0603
Date Prepared: 03/24/2008 0909

Analysis Batch: 680-101167
Prep Batch: 680-101054
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 3.0 mL
Final Weight/Volume: 1.3 mL

LCSD Lab Sample ID: LCSD 680-101054/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/25/2008 0603
Date Prepared: 03/24/2008 0909

Analysis Batch: 680-101167
Prep Batch: 680-101054
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 3.0 mL
Final Weight/Volume: 1.3 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Cyanide, Free	102	100	75 - 125	2	25		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: TestAmerica Laboratories, Inc.

Job Number: 680-35083-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-101054

Method: D4282 83
Preparation: D4282 83

MS Lab Sample ID:	680-35083-1	Analysis Batch:	680-101167	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	680-101054	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	3.0 mL
Date Analyzed:	03/25/2008 0603			Final Weight/Volume:	1.3 mL
Date Prepared:	03/24/2008 0909				

MSD Lab Sample ID:	680-35083-1	Analysis Batch:	680-101167	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	680-101054	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	3.0 mL
Date Analyzed:	03/25/2008 0603			Final Weight/Volume:	1.3 mL
Date Prepared:	03/24/2008 0909				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Free	141	120	75 - 125	16	25	F	

Calculations are performed before rounding to avoid round-off errors in calculated results.

TestAmerica Laboratories, Inc.

Laboratory **TestAmerica Savannah**
5102 LaRoche Avenue
Savannah, GA 31404

SAMPLE ANALYSIS REQUISTION
Lab Request SR101790

Report Package: **Report**
Need Analytical Report 2008-03-24

Client Code: 382723

Project Manager: DENISE POHL

Sample I.D.	Work Order Number	Client Sample ID	Sampling Date	Analysis Required
A8C140216-1	KJLPL	AMW-07(20080313)	2008-03-13 8:55	WATER, ASTM D4282-89, Free CN - Savannah

1X500

Please use Client Sample ID for report

Call DENISE POHL with questions at 330-497-9396
at the TAL North Canton Laboratory

Shipping Method: FEDEX

Need detection limit and analysis date included in report.

Please send a signed copy of this form with the report at completion of analysis.

Relinquished by: [signature] Date/Time: 3/17/08 1500

Relinquished by: _____ Date/Time: _____

Received for lab by: [signature] Date/Time: 031808 0924

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

35883
680-~~35883~~
TEMP.: 5.6

130
Page 12 of 13
North Canton

Login Sample Receipt Check List

Client: TestAmerica Laboratories, Inc.

Job Number: 680-35083-1

Login Number: 35083

List Source: TestAmerica Savannah

Creator: Hall, Karl I

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	5.6 C
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

October 08, 2008

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000591.0001.0001
Laboratory: TestAmerica - North Canton
Laboratory submittal: A8I120347
Sample date: 2008-09-10
Report received by Enovis: 2008-10-03
Initial Data Verification completed by Enovis: 2008-10-08

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

1 Water sample(s) were analyzed for GCMS VOC, GCMS SVOC, PCB, GRO, DRO and Metals parameter(s). 1 Trip Blank sample(s) were analyzed for GCMS VOC parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Refer to the attached Sampling and Analysis Summary table.

Trip Blank result for Acetone reported. Refer to the minor QC exception listed below.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the Enovis CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The following minor QC exceptions or missing information were noted:

GCMS VOC LCS/LCSD for 1,1,2,2-Tetrachloroethane and cis-1,3-Dichloropropene recovered slightly low outside of the labs acceptance window in QC batch 8262193. All recoveries were greater than 80%. Based on professional judgment no qualification is required.

GCMS VOC LCS for 1,2,3-Trichloropropene, Ethylbenzene and Naphthalene recovered low outside of the labs acceptance window in QC batch 8262193. The LCSD spike and LCS/LCSD RPD are in control. No qualification required.

GCMS VOC MS/MSD for 1,1,2,2-Tetrachloroethane, 2,2-Dichloropropane, cis-1,3-Dichloropropene, Ethylbenzene, Styrene, Trichlorofluoromethane and Vinyl chloride recovered low outside of the labs acceptance window in QC batch 8260041. The sample is project specific A8I20347-001. The sample results are reported non-detect and flagged UJ and considered estimated.

GCMS VOC MS for 1,1-Dichloroethane, 1,2,4-Trichlorobenzene, 1,2-Dichloropropane, Cyclohexane, Methylcyclohexane, n-Butylbenzene, Naphthalene and tert-Butylbenzene recovered low outside of the labs acceptance window in QC batch 8260041. The MSD spike and MS/MSD RPD are in control. No qualification required.

GCMS VOC Trip Blank for Acetone reported between the MDL and RDL. The associate field sample result is reported non-detect. No qualification required.

GCMS SVOC LCS and MS/MSD for Hexachlorocyclopentadiene recovered low outside of the labs acceptance window in QC batch 8260041. The MS/MSD is project specific A8I120347-001. The sample result is reported non-detect and is flagged UJ and considered estimated.

GCMS SVOC Method Blank for bis(2-Ethylhexyl) phthalate is reported between the MDL and RDL in QC batch 8260041. The associated result for A8i120347-001 is reported between the MDL and RDL and less than 10x the method blank concentration and is flagged UB and considered non-detect at the RDL.

PCB Surrogate DCB recovered high outside of the labs acceptance window in the Method Blank for QC batch 8257090. The second surrogate recovered in control to meet method criteria. No qualification required.

PCB MS/MSD for PCB-1260 recovered high outside of the labs acceptance window in QC batch 8257090. The sample is project specific A8I120347-001. In the case narrative the lab notes that the closing CCV associated with the MS/MSD failed high. The sample results is reported non-detect. No qualification required.

GRO MS/MSD recovered low outside of the labs acceptance window in QC batch 8261404. The sample is project specific A8I120347-001. The sample result is reported non-detect and is flagged UJ and considered estimated.

DRO Surrogate C9 recovered high outside of the labs acceptance window in samples A8I120347-001, 1MS, 1MSD, Method Blank and LCS/LCSD for QC batch 8259037. The method does not require surrogates. No qualification required.

DRO Method Blank reported a concentration between the MDL and RDL in QC batch 8259037. The associated result for A8I120347-001 is reported between the MDL and RDL and less than 5x the method blank concentration and is flagged UB and considered non-detect at the RDL.

Metals Method Blank for Barium is reported between the MDL and RDL in QC batch . The associated result fo rA8I120347-001 is reported between the MDL and RDL and greater than 10x the method blank concentration and is flagged J as an estimated value. No further qualification required.

Evaluation of blank contamination includes directions on the interpretation of the affected analytical results; however it is beyond the scope of Enovis verification to apply changes to the result and quantitation limit in the Ford Master Analytical database. The end data user must implement any corrections to the electronic data downloaded from the Enovis CLMS based on project requirements.

Enovis does not have enough information regarding the nature and consistency of the investigative field samples to apply the valid qualifiers to additional samples beyond the parent sample for the MS/MSD outlier. The end data user must determine whether or not to extend qualification based on knowledge of the investigative field samples and project requirements.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Tim Abston

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

Enovis Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: A8I120347

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Polychlorinated Biphenyls by GCECD	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)	Comment
A8I120347001	AMW-05B(20080910)	9/10/2008	12:35:00	X	X	X	X	X	X	X	
A8I120347002	TB-001(20080910)	9/10/2008	12:00:00	X							

Qualified Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A8I120347

Sample Name: AMW-05B(20080910)
Lab Sample ID: A8I120347001
Sample Date: 9/10/2008

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC					
OSW-8260B					
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	UJ
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	UJ
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	UJ
Ethylbenzene	100-41-4	ND	1.0	ug/l	UJ
Styrene	100-42-5	ND	1.0	ug/l	UJ
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	UJ
Vinyl chloride	75-01-4	ND	1.0	ug/l	UJ
GC/MS SVOC					
OSW-8270C					
bis(2-Ethylhexyl) phthalate	117-81-7	2.2	10	ug/l	UB
Hexachlorocyclopentadiene	77-47-4	ND	50	ug/l	UJ
GC VOC					
PUBL-SW-140					
Gasoline Range Organics	E-1005	ND	100	ug/l	UJ
GC Other					
OSW-8015B-MOD					
Diesel Range Organics	E-1004	0.029	0.10	mg/l	UB

Note: UJ - Non-detect result is considered estimated due to associated QC outlier.
UB - Result is considered non-detect at the RDL due to blank contamination.

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. MN000593.5

FORD TWIN CITIES MN E200572

Lot #: A8I120347

Rebecca Forbort

ARCADIS U.S., Inc.
430 1st. Ave. North
Suite 720
Minneapolis, MN 55401

TESTAMERICA LABORATORIES, INC.

Denise Pohl
Project Manager

October 1, 2008

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CASE NARRATIVE

A8I120347

The following report contains the analytical results for two water samples submitted to TestAmerica North Canton by ARCADIS Geraghty & Miller, Inc. from the Ford-TCAP-03/E200572 Site, project number MN000593.5. The samples were received September 12, 2008, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

Any reference within this document to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.)

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 0.4, 1.3, and 2.0°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for AMW-05B(20080910) had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GC/MS SEMIVOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for AMW-05B(20080910) had RPD's and recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GASOLINE RANGE ORGANICS

The matrix spike/matrix spike duplicate(s) for AMW-05B(20080910) had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

POLYCHLORINATED BIPHENYLS-8082

The matrix spike/matrix spike duplicate(s) for AMW-05B(20080910) had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

CASE NARRATIVE (continued)

POLYCHLORINATED BIPHENYLS-8082 (continued)

Surrogate recoveries were outside criteria; since the method criterion is that one of two surrogate compounds must meet acceptance criteria, no corrective action was required for sample(s) Blank for batch(es) 8257090.

The closing CCV failed high for sample(s) AMW-05B(20080910)MS, and AMW-05B (20080910)MSD; since the sample(s) were non-detect (or J flag values), no corrective action is needed.

DIESEL RANGE ORGANICS

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The surrogate was outside of acceptance criteria for sample(s) Blank, LCS for batch(es) 8259037, AMW-05B(20080910), AMW-05B(20080910)MS, and AMW-05B (20080910)MSD. The method does not require a surrogate; therefore, no corrective action was necessary.

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

No ICP Trace Form IX was provided for batch(es) 8259014. The serial dilution was performed on a different sample from the same QC batch(es).

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A8I120347

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
AMW-05B(20080910) 09/10/08 12:35 001				
Diesel Range Organics	0.029 J,B	0.10	mg/L	WI-DRO DRO
PCB-1254	0.97	0.20	ug/L	SW846 8082
Barium - DISSOLVED	61.9 B,J	200	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	2.2 J,B	10	ug/L	SW846 8270C
Carbon disulfide	0.95 J	1.0	ug/L	SW846 8260B
Methylene chloride	0.72 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	3.7	1.0	ug/L	SW846 8260B
TB-001(20080910) 09/10/08 002				
Acetone	2.8 J	10	ug/L	SW846 8260B

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METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A8I120347

PARAMETER	ANALYTICAL METHOD
Diesel Range Organics	WI-DRO DRO
Gasoline Range Organics	WI-GRO GRO
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
PCBs by SW-846 8082	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

WI-DRO "Modified DRO: Method for Determining Diesel Range Organics", Wisconsin DNR, PUBL-SW-141, September, 1995.

WI-GRO "Modified GRO: Method for Determining Gasoline Range Organics", Wisconsin DNR, PUBL-SW-140, September, 1995.

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SAMPLE SUMMARY

SAMPLE SUMMARY

A8I120347

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KWTK1	001	AMW-05B(20080910)	09/10/08	12:35
KWTLD	002	TB-001(20080910)	09/10/08	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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SHIPPING AND RECEIVING DOCUMENTS

Chain of Custody Record

Send to North Canton *

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TAL-4142 (0408)

Client: ARCADIS	Project Manager: Bryan Zinda	Date: 9/11/08	Chain of Custody Number: 017035
Address: 430 1st Ave N Suite 720	Telephone Number (Area Code)/Fax Number: 612-339-9434/612-336-4538	Lab Number:	Page 1 of 1
City: Minneapolis; State: MN; Zip Code: 5540	Site Contact:	Lab Contact: Denise Pohl	
Project Name and Location (State): Ford Twin Cities, MN	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: Ford-TCAP-03/E200575-2			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	VOC (8260)	SVOC	PCB	RCRA metals (filtered)	DRO	GRO	Temp Blank	Special Instructions/ Conditions of Receipt
AMW-05B(20080910)	9/10/08	1235		X			4		1	7			3	2	2	1	1	3		*Level 4*
AMW-05B(20080910)MS	9/10/08	1235		X			4		1	7			3	2	2	1	1	3		
AMW-05B(20080910)MSD	9/10/08	1235		X			4		1	7			3	2	2	1	1	3		
TB-001(20080910)	9/10/08	—		X						2			2							
Temp Blank	9/10/08	—		X			1												1	

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Imtant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are relained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Matt [signature]	9-11	1400	1. Received By: [signature]	9	
2. Relinquished By: [signature]	9-11		2. Received By: [signature]	9-12-08	0920
3. Relinquished By:			3. Received By:		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

North Canton

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** ABI120347
North Canton Facility

Client ARCADIS Project _____ By: _____
Cooler Received on 9-12-08 Opened on 9-12-08 (Signature)
FedEx ☑ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____
TestAmerica Cooler # _____ Multiple Coolers ☑ Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity_____ Quantity Unsalvageable_____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☑
   Were custody seals on the bottle(s)? Yes ☐ No ☑
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☑ No ☐
3. Did custody papers accompany the sample(s)? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt _____ °C See back of form for multiple coolers/temps ☑
   METHOD: IR ☑ Other ☐ _____
   COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☑ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☑ No ☐ NA ☐
10. Were correct bottle(s) used for the test(s) indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☑ No ☐ Were VOAs on the COC? Yes ☑ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

_____

_____

_____

_____

_____

_____

15. SAMPLE CONDITION

Sample(s)_____ were received after the recommended holding time had expired.
Sample(s)_____ were received in a broken container.
Sample(s)_____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 031808-HNO_3; Sulfuric Acid Lot# 031808-H_2SO_4; Sodium Hydroxide Lot# 073007 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 050205-$(CH_3COO)_2ZN$/NaOH.* What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
AMW-05B	<2 <2 <2 <2 <2 <2	9-12-08	AS
EB-001	<2 <2	"	"

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant
C157	0.4	IR	ICE
TA41	1.3	"	"
241 141	2.0	"	"

Discrepancies Cont'd:

TestAmerica
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GCMS VOLATILE DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080910)

GC/MS Volatiles

Lot-Sample #...: A8I120347-001 **Work Order #...:** KWTK11AA **Matrix.....:** WG
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/18/08 **Analysis Date..:** 09/18/08
Prep Batch #...: 8262193
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	**0.95 J**	**1.0**	**ug/L**	**0.13**
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16

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ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080910)

GC/MS Volatiles

Lot-Sample #...: A8I120347-001 **Work Order #...:** KWTK11AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	**0.72 J**	**1.0**	**ug/L**	**0.33**
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	**3.7**	**1.0**	**ug/L**	**0.29**
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

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ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080910)

GC/MS Volatiles

Lot-Sample #...: A8I120347-001 **Work Order #...:** KWTK11AA **Matrix.....:** WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: TB-001(20080910)

GC/MS Volatiles

Lot-Sample #...: A8I120347-002 **Work Order #...:** KWTLD1AA **Matrix.....:** WG
Date Sampled...: 09/10/08 **Date Received..:** 09/12/08
Prep Date.....: 09/18/08 **Analysis Date..:** 09/18/08
Prep Batch #...: 8262193
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.8 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16

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ARCADIS U.S., Inc.

Client Sample ID: TB-001(20080910)

GC/MS Volatiles

Lot-Sample #...: A8I120347-002 **Work Order #...:** KWTLD1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,2-Dichloropropane	ND	1.0	ug/L	0.13
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

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ARCADIS U.S., Inc.

Client Sample ID: TB-001(20080910)

GC/MS Volatiles

Lot-Sample #...: A8I120347-002 **Work Order #...:** KWTLD1AA **Matrix.....:** WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AA **Matrix.....:** WATER
MB Lot-Sample #: A8I180000-193

Prep Date.....: 09/18/08 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 09/18/08 **Prep Batch #...:** 8262193
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-193 KW4KL1AD-LCSD
Prep Date.....: 09/18/08 **Analysis Date..:** 09/18/08
Prep Batch #...: 8262193
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	109	(22 - 200)			SW846 8260B
	105	(22 - 200)	3.8	(0-95)	SW846 8260B
Benzene	**89**	**(80 - 116)**			**SW846 8260B**
	88	**(80 - 116)**	**0.85**	**(0-20)**	**SW846 8260B**
1,2-Dichloroethene (total)	97	(82 - 116)			SW846 8260B
	95	(82 - 116)	1.9	(0-30)	SW846 8260B
Bromobenzene	81	(70 - 130)			SW846 8260B
	82	(70 - 130)	1.5	(0-30)	SW846 8260B
Bromochloromethane	100	(70 - 130)			SW846 8260B
	96	(70 - 130)	3.9	(0-30)	SW846 8260B
Bromodichloromethane	89	(87 - 130)			SW846 8260B
	87	(87 - 130)	1.2	(0-30)	SW846 8260B
Bromoform	86	(76 - 150)			SW846 8260B
	88	(76 - 150)	2.2	(0-30)	SW846 8260B
Bromomethane	88	(64 - 129)			SW846 8260B
	83	(64 - 129)	6.0	(0-30)	SW846 8260B
Methyl ethyl ketone	94	(28 - 237)			SW846 8260B
	94	(28 - 237)	0.65	(0-65)	SW846 8260B
n-Butylbenzene	73	(70 - 130)			SW846 8260B
	75	(70 - 130)	3.0	(0-30)	SW846 8260B
Xylenes (total)	84 a	(87 - 116)			SW846 8260B
	87	(87 - 116)	2.9	(0-30)	SW846 8260B
sec-Butylbenzene	72	(70 - 130)			SW846 8260B
	76	(70 - 130)	4.2	(0-30)	SW846 8260B
tert-Butylbenzene	73	(70 - 130)			SW846 8260B
	75	(70 - 130)	3.8	(0-30)	SW846 8260B
Carbon disulfide	91	(73 - 139)			SW846 8260B
	98	(73 - 139)	7.2	(0-30)	SW846 8260B
Carbon tetrachloride	93	(75 - 149)			SW846 8260B
	95	(75 - 149)	1.9	(0-30)	SW846 8260B
Chlorobenzene	**88**	**(76 - 117)**			**SW846 8260B**
	89	**(76 - 117)**	**0.94**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	92	(81 - 138)			SW846 8260B
	92	(81 - 138)	0.38	(0-30)	SW846 8260B
Chloroethane	80	(66 - 126)			SW846 8260B
	82	(66 - 126)	3.3	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-193 KW4KL1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
n-Hexane	92	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.7	(0-30)	SW846 8260B
Chloroform	94	(84 - 128)			SW846 8260B
	90	(84 - 128)	4.6	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	90	(70 - 130)			SW846 8260B
	94	(70 - 130)	3.6	(0-30)	SW846 8260B
Acetonitrile	87	(50 - 130)			SW846 8260B
	89	(50 - 130)	2.4	(0-30)	SW846 8260B
Chloromethane	78	(48 - 123)			SW846 8260B
	77	(48 - 123)	0.98	(0-30)	SW846 8260B
Acrolein	130	(50 - 130)			SW846 8260B
	123	(50 - 130)	5.3	(0-30)	SW846 8260B
Vinyl acetate	103	(70 - 130)			SW846 8260B
	106	(70 - 130)	3.3	(0-30)	SW846 8260B
Acrylonitrile	103	(50 - 130)			SW846 8260B
	98	(50 - 130)	5.0	(0-30)	SW846 8260B
2-Chlorotoluene	75	(70 - 130)			SW846 8260B
	77	(70 - 130)	2.6	(0-30)	SW846 8260B
4-Chlorotoluene	77	(70 - 130)			SW846 8260B
	79	(70 - 130)	2.4	(0-30)	SW846 8260B
Cyclohexane	74	(70 - 130)			SW846 8260B
	75	(70 - 130)	1.4	(0-30)	SW846 8260B
Iodomethane	104	(70 - 130)			SW846 8260B
	107	(70 - 130)	2.9	(0-30)	SW846 8260B
Isopropyl ether	105	(70 - 130)			SW846 8260B
	103	(70 - 130)	1.8	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	73	(70 - 130)			SW846 8260B
	77	(70 - 130)	5.4	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	91	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.14	(0-30)	SW846 8260B
Dibromomethane	93	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.75	(0-30)	SW846 8260B
1,2-Dichlorobenzene	82	(70 - 130)			SW846 8260B
	85	(70 - 130)	3.7	(0-30)	SW846 8260B
1,3-Dichlorobenzene	81	(70 - 130)			SW846 8260B
	83	(70 - 130)	2.6	(0-30)	SW846 8260B
1,4-Dichlorobenzene	80	(70 - 130)			SW846 8260B
	81	(70 - 130)	1.6	(0-30)	SW846 8260B
Dichlorodifluoromethane	79	(70 - 130)			SW846 8260B
	80	(70 - 130)	1.3	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-193 KW4KL1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethane	91	(86 - 123)			SW846 8260B
	90	(86 - 123)	1.5	(0-30)	SW846 8260B
1,2-Dichloroethane	91	(79 - 136)			SW846 8260B
	87	(79 - 136)	4.4	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	97	(85 - 113)			SW846 8260B
	94	(85 - 113)	2.8	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	97	(80 - 120)			SW846 8260B
	96	(80 - 120)	0.98	(0-30)	SW846 8260B
1,1-Dichloroethene	**100**	**(63 - 130)**			**SW846 8260B**
	98	**(63 - 130)**	**2.2**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	89	(82 - 115)			SW846 8260B
	88	(82 - 115)	0.94	(0-30)	SW846 8260B
1,3-Dichloropropane	89	(70 - 130)			SW846 8260B
	88	(70 - 130)	0.50	(0-30)	SW846 8260B
2,2-Dichloropropane	73	(70 - 130)			SW846 8260B
	76	(70 - 130)	3.6	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	81 a	(84 - 130)			SW846 8260B
	83 a	(84 - 130)	1.9	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	84	(84 - 130)			SW846 8260B
	86	(84 - 130)	2.7	(0-30)	SW846 8260B
1,1-Dichloropropene	89	(70 - 130)			SW846 8260B
	90	(70 - 130)	0.47	(0-30)	SW846 8260B
Ethylbenzene	85 a	(86 - 116)			SW846 8260B
	86	(86 - 116)	1.7	(0-30)	SW846 8260B
Hexachlorobutadiene	80	(70 - 130)			SW846 8260B
	84	(70 - 130)	5.2	(0-30)	SW846 8260B
2-Hexanone	91	(35 - 200)			SW846 8260B
	87	(35 - 200)	4.2	(0-52)	SW846 8260B
Isopropylbenzene	96	(70 - 130)			SW846 8260B
	100	(70 - 130)	3.7	(0-30)	SW846 8260B
p-Isopropyltoluene	79	(70 - 130)			SW846 8260B
	83	(70 - 130)	5.2	(0-30)	SW846 8260B
Methyl acetate	94	(70 - 130)			SW846 8260B
	87	(70 - 130)	7.3	(0-30)	SW846 8260B
Methylcyclohexane	75	(70 - 130)			SW846 8260B
	78	(70 - 130)	3.7	(0-30)	SW846 8260B
Methylene chloride	92	(78 - 118)			SW846 8260B
	93	(78 - 118)	0.72	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	90	(78 - 141)			SW846 8260B
	88	(78 - 141)	2.2	(0-32)	SW846 8260B
Methyl tert-butyl ether (MTBE)	92	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.52	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-193 KW4KL1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	65 a	(70 - 130)			SW846 8260B
	71	(70 - 130)	8.3	(0-30)	SW846 8260B
n-Propylbenzene	75	(70 - 130)			SW846 8260B
	79	(70 - 130)	4.6	(0-30)	SW846 8260B
Styrene	87	(85 - 117)			SW846 8260B
	88	(85 - 117)	1.6	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	85	(70 - 130)			SW846 8260B
	87	(70 - 130)	2.7	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	82 a	(85 - 118)			SW846 8260B
	82 a	(85 - 118)	0.010	(0-30)	SW846 8260B
Tetrachloroethene	94	(88 - 113)			SW846 8260B
	96	(88 - 113)	1.9	(0-30)	SW846 8260B
Toluene	**90**	**(74 - 119)**			**SW846 8260B**
	91	**(74 - 119)**	**1.3**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	69 a	(70 - 130)			SW846 8260B
	77	(70 - 130)	10	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	71	(70 - 130)			SW846 8260B
	75	(70 - 130)	5.8	(0-30)	SW846 8260B
1,1,1-Trichloroethane	87	(78 - 140)			SW846 8260B
	87	(78 - 140)	0.50	(0-30)	SW846 8260B
1,1,2-Trichloroethane	90	(83 - 122)			SW846 8260B
	91	(83 - 122)	0.47	(0-30)	SW846 8260B
Trichloroethene	**93**	**(75 - 122)**			**SW846 8260B**
	92	**(75 - 122)**	**0.46**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	70	(70 - 130)			SW846 8260B
	82	(70 - 130)	15	(0-30)	SW846 8260B
1,2,3-Trichloropropane	91	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.49	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	112	(70 - 130)			SW846 8260B
	115	(70 - 130)	2.7	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	79	(70 - 130)			SW846 8260B
	80	(70 - 130)	2.1	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	76	(70 - 130)			SW846 8260B
	78	(70 - 130)	2.8	(0-30)	SW846 8260B
Vinyl chloride	80	(61 - 120)			SW846 8260B
	82	(61 - 120)	2.4	(0-30)	SW846 8260B
m-Xylene & p-Xylene	84	(70 - 130)			SW846 8260B
	87	(70 - 130)	3.0	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-193 KW4KL1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	84	(70 - 130)			SW846 8260B
	86	(70 - 130)	2.8	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
	88	(61 - 128)
Toluene-d8	98	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)
	93	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-193 KW4KL1AD-LCSD
Prep Date.....: 09/18/08 **Analysis Date..:** 09/18/08
Prep Batch #...: 8262193
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acetone	10	11	ug/L	109		SW846 8260B
	10	10	ug/L	105	3.8	SW846 8260B
Benzene	**10**	**8.9**	**ug/L**	**89**		**SW846 8260B**
	10	**8.8**	**ug/L**	**88**	**0.85**	**SW846 8260B**
1,2-Dichloroethene (total)	20	19	ug/L	97		SW846 8260B
	20	19	ug/L	95	1.9	SW846 8260B
Bromobenzene	10	8.1	ug/L	81		SW846 8260B
	10	8.2	ug/L	82	1.5	SW846 8260B
Bromochloromethane	10	10	ug/L	100		SW846 8260B
	10	9.6	ug/L	96	3.9	SW846 8260B
Bromodichloromethane	10	8.9	ug/L	89		SW846 8260B
	10	8.7	ug/L	87	1.2	SW846 8260B
Bromoform	10	8.6	ug/L	86		SW846 8260B
	10	8.8	ug/L	88	2.2	SW846 8260B
Bromomethane	10	8.8	ug/L	88		SW846 8260B
	10	8.3	ug/L	83	6.0	SW846 8260B
Methyl ethyl ketone	10	9.4	ug/L	94		SW846 8260B
	10	9.4	ug/L	94	0.65	SW846 8260B
n-Butylbenzene	10	7.3	ug/L	73		SW846 8260B
	10	7.5	ug/L	75	3.0	SW846 8260B
Xylenes (total)	30	25 a	ug/L	84		SW846 8260B
	30	26	ug/L	87	2.9	SW846 8260B
sec-Butylbenzene	10	7.2	ug/L	72		SW846 8260B
	10	7.6	ug/L	76	4.2	SW846 8260B
tert-Butylbenzene	10	7.3	ug/L	73		SW846 8260B
	10	7.5	ug/L	75	3.8	SW846 8260B
Carbon disulfide	10	9.1	ug/L	91		SW846 8260B
	10	9.8	ug/L	98	7.2	SW846 8260B
Carbon tetrachloride	10	9.3	ug/L	93		SW846 8260B
	10	9.5	ug/L	95	1.9	SW846 8260B
Chlorobenzene	**10**	**8.8**	**ug/L**	**88**		**SW846 8260B**
	10	**8.9**	**ug/L**	**89**	**0.94**	**SW846 8260B**
Chlorodibromomethane	10	9.2	ug/L	92		SW846 8260B
	10	9.2	ug/L	92	0.38	SW846 8260B
Chloroethane	10	8.0	ug/L	80		SW846 8260B
	10	8.2	ug/L	82	3.3	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-193 KW4KL1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
n-Hexane	10	9.2	ug/L	92		SW846 8260B
	10	9.3	ug/L	93	1.7	SW846 8260B
Chloroform	10	9.4	ug/L	94		SW846 8260B
	10	9.0	ug/L	90	4.6	SW846 8260B
2-Chloroethyl vinyl ether	10	9.0	ug/L	90		SW846 8260B
	10	9.4	ug/L	94	3.6	SW846 8260B
Acetonitrile	100	87	ug/L	87		SW846 8260B
	100	89	ug/L	89	2.4	SW846 8260B
Chloromethane	10	7.8	ug/L	78		SW846 8260B
	10	7.7	ug/L	77	0.98	SW846 8260B
Acrolein	100	130	ug/L	130		SW846 8260B
	100	120	ug/L	123	5.3	SW846 8260B
Vinyl acetate	10	10	ug/L	103		SW846 8260B
	10	11	ug/L	106	3.3	SW846 8260B
Acrylonitrile	100	100	ug/L	103		SW846 8260B
	100	98	ug/L	98	5.0	SW846 8260B
2-Chlorotoluene	10	7.5	ug/L	75		SW846 8260B
	10	7.7	ug/L	77	2.6	SW846 8260B
4-Chlorotoluene	10	7.7	ug/L	77		SW846 8260B
	10	7.9	ug/L	79	2.4	SW846 8260B
Cyclohexane	10	7.4	ug/L	74		SW846 8260B
	10	7.5	ug/L	75	1.4	SW846 8260B
Iodomethane	10	10	ug/L	104		SW846 8260B
	10	11	ug/L	107	2.9	SW846 8260B
Isopropyl ether	10	10	ug/L	105		SW846 8260B
	10	10	ug/L	103	1.8	SW846 8260B
1,2-Dibromo-3-chloro-propane	10	7.3	ug/L	73		SW846 8260B
	10	7.7	ug/L	77	5.4	SW846 8260B
1,2-Dibromoethane (EDB)	10	9.1	ug/L	91		SW846 8260B
	10	9.1	ug/L	91	0.14	SW846 8260B
Dibromomethane	10	9.3	ug/L	93		SW846 8260B
	10	9.4	ug/L	94	0.75	SW846 8260B
1,2-Dichlorobenzene	10	8.2	ug/L	82		SW846 8260B
	10	8.5	ug/L	85	3.7	SW846 8260B
1,3-Dichlorobenzene	10	8.1	ug/L	81		SW846 8260B
	10	8.3	ug/L	83	2.6	SW846 8260B
1,4-Dichlorobenzene	10	8.0	ug/L	80		SW846 8260B
	10	8.1	ug/L	81	1.6	SW846 8260B
Dichlorodifluoromethane	10	7.9	ug/L	79		SW846 8260B
	10	8.0	ug/L	80	1.3	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-193 KW4KL1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethane	10	9.1	ug/L	91		SW846 8260B
	10	9.0	ug/L	90	1.5	SW846 8260B
1,2-Dichloroethane	10	9.1	ug/L	91		SW846 8260B
	10	8.7	ug/L	87	4.4	SW846 8260B
cis-1,2-Dichloroethene	10	9.7	ug/L	97		SW846 8260B
	10	9.4	ug/L	94	2.8	SW846 8260B
trans-1,2-Dichloroethene	10	9.7	ug/L	97		SW846 8260B
	10	9.6	ug/L	96	0.98	SW846 8260B
1,1-Dichloroethene	**10**	**10**	**ug/L**	**100**		**SW846 8260B**
	10	**9.8**	**ug/L**	**98**	**2.2**	**SW846 8260B**
1,2-Dichloropropane	10	8.9	ug/L	89		SW846 8260B
	10	8.8	ug/L	88	0.94	SW846 8260B
1,3-Dichloropropane	10	8.9	ug/L	89		SW846 8260B
	10	8.8	ug/L	88	0.50	SW846 8260B
2,2-Dichloropropane	10	7.3	ug/L	73		SW846 8260B
	10	7.6	ug/L	76	3.6	SW846 8260B
cis-1,3-Dichloropropene	10	8.1 a	ug/L	81		SW846 8260B
	10	8.3 a	ug/L	83	1.9	SW846 8260B
trans-1,3-Dichloropropene	10	8.4	ug/L	84		SW846 8260B
	10	8.6	ug/L	86	2.7	SW846 8260B
1,1-Dichloropropene	10	8.9	ug/L	89		SW846 8260B
	10	9.0	ug/L	90	0.47	SW846 8260B
Ethylbenzene	10	8.5 a	ug/L	85		SW846 8260B
	10	8.6	ug/L	86	1.7	SW846 8260B
Hexachlorobutadiene	10	8.0	ug/L	80		SW846 8260B
	10	8.4	ug/L	84	5.2	SW846 8260B
2-Hexanone	10	9.1	ug/L	91		SW846 8260B
	10	8.7	ug/L	87	4.2	SW846 8260B
Isopropylbenzene	10	9.6	ug/L	96		SW846 8260B
	10	10	ug/L	100	3.7	SW846 8260B
p-Isopropyltoluene	10	7.9	ug/L	79		SW846 8260B
	10	8.3	ug/L	83	5.2	SW846 8260B
Methyl acetate	10	9.4	ug/L	94		SW846 8260B
	10	8.7	ug/L	87	7.3	SW846 8260B
Methylcyclohexane	10	7.5	ug/L	75		SW846 8260B
	10	7.8	ug/L	78	3.7	SW846 8260B
Methylene chloride	10	9.2	ug/L	92		SW846 8260B
	10	9.3	ug/L	93	0.72	SW846 8260B
4-Methyl-2-pentanone (MIBK	10	9.0	ug/L	90		SW846 8260B
	10	8.8	ug/L	88	2.2	SW846 8260B
Methyl tert-butyl ether (MTBE)	10	9.2	ug/L	92		SW846 8260B
	10	9.1	ug/L	91	0.52	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-193 KW4KL1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Naphthalene	10	6.5 a	ug/L	65		SW846 8260B
	10	7.1	ug/L	71	8.3	SW846 8260B
n-Propylbenzene	10	7.5	ug/L	75		SW846 8260B
	10	7.9	ug/L	79	4.6	SW846 8260B
Styrene	10	8.7	ug/L	87		SW846 8260B
	10	8.8	ug/L	88	1.6	SW846 8260B
1,1,1,2-Tetrachloroethane	10	8.5	ug/L	85		SW846 8260B
	10	8.7	ug/L	87	2.7	SW846 8260B
1,1,2,2-Tetrachloroethane	10	8.2 a	ug/L	82		SW846 8260B
	10	8.2 a	ug/L	82	0.010	SW846 8260B
Tetrachloroethene	10	9.4	ug/L	94		SW846 8260B
	10	9.6	ug/L	96	1.9	SW846 8260B
Toluene	**10**	**9.0**	**ug/L**	**90**		**SW846 8260B**
	10	**9.1**	**ug/L**	**91**	**1.3**	**SW846 8260B**
1,2,3-Trichlorobenzene	10	6.9 a	ug/L	69		SW846 8260B
	10	7.7	ug/L	77	10	SW846 8260B
1,2,4-Trichloro-benzene	10	7.1	ug/L	71		SW846 8260B
	10	7.5	ug/L	75	5.8	SW846 8260B
1,1,1-Trichloroethane	10	8.7	ug/L	87		SW846 8260B
	10	8.7	ug/L	87	0.50	SW846 8260B
1,1,2-Trichloroethane	10	9.0	ug/L	90		SW846 8260B
	10	9.1	ug/L	91	0.47	SW846 8260B
Trichloroethene	**10**	**9.3**	**ug/L**	**93**		**SW846 8260B**
	10	**9.2**	**ug/L**	**92**	**0.46**	**SW846 8260B**
Trichlorofluoromethane	10	7.0	ug/L	70		SW846 8260B
	10	8.2	ug/L	82	15	SW846 8260B
1,2,3-Trichloropropane	10	9.1	ug/L	91		SW846 8260B
	10	9.1	ug/L	91	0.49	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	10	11	ug/L	112		SW846 8260B
	10	11	ug/L	115	2.7	SW846 8260B
1,2,4-Trimethylbenzene	10	7.9	ug/L	79		SW846 8260B
	10	8.0	ug/L	80	2.1	SW846 8260B
1,3,5-Trimethylbenzene	10	7.6	ug/L	76		SW846 8260B
	10	7.8	ug/L	78	2.8	SW846 8260B
Vinyl chloride	10	8.0	ug/L	80		SW846 8260B
	10	8.2	ug/L	82	2.4	SW846 8260B
m-Xylene & p-Xylene	20	17	ug/L	84		SW846 8260B
	20	17	ug/L	87	3.0	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW4KL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-193 KW4KL1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
o-Xylene	10	8.4	ug/L	84		SW846 8260B
	10	8.6	ug/L	86	2.8	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
	88	(61 - 128)
Toluene-d8	98	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)
	93	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AR-MSD
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/18/08 **Analysis Date..:** 09/18/08
Prep Batch #...: 8262193
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	91	(45 - 128)			SW846 8260B
	93	(45 - 128)	2.0	(0-30)	SW846 8260B
Benzene	**83**	**(78 - 118)**			**SW846 8260B**
	86	**(78 - 118)**	**4.0**	**(0-20)**	**SW846 8260B**
Bromobenzene	78	(70 - 130)			SW846 8260B
	78	(70 - 130)	0.25	(0-30)	SW846 8260B
1,2-Dichloroethene (total)	90	(86 - 115)			SW846 8260B
	93	(86 - 115)	3.6	(0-30)	SW846 8260B
Bromochloromethane	93	(70 - 130)			SW846 8260B
	96	(70 - 130)	3.2	(0-30)	SW846 8260B
Bromodichloromethane	85	(80 - 146)			SW846 8260B
	89	(80 - 146)	4.6	(0-30)	SW846 8260B
Bromoform	86	(58 - 176)			SW846 8260B
	88	(58 - 176)	2.4	(0-30)	SW846 8260B
Bromomethane	74	(55 - 145)			SW846 8260B
	74	(55 - 145)	0.33	(0-30)	SW846 8260B
Methyl ethyl ketone	95	(71 - 123)			SW846 8260B
	95	(71 - 123)	0.17	(0-30)	SW846 8260B
n-Butylbenzene	68 a	(70 - 130)			SW846 8260B
	70	(70 - 130)	3.1	(0-30)	SW846 8260B
sec-Butylbenzene	68 a	(70 - 130)			SW846 8260B
	71	(70 - 130)	3.8	(0-30)	SW846 8260B
Xylenes (total)	80 a	(89 - 121)			SW846 8260B
	81 a	(89 - 121)	1.5	(0-30)	SW846 8260B
tert-Butylbenzene	68 a	(70 - 130)			SW846 8260B
	71	(70 - 130)	4.1	(0-30)	SW846 8260B
Carbon disulfide	102	(69 - 138)			SW846 8260B
	117	(69 - 138)	13	(0-41)	SW846 8260B
Carbon tetrachloride	83	(63 - 176)			SW846 8260B
	89	(63 - 176)	7.2	(0-30)	SW846 8260B
Chlorobenzene	**84**	**(76 - 117)**			**SW846 8260B**
	85	**(76 - 117)**	**0.09**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	92	(71 - 158)			SW846 8260B
	92	(71 - 158)	0.01	(0-30)	SW846 8260B
Chloroethane	76	(59 - 142)			SW846 8260B
	82	(59 - 142)	7.6	(0-30)	SW846 8260B
n-Hexane	76	(70 - 130)			SW846 8260B
	90	(70 - 130)	17	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AR-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	85	(83 - 141)			SW846 8260B
	90	(83 - 141)	5.3	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acetonitrile	86	(50 - 130)			SW846 8260B
	89	(50 - 130)	3.4	(0-30)	SW846 8260B
Chloromethane	66	(40 - 137)			SW846 8260B
	70	(40 - 137)	6.2	(0-39)	SW846 8260B
Acrolein	108	(50 - 130)			SW846 8260B
	111	(50 - 130)	2.6	(0-30)	SW846 8260B
Acrylonitrile	97	(50 - 130)			SW846 8260B
	97	(50 - 130)	0.35	(0-30)	SW846 8260B
Vinyl acetate	76	(70 - 130)			SW846 8260B
	79	(70 - 130)	4.5	(0-30)	SW846 8260B
2-Chlorotoluene	72	(70 - 130)			SW846 8260B
	74	(70 - 130)	2.8	(0-30)	SW846 8260B
4-Chlorotoluene	73	(70 - 130)			SW846 8260B
	75	(70 - 130)	3.5	(0-30)	SW846 8260B
Cyclohexane	66 a	(70 - 130)			SW846 8260B
	71	(70 - 130)	7.9	(0-30)	SW846 8260B
Iodomethane	94	(70 - 130)			SW846 8260B
	103	(70 - 130)	9.6	(0-30)	SW846 8260B
Isopropyl ether	109	(70 - 130)			SW846 8260B
	102	(70 - 130)	7.0	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	76	(70 - 130)			SW846 8260B
	80	(70 - 130)	5.0	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	89	(70 - 130)			SW846 8260B
	90	(70 - 130)	1.2	(0-30)	SW846 8260B
Dibromomethane	91	(70 - 130)			SW846 8260B
	92	(70 - 130)	1.1	(0-30)	SW846 8260B
1,2-Dichlorobenzene	80	(70 - 130)			SW846 8260B
	82	(70 - 130)	2.5	(0-30)	SW846 8260B
1,3-Dichlorobenzene	79	(70 - 130)			SW846 8260B
	80	(70 - 130)	1.7	(0-30)	SW846 8260B
1,4-Dichlorobenzene	76	(70 - 130)			SW846 8260B
	79	(70 - 130)	3.9	(0-30)	SW846 8260B
Dichlorodifluoromethane	70	(70 - 130)			SW846 8260B
	77	(70 - 130)	10	(0-30)	SW846 8260B
1,1-Dichloroethane	85 a	(88 - 127)			SW846 8260B
	88	(88 - 127)	3.3	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AR-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	84	(71 - 160)			SW846 8260B
	86	(71 - 160)	2.5	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	88	(87 - 114)			SW846 8260B
	92	(87 - 114)	4.6	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	92	(85 - 116)			SW846 8260B
	94	(85 - 116)	2.7	(0-30)	SW846 8260B
1,1-Dichloroethene	**95**	**(62 - 130)**			**SW846 8260B**
	98	**(62 - 130)**	**2.9**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	86 a	(87 - 114)			SW846 8260B
	88	(87 - 114)	1.9	(0-30)	SW846 8260B
1,3-Dichloropropane	89	(70 - 130)			SW846 8260B
	87	(70 - 130)	2.0	(0-30)	SW846 8260B
2,2-Dichloropropane	57 a	(70 - 130)			SW846 8260B
	61 a	(70 - 130)	7.6	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	70 a	(82 - 130)			SW846 8260B
	74 a	(82 - 130)	5.6	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	77	(73 - 147)			SW846 8260B
	77	(73 - 147)	0.59	(0-30)	SW846 8260B
1,1-Dichloropropene	84	(70 - 130)			SW846 8260B
	87	(70 - 130)	3.8	(0-30)	SW846 8260B
Ethylbenzene	80 a	(86 - 132)			SW846 8260B
	82 a	(86 - 132)	2.6	(0-30)	SW846 8260B
Hexachlorobutadiene	75	(70 - 130)			SW846 8260B
	76	(70 - 130)	2.0	(0-30)	SW846 8260B
2-Hexanone	87	(81 - 128)			SW846 8260B
	85	(81 - 128)	2.3	(0-30)	SW846 8260B
Isopropylbenzene	90	(70 - 130)			SW846 8260B
	95	(70 - 130)	5.9	(0-30)	SW846 8260B
p-Isopropyltoluene	75	(70 - 130)			SW846 8260B
	77	(70 - 130)	3.8	(0-30)	SW846 8260B
Methyl acetate	71	(70 - 130)			SW846 8260B
	70	(70 - 130)	1.7	(0-30)	SW846 8260B
Methylcyclohexane	65 a	(70 - 130)			SW846 8260B
	72	(70 - 130)	10	(0-30)	SW846 8260B
Methylene chloride	88	(82 - 115)			SW846 8260B
	92	(82 - 115)	4.5	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	87	(82 - 135)			SW846 8260B
	89	(82 - 135)	1.7	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	86	(70 - 130)			SW846 8260B
	91	(70 - 130)	6.0	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AR-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	65 a	(70 - 130)			SW846 8260B
	70	(70 - 130)	6.1	(0-30)	SW846 8260B
n-Propylbenzene	71	(70 - 130)			SW846 8260B
	74	(70 - 130)	4.0	(0-30)	SW846 8260B
Styrene	79 a	(83 - 120)			SW846 8260B
	81 a	(83 - 120)	2.4	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	82	(70 - 130)			SW846 8260B
	84	(70 - 130)	3.2	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	81 a	(88 - 116)			SW846 8260B
	82 a	(88 - 116)	1.7	(0-30)	SW846 8260B
Tetrachloroethene	86	(85 - 121)			SW846 8260B
	87	(85 - 121)	0.60	(0-30)	SW846 8260B
Toluene	**89**	**(70 - 119)**			**SW846 8260B**
	88	**(70 - 119)**	**1.2**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	70	(70 - 130)			SW846 8260B
	71	(70 - 130)	2.0	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	68 a	(70 - 130)			SW846 8260B
	70	(70 - 130)	2.4	(0-30)	SW846 8260B
1,1,1-Trichloroethane	82	(71 - 162)			SW846 8260B
	87	(71 - 162)	5.5	(0-30)	SW846 8260B
1,1,2-Trichloroethane	90	(86 - 129)			SW846 8260B
	88	(86 - 129)	2.4	(0-30)	SW846 8260B
Trichloroethene	**87**	**(62 - 130)**			**SW846 8260B**
	91	**(62 - 130)**	**4.6**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	52 a	(70 - 130)			SW846 8260B
	62 a	(70 - 130)	18	(0-30)	SW846 8260B
1,2,3-Trichloropropane	89	(70 - 130)			SW846 8260B
	93	(70 - 130)	4.2	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	97	(70 - 130)			SW846 8260B
	105	(70 - 130)	7.9	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	74	(70 - 130)			SW846 8260B
	77	(70 - 130)	3.5	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	71	(70 - 130)			SW846 8260B
	73	(70 - 130)	2.5	(0-30)	SW846 8260B
Vinyl chloride	69 a	(88 - 126)			SW846 8260B
	77 a	(88 - 126)	10	(0-30)	SW846 8260B
m-Xylene & p-Xylene	80	(70 - 130)			SW846 8260B
	81	(70 - 130)	1.2	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AR-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	80	(70 - 130)			SW846 8260B
	82	(70 - 130)	2.2	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
	89	(61 - 128)
Toluene-d8	101	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AR-MSD
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/18/08 **Analysis Date..:** 09/18/08
Prep Batch #...: 8262193
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acetone	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	9.3	ug/L	93	2.0	SW846 8260B
Benzene	**ND**	**10**	**8.3**	**ug/L**	**83**		**SW846 8260B**
	ND	**10**	**8.6**	**ug/L**	**86**	**4.0**	**SW846 8260B**
Bromobenzene	ND	10	7.8	ug/L	78		SW846 8260B
	ND	10	7.8	ug/L	78	0.25	SW846 8260B
1,2-Dichloroethene (total)	ND	20	18	ug/L	90		SW846 8260B
	ND	20	19	ug/L	93	3.6	SW846 8260B
Bromochloromethane	ND	10	9.3	ug/L	93		SW846 8260B
	ND	10	9.6	ug/L	96	3.2	SW846 8260B
Bromodichloromethane	ND	10	8.5	ug/L	85		SW846 8260B
	ND	10	8.9	ug/L	89	4.6	SW846 8260B
Bromoform	ND	10	8.6	ug/L	86		SW846 8260B
	ND	10	8.8	ug/L	88	2.4	SW846 8260B
Bromomethane	ND	10	7.4	ug/L	74		SW846 8260B
	ND	10	7.4	ug/L	74	0.33	SW846 8260B
Methyl ethyl ketone	ND	10	9.5	ug/L	95		SW846 8260B
	ND	10	9.5	ug/L	95	0.17	SW846 8260B
n-Butylbenzene	ND	10	6.8	ug/L	68 a		SW846 8260B
	ND	10	7.0	ug/L	70	3.1	SW846 8260B
sec-Butylbenzene	ND	10	6.8	ug/L	68 a		SW846 8260B
	ND	10	7.1	ug/L	71	3.8	SW846 8260B
Xylenes (total)	ND	30	24	ug/L	80 a		SW846 8260B
	ND	30	24	ug/L	81 a	1.5	SW846 8260B
tert-Butylbenzene	ND	10	6.8	ug/L	68 a		SW846 8260B
	ND	10	7.1	ug/L	71	4.1	SW846 8260B
Carbon disulfide	0.95	10	11	ug/L	102		SW846 8260B
	0.95	10	13	ug/L	117	13	SW846 8260B
Carbon tetrachloride	ND	10	8.3	ug/L	83		SW846 8260B
	ND	10	8.9	ug/L	89	7.2	SW846 8260B
Chlorobenzene	**ND**	**10**	**8.4**	**ug/L**	**84**		**SW846 8260B**
	ND	**10**	**8.5**	**ug/L**	**85**	**0.09**	**SW846 8260B**
Chlorodibromomethane	ND	10	9.2	ug/L	92		SW846 8260B
	ND	10	9.2	ug/L	92	0.01	SW846 8260B
Chloroethane	ND	10	7.6	ug/L	76		SW846 8260B
	ND	10	8.2	ug/L	82	7.6	SW846 8260B
n-Hexane	ND	10	7.6	ug/L	76		SW846 8260B
	ND	10	9.0	ug/L	90	17	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AR-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Chloroform	ND	10	8.5	ug/L	85		SW846 8260B
	ND	10	9.0	ug/L	90	5.3	SW846 8260B
2-Chloroethyl vinyl ether	ND	10	0.0	ug/L	0.0 a		SW846 8260B
	ND	10	0.0	ug/L	0.0 a	0.0	SW846 8260B
Acetonitrile	ND	100	86	ug/L	86		SW846 8260B
	ND	100	89	ug/L	89	3.4	SW846 8260B
Chloromethane	ND	10	6.6	ug/L	66		SW846 8260B
	ND	10	7.0	ug/L	70	6.2	SW846 8260B
Acrolein	ND	100	110	ug/L	108		SW846 8260B
	ND	100	110	ug/L	111	2.6	SW846 8260B
Acrylonitrile	ND	100	97	ug/L	97		SW846 8260B
	ND	100	97	ug/L	97	0.35	SW846 8260B
Vinyl acetate	ND	10	7.6	ug/L	76		SW846 8260B
	ND	10	7.9	ug/L	79	4.5	SW846 8260B
2-Chlorotoluene	ND	10	7.2	ug/L	72		SW846 8260B
	ND	10	7.4	ug/L	74	2.8	SW846 8260B
4-Chlorotoluene	ND	10	7.3	ug/L	73		SW846 8260B
	ND	10	7.5	ug/L	75	3.5	SW846 8260B
Cyclohexane	ND	10	6.6	ug/L	66 a		SW846 8260B
	ND	10	7.1	ug/L	71	7.9	SW846 8260B
Iodomethane	ND	10	9.4	ug/L	94		SW846 8260B
	ND	10	10	ug/L	103	9.6	SW846 8260B
Isopropyl ether	ND	10	11	ug/L	109		SW846 8260B
	ND	10	10	ug/L	102	7.0	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	10	7.6	ug/L	76		SW846 8260B
	ND	10	8.0	ug/L	80	5.0	SW846 8260B
1,2-Dibromoethane (EDB)	ND	10	8.9	ug/L	89		SW846 8260B
	ND	10	9.0	ug/L	90	1.2	SW846 8260B
Dibromomethane	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	9.2	ug/L	92	1.1	SW846 8260B
1,2-Dichlorobenzene	ND	10	8.0	ug/L	80		SW846 8260B
	ND	10	8.2	ug/L	82	2.5	SW846 8260B
1,3-Dichlorobenzene	ND	10	7.9	ug/L	79		SW846 8260B
	ND	10	8.0	ug/L	80	1.7	SW846 8260B
1,4-Dichlorobenzene	ND	10	7.6	ug/L	76		SW846 8260B
	ND	10	7.9	ug/L	79	3.9	SW846 8260B
Dichlorodifluoromethane	ND	10	7.0	ug/L	70		SW846 8260B
	ND	10	7.7	ug/L	77	10	SW846 8260B
1,1-Dichloroethane	ND	10	8.5	ug/L	85 a		SW846 8260B
	ND	10	8.8	ug/L	88	3.3	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AR-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2-Dichloroethane	ND	10	8.4	ug/L	84		SW846 8260B
	ND	10	8.6	ug/L	86	2.5	SW846 8260B
cis-1,2-Dichloroethene	ND	10	8.8	ug/L	88		SW846 8260B
	ND	10	9.2	ug/L	92	4.6	SW846 8260B
trans-1,2-Dichloroethene	ND	10	9.2	ug/L	92		SW846 8260B
	ND	10	9.4	ug/L	94	2.7	SW846 8260B
1,1-Dichloroethene	**ND**	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	ND	**10**	**9.8**	**ug/L**	**98**	**2.9**	**SW846 8260B**
1,2-Dichloropropane	ND	10	8.6	ug/L	86 a		SW846 8260B
	ND	10	8.8	ug/L	88	1.9	SW846 8260B
1,3-Dichloropropane	ND	10	8.9	ug/L	89		SW846 8260B
	ND	10	8.7	ug/L	87	2.0	SW846 8260B
2,2-Dichloropropane	ND	10	5.7	ug/L	57 a		SW846 8260B
	ND	10	6.1	ug/L	61 a	7.6	SW846 8260B
cis-1,3-Dichloropropene	ND	10	7.0	ug/L	70 a		SW846 8260B
	ND	10	7.4	ug/L	74 a	5.6	SW846 8260B
trans-1,3-Dichloropropene	ND	10	7.7	ug/L	77		SW846 8260B
	ND	10	7.7	ug/L	77	0.59	SW846 8260B
1,1-Dichloropropene	ND	10	8.4	ug/L	84		SW846 8260B
	ND	10	8.7	ug/L	87	3.8	SW846 8260B
Ethylbenzene	ND	10	8.0	ug/L	80 a		SW846 8260B
	ND	10	8.2	ug/L	82 a	2.6	SW846 8260B
Hexachlorobutadiene	ND	10	7.5	ug/L	75		SW846 8260B
	ND	10	7.6	ug/L	76	2.0	SW846 8260B
2-Hexanone	ND	10	8.7	ug/L	87		SW846 8260B
	ND	10	8.5	ug/L	85	2.3	SW846 8260B
Isopropylbenzene	ND	10	9.0	ug/L	90		SW846 8260B
	ND	10	9.5	ug/L	95	5.9	SW846 8260B
p-Isopropyltoluene	ND	10	7.5	ug/L	75		SW846 8260B
	ND	10	7.7	ug/L	77	3.8	SW846 8260B
Methyl acetate	ND	10	7.1	ug/L	71		SW846 8260B
	ND	10	7.0	ug/L	70	1.7	SW846 8260B
Methylcyclohexane	ND	10	6.5	ug/L	65 a		SW846 8260B
	ND	10	7.2	ug/L	72	10	SW846 8260B
Methylene chloride	0.72	10	9.5	ug/L	88		SW846 8260B
	0.72	10	10	ug/L	92	4.5	SW846 8260B
4-Methyl-2-pentanone (MIB	ND	10	8.7	ug/L	87		SW846 8260B
	ND	10	8.9	ug/L	89	1.7	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	10	8.6	ug/L	86		SW846 8260B
	ND	10	9.1	ug/L	91	6.0	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AR-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Naphthalene	ND	10	6.5	ug/L	65 a		SW846 8260B
	ND	10	7.0	ug/L	70	6.1	SW846 8260B
n-Propylbenzene	ND	10	7.1	ug/L	71		SW846 8260B
	ND	10	7.4	ug/L	74	4.0	SW846 8260B
Styrene	ND	10	7.9	ug/L	79 a		SW846 8260B
	ND	10	8.1	ug/L	81 a	2.4	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	10	8.2	ug/L	82		SW846 8260B
	ND	10	8.4	ug/L	84	3.2	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	10	8.1	ug/L	81 a		SW846 8260B
	ND	10	8.2	ug/L	82 a	1.7	SW846 8260B
Tetrachloroethene	3.7	10	12	ug/L	86		SW846 8260B
	3.7	10	12	ug/L	87	0.60	SW846 8260B
Toluene	**ND**	**10**	**8.9**	**ug/L**	**89**		**SW846 8260B**
	ND	**10**	**8.8**	**ug/L**	**88**	**1.2**	**SW846 8260B**
1,2,3-Trichlorobenzene	ND	10	7.0	ug/L	70		SW846 8260B
	ND	10	7.1	ug/L	71	2.0	SW846 8260B
1,2,4-Trichloro-benzene	ND	10	6.8	ug/L	68 a		SW846 8260B
	ND	10	7.0	ug/L	70	2.4	SW846 8260B
1,1,1-Trichloroethane	ND	10	8.2	ug/L	82		SW846 8260B
	ND	10	8.7	ug/L	87	5.5	SW846 8260B
1,1,2-Trichloroethane	ND	10	9.0	ug/L	90		SW846 8260B
	ND	10	8.8	ug/L	88	2.4	SW846 8260B
Trichloroethene	**ND**	**10**	**8.7**	**ug/L**	**87**		**SW846 8260B**
	ND	**10**	**9.1**	**ug/L**	**91**	**4.6**	**SW846 8260B**
Trichlorofluoromethane	ND	10	5.2	ug/L	52 a		SW846 8260B
	ND	10	6.2	ug/L	62 a	18	SW846 8260B
1,2,3-Trichloropropane	ND	10	8.9	ug/L	89		SW846 8260B
	ND	10	9.3	ug/L	93	4.2	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	9.7	ug/L	97		SW846 8260B
	ND	10	11	ug/L	105	7.9	SW846 8260B
1,2,4-Trimethylbenzene	ND	10	7.4	ug/L	74		SW846 8260B
	ND	10	7.7	ug/L	77	3.5	SW846 8260B
1,3,5-Trimethylbenzene	ND	10	7.1	ug/L	71		SW846 8260B
	ND	10	7.3	ug/L	73	2.5	SW846 8260B
Vinyl chloride	ND	10	6.9	ug/L	69 a		SW846 8260B
	ND	10	7.7	ug/L	77 a	10	SW846 8260B
m-Xylene & p-Xylene	ND	20	16	ug/L	80		SW846 8260B
	ND	20	16	ug/L	81	1.2	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AQ-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AR-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
o-Xylene	ND	10	8.0	ug/L	80		SW846 8260B
	ND	10	8.2	ug/L	82	2.2	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
	89	(61 - 128)
Toluene-d8	101	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

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GCMS SEMIVOLATILE DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080910)

GC/MS Semivolatiles

Lot-Sample #...: A8I120347-001 **Work Order #...:** KWTK11AC **Matrix.....:** WG
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/16/08 **Analysis Date..:** 09/18/08
Prep Batch #...: 8260041
Dilution Factor: 1 **Initial Wgt/Vol:** 1030 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.10
Acenaphthylene	ND	10	ug/L	0.10
Acetophenone	ND	10	ug/L	0.34
Anthracene	ND	10	ug/L	0.10
Atrazine	ND	10	ug/L	0.34
Benzaldehyde	ND	10	ug/L	0.39
Benzo(a)anthracene	ND	10	ug/L	0.10
Benzo(b)fluoranthene	ND	10	ug/L	0.10
Benzo(k)fluoranthene	ND	10	ug/L	0.10
Benzo(ghi)perylene	ND	10	ug/L	0.10
Benzo(a)pyrene	ND	10	ug/L	0.10
1,1'-Biphenyl	ND	10	ug/L	0.80
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.32
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.10
bis(2-Ethylhexyl) phthalate	**2.2 J,B**	**10**	**ug/L**	**0.80**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.80
Butyl benzyl phthalate	ND	10	ug/L	0.80
Caprolactam	ND	10	ug/L	0.80
Carbazole	ND	10	ug/L	0.28
4-Chloroaniline	ND	10	ug/L	0.80
4-Chloro-3-methylphenol	ND	10	ug/L	0.80
2-Chloronaphthalene	ND	10	ug/L	0.10
2-Chlorophenol	ND	10	ug/L	0.29
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.30
Chrysene	ND	10	ug/L	0.10
Dibenz(a,h)anthracene	ND	10	ug/L	0.10
Dibenzofuran	ND	10	ug/L	0.10
Di-n-butyl phthalate	ND	10	ug/L	0.67
3,3'-Dichlorobenzidine	ND	50	ug/L	0.37
2,4-Dichlorophenol	ND	10	ug/L	0.80
Diethyl phthalate	ND	10	ug/L	0.60
2,4-Dimethylphenol	ND	10	ug/L	0.80
Dimethyl phthalate	ND	10	ug/L	0.29

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ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080910)

GC/MS Semivolatiles

Lot-Sample #...: A8I120347-001 **Work Order #...:** KWTK11AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
4,6-Dinitro-2-methylphenol	ND	50	ug/L	2.4
2,4-Dinitrophenol	ND	50	ug/L	2.4
2,4-Dinitrotoluene	ND	10	ug/L	0.27
2,6-Dinitrotoluene	ND	10	ug/L	0.80
Di-n-octyl phthalate	ND	10	ug/L	0.80
Fluoranthene	ND	10	ug/L	0.10
Fluorene	ND	10	ug/L	0.10
Hexachlorobenzene	ND	10	ug/L	0.10
Hexachlorobutadiene	ND	10	ug/L	0.27
Hexachlorocyclopenta-diene	ND	50	ug/L	0.80
Hexachloroethane	ND	10	ug/L	0.80
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.10
Isophorone	ND	10	ug/L	0.27
2-Methylnaphthalene	ND	10	ug/L	0.10
2-Methylphenol	ND	10	ug/L	0.80
4-Methylphenol	ND	10	ug/L	0.80
Naphthalene	ND	10	ug/L	0.10
2-Nitroaniline	ND	50	ug/L	0.80
3-Nitroaniline	ND	50	ug/L	0.28
4-Nitroaniline	ND	50	ug/L	0.80
Nitrobenzene	ND	10	ug/L	0.040
2-Nitrophenol	ND	10	ug/L	0.28
4-Nitrophenol	ND	50	ug/L	2.4
N-Nitrosodiphenylamine	ND	10	ug/L	0.31
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.80
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	0.40
Pentachlorophenol	ND	10	ug/L	2.4
Phenanthrene	ND	10	ug/L	0.10
Phenol	ND	10	ug/L	0.60
Pyrene	ND	10	ug/L	0.10
2,4,5-Trichloro-phenol	ND	10	ug/L	0.30
2,4,6-Trichloro-phenol	ND	10	ug/L	0.80

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ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080910)

GC/MS Semivolatiles

Lot-Sample #...: A8I120347-001 **Work Order #...:** KWTK11AC **Matrix.....:** WG

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	77	(27 - 111)
2-Fluorobiphenyl	71	(28 - 110)
Terphenyl-d14	99	(37 - 119)
Phenol-d5	73	(10 - 110)
2-Fluorophenol	69	(10 - 110)
2,4,6-Tribromophenol	78	(22 - 120)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWXG01AA **Matrix.....:** WATER
MB Lot-Sample #: A8I160000-041

Prep Date.....: 09/16/08 **Final Wgt/Vol..:** 2 mL
Analysis Date..: 09/18/08 **Prep Batch #...:** 8260041
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Atrazine	ND	10	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	**1.9 J**	**10**	**ug/L**	**SW846 8270C**
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWXG01AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	85	(27 - 111)
2-Fluorobiphenyl	73	(28 - 110)
Terphenyl-d14	104	(37 - 119)
Phenol-d5	76	(10 - 110)
2-Fluorophenol	76	(10 - 110)
2,4,6-Tribromophenol	72	(22 - 120)

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWXG01AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWXG01AC **Matrix.....:** WATER
LCS Lot-Sample#: A8I160000-041
Prep Date.....: 09/16/08 **Analysis Date..:** 09/18/08
Prep Batch #...: 8260041
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2,4-Trichloro-benzene	**52**	**(25 - 110)**	**SW846 8270C**
Acenaphthene	**75**	**(40 - 110)**	**SW846 8270C**
1,4-Dichlorobenzene	**51**	**(19 - 110)**	**SW846 8270C**
Acenaphthylene	77	(43 - 110)	SW846 8270C
Acetophenone	80	(50 - 130)	SW846 8270C
Anthracene	78	(54 - 114)	SW846 8270C
Atrazine	93	(50 - 130)	SW846 8270C
1,2-Dichlorobenzene	56	(23 - 110)	SW846 8270C
1,3-Dichlorobenzene	47	(19 - 110)	SW846 8270C
Benzaldehyde	104	(10 - 130)	SW846 8270C
Benzo(a)anthracene	79	(55 - 115)	SW846 8270C
Benzo(b)fluoranthene	74	(43 - 122)	SW846 8270C
Benzo(k)fluoranthene	80	(43 - 124)	SW846 8270C
Benzo(ghi)perylene	80	(45 - 120)	SW846 8270C
Benzo(a)pyrene	65	(43 - 116)	SW846 8270C
1,1'-Biphenyl	74	(50 - 130)	SW846 8270C
bis(2-Chloroethoxy) methane	77	(39 - 110)	SW846 8270C
bis(2-Chloroethyl)-ether	80	(34 - 113)	SW846 8270C
bis(2-Ethylhexyl) phthalate	91	(36 - 163)	SW846 8270C
4-Bromophenyl phenyl ether	78	(51 - 114)	SW846 8270C
Butyl benzyl phthalate	84	(53 - 126)	SW846 8270C
Caprolactam	77	(50 - 130)	SW846 8270C
Carbazole	79	(53 - 120)	SW846 8270C
4-Chloroaniline	69	(10 - 110)	SW846 8270C
4-Chloro-3-methylphenol	**74**	**(39 - 110)**	**SW846 8270C**
Benzoic acid	37	(10 - 129)	SW846 8270C
1,4-Dioxane	63	(10 - 110)	SW846 8270C
Pyridine	13	(10 - 110)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWXG01AC **Matrix.....:** WATER
LCS Lot-Sample#: A8I160000-041

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2-Chloronaphthalene	73	(39 - 110)	SW846 8270C
2-Chlorophenol	**72**	**(27 - 110)**	**SW846 8270C**
Aniline	62	(10 - 130)	SW846 8270C
Benzyl alcohol	42	(10 - 130)	SW846 8270C
4-Chlorophenyl phenyl ether	77	(50 - 115)	SW846 8270C
N-Nitrosodimethylamine	76	(10 - 130)	SW846 8270C
1-Methylnaphthalene	67	(10 - 130)	SW846 8270C
1,2-Dinitrobenzene	78	(10 - 130)	SW846 8270C
2,3,5,6-Tetrachlorophenol	67	(10 - 130)	SW846 8270C
Chrysene	76	(55 - 115)	SW846 8270C
Dibenz(a,h)anthracene	79	(46 - 122)	SW846 8270C
Dibenzofuran	74	(46 - 111)	SW846 8270C
Di-n-butyl phthalate	91	(55 - 122)	SW846 8270C
3,3'-Dichlorobenzidine	61	(19 - 110)	SW846 8270C
2,4-Dichlorophenol	73	(33 - 110)	SW846 8270C
Diethyl phthalate	80	(33 - 134)	SW846 8270C
2,4-Dimethylphenol	49	(12 - 110)	SW846 8270C
Dimethyl phthalate	78	(15 - 143)	SW846 8270C
4,6-Dinitro-2-methylphenol	60	(28 - 112)	SW846 8270C
2,4-Dinitrophenol	46	(17 - 112)	SW846 8270C
2,4-Dinitrotoluene	**78**	**(52 - 123)**	**SW846 8270C**
2,6-Dinitrotoluene	77	(52 - 119)	SW846 8270C
Di-n-octyl phthalate	80	(44 - 128)	SW846 8270C
Fluoranthene	84	(54 - 122)	SW846 8270C
Fluorene	75	(47 - 112)	SW846 8270C
Hexachlorobenzene	75	(51 - 112)	SW846 8270C
Hexachlorobutadiene	42	(13 - 110)	SW846 8270C
Hexachlorocyclopenta-diene	7.1 a	(10 - 110)	SW846 8270C
Hexachloroethane	40	(12 - 110)	SW846 8270C
Indeno(1,2,3-cd)pyrene	82	(46 - 121)	SW846 8270C
Isophorone	88	(44 - 128)	SW846 8270C
2-Methylnaphthalene	73	(35 - 110)	SW846 8270C
2-Methylphenol	86	(30 - 110)	SW846 8270C
4-Methylphenol	72	(32 - 110)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWXG01AC **Matrix.....:** WATER
LCS Lot-Sample#: A8I160000-041

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Naphthalene	67	(31 - 110)	SW846 8270C
2-Nitroaniline	85	(43 - 130)	SW846 8270C
3-Nitroaniline	80	(45 - 116)	SW846 8270C
4-Nitroaniline	77	(45 - 120)	SW846 8270C
Nitrobenzene	81	(37 - 115)	SW846 8270C
2-Nitrophenol	76	(29 - 110)	SW846 8270C
4-Nitrophenol	**72**	**(12 - 130)**	**SW846 8270C**
N-Nitrosodiphenylamine	74	(53 - 113)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**81**	**(37 - 121)**	**SW846 8270C**
2,2'-oxybis (1-Chloropropane)	84	(25 - 128)	SW846 8270C
Pentachlorophenol	**61**	**(26 - 110)**	**SW846 8270C**
Phenanthrene	73	(52 - 114)	SW846 8270C
Phenol	**73**	**(14 - 112)**	**SW846 8270C**
Pyrene	**81**	**(55 - 120)**	**SW846 8270C**
2,4,5-Trichloro-phenol	74	(39 - 110)	SW846 8270C
2,4,6-Trichloro-phenol	73	(35 - 110)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	91	(27 - 111)
2-Fluorobiphenyl	78	(28 - 110)
Terphenyl-d14	107	(37 - 119)
Phenol-d5	86	(10 - 110)
2-Fluorophenol	78	(10 - 110)
2,4,6-Tribromophenol	78	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWXG01AC **Matrix.....:** WATER
LCS Lot-Sample#: A8I160000-041
Prep Date.....: 09/16/08 **Analysis Date..:** 09/18/08
Prep Batch #...: 8260041
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,2,4-Trichloro-benzene	**20**	**10**	**ug/L**	**52**	**SW846 8270C**
Acenaphthene	**20**	**15**	**ug/L**	**75**	**SW846 8270C**
1,4-Dichlorobenzene	**20**	**10**	**ug/L**	**51**	**SW846 8270C**
Acenaphthylene	20	15	ug/L	77	SW846 8270C
Acetophenone	20	16	ug/L	80	SW846 8270C
Anthracene	20	16	ug/L	78	SW846 8270C
Atrazine	20	19	ug/L	93	SW846 8270C
1,2-Dichlorobenzene	20	11	ug/L	56	SW846 8270C
1,3-Dichlorobenzene	20	9.4	ug/L	47	SW846 8270C
Benzaldehyde	20	21	ug/L	104	SW846 8270C
Benzo(a)anthracene	20	16	ug/L	79	SW846 8270C
Benzo(b)fluoranthene	20	15	ug/L	74	SW846 8270C
Benzo(k)fluoranthene	20	16	ug/L	80	SW846 8270C
Benzo(ghi)perylene	20	16	ug/L	80	SW846 8270C
Benzo(a)pyrene	20	13	ug/L	65	SW846 8270C
1,1'-Biphenyl	20	15	ug/L	74	SW846 8270C
bis(2-Chloroethoxy) methane	20	15	ug/L	77	SW846 8270C
bis(2-Chloroethyl)-ether	20	16	ug/L	80	SW846 8270C
bis(2-Ethylhexyl) phthalate	20	18	ug/L	91	SW846 8270C
4-Bromophenyl phenyl ether	20	16	ug/L	78	SW846 8270C
Butyl benzyl phthalate	20	17	ug/L	84	SW846 8270C
Caprolactam	20	15	ug/L	77	SW846 8270C
Carbazole	20	16	ug/L	79	SW846 8270C
4-Chloroaniline	20	14	ug/L	69	SW846 8270C
4-Chloro-3-methylphenol	**20**	**15**	**ug/L**	**74**	**SW846 8270C**
Benzoic acid	20		ug/L	37	SW846 8270C
1,4-Dioxane	20	13	ug/L	63	SW846 8270C
Pyridine	20	2.5	ug/L	13	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWXG01AC **Matrix.....:** WATER
LCS Lot-Sample#: A8I160000-041

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2-Chloronaphthalene	20	15	ug/L	73	SW846 8270C
2-Chlorophenol	**20**	**14**	**ug/L**	**72**	**SW846 8270C**
Aniline	20	12	ug/L	62	SW846 8270C
Benzyl alcohol	20	8.4	ug/L	42	SW846 8270C
4-Chlorophenyl phenyl ether	20	15	ug/L	77	SW846 8270C
N-Nitrosodimethylamine	20	15	ug/L	76	SW846 8270C
1-Methylnaphthalene	20	13	ug/L	67	SW846 8270C
1,2-Dinitrobenzene	20	16	ug/L	78	SW846 8270C
2,3,5,6-Tetrachlorophenol	20	13	ug/L	67	SW846 8270C
Chrysene	20	15	ug/L	76	SW846 8270C
Dibenz(a,h)anthracene	20	16	ug/L	79	SW846 8270C
Dibenzofuran	20	15	ug/L	74	SW846 8270C
Di-n-butyl phthalate	20	18	ug/L	91	SW846 8270C
3,3'-Dichlorobenzidine	20	12	ug/L	61	SW846 8270C
2,4-Dichlorophenol	20	15	ug/L	73	SW846 8270C
Diethyl phthalate	20	16	ug/L	80	SW846 8270C
2,4-Dimethylphenol	20	9.9	ug/L	49	SW846 8270C
Dimethyl phthalate	20	16	ug/L	78	SW846 8270C
4,6-Dinitro-2-methylphenol	20	12	ug/L	60	SW846 8270C
2,4-Dinitrophenol	20	9.3	ug/L	46	SW846 8270C
2,4-Dinitrotoluene	**20**	**16**	**ug/L**	**78**	**SW846 8270C**
2,6-Dinitrotoluene	20	15	ug/L	77	SW846 8270C
Di-n-octyl phthalate	20	16	ug/L	80	SW846 8270C
Fluoranthene	20	17	ug/L	84	SW846 8270C
Fluorene	20	15	ug/L	75	SW846 8270C
Hexachlorobenzene	20	15	ug/L	75	SW846 8270C
Hexachlorobutadiene	20	8.4	ug/L	42	SW846 8270C
Hexachlorocyclopenta-diene	20	1.4 a	ug/L	7.1	SW846 8270C
Hexachloroethane	20	7.9	ug/L	40	SW846 8270C
Indeno(1,2,3-cd)pyrene	20	16	ug/L	82	SW846 8270C
Isophorone	20	18	ug/L	88	SW846 8270C
2-Methylnaphthalene	20	15	ug/L	73	SW846 8270C
2-Methylphenol	20	17	ug/L	86	SW846 8270C
4-Methylphenol	40	29	ug/L	72	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWXG01AC **Matrix.....:** WATER
LCS Lot-Sample#: A8I160000-041

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Naphthalene	20	13	ug/L	67	SW846 8270C
2-Nitroaniline	20	17	ug/L	85	SW846 8270C
3-Nitroaniline	20	16	ug/L	80	SW846 8270C
4-Nitroaniline	20	15	ug/L	77	SW846 8270C
Nitrobenzene	20	16	ug/L	81	SW846 8270C
2-Nitrophenol	20	15	ug/L	76	SW846 8270C
4-Nitrophenol	**20**	**14**	**ug/L**	**72**	**SW846 8270C**
N-Nitrosodiphenylamine	20	15	ug/L	74	SW846 8270C
N-Nitrosodi-n-propyl-amine	**20**	**16**	**ug/L**	**81**	**SW846 8270C**
2,2'-oxybis (1-Chloropropane)	20	17	ug/L	84	SW846 8270C
Pentachlorophenol	**20**	**12**	**ug/L**	**61**	**SW846 8270C**
Phenanthrene	20	15	ug/L	73	SW846 8270C
Phenol	**20**	**15**	**ug/L**	**73**	**SW846 8270C**
Pyrene	**20**	**16**	**ug/L**	**81**	**SW846 8270C**
2,4,5-Trichloro-phenol	20	15	ug/L	74	SW846 8270C
2,4,6-Trichloro-phenol	20	15	ug/L	73	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	91	(27 - 111)
2-Fluorobiphenyl	78	(28 - 110)
Terphenyl-d14	107	(37 - 119)
Phenol-d5	86	(10 - 110)
2-Fluorophenol	78	(10 - 110)
2,4,6-Tribromophenol	78	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11CL-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11CM-MSD
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/16/08 **Analysis Date..:** 09/18/08
Prep Batch #...: 8260041
Dilution Factor: 1 **Initial Wgt/Vol:** 525 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichloro-benzene	**55**	**(25 - 110)**			**SW846 8270C**
	59	**(25 - 110)**	**5.7**	**(0-30)**	**SW846 8270C**
Acenaphthene	**82**	**(36 - 110)**			**SW846 8270C**
	83	**(36 - 110)**	**1.6**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**46**	**(17 - 110)**			**SW846 8270C**
	55	**(17 - 110)**	**18**	**(0-30)**	**SW846 8270C**
Acenaphthylene	82	(39 - 110)			SW846 8270C
	84	(39 - 110)	1.9	(0-30)	SW846 8270C
Acetophenone	74	(50 - 130)			SW846 8270C
	82	(50 - 130)	9.9	(0-30)	SW846 8270C
Anthracene	85	(46 - 110)			SW846 8270C
	86	(46 - 110)	1.0	(0-30)	SW846 8270C
Atrazine	93	(50 - 130)			SW846 8270C
	96	(50 - 130)	2.8	(0-30)	SW846 8270C
Benzaldehyde	95	(10 - 130)			SW846 8270C
	108	(10 - 130)	13	(0-30)	SW846 8270C
Benzo(a)anthracene	85	(52 - 110)			SW846 8270C
	86	(52 - 110)	0.74	(0-30)	SW846 8270C
Benzo(b)fluoranthene	80	(33 - 114)			SW846 8270C
	82	(33 - 114)	3.3	(0-30)	SW846 8270C
Benzo(k)fluoranthene	86	(32 - 121)			SW846 8270C
	84	(32 - 121)	2.6	(0-30)	SW846 8270C
Benzo(ghi)perylene	84	(34 - 116)			SW846 8270C
	85	(34 - 116)	1.1	(0-30)	SW846 8270C
Benzo(a)pyrene	70	(33 - 110)			SW846 8270C
	71	(33 - 110)	2.0	(0-30)	SW846 8270C
1,2-Dichlorobenzene	53	(22 - 110)			SW846 8270C
	62	(22 - 110)	15	(0-30)	SW846 8270C
1,3-Dichlorobenzene	46	(19 - 110)			SW846 8270C
	53	(19 - 110)	15	(0-30)	SW846 8270C
1,1'-Biphenyl	75	(50 - 130)			SW846 8270C
	76	(50 - 130)	2.3	(0-30)	SW846 8270C
bis(2-Chloroethoxy) methane	81	(35 - 110)			SW846 8270C
	84	(35 - 110)	4.3	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11CL-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11CM-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
bis(2-Chloroethyl)-ether	67	(27 - 110)			SW846 8270C
	78	(27 - 110)	15	(0-30)	SW846 8270C
bis(2-Ethylhexyl) phthalate	91	(40 - 140)			SW846 8270C
	93	(40 - 140)	2.2	(0-30)	SW846 8270C
4-Bromophenyl phenyl ether	84	(42 - 113)			SW846 8270C
	85	(42 - 113)	1.6	(0-30)	SW846 8270C
Butyl benzyl phthalate	89	(51 - 121)			SW846 8270C
	91	(51 - 121)	2.8	(0-30)	SW846 8270C
Caprolactam	75	(50 - 130)			SW846 8270C
	80	(50 - 130)	6.7	(0-30)	SW846 8270C
Carbazole	86	(49 - 114)			SW846 8270C
	87	(49 - 114)	0.58	(0-30)	SW846 8270C
4-Chloroaniline	73	(10 - 110)			SW846 8270C
	75	(10 - 110)	3.0	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	**78**	**(33 - 110)**			**SW846 8270C**
	82	**(33 - 110)**	**4.4**	**(0-30)**	**SW846 8270C**
Benzoic acid	68	(10 - 165)			SW846 8270C
	75	(10 - 165)	9.6	(0-30)	SW846 8270C
1,4-Dioxane	62	(10 - 110)			SW846 8270C
	66	(10 - 110)	5.7	(0-30)	SW846 8270C
Pyridine	6.1 a	(10 - 110)			SW846 8270C
	5.8 a	(10 - 110)	5.4	(0-30)	SW846 8270C
2-Chloronaphthalene	77	(34 - 110)			SW846 8270C
	79	(34 - 110)	2.4	(0-30)	SW846 8270C
2-Chlorophenol	**66**	**(26 - 110)**			**SW846 8270C**
	78	**(26 - 110)**	**16**	**(0-30)**	**SW846 8270C**
Aniline	49	(10 - 130)			SW846 8270C
	59	(10 - 130)	19	(0-30)	SW846 8270C
Benzyl alcohol	31	(10 - 130)			SW846 8270C
	56 p	(10 - 130)	59	(0-30)	SW846 8270C
4-Chlorophenyl phenyl ether	83	(43 - 113)			SW846 8270C
	84	(43 - 113)	1.7	(0-30)	SW846 8270C
N-Nitrosodimethylamine	71	(10 - 130)			SW846 8270C
	84	(10 - 130)	17	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11CL-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11CM-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1-Methylnaphthalene	71	(10 - 130)			SW846 8270C
	74	(10 - 130)	3.0	(0-30)	SW846 8270C
1,2-Dinitrobenzene	84	(10 - 130)			SW846 8270C
	87	(10 - 130)	3.2	(0-30)	SW846 8270C
2,3,5,6-Tetrachlorophenol	73	(10 - 130)			SW846 8270C
	78	(10 - 130)	7.2	(0-30)	SW846 8270C
Chrysene	83	(52 - 111)			SW846 8270C
	85	(52 - 111)	2.0	(0-30)	SW846 8270C
Dibenz(a,h)anthracene	84	(35 - 118)			SW846 8270C
	86	(35 - 118)	2.6	(0-30)	SW846 8270C
Dibenzofuran	79	(41 - 110)			SW846 8270C
	81	(41 - 110)	1.5	(0-30)	SW846 8270C
Di-n-butyl phthalate	97	(50 - 117)			SW846 8270C
	98	(50 - 117)	0.61	(0-30)	SW846 8270C
3,3'-Dichlorobenzidine	65	(10 - 110)			SW846 8270C
	56	(10 - 110)	15	(0-30)	SW846 8270C
2,4-Dichlorophenol	76	(30 - 110)			SW846 8270C
	80	(30 - 110)	4.6	(0-30)	SW846 8270C
Diethyl phthalate	87	(33 - 130)			SW846 8270C
	87	(33 - 130)	0.38	(0-30)	SW846 8270C
2,4-Dimethylphenol	55	(11 - 110)			SW846 8270C
	60	(11 - 110)	8.2	(0-30)	SW846 8270C
Dimethyl phthalate	84	(36 - 124)			SW846 8270C
	86	(36 - 124)	2.0	(0-30)	SW846 8270C
4,6-Dinitro-2-methylphenol	67	(25 - 110)			SW846 8270C
	73	(25 - 110)	8.5	(0-30)	SW846 8270C
2,4-Dinitrophenol	57	(11 - 119)			SW846 8270C
	66	(11 - 119)	14	(0-30)	SW846 8270C
2,4-Dinitrotoluene	**82**	**(46 - 119)**			**SW846 8270C**
	85	**(46 - 119)**	**3.1**	**(0-30)**	**SW846 8270C**
2,6-Dinitrotoluene	83	(48 - 115)			SW846 8270C
	84	(48 - 115)	1.4	(0-30)	SW846 8270C
Di-n-octyl phthalate	84	(36 - 124)			SW846 8270C
	86	(36 - 124)	1.9	(0-30)	SW846 8270C
Fluoranthene	92	(53 - 111)			SW846 8270C
	92	(53 - 111)	0.42	(0-30)	SW846 8270C
Fluorene	82	(43 - 110)			SW846 8270C
	83	(43 - 110)	1.3	(0-30)	SW846 8270C
Hexachlorobenzene	82	(40 - 113)			SW846 8270C
	84	(40 - 113)	2.3	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11CL-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11CM-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Hexachlorobutadiene	43	(14 - 110)			SW846 8270C
	48	(14 - 110)	9.9	(0-30)	SW846 8270C
Hexachlorocyclopenta-diene	4.9 a	(10 - 110)			SW846 8270C
	6.0 a	(10 - 110)	19	(0-30)	SW846 8270C
Hexachloroethane	37	(10 - 110)			SW846 8270C
	44	(10 - 110)	19	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	87	(36 - 116)			SW846 8270C
	88	(36 - 116)	0.71	(0-30)	SW846 8270C
Isophorone	93	(34 - 125)			SW846 8270C
	96	(34 - 125)	4.1	(0-30)	SW846 8270C
2-Methylnaphthalene	77	(35 - 110)			SW846 8270C
	80	(35 - 110)	2.8	(0-30)	SW846 8270C
2-Methylphenol	94	(26 - 110)			SW846 8270C
	93	(26 - 110)	0.66	(0-30)	SW846 8270C
4-Methylphenol	73	(25 - 110)			SW846 8270C
	78	(25 - 110)	6.6	(0-30)	SW846 8270C
Naphthalene	73	(32 - 110)			SW846 8270C
	75	(32 - 110)	3.3	(0-30)	SW846 8270C
2-Nitroaniline	91	(31 - 129)			SW846 8270C
	95	(31 - 129)	4.4	(0-30)	SW846 8270C
3-Nitroaniline	87	(23 - 112)			SW846 8270C
	87	(23 - 112)	0.10	(0-30)	SW846 8270C
4-Nitroaniline	83	(26 - 115)			SW846 8270C
	83	(26 - 115)	0.18	(0-30)	SW846 8270C
Nitrobenzene	84	(26 - 118)			SW846 8270C
	90	(26 - 118)	6.5	(0-30)	SW846 8270C
2-Nitrophenol	79	(30 - 110)			SW846 8270C
	83	(30 - 110)	5.2	(0-30)	SW846 8270C
4-Nitrophenol	**80**	**(13 - 127)**			**SW846 8270C**
	85	**(13 - 127)**	**6.0**	**(0-30)**	**SW846 8270C**
N-Nitrosodiphenylamine	81	(28 - 118)			SW846 8270C
	82	(28 - 118)	1.3	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**82**	**(25 - 119)**			**SW846 8270C**
	90	**(25 - 119)**	**9.8**	**(0-30)**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	84	(13 - 124)			SW846 8270C
	91	(13 - 124)	8.4	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11CL-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11CM-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Pentachlorophenol	**65**	**(23 - 110)**			**SW846 8270C**
	76	**(23 - 110)**	**15**	**(0-30)**	**SW846 8270C**
Phenanthrene	80	(47 - 110)			SW846 8270C
	81	(47 - 110)	0.49	(0-30)	SW846 8270C
Phenol	**73**	**(16 - 110)**			**SW846 8270C**
	80	**(16 - 110)**	**9.7**	**(0-30)**	**SW846 8270C**
Pyrene	**88**	**(54 - 115)**			**SW846 8270C**
	90	**(54 - 115)**	**1.4**	**(0-30)**	**SW846 8270C**
2,4,5-Trichloro-phenol	80	(36 - 110)			SW846 8270C
	82	(36 - 110)	3.2	(0-30)	SW846 8270C
2,4,6-Trichloro-phenol	77	(34 - 110)			SW846 8270C
	81	(34 - 110)	5.2	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	86	(27 - 111)
	86	(27 - 111)
2-Fluorobiphenyl	76	(28 - 110)
	76	(28 - 110)
Terphenyl-d14	103	(37 - 119)
	105	(37 - 119)
Phenol-d5	76	(10 - 110)
	83	(10 - 110)
2-Fluorophenol	69	(10 - 110)
	78	(10 - 110)
2,4,6-Tribromophenol	80	(22 - 120)
	83	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11CL-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11CM-MSD
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/16/08 **Analysis Date..:** 09/18/08
Prep Batch #...: 8260041
Dilution Factor: 1 **Initial Wgt/Vol:** 525 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2,4-Trichloro-benzene	**ND**	**38**	**21**	**ug/L**	**55**		**SW846 8270C**
	ND	**38**	**22**	**ug/L**	**59**	**5.7**	**SW846 8270C**
Acenaphthene	**ND**	**38**	**31**	**ug/L**	**82**		**SW846 8270C**
	ND	**38**	**32**	**ug/L**	**83**	**1.6**	**SW846 8270C**
1,4-Dichlorobenzene	**ND**	**38**	**17**	**ug/L**	**46**		**SW846 8270C**
	ND	**38**	**21**	**ug/L**	**55**	**18**	**SW846 8270C**
Acenaphthylene	ND	38	31	ug/L	82		SW846 8270C
	ND	38	32	ug/L	84	1.9	SW846 8270C
Acetophenone	ND	38	28	ug/L	74		SW846 8270C
	ND	38	31	ug/L	82	9.9	SW846 8270C
Anthracene	ND	38	33	ug/L	85		SW846 8270C
	ND	38	33	ug/L	86	1.0	SW846 8270C
Atrazine	ND	38	36	ug/L	93		SW846 8270C
	ND	38	37	ug/L	96	2.8	SW846 8270C
Benzaldehyde	ND	38	36	ug/L	95		SW846 8270C
	ND	38	41	ug/L	108	13	SW846 8270C
Benzo(a)anthracene	ND	38	32	ug/L	85		SW846 8270C
	ND	38	33	ug/L	86	0.74	SW846 8270C
Benzo(b)fluoranthene	ND	38	30	ug/L	80		SW846 8270C
	ND	38	31	ug/L	82	3.3	SW846 8270C
Benzo(k)fluoranthene	ND	38	33	ug/L	86		SW846 8270C
	ND	38	32	ug/L	84	2.6	SW846 8270C
Benzo(ghi)perylene	ND	38	32	ug/L	84		SW846 8270C
	ND	38	32	ug/L	85	1.1	SW846 8270C
Benzo(a)pyrene	ND	38	27	ug/L	70		SW846 8270C
	ND	38	27	ug/L	71	2.0	SW846 8270C
1,2-Dichlorobenzene	ND	38	20	ug/L	53		SW846 8270C
	ND	38	24	ug/L	62	15	SW846 8270C
1,3-Dichlorobenzene	ND	38	17	ug/L	46		SW846 8270C
	ND	38	20	ug/L	53	15	SW846 8270C
1,1'-Biphenyl	ND	38	28	ug/L	75		SW846 8270C
	ND	38	29	ug/L	76	2.3	SW846 8270C
bis(2-Chloroethoxy) methane	ND	38	31	ug/L	81		SW846 8270C
	ND	38	32	ug/L	84	4.3	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11CL-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11CM-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
bis(2-Chloroethyl)-ether	ND	38	26	ug/L	67		SW846 8270C
	ND	38	30	ug/L	78	15	SW846 8270C
bis(2-Ethylhexyl) phthalate	2.2	38	37	ug/L	91		SW846 8270C
	2.2	38	38	ug/L	93	2.2	SW846 8270C
4-Bromophenyl phenyl ether	ND	38	32	ug/L	84		SW846 8270C
	ND	38	32	ug/L	85	1.6	SW846 8270C
Butyl benzyl phthalate	ND	38	34	ug/L	89		SW846 8270C
	ND	38	35	ug/L	91	2.8	SW846 8270C
Caprolactam	ND	38	29	ug/L	75		SW846 8270C
	ND	38	31	ug/L	80	6.7	SW846 8270C
Carbazole	ND	38	33	ug/L	86		SW846 8270C
	ND	38	33	ug/L	87	0.58	SW846 8270C
4-Chloroaniline	ND	38	28	ug/L	73		SW846 8270C
	ND	38	28	ug/L	75	3.0	SW846 8270C
4-Chloro-3-methylphenol	**ND**	**38**	**30**	**ug/L**	**78**		**SW846 8270C**
	ND	**38**	**31**	**ug/L**	**82**	**4.4**	**SW846 8270C**
Benzoic acid	ND	38	26	ug/L	68		SW846 8270C
	ND	38	28	ug/L	75	9.6	SW846 8270C
1,4-Dioxane	ND	38	24	ug/L	62		SW846 8270C
	ND	38	25	ug/L	66	5.7	SW846 8270C
Pyridine	ND	38	2.3	ug/L	6.1 a		SW846 8270C
	ND	38	2.2	ug/L	5.8 a	5.4	SW846 8270C
2-Chloronaphthalene	ND	38	30	ug/L	77		SW846 8270C
	ND	38	30	ug/L	79	2.4	SW846 8270C
2-Chlorophenol	**ND**	**38**	**25**	**ug/L**	**66**		**SW846 8270C**
	ND	**38**	**30**	**ug/L**	**78**	**16**	**SW846 8270C**
Aniline	ND	38	19	ug/L	49		SW846 8270C
	ND	38	22	ug/L	59	19	SW846 8270C
Benzyl alcohol	ND	38	12	ug/L	31		SW846 8270C
	ND	38	21	ug/L	56 p	59	SW846 8270C
4-Chlorophenyl phenyl ether	ND	38	32	ug/L	83		SW846 8270C
	ND	38	32	ug/L	84	1.7	SW846 8270C
N-Nitrosodimethylamine	ND	38	27	ug/L	71		SW846 8270C
	ND	38	32	ug/L	84	17	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11CL-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11CM-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1-Methylnaphthalene	ND	38	27	ug/L	71		SW846 8270C
	ND	38	28	ug/L	74	3.0	SW846 8270C
1,2-Dinitrobenzene	ND	38	32	ug/L	84		SW846 8270C
	ND	38	33	ug/L	87	3.2	SW846 8270C
2,3,5,6-Tetrachlorophenol	ND	38	28	ug/L	73		SW846 8270C
	ND	38	30	ug/L	78	7.2	SW846 8270C
Chrysene	ND	38	32	ug/L	83		SW846 8270C
	ND	38	32	ug/L	85	2.0	SW846 8270C
Dibenz(a,h)anthracene	ND	38	32	ug/L	84		SW846 8270C
	ND	38	33	ug/L	86	2.6	SW846 8270C
Dibenzofuran	ND	38	30	ug/L	79		SW846 8270C
	ND	38	31	ug/L	81	1.5	SW846 8270C
Di-n-butyl phthalate	ND	38	37	ug/L	97		SW846 8270C
	ND	38	37	ug/L	98	0.61	SW846 8270C
3,3'-Dichlorobenzidine	ND	38	25	ug/L	65		SW846 8270C
	ND	38	22	ug/L	56	15	SW846 8270C
2,4-Dichlorophenol	ND	38	29	ug/L	76		SW846 8270C
	ND	38	31	ug/L	80	4.6	SW846 8270C
Diethyl phthalate	ND	38	33	ug/L	87		SW846 8270C
	ND	38	33	ug/L	87	0.38	SW846 8270C
2,4-Dimethylphenol	ND	38	21	ug/L	55		SW846 8270C
	ND	38	23	ug/L	60	8.2	SW846 8270C
Dimethyl phthalate	ND	38	32	ug/L	84		SW846 8270C
	ND	38	33	ug/L	86	2.0	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	38	26	ug/L	67		SW846 8270C
	ND	38	28	ug/L	73	8.5	SW846 8270C
2,4-Dinitrophenol	ND	38	22	ug/L	57		SW846 8270C
	ND	38	25	ug/L	66	14	SW846 8270C
2,4-Dinitrotoluene	**ND**	**38**	**31**	**ug/L**	**82**		**SW846 8270C**
	ND	**38**	**32**	**ug/L**	**85**	**3.1**	**SW846 8270C**
2,6-Dinitrotoluene	ND	38	32	ug/L	83		SW846 8270C
	ND	38	32	ug/L	84	1.4	SW846 8270C
Di-n-octyl phthalate	ND	38	32	ug/L	84		SW846 8270C
	ND	38	33	ug/L	86	1.9	SW846 8270C
Fluoranthene	ND	38	35	ug/L	92		SW846 8270C
	ND	38	35	ug/L	92	0.42	SW846 8270C
Fluorene	ND	38	31	ug/L	82		SW846 8270C
	ND	38	32	ug/L	83	1.3	SW846 8270C
Hexachlorobenzene	ND	38	31	ug/L	82		SW846 8270C
	ND	38	32	ug/L	84	2.3	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11CL-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11CM-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Hexachlorobutadiene	ND	38	17	ug/L	43		SW846 8270C
	ND	38	18	ug/L	48	9.9	SW846 8270C
Hexachlorocyclopenta-diene	ND	38	1.9	ug/L	4.9 a		SW846 8270C
	ND	38	2.3	ug/L	6.0 a	19	SW846 8270C
Hexachloroethane	ND	38	14	ug/L	37		SW846 8270C
	ND	38	17	ug/L	44	19	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	38	33	ug/L	87		SW846 8270C
	ND	38	33	ug/L	88	0.71	SW846 8270C
Isophorone	ND	38	35	ug/L	93		SW846 8270C
	ND	38	37	ug/L	96	4.1	SW846 8270C
2-Methylnaphthalene	ND	38	29	ug/L	77		SW846 8270C
	ND	38	30	ug/L	80	2.8	SW846 8270C
2-Methylphenol	ND	38	36	ug/L	94		SW846 8270C
	ND	38	35	ug/L	93	0.66	SW846 8270C
4-Methylphenol	ND	76	56	ug/L	73		SW846 8270C
	ND	76	60	ug/L	78	6.6	SW846 8270C
Naphthalene	ND	38	28	ug/L	73		SW846 8270C
	ND	38	29	ug/L	75	3.3	SW846 8270C
2-Nitroaniline	ND	38	35	ug/L	91		SW846 8270C
	ND	38	36	ug/L	95	4.4	SW846 8270C
3-Nitroaniline	ND	38	33	ug/L	87		SW846 8270C
	ND	38	33	ug/L	87	0.10	SW846 8270C
4-Nitroaniline	ND	38	32	ug/L	83		SW846 8270C
	ND	38	32	ug/L	83	0.18	SW846 8270C
Nitrobenzene	ND	38	32	ug/L	84		SW846 8270C
	ND	38	34	ug/L	90	6.5	SW846 8270C
2-Nitrophenol	ND	38	30	ug/L	79		SW846 8270C
	ND	38	32	ug/L	83	5.2	SW846 8270C
4-Nitrophenol	**ND**	**38**	**30**	**ug/L**	**80**		**SW846 8270C**
	ND	**38**	**32**	**ug/L**	**85**	**6.0**	**SW846 8270C**
N-Nitrosodiphenylamine	ND	38	31	ug/L	81		SW846 8270C
	ND	38	31	ug/L	82	1.3	SW846 8270C
N-Nitrosodi-n-propyl-amine	**ND**	**38**	**31**	**ug/L**	**82**		**SW846 8270C**
	ND	**38**	**34**	**ug/L**	**90**	**9.8**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	ND	38	32	ug/L	84		SW846 8270C
	ND	38	35	ug/L	91	8.4	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11CL-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11CM-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Pentachlorophenol	**ND**	**38**	**25**	**ug/L**	**65**		**SW846 8270C**
	ND	**38**	**29**	**ug/L**	**76**	**15**	**SW846 8270C**
Phenanthrene	ND	38	31	ug/L	80		SW846 8270C
	ND	38	31	ug/L	81	0.49	SW846 8270C
Phenol	**ND**	**38**	**28**	**ug/L**	**73**		**SW846 8270C**
	ND	**38**	**31**	**ug/L**	**80**	**9.7**	**SW846 8270C**
Pyrene	**ND**	**38**	**34**	**ug/L**	**88**		**SW846 8270C**
	ND	**38**	**34**	**ug/L**	**90**	**1.4**	**SW846 8270C**
2,4,5-Trichloro-phenol	ND	38	30	ug/L	80		SW846 8270C
	ND	38	31	ug/L	82	3.2	SW846 8270C
2,4,6-Trichloro-phenol	ND	38	29	ug/L	77		SW846 8270C
	ND	38	31	ug/L	81	5.2	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	86	(27 - 111)
	86	(27 - 111)
2-Fluorobiphenyl	76	(28 - 110)
	76	(28 - 110)
Terphenyl-d14	103	(37 - 119)
	105	(37 - 119)
Phenol-d5	76	(10 - 110)
	83	(10 - 110)
2-Fluorophenol	69	(10 - 110)
	78	(10 - 110)
2,4,6-Tribromophenol	80	(22 - 120)
	83	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

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GC VOLATILE DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080910)

GC Volatiles

Lot-Sample #...: A8I120347-001 **Work Order #...:** KWTK11AE **Matrix.....:** WG
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/16/08 **Analysis Date..:** 09/16/08
Prep Batch #...: 8261404
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW2961AA **Matrix.....:** WATER
MB Lot-Sample #: A8I170000-404
Prep Date.....: 09/16/08 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 09/16/08 **Prep Batch #...:** 8261404
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/L	WI-GRO GRO

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW2961AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I170000-404 KW2961AD-LCSD
Prep Date.....: 09/16/08 **Analysis Date..:** 09/16/08
Prep Batch #...: 8261404
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**97**	**(80 - 120)**			**WI-GRO GRO**
	90	**(80 - 120)**	**7.1**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KW2961AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I170000-404 KW2961AD-LCSD
Prep Date.....: 09/16/08 **Analysis Date..:** 09/16/08
Prep Batch #...: 8261404
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**200**	**190**	**ug/L**	**97**		**WI-GRO GRO**
	200	**180**	**ug/L**	**90**	**7.1**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AX-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11A0-MSD
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/17/08 **Analysis Date..:** 09/17/08
Prep Batch #...: 8261404
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**75 a**	**(80 - 120)**			**WI-GRO GRO**
	75 a	**(80 - 120)**	**0.23**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AX-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11A0-MSD
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/17/08 **Analysis Date..:** 09/17/08
Prep Batch #...: 8261404
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	**ND**	**200**	**170**	**ug/L**	**75 a**		**WI-GRO GRO**
	ND	**200**	**170**	**ug/L**	**75 a**	**0.23**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

DIESEL RANGE ORGANICS DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080910)

GC Semivolatiles

Lot-Sample #...: A8I120347-001 **Work Order #...:** KWTK11AF **Matrix.....:** WG
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/15/08 **Analysis Date..:** 09/19/08
Prep Batch #...: 8259037
Dilution Factor: 1 **Initial Wgt/Vol:** 940 mL **Final Wgt/Vol..:** 1 mL
Method.....: WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**0.029 J,B**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	164 *	(10 - 110)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWV931AA **Matrix.....:** WATER
MB Lot-Sample #: A8I150000-037

Prep Date.....: 09/15/08 **Final Wgt/Vol..:** 1 mL
Analysis Date..: 09/19/08 **Prep Batch #...:** 8259037
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	**0.020 J**	**0.10**	**mg/L**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	139 *	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWV931AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I150000-037 KWV931AD-LCSD
Prep Date.....: 09/15/08 **Analysis Date..:** 09/19/08
Prep Batch #...: 8259037
Dilution Factor: 1 **Final Wgt/Vol..:** 1 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**83**	**(75 - 115)**			**WI-DRO DRO**
	93	**(75 - 115)**	**11**	**(0-20)**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	160 *	(10 - 110)
	160 *	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWV931AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I150000-037 KWV931AD-LCSD
Prep Date.....: 09/15/08 **Analysis Date..:** 09/19/08
Prep Batch #...: 8259037
Dilution Factor: 1 **Final Wgt/Vol..:** 1 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Diesel Range Organics	**0.50**	**0.42**	**mg/L**	**83**		**WI-DRO DRO**
	0.50	**0.47**	**mg/L**	**93**	**11**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	160 *	(10 - 110)
	160 *	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11A1-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11A2-MSD
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/15/08 **Analysis Date..:** 09/19/08
Prep Batch #...: 8259037
Dilution Factor: 1 **Initial Wgt/Vol:** 450 mL **Final Wgt/Vol..:** 1 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**70**	**(60 - 130)**			**WI-DRO DRO**
	89	**(60 - 130)**	**24**	**(0-25)**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	126 *	(10 - 110)
	151 *	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11A1-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11A2-MSD
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/15/08 **Analysis Date..:** 09/19/08
Prep Batch #...: 8259037
Dilution Factor: 1 **Initial Wgt/Vol:** 450 mL **Final Wgt/Vol..:** 1 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	**0.029**	**1.1**	**0.80**	**mg/L**	**70**		**WI-DRO DRO**
	0.029	**1.1**	**1.0**	**mg/L**	**89**	**24**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	126 *	(10 - 110)
	151 *	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

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POLYCHLORINATED BIPHENYLS DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080910)

GC Semivolatiles

Lot-Sample #...: A8I120347-001 **Work Order #...:** KWTK11AD **Matrix.....:** WG
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/14/08 **Analysis Date..:** 09/19/08
Prep Batch #...: 8257090
Dilution Factor: 1 **Initial Wgt/Vol:** 1040 mL **Final Wgt/Vol..:** 2 mL
Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	**0.97**	**0.20**	**ug/L**	**0.032**
PCB-1260	ND	0.20	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	104	(27 - 130)
Decachlorobiphenyl	34	(10 - 127)

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWVWF1AA **Matrix.....:** WATER
MB Lot-Sample #: A8I130000-090

Prep Date.....: 09/14/08 **Final Wgt/Vol..:** 2 mL
Analysis Date..: 09/17/08 **Prep Batch #...:** 8257090
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
PCB-1016	ND	0.20	ug/L	SW846 8082
PCB-1221	ND	0.20	ug/L	SW846 8082
PCB-1232	ND	0.20	ug/L	SW846 8082
PCB-1242	ND	0.20	ug/L	SW846 8082
PCB-1248	ND	0.20	ug/L	SW846 8082
PCB-1254	ND	0.20	ug/L	SW846 8082
PCB-1260	ND	0.20	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	95	(27 - 130)
Decachlorobiphenyl	151 *	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWVWF1AC **Matrix.....:** WATER
LCS Lot-Sample#: A8I130000-090
Prep Date.....: 09/14/08 **Analysis Date..:** 09/17/08
Prep Batch #...: 8257090
Dilution Factor: 5 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
PCB-1016	**92**	**(44 - 119)**	**SW846 8082**
PCB-1260	**98**	**(41 - 118)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	96	(27 - 130)
Decachlorobiphenyl	66	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWVWF1AC **Matrix.....:** WATER
LCS Lot-Sample#: A8I130000-090
Prep Date.....: 09/14/08 **Analysis Date..:** 09/17/08
Prep Batch #...: 8257090
Dilution Factor: 5 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
PCB-1016	**10**	**9.2**	**ug/L**	**92**	**SW846 8082**
PCB-1260	**10**	**9.8**	**ug/L**	**98**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	96	(27 - 130)
Decachlorobiphenyl	66	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AV-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AW-MSD
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/14/08 **Analysis Date..:** 09/17/08
Prep Batch #...: 8257090
Dilution Factor: 5 **Initial Wgt/Vol:** 510 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
PCB-1016	**141**	**(10 - 166)**			**SW846 8082**
	142	**(10 - 166)**	**0.82**	**(0-30)**	**SW846 8082**
PCB-1260	**145 a**	**(21 - 140)**			**SW846 8082**
	144 a	**(21 - 140)**	**1.1**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(27 - 130)
	100	(27 - 130)
Decachlorobiphenyl	88	(10 - 127)
	75	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A8I120347 **Work Order #...:** KWTK11AV-MS **Matrix.....:** WG
MS Lot-Sample #: A8I120347-001 KWTK11AW-MSD
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/14/08 **Analysis Date..:** 09/17/08
Prep Batch #...: 8257090
Dilution Factor: 5 **Initial Wgt/Vol:** 510 mL **Final Wgt/Vol..:** 2 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
PCB-1016	**ND**	**20**	**28**	**ug/L**	**141**		**SW846 8082**
	ND	**20**	**28**	**ug/L**	**142**	**0.82**	**SW846 8082**
PCB-1260	**ND**	**20**	**29**	**ug/L**	**145 a**		**SW846 8082**
	ND	**20**	**28**	**ug/L**	**144 a**	**1.1**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(27 - 130)
	100	(27 - 130)
Decachlorobiphenyl	88	(10 - 127)
	75	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

METALS DATA

ARCADIS U.S., Inc.

Client Sample ID: AMW-05B(20080910)

DISSOLVED Metals

Lot-Sample #...: A8I120347-001 **Matrix.....:** WG
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8259014						
Arsenic	ND	10.0	ug/L	SW846 6010B	09/15-09/18/08	KWTK11AH
		Dilution Factor: 1		Analysis Time..: 20:47	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 3.2		
Barium	**61.9 B,J**	**200**	**ug/L**	**SW846 6010B**	**09/15-09/18/08**	**KWTK11AL**
		Dilution Factor: 1		Analysis Time..: 20:47	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	09/15-09/18/08	KWTK11AM
		Dilution Factor: 1		Analysis Time..: 20:47	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	09/15-09/18/08	KWTK11AJ
		Dilution Factor: 1		Analysis Time..: 20:47	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	09/15-09/18/08	KWTK11AN
		Dilution Factor: 1		Analysis Time..: 20:47	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	09/15-09/18/08	KWTK11AK
		Dilution Factor: 1		Analysis Time..: 20:47	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	09/15-09/18/08	KWTK11AP
		Dilution Factor: 1		Analysis Time..: 20:47	Analyst ID.....: 002260	
		Instrument ID..: I5		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	09/15/08	KWTK11AG
		Dilution Factor: 1		Analysis Time..: 17:06	Analyst ID.....: 001576	
		Instrument ID..: H1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: A8I120347 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A8I150000-014 **Prep Batch #...:** 8259014						
Arsenic	ND	10.0	ug/L	SW846 6010B	09/15-09/18/08	KWV8W1C9
		Dilution Factor: 1				
		Analysis Time..: 19:03	Analyst ID.....: 002260		Instrument ID..: I5	
Barium	**1.0 B**	**200**	**ug/L**	**SW846 6010B**	**09/15-09/18/08**	**KWV8W1DD**
		Dilution Factor: 1				
		Analysis Time..: 19:03	Analyst ID.....: 002260		Instrument ID..: I5	
Cadmium	ND	5.0	ug/L	SW846 6010B	09/15-09/18/08	KWV8W1DE
		Dilution Factor: 1				
		Analysis Time..: 19:03	Analyst ID.....: 002260		Instrument ID..: I5	
Lead	ND	3.0	ug/L	SW846 6010B	09/15-09/18/08	KWV8W1DA
		Dilution Factor: 1				
		Analysis Time..: 19:03	Analyst ID.....: 002260		Instrument ID..: I5	
Chromium	ND	10.0	ug/L	SW846 6010B	09/15-09/18/08	KWV8W1DF
		Dilution Factor: 1				
		Analysis Time..: 19:03	Analyst ID.....: 002260		Instrument ID..: I5	
Selenium	ND	5.0	ug/L	SW846 6010B	09/15-09/18/08	KWV8W1DC
		Dilution Factor: 1				
		Analysis Time..: 19:03	Analyst ID.....: 002260		Instrument ID..: I5	
Silver	ND	10.0	ug/L	SW846 6010B	09/15-09/18/08	KWV8W1DG
		Dilution Factor: 1				
		Analysis Time..: 19:03	Analyst ID.....: 002260		Instrument ID..: I5	
Mercury	ND	0.20	ug/L	SW846 7470A	09/15-09/16/08	KWV8W1C8
		Dilution Factor: 1				
		Analysis Time..: 09:37	Analyst ID.....: 001576		Instrument ID..: H1	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: A8I120347 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A8I150000-014 **Prep Batch #...:** 8259014					
Arsenic	87	(80 - 120)	SW846 6010B	09/15-09/18/08	KWV8W1DV
		Dilution Factor: 1	Analysis Time..: 19:08	Analyst ID.....: 002260	
		Instrument ID..: I5			
Barium	89	(80 - 120)	SW846 6010B	09/15-09/18/08	KWV8W1D0
		Dilution Factor: 1	Analysis Time..: 19:08	Analyst ID.....: 002260	
		Instrument ID..: I5			
Lead	88	(80 - 120)	SW846 6010B	09/15-09/18/08	KWV8W1DW
		Dilution Factor: 1	Analysis Time..: 19:08	Analyst ID.....: 002260	
		Instrument ID..: I5			
Cadmium	87	(80 - 120)	SW846 6010B	09/15-09/18/08	KWV8W1D1
		Dilution Factor: 1	Analysis Time..: 19:08	Analyst ID.....: 002260	
		Instrument ID..: I5			
Selenium	90	(80 - 120)	SW846 6010B	09/15-09/18/08	KWV8W1DX
		Dilution Factor: 1	Analysis Time..: 19:08	Analyst ID.....: 002260	
		Instrument ID..: I5			
Chromium	87	(80 - 120)	SW846 6010B	09/15-09/18/08	KWV8W1D2
		Dilution Factor: 1	Analysis Time..: 19:08	Analyst ID.....: 002260	
		Instrument ID..: I5			
Silver	94	(80 - 120)	SW846 6010B	09/15-09/18/08	KWV8W1D3
		Dilution Factor: 1	Analysis Time..: 19:08	Analyst ID.....: 002260	
		Instrument ID..: I5			
Mercury	95	(81 - 123)	SW846 7470A	09/15/08	KWV8W1DU
		Dilution Factor: 1	Analysis Time..: 17:02	Analyst ID.....: 001576	
		Instrument ID..: H1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: A8I120347 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A8I150000-014 **Prep Batch #...:** 8259014							
Arsenic	2000	1740	ug/L	87	SW846 6010B	09/15-09/18/08	KWV8W1DV
			Dilution Factor: 1		Analysis Time..: 19:08	Analyst ID.....: 002260	
			Instrument ID..: I5				
Barium	2000	1780	ug/L	89	SW846 6010B	09/15-09/18/08	KWV8W1D0
			Dilution Factor: 1		Analysis Time..: 19:08	Analyst ID.....: 002260	
			Instrument ID..: I5				
Lead	500	440	ug/L	88	SW846 6010B	09/15-09/18/08	KWV8W1DW
			Dilution Factor: 1		Analysis Time..: 19:08	Analyst ID.....: 002260	
			Instrument ID..: I5				
Cadmium	50.0	43.7	ug/L	87	SW846 6010B	09/15-09/18/08	KWV8W1D1
			Dilution Factor: 1		Analysis Time..: 19:08	Analyst ID.....: 002260	
			Instrument ID..: I5				
Selenium	2000	1810	ug/L	90	SW846 6010B	09/15-09/18/08	KWV8W1DX
			Dilution Factor: 1		Analysis Time..: 19:08	Analyst ID.....: 002260	
			Instrument ID..: I5				
Chromium	200	175	ug/L	87	SW846 6010B	09/15-09/18/08	KWV8W1D2
			Dilution Factor: 1		Analysis Time..: 19:08	Analyst ID.....: 002260	
			Instrument ID..: I5				
Silver	50.0	46.9	ug/L	94	SW846 6010B	09/15-09/18/08	KWV8W1D3
			Dilution Factor: 1		Analysis Time..: 19:08	Analyst ID.....: 002260	
			Instrument ID..: I5				
Mercury	5.0	4.8	ug/L	95	SW846 7470A	09/15/08	KWV8W1DU
			Dilution Factor: 1		Analysis Time..: 17:02	Analyst ID.....: 001576	
			Instrument ID..: H1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: A8I120347 **Matrix.....:** WG
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A8I120347-001 **Prep Batch #...:** 8259014							
Arsenic	101	(75 - 125)			SW846 6010B	09/15-09/18/08	KWTK11A5
	101	(75 - 125)	0.11	(0-20)	SW846 6010B	09/15-09/18/08	KWTK11A6
		Dilution Factor: 1					
		Analysis Time..: 20:52			Instrument ID..: I5	Analyst ID.....: 002260	
Barium	104	(75 - 125)			SW846 6010B	09/15-09/18/08	KWTK11CC
	104	(75 - 125)	0.08	(0-20)	SW846 6010B	09/15-09/18/08	KWTK11CD
		Dilution Factor: 1					
		Analysis Time..: 20:52			Instrument ID..: I5	Analyst ID.....: 002260	
Cadmium	99	(75 - 125)			SW846 6010B	09/15-09/18/08	KWTK11CE
	98	(75 - 125)	0.58	(0-20)	SW846 6010B	09/15-09/18/08	KWTK11CF
		Dilution Factor: 1					
		Analysis Time..: 20:52			Instrument ID..: I5	Analyst ID.....: 002260	
Lead	100	(75 - 125)			SW846 6010B	09/15-09/18/08	KWTK11A7
	100	(75 - 125)	0.27	(0-20)	SW846 6010B	09/15-09/18/08	KWTK11A8
		Dilution Factor: 1					
		Analysis Time..: 20:52			Instrument ID..: I5	Analyst ID.....: 002260	
Chromium	100	(75 - 125)			SW846 6010B	09/15-09/18/08	KWTK11CG
	101	(75 - 125)	0.27	(0-20)	SW846 6010B	09/15-09/18/08	KWTK11CH
		Dilution Factor: 1					
		Analysis Time..: 20:52			Instrument ID..: I5	Analyst ID.....: 002260	
Selenium	104	(75 - 125)			SW846 6010B	09/15-09/18/08	KWTK11A9
	104	(75 - 125)	0.43	(0-20)	SW846 6010B	09/15-09/18/08	KWTK11CA
		Dilution Factor: 1					
		Analysis Time..: 20:52			Instrument ID..: I5	Analyst ID.....: 002260	
Silver	109	(75 - 125)			SW846 6010B	09/15-09/18/08	KWTK11CJ
	108	(75 - 125)	0.70	(0-20)	SW846 6010B	09/15-09/18/08	KWTK11CK
		Dilution Factor: 1					
		Analysis Time..: 20:52			Instrument ID..: I5	Analyst ID.....: 002260	
Mercury	84	(69 - 134)			SW846 7470A	09/15/08	KWTK11A3
	97	(69 - 134)	15	(0-20)	SW846 7470A	09/15/08	KWTK11A4
		Dilution Factor: 1					
		Analysis Time..: 17:10			Instrument ID..: H1	Analyst ID.....: 001576	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: A8I120347 **Matrix.....:** WG
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A8I120347-001 **Prep Batch #...:** 8259014									
Arsenic									
	ND	2000	2030	ug/L	101		SW846 6010B	09/15-09/18/08	KWTK11A5
	ND	2000	2020	ug/L	101	0.11	SW846 6010B	09/15-09/18/08	KWTK11A6
			Dilution Factor: 1						
			Analysis Time..: 20:52	Instrument ID..: I5			Analyst ID.....: 002260		
Barium									
	61.9	2000	2130	ug/L	104		SW846 6010B	09/15-09/18/08	KWTK11CC
	61.9	2000	2140	ug/L	104	0.08	SW846 6010B	09/15-09/18/08	KWTK11CD
			Dilution Factor: 1						
			Analysis Time..: 20:52	Instrument ID..: I5			Analyst ID.....: 002260		
Cadmium									
	ND	50.0	49.5	ug/L	99		SW846 6010B	09/15-09/18/08	KWTK11CE
	ND	50.0	49.2	ug/L	98	0.58	SW846 6010B	09/15-09/18/08	KWTK11CF
			Dilution Factor: 1						
			Analysis Time..: 20:52	Instrument ID..: I5			Analyst ID.....: 002260		
Lead									
	ND	500	501	ug/L	100		SW846 6010B	09/15-09/18/08	KWTK11A7
	ND	500	499	ug/L	100	0.27	SW846 6010B	09/15-09/18/08	KWTK11A8
			Dilution Factor: 1						
			Analysis Time..: 20:52	Instrument ID..: I5			Analyst ID.....: 002260		
Chromium									
	ND	200	201	ug/L	100		SW846 6010B	09/15-09/18/08	KWTK11CG
	ND	200	202	ug/L	101	0.27	SW846 6010B	09/15-09/18/08	KWTK11CH
			Dilution Factor: 1						
			Analysis Time..: 20:52	Instrument ID..: I5			Analyst ID.....: 002260		
Selenium									
	ND	2000	2090	ug/L	104		SW846 6010B	09/15-09/18/08	KWTK11A9
	ND	2000	2080	ug/L	104	0.43	SW846 6010B	09/15-09/18/08	KWTK11CA
			Dilution Factor: 1						
			Analysis Time..: 20:52	Instrument ID..: I5			Analyst ID.....: 002260		
Silver									
	ND	50.0	54.3	ug/L	109		SW846 6010B	09/15-09/18/08	KWTK11CJ
	ND	50.0	53.9	ug/L	108	0.70	SW846 6010B	09/15-09/18/08	KWTK11CK
			Dilution Factor: 1						
			Analysis Time..: 20:52	Instrument ID..: I5			Analyst ID.....: 002260		

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: A8I120347 **Matrix.....:** WG
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Mercury									
	ND	1.0	0.84	ug/L	84		SW846 7470A	09/15/08	KWTK11A3
	ND	1.0	0.97	ug/L	97	15	SW846 7470A	09/15/08	KWTK11A4

Dilution Factor: 1
Analysis Time..: 17:10 Instrument ID..: H1 Analyst ID.....: 001576

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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END OF REPORT

October 02, 2008

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000591.0001.0001
Laboratory: TestAmerica - North Canton
Laboratory submittal: A8I160306
Sample date: 2008-09-15
Report received by Enovis: 2008-10-01
Initial Data Verification completed by Enovis: 2008-10-02

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

1 Water sample(s) were analyzed for GCMS VOC, GCMS SVOC, PCB, GC VOC, GC Other and Metals parameter(s). 1 Trip Blank were analyzed for GCMS VOC parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Refer to the attached Sampling and Analysis Summary table.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the Enovis CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The following minor QC exceptions or missing information were noted:

GCMS VOC LCS/LCSD for Bromomethane and Styrene recovered low outside of the labs acceptance window in QC batch 8266108. The associated results for A8I160306-001 and 2 are reported non-detect and are flagged UJ and considered estimated.

GCMS VOC LCS for 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, Bromodichloromethane, Chlorodibromomethane, Chloroform, cis-1,2-Dichloroethene, cis-1,3-Dichloropropene, Cyclohexane, Ethylbenzene, Methylcyclohexane, Tetrachloroethene and trans-1,3-Dichloropropene recovered low outside of the labs acceptance window in QC batch 8266108. The LCSD spikes and LCS/LCSD RPD are in control. No qualification required.

GCMS VOC LCSD 1,2,4-Trichlorobenzene and Hexachlorobutadiene recovered low outside of the labs acceptance window in QC batch 8266108. The LCS spike and LCS/LCSD RPD are in control. No qualification required.

GCMS SVOC Method Blank for bis(2-Ethylhexyl) phthalate is reported between the MDL and the RDL in QC batch 50. The associated result for A8I160306-001 is reported between the MDL and RDL and less than 10x the method blank concentration and is flagged UB and considered non-detect at the RDL.

DRO Surrogate C9 in sample A8I160306-001 and the Method Blank, LCS and LCSD in QC batch 8262056 were not surrogated. The method does not require use of a surrogate. No qualification required.

The preserved sample aliquot of sample A8I160306-001 for DRO was consumed due to a laboratory accident. An unpreserved aliquot was used for the extraction. The sample was extracted within the holding time for unpreserved samples. No qualification required.

Metals Method Blank for Barium reported between the MDL and RDL in QC batch 8261012. The associated result for A8I160306-001 is reported above the RDL and greater than 10x the method blank concentration. No qualification required.

Evaluation of blank contamination includes directions on the interpretation of the affected analytical results; however it is beyond the scope of Enovis verification to apply changes to the result and quantitation limit in the Ford Master Analytical database. The end data user must implement any corrections to the electronic data downloaded from the Enovis CLMS based on project requirements.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Tim Abston

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

Enovis Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: A8I160306

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Polychlorinated Biphenyls by GCECD	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)	Comment
A8I160306001	AMW-07(20080915)	9/15/2008	9:35:00	X	X	X	X	X	X	X	
A8I160306002	TB-01(20080915)	9/15/2008	12:00:00	X							

Qualified Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A8I160306

		Sample Name:	AMW-07(20080915)			TB-01(20080915)			
		Lab Sample ID:	A8I160306001			A8I160306002			
		Sample Date:	9/15/2008			9/15/2008			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC									
OSW-8260B									
Bromomethane	74-83-9	ND	1.0	ug/l	UJ	ND	1.0	ug/l	UJ
Styrene	100-42-5	ND	1.0	ug/l	UJ	ND	1.0	ug/l	UJ
GC/MS SVOC									
OSW-8270C									
bis(2-Ethylhexyl) phthalate	117-81-7	1.5	10	ug/l	UB				

Note: UJ - Non-detect result is considered estimated due to associated QC outlier.
UB - Result is considered non-detect at the report limit due to blank contamination.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

FORD TWIN CITIES MN E200572

Lot #: A8I160306

Rebecca Forbort

ARCADIS U.S., Inc.
430 1st. Ave. North
Suite 720
Minneapolis, MN 55401

TESTAMERICA LABORATORIES, INC.

Denise Pohl
Project Manager

October 1, 2008

CASE NARRATIVE

A8I160306

The following report contains the analytical results for one water sample and one quality control sample submitted to TestAmerica North Canton by ARCADIS Geraghty & Miller, Inc. from the Ford Twin Cities MN Site. The samples were received September 16, 2008, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

Any reference within this document to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.)

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 59.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 0.8°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for batch(es) 8266108 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GC/MS SEMIVOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 8262050. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

GASOLINE RANGE ORGANICS

The matrix spike/matrix spike duplicate(s) for batch(es) 8261404 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

CASE NARRATIVE (continued)

POLYCHLORINATED BIPHENYLS-8082

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 8261351. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

DIESEL RANGE ORGANICS

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 8262056. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

Due to a laboratory accident, the preserved liter of sample(s) AMW-07(20080915) was consumed; therefore, it was necessary to use an unpreserved liter to extract this sample.

The entire batch 8262056 was not surrogated. The method does not require a surrogate, therefore there was no additional corrective action for sample(s) AMW-07(20080915).

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A8I160306

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
AMW-07(20080915) 09/15/08 09:35 001				
Diesel Range Organics	0.21	0.10	mg/L	WI-DRO DRO
PCB-1260	0.059 J	0.20	ug/L	SW846 8082
Barium - DISSOLVED	29.2 B,J	200	ug/L	SW846 6010B
Cadmium - DISSOLVED	0.99 B	5.0	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	1.5 J,B	10	ug/L	SW846 8270C
Fluoranthene	0.25 J	10	ug/L	SW846 8270C
Trichloroethene	0.43 J	1.0	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A8I160306

PARAMETER	ANALYTICAL METHOD
Diesel Range Organics	WI-DRO DRO
Gasoline Range Organics	WI-GRO GRO
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
PCBs by SW-846 8082	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

WI-DRO "Modified DRO: Method for Determining Diesel Range Organics", Wisconsin DNR, PUBL-SW-141, September, 1995.

WI-GRO "Modified GRO: Method for Determining Gasoline Range Organics", Wisconsin DNR, PUBL-SW-140, September, 1995.

SAMPLE SUMMARY

A8I160306

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KW08G	001	AMW-07(20080915)	09/15/08	09:35
KW085	002	TB-01(20080915)	09/15/08	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080915)

GC/MS Volatiles

Lot-Sample #...: A8I160306-001 **Work Order #...:** KW08G1AA **Matrix.....:** WG
Date Sampled...: 09/15/08 09:35 **Date Received..:** 09/16/08
Prep Date.....: 09/19/08 **Analysis Date..:** 09/19/08
Prep Batch #...: 8266108
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

(Continued on next page)

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080915)

GC/MS Volatiles

Lot-Sample #...: A8I160306-001 **Work Order #...:** KW08G1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	**0.43 J**	**1.0**	**ug/L**	**0.17**
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

(Continued on next page)

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080915)

GC/MS Volatiles

Lot-Sample #...: A8I160306-001 **Work Order #...:** KW08G1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080915)

GC/MS Semivolatiles

Lot-Sample #...: A8I160306-001 **Work Order #...:** KW08G1AC **Matrix.....:** WG
Date Sampled...: 09/15/08 09:35 **Date Received..:** 09/16/08
Prep Date.....: 09/18/08 **Analysis Date..:** 09/24/08
Prep Batch #...: 8262050
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.10
Acenaphthylene	ND	10	ug/L	0.10
Acetophenone	ND	10	ug/L	0.34
Anthracene	ND	10	ug/L	0.10
Atrazine	ND	10	ug/L	0.34
Benzaldehyde	ND	10	ug/L	0.39
Benzo(a)anthracene	ND	10	ug/L	0.10
Benzo(b)fluoranthene	ND	10	ug/L	0.10
Benzo(k)fluoranthene	ND	10	ug/L	0.10
Benzo(ghi)perylene	ND	10	ug/L	0.10
Benzo(a)pyrene	ND	10	ug/L	0.10
1,1'-Biphenyl	ND	10	ug/L	0.80
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.32
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.10
bis(2-Ethylhexyl) phthalate	**1.5 J,B**	**10**	**ug/L**	**0.80**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.80
Butyl benzyl phthalate	ND	10	ug/L	0.80
Caprolactam	ND	10	ug/L	0.80
Carbazole	ND	10	ug/L	0.28
4-Chloroaniline	ND	10	ug/L	0.80
4-Chloro-3-methylphenol	ND	10	ug/L	0.80
2-Chloronaphthalene	ND	10	ug/L	0.10
2-Chlorophenol	ND	10	ug/L	0.29
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.30
Chrysene	ND	10	ug/L	0.10
Dibenz(a,h)anthracene	ND	10	ug/L	0.10
Dibenzofuran	ND	10	ug/L	0.10
Di-n-butyl phthalate	ND	10	ug/L	0.67
3,3'-Dichlorobenzidine	ND	50	ug/L	0.37
2,4-Dichlorophenol	ND	10	ug/L	0.80
Diethyl phthalate	ND	10	ug/L	0.60
2,4-Dimethylphenol	ND	10	ug/L	0.80
Dimethyl phthalate	ND	10	ug/L	0.29
4,6-Dinitro-2-methylphenol	ND	50	ug/L	2.4

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ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080915)

GC/MS Semivolatiles

Lot-Sample #...: A8I160306-001 **Work Order #...:** KW08G1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	2.4
2,4-Dinitrotoluene	ND	10	ug/L	0.27
2,6-Dinitrotoluene	ND	10	ug/L	0.80
Di-n-octyl phthalate	ND	10	ug/L	0.80
Fluoranthene	**0.25 J**	**10**	**ug/L**	**0.10**
Fluorene	ND	10	ug/L	0.10
Hexachlorobenzene	ND	10	ug/L	0.10
Hexachlorobutadiene	ND	10	ug/L	0.27
Hexachlorocyclopenta-diene	ND	50	ug/L	0.80
Hexachloroethane	ND	10	ug/L	0.80
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.10
Isophorone	ND	10	ug/L	0.27
2-Methylnaphthalene	ND	10	ug/L	0.10
2-Methylphenol	ND	10	ug/L	0.80
4-Methylphenol	ND	10	ug/L	0.80
Naphthalene	ND	10	ug/L	0.10
2-Nitroaniline	ND	50	ug/L	0.80
3-Nitroaniline	ND	50	ug/L	0.28
4-Nitroaniline	ND	50	ug/L	0.80
Nitrobenzene	ND	10	ug/L	0.040
2-Nitrophenol	ND	10	ug/L	0.28
4-Nitrophenol	ND	50	ug/L	2.4
N-Nitrosodiphenylamine	ND	10	ug/L	0.31
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.80
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	0.40
Pentachlorophenol	ND	10	ug/L	2.4
Phenanthrene	ND	10	ug/L	0.10
Phenol	ND	10	ug/L	0.60
Pyrene	ND	10	ug/L	0.10
2,4,5-Trichloro-phenol	ND	10	ug/L	0.30
2,4,6-Trichloro-phenol	ND	10	ug/L	0.80

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	59	(27 - 111)
2-Fluorobiphenyl	51	(28 - 110)
Terphenyl-d14	81	(37 - 119)
Phenol-d5	54	(10 - 110)
2-Fluorophenol	48	(10 - 110)
2,4,6-Tribromophenol	61	(22 - 120)

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ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080915)

GC/MS Semivolatiles

Lot-Sample #...: A8I160306-001 **Work Order #...:** KW08G1AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080915)

GC Volatiles

Lot-Sample #...: A8I160306-001 **Work Order #...:** KW08G1AE **Matrix.....:** WG
Date Sampled...: 09/15/08 09:35 **Date Received..:** 09/16/08
Prep Date.....: 09/17/08 **Analysis Date..:** 09/17/08
Prep Batch #...: 8261404
Dilution Factor: 1 **Method.....:** WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080915)

GC Semivolatiles

Lot-Sample #...: A8I160306-001 **Work Order #...:** KW08G1AF **Matrix.....:** WG
Date Sampled...: 09/15/08 09:35 **Date Received..:** 09/16/08
Prep Date.....: 09/18/08 **Analysis Date..:** 09/23/08
Prep Batch #...: 8262056
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**0.21**	**0.10**	**mg/L**	**0.016**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	0.0 *	(10 - 110)

NOTE(S):

* Surrogate recovery is outside stated control limits.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080915)

GC Semivolatiles

Lot-Sample #...: A8I160306-001 **Work Order #...:** KW08G1AD **Matrix.....:** WG
Date Sampled...: 09/15/08 09:35 **Date Received..:** 09/16/08
Prep Date.....: 09/17/08 **Analysis Date..:** 09/20/08
Prep Batch #...: 8261351
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
PCB-1016	ND	0.20	ug/L	0.044
PCB-1221	ND	0.20	ug/L	0.045
PCB-1232	ND	0.20	ug/L	0.073
PCB-1242	ND	0.20	ug/L	0.060
PCB-1248	ND	0.20	ug/L	0.061
PCB-1254	ND	0.20	ug/L	0.032
PCB-1260	**0.059 J**	**0.20**	**ug/L**	**0.038**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	70	(27 - 130)
Decachlorobiphenyl	38	(10 - 127)

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: AMW-07(20080915)

DISSOLVED Metals

Lot-Sample #...: A8I160306-001 **Matrix.....:** WG
Date Sampled...: 09/15/08 09:35 **Date Received..:** 09/16/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8261012						
Arsenic	ND	10.0	ug/L	SW846 6010B	09/17-09/19/08	KW08G1AH
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**29.2 B,J**	**200**	**ug/L**	**SW846 6010B**	**09/17-09/19/08**	**KW08G1AL**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	**0.99 B**	**5.0**	**ug/L**	**SW846 6010B**	**09/17-09/19/08**	**KW08G1AM**
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	09/17-09/19/08	KW08G1AJ
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	09/17-09/19/08	KW08G1AN
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	09/17-09/19/08	KW08G1AK
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	09/17-09/19/08	KW08G1AP
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	09/17/08	KW08G1AG
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS U.S., Inc.

Client Sample ID: TB-01(20080915)

GC/MS Volatiles

Lot-Sample #...: A8I160306-002 **Work Order #...:** KW0851AA **Matrix.....:** WQ
Date Sampled...: 09/15/08 **Date Received..:** 09/16/08
Prep Date.....: 09/19/08 **Analysis Date..:** 09/19/08
Prep Batch #...: 8266108
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: TB-01(20080915)

GC/MS Volatiles

Lot-Sample #...: A8I160306-002 **Work Order #...:** KW0851AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

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THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KXCW21AA **Matrix.....:** WATER
MB Lot-Sample #: A8I220000-108
Prep Date.....: 09/19/08
Analysis Date..: 09/19/08 **Prep Batch #...:** 8266108
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KXCW21AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KXCW21AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW39D1AA **Matrix.....:** WATER
MB Lot-Sample #: A8I180000-050

Prep Date.....: 09/18/08
Analysis Date..: 09/24/08 **Prep Batch #...:** 8262050
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Atrazine	ND	10	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	**0.97 J**	**10**	**ug/L**	**SW846 8270C**
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW39D1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	72	(27 - 111)
2-Fluorobiphenyl	64	(28 - 110)
Terphenyl-d14	90	(37 - 119)
Phenol-d5	68	(10 - 110)
2-Fluorophenol	68	(10 - 110)
2,4,6-Tribromophenol	65	(22 - 120)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW39D1AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KW2961AA **Matrix.....:** WATER
MB Lot-Sample #: A8I170000-404
Prep Date.....: 09/16/08
Analysis Date..: 09/16/08 **Prep Batch #...:** 8261404
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/L	WI-GRO GRO

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW39L1AA **Matrix.....:** WATER
MB Lot-Sample #: A8I180000-056
Prep Date.....: 09/18/08
Analysis Date..: 09/23/08 **Prep Batch #...:** 8262056
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	ND	0.10	mg/L	WI-DRO DRO

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	0.0 *	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW2121AA **Matrix.....:** WATER
MB Lot-Sample #: A8I170000-351
Prep Date.....: 09/17/08
Analysis Date..: 09/20/08 **Prep Batch #...:** 8261351
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
PCB-1016	ND	0.20	ug/L	SW846 8082
PCB-1221	ND	0.20	ug/L	SW846 8082
PCB-1232	ND	0.20	ug/L	SW846 8082
PCB-1242	ND	0.20	ug/L	SW846 8082
PCB-1248	ND	0.20	ug/L	SW846 8082
PCB-1254	ND	0.20	ug/L	SW846 8082
PCB-1260	ND	0.20	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	78	(27 - 130)
Decachlorobiphenyl	63	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: A8I160306 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A8I170000-012 **Prep Batch #...:** 8261012						
Arsenic	ND	10.0	ug/L	SW846 6010B	09/17-09/18/08	KW1NE1C2
		Dilution Factor: 1				
Barium	**0.83 B**	**200**	**ug/L**	**SW846 6010B**	**09/17-09/18/08**	**KW1NE1C5**
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	09/17-09/18/08	KW1NE1C6
		Dilution Factor: 1				
Lead	ND	3.0	ug/L	SW846 6010B	09/17-09/18/08	KW1NE1C3
		Dilution Factor: 1				
Chromium	ND	10.0	ug/L	SW846 6010B	09/17-09/18/08	KW1NE1C7
		Dilution Factor: 1				
Selenium	ND	5.0	ug/L	SW846 6010B	09/17-09/18/08	KW1NE1C4
		Dilution Factor: 1				
Silver	ND	10.0	ug/L	SW846 6010B	09/17-09/18/08	KW1NE1C8
		Dilution Factor: 1				
Mercury	ND	0.20	ug/L	SW846 7470A	09/17/08	KW1NE1C1
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KXCW21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I220000-108 KXCW21AD-LCSD
Prep Date.....: 09/19/08 **Analysis Date..:** 09/19/08
Prep Batch #...: 8266108
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	72	(22 - 200)			SW846 8260B
	62	(22 - 200)	14	(0-95)	SW846 8260B
Benzene	**80**	**(80 - 116)**			**SW846 8260B**
	90	**(80 - 116)**	**11**	**(0-20)**	**SW846 8260B**
1,2-Dichloroethene (total)	83	(82 - 116)			SW846 8260B
	92	(82 - 116)	9.9	(0-30)	SW846 8260B
Bromobenzene	79	(70 - 130)			SW846 8260B
	100	(70 - 130)	24	(0-30)	SW846 8260B
Bromochloromethane	80	(70 - 130)			SW846 8260B
	88	(70 - 130)	9.5	(0-30)	SW846 8260B
Bromodichloromethane	80 a	(87 - 130)			SW846 8260B
	88	(87 - 130)	9.5	(0-30)	SW846 8260B
Bromoform	79	(76 - 150)			SW846 8260B
	83	(76 - 150)	4.7	(0-30)	SW846 8260B
Bromomethane	57 a	(64 - 129)			SW846 8260B
	59 a	(64 - 129)	4.0	(0-30)	SW846 8260B
Methyl ethyl ketone	90	(28 - 237)			SW846 8260B
	95	(28 - 237)	5.6	(0-65)	SW846 8260B
n-Butylbenzene	79	(70 - 130)			SW846 8260B
	82	(70 - 130)	4.2	(0-30)	SW846 8260B
Xylenes (total)	80 a	(87 - 116)			SW846 8260B
	90	(87 - 116)	12	(0-30)	SW846 8260B
sec-Butylbenzene	77	(70 - 130)			SW846 8260B
	88	(70 - 130)	13	(0-30)	SW846 8260B
tert-Butylbenzene	86	(70 - 130)			SW846 8260B
	102	(70 - 130)	17	(0-30)	SW846 8260B
Carbon disulfide	87	(73 - 139)			SW846 8260B
	94	(73 - 139)	8.2	(0-30)	SW846 8260B
Carbon tetrachloride	77	(75 - 149)			SW846 8260B
	84	(75 - 149)	9.0	(0-30)	SW846 8260B
Chlorobenzene	**78**	**(76 - 117)**			**SW846 8260B**
	89	**(76 - 117)**	**13**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	80 a	(81 - 138)			SW846 8260B
	91	(81 - 138)	13	(0-30)	SW846 8260B
Chloroethane	71	(66 - 126)			SW846 8260B
	80	(66 - 126)	11	(0-30)	SW846 8260B
n-Hexane	78	(70 - 130)			SW846 8260B
	85	(70 - 130)	8.0	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KXCW21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I220000-108 KXCW21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	79 a	(84 - 128)			SW846 8260B
	88	(84 - 128)	11	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	93	(70 - 130)			SW846 8260B
	102	(70 - 130)	8.7	(0-30)	SW846 8260B
Acetonitrile	87	(50 - 130)			SW846 8260B
	65	(50 - 130)	29	(0-30)	SW846 8260B
Chloromethane	81	(48 - 123)			SW846 8260B
	92	(48 - 123)	12	(0-30)	SW846 8260B
Acrolein	139 a	(50 - 130)			SW846 8260B
	149 a	(50 - 130)	7.2	(0-30)	SW846 8260B
Vinyl acetate	138 a	(70 - 130)			SW846 8260B
	153 a	(70 - 130)	11	(0-30)	SW846 8260B
Acrylonitrile	90	(50 - 130)			SW846 8260B
	95	(50 - 130)	5.4	(0-30)	SW846 8260B
2-Chlorotoluene	80	(70 - 130)			SW846 8260B
	97	(70 - 130)	20	(0-30)	SW846 8260B
4-Chlorotoluene	78	(70 - 130)			SW846 8260B
	98	(70 - 130)	23	(0-30)	SW846 8260B
Cyclohexane	69 a	(70 - 130)			SW846 8260B
	77	(70 - 130)	12	(0-30)	SW846 8260B
Iodomethane	84	(70 - 130)			SW846 8260B
	94	(70 - 130)	11	(0-30)	SW846 8260B
Isopropyl ether	90	(70 - 130)			SW846 8260B
	100	(70 - 130)	9.7	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	73	(70 - 130)			SW846 8260B
	77	(70 - 130)	5.8	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	78	(70 - 130)			SW846 8260B
	88	(70 - 130)	13	(0-30)	SW846 8260B
Dibromomethane	82	(70 - 130)			SW846 8260B
	87	(70 - 130)	6.5	(0-30)	SW846 8260B
1,2-Dichlorobenzene	80	(70 - 130)			SW846 8260B
	86	(70 - 130)	6.7	(0-30)	SW846 8260B
1,3-Dichlorobenzene	78	(70 - 130)			SW846 8260B
	90	(70 - 130)	14	(0-30)	SW846 8260B
1,4-Dichlorobenzene	79	(70 - 130)			SW846 8260B
	88	(70 - 130)	12	(0-30)	SW846 8260B
Dichlorodifluoromethane	70	(70 - 130)			SW846 8260B
	78	(70 - 130)	10	(0-30)	SW846 8260B
1,1-Dichloroethane	81 a	(86 - 123)			SW846 8260B
	90	(86 - 123)	11	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KXCW21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I220000-108 KXCW21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	80	(79 - 136)			SW846 8260B
	89	(79 - 136)	10	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	84 a	(85 - 113)			SW846 8260B
	91	(85 - 113)	8.1	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	83	(80 - 120)			SW846 8260B
	93	(80 - 120)	12	(0-30)	SW846 8260B
1,1-Dichloroethene	**84**	**(63 - 130)**			**SW846 8260B**
	95	**(63 - 130)**	**13**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	83	(82 - 115)			SW846 8260B
	91	(82 - 115)	9.8	(0-30)	SW846 8260B
1,3-Dichloropropane	79	(70 - 130)			SW846 8260B
	92	(70 - 130)	15	(0-30)	SW846 8260B
2,2-Dichloropropane	81	(70 - 130)			SW846 8260B
	87	(70 - 130)	6.7	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	81 a	(84 - 130)			SW846 8260B
	90	(84 - 130)	10	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	81 a	(84 - 130)			SW846 8260B
	95	(84 - 130)	15	(0-30)	SW846 8260B
1,1-Dichloropropene	81	(70 - 130)			SW846 8260B
	90	(70 - 130)	11	(0-30)	SW846 8260B
Ethylbenzene	78 a	(86 - 116)			SW846 8260B
	91	(86 - 116)	15	(0-30)	SW846 8260B
Hexachlorobutadiene	72	(70 - 130)			SW846 8260B
	60 a	(70 - 130)	17	(0-30)	SW846 8260B
2-Hexanone	88	(35 - 200)			SW846 8260B
	103	(35 - 200)	15	(0-52)	SW846 8260B
Isopropylbenzene	96	(70 - 130)			SW846 8260B
	103	(70 - 130)	7.0	(0-30)	SW846 8260B
p-Isopropyltoluene	83	(70 - 130)			SW846 8260B
	91	(70 - 130)	9.3	(0-30)	SW846 8260B
Methyl acetate	77	(70 - 130)			SW846 8260B
	83	(70 - 130)	7.3	(0-30)	SW846 8260B
Methylcyclohexane	65 a	(70 - 130)			SW846 8260B
	72	(70 - 130)	10	(0-30)	SW846 8260B
Methylene chloride	82	(78 - 118)			SW846 8260B
	91	(78 - 118)	10	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	91	(78 - 141)			SW846 8260B
	98	(78 - 141)	8.2	(0-32)	SW846 8260B
Methyl tert-butyl ether (MTBE)	86	(70 - 130)			SW846 8260B
	91	(70 - 130)	5.3	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KXCW21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I220000-108 KXCW21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	80	(70 - 130)			SW846 8260B
	71	(70 - 130)	12	(0-30)	SW846 8260B
n-Propylbenzene	81	(70 - 130)			SW846 8260B
	102	(70 - 130)	23	(0-30)	SW846 8260B
Styrene	74 a	(85 - 117)			SW846 8260B
	81 a	(85 - 117)	9.2	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	77	(70 - 130)			SW846 8260B
	86	(70 - 130)	10	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	77 a	(85 - 118)			SW846 8260B
	94	(85 - 118)	20	(0-30)	SW846 8260B
Tetrachloroethene	81 a	(88 - 113)			SW846 8260B
	92	(88 - 113)	12	(0-30)	SW846 8260B
Toluene	**79**	**(74 - 119)**			**SW846 8260B**
	93	**(74 - 119)**	**16**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	82	(70 - 130)			SW846 8260B
	73	(70 - 130)	12	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	80	(70 - 130)			SW846 8260B
	69 a	(70 - 130)	15	(0-30)	SW846 8260B
1,1,1-Trichloroethane	76 a	(78 - 140)			SW846 8260B
	83	(78 - 140)	8.9	(0-30)	SW846 8260B
1,1,2-Trichloroethane	75 a	(83 - 122)			SW846 8260B
	89	(83 - 122)	17	(0-30)	SW846 8260B
Trichloroethene	**80**	**(75 - 122)**			**SW846 8260B**
	88	**(75 - 122)**	**9.3**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	74	(70 - 130)			SW846 8260B
	81	(70 - 130)	9.3	(0-30)	SW846 8260B
1,2,3-Trichloropropane	83	(70 - 130)			SW846 8260B
	103	(70 - 130)	22	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	83	(70 - 130)			SW846 8260B
	92	(70 - 130)	10	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	83	(70 - 130)			SW846 8260B
	98	(70 - 130)	16	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	80	(70 - 130)			SW846 8260B
	95	(70 - 130)	18	(0-30)	SW846 8260B
Vinyl chloride	76	(61 - 120)			SW846 8260B
	84	(61 - 120)	10	(0-30)	SW846 8260B
m-Xylene & p-Xylene	81	(70 - 130)			SW846 8260B
	91	(70 - 130)	12	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KXCW21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I220000-108 KXCW21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	79	(70 - 130)			SW846 8260B
	88	(70 - 130)	11	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	93	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
	88	(61 - 128)
Toluene-d8	97	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)
	93	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW39D1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-050 KW39D1AD-LCSD
Prep Date.....: 09/18/08 **Analysis Date..:** 09/24/08
Prep Batch #...: 8262050
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichloro-benzene	**54**	**(25 - 110)**			**SW846 8270C**
	58	**(25 - 110)**	**6.5**	**(0-30)**	**SW846 8270C**
Acenaphthene	**73**	**(40 - 110)**			**SW846 8270C**
	76	**(40 - 110)**	**4.2**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**53**	**(19 - 110)**			**SW846 8270C**
	57	**(19 - 110)**	**5.8**	**(0-30)**	**SW846 8270C**
Acenaphthylene	77	(43 - 110)			SW846 8270C
	79	(43 - 110)	2.8	(0-30)	SW846 8270C
Acetophenone	87	(50 - 130)			SW846 8270C
	92	(50 - 130)	5.2	(0-30)	SW846 8270C
Anthracene	79	(54 - 114)			SW846 8270C
	81	(54 - 114)	2.2	(0-30)	SW846 8270C
Atrazine	101	(50 - 130)			SW846 8270C
	103	(50 - 130)	1.8	(0-30)	SW846 8270C
1,2-Dichlorobenzene	55	(23 - 110)			SW846 8270C
	59	(23 - 110)	7.7	(0-30)	SW846 8270C
1,3-Dichlorobenzene	49	(19 - 110)			SW846 8270C
	54	(19 - 110)	8.5	(0-30)	SW846 8270C
Benzaldehyde	117	(10 - 130)			SW846 8270C
	122	(10 - 130)	3.7	(0-30)	SW846 8270C
Benzo(a)anthracene	81	(55 - 115)			SW846 8270C
	83	(55 - 115)	2.0	(0-30)	SW846 8270C
Benzo(b)fluoranthene	78	(43 - 122)			SW846 8270C
	81	(43 - 122)	2.8	(0-30)	SW846 8270C
Benzo(k)fluoranthene	80	(43 - 124)			SW846 8270C
	87	(43 - 124)	7.6	(0-30)	SW846 8270C
Benzo(ghi)perylene	79	(45 - 120)			SW846 8270C
	83	(45 - 120)	4.8	(0-30)	SW846 8270C
Benzo(a)pyrene	65	(43 - 116)			SW846 8270C
	69	(43 - 116)	5.4	(0-30)	SW846 8270C
1,1'-Biphenyl	72	(50 - 130)			SW846 8270C
	76	(50 - 130)	6.0	(0-30)	SW846 8270C
bis(2-Chloroethoxy) methane	81	(39 - 110)			SW846 8270C
	88	(39 - 110)	8.4	(0-30)	SW846 8270C
bis(2-Chloroethyl)-ether	94	(34 - 113)			SW846 8270C
	88	(34 - 113)	6.4	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW39D1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-050 KW39D1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
bis(2-Ethylhexyl) phthalate	93	(36 - 163)			SW846 8270C
	94	(36 - 163)	1.1	(0-30)	SW846 8270C
4-Bromophenyl phenyl ether	80	(51 - 114)			SW846 8270C
	83	(51 - 114)	3.6	(0-30)	SW846 8270C
Butyl benzyl phthalate	97	(53 - 126)			SW846 8270C
	101	(53 - 126)	4.1	(0-30)	SW846 8270C
Caprolactam	93	(50 - 130)			SW846 8270C
	94	(50 - 130)	0.73	(0-30)	SW846 8270C
Carbazole	84	(53 - 120)			SW846 8270C
	86	(53 - 120)	2.5	(0-30)	SW846 8270C
4-Chloroaniline	75	(10 - 110)			SW846 8270C
	82	(10 - 110)	8.0	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	**78**	**(39 - 110)**			**SW846 8270C**
	82	**(39 - 110)**	**4.6**	**(0-30)**	**SW846 8270C**
Benzoic acid	22	(10 - 129)			SW846 8270C
	26	(10 - 129)	19	(0-30)	SW846 8270C
1,4-Dioxane	63	(10 - 110)			SW846 8270C
	75	(10 - 110)	18	(0-30)	SW846 8270C
2-Chloronaphthalene	72	(39 - 110)			SW846 8270C
	77	(39 - 110)	7.7	(0-30)	SW846 8270C
2-Chlorophenol	**75**	**(27 - 110)**			**SW846 8270C**
	80	**(27 - 110)**	**5.4**	**(0-30)**	**SW846 8270C**
Aniline	57	(10 - 130)			SW846 8270C
	64	(10 - 130)	11	(0-30)	SW846 8270C
Benzyl alcohol	86	(10 - 130)			SW846 8270C
	88	(10 - 130)	2.6	(0-30)	SW846 8270C
4-Chlorophenyl phenyl ether	83	(50 - 115)			SW846 8270C
	85	(50 - 115)	1.3	(0-30)	SW846 8270C
N-Nitrosodimethylamine	74	(10 - 130)			SW846 8270C
	90	(10 - 130)	19	(0-30)	SW846 8270C
1-Methylnaphthalene	68	(10 - 130)			SW846 8270C
	72	(10 - 130)	5.3	(0-30)	SW846 8270C
1,2-Dinitrobenzene	90	(10 - 130)			SW846 8270C
	92	(10 - 130)	2.0	(0-30)	SW846 8270C
2,3,5,6-Tetrachlorophenol	79	(10 - 130)			SW846 8270C
	82	(10 - 130)	3.8	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW39D1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-050 KW39D1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chrysene	80	(55 - 115)			SW846 8270C
	86	(55 - 115)	7.6	(0-30)	SW846 8270C
Dibenz(a,h)anthracene	81	(46 - 122)			SW846 8270C
	84	(46 - 122)	3.7	(0-30)	SW846 8270C
Dibenzofuran	76	(46 - 111)			SW846 8270C
	80	(46 - 111)	5.1	(0-30)	SW846 8270C
Di-n-butyl phthalate	88	(55 - 122)			SW846 8270C
	87	(55 - 122)	0.99	(0-30)	SW846 8270C
3,3'-Dichlorobenzidine	63	(19 - 110)			SW846 8270C
	66	(19 - 110)	4.6	(0-30)	SW846 8270C
2,4-Dichlorophenol	76	(33 - 110)			SW846 8270C
	80	(33 - 110)	4.9	(0-30)	SW846 8270C
Diethyl phthalate	86	(33 - 134)			SW846 8270C
	87	(33 - 134)	1.3	(0-30)	SW846 8270C
2,4-Dimethylphenol	54	(12 - 110)			SW846 8270C
	57	(12 - 110)	5.4	(0-30)	SW846 8270C
Dimethyl phthalate	86	(15 - 143)			SW846 8270C
	89	(15 - 143)	2.6	(0-30)	SW846 8270C
4,6-Dinitro-2-methylphenol	69	(28 - 112)			SW846 8270C
	77	(28 - 112)	9.8	(0-30)	SW846 8270C
2,4-Dinitrophenol	48	(17 - 112)			SW846 8270C
	55	(17 - 112)	12	(0-30)	SW846 8270C
2,4-Dinitrotoluene	**88**	**(52 - 123)**			**SW846 8270C**
	92	**(52 - 123)**	**3.9**	**(0-30)**	**SW846 8270C**
2,6-Dinitrotoluene	87	(52 - 119)			SW846 8270C
	91	(52 - 119)	4.6	(0-30)	SW846 8270C
Di-n-octyl phthalate	86	(44 - 128)			SW846 8270C
	88	(44 - 128)	2.1	(0-30)	SW846 8270C
Fluoranthene	86	(54 - 122)			SW846 8270C
	88	(54 - 122)	1.8	(0-30)	SW846 8270C
Fluorene	78	(47 - 112)			SW846 8270C
	82	(47 - 112)	4.7	(0-30)	SW846 8270C
Hexachlorobenzene	81	(51 - 112)			SW846 8270C
	83	(51 - 112)	2.4	(0-30)	SW846 8270C
Hexachlorobutadiene	41	(13 - 110)			SW846 8270C
	46	(13 - 110)	10	(0-30)	SW846 8270C
Hexachlorocyclopenta-diene	19	(10 - 110)			SW846 8270C
	20	(10 - 110)	3.2	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW39D1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-050 KW39D1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Hexachloroethane	42	(12 - 110)			SW846 8270C
	46	(12 - 110)	9.2	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	82	(46 - 121)			SW846 8270C
	85	(46 - 121)	4.0	(0-30)	SW846 8270C
Isophorone	95	(44 - 128)			SW846 8270C
	99	(44 - 128)	4.0	(0-30)	SW846 8270C
2-Methylnaphthalene	75	(35 - 110)			SW846 8270C
	79	(35 - 110)	5.0	(0-30)	SW846 8270C
2-Methylphenol	71	(30 - 110)			SW846 8270C
	75	(30 - 110)	4.9	(0-30)	SW846 8270C
4-Methylphenol	78	(32 - 110)			SW846 8270C
	81	(32 - 110)	3.8	(0-30)	SW846 8270C
Naphthalene	69	(31 - 110)			SW846 8270C
	74	(31 - 110)	7.7	(0-30)	SW846 8270C
2-Nitroaniline	85	(43 - 130)			SW846 8270C
	90	(43 - 130)	5.2	(0-30)	SW846 8270C
3-Nitroaniline	86	(45 - 116)			SW846 8270C
	86	(45 - 116)	0.38	(0-30)	SW846 8270C
4-Nitroaniline	87	(45 - 120)			SW846 8270C
	86	(45 - 120)	0.70	(0-30)	SW846 8270C
Nitrobenzene	85	(37 - 115)			SW846 8270C
	91	(37 - 115)	7.4	(0-30)	SW846 8270C
2-Nitrophenol	77	(29 - 110)			SW846 8270C
	80	(29 - 110)	3.7	(0-30)	SW846 8270C
4-Nitrophenol	**86**	**(12 - 130)**			**SW846 8270C**
	87	**(12 - 130)**	**1.7**	**(0-30)**	**SW846 8270C**
N-Nitrosodiphenylamine	77	(53 - 113)			SW846 8270C
	82	(53 - 113)	5.9	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**86**	**(37 - 121)**			**SW846 8270C**
	91	**(37 - 121)**	**5.0**	**(0-30)**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	84	(25 - 128)			SW846 8270C
	89	(25 - 128)	6.0	(0-30)	SW846 8270C
Pentachlorophenol	**76**	**(26 - 110)**			**SW846 8270C**
	79	**(26 - 110)**	**3.8**	**(0-30)**	**SW846 8270C**
Phenanthrene	74	(52 - 114)			SW846 8270C
	78	(52 - 114)	4.7	(0-30)	SW846 8270C
Phenol	**75**	**(14 - 112)**			**SW846 8270C**
	80	**(14 - 112)**	**6.1**	**(0-30)**	**SW846 8270C**

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW39D1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-050 KW39D1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Pyrene	**84**	**(55 - 120)**			**SW846 8270C**
	88	**(55 - 120)**	**5.0**	**(0-30)**	**SW846 8270C**
2,4,5-Trichloro-phenol	78	(39 - 110)			SW846 8270C
	77	(39 - 110)	0.63	(0-30)	SW846 8270C
2,4,6-Trichloro-phenol	76	(35 - 110)			SW846 8270C
	81	(35 - 110)	6.9	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	86	(27 - 111)
	90	(27 - 111)
2-Fluorobiphenyl	70	(28 - 110)
	73	(28 - 110)
Terphenyl-d14	99	(37 - 119)
	103	(37 - 119)
Phenol-d5	79	(10 - 110)
	82	(10 - 110)
2-Fluorophenol	73	(10 - 110)
	84	(10 - 110)
2,4,6-Tribromophenol	80	(22 - 120)
	79	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KW2961AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I170000-404 KW2961AD-LCSD
Prep Date.....: 09/16/08 **Analysis Date..:** 09/16/08
Prep Batch #...: 8261404
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**97**	**(80 - 120)**			**WI-GRO GRO**
	90	**(80 - 120)**	**7.1**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW39L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I180000-056 KW39L1AD-LCSD
Prep Date.....: 09/18/08 **Analysis Date..:** 09/23/08
Prep Batch #...: 8262056
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**90**	**(75 - 115)**			**WI-DRO DRO**
	104	**(75 - 115)**	**15**	**(0-20)**	**WI-DRO DRO**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
C9 (nonane)	0.0 *	(10 - 110)
	0.0 *	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A8I160306 **Work Order #...:** KW2121AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A8I170000-351 KW2121AD-LCSD
Prep Date.....: 09/17/08 **Analysis Date..:** 09/20/08
Prep Batch #...: 8261351
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
PCB-1016	**72**	**(44 - 119)**			**SW846 8082**
	72	**(44 - 119)**	**0.29**	**(0-30)**	**SW846 8082**
PCB-1260	**63**	**(41 - 118)**			**SW846 8082**
	62	**(41 - 118)**	**1.5**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	67	(27 - 130)
	61	(27 - 130)
Decachlorobiphenyl	16	(10 - 127)
	18	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: A8I160306 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A8I170000-012 **Prep Batch #...:** 8261012					
Arsenic	90	(80 - 120)	SW846 6010B	09/17-09/19/08	KW1NE1DT
		Dilution Factor: 1			
Barium	92	(80 - 120)	SW846 6010B	09/17-09/19/08	KW1NE1DW
		Dilution Factor: 1			
Lead	92	(80 - 120)	SW846 6010B	09/17-09/19/08	KW1NE1DU
		Dilution Factor: 1			
Cadmium	92	(80 - 120)	SW846 6010B	09/17-09/19/08	KW1NE1DX
		Dilution Factor: 1			
Selenium	94	(80 - 120)	SW846 6010B	09/17-09/19/08	KW1NE1DV
		Dilution Factor: 1			
Chromium	91	(80 - 120)	SW846 6010B	09/17-09/19/08	KW1NE1D0
		Dilution Factor: 1			
Silver	96	(80 - 120)	SW846 6010B	09/17-09/19/08	KW1NE1D1
		Dilution Factor: 1			
Mercury	109	(81 - 123)	SW846 7470A	09/17/08	KW1NE1DR
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KWX0R1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A8I160138-003 KWX0R1AD-MSD
Date Sampled...: 09/15/08 **Date Received..:** 09/16/08
Prep Date.....: 09/19/08 **Analysis Date..:** 09/19/08
Prep Batch #...: 8266108
Dilution Factor: 25

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	84	(45 - 128)			SW846 8260B
	87	(45 - 128)	3.8	(0-30)	SW846 8260B
Benzene	**78**	**(78 - 118)**			**SW846 8260B**
	85	**(78 - 118)**	**6.9**	**(0-20)**	**SW846 8260B**
Bromobenzene	74	(70 - 130)			SW846 8260B
	84	(70 - 130)	13	(0-30)	SW846 8260B
1,2-Dichloroethene (total)	84 a	(86 - 115)			SW846 8260B
	87	(86 - 115)	2.0	(0-30)	SW846 8260B
Bromochloromethane	76	(70 - 130)			SW846 8260B
	83	(70 - 130)	8.1	(0-30)	SW846 8260B
Bromodichloromethane	76 a	(80 - 146)			SW846 8260B
	83	(80 - 146)	8.7	(0-30)	SW846 8260B
Bromoform	71	(58 - 176)			SW846 8260B
	77	(58 - 176)	7.6	(0-30)	SW846 8260B
Bromomethane	50 a	(55 - 145)			SW846 8260B
	50 a	(55 - 145)	1.2	(0-30)	SW846 8260B
Methyl ethyl ketone	83	(71 - 123)			SW846 8260B
	89	(71 - 123)	7.2	(0-30)	SW846 8260B
n-Butylbenzene	74	(70 - 130)			SW846 8260B
	85	(70 - 130)	14	(0-30)	SW846 8260B
sec-Butylbenzene	73	(70 - 130)			SW846 8260B
	82	(70 - 130)	12	(0-30)	SW846 8260B
Xylenes (total)	91	(89 - 121)			SW846 8260B
	90	(89 - 121)	0.79	(0-30)	SW846 8260B
tert-Butylbenzene	81	(70 - 130)			SW846 8260B
	93	(70 - 130)	13	(0-30)	SW846 8260B
Carbon disulfide	85	(69 - 138)			SW846 8260B
	94	(69 - 138)	9.7	(0-41)	SW846 8260B
Carbon tetrachloride	76	(63 - 176)			SW846 8260B
	83	(63 - 176)	7.9	(0-30)	SW846 8260B
Chlorobenzene	**76**	**(76 - 117)**			**SW846 8260B**
	84	**(76 - 117)**	**9.1**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	77	(71 - 158)			SW846 8260B
	84	(71 - 158)	7.5	(0-30)	SW846 8260B
Chloroethane	68	(59 - 142)			SW846 8260B
	72	(59 - 142)	5.7	(0-30)	SW846 8260B
n-Hexane	95	(70 - 130)			SW846 8260B
	100	(70 - 130)	5.0	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KWX0R1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A8I160138-003 KWX0R1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	77 a	(83 - 141)			SW846 8260B
	84	(83 - 141)	8.9	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	3.2 a	(70 - 130)			SW846 8260B
	3.1 a	(70 - 130)	4.3	(0-30)	SW846 8260B
Acetonitrile	84	(50 - 130)			SW846 8260B
	88	(50 - 130)	5.6	(0-30)	SW846 8260B
Chloromethane	79	(40 - 137)			SW846 8260B
	87	(40 - 137)	11	(0-39)	SW846 8260B
Acrolein	135 a	(50 - 130)			SW846 8260B
	143 a	(50 - 130)	5.1	(0-30)	SW846 8260B
Acrylonitrile	88	(50 - 130)			SW846 8260B
	93	(50 - 130)	5.0	(0-30)	SW846 8260B
Vinyl acetate	126	(70 - 130)			SW846 8260B
	142 a	(70 - 130)	12	(0-30)	SW846 8260B
2-Chlorotoluene	75	(70 - 130)			SW846 8260B
	83	(70 - 130)	11	(0-30)	SW846 8260B
4-Chlorotoluene	75	(70 - 130)			SW846 8260B
	84	(70 - 130)	11	(0-30)	SW846 8260B
Cyclohexane	80	(70 - 130)			SW846 8260B
	86	(70 - 130)	7.7	(0-30)	SW846 8260B
Iodomethane	79	(70 - 130)			SW846 8260B
	89	(70 - 130)	11	(0-30)	SW846 8260B
Isopropyl ether	85	(70 - 130)			SW846 8260B
	94	(70 - 130)	11	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	70	(70 - 130)			SW846 8260B
	78	(70 - 130)	12	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	75	(70 - 130)			SW846 8260B
	83	(70 - 130)	10	(0-30)	SW846 8260B
Dibromomethane	78	(70 - 130)			SW846 8260B
	85	(70 - 130)	8.6	(0-30)	SW846 8260B
1,2-Dichlorobenzene	75	(70 - 130)			SW846 8260B
	85	(70 - 130)	12	(0-30)	SW846 8260B
1,3-Dichlorobenzene	74	(70 - 130)			SW846 8260B
	83	(70 - 130)	12	(0-30)	SW846 8260B
1,4-Dichlorobenzene	74	(70 - 130)			SW846 8260B
	85	(70 - 130)	13	(0-30)	SW846 8260B
Dichlorodifluoromethane	77	(70 - 130)			SW846 8260B
	85	(70 - 130)	11	(0-30)	SW846 8260B
1,1-Dichloroethane	79 a	(88 - 127)			SW846 8260B
	87 a	(88 - 127)	10	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KWX0R1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A8I160138-003 KWX0R1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	78	(71 - 160)			SW846 8260B
	84	(71 - 160)	7.6	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	89	(87 - 114)			SW846 8260B
	86 a	(87 - 114)	1.1	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	80 a	(85 - 116)			SW846 8260B
	89	(85 - 116)	9.8	(0-30)	SW846 8260B
1,1-Dichloroethene	**87**	**(62 - 130)**			**SW846 8260B**
	94	**(62 - 130)**	**7.2**	**(0-20)**	**SW846 8260B**
1,2-Dichloropropane	79 a	(87 - 114)			SW846 8260B
	86 a	(87 - 114)	9.3	(0-30)	SW846 8260B
1,3-Dichloropropane	76	(70 - 130)			SW846 8260B
	84	(70 - 130)	9.4	(0-30)	SW846 8260B
2,2-Dichloropropane	75	(70 - 130)			SW846 8260B
	83	(70 - 130)	10	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	70 a	(82 - 130)			SW846 8260B
	79 a	(82 - 130)	12	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	76	(73 - 147)			SW846 8260B
	84	(73 - 147)	10	(0-30)	SW846 8260B
1,1-Dichloropropene	81	(70 - 130)			SW846 8260B
	89	(70 - 130)	9.0	(0-30)	SW846 8260B
Ethylbenzene	89	(86 - 132)			SW846 8260B
	92	(86 - 132)	2.3	(0-30)	SW846 8260B
Hexachlorobutadiene	69 a	(70 - 130)			SW846 8260B
	76	(70 - 130)	9.6	(0-30)	SW846 8260B
2-Hexanone	79 a	(81 - 128)			SW846 8260B
	87	(81 - 128)	9.5	(0-30)	SW846 8260B
Isopropylbenzene	95	(70 - 130)			SW846 8260B
	104	(70 - 130)	8.9	(0-30)	SW846 8260B
p-Isopropyltoluene	77	(70 - 130)			SW846 8260B
	88	(70 - 130)	13	(0-30)	SW846 8260B
Methyl acetate	76	(70 - 130)			SW846 8260B
	79	(70 - 130)	3.6	(0-30)	SW846 8260B
Methylcyclohexane	77	(70 - 130)			SW846 8260B
	83	(70 - 130)	7.6	(0-30)	SW846 8260B
Methylene chloride	76 a	(82 - 115)			SW846 8260B
	84	(82 - 115)	10	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	78 a	(82 - 135)			SW846 8260B
	86	(82 - 135)	9.6	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	81	(70 - 130)			SW846 8260B
	89	(70 - 130)	9.9	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KWX0R1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A8I160138-003 KWX0R1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	72	(70 - 130)			SW846 8260B
	81	(70 - 130)	12	(0-30)	SW846 8260B
n-Propylbenzene	78	(70 - 130)			SW846 8260B
	88	(70 - 130)	12	(0-30)	SW846 8260B
Styrene	74 a	(83 - 120)			SW846 8260B
	81 a	(83 - 120)	8.9	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	73	(70 - 130)			SW846 8260B
	81	(70 - 130)	11	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	75 a	(88 - 116)			SW846 8260B
	83 a	(88 - 116)	9.8	(0-30)	SW846 8260B
Tetrachloroethene	81 a	(85 - 121)			SW846 8260B
	88	(85 - 121)	8.0	(0-30)	SW846 8260B
Toluene	**89**	**(70 - 119)**			**SW846 8260B**
	75	**(70 - 119)**	**3.9**	**(0-20)**	**SW846 8260B**
1,2,3-Trichlorobenzene	73	(70 - 130)			SW846 8260B
	81	(70 - 130)	11	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	72	(70 - 130)			SW846 8260B
	82	(70 - 130)	13	(0-30)	SW846 8260B
1,1,1-Trichloroethane	73	(71 - 162)			SW846 8260B
	79	(71 - 162)	8.5	(0-30)	SW846 8260B
1,1,2-Trichloroethane	74 a	(86 - 129)			SW846 8260B
	81 a	(86 - 129)	9.4	(0-30)	SW846 8260B
Trichloroethene	**77**	**(62 - 130)**			**SW846 8260B**
	85	**(62 - 130)**	**10**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	87	(70 - 130)			SW846 8260B
	89	(70 - 130)	2.2	(0-30)	SW846 8260B
1,2,3-Trichloropropane	78	(70 - 130)			SW846 8260B
	86	(70 - 130)	9.4	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	97	(70 - 130)			SW846 8260B
	101	(70 - 130)	3.3	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	79	(70 - 130)			SW846 8260B
	88	(70 - 130)	11	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	76	(70 - 130)			SW846 8260B
	84	(70 - 130)	10	(0-30)	SW846 8260B
Vinyl chloride	75 a	(88 - 126)			SW846 8260B
	80 a	(88 - 126)	5.1	(0-30)	SW846 8260B
m-Xylene & p-Xylene	94	(70 - 130)			SW846 8260B
	89	(70 - 130)	2.4	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KWX0R1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A8I160138-003 KWX0R1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	85	(70 - 130)			SW846 8260B
	91	(70 - 130)	4.8	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
	92	(61 - 128)
Toluene-d8	97	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A8I160306 **Work Order #...:** KWTK11AX-MS **Matrix.....:** WATER
MS Lot-Sample #: A8I120347-001 KWTK11A0-MSD
Date Sampled...: 09/10/08 12:35 **Date Received..:** 09/12/08
Prep Date.....: 09/17/08 **Analysis Date..:** 09/17/08
Prep Batch #...: 8261404
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**75 a**	**(80 - 120)**			**WI-GRO GRO**
	75 a	**(80 - 120)**	**0.23**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: A8I160306 **Matrix.....:** WATER
Date Sampled...: 09/12/08 12:25 **Date Received..:** 09/16/08

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A8I160150-003 **Prep Batch #...:** 8261012							
Cadmium	104	(75 - 125)			SW846 6010B	09/17-09/19/08	KWX431E6
	102	(75 - 125)	1.9	(0-20)	SW846 6010B	09/17-09/19/08	KWX431E7
		Dilution Factor: 1					
Chromium	104	(75 - 125)			SW846 6010B	09/17-09/19/08	KWX431E9
	101	(75 - 125)	2.7	(0-20)	SW846 6010B	09/17-09/19/08	KWX431FA
		Dilution Factor: 1					
Silver	109	(75 - 125)			SW846 6010B	09/17-09/19/08	KWX431FD
	107	(75 - 125)	1.8	(0-20)	SW846 6010B	09/17-09/19/08	KWX431FE
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Data File: \\cansvr11\dd\chem\GCS\a2hp6.i\80922.b\080B3001.D

Page 1

Date : 23-SEP-2008 05:42

Client ID: AMW-07(20080915)

Instrument: a2hp6.i

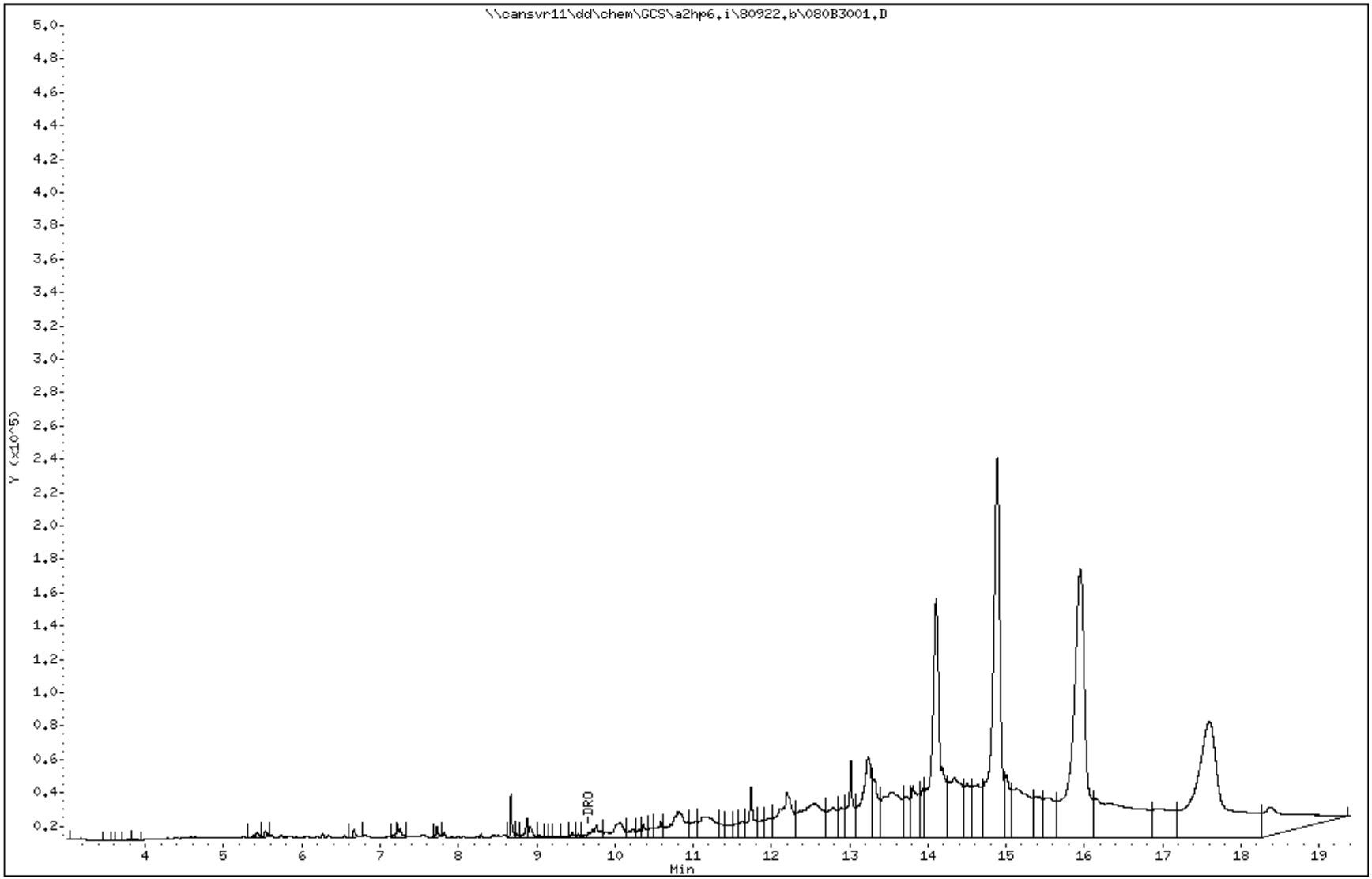
Sample Info: KW08G1AF

Volume Injected (uL): 1.0

Operator: 2398

Column phase: db-625

Column diameter: 0.32



Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y80916.b\YF091617.D

Page 1

Date : 17-SEP-2008 01:30

Client ID: AMW-07(20080915)

Instrument: ypid.i

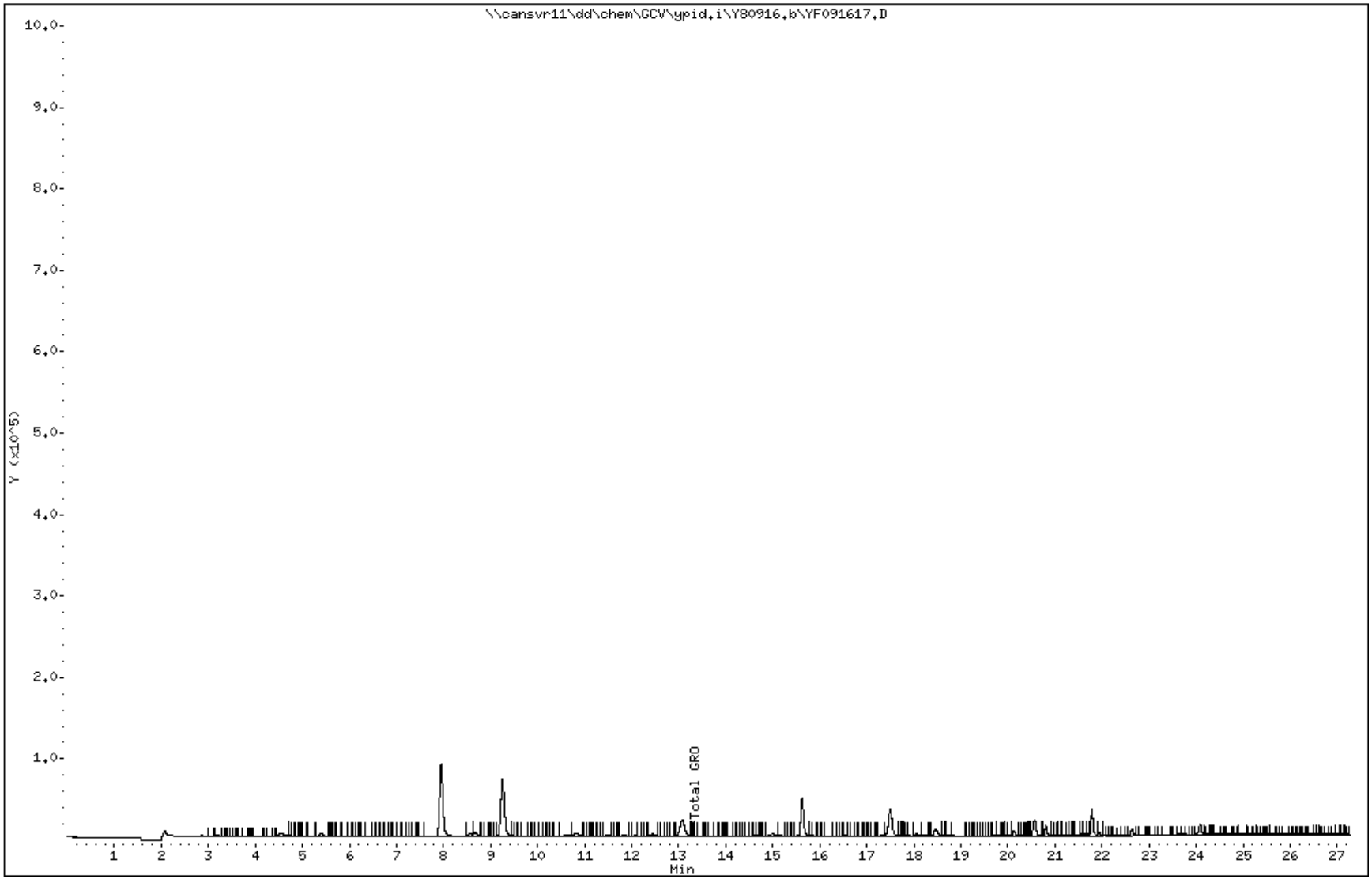
Sample Info: KW08G1AE,5.0ML

Purge Volume: 5.0

Operator: 01616

Column phase:

Column diameter: 2.00



Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4142 (0408)

Client: ARCADIS
Address: 430 1ST AVE NORTH SUITE 720
City: MINNEAPOLIS State: MN Zip Code: 55401
Project Name and Location (State): FORD TWIN CITIES MN
Contract/Purchase Order/Quote No.: FORD-TCAP-03/E200575-2

Project Manager: BRYAN ZINDA
Telephone Number (Area Code)/Fax Number: 612-339-9434 / 612-336-4538
Site Contact:
Lab Contact: DENISE POHL
Carrier/Waybill Number:

Date: 9/15/08
Lab Number:
Chain of Custody Number: 008109
Page 1 of 1

Special Instructions/Conditions of Receipt: LEVEL 2

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Matrix: Aqueous	Matrix: Sed.	Matrix: Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): VOC	SVOC	PCB	RCRA METALS	(FIELD FILTERED)	DRO	GRO
AMW-07(20080915)	9/15/08	935		X			4		1	7			3	2	2	1		1	3
TB-01 (20080915)	9/15/08	—		X						1			1						

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: [ ] 24 Hours [ ] 48 Hours [ ] 7 Days [X] 14 Days [ ] 21 Days [ ] Other ____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	9/15/08	1600	1. Received By: [signature]	9-15	1700
2. Relinquished By: [signature]	9-15		2. Received By: [signature]	9-16-08	0920
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

North Canton

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: ABE160306

Client ARCADIS Project _____ By: _____ (Signature)

Cooler Received on 9-16-08 Opened on 9-16-08

FedEx ☑ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____

TestAmerica Cooler # C175 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity 1 (N) Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☑
   Were custody seals on the bottle(s)? Yes ☐ No ☑
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☑ No ☐
3. Did custody papers accompany the sample(s)? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt 0.8 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☑ Other ☐ _____
   COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☑ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☑ No ☐ NA ☐
10. Were correct bottle(s) used for the test(s) indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☑ No ☐ Were VOAs on the COC? Yes ☑ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 031808-HNO_3; Sulfuric Acid Lot# 031808-H_2SO_4; Sodium Hydroxide Lot# 073007 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 050205-$(CH_3COO)_2ZN$/NaOH.* What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
AMW-7	<2 <2	9-16-08	LS

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

ANALYTICAL REPORT

Job Number: 240-5928-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Mr. Rob Ellis

Approved for release.
Denise Pohl
Project Manager II
11/30/2011 3:56 PM

Denise Pohl
Project Manager II
denise.pohl@testamericainc.com
11/30/2011

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

TestAmerica Laboratories, Inc.
TestAmerica North Canton 4101 Shuffel Street NW, North Canton, OH 44720
Tel (330) 497-9396 Fax (330) 497-0772 www.testamericainc.com

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-5928-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 11/15/2011; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt was 2.3, 2.6 and 2.8 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples AMW-19 (240-5928-1), AMW-20 (240-5928-2), DUP-01 (240-5928-3) and TRIP BLANK (240-5928-4) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/18/2011 and 11/23/2011.

1,2,3-Trichlorobenzene, Methylene Chloride and Naphthalene were detected in method blank MB 240-24524/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Method(s) 8260B: The following sample(s) submitted for volatiles analysis was received with insufficient preservation (pH >2): AMW-20 (240-5928-2), DUP-01 (240-5928-3).

No other difficulties were encountered during the VOCs analyses.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples AMW-19 (240-5928-1), AMW-20 (240-5928-2) and DUP-01 (240-5928-3) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 11/17/2011 and analyzed on 11/21/2011.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Several analytes failed the recovery criteria low for the MS of sample AMW-19MS (240-5928-1) in batch 240-24168.

Several analytes failed the recovery criteria low for the MSD of sample AMW-19MSD (240-5928-1) in batch 240-24168. Dibenz(a,h)anthracene exceeded the rpd limit.

Refer to the QC report for details.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

No other difficulties were encountered during the SVOC analyses.

All other quality control parameters were within the acceptance limits.

WISCONSIN DRO

Samples AMW-19 (240-5928-1), AMW-20 (240-5928-2) and DUP-01 (240-5928-3) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 11/17/2011 and analyzed on 11/18/2011.

WI Diesel Range Organics (C10-C28) was detected in method blank MB 240-23759/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged “J”. If the associated sample reported a result above the MDL and/or RL, the result has been “B” flagged. Refer to the QC report for details.

No other difficulties were encountered during the WI-DRO analyses.

All other quality control parameters were within the acceptance limits.

WISCONSIN GRO

Samples AMW-19 (240-5928-1), AMW-20 (240-5928-2) and DUP-01 (240-5928-3) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were analyzed on 11/17/2011.

Method(s) WI-GRO: The following samples submitted for volatiles analysis were received with insufficient preservation (pH >2): AMW-19 (240-5928-1), AMW-20 (240-5928-2), DUP-01 (240-5928-3).

No other difficulties were encountered during the WI-GRO analyses.

All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICP)

Samples AMW-19 (240-5928-1), AMW-20 (240-5928-2) and DUP-01 (240-5928-3) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 11/18/2011 and analyzed on 11/21/2011 and 11/22/2011.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

Several analytes were detected in method blank MB 240-23930/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged “J”. If the associated sample reported a result above the MDL and/or RL, the result has been “B” flagged. Refer to the QC report for details.

DISSOLVED MERCURY (CVAA)

Samples AMW-19 (240-5928-1), AMW-20 (240-5928-2) and DUP-01 (240-5928-3) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 11/17/2011 and analyzed on 11/21/2011.

No difficulties were encountered during the mercury analyses.

All quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-5928-1	**AMW-19**					
WI Diesel Range Organics (C10-C28)		0.26	B	0.10	mg/L	WI-DRO
Dissolved						
Barium		240	B	200	ug/L	6010B
Arsenic		4.7	J B	10	ug/L	6010B
Beryllium		0.84	J B	5.0	ug/L	6010B
Calcium		150000	B	5000	ug/L	6010B
Cobalt		4.9	J	7.0	ug/L	6010B
Iron		170		100	ug/L	6010B
Potassium		4300	J B	5000	ug/L	6010B
Magnesium		41000	B	5000	ug/L	6010B
Manganese		2800	B	15	ug/L	6010B
Sodium		55000		5000	ug/L	6010B
Nickel		3.4	J	40	ug/L	6010B
Antimony		2.9	J	10	ug/L	6010B
240-5928-2	**AMW-20**					
Acetone		5.4	J	10	ug/L	8260B
Benzene		0.14	J	1.0	ug/L	8260B
2-Butanone (MEK)		0.88	J	10	ug/L	8260B
Tetrahydrofuran		0.51	J	5.0	ug/L	8260B
Toluene		0.19	J	1.0	ug/L	8260B
Methylcyclohexane		0.15	J	1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.63	B	0.099	mg/L	WI-DRO
Dissolved						
Barium		200	B	200	ug/L	6010B
Arsenic		4.3	J B	10	ug/L	6010B
Beryllium		0.79	J B	5.0	ug/L	6010B
Calcium		180000	B	5000	ug/L	6010B
Cobalt		5.3	J	7.0	ug/L	6010B
Potassium		3500	J B	5000	ug/L	6010B
Magnesium		49000	B	5000	ug/L	6010B
Manganese		1800	B	15	ug/L	6010B
Sodium		66000		5000	ug/L	6010B
Nickel		6.9	J	40	ug/L	6010B
Antimony		3.3	J	10	ug/L	6010B
Vanadium		0.64	J	7.0	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-5928-3FD	**DUP-01**					
Acetone		1.9	J	10	ug/L	8260B
Toluene		0.14	J	1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.28	B	0.097	mg/L	WI-DRO
Dissolved						
Barium		200	B	200	ug/L	6010B
Arsenic		4.3	J B	10	ug/L	6010B
Beryllium		0.80	J B	5.0	ug/L	6010B
Calcium		190000	B	5000	ug/L	6010B
Cobalt		9.9		7.0	ug/L	6010B
Potassium		3600	J B	5000	ug/L	6010B
Magnesium		51000	B	5000	ug/L	6010B
Manganese		1900	B	15	ug/L	6010B
Sodium		69000		5000	ug/L	6010B
Nickel		7.6	J	40	ug/L	6010B
240-5928-4TB	**TRIP BLANK**					
1,2,3-Trichlorobenzene		0.73	J B	1.0	ug/L	8260B
Naphthalene		0.58	J B	1.0	ug/L	8260B
Methylene Chloride		0.47	J B	1.0	ug/L	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds (GC/MS)	TAL NC	SW846 8260B	
Purge and Trap	TAL NC		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)			SW846 3520C
Wisconsin - Gasoline Range Organics (GC)	TAL NC	WI-GRO WI-GRO	
Purge and Trap	TAL NC		SW846 5030B
Wisconsin - Diesel Range Organics (GC)	TAL NC	WI-DRO WI-DRO	
Liquid-Liquid Extraction (Separatory Funnel)			SW846 3510C
Metals (ICP)	TAL NC	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals			SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury			SW846 7470A
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL NC = TestAmerica North Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Method	Analyst	Analyst ID
SW846 8260B	Evans, Laura	LE
SW846 8260B	Quayle, Rick	RQ
SW846 8270C	Hula, Tom	TH
WI-GRO WI-GRO	Bolgrin, Deborah	DB
WI-DRO WI-DRO	Geis, Sharon	SG
SW846 6010B	Counts, Karen	KC
SW846 7470A	Sutherland, Aaron	AS

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-5928-1	AMW-19	Water	11/11/2011 1145	11/15/2011 0900
240-5928-1MS	AMW-19	Water	11/11/2011 1145	11/15/2011 0900
240-5928-1MSD	AMW-19	Water	11/11/2011 1145	11/15/2011 0900
240-5928-2	AMW-20	Water	11/11/2011 1230	11/15/2011 0900
240-5928-3FD	DUP-01	Water	11/11/2011 0000	11/15/2011 0900
240-5928-4TB	TRIP BLANK	Water	11/11/2011 0000	11/15/2011 0900

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-5928-1 Date Sampled: 11/11/2011 1145
Client Matrix: Water Date Received: 11/15/2011 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX7736.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1239			Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1239				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-5928-1 Date Sampled: 11/11/2011 1145
Client Matrix: Water Date Received: 11/15/2011 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX7736.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1239			Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1239				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	1.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	5.0
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		63 - 129
4-Bromofluorobenzene (Surr)	88		66 - 117
Toluene-d8 (Surr)	100		74 - 115
Dibromofluoromethane (Surr)	104		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-5928-2 Date Sampled: 11/11/2011 1230
Client Matrix: Water Date Received: 11/15/2011 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1224.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1228			Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1228				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	5.4	J	1.1	10
Benzene	0.14	J	0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-5928-2 Date Sampled: 11/11/2011 1230
Client Matrix: Water Date Received: 11/15/2011 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1224.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1228			Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1228				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	1.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	0.88	J	0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	5.0
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	0.51	J	0.42	5.0
Toluene	0.19	J	0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	0.15	J	0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87		63 - 129
4-Bromofluorobenzene (Surr)	101		66 - 117
Toluene-d8 (Surr)	99		74 - 115
Dibromofluoromethane (Surr)	91		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **DUP-01**

Lab Sample ID: 240-5928-3FD Date Sampled: 11/11/2011 0000
Client Matrix: Water Date Received: 11/15/2011 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1225.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1251			Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1251				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	1.9	J	1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **DUP-01**

Lab Sample ID: 240-5928-3FD Date Sampled: 11/11/2011 0000
Client Matrix: Water Date Received: 11/15/2011 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1225.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1251			Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1251				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	1.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	5.0
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	0.14	J	0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	88		63 - 129
4-Bromofluorobenzene (Surr)	96		66 - 117
Toluene-d8 (Surr)	98		74 - 115
Dibromofluoromethane (Surr)	92		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-5928-4TB Date Sampled: 11/11/2011 0000
Client Matrix: Water Date Received: 11/15/2011 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX7742.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1456			Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1456				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	0.73	J B	0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-5928-4TB Date Sampled: 11/11/2011 0000
Client Matrix: Water Date Received: 11/15/2011 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX7742.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1456			Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1456				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	1.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	0.58	J B	0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	5.0
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	2.0
Methylene Chloride	0.47	J B	0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		63 - 129
4-Bromofluorobenzene (Surr)	88		66 - 117
Toluene-d8 (Surr)	102		74 - 115
Dibromofluoromethane (Surr)	102		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-5928-1 Date Sampled: 11/11/2011 1145
Client Matrix: Water Date Received: 11/15/2011 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-24168	Instrument ID:	A4AG2
Prep Method:	3520C	Prep Batch:	240-23673	Lab File ID:	1121025.D
Dilution:	1.0			Initial Weight/Volume:	960 mL
Analysis Date:	11/21/2011 1750			Final Weight/Volume:	2.00 mL
Prep Date:	11/17/2011 0817			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.10	10
Acenaphthylene	ND		0.10	10
Anthracene	ND		0.10	10
Benzo[a]anthracene	ND		0.10	0.21
Benzo[b]fluoranthene	ND		0.10	10
Benzo[k]fluoranthene	ND		0.10	10
Benzo[g,h,i]perylene	ND		0.10	10
Benzo[a]pyrene	ND		0.10	10
Chrysene	ND		0.10	10
2-Methylnaphthalene	ND		0.10	10
Dibenz(a,h)anthracene	ND		0.10	10
Fluoranthene	ND		0.10	10
Fluorene	ND		0.10	10
Indeno[1,2,3-cd]pyrene	ND		0.10	10
Naphthalene	ND		0.10	10
Phenanthrene	ND		0.10	10
Pyrene	ND		0.10	10

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	48		28 - 110
2-Fluorophenol (Surr)	56		10 - 110
2,4,6-Tribromophenol (Surr)	54		22 - 120
Nitrobenzene-d5 (Surr)	57		27 - 111
Phenol-d5 (Surr)	59		10 - 110
Terphenyl-d14 (Surr)	37		37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-5928-2 Date Sampled: 11/11/2011 1230
Client Matrix: Water Date Received: 11/15/2011 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-24168	Instrument ID:	A4AG2
Prep Method:	3520C	Prep Batch:	240-23673	Lab File ID:	1121028.D
Dilution:	1.0			Initial Weight/Volume:	990 mL
Analysis Date:	11/21/2011 1841			Final Weight/Volume:	2.00 mL
Prep Date:	11/17/2011 0817			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.10	10
Acenaphthylene	ND		0.10	10
Anthracene	ND		0.10	10
Benzo[a]anthracene	ND		0.10	0.20
Benzo[b]fluoranthene	ND		0.10	10
Benzo[k]fluoranthene	ND		0.10	10
Benzo[g,h,i]perylene	ND		0.10	10
Benzo[a]pyrene	ND		0.10	10
Chrysene	ND		0.10	10
2-Methylnaphthalene	ND		0.10	10
Dibenz(a,h)anthracene	ND		0.10	10
Fluoranthene	ND		0.10	10
Fluorene	ND		0.10	10
Indeno[1,2,3-cd]pyrene	ND		0.10	10
Naphthalene	ND		0.10	10
Phenanthrene	ND		0.10	10
Pyrene	ND		0.10	10

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	57		28 - 110
2-Fluorophenol (Surr)	65		10 - 110
2,4,6-Tribromophenol (Surr)	63		22 - 120
Nitrobenzene-d5 (Surr)	69		27 - 111
Phenol-d5 (Surr)	67		10 - 110
Terphenyl-d14 (Surr)	64		37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **DUP-01**

Lab Sample ID: 240-5928-3FD Date Sampled: 11/11/2011 0000
Client Matrix: Water Date Received: 11/15/2011 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-24168	Instrument ID:	A4AG2
Prep Method:	3520C	Prep Batch:	240-23673	Lab File ID:	1121029.D
Dilution:	1.0			Initial Weight/Volume:	990 mL
Analysis Date:	11/21/2011 1857			Final Weight/Volume:	2.00 mL
Prep Date:	11/17/2011 0817			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.10	10
Acenaphthylene	ND		0.10	10
Anthracene	ND		0.10	10
Benzo[a]anthracene	ND		0.10	0.20
Benzo[b]fluoranthene	ND		0.10	10
Benzo[k]fluoranthene	ND		0.10	10
Benzo[g,h,i]perylene	ND		0.10	10
Benzo[a]pyrene	ND		0.10	10
Chrysene	ND		0.10	10
2-Methylnaphthalene	ND		0.10	10
Dibenz(a,h)anthracene	ND		0.10	10
Fluoranthene	ND		0.10	10
Fluorene	ND		0.10	10
Indeno[1,2,3-cd]pyrene	ND		0.10	10
Naphthalene	ND		0.10	10
Phenanthrene	ND		0.10	10
Pyrene	ND		0.10	10

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	52		28 - 110
2-Fluorophenol (Surr)	58		10 - 110
2,4,6-Tribromophenol (Surr)	53		22 - 120
Nitrobenzene-d5 (Surr)	60		27 - 111
Phenol-d5 (Surr)	58		10 - 110
Terphenyl-d14 (Surr)	52		37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-5928-1 Date Sampled: 11/11/2011 1145
Client Matrix: Water Date Received: 11/15/2011 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-23696	Instrument ID:	AFID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	AF111718.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/17/2011 1751			Final Weight/Volume:	5 mL
Prep Date:	11/17/2011 1751			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		26	100

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-5928-2 Date Sampled: 11/11/2011 1230
Client Matrix: Water Date Received: 11/15/2011 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-23696	Instrument ID:	AFID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	AF111721.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/17/2011 1924			Final Weight/Volume:	5 mL
Prep Date:	11/17/2011 1924			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		26	100

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **DUP-01**

Lab Sample ID: 240-5928-3FD Date Sampled: 11/11/2011 0000
Client Matrix: Water Date Received: 11/15/2011 0900

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-23696	Instrument ID:	AFID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	AF111722.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/17/2011 1955			Final Weight/Volume:	5 mL
Prep Date:	11/17/2011 1955			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		26	100

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-5928-1 Date Sampled: 11/11/2011 1145
Client Matrix: Water Date Received: 11/15/2011 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-23922	Instrument ID:	A2HP14F
Prep Method:	3510C	Prep Batch:	240-23759	Lab File ID:	P14F0000016.D
Dilution:	1.0			Initial Weight/Volume:	970 mL
Analysis Date:	11/18/2011 1551			Final Weight/Volume:	1.00 mL
Prep Date:	11/17/2011 1151			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.26	B	0.016	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-5928-2 Date Sampled: 11/11/2011 1230
Client Matrix: Water Date Received: 11/15/2011 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-23922	Instrument ID:	A2HP14F
Prep Method:	3510C	Prep Batch:	240-23759	Lab File ID:	P14F0000019.D
Dilution:	1.0			Initial Weight/Volume:	1010 mL
Analysis Date:	11/18/2011 1703			Final Weight/Volume:	1.00 mL
Prep Date:	11/17/2011 1151			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.63	B	0.016	0.099

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **DUP-01**

Lab Sample ID: 240-5928-3FD Date Sampled: 11/11/2011 0000
Client Matrix: Water Date Received: 11/15/2011 0900

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-23922	Instrument ID:	A2HP14F
Prep Method:	3510C	Prep Batch:	240-23759	Lab File ID:	P14F0000020.D
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Analysis Date:	11/18/2011 1727			Final Weight/Volume:	1.00 mL
Prep Date:	11/17/2011 1151			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.28	B	0.016	0.097

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-5928-1 Date Sampled: 11/11/2011 1145
Client Matrix: Water Date Received: 11/15/2011 0900

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-24269	Instrument ID:	I6
Prep Method:	3005A	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	11/21/2011 2306			Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	240	B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	4.7	J B	3.2	10
Beryllium	0.84	J B	0.46	5.0
Lead	ND		1.9	3.0
Calcium	150000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	4.9	J	1.7	7.0
Copper	ND		4.5	25
Iron	170		81	100
Magnesium	41000	B	34	5000
Manganese	2800	B	0.41	15
Sodium	55000		590	5000
Nickel	3.4	J	3.2	40
Antimony	2.9	J	1.8	10
Vanadium	ND		0.64	7.0
Zinc	ND		5.0	50

Analysis Method:	6010B	Analysis Batch:	240-24269	Instrument ID:	I6
Prep Method:	3005A	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	11/22/2011 0529			Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Potassium	4300	J B	72	5000
Thallium	ND		4.7	10

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-24219	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-23739	Lab File ID:	HG11121A.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	11/21/2011 1307			Final Weight/Volume:	100 mL
Prep Date:	11/17/2011 1340				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-5928-2 Date Sampled: 11/11/2011 1230
Client Matrix: Water Date Received: 11/15/2011 0900

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-24269	Instrument ID:	I6
Prep Method:	3005A	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	11/21/2011 2343			Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	200	B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	4.3	J B	3.2	10
Beryllium	0.79	J B	0.46	5.0
Lead	ND		1.9	3.0
Calcium	180000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	5.3	J	1.7	7.0
Copper	ND		4.5	25
Iron	ND		81	100
Magnesium	49000	B	34	5000
Manganese	1800	B	0.41	15
Sodium	66000		590	5000
Nickel	6.9	J	3.2	40
Antimony	3.3	J	1.8	10
Vanadium	0.64	J	0.64	7.0
Zinc	ND		5.0	50

Analysis Method:	6010B	Analysis Batch:	240-24269	Instrument ID:	I6
Prep Method:	3005A	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	11/22/2011 0553			Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Potassium	3500	J B	72	5000
Thallium	ND		4.7	10

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-24219	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-23739	Lab File ID:	HG11121A.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	11/21/2011 1314			Final Weight/Volume:	100 mL
Prep Date:	11/17/2011 1340				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Client Sample ID: **DUP-01**

Lab Sample ID: 240-5928-3FD Date Sampled: 11/11/2011 0000
Client Matrix: Water Date Received: 11/15/2011 0900

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-24269	Instrument ID:	I6
Prep Method:	3005A	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	11/21/2011 2349			Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	200	B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	4.3	J B	3.2	10
Beryllium	0.80	J B	0.46	5.0
Lead	ND		1.9	3.0
Calcium	190000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	9.9		1.7	7.0
Copper	ND		4.5	25
Iron	ND		81	100
Magnesium	51000	B	34	5000
Manganese	1900	B	0.41	15
Sodium	69000		590	5000
Nickel	7.6	J	3.2	40
Antimony	ND		1.8	10
Vanadium	ND		0.64	7.0
Zinc	ND		5.0	50

Analysis Method:	6010B	Analysis Batch:	240-24269	Instrument ID:	I6
Prep Method:	3005A	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	11/22/2011 0559			Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Potassium	3600	J B	72	5000
Thallium	ND		4.7	10

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-24219	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-23739	Lab File ID:	HG11121A.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	11/21/2011 1315			Final Weight/Volume:	100 mL
Prep Date:	11/17/2011 1340				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	F	RPD of the MS and MSD exceeds the control limits
GC Semi VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-23941					
LCS 240-23941/4	Lab Control Sample	T	Water	8260B	
MB 240-23941/5	Method Blank	T	Water	8260B	
240-5792-H-14 MS	Matrix Spike	T	Water	8260B	
240-5792-E-14 MSD	Matrix Spike Duplicate	T	Water	8260B	
240-5928-2	AMW-20	T	Water	8260B	
240-5928-3FD	DUP-01	T	Water	8260B	
Analysis Batch:240-24524					
LCS 240-24524/4	Lab Control Sample	T	Water	8260B	
MB 240-24524/5	Method Blank	T	Water	8260B	
240-5928-1	AMW-19	T	Water	8260B	
240-5928-1MS	Matrix Spike	T	Water	8260B	
240-5928-1MSD	Matrix Spike Duplicate	T	Water	8260B	
240-5928-4TB	TRIP BLANK	T	Water	8260B	

Report Basis
T = Total

GC/MS Semi VOA					
Prep Batch: 240-23673					
LCS 240-23673/22-A	Lab Control Sample	T	Water	3520C	
MB 240-23673/21-A	Method Blank	T	Water	3520C	
240-5928-1	AMW-19	T	Water	3520C	
240-5928-1MS	Matrix Spike	T	Water	3520C	
240-5928-1MSD	Matrix Spike Duplicate	T	Water	3520C	
240-5928-2	AMW-20	T	Water	3520C	
240-5928-3FD	DUP-01	T	Water	3520C	
Analysis Batch:240-24168					
240-5928-1	AMW-19	T	Water	8270C	240-23673
240-5928-1MS	Matrix Spike	T	Water	8270C	240-23673
240-5928-1MSD	Matrix Spike Duplicate	T	Water	8270C	240-23673
240-5928-2	AMW-20	T	Water	8270C	240-23673
240-5928-3FD	DUP-01	T	Water	8270C	240-23673
Analysis Batch:240-24295					
LCS 240-23673/22-A	Lab Control Sample	T	Water	8270C	240-23673
MB 240-23673/21-A	Method Blank	T	Water	8270C	240-23673

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Analysis Batch:240-23696					
LCS 240-23696/9	Lab Control Sample	T	Water	WI-GRO	
LCSD 240-23696/23	Lab Control Sample Duplicate	T	Water	WI-GRO	
MB 240-23696/8	Method Blank	T	Water	WI-GRO	
240-5928-1	AMW-19	T	Water	WI-GRO	
240-5928-1MS	Matrix Spike	T	Water	WI-GRO	
240-5928-1MSD	Matrix Spike Duplicate	T	Water	WI-GRO	
240-5928-2	AMW-20	T	Water	WI-GRO	
240-5928-3FD	DUP-01	T	Water	WI-GRO	

Report Basis
T = Total

GC Semi VOA					
Prep Batch: 240-23759					
LCS 240-23759/2-A	Lab Control Sample	T	Water	3510C	
LCSD 240-23759/3-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 240-23759/1-A	Method Blank	T	Water	3510C	
240-5928-1	AMW-19	T	Water	3510C	
240-5928-1MS	Matrix Spike	T	Water	3510C	
240-5928-1MSD	Matrix Spike Duplicate	T	Water	3510C	
240-5928-2	AMW-20	T	Water	3510C	
240-5928-3FD	DUP-01	T	Water	3510C	
Analysis Batch:240-23922					
LCS 240-23759/2-A	Lab Control Sample	T	Water	WI-DRO	240-23759
MB 240-23759/1-A	Method Blank	T	Water	WI-DRO	240-23759
240-5928-1	AMW-19	T	Water	WI-DRO	240-23759
240-5928-1MS	Matrix Spike	T	Water	WI-DRO	240-23759
240-5928-1MSD	Matrix Spike Duplicate	T	Water	WI-DRO	240-23759
240-5928-2	AMW-20	T	Water	WI-DRO	240-23759
240-5928-3FD	DUP-01	T	Water	WI-DRO	240-23759
Analysis Batch:240-24134					
LCSD 240-23759/3-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-23759

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-23739					
LCS 240-23739/2-A	Lab Control Sample	T	Water	7470A	
MB 240-23739/1-A	Method Blank	T	Water	7470A	
240-5928-1	AMW-19	D	Water	7470A	
240-5928-1MS	Matrix Spike	D	Water	7470A	
240-5928-1MSD	Matrix Spike Duplicate	D	Water	7470A	
240-5928-2	AMW-20	D	Water	7470A	
240-5928-3FD	DUP-01	D	Water	7470A	
Prep Batch: 240-23930					
LCS 240-23930/2-A	Lab Control Sample	R	Water	3005A	
MB 240-23930/1-A	Method Blank	R	Water	3005A	
240-5928-1	AMW-19	D	Water	3005A	
240-5928-1MS	Matrix Spike	D	Water	3005A	
240-5928-1MSD	Matrix Spike Duplicate	D	Water	3005A	
240-5928-2	AMW-20	D	Water	3005A	
240-5928-3FD	DUP-01	D	Water	3005A	
Analysis Batch:240-24219					
LCS 240-23739/2-A	Lab Control Sample	T	Water	7470A	240-23739
MB 240-23739/1-A	Method Blank	T	Water	7470A	240-23739
240-5928-1	AMW-19	D	Water	7470A	240-23739
240-5928-1MS	Matrix Spike	D	Water	7470A	240-23739
240-5928-1MSD	Matrix Spike Duplicate	D	Water	7470A	240-23739
240-5928-2	AMW-20	D	Water	7470A	240-23739
240-5928-3FD	DUP-01	D	Water	7470A	240-23739
Analysis Batch:240-24269					
LCS 240-23930/2-A	Lab Control Sample	R	Water	6010B	240-23930
MB 240-23930/1-A	Method Blank	R	Water	6010B	240-23930
240-5928-1	AMW-19	D	Water	6010B	240-23930
240-5928-1MS	Matrix Spike	D	Water	6010B	240-23930
240-5928-1MSD	Matrix Spike Duplicate	D	Water	6010B	240-23930
240-5928-2	AMW-20	D	Water	6010B	240-23930
240-5928-3FD	DUP-01	D	Water	6010B	240-23930

Report Basis

D = Dissolved

R = Total Recoverable

T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-5928-1	AMW-19	101	88	100	104
240-5928-2	AMW-20	87	101	99	91
240-5928-3	DUP-01	88	96	98	92
240-5928-4	TRIP BLANK	100	88	102	102
MB 240-23941/5		87	91	98	92
MB 240-24524/5		100	89	102	100
LCS 240-23941/4		87	104	101	98
LCS 240-24524/4		101	101	105	100
240-5928-1 MS	AMW-19 MS	104	100	108	102
240-5792-H-14 MS		88	105	100	100
240-5928-1 MSD	AMW-19 MSD	102	102	106	98
240-5792-E-14 MSD		93	109	99	97

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
BFB = 4-Bromofluorobenzene (Surr)	66-117
TOL = Toluene-d8 (Surr)	74-115
DBFM = Dibromofluoromethane (Surr)	75-121

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-5928-1	AMW-19	48	56	54	57	59	37
240-5928-2	AMW-20	57	65	63	69	67	64
240-5928-3	DUP-01	52	58	53	60	58	52
MB 240-23673/21-A		70	72	66	80	75	87
LCS 240-23673/22-A		77	81	78	90	89	86
240-5928-1 MS	AMW-19 MS	66	71	67	74	75	39
240-5928-1 MSD	AMW-19 MSD	65	70	67	73	74	45

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	28-110
2FP = 2-Fluorophenol (Surr)	10-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
NBZ = Nitrobenzene-d5 (Surr)	27-111
PHL = Phenol-d5 (Surr)	10-110
TPH = Terphenyl-d14 (Surr)	37-119

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Method Blank - Batch: 240-23941

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-23941/5	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1222.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1143	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1143				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Method Blank - Batch: 240-23941

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-23941/5	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1222.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1143	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1143				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.42	1.0
Ethyl ether	ND		0.31	1.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	5.0
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87	63 - 129
4-Bromofluorobenzene (Surr)	91	66 - 117
Toluene-d8 (Surr)	98	74 - 115
Dibromofluoromethane (Surr)	92	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Lab Control Sample - Batch: 240-23941

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-23941/4	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1221.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1121	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1121				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	9.02	90	72 - 116	
1,1,1-Trichloroethane	10.0	10.2	102	74 - 118	
1,1,2,2-Tetrachloroethane	10.0	9.40	94	68 - 118	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.3	123	74 - 151	
1,1,2-Trichloroethane	10.0	8.90	89	80 - 112	
1,1-Dichloroethane	10.0	9.15	92	82 - 115	
1,1-Dichloroethene	10.0	10.7	107	78 - 131	
1,1-Dichloropropene	10.0	9.45	95	83 - 114	
1,2,3-Trichlorobenzene	10.0	9.12	91	54 - 126	
1,2,3-Trichloropropane	10.0	9.57	96	73 - 129	
1,2,4-Trichlorobenzene	10.0	8.22	82	48 - 135	
1,2,4-Trimethylbenzene	10.0	8.85	89	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	9.99	100	42 - 136	
1,2-Dichlorobenzene	10.0	9.11	91	81 - 110	
1,2-Dichloroethane	10.0	8.54	85	71 - 127	
1,2-Dichloropropane	10.0	9.23	92	81 - 115	
1,3,5-Trimethylbenzene	10.0	8.73	87	72 - 118	
1,3-Dichlorobenzene	10.0	8.89	89	80 - 110	
1,3-Dichloropropane	10.0	8.84	88	79 - 116	
1,4-Dichlorobenzene	10.0	8.65	87	82 - 110	
2,2-Dichloropropane	10.0	10.0	100	50 - 129	
2-Chlorotoluene	10.0	8.86	89	76 - 116	
2-Hexanone	20.0	18.3	92	55 - 133	
Bromobenzene	10.0	8.87	89	76 - 115	
Bromochloromethane	10.0	8.69	87	77 - 120	
4-Chlorotoluene	10.0	8.73	87	77 - 115	
p-Isopropyltoluene	10.0	9.18	92	74 - 120	
Acetone	20.0	19.2	96	43 - 136	
Benzene	10.0	8.96	90	83 - 112	
Bromoform	10.0	7.21	72	40 - 131	
Bromomethane	10.0	8.84	88	11 - 185	
Carbon disulfide	10.0	9.85	99	62 - 142	
Carbon tetrachloride	10.0	9.57	96	66 - 128	
Chlorobenzene	10.0	8.68	87	85 - 110	
Chloroethane	10.0	9.01	90	25 - 153	
Chloroform	10.0	9.11	91	79 - 117	
Chloromethane	10.0	7.86	79	44 - 126	
cis-1,2-Dichloroethene	10.0	8.94	89	80 - 113	
cis-1,3-Dichloropropene	10.0	7.27	73	61 - 115	
Cyclohexane	10.0	10.8	108	54 - 121	
Hexachlorobutadiene	10.0	9.19	92	36 - 134	

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Lab Control Sample - Batch: 240-23941

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-23941/4	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1221.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1121	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1121				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dibromomethane	10.0	9.06	91	81 - 120	
Bromodichloromethane	10.0	8.68	87	72 - 121	
Dichlorodifluoromethane	10.0	5.63	56	19 - 129	
Ethyl ether	10.0	11.4	114	53 - 135	
Ethylbenzene	10.0	8.80	88	83 - 112	
1,2-Dibromoethane	10.0	9.09	91	79 - 113	
Naphthalene	10.0	8.94	89	32 - 141	
m-Xylene & p-Xylene	20.0	17.4	87	83 - 113	
n-Butylbenzene	10.0	9.16	92	66 - 125	
Isopropylbenzene	10.0	8.80	88	75 - 114	
Methyl acetate	10.0	9.02	90	58 - 131	J
N-Propylbenzene	10.0	9.32	93	74 - 121	
2-Butanone (MEK)	20.0	18.3	92	60 - 126	
4-Methyl-2-pentanone (MIBK)	20.0	18.2	91	63 - 128	
sec-Butylbenzene	10.0	8.64	86	70 - 117	
Methyl tert butyl ether	10.0	8.91	89	52 - 144	
Methylene Chloride	10.0	9.92	99	66 - 131	
o-Xylene	10.0	8.81	88	83 - 113	
Styrene	10.0	8.74	87	79 - 114	
tert-Butylbenzene	10.0	8.56	86	71 - 115	
Tetrachloroethene	10.0	9.08	91	79 - 114	
Tetrahydrofuran	10.0	8.89	89	23 - 143	
Toluene	10.0	8.82	88	84 - 111	
trans-1,2-Dichloroethene	10.0	10.1	101	83 - 117	
trans-1,3-Dichloropropene	10.0	7.48	75	58 - 117	
Trichloroethene	10.0	8.86	89	76 - 117	
Trichlorofluoromethane	10.0	9.50	95	49 - 157	
Vinyl chloride	10.0	8.31	83	53 - 127	
Methylcyclohexane	10.0	11.2	112	56 - 127	
Chlorodibromomethane	10.0	7.57	76	64 - 119	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87	63 - 129
4-Bromofluorobenzene (Surr)	104	66 - 117
Toluene-d8 (Surr)	101	74 - 115
Dibromofluoromethane (Surr)	98	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-23941

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-5792-H-14 MS	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1232.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1528			Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1528				
Leach Date:	N/A				

MSD Lab Sample ID:	240-5792-E-14 MSD	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1233.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1551			Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1551				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	87	89	64 - 118	2	30		
1,1,1-Trichloroethane	99	99	68 - 121	0	30		
1,1,2,2-Tetrachloroethane	93	88	63 - 122	5	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	127	130	70 - 152	2	30		
1,1,2-Trichloroethane	86	86	75 - 115	0	30		
1,1-Dichloroethane	92	91	79 - 116	1	30		
1,1-Dichloroethene	106	106	74 - 135	0	30		
1,1-Dichloropropene	95	94	80 - 114	1	30		
1,2,3-Trichlorobenzene	85	84	45 - 129	1	30		
1,2,3-Trichloropropane	90	86	67 - 132	5	30		
1,2,4-Trichlorobenzene	78	76	38 - 138	3	30		
1,2,4-Trimethylbenzene	86	83	67 - 124	3	30		
1,2-Dibromo-3-Chloropropane	101	95	32 - 139	6	30		
1,2-Dichlorobenzene	90	86	75 - 111	4	30		
1,2-Dichloroethane	85	85	68 - 129	0	30		
1,2-Dichloropropane	89	89	78 - 115	0	30		
1,3,5-Trimethylbenzene	84	82	63 - 121	2	30		
1,3-Dichlorobenzene	85	85	73 - 110	0	30		
1,3-Dichloropropane	87	86	74 - 118	2	30		
1,4-Dichlorobenzene	85	82	75 - 110	3	30		
2,2-Dichloropropane	95	95	38 - 127	0	30		
2-Chlorotoluene	84	81	69 - 117	3	30		
2-Hexanone	97	95	47 - 139	2	30		
Bromobenzene	83	80	71 - 116	4	30		
Bromochloromethane	89	87	73 - 121	2	30		
4-Chlorotoluene	83	81	71 - 116	3	30		
p-Isopropyltoluene	92	89	64 - 122	3	30		
Acetone	89	90	33 - 145	1	30		
Benzene	89	87	72 - 121	1	30		
Bromoform	76	76	32 - 128	0	30		
Bromomethane	77	79	10 - 186	3	30		
Carbon disulfide	90	87	57 - 147	3	30		

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-23941

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-5792-H-14 MS	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1232.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1528			Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1528				
Leach Date:	N/A				

MSD Lab Sample ID:	240-5792-E-14 MSD	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1233.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1551			Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1551				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Carbon tetrachloride	94	93	59 - 129	1	30		
Chlorobenzene	85	84	80 - 110	0	30		
Chloroethane	82	79	21 - 165	4	30		
Chloroform	89	90	76 - 118	1	30		
Chloromethane	79	80	33 - 132	1	30		
cis-1,2-Dichloroethene	89	87	70 - 120	3	30		
cis-1,3-Dichloropropene	72	72	51 - 110	1	30		
Cyclohexane	111	110	49 - 123	1	30		
Hexachlorobutadiene	88	82	27 - 132	7	30		
Dibromomethane	89	88	77 - 121	0	30		
Bromodichloromethane	84	84	67 - 120	1	30		
Dichlorodifluoromethane	62	61	17 - 128	2	30		
Ethyl ether	111	108	63 - 136	3	30		
Ethylbenzene	87	88	75 - 116	1	30		
1,2-Dibromoethane	88	88	74 - 113	1	30		
Naphthalene	87	84	15 - 158	3	30		
m-Xylene & p-Xylene	85	84	75 - 117	1	30		
n-Butylbenzene	90	89	56 - 127	1	30		
Isopropylbenzene	87	88	68 - 116	1	30		
Methyl acetate	92	89	47 - 130	3	30	J	J
N-Propylbenzene	89	85	64 - 124	5	30		
2-Butanone (MEK)	95	95	54 - 129	1	30		
4-Methyl-2-pentanone (MIBK)	94	94	56 - 131	1	30		
sec-Butylbenzene	86	83	60 - 119	3	30		
Methyl tert butyl ether	89	90	46 - 144	1	30		
Methylene Chloride	88	87	63 - 128	1	30		
o-Xylene	84	85	76 - 116	1	30		
Styrene	85	84	71 - 117	1	30		
tert-Butylbenzene	86	83	61 - 119	4	30		
Tetrachloroethene	91	89	70 - 117	2	30		
Tetrahydrofuran	95	90	10 - 167	5	30		
Toluene	87	85	78 - 114	2	30		

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-23941

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-5792-H-14 MS	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1232.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1528			Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1528				
Leach Date:	N/A				

MSD Lab Sample ID:	240-5792-E-14 MSD	Analysis Batch:	240-23941	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1233.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/18/2011 1551			Final Weight/Volume:	5 mL
Prep Date:	11/18/2011 1551				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
trans-1,2-Dichloroethene	100	99	80 - 119	1	30		
trans-1,3-Dichloropropene	75	76	46 - 116	1	30		
Trichloroethene	87	86	66 - 120	1	30		
Trichlorofluoromethane	93	93	46 - 157	0	30		
Vinyl chloride	82	81	49 - 130	1	30		
Methylcyclohexane	118	118	49 - 127	0	30		
Chlorodibromomethane	76	76	56 - 118	0	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	88	93	63 - 129
4-Bromofluorobenzene (Surr)	105	109	66 - 117
Toluene-d8 (Surr)	100	99	74 - 115
Dibromofluoromethane (Surr)	100	97	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Method Blank - Batch: 240-24524 **Method: 8260B**
Preparation: 5030B

Lab Sample ID:	MB 240-24524/5	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX7735.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1218	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1218				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	0.556	J	0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Method Blank - Batch: 240-24524

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-24524/5	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX7735.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1218	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1218				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.42	1.0
Ethyl ether	ND		0.31	1.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	0.462	J	0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	5.0
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	2.0
Methylene Chloride	0.857	J	0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100	63 - 129
4-Bromofluorobenzene (Surr)	89	66 - 117
Toluene-d8 (Surr)	102	74 - 115
Dibromofluoromethane (Surr)	100	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Lab Control Sample - Batch: 240-24524

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-24524/4	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX7734.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1157	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1157				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	9.81	98	72 - 116	
1,1,1-Trichloroethane	10.0	8.51	85	74 - 118	
1,1,2,2-Tetrachloroethane	10.0	9.17	92	68 - 118	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.9	119	74 - 151	
1,1,2-Trichloroethane	10.0	9.63	96	80 - 112	
1,1-Dichloroethane	10.0	10.2	102	82 - 115	
1,1-Dichloroethene	10.0	10.3	103	78 - 131	
1,1-Dichloropropene	10.0	10.3	103	83 - 114	
1,2,3-Trichlorobenzene	10.0	8.87	89	54 - 126	
1,2,3-Trichloropropane	10.0	8.61	86	73 - 129	
1,2,4-Trichlorobenzene	10.0	9.08	91	48 - 135	
1,2,4-Trimethylbenzene	10.0	9.56	96	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	8.35	84	42 - 136	
1,2-Dichlorobenzene	10.0	9.44	94	81 - 110	
1,2-Dichloroethane	10.0	9.69	97	71 - 127	
1,2-Dichloropropane	10.0	9.89	99	81 - 115	
1,3,5-Trimethylbenzene	10.0	9.55	96	72 - 118	
1,3-Dichlorobenzene	10.0	9.28	93	80 - 110	
1,3-Dichloropropane	10.0	10.0	100	79 - 116	
1,4-Dichlorobenzene	10.0	9.22	92	82 - 110	
2,2-Dichloropropane	10.0	7.40	74	50 - 129	
2-Chlorotoluene	10.0	8.95	90	76 - 116	
2-Hexanone	20.0	17.0	85	55 - 133	
Bromobenzene	10.0	8.82	88	76 - 115	
Bromochloromethane	10.0	9.70	97	77 - 120	
4-Chlorotoluene	10.0	8.80	88	77 - 115	
p-Isopropyltoluene	10.0	9.94	99	74 - 120	
Acetone	20.0	15.0	75	43 - 136	
Benzene	10.0	10.1	101	83 - 112	
Bromoform	10.0	7.64	76	40 - 131	
Bromomethane	10.0	7.51	75	11 - 185	
Carbon disulfide	10.0	8.70	87	62 - 142	
Carbon tetrachloride	10.0	8.34	83	66 - 128	
Chlorobenzene	10.0	9.66	97	85 - 110	
Chloroethane	10.0	8.13	81	25 - 153	
Chloroform	10.0	10.4	104	79 - 117	
Chloromethane	10.0	8.91	89	44 - 126	
cis-1,2-Dichloroethene	10.0	9.42	94	80 - 113	
cis-1,3-Dichloropropene	10.0	7.76	78	61 - 115	
Cyclohexane	10.0	10.7	107	54 - 121	
Hexachlorobutadiene	10.0	11.3	113	36 - 134	

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Lab Control Sample - Batch: 240-24524

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-24524/4	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX7734.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1157	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1157				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dibromomethane	10.0	9.26	93	81 - 120	
Bromodichloromethane	10.0	9.20	92	72 - 121	
Dichlorodifluoromethane	10.0	6.47	65	19 - 129	
Ethyl ether	10.0	10.2	102	53 - 135	
Ethylbenzene	10.0	9.66	97	83 - 112	
1,2-Dibromoethane	10.0	9.24	92	79 - 113	
Naphthalene	10.0	6.66	67	32 - 141	
m-Xylene & p-Xylene	20.0	19.2	96	83 - 113	
n-Butylbenzene	10.0	10.3	103	66 - 125	
Isopropylbenzene	10.0	9.82	98	75 - 114	
Methyl acetate	10.0	10.2	102	58 - 131	
N-Propylbenzene	10.0	9.31	93	74 - 121	
2-Butanone (MEK)	20.0	15.3	77	60 - 126	
4-Methyl-2-pentanone (MIBK)	20.0	16.4	82	63 - 128	
sec-Butylbenzene	10.0	9.66	97	70 - 117	
Methyl tert butyl ether	10.0	8.80	88	52 - 144	
Methylene Chloride	10.0	10.2	102	66 - 131	
o-Xylene	10.0	9.71	97	83 - 113	
Styrene	10.0	8.62	86	79 - 114	
tert-Butylbenzene	10.0	8.92	89	71 - 115	
Tetrachloroethene	10.0	10.4	104	79 - 114	
Tetrahydrofuran	10.0	8.54	85	23 - 143	
Toluene	10.0	10.2	102	84 - 111	
trans-1,2-Dichloroethene	10.0	9.98	100	83 - 117	
trans-1,3-Dichloropropene	10.0	8.57	86	58 - 117	
Trichloroethene	10.0	9.30	93	76 - 117	
Trichlorofluoromethane	10.0	7.83	78	49 - 157	
Vinyl chloride	10.0	7.82	78	53 - 127	
Methylcyclohexane	10.0	11.1	111	56 - 127	
Chlorodibromomethane	10.0	8.99	90	64 - 119	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101	63 - 129
4-Bromofluorobenzene (Surr)	101	66 - 117
Toluene-d8 (Surr)	105	74 - 115
Dibromofluoromethane (Surr)	100	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-24524

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-5928-1	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX7740.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1413			Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1413				
Leach Date:	N/A				

MSD Lab Sample ID:	240-5928-1	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX7741.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1435			Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1435				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	104	106	64 - 118	2	30		
1,1,1-Trichloroethane	88	89	68 - 121	1	30		
1,1,2,2-Tetrachloroethane	94	96	63 - 122	2	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	115	112	70 - 152	3	30		
1,1,2-Trichloroethane	104	107	75 - 115	3	30		
1,1-Dichloroethane	110	110	79 - 116	0	30		
1,1-Dichloroethene	104	108	74 - 135	4	30		
1,1-Dichloropropene	109	109	80 - 114	0	30		
1,2,3-Trichlorobenzene	85	92	45 - 129	8	30		
1,2,3-Trichloropropane	90	91	67 - 132	1	30		
1,2,4-Trichlorobenzene	87	94	38 - 138	8	30		
1,2,4-Trimethylbenzene	96	101	67 - 124	5	30		
1,2-Dibromo-3-Chloropropane	84	90	32 - 139	7	30		
1,2-Dichlorobenzene	97	100	75 - 111	3	30		
1,2-Dichloroethane	110	108	68 - 129	2	30		
1,2-Dichloropropane	107	106	78 - 115	1	30		
1,3,5-Trimethylbenzene	95	100	63 - 121	4	30		
1,3-Dichlorobenzene	95	99	73 - 110	4	30		
1,3-Dichloropropane	104	107	74 - 118	3	30		
1,4-Dichlorobenzene	93	97	75 - 110	3	30		
2,2-Dichloropropane	76	76	38 - 127	0	30		
2-Chlorotoluene	91	97	69 - 117	6	30		
2-Hexanone	90	95	47 - 139	6	30		
Bromobenzene	92	97	71 - 116	6	30		
Bromochloromethane	104	105	73 - 121	1	30		
4-Chlorotoluene	90	93	71 - 116	4	30		
p-Isopropyltoluene	96	102	64 - 122	6	30		
Acetone	104	101	33 - 145	3	30		
Benzene	108	109	72 - 121	1	30		
Bromoform	82	83	32 - 128	1	30		
Bromomethane	80	80	10 - 186	1	30		
Carbon disulfide	86	86	57 - 147	0	30		

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-24524

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-5928-1	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX7740.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1413			Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1413				
Leach Date:	N/A				

MSD Lab Sample ID:	240-5928-1	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX7741.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1435			Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1435				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Carbon tetrachloride	85	85	59 - 129	1	30		
Chlorobenzene	100	103	80 - 110	3	30		
Chloroethane	89	84	21 - 165	6	30		
Chloroform	112	112	76 - 118	0	30		
Chloromethane	101	98	33 - 132	3	30		
cis-1,2-Dichloroethene	101	103	70 - 120	2	30		
cis-1,3-Dichloropropene	80	82	51 - 110	2	30		
Cyclohexane	101	101	49 - 123	0	30		
Hexachlorobutadiene	84	94	27 - 132	12	30		
Dibromomethane	100	101	77 - 121	1	30		
Bromodichloromethane	98	99	67 - 120	2	30		
Dichlorodifluoromethane	63	64	17 - 128	1	30		
Ethyl ether	111	112	63 - 136	1	30		
Ethylbenzene	101	104	75 - 116	3	30		
1,2-Dibromoethane	96	98	74 - 113	2	30		
Naphthalene	63	75	15 - 158	18	30		
m-Xylene & p-Xylene	100	103	75 - 117	3	30		
n-Butylbenzene	95	102	56 - 127	7	30		
Isopropylbenzene	100	103	68 - 116	3	30		
Methyl acetate	101	100	47 - 130	1	30		J
N-Propylbenzene	93	96	64 - 124	3	30		
2-Butanone (MEK)	86	86	54 - 129	1	30		
4-Methyl-2-pentanone (MIBK)	89	93	56 - 131	4	30		
sec-Butylbenzene	90	95	60 - 119	5	30		
Methyl tert butyl ether	92	96	46 - 144	4	30		
Methylene Chloride	101	100	63 - 128	1	30		
o-Xylene	101	103	76 - 116	2	30		
Styrene	90	91	71 - 117	2	30		
tert-Butylbenzene	86	91	61 - 119	5	30		
Tetrachloroethene	109	111	70 - 117	2	30		
Tetrahydrofuran	92	92	10 - 167	0	30		
Toluene	110	112	78 - 114	2	30		

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-24524

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-5928-1	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX7740.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1413			Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1413				
Leach Date:	N/A				

MSD Lab Sample ID:	240-5928-1	Analysis Batch:	240-24524	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX7741.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/23/2011 1435			Final Weight/Volume:	5 mL
Prep Date:	11/23/2011 1435				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
trans-1,2-Dichloroethene	107	104	80 - 119	3	30		
trans-1,3-Dichloropropene	91	92	46 - 116	1	30		
Trichloroethene	98	99	66 - 120	1	30		
Trichlorofluoromethane	63	63	46 - 157	1	30		
Vinyl chloride	80	81	49 - 130	1	30		
Methylcyclohexane	99	100	49 - 127	0	30		
Chlorodibromomethane	97	99	56 - 118	1	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104	102	63 - 129
4-Bromofluorobenzene (Surr)	100	102	66 - 117
Toluene-d8 (Surr)	108	106	74 - 115
Dibromofluoromethane (Surr)	102	98	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Method Blank - Batch: 240-23673

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 240-23673/21-A	Analysis Batch:	240-24295	Instrument ID:	A4AG2
Client Matrix:	Water	Prep Batch:	240-23673	Lab File ID:	1122004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	11/22/2011 1006	Units:	ug/L	Final Weight/Volume:	2.00 mL
Prep Date:	11/17/2011 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	ND		0.10	10
Acenaphthylene	ND		0.10	10
Anthracene	ND		0.10	10
Benzo[a]anthracene	ND		0.10	0.20
Benzo[b]fluoranthene	ND		0.10	10
Benzo[k]fluoranthene	ND		0.10	10
Benzo[g,h,i]perylene	ND		0.10	10
Benzo[a]pyrene	ND		0.10	10
Chrysene	ND		0.10	10
2-Methylnaphthalene	ND		0.10	10
Dibenz(a,h)anthracene	ND		0.10	10
Fluoranthene	ND		0.10	10
Fluorene	ND		0.10	10
Indeno[1,2,3-cd]pyrene	ND		0.10	10
Naphthalene	ND		0.10	10
Phenanthrene	ND		0.10	10
Pyrene	ND		0.10	10

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	70	28 - 110
2-Fluorophenol (Surr)	72	10 - 110
2,4,6-Tribromophenol (Surr)	66	22 - 120
Nitrobenzene-d5 (Surr)	80	27 - 111
Phenol-d5 (Surr)	75	10 - 110
Terphenyl-d14 (Surr)	87	37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Lab Control Sample - Batch: 240-23673

Method: 8270C
Preparation: 3520C

Lab Sample ID:	LCS 240-23673/22-A	Analysis Batch:	240-24295	Instrument ID:	A4AG2
Client Matrix:	Water	Prep Batch:	240-23673	Lab File ID:	1122005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	11/22/2011 1022	Units:	ug/L	Final Weight/Volume:	2.00 mL
Prep Date:	11/17/2011 0817			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	20.0	16.3	82	40 - 110	
Acenaphthylene	20.0	16.3	82	43 - 110	
Anthracene	20.0	16.5	82	54 - 114	
Benzo[a]anthracene	20.0	15.9	80	55 - 115	
Benzo[b]fluoranthene	20.0	15.6	78	43 - 122	
Benzo[k]fluoranthene	20.0	16.4	82	43 - 124	
Benzo[g,h,i]perylene	20.0	16.6	83	45 - 120	
Benzo[a]pyrene	20.0	13.9	70	43 - 116	
Chrysene	20.0	16.5	83	55 - 115	
2-Methylnaphthalene	20.0	16.5	82	35 - 110	
Dibenz(a,h)anthracene	20.0	16.0	80	46 - 122	
Fluoranthene	20.0	17.7	88	54 - 122	
Fluorene	20.0	16.8	84	47 - 112	
Indeno[1,2,3-cd]pyrene	20.0	15.6	78	46 - 121	
Naphthalene	20.0	16.9	85	31 - 110	
Phenanthrene	20.0	16.7	83	52 - 114	
Pyrene	20.0	15.9	80	55 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	77	28 - 110
2-Fluorophenol (Surr)	81	10 - 110
2,4,6-Tribromophenol (Surr)	78	22 - 120
Nitrobenzene-d5 (Surr)	90	27 - 111
Phenol-d5 (Surr)	89	10 - 110
Terphenyl-d14 (Surr)	86	37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-23673

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	240-5928-1	Analysis Batch:	240-24168	Instrument ID:	A4AG2
Client Matrix:	Water	Prep Batch:	240-23673	Lab File ID:	1121026.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	480 mL
Analysis Date:	11/21/2011 1807			Final Weight/Volume:	2.00 mL
Prep Date:	11/17/2011 0817			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-5928-1	Analysis Batch:	240-24168	Instrument ID:	A4AG2
Client Matrix:	Water	Prep Batch:	240-23673	Lab File ID:	1121027.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	480 mL
Analysis Date:	11/21/2011 1824			Final Weight/Volume:	2.00 mL
Prep Date:	11/17/2011 0817			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	67	67	36 - 110	0	30		
Acenaphthylene	68	68	39 - 110	1	30		
Anthracene	62	65	46 - 110	5	30		
Benzo[a]anthracene	36	42	52 - 110	17	30	F	F
Benzo[b]fluoranthene	23	31	33 - 114	27	30	J F	J F
Benzo[k]fluoranthene	27	34	32 - 121	24	30	J F	J
Benzo[g,h,i]perylene	18	25	34 - 116	30	30	J F	J F
Benzo[a]pyrene	23	29	33 - 110	25	30	J F	J F
Chrysene	42	49	52 - 111	17	30	J F	J F
2-Methylnaphthalene	68	69	35 - 110	1	30		
Dibenz(a,h)anthracene	16	22	35 - 118	31	30	J F	J F
Fluoranthene	54	61	53 - 111	12	30		
Fluorene	68	69	43 - 110	1	30		
Indeno[1,2,3-cd]pyrene	17	22	36 - 116	30	30	J F	J F
Naphthalene	69	70	32 - 110	1	30		
Phenanthrene	64	66	47 - 110	3	30		
Pyrene	51	57	54 - 115	10	30	F	

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	66	65	28 - 110
2-Fluorophenol (Surr)	71	70	10 - 110
2,4,6-Tribromophenol (Surr)	67	67	22 - 120
Nitrobenzene-d5 (Surr)	74	73	27 - 111
Phenol-d5 (Surr)	75	74	10 - 110
Terphenyl-d14 (Surr)	39	45	37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Method Blank - Batch: 240-23696 **Method: WI-GRO**
Preparation: 5030B

Lab Sample ID:	MB 240-23696/8	Analysis Batch:	240-23696	Instrument ID:	AFID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	AF111708.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/17/2011 1239	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/17/2011 1239			Injection Volume:	
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		26	100

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-23696 **Method: WI-GRO**
Preparation: 5030B

LCS Lab Sample ID:	LCS 240-23696/9	Analysis Batch:	240-23696	Instrument ID:	AFID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	AF111709.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/17/2011 1310	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/17/2011 1310			Injection Volume:	
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-23696/23	Analysis Batch:	240-23696	Instrument ID:	AFID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	AF111723.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/17/2011 2025	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/17/2011 2025			Injection Volume:	
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	99	99	80 - 120	0	20		

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-23696

Method: WI-GRO
Preparation: 5030B

MS Lab Sample ID:	240-5928-1	Analysis Batch:	240-23696	Instrument ID:	AFID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	AF111719.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/17/2011 1822			Final Weight/Volume:	5 mL
Prep Date:	11/17/2011 1822			Injection Volume:	
Leach Date:	N/A				

MSD Lab Sample ID:	240-5928-1	Analysis Batch:	240-23696	Instrument ID:	AFID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	AF111720.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/17/2011 1853			Final Weight/Volume:	5 mL
Prep Date:	11/17/2011 1853			Injection Volume:	
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
WI Gasoline Range Organics (C6-C10)	101	104	80 - 120	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Method Blank - Batch: 240-23759

Method: WI-DRO
Preparation: 3510C

Lab Sample ID:	MB 240-23759/1-A	Analysis Batch:	240-23922	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-23759	Lab File ID:	P14F0000014.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	11/18/2011 1503	Units:	mg/L	Final Weight/Volume:	1.00 mL
Prep Date:	11/17/2011 1151			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	0.0498	J	0.016	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-23759

Method: WI-DRO
Preparation: 3510C

LCS Lab Sample ID:	LCS 240-23759/2-A	Analysis Batch:	240-23922	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-23759	Lab File ID:	P14F0000015.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	11/18/2011 1527	Units:	mg/L	Final Weight/Volume:	1.00 mL
Prep Date:	11/17/2011 1151			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-23759/3-A	Analysis Batch:	240-24134	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-23759	Lab File ID:	P14F0000005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	11/21/2011 1007	Units:	mg/L	Final Weight/Volume:	1.00 mL
Prep Date:	11/17/2011 1151			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	98	111	75 - 115	12	20		

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-23759

Method: WI-DRO
Preparation: 3510C

MS Lab Sample ID:	240-5928-1	Analysis Batch:	240-23922	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-23759	Lab File ID:	P14F0000017.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	490 mL
Analysis Date:	11/18/2011 1615			Final Weight/Volume:	1.00 mL
Prep Date:	11/17/2011 1151			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-5928-1	Analysis Batch:	240-23922	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-23759	Lab File ID:	P14F0000018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	490 mL
Analysis Date:	11/18/2011 1639			Final Weight/Volume:	1.00 mL
Prep Date:	11/17/2011 1151			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
WI Diesel Range Organics (C10-C28)	93	97	60 - 130	4	25		

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Method Blank - Batch: 240-23930

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-23930/1-A	Analysis Batch:	240-24269	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/21/2011 2254	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	1.11	J	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	4.13	J	3.2	10
Beryllium	0.861	J	0.46	5.0
Lead	ND		1.9	3.0
Calcium	131	J	130	5000
Selenium	ND		4.1	5.0
Cobalt	ND		1.7	7.0
Copper	ND		4.5	25
Iron	ND		81	100
Magnesium	204	J	34	5000
Manganese	0.496	J	0.41	15
Sodium	ND		590	5000
Nickel	ND		3.2	40
Antimony	ND		1.8	10
Vanadium	ND		0.64	7.0
Zinc	11.0	J	5.0	50

Method Blank - Batch: 240-23930

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-23930/1-A	Analysis Batch:	240-24269	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/22/2011 0517	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Potassium	215	J	72	5000
Thallium	ND		4.7	10

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Lab Control Sample - Batch: 240-23930

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-23930/2-A	Analysis Batch:	240-24269	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/21/2011 2300	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	2100	105	80 - 120	
Aluminum	2000	1990	100	80 - 120	
Cadmium	50.0	45.9	92	80 - 120	
Chromium	200	194	97	80 - 120	
Silver	50.0	54.2	108	80 - 120	
Arsenic	2000	1890	95	80 - 120	
Beryllium	50.0	51.0	102	80 - 120	
Lead	500	477	95	80 - 120	
Calcium	50000	45400	91	80 - 120	
Selenium	2000	1840	92	80 - 120	
Cobalt	500	459	92	80 - 120	
Copper	250	227	91	80 - 120	
Iron	1000	1010	101	80 - 120	
Magnesium	50000	43100	86	80 - 120	
Manganese	500	479	96	80 - 120	
Sodium	50000	47400	95	80 - 120	
Nickel	500	509	102	80 - 120	
Antimony	500	479	96	80 - 120	
Vanadium	500	446	89	80 - 120	
Zinc	500	467	93	80 - 120	

Lab Control Sample - Batch: 240-23930

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-23930/2-A	Analysis Batch:	240-24269	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/22/2011 0523	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Potassium	50000	48100	96	80 - 120	
Thallium	2000	1940	97	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-23930

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID:	240-5928-1	Analysis Batch:	240-24269	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/21/2011 2331			Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				
Leach Date:	N/A				

MSD Lab Sample ID:	240-5928-1	Analysis Batch:	240-24269	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/21/2011 2337			Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	115	115	75 - 125	0	20		
Aluminum	108	109	75 - 125	0	20		
Cadmium	98	99	75 - 125	1	20		
Chromium	105	104	75 - 125	1	20		
Silver	116	116	75 - 125	0	20		
Arsenic	104	105	75 - 125	1	20		
Beryllium	108	109	75 - 125	0	20		
Lead	101	102	75 - 125	1	20		
Calcium	104	103	75 - 125	0	20		
Selenium	99	100	75 - 125	1	20		
Cobalt	98	99	75 - 125	1	20		
Copper	98	98	75 - 125	1	20		
Iron	109	120	75 - 125	8	20		
Magnesium	97	98	75 - 125	1	20		
Manganese	100	97	75 - 125	0	20	4	4
Sodium	108	107	75 - 125	0	20		
Nickel	108	108	75 - 125	0	20		
Antimony	105	106	75 - 125	1	20		
Vanadium	97	97	75 - 125	1	20		
Zinc	100	100	75 - 125	0	20		

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-23930

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID:	240-5928-1	Analysis Batch:	240-24269	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/22/2011 0541			Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				
Leach Date:	N/A				

MSD Lab Sample ID:	240-5928-1	Analysis Batch:	240-24269	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-23930	Lab File ID:	I61121A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/22/2011 0547			Final Weight/Volume:	50 mL
Prep Date:	11/18/2011 0937				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Potassium	107	106	75 - 125	1	20		
Thallium	106	105	75 - 125	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-5928-1

Method Blank - Batch: 240-23739

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-23739/1-A	Analysis Batch:	240-24219	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-23739	Lab File ID:	HG11121A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/21/2011 1304	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	11/17/2011 1340				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.12	0.20

Lab Control Sample - Batch: 240-23739

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-23739/2-A	Analysis Batch:	240-24219	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-23739	Lab File ID:	HG11121A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/21/2011 1306	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	11/17/2011 1340				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	4.25	85	81 - 123	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-23739

Method: 7470A
Preparation: 7470A
Dissolved

MS Lab Sample ID:	240-5928-1	Analysis Batch:	240-24219	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-23739	Lab File ID:	HG11121A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/21/2011 1308			Final Weight/Volume:	100 mL
Prep Date:	11/17/2011 1340				
Leach Date:	N/A				

MSD Lab Sample ID:	240-5928-1	Analysis Batch:	240-24219	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-23739	Lab File ID:	HG11121A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	11/21/2011 1310			Final Weight/Volume:	100 mL
Prep Date:	11/17/2011 1340				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	91	91	69 - 134	0	20		

Chain of Custody Record

Enovis #E200572

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: North Canton
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: ARCADIS	Client Project Manager: Rob Ellis	Site Contact: Mike LeFrancois	Lab Contact: DEnise Pohl	COC No: 032265
Address: 430 1st Ave.N., #720	Telephone: 248-994-2252	Telephone: 612-373-0256	Telephone: 330-966-9789	____ of ____ COCs
City/State/Zip: Minneapolis MN 55401	Email: rob.ellis@arcadis-us.com	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: 612-339-9434		TAT if different from below ____		Walk-in client ☐
Project Name: Ford/TCAP	Method of Shipment/Carrier: Fedex	☐ 3 weeks ☒ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Lab pickup ☐
Project Number: DE000440.0001.00005	Shipping/Tracking No:			Lab sampling ☐
PO#				Job/SDG No:

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C/ Grab=G	VOCs (8260)	PAHs (8270)	GRO (WI method)	DRO (WI method)	TAL metals, Dissolved (method 6010)	Temperature				Sample Specific Notes / Special Instructions:
AMW-19	11/11/11	1145		X					1	7			2		Y	G	3	2	2	2	1					A773/A392
AMW-19 MS	11/11/11	1145																								L391/A392
AMW-19 MSD	11/11/11	1145																								L391/A392
AMW-20	11/11/11	1230																								A773/A392
DUP-01	11/11/11	—																								A392
Temp Blank	—	—		X									X								3					A392/A773/L391
Trip Blank	—	—		X						2					—		2									

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:

1615

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Kelly Hoehn	ARCADIS	11/14/11 1230		TAmerica	11-14-11
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAmerica	11-14-11 1700			
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				TAL	11/15/11 900

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TAL 0018-1 (04/10)

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** #5928
North Canton Facility

Client FORD TCAP ARCADIS Project _____ By: _____ (Signature)
Cooler Received on 11-15-11 Opened on 11-15-11
FedEx UPS DHL FAS Stetson Client Drop Off TestAmerica Courier Other _____
TestAmerica Cooler # _____ Multiple Coolers Foam Box Client Cooler Other _____

1. Were custody seals on the outside of the cooler(s)? Yes No Intact? Yes No NA
   If YES, Quantity 4 Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes No NA
   Were custody seals on the bottle(s)? Yes No
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes No
3. Did custody papers accompany the sample(s)? Yes No Relinquished by client? Yes No
4. Were the custody papers signed in the appropriate place? Yes No
5. Packing material used: Bubble Wrap Foam None Other _____
6. Cooler temperature upon receipt _____ °C See back of form for multiple coolers/temps BACK
   METHOD: IR Other _____
   COOLANT: Wet Ice Blue Ice Dry Ice Water None
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were sample(s) at the correct pH upon receipt? Yes No NA
10. Were correct bottle(s) used for the test(s) indicated? Yes No
11. Were air bubbles >6 mm in any VOA vials? Yes No NA
12. Sufficient quantity received to perform indicated analyses? Yes No
13. Was a trip blank present in the cooler(s)? Yes No Were VOAs on the COC? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other
Concerning

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 110410-HNO_3; Sulfuric Acid Lot# 041911-H_2SO_4; Sodium Hydroxide Lot# 121809 -NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN$/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
19	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	11-15-11	CSL
20	2 2 2 2 2 2	1	1
DUP01	2 2 2 2 2 2		

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant
A392	2.6	IR	Ice
A773	2.3	1	1
L391	2.8		

Discrepancies Cont'd:

SOP: NC-SC-0005, Sample Receiving
N:\QA\NARRATIVE\TestAmerica\Cooler Receipt TestAmerica\COOLER_TestAmerica_Rev 81_110911 djl.doc

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 240-5928-1

Login Number: 5928

List Source: TestAmerica North Canton

List Number: 1

Creator: Livengood, Chris

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6, 2.3, 2.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

December 02, 2011

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000440.0001.00005
Laboratory: TestAmerica - North Canton
Laboratory submittal: 5928-1
Sample date: 2011-11-11
Report received by Enovis: 2011-11-30
Initial Data Verification completed by Enovis: 2011-12-02

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

2 Water sample(s) and 1 field duplicate were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other and Metals parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the Enovis CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The following minor QC exceptions or missing information were noted:

GCMS VOC method blank for QC batch 24524 had detections below the RL for 1,2,3-trichlorobenzene, methylene chloride and naphthalene. Client sample -004 (trip blank) results for these analytes should be considered to be non-detect at the RL and qualified with UB flags.

GCMS VOC trip blank detections for 1,2,3-trichlorobenzene, naphthalene and methylene chloride were qualified as non-detect at the RL due to associated method blank detections. No other detections were reported in the trip blank.

GCMS VOC client samples -002 and -003 and GRO client samples -001, -002 and -003 containers were received at a pH of greater than 2 so were outside of the recommended preservation criteria for the standard 14 day holding time. The associated analyses were performed within 7 days of sample collection so qualification was not required based on the preservation non-conformances.

GCMS SVOC MS/MSD recoveries performed on client sample -001 were outside of laboratory control limits biased low for benzo(a)anthracene, benzo(b)fluoranthene, benzo(ghi)perylene, benzo(a)pyrene, chrysene, dibenzo(ah)anthracnene (MS/MSD RPD also an outlier) and indeno(1,2,3-cd)pyrene. Client sample -001 results for these analytes should be considered to be estimated and qualified with UJ flags. MS only recovery outliers for benzo(k)fluoranthene and pyrene did not result in qualification of client sample data.

DRO method blank detection below the RL did not result in qualification for client sample data.

Metals method blank had detections below the RL for potassium, barium, arsenic, beryllium, calcium, magnesium, manganese and zinc. Client samples -001, -002 and -003 arsenic and beryllium results should be considered to be non-detect at the RL and qualified with UB flags.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

Enovis Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 5928-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)
2402369618	AMW-19	11/11/2011	11:45:00			X			
2402369621	AMW-20	11/11/2011	12:30:00			X			
2402369622	DUP-01	11/11/2011	12:00:00			X			
2402392216	AMW-19	11/11/2011	11:45:00				X		
2402392219	AMW-20	11/11/2011	12:30:00				X		
2402392220	DUP-01	11/11/2011	12:00:00				X		
240239417	AMW-20	11/11/2011	12:30:00	X					
240239418	DUP-01	11/11/2011	12:00:00	X					
2402416825	AMW-19	11/11/2011	11:45:00		X				
2402416828	AMW-20	11/11/2011	12:30:00		X				
2402416829	DUP-01	11/11/2011	12:00:00		X				
2402421960	AMW-19	11/11/2011	11:45:00						X
2402421965	AMW-20	11/11/2011	12:30:00						X
2402421966	DUP-01	11/11/2011	12:00:00						X
24024269153	AMW-19	11/11/2011	11:45:00					X	
24024269159	AMW-20	11/11/2011	12:30:00					X	
24024269160	DUP-01	11/11/2011	12:00:00					X	
24024269188	AMW-19	11/11/2011	11:45:00					X	
24024269192	AMW-20	11/11/2011	12:30:00					X	
24024269193	DUP-01	11/11/2011	12:00:00					X	
2402452412	TRIP BLANK	11/11/2011	12:00:00	X					
240245246	AMW-19	11/11/2011	11:45:00	X					

Qualified Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

		Sample Name:	AMW-19				AMW-19				AMW-20				DUP-01				TRIP BLANK			
		Lab Sample ID:	2402416825				24024269153				24024269159				24024269160				2402452412			
		Sample Date:	11/11/2011				11/11/2011				11/11/2011				11/11/2011				11/11/2011			
Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																						
OSW-8260B																						
1,2,3-Trichlorobenzene	87-61-6																		0.73	1.0	ug/l	UB
Methylene Chloride	75-09-2																		0.47	1.0	ug/l	UB
Naphthalene	91-20-3																		0.58	1.0	ug/l	UB
GC/MS SVOC																						
OSW-8270C																						
Benzo[a]anthracene	56-55-3		ND	0.21	ug/l	UJ																
Benzo[a]pyrene	50-32-8		ND	10	ug/l	UJ																
Benzo[b]fluoranthene	205-99-2		ND	10	ug/l	UJ																
Benzo[g,h,i]perylene	191-24-2		ND	10	ug/l	UJ																
Chrysene	218-01-9		ND	10	ug/l	UJ																
Dibenz(a,h)anthracene	53-70-3		ND	10	ug/l	UJ																
Indeno[1,2,3-cd]pyrene	193-39-5		ND	10	ug/l	UJ																
Metals																						
OSW-6010B																						
Arsenic - Dissolved	7440-38-2						4.7	10	ug/l	UB	4.3	10	ug/l	UB	4.3	10	ug/l	UB				
Beryllium - Dissolved	7440-41-7						0.84	5.0	ug/l	UB	0.79	5.0	ug/l	UB	0.80	5.0	ug/l	UB				

GCMS VOC method blank for QC batch 24524 had detections below the RL for 1,2,3-trichlorobenzene, methylene chloride and naphthalene. Client sample -004 (trip blank) results for these analytes should be considered to be non-detect at the RL and qualified with UB flags.

GCMS SVOC MS/MSD recoveries performed on client sample -001 were outside of laboratory control limits biased low for benzo(a)anthracene, benzo(b)fluoranthene, benzo(ghi)perylene, benzo(a)pyrene, chrysene, dibenzo(ah)anthracnene (MS/MSD RPD also an outlier) and indeno(1,2,3-cd)pyrene. Client sample -001 results for these analytes should be considered to be estimated and qualified with UJ flags. MS only recovery outliers for benzo(k)fluoranthene and pyrene did not result in qualification of client sample data.

Metals method blank had detections below the RL for potassium, barium, arsenic, beryllium, calcium, magnesium, manganese and zinc. Client samples -001, -002 and -003 arsenic and beryllium results should be considered to be non-detect at the RL and qualified with UB flags.

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

		Sample Name:	AMW-19				AMW-20			
		Lab Sample ID:	2402369618				2402369621			
		Sample Date:	11/11/2011				11/11/2011			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC										
	OSW-8270C									
	2-Methylnaphthalene	91-57-6								
	Acenaphthene	83-32-9								
	Acenaphthylene	208-96-8								
	Anthracene	120-12-7								
	Benzo[a]anthracene	56-55-3								
	Benzo[a]pyrene	50-32-8								
	Benzo[b]fluoranthene	205-99-2								
	Benzo[g,h,i]perylene	191-24-2								
	Benzo[k]fluoranthene	207-08-9								
	Chrysene	218-01-9								
	Dibenz(a,h)anthracene	53-70-3								
	Fluoranthene	206-44-0								
	Fluorene	86-73-7								
	Indeno[1,2,3-cd]pyrene	193-39-5								
	Naphthalene	91-20-3								
	Phenanthrene	85-01-8								
	Pyrene	129-00-0								
GC VOC										
	PUBL-SW-140									
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	100	ug/l	---	ND	100	ug/l	---
GC Other										
	PUBL-SW-141									
	WI Diesel Range Organics (C10-C28)	E-1004								
Metals										
	OSW-6010B									
	Aluminum - Dissolved	7429-90-5								
	Antimony - Dissolved	7440-36-0								
	Arsenic - Dissolved	7440-38-2								
	Barium - Dissolved	7440-39-3								
	Beryllium - Dissolved	7440-41-7								
	Cadmium - Dissolved	7440-43-9								
	Calcium - Dissolved	7440-70-2								
	Chromium - Dissolved	7440-47-3								
	Cobalt - Dissolved	7440-48-4								
	Copper - Dissolved	7440-50-8								
	Iron - Dissolved	7439-89-6								
	Lead - Dissolved	7439-92-1								
	Magnesium - Dissolved	7439-95-4								
	Manganese - Dissolved	7439-96-5								
	Nickel - Dissolved	7440-02-0								
	Potassium - Dissolved	7440-09-7								
	Selenium - Dissolved	7782-49-2								
	Silver - Dissolved	7440-22-4								
	Sodium - Dissolved	7440-23-5								
	Thallium - Dissolved	7440-28-0								
	Vanadium - Dissolved	7440-62-2								
	Zinc - Dissolved	7440-66-6								
	OSW-7470A									
	Mercury - Dissolved	7439-97-6								

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

		Sample Name:	DUP-01				AMW-19			
		Lab Sample ID:	2402369622				2402392216			
		Sample Date:	11/11/2011				11/11/2011			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC										
	OSW-8270C									
	2-Methylnaphthalene	91-57-6								
	Acenaphthene	83-32-9								
	Acenaphthylene	208-96-8								
	Anthracene	120-12-7								
	Benzo[a]anthracene	56-55-3								
	Benzo[a]pyrene	50-32-8								
	Benzo[b]fluoranthene	205-99-2								
	Benzo[g,h,i]perylene	191-24-2								
	Benzo[k]fluoranthene	207-08-9								
	Chrysene	218-01-9								
	Dibenz(a,h)anthracene	53-70-3								
	Fluoranthene	206-44-0								
	Fluorene	86-73-7								
	Indeno[1,2,3-cd]pyrene	193-39-5								
	Naphthalene	91-20-3								
	Phenanthrene	85-01-8								
	Pyrene	129-00-0								
GC VOC										
	PUBL-SW-140									
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	100	ug/l	---				
GC Other										
	PUBL-SW-141									
	WI Diesel Range Organics (C10-C28)	E-1004					0.26	0.10	mg/l	---
Metals										
	OSW-6010B									
	Aluminum - Dissolved	7429-90-5								
	Antimony - Dissolved	7440-36-0								
	Arsenic - Dissolved	7440-38-2								
	Barium - Dissolved	7440-39-3								
	Beryllium - Dissolved	7440-41-7								
	Cadmium - Dissolved	7440-43-9								
	Calcium - Dissolved	7440-70-2								
	Chromium - Dissolved	7440-47-3								
	Cobalt - Dissolved	7440-48-4								
	Copper - Dissolved	7440-50-8								
	Iron - Dissolved	7439-89-6								
	Lead - Dissolved	7439-92-1								
	Magnesium - Dissolved	7439-95-4								
	Manganese - Dissolved	7439-96-5								
	Nickel - Dissolved	7440-02-0								
	Potassium - Dissolved	7440-09-7								
	Selenium - Dissolved	7782-49-2								
	Silver - Dissolved	7440-22-4								
	Sodium - Dissolved	7440-23-5								
	Thallium - Dissolved	7440-28-0								
	Vanadium - Dissolved	7440-62-2								
	Zinc - Dissolved	7440-66-6								
	OSW-7470A									
	Mercury - Dissolved	7439-97-6								

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

		Sample Name:	AMW-20				DUP-01			
		Lab Sample ID:	2402392219				2402392220			
		Sample Date:	11/11/2011				11/11/2011			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC										
	OSW-8270C									
	2-Methylnaphthalene	91-57-6								
	Acenaphthene	83-32-9								
	Acenaphthylene	208-96-8								
	Anthracene	120-12-7								
	Benzo[a]anthracene	56-55-3								
	Benzo[a]pyrene	50-32-8								
	Benzo[b]fluoranthene	205-99-2								
	Benzo[g,h,i]perylene	191-24-2								
	Benzo[k]fluoranthene	207-08-9								
	Chrysene	218-01-9								
	Dibenz(a,h)anthracene	53-70-3								
	Fluoranthene	206-44-0								
	Fluorene	86-73-7								
	Indeno[1,2,3-cd]pyrene	193-39-5								
	Naphthalene	91-20-3								
	Phenanthrene	85-01-8								
	Pyrene	129-00-0								
GC VOC										
	PUBL-SW-140									
	WI Gasoline Range Organics (C6-C10)	E-1005								
GC Other										
	PUBL-SW-141									
	WI Diesel Range Organics (C10-C28)	E-1004	0.63	0.099	mg/l	---	0.28	0.097	mg/l	---
Metals										
	OSW-6010B									
	Aluminum - Dissolved	7429-90-5								
	Antimony - Dissolved	7440-36-0								
	Arsenic - Dissolved	7440-38-2								
	Barium - Dissolved	7440-39-3								
	Beryllium - Dissolved	7440-41-7								
	Cadmium - Dissolved	7440-43-9								
	Calcium - Dissolved	7440-70-2								
	Chromium - Dissolved	7440-47-3								
	Cobalt - Dissolved	7440-48-4								
	Copper - Dissolved	7440-50-8								
	Iron - Dissolved	7439-89-6								
	Lead - Dissolved	7439-92-1								
	Magnesium - Dissolved	7439-95-4								
	Manganese - Dissolved	7439-96-5								
	Nickel - Dissolved	7440-02-0								
	Potassium - Dissolved	7440-09-7								
	Selenium - Dissolved	7782-49-2								
	Silver - Dissolved	7440-22-4								
	Sodium - Dissolved	7440-23-5								
	Thallium - Dissolved	7440-28-0								
	Vanadium - Dissolved	7440-62-2								
	Zinc - Dissolved	7440-66-6								
	OSW-7470A									
	Mercury - Dissolved	7439-97-6								

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

		Sample Name:	AMW-20				DUP-01			
		Lab Sample ID:	240239417				240239418			
		Sample Date:	11/11/2011				11/11/2011			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC									
OSW-8260B									
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	0.88	10	ug/l	J	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Acetone	67-64-1	5.4	10	ug/l	J	1.9	10	ug/l	J
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	0.14	1.0	ug/l	J	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Ethyl ether	60-29-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methylcyclohexane	108-87-2	0.15	1.0	ug/l	J	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	0.51	5.0	ug/l	J	ND	5.0	ug/l	---
Toluene	108-88-3	0.19	1.0	ug/l	J	0.14	1.0	ug/l	J
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

Analyte	Cas No.	Sample Name: AMW-19 Result	Report Limit	Units	Valid Qualifier	Sample Name: AMW-20 Result	Report Limit	Units	Valid Qualifier
		Lab Sample ID: 2402416825				Lab Sample ID: 2402416828			
		Sample Date: 11/11/2011				Sample Date: 11/11/2011			
GC/MS SVOC									
OSW-8270C									
2-Methylnaphthalene	91-57-6	ND	10	ug/l	---	ND	10	ug/l	---
Acenaphthene	83-32-9	ND	10	ug/l	---	ND	10	ug/l	---
Acenaphthylene	208-96-8	ND	10	ug/l	---	ND	10	ug/l	---
Anthracene	120-12-7	ND	10	ug/l	---	ND	10	ug/l	---
Benzo[a]anthracene	56-55-3	ND	0.21	ug/l	UJ	ND	0.20	ug/l	---
Benzo[a]pyrene	50-32-8	ND	10	ug/l	UJ	ND	10	ug/l	---
Benzo[b]fluoranthene	205-99-2	ND	10	ug/l	UJ	ND	10	ug/l	---
Benzo[g,h,i]perylene	191-24-2	ND	10	ug/l	UJ	ND	10	ug/l	---
Benzo[k]fluoranthene	207-08-9	ND	10	ug/l	---	ND	10	ug/l	---
Chrysene	218-01-9	ND	10	ug/l	UJ	ND	10	ug/l	---
Dibenz(a,h)anthracene	53-70-3	ND	10	ug/l	UJ	ND	10	ug/l	---
Fluoranthene	206-44-0	ND	10	ug/l	---	ND	10	ug/l	---
Fluorene	86-73-7	ND	10	ug/l	---	ND	10	ug/l	---
Indeno[1,2,3-cd]pyrene	193-39-5	ND	10	ug/l	UJ	ND	10	ug/l	---
Naphthalene	91-20-3	ND	10	ug/l	---	ND	10	ug/l	---
Phenanthrene	85-01-8	ND	10	ug/l	---	ND	10	ug/l	---
Pyrene	129-00-0	ND	10	ug/l	---	ND	10	ug/l	---
GC VOC									
PUBL-SW-140									
WI Gasoline Range Organics (C6-C10)	E-1005								
GC Other									
PUBL-SW-141									
WI Diesel Range Organics (C10-C28)	E-1004								
Metals									
OSW-6010B									
Aluminum - Dissolved	7429-90-5								
Antimony - Dissolved	7440-36-0								
Arsenic - Dissolved	7440-38-2								
Barium - Dissolved	7440-39-3								
Beryllium - Dissolved	7440-41-7								
Cadmium - Dissolved	7440-43-9								
Calcium - Dissolved	7440-70-2								
Chromium - Dissolved	7440-47-3								
Cobalt - Dissolved	7440-48-4								
Copper - Dissolved	7440-50-8								
Iron - Dissolved	7439-89-6								
Lead - Dissolved	7439-92-1								
Magnesium - Dissolved	7439-95-4								
Manganese - Dissolved	7439-96-5								
Nickel - Dissolved	7440-02-0								
Potassium - Dissolved	7440-09-7								
Selenium - Dissolved	7782-49-2								
Silver - Dissolved	7440-22-4								
Sodium - Dissolved	7440-23-5								
Thallium - Dissolved	7440-28-0								
Vanadium - Dissolved	7440-62-2								
Zinc - Dissolved	7440-66-6								
OSW-7470A									
Mercury - Dissolved	7439-97-6								

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

		Sample Name:	DUP-01				AMW-19			
		Lab Sample ID:	2402416829				2402421960			
		Sample Date:	11/11/2011				11/11/2011			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC										
	OSW-8270C									
	2-Methylnaphthalene	91-57-6	ND	10	ug/l	---				
	Acenaphthene	83-32-9	ND	10	ug/l	---				
	Acenaphthylene	208-96-8	ND	10	ug/l	---				
	Anthracene	120-12-7	ND	10	ug/l	---				
	Benzo[a]anthracene	56-55-3	ND	0.20	ug/l	---				
	Benzo[a]pyrene	50-32-8	ND	10	ug/l	---				
	Benzo[b]fluoranthene	205-99-2	ND	10	ug/l	---				
	Benzo[g,h,i]perylene	191-24-2	ND	10	ug/l	---				
	Benzo[k]fluoranthene	207-08-9	ND	10	ug/l	---				
	Chrysene	218-01-9	ND	10	ug/l	---				
	Dibenz(a,h)anthracene	53-70-3	ND	10	ug/l	---				
	Fluoranthene	206-44-0	ND	10	ug/l	---				
	Fluorene	86-73-7	ND	10	ug/l	---				
	Indeno[1,2,3-cd]pyrene	193-39-5	ND	10	ug/l	---				
	Naphthalene	91-20-3	ND	10	ug/l	---				
	Phenanthrene	85-01-8	ND	10	ug/l	---				
	Pyrene	129-00-0	ND	10	ug/l	---				
GC VOC										
	PUBL-SW-140									
	WI Gasoline Range Organics (C6-C10)	E-1005								
GC Other										
	PUBL-SW-141									
	WI Diesel Range Organics (C10-C28)	E-1004								
Metals										
	OSW-6010B									
	Aluminum - Dissolved	7429-90-5								
	Antimony - Dissolved	7440-36-0								
	Arsenic - Dissolved	7440-38-2								
	Barium - Dissolved	7440-39-3								
	Beryllium - Dissolved	7440-41-7								
	Cadmium - Dissolved	7440-43-9								
	Calcium - Dissolved	7440-70-2								
	Chromium - Dissolved	7440-47-3								
	Cobalt - Dissolved	7440-48-4								
	Copper - Dissolved	7440-50-8								
	Iron - Dissolved	7439-89-6								
	Lead - Dissolved	7439-92-1								
	Magnesium - Dissolved	7439-95-4								
	Manganese - Dissolved	7439-96-5								
	Nickel - Dissolved	7440-02-0								
	Potassium - Dissolved	7440-09-7								
	Selenium - Dissolved	7782-49-2								
	Silver - Dissolved	7440-22-4								
	Sodium - Dissolved	7440-23-5								
	Thallium - Dissolved	7440-28-0								
	Vanadium - Dissolved	7440-62-2								
	Zinc - Dissolved	7440-66-6								
	OSW-7470A									
	Mercury - Dissolved	7439-97-6					ND	0.20	ug/l	---

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

		Sample Name:	AMW-20				DUP-01			
		Lab Sample ID:	2402421965				2402421966			
		Sample Date:	11/11/2011				11/11/2011			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC										
	OSW-8270C									
	2-Methylnaphthalene	91-57-6								
	Acenaphthene	83-32-9								
	Acenaphthylene	208-96-8								
	Anthracene	120-12-7								
	Benzo[a]anthracene	56-55-3								
	Benzo[a]pyrene	50-32-8								
	Benzo[b]fluoranthene	205-99-2								
	Benzo[g,h,i]perylene	191-24-2								
	Benzo[k]fluoranthene	207-08-9								
	Chrysene	218-01-9								
	Dibenz(a,h)anthracene	53-70-3								
	Fluoranthene	206-44-0								
	Fluorene	86-73-7								
	Indeno[1,2,3-cd]pyrene	193-39-5								
	Naphthalene	91-20-3								
	Phenanthrene	85-01-8								
	Pyrene	129-00-0								
GC VOC										
	PUBL-SW-140									
	WI Gasoline Range Organics (C6-C10)	E-1005								
GC Other										
	PUBL-SW-141									
	WI Diesel Range Organics (C10-C28)	E-1004								
Metals										
	OSW-6010B									
	Aluminum - Dissolved	7429-90-5								
	Antimony - Dissolved	7440-36-0								
	Arsenic - Dissolved	7440-38-2								
	Barium - Dissolved	7440-39-3								
	Beryllium - Dissolved	7440-41-7								
	Cadmium - Dissolved	7440-43-9								
	Calcium - Dissolved	7440-70-2								
	Chromium - Dissolved	7440-47-3								
	Cobalt - Dissolved	7440-48-4								
	Copper - Dissolved	7440-50-8								
	Iron - Dissolved	7439-89-6								
	Lead - Dissolved	7439-92-1								
	Magnesium - Dissolved	7439-95-4								
	Manganese - Dissolved	7439-96-5								
	Nickel - Dissolved	7440-02-0								
	Potassium - Dissolved	7440-09-7								
	Selenium - Dissolved	7782-49-2								
	Silver - Dissolved	7440-22-4								
	Sodium - Dissolved	7440-23-5								
	Thallium - Dissolved	7440-28-0								
	Vanadium - Dissolved	7440-62-2								
	Zinc - Dissolved	7440-66-6								
	OSW-7470A									
	Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

		Sample Name:	AMW-19				AMW-20			
		Lab Sample ID:	24024269153				24024269159			
		Sample Date:	11/11/2011				11/11/2011			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC									
OSW-8270C									
2-Methylnaphthalene	91-57-6								
Acenaphthene	83-32-9								
Acenaphthylene	208-96-8								
Anthracene	120-12-7								
Benzo[a]anthracene	56-55-3								
Benzo[a]pyrene	50-32-8								
Benzo[b]fluoranthene	205-99-2								
Benzo[g,h,i]perylene	191-24-2								
Benzo[k]fluoranthene	207-08-9								
Chrysene	218-01-9								
Dibenz(a,h)anthracene	53-70-3								
Fluoranthene	206-44-0								
Fluorene	86-73-7								
Indeno[1,2,3-cd]pyrene	193-39-5								
Naphthalene	91-20-3								
Phenanthrene	85-01-8								
Pyrene	129-00-0								
GC VOC									
PUBL-SW-140									
WI Gasoline Range Organics (C6-C10)	E-1005								
GC Other									
PUBL-SW-141									
WI Diesel Range Organics (C10-C28)	E-1004								
Metals									
OSW-6010B									
Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---	ND	200	ug/l	---
Antimony - Dissolved	7440-36-0	2.9	10	ug/l	J	3.3	10	ug/l	J
Arsenic - Dissolved	7440-38-2	4.7	10	ug/l	UB	4.3	10	ug/l	UB
Barium - Dissolved	7440-39-3	240	200	ug/l	---	200	200	ug/l	---
Beryllium - Dissolved	7440-41-7	0.84	5.0	ug/l	UB	0.79	5.0	ug/l	UB
Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Calcium - Dissolved	7440-70-2	150000	5000	ug/l	---	180000	5000	ug/l	---
Chromium - Dissolved	7440-47-3	ND	10	ug/l	---	ND	10	ug/l	---
Cobalt - Dissolved	7440-48-4	4.9	7.0	ug/l	J	5.3	7.0	ug/l	J
Copper - Dissolved	7440-50-8	ND	25	ug/l	---	ND	25	ug/l	---
Iron - Dissolved	7439-89-6	170	100	ug/l	---	ND	100	ug/l	---
Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---
Magnesium - Dissolved	7439-95-4	41000	5000	ug/l	---	49000	5000	ug/l	---
Manganese - Dissolved	7439-96-5	2800	15	ug/l	---	1800	15	ug/l	---
Nickel - Dissolved	7440-02-0	3.4	40	ug/l	J	6.9	40	ug/l	J
Potassium - Dissolved	7440-09-7								
Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---
Sodium - Dissolved	7440-23-5	55000	5000	ug/l	---	66000	5000	ug/l	---
Thallium - Dissolved	7440-28-0								
Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---	0.64	7.0	ug/l	J
Zinc - Dissolved	7440-66-6	ND	50	ug/l	---	ND	50	ug/l	---
OSW-7470A									
Mercury - Dissolved	7439-97-6								

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

		Sample Name:	DUP-01				AMW-19			
		Lab Sample ID:	24024269160				24024269188			
		Sample Date:	11/11/2011				11/11/2011			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC										
	OSW-8270C									
	2-Methylnaphthalene	91-57-6								
	Acenaphthene	83-32-9								
	Acenaphthylene	208-96-8								
	Anthracene	120-12-7								
	Benzo[a]anthracene	56-55-3								
	Benzo[a]pyrene	50-32-8								
	Benzo[b]fluoranthene	205-99-2								
	Benzo[g,h,i]perylene	191-24-2								
	Benzo[k]fluoranthene	207-08-9								
	Chrysene	218-01-9								
	Dibenz(a,h)anthracene	53-70-3								
	Fluoranthene	206-44-0								
	Fluorene	86-73-7								
	Indeno[1,2,3-cd]pyrene	193-39-5								
	Naphthalene	91-20-3								
	Phenanthrene	85-01-8								
	Pyrene	129-00-0								
GC VOC										
	PUBL-SW-140									
	WI Gasoline Range Organics (C6-C10)	E-1005								
GC Other										
	PUBL-SW-141									
	WI Diesel Range Organics (C10-C28)	E-1004								
Metals										
	OSW-6010B									
	Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---				
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---				
	Arsenic - Dissolved	7440-38-2	4.3	10	ug/l	UB				
	Barium - Dissolved	7440-39-3	200	200	ug/l	---				
	Beryllium - Dissolved	7440-41-7	0.80	5.0	ug/l	UB				
	Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---				
	Calcium - Dissolved	7440-70-2	190000	5000	ug/l	---				
	Chromium - Dissolved	7440-47-3	ND	10	ug/l	---				
	Cobalt - Dissolved	7440-48-4	9.9	7.0	ug/l	---				
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---				
	Iron - Dissolved	7439-89-6	ND	100	ug/l	---				
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---				
	Magnesium - Dissolved	7439-95-4	51000	5000	ug/l	---				
	Manganese - Dissolved	7439-96-5	1900	15	ug/l	---				
	Nickel - Dissolved	7440-02-0	7.6	40	ug/l	J				
	Potassium - Dissolved	7440-09-7					4300	5000	ug/l	J
	Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---				
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---				
	Sodium - Dissolved	7440-23-5	69000	5000	ug/l	---				
	Thallium - Dissolved	7440-28-0					ND	10	ug/l	---
	Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---				
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---				
	OSW-7470A									
	Mercury - Dissolved	7439-97-6								

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

		Sample Name:	AMW-20				DUP-01			
		Lab Sample ID:	24024269192				24024269193			
		Sample Date:	11/11/2011				11/11/2011			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC										
	OSW-8270C									
	2-Methylnaphthalene	91-57-6								
	Acenaphthene	83-32-9								
	Acenaphthylene	208-96-8								
	Anthracene	120-12-7								
	Benzo[a]anthracene	56-55-3								
	Benzo[a]pyrene	50-32-8								
	Benzo[b]fluoranthene	205-99-2								
	Benzo[g,h,i]perylene	191-24-2								
	Benzo[k]fluoranthene	207-08-9								
	Chrysene	218-01-9								
	Dibenz(a,h)anthracene	53-70-3								
	Fluoranthene	206-44-0								
	Fluorene	86-73-7								
	Indeno[1,2,3-cd]pyrene	193-39-5								
	Naphthalene	91-20-3								
	Phenanthrene	85-01-8								
	Pyrene	129-00-0								
GC VOC										
	PUBL-SW-140									
	WI Gasoline Range Organics (C6-C10)	E-1005								
GC Other										
	PUBL-SW-141									
	WI Diesel Range Organics (C10-C28)	E-1004								
Metals										
	OSW-6010B									
	Aluminum - Dissolved	7429-90-5								
	Antimony - Dissolved	7440-36-0								
	Arsenic - Dissolved	7440-38-2								
	Barium - Dissolved	7440-39-3								
	Beryllium - Dissolved	7440-41-7								
	Cadmium - Dissolved	7440-43-9								
	Calcium - Dissolved	7440-70-2								
	Chromium - Dissolved	7440-47-3								
	Cobalt - Dissolved	7440-48-4								
	Copper - Dissolved	7440-50-8								
	Iron - Dissolved	7439-89-6								
	Lead - Dissolved	7439-92-1								
	Magnesium - Dissolved	7439-95-4								
	Manganese - Dissolved	7439-96-5								
	Nickel - Dissolved	7440-02-0								
	Potassium - Dissolved	7440-09-7	3500	5000	ug/l	J	3600	5000	ug/l	J
	Selenium - Dissolved	7782-49-2								
	Silver - Dissolved	7440-22-4								
	Sodium - Dissolved	7440-23-5								
	Thallium - Dissolved	7440-28-0	ND	10	ug/l	---	ND	10	ug/l	---
	Vanadium - Dissolved	7440-62-2								
	Zinc - Dissolved	7440-66-6								
	OSW-7470A									
	Mercury - Dissolved	7439-97-6								

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 5928-1

		Sample Name:	TRIP BLANK				AMW-19			
		Lab Sample ID:	2402452412				240245246			
		Sample Date:	11/11/2011				11/11/2011			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC									
OSW-8260B									
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	0.73	1.0	ug/l	UB	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Acetone	67-64-1	ND	10	ug/l	---	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Ethyl ether	60-29-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	0.47	1.0	ug/l	UB	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	0.58	1.0	ug/l	UB	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---

ANALYTICAL REPORT

Job Number: 240-7777-1

Job Description: Ford TCAP- E200572- DE000440.0002.00005

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Mr. Rob Ellis

Approved for release.
Denise Pohl
Project Manager II
1/31/2012 12:00 PM

Denise Pohl
Project Manager II
denise.pohl@testamericainc.com
01/31/2012

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP- E200572- DE000440.0002.00005

Report Number: 240-7777-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 01/19/2012; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 0.2, 0.8, 1.3 and 1.8C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples AMW-19 (240-7777-1), AMW-20 (240-7777-2), DUP-02 (240-7777-3) and TB-(20120117)-01 (240-7777-4) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 01/23/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-31076/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the VOCs analyses.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples AMW-19 (240-7777-1), AMW-20 (240-7777-2) and DUP-02 (240-7777-3) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 01/20/2012 and analyzed on 01/24/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for AMW-19MSD (240-7777-1MSD). Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS/MSD of sample AMW-19MS (240-7777-1) in batch 240-31131.

Benzo[a]pyrene exceeded the rpd limit.

Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MSD of sample AMW-19MSD (240-7777-1) in batch 240-31304. Benzo[a]pyrene exceeded the rpd limit.

Refer to the QC report for details.

No other difficulties were encountered during the SVOC analyses.

All other quality control parameters were within the acceptance limits.

WISCONSIN DRO

Samples AMW-19 (240-7777-1), AMW-20 (240-7777-2) and DUP-02 (240-7777-3) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 01/20/2012 and analyzed on 01/24/2012.

WI Diesel Range Organics (C10-C28) exceeded the rpd limit for LCSD 240-30867/3-A. Refer to the QC report for details.

Method(s) WI-DRO: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 30867 exceeded control limits for the following analytes: diesel range organics C10 - C28.

No other difficulties were encountered during the WI-DRO analyses.

All other quality control parameters were within the acceptance limits.

WISCONSIN GRO

Samples AMW-19 (240-7777-1), AMW-20 (240-7777-2) and DUP-02 (240-7777-3) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were analyzed on 01/26/2012.

No difficulties were encountered during the WI-GRO analyses.

All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICP)

Samples AMW-19 (240-7777-1), AMW-20 (240-7777-2) and DUP-02 (240-7777-3) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 01/23/2012 and analyzed on 01/25/2012.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

Several analytes were detected in method blank MB 240-31087/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged “J”. If the associated sample reported a result above the MDL and/or RL, the result has been “B” flagged. Refer to the QC report for details.

DISSOLVED MERCURY (CVAA)

Samples AMW-19 (240-7777-1), AMW-20 (240-7777-2) and DUP-02 (240-7777-3) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 01/20/2012 and analyzed on 01/25/2012.

No difficulties were encountered during the mercury analyses.

All quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-7777-1	**AMW-19**					
Dissolved						
Barium		220	B	200	ug/L	6010B
Calcium		150000	B	5000	ug/L	6010B
Cobalt		3.1	J	7.0	ug/L	6010B
Potassium		3900	J B	5000	ug/L	6010B
Magnesium		41000	B	5000	ug/L	6010B
Manganese		1700	B	15	ug/L	6010B
Sodium		51000		5000	ug/L	6010B
Thallium		9.7	J	10	ug/L	6010B
240-7777-2	**AMW-20**					
Acetone		2.6	J	10	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.46	*	0.10	mg/L	WI-DRO
Dissolved						
Barium		160	J B	200	ug/L	6010B
Calcium		180000	B	5000	ug/L	6010B
Cobalt		3.3	J	7.0	ug/L	6010B
Iron		550		100	ug/L	6010B
Potassium		3300	J B	5000	ug/L	6010B
Magnesium		48000	B	5000	ug/L	6010B
Manganese		1700	B	15	ug/L	6010B
Sodium		58000		5000	ug/L	6010B
Nickel		4.5	J	40	ug/L	6010B
240-7777-3FD	**DUP-02**					
p-Isopropyltoluene		0.45	J	1.0	ug/L	8260B
Methylene Chloride		0.45	J	1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		1.2	*	0.10	mg/L	WI-DRO
Dissolved						
Barium		160	J B	200	ug/L	6010B
Calcium		180000	B	5000	ug/L	6010B
Cobalt		6.4	J	7.0	ug/L	6010B
Iron		700		100	ug/L	6010B
Potassium		3300	J B	5000	ug/L	6010B
Magnesium		48000	B	5000	ug/L	6010B
Manganese		1700	B	15	ug/L	6010B
Sodium		58000		5000	ug/L	6010B
Nickel		4.8	J	40	ug/L	6010B
Thallium		5.9	J	10	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-7777-4TB	**TB-(20120117)-01**					
Acetone		8.0	J	10	ug/L	8260B
Methylene Chloride		0.89	J	1.0	ug/L	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds (GC/MS)	TAL NC	SW846 8260B	
Purge and Trap	TAL NC		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)			SW846 3520C
Wisconsin - Gasoline Range Organics (GC)	TAL NC	WI-GRO WI-GRO	
Purge and Trap	TAL NC		SW846 5030B
Wisconsin - Diesel Range Organics (GC)	TAL NC	WI-DRO WI-DRO	
Liquid-Liquid Extraction (Separatory Funnel)			SW846 3510C
Metals (ICP)	TAL NC	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals			SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury			SW846 7470A
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL NC = TestAmerica North Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Method	Analyst	Analyst ID
SW846 8260B	Williams, Larry	LW
SW846 8270C	Hula, Tom	TH
WI-GRO WI-GRO	Bolgrin, Deborah	DB
WI-DRO WI-DRO	Van Doren, Carolyn	CV
SW846 6010B	Counts, Karen	KC
SW846 7470A	Sutherland, Aaron	AS

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-7777-1	AMW-19	Water	01/17/2012 1225	01/19/2012 0930
240-7777-1MS	AMW-19	Water	01/17/2012 1225	01/19/2012 0930
240-7777-1MSD	AMW-19	Water	01/17/2012 1225	01/19/2012 0930
240-7777-2	AMW-20	Water	01/17/2012 1415	01/19/2012 0930
240-7777-3FD	DUP-02	Water	01/17/2012 0000	01/19/2012 0930
240-7777-4TB	TB-(20120117)-01	Water	01/17/2012 0000	01/19/2012 0930

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-7777-1 Date Sampled: 01/17/2012 1225
Client Matrix: Water Date Received: 01/19/2012 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM3081.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1454			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1454				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-7777-1 Date Sampled: 01/17/2012 1225
Client Matrix: Water Date Received: 01/19/2012 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM3081.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1454			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1454				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	5.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91		63 - 129
4-Bromofluorobenzene (Surr)	88		66 - 117
Toluene-d8 (Surr)	90		74 - 115
Dibromofluoromethane (Surr)	91		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-7777-2 Date Sampled: 01/17/2012 1415
Client Matrix: Water Date Received: 01/19/2012 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM3082.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1516			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1516				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	2.6	J	1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-7777-2 Date Sampled: 01/17/2012 1415
Client Matrix: Water Date Received: 01/19/2012 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM3082.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1516			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1516				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	5.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90		63 - 129
4-Bromofluorobenzene (Surr)	86		66 - 117
Toluene-d8 (Surr)	87		74 - 115
Dibromofluoromethane (Surr)	92		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **DUP-02**

Lab Sample ID: 240-7777-3FD Date Sampled: 01/17/2012 0000
Client Matrix: Water Date Received: 01/19/2012 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM3083.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1539			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1539				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	0.45	J	0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **DUP-02**

Lab Sample ID: 240-7777-3FD Date Sampled: 01/17/2012 0000
Client Matrix: Water Date Received: 01/19/2012 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM3083.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1539			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1539				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	5.0
Methylene Chloride	0.45	J	0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		63 - 129
4-Bromofluorobenzene (Surr)	87		66 - 117
Toluene-d8 (Surr)	88		74 - 115
Dibromofluoromethane (Surr)	92		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **TB-(20120117)-01**

Lab Sample ID: 240-7777-4TB Date Sampled: 01/17/2012 0000
Client Matrix: Water Date Received: 01/19/2012 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM3084.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1602			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1602				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	8.0	J	1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **TB-(20120117)-01**

Lab Sample ID: 240-7777-4TB Date Sampled: 01/17/2012 0000
Client Matrix: Water Date Received: 01/19/2012 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM3084.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1602			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1602				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	1.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	5.0
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	2.0
Methylene Chloride	0.89	J	0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90		63 - 129
4-Bromofluorobenzene (Surr)	87		66 - 117
Toluene-d8 (Surr)	87		74 - 115
Dibromofluoromethane (Surr)	90		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-7777-1 Date Sampled: 01/17/2012 1225
Client Matrix: Water Date Received: 01/19/2012 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-31131	Instrument ID:	A4AG2
Prep Method:	3520C	Prep Batch:	240-30848	Lab File ID:	0124020.D
Dilution:	1.0			Initial Weight/Volume:	920 mL
Analysis Date:	01/24/2012 1303			Final Weight/Volume:	2.00 mL
Prep Date:	01/20/2012 0737			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.11	11
Acenaphthylene	ND		0.11	11
Anthracene	ND		0.11	11
Benzo[a]anthracene	ND		0.11	0.22
Benzo[b]fluoranthene	ND		0.11	11
Benzo[k]fluoranthene	ND		0.11	11
Benzo[g,h,i]perylene	ND		0.11	11
Benzo[a]pyrene	ND		0.11	11
Chrysene	ND		0.11	11
2-Methylnaphthalene	ND		0.11	11
Dibenz(a,h)anthracene	ND		0.11	11
Fluoranthene	ND		0.11	11
Fluorene	ND		0.11	11
Indeno[1,2,3-cd]pyrene	ND		0.11	11
Naphthalene	ND		0.11	11
Phenanthrene	ND		0.11	11
Pyrene	ND		0.11	11

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	63		28 - 110
2-Fluorophenol (Surr)	69		10 - 110
2,4,6-Tribromophenol (Surr)	54		22 - 120
Nitrobenzene-d5 (Surr)	72		27 - 111
Phenol-d5 (Surr)	68		10 - 110
Terphenyl-d14 (Surr)	61		37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-7777-2 Date Sampled: 01/17/2012 1415
Client Matrix: Water Date Received: 01/19/2012 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-31131	Instrument ID:	A4AG2
Prep Method:	3520C	Prep Batch:	240-30848	Lab File ID:	0124023.D
Dilution:	1.0			Initial Weight/Volume:	1010 mL
Analysis Date:	01/24/2012 1355			Final Weight/Volume:	2.00 mL
Prep Date:	01/20/2012 0737			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.099	9.9
Acenaphthylene	ND		0.099	9.9
Anthracene	ND		0.099	9.9
Benzo[a]anthracene	ND		0.099	0.20
Benzo[b]fluoranthene	ND		0.099	9.9
Benzo[k]fluoranthene	ND		0.099	9.9
Benzo[g,h,i]perylene	ND		0.099	9.9
Benzo[a]pyrene	ND		0.099	9.9
Chrysene	ND		0.099	9.9
2-Methylnaphthalene	ND		0.099	9.9
Dibenz(a,h)anthracene	ND		0.099	9.9
Fluoranthene	ND		0.099	9.9
Fluorene	ND		0.099	9.9
Indeno[1,2,3-cd]pyrene	ND		0.099	9.9
Naphthalene	ND		0.099	9.9
Phenanthrene	ND		0.099	9.9
Pyrene	ND		0.099	9.9

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	58		28 - 110
2-Fluorophenol (Surr)	66		10 - 110
2,4,6-Tribromophenol (Surr)	51		22 - 120
Nitrobenzene-d5 (Surr)	67		27 - 111
Phenol-d5 (Surr)	65		10 - 110
Terphenyl-d14 (Surr)	46		37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **DUP-02**

Lab Sample ID: 240-7777-3FD Date Sampled: 01/17/2012 0000
Client Matrix: Water Date Received: 01/19/2012 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-31131	Instrument ID:	A4AG2
Prep Method:	3520C	Prep Batch:	240-30848	Lab File ID:	0124024.D
Dilution:	1.0			Initial Weight/Volume:	960 mL
Analysis Date:	01/24/2012 1412			Final Weight/Volume:	2.00 mL
Prep Date:	01/20/2012 0737			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.10	10
Acenaphthylene	ND		0.10	10
Anthracene	ND		0.10	10
Benzo[a]anthracene	ND		0.10	0.21
Benzo[b]fluoranthene	ND		0.10	10
Benzo[k]fluoranthene	ND		0.10	10
Benzo[g,h,i]perylene	ND		0.10	10
Benzo[a]pyrene	ND		0.10	10
Chrysene	ND		0.10	10
2-Methylnaphthalene	ND		0.10	10
Dibenz(a,h)anthracene	ND		0.10	10
Fluoranthene	ND		0.10	10
Fluorene	ND		0.10	10
Indeno[1,2,3-cd]pyrene	ND		0.10	10
Naphthalene	ND		0.10	10
Phenanthrene	ND		0.10	10
Pyrene	ND		0.10	10

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	52		28 - 110
2-Fluorophenol (Surr)	59		10 - 110
2,4,6-Tribromophenol (Surr)	44		22 - 120
Nitrobenzene-d5 (Surr)	61		27 - 111
Phenol-d5 (Surr)	58		10 - 110
Terphenyl-d14 (Surr)	42		37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-7777-1 Date Sampled: 01/17/2012 1225
Client Matrix: Water Date Received: 01/19/2012 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-31526	Instrument ID:	O
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	O1012613.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/26/2012 1739			Final Weight/Volume:	5 mL
Prep Date:	01/26/2012 1739			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		26	100

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-7777-2 Date Sampled: 01/17/2012 1415
Client Matrix: Water Date Received: 01/19/2012 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-31526	Instrument ID:	O
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	O1012616.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/26/2012 1922			Final Weight/Volume:	5 mL
Prep Date:	01/26/2012 1922			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		26	100

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **DUP-02**

Lab Sample ID: 240-7777-3FD Date Sampled: 01/17/2012 0000
Client Matrix: Water Date Received: 01/19/2012 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-31526	Instrument ID:	O
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	O1012617.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/26/2012 1956			Final Weight/Volume:	5 mL
Prep Date:	01/26/2012 1956			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		26	100

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-7777-1 Date Sampled: 01/17/2012 1225
Client Matrix: Water Date Received: 01/19/2012 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-31199	Instrument ID:	A2HP14F
Prep Method:	3510C	Prep Batch:	240-30867	Lab File ID:	P14F0000008.D
Dilution:	1.0			Initial Weight/Volume:	970 mL
Analysis Date:	01/24/2012 1406			Final Weight/Volume:	1.00 mL
Prep Date:	01/20/2012 0755			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	ND	*	0.016	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-7777-2 Date Sampled: 01/17/2012 1415
Client Matrix: Water Date Received: 01/19/2012 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-31199	Instrument ID:	A2HP14F
Prep Method:	3510C	Prep Batch:	240-30867	Lab File ID:	P14F0000011.D
Dilution:	1.0			Initial Weight/Volume:	980 mL
Analysis Date:	01/24/2012 1519			Final Weight/Volume:	1.00 mL
Prep Date:	01/20/2012 0755			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.46	*	0.016	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **DUP-02**

Lab Sample ID: 240-7777-3FD Date Sampled: 01/17/2012 0000
Client Matrix: Water Date Received: 01/19/2012 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-31199	Instrument ID:	A2HP14F
Prep Method:	3510C	Prep Batch:	240-30867	Lab File ID:	P14F0000012.D
Dilution:	1.0			Initial Weight/Volume:	990 mL
Analysis Date:	01/24/2012 1544			Final Weight/Volume:	1.00 mL
Prep Date:	01/20/2012 0755			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	1.2	*	0.016	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-19**

Lab Sample ID: 240-7777-1 Date Sampled: 01/17/2012 1225
Client Matrix: Water Date Received: 01/19/2012 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-31467	Instrument ID:	I6
Prep Method:	3005A	Prep Batch:	240-31087	Lab File ID:	I60125A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2012 1022			Final Weight/Volume:	50 mL
Prep Date:	01/23/2012 1147				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	220	B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	150000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	3.1	J	1.7	7.0
Copper	ND		4.5	25
Iron	ND		81	100
Potassium	3900	J B	72	5000
Magnesium	41000	B	34	5000
Manganese	1700	B	0.41	15
Sodium	51000		590	5000
Nickel	ND		3.2	40
Antimony	ND		1.8	10
Thallium	9.7	J	4.7	10
Vanadium	ND		0.64	7.0
Zinc	ND		5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-31390	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-30868	Lab File ID:	H1012512B.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	01/25/2012 1132			Final Weight/Volume:	100 mL
Prep Date:	01/20/2012 1335				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **AMW-20**

Lab Sample ID: 240-7777-2 Date Sampled: 01/17/2012 1415
Client Matrix: Water Date Received: 01/19/2012 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-31467	Instrument ID:	I6
Prep Method:	3005A	Prep Batch:	240-31087	Lab File ID:	I60125A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2012 1202			Final Weight/Volume:	50 mL
Prep Date:	01/23/2012 1147				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	160	J B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	180000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	3.3	J	1.7	7.0
Copper	ND		4.5	25
Iron	550		81	100
Potassium	3300	J B	72	5000
Magnesium	48000	B	34	5000
Manganese	1700	B	0.41	15
Sodium	58000		590	5000
Nickel	4.5	J	3.2	40
Antimony	ND		1.8	10
Thallium	ND		4.7	10
Vanadium	ND		0.64	7.0
Zinc	ND		5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-31390	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-30868	Lab File ID:	H1012512B.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	01/25/2012 1144			Final Weight/Volume:	100 mL
Prep Date:	01/20/2012 1335				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Client Sample ID: **DUP-02**

Lab Sample ID: 240-7777-3FD Date Sampled: 01/17/2012 0000
Client Matrix: Water Date Received: 01/19/2012 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-31467	Instrument ID:	I6
Prep Method:	3005A	Prep Batch:	240-31087	Lab File ID:	I60125A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2012 1208			Final Weight/Volume:	50 mL
Prep Date:	01/23/2012 1147				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	160	J B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	180000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	6.4	J	1.7	7.0
Copper	ND		4.5	25
Iron	700		81	100
Potassium	3300	J B	72	5000
Magnesium	48000	B	34	5000
Manganese	1700	B	0.41	15
Sodium	58000		590	5000
Nickel	4.8	J	3.2	40
Antimony	ND		1.8	10
Thallium	5.9	J	4.7	10
Vanadium	ND		0.64	7.0
Zinc	ND		5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-31390	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-30868	Lab File ID:	H1012512B.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	01/25/2012 1145			Final Weight/Volume:	100 mL
Prep Date:	01/20/2012 1335				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	F	RPD of the MS and MSD exceeds the control limits
	X	Surrogate is outside control limits
GC Semi VOA		
	*	RPD of the LCS and LCSD exceeds the control limits
Metals		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-31076					
LCS 240-31076/4	Lab Control Sample	T	Water	8260B	
MB 240-31076/5	Method Blank	T	Water	8260B	
240-7777-1	AMW-19	T	Water	8260B	
240-7777-1MS	Matrix Spike	T	Water	8260B	
240-7777-1MSD	Matrix Spike Duplicate	T	Water	8260B	
240-7777-2	AMW-20	T	Water	8260B	
240-7777-3FD	DUP-02	T	Water	8260B	
240-7777-4TB	TB-(20120117)-01	T	Water	8260B	

Report Basis
T = Total

GC/MS Semi VOA					
Prep Batch: 240-30848					
LCS 240-30848/2-A	Lab Control Sample	T	Water	3520C	
MB 240-30848/1-A	Method Blank	T	Water	3520C	
240-7777-1	AMW-19	T	Water	3520C	
240-7777-1MS	Matrix Spike	T	Water	3520C	
240-7777-1MSD	Matrix Spike Duplicate	T	Water	3520C	
240-7777-2	AMW-20	T	Water	3520C	
240-7777-3FD	DUP-02	T	Water	3520C	
Analysis Batch:240-31131					
LCS 240-30848/2-A	Lab Control Sample	T	Water	8270C	240-30848
MB 240-30848/1-A	Method Blank	T	Water	8270C	240-30848
240-7777-1	AMW-19	T	Water	8270C	240-30848
240-7777-1MS	Matrix Spike	T	Water	8270C	240-30848
240-7777-2	AMW-20	T	Water	8270C	240-30848
240-7777-3FD	DUP-02	T	Water	8270C	240-30848
Analysis Batch:240-31304					
240-7777-1MSD	Matrix Spike Duplicate	T	Water	8270C	240-30848

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Analysis Batch:240-31526					
LCS 240-31526/6	Lab Control Sample	T	Water	WI-GRO	
LCSD 240-31526/18	Lab Control Sample Duplicate	T	Water	WI-GRO	
MB 240-31526/5	Method Blank	T	Water	WI-GRO	
240-7777-1	AMW-19	T	Water	WI-GRO	
240-7777-1MS	Matrix Spike	T	Water	WI-GRO	
240-7777-1MSD	Matrix Spike Duplicate	T	Water	WI-GRO	
240-7777-2	AMW-20	T	Water	WI-GRO	
240-7777-3FD	DUP-02	T	Water	WI-GRO	

Report Basis
T = Total

GC Semi VOA					
Prep Batch: 240-30867					
LCS 240-30867/2-A	Lab Control Sample	T	Water	3510C	
LCSD 240-30867/3-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 240-30867/1-A	Method Blank	T	Water	3510C	
240-7777-1	AMW-19	T	Water	3510C	
240-7777-1MS	Matrix Spike	T	Water	3510C	
240-7777-1MSD	Matrix Spike Duplicate	T	Water	3510C	
240-7777-2	AMW-20	T	Water	3510C	
240-7777-3FD	DUP-02	T	Water	3510C	
Analysis Batch:240-31199					
LCS 240-30867/2-A	Lab Control Sample	T	Water	WI-DRO	240-30867
LCSD 240-30867/3-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-30867
MB 240-30867/1-A	Method Blank	T	Water	WI-DRO	240-30867
240-7777-1	AMW-19	T	Water	WI-DRO	240-30867
240-7777-1MS	Matrix Spike	T	Water	WI-DRO	240-30867
240-7777-1MSD	Matrix Spike Duplicate	T	Water	WI-DRO	240-30867
240-7777-2	AMW-20	T	Water	WI-DRO	240-30867
240-7777-3FD	DUP-02	T	Water	WI-DRO	240-30867

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-30868					
LCS 240-30868/2-A	Lab Control Sample	T	Water	7470A	
MB 240-30868/1-A	Method Blank	T	Water	7470A	
240-7777-1	AMW-19	D	Water	7470A	
240-7777-1MS	Matrix Spike	D	Water	7470A	
240-7777-1MSD	Matrix Spike Duplicate	D	Water	7470A	
240-7777-2	AMW-20	D	Water	7470A	
240-7777-3FD	DUP-02	D	Water	7470A	
Prep Batch: 240-31087					
LCS 240-31087/2-A	Lab Control Sample	R	Water	3005A	
MB 240-31087/1-A	Method Blank	R	Water	3005A	
240-7777-1	AMW-19	D	Water	3005A	
240-7777-1MS	Matrix Spike	D	Water	3005A	
240-7777-1MSD	Matrix Spike Duplicate	D	Water	3005A	
240-7777-2	AMW-20	D	Water	3005A	
240-7777-3FD	DUP-02	D	Water	3005A	
Analysis Batch:240-31390					
LCS 240-30868/2-A	Lab Control Sample	T	Water	7470A	240-30868
MB 240-30868/1-A	Method Blank	T	Water	7470A	240-30868
240-7777-1	AMW-19	D	Water	7470A	240-30868
240-7777-1MS	Matrix Spike	D	Water	7470A	240-30868
240-7777-1MSD	Matrix Spike Duplicate	D	Water	7470A	240-30868
240-7777-2	AMW-20	D	Water	7470A	240-30868
240-7777-3FD	DUP-02	D	Water	7470A	240-30868
Analysis Batch:240-31467					
LCS 240-31087/2-A	Lab Control Sample	R	Water	6010B	240-31087
MB 240-31087/1-A	Method Blank	R	Water	6010B	240-31087
240-7777-1	AMW-19	D	Water	6010B	240-31087
240-7777-1MS	Matrix Spike	D	Water	6010B	240-31087
240-7777-1MSD	Matrix Spike Duplicate	D	Water	6010B	240-31087
240-7777-2	AMW-20	D	Water	6010B	240-31087
240-7777-3FD	DUP-02	D	Water	6010B	240-31087

Report Basis

D = Dissolved

R = Total Recoverable

T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-7777-1	AMW-19	91	88	90	91
240-7777-2	AMW-20	90	86	87	92
240-7777-3	DUP-02	92	87	88	92
240-7777-4	TB-(20120117)-01	90	87	87	90
MB 240-31076/5		97	96	96	101
LCS 240-31076/4		88	91	89	93
240-7777-1 MS	AMW-19 MS	89	91	90	97
240-7777-1 MSD	AMW-19 MSD	85	90	89	93

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
BFB = 4-Bromofluorobenzene (Surr)	66-117
TOL = Toluene-d8 (Surr)	74-115
DBFM = Dibromofluoromethane (Surr)	75-121

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-7777-1	AMW-19	63	69	54	72	68	61
240-7777-2	AMW-20	58	66	51	67	65	46
240-7777-3	DUP-02	52	59	44	61	58	42
MB 240-30848/1-A		56	63	46	64	61	67
LCS 240-30848/2-A		64	73	62	76	72	72
240-7777-1 MS	AMW-19 MS	64	75	59	74	73	41
240-7777-1 MSD	AMW-19 MSD	57	62	56	62	64	35X

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	28-110
2FP = 2-Fluorophenol (Surr)	10-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
NBZ = Nitrobenzene-d5 (Surr)	27-111
PHL = Phenol-d5 (Surr)	10-110
TPH = Terphenyl-d14 (Surr)	37-119

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Method Blank - Batch: 240-31076

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-31076/5	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM3074.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1213	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1213				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	0.319	J	0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Method Blank - Batch: 240-31076 **Method: 8260B**
Preparation: 5030B

Lab Sample ID:	MB 240-31076/5	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM3074.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1213	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1213				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.42	2.0
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	5.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97	63 - 129
4-Bromofluorobenzene (Surr)	96	66 - 117
Toluene-d8 (Surr)	96	74 - 115
Dibromofluoromethane (Surr)	101	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Lab Control Sample - Batch: 240-31076

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-31076/4	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM3073.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1150	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1150				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	8.76	88	72 - 116	
1,1,1-Trichloroethane	10.0	9.57	96	74 - 118	
1,1,2,2-Tetrachloroethane	10.0	7.86	79	68 - 118	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.2	122	74 - 151	
1,1,2-Trichloroethane	10.0	8.48	85	80 - 112	
1,1-Dichloroethane	10.0	9.09	91	82 - 115	
1,1-Dichloroethene	10.0	10.1	101	78 - 131	
1,1-Dichloropropene	10.0	9.50	95	83 - 114	
1,2,3-Trichlorobenzene	10.0	8.48	85	54 - 126	
1,2,3-Trichloropropane	10.0	8.50	85	73 - 129	
1,2,4-Trichlorobenzene	10.0	8.80	88	48 - 135	
1,2,4-Trimethylbenzene	10.0	8.60	86	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	7.82	78	42 - 136	
1,2-Dichlorobenzene	10.0	8.54	85	81 - 110	
1,2-Dichloroethane	10.0	8.90	89	71 - 127	
1,2-Dichloropropane	10.0	8.80	88	81 - 115	
1,3,5-Trimethylbenzene	10.0	8.72	87	72 - 118	
1,3-Dichlorobenzene	10.0	8.55	86	80 - 110	
1,3-Dichloropropane	10.0	8.23	82	79 - 116	
1,4-Dichlorobenzene	10.0	8.45	85	82 - 110	
2,2-Dichloropropane	10.0	9.54	95	50 - 129	
2-Chlorotoluene	10.0	8.59	86	76 - 116	
2-Hexanone	20.0	15.1	76	55 - 133	
Bromobenzene	10.0	8.67	87	76 - 115	
Bromochloromethane	10.0	9.69	97	77 - 120	
4-Chlorotoluene	10.0	8.37	84	77 - 115	
p-Isopropyltoluene	10.0	9.18	92	74 - 120	
Acetone	20.0	12.9	65	43 - 136	
Benzene	10.0	9.16	92	83 - 112	
Bromoform	10.0	7.71	77	40 - 131	
Bromomethane	10.0	11.8	118	11 - 185	
Carbon disulfide	10.0	9.25	93	62 - 142	
Carbon tetrachloride	10.0	9.45	95	66 - 128	
Chlorobenzene	10.0	8.84	88	85 - 110	
Chloroethane	10.0	10.2	102	25 - 153	
Chloroform	10.0	9.76	98	79 - 117	
Chloromethane	10.0	8.56	86	44 - 126	
cis-1,2-Dichloroethene	10.0	9.46	95	80 - 113	
cis-1,3-Dichloropropene	10.0	8.53	85	61 - 115	
Cyclohexane	10.0	9.53	95	54 - 121	
Hexachlorobutadiene	10.0	8.09	81	36 - 134	

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Lab Control Sample - Batch: 240-31076

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-31076/4	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM3073.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 1150	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 1150				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dibromomethane	10.0	9.11	91	81 - 120	
Bromodichloromethane	10.0	8.77	88	72 - 121	
Dichlorodifluoromethane	10.0	8.59	86	19 - 129	
Ethyl ether	10.0	10.5	105	53 - 135	
Ethylbenzene	10.0	8.95	90	83 - 112	
1,2-Dibromoethane	10.0	8.48	85	79 - 113	
Naphthalene	10.0	8.80	88	32 - 141	
m-Xylene & p-Xylene	20.0	17.8	89	83 - 113	
n-Butylbenzene	10.0	8.84	88	66 - 125	
Isopropylbenzene	10.0	9.09	91	75 - 114	
Methyl acetate	10.0	6.87	69	58 - 131	J
N-Propylbenzene	10.0	8.98	90	74 - 121	
2-Butanone (MEK)	20.0	13.9	70	60 - 126	
4-Methyl-2-pentanone (MIBK)	20.0	16.0	80	63 - 128	
sec-Butylbenzene	10.0	8.61	86	70 - 117	
Methyl tert butyl ether	10.0	9.36	94	52 - 144	
Methylene Chloride	10.0	8.47	85	66 - 131	
o-Xylene	10.0	9.24	92	83 - 113	
Styrene	10.0	9.27	93	79 - 114	
tert-Butylbenzene	10.0	8.15	82	71 - 115	
Tetrachloroethene	10.0	8.73	87	79 - 114	
Tetrahydrofuran	10.0	6.91	69	23 - 143	
Toluene	10.0	8.53	85	84 - 111	
trans-1,2-Dichloroethene	10.0	9.83	98	83 - 117	
trans-1,3-Dichloropropene	10.0	8.30	83	58 - 117	
Trichloroethene	10.0	9.63	96	76 - 117	
Trichlorofluoromethane	10.0	11.0	110	49 - 157	
Vinyl chloride	10.0	9.51	95	53 - 127	
Methylcyclohexane	10.0	10.7	107	56 - 127	
Chlorodibromomethane	10.0	8.58	86	64 - 119	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	88	63 - 129
4-Bromofluorobenzene (Surr)	91	66 - 117
Toluene-d8 (Surr)	89	74 - 115
Dibromofluoromethane (Surr)	93	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-31076

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-7777-1	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM3098.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 2118			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 2118				
Leach Date:	N/A				

MSD Lab Sample ID:	240-7777-1	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM3099.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 2140			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 2140				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	81	87	64 - 118	7	30		
1,1,1-Trichloroethane	96	97	68 - 121	0	30		
1,1,2,2-Tetrachloroethane	75	77	63 - 122	3	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	134	117	70 - 152	14	30		
1,1,2-Trichloroethane	81	83	75 - 115	3	30		
1,1-Dichloroethane	88	91	79 - 116	3	30		
1,1-Dichloroethene	105	102	74 - 135	3	30		
1,1-Dichloropropene	96	92	80 - 114	5	30		
1,2,3-Trichlorobenzene	77	85	45 - 129	9	30		
1,2,3-Trichloropropane	79	82	67 - 132	3	30		
1,2,4-Trichlorobenzene	76	82	38 - 138	8	30		
1,2,4-Trimethylbenzene	82	85	67 - 124	3	30		
1,2-Dibromo-3-Chloropropane	81	83	32 - 139	2	30		
1,2-Dichlorobenzene	80	84	75 - 111	5	30		
1,2-Dichloroethane	85	88	68 - 129	3	30		
1,2-Dichloropropane	83	86	78 - 115	4	30		
1,3,5-Trimethylbenzene	82	85	63 - 121	3	30		
1,3-Dichlorobenzene	80	83	73 - 110	4	30		
1,3-Dichloropropane	79	80	74 - 118	1	30		
1,4-Dichlorobenzene	80	83	75 - 110	3	30		
2,2-Dichloropropane	92	91	38 - 127	2	30		
2-Chlorotoluene	83	83	69 - 117	1	30		
2-Hexanone	73	73	47 - 139	0	30		
Bromobenzene	85	85	71 - 116	1	30		
Bromochloromethane	90	94	73 - 121	4	30		
4-Chlorotoluene	80	83	71 - 116	4	30		
p-Isopropyltoluene	91	95	64 - 122	4	30		
Acetone	58	63	33 - 145	8	30		
Benzene	87	89	72 - 121	2	30		
Bromoform	73	73	32 - 128	1	30		
Bromomethane	110	133	10 - 186	19	30		
Carbon disulfide	93	92	57 - 147	1	30		

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-31076

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-7777-1	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM3098.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 2118			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 2118				
Leach Date:	N/A				

MSD Lab Sample ID:	240-7777-1	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM3099.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 2140			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 2140				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Carbon tetrachloride	97	95	59 - 129	3	30		
Chlorobenzene	85	86	80 - 110	1	30		
Chloroethane	95	105	21 - 165	10	30		
Chloroform	93	98	76 - 118	5	30		
Chloromethane	81	88	33 - 132	7	30		
cis-1,2-Dichloroethene	93	94	70 - 120	1	30		
cis-1,3-Dichloropropene	77	79	51 - 110	3	30		
Cyclohexane	108	93	49 - 123	15	30		
Hexachlorobutadiene	72	76	27 - 132	5	30		
Dibromomethane	86	89	77 - 121	3	30		
Bromodichloromethane	81	88	67 - 120	8	30		
Dichlorodifluoromethane	98	81	17 - 128	19	30		
Ethyl ether	105	101	63 - 136	4	30		
Ethylbenzene	86	87	75 - 116	1	30		
1,2-Dibromoethane	80	82	74 - 113	2	30		
Naphthalene	82	87	15 - 158	5	30		
m-Xylene & p-Xylene	85	87	75 - 117	2	30		
n-Butylbenzene	78	81	56 - 127	3	30		
Isopropylbenzene	84	88	68 - 116	5	30		
Methyl acetate	67	65	47 - 130	3	30	J	J
N-Propylbenzene	85	87	64 - 124	3	30		
2-Butanone (MEK)	70	65	54 - 129	7	30		
4-Methyl-2-pentanone (MIBK)	80	79	56 - 131	2	30		
sec-Butylbenzene	81	81	60 - 119	0	30		
Methyl tert butyl ether	91	92	46 - 144	1	30		
Methylene Chloride	82	86	63 - 128	5	30		
o-Xylene	86	91	76 - 116	6	30		
Styrene	83	85	71 - 117	3	30		
tert-Butylbenzene	78	81	61 - 119	3	30		
Tetrachloroethene	87	88	70 - 117	1	30		
Tetrahydrofuran	68	66	10 - 167	2	30		
Toluene	81	86	78 - 114	6	30		

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-31076

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-7777-1	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM3098.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 2118			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 2118				
Leach Date:	N/A				

MSD Lab Sample ID:	240-7777-1	Analysis Batch:	240-31076	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM3099.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2012 2140			Final Weight/Volume:	5 mL
Prep Date:	01/23/2012 2140				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
trans-1,2-Dichloroethene	96	98	80 - 119	2	30		
trans-1,3-Dichloropropene	76	78	46 - 116	2	30		
Trichloroethene	93	94	66 - 120	1	30		
Trichlorofluoromethane	111	110	46 - 157	1	30		
Vinyl chloride	96	95	49 - 130	1	30		
Methylcyclohexane	120	97	49 - 127	22	30		
Chlorodibromomethane	77	82	56 - 118	6	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89	85	63 - 129
4-Bromofluorobenzene (Surr)	91	90	66 - 117
Toluene-d8 (Surr)	90	89	74 - 115
Dibromofluoromethane (Surr)	97	93	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Method Blank - Batch: 240-30848

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 240-30848/1-A	Analysis Batch:	240-31131	Instrument ID:	A4AG2
Client Matrix:	Water	Prep Batch:	240-30848	Lab File ID:	0124008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2012 0935	Units:	ug/L	Final Weight/Volume:	2.00 mL
Prep Date:	01/20/2012 0737			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	ND		0.10	10
Acenaphthylene	ND		0.10	10
Anthracene	ND		0.10	10
Benzo[a]anthracene	ND		0.10	0.20
Benzo[b]fluoranthene	ND		0.10	10
Benzo[k]fluoranthene	ND		0.10	10
Benzo[g,h,i]perylene	ND		0.10	10
Benzo[a]pyrene	ND		0.10	10
Chrysene	ND		0.10	10
2-Methylnaphthalene	ND		0.10	10
Dibenz(a,h)anthracene	ND		0.10	10
Fluoranthene	ND		0.10	10
Fluorene	ND		0.10	10
Indeno[1,2,3-cd]pyrene	ND		0.10	10
Naphthalene	ND		0.10	10
Phenanthrene	ND		0.10	10
Pyrene	ND		0.10	10

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	56	28 - 110
2-Fluorophenol (Surr)	63	10 - 110
2,4,6-Tribromophenol (Surr)	46	22 - 120
Nitrobenzene-d5 (Surr)	64	27 - 111
Phenol-d5 (Surr)	61	10 - 110
Terphenyl-d14 (Surr)	67	37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Lab Control Sample - Batch: 240-30848

Method: 8270C
Preparation: 3520C

Lab Sample ID:	LCS 240-30848/2-A	Analysis Batch:	240-31131	Instrument ID:	A4AG2
Client Matrix:	Water	Prep Batch:	240-30848	Lab File ID:	0124009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2012 0952	Units:	ug/L	Final Weight/Volume:	2.00 mL
Prep Date:	01/20/2012 0737			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	20.0	12.7	64	40 - 110	
Acenaphthylene	20.0	13.0	65	43 - 110	
Anthracene	20.0	13.0	65	54 - 114	
Benzo[a]anthracene	20.0	12.4	62	55 - 115	
Benzo[b]fluoranthene	20.0	11.9	60	43 - 122	
Benzo[k]fluoranthene	20.0	14.2	71	43 - 124	
Benzo[g,h,i]perylene	20.0	13.4	67	45 - 120	
Benzo[a]pyrene	20.0	11.2	56	43 - 116	
Chrysene	20.0	14.6	73	55 - 115	
2-Methylnaphthalene	20.0	13.0	65	35 - 110	
Dibenz(a,h)anthracene	20.0	12.6	63	46 - 122	
Fluoranthene	20.0	13.6	68	54 - 122	
Fluorene	20.0	13.1	66	47 - 112	
Indeno[1,2,3-cd]pyrene	20.0	12.6	63	46 - 121	
Naphthalene	20.0	13.6	68	31 - 110	
Phenanthrene	20.0	13.4	67	52 - 114	
Pyrene	20.0	13.1	65	55 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	64	28 - 110
2-Fluorophenol (Surr)	73	10 - 110
2,4,6-Tribromophenol (Surr)	62	22 - 120
Nitrobenzene-d5 (Surr)	76	27 - 111
Phenol-d5 (Surr)	72	10 - 110
Terphenyl-d14 (Surr)	72	37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-30848

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	240-7777-1	Analysis Batch:	240-31131	Instrument ID:	A4AG2
Client Matrix:	Water	Prep Batch:	240-30848	Lab File ID:	0124021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	980 mL
Analysis Date:	01/24/2012 1320			Final Weight/Volume:	2.00 mL
Prep Date:	01/20/2012 0737			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-7777-1	Analysis Batch:	240-31304	Instrument ID:	A4AG2
Client Matrix:	Water	Prep Batch:	240-30848	Lab File ID:	0125015.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	970 mL
Analysis Date:	01/25/2012 1141			Final Weight/Volume:	2.00 mL
Prep Date:	01/20/2012 0737			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	63	57	36 - 110	9	30		
Acenaphthylene	64	58	39 - 110	9	30		
Anthracene	60	55	46 - 110	8	30		
Benzo[a]anthracene	39	34	52 - 110	12	30	F	F
Benzo[b]fluoranthene	25	23	33 - 114	8	30	J F	J F
Benzo[k]fluoranthene	32	24	32 - 121	26	30	J	J F
Benzo[g,h,i]perylene	21	16	34 - 116	24	30	J F	J F
Benzo[a]pyrene	25	16	33 - 110	43	30	J F	J F
Chrysene	42	34	52 - 111	20	30	J F	J F
2-Methylnaphthalene	62	60	35 - 110	3	30		
Dibenz(a,h)anthracene	20	17	35 - 118	16	30	J F	J F
Fluoranthene	53	51	53 - 111	4	30		F
Fluorene	64	59	43 - 110	7	30		
Indeno[1,2,3-cd]pyrene	18	15	36 - 116	16	30	J F	J F
Naphthalene	65	60	32 - 110	8	30		
Phenanthrene	63	57	47 - 110	9	30		
Pyrene	56	51	54 - 115	7	30		F

Surrogate	MS % Rec	MSD % Rec		Acceptance Limits
2-Fluorobiphenyl (Surr)	64	57		28 - 110
2-Fluorophenol (Surr)	75	62		10 - 110
2,4,6-Tribromophenol (Surr)	59	56		22 - 120
Nitrobenzene-d5 (Surr)	74	62		27 - 111
Phenol-d5 (Surr)	73	64		10 - 110
Terphenyl-d14 (Surr)	41	35	X	37 - 119

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Method Blank - Batch: 240-31526

Method: WI-GRO
Preparation: 5030B

Lab Sample ID:	MB 240-31526/5	Analysis Batch:	240-31526	Instrument ID:	O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	O1012605.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/26/2012 1305	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/26/2012 1305			Injection Volume:	
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		26	100

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-31526

Method: WI-GRO
Preparation: 5030B

LCS Lab Sample ID:	LCS 240-31526/6	Analysis Batch:	240-31526	Instrument ID:	O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	O1012606.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/26/2012 1339	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/26/2012 1339			Injection Volume:	
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-31526/18	Analysis Batch:	240-31526	Instrument ID:	O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	O1012618.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/26/2012 2031	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/26/2012 2031			Injection Volume:	
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	116	96	80 - 120	19	20		

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-31526

Method: WI-GRO
Preparation: 5030B

MS Lab Sample ID:	240-7777-1	Analysis Batch:	240-31526	Instrument ID:	O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	O1012614.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/26/2012 1813			Final Weight/Volume:	5 mL
Prep Date:	01/26/2012 1813			Injection Volume:	
Leach Date:	N/A				

MSD Lab Sample ID:	240-7777-1	Analysis Batch:	240-31526	Instrument ID:	O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	O1012615.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/26/2012 1848			Final Weight/Volume:	5 mL
Prep Date:	01/26/2012 1848			Injection Volume:	
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
WI Gasoline Range Organics (C6-C10)	103	112	80 - 120	8	20		

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Method Blank - Batch: 240-30867 **Method: WI-DRO**
Preparation: 3510C

Lab Sample ID:	MB 240-30867/1-A	Analysis Batch:	240-31199	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-30867	Lab File ID:	P14F0000006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2012 1317	Units:	mg/L	Final Weight/Volume:	1.00 mL
Prep Date:	01/20/2012 0755			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.016	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-30867 **Method: WI-DRO**
Preparation: 3510C

LCS Lab Sample ID:	LCS 240-30867/2-A	Analysis Batch:	240-31199	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-30867	Lab File ID:	P14F0000007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2012 1342	Units:	mg/L	Final Weight/Volume:	1.00 mL
Prep Date:	01/20/2012 0755			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-30867/3-A	Analysis Batch:	240-31199	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-30867	Lab File ID:	P14F0000013.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2012 1608	Units:	mg/L	Final Weight/Volume:	1.00 mL
Prep Date:	01/20/2012 0755			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	85	108	75 - 115	24	20		*

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-30867

Method: WI-DRO
Preparation: 3510C

MS Lab Sample ID:	240-7777-1	Analysis Batch:	240-31199	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-30867	Lab File ID:	P14F0000009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	980 mL
Analysis Date:	01/24/2012 1431			Final Weight/Volume:	1.00 mL
Prep Date:	01/20/2012 0755			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-7777-1	Analysis Batch:	240-31199	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-30867	Lab File ID:	P14F0000010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	970 mL
Analysis Date:	01/24/2012 1455			Final Weight/Volume:	1.00 mL
Prep Date:	01/20/2012 0755			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
WI Diesel Range Organics (C10-C28)	79	62	60 - 130	22	25		

Method Blank - Batch: 240-31087

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-31087/1-A	Analysis Batch:	240-31467	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-31087	Lab File ID:	I60125A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2012 0932	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/23/2012 1147				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	1.11	J	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	222	J	130	5000
Cobalt	ND		1.7	7.0
Copper	ND		4.5	25
Iron	ND		81	100
Potassium	202	J	72	5000
Magnesium	228	J	34	5000
Manganese	0.445	J	0.41	15
Sodium	ND		590	5000
Nickel	ND		3.2	40
Antimony	ND		1.8	10
Thallium	ND		4.7	10
Vanadium	ND		0.64	7.0
Zinc	ND		5.0	50

Method Blank - Batch: 240-31087

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-31087/1-A	Analysis Batch:	240-31467	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-31087	Lab File ID:	I60125A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2012 2128	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/23/2012 1147				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Selenium	ND		4.1	5.0

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Lab Control Sample - Batch: 240-31087

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-31087/2-A	Analysis Batch:	240-31467	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-31087	Lab File ID:	I60125A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2012 0939	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/23/2012 1147				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1950	97	80 - 120	
Aluminum	2000	1940	97	80 - 120	
Cadmium	50.0	46.6	93	80 - 120	
Chromium	200	185	92	80 - 120	
Silver	50.0	46.4	93	80 - 120	
Arsenic	2000	1830	91	80 - 120	
Beryllium	50.0	46.9	94	80 - 120	
Lead	500	458	92	80 - 120	
Calcium	50000	47000	94	80 - 120	
Selenium	2000	1810	91	80 - 120	
Cobalt	500	458	92	80 - 120	
Copper	250	228	91	80 - 120	
Iron	1000	944	94	80 - 120	
Potassium	50000	48200	96	80 - 120	
Magnesium	50000	45300	91	80 - 120	
Manganese	500	469	94	80 - 120	
Sodium	50000	46000	92	80 - 120	
Nickel	500	465	93	80 - 120	
Antimony	500	464	93	80 - 120	
Thallium	2000	1750	87	80 - 120	
Vanadium	500	459	92	80 - 120	
Zinc	500	476	95	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-7777-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-31087

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID:	240-7777-1	Analysis Batch:	240-31467	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-31087	Lab File ID:	I60125A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2012 1028			Final Weight/Volume:	50 mL
Prep Date:	01/23/2012 1147				
Leach Date:	N/A				

MSD Lab Sample ID:	240-7777-1	Analysis Batch:	240-31467	Instrument ID:	I6
Client Matrix:	Water	Prep Batch:	240-31087	Lab File ID:	I60125A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/25/2012 1034			Final Weight/Volume:	50 mL
Prep Date:	01/23/2012 1147				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	108	109	75 - 125	1	20		
Aluminum	109	110	75 - 125	1	20		
Cadmium	100	101	75 - 125	1	20		
Chromium	101	101	75 - 125	0	20		
Silver	103	104	75 - 125	0	20		
Arsenic	101	102	75 - 125	0	20		
Beryllium	104	104	75 - 125	1	20		
Lead	100	100	75 - 125	0	20		
Calcium	105	105	75 - 125	0	20		
Selenium	99	100	75 - 125	1	20		
Cobalt	99	100	75 - 125	1	20		
Copper	99	100	75 - 125	0	20		
Iron	113	113	75 - 125	0	20		
Potassium	109	110	75 - 125	1	20		
Magnesium	103	103	75 - 125	0	20		
Manganese	102	101	75 - 125	0	20		
Sodium	106	107	75 - 125	0	20		
Nickel	101	102	75 - 125	1	20		
Antimony	104	105	75 - 125	1	20		
Thallium	92	92	75 - 125	0	20		
Vanadium	101	101	75 - 125	0	20		
Zinc	102	103	75 - 125	0	20		

Method Blank - Batch: 240-30868

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-30868/1-A	Analysis Batch:	240-31390	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-30868	Lab File ID:	H1012512B.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/25/2012 1130	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	01/20/2012 1335				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.12	0.20

Lab Control Sample - Batch: 240-30868

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-30868/2-A	Analysis Batch:	240-31390	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-30868	Lab File ID:	H1012512B.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/25/2012 1131	Units:	ug/L	Final Weight/Volume:	100 mL
Prep Date:	01/20/2012 1335				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	4.18	84	81 - 123	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-30868

Method: 7470A
Preparation: 7470A
Dissolved

MS Lab Sample ID:	240-7777-1	Analysis Batch:	240-31390	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-30868	Lab File ID:	H1012512B.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/25/2012 1133			Final Weight/Volume:	100 mL
Prep Date:	01/20/2012 1335				
Leach Date:	N/A				

MSD Lab Sample ID:	240-7777-1	Analysis Batch:	240-31390	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-30868	Lab File ID:	H1012512B.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/25/2012 1134			Final Weight/Volume:	100 mL
Prep Date:	01/20/2012 1335				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	97	98	69 - 134	0	20		

Chain of Custody Record

Enovis #E200572

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: North Canton
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: ARCADIS	Client Project Manager: Rob Ellis	Site Contact: Mike LeFrancois	Lab Contact: Denise Pohl	COC No: 032266
Address: 430 1st Ave.,N., #720	Telephone: 248-994-2252	Telephone: 612-373-0256	Telephone: 330-966-9789	1 of 1 COCs
City/State/Zip: Minneapolis MN 55401	Email:	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: Ford TCAP	Fedex	TAT if different from below ☐ 3 weeks ☒ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab pickup ☐ Lab sampling ☐
Project Name: DE000440.0002.00005	Method of Shipment/Carrier:			Job/SDG No.:
Project Number: 612-339-9434	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	PAH	VOC (8260)	GRO (WI multi-ext)	DRO (WI Method)	TAL metals (Dissolved)	Sample Specific Notes / Special Instructions:
AMW-19	1/17/12	1225		X					1	7			2				2	3	2	2	1	
AMW-19MS		1225							1	7			2									
AMW-19MSD		1225							1	7			2									
AMW-20		1415							1	7			2									
DUP-02		—							1	7			2									
TB-(20120117)-01		—								2								2				
Temp Blank																						

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company: ARCADIS	Date/Time: 1/18/12 1425	Received by:	Company:	Date/Time: 1430 1-18-12
Relinquished by:	Company:	Date/Time: 1-18-12 1910	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: Mike Gordon	Company: TAL	Date/Time: 1/19/12 - 930

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01/31/2012

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TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 7777
North Canton Facility

Client Arcadis Project TCAP By: Mike Hanlon
Cooler Received on 1/19/12 Opened on 1/19/12 (Signature)
(FedEx) UPS DHL FAS Stetson Client Drop Off TestAmerica Courier Other
TestAmerica Cooler # (Multiple Coolers) Foam Box Client Cooler Other
1. Were custody seals on the outside of the cooler(s)? Yes (No) Intact? Yes No (NA)
   If YES, Quantity Quantity Unsalvageable
   Were custody seals on the outside of cooler(s) signed and dated? Yes No (NA)
   Were custody seals on the bottle(s)? Yes (No)
   If YES, are there any exceptions?
2. Shippers' packing slip attached to the cooler(s)? (Yes) No
3. Did custody papers accompany the sample(s)? (Yes) No Relinquished by client? (Yes) No
4. Were the custody papers signed in the appropriate place? (Yes) No
5. Packing material used: (Bubble Wrap) (Foam) None Other
6. Cooler temperature upon receipt °C (See back of form for multiple coolers/temps)
   METHOD: (IR) Other
   COOLANT: (Wet Ice) Blue Ice Dry Ice Water None
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were sample(s) at the correct pH upon receipt? Yes (No) NA
10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
11. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
12. Sufficient quantity received to perform indicated analyses? (Yes) No
13. Was a trip blank present in the cooler(s)? (Yes) No Were VOAs on the COC? (Yes) No

Contacted PM Date by via Verbal Voice Mail Other
Concerning

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) 6 x 1L AMW-19 were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 110410-HNO_3; Sulfuric Acid Lot# 041911-H_2SO_4; Sodium Hydroxide Lot# 121809 -NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-*$(CH_3COO)_2ZN$/NaOH.* What time was preservative added to sample(s)?

Client ID	pH	Date	Initials
AMW-19	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2	1/19/12	ZLH
L-20	<2 <2 <2	↓	↓
DUP-02	<2 <2 <2		

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant
A286	0.8	IR	wet ice
L912	1.3		
L676	1.8		
L226	0.2		

Discrepancies Cont'd:

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 240-7777-1

Login Number: 7777

List Source: TestAmerica North Canton

List Number: 1

Creator: Gambone, Mike

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.8/1.3/1.8/0.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 240-39273-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
430 1st Avenue, North
Suite 720
Minneapolis, MN 55401

Attention: Ms. Angharad Pagnon

Approved for release.
Denise Pohl
Project Manager II
7/18/2014 8:17 AM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
07/18/2014

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-39273-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 7/8/2014 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-07 (20140703) (240-39273-1), AMW-05 (20140703) (240-39273-2), AMW-05B (20140703) (240-39273-3) and TRIP BLANK-01 (20131217) (240-39273-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 07/11/2014.

Methylene Chloride was detected in method blank MB 240-138130/5 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Methylene Chloride failed the recovery criteria high for LCS 240-138130/4. Refer to the QC report for details.

Method(s) 8260B: The laboratory control sample (LCS) for batch 138130 recovered outside control limits for the following analytes: Methylene Chloride. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: No MS/MSD in batch 138130 due to sample re-analysis.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Sample AMW-07 (20140703) (240-39273-1) was analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 07/09/2014 and analyzed on 07/12/2014.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 137710.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP)

Samples AMW-07 (20140703) (240-39273-1), AMW-05 (20140703) (240-39273-2) and AMW-05B (20140703) (240-39273-3) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 07/09/2014 and analyzed on 07/10/2014.

Barium, Calcium, Magnesium and Zinc were detected in method blank MB 240-137747/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Samples AMW-07 (20140703) (240-39273-1), AMW-05 (20140703) (240-39273-2) and AMW-05B (20140703) (240-39273-3) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 07/09/2014 and analyzed on 07/10/2014.

Mercury failed the recovery criteria low for the MS/MSD of sample 240-39290-1 in batch 240-138051. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-39273-1	**AMW-07 (20140703)**					
Trichloroethene		0.46	J	1.0	ug/L	8260B
Dissolved						
Barium		32	J B	200	ug/L	6010B
Calcium		67000	B	5000	ug/L	6010B
Iron		3600		100	ug/L	6010B
Potassium		4800	J	5000	ug/L	6010B
Magnesium		35000	B	5000	ug/L	6010B
Manganese		180		15	ug/L	6010B
Sodium		24000		5000	ug/L	6010B
240-39273-2	**AMW-05 (20140703)**					
Tetrachloroethene		0.39	J	1.0	ug/L	8260B
Trichloroethene		15		1.0	ug/L	8260B
Dissolved						
Barium		150	J B	200	ug/L	6010B
Beryllium		0.62	J	5.0	ug/L	6010B
Calcium		280000	B	5000	ug/L	6010B
Selenium		11		5.0	ug/L	6010B
Iron		810		100	ug/L	6010B
Potassium		11000		5000	ug/L	6010B
Magnesium		97000	B	5000	ug/L	6010B
Manganese		180		15	ug/L	6010B
Sodium		89000		5000	ug/L	6010B
Nickel		110		40	ug/L	6010B
Zinc		29	J B	50	ug/L	6010B
240-39273-3	**AMW-05B (20140703)**					
Dissolved						
Barium		70	J B	200	ug/L	6010B
Calcium		250000	B	5000	ug/L	6010B
Iron		300		100	ug/L	6010B
Potassium		14000		5000	ug/L	6010B
Magnesium		60000	B	5000	ug/L	6010B
Manganese		25		15	ug/L	6010B
Sodium		170000		5000	ug/L	6010B
Nickel		17	J	40	ug/L	6010B
Zinc		34	J B	50	ug/L	6010B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL CAN = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Method	Analyst	Analyst ID
SW846 8260B	Evans, Laura	LEE
SW846 8270C	Ulman, Mark	MRU
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Martin, Aaron	AMM2

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-39273-1	AMW-07 (20140703)	Water	07/03/2014 1525	07/08/2014 0920
240-39273-2	AMW-05 (20140703)	Water	07/03/2014 1820	07/08/2014 0920
240-39273-3	AMW-05B (20140703)	Water	07/03/2014 1720	07/08/2014 0920
240-39273-4TB	TRIP BLANK-01 (20131217)	Water	07/03/2014 0000	07/08/2014 0920

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **AMW-07 (20140703)**

Lab Sample ID: 240-39273-1 Date Sampled: 07/03/2014 1525
Client Matrix: Water Date Received: 07/08/2014 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ9595.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 1117			Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 1117				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **AMW-07 (20140703)**

Lab Sample ID: 240-39273-1 Date Sampled: 07/03/2014 1525
Client Matrix: Water Date Received: 07/08/2014 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ9595.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 1117			Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 1117				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	ND	*	0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	0.46	J	0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	79		63 - 129
4-Bromofluorobenzene (Surr)	84		66 - 120
Toluene-d8 (Surr)	83		74 - 120
Dibromofluoromethane (Surr)	85		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **AMW-05 (20140703)**

Lab Sample ID: 240-39273-2 Date Sampled: 07/03/2014 1820
Client Matrix: Water Date Received: 07/08/2014 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ9596.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 1141			Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 1141				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **AMW-05 (20140703)**

Lab Sample ID: 240-39273-2 Date Sampled: 07/03/2014 1820
Client Matrix: Water Date Received: 07/08/2014 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ9596.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 1141			Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 1141				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	ND	*	0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	0.39	J	0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	15		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	77		63 - 129
4-Bromofluorobenzene (Surr)	86		66 - 120
Toluene-d8 (Surr)	77		74 - 120
Dibromofluoromethane (Surr)	87		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **AMW-05B (20140703)**

Lab Sample ID: 240-39273-3 Date Sampled: 07/03/2014 1720
Client Matrix: Water Date Received: 07/08/2014 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ9597.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 1205			Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 1205				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **AMW-05B (20140703)**

Lab Sample ID: 240-39273-3 Date Sampled: 07/03/2014 1720
Client Matrix: Water Date Received: 07/08/2014 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ9597.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 1205			Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 1205				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	ND	*	0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	74		63 - 129
4-Bromofluorobenzene (Surr)	85		66 - 120
Toluene-d8 (Surr)	80		74 - 120
Dibromofluoromethane (Surr)	87		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **TRIP BLANK-01 (20131217)**

Lab Sample ID: 240-39273-4TB Date Sampled: 07/03/2014 0000
Client Matrix: Water Date Received: 07/08/2014 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ9598.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 1228			Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 1228				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **TRIP BLANK-01 (20131217)**

Lab Sample ID: 240-39273-4TB Date Sampled: 07/03/2014 0000
Client Matrix: Water Date Received: 07/08/2014 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ9598.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 1228			Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 1228				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	1.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	5.0
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	2.0
Methylene Chloride	ND	*	0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	79		63 - 129
4-Bromofluorobenzene (Surr)	82		66 - 120
Toluene-d8 (Surr)	84		74 - 120
Dibromofluoromethane (Surr)	87		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **AMW-07 (20140703)**

Lab Sample ID: 240-39273-1 Date Sampled: 07/03/2014 1525
Client Matrix: Water Date Received: 07/08/2014 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-138228	Instrument ID:	A4HP10
Prep Method:	3520C	Prep Batch:	240-137710	Lab File ID:	40712023.D
Dilution:	1.0			Initial Weight/Volume:	880 mL
Analysis Date:	07/12/2014 1920			Final Weight/Volume:	2 mL
Prep Date:	07/09/2014 0725			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.050	11
Acenaphthylene	ND		0.055	11
Anthracene	ND		0.10	11
Benzo[a]anthracene	ND		0.034	0.23
Benzo[b]fluoranthene	ND		0.045	11
Benzo[k]fluoranthene	ND		0.051	11
Benzo[g,h,i]perylene	ND		0.053	11
Benzo[a]pyrene	ND		0.058	11
Chrysene	ND		0.057	11
2-Methylnaphthalene	ND		0.10	11
Dibenz(a,h)anthracene	ND		0.051	11
Fluoranthene	ND		0.051	11
Fluorene	ND		0.046	11
Indeno[1,2,3-cd]pyrene	ND		0.049	11
Naphthalene	ND		0.071	11
Phenanthrene	ND		0.070	11
Pyrene	ND		0.048	11

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	51		20 - 110
2-Fluorophenol (Surr)	51		10 - 110
2,4,6-Tribromophenol (Surr)	62		21 - 110
Nitrobenzene-d5 (Surr)	59		21 - 110
Phenol-d5 (Surr)	55		21 - 110
Terphenyl-d14 (Surr)	71		24 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **AMW-07 (20140703)**

Lab Sample ID: 240-39273-1 Date Sampled: 07/03/2014 1525
Client Matrix: Water Date Received: 07/08/2014 0920

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-137990	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-137747	Lab File ID:	I9071014A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1357			Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	32	J B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	67000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	ND		1.7	7.0
Copper	ND		4.5	25
Iron	3600		81	100
Potassium	4800	J	72	5000
Magnesium	35000	B	34	5000
Manganese	180		0.96	15
Sodium	24000		590	5000
Nickel	ND		3.2	40
Antimony	ND		2.1	10
Thallium	ND		4.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-138051	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-137751	Lab File ID:	071014A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1347			Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1600				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **AMW-05 (20140703)**

Lab Sample ID: 240-39273-2 Date Sampled: 07/03/2014 1820
Client Matrix: Water Date Received: 07/08/2014 0920

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-137990	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-137747	Lab File ID:	I9071014A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1401			Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	150	J B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	0.62	J	0.46	5.0
Lead	ND		1.9	3.0
Calcium	280000	B	130	5000
Selenium	11		4.1	5.0
Cobalt	ND		1.7	7.0
Copper	ND		4.5	25
Iron	810		81	100
Potassium	11000		72	5000
Magnesium	97000	B	34	5000
Manganese	180		0.96	15
Sodium	89000		590	5000
Nickel	110		3.2	40
Antimony	ND		2.1	10
Thallium	ND		4.7	10
Vanadium	ND		2.4	7.0
Zinc	29	J B	5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-138051	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-137751	Lab File ID:	071014A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1348			Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1600				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Client Sample ID: **AMW-05B (20140703)**

Lab Sample ID: 240-39273-3 Date Sampled: 07/03/2014 1720
Client Matrix: Water Date Received: 07/08/2014 0920

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-137990	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-137747	Lab File ID:	I9071014A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1405			Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	70	J B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	250000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	ND		1.7	7.0
Copper	ND		4.5	25
Iron	300		81	100
Potassium	14000		72	5000
Magnesium	60000	B	34	5000
Manganese	25		0.96	15
Sodium	170000		590	5000
Nickel	17	J	3.2	40
Antimony	ND		2.1	10
Thallium	ND		4.7	10
Vanadium	ND		2.4	7.0
Zinc	34	J B	5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-138051	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-137751	Lab File ID:	071014A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1353			Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1600				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Lab Section	Qualifier	Description
GC/MS VOA		
	*	LCS or LCSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-138130					
LCS 240-138130/4	Lab Control Sample	T	Water	8260B	
MB 240-138130/5	Method Blank	T	Water	8260B	
240-39273-1	AMW-07 (20140703)	T	Water	8260B	
240-39273-2	AMW-05 (20140703)	T	Water	8260B	
240-39273-3	AMW-05B (20140703)	T	Water	8260B	
240-39273-4TB	TRIP BLANK-01 (20131217)	T	Water	8260B	

Report Basis
T = Total

GC/MS Semi VOA					
Prep Batch: 240-137710					
LCS 240-137710/8-A	Lab Control Sample	T	Water	3520C	
MB 240-137710/7-A	Method Blank	T	Water	3520C	
240-39273-1	AMW-07 (20140703)	T	Water	3520C	
Analysis Batch:240-138228					
LCS 240-137710/8-A	Lab Control Sample	T	Water	8270C	240-137710
MB 240-137710/7-A	Method Blank	T	Water	8270C	240-137710
240-39273-1	AMW-07 (20140703)	T	Water	8270C	240-137710

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-137747					
LCS 240-137747/2-A	Lab Control Sample	R	Water	3005A	
MB 240-137747/1-A	Method Blank	R	Water	3005A	
240-39273-1	AMW-07 (20140703)	D	Water	3005A	
240-39273-2	AMW-05 (20140703)	D	Water	3005A	
240-39273-3	AMW-05B (20140703)	D	Water	3005A	
240-39290-E-1-B MS	Matrix Spike	D	Water	3005A	
240-39290-E-1-C MSD	Matrix Spike Duplicate	D	Water	3005A	
Prep Batch: 240-137751					
LCS 240-137751/2-A	Lab Control Sample	T	Water	7470A	
MB 240-137751/1-A	Method Blank	T	Water	7470A	
240-39273-1	AMW-07 (20140703)	D	Water	7470A	
240-39273-2	AMW-05 (20140703)	D	Water	7470A	
240-39273-3	AMW-05B (20140703)	D	Water	7470A	
240-39290-E-1-F MS	Matrix Spike	D	Water	7470A	
240-39290-E-1-G MSD	Matrix Spike Duplicate	D	Water	7470A	
Analysis Batch:240-137990					
LCS 240-137747/2-A	Lab Control Sample	R	Water	6010B	240-137747
MB 240-137747/1-A	Method Blank	R	Water	6010B	240-137747
240-39273-1	AMW-07 (20140703)	D	Water	6010B	240-137747
240-39273-2	AMW-05 (20140703)	D	Water	6010B	240-137747
240-39273-3	AMW-05B (20140703)	D	Water	6010B	240-137747
240-39290-E-1-B MS	Matrix Spike	D	Water	6010B	240-137747
240-39290-E-1-C MSD	Matrix Spike Duplicate	D	Water	6010B	240-137747
Analysis Batch:240-138051					
LCS 240-137751/2-A	Lab Control Sample	T	Water	7470A	240-137751
MB 240-137751/1-A	Method Blank	T	Water	7470A	240-137751
240-39273-1	AMW-07 (20140703)	D	Water	7470A	240-137751
240-39273-2	AMW-05 (20140703)	D	Water	7470A	240-137751
240-39273-3	AMW-05B (20140703)	D	Water	7470A	240-137751
240-39290-E-1-F MS	Matrix Spike	D	Water	7470A	240-137751
240-39290-E-1-G MSD	Matrix Spike Duplicate	D	Water	7470A	240-137751

Report Basis

D = Dissolved

R = Total Recoverable

T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-39273-1	AMW-07 (20140703)	79	84	83	85
240-39273-2	AMW-05 (20140703)	77	86	77	87
240-39273-3	AMW-05B (20140703)	74	85	80	87
240-39273-4	TRIP BLANK-01 (20131217)	79	82	84	87
MB 240-138130/5		84	82	81	90
LCS 240-138130/4		80	95	83	82

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
BFB = 4-Bromofluorobenzene (Surr)	66-120
TOL = Toluene-d8 (Surr)	74-120
DBFM = Dibromofluoromethane (Surr)	75-121

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-39273-1	AMW-07 (20140703)	51	51	62	59	55	71
MB 240-137710/7-A		71	70	68	76	73	78
LCS 240-137710/8-A		70	69	79	72	72	74

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	20-110
2FP = 2-Fluorophenol (Surr)	10-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Method Blank - Batch: 240-138130

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-138130/5	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ9594.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 1054	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 1054				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Method Blank - Batch: 240-138130

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-138130/5	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ9594.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 1054	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 1054				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.42	2.0
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	3.60		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	84	63 - 129
4-Bromofluorobenzene (Surr)	82	66 - 120
Toluene-d8 (Surr)	81	74 - 120
Dibromofluoromethane (Surr)	90	75 - 121

Lab Control Sample - Batch: 240-138130

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-138130/4	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ9591.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 0942	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 0942				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	10.1	101	72 - 120	
1,1,1-Trichloroethane	10.0	9.01	90	74 - 120	
1,1,2,2-Tetrachloroethane	10.0	10.8	108	68 - 120	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.22	92	74 - 151	
1,1,2-Trichloroethane	10.0	9.63	96	80 - 120	
1,1-Dichloroethane	10.0	9.22	92	80 - 120	
1,1-Dichloroethene	10.0	8.59	86	78 - 131	
1,1-Dichloropropene	10.0	9.75	98	80 - 120	
1,2,3-Trichlorobenzene	10.0	8.84	88	54 - 126	
1,2,3-Trichloropropane	10.0	9.21	92	73 - 129	
1,2,4-Trichlorobenzene	10.0	9.03	90	48 - 135	
1,2,4-Trimethylbenzene	10.0	8.65	86	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	9.86	99	42 - 136	
1,2-Dichlorobenzene	10.0	9.81	98	80 - 120	
1,2-Dichloroethane	10.0	9.50	95	71 - 127	
1,2-Dichloropropane	10.0	9.76	98	80 - 120	
1,3,5-Trimethylbenzene	10.0	9.35	93	72 - 120	
1,3-Dichlorobenzene	10.0	9.16	92	80 - 120	
1,3-Dichloropropane	10.0	9.84	98	79 - 120	
1,4-Dichlorobenzene	10.0	9.13	91	80 - 120	
Allyl chloride	10.0	8.76	88	40 - 160	
2,2-Dichloropropane	10.0	9.30	93	50 - 129	
2-Chlorotoluene	10.0	9.93	99	76 - 120	
2-Hexanone	20.0	20.3	102	55 - 133	
Bromobenzene	10.0	9.64	96	76 - 120	
Bromochloromethane	10.0	9.15	91	77 - 120	
4-Chlorotoluene	10.0	9.69	97	77 - 120	
p-Isopropyltoluene	10.0	8.83	88	74 - 120	
Acetone	20.0	15.5	78	43 - 136	
Benzene	10.0	9.75	98	80 - 120	
Bromoform	10.0	11.1	111	40 - 131	
Bromomethane	10.0	6.40	64	11 - 185	
Carbon disulfide	10.0	8.59	86	62 - 142	
Carbon tetrachloride	10.0	9.58	96	66 - 128	
Chlorobenzene	10.0	9.74	97	80 - 120	
Chloroethane	10.0	6.79	68	25 - 153	
Chloroform	10.0	9.16	92	79 - 120	
Chloromethane	10.0	11.5	115	44 - 126	
cis-1,2-Dichloroethene	10.0	9.28	93	80 - 120	
cis-1,3-Dichloropropene	10.0	10.7	107	61 - 120	
Cyclohexane	10.0	9.23	92	54 - 121	

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Lab Control Sample - Batch: 240-138130

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-138130/4	Analysis Batch:	240-138130	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ9591.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	07/11/2014 0942	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	07/11/2014 0942				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	9.20	92	36 - 134	
Dibromomethane	10.0	9.28	93	80 - 120	
Bromodichloromethane	10.0	9.55	95	72 - 121	
Dichlorodifluoromethane	10.0	12.3	123	19 - 129	
Dichlorofluoromethane	10.0	7.80	78	40 - 160	
Ethyl ether	10.0	8.69	87	53 - 135	
Ethylbenzene	10.0	9.18	92	80 - 120	
1,2-Dibromoethane	10.0	9.66	97	79 - 120	
Naphthalene	10.0	8.55	85	32 - 141	
m-Xylene & p-Xylene	10.0	8.52	85	80 - 120	
n-Butylbenzene	10.0	8.44	84	66 - 125	
Isopropylbenzene	10.0	7.94	79	75 - 120	
Methyl acetate	50.0	44.9	90	58 - 131	
N-Propylbenzene	10.0	9.36	94	74 - 121	
2-Butanone (MEK)	20.0	18.2	91	60 - 126	
4-Methyl-2-pentanone (MIBK)	20.0	20.8	104	63 - 128	
sec-Butylbenzene	10.0	8.91	89	70 - 120	
Methyl tert butyl ether	10.0	8.42	84	52 - 144	
Methylene Chloride	10.0	13.4	134	66 - 131	*
o-Xylene	10.0	8.61	86	80 - 120	
Styrene	10.0	8.57	86	79 - 120	
tert-Butylbenzene	10.0	8.73	87	71 - 120	
Tetrachloroethene	10.0	9.66	97	79 - 120	
Tetrahydrofuran	20.0	20.6	103	23 - 143	
Toluene	10.0	9.34	93	80 - 120	
trans-1,2-Dichloroethene	10.0	8.60	86	80 - 120	
trans-1,3-Dichloropropene	10.0	10.9	109	58 - 120	
Trichloroethene	10.0	10.0	100	76 - 120	
Trichlorofluoromethane	10.0	7.78	78	49 - 157	
Vinyl chloride	10.0	10.8	108	53 - 127	
Methylcyclohexane	10.0	8.76	88	56 - 127	
Chlorodibromomethane	10.0	10.3	103	64 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	80	63 - 129
4-Bromofluorobenzene (Surr)	95	66 - 120
Toluene-d8 (Surr)	83	74 - 120
Dibromofluoromethane (Surr)	82	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Method Blank - Batch: 240-137710

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 240-137710/7-A	Analysis Batch:	240-138228	Instrument ID:	A4HP10
Client Matrix:	Water	Prep Batch:	240-137710	Lab File ID:	40712019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	07/12/2014 1745	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	07/09/2014 0725			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	ND		0.044	10
Acenaphthylene	ND		0.048	10
Anthracene	ND		0.088	10
Benzo[a]anthracene	ND		0.030	0.20
Benzo[b]fluoranthene	ND		0.039	10
Benzo[k]fluoranthene	ND		0.045	10
Benzo[g,h,i]perylene	ND		0.046	10
Benzo[a]pyrene	ND		0.051	10
Chrysene	ND		0.050	10
2-Methylnaphthalene	ND		0.090	10
Dibenz(a,h)anthracene	ND		0.045	10
Fluoranthene	ND		0.045	10
Fluorene	ND		0.041	10
Indeno[1,2,3-cd]pyrene	ND		0.043	10
Naphthalene	ND		0.063	10
Phenanthrene	ND		0.062	10
Pyrene	ND		0.042	10

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	71	20 - 110
2-Fluorophenol (Surr)	70	10 - 110
2,4,6-Tribromophenol (Surr)	68	21 - 110
Nitrobenzene-d5 (Surr)	76	21 - 110
Phenol-d5 (Surr)	73	21 - 110
Terphenyl-d14 (Surr)	78	24 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Lab Control Sample - Batch: 240-137710

Method: 8270C
Preparation: 3520C

Lab Sample ID:	LCS 240-137710/8-A	Analysis Batch:	240-138228	Instrument ID:	A4HP10
Client Matrix:	Water	Prep Batch:	240-137710	Lab File ID:	40712020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	07/12/2014 1809	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	07/09/2014 0725			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	20.0	13.4	67	47 - 110	
Acenaphthylene	20.0	13.0	65	49 - 110	
Anthracene	20.0	14.0	70	52 - 110	
Benzo[a]anthracene	20.0	13.3	67	52 - 110	
Benzo[b]fluoranthene	20.0	14.1	70	48 - 110	
Benzo[k]fluoranthene	20.0	13.5	68	49 - 110	
Benzo[g,h,i]perylene	20.0	13.7	69	50 - 110	
Benzo[a]pyrene	20.0	13.0	65	44 - 110	
Chrysene	20.0	13.2	66	55 - 110	
2-Methylnaphthalene	20.0	12.2	61	45 - 110	
Dibenz(a,h)anthracene	20.0	13.5	67	49 - 110	
Fluoranthene	20.0	14.4	72	54 - 110	
Fluorene	20.0	14.3	71	52 - 110	
Indeno[1,2,3-cd]pyrene	20.0	13.5	68	50 - 110	
Naphthalene	20.0	12.2	61	44 - 110	
Phenanthrene	20.0	14.1	70	53 - 110	
Pyrene	20.0	13.6	68	52 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	70	20 - 110
2-Fluorophenol (Surr)	69	10 - 110
2,4,6-Tribromophenol (Surr)	79	21 - 110
Nitrobenzene-d5 (Surr)	72	21 - 110
Phenol-d5 (Surr)	72	21 - 110
Terphenyl-d14 (Surr)	74	24 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Method Blank - Batch: 240-137747

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-137747/1-A	Analysis Batch:	240-137990	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-137747	Lab File ID:	I9071014A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 0853	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1200				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	0.996	J	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	254	J	130	5000
Selenium	ND		4.1	5.0
Cobalt	ND		1.7	7.0
Copper	ND		4.5	25
Iron	ND		81	100
Potassium	ND		72	5000
Magnesium	83.0	J	34	5000
Manganese	ND		0.96	15
Sodium	ND		590	5000
Nickel	ND		3.2	40
Antimony	ND		2.1	10
Thallium	ND		4.7	10
Vanadium	ND		2.4	7.0
Zinc	7.91	J	5.0	50

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Lab Control Sample - Batch: 240-137747

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-137747/2-A	Analysis Batch:	240-137990	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-137747	Lab File ID:	I9071014A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 0857	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1200				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1860	93	80 - 120	
Aluminum	2000	1950	98	80 - 120	
Cadmium	50.0	50.1	100	80 - 120	
Chromium	200	192	96	80 - 120	
Silver	50.0	50.6	101	80 - 120	
Arsenic	2000	1970	99	80 - 120	
Beryllium	50.0	47.1	94	80 - 120	
Lead	500	477	95	80 - 120	
Calcium	50000	49500	99	80 - 120	
Selenium	2000	2020	101	80 - 120	
Cobalt	500	481	96	80 - 120	
Copper	250	241	97	80 - 120	
Iron	1000	997	100	80 - 120	
Potassium	50000	48600	97	80 - 120	
Magnesium	50000	49100	98	80 - 120	
Manganese	500	482	96	80 - 120	
Sodium	50000	49100	98	80 - 120	
Nickel	500	491	98	80 - 120	
Antimony	500	505	101	80 - 120	
Thallium	2000	1940	97	80 - 120	
Vanadium	500	482	96	80 - 120	
Zinc	500	499	100	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-137747

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID:	240-39290-E-1-B MS	Analysis Batch:	240-137990	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-137747	Lab File ID:	I9071014A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1332			Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1200				
Leach Date:	N/A				

MSD Lab Sample ID:	240-39290-E-1-C MSD	Analysis Batch:	240-137990	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-137747	Lab File ID:	I9071014A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1336			Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1200				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	99	99	75 - 125	1	20		
Aluminum	105	104	75 - 125	1	20		
Cadmium	106	107	75 - 125	1	20		
Chromium	103	103	75 - 125	0	20		
Silver	112	111	75 - 125	1	20		
Arsenic	107	108	75 - 125	0	20		
Beryllium	97	97	75 - 125	0	20		
Lead	99	99	75 - 125	0	20		
Calcium	94	96	75 - 125	0	20		
Cobalt	103	104	75 - 125	0	20		
Copper	105	107	75 - 125	1	20		
Iron	105	106	75 - 125	0	20		
Potassium	103	103	75 - 125	0	20		
Magnesium	100	100	75 - 125	0	20		
Manganese	104	105	75 - 125	0	20		
Sodium	100	98	75 - 125	0	20		
Nickel	105	105	75 - 125	0	20		
Antimony	108	110	75 - 125	2	20		
Thallium	101	101	75 - 125	1	20		
Vanadium	100	101	75 - 125	1	20		
Zinc	105	105	75 - 125	0	20		

Client: ARCADIS U.S., Inc. Job Number: 240-39273-1

Method Blank - Batch: 240-137751

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-137751/1-A	Analysis Batch:	240-138051	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-137751	Lab File ID:	071014A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1334	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1600				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.12	0.20

Lab Control Sample - Batch: 240-137751

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-137751/2-A	Analysis Batch:	240-138051	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-137751	Lab File ID:	071014A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1336	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1600				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	4.37	87	81 - 123	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-137751

Method: 7470A
Preparation: 7470A
Dissolved

MS Lab Sample ID:	240-39290-E-1-F MS	Analysis Batch:	240-138051	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-137751	Lab File ID:	071014A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1339			Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1600				
Leach Date:	N/A				

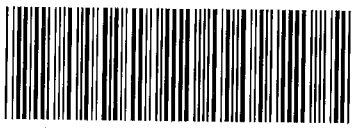
MSD Lab Sample ID:	240-39290-E-1-G MSD	Analysis Batch:	240-138051	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-137751	Lab File ID:	071014A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/10/2014 1341			Final Weight/Volume:	50 mL
Prep Date:	07/09/2014 1600				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	39	35	69 - 134	10	20	F1	F1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-39273 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

Chain of Custody Record

Temperature on Receipt 3.2

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	Angharad Pagnon	7/7/2014	254956
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
430 First Ave North, Suite 720	612-339-9434		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Minneapolis / MN / 55401	Kelly Hoehn	Denise Poirier	
Project Name and Location (State)	**Carrier/Waybill Number**		
Ford TCAP - St. Paul MN			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOCs (8260)	Dissolved Metals (6010)	PAHs (8270)	Special Instructions/ Conditions of Receipt
MW-07 (20140703)	7/3/14	1525		X			2		1	3			3	1	2	
MW-05 (20140703)	7/3/14	1820		X					1	3			3	1		
MW-05B (20140703)	7/3/14	1720		X					1	2			2	1		
Trip Blank-01 (20131207)	12/3/13	—		X						1			1			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)
Level II

1. Relinquished By	Date	Time	1. Received By	Date	Time
Kelly Hoehn	7/7/14	1730	Barb Ross	7/8/14	920
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Canton Sample Receipt Form/Narrative Login # : 39273
Canton Facility

Client Arcadis Site Name _____ Cooler unpacked by: Ryan Rood

Cooler Received on 7/8/14 Opened on 7/8/14

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # A634 Foam Box ~~Client Cooler~~ Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A	(CF +2 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	☐ See Multiple Cooler Form
IR GUN# 4	(CF -2 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
IR GUN# 5	(CF +0 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
IR GUN# 8	(CF +0 °C) Observed Cooler Temp. 3.2 °C	Corrected Cooler Temp. 3.2 °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes) No	
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes) No	NA
-Were custody seals on the bottle(s)?	Yes (No)	
3. Shippers' packing slip attached to the cooler(s)?	(Yes) No	
4. Did custody papers accompany the sample(s)?	(Yes) No	
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6. Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
7. Could all bottle labels be reconciled with the COC?	(Yes) No	
8. Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
9. Sufficient quantity received to perform indicated analyses?	(Yes) No	
10. Were sample(s) at the correct pH upon receipt?	(Yes) No	NA pH Strip Lot# HC302587
11. Were VOAs on the COC?	(Yes) No	
12. Were air bubbles >6 mm in any VOA vials?	Yes (No)	NA
13. Was a trip blank present in the cooler(s)?	(Yes) No	

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: RM

Recieved 2x40mL vial w/HCl for sample MW-05 y COC indicated 3x40mL

Recieved 3x40mL vial w/HCl for sample MW-05B, COC indicated 2x40mL

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW-07 (20140703)	240-39273-D-1	Plastic 500ml - w/ Nitric - Dis.	<2	_____	_____
MW-05 (20140703)	240-39273-C-2	Plastic 500ml - w/ Nitric - Dis.	<2	_____	_____
MW-05B (20140703)	240-39273-D-3	Plastic 500ml - w/ Nitric - Dis.	<2	_____	_____

July 22, 2014

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 39273-1
Sample date: 2014-07-03
Report received by CADENA: 2014-07-18
Initial Data Verification completed by CADENA: 2014-07-22

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

3 Water sample(s) were analyzed for GCMS VOC, GCMS SVOC and Metals parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The following minor QC exceptions or missing information were noted:

MS/MSD recovery data was not available for GCMS VOC QC batch 138130 due to re-analysis and in GCMS SVOC QC batch 137710 due to insufficient sample volume provided.

GCMS VOC QC batch 138130 method blank had detections above the RL for methylene chloride. Qualification of client sample results was not required based on these method blank detections.

GCMS VOC trip blank was non-detect for all target analytes.

GCMS VOC QC batch 138130 LCS recoveries were outliers biased high for methylene chloride. Qualification of client sample non-detect results were not required based on these high bias QC outliers.

Metals QC batch 137747 method blank had detections below the RL for barium, calcium, magnesium and zinc. Client samples -002 and -003 zinc results should be considered to be non-detect at the RL and qualified with UB flags.

Metals QC batch 137751 MS/MSD recovery outliers were not determined using a sample from this submittal. Qualification of client sample results was not required based on these sample-specific QC outliers.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the CADENA CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 39273-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)
240392731	AMW-07 (20140703)	7/3/2014	3:25:00	X	X	X	X
240392732	AMW-05 (20140703)	7/3/2014	6:20:00	X		X	X
240392733	AMW-05B (20140703)	7/3/2014	5:20:00	X		X	X
240392734	TRIP BLANK-01 (20131217)	7/3/2014	12:00:00	X			

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 39273-1

		Sample Name:	AMW-05 (20140703)				AMW-05B (20140703)			
		Lab Sample ID:	240392732				240392733			
		Sample Date:	7/3/2014				7/3/2014			
Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
Metals										
OSW-6010B										
Zinc - Dissolved	7440-66-6		29	50	ug/l	**UB**	34	50	ug/l	**UB**

UB - Metals QC batch 137747 method blank had detections below the RL for barium, calcium, magnesium and zinc. Client samples -002 and -003 zinc results should be considered to be non-detect at the RL and qualified with UB flags.

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 39273-1

		Sample Name:	AMW-07 (20140703)				AMW-05 (20140703)			
		Lab Sample ID:	240392731				240392732			
		Sample Date:	7/3/2014				7/3/2014			
	Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC										
OSW-8260B										
	1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---
	2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---
	4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---
	Acetone	67-64-1	ND	10	ug/l	---	ND	10	ug/l	---
	Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---
	Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	0.39	1.0	ug/l	J
	Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Trichloroethene	79-01-6	0.46	1.0	ug/l	J	15	1.0	ug/l	---
	Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 39273-1

		Sample Name:	AMW-07 (20140703)				AMW-05 (20140703)			
		Lab Sample ID:	240392731				240392732			
		Sample Date:	7/3/2014				7/3/2014			
	Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS SVOC										
OSW-8270C										
	2-Methylnaphthalene	91-57-6	ND	11	ug/l	---				
	Acenaphthene	83-32-9	ND	11	ug/l	---				
	Acenaphthylene	208-96-8	ND	11	ug/l	---				
	Anthracene	120-12-7	ND	11	ug/l	---				
	Benzo[a]anthracene	56-55-3	ND	0.23	ug/l	---				
	Benzo[a]pyrene	50-32-8	ND	11	ug/l	---				
	Benzo[b]fluoranthene	205-99-2	ND	11	ug/l	---				
	Benzo[g,h,i]perylene	191-24-2	ND	11	ug/l	---				
	Benzo[k]fluoranthene	207-08-9	ND	11	ug/l	---				
	Chrysene	218-01-9	ND	11	ug/l	---				
	Dibenz(a,h)anthracene	53-70-3	ND	11	ug/l	---				
	Fluoranthene	206-44-0	ND	11	ug/l	---				
	Fluorene	86-73-7	ND	11	ug/l	---				
	Indeno[1,2,3-cd]pyrene	193-39-5	ND	11	ug/l	---				
	Naphthalene	91-20-3	ND	11	ug/l	---				
	Phenanthrene	85-01-8	ND	11	ug/l	---				
	Pyrene	129-00-0	ND	11	ug/l	---				
Metals										
OSW-6010B										
	Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---	ND	200	ug/l	---
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---
	Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---	ND	10	ug/l	---
	Barium - Dissolved	7440-39-3	32	200	ug/l	J	150	200	ug/l	J
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---	0.62	5.0	ug/l	J
	Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Calcium - Dissolved	7440-70-2	67000	5000	ug/l	---	280000	5000	ug/l	---
	Chromium - Dissolved	7440-47-3	ND	10	ug/l	---	ND	10	ug/l	---
	Cobalt - Dissolved	7440-48-4	ND	7.0	ug/l	---	ND	7.0	ug/l	---
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---	ND	25	ug/l	---
	Iron - Dissolved	7439-89-6	3600	100	ug/l	---	810	100	ug/l	---
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---
	Magnesium - Dissolved	7439-95-4	35000	5000	ug/l	---	97000	5000	ug/l	---
	Manganese - Dissolved	7439-96-5	180	15	ug/l	---	180	15	ug/l	---
	Nickel - Dissolved	7440-02-0	ND	40	ug/l	---	110	40	ug/l	---
	Potassium - Dissolved	7440-09-7	4800	5000	ug/l	J	11000	5000	ug/l	---
	Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---	11	5.0	ug/l	---
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---
	Sodium - Dissolved	7440-23-5	24000	5000	ug/l	---	89000	5000	ug/l	---
	Thallium - Dissolved	7440-28-0	ND	10	ug/l	---	ND	10	ug/l	---
	Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---	ND	7.0	ug/l	---
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---	29	50	ug/l	UB
OSW-7470A										
	Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 39273-1

		Sample Name:	AMW-05B (20140703)				TRIP BLANK-01 (20131217)			
		Lab Sample ID:	240392733				240392734			
		Sample Date:	7/3/2014				7/3/2014			
	Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC										
OSW-8260B										
	1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---
	2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---
	4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	5.0	ug/l	---
	Acetone	67-64-1	ND	10	ug/l	---	ND	10	ug/l	---
	Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	1.0	ug/l	---
	Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	1.0	ug/l	---
	Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---
	Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	2.0	ug/l	---
	Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 39273-1

		Sample Name:	AMW-05B (20140703)				TRIP BLANK-01 (20131217)			
		Lab Sample ID:	240392733				240392734			
		Sample Date:	7/3/2014				7/3/2014			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS SVOC									
OSW-8270C									
2-Methylnaphthalene	91-57-6								
Acenaphthene	83-32-9								
Acenaphthylene	208-96-8								
Anthracene	120-12-7								
Benzo[a]anthracene	56-55-3								
Benzo[a]pyrene	50-32-8								
Benzo[b]fluoranthene	205-99-2								
Benzo[g,h,i]perylene	191-24-2								
Benzo[k]fluoranthene	207-08-9								
Chrysene	218-01-9								
Dibenz(a,h)anthracene	53-70-3								
Fluoranthene	206-44-0								
Fluorene	86-73-7								
Indeno[1,2,3-cd]pyrene	193-39-5								
Naphthalene	91-20-3								
Phenanthrene	85-01-8								
Pyrene	129-00-0								
Metals									
OSW-6010B									
Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---				
Antimony - Dissolved	7440-36-0	ND	10	ug/l	---				
Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---				
Barium - Dissolved	7440-39-3	70	200	ug/l	J				
Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---				
Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---				
Calcium - Dissolved	7440-70-2	250000	5000	ug/l	---				
Chromium - Dissolved	7440-47-3	ND	10	ug/l	---				
Cobalt - Dissolved	7440-48-4	ND	7.0	ug/l	---				
Copper - Dissolved	7440-50-8	ND	25	ug/l	---				
Iron - Dissolved	7439-89-6	300	100	ug/l	---				
Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---				
Magnesium - Dissolved	7439-95-4	60000	5000	ug/l	---				
Manganese - Dissolved	7439-96-5	25	15	ug/l	---				
Nickel - Dissolved	7440-02-0	17	40	ug/l	J				
Potassium - Dissolved	7440-09-7	14000	5000	ug/l	---				
Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---				
Silver - Dissolved	7440-22-4	ND	10	ug/l	---				
Sodium - Dissolved	7440-23-5	170000	5000	ug/l	---				
Thallium - Dissolved	7440-28-0	ND	10	ug/l	---				
Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---				
Zinc - Dissolved	7440-66-6	34	50	ug/l	UB				
OSW-7470A									
Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---				

ANALYTICAL REPORT

Job Number: 240-40552-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
430 First Avenue, North
Suite 720
Minneapolis, MN 55304

Attention: Ms. Angharad Pagnon

Approved for release.
Denise Pohl
Project Manager II
8/21/2014 5:15 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
08/21/2014

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-40552-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 8/9/2014 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-05B (20140806) (240-40552-1), EB-001 (20140806) (240-40552-2), AMW-05 (20140807) (240-40552-3), AMW-19 (20140807) (240-40552-4), AMW-20 (20140807) (240-40552-5), DUP-002 (20140807) (240-40552-6), TRIP BLANK (240-40552-7) and AMW-07 (20140807) (240-40552-8) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 08/14/2014.

Acetone and Tetrahydrofuran were detected in method blank MB 240-142797/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

1,1,2-Trichloro-1,2,2-trifluoroethane failed the recovery criteria low for the MS/MSD of sample 240-40483-9 in batch 240-142797. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Sample AMW-07 (20140807) (240-40552-8) was analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 08/13/2014 and analyzed on 08/14/2014.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 142593.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP)

Samples AMW-05B (20140806) (240-40552-1), AMW-05 (20140807) (240-40552-3), AMW-19 (20140807) (240-40552-4), AMW-20 (20140807) (240-40552-5), DUP-002 (20140807) (240-40552-6) and AMW-07 (20140807) (240-40552-8) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 08/12/2014 and analyzed on 08/13/2014.

Barium, Calcium, Magnesium, Thallium and Zinc were detected in method blank MB 240-142428/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Samples AMW-05B (20140806) (240-40552-1), AMW-05 (20140807) (240-40552-3), AMW-19 (20140807) (240-40552-4), AMW-20 (20140807) (240-40552-5), DUP-002 (20140807) (240-40552-6) and AMW-07 (20140807) (240-40552-8) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 08/12/2014 and analyzed on 08/14/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-40552-1	**AMW-05B (20140806)**					
1,2,3-Trichlorobenzene		0.17	J	1.0	ug/L	8260B
Carbon disulfide		0.18	J	1.0	ug/L	8260B
Chloromethane		0.46	J	1.0	ug/L	8260B
Hexachlorobutadiene		0.52	J	1.0	ug/L	8260B
Trichloroethene		0.36	J	1.0	ug/L	8260B
Dissolved						
Barium		54	J B	200	ug/L	6010B
Chromium		2.4	J	10	ug/L	6010B
Calcium		130000	B	5000	ug/L	6010B
Cobalt		6.3	J	7.0	ug/L	6010B
Iron		6000		100	ug/L	6010B
Potassium		2900	J	5000	ug/L	6010B
Magnesium		40000	B	5000	ug/L	6010B
Manganese		190		15	ug/L	6010B
Sodium		23000		5000	ug/L	6010B
Nickel		9.8	J	40	ug/L	6010B
Thallium		4.7	J B	10	ug/L	6010B
Zinc		10	J B	50	ug/L	6010B
240-40552-2EB	**EB-001 (20140806)**					
Acetone		4.8	J B	10	ug/L	8260B
Carbon disulfide		2.2		1.0	ug/L	8260B
Chloromethane		0.34	J	1.0	ug/L	8260B
2-Butanone (MEK)		0.79	J	10	ug/L	8260B
240-40552-3	**AMW-05 (20140807)**					
Acetone		1.3	J B	10	ug/L	8260B
Chloromethane		4.4		1.0	ug/L	8260B
Tetrachloroethene		0.32	J	1.0	ug/L	8260B
Trichloroethene		3.2		1.0	ug/L	8260B
Dissolved						
Barium		73	J B	200	ug/L	6010B
Calcium		130000	B	5000	ug/L	6010B
Cobalt		2.7	J	7.0	ug/L	6010B
Potassium		7200		5000	ug/L	6010B
Magnesium		53000	B	5000	ug/L	6010B
Manganese		64		15	ug/L	6010B
Sodium		120000		5000	ug/L	6010B
Nickel		31	J	40	ug/L	6010B
Zinc		27	J B	50	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-40552-4	**AMW-19 (20140807)**					
Chloromethane		2.8		1.0	ug/L	8260B
Dissolved						
Barium		120	J B	200	ug/L	6010B
Arsenic		3.7	J	10	ug/L	6010B
Calcium		160000	B	5000	ug/L	6010B
Potassium		2400	J	5000	ug/L	6010B
Magnesium		42000	B	5000	ug/L	6010B
Manganese		110		15	ug/L	6010B
Sodium		31000		5000	ug/L	6010B
240-40552-5	**AMW-20 (20140807)**					
Chloromethane		4.6		1.0	ug/L	8260B
Dissolved						
Barium		160	J B	200	ug/L	6010B
Calcium		200000	B	5000	ug/L	6010B
Iron		380		100	ug/L	6010B
Potassium		3100	J	5000	ug/L	6010B
Magnesium		55000	B	5000	ug/L	6010B
Manganese		1400		15	ug/L	6010B
Sodium		58000		5000	ug/L	6010B
Nickel		5.5	J	40	ug/L	6010B
240-40552-6FD	**DUP-002 (20140807)**					
Chloromethane		2.0		1.0	ug/L	8260B
Dissolved						
Barium		120	J B	200	ug/L	6010B
Calcium		160000	B	5000	ug/L	6010B
Potassium		2500	J	5000	ug/L	6010B
Magnesium		43000	B	5000	ug/L	6010B
Manganese		110		15	ug/L	6010B
Sodium		32000		5000	ug/L	6010B
Antimony		2.2	J	10	ug/L	6010B
Thallium		5.2	J B	10	ug/L	6010B
240-40552-7TB	**TRIP BLANK**					
Acetone		1.2	J H B	10	ug/L	8260B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-40552-8	**AMW-07 (20140807)**					
Chloromethane		0.93	J	1.0	ug/L	8260B
Trichloroethene		2.9		1.0	ug/L	8260B
Dissolved						
Barium		32	J B	200	ug/L	6010B
Aluminum		270		200	ug/L	6010B
Beryllium		0.67	J	5.0	ug/L	6010B
Calcium		130000	B	5000	ug/L	6010B
Cobalt		9.6		7.0	ug/L	6010B
Potassium		9100		5000	ug/L	6010B
Magnesium		40000	B	5000	ug/L	6010B
Manganese		110		15	ug/L	6010B
Sodium		67000		5000	ug/L	6010B
Nickel		49		40	ug/L	6010B
Antimony		12		10	ug/L	6010B
Thallium		5.2	J B	10	ug/L	6010B
Zinc		110	B	50	ug/L	6010B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL CAN = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Method	Analyst	Analyst ID
SW846 8260B	Evans, Laura	LEE
SW846 8270C	Gruber, John	JMG
SW846 6010B	Counts, Karen	KLC
SW846 7470A	Martin, Aaron	AMM2

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-40552-1	AMW-05B (20140806)	Water	08/06/2014 1620	08/09/2014 0945
240-40552-2EB	EB-001 (20140806)	Water	08/06/2014 0000	08/09/2014 0945
240-40552-3	AMW-05 (20140807)	Water	08/07/2014 1345	08/09/2014 0945
240-40552-4	AMW-19 (20140807)	Water	08/07/2014 1025	08/09/2014 0945
240-40552-5	AMW-20 (20140807)	Water	08/07/2014 1155	08/09/2014 0945
240-40552-6FD	DUP-002 (20140807)	Water	08/07/2014 0000	08/09/2014 0945
240-40552-7TB	TRIP BLANK	Water	08/06/2014 0000	08/09/2014 0945
240-40552-8	AMW-07 (20140807)	Water	08/07/2014 1640	08/09/2014 0945

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-05B (20140806)**

Lab Sample ID: 240-40552-1 Date Sampled: 08/06/2014 1620
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0238.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1353			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1353				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	0.17	J	0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	0.18	J	0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	0.46	J	0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	0.52	J	0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-05B (20140806)**

Lab Sample ID: 240-40552-1 Date Sampled: 08/06/2014 1620
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0238.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1353			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1353				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	0.36	J	0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		63 - 129
4-Bromofluorobenzene (Surr)	85		66 - 120
Toluene-d8 (Surr)	90		74 - 120
Dibromofluoromethane (Surr)	102		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **EB-001 (20140806)**

Lab Sample ID: 240-40552-2EB Date Sampled: 08/06/2014 0000
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0239.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1415			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1415				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	4.8	J B	1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	2.2		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	0.34	J	0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **EB-001 (20140806)**

Lab Sample ID: 240-40552-2EB Date Sampled: 08/06/2014 0000
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0239.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1415			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1415				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	0.79	J	0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		63 - 129
4-Bromofluorobenzene (Surr)	85		66 - 120
Toluene-d8 (Surr)	89		74 - 120
Dibromofluoromethane (Surr)	103		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-05 (20140807)**

Lab Sample ID: 240-40552-3 Date Sampled: 08/07/2014 1345
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0240.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1439			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1439				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	1.3	J B	1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	4.4		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-05 (20140807)**

Lab Sample ID: 240-40552-3 Date Sampled: 08/07/2014 1345
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0240.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1439			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1439				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	0.32	J	0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	3.2		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		63 - 129
4-Bromofluorobenzene (Surr)	82		66 - 120
Toluene-d8 (Surr)	87		74 - 120
Dibromofluoromethane (Surr)	103		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-19 (20140807)**

Lab Sample ID: 240-40552-4 Date Sampled: 08/07/2014 1025
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0241.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1501			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1501				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	2.8		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-19 (20140807)**

Lab Sample ID: 240-40552-4 Date Sampled: 08/07/2014 1025
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0241.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1501			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1501				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		63 - 129
4-Bromofluorobenzene (Surr)	82		66 - 120
Toluene-d8 (Surr)	89		74 - 120
Dibromofluoromethane (Surr)	101		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-20 (20140807)**

Lab Sample ID: 240-40552-5 Date Sampled: 08/07/2014 1155
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0242.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1524			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1524				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	4.6		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-20 (20140807)**

Lab Sample ID: 240-40552-5 Date Sampled: 08/07/2014 1155
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0242.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1524			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1524				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		63 - 129
4-Bromofluorobenzene (Surr)	88		66 - 120
Toluene-d8 (Surr)	92		74 - 120
Dibromofluoromethane (Surr)	104		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **DUP-002 (20140807)**

Lab Sample ID: 240-40552-6FD Date Sampled: 08/07/2014 0000
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0243.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1547			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1547				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	2.0		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **DUP-002 (20140807)**

Lab Sample ID: 240-40552-6FD Date Sampled: 08/07/2014 0000
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0243.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1547			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1547				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		63 - 129
4-Bromofluorobenzene (Surr)	85		66 - 120
Toluene-d8 (Surr)	88		74 - 120
Dibromofluoromethane (Surr)	99		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-40552-7TB Date Sampled: 08/06/2014 0000
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0244.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1611			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1611				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND	H	0.23	1.0
1,1,1-Trichloroethane	ND	H	0.22	1.0
1,1,2,2-Tetrachloroethane	ND	H	0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	H	0.28	1.0
1,1,2-Trichloroethane	ND	H	0.27	1.0
1,1-Dichloroethane	ND	H	0.15	1.0
1,1-Dichloroethene	ND	H	0.19	1.0
1,1-Dichloropropene	ND	H	0.13	1.0
1,2,3-Trichlorobenzene	ND	H	0.17	1.0
1,2,3-Trichloropropane	ND	H	0.43	1.0
1,2,4-Trichlorobenzene	ND	H	0.15	1.0
1,2,4-Trimethylbenzene	ND	H	0.12	1.0
1,2-Dibromo-3-Chloropropane	ND	H	0.67	2.0
1,2-Dichlorobenzene	ND	H	0.13	1.0
1,2-Dichloroethane	ND	H	0.22	1.0
1,2-Dichloropropane	ND	H	0.18	1.0
1,3,5-Trimethylbenzene	ND	H	0.096	1.0
1,3-Dichlorobenzene	ND	H	0.14	1.0
1,3-Dichloropropane	ND	H	0.16	1.0
1,4-Dichlorobenzene	ND	H	0.13	1.0
Allyl chloride	ND	H	0.35	2.0
2,2-Dichloropropane	ND	H	0.13	1.0
2-Chlorotoluene	ND	H	0.11	1.0
2-Hexanone	ND	H	0.41	10
Bromobenzene	ND	H	0.13	1.0
Bromochloromethane	ND	H	0.29	1.0
4-Chlorotoluene	ND	H	0.18	1.0
p-Isopropyltoluene	ND	H	0.12	1.0
Acetone	1.2	J H B	1.1	10
Benzene	ND	H	0.13	1.0
Bromoform	ND	H	0.64	1.0
Bromomethane	ND	H	0.41	1.0
Carbon disulfide	ND	H	0.13	1.0
Carbon tetrachloride	ND	H	0.13	1.0
Chlorobenzene	ND	H	0.15	1.0
Chloroethane	ND	H	0.29	1.0
Chloroform	ND	H	0.16	1.0
Chloromethane	ND	H	0.30	1.0
cis-1,2-Dichloroethene	ND	H	0.17	1.0
cis-1,3-Dichloropropene	ND	H	0.14	1.0
Cyclohexane	ND	H	0.12	1.0
Hexachlorobutadiene	ND	H	0.30	1.0
Dibromomethane	ND	H	0.28	1.0
Bromodichloromethane	ND	H	0.15	1.0
Dichlorodifluoromethane	ND	H	0.31	1.0
Dichlorofluoromethane	ND	H	0.42	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-40552-7TB Date Sampled: 08/06/2014 0000
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0244.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1611			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1611				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND	H	0.31	1.0
Ethylbenzene	ND	H	0.17	1.0
1,2-Dibromoethane	ND	H	0.24	1.0
Naphthalene	ND	H	0.24	1.0
m-Xylene & p-Xylene	ND	H	0.24	2.0
n-Butylbenzene	ND	H	0.12	1.0
Isopropylbenzene	ND	H	0.13	1.0
Methyl acetate	ND	H	0.38	10
N-Propylbenzene	ND	H	0.14	1.0
2-Butanone (MEK)	ND	H	0.57	10
4-Methyl-2-pentanone (MIBK)	ND	H	0.32	5.0
sec-Butylbenzene	ND	H	0.13	1.0
Methyl tert butyl ether	ND	H	0.17	2.0
Methylene Chloride	ND	H	0.33	1.0
o-Xylene	ND	H	0.14	1.0
Styrene	ND	H	0.11	1.0
tert-Butylbenzene	ND	H	0.13	1.0
Tetrachloroethene	ND	H	0.29	1.0
Tetrahydrofuran	ND	H	0.42	5.0
Toluene	ND	H	0.13	1.0
trans-1,2-Dichloroethene	ND	H	0.19	1.0
trans-1,3-Dichloropropene	ND	H	0.19	1.0
Trichloroethene	ND	H	0.17	1.0
Trichlorofluoromethane	ND	H	0.21	1.0
Vinyl chloride	ND	H	0.22	1.0
Methylcyclohexane	ND	H	0.13	1.0
Chlorodibromomethane	ND	H	0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		63 - 129
4-Bromofluorobenzene (Surr)	87		66 - 120
Toluene-d8 (Surr)	89		74 - 120
Dibromofluoromethane (Surr)	103		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-07 (20140807)**

Lab Sample ID: 240-40552-8 Date Sampled: 08/07/2014 1640
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0245.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1634			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1634				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	ND		1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	0.93	J	0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0
Dichlorofluoromethane	ND		0.42	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-07 (20140807)**

Lab Sample ID: 240-40552-8 Date Sampled: 08/07/2014 1640
Client Matrix: Water Date Received: 08/09/2014 0945

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ0245.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1634			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1634				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	ND		0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	2.9		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		63 - 129
4-Bromofluorobenzene (Surr)	83		66 - 120
Toluene-d8 (Surr)	88		74 - 120
Dibromofluoromethane (Surr)	106		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-07 (20140807)**

Lab Sample ID: 240-40552-8 Date Sampled: 08/07/2014 1640
Client Matrix: Water Date Received: 08/09/2014 0945

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-142780	Instrument ID:	A4HP7
Prep Method:	3520C	Prep Batch:	240-142593	Lab File ID:	40814021.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	08/14/2014 1804			Final Weight/Volume:	2 mL
Prep Date:	08/13/2014 0751			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	9.5
Acenaphthylene	ND		0.046	9.5
Anthracene	ND		0.084	9.5
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	9.5
Benzo[k]fluoranthene	ND		0.043	9.5
Benzo[g,h,i]perylene	ND		0.044	9.5
Benzo[a]pyrene	ND		0.049	9.5
Chrysene	ND		0.048	9.5
2-Methylnaphthalene	ND		0.086	9.5
Dibenz(a,h)anthracene	ND		0.042	9.5
Fluoranthene	ND		0.042	9.5
Fluorene	ND		0.039	9.5
Indeno[1,2,3-cd]pyrene	ND		0.041	9.5
Naphthalene	ND		0.060	9.5
Phenanthrene	ND		0.059	9.5
Pyrene	ND		0.040	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	63		20 - 110
2-Fluorophenol (Surr)	39		10 - 110
2,4,6-Tribromophenol (Surr)	74		21 - 110
Nitrobenzene-d5 (Surr)	58		21 - 110
Phenol-d5 (Surr)	23		21 - 110
Terphenyl-d14 (Surr)	73		24 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-05B (20140806)**

Lab Sample ID: 240-40552-1 Date Sampled: 08/06/2014 1620
Client Matrix: Water Date Received: 08/09/2014 0945

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-142742	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-142428	Lab File ID:	I9081314A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/13/2014 1336			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 0934				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	54	J B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	2.4	J	2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	130000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	6.3	J	1.7	7.0
Copper	ND		4.5	25
Iron	6000		81	100
Potassium	2900	J	72	5000
Magnesium	40000	B	34	5000
Manganese	190		0.96	15
Sodium	23000		590	5000
Nickel	9.8	J	3.2	40
Antimony	ND		2.1	10
Thallium	4.7	J B	4.7	10
Vanadium	ND		2.4	7.0
Zinc	10	J B	5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-142937	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-142441	Lab File ID:	081414A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/14/2014 1522			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 1440				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-05 (20140807)**

Lab Sample ID: 240-40552-3 Date Sampled: 08/07/2014 1345
Client Matrix: Water Date Received: 08/09/2014 0945

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-142742	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-142428	Lab File ID:	I9081314A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/13/2014 1428			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 0934				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	73	J B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	130000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	2.7	J	1.7	7.0
Copper	ND		4.5	25
Iron	ND		81	100
Potassium	7200		72	5000
Magnesium	53000	B	34	5000
Manganese	64		0.96	15
Sodium	120000		590	5000
Nickel	31	J	3.2	40
Antimony	ND		2.1	10
Thallium	ND		4.7	10
Vanadium	ND		2.4	7.0
Zinc	27	J B	5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-142937	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-142441	Lab File ID:	081414A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/14/2014 1450			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 1440				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-19 (20140807)**

Lab Sample ID: 240-40552-4 Date Sampled: 08/07/2014 1025
Client Matrix: Water Date Received: 08/09/2014 0945

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-142742	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-142428	Lab File ID:	I9081314A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/13/2014 1432			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 0934				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	120	J B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	3.7	J	3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	160000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	ND		1.7	7.0
Copper	ND		4.5	25
Iron	ND		81	100
Potassium	2400	J	72	5000
Magnesium	42000	B	34	5000
Manganese	110		0.96	15
Sodium	31000		590	5000
Nickel	ND		3.2	40
Antimony	ND		2.1	10
Thallium	ND		4.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-142937	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-142441	Lab File ID:	081414A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/14/2014 1500			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 1440				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-20 (20140807)**

Lab Sample ID: 240-40552-5 Date Sampled: 08/07/2014 1155
Client Matrix: Water Date Received: 08/09/2014 0945

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-142742	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-142428	Lab File ID:	I9081314A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/13/2014 1436			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 0934				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	160	J B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	200000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	ND		1.7	7.0
Copper	ND		4.5	25
Iron	380		81	100
Potassium	3100	J	72	5000
Magnesium	55000	B	34	5000
Manganese	1400		0.96	15
Sodium	58000		590	5000
Nickel	5.5	J	3.2	40
Antimony	ND		2.1	10
Thallium	ND		4.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-142937	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-142441	Lab File ID:	081414A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/14/2014 1502			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 1440				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **DUP-002 (20140807)**

Lab Sample ID: 240-40552-6FD Date Sampled: 08/07/2014 0000
Client Matrix: Water Date Received: 08/09/2014 0945

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-142742	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-142428	Lab File ID:	I9081314A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/13/2014 1440			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 0934				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	120	J B	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	160000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	ND		1.7	7.0
Copper	ND		4.5	25
Iron	ND		81	100
Potassium	2500	J	72	5000
Magnesium	43000	B	34	5000
Manganese	110		0.96	15
Sodium	32000		590	5000
Nickel	ND		3.2	40
Antimony	2.2	J	2.1	10
Thallium	5.2	J B	4.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-142937	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-142441	Lab File ID:	081414A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/14/2014 1516			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 1440				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Client Sample ID: **AMW-07 (20140807)**

Lab Sample ID: 240-40552-8 Date Sampled: 08/07/2014 1640
Client Matrix: Water Date Received: 08/09/2014 0945

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-142742	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-142428	Lab File ID:	I9081314A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/13/2014 1444			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 0934				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	32	J B	0.67	200
Aluminum	270		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	0.67	J	0.46	5.0
Lead	ND		1.9	3.0
Calcium	130000	B	130	5000
Selenium	ND		4.1	5.0
Cobalt	9.6		1.7	7.0
Copper	ND		4.5	25
Iron	ND		81	100
Potassium	9100		72	5000
Magnesium	40000	B	34	5000
Manganese	110		0.96	15
Sodium	67000		590	5000
Nickel	49		3.2	40
Antimony	12		2.1	10
Thallium	5.2	J B	4.7	10
Vanadium	ND		2.4	7.0
Zinc	110	B	5.0	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-142937	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-142441	Lab File ID:	081414A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/14/2014 1504			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 1440				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.12	0.20

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time
Metals		
	B	Compound was found in the blank and sample.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-142797					
LCS 240-142797/4	Lab Control Sample	T	Water	8260B	
MB 240-142797/5	Method Blank	T	Water	8260B	
240-40483-C-9 MS	Matrix Spike	T	Water	8260B	
240-40483-C-9 MSD	Matrix Spike Duplicate	T	Water	8260B	
240-40552-1	AMW-05B (20140806)	T	Water	8260B	
240-40552-2EB	EB-001 (20140806)	T	Water	8260B	
240-40552-3	AMW-05 (20140807)	T	Water	8260B	
240-40552-4	AMW-19 (20140807)	T	Water	8260B	
240-40552-5	AMW-20 (20140807)	T	Water	8260B	
240-40552-6FD	DUP-002 (20140807)	T	Water	8260B	
240-40552-7TB	TRIP BLANK	T	Water	8260B	
240-40552-8	AMW-07 (20140807)	T	Water	8260B	

Report Basis
T = Total

GC/MS Semi VOA

Prep Batch: 240-142593					
LCS 240-142593/4-A	Lab Control Sample	T	Water	3520C	
MB 240-142593/3-A	Method Blank	T	Water	3520C	
240-40552-8	AMW-07 (20140807)	T	Water	3520C	
Analysis Batch:240-142780					
LCS 240-142593/4-A	Lab Control Sample	T	Water	8270C	240-142593
MB 240-142593/3-A	Method Blank	T	Water	8270C	240-142593
240-40552-8	AMW-07 (20140807)	T	Water	8270C	240-142593

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-142428					
LCS 240-142428/2-A	Lab Control Sample	R	Water	3005A	
MB 240-142428/1-A	Method Blank	R	Water	3005A	
240-40552-1	AMW-05B (20140806)	D	Water	3005A	
240-40552-1MS	Matrix Spike	D	Water	3005A	
240-40552-1MSD	Matrix Spike Duplicate	D	Water	3005A	
240-40552-3	AMW-05 (20140807)	D	Water	3005A	
240-40552-4	AMW-19 (20140807)	D	Water	3005A	
240-40552-5	AMW-20 (20140807)	D	Water	3005A	
240-40552-6FD	DUP-002 (20140807)	D	Water	3005A	
240-40552-8	AMW-07 (20140807)	D	Water	3005A	
Prep Batch: 240-142441					
LCS 240-142441/2-A	Lab Control Sample	T	Water	7470A	
MB 240-142441/1-A	Method Blank	T	Water	7470A	
240-40552-1	AMW-05B (20140806)	D	Water	7470A	
240-40552-3	AMW-05 (20140807)	D	Water	7470A	
240-40552-3MS	Matrix Spike	D	Water	7470A	
240-40552-3MSD	Matrix Spike Duplicate	D	Water	7470A	
240-40552-4	AMW-19 (20140807)	D	Water	7470A	
240-40552-5	AMW-20 (20140807)	D	Water	7470A	
240-40552-6FD	DUP-002 (20140807)	D	Water	7470A	
240-40552-8	AMW-07 (20140807)	D	Water	7470A	
Analysis Batch:240-142742					
LCS 240-142428/2-A	Lab Control Sample	R	Water	6010B	240-142428
MB 240-142428/1-A	Method Blank	R	Water	6010B	240-142428
240-40552-1	AMW-05B (20140806)	D	Water	6010B	240-142428
240-40552-1MS	Matrix Spike	D	Water	6010B	240-142428
240-40552-1MSD	Matrix Spike Duplicate	D	Water	6010B	240-142428
240-40552-3	AMW-05 (20140807)	D	Water	6010B	240-142428
240-40552-4	AMW-19 (20140807)	D	Water	6010B	240-142428
240-40552-5	AMW-20 (20140807)	D	Water	6010B	240-142428
240-40552-6FD	DUP-002 (20140807)	D	Water	6010B	240-142428
240-40552-8	AMW-07 (20140807)	D	Water	6010B	240-142428

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-142937					
LCS 240-142441/2-A	Lab Control Sample	T	Water	7470A	240-142441
MB 240-142441/1-A	Method Blank	T	Water	7470A	240-142441
240-40552-1	AMW-05B (20140806)	D	Water	7470A	240-142441
240-40552-3	AMW-05 (20140807)	D	Water	7470A	240-142441
240-40552-3MS	Matrix Spike	D	Water	7470A	240-142441
240-40552-3MSD	Matrix Spike Duplicate	D	Water	7470A	240-142441
240-40552-4	AMW-19 (20140807)	D	Water	7470A	240-142441
240-40552-5	AMW-20 (20140807)	D	Water	7470A	240-142441
240-40552-6FD	DUP-002 (20140807)	D	Water	7470A	240-142441
240-40552-8	AMW-07 (20140807)	D	Water	7470A	240-142441

Report Basis

D = Dissolved

R = Total Recoverable

T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-40552-1	AMW-05B (20140806)	99	85	90	102
240-40552-2	EB-001 (20140806)	97	85	89	103
240-40552-3	AMW-05 (20140807)	104	82	87	103
240-40552-4	AMW-19 (20140807)	99	82	89	101
240-40552-5	AMW-20 (20140807)	103	88	92	104
240-40552-6	DUP-002 (20140807)	96	85	88	99
240-40552-7	TRIP BLANK	100	87	89	103
240-40552-8	AMW-07 (20140807)	102	83	88	106
MB 240-142797/5		96	84	86	95
LCS 240-142797/4		87	98	90	94
240-40483-C-9 MS		88	101	95	94
240-40483-C-9 MSD		92	95	92	95

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
BFB = 4-Bromofluorobenzene (Surr)	66-120
TOL = Toluene-d8 (Surr)	74-120
DBFM = Dibromofluoromethane (Surr)	75-121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-40552-8	AMW-07 (20140807)	63	39	74	58	23	73
MB 240-142593/3-A		63	50	65	59	35	81
LCS 240-142593/4-A		68	53	82	66	36	74

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	20-110
2FP = 2-Fluorophenol (Surr)	10-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
PHL = Phenol-d5 (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Method Blank - Batch: 240-142797

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-142797/5	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ0232.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1134	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1134				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.23	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.18	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.28	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1-Dichloroethane	ND		0.15	1.0
1,1-Dichloroethene	ND		0.19	1.0
1,1-Dichloropropene	ND		0.13	1.0
1,2,3-Trichlorobenzene	ND		0.17	1.0
1,2,3-Trichloropropane	ND		0.43	1.0
1,2,4-Trichlorobenzene	ND		0.15	1.0
1,2,4-Trimethylbenzene	ND		0.12	1.0
1,2-Dibromo-3-Chloropropane	ND		0.67	2.0
1,2-Dichlorobenzene	ND		0.13	1.0
1,2-Dichloroethane	ND		0.22	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,3,5-Trimethylbenzene	ND		0.096	1.0
1,3-Dichlorobenzene	ND		0.14	1.0
1,3-Dichloropropane	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.13	1.0
Allyl chloride	ND		0.35	2.0
2,2-Dichloropropane	ND		0.13	1.0
2-Chlorotoluene	ND		0.11	1.0
2-Hexanone	ND		0.41	10
Bromobenzene	ND		0.13	1.0
Bromochloromethane	ND		0.29	1.0
4-Chlorotoluene	ND		0.18	1.0
p-Isopropyltoluene	ND		0.12	1.0
Acetone	1.27	J	1.1	10
Benzene	ND		0.13	1.0
Bromoform	ND		0.64	1.0
Bromomethane	ND		0.41	1.0
Carbon disulfide	ND		0.13	1.0
Carbon tetrachloride	ND		0.13	1.0
Chlorobenzene	ND		0.15	1.0
Chloroethane	ND		0.29	1.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	1.0
cis-1,2-Dichloroethene	ND		0.17	1.0
cis-1,3-Dichloropropene	ND		0.14	1.0
Cyclohexane	ND		0.12	1.0
Hexachlorobutadiene	ND		0.30	1.0
Dibromomethane	ND		0.28	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.31	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Method Blank - Batch: 240-142797

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-142797/5	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ0232.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1134	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1134				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.42	2.0
Ethyl ether	ND		0.31	2.0
Ethylbenzene	ND		0.17	1.0
1,2-Dibromoethane	ND		0.24	1.0
Naphthalene	ND		0.24	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.12	1.0
Isopropylbenzene	ND		0.13	1.0
Methyl acetate	ND		0.38	10
N-Propylbenzene	ND		0.14	1.0
2-Butanone (MEK)	ND		0.57	10
4-Methyl-2-pentanone (MIBK)	ND		0.32	10
sec-Butylbenzene	ND		0.13	1.0
Methyl tert butyl ether	ND		0.17	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.14	1.0
Styrene	ND		0.11	1.0
tert-Butylbenzene	ND		0.13	1.0
Tetrachloroethene	ND		0.29	1.0
Tetrahydrofuran	0.925	J	0.42	5.0
Toluene	ND		0.13	1.0
trans-1,2-Dichloroethene	ND		0.19	1.0
trans-1,3-Dichloropropene	ND		0.19	1.0
Trichloroethene	ND		0.17	1.0
Trichlorofluoromethane	ND		0.21	1.0
Vinyl chloride	ND		0.22	1.0
Methylcyclohexane	ND		0.13	1.0
Chlorodibromomethane	ND		0.18	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	63 - 129
4-Bromofluorobenzene (Surr)	84	66 - 120
Toluene-d8 (Surr)	86	74 - 120
Dibromofluoromethane (Surr)	95	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Lab Control Sample - Batch: 240-142797

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-142797/4	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ0229.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1025	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1025				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	10.2	102	72 - 120	
1,1,1-Trichloroethane	10.0	10.6	106	74 - 120	
1,1,2,2-Tetrachloroethane	10.0	9.21	92	68 - 120	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.77	98	74 - 151	
1,1,2-Trichloroethane	10.0	9.96	100	80 - 120	
1,1-Dichloroethane	10.0	10.6	106	80 - 120	
1,1-Dichloroethene	10.0	9.66	97	78 - 131	
1,1-Dichloropropene	10.0	11.0	110	80 - 120	
1,2,3-Trichlorobenzene	10.0	9.68	97	54 - 126	
1,2,3-Trichloropropane	10.0	9.08	91	73 - 129	
1,2,4-Trichlorobenzene	10.0	9.60	96	48 - 135	
1,2,4-Trimethylbenzene	10.0	10.3	103	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	8.75	87	42 - 136	
1,2-Dichlorobenzene	10.0	9.91	99	80 - 120	
1,2-Dichloroethane	10.0	10.6	106	71 - 127	
1,2-Dichloropropane	10.0	10.3	103	80 - 120	
1,3,5-Trimethylbenzene	10.0	10.3	103	72 - 120	
1,3-Dichlorobenzene	10.0	9.60	96	80 - 120	
1,3-Dichloropropane	10.0	9.72	97	79 - 120	
1,4-Dichlorobenzene	10.0	9.75	97	80 - 120	
Allyl chloride	10.0	9.02	90	40 - 160	
2,2-Dichloropropane	10.0	10.5	105	50 - 129	
2-Chlorotoluene	10.0	9.75	98	76 - 120	
2-Hexanone	20.0	17.9	90	55 - 133	
Bromobenzene	10.0	9.61	96	76 - 120	
Bromochloromethane	10.0	10.2	102	77 - 120	
4-Chlorotoluene	10.0	9.87	99	77 - 120	
p-Isopropyltoluene	10.0	10.1	101	74 - 120	
Acetone	20.0	17.2	86	43 - 136	
Benzene	10.0	10.5	105	80 - 120	
Bromoform	10.0	9.13	91	40 - 131	
Bromomethane	10.0	10.7	107	11 - 185	
Carbon disulfide	10.0	10.5	105	62 - 142	
Carbon tetrachloride	10.0	10.5	105	66 - 128	
Chlorobenzene	10.0	10.4	104	80 - 120	
Chloroethane	10.0	10.3	103	25 - 153	
Chloroform	10.0	10.6	106	79 - 120	
Chloromethane	10.0	10.6	106	44 - 126	
cis-1,2-Dichloroethene	10.0	10.7	107	80 - 120	
cis-1,3-Dichloropropene	10.0	11.1	111	61 - 120	
Cyclohexane	10.0	9.55	96	54 - 121	

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Lab Control Sample - Batch: 240-142797

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-142797/4	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ0229.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1025	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1025				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	9.13	91	36 - 134	
Dibromomethane	10.0	10.0	100	80 - 120	
Bromodichloromethane	10.0	10.2	102	72 - 121	
Dichlorodifluoromethane	10.0	9.96	100	19 - 129	
Dichlorofluoromethane	10.0	10.9	109	40 - 160	
Ethyl ether	10.0	10.8	108	53 - 135	
Ethylbenzene	10.0	10.0	100	80 - 120	
1,2-Dibromoethane	10.0	9.87	99	79 - 120	
Naphthalene	10.0	9.31	93	32 - 141	
m-Xylene & p-Xylene	10.0	10.5	105	80 - 120	
n-Butylbenzene	10.0	9.80	98	66 - 125	
Isopropylbenzene	10.0	10.5	105	75 - 120	
Methyl acetate	50.0	47.8	96	58 - 131	
N-Propylbenzene	10.0	9.64	96	74 - 121	
2-Butanone (MEK)	20.0	18.9	94	60 - 126	
4-Methyl-2-pentanone (MIBK)	20.0	19.0	95	63 - 128	
sec-Butylbenzene	10.0	9.87	99	70 - 120	
Methyl tert butyl ether	10.0	10.1	101	52 - 144	
Methylene Chloride	10.0	10.6	106	66 - 131	
o-Xylene	10.0	10.9	109	80 - 120	
Styrene	10.0	11.3	113	79 - 120	
tert-Butylbenzene	10.0	9.82	98	71 - 120	
Tetrachloroethene	10.0	10.2	102	79 - 120	
Tetrahydrofuran	20.0	19.4	97	23 - 143	
Toluene	10.0	10.4	104	80 - 120	
trans-1,2-Dichloroethene	10.0	10.7	107	80 - 120	
trans-1,3-Dichloropropene	10.0	11.2	112	58 - 120	
Trichloroethene	10.0	10.7	107	76 - 120	
Trichlorofluoromethane	10.0	10.3	103	49 - 157	
Vinyl chloride	10.0	10.7	107	53 - 127	
Methylcyclohexane	10.0	9.29	93	56 - 127	
Chlorodibromomethane	10.0	10.3	103	64 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87	63 - 129
4-Bromofluorobenzene (Surr)	98	66 - 120
Toluene-d8 (Surr)	90	74 - 120
Dibromofluoromethane (Surr)	94	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-142797

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-40483-C-9 MS	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ0236.D
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1307			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1307				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-40483-C-9 MSD	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ0237.D
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1329			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1329				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	96	104	68 - 121	8	30		
1,1,2,2-Tetrachloroethane	93	99	63 - 122	6	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	69	31	70 - 152	14	30	F1	F1
1,1,2-Trichloroethane	103	101	75 - 120	2	30		
1,1-Dichloroethane	99	108	79 - 120	9	30		
1,1-Dichloroethene	99	104	74 - 135	5	30		
1,2,4-Trichlorobenzene	90	95	38 - 138	6	30		
1,2-Dibromo-3-Chloropropane	82	86	32 - 139	5	30		
1,2-Dichlorobenzene	96	102	75 - 120	6	30		
1,2-Dichloroethane	100	109	68 - 129	8	30		
1,2-Dichloropropane	101	110	78 - 120	9	30		
1,3-Dichlorobenzene	92	103	73 - 120	11	30		
1,4-Dichlorobenzene	94	97	75 - 120	3	30		
2-Hexanone	97	94	47 - 139	3	30		
Acetone	82	89	33 - 145	9	30		
Benzene	100	106	72 - 121	5	30		
Bromoform	86	76	32 - 128	12	30		
Bromomethane	94	106	10 - 186	13	30		
Carbon disulfide	93	104	57 - 147	11	30		
Carbon tetrachloride	101	105	59 - 129	4	30		
Chlorobenzene	100	103	80 - 120	2	30		
Chloroethane	97	106	21 - 165	9	30		
Chloroform	98	107	76 - 120	8	30		
Chloromethane	98	110	33 - 132	11	30		
cis-1,2-Dichloroethene	98	107	70 - 120	8	30		
cis-1,3-Dichloropropene	92	99	51 - 120	8	30		
Cyclohexane	106	102	49 - 123	3	30		
Bromodichloromethane	95	104	67 - 120	9	30		
Dichlorodifluoromethane	103	103	17 - 128	0	30		
Ethylbenzene	101	105	75 - 120	4	30		
1,2-Dibromoethane	98	102	74 - 120	4	30		
m-Xylene & p-Xylene	100	105	75 - 120	5	30		

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-142797

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-40483-C-9 MS	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ0236.D
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1307			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1307				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-40483-C-9 MSD	Analysis Batch:	240-142797	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ0237.D
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	08/14/2014 1329			Final Weight/Volume:	5 mL
Prep Date:	08/14/2014 1329				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Isopropylbenzene	104	107	68 - 120	3	30		
Methyl acetate	97	100	47 - 130	3	30		
2-Butanone (MEK)	91	98	54 - 129	8	30		
4-Methyl-2-pentanone (MIBK)	98	100	56 - 131	2	30		
Methyl tert butyl ether	94	104	46 - 144	10	30		
Methylene Chloride	100	107	63 - 128	6	30		
o-Xylene	110	113	76 - 120	3	30		
Styrene	109	114	71 - 120	5	30		
Tetrachloroethene	93	96	70 - 120	1	30		
Toluene	101	106	78 - 120	5	30		
trans-1,2-Dichloroethene	101	105	80 - 120	4	30		
trans-1,3-Dichloropropene	103	101	46 - 120	2	30		
Trichloroethene	93	108	66 - 120	12	30		
Trichlorofluoromethane	93	102	46 - 157	9	30		
Vinyl chloride	98	109	49 - 130	11	30		
Methylcyclohexane	109	97	49 - 127	12	30		
Chlorodibromomethane	92	92	56 - 120	0	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	88	92	63 - 129
4-Bromofluorobenzene (Surr)	101	95	66 - 120
Toluene-d8 (Surr)	95	92	74 - 120
Dibromofluoromethane (Surr)	94	95	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Method Blank - Batch: 240-142593

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 240-142593/3-A	Analysis Batch:	240-142780	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-142593	Lab File ID:	40814006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	08/14/2014 1052	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	08/13/2014 0751			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	ND		0.044	10
Acenaphthylene	ND		0.048	10
Anthracene	ND		0.088	10
Benzo[a]anthracene	ND		0.030	0.20
Benzo[b]fluoranthene	ND		0.039	10
Benzo[k]fluoranthene	ND		0.045	10
Benzo[g,h,i]perylene	ND		0.046	10
Benzo[a]pyrene	ND		0.051	10
Chrysene	ND		0.050	10
2-Methylnaphthalene	ND		0.090	10
Dibenz(a,h)anthracene	ND		0.045	10
Fluoranthene	ND		0.045	10
Fluorene	ND		0.041	10
Indeno[1,2,3-cd]pyrene	ND		0.043	10
Naphthalene	ND		0.063	10
Phenanthrene	ND		0.062	10
Pyrene	ND		0.042	10

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	63	20 - 110
2-Fluorophenol (Surr)	50	10 - 110
2,4,6-Tribromophenol (Surr)	65	21 - 110
Nitrobenzene-d5 (Surr)	59	21 - 110
Phenol-d5 (Surr)	35	21 - 110
Terphenyl-d14 (Surr)	81	24 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Lab Control Sample - Batch: 240-142593

Method: 8270C
Preparation: 3520C

Lab Sample ID:	LCS 240-142593/4-A	Analysis Batch:	240-142780	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-142593	Lab File ID:	40814007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	08/14/2014 1118	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	08/13/2014 0751			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	20.0	13.5	68	47 - 110	
Acenaphthylene	20.0	13.1	66	49 - 110	
Anthracene	20.0	14.3	71	52 - 110	
Benzo[a]anthracene	20.0	14.2	71	52 - 110	
Benzo[b]fluoranthene	20.0	14.8	74	48 - 110	
Benzo[k]fluoranthene	20.0	15.0	75	49 - 110	
Benzo[g,h,i]perylene	20.0	14.1	71	50 - 110	
Benzo[a]pyrene	20.0	14.6	73	44 - 110	
Chrysene	20.0	13.5	68	55 - 110	
2-Methylnaphthalene	20.0	11.8	59	45 - 110	
Dibenz(a,h)anthracene	20.0	14.6	73	49 - 110	
Fluoranthene	20.0	14.7	73	54 - 110	
Fluorene	20.0	14.6	73	52 - 110	
Indeno[1,2,3-cd]pyrene	20.0	14.3	72	50 - 110	
Naphthalene	20.0	11.4	57	44 - 110	
Phenanthrene	20.0	14.3	72	53 - 110	
Pyrene	20.0	14.2	71	52 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	68	20 - 110
2-Fluorophenol (Surr)	53	10 - 110
2,4,6-Tribromophenol (Surr)	82	21 - 110
Nitrobenzene-d5 (Surr)	66	21 - 110
Phenol-d5 (Surr)	36	21 - 110
Terphenyl-d14 (Surr)	74	24 - 110

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Method Blank - Batch: 240-142428

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-142428/1-A	Analysis Batch:	240-142742	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-142428	Lab File ID:	I9081314A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/13/2014 1328	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 0934				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	1.06	J	0.67	200
Aluminum	ND		97	200
Cadmium	ND		0.66	5.0
Chromium	ND		2.2	10
Silver	ND		2.2	10
Arsenic	ND		3.2	10
Beryllium	ND		0.46	5.0
Lead	ND		1.9	3.0
Calcium	412	J	130	5000
Selenium	ND		4.1	5.0
Cobalt	ND		1.7	7.0
Copper	ND		4.5	25
Iron	ND		81	100
Potassium	ND		72	5000
Magnesium	78.1	J	34	5000
Manganese	ND		0.96	15
Sodium	ND		590	5000
Nickel	ND		3.2	40
Antimony	ND		2.1	10
Thallium	4.83	J	4.7	10
Vanadium	ND		2.4	7.0
Zinc	18.9	J	5.0	50

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Lab Control Sample - Batch: 240-142428

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-142428/2-A	Analysis Batch:	240-142742	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-142428	Lab File ID:	I9081314A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/13/2014 1332	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 0934				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1960	98	80 - 120	
Aluminum	2000	2000	100	80 - 120	
Cadmium	50.0	52.5	105	80 - 120	
Chromium	200	195	98	80 - 120	
Silver	50.0	52.6	105	80 - 120	
Arsenic	2000	2000	100	80 - 120	
Beryllium	50.0	48.6	97	80 - 120	
Lead	500	483	97	80 - 120	
Calcium	50000	51200	102	80 - 120	
Selenium	2000	2150	107	80 - 120	
Cobalt	500	482	96	80 - 120	
Copper	250	253	101	80 - 120	
Iron	1000	1010	101	80 - 120	
Potassium	50000	51400	103	80 - 120	
Magnesium	50000	51100	102	80 - 120	
Manganese	500	486	97	80 - 120	
Sodium	50000	51500	103	80 - 120	
Nickel	500	489	98	80 - 120	
Antimony	500	516	103	80 - 120	
Thallium	2000	1950	98	80 - 120	
Vanadium	500	515	103	80 - 120	
Zinc	500	542	108	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-142428

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID:	240-40552-1	Analysis Batch:	240-142742	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-142428	Lab File ID:	I9081314A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/13/2014 1348			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 0934				
Leach Date:	N/A				

MSD Lab Sample ID:	240-40552-1	Analysis Batch:	240-142742	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-142428	Lab File ID:	I9081314A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/13/2014 1351			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 0934				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	101	98	75 - 125	3	20		
Aluminum	105	101	75 - 125	3	20		
Cadmium	109	106	75 - 125	3	20		
Chromium	100	97	75 - 125	3	20		
Silver	110	110	75 - 125	0	20		
Arsenic	104	100	75 - 125	3	20		
Beryllium	100	96	75 - 125	5	20		
Lead	99	96	75 - 125	3	20		
Calcium	106	102	75 - 125	1	20		
Selenium	110	106	75 - 125	3	20		
Cobalt	98	96	75 - 125	3	20		
Copper	106	104	75 - 125	2	20		
Iron	105	103	75 - 125	0	20	4	4
Potassium	107	105	75 - 125	2	20		
Magnesium	105	105	75 - 125	0	20		
Manganese	101	99	75 - 125	1	20		
Sodium	107	107	75 - 125	0	20		
Nickel	99	97	75 - 125	3	20		
Antimony	109	105	75 - 125	3	20		
Thallium	101	98	75 - 125	3	20		
Vanadium	105	101	75 - 125	4	20		
Zinc	97	94	75 - 125	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-40552-1

Method Blank - Batch: 240-142441

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-142441/1-A	Analysis Batch:	240-142937	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-142441	Lab File ID:	081414A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/14/2014 1441	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 1440				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.12	0.20

Lab Control Sample - Batch: 240-142441

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-142441/2-A	Analysis Batch:	240-142937	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-142441	Lab File ID:	081414A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/14/2014 1443	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 1440				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	5.56	111	81 - 123	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-142441

Method: 7470A
Preparation: 7470A
Dissolved

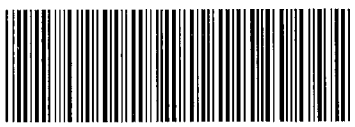
MS Lab Sample ID:	240-40552-3	Analysis Batch:	240-142937	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-142441	Lab File ID:	081414A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/14/2014 1455			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 1440				
Leach Date:	N/A				

MSD Lab Sample ID:	240-40552-3	Analysis Batch:	240-142937	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-142441	Lab File ID:	081414A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/14/2014 1457			Final Weight/Volume:	50 mL
Prep Date:	08/12/2014 1440				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	96	90	69 - 134	6	20		

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-40552 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Phone 319-277-2401 or 800-750-2401
Fax 319-277-2425

3.8

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: ARCADIS Client #: _____
Address: 430 First Ave N #720
City/State/Zip Code: Minneapolis, MN 55401
Project Manager: Angharad Pagnon
Email Address: angharad.pagnon@arcadis-us.com
Telephone Number: 612 339 9434 Fax: _____
Sampler Name: (Print Name) Adam Salzer Paige Schulz
Sampler Signature: Paige Schulz

Project Name: Ford TCAP
Project #: NE000372.0004
Site/Location ID: St Paul State: MN
Report To: lab contact Denice Pohl
Invoice To: accounts payable
Quote #: _____ PO#: _____

TAT
X Standard
___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: Y (N)
Email Results: (Y) N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify, Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: VOCs	Dissolved TAL metals	PAH	Temperature	QC Deliverables	REMARKS
AMW-05B(20140806)	8/6/14	1620	G	—	GW	1	3						3	1			None	
EB-001(20140806)	8/6/14	—	G	—	—		2						2				X Level 2 (Batch QC)	
AMW-05(20140807)	8/7/14	1345	G	—	GW	1	3						3	1			Level 3	
AMW-19(20140807)	8/7/14	1025	G	—	GW	1	3						3	1			Level 4	
AMW-20(20140807)	8/7/14	1155	G	—	GW	1	3						3	1			Other: _____	
DUP-002(20140807)	8/7/14	—	G	—	GW	1	3						3	1				
Temperature Blank	—	—	—	—	—						1					1		
Trip blank	8/7/14	—	—	—	—		1						1					
AMW-07(20140807)	8/7/14	1640	G	—	GW	1	3				2		3	1	2			

Special Instructions: Dissolved TAL metals samples have been field filtered

LABORATORY COMMENTS:

Relinquished By:	Date: 8-8-14	Time: 1605	Received By:	Date: 8-8-14	Time: 1605
Relinquished By:	Date: 8-8-14	Time:	Received By: Heather Powell	Date: 8/9/14	Time: 8/9/14 0915
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAL-0033 (0708)

Page _____ of _____

Page 54 of 56

08/21/2014

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 40552

Client Arcadis Site Name Ford TCAP

Cooler unpacked by: Heather Pomey

Cooler Received on 8/9/14 Opened on 8/9/14

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A	(CF +2 °C)	Observed Cooler Temp. ____ °C	Corrected Cooler Temp. ____ °C	
IR GUN# 4	(CF -2 °C)	Observed Cooler Temp. ____ °C	Corrected Cooler Temp. ____ °C	☐ See Multiple Cooler Form
IR GUN# 5	(CF 0 °C)	Observed Cooler Temp. ____ °C	Corrected Cooler Temp. ____ °C	
IR GUN# 8	(CF 0 °C)	Observed Cooler Temp. 3.8 °C	Corrected Cooler Temp. 3.8 °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   - -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - -Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC412469
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other .

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: [signature]

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____.

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-05B (20140806)	240-40552-D-1	Plastic 250ml - w/nitric - dis	<2	_____	_____
AMW-05 (20140807)	240-40552-D-3	Plastic 250ml - w/nitric - dis	<2	_____	_____
AMW-19 (20140807)	240-40552-D-4	Plastic 250ml - w/nitric - dis	<2	_____	_____
AMW-20 (20140807)	240-40552-D-5	Plastic 250ml - w/nitric - dis	<2	_____	_____
DUP-002 (20140807)	240-40552-D-6	Plastic 250ml - w/nitric - dis	<2	_____	_____
AMW-07 (20140807)	240-40552-D-8	Plastic 250ml - w/nitric - dis	<2	_____	_____

August 23, 2014

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 40552-1
Sample date: 2014-08-07 2014-08-06
Report received by CADENA: 2014-08-21
Initial Data Verification completed by CADENA: 2014-08-23

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

7 Water sample(s) and 1 trip blank were analyzed for GCMS VOC, GCMS SVOC and Metals parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The following minor QC exceptions or missing information were noted:

EPA 8260B VOC GCMS, batch 142797 MB had detections below RL for acetone and tetrahydrofuran (THF). Based on these detections, client sample results for THF do not require qualification; acetone results for sample -2, -3 and -7 should be considered not-detect and flagged UB.
EPA 6010B metals ICP, batch 142428 MB had detections below RL for barium, calcium, magnesium, thallium and zinc. Based on these detections, client sample -1, -6 and -8 results for thallium should be considered not-detect and flagged UB; client sample -1 and -3 results for zinc should be considered not-detect and flagged UB.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the CADENA CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Inc, 1099 Highland Drive, Suite E, Ann Arbor, MI 48108 517-819-0356

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 40552-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)
240405521	AMW-05B (20140806)	8/6/2014	4:20:00	X		X	X
240405522	EB-001 (20140806)	8/6/2014	12:00:00	X			
240405523	AMW-05 (20140807)	8/7/2014	1:45:00	X		X	X
240405524	AMW-19 (20140807)	8/7/2014	10:25:00	X		X	X
240405525	AMW-20 (20140807)	8/7/2014	11:55:00	X		X	X
240405526	DUP-002 (20140807)	8/7/2014	12:00:00	X		X	X
240405527	TRIP BLANK	8/6/2014	12:00:00	X			
240405528	AMW-07 (20140807)	8/7/2014	4:40:00	X	X	X	X

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 40552-1

	Sample Name:	AMW-05B (20140806)				EB-001 (20140806)				AMW-05 (20140807)			
	Lab Sample ID:	240405521				240405522				240405523			
	Sample Date:	8/6/2014				8/6/2014				8/7/2014			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC													
OSW-8260B													
Acetone	67-64-1					4.8	10	ug/l	UB	1.3	10	ug/l	UB
Metals													
OSW-6010B													
Thallium - Dissolved	7440-28-0	4.7	10	ug/l	UB								
Zinc - Dissolved	7440-66-6	10	50	ug/l	UB					27	50	ug/l	UB

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 40552-1

		Sample Name:	AMW-05B (20140806)			EB-001 (20140806)			
		Lab Sample ID:	240405521			240405522			
		Sample Date:	8/6/2014			8/6/2014			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC									
OSW-8260B									
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	0.17	1.0	ug/l	J	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---

1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	0.79	10	ug/l	J
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---
Acetone	67-64-1	ND	10	ug/l	---	4.8	10	ug/l	UB
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	0.18	1.0	ug/l	J	2.2	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	0.46	1.0	ug/l	J	0.34	1.0	ug/l	J
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	0.52	1.0	ug/l	J	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	0.36	1.0	ug/l	J	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---

GC/MS SVOC

OSW-8270C

2-Methylnaphthalene	91-57-6
Acenaphthene	83-32-9

Acenaphthylene	208-96-8				
Anthracene	120-12-7				
Benzo[a]anthracene	56-55-3				
Benzo[a]pyrene	50-32-8				
Benzo[b]fluoranthene	205-99-2				
Benzo[g,h,i]perylene	191-24-2				
Benzo[k]fluoranthene	207-08-9				
Chrysene	218-01-9				
Dibenz(a,h)anthracene	53-70-3				
Fluoranthene	206-44-0				
Fluorene	86-73-7				
Indeno[1,2,3-cd]pyrene	193-39-5				
Naphthalene	91-20-3				
Phenanthrene	85-01-8				
Pyrene	129-00-0				

Metals

OSW-6010B

Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---
Antimony - Dissolved	7440-36-0	ND	10	ug/l	---
Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---
Barium - Dissolved	7440-39-3	54	200	ug/l	J
Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---
Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---
Calcium - Dissolved	7440-70-2	130000	5000	ug/l	---
Chromium - Dissolved	7440-47-3	2.4	10	ug/l	J
Cobalt - Dissolved	7440-48-4	6.3	7.0	ug/l	J
Copper - Dissolved	7440-50-8	ND	25	ug/l	---
Iron - Dissolved	7439-89-6	6000	100	ug/l	---
Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---
Magnesium - Dissolved	7439-95-4	40000	5000	ug/l	---

Manganese - Dissolved	7439-96-5	190	15	ug/l	---
Nickel - Dissolved	7440-02-0	9.8	40	ug/l	J
Potassium - Dissolved	7440-09-7	2900	5000	ug/l	J
Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---
Silver - Dissolved	7440-22-4	ND	10	ug/l	---
Sodium - Dissolved	7440-23-5	23000	5000	ug/l	---
Thallium - Dissolved	7440-28-0	4.7	10	ug/l	UB
Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---
Zinc - Dissolved	7440-66-6	10	50	ug/l	UB
OSW-7470A					
Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 40552-1

		Sample Name:	AMW-05 (20140807)			AMW-19 (20140807)			
		Lab Sample ID:	240405523			240405524			
		Sample Date:	8/7/2014			8/7/2014			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC									
OSW-8260B									
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---

1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---
Acetone	67-64-1	1.3	10	ug/l	UB	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	4.4	1.0	ug/l	---	2.8	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	0.32	1.0	ug/l	J	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	3.2	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---

GC/MS SVOC

OSW-8270C

2-Methylnaphthalene	91-57-6
Acenaphthene	83-32-9

Acenaphthylene	208-96-8								
Anthracene	120-12-7								
Benzo[a]anthracene	56-55-3								
Benzo[a]pyrene	50-32-8								
Benzo[b]fluoranthene	205-99-2								
Benzo[g,h,i]perylene	191-24-2								
Benzo[k]fluoranthene	207-08-9								
Chrysene	218-01-9								
Dibenz(a,h)anthracene	53-70-3								
Fluoranthene	206-44-0								
Fluorene	86-73-7								
Indeno[1,2,3-cd]pyrene	193-39-5								
Naphthalene	91-20-3								
Phenanthrene	85-01-8								
Pyrene	129-00-0								

Metals

OSW-6010B

Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---	ND	200	ug/l	---
Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---
Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---	3.7	10	ug/l	J
Barium - Dissolved	7440-39-3	73	200	ug/l	J	120	200	ug/l	J
Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Calcium - Dissolved	7440-70-2	130000	5000	ug/l	---	160000	5000	ug/l	---
Chromium - Dissolved	7440-47-3	ND	10	ug/l	---	ND	10	ug/l	---
Cobalt - Dissolved	7440-48-4	2.7	7.0	ug/l	J	ND	7.0	ug/l	---
Copper - Dissolved	7440-50-8	ND	25	ug/l	---	ND	25	ug/l	---
Iron - Dissolved	7439-89-6	ND	100	ug/l	---	ND	100	ug/l	---
Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---
Magnesium - Dissolved	7439-95-4	53000	5000	ug/l	---	42000	5000	ug/l	---

Manganese - Dissolved	7439-96-5	64	15	ug/l	---	110	15	ug/l	---
Nickel - Dissolved	7440-02-0	31	40	ug/l	J	ND	40	ug/l	---
Potassium - Dissolved	7440-09-7	7200	5000	ug/l	---	2400	5000	ug/l	J
Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---
Sodium - Dissolved	7440-23-5	120000	5000	ug/l	---	31000	5000	ug/l	---
Thallium - Dissolved	7440-28-0	ND	10	ug/l	---	ND	10	ug/l	---
Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---	ND	7.0	ug/l	---
Zinc - Dissolved	7440-66-6	27	50	ug/l	UB	ND	50	ug/l	---
OSW-7470A									
Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 40552-1

	Sample Name:								
	Lab Sample ID:	AMW-20 (20140807)				DUP-002 (20140807)			
	Sample Date:	240405525				240405526			
		8/7/2014				8/7/2014			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC									
OSW-8260B									
1,1,1,2-Tetrachloroethane	630-20-6								
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---

1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Chlorotoluene	95-49-8	ND	10	ug/l	---	ND	10	ug/l	---
2-Hexanone	591-78-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Chlorotoluene	106-43-4	ND	10	ug/l	---	ND	10	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Acetone	67-64-1	ND	10	ug/l	---	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	10	ug/l	---	ND	10	ug/l	---
Benzene	71-43-2	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	4.6	1.0	ug/l	---	2.0	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methyl acetate	79-20-9	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	10	ug/l	---	ND	10	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Toluene	108-88-3	ND	5.0	ug/l	---	ND	5.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
		ND	1.0	ug/l	---	ND	1.0	ug/l	---

GC/MS SVOC

OSW-8270C

2-Methylnaphthalene	91-57-6
Acenaphthene	83-32-9

Acenaphthylene	208-96-8								
Anthracene	120-12-7								
Benzo[a]anthracene	56-55-3								
Benzo[a]pyrene	50-32-8								
Benzo[b]fluoranthene	205-99-2								
Benzo[g,h,i]perylene	191-24-2								
Benzo[k]fluoranthene	207-08-9								
Chrysene	218-01-9								
Dibenz(a,h)anthracene	53-70-3								
Fluoranthene	206-44-0								
Fluorene	86-73-7								
Indeno[1,2,3-cd]pyrene	193-39-5								
Naphthalene	91-20-3								
Phenanthrene	85-01-8								
Pyrene	129-00-0								
Metals									
OSW-6010B									
Aluminum - Dissolved	7429-90-5								
Antimony - Dissolved	7440-36-0	ND	200	ug/l	---	ND	200	ug/l	---
Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---	2.2	10	ug/l	J
Barium - Dissolved	7440-39-3	ND	10	ug/l	---	ND	10	ug/l	---
Beryllium - Dissolved	7440-41-7	160	200	ug/l	J	120	200	ug/l	J
Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Calcium - Dissolved	7440-70-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Chromium - Dissolved	7440-47-3	200000	5000	ug/l	---	160000	5000	ug/l	---
Cobalt - Dissolved	7440-48-4	ND	10	ug/l	---	ND	10	ug/l	---
Copper - Dissolved	7440-50-8	ND	7.0	ug/l	---	ND	7.0	ug/l	---
Iron - Dissolved	7439-89-6	ND	25	ug/l	---	ND	25	ug/l	---
Lead - Dissolved	7439-92-1	380	100	ug/l	---	ND	100	ug/l	---
Magnesium - Dissolved	7439-95-4	ND	3.0	ug/l	---	ND	3.0	ug/l	---

Manganese - Dissolved	7439-96-5	55000	5000	ug/l	---	43000	5000	ug/l	---
Nickel - Dissolved	7440-02-0	1400	15	ug/l	---	110	15	ug/l	---
Potassium - Dissolved	7440-09-7	5.5	40	ug/l	J	ND	40	ug/l	---
Selenium - Dissolved	7782-49-2	3100	5000	ug/l	J	2500	5000	ug/l	J
Silver - Dissolved	7440-22-4	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Sodium - Dissolved	7440-23-5	ND	10	ug/l	---	ND	10	ug/l	---
Thallium - Dissolved	7440-28-0	58000	5000	ug/l	---	32000	5000	ug/l	---
Vanadium - Dissolved	7440-62-2	ND	10	ug/l	---	5.2	10	ug/l	UB
Zinc - Dissolved	7440-66-6	ND	7.0	ug/l	---	ND	7.0	ug/l	---
OSW-7470A		ND	50	ug/l	---	ND	50	ug/l	---
Mercury - Dissolved	7439-97-6								
		ND	0.20	ug/l	---	ND	0.20	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572

Laboratory: TestAmerica - North Canton

Laboratory Submittal: 40552-1

	Sample Name:	TRIP BLANK				AMW-07 (20140807)			
	Lab Sample ID:	240405527				240405528			
	Sample Date:	8/6/2014				8/7/2014			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC									
OSW-8260B									
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---

1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	5.0	ug/l	---	ND	10	ug/l	---
Acetone	67-64-1	1.2	10	ug/l	UB	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	0.93	1.0	ug/l	J
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---	ND	2.0	ug/l	---
Ethyl ether	60-29-7	ND	1.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	2.9	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---

GC/MS SVOC

OSW-8270C

2-Methylnaphthalene	91-57-6					ND	9.5	ug/l	---
Acenaphthene	83-32-9					ND	9.5	ug/l	---

Acenaphthylene	208-96-8	ND	9.5	ug/l	---
Anthracene	120-12-7	ND	9.5	ug/l	---
Benzo[a]anthracene	56-55-3	ND	0.19	ug/l	---
Benzo[a]pyrene	50-32-8	ND	9.5	ug/l	---
Benzo[b]fluoranthene	205-99-2	ND	9.5	ug/l	---
Benzo[g,h,i]perylene	191-24-2	ND	9.5	ug/l	---
Benzo[k]fluoranthene	207-08-9	ND	9.5	ug/l	---
Chrysene	218-01-9	ND	9.5	ug/l	---
Dibenz(a,h)anthracene	53-70-3	ND	9.5	ug/l	---
Fluoranthene	206-44-0	ND	9.5	ug/l	---
Fluorene	86-73-7	ND	9.5	ug/l	---
Indeno[1,2,3-cd]pyrene	193-39-5	ND	9.5	ug/l	---
Naphthalene	91-20-3	ND	9.5	ug/l	---
Phenanthrene	85-01-8	ND	9.5	ug/l	---
Pyrene	129-00-0	ND	9.5	ug/l	---

Metals

OSW-6010B

Aluminum - Dissolved	7429-90-5	270	200	ug/l	---
Antimony - Dissolved	7440-36-0	12	10	ug/l	---
Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---
Barium - Dissolved	7440-39-3	32	200	ug/l	J
Beryllium - Dissolved	7440-41-7	0.67	5.0	ug/l	J
Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---
Calcium - Dissolved	7440-70-2	130000	5000	ug/l	---
Chromium - Dissolved	7440-47-3	ND	10	ug/l	---
Cobalt - Dissolved	7440-48-4	9.6	7.0	ug/l	---
Copper - Dissolved	7440-50-8	ND	25	ug/l	---
Iron - Dissolved	7439-89-6	ND	100	ug/l	---
Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---
Magnesium - Dissolved	7439-95-4	40000	5000	ug/l	---

Manganese - Dissolved	7439-96-5	110	15	ug/l	---
Nickel - Dissolved	7440-02-0	49	40	ug/l	---
Potassium - Dissolved	7440-09-7	9100	5000	ug/l	---
Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---
Silver - Dissolved	7440-22-4	ND	10	ug/l	---
Sodium - Dissolved	7440-23-5	67000	5000	ug/l	---
Thallium - Dissolved	7440-28-0	5.2	10	ug/l	UB
Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---
Zinc - Dissolved	7440-66-6	110	50	ug/l	---
OSW-7470A					
Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---

ANALYTICAL REPORT

Job Number: 240-42049-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
430 First Avenue, North
Suite 720
Minneapolis, MN 55304

Attention: Ms. Angharad Pagnon

Approved for release.
Denise Pohl
Project Manager II
9/25/2014 8:21 AM

Denise Pohl, Project Manager II
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09/25/2014

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-42049-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 9/18/2014 7:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-19 (20140916) (240-42049-1), AMW-20 (20140916) (240-42049-2), AMW-05 (20140916) (240-42049-3), AMW-07 (20140916) (240-42049-4), DUP-003 (20140916) (240-42049-5), EB-02 (20140916) (240-42049-6) and TRIP BLANK (240-42049-7) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 09/23/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Sample AMW-07 (20140916) (240-42049-4) was analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 09/22/2014 and analyzed on 09/23/2014.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP)

Samples AMW-19 (20140916) (240-42049-1), AMW-20 (20140916) (240-42049-2), AMW-05 (20140916) (240-42049-3), AMW-07 (20140916) (240-42049-4) and DUP-003 (20140916) (240-42049-5) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 09/19/2014 and analyzed on 09/22/2014.

Iron, Manganese and Sodium were detected in method blank MB 240-147761/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Samples AMW-19 (20140916) (240-42049-1), AMW-20 (20140916) (240-42049-2), AMW-05 (20140916) (240-42049-3), AMW-07 (20140916) (240-42049-4) and DUP-003 (20140916) (240-42049-5) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 09/19/2014 and analyzed on 09/22/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-42049-1	**AMW-19 (20140916)**					
Chloromethane		5.6		1.0	ug/L	8260B
Dissolved						
Barium		160	J	200	ug/L	6010B
Cadmium		0.32	J	5.0	ug/L	6010B
Chromium		2.2	J	10	ug/L	6010B
Calcium		140000		5000	ug/L	6010B
Cobalt		0.79	J	7.0	ug/L	6010B
Iron		41	J B	100	ug/L	6010B
Potassium		2400	J	5000	ug/L	6010B
Magnesium		40000		5000	ug/L	6010B
Manganese		180	B	15	ug/L	6010B
Sodium		21000	B	5000	ug/L	6010B
Nickel		3.1	J	40	ug/L	6010B
Thallium		2.4	J	10	ug/L	6010B
Zinc		13	J	50	ug/L	6010B
240-42049-2	**AMW-20 (20140916)**					
Chloromethane		2.8		1.0	ug/L	8260B
Dissolved						
Barium		160	J	200	ug/L	6010B
Cadmium		0.20	J	5.0	ug/L	6010B
Chromium		2.9	J	10	ug/L	6010B
Calcium		180000		5000	ug/L	6010B
Cobalt		2.5	J	7.0	ug/L	6010B
Iron		200	B	100	ug/L	6010B
Potassium		2700	J	5000	ug/L	6010B
Magnesium		52000		5000	ug/L	6010B
Manganese		870	B	15	ug/L	6010B
Sodium		56000	B	5000	ug/L	6010B
Nickel		8.2	J	40	ug/L	6010B
Zinc		10	J	50	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-42049-3	**AMW-05 (20140916)**					
Carbon disulfide		0.37	J	1.0	ug/L	8260B
Dissolved						
Barium		59	J	200	ug/L	6010B
Cadmium		0.22	J	5.0	ug/L	6010B
Chromium		1.9	J	10	ug/L	6010B
Calcium		120000		5000	ug/L	6010B
Cobalt		6.3	J	7.0	ug/L	6010B
Iron		6800	B	100	ug/L	6010B
Potassium		2700	J	5000	ug/L	6010B
Magnesium		40000		5000	ug/L	6010B
Manganese		190	B	15	ug/L	6010B
Sodium		20000	B	5000	ug/L	6010B
Nickel		7.8	J	40	ug/L	6010B
Zinc		11	J	50	ug/L	6010B
240-42049-4	**AMW-07 (20140916)**					
Tetrachloroethene		0.31	J	1.0	ug/L	8260B
Trichloroethene		2.3		1.0	ug/L	8260B
Dissolved						
Barium		25	J	200	ug/L	6010B
Aluminum		270		200	ug/L	6010B
Cadmium		0.42	J	5.0	ug/L	6010B
Chromium		1.7	J	10	ug/L	6010B
Beryllium		0.65	J	5.0	ug/L	6010B
Calcium		120000		5000	ug/L	6010B
Cobalt		7.7		7.0	ug/L	6010B
Iron		28	J B	100	ug/L	6010B
Potassium		7100		5000	ug/L	6010B
Magnesium		41000		5000	ug/L	6010B
Manganese		82	B	15	ug/L	6010B
Sodium		80000	B	5000	ug/L	6010B
Nickel		49		40	ug/L	6010B
Zinc		100		50	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-42049-5FD	**DUP-003 (20140916)**					
Chloromethane		5.2		1.0	ug/L	8260B
Dissolved						
Barium		160	J	200	ug/L	6010B
Cadmium		0.24	J	5.0	ug/L	6010B
Chromium		2.1	J	10	ug/L	6010B
Arsenic		2.9	J	10	ug/L	6010B
Calcium		140000		5000	ug/L	6010B
Iron		42	J B	100	ug/L	6010B
Potassium		2400	J	5000	ug/L	6010B
Magnesium		40000		5000	ug/L	6010B
Manganese		180	B	15	ug/L	6010B
Sodium		21000	B	5000	ug/L	6010B
Nickel		3.2	J	40	ug/L	6010B
Zinc		11	J	50	ug/L	6010B
240-42049-6EB	**EB-02 (20140916)**					
Acetone		5.5	J	10	ug/L	8260B
Toluene		0.24	J	1.0	ug/L	8260B
240-42049-7TB	**TRIP BLANK**					
Chloroform		0.45	J	1.0	ug/L	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL CAN = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Method	Analyst	Analyst ID
SW846 8260B	Evans, Laura	LEE
SW846 8270C	Gruber, John	JMG
SW846 6010B	Sutherland, Aaron	ADS
SW846 7470A	Martin, Aaron	AMM2

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-42049-1	AMW-19 (20140916)	Water	09/16/2014 1210	09/18/2014 0750
240-42049-2	AMW-20 (20140916)	Water	09/16/2014 1320	09/18/2014 0750
240-42049-3	AMW-05 (20140916)	Water	09/16/2014 1620	09/18/2014 0750
240-42049-4	AMW-07 (20140916)	Water	09/16/2014 1740	09/18/2014 0750
240-42049-5FD	DUP-003 (20140916)	Water	09/16/2014 0000	09/18/2014 0750
240-42049-6EB	EB-02 (20140916)	Water	09/16/2014 0000	09/18/2014 0750
240-42049-7TB	TRIP BLANK	Water	09/16/2014 0000	09/18/2014 0750

SAMPLE RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-19 (20140916)**

Lab Sample ID: 240-42049-1 Date Sampled: 09/16/2014 1210
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1056.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0044			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0044				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.37	1.0
1,1,2-Trichloroethane	ND		0.17	1.0
1,1-Dichloroethane	ND		0.26	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.22	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.30	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.17	1.0
1,2-Dichloroethane	ND		0.20	1.0
1,2-Dichloropropane	ND		0.22	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.17	1.0
1,3-Dichloropropane	ND		0.18	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.20	1.0
2-Hexanone	ND		3.9	10
Bromobenzene	ND		0.12	1.0
Bromochloromethane	ND		0.25	1.0
4-Chlorotoluene	ND		0.22	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		3.4	10
Benzene	ND		0.24	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.63	1.0
Carbon disulfide	ND		0.28	1.0
Carbon tetrachloride	ND		0.17	1.0
Chlorobenzene	ND		0.19	1.0
Chloroethane	ND		0.33	1.0
Chloroform	ND		0.21	1.0
Chloromethane	5.6		0.44	1.0
cis-1,2-Dichloroethene	ND		0.20	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.33	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.17	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.50	1.0
Dichlorofluoromethane	ND		0.27	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-19 (20140916)**

Lab Sample ID: 240-42049-1 Date Sampled: 09/16/2014 1210
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1056.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0044			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0044				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.43	2.0
Ethylbenzene	ND		0.23	1.0
1,2-Dibromoethane	ND		0.19	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.22	2.0
n-Butylbenzene	ND		0.22	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		4.1	10
4-Methyl-2-pentanone (MIBK)	ND		3.6	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.16	1.0
Methylene Chloride	ND		0.28	1.0
o-Xylene	ND		0.21	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.20	1.0
Tetrahydrofuran	ND		0.62	5.0
Toluene	ND		0.22	1.0
trans-1,2-Dichloroethene	ND		0.26	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.15	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.23	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	81		63 - 129
4-Bromofluorobenzene (Surr)	71		66 - 120
Toluene-d8 (Surr)	80		74 - 120
Dibromofluoromethane (Surr)	91		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-20 (20140916)**

Lab Sample ID: 240-42049-2 Date Sampled: 09/16/2014 1320
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1057.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0107			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0107				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.37	1.0
1,1,2-Trichloroethane	ND		0.17	1.0
1,1-Dichloroethane	ND		0.26	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.22	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.30	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.17	1.0
1,2-Dichloroethane	ND		0.20	1.0
1,2-Dichloropropane	ND		0.22	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.17	1.0
1,3-Dichloropropane	ND		0.18	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.20	1.0
2-Hexanone	ND		3.9	10
Bromobenzene	ND		0.12	1.0
Bromochloromethane	ND		0.25	1.0
4-Chlorotoluene	ND		0.22	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		3.4	10
Benzene	ND		0.24	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.63	1.0
Carbon disulfide	ND		0.28	1.0
Carbon tetrachloride	ND		0.17	1.0
Chlorobenzene	ND		0.19	1.0
Chloroethane	ND		0.33	1.0
Chloroform	ND		0.21	1.0
Chloromethane	2.8		0.44	1.0
cis-1,2-Dichloroethene	ND		0.20	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.33	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.17	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.50	1.0
Dichlorofluoromethane	ND		0.27	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-20 (20140916)**

Lab Sample ID: 240-42049-2 Date Sampled: 09/16/2014 1320
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1057.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0107			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0107				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.43	2.0
Ethylbenzene	ND		0.23	1.0
1,2-Dibromoethane	ND		0.19	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.22	2.0
n-Butylbenzene	ND		0.22	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		4.1	10
4-Methyl-2-pentanone (MIBK)	ND		3.6	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.16	1.0
Methylene Chloride	ND		0.28	1.0
o-Xylene	ND		0.21	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.20	1.0
Tetrahydrofuran	ND		0.62	5.0
Toluene	ND		0.22	1.0
trans-1,2-Dichloroethene	ND		0.26	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.15	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.23	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	76		63 - 129
4-Bromofluorobenzene (Surr)	70		66 - 120
Toluene-d8 (Surr)	79		74 - 120
Dibromofluoromethane (Surr)	91		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-05 (20140916)**

Lab Sample ID: 240-42049-3 Date Sampled: 09/16/2014 1620
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1058.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0129			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0129				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.37	1.0
1,1,2-Trichloroethane	ND		0.17	1.0
1,1-Dichloroethane	ND		0.26	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.22	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.30	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.17	1.0
1,2-Dichloroethane	ND		0.20	1.0
1,2-Dichloropropane	ND		0.22	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.17	1.0
1,3-Dichloropropane	ND		0.18	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.20	1.0
2-Hexanone	ND		3.9	10
Bromobenzene	ND		0.12	1.0
Bromochloromethane	ND		0.25	1.0
4-Chlorotoluene	ND		0.22	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		3.4	10
Benzene	ND		0.24	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.63	1.0
Carbon disulfide	0.37	J	0.28	1.0
Carbon tetrachloride	ND		0.17	1.0
Chlorobenzene	ND		0.19	1.0
Chloroethane	ND		0.33	1.0
Chloroform	ND		0.21	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.20	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.33	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.17	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.50	1.0
Dichlorofluoromethane	ND		0.27	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-05 (20140916)**

Lab Sample ID: 240-42049-3 Date Sampled: 09/16/2014 1620
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1058.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0129			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0129				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.43	2.0
Ethylbenzene	ND		0.23	1.0
1,2-Dibromoethane	ND		0.19	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.22	2.0
n-Butylbenzene	ND		0.22	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		4.1	10
4-Methyl-2-pentanone (MIBK)	ND		3.6	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.16	1.0
Methylene Chloride	ND		0.28	1.0
o-Xylene	ND		0.21	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.20	1.0
Tetrahydrofuran	ND		0.62	5.0
Toluene	ND		0.22	1.0
trans-1,2-Dichloroethene	ND		0.26	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.15	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.23	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	80		63 - 129
4-Bromofluorobenzene (Surr)	75		66 - 120
Toluene-d8 (Surr)	83		74 - 120
Dibromofluoromethane (Surr)	94		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-07 (20140916)**

Lab Sample ID: 240-42049-4 Date Sampled: 09/16/2014 1740
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1059.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0151			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0151				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.37	1.0
1,1,2-Trichloroethane	ND		0.17	1.0
1,1-Dichloroethane	ND		0.26	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.22	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.30	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.17	1.0
1,2-Dichloroethane	ND		0.20	1.0
1,2-Dichloropropane	ND		0.22	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.17	1.0
1,3-Dichloropropane	ND		0.18	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.20	1.0
2-Hexanone	ND		3.9	10
Bromobenzene	ND		0.12	1.0
Bromochloromethane	ND		0.25	1.0
4-Chlorotoluene	ND		0.22	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		3.4	10
Benzene	ND		0.24	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.63	1.0
Carbon disulfide	ND		0.28	1.0
Carbon tetrachloride	ND		0.17	1.0
Chlorobenzene	ND		0.19	1.0
Chloroethane	ND		0.33	1.0
Chloroform	ND		0.21	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.20	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.33	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.17	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.50	1.0
Dichlorofluoromethane	ND		0.27	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-07 (20140916)**

Lab Sample ID: 240-42049-4 Date Sampled: 09/16/2014 1740
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1059.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0151			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0151				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.43	2.0
Ethylbenzene	ND		0.23	1.0
1,2-Dibromoethane	ND		0.19	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.22	2.0
n-Butylbenzene	ND		0.22	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		4.1	10
4-Methyl-2-pentanone (MIBK)	ND		3.6	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.16	1.0
Methylene Chloride	ND		0.28	1.0
o-Xylene	ND		0.21	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	0.31	J	0.20	1.0
Tetrahydrofuran	ND		0.62	5.0
Toluene	ND		0.22	1.0
trans-1,2-Dichloroethene	ND		0.26	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	2.3		0.15	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.23	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	78		63 - 129
4-Bromofluorobenzene (Surr)	74		66 - 120
Toluene-d8 (Surr)	82		74 - 120
Dibromofluoromethane (Surr)	94		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **DUP-003 (20140916)**

Lab Sample ID: 240-42049-5FD Date Sampled: 09/16/2014 0000
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1060.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0214			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0214				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.37	1.0
1,1,2-Trichloroethane	ND		0.17	1.0
1,1-Dichloroethane	ND		0.26	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.22	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.30	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.17	1.0
1,2-Dichloroethane	ND		0.20	1.0
1,2-Dichloropropane	ND		0.22	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.17	1.0
1,3-Dichloropropane	ND		0.18	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.20	1.0
2-Hexanone	ND		3.9	10
Bromobenzene	ND		0.12	1.0
Bromochloromethane	ND		0.25	1.0
4-Chlorotoluene	ND		0.22	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		3.4	10
Benzene	ND		0.24	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.63	1.0
Carbon disulfide	ND		0.28	1.0
Carbon tetrachloride	ND		0.17	1.0
Chlorobenzene	ND		0.19	1.0
Chloroethane	ND		0.33	1.0
Chloroform	ND		0.21	1.0
Chloromethane	5.2		0.44	1.0
cis-1,2-Dichloroethene	ND		0.20	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.33	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.17	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.50	1.0
Dichlorofluoromethane	ND		0.27	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **DUP-003 (20140916)**

Lab Sample ID: 240-42049-5FD Date Sampled: 09/16/2014 0000
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1060.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0214			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0214				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.43	2.0
Ethylbenzene	ND		0.23	1.0
1,2-Dibromoethane	ND		0.19	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.22	2.0
n-Butylbenzene	ND		0.22	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		4.1	10
4-Methyl-2-pentanone (MIBK)	ND		3.6	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.16	1.0
Methylene Chloride	ND		0.28	1.0
o-Xylene	ND		0.21	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.20	1.0
Tetrahydrofuran	ND		0.62	5.0
Toluene	ND		0.22	1.0
trans-1,2-Dichloroethene	ND		0.26	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.15	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.23	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	78		63 - 129
4-Bromofluorobenzene (Surr)	73		66 - 120
Toluene-d8 (Surr)	83		74 - 120
Dibromofluoromethane (Surr)	96		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **EB-02 (20140916)**

Lab Sample ID: 240-42049-6EB Date Sampled: 09/16/2014 0000
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1061.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0235			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0235				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.37	1.0
1,1,2-Trichloroethane	ND		0.17	1.0
1,1-Dichloroethane	ND		0.26	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.22	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.30	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.17	1.0
1,2-Dichloroethane	ND		0.20	1.0
1,2-Dichloropropane	ND		0.22	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.17	1.0
1,3-Dichloropropane	ND		0.18	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.20	1.0
2-Hexanone	ND		3.9	10
Bromobenzene	ND		0.12	1.0
Bromochloromethane	ND		0.25	1.0
4-Chlorotoluene	ND		0.22	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	5.5	J	3.4	10
Benzene	ND		0.24	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.63	1.0
Carbon disulfide	ND		0.28	1.0
Carbon tetrachloride	ND		0.17	1.0
Chlorobenzene	ND		0.19	1.0
Chloroethane	ND		0.33	1.0
Chloroform	ND		0.21	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.20	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.33	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.17	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.50	1.0
Dichlorofluoromethane	ND		0.27	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **EB-02 (20140916)**

Lab Sample ID: 240-42049-6EB Date Sampled: 09/16/2014 0000
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1061.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0235			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0235				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.43	2.0
Ethylbenzene	ND		0.23	1.0
1,2-Dibromoethane	ND		0.19	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.22	2.0
n-Butylbenzene	ND		0.22	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		4.1	10
4-Methyl-2-pentanone (MIBK)	ND		3.6	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.16	1.0
Methylene Chloride	ND		0.28	1.0
o-Xylene	ND		0.21	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.20	1.0
Tetrahydrofuran	ND		0.62	5.0
Toluene	0.24	J	0.22	1.0
trans-1,2-Dichloroethene	ND		0.26	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.15	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.23	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	78		63 - 129
4-Bromofluorobenzene (Surr)	74		66 - 120
Toluene-d8 (Surr)	81		74 - 120
Dibromofluoromethane (Surr)	91		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-42049-7TB
Client Matrix: Water

Date Sampled: 09/16/2014 0000
Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1062.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0257			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0257				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.37	1.0
1,1,2-Trichloroethane	ND		0.17	1.0
1,1-Dichloroethane	ND		0.26	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.22	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.30	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.17	1.0
1,2-Dichloroethane	ND		0.20	1.0
1,2-Dichloropropane	ND		0.22	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.17	1.0
1,3-Dichloropropane	ND		0.18	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.20	1.0
2-Hexanone	ND		3.9	10
Bromobenzene	ND		0.12	1.0
Bromochloromethane	ND		0.25	1.0
4-Chlorotoluene	ND		0.22	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		3.4	10
Benzene	ND		0.24	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.63	1.0
Carbon disulfide	ND		0.28	1.0
Carbon tetrachloride	ND		0.17	1.0
Chlorobenzene	ND		0.19	1.0
Chloroethane	ND		0.33	1.0
Chloroform	0.45	J	0.21	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.20	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.33	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.17	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.50	1.0
Dichlorofluoromethane	ND		0.27	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-42049-7TB Date Sampled: 09/16/2014 0000
Client Matrix: Water Date Received: 09/18/2014 0750

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXJ1062.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0257			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0257				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.43	1.0
Ethylbenzene	ND		0.23	1.0
1,2-Dibromoethane	ND		0.19	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.22	2.0
n-Butylbenzene	ND		0.22	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		4.1	10
4-Methyl-2-pentanone (MIBK)	ND		3.6	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.16	2.0
Methylene Chloride	ND		0.28	1.0
o-Xylene	ND		0.21	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.20	1.0
Tetrahydrofuran	ND		0.62	5.0
Toluene	ND		0.22	1.0
trans-1,2-Dichloroethene	ND		0.26	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.15	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.23	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	79		63 - 129
4-Bromofluorobenzene (Surr)	72		66 - 120
Toluene-d8 (Surr)	82		74 - 120
Dibromofluoromethane (Surr)	92		75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-07 (20140916)**

Lab Sample ID: 240-42049-4 Date Sampled: 09/16/2014 1740
Client Matrix: Water Date Received: 09/18/2014 0750

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-148216	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-147960	Lab File ID:	40923024.D
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Analysis Date:	09/23/2014 1943			Final Weight/Volume:	2 mL
Prep Date:	09/22/2014 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.044	10
Acenaphthylene	ND		0.048	10
Anthracene	ND		0.088	10
Benzo[a]anthracene	ND		0.030	0.20
Benzo[a]pyrene	ND		0.051	10
Benzo[b]fluoranthene	ND		0.039	10
Benzo[g,h,i]perylene	ND		0.046	10
Benzo[k]fluoranthene	ND		0.045	10
Chrysene	ND		0.050	10
Dibenz(a,h)anthracene	ND		0.045	10
Fluoranthene	ND		0.045	10
Fluorene	ND		0.041	10
Indeno[1,2,3-cd]pyrene	ND		0.043	10
2-Methylnaphthalene	ND		0.090	10
Naphthalene	ND		0.063	10
Phenanthrene	ND		0.062	10
Pyrene	ND		0.042	10

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	68		29 - 110
2-Fluorophenol (Surr)	38		15 - 110
Nitrobenzene-d5 (Surr)	52		31 - 110
Phenol-d5 (Surr)	22		10 - 110
Terphenyl-d14 (Surr)	75		31 - 115
2,4,6-Tribromophenol (Surr)	81		21 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-19 (20140916)**

Lab Sample ID: 240-42049-1 Date Sampled: 09/16/2014 1210
Client Matrix: Water Date Received: 09/18/2014 0750

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-148152	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-147761	Lab File ID:	I9092214B.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 2135			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1030				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	160	J	1.0	200
Aluminum	ND		40	200
Cadmium	0.32	J	0.14	5.0
Chromium	2.2	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	140000		260	5000
Selenium	ND		4.0	5.0
Cobalt	0.79	J	0.56	7.0
Copper	ND		1.9	25
Iron	41	J B	13	100
Potassium	2400	J	70	5000
Magnesium	40000		55	5000
Manganese	180	B	0.46	15
Sodium	21000	B	180	5000
Nickel	3.1	J	0.76	40
Antimony	ND		2.4	10
Thallium	2.4	J	1.7	10
Vanadium	ND		2.4	7.0
Zinc	13	J	9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-148140	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-147764	Lab File ID:	092214A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 1718			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-20 (20140916)**

Lab Sample ID: 240-42049-2 Date Sampled: 09/16/2014 1320
Client Matrix: Water Date Received: 09/18/2014 0750

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-148152	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-147761	Lab File ID:	I9092214B.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 2206			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1030				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	160	J	1.0	200
Aluminum	ND		40	200
Cadmium	0.20	J	0.14	5.0
Chromium	2.9	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	180000		260	5000
Selenium	ND		4.0	5.0
Cobalt	2.5	J	0.56	7.0
Copper	ND		1.9	25
Iron	200	B	13	100
Potassium	2700	J	70	5000
Magnesium	52000		55	5000
Manganese	870	B	0.46	15
Sodium	56000	B	180	5000
Nickel	8.2	J	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	10	J	9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-148140	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-147764	Lab File ID:	092214A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 1657			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-05 (20140916)**

Lab Sample ID: 240-42049-3 Date Sampled: 09/16/2014 1620
Client Matrix: Water Date Received: 09/18/2014 0750

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-148152	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-147761	Lab File ID:	I9092214B.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 2210			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1030				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	59	J	1.0	200
Aluminum	ND		40	200
Cadmium	0.22	J	0.14	5.0
Chromium	1.9	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	120000		260	5000
Selenium	ND		4.0	5.0
Cobalt	6.3	J	0.56	7.0
Copper	ND		1.9	25
Iron	6800	B	13	100
Potassium	2700	J	70	5000
Magnesium	40000		55	5000
Manganese	190	B	0.46	15
Sodium	20000	B	180	5000
Nickel	7.8	J	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	11	J	9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-148140	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-147764	Lab File ID:	092214A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 1711			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **AMW-07 (20140916)**

Lab Sample ID: 240-42049-4 Date Sampled: 09/16/2014 1740
Client Matrix: Water Date Received: 09/18/2014 0750

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-148152	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-147761	Lab File ID:	I9092214B.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 2214			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1030				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	25	J	1.0	200
Aluminum	270		40	200
Cadmium	0.42	J	0.14	5.0
Chromium	1.7	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	0.65	J	0.13	5.0
Lead	ND		1.9	3.0
Calcium	120000		260	5000
Selenium	ND		4.0	5.0
Cobalt	7.7		0.56	7.0
Copper	ND		1.9	25
Iron	28	J B	13	100
Potassium	7100		70	5000
Magnesium	41000		55	5000
Manganese	82	B	0.46	15
Sodium	80000	B	180	5000
Nickel	49		0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	100		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-148140	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-147764	Lab File ID:	092214A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 1714			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Client Sample ID: **DUP-003 (20140916)**

Lab Sample ID: 240-42049-5FD Date Sampled: 09/16/2014 0000
Client Matrix: Water Date Received: 09/18/2014 0750

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-148152	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-147761	Lab File ID:	I9092214B.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 2218			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1030				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	160	J	1.0	200
Aluminum	ND		40	200
Cadmium	0.24	J	0.14	5.0
Chromium	2.1	J	0.55	10
Silver	ND		0.92	10
Arsenic	2.9	J	2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	140000		260	5000
Selenium	ND		4.0	5.0
Cobalt	ND		0.56	7.0
Copper	ND		1.9	25
Iron	42	J B	13	100
Potassium	2400	J	70	5000
Magnesium	40000		55	5000
Manganese	180	B	0.46	15
Sodium	21000	B	180	5000
Nickel	3.2	J	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	11	J	9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-148140	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-147764	Lab File ID:	092214A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 1732			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-148104					
LCS 240-148104/4	Lab Control Sample	T	Water	8260B	
MB 240-148104/6	Method Blank	T	Water	8260B	
240-42049-1	AMW-19 (20140916)	T	Water	8260B	
240-42049-2	AMW-20 (20140916)	T	Water	8260B	
240-42049-3	AMW-05 (20140916)	T	Water	8260B	
240-42049-4	AMW-07 (20140916)	T	Water	8260B	
240-42049-5FD	DUP-003 (20140916)	T	Water	8260B	
240-42049-6EB	EB-02 (20140916)	T	Water	8260B	
240-42049-7TB	TRIP BLANK	T	Water	8260B	
240-42095-E-2 MS	Matrix Spike	T	Water	8260B	
240-42095-F-2 MSD	Matrix Spike Duplicate	T	Water	8260B	

Report Basis
T = Total

GC/MS Semi VOA					
Prep Batch: 240-147960					
LCS 240-147960/22-A	Lab Control Sample	T	Water	3510C	
MB 240-147960/21-A	Method Blank	T	Water	3510C	
240-41983-I-2-A MS	Matrix Spike	T	Water	3510C	
240-41983-K-2-A MSD	Matrix Spike Duplicate	T	Water	3510C	
240-42049-4	AMW-07 (20140916)	T	Water	3510C	
Analysis Batch:240-148216					
LCS 240-147960/22-A	Lab Control Sample	T	Water	8270C	240-147960
MB 240-147960/21-A	Method Blank	T	Water	8270C	240-147960
240-41983-I-2-A MS	Matrix Spike	T	Water	8270C	240-147960
240-41983-K-2-A MSD	Matrix Spike Duplicate	T	Water	8270C	240-147960
240-42049-4	AMW-07 (20140916)	T	Water	8270C	240-147960

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-147761					
LCS 240-147761/2-A	Lab Control Sample	R	Water	3005A	
MB 240-147761/1-A	Method Blank	R	Water	3005A	
240-42049-1	AMW-19 (20140916)	D	Water	3005A	
240-42049-1MS	Matrix Spike	D	Water	3005A	
240-42049-1MSD	Matrix Spike Duplicate	D	Water	3005A	
240-42049-2	AMW-20 (20140916)	D	Water	3005A	
240-42049-3	AMW-05 (20140916)	D	Water	3005A	
240-42049-4	AMW-07 (20140916)	D	Water	3005A	
240-42049-5FD	DUP-003 (20140916)	D	Water	3005A	
Prep Batch: 240-147764					
LCS 240-147764/2-A	Lab Control Sample	T	Water	7470A	
MB 240-147764/1-A	Method Blank	T	Water	7470A	
240-42049-1	AMW-19 (20140916)	D	Water	7470A	
240-42049-2	AMW-20 (20140916)	D	Water	7470A	
240-42049-2MS	Matrix Spike	D	Water	7470A	
240-42049-2MSD	Matrix Spike Duplicate	D	Water	7470A	
240-42049-3	AMW-05 (20140916)	D	Water	7470A	
240-42049-4	AMW-07 (20140916)	D	Water	7470A	
240-42049-5FD	DUP-003 (20140916)	D	Water	7470A	
Analysis Batch:240-148140					
LCS 240-147764/2-A	Lab Control Sample	T	Water	7470A	240-147764
MB 240-147764/1-A	Method Blank	T	Water	7470A	240-147764
240-42049-1	AMW-19 (20140916)	D	Water	7470A	240-147764
240-42049-2	AMW-20 (20140916)	D	Water	7470A	240-147764
240-42049-2MS	Matrix Spike	D	Water	7470A	240-147764
240-42049-2MSD	Matrix Spike Duplicate	D	Water	7470A	240-147764
240-42049-3	AMW-05 (20140916)	D	Water	7470A	240-147764
240-42049-4	AMW-07 (20140916)	D	Water	7470A	240-147764
240-42049-5FD	DUP-003 (20140916)	D	Water	7470A	240-147764
Analysis Batch:240-148152					
LCS 240-147761/2-A	Lab Control Sample	R	Water	6010B	240-147761
MB 240-147761/1-A	Method Blank	R	Water	6010B	240-147761
240-42049-1	AMW-19 (20140916)	D	Water	6010B	240-147761
240-42049-1MS	Matrix Spike	D	Water	6010B	240-147761
240-42049-1MSD	Matrix Spike Duplicate	D	Water	6010B	240-147761
240-42049-2	AMW-20 (20140916)	D	Water	6010B	240-147761
240-42049-3	AMW-05 (20140916)	D	Water	6010B	240-147761
240-42049-4	AMW-07 (20140916)	D	Water	6010B	240-147761
240-42049-5FD	DUP-003 (20140916)	D	Water	6010B	240-147761

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
D = Dissolved
R = Total Recoverable
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-42049-1	AMW-19 (20140916)	81	71	80	91
240-42049-2	AMW-20 (20140916)	76	70	79	91
240-42049-3	AMW-05 (20140916)	80	75	83	94
240-42049-4	AMW-07 (20140916)	78	74	82	94
240-42049-5	DUP-003 (20140916)	78	73	83	96
240-42049-6	EB-02 (20140916)	78	74	81	91
240-42049-7	TRIP BLANK	79	72	82	92
MB 240-148104/6		78	74	84	93
LCS 240-148104/4		74	87	88	85
240-42095-E-2 MS		72	82	85	89
240-42095-F-2 MSD		73	84	83	89

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
BFB = 4-Bromofluorobenzene (Surr)	66-120
TOL = Toluene-d8 (Surr)	74-120
DBFM = Dibromofluoromethane (Surr)	75-121

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
240-42049-4	AMW-07 (20140916)	68	38	52	22	75	81
MB 240-147960/21-A		83	60	67	40	97	95
LCS 240-147960/22-A		89	57	74	37	104	118
240-41983-I-2-A MS		68	31	51	17	67	91
240-41983-K-2-A MSD		71	30	53	18	70	90

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	29-110
2FP = 2-Fluorophenol (Surr)	15-110
NBZ = Nitrobenzene-d5 (Surr)	31-110
PHL = Phenol-d5 (Surr)	10-110
TPH = Terphenyl-d14 (Surr)	31-115
TBP = 2,4,6-Tribromophenol (Surr)	21-128

Method Blank - Batch: 240-148104 **Method: 8260B**
Preparation: 5030B

Lab Sample ID:	MB 240-148104/6	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1055.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0022	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0022				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.22	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.37	1.0
1,1,2-Trichloroethane	ND		0.17	1.0
1,1-Dichloroethane	ND		0.26	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.22	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.30	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.17	1.0
1,2-Dichloroethane	ND		0.20	1.0
1,2-Dichloropropane	ND		0.22	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.17	1.0
1,3-Dichloropropane	ND		0.18	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.20	1.0
2-Hexanone	ND		3.9	10
Bromobenzene	ND		0.12	1.0
Bromochloromethane	ND		0.25	1.0
4-Chlorotoluene	ND		0.22	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		3.4	10
Benzene	ND		0.24	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.63	1.0
Carbon disulfide	ND		0.28	1.0
Carbon tetrachloride	ND		0.17	1.0
Chlorobenzene	ND		0.19	1.0
Chloroethane	ND		0.33	1.0
Chloroform	ND		0.21	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.20	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.33	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.17	1.0
Bromodichloromethane	ND		0.15	1.0
Dichlorodifluoromethane	ND		0.50	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Method Blank - Batch: 240-148104

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-148104/6	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1055.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0022	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0022				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.27	2.0
Ethyl ether	ND		0.43	2.0
Ethylbenzene	ND		0.23	1.0
1,2-Dibromoethane	ND		0.19	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.22	2.0
n-Butylbenzene	ND		0.22	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		4.1	10
4-Methyl-2-pentanone (MIBK)	ND		3.6	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.16	1.0
Methylene Chloride	ND		0.28	1.0
o-Xylene	ND		0.21	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.20	1.0
Tetrahydrofuran	ND		0.62	5.0
Toluene	ND		0.22	1.0
trans-1,2-Dichloroethene	ND		0.26	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.15	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.23	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	78	63 - 129
4-Bromofluorobenzene (Surr)	74	66 - 120
Toluene-d8 (Surr)	84	74 - 120
Dibromofluoromethane (Surr)	93	75 - 121

Lab Control Sample - Batch: 240-148104

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-148104/4	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1053.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	09/22/2014 2337	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	09/22/2014 2337				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	9.57	96	72 - 120	
1,1,1-Trichloroethane	10.0	10.4	104	74 - 120	
1,1,2,2-Tetrachloroethane	10.0	8.13	81	68 - 120	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.20	92	74 - 151	
1,1,2-Trichloroethane	10.0	9.58	96	80 - 120	
1,1-Dichloroethane	10.0	10.5	105	80 - 120	
1,1-Dichloroethene	10.0	9.67	97	78 - 131	
1,1-Dichloropropene	10.0	10.4	104	80 - 120	
1,2,3-Trichlorobenzene	10.0	7.59	76	54 - 126	
1,2,3-Trichloropropane	10.0	8.17	82	73 - 129	
1,2,4-Trichlorobenzene	10.0	7.50	75	48 - 135	
1,2,4-Trimethylbenzene	10.0	8.23	82	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	8.30	83	42 - 136	
1,2-Dichlorobenzene	10.0	8.68	87	80 - 120	
1,2-Dichloroethane	10.0	8.93	89	71 - 127	
1,2-Dichloropropane	10.0	10.6	106	80 - 120	
1,3,5-Trimethylbenzene	10.0	8.46	85	72 - 120	
1,3-Dichlorobenzene	10.0	8.75	88	80 - 120	
1,3-Dichloropropane	10.0	9.38	94	79 - 120	
1,4-Dichlorobenzene	10.0	8.89	89	80 - 120	
Allyl chloride	10.0	10.1	101	40 - 160	
2,2-Dichloropropane	10.0	10.0	100	50 - 129	
2-Chlorotoluene	10.0	8.60	86	76 - 120	
2-Hexanone	20.0	16.9	84	55 - 133	
Bromobenzene	10.0	9.14	91	76 - 120	
Bromochloromethane	10.0	10.4	104	77 - 120	
4-Chlorotoluene	10.0	8.54	85	77 - 120	
p-Isopropyltoluene	10.0	8.02	80	74 - 120	
Acetone	20.0	15.5	78	43 - 136	
Benzene	10.0	10.7	107	80 - 120	
Bromoform	10.0	8.78	88	40 - 131	
Bromomethane	10.0	9.22	92	11 - 185	
Carbon disulfide	10.0	10.6	106	62 - 142	
Carbon tetrachloride	10.0	11.2	112	66 - 128	
Chlorobenzene	10.0	9.19	92	80 - 120	
Chloroethane	10.0	9.37	94	25 - 153	
Chloroform	10.0	9.89	99	79 - 120	
Chloromethane	10.0	9.28	93	44 - 126	
cis-1,2-Dichloroethene	10.0	10.5	105	80 - 120	
cis-1,3-Dichloropropene	10.0	10.0	100	61 - 120	
Cyclohexane	10.0	9.89	99	54 - 121	

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Lab Control Sample - Batch: 240-148104

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-148104/4	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1053.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	09/22/2014 2337	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	09/22/2014 2337				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	7.85	79	36 - 134	
Dibromomethane	10.0	9.85	98	80 - 120	
Bromodichloromethane	10.0	9.76	98	72 - 121	
Dichlorodifluoromethane	10.0	7.57	76	19 - 129	
Dichlorofluoromethane	10.0	8.96	90	40 - 160	
Ethyl ether	10.0	9.72	97	53 - 135	
Ethylbenzene	10.0	9.33	93	80 - 120	
1,2-Dibromoethane	10.0	9.48	95	79 - 120	
Naphthalene	10.0	7.08	71	32 - 141	
m-Xylene & p-Xylene	10.0	9.37	94	80 - 120	
n-Butylbenzene	10.0	7.55	75	66 - 125	
Isopropylbenzene	10.0	8.61	86	75 - 120	
Methyl acetate	50.0	47.0	94	58 - 131	
N-Propylbenzene	10.0	8.02	80	74 - 121	
2-Butanone (MEK)	20.0	16.7	84	60 - 126	
4-Methyl-2-pentanone (MIBK)	20.0	18.3	92	63 - 128	
sec-Butylbenzene	10.0	7.95	80	70 - 120	
Methyl tert butyl ether	10.0	9.86	99	52 - 144	
Methylene Chloride	10.0	10.3	103	66 - 131	
o-Xylene	10.0	9.14	91	80 - 120	
Styrene	10.0	9.61	96	79 - 120	
tert-Butylbenzene	10.0	7.88	79	71 - 120	
Tetrachloroethene	10.0	9.89	99	79 - 120	
Tetrahydrofuran	20.0	17.7	88	23 - 143	
Toluene	10.0	9.91	99	80 - 120	
trans-1,2-Dichloroethene	10.0	10.7	107	80 - 120	
trans-1,3-Dichloropropene	10.0	9.93	99	58 - 120	
Trichloroethene	10.0	10.3	103	76 - 120	
Trichlorofluoromethane	10.0	8.77	88	49 - 157	
Vinyl chloride	10.0	9.64	96	53 - 127	
Methylcyclohexane	10.0	9.04	90	56 - 127	
Chlorodibromomethane	10.0	9.58	96	64 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	74	63 - 129
4-Bromofluorobenzene (Surr)	87	66 - 120
Toluene-d8 (Surr)	88	74 - 120
Dibromofluoromethane (Surr)	85	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-148104

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-42095-E-2 MS	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1076.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0811			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0811				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-42095-F-2 MSD	Analysis Batch:	240-148104	Instrument ID:	A3UX11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXJ1077.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	09/23/2014 0833			Final Weight/Volume:	5 mL
Prep Date:	09/23/2014 0833				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	103	105	72 - 121	2	30		
Ethylbenzene	84	87	75 - 120	4	30		
m-Xylene & p-Xylene	83	88	75 - 120	7	30		
o-Xylene	84	88	76 - 120	4	30		
Toluene	91	94	78 - 120	3	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	72	73	63 - 129
4-Bromofluorobenzene (Surr)	82	84	66 - 120
Toluene-d8 (Surr)	85	83	74 - 120
Dibromofluoromethane (Surr)	89	89	75 - 121

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Method Blank - Batch: 240-147960

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-147960/21-A	Analysis Batch:	240-148216	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-147960	Lab File ID:	40923006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	09/23/2014 1201	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	09/22/2014 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	ND		0.044	10
Acenaphthylene	ND		0.048	10
Anthracene	ND		0.088	10
Benzo[a]anthracene	ND		0.030	0.20
Benzo[a]pyrene	ND		0.051	10
Benzo[b]fluoranthene	ND		0.039	10
Benzo[g,h,i]perylene	ND		0.046	10
Benzo[k]fluoranthene	ND		0.045	10
Chrysene	ND		0.050	10
Dibenz(a,h)anthracene	ND		0.045	10
Fluoranthene	ND		0.045	10
Fluorene	ND		0.041	10
Indeno[1,2,3-cd]pyrene	ND		0.043	10
2-Methylnaphthalene	ND		0.090	10
Naphthalene	ND		0.063	10
Phenanthrene	ND		0.062	10
Pyrene	ND		0.042	10

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	83	29 - 110
2-Fluorophenol (Surr)	60	15 - 110
Nitrobenzene-d5 (Surr)	67	31 - 110
Phenol-d5 (Surr)	40	10 - 110
Terphenyl-d14 (Surr)	97	31 - 115
2,4,6-Tribromophenol (Surr)	95	21 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Lab Control Sample - Batch: 240-147960

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-147960/22-A	Analysis Batch:	240-148216	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-147960	Lab File ID:	40923007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	09/23/2014 1227	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	09/22/2014 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	20.0	16.9	85	55 - 120	
Acenaphthylene	20.0	17.1	85	55 - 120	
Anthracene	20.0	18.6	93	56 - 120	
Benzo[a]anthracene	20.0	18.3	92	46 - 120	
Benzo[a]pyrene	20.0	17.6	88	24 - 120	
Benzo[b]fluoranthene	20.0	18.2	91	24 - 120	
Benzo[g,h,i]perylene	20.0	18.5	93	24 - 126	
Benzo[k]fluoranthene	20.0	16.9	85	30 - 120	
Chrysene	20.0	18.1	91	49 - 120	
Dibenz(a,h)anthracene	20.0	18.9	95	24 - 125	
Fluoranthene	20.0	19.8	99	57 - 120	
Fluorene	20.0	18.8	94	56 - 120	
Indeno[1,2,3-cd]pyrene	20.0	18.7	94	25 - 120	
2-Methylnaphthalene	20.0	15.2	76	52 - 120	
Naphthalene	20.0	14.3	71	52 - 120	
Phenanthrene	20.0	18.5	92	57 - 120	
Pyrene	20.0	19.8	99	50 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	89	29 - 110
2-Fluorophenol (Surr)	57	15 - 110
Nitrobenzene-d5 (Surr)	74	31 - 110
Phenol-d5 (Surr)	37	10 - 110
Terphenyl-d14 (Surr)	104	31 - 115
2,4,6-Tribromophenol (Surr)	118	21 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-147960

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-41983-I-2-A MS	Analysis Batch:	240-148216	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-147960	Lab File ID:	40923022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1050 mL
Analysis Date:	09/23/2014 1851			Final Weight/Volume:	2 mL
Prep Date:	09/22/2014 0901			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-41983-K-2-A MSD	Analysis Batch:	240-148216	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-147960	Lab File ID:	40923023.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1030 mL
Analysis Date:	09/23/2014 1917			Final Weight/Volume:	2 mL
Prep Date:	09/22/2014 0901			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	66	69	49 - 110	6	30		
Acenaphthylene	65	67	49 - 110	5	37		
Anthracene	75	76	50 - 110	3	30		
Benzo[a]anthracene	73	77	34 - 110	7	52		
Benzo[a]pyrene	73	74	17 - 110	3	68		
Benzo[b]fluoranthene	72	75	21 - 110	6	64		
Benzo[g,h,i]perylene	80	81	18 - 110	2	87		
Benzo[k]fluoranthene	73	73	24 - 110	2	75		
Chrysene	71	74	36 - 110	7	49		
Dibenz(a,h)anthracene	78	80	14 - 110	5	92		
Fluoranthene	79	82	54 - 110	6	30		
Fluorene	75	77	51 - 110	4	30		
Indeno[1,2,3-cd]pyrene	79	80	16 - 110	2	89		
2-Methylnaphthalene	63	68	50 - 110	9	37		
Naphthalene	58	62	35 - 110	9	58		
Phenanthrene	73	75	52 - 110	5	30		
Pyrene	75	80	50 - 110	8	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	68	71	29 - 110
2-Fluorophenol (Surr)	31	30	15 - 110
Nitrobenzene-d5 (Surr)	51	53	31 - 110
Phenol-d5 (Surr)	17	18	10 - 110
Terphenyl-d14 (Surr)	67	70	31 - 115
2,4,6-Tribromophenol (Surr)	91	90	21 - 128

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Method Blank - Batch: 240-147761

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-147761/1-A	Analysis Batch:	240-148152	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-147761	Lab File ID:	I9092214B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 2127	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1030				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	ND		1.0	200
Aluminum	ND		40	200
Cadmium	ND		0.14	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	ND		260	5000
Selenium	ND		4.0	5.0
Cobalt	ND		0.56	7.0
Copper	ND		1.9	25
Iron	18.9	J	13	100
Potassium	ND		70	5000
Magnesium	ND		55	5000
Manganese	0.685	J	0.46	15
Sodium	185	J	180	5000
Nickel	ND		0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Lab Control Sample - Batch: 240-147761

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-147761/2-A	Analysis Batch:	240-148152	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-147761	Lab File ID:	I9092214B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 2131	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1030				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1870	93	80 - 120	
Aluminum	2000	1870	94	80 - 120	
Cadmium	50.0	50.4	101	80 - 120	
Chromium	200	195	97	80 - 120	
Silver	50.0	49.9	100	80 - 120	
Arsenic	2000	1920	96	80 - 120	
Beryllium	50.0	46.4	93	80 - 120	
Lead	500	462	92	80 - 120	
Calcium	50000	47000	94	80 - 120	
Selenium	2000	2060	103	80 - 120	
Cobalt	500	467	93	80 - 120	
Copper	250	239	96	80 - 120	
Iron	1000	983	98	80 - 120	
Potassium	50000	46300	93	80 - 120	
Magnesium	50000	47500	95	80 - 120	
Manganese	500	471	94	80 - 120	
Sodium	50000	46600	93	80 - 120	
Nickel	500	473	95	80 - 120	
Antimony	500	500	100	80 - 120	
Thallium	2000	1960	98	80 - 120	
Vanadium	500	468	94	80 - 120	
Zinc	500	480	96	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-147761

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID:	240-42049-1	Analysis Batch:	240-148152	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-147761	Lab File ID:	I9092214B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 2155			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1030				
Leach Date:	N/A				

MSD Lab Sample ID:	240-42049-1	Analysis Batch:	240-148152	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-147761	Lab File ID:	I9092214B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 2158			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1030				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	93	99	75 - 125	6	20		
Aluminum	94	100	75 - 125	6	20		
Cadmium	101	107	75 - 125	5	20		
Chromium	96	101	75 - 125	5	20		
Silver	101	106	75 - 125	4	20		
Arsenic	97	103	75 - 125	6	20		
Beryllium	92	98	75 - 125	6	20		
Lead	92	96	75 - 125	5	20		
Calcium	76	92	75 - 125	5	20		
Selenium	103	109	75 - 125	6	20		
Cobalt	94	100	75 - 125	5	20		
Copper	97	104	75 - 125	6	20		
Iron	94	99	75 - 125	6	20		
Potassium	94	99	75 - 125	5	20		
Magnesium	90	97	75 - 125	5	20		
Manganese	92	99	75 - 125	5	20		
Sodium	92	98	75 - 125	5	20		
Nickel	95	101	75 - 125	6	20		
Antimony	101	107	75 - 125	6	20		
Thallium	98	104	75 - 125	5	20		
Vanadium	93	99	75 - 125	5	20		
Zinc	94	100	75 - 125	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-42049-1

Method Blank - Batch: 240-147764

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-147764/1-A	Analysis Batch:	240-148140	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-147764	Lab File ID:	092214A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 1653	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1200				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.090	0.20

Lab Control Sample - Batch: 240-147764

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-147764/2-A	Analysis Batch:	240-148140	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-147764	Lab File ID:	092214A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 1655	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1200				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	4.88	98	81 - 123	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-147764

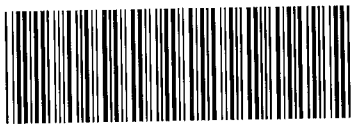
Method: 7470A
Preparation: 7470A
Dissolved

MS Lab Sample ID:	240-42049-2	Analysis Batch:	240-148140	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-147764	Lab File ID:	092214A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 1703			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1200				
Leach Date:	N/A				

MSD Lab Sample ID:	240-42049-2	Analysis Batch:	240-148140	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-147764	Lab File ID:	092214A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/22/2014 1705			Final Weight/Volume:	50 mL
Prep Date:	09/19/2014 1200				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	91	93	69 - 134	2	20		

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-42049 Chain of Custody

TestAmerica Canton

4101 Shuffel Street, N. W.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

2.4

Chain of Custody Record

047151

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Angherad Pegnon	Site Contact: Kelly Hoehn	Date: 9/16/14	COC No: 1 of ___ COCs
Company Name: ARCADIS	Tel/Fax:	Lab Contact: Denise Pohl	Carrier:	Sampler: Kelly Hoehn
Address: 430 First Ave North, Ste 720	Analysis Turnaround Time			For Lab Use Only:
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			Walk-in Client:
Phone: 612-339-9434	TAT if different from Below ___			Lab Sampling:
Fax:	☐ 2 weeks			
Project Name: Ford TCAP	☒ 1 week			Job / SDG No.: 24006638
Site: St. Paul MN	☐ 2 days			
P O # DE000372.0004	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	TAL metals, dissolved (6010)	PAHs (8270)	Sample Specific Notes:
AMW-19 (20140916)	9/16/14	1210	G	GW	4	Y		3	1		
AMW-20 (20140916)	9/16/14	1320	G	GW	4	Y		3	1		
AMW-05 (20140916)	9/16/14	1620	G	GW	4	Y		3	1		
AMW-07 (20140916)	9/16/14	1740	G	GW	6	Y		3	1	2	
DUP-003 (20140916)	9/16/14	—	G	GW	4	Y		3	1		
EB-02 (20140916)	9/16/14		G	GW	3						

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other ___

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ___ Months

Special Instructions/QC Requirements & Comments:

Lab Project # 24006638 Level II QC

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: ___ Corr'd: ___	Therm ID No.: ___
Relinquished by:	Company: ARCADIS	Date/Time: 9/17/14 1600	Received by: Dakota Turner	Company: TA-Canton	Date/Time: 9/18/14 7:50
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 42049

Client Arcadis Site Name

Cooler unpacked by: [signature]

Cooler Received on 9/18/14 Opened on 9/18/14

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A	(CF +2 °C)	Observed Cooler Temp. ____ °C	Corrected Cooler Temp. ____ °C	
IR GUN# 4	(CF -2 °C)	Observed Cooler Temp. ____ °C	Corrected Cooler Temp. ____ °C	☐ See Multiple Cooler Form
IR GUN# 5	(CF 0 °C)	Observed Cooler Temp. ____ °C	Corrected Cooler Temp. ____ °C	
IR GUN# 8	(CF 0 °C)	Observed Cooler Temp. 2.4 °C	Corrected Cooler Temp. 2.4 °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity ____ Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC412469
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM DJP Date 9/18/14 by GB via Verbal Voice Mail Other email

Concerning trip blank

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: DT

Received 3 Voa vials without labels, by process of elimination the vials are EB-02

EB-02 on COC has no marked tests

Received 1x40 trip blank not on COC, will log.

15. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.

Sample(s) ____ were received in a broken container.

Sample(s) ____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory.

Time preserved: ____ Preservative(s) added/Lot number(s): ____

Ref: SOP NC-SC-0005, Sample Receiving
L:\QAQC\QA Department\QA TARDIS\Document Control\SOPs\Work Instructions\WI-NC-099K-072514 Cooler Receipt Form.doc djl

Page 52 of 53 09/25/2014

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-19 (20140916)	240-42049-D-1	Plastic 250ml - w/nitric - dis	<2		
AMW-20 (20140916)	240-42049-D-2	Plastic 250ml - w/nitric - dis	<2		
AMW-05 (20140916)	240-42049-D-3	Plastic 250ml - w/nitric - dis	<2		
AMW-07 (20140916)	240-42049-D-4	Plastic 250ml - w/nitric - dis	<2		
DUP-003 (20140916)	240-42049-D-5	Plastic 250ml - w/nitric - dis	<2		

September 25, 2014

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 42049-1
Sample date: 2014-09-16
Report received by CADENA: 2014-09-25
Initial Data Verification completed by CADENA: 2014-09-25

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

6 Water sample(s) were analyzed for GCMS VOC, GCMS SVOC and Metals parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The following minor QC exceptions or missing information were noted:

Metals method blank had detections below the RL for iron, manganese and sodium. Client samples -001, -004 and -005 iron results should be considered to be non-detect at the RL and qualified with UB flags.

GCMS VOC trip blank had a detection below the RL for chloroform. Qualification of client sample results was not required based on this trip blank detection.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the CADENA CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 42049-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)
240420491	AMW-19 (20140916)	9/16/2014	12:10:00	X		X	X
240420492	AMW-20 (20140916)	9/16/2014	1:20:00	X		X	X
240420493	AMW-05 (20140916)	9/16/2014	4:20:00	X		X	X
240420494	AMW-07 (20140916)	9/16/2014	5:40:00	X	X	X	X
240420495	DUP-003 (20140916)	9/16/2014	12:00:00	X		X	X
240420496	EB-02 (20140916)	9/16/2014	12:00:00	X			
240420497	TRIP BLANK	9/16/2014	12:00:00	X			

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 42049-1

		Sample Name:	AMW-19 (20140916)				AMW-07 (20140916)				DUP-003 (20140916)			
		Lab Sample ID:	240420491				240420494				240420495			
		Sample Date:	9/16/2014				9/16/2014				9/16/2014			
	Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
Metals														
	OSW-6010B													
	Iron - Dissolved	7439-89-6	41	100	ug/l	UB	28	100	ug/l	UB	42	100	ug/l	UB

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 42049-1

		Sample Name:	AMW-19 (20140916)				AMW-20 (20140916)				AMW-05 (20140916)				AMW-07 (20140916)			
		Lab Sample ID:	240420491				240420492				240420493				240420494			
		Sample Date:	9/16/2014				9/16/2014				9/16/2014				9/16/2014			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																	
OSW-8260B																	
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Acetone	67-64-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---	0.37	1.0	ug/l	J	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	5.6	1.0	ug/l	---	2.8	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	0.31	1.0	ug/l	J
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	2.3	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 42049-1

		Sample Name:	AMW-19 (20140916)				AMW-20 (20140916)				AMW-05 (20140916)				AMW-07 (20140916)			
		Lab Sample ID:	240420491				240420492				240420493				240420494			
		Sample Date:	9/16/2014				9/16/2014				9/16/2014				9/16/2014			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC																		
	OSW-8270C																	
	2-Methylnaphthalene	91-57-6													ND	10	ug/l	---
	Acenaphthene	83-32-9													ND	10	ug/l	---
	Acenaphthylene	208-96-8													ND	10	ug/l	---
	Anthracene	120-12-7													ND	10	ug/l	---
	Benzo[a]anthracene	56-55-3													ND	0.20	ug/l	---
	Benzo[a]pyrene	50-32-8													ND	10	ug/l	---
	Benzo[b]fluoranthene	205-99-2													ND	10	ug/l	---
	Benzo[g,h,i]perylene	191-24-2													ND	10	ug/l	---
	Benzo[k]fluoranthene	207-08-9													ND	10	ug/l	---
	Chrysene	218-01-9													ND	10	ug/l	---
	Dibenz(a,h)anthracene	53-70-3													ND	10	ug/l	---
	Fluoranthene	206-44-0													ND	10	ug/l	---
	Fluorene	86-73-7													ND	10	ug/l	---
	Indeno[1,2,3-cd]pyrene	193-39-5													ND	10	ug/l	---
	Naphthalene	91-20-3													ND	10	ug/l	---
	Phenanthrene	85-01-8													ND	10	ug/l	---
	Pyrene	129-00-0													ND	10	ug/l	---
Metals																		
	OSW-6010B																	
	Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---	ND	200	ug/l	---	ND	200	ug/l	---	270	200	ug/l	---
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Barium - Dissolved	7440-39-3	160	200	ug/l	J	160	200	ug/l	J	59	200	ug/l	J	25	200	ug/l	J
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---	0.65	5.0	ug/l	J
	Cadmium - Dissolved	7440-43-9	0.32	5.0	ug/l	J	0.20	5.0	ug/l	J	0.22	5.0	ug/l	J	0.42	5.0	ug/l	J
	Calcium - Dissolved	7440-70-2	140000	5000	ug/l	---	180000	5000	ug/l	---	120000	5000	ug/l	---	120000	5000	ug/l	---
	Chromium - Dissolved	7440-47-3	2.2	10	ug/l	J	2.9	10	ug/l	J	1.9	10	ug/l	J	1.7	10	ug/l	J
	Cobalt - Dissolved	7440-48-4	0.79	7.0	ug/l	J	2.5	7.0	ug/l	J	6.3	7.0	ug/l	J	7.7	7.0	ug/l	---
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---	ND	25	ug/l	---	ND	25	ug/l	---	ND	25	ug/l	---
	Iron - Dissolved	7439-89-6	41	100	ug/l	UB	200	100	ug/l	---	6800	100	ug/l	---	28	100	ug/l	UB
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---	ND	3.0	ug/l	---	ND	3.0	ug/l	---
	Magnesium - Dissolved	7439-95-4	40000	5000	ug/l	---	52000	5000	ug/l	---	40000	5000	ug/l	---	41000	5000	ug/l	---
	Manganese - Dissolved	7439-96-5	180	15	ug/l	---	870	15	ug/l	---	190	15	ug/l	---	82	15	ug/l	---
	Nickel - Dissolved	7440-02-0	3.1	40	ug/l	J	8.2	40	ug/l	J	7.8	40	ug/l	J	49	40	ug/l	---
	Potassium - Dissolved	7440-09-7	2400	5000	ug/l	J	2700	5000	ug/l	J	2700	5000	ug/l	J	7100	5000	ug/l	---
	Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Sodium - Dissolved	7440-23-5	21000	5000	ug/l	---	56000	5000	ug/l	---	20000	5000	ug/l	---	80000	5000	ug/l	---
	Thallium - Dissolved	7440-28-0	2.4	10	ug/l	J	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---	ND	7.0	ug/l	---	ND	7.0	ug/l	---	ND	7.0	ug/l	---
	Zinc - Dissolved	7440-66-6	13	50	ug/l	J	10	50	ug/l	J	11	50	ug/l	J	100	50	ug/l	---
	OSW-7470A																	
	Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---	ND	0.20	ug/l	---	ND	0.20	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 42049-1

		Sample Name:	DUP-003 (20140916)				EB-02 (20140916)				TRIP BLANK			
		Lab Sample ID:	240420495				240420496				240420497			
		Sample Date:	9/16/2014				9/16/2014				9/16/2014			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	5.0	ug/l	---
Acetone	67-64-1	ND	10	ug/l	---	5.5	10	ug/l	J	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	0.45	1.0	ug/l	J
Chloromethane	74-87-3	5.2	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	2.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	0.24	1.0	ug/l	J	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 42049-1

		Sample Name:	DUP-003 (20140916)				EB-02 (20140916)				TRIP BLANK			
		Lab Sample ID:	240420495				240420496				240420497			
		Sample Date:	9/16/2014				9/16/2014				9/16/2014			
Analyte	**Cas No.**		**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS SVOC														
OSW-8270C														
2-Methylnaphthalene	91-57-6													
Acenaphthene	83-32-9													
Acenaphthylene	208-96-8													
Anthracene	120-12-7													
Benzo[a]anthracene	56-55-3													
Benzo[a]pyrene	50-32-8													
Benzo[b]fluoranthene	205-99-2													
Benzo[g,h,i]perylene	191-24-2													
Benzo[k]fluoranthene	207-08-9													
Chrysene	218-01-9													
Dibenz(a,h)anthracene	53-70-3													
Fluoranthene	206-44-0													
Fluorene	86-73-7													
Indeno[1,2,3-cd]pyrene	193-39-5													
Naphthalene	91-20-3													
Phenanthrene	85-01-8													
Pyrene	129-00-0													
Metals														
OSW-6010B														
Aluminum - Dissolved	7429-90-5		ND	200	ug/l	---								
Antimony - Dissolved	7440-36-0		ND	10	ug/l	---								
Arsenic - Dissolved	7440-38-2		2.9	10	ug/l	J								
Barium - Dissolved	7440-39-3		160	200	ug/l	J								
Beryllium - Dissolved	7440-41-7		ND	5.0	ug/l	---								
Cadmium - Dissolved	7440-43-9		0.24	5.0	ug/l	J								
Calcium - Dissolved	7440-70-2		140000	5000	ug/l	---								
Chromium - Dissolved	7440-47-3		2.1	10	ug/l	J								
Cobalt - Dissolved	7440-48-4		ND	7.0	ug/l	---								
Copper - Dissolved	7440-50-8		ND	25	ug/l	---								
Iron - Dissolved	7439-89-6		42	100	ug/l	UB								
Lead - Dissolved	7439-92-1		ND	3.0	ug/l	---								
Magnesium - Dissolved	7439-95-4		40000	5000	ug/l	---								
Manganese - Dissolved	7439-96-5		180	15	ug/l	---								
Nickel - Dissolved	7440-02-0		3.2	40	ug/l	J								
Potassium - Dissolved	7440-09-7		2400	5000	ug/l	J								
Selenium - Dissolved	7782-49-2		ND	5.0	ug/l	---								
Silver - Dissolved	7440-22-4		ND	10	ug/l	---								
Sodium - Dissolved	7440-23-5		21000	5000	ug/l	---								
Thallium - Dissolved	7440-28-0		ND	10	ug/l	---								
Vanadium - Dissolved	7440-62-2		ND	7.0	ug/l	---								
Zinc - Dissolved	7440-66-6		11	50	ug/l	J								
OSW-7470A														
Mercury - Dissolved	7439-97-6		ND	0.20	ug/l	---								

ANALYTICAL REPORT

Job Number: 240-61699-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
3/8/2016 2:11 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
03/08/2016

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CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-61699-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 3/4/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.7º C and 1.1º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-27_20160302 (240-61699-1), AMW-28_20160302 (240-61699-2), AMW-29_20160303 (240-61699-3), AMW-30_20160303 (240-61699-4), AMW-31_20160303 (240-61699-5), DUP-1 (240-61699-6) and TRIP BLANK (240-61699-7) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/07/2016.

Several analytes failed the recovery criteria low for the MSD of sample 240-61588-3 in batch 240-220480. Several analytes exceeded the RPD limit. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples AMW-27_20160302 (240-61699-1), AMW-28_20160302 (240-61699-2), AMW-29_20160303 (240-61699-3), AMW-30_20160303 (240-61699-4), AMW-31_20160303 (240-61699-5) and DUP-1 (240-61699-6) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 03/05/2016 and analyzed on 03/07/2016.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) : AMW-31_20160303 (240-61699-5) and DUP-1 (240-61699-6).

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-220349.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP)

Samples AMW-27_20160302 (240-61699-1), AMW-28_20160302 (240-61699-2), AMW-29_20160303 (240-61699-3), AMW-30_20160303 (240-61699-4), AMW-31_20160303 (240-61699-5) and DUP-1 (240-61699-6) were analyzed for dissolved metals

(ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 03/04/2016 and analyzed on 03/07/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Several analytes were detected in method blank MB 240-220200/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

DISSOLVED MERCURY (CVAA)

Samples AMW-27_20160302 (240-61699-1), AMW-28_20160302 (240-61699-2), AMW-29_20160303 (240-61699-3), AMW-30_20160303 (240-61699-4), AMW-31_20160303 (240-61699-5) and DUP-1 (240-61699-6) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 03/04/2016 and analyzed on 03/07/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-61699-1	**AMW-27_20160302**					
Acetone		3.3	J	10	ug/L	8260B
Chloroform		4.8		1.0	ug/L	8260B
2-Butanone (MEK)		0.80	J	10	ug/L	8260B
Methyl tert butyl ether		0.49	J	1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.50		0.095	mg/L	WI-DRO
Dissolved						
Barium		170	J B	200	ug/L	6010B
Aluminum		4800		200	ug/L	6010B
Cadmium		0.43	J	5.0	ug/L	6010B
Chromium		10		10	ug/L	6010B
Arsenic		8.0	J	10	ug/L	6010B
Beryllium		0.13	J	5.0	ug/L	6010B
Lead		6.0		3.0	ug/L	6010B
Calcium		79000	B	5000	ug/L	6010B
Cobalt		5.1	J	7.0	ug/L	6010B
Copper		14	J	25	ug/L	6010B
Iron		1600		100	ug/L	6010B
Potassium		3400	J	5000	ug/L	6010B
Magnesium		18000	B	5000	ug/L	6010B
Manganese		350	B	15	ug/L	6010B
Sodium		270000	B	5000	ug/L	6010B
Nickel		27	J	40	ug/L	6010B
Vanadium		18		7.0	ug/L	6010B
Zinc		22	J B	50	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-61699-2	**AMW-28_20160302**					
Chloroform		1.1		1.0	ug/L	8260B
Cyclohexane		1.2		1.0	ug/L	8260B
Methyl tert butyl ether		0.36	J	1.0	ug/L	8260B
Methylcyclohexane		10		1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.54		0.095	mg/L	WI-DRO
Dissolved						
Barium		97	J B	200	ug/L	6010B
Aluminum		4000		200	ug/L	6010B
Chromium		8.2	J	10	ug/L	6010B
Lead		3.1		3.0	ug/L	6010B
Calcium		62000	B	5000	ug/L	6010B
Cobalt		3.1	J	7.0	ug/L	6010B
Copper		10	J	25	ug/L	6010B
Iron		2900		100	ug/L	6010B
Potassium		2500	J	5000	ug/L	6010B
Magnesium		15000	B	5000	ug/L	6010B
Manganese		480	B	15	ug/L	6010B
Sodium		150000	B	5000	ug/L	6010B
Nickel		14	J	40	ug/L	6010B
Vanadium		11		7.0	ug/L	6010B
Zinc		13	J B	50	ug/L	6010B
240-61699-3	**AMW-29_20160303**					
Trichloroethene		7.1		1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.35		0.095	mg/L	WI-DRO
Dissolved						
Barium		95	J B	200	ug/L	6010B
Aluminum		2900		200	ug/L	6010B
Cadmium		0.48	J	5.0	ug/L	6010B
Chromium		3.9	J	10	ug/L	6010B
Beryllium		0.42	J	5.0	ug/L	6010B
Lead		3.1		3.0	ug/L	6010B
Calcium		51000	B	5000	ug/L	6010B
Cobalt		70		7.0	ug/L	6010B
Copper		3.8	J	25	ug/L	6010B
Iron		1000		100	ug/L	6010B
Potassium		6000		5000	ug/L	6010B
Magnesium		21000	B	5000	ug/L	6010B
Manganese		1300	B	15	ug/L	6010B
Sodium		120000	B	5000	ug/L	6010B
Nickel		310		40	ug/L	6010B
Vanadium		4.1	J	7.0	ug/L	6010B
Zinc		180	B	50	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-61699-4	**AMW-30_20160303**					
Chloroform		0.99	J	1.0	ug/L	8260B
Tetrachloroethene		0.64	J	1.0	ug/L	8260B
Trichloroethene		22		1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.18		0.095	mg/L	WI-DRO
Dissolved						
Barium		160	J B	200	ug/L	6010B
Aluminum		4000		200	ug/L	6010B
Cadmium		0.27	J	5.0	ug/L	6010B
Chromium		6.0	J	10	ug/L	6010B
Beryllium		0.70	J	5.0	ug/L	6010B
Calcium		130000	B	5000	ug/L	6010B
Cobalt		49		7.0	ug/L	6010B
Copper		29		25	ug/L	6010B
Iron		1100		100	ug/L	6010B
Potassium		12000		5000	ug/L	6010B
Magnesium		42000	B	5000	ug/L	6010B
Manganese		1100	B	15	ug/L	6010B
Sodium		170000	B	5000	ug/L	6010B
Nickel		260		40	ug/L	6010B
Thallium		2.5	J	10	ug/L	6010B
Zinc		79	B	50	ug/L	6010B
240-61699-5	**AMW-31_20160303**					
Acetone		1.7	J	10	ug/L	8260B
Toluene		0.46	J	1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.70		0.095	mg/L	WI-DRO
Dissolved						
Barium		31	J B	200	ug/L	6010B
Chromium		1.3	J	10	ug/L	6010B
Calcium		49000	B	5000	ug/L	6010B
Cobalt		0.98	J	7.0	ug/L	6010B
Copper		3.3	J	25	ug/L	6010B
Iron		1100		100	ug/L	6010B
Potassium		4600	J	5000	ug/L	6010B
Magnesium		15000	B	5000	ug/L	6010B
Manganese		480	B	15	ug/L	6010B
Sodium		140000	B	5000	ug/L	6010B
Nickel		4.1	J	40	ug/L	6010B
Thallium		2.5	J	10	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-61699-6	**DUP-1**					
WI Diesel Range Organics (C10-C28)		0.76		0.095	mg/L	WI-DRO
Dissolved						
Barium		33	J B	200	ug/L	6010B
Chromium		0.73	J	10	ug/L	6010B
Calcium		44000	B	5000	ug/L	6010B
Cobalt		0.96	J	7.0	ug/L	6010B
Copper		3.9	J	25	ug/L	6010B
Iron		470		100	ug/L	6010B
Potassium		4400	J	5000	ug/L	6010B
Magnesium		13000	B	5000	ug/L	6010B
Manganese		400	B	15	ug/L	6010B
Sodium		130000	B	5000	ug/L	6010B
Nickel		4.4	J	40	ug/L	6010B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Purge and Trap	TAL CAN		SW846 5030B
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL CAN = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Method	Analyst	Analyst ID
SW846 8260B	Williams, Larry	LRW
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Toth, Roger	RKT
SW846 7470A	Heakin, David	DSH

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-61699-1	AMW-27_20160302	Water	03/02/2016 1251	03/04/2016 0930
240-61699-2	AMW-28_20160302	Water	03/02/2016 1445	03/04/2016 0930
240-61699-3	AMW-29_20160303	Water	03/03/2016 1111	03/04/2016 0930
240-61699-4	AMW-30_20160303	Water	03/03/2016 1229	03/04/2016 0930
240-61699-5	AMW-31_20160303	Water	03/03/2016 1508	03/04/2016 0930
240-61699-6	DUP-1	Water	03/03/2016 1508	03/04/2016 0930
240-61699-7	TRIP BLANK	Water	03/03/2016 0000	03/04/2016 0930

SAMPLE RESULTS

Client Sample ID: **AMW-27_20160302**

Lab Sample ID: 240-61699-1 Date Sampled: 03/02/2016 1251
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5266.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1321			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1321				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	3.3	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	4.8		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-27_20160302

Lab Sample ID: 240-61699-1 Date Sampled: 03/02/2016 1251
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5266.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1321			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1321				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	0.80	J	0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	0.49	J	0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		78 - 125
4-Bromofluorobenzene (Surr)	93		61 - 120
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	102		79 - 120

Client Sample ID: **AMW-28_20160302**

Lab Sample ID: 240-61699-2 Date Sampled: 03/02/2016 1445
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5267.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1344			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1344				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	1.1		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	1.2		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-28_20160302

Lab Sample ID: 240-61699-2 Date Sampled: 03/02/2016 1445
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5267.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1344			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1344				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	0.36	J	0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	10		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		78 - 125
4-Bromofluorobenzene (Surr)	97		61 - 120
Toluene-d8 (Surr)	106		80 - 120
Dibromofluoromethane (Surr)	102		79 - 120

Client Sample ID: **AMW-29_20160303**

Lab Sample ID: 240-61699-3 Date Sampled: 03/03/2016 1111
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5268.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1406			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1406				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-29_20160303

Lab Sample ID: 240-61699-3 Date Sampled: 03/03/2016 1111
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5268.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1406			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1406				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	7.1		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		78 - 125
4-Bromofluorobenzene (Surr)	91		61 - 120
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	103		79 - 120

Client Sample ID: **AMW-30_20160303**

Lab Sample ID: 240-61699-4 Date Sampled: 03/03/2016 1229
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5269.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1428			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1428				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	0.99	J	0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-30_20160303

Lab Sample ID: 240-61699-4 Date Sampled: 03/03/2016 1229
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5269.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1428			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1428				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	0.64	J	0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	22		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		78 - 125
4-Bromofluorobenzene (Surr)	89		61 - 120
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	103		79 - 120

Client Sample ID: **AMW-31_20160303**

Lab Sample ID: 240-61699-5 Date Sampled: 03/03/2016 1508
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5270.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1450			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1450				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	1.7	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-31_20160303

Lab Sample ID: 240-61699-5 Date Sampled: 03/03/2016 1508
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5270.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1450			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1450				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	0.46	J	0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		78 - 125
4-Bromofluorobenzene (Surr)	96		61 - 120
Toluene-d8 (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	106		79 - 120

Client Sample ID: **DUP-1**

Lab Sample ID: 240-61699-6 Date Sampled: 03/03/2016 1508
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5271.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1512			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1512				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: DUP-1

Lab Sample ID: 240-61699-6 Date Sampled: 03/03/2016 1508
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5271.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1512			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1512				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		78 - 125
4-Bromofluorobenzene (Surr)	92		61 - 120
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	106		79 - 120

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-61699-7 Date Sampled: 03/03/2016 0000
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5272.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1534			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1534				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-61699-7 Date Sampled: 03/03/2016 0000
Client Matrix: Water Date Received: 03/04/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5272.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1534			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1534				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	111		78 - 125
4-Bromofluorobenzene (Surr)	95		61 - 120
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	106		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-27_20160302

Lab Sample ID: 240-61699-1 Date Sampled: 03/02/2016 1251
Client Matrix: Water Date Received: 03/04/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-220461	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-220349	Lab File ID:	P14F0307009.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/07/2016 1330			Final Weight/Volume:	5 mL
Prep Date:	03/05/2016 1015			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.50		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-28_20160302

Lab Sample ID: 240-61699-2 Date Sampled: 03/02/2016 1445
Client Matrix: Water Date Received: 03/04/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-220461	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-220349	Lab File ID:	P14F0307010.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/07/2016 1357			Final Weight/Volume:	5 mL
Prep Date:	03/05/2016 1015			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.54		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-29_20160303

Lab Sample ID: 240-61699-3 Date Sampled: 03/03/2016 1111
Client Matrix: Water Date Received: 03/04/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-220461	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-220349	Lab File ID:	P14F0307011.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/07/2016 1424			Final Weight/Volume:	5 mL
Prep Date:	03/05/2016 1015			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.35		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-30_20160303

Lab Sample ID: 240-61699-4 Date Sampled: 03/03/2016 1229
Client Matrix: Water Date Received: 03/04/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-220461	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-220349	Lab File ID:	P14F0307012.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/07/2016 1451			Final Weight/Volume:	5 mL
Prep Date:	03/05/2016 1015			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.18		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-31_20160303

Lab Sample ID: 240-61699-5 Date Sampled: 03/03/2016 1508
Client Matrix: Water Date Received: 03/04/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-220461	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-220349	Lab File ID:	P14F0307013.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/07/2016 1518			Final Weight/Volume:	5 mL
Prep Date:	03/05/2016 1015			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.70		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: DUP-1

Lab Sample ID: 240-61699-6 Date Sampled: 03/03/2016 1508
Client Matrix: Water Date Received: 03/04/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-220461	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-220349	Lab File ID:	P14F0307014.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/07/2016 1545			Final Weight/Volume:	5 mL
Prep Date:	03/05/2016 1015			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.76		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-27_20160302

Lab Sample ID: 240-61699-1 Date Sampled: 03/02/2016 1251
Client Matrix: Water Date Received: 03/04/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-220596	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-220200	Lab File ID:	I9030716A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1659			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1151				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	170	J B	1.0	200
Aluminum	4800		40	200
Cadmium	0.43	J	0.14	5.0
Chromium	10		0.55	10
Silver	ND		0.92	10
Arsenic	8.0	J	2.9	10
Beryllium	0.13	J	0.13	5.0
Lead	6.0		1.9	3.0
Calcium	79000	B	260	5000
Selenium	ND		4.0	5.0
Cobalt	5.1	J	0.56	7.0
Copper	14	J	1.9	25
Iron	1600		13	100
Potassium	3400	J	70	5000
Magnesium	18000	B	55	5000
Manganese	350	B	0.46	15
Sodium	270000	B	180	5000
Nickel	27	J	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	18		2.4	7.0
Zinc	22	J B	9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-220605	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-220292	Lab File ID:	0307A16HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1422			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-28_20160302

Lab Sample ID: 240-61699-2 Date Sampled: 03/02/2016 1445
Client Matrix: Water Date Received: 03/04/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-220596	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-220200	Lab File ID:	I9030716A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1704			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1151				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	97	J B	1.0	200
Aluminum	4000		40	200
Cadmium	ND		0.14	5.0
Chromium	8.2	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	3.1		1.9	3.0
Calcium	62000	B	260	5000
Selenium	ND		4.0	5.0
Cobalt	3.1	J	0.56	7.0
Copper	10	J	1.9	25
Iron	2900		13	100
Potassium	2500	J	70	5000
Magnesium	15000	B	55	5000
Manganese	480	B	0.46	15
Sodium	150000	B	180	5000
Nickel	14	J	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	11		2.4	7.0
Zinc	13	J B	9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-220605	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-220292	Lab File ID:	0307A16HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1424			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-29_20160303

Lab Sample ID: 240-61699-3 Date Sampled: 03/03/2016 1111
Client Matrix: Water Date Received: 03/04/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-220596	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-220200	Lab File ID:	I9030716A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1708			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1151				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	95	J B	1.0	200
Aluminum	2900		40	200
Cadmium	0.48	J	0.14	5.0
Chromium	3.9	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	0.42	J	0.13	5.0
Lead	3.1		1.9	3.0
Calcium	51000	B	260	5000
Selenium	ND		4.0	5.0
Cobalt	70		0.56	7.0
Copper	3.8	J	1.9	25
Iron	1000		13	100
Potassium	6000		70	5000
Magnesium	21000	B	55	5000
Manganese	1300	B	0.46	15
Sodium	120000	B	180	5000
Nickel	310		0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	4.1	J	2.4	7.0
Zinc	180	B	9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-220605	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-220292	Lab File ID:	0307A16HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1426			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-30_20160303

Lab Sample ID: 240-61699-4 Date Sampled: 03/03/2016 1229
Client Matrix: Water Date Received: 03/04/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-220596	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-220200	Lab File ID:	I9030716A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1712			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1151				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	160	J B	1.0	200
Aluminum	4000		40	200
Cadmium	0.27	J	0.14	5.0
Chromium	6.0	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	0.70	J	0.13	5.0
Lead	ND		1.9	3.0
Calcium	130000	B	260	5000
Selenium	ND		4.0	5.0
Cobalt	49		0.56	7.0
Copper	29		1.9	25
Iron	1100		13	100
Potassium	12000		70	5000
Magnesium	42000	B	55	5000
Manganese	1100	B	0.46	15
Sodium	170000	B	180	5000
Nickel	260		0.76	40
Antimony	ND		2.4	10
Thallium	2.5	J	1.7	10
Vanadium	ND		2.4	7.0
Zinc	79	B	9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-220605	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-220292	Lab File ID:	0307A16HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1428			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: AMW-31_20160303

Lab Sample ID: 240-61699-5 Date Sampled: 03/03/2016 1508
Client Matrix: Water Date Received: 03/04/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-220596	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-220200	Lab File ID:	I9030716A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1716			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1151				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	31	J B	1.0	200
Aluminum	ND		40	200
Cadmium	ND		0.14	5.0
Chromium	1.3	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	49000	B	260	5000
Selenium	ND		4.0	5.0
Cobalt	0.98	J	0.56	7.0
Copper	3.3	J	1.9	25
Iron	1100		13	100
Potassium	4600	J	70	5000
Magnesium	15000	B	55	5000
Manganese	480	B	0.46	15
Sodium	140000	B	180	5000
Nickel	4.1	J	0.76	40
Antimony	ND		2.4	10
Thallium	2.5	J	1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-220605	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-220292	Lab File ID:	0307A16HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1411			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Client Sample ID: DUP-1

Lab Sample ID: 240-61699-6 Date Sampled: 03/03/2016 1508
Client Matrix: Water Date Received: 03/04/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-220596	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-220200	Lab File ID:	I9030716A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1636			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1151				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	33	J B	1.0	200
Aluminum	ND		40	200
Cadmium	ND		0.14	5.0
Chromium	0.73	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	44000	B	260	5000
Selenium	ND		4.0	5.0
Cobalt	0.96	J	0.56	7.0
Copper	3.9	J	1.9	25
Iron	470		13	100
Potassium	4400	J	70	5000
Magnesium	13000	B	55	5000
Manganese	400	B	0.46	15
Sodium	130000	B	180	5000
Nickel	4.4	J	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-220605	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-220292	Lab File ID:	0307A16HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1430			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Lab Section	Qualifier	Description
GC/MS VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-220480					
LCS 240-220480/4	Lab Control Sample	T	Water	8260B	
MB 240-220480/6	Method Blank	T	Water	8260B	
240-61588-D-3 MS	Matrix Spike	T	Water	8260B	
240-61588-E-3 MSD	Matrix Spike Duplicate	T	Water	8260B	
240-61699-1	AMW-27_20160302	T	Water	8260B	
240-61699-2	AMW-28_20160302	T	Water	8260B	
240-61699-3	AMW-29_20160303	T	Water	8260B	
240-61699-4	AMW-30_20160303	T	Water	8260B	
240-61699-5	AMW-31_20160303	T	Water	8260B	
240-61699-6	DUP-1	T	Water	8260B	
240-61699-7	TRIP BLANK	T	Water	8260B	

Report Basis
T = Total

GC Semi VOA					
Prep Batch: 240-220349					
LCS 240-220349/8-A	Lab Control Sample	T	Water	3520C	
LCSD 240-220349/9-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 240-220349/7-A	Method Blank	T	Water	3520C	
240-61699-1	AMW-27_20160302	T	Water	3520C	
240-61699-2	AMW-28_20160302	T	Water	3520C	
240-61699-3	AMW-29_20160303	T	Water	3520C	
240-61699-4	AMW-30_20160303	T	Water	3520C	
240-61699-5	AMW-31_20160303	T	Water	3520C	
240-61699-6	DUP-1	T	Water	3520C	
Analysis Batch:240-220461					
LCS 240-220349/8-A	Lab Control Sample	T	Water	WI-DRO	240-220349
LCSD 240-220349/9-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-220349
MB 240-220349/7-A	Method Blank	T	Water	WI-DRO	240-220349
240-61699-1	AMW-27_20160302	T	Water	WI-DRO	240-220349
240-61699-2	AMW-28_20160302	T	Water	WI-DRO	240-220349
240-61699-3	AMW-29_20160303	T	Water	WI-DRO	240-220349
240-61699-4	AMW-30_20160303	T	Water	WI-DRO	240-220349
240-61699-5	AMW-31_20160303	T	Water	WI-DRO	240-220349
240-61699-6	DUP-1	T	Water	WI-DRO	240-220349

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-220200					
LCS 240-220200/2-A	Lab Control Sample	R	Water	3005A	
MB 240-220200/1-A	Method Blank	R	Water	3005A	
240-61699-1	AMW-27_20160302	D	Water	3005A	
240-61699-2	AMW-28_20160302	D	Water	3005A	
240-61699-3	AMW-29_20160303	D	Water	3005A	
240-61699-4	AMW-30_20160303	D	Water	3005A	
240-61699-5	AMW-31_20160303	D	Water	3005A	
240-61699-6	DUP-1	D	Water	3005A	
240-61699-6MS	Matrix Spike	D	Water	3005A	
240-61699-6MSD	Matrix Spike Duplicate	D	Water	3005A	
Prep Batch: 240-220292					
LCS 240-220292/2-A	Lab Control Sample	T	Water	7470A	
MB 240-220292/1-A	Method Blank	T	Water	7470A	
240-61699-1	AMW-27_20160302	D	Water	7470A	
240-61699-2	AMW-28_20160302	D	Water	7470A	
240-61699-3	AMW-29_20160303	D	Water	7470A	
240-61699-4	AMW-30_20160303	D	Water	7470A	
240-61699-5	AMW-31_20160303	D	Water	7470A	
240-61699-5MS	Matrix Spike	D	Water	7470A	
240-61699-5MSD	Matrix Spike Duplicate	D	Water	7470A	
240-61699-6	DUP-1	D	Water	7470A	
Analysis Batch:240-220596					
LCS 240-220200/2-A	Lab Control Sample	R	Water	6010B	240-220200
MB 240-220200/1-A	Method Blank	R	Water	6010B	240-220200
240-61699-1	AMW-27_20160302	D	Water	6010B	240-220200
240-61699-2	AMW-28_20160302	D	Water	6010B	240-220200
240-61699-3	AMW-29_20160303	D	Water	6010B	240-220200
240-61699-4	AMW-30_20160303	D	Water	6010B	240-220200
240-61699-5	AMW-31_20160303	D	Water	6010B	240-220200
240-61699-6	DUP-1	D	Water	6010B	240-220200
240-61699-6MS	Matrix Spike	D	Water	6010B	240-220200
240-61699-6MSD	Matrix Spike Duplicate	D	Water	6010B	240-220200

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-220605					
LCS 240-220292/2-A	Lab Control Sample	T	Water	7470A	240-220292
MB 240-220292/1-A	Method Blank	T	Water	7470A	240-220292
240-61699-1	AMW-27_20160302	D	Water	7470A	240-220292
240-61699-2	AMW-28_20160302	D	Water	7470A	240-220292
240-61699-3	AMW-29_20160303	D	Water	7470A	240-220292
240-61699-4	AMW-30_20160303	D	Water	7470A	240-220292
240-61699-5	AMW-31_20160303	D	Water	7470A	240-220292
240-61699-5MS	Matrix Spike	D	Water	7470A	240-220292
240-61699-5MSD	Matrix Spike Duplicate	D	Water	7470A	240-220292
240-61699-6	DUP-1	D	Water	7470A	240-220292

Report Basis
D = Dissolved
R = Total Recoverable
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-61699-1	AMW-27_20160302	103	93	101	102
240-61699-2	AMW-28_20160302	100	97	106	102
240-61699-3	AMW-29_20160303	106	91	100	103
240-61699-4	AMW-30_20160303	106	89	97	103
240-61699-5	AMW-31_20160303	107	96	96	106
240-61699-6	DUP-1	109	92	98	106
240-61699-7	TRIP BLANK	111	95	98	106
MB 240-220480/6		104	95	96	101
LCS 240-220480/4		96	106	98	100
240-61588-D-3 MS		99	101	106	102
240-61588-E-3 MSD		102	106	104	103

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	78-125
BFB = 4-Bromofluorobenzene (Surr)	61-120
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	79-120

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Method Blank - Batch: 240-220480

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-220480/6	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5265.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1259	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1259				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Method Blank - Batch: 240-220480

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-220480/6	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5265.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1259	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1259				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	2.0
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104	78 - 125
4-Bromofluorobenzene (Surr)	95	61 - 120
Toluene-d8 (Surr)	96	80 - 120
Dibromofluoromethane (Surr)	101	79 - 120

Lab Control Sample - Batch: 240-220480

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-220480/4	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5263.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1215	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1215				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	10.5	105	80 - 120	
1,1,1-Trichloroethane	10.0	10.6	106	77 - 123	
1,1,2,2-Tetrachloroethane	10.0	8.01	80	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.0	100	67 - 138	
1,1,2-Trichloroethane	10.0	9.03	90	80 - 120	
1,1-Dichloroethane	10.0	9.67	97	79 - 125	
1,1-Dichloroethene	10.0	10.1	101	76 - 124	
1,1-Dichloropropene	10.0	10.3	103	80 - 128	
1,2,3-Trichlorobenzene	10.0	8.48	85	66 - 120	
1,2,3-Trichloropropane	10.0	7.83	78	72 - 126	
1,2,4-Trichlorobenzene	10.0	9.47	95	61 - 120	
1,2,4-Trimethylbenzene	10.0	9.86	99	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	9.12	91	50 - 132	
1,2-Dichlorobenzene	10.0	9.68	97	79 - 120	
1,2-Dichloroethane	10.0	9.61	96	80 - 120	
1,2-Dichloropropane	10.0	9.95	99	78 - 124	
1,3,5-Trimethylbenzene	10.0	9.70	97	77 - 120	
1,3-Dichlorobenzene	10.0	9.32	93	79 - 120	
1,3-Dichloropropane	10.0	9.03	90	80 - 120	
1,4-Dichlorobenzene	10.0	9.42	94	79 - 120	
Allyl chloride	10.0	10.0	100	69 - 120	
2,2-Dichloropropane	10.0	11.3	113	71 - 122	
2-Chlorotoluene	10.0	8.90	89	80 - 120	
2-Hexanone	20.0	17.3	87	55 - 141	
Bromobenzene	10.0	8.43	84	80 - 120	
Bromochloromethane	10.0	9.54	95	80 - 120	
4-Chlorotoluene	10.0	9.00	90	80 - 120	
p-Isopropyltoluene	10.0	10.9	109	77 - 120	
Acetone	20.0	14.6	73	34 - 148	
Benzene	10.0	9.70	97	80 - 120	
Bromoform	10.0	8.99	90	56 - 122	
Bromomethane	10.0	7.62	76	38 - 132	
Carbon disulfide	10.0	10.5	105	65 - 144	
Carbon tetrachloride	10.0	11.4	114	77 - 131	
Chlorobenzene	10.0	9.31	93	80 - 120	
Chloroethane	10.0	8.90	89	36 - 126	
Chloroform	10.0	9.86	99	80 - 120	
Chloromethane	10.0	10.0	100	48 - 133	
cis-1,2-Dichloroethene	10.0	9.85	98	79 - 120	
cis-1,3-Dichloropropene	10.0	10.8	108	74 - 126	
Cyclohexane	10.0	10.1	101	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Lab Control Sample - Batch: 240-220480

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-220480/4	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5263.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 1215	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 1215				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	9.27	93	62 - 120	
Dibromomethane	10.0	9.56	96	80 - 120	
Bromodichloromethane	10.0	9.99	100	80 - 120	
Dichlorodifluoromethane	10.0	9.11	91	23 - 136	
Dichlorofluoromethane	10.0	8.39	84	40 - 160	
Ethyl ether	10.0	9.10	91	53 - 135	
Ethylbenzene	10.0	9.81	98	80 - 120	
1,2-Dibromoethane	10.0	9.45	94	80 - 120	
Naphthalene	10.0	7.79	78	53 - 121	
m-Xylene & p-Xylene	10.0	10.0	100	80 - 120	
n-Butylbenzene	10.0	11.0	110	74 - 120	
Isopropylbenzene	10.0	10.9	109	77 - 120	
Methyl acetate	50.0	43.7	87	67 - 131	
N-Propylbenzene	10.0	9.41	94	79 - 123	
2-Butanone (MEK)	20.0	16.6	83	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	18.4	92	64 - 135	
sec-Butylbenzene	10.0	10.4	104	77 - 120	
Methyl tert butyl ether	10.0	9.77	98	69 - 121	
Methylene Chloride	10.0	10.7	107	77 - 129	
o-Xylene	10.0	10.5	105	80 - 120	
Styrene	10.0	10.1	101	76 - 122	
tert-Butylbenzene	10.0	10.2	102	77 - 121	
Tetrachloroethene	10.0	9.81	98	78 - 121	
Tetrahydrofuran	20.0	17.3	87	61 - 136	
Toluene	10.0	9.60	96	80 - 120	
trans-1,2-Dichloroethene	10.0	10.1	101	80 - 124	
trans-1,3-Dichloropropene	10.0	9.38	94	75 - 131	
Trichloroethene	10.0	9.94	99	80 - 121	
Trichlorofluoromethane	10.0	10.3	103	61 - 133	
Vinyl chloride	10.0	9.50	95	52 - 121	
Methylcyclohexane	10.0	10.5	105	61 - 134	
Chlorodibromomethane	10.0	10.2	102	74 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	78 - 125
4-Bromofluorobenzene (Surr)	106	61 - 120
Toluene-d8 (Surr)	98	80 - 120
Dibromofluoromethane (Surr)	100	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-220480

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 240-61588-D-3 MS
Client Matrix: Water
Dilution: 1.0
Analysis Date: 03/07/2016 2045
Prep Date: 03/07/2016 2045
Leach Date: N/A

Analysis Batch: 240-220480
Prep Batch: N/A
Leach Batch: N/A

Instrument ID: A3UX10
Lab File ID: UXX5286.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL
5 mL

MSD Lab Sample ID: 240-61588-E-3 MSD
Client Matrix: Water
Dilution: 1.0
Analysis Date: 03/07/2016 2107
Prep Date: 03/07/2016 2107
Leach Date: N/A

Analysis Batch: 240-220480
Prep Batch: N/A
Leach Batch: N/A

Instrument ID: A3UX10
Lab File ID: UXX5287.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL
5 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	88	75	69 - 122	16	14		F2
1,1,2,2-Tetrachloroethane	82	74	61 - 130	10	18		
1,1,2-Trichloro-1,2,2-trifluoroethane	67	57	44 - 140	17	35		
1,1,2-Trichloroethane	90	77	72 - 125	16	19		
1,1-Dichloroethane	90	77	73 - 124	15	14		F2
1,1-Dichloroethene	82	69	67 - 124	17	24		
1,2,4-Trichlorobenzene	57	43	48 - 120	27	28		F1
1,2,4-Trimethylbenzene	69	55	64 - 122	23	14		F1 F2
1,2-Dibromo-3-Chloropropane	71	72	42 - 130	2	24		
1,2-Dichlorobenzene	72	60	67 - 118	18	15		F1 F2
1,2-Dichloroethane	92	82	74 - 125	11	24		
1,2-Dichloropropane	90	78	73 - 122	14	15		
1,3,5-Trimethylbenzene	69	53	62 - 126	25	17		F1 F2
1,3-Dichlorobenzene	70	57	65 - 120	21	15		F1 F2
1,4-Dichlorobenzene	70	58	66 - 120	20	16		F1 F2
2-Hexanone	87	82	49 - 142	5	27		
Acetone	73	82	32 - 126	12	28		
Benzene	85	72	73 - 121	17	13		F1 F2
Bromoform	76	71	45 - 121	7	19		
Bromomethane	85	74	26 - 136	14	35		
Carbon disulfide	95	77	54 - 144	21	34		
Carbon tetrachloride	87	70	65 - 129	22	20		F2
Chlorobenzene	75	62	72 - 120	19	15		F1 F2
Chloroethane	84	67	27 - 131	22	35		
Chloroform	88	76	73 - 121	15	17		
Chloromethane	67	57	39 - 134	16	20		
cis-1,2-Dichloroethene	89	75	66 - 124	16	22		
cis-1,3-Dichloropropene	76	66	60 - 120	14	21		
Cyclohexane	67	48	41 - 137	34	35		
Bromodichloromethane	89	77	72 - 120	15	19		
Dichlorodifluoromethane	53	50	14 - 137	5	34		
Ethylbenzene	73	57	68 - 121	24	16		F1 F2

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-220480

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-61588-D-3 MS	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5286.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 2045			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 2045				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61588-E-3 MSD	Analysis Batch:	240-220480	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5287.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/07/2016 2107			Final Weight/Volume:	5 mL
Prep Date:	03/07/2016 2107				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,2-Dibromoethane	89	79	69 - 125	12	24		
m-Xylene & p-Xylene	73	57	66 - 123	24	15		F1 F2
Isopropylbenzene	71	54	61 - 122	27	20		F1 F2
Methyl acetate	66	63	64 - 124	5	12		F1
2-Butanone (MEK)	76	78	49 - 132	2	19		
4-Methyl-2-pentanone (MIBK)	88	85	58 - 136	2	32		
Methyl tert butyl ether	97	89	61 - 121	8	12		
Methylene Chloride	96	82	70 - 124	15	14		F2
o-Xylene	77	63	68 - 121	20	14		F1 F2
Styrene	72	59	64 - 126	20	15		F1 F2
Tetrachloroethene	71	54	59 - 125	28	20		F1 F2
Toluene	80	64	72 - 122	22	15		F1 F2
trans-1,2-Dichloroethene	89	73	72 - 125	19	25		
trans-1,3-Dichloropropene	72	62	58 - 132	15	22		
Trichloroethene	78	64	61 - 129	19	14		F2
Trichlorofluoromethane	84	59	49 - 133	35	25		F2
Vinyl chloride	78	61	44 - 122	25	35		
Methylcyclohexane	60	42	39 - 135	36	35		F2
Chlorodibromomethane	89	78	62 - 122	13	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99	102	78 - 125
4-Bromofluorobenzene (Surr)	101	106	61 - 120
Toluene-d8 (Surr)	106	104	80 - 120
Dibromofluoromethane (Surr)	102	103	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Method Blank - Batch: 240-220349 **Method: WI-DRO**
Preparation: 3520C

Lab Sample ID:	MB 240-220349/7-A	Analysis Batch:	240-220461	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-220349	Lab File ID:	P14F0307007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/07/2016 1235	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/05/2016 1015			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.050	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-220349 **Method: WI-DRO**
Preparation: 3520C

LCS Lab Sample ID:	LCS 240-220349/8-A	Analysis Batch:	240-220461	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-220349	Lab File ID:	P14F0307008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/07/2016 1302	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/05/2016 1015			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-220349/9-A	Analysis Batch:	240-220461	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-220349	Lab File ID:	P14F0307015.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/07/2016 1612	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/05/2016 1015			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	85	94	75 - 115	10	20		

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Method Blank - Batch: 240-220200

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-220200/1-A	Analysis Batch:	240-220596	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-220200	Lab File ID:	I9030716A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1505	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 0935				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	1.77	J	1.0	200
Aluminum	ND		40	200
Cadmium	ND		0.14	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	543	J	260	5000
Selenium	ND		4.0	5.0
Cobalt	ND		0.56	7.0
Copper	ND		1.9	25
Iron	ND		13	100
Potassium	ND		70	5000
Magnesium	149	J	55	5000
Manganese	1.06	J	0.46	15
Sodium	225	J	180	5000
Nickel	ND		0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	34.9	J	9.6	50

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Lab Control Sample - Batch: 240-220200

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-220200/2-A	Analysis Batch:	240-220596	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-220200	Lab File ID:	I9030716A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1517	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 0935				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1890	95	80 - 120	
Aluminum	2000	1930	97	80 - 120	
Cadmium	50.0	48.7	97	80 - 120	
Chromium	200	195	98	80 - 120	
Silver	50.0	50.3	101	80 - 120	
Arsenic	2000	1980	99	80 - 120	
Beryllium	50.0	48.3	97	80 - 120	
Lead	500	472	94	80 - 120	
Calcium	50000	48200	96	80 - 120	
Selenium	2000	2050	103	80 - 120	
Cobalt	500	483	97	80 - 120	
Copper	250	247	99	80 - 120	
Iron	1000	992	99	80 - 120	
Potassium	50000	46800	94	80 - 120	
Magnesium	50000	47100	94	80 - 120	
Manganese	500	487	97	80 - 120	
Sodium	50000	46800	94	80 - 120	
Nickel	500	494	99	80 - 120	
Antimony	500	503	101	80 - 120	
Thallium	2000	1960	98	80 - 120	
Vanadium	500	484	97	80 - 120	
Zinc	500	500	100	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-220200

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID: 240-61699-6
Client Matrix: Water
Dilution: 1.0
Analysis Date: 03/07/2016 1640
Prep Date: 03/04/2016 1151
Leach Date: N/A

Analysis Batch: 240-220596
Prep Batch: 240-220200
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9030716A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-61699-6
Client Matrix: Water
Dilution: 1.0
Analysis Date: 03/07/2016 1643
Prep Date: 03/04/2016 1151
Leach Date: N/A

Analysis Batch: 240-220596
Prep Batch: 240-220200
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9030716A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	104	103	75 - 125	2	20		
Aluminum	112	109	75 - 125	2	20		
Cadmium	110	107	75 - 125	3	20		
Chromium	108	107	75 - 125	1	20		
Silver	114	113	75 - 125	1	20		
Arsenic	113	111	75 - 125	2	20		
Beryllium	107	105	75 - 125	1	20		
Lead	103	101	75 - 125	2	20		
Calcium	111	105	75 - 125	3	20		
Selenium	115	113	75 - 125	2	20		
Cobalt	109	107	75 - 125	2	20		
Copper	109	108	75 - 125	0	20		
Iron	112	108	75 - 125	3	20		
Potassium	106	104	75 - 125	2	20		
Magnesium	105	102	75 - 125	2	20		
Manganese	113	109	75 - 125	2	20		
Sodium	121	111	75 - 125	3	20		
Nickel	111	109	75 - 125	2	20		
Antimony	112	111	75 - 125	1	20		
Thallium	108	106	75 - 125	2	20		
Vanadium	108	107	75 - 125	1	20		
Zinc	114	112	75 - 125	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-61699-1

Method Blank - Batch: 240-220292

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-220292/1-A	Analysis Batch:	240-220605	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-220292	Lab File ID:	0307A16HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1407	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.090	0.20

Lab Control Sample - Batch: 240-220292

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-220292/2-A	Analysis Batch:	240-220605	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-220292	Lab File ID:	0307A16HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1409	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	5.14	103	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-220292

Method: 7470A
Preparation: 7470A
Dissolved

MS Lab Sample ID:	240-61699-5	Analysis Batch:	240-220605	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-220292	Lab File ID:	0307A16HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1414			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1400				
Leach Date:	N/A				

MSD Lab Sample ID:	240-61699-5	Analysis Batch:	240-220605	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-220292	Lab File ID:	0307A16HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/07/2016 1416			Final Weight/Volume:	50 mL
Prep Date:	03/04/2016 1400				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	110	108	80 - 120	2	20		

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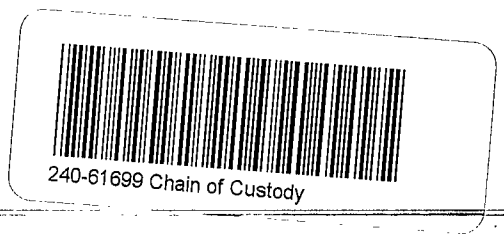
AND
RECEIVING DOCUMENTS



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1,2/C0,7 1,6/C1,1

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Fax 319-277-2425

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: Arcadis Client #: _____

Address: 430 1st Ave N. Ste 720

City/State/Zip Code: Minneapolis, MN 55401

Project Manager: Bryan Zinda

Email Address: bryan.zinda@arcadis.com

Telephone Number: 612-373-0234 Fax: _____

Sampler Name: (Print Name) Alex Roll

Sampler Signature: [signature]

Project Name: Ford TCAP

Project #: MN000625.0002

Site/Location ID: St. Paul State: MN

Report To: _____

Invoice To: _____

Quote #: _____ PO#: _____

TAT
__ Standard
X Rush (surcharges may apply)

Date Needed: 48hR

Fax Results: Y N

Email Results: Y N

Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify, Other

Preservation & # of Containers

Analyze For:

QC Deliverables
__ None
X Level 2 (Batch QC)
__ Level 3
__ Level 4
Other: _____

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify, Other	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	VOCs (8260)	Dissolved target Analyte metals (6010)	DRO (WI modified method)								REMARKS
AMW-27_20160302	3/2/16	1251	G	Y	GW	1	5						X	X	X								
AMW-28_20160303	3/2/16	1445	↓	↓	↓	1	5						X	X	X								
AMW-29_20160303	3/3/16	1111	↓	↓	↓	1	5						X	X	X								
AMW-30_20160303	3/3/16	1229	↓	↓	↓	1	5						X	X	X								
AMW-31_20160303	3/3/16	1508	↓	↓	↓	1	5						X	X	X								
Dup-1	3/3/16	1508	↓	↓	↓	1	5						X	X	X								
Trip Blank	3/3/16	—	—	—			2						X										

Special Instructions: dissolved metals samples field filtered

LABORATORY COMMENTS:

Relinquished By: [signature]	Date: 3/3/16	Time: 1640	Received By: [signature]	Date: 3-3-16	Time: 1640
Relinquished By: [signature]	Date: 3-3-16	Time: 1940	Received By: [signature]	Date: 3.4.16	Time: 930
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAL-0033 (0708)

Page ____ of ____

03/08/2016

TestAmerica Canton Sample Receipt Form/Narrative Login # : 61699

Canton Facility

Client Arcadis Site Name _____ Cooler unpacked by:

Cooler Received on 3-4-16 Opened on 3-4-16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box (Other) _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form

IR GUN# 48 (CF **-1.9** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

IR GUN# 36 (CF **-1.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

IR GUN# I8 (CF **-0.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 (Yes) No

-Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA

-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)

3. Shippers' packing slip attached to the cooler(s)? (Yes) No

4. Did custody papers accompany the sample(s)? (Yes) No

5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No

6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No

7. Did all bottles arrive in good condition (Unbroken)? (Yes) No

8. Could all bottle labels be reconciled with the COC? (Yes) No

9. Were correct bottle(s) used for the test(s) indicated? (Yes) No

10. Sufficient quantity received to perform indicated analyses? (Yes) No

11. Are these work share samples? Yes (No)

If yes, Questions 12-16 have been checked at the originating laboratory.

12. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# HC559158

13. Were VOAs on the COC? (Yes) No

14. Were air bubbles >6 mm in any VOA vials? Yes (No) NA

15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ (Yes) No

16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # :** 616994
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	8	1.7	0.7	Ice
1	1	1.6	1.1	1

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-27_20160302	240-61699-D-1	Plastic 500ml - with Nitric Acid	<2		
AMW-27_20160302	240-61699-E-1	Amber Glass 1 liter Wide - Hydroch			
AMW-27_20160302	240-61699-F-1	Amber Glass 1 liter Wide - Hydroch			
AMW-28_20160302	240-61699-D-2	Plastic 500ml - with Nitric Acid	<2		
AMW-28_20160302	240-61699-E-2	Amber Glass 1 liter Wide - Hydroch			
AMW-28_20160302	240-61699-F-2	Amber Glass 1 liter Wide - Hydroch			
AMW-29_20160303	240-61699-D-3	Plastic 500ml - with Nitric Acid	<2		
AMW-29_20160303	240-61699-E-3	Amber Glass 1 liter Wide - Hydroch			
AMW-29_20160303	240-61699-F-3	Amber Glass 1 liter Wide - Hydroch			
AMW-30_20160303	240-61699-D-4	Plastic 500ml - with Nitric Acid	<2		
AMW-30_20160303	240-61699-E-4	Amber Glass 1 liter Wide - Hydroch			
AMW-30_20160303	240-61699-F-4	Amber Glass 1 liter Wide - Hydroch			
AMW-31_20160303	240-61699-D-5	Plastic 500ml - with Nitric Acid	<2		
AMW-31_20160303	240-61699-E-5	Amber Glass 1 liter Wide - Hydroch			
AMW-31_20160303	240-61699-F-5	Amber Glass 1 liter Wide - Hydroch			
DUP-1	240-61699-D-6	Plastic 500ml - with Nitric Acid	<2		
DUP-1	240-61699-E-6	Amber Glass 1 liter Wide - Hydroch			
DUP-1	240-61699-F-6	Amber Glass 1 liter Wide - Hydroch			

March 09, 2016

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 61699-1
Sample date: 2016-03-02 2016-03-03
Report received by CADENA: 2016-03-08
Initial Data Verification completed by CADENA: 2016-03-09

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch 220480 MS recovery outliers were not determined using samples from this submittal so qualification of client sample results was not required based on these sample-specific QC outliers.

WI-DRO QC did not include surrogate recoveries or batch 2203349 QC MS recovery data (due to insufficient sample volume available for spiking).

Meals QC batch 220200 method blank had detections below the RL for barium, calcium, magnesium, manganese, sodium and zinc. Client sample -004 zinc result should be considered to be non-detect at the concentration reported and qualified with a B flag and samples -001 and -002 zinc results non-detect at the RL and qualified with UB flags.

GCMS VOC trip blank was non-detect for all target analytes.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

6 Water sample(s) were analyzed for GCMS VOC, GC Other and Metals parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values. Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia, Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 61699-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)
240616991	AMW-27_20160302	3/2/2016	12:51:00	X	X	X	X
240616992	AMW-28_20160302	3/2/2016	2:45:00	X	X	X	X
240616993	AMW-29_20160303	3/3/2016	11:11:00	X	X	X	X
240616994	AMW-30_20160303	3/3/2016	12:29:00	X	X	X	X
240616995	AMW-31_20160303	3/3/2016	3:08:00	X	X	X	X
240616996	DUP-1	3/3/2016	3:08:00	X	X	X	X
240616997	TRIP BLANK	3/3/2016	12:00:00	X			

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61699-1

			Sample Name:	AMW-27_20160302				AMW-28_20160302				AMW-30_20160303			
			Lab Sample ID:	240616991				240616992				240616994			
			Sample Date:	3/2/2016				3/2/2016				3/3/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
Metals														
	OSW-6010B													
	Zinc - Dissolved	7440-66-6	22	50	ug/l	UB	13	50	ug/l	UB	79	50	ug/l	B

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61699-1

		Sample Name:	AMW-27_20160302				AMW-28_20160302				AMW-29_20160303				AMW-30_20160303			
		Lab Sample ID:	240616991				240616992				240616993				240616994			
		Sample Date:	3/2/2016				3/2/2016				3/3/2016				3/3/2016			
				Report		Valid		Report		Valid		Report		Valid		Report		Valid
Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
GC/MS VOC																	
OSW-8260B																	
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	0.80	10	ug/l	J	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Acetone	67-64-1	3.3	10	ug/l	J	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	4.8	1.0	ug/l	---	1.1	1.0	ug/l	---	ND	1.0	ug/l	---	0.99	1.0	ug/l	J
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	1.2	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	0.49	1.0	ug/l	J	0.36	1.0	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	10	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	0.64	1.0	ug/l	J
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	7.1	1.0	ug/l	---	22	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61699-1

			Sample Name:	AMW-27_20160302				AMW-28_20160302				AMW-29_20160303				AMW-30_20160303			
			Lab Sample ID:	240616991				240616992				240616993				240616994			
			Sample Date:	3/2/2016				3/2/2016				3/3/2016				3/3/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC Other																		
	PUBL-SW-141																	
	WI Diesel Range Organics (C10-C28)	E-1004	0.50	0.095	mg/l	---	0.54	0.095	mg/l	---	0.35	0.095	mg/l	---	0.18	0.095	mg/l	---
Metals																		
	OSW-6010B																	
	Aluminum - Dissolved	7429-90-5	4800	200	ug/l	---	4000	200	ug/l	---	2900	200	ug/l	---	4000	200	ug/l	---
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Arsenic - Dissolved	7440-38-2	8.0	10	ug/l	J	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Barium - Dissolved	7440-39-3	170	200	ug/l	J	97	200	ug/l	J	95	200	ug/l	J	160	200	ug/l	J
	Beryllium - Dissolved	7440-41-7	0.13	5.0	ug/l	J	ND	5.0	ug/l	---	0.42	5.0	ug/l	J	0.70	5.0	ug/l	J
	Cadmium - Dissolved	7440-43-9	0.43	5.0	ug/l	J	ND	5.0	ug/l	---	0.48	5.0	ug/l	J	0.27	5.0	ug/l	J
	Calcium - Dissolved	7440-70-2	79000	5000	ug/l	---	62000	5000	ug/l	---	51000	5000	ug/l	---	130000	5000	ug/l	---
	Chromium - Dissolved	7440-47-3	10	10	ug/l	---	8.2	10	ug/l	J	3.9	10	ug/l	J	6.0	10	ug/l	J
	Cobalt - Dissolved	7440-48-4	5.1	7.0	ug/l	J	3.1	7.0	ug/l	J	70	7.0	ug/l	---	49	7.0	ug/l	---
	Copper - Dissolved	7440-50-8	14	25	ug/l	J	10	25	ug/l	J	3.8	25	ug/l	J	29	25	ug/l	---
	Iron - Dissolved	7439-89-6	1600	100	ug/l	---	2900	100	ug/l	---	1000	100	ug/l	---	1100	100	ug/l	---
	Lead - Dissolved	7439-92-1	6.0	3.0	ug/l	---	3.1	3.0	ug/l	---	3.1	3.0	ug/l	---	ND	3.0	ug/l	---
	Magnesium - Dissolved	7439-95-4	18000	5000	ug/l	---	15000	5000	ug/l	---	21000	5000	ug/l	---	42000	5000	ug/l	---
	Manganese - Dissolved	7439-96-5	350	15	ug/l	---	480	15	ug/l	---	1300	15	ug/l	---	1100	15	ug/l	---
	Nickel - Dissolved	7440-02-0	27	40	ug/l	J	14	40	ug/l	J	310	40	ug/l	---	260	40	ug/l	---
	Potassium - Dissolved	7440-09-7	3400	5000	ug/l	J	2500	5000	ug/l	J	6000	5000	ug/l	---	12000	5000	ug/l	---
	Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Sodium - Dissolved	7440-23-5	270000	5000	ug/l	---	150000	5000	ug/l	---	120000	5000	ug/l	---	170000	5000	ug/l	---
	Thallium - Dissolved	7440-28-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	2.5	10	ug/l	J
	Vanadium - Dissolved	7440-62-2	18	7.0	ug/l	---	11	7.0	ug/l	---	4.1	7.0	ug/l	J	ND	7.0	ug/l	---
	Zinc - Dissolved	7440-66-6	22	50	ug/l	UB	13	50	ug/l	UB	180	50	ug/l	---	79	50	ug/l	B
	OSW-7470A																	
	Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---	ND	0.20	ug/l	---	ND	0.20	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61699-1

		Sample Name:	AMW-31_20160303				DUP-1				TRIP BLANK			
		Lab Sample ID:	240616995				240616996				240616997			
		Sample Date:	3/3/2016				3/3/2016				3/3/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	5.0	ug/l	---
Acetone	67-64-1	1.7	10	ug/l	J	ND	10	ug/l	---	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	2.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	0.46	1.0	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61699-1

			Sample Name:	AMW-31_20160303			DUP-1				TRIP BLANK			
			Lab Sample ID:	240616995			240616996				240616997			
			Sample Date:	3/3/2016			3/3/2016				3/3/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	0.70	0.095	mg/l	---	0.76	0.095	mg/l	---				
Metals														
	OSW-6010B													
	Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---	ND	200	ug/l	---				
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---				
	Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---	ND	10	ug/l	---				
	Barium - Dissolved	7440-39-3	31	200	ug/l	J	33	200	ug/l	J				
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Calcium - Dissolved	7440-70-2	49000	5000	ug/l	---	44000	5000	ug/l	---				
	Chromium - Dissolved	7440-47-3	1.3	10	ug/l	J	0.73	10	ug/l	J				
	Cobalt - Dissolved	7440-48-4	0.98	7.0	ug/l	J	0.96	7.0	ug/l	J				
	Copper - Dissolved	7440-50-8	3.3	25	ug/l	J	3.9	25	ug/l	J				
	Iron - Dissolved	7439-89-6	1100	100	ug/l	---	470	100	ug/l	---				
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---				
	Magnesium - Dissolved	7439-95-4	15000	5000	ug/l	---	13000	5000	ug/l	---				
	Manganese - Dissolved	7439-96-5	480	15	ug/l	---	400	15	ug/l	---				
	Nickel - Dissolved	7440-02-0	4.1	40	ug/l	J	4.4	40	ug/l	J				
	Potassium - Dissolved	7440-09-7	4600	5000	ug/l	J	4400	5000	ug/l	J				
	Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---				
	Sodium - Dissolved	7440-23-5	140000	5000	ug/l	---	130000	5000	ug/l	---				
	Thallium - Dissolved	7440-28-0	2.5	10	ug/l	J	ND	10	ug/l	---				
	Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---	ND	7.0	ug/l	---				
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---	ND	50	ug/l	---				
	OSW-7470A													
	Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---				

ANALYTICAL REPORT

Job Number: 240-61960-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
3/24/2016 3:00 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
03/24/2016

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-61960-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 3/10/2016 11:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 0.3º C, 0.7º C, 0.9º C, 2.3º C, 3.7º C and 3.9º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-25 (20160308) (240-61960-1), AMW-24 (20160308) (240-61960-2), AMW-23B (20160308) (240-61960-3), AMW-23 (20160308) (240-61960-4), AMW-20 (20160308) (240-61960-5), TRIPBLANK-01 (20160308) (240-61960-6), AMW-19 (20160309) (240-61960-7), DUP-01 (20160309) (240-61960-8), AMW-22B (20160309) (240-61960-9), AMW-22 (20160309) (240-61960-10) and AMW-07 (20160309) (240-61960-11) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/14/2016 and 03/15/2016.

Methylene Chloride was detected in method blank MB 240-221437/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Sample AMW-25 (20160308) (240-61960-1)[13.33X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: The following sample was submitted for volatile analysis with insufficient preservation (pH>2): AMW-25 (20160308) (240-61960-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-25 (20160308) (240-61960-1), AMW-24 (20160308) (240-61960-2), AMW-23B (20160308) (240-61960-3), AMW-23 (20160308) (240-61960-4), AMW-20 (20160308) (240-61960-5), AMW-19 (20160309) (240-61960-7), DUP-01 (20160309) (240-61960-8), AMW-22B (20160309) (240-61960-9), AMW-22 (20160309) (240-61960-10) and AMW-07 (20160309) (240-61960-11) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 03/15/2016 and analyzed on 03/17/2016 and 03/18/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

4-Chloroaniline and Caprolactam failed the recovery criteria low for the MS/MSD of sample AMW-22B (20160309)MS/MSD (240-61960-9) in batch 240-221952. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples AMW-25 (20160308) (240-61960-1), AMW-24 (20160308) (240-61960-2), AMW-23B (20160308) (240-61960-3), AMW-23 (20160308) (240-61960-4), AMW-20 (20160308) (240-61960-5), AMW-19 (20160309) (240-61960-7), DUP-01 (20160309) (240-61960-8), AMW-22B (20160309) (240-61960-9), AMW-22 (20160309) (240-61960-10) and AMW-07 (20160309) (240-61960-11) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 03/11/2016 and 03/12/2016 and analyzed on 03/15/2016.

Sample AMW-25 (20160308) (240-61960-1)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batches 240-221094 and 240-221293.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP)

Samples AMW-25 (20160308) (240-61960-1), AMW-24 (20160308) (240-61960-2), AMW-23B (20160308) (240-61960-3), AMW-23 (20160308) (240-61960-4), AMW-20 (20160308) (240-61960-5), AMW-19 (20160309) (240-61960-7), AMW-22B (20160309) (240-61960-9), AMW-22 (20160309) (240-61960-10) and AMW-07 (20160309) (240-61960-11) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 03/11/2016 and analyzed on 03/14/2016.

Iron, Magnesium, Manganese, Nickel and Sodium were detected in method blank MB 240-221145/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Samples AMW-25 (20160308) (240-61960-1), AMW-24 (20160308) (240-61960-2), AMW-23B (20160308) (240-61960-3), AMW-23 (20160308) (240-61960-4), AMW-20 (20160308) (240-61960-5), AMW-19 (20160309) (240-61960-7), AMW-22B (20160309) (240-61960-9), AMW-22 (20160309) (240-61960-10) and AMW-07 (20160309) (240-61960-11) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 03/11/2016 and analyzed on 03/15/2016.

Mercury failed the recovery criteria low for the MSD of sample AMW-22B (20160309)MSD (240-61960-9) in batch 240-221648. Mercury exceeded the RPD limit. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-61960-1	**AMW-25 (20160308)**					
1,2,4-Trimethylbenzene		330		13	ug/L	8260B
Ethylbenzene		120		13	ug/L	8260B
Naphthalene		37		13	ug/L	8260B
m-Xylene & p-Xylene		170		27	ug/L	8260B
n-Butylbenzene		260		13	ug/L	8260B
Isopropylbenzene		13		13	ug/L	8260B
N-Propylbenzene		42		13	ug/L	8260B
sec-Butylbenzene		16		13	ug/L	8260B
Benzaldehyde		10		0.95	ug/L	8270C
Di-n-butyl phthalate		1.7	J	4.8	ug/L	8270C
Naphthalene		21		0.19	ug/L	8270C
WI Diesel Range Organics (C10-C28)		11		1.0	mg/L	WI-DRO
Dissolved						
Barium		250		200	ug/L	6010B
Cadmium		0.49	J	5.0	ug/L	6010B
Chromium		1.2	J	10	ug/L	6010B
Calcium		210000		5000	ug/L	6010B
Iron		2400	B	100	ug/L	6010B
Potassium		4200	J	5000	ug/L	6010B
Magnesium		65000	B	5000	ug/L	6010B
Manganese		1400	B	15	ug/L	6010B
Sodium		75000	B	5000	ug/L	6010B
Nickel		1.7	J B	40	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-61960-2	**AMW-24 (20160308)**					
Acetone		0.95	J	10	ug/L	8260B
Naphthalene		0.60	J	1.0	ug/L	8260B
2,4-Dichlorophenol		0.69	J	1.9	ug/L	8270C
2,4,5-Trichlorophenol		0.48	J	4.8	ug/L	8270C
WI Diesel Range Organics (C10-C28)		0.19		0.10	mg/L	WI-DRO
Dissolved						
Barium		110	J	200	ug/L	6010B
Cadmium		0.45	J	5.0	ug/L	6010B
Chromium		0.81	J	10	ug/L	6010B
Calcium		200000		5000	ug/L	6010B
Cobalt		2.7	J	7.0	ug/L	6010B
Iron		4200	B	100	ug/L	6010B
Potassium		7300		5000	ug/L	6010B
Magnesium		50000	B	5000	ug/L	6010B
Manganese		2100	B	15	ug/L	6010B
Sodium		90000	B	5000	ug/L	6010B
Nickel		5.1	J B	40	ug/L	6010B
Mercury		0.17	J	0.20	ug/L	7470A
240-61960-3	**AMW-23B (20160308)**					
Fluoranthene		1.5		0.19	ug/L	8270C
Pyrene		0.15	J	0.19	ug/L	8270C
WI Diesel Range Organics (C10-C28)		0.086	J	0.10	mg/L	WI-DRO
Dissolved						
Barium		180	J	200	ug/L	6010B
Cadmium		0.29	J	5.0	ug/L	6010B
Chromium		0.60	J	10	ug/L	6010B
Arsenic		2.9	J	10	ug/L	6010B
Calcium		80000		5000	ug/L	6010B
Iron		4000	B	100	ug/L	6010B
Potassium		1900	J	5000	ug/L	6010B
Magnesium		27000	B	5000	ug/L	6010B
Manganese		210	B	15	ug/L	6010B
Sodium		9000	B	5000	ug/L	6010B
Nickel		0.99	J B	40	ug/L	6010B
Mercury		0.16	J	0.20	ug/L	7470A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-61960-4	**AMW-23 (20160308)**					
WI Diesel Range Organics (C10-C28)		0.11		0.10	mg/L	WI-DRO
Dissolved						
Barium		110	J	200	ug/L	6010B
Cadmium		0.36	J	5.0	ug/L	6010B
Chromium		0.84	J	10	ug/L	6010B
Calcium		140000		5000	ug/L	6010B
Cobalt		2.5	J	7.0	ug/L	6010B
Iron		530	B	100	ug/L	6010B
Potassium		3700	J	5000	ug/L	6010B
Magnesium		37000	B	5000	ug/L	6010B
Manganese		2500	B	15	ug/L	6010B
Sodium		43000	B	5000	ug/L	6010B
Nickel		3.1	J B	40	ug/L	6010B
240-61960-5	**AMW-20 (20160308)**					
WI Diesel Range Organics (C10-C28)		0.088	J	0.10	mg/L	WI-DRO
Dissolved						
Barium		130	J	200	ug/L	6010B
Cadmium		0.52	J	5.0	ug/L	6010B
Chromium		0.70	J	10	ug/L	6010B
Calcium		170000		5000	ug/L	6010B
Cobalt		0.65	J	7.0	ug/L	6010B
Iron		190	B	100	ug/L	6010B
Potassium		2800	J	5000	ug/L	6010B
Magnesium		46000	B	5000	ug/L	6010B
Manganese		380	B	15	ug/L	6010B
Sodium		45000	B	5000	ug/L	6010B
Nickel		3.2	J B	40	ug/L	6010B
Mercury		0.27		0.20	ug/L	7470A
240-61960-6TB	**TRIPBLANK-01 (20160308)**					
Methylene Chloride		0.69	J B	1.0	ug/L	8260B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-61960-7	**AMW-19 (20160309)**					
WI Diesel Range Organics (C10-C28)		0.081	J	0.095	mg/L	WI-DRO
Dissolved						
Barium		130	J	200	ug/L	6010B
Cadmium		0.50	J	5.0	ug/L	6010B
Chromium		0.75	J	10	ug/L	6010B
Calcium		140000		5000	ug/L	6010B
Iron		30	J B	100	ug/L	6010B
Potassium		3100	J	5000	ug/L	6010B
Magnesium		41000	B	5000	ug/L	6010B
Manganese		45	B	15	ug/L	6010B
Sodium		35000	B	5000	ug/L	6010B
Nickel		1.7	J B	40	ug/L	6010B
Mercury		0.16	J	0.20	ug/L	7470A
240-61960-8FD	**DUP-01 (20160309)**					
WI Diesel Range Organics (C10-C28)		0.10		0.095	mg/L	WI-DRO
240-61960-9	**AMW-22B (20160309)**					
Acetone		1.8	J	10	ug/L	8260B
cis-1,2-Dichloroethene		1.1		1.0	ug/L	8260B
Naphthalene		0.46	J	1.0	ug/L	8260B
Isophorone		0.34	J	0.96	ug/L	8270C
WI Diesel Range Organics (C10-C28)		0.14		0.11	mg/L	WI-DRO
Dissolved						
Barium		140	J	200	ug/L	6010B
Cadmium		0.37	J	5.0	ug/L	6010B
Calcium		61000		5000	ug/L	6010B
Iron		2400	B	100	ug/L	6010B
Potassium		16000		5000	ug/L	6010B
Magnesium		27000	B	5000	ug/L	6010B
Manganese		120	B	15	ug/L	6010B
Sodium		9600	B	5000	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-61960-10	**AMW-22 (20160309)**					
cis-1,2-Dichloroethene		1.6		1.0	ug/L	8260B
Dissolved						
Barium		170	J	200	ug/L	6010B
Cadmium		0.41	J	5.0	ug/L	6010B
Chromium		1.0	J	10	ug/L	6010B
Arsenic		7.2	J	10	ug/L	6010B
Beryllium		0.13	J	5.0	ug/L	6010B
Calcium		140000		5000	ug/L	6010B
Cobalt		1.2	J	7.0	ug/L	6010B
Iron		9000	B	100	ug/L	6010B
Potassium		4300	J	5000	ug/L	6010B
Magnesium		39000	B	5000	ug/L	6010B
Manganese		1900	B	15	ug/L	6010B
Sodium		29000	B	5000	ug/L	6010B
Nickel		2.3	J B	40	ug/L	6010B
240-61960-11	**AMW-07 (20160309)**					
Trichloroethene		2.3		1.0	ug/L	8260B
Benzo[a]anthracene		0.28		0.19	ug/L	8270C
Benzo[b]fluoranthene		0.25		0.19	ug/L	8270C
Benzo[g,h,i]perylene		0.17	J	0.19	ug/L	8270C
Benzo[a]pyrene		0.22		0.19	ug/L	8270C
Chrysene		0.33		0.19	ug/L	8270C
Fluoranthene		1.6		0.19	ug/L	8270C
Indeno[1,2,3-cd]pyrene		0.15	J	0.19	ug/L	8270C
Phenanthrene		0.18	J	0.19	ug/L	8270C
Pyrene		0.39		0.19	ug/L	8270C
Dissolved						
Barium		14	J	200	ug/L	6010B
Aluminum		120	J	200	ug/L	6010B
Cadmium		0.76	J	5.0	ug/L	6010B
Chromium		1.5	J	10	ug/L	6010B
Beryllium		0.73	J	5.0	ug/L	6010B
Calcium		100000		5000	ug/L	6010B
Cobalt		6.8	J	7.0	ug/L	6010B
Potassium		4200	J	5000	ug/L	6010B
Magnesium		37000	B	5000	ug/L	6010B
Manganese		68	B	15	ug/L	6010B
Sodium		22000	B	5000	ug/L	6010B
Nickel		34	J B	40	ug/L	6010B
Zinc		98		50	ug/L	6010B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL CAN = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Method	Analyst	Analyst ID
SW846 8260B	Williams, Larry	LRW
SW846 8270C	Gruber, John	JMG
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Toth, Roger	RKT
SW846 7470A	Heakin, David	DSH

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-61960-1	AMW-25 (20160308)	Water	03/08/2016 1110	03/10/2016 1130
240-61960-2	AMW-24 (20160308)	Water	03/08/2016 1250	03/10/2016 1130
240-61960-3	AMW-23B (20160308)	Water	03/08/2016 1405	03/10/2016 1130
240-61960-4	AMW-23 (20160308)	Water	03/08/2016 1455	03/10/2016 1130
240-61960-5	AMW-20 (20160308)	Water	03/08/2016 1555	03/10/2016 1130
240-61960-6TB	TRIPBLANK-01 (20160308)	Water	03/08/2016 0000	03/10/2016 1130
240-61960-7	AMW-19 (20160309)	Water	03/09/2016 0915	03/10/2016 1130
240-61960-8FD	DUP-01 (20160309)	Water	03/09/2016 0000	03/10/2016 1130
240-61960-9	AMW-22B (20160309)	Water	03/09/2016 1050	03/10/2016 1130
240-61960-9MS	AMW-22B (20160309)	Water	03/09/2016 1050	03/10/2016 1130
240-61960-9MSD	AMW-22B (20160309)	Water	03/09/2016 1050	03/10/2016 1130
240-61960-10	AMW-22 (20160309)	Water	03/09/2016 1155	03/10/2016 1130
240-61960-11	AMW-07 (20160309)	Water	03/09/2016 1240	03/10/2016 1130

SAMPLE RESULTS

Client Sample ID: **AMW-25 (20160308)**

Lab Sample ID: 240-61960-1 Date Sampled: 03/08/2016 1110
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221634	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5450.D
Dilution:	13.33			Initial Weight/Volume:	5 mL
Analysis Date:	03/15/2016 1421			Final Weight/Volume:	5 mL
Prep Date:	03/15/2016 1421				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		3.7	13
1,1,1-Trichloroethane	ND		5.9	13
1,1,2,2-Tetrachloroethane	ND		2.9	13
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.0	13
1,1,2-Trichloroethane	ND		3.2	13
1,1-Dichloroethane	ND		4.0	13
1,1-Dichloroethene	ND		6.0	13
1,1-Dichloropropene	ND		5.6	13
1,2,3-Trichlorobenzene	ND		4.9	13
1,2,3-Trichloropropane	ND		5.9	13
1,2,4-Trichlorobenzene	ND		4.3	13
1,2,4-Trimethylbenzene	330		5.5	13
1,2-Dibromo-3-Chloropropane	ND		11	27
1,2-Dichlorobenzene	ND		3.3	13
1,2-Dichloroethane	ND		3.1	13
1,2-Dichloropropane	ND		3.3	13
1,3,5-Trimethylbenzene	ND		6.4	13
1,3-Dichlorobenzene	ND		2.5	13
1,3-Dichloropropane	ND		2.5	13
1,4-Dichlorobenzene	ND		3.6	13
Allyl chloride	ND		11	27
2,2-Dichloropropane	ND		3.5	13
2-Chlorotoluene	ND		5.3	13
2-Hexanone	ND		6.4	130
Bromobenzene	ND		4.7	13
Bromochloromethane	ND		6.7	13
4-Chlorotoluene	ND		3.9	13
p-Isopropyltoluene	ND		5.7	13
Acetone	ND		13	130
Benzene	ND		4.7	13
Bromoform	ND		7.5	13
Bromomethane	ND		5.9	13
Carbon disulfide	ND		5.1	13
Carbon tetrachloride	ND		5.7	13
Chlorobenzene	ND		3.3	13
Chloroethane	ND		4.3	13
Chloroform	ND		3.3	13
Chloromethane	ND		5.9	13
cis-1,2-Dichloroethene	ND		3.5	13
cis-1,3-Dichloropropene	ND		6.1	13
Cyclohexane	ND		6.0	13
Hexachlorobutadiene	ND		4.7	13
Dibromomethane	ND		5.6	13
Bromodichloromethane	ND		3.9	13
Dichlorodifluoromethane	ND		4.3	13
Dichlorofluoromethane	ND		4.0	27

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-25 (20160308)

Lab Sample ID: 240-61960-1 Date Sampled: 03/08/2016 1110
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221634	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5450.D
Dilution:	13.33			Initial Weight/Volume:	5 mL
Analysis Date:	03/15/2016 1421			Final Weight/Volume:	5 mL
Prep Date:	03/15/2016 1421				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		4.9	27
Ethylbenzene	120		3.3	13
1,2-Dibromoethane	ND		4.3	13
Naphthalene	37		6.0	13
m-Xylene & p-Xylene	170		3.2	27
n-Butylbenzene	260		4.1	13
Isopropylbenzene	13		4.7	13
Methyl acetate	ND		30	130
N-Propylbenzene	42		5.3	13
2-Butanone (MEK)	ND		7.1	130
4-Methyl-2-pentanone (MIBK)	ND		13	130
sec-Butylbenzene	16		6.4	13
Methyl tert butyl ether	ND		2.7	13
Methylene Chloride	ND		4.4	13
o-Xylene	ND		3.3	13
Styrene	ND		6.0	13
tert-Butylbenzene	ND		5.5	13
Tetrachloroethene	ND		4.1	13
Tetrahydrofuran	ND		19	67
Toluene	ND		3.1	13
trans-1,2-Dichloroethene	ND		4.0	13
trans-1,3-Dichloropropene	ND		7.5	13
Trichloroethene	ND		2.9	13
Trichlorofluoromethane	ND		6.5	13
Vinyl chloride	ND		3.9	13
Methylcyclohexane	ND		5.7	13
Chlorodibromomethane	ND		5.7	13

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		78 - 125
4-Bromofluorobenzene (Surr)	100		61 - 120
Toluene-d8 (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	101		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-24 (20160308)

Lab Sample ID: 240-61960-2 Date Sampled: 03/08/2016 1250
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5428.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1542			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1542				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	0.95	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-24 (20160308)

Lab Sample ID: 240-61960-2 Date Sampled: 03/08/2016 1250
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5428.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1542			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1542				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	0.60	J	0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		78 - 125
4-Bromofluorobenzene (Surr)	93		61 - 120
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	104		79 - 120

Client Sample ID: **AMW-23B (20160308)**

Lab Sample ID: 240-61960-3 Date Sampled: 03/08/2016 1405
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5429.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1604			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1604				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-23B (20160308)

Lab Sample ID: 240-61960-3 Date Sampled: 03/08/2016 1405
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5429.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1604			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1604				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		78 - 125
4-Bromofluorobenzene (Surr)	91		61 - 120
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	106		79 - 120

Client Sample ID: **AMW-23 (20160308)**

Lab Sample ID: 240-61960-4 Date Sampled: 03/08/2016 1455
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5430.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1626			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1626				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-23 (20160308)

Lab Sample ID: 240-61960-4 Date Sampled: 03/08/2016 1455
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5430.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1626			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1626				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		78 - 125
4-Bromofluorobenzene (Surr)	88		61 - 120
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	106		79 - 120

Client Sample ID: **AMW-20 (20160308)**

Lab Sample ID: 240-61960-5 Date Sampled: 03/08/2016 1555
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5431.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1648			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1648				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-20 (20160308)

Lab Sample ID: 240-61960-5 Date Sampled: 03/08/2016 1555
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5431.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1648			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1648				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		78 - 125
4-Bromofluorobenzene (Surr)	89		61 - 120
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	106		79 - 120

Client Sample ID: **TRIPBLANK-01 (20160308)**

Lab Sample ID: 240-61960-6TB
Client Matrix: Water

Date Sampled: 03/08/2016 0000
Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5432.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1710			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1710				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: **TRIPBLANK-01 (20160308)**

Lab Sample ID: 240-61960-6TB Date Sampled: 03/08/2016 0000
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5432.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1710			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1710				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	0.69	J B	0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		78 - 125
4-Bromofluorobenzene (Surr)	89		61 - 120
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	110		79 - 120

Client Sample ID: **AMW-19 (20160309)**

Lab Sample ID: 240-61960-7 Date Sampled: 03/09/2016 0915
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5433.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1731			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1731				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-19 (20160309)

Lab Sample ID: 240-61960-7 Date Sampled: 03/09/2016 0915
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5433.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1731			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1731				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	111		78 - 125
4-Bromofluorobenzene (Surr)	88		61 - 120
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	110		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: **DUP-01 (20160309)**

Lab Sample ID: 240-61960-8FD Date Sampled: 03/09/2016 0000
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5434.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1753			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1753				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: **DUP-01 (20160309)**

Lab Sample ID: 240-61960-8FD Date Sampled: 03/09/2016 0000
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5434.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1753			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1753				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		78 - 125
4-Bromofluorobenzene (Surr)	86		61 - 120
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	109		79 - 120

Client Sample ID: **AMW-22B (20160309)**

Lab Sample ID: 240-61960-9 Date Sampled: 03/09/2016 1050
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5442.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2048			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2048				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	1.8	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	1.1		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-22B (20160309)

Lab Sample ID: 240-61960-9 Date Sampled: 03/09/2016 1050
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5442.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2048			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2048				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	0.46	J	0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		78 - 125
4-Bromofluorobenzene (Surr)	86		61 - 120
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	109		79 - 120

Client Sample ID: **AMW-22 (20160309)**

Lab Sample ID: 240-61960-10 Date Sampled: 03/09/2016 1155
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5435.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1815			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1815				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	1.6		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-22 (20160309)

Lab Sample ID: 240-61960-10 Date Sampled: 03/09/2016 1155
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5435.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1815			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1815				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		78 - 125
4-Bromofluorobenzene (Surr)	87		61 - 120
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	108		79 - 120

Client Sample ID: **AMW-07 (20160309)**

Lab Sample ID: 240-61960-11 Date Sampled: 03/09/2016 1240
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5436.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1837			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1837				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-07 (20160309)

Lab Sample ID: 240-61960-11 Date Sampled: 03/09/2016 1240
Client Matrix: Water Date Received: 03/10/2016 1130

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5436.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1837			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1837				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	2.3		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		78 - 125
4-Bromofluorobenzene (Surr)	87		61 - 120
Toluene-d8 (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	109		79 - 120

Client Sample ID: **AMW-25 (20160308)**

Lab Sample ID: 240-61960-1 Date Sampled: 03/08/2016 1110
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317019.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/17/2016 1608			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	10		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	1.7	J	1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-25 (20160308)

Lab Sample ID: 240-61960-1 Date Sampled: 03/08/2016 1110
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317019.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/17/2016 1608			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	21		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	51		29 - 110
2-Fluorophenol (Surr)	24		15 - 110
2,4,6-Tribromophenol (Surr)	69		21 - 128
Nitrobenzene-d5 (Surr)	59		31 - 110
Phenol-d5 (Surr)	16		10 - 110
Terphenyl-d14 (Surr)	72		31 - 115

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-24 (20160308)

Lab Sample ID: 240-61960-2 Date Sampled: 03/08/2016 1250
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317020.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/17/2016 1632			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	0.69	J	0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-24 (20160308)

Lab Sample ID: 240-61960-2 Date Sampled: 03/08/2016 1250
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317020.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/17/2016 1632			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	0.48	J	0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	73		29 - 110
2-Fluorophenol (Surr)	33		15 - 110
2,4,6-Tribromophenol (Surr)	91		21 - 128
Nitrobenzene-d5 (Surr)	66		31 - 110
Phenol-d5 (Surr)	19		10 - 110
Terphenyl-d14 (Surr)	68		31 - 115

Client Sample ID: **AMW-23B (20160308)**

Lab Sample ID: 240-61960-3 Date Sampled: 03/08/2016 1405
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317021.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/17/2016 1655			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	1.5		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-23B (20160308)

Lab Sample ID: 240-61960-3 Date Sampled: 03/08/2016 1405
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317021.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/17/2016 1655			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	0.15	J	0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	56		29 - 110
2-Fluorophenol (Surr)	22		15 - 110
2,4,6-Tribromophenol (Surr)	65		21 - 128
Nitrobenzene-d5 (Surr)	51		31 - 110
Phenol-d5 (Surr)	13		10 - 110
Terphenyl-d14 (Surr)	67		31 - 115

Client Sample ID: **AMW-23 (20160308)**

Lab Sample ID: 240-61960-4 Date Sampled: 03/08/2016 1455
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-222165	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60318007.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/18/2016 1137			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-23 (20160308)

Lab Sample ID: 240-61960-4 Date Sampled: 03/08/2016 1455
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-222165	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60318007.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/18/2016 1137			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	57		29 - 110
2-Fluorophenol (Surr)	21		15 - 110
2,4,6-Tribromophenol (Surr)	75		21 - 128
Nitrobenzene-d5 (Surr)	50		31 - 110
Phenol-d5 (Surr)	13		10 - 110
Terphenyl-d14 (Surr)	70		31 - 115

Client Sample ID: **AMW-20 (20160308)**

Lab Sample ID: 240-61960-5 Date Sampled: 03/08/2016 1555
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-222165	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60318008.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/18/2016 1201			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-20 (20160308)

Lab Sample ID: 240-61960-5 Date Sampled: 03/08/2016 1555
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-222165	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60318008.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/18/2016 1201			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		29 - 110
2-Fluorophenol (Surr)	31		15 - 110
2,4,6-Tribromophenol (Surr)	82		21 - 128
Nitrobenzene-d5 (Surr)	69		31 - 110
Phenol-d5 (Surr)	17		10 - 110
Terphenyl-d14 (Surr)	71		31 - 115

Client Sample ID: **AMW-19 (20160309)**

Lab Sample ID: 240-61960-7 Date Sampled: 03/09/2016 0915
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-222165	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60318010.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/18/2016 1249			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-19 (20160309)

Lab Sample ID: 240-61960-7 Date Sampled: 03/09/2016 0915
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-222165	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60318010.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/18/2016 1249			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	63		29 - 110
2-Fluorophenol (Surr)	25		15 - 110
2,4,6-Tribromophenol (Surr)	77		21 - 128
Nitrobenzene-d5 (Surr)	57		31 - 110
Phenol-d5 (Surr)	15		10 - 110
Terphenyl-d14 (Surr)	60		31 - 115

Client Sample ID: **DUP-01 (20160309)**

Lab Sample ID: 240-61960-8FD Date Sampled: 03/09/2016 0000
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-222165	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60318009.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/18/2016 1225			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: **DUP-01 (20160309)**

Lab Sample ID: 240-61960-8FD Date Sampled: 03/09/2016 0000
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-222165	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60318009.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/18/2016 1225			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	51		29 - 110
2-Fluorophenol (Surr)	16		15 - 110
2,4,6-Tribromophenol (Surr)	70		21 - 128
Nitrobenzene-d5 (Surr)	46		31 - 110
Phenol-d5 (Surr)	11		10 - 110
Terphenyl-d14 (Surr)	57		31 - 115

Client Sample ID: **AMW-22B (20160309)**

Lab Sample ID: 240-61960-9 Date Sampled: 03/09/2016 1050
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317016.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1456			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.043	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.33	0.96
Anthracene	ND		0.085	0.19
Atrazine	ND		0.33	0.96
Benzaldehyde	ND		0.37	0.96
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.045	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.13	0.96
Bis(2-chloroethoxy)methane	ND		0.31	0.96
Bis(2-chloroethyl)ether	ND		0.096	0.96
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND	F1	0.19	4.8
Carbazole	ND		0.27	0.96
4-Chloroaniline	ND	F1	0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.096	0.96
2-Chlorophenol	ND		0.28	0.96
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.087	0.19
3 & 4 Methylphenol	ND		0.77	1.9
Dibenz(a,h)anthracene	ND		0.043	0.19
Dibenzofuran	ND		0.019	0.96
3,3'-Dichlorobenzidine	ND		0.36	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.58	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.31	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.043	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.082	0.19
Hexachlorobutadiene	ND		0.26	0.96
Hexachlorocyclopentadiene	ND		0.23	9.6
Hexachloroethane	ND		0.18	0.96
Indeno[1,2,3-cd]pyrene	ND		0.042	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-22B (20160309)

Lab Sample ID: 240-61960-9 Date Sampled: 03/09/2016 1050
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317016.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1456			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	0.34	J	0.26	0.96
2-Methylphenol	ND		0.16	0.96
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.96
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.96
N-Nitrosodi-n-propylamine	ND		0.23	0.96
2,2'-oxybis[1-chloropropane]	ND		0.38	0.96
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.060	0.19
Phenol	ND		0.58	0.96
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.77	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		29 - 110
2-Fluorophenol (Surr)	31		15 - 110
2,4,6-Tribromophenol (Surr)	92		21 - 128
Nitrobenzene-d5 (Surr)	67		31 - 110
Phenol-d5 (Surr)	18		10 - 110
Terphenyl-d14 (Surr)	69		31 - 115

Client Sample ID: **AMW-22 (20160309)**

Lab Sample ID: 240-61960-10 Date Sampled: 03/09/2016 1155
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317029.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 2006			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.043	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.33	0.96
Anthracene	ND		0.085	0.19
Atrazine	ND		0.33	0.96
Benzaldehyde	ND		0.37	0.96
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.045	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.13	0.96
Bis(2-chloroethoxy)methane	ND		0.31	0.96
Bis(2-chloroethyl)ether	ND		0.096	0.96
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.96
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.096	0.96
2-Chlorophenol	ND		0.28	0.96
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.087	0.19
3 & 4 Methylphenol	ND		0.77	1.9
Dibenz(a,h)anthracene	ND		0.043	0.19
Dibenzofuran	ND		0.019	0.96
3,3'-Dichlorobenzidine	ND		0.36	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.58	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.31	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.043	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.082	0.19
Hexachlorobutadiene	ND		0.26	0.96
Hexachlorocyclopentadiene	ND		0.23	9.6
Hexachloroethane	ND		0.18	0.96
Indeno[1,2,3-cd]pyrene	ND		0.042	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-22 (20160309)

Lab Sample ID: 240-61960-10 Date Sampled: 03/09/2016 1155
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317029.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 2006			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.96
2-Methylphenol	ND		0.16	0.96
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.96
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.96
N-Nitrosodi-n-propylamine	ND		0.23	0.96
2,2'-oxybis[1-chloropropane]	ND		0.38	0.96
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.060	0.19
Phenol	ND		0.58	0.96
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.77	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	74		29 - 110
2-Fluorophenol (Surr)	32		15 - 110
2,4,6-Tribromophenol (Surr)	82		21 - 128
Nitrobenzene-d5 (Surr)	70		31 - 110
Phenol-d5 (Surr)	19		10 - 110
Terphenyl-d14 (Surr)	59		31 - 115

Client Sample ID: **AMW-07 (20160309)**

Lab Sample ID: 240-61960-11 Date Sampled: 03/09/2016 1240
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317025.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1831			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.043	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.33	0.96
Anthracene	ND		0.085	0.19
Atrazine	ND		0.33	0.96
Benzaldehyde	ND		0.37	0.96
Benzo[a]anthracene	0.28		0.028	0.19
Benzo[b]fluoranthene	0.25		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	0.17	J	0.045	0.19
Benzo[a]pyrene	0.22		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.13	0.96
Bis(2-chloroethoxy)methane	ND		0.31	0.96
Bis(2-chloroethyl)ether	ND		0.096	0.96
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.96
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.096	0.96
2-Chlorophenol	ND		0.28	0.96
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	0.33		0.048	0.19
2-Methylnaphthalene	ND		0.087	0.19
3 & 4 Methylphenol	ND		0.77	1.9
Dibenz(a,h)anthracene	ND		0.043	0.19
Dibenzofuran	ND		0.019	0.96
3,3'-Dichlorobenzidine	ND		0.36	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.58	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.31	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	1.6		0.043	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.082	0.19
Hexachlorobutadiene	ND		0.26	0.96
Hexachlorocyclopentadiene	ND		0.23	9.6
Hexachloroethane	ND		0.18	0.96
Indeno[1,2,3-cd]pyrene	0.15	J	0.042	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-07 (20160309)

Lab Sample ID: 240-61960-11 Date Sampled: 03/09/2016 1240
Client Matrix: Water Date Received: 03/10/2016 1130

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317025.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1831			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.96
2-Methylphenol	ND		0.16	0.96
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.96
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.96
N-Nitrosodi-n-propylamine	ND		0.23	0.96
2,2'-oxybis[1-chloropropane]	ND		0.38	0.96
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	0.18	J	0.060	0.19
Phenol	ND		0.58	0.96
Pyrene	0.39		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.77	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	75		29 - 110
2-Fluorophenol (Surr)	30		15 - 110
2,4,6-Tribromophenol (Surr)	80		21 - 128
Nitrobenzene-d5 (Surr)	68		31 - 110
Phenol-d5 (Surr)	17		10 - 110
Terphenyl-d14 (Surr)	47		31 - 115

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-25 (20160308)

Lab Sample ID: 240-61960-1 Date Sampled: 03/08/2016 1110
Client Matrix: Water Date Received: 03/10/2016 1130

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221094	Lab File ID:	P14F0315007.D
Dilution:	10			Initial Weight/Volume:	970 mL
Analysis Date:	03/15/2016 1425			Final Weight/Volume:	5 mL
Prep Date:	03/11/2016 0619			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	11		0.52	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-24 (20160308)

Lab Sample ID: 240-61960-2 Date Sampled: 03/08/2016 1250
Client Matrix: Water Date Received: 03/10/2016 1130

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221094	Lab File ID:	P14F0315008.D
Dilution:	1.0			Initial Weight/Volume:	970 mL
Analysis Date:	03/15/2016 1452			Final Weight/Volume:	5 mL
Prep Date:	03/11/2016 0619			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.19		0.052	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-23B (20160308)

Lab Sample ID: 240-61960-3 Date Sampled: 03/08/2016 1405
Client Matrix: Water Date Received: 03/10/2016 1130

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221397	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221094	Lab File ID:	P14F0314037.D
Dilution:	1.0			Initial Weight/Volume:	980 mL
Analysis Date:	03/15/2016 0148			Final Weight/Volume:	5 mL
Prep Date:	03/11/2016 0619			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.086	J	0.051	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-23 (20160308)

Lab Sample ID: 240-61960-4 Date Sampled: 03/08/2016 1455
Client Matrix: Water Date Received: 03/10/2016 1130

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221397	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221094	Lab File ID:	P14F0314038.D
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Analysis Date:	03/15/2016 0215			Final Weight/Volume:	5 mL
Prep Date:	03/11/2016 0619			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.11		0.050	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-20 (20160308)

Lab Sample ID: 240-61960-5 Date Sampled: 03/08/2016 1555
Client Matrix: Water Date Received: 03/10/2016 1130

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221397	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221094	Lab File ID:	P14F0314039.D
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Analysis Date:	03/15/2016 0242			Final Weight/Volume:	5 mL
Prep Date:	03/11/2016 0619			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.088	J	0.050	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-19 (20160309)

Lab Sample ID: 240-61960-7 Date Sampled: 03/09/2016 0915
Client Matrix: Water Date Received: 03/10/2016 1130

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221397	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221094	Lab File ID:	P14F0314040.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/15/2016 0309			Final Weight/Volume:	5 mL
Prep Date:	03/11/2016 0619			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.081	J	0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: DUP-01 (20160309)

Lab Sample ID: 240-61960-8FD Date Sampled: 03/09/2016 0000
Client Matrix: Water Date Received: 03/10/2016 1130

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221397	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221094	Lab File ID:	P14F0314041.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/15/2016 0336			Final Weight/Volume:	5 mL
Prep Date:	03/11/2016 0619			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.10		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-22B (20160309)

Lab Sample ID: 240-61960-9 Date Sampled: 03/09/2016 1050
Client Matrix: Water Date Received: 03/10/2016 1130

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221397	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221094	Lab File ID:	P14F0314042.D
Dilution:	1.0			Initial Weight/Volume:	950 mL
Analysis Date:	03/15/2016 0403			Final Weight/Volume:	5 mL
Prep Date:	03/11/2016 0619			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.14		0.053	0.11

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-22 (20160309)

Lab Sample ID: 240-61960-10 Date Sampled: 03/09/2016 1155
Client Matrix: Water Date Received: 03/10/2016 1130

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221293	Lab File ID:	P14F0315012.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	03/15/2016 1640			Final Weight/Volume:	5 mL
Prep Date:	03/12/2016 0930			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.048	0.096

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-07 (20160309)

Lab Sample ID: 240-61960-11 Date Sampled: 03/09/2016 1240
Client Matrix: Water Date Received: 03/10/2016 1130

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221293	Lab File ID:	P14F0315013.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/15/2016 1708			Final Weight/Volume:	5 mL
Prep Date:	03/12/2016 0930			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-25 (20160308)

Lab Sample ID: 240-61960-1 Date Sampled: 03/08/2016 1110
Client Matrix: Water Date Received: 03/10/2016 1130

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-221480	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-221145	Lab File ID:	I9031116A1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/14/2016 1721			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1023				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	250		1.0	200
Aluminum	ND		40	200
Cadmium	0.49	J	0.14	5.0
Chromium	1.2	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	210000		260	5000
Selenium	ND		4.0	5.0
Cobalt	ND		0.56	7.0
Copper	ND		1.9	25
Iron	2400	B	13	100
Potassium	4200	J	70	5000
Magnesium	65000	B	55	5000
Manganese	1400	B	0.46	15
Sodium	75000	B	180	5000
Nickel	1.7	J B	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-221648	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0843			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-24 (20160308)

Lab Sample ID: 240-61960-2 Date Sampled: 03/08/2016 1250
Client Matrix: Water Date Received: 03/10/2016 1130

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-221480	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-221145	Lab File ID:	I9031116A1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/14/2016 1725			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1023				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	110	J	1.0	200
Aluminum	ND		40	200
Cadmium	0.45	J	0.14	5.0
Chromium	0.81	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	200000		260	5000
Selenium	ND		4.0	5.0
Cobalt	2.7	J	0.56	7.0
Copper	ND		1.9	25
Iron	4200	B	13	100
Potassium	7300		70	5000
Magnesium	50000	B	55	5000
Manganese	2100	B	0.46	15
Sodium	90000	B	180	5000
Nickel	5.1	J B	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-221648	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0845			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.17	J	0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-23B (20160308)

Lab Sample ID: 240-61960-3 Date Sampled: 03/08/2016 1405
Client Matrix: Water Date Received: 03/10/2016 1130

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-221480	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-221145	Lab File ID:	I9031116A1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/14/2016 1729			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1023				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	180	J	1.0	200
Aluminum	ND		40	200
Cadmium	0.29	J	0.14	5.0
Chromium	0.60	J	0.55	10
Silver	ND		0.92	10
Arsenic	2.9	J	2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	80000		260	5000
Selenium	ND		4.0	5.0
Cobalt	ND		0.56	7.0
Copper	ND		1.9	25
Iron	4000	B	13	100
Potassium	1900	J	70	5000
Magnesium	27000	B	55	5000
Manganese	210	B	0.46	15
Sodium	9000	B	180	5000
Nickel	0.99	J B	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-221648	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0847			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.16	J	0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-23 (20160308)

Lab Sample ID: 240-61960-4 Date Sampled: 03/08/2016 1455
Client Matrix: Water Date Received: 03/10/2016 1130

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-221480	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-221145	Lab File ID:	I9031116A1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/14/2016 1733			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1023				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	110	J	1.0	200
Aluminum	ND		40	200
Cadmium	0.36	J	0.14	5.0
Chromium	0.84	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	140000		260	5000
Selenium	ND		4.0	5.0
Cobalt	2.5	J	0.56	7.0
Copper	ND		1.9	25
Iron	530	B	13	100
Potassium	3700	J	70	5000
Magnesium	37000	B	55	5000
Manganese	2500	B	0.46	15
Sodium	43000	B	180	5000
Nickel	3.1	J B	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-221648	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0849			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND	L	0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-20 (20160308)

Lab Sample ID: 240-61960-5 Date Sampled: 03/08/2016 1555
Client Matrix: Water Date Received: 03/10/2016 1130

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-221480	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-221145	Lab File ID:	I9031116A1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/14/2016 1737			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1023				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	130	J	1.0	200
Aluminum	ND		40	200
Cadmium	0.52	J	0.14	5.0
Chromium	0.70	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	170000		260	5000
Selenium	ND		4.0	5.0
Cobalt	0.65	J	0.56	7.0
Copper	ND		1.9	25
Iron	190	B	13	100
Potassium	2800	J	70	5000
Magnesium	46000	B	55	5000
Manganese	380	B	0.46	15
Sodium	45000	B	180	5000
Nickel	3.2	J B	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-221648	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0851			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.27		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-19 (20160309)

Lab Sample ID: 240-61960-7 Date Sampled: 03/09/2016 0915
Client Matrix: Water Date Received: 03/10/2016 1130

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-221480	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-221145	Lab File ID:	I9031116A1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/14/2016 1741			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1023				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	130	J	1.0	200
Aluminum	ND		40	200
Cadmium	0.50	J	0.14	5.0
Chromium	0.75	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	140000		260	5000
Selenium	ND		4.0	5.0
Cobalt	ND		0.56	7.0
Copper	ND		1.9	25
Iron	30	J B	13	100
Potassium	3100	J	70	5000
Magnesium	41000	B	55	5000
Manganese	45	B	0.46	15
Sodium	35000	B	180	5000
Nickel	1.7	J B	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-221648	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0853			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.16	J	0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-22B (20160309)

Lab Sample ID: 240-61960-9 Date Sampled: 03/09/2016 1050
Client Matrix: Water Date Received: 03/10/2016 1130

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-221480	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-221145	Lab File ID:	I9031116A1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/14/2016 1625			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1023				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	140	J	1.0	200
Aluminum	ND		40	200
Cadmium	0.37	J	0.14	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	61000		260	5000
Selenium	ND		4.0	5.0
Cobalt	ND		0.56	7.0
Copper	ND		1.9	25
Iron	2400	B	13	100
Potassium	16000		70	5000
Magnesium	27000	B	55	5000
Manganese	120	B	0.46	15
Sodium	9600	B	180	5000
Nickel	ND		0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-221648	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0818			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND	F2 F1	0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-22 (20160309)

Lab Sample ID: 240-61960-10 Date Sampled: 03/09/2016 1155
Client Matrix: Water Date Received: 03/10/2016 1130

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-221480	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-221145	Lab File ID:	I9031116A1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/14/2016 1753			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1023				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	170	J	1.0	200
Aluminum	ND		40	200
Cadmium	0.41	J	0.14	5.0
Chromium	1.0	J	0.55	10
Silver	ND		0.92	10
Arsenic	7.2	J	2.9	10
Beryllium	0.13	J	0.13	5.0
Lead	ND		1.9	3.0
Calcium	140000		260	5000
Selenium	ND		4.0	5.0
Cobalt	1.2	J	0.56	7.0
Copper	ND		1.9	25
Iron	9000	B	13	100
Potassium	4300	J	70	5000
Magnesium	39000	B	55	5000
Manganese	1900	B	0.46	15
Sodium	29000	B	180	5000
Nickel	2.3	J B	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-221648	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0856			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Client Sample ID: AMW-07 (20160309)

Lab Sample ID: 240-61960-11 Date Sampled: 03/09/2016 1240
Client Matrix: Water Date Received: 03/10/2016 1130

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-221480	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-221145	Lab File ID:	I9031116A1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/14/2016 1757			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1023				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	14	J	1.0	200
Aluminum	120	J	40	200
Cadmium	0.76	J	0.14	5.0
Chromium	1.5	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	0.73	J	0.13	5.0
Lead	ND		1.9	3.0
Calcium	100000		260	5000
Selenium	ND		4.0	5.0
Cobalt	6.8	J	0.56	7.0
Copper	ND		1.9	25
Iron	ND		13	100
Potassium	4200	J	70	5000
Magnesium	37000	B	55	5000
Manganese	68	B	0.46	15
Sodium	22000	B	180	5000
Nickel	34	J B	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	98		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-221648	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0858			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	L	A negative instrument reading had an absolute value greater than the reporting limit
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-221437					
LCS 240-221437/4	Lab Control Sample	T	Water	8260B	
MB 240-221437/6	Method Blank	T	Water	8260B	
240-61960-2	AMW-24 (20160308)	T	Water	8260B	
240-61960-3	AMW-23B (20160308)	T	Water	8260B	
240-61960-4	AMW-23 (20160308)	T	Water	8260B	
240-61960-5	AMW-20 (20160308)	T	Water	8260B	
240-61960-6TB	TRIPBLANK-01 (20160308)	T	Water	8260B	
240-61960-7	AMW-19 (20160309)	T	Water	8260B	
240-61960-8FD	DUP-01 (20160309)	T	Water	8260B	
240-61960-9	AMW-22B (20160309)	T	Water	8260B	
240-61960-9MS	Matrix Spike	T	Water	8260B	
240-61960-9MSD	Matrix Spike Duplicate	T	Water	8260B	
240-61960-10	AMW-22 (20160309)	T	Water	8260B	
240-61960-11	AMW-07 (20160309)	T	Water	8260B	
Analysis Batch:240-221634					
LCS 240-221634/4	Lab Control Sample	T	Water	8260B	
MB 240-221634/6	Method Blank	T	Water	8260B	
240-61960-1	AMW-25 (20160308)	T	Water	8260B	
240-61963-E-2 MS	Matrix Spike	T	Water	8260B	
240-61963-F-2 MSD	Matrix Spike Duplicate	T	Water	8260B	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-221556					
LCS 240-221556/24-A	Lab Control Sample	T	Water	3510C	
MB 240-221556/23-A	Method Blank	T	Water	3510C	
240-61960-1	AMW-25 (20160308)	T	Water	3510C	
240-61960-2	AMW-24 (20160308)	T	Water	3510C	
240-61960-3	AMW-23B (20160308)	T	Water	3510C	
240-61960-4	AMW-23 (20160308)	T	Water	3510C	
240-61960-5	AMW-20 (20160308)	T	Water	3510C	
240-61960-7	AMW-19 (20160309)	T	Water	3510C	
240-61960-8FD	DUP-01 (20160309)	T	Water	3510C	
240-61960-9	AMW-22B (20160309)	T	Water	3510C	
240-61960-9MS	Matrix Spike	T	Water	3510C	
240-61960-9MSD	Matrix Spike Duplicate	T	Water	3510C	
240-61960-10	AMW-22 (20160309)	T	Water	3510C	
240-61960-11	AMW-07 (20160309)	T	Water	3510C	
Analysis Batch:240-221952					
LCS 240-221556/24-A	Lab Control Sample	T	Water	8270C	240-221556
MB 240-221556/23-A	Method Blank	T	Water	8270C	240-221556
240-61960-1	AMW-25 (20160308)	T	Water	8270C	240-221556
240-61960-2	AMW-24 (20160308)	T	Water	8270C	240-221556
240-61960-3	AMW-23B (20160308)	T	Water	8270C	240-221556
240-61960-9	AMW-22B (20160309)	T	Water	8270C	240-221556
240-61960-9MS	Matrix Spike	T	Water	8270C	240-221556
240-61960-9MSD	Matrix Spike Duplicate	T	Water	8270C	240-221556
240-61960-10	AMW-22 (20160309)	T	Water	8270C	240-221556
240-61960-11	AMW-07 (20160309)	T	Water	8270C	240-221556
Analysis Batch:240-222165					
240-61960-4	AMW-23 (20160308)	T	Water	8270C	240-221556
240-61960-5	AMW-20 (20160308)	T	Water	8270C	240-221556
240-61960-7	AMW-19 (20160309)	T	Water	8270C	240-221556
240-61960-8FD	DUP-01 (20160309)	T	Water	8270C	240-221556

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-221094					
LCS 240-221094/10-A	Lab Control Sample	T	Water	3520C	
LCSD 240-221094/11-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 240-221094/9-A	Method Blank	T	Water	3520C	
240-61960-1	AMW-25 (20160308)	T	Water	3520C	
240-61960-2	AMW-24 (20160308)	T	Water	3520C	
240-61960-3	AMW-23B (20160308)	T	Water	3520C	
240-61960-4	AMW-23 (20160308)	T	Water	3520C	
240-61960-5	AMW-20 (20160308)	T	Water	3520C	
240-61960-7	AMW-19 (20160309)	T	Water	3520C	
240-61960-8FD	DUP-01 (20160309)	T	Water	3520C	
240-61960-9	AMW-22B (20160309)	T	Water	3520C	
Prep Batch: 240-221293					
LCS 240-221293/6-A	Lab Control Sample	T	Water	3520C	
LCSD 240-221293/7-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 240-221293/5-A	Method Blank	T	Water	3520C	
240-61960-10	AMW-22 (20160309)	T	Water	3520C	
240-61960-11	AMW-07 (20160309)	T	Water	3520C	
Analysis Batch:240-221397					
LCS 240-221094/10-A	Lab Control Sample	T	Water	WI-DRO	240-221094
LCSD 240-221094/11-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-221094
MB 240-221094/9-A	Method Blank	T	Water	WI-DRO	240-221094
240-61960-3	AMW-23B (20160308)	T	Water	WI-DRO	240-221094
240-61960-4	AMW-23 (20160308)	T	Water	WI-DRO	240-221094
240-61960-5	AMW-20 (20160308)	T	Water	WI-DRO	240-221094
240-61960-7	AMW-19 (20160309)	T	Water	WI-DRO	240-221094
240-61960-8FD	DUP-01 (20160309)	T	Water	WI-DRO	240-221094
240-61960-9	AMW-22B (20160309)	T	Water	WI-DRO	240-221094
Analysis Batch:240-221606					
LCS 240-221293/6-A	Lab Control Sample	T	Water	WI-DRO	240-221293
LCSD 240-221293/7-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-221293
MB 240-221293/5-A	Method Blank	T	Water	WI-DRO	240-221293
240-61960-1	AMW-25 (20160308)	T	Water	WI-DRO	240-221094
240-61960-2	AMW-24 (20160308)	T	Water	WI-DRO	240-221094
240-61960-10	AMW-22 (20160309)	T	Water	WI-DRO	240-221293
240-61960-11	AMW-07 (20160309)	T	Water	WI-DRO	240-221293

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-221145					
LCS 240-221145/2-A	Lab Control Sample	R	Water	3005A	
MB 240-221145/1-A	Method Blank	R	Water	3005A	
240-61960-1	AMW-25 (20160308)	D	Water	3005A	
240-61960-2	AMW-24 (20160308)	D	Water	3005A	
240-61960-3	AMW-23B (20160308)	D	Water	3005A	
240-61960-4	AMW-23 (20160308)	D	Water	3005A	
240-61960-5	AMW-20 (20160308)	D	Water	3005A	
240-61960-7	AMW-19 (20160309)	D	Water	3005A	
240-61960-9	AMW-22B (20160309)	D	Water	3005A	
240-61960-9MS	Matrix Spike	D	Water	3005A	
240-61960-9MSD	Matrix Spike Duplicate	D	Water	3005A	
240-61960-10	AMW-22 (20160309)	D	Water	3005A	
240-61960-11	AMW-07 (20160309)	D	Water	3005A	
Prep Batch: 240-221146					
LCS 240-221146/2-A	Lab Control Sample	T	Water	7470A	
MB 240-221146/1-A	Method Blank	T	Water	7470A	
240-61960-1	AMW-25 (20160308)	D	Water	7470A	
240-61960-2	AMW-24 (20160308)	D	Water	7470A	
240-61960-3	AMW-23B (20160308)	D	Water	7470A	
240-61960-4	AMW-23 (20160308)	D	Water	7470A	
240-61960-5	AMW-20 (20160308)	D	Water	7470A	
240-61960-7	AMW-19 (20160309)	D	Water	7470A	
240-61960-9	AMW-22B (20160309)	D	Water	7470A	
240-61960-9MS	Matrix Spike	D	Water	7470A	
240-61960-9MSD	Matrix Spike Duplicate	D	Water	7470A	
240-61960-10	AMW-22 (20160309)	D	Water	7470A	
240-61960-11	AMW-07 (20160309)	D	Water	7470A	
Analysis Batch:240-221480					
LCS 240-221145/2-A	Lab Control Sample	R	Water	6010B	240-221145
MB 240-221145/1-A	Method Blank	R	Water	6010B	240-221145
240-61960-1	AMW-25 (20160308)	D	Water	6010B	240-221145
240-61960-2	AMW-24 (20160308)	D	Water	6010B	240-221145
240-61960-3	AMW-23B (20160308)	D	Water	6010B	240-221145
240-61960-4	AMW-23 (20160308)	D	Water	6010B	240-221145
240-61960-5	AMW-20 (20160308)	D	Water	6010B	240-221145
240-61960-7	AMW-19 (20160309)	D	Water	6010B	240-221145
240-61960-9	AMW-22B (20160309)	D	Water	6010B	240-221145
240-61960-9MS	Matrix Spike	D	Water	6010B	240-221145
240-61960-9MSD	Matrix Spike Duplicate	D	Water	6010B	240-221145
240-61960-10	AMW-22 (20160309)	D	Water	6010B	240-221145
240-61960-11	AMW-07 (20160309)	D	Water	6010B	240-221145

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-221648					
LCS 240-221146/2-A	Lab Control Sample	T	Water	7470A	240-221146
MB 240-221146/1-A	Method Blank	T	Water	7470A	240-221146
240-61960-1	AMW-25 (20160308)	D	Water	7470A	240-221146
240-61960-2	AMW-24 (20160308)	D	Water	7470A	240-221146
240-61960-3	AMW-23B (20160308)	D	Water	7470A	240-221146
240-61960-4	AMW-23 (20160308)	D	Water	7470A	240-221146
240-61960-5	AMW-20 (20160308)	D	Water	7470A	240-221146
240-61960-7	AMW-19 (20160309)	D	Water	7470A	240-221146
240-61960-9	AMW-22B (20160309)	D	Water	7470A	240-221146
240-61960-9MS	Matrix Spike	D	Water	7470A	240-221146
240-61960-9MSD	Matrix Spike Duplicate	D	Water	7470A	240-221146
240-61960-10	AMW-22 (20160309)	D	Water	7470A	240-221146
240-61960-11	AMW-07 (20160309)	D	Water	7470A	240-221146

Report Basis
D = Dissolved
R = Total Recoverable
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-61960-1	AMW-25 (20160308)	101	100	95	101
240-61960-2	AMW-24 (20160308)	106	93	101	104
240-61960-3	AMW-23B (20160308)	106	91	100	106
240-61960-4	AMW-23 (20160308)	107	88	100	106
240-61960-5	AMW-20 (20160308)	107	89	99	106
240-61960-6	TRIPBLANK-01 (20160308)	110	89	100	110
240-61960-7	AMW-19 (20160309)	111	88	99	110
240-61960-8	DUP-01 (20160309)	110	86	99	109
240-61960-9	AMW-22B (20160309)	110	86	99	109
240-61960-10	AMW-22 (20160309)	109	87	98	108
240-61960-11	AMW-07 (20160309)	113	87	96	109
MB 240-221437/6		108	92	98	105
MB 240-221634/6		107	86	99	105
LCS 240-221437/4		103	108	102	103
LCS 240-221634/4		98	104	103	103
240-61960-9 MS	AMW-22B (20160309) MS	103	102	107	103
240-61963-E-2 MS		98	99	108	102
240-61960-9 MSD	AMW-22B (20160309) MSD	101	101	105	102
240-61963-F-2 MSD		98	100	107	102

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	78-125
BFB = 4-Bromofluorobenzene (Surr)	61-120
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	79-120

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-61960-1	AMW-25 (20160308)	51	24	69	59	16	72
240-61960-2	AMW-24 (20160308)	73	33	91	66	19	68
240-61960-3	AMW-23B (20160308)	56	22	65	51	13	67
240-61960-4	AMW-23 (20160308)	57	21	75	50	13	70
240-61960-5	AMW-20 (20160308)	74	31	82	69	17	71
240-61960-7	AMW-19 (20160309)	63	25	77	57	15	60
240-61960-8	DUP-01 (20160309)	51	16	70	46	11	57
240-61960-9	AMW-22B (20160309)	74	31	92	67	18	69
240-61960-10	AMW-22 (20160309)	74	32	82	70	19	59
240-61960-11	AMW-07 (20160309)	75	30	80	68	17	47
MB 240-221556/23-A		83	53	96	77	35	90
LCS 240-221556/24-A		82	50	100	81	33	93
240-61960-9 MS	AMW-22B (20160309) MS	74	31	96	68	19	60
240-61960-9 MSD	AMW-22B (20160309) MSD	71	31	90	65	18	63

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	29-110
2FP = 2-Fluorophenol (Surr)	15-110
TBP = 2,4,6-Tribromophenol (Surr)	21-128
NBZ = Nitrobenzene-d5 (Surr)	31-110
PHL = Phenol-d5 (Surr)	10-110
TPH = Terphenyl-d14 (Surr)	31-115

Method Blank - Batch: 240-221437

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-221437/6	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5421.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1304	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1304				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Method Blank - Batch: 240-221437

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-221437/6	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5421.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1304	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1304				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	2.0
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	0.393	J	0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108	78 - 125
4-Bromofluorobenzene (Surr)	92	61 - 120
Toluene-d8 (Surr)	98	80 - 120
Dibromofluoromethane (Surr)	105	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Control Sample - Batch: 240-221437

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-221437/4	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5419.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1221	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1221				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	10.6	106	80 - 120	
1,1,1-Trichloroethane	10.0	10.4	104	77 - 123	
1,1,2,2-Tetrachloroethane	10.0	8.65	86	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.3	103	67 - 138	
1,1,2-Trichloroethane	10.0	9.75	98	80 - 120	
1,1-Dichloroethane	10.0	9.71	97	79 - 125	
1,1-Dichloroethene	10.0	10.0	100	76 - 124	
1,1-Dichloropropene	10.0	10.3	103	80 - 128	
1,2,3-Trichlorobenzene	10.0	9.15	91	66 - 120	
1,2,3-Trichloropropane	10.0	8.59	86	72 - 126	
1,2,4-Trichlorobenzene	10.0	9.56	96	61 - 120	
1,2,4-Trimethylbenzene	10.0	9.80	98	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	10.3	103	50 - 132	
1,2-Dichlorobenzene	10.0	9.74	97	79 - 120	
1,2-Dichloroethane	10.0	9.97	100	80 - 120	
1,2-Dichloropropane	10.0	9.85	98	78 - 124	
1,3,5-Trimethylbenzene	10.0	9.67	97	77 - 120	
1,3-Dichlorobenzene	10.0	9.29	93	79 - 120	
1,3-Dichloropropane	10.0	9.37	94	80 - 120	
1,4-Dichlorobenzene	10.0	9.39	94	79 - 120	
Allyl chloride	10.0	9.91	99	69 - 120	
2,2-Dichloropropane	10.0	10.3	103	71 - 122	
2-Chlorotoluene	10.0	9.01	90	80 - 120	
2-Hexanone	20.0	19.8	99	55 - 141	
Bromobenzene	10.0	8.53	85	80 - 120	
Bromochloromethane	10.0	10.1	101	80 - 120	
4-Chlorotoluene	10.0	9.06	91	80 - 120	
p-Isopropyltoluene	10.0	10.6	106	77 - 120	
Acetone	20.0	17.5	87	34 - 148	
Benzene	10.0	9.80	98	80 - 120	
Bromoform	10.0	9.48	95	56 - 122	
Bromomethane	10.0	7.40	74	38 - 132	
Carbon disulfide	10.0	9.14	91	65 - 144	
Carbon tetrachloride	10.0	11.4	114	77 - 131	
Chlorobenzene	10.0	9.46	95	80 - 120	
Chloroethane	10.0	7.79	78	36 - 126	
Chloroform	10.0	9.85	99	80 - 120	
Chloromethane	10.0	7.98	80	48 - 133	
cis-1,2-Dichloroethene	10.0	10.1	101	79 - 120	
cis-1,3-Dichloropropene	10.0	10.7	107	74 - 126	
Cyclohexane	10.0	10.0	100	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Control Sample - Batch: 240-221437

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-221437/4	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5419.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1221	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1221				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	9.39	94	62 - 120	
Dibromomethane	10.0	10.2	102	80 - 120	
Bromodichloromethane	10.0	10.1	101	80 - 120	
Dichlorodifluoromethane	10.0	5.68	57	23 - 136	
Dichlorofluoromethane	10.0	7.96	80	40 - 160	
Ethyl ether	10.0	9.71	97	53 - 135	
Ethylbenzene	10.0	9.87	99	80 - 120	
1,2-Dibromoethane	10.0	10.0	100	80 - 120	
Naphthalene	10.0	8.67	87	53 - 121	
m-Xylene & p-Xylene	10.0	9.82	98	80 - 120	
n-Butylbenzene	10.0	10.6	106	74 - 120	
Isopropylbenzene	10.0	10.7	107	77 - 120	
Methyl acetate	50.0	50.6	101	67 - 131	
N-Propylbenzene	10.0	9.13	91	79 - 123	
2-Butanone (MEK)	20.0	19.1	96	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	21.2	106	64 - 135	
sec-Butylbenzene	10.0	10.0	100	77 - 120	
Methyl tert butyl ether	10.0	10.3	103	69 - 121	
Methylene Chloride	10.0	10.8	108	77 - 129	
o-Xylene	10.0	10.5	105	80 - 120	
Styrene	10.0	10.1	101	76 - 122	
tert-Butylbenzene	10.0	9.99	100	77 - 121	
Tetrachloroethene	10.0	9.77	98	78 - 121	
Tetrahydrofuran	20.0	21.1	105	61 - 136	
Toluene	10.0	9.63	96	80 - 120	
trans-1,2-Dichloroethene	10.0	10.3	103	80 - 124	
trans-1,3-Dichloropropene	10.0	9.43	94	75 - 131	
Trichloroethene	10.0	9.88	99	80 - 121	
Trichlorofluoromethane	10.0	8.84	88	61 - 133	
Vinyl chloride	10.0	7.84	78	52 - 121	
Methylcyclohexane	10.0	10.4	104	61 - 134	
Chlorodibromomethane	10.0	10.2	102	74 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103	78 - 125
4-Bromofluorobenzene (Surr)	108	61 - 120
Toluene-d8 (Surr)	102	80 - 120
Dibromofluoromethane (Surr)	103	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221437

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-61960-9	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5443.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2110			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2110				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-9	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5444.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2132			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2132				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	97	102	72 - 120	4	22		
1,1,1-Trichloroethane	99	97	69 - 122	3	14		
1,1,2,2-Tetrachloroethane	94	97	61 - 130	3	18		
1,1,2-Trichloro-1,2,2-trifluoroethane	104	84	44 - 140	22	35		
1,1,2-Trichloroethane	98	99	72 - 125	1	19		
1,1-Dichloroethane	93	98	73 - 124	5	14		
1,1-Dichloroethene	100	95	67 - 124	5	24		
1,1-Dichloropropene	101	96	81 - 126	5	11		
1,2,3-Trichlorobenzene	73	77	46 - 120	5	35		
1,2,3-Trichloropropane	98	99	58 - 135	1	25		
1,2,4-Trichlorobenzene	65	74	48 - 120	13	28		
1,2,4-Trimethylbenzene	86	87	64 - 122	1	14		
1,2-Dibromo-3-Chloropropane	91	90	42 - 130	1	24		
1,2-Dichlorobenzene	84	89	67 - 118	5	15		
1,2-Dichloroethane	95	99	74 - 125	4	24		
1,2-Dichloropropane	95	97	73 - 122	2	15		
1,3,5-Trimethylbenzene	85	87	62 - 126	2	17		
1,3-Dichlorobenzene	85	87	65 - 120	3	15		
1,3-Dichloropropane	95	97	59 - 133	2	35		
1,4-Dichlorobenzene	85	88	66 - 120	4	16		
Allyl chloride	97	97	39 - 124	0	35		
2,2-Dichloropropane	79	78	48 - 126	0	30		
2-Chlorotoluene	88	88	70 - 122	0	18		
2-Hexanone	106	106	49 - 142	0	27		
Bromobenzene	88	91	73 - 120	3	13		
Bromochloromethane	96	100	60 - 132	4	35		
4-Chlorotoluene	87	90	74 - 120	3	15		
p-Isopropyltoluene	85	85	61 - 123	0	27		
Acetone	71	80	32 - 126	10	28		
Benzene	95	97	73 - 121	2	13		
Bromoform	85	90	45 - 121	5	19		
Bromomethane	43	34	26 - 136	24	35		

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221437

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-61960-9	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5443.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2110			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2110				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-9	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5444.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2132			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2132				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Carbon disulfide	102	94	54 - 144	8	34		
Carbon tetrachloride	107	100	65 - 129	7	20		
Chlorobenzene	90	90	72 - 120	0	15		
Chloroethane	60	53	27 - 131	12	35		
Chloroform	96	99	73 - 121	3	17		
Chloromethane	48	47	39 - 134	3	20		
cis-1,2-Dichloroethene	94	100	66 - 124	6	22		
cis-1,3-Dichloropropene	90	95	60 - 120	5	21		
Cyclohexane	96	80	41 - 137	19	35		
Hexachlorobutadiene	69	71	48 - 120	4	34		
Dibromomethane	98	101	63 - 134	4	35		
Bromodichloromethane	91	99	72 - 120	8	19		
Dichlorodifluoromethane	55	48	14 - 137	13	34		
Dichlorofluoromethane	72	66	42 - 133	9	35		
Ethyl ether	97	100	63 - 136	3	35		
Ethylbenzene	92	90	68 - 121	2	16		
1,2-Dibromoethane	98	100	69 - 125	2	24		
Naphthalene	61	65	38 - 128	5	35		
m-Xylene & p-Xylene	92	89	66 - 123	3	15		
n-Butylbenzene	79	80	54 - 126	2	33		
Isopropylbenzene	89	89	61 - 122	1	20		
Methyl acetate	93	83	64 - 124	11	12		
N-Propylbenzene	90	86	63 - 129	5	29		
2-Butanone (MEK)	92	93	49 - 132	1	19		
4-Methyl-2-pentanone (MIBK)	105	108	58 - 136	3	32		
sec-Butylbenzene	85	83	61 - 123	2	29		
Methyl tert butyl ether	97	101	61 - 121	4	12		
Methylene Chloride	93	96	70 - 124	3	14		
o-Xylene	93	94	68 - 121	2	14		
Styrene	93	93	64 - 126	1	15		
tert-Butylbenzene	84	84	63 - 122	0	24		
Tetrachloroethene	94	89	59 - 125	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221437

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-61960-9	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5443.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2110			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2110				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-9	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5444.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2132			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2132				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Tetrahydrofuran	104	101	16 - 161	3	35		
Toluene	96	95	72 - 122	0	15		
trans-1,2-Dichloroethene	101	101	72 - 125	0	25		
trans-1,3-Dichloropropene	86	89	58 - 132	4	22		
Trichloroethene	95	95	61 - 129	1	14		
Trichlorofluoromethane	85	74	49 - 133	14	25		
Vinyl chloride	78	81	44 - 122	4	35		
Methylcyclohexane	95	79	39 - 135	18	35		
Chlorodibromomethane	97	101	62 - 122	4	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103	101	78 - 125
4-Bromofluorobenzene (Surr)	102	101	61 - 120
Toluene-d8 (Surr)	107	105	80 - 120
Dibromofluoromethane (Surr)	103	102	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Method Blank - Batch: 240-221634

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-221634/6	Analysis Batch:	240-221634	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5449.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/15/2016 1337	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/15/2016 1337				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Method Blank - Batch: 240-221634

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-221634/6	Analysis Batch:	240-221634	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5449.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/15/2016 1337	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/15/2016 1337				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	2.0
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107	78 - 125
4-Bromofluorobenzene (Surr)	86	61 - 120
Toluene-d8 (Surr)	99	80 - 120
Dibromofluoromethane (Surr)	105	79 - 120

Lab Control Sample - Batch: 240-221634

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-221634/4	Analysis Batch:	240-221634	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5447.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/15/2016 1254	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/15/2016 1254				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	9.80	98	80 - 120	
1,1,1-Trichloroethane	10.0	10.7	107	77 - 123	
1,1,2,2-Tetrachloroethane	10.0	8.84	88	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.0	120	67 - 138	
1,1,2-Trichloroethane	10.0	9.30	93	80 - 120	
1,1-Dichloroethane	10.0	9.29	93	79 - 125	
1,1-Dichloroethene	10.0	10.4	104	76 - 124	
1,1-Dichloropropene	10.0	10.5	105	80 - 128	
1,2,3-Trichlorobenzene	10.0	6.77	68	66 - 120	
1,2,3-Trichloropropane	10.0	8.99	90	72 - 126	
1,2,4-Trichlorobenzene	10.0	6.80	68	61 - 120	
1,2,4-Trimethylbenzene	10.0	9.07	91	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	7.79	78	50 - 132	
1,2-Dichlorobenzene	10.0	8.56	86	79 - 120	
1,2-Dichloroethane	10.0	9.23	92	80 - 120	
1,2-Dichloropropane	10.0	9.53	95	78 - 124	
1,3,5-Trimethylbenzene	10.0	9.09	91	77 - 120	
1,3-Dichlorobenzene	10.0	8.58	86	79 - 120	
1,3-Dichloropropane	10.0	8.82	88	80 - 120	
1,4-Dichlorobenzene	10.0	8.68	87	79 - 120	
Allyl chloride	10.0	9.64	96	69 - 120	
2,2-Dichloropropane	10.0	11.1	111	71 - 122	
2-Chlorotoluene	10.0	8.94	89	80 - 120	
2-Hexanone	20.0	18.7	94	55 - 141	
Bromobenzene	10.0	8.80	88	80 - 120	
Bromochloromethane	10.0	9.24	92	80 - 120	
4-Chlorotoluene	10.0	9.24	92	80 - 120	
p-Isopropyltoluene	10.0	9.32	93	77 - 120	
Acetone	20.0	15.1	75	34 - 148	
Benzene	10.0	9.41	94	80 - 120	
Bromoform	10.0	8.49	85	56 - 122	
Bromomethane	10.0	6.34	63	38 - 132	
Carbon disulfide	10.0	10.5	105	65 - 144	
Carbon tetrachloride	10.0	12.0	120	77 - 131	
Chlorobenzene	10.0	8.90	89	80 - 120	
Chloroethane	10.0	7.54	75	36 - 126	
Chloroform	10.0	9.33	93	80 - 120	
Chloromethane	10.0	8.77	88	48 - 133	
cis-1,2-Dichloroethene	10.0	9.59	96	79 - 120	
cis-1,3-Dichloropropene	10.0	9.80	98	74 - 126	
Cyclohexane	10.0	11.4	114	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Control Sample - Batch: 240-221634

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-221634/4	Analysis Batch:	240-221634	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5447.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/15/2016 1254	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/15/2016 1254				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	7.91	79	62 - 120	
Dibromomethane	10.0	9.41	94	80 - 120	
Bromodichloromethane	10.0	9.29	93	80 - 120	
Dichlorodifluoromethane	10.0	9.60	96	23 - 136	
Dichlorofluoromethane	10.0	7.80	78	40 - 160	
Ethyl ether	10.0	9.00	90	53 - 135	
Ethylbenzene	10.0	9.28	93	80 - 120	
1,2-Dibromoethane	10.0	9.29	93	80 - 120	
Naphthalene	10.0	5.60	56	53 - 121	
m-Xylene & p-Xylene	10.0	9.22	92	80 - 120	
n-Butylbenzene	10.0	9.01	90	74 - 120	
Isopropylbenzene	10.0	9.58	96	77 - 120	
Methyl acetate	50.0	44.4	89	67 - 131	
N-Propylbenzene	10.0	9.54	95	79 - 123	
2-Butanone (MEK)	20.0	16.7	84	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	19.1	95	64 - 135	
sec-Butylbenzene	10.0	9.40	94	77 - 120	
Methyl tert butyl ether	10.0	9.45	94	69 - 121	
Methylene Chloride	10.0	9.71	97	77 - 129	
o-Xylene	10.0	9.51	95	80 - 120	
Styrene	10.0	9.23	92	76 - 122	
tert-Butylbenzene	10.0	9.26	93	77 - 121	
Tetrachloroethene	10.0	9.97	100	78 - 121	
Tetrahydrofuran	20.0	18.1	90	61 - 136	
Toluene	10.0	9.44	94	80 - 120	
trans-1,2-Dichloroethene	10.0	10.1	101	80 - 124	
trans-1,3-Dichloropropene	10.0	8.84	88	75 - 131	
Trichloroethene	10.0	9.76	98	80 - 121	
Trichlorofluoromethane	10.0	11.3	113	61 - 133	
Vinyl chloride	10.0	9.38	94	52 - 121	
Methylcyclohexane	10.0	12.0	120	61 - 134	
Chlorodibromomethane	10.0	9.59	96	74 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	78 - 125
4-Bromofluorobenzene (Surr)	104	61 - 120
Toluene-d8 (Surr)	103	80 - 120
Dibromofluoromethane (Surr)	103	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221634

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-61963-E-2 MS	Analysis Batch:	240-221634	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5470.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/15/2016 2158			Final Weight/Volume:	5 mL
Prep Date:	03/15/2016 2158				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61963-F-2 MSD	Analysis Batch:	240-221634	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5471.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/15/2016 2220			Final Weight/Volume:	5 mL
Prep Date:	03/15/2016 2220				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	101	105	69 - 122	4	14		
1,1,2,2-Tetrachloroethane	90	95	61 - 130	5	18		
1,1,2-Trichloro-1,2,2-trifluoroethane	95	97	44 - 140	3	35		
1,1,2-Trichloroethane	99	100	72 - 125	1	19		
1,1-Dichloroethane	91	96	73 - 124	5	14		
1,1-Dichloroethene	96	102	67 - 124	6	24		
1,2,4-Trichlorobenzene	67	79	48 - 120	17	28		
1,2-Dibromo-3-Chloropropane	80	79	42 - 130	2	24		
1,2-Dichlorobenzene	86	89	67 - 118	4	15		
1,2-Dichloroethane	93	100	74 - 125	7	24		
1,2-Dichloropropane	96	103	73 - 122	7	15		
1,3-Dichlorobenzene	85	89	65 - 120	5	15		
1,4-Dichlorobenzene	86	89	66 - 120	4	16		
2-Hexanone	92	101	49 - 142	9	27		
Acetone	69	74	32 - 126	5	28		
Benzene	93	98	73 - 121	5	13		
Bromoform	84	85	45 - 121	0	19		
Bromomethane	57	70	26 - 136	20	35		
Carbon disulfide	110	111	54 - 144	1	34		
Carbon tetrachloride	108	112	65 - 129	4	20		
Chlorobenzene	91	94	72 - 120	3	15		
Chloroethane	70	74	27 - 131	5	35		
Chloroform	93	99	73 - 121	7	17		
Chloromethane	60	65	39 - 134	8	20		
cis-1,2-Dichloroethene	98	104	66 - 124	5	22		
cis-1,3-Dichloropropene	90	95	60 - 120	5	21		
Cyclohexane	92	96	41 - 137	5	35		
Bromodichloromethane	93	99	72 - 120	7	19		
Dichlorodifluoromethane	75	76	14 - 137	1	34		
Ethylbenzene	92	95	68 - 121	3	16		
1,2-Dibromoethane	95	99	69 - 125	4	24		
m-Xylene & p-Xylene	93	94	66 - 123	1	15		

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221634

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-61963-E-2 MS	Analysis Batch:	240-221634	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5470.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/15/2016 2158			Final Weight/Volume:	5 mL
Prep Date:	03/15/2016 2158				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61963-F-2 MSD	Analysis Batch:	240-221634	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5471.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/15/2016 2220			Final Weight/Volume:	5 mL
Prep Date:	03/15/2016 2220				5 mL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Isopropylbenzene	89	92	61 - 122	2	20		
Methyl acetate	86	87	64 - 124	2	12		
2-Butanone (MEK)	73	77	49 - 132	5	19		
4-Methyl-2-pentanone (MIBK)	89	101	58 - 136	12	32		
Methyl tert butyl ether	92	98	61 - 121	7	12		
Methylene Chloride	96	101	70 - 124	5	14		
o-Xylene	94	96	68 - 121	2	14		
Styrene	92	95	64 - 126	3	15		
Tetrachloroethene	97	97	59 - 125	1	20		
Toluene	97	101	72 - 122	4	15		
trans-1,2-Dichloroethene	99	106	72 - 125	7	25		
trans-1,3-Dichloropropene	87	94	58 - 132	7	22		
Trichloroethene	93	98	61 - 129	5	14		
Trichlorofluoromethane	106	103	49 - 133	3	25		
Vinyl chloride	84	88	44 - 122	6	35		
Methylcyclohexane	92	97	39 - 135	5	35		
Chlorodibromomethane	99	103	62 - 122	4	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	98	78 - 125
4-Bromofluorobenzene (Surr)	99	100	61 - 120
Toluene-d8 (Surr)	108	107	80 - 120
Dibromofluoromethane (Surr)	102	102	79 - 120

Method Blank - Batch: 240-221556

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-221556/23-A	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/17/2016 1057	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	ND		0.044	0.20
Acenaphthylene	ND		0.048	0.20
Acetophenone	ND		0.34	1.0
Anthracene	ND		0.088	0.20
Atrazine	ND		0.34	1.0
Benzaldehyde	ND		0.39	1.0
Benzo[a]anthracene	ND		0.030	0.20
Benzo[b]fluoranthene	ND		0.039	0.20
Benzo[k]fluoranthene	ND		0.045	0.20
Benzo[g,h,i]perylene	ND		0.046	0.20
Benzo[a]pyrene	ND		0.051	0.20
Butyl benzyl phthalate	ND		0.26	2.0
1,1'-Biphenyl	ND		0.13	1.0
Bis(2-chloroethoxy)methane	ND		0.32	1.0
Bis(2-chloroethyl)ether	ND		0.10	1.0
Bis(2-ethylhexyl) phthalate	ND		1.7	5.0
4-Bromophenyl phenyl ether	ND		0.22	2.0
Caprolactam	ND		0.20	5.0
Carbazole	ND		0.28	1.0
4-Chloroaniline	ND		0.21	2.0
4-Chloro-3-methylphenol	ND		0.21	2.0
2-Chloronaphthalene	ND		0.10	1.0
2-Chlorophenol	ND		0.29	1.0
4-Chlorophenyl phenyl ether	ND		0.30	2.0
Chrysene	ND		0.050	0.20
2-Methylnaphthalene	ND		0.090	0.20
3 & 4 Methylphenol	ND		0.80	2.0
Dibenz(a,h)anthracene	ND		0.045	0.20
Dibenzofuran	ND		0.020	1.0
3,3'-Dichlorobenzidine	ND		0.37	5.0
2,4-Dichlorophenol	ND		0.19	2.0
Diethyl phthalate	ND		0.60	2.0
2,4-Dimethylphenol	ND		0.25	2.0
Dimethyl phthalate	ND		0.29	2.0
4,6-Dinitro-2-methylphenol	ND		2.4	5.0
2,4-Dinitrophenol	ND		0.32	5.0
2,4-Dinitrotoluene	ND		0.25	5.0
Di-n-butyl phthalate	ND		1.7	5.0
Di-n-octyl phthalate	ND		0.23	2.0
Fluoranthene	ND		0.045	0.20
Fluorene	ND		0.041	0.20
Hexachlorobenzene	ND		0.085	0.20
Hexachlorobutadiene	ND		0.27	1.0
Hexachlorocyclopentadiene	ND		0.24	10
Hexachloroethane	ND		0.19	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Method Blank - Batch: 240-221556

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-221556/23-A	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/17/2016 1057	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Indeno[1,2,3-cd]pyrene	ND		0.043	0.20
Isophorone	ND		0.27	1.0
2-Methylphenol	ND		0.17	1.0
Naphthalene	ND		0.063	0.20
2-Nitroaniline	ND		0.21	2.0
3-Nitroaniline	ND		0.28	2.0
4-Nitroaniline	ND		0.22	2.0
Nitrobenzene	ND		0.040	1.0
2-Nitrophenol	ND		0.28	2.0
4-Nitrophenol	ND		0.29	5.0
N-Nitrosodiphenylamine	ND		0.31	1.0
N-Nitrosodi-n-propylamine	ND		0.24	1.0
2,2'-oxybis[1-chloropropane]	ND		0.40	1.0
Pentachlorophenol	ND		0.27	5.0
Phenanthrene	ND		0.062	0.20
Phenol	ND		0.60	1.0
Pyrene	ND		0.042	0.20
2,4,5-Trichlorophenol	ND		0.30	5.0
2,4,6-Trichlorophenol	ND		0.24	5.0
2,6-Dinitrotoluene	ND		0.80	5.0

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	83	29 - 110
2-Fluorophenol (Surr)	53	15 - 110
2,4,6-Tribromophenol (Surr)	96	21 - 128
Nitrobenzene-d5 (Surr)	77	31 - 110
Phenol-d5 (Surr)	35	10 - 110
Terphenyl-d14 (Surr)	90	31 - 115

Lab Control Sample - Batch: 240-221556

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-221556/24-A	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/17/2016 1121	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	20.0	15.3	76	55 - 120	
Acenaphthylene	20.0	15.1	76	55 - 120	
Acetophenone	20.0	15.9	80	50 - 120	
Anthracene	20.0	17.4	87	56 - 120	
Atrazine	40.0	37.0	92	65 - 161	
Benzaldehyde	40.0	32.5	81	40 - 122	
Benzo[a]anthracene	20.0	17.8	89	46 - 120	
Benzo[b]fluoranthene	20.0	17.3	86	24 - 120	
Benzo[k]fluoranthene	20.0	18.3	91	30 - 120	
Benzo[g,h,i]perylene	20.0	20.0	100	24 - 126	
Benzo[a]pyrene	20.0	17.9	89	24 - 120	
Butyl benzyl phthalate	20.0	17.9	89	51 - 120	
1,1'-Biphenyl	20.0	15.8	79	52 - 120	
Bis(2-chloroethoxy)methane	20.0	16.8	84	48 - 120	
Bis(2-chloroethyl)ether	20.0	15.7	78	43 - 120	
Bis(2-ethylhexyl) phthalate	20.0	16.7	83	21 - 125	
4-Bromophenyl phenyl ether	20.0	13.8	69	47 - 120	
Caprolactam	40.0	5.20	13	10 - 120	
Carbazole	20.0	17.2	86	57 - 120	
4-Chloroaniline	20.0	6.22	31	15 - 120	
4-Chloro-3-methylphenol	20.0	16.0	80	45 - 120	
2-Chloronaphthalene	20.0	15.6	78	47 - 120	
2-Chlorophenol	20.0	15.4	77	43 - 120	
4-Chlorophenyl phenyl ether	20.0	15.5	78	47 - 120	
Chrysene	20.0	18.2	91	49 - 120	
2-Methylnaphthalene	20.0	15.7	78	52 - 120	
3 & 4 Methylphenol	20.0	12.6	63	34 - 120	
Dibenz(a,h)anthracene	20.0	19.3	97	24 - 125	
Dibenzofuran	20.0	15.5	78	56 - 120	
3,3'-Dichlorobenzidine	40.0	37.9	95	29 - 120	
2,4-Dichlorophenol	20.0	16.8	84	46 - 120	
Diethyl phthalate	20.0	15.5	77	58 - 120	
2,4-Dimethylphenol	20.0	15.2	76	38 - 120	
Dimethyl phthalate	20.0	16.0	80	59 - 120	
4,6-Dinitro-2-methylphenol	40.0	28.1	70	33 - 120	
2,4-Dinitrophenol	40.0	28.5	71	10 - 120	
2,4-Dinitrotoluene	20.0	16.7	84	52 - 120	
Di-n-butyl phthalate	20.0	16.4	82	57 - 122	
Di-n-octyl phthalate	20.0	16.4	82	21 - 122	
Fluoranthene	20.0	17.6	88	57 - 120	
Fluorene	20.0	14.9	75	56 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Control Sample - Batch: 240-221556

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-221556/24-A	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/17/2016 1121	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobenzene	20.0	13.1	66	52 - 120	
Hexachlorobutadiene	20.0	15.2	76	38 - 120	
Hexachlorocyclopentadiene	20.0	11.7	59	4 - 120	
Hexachloroethane	20.0	13.1	65	42 - 120	
Indeno[1,2,3-cd]pyrene	20.0	19.4	97	25 - 120	
Isophorone	20.0	16.9	85	48 - 123	
2-Methylphenol	20.0	13.9	69	38 - 120	
Naphthalene	20.0	15.7	78	52 - 120	
2-Nitroaniline	20.0	15.6	78	48 - 127	
3-Nitroaniline	20.0	15.5	77	52 - 120	
4-Nitroaniline	20.0	15.9	79	48 - 120	
Nitrobenzene	20.0	15.4	77	41 - 120	
2-Nitrophenol	20.0	16.5	83	42 - 120	
4-Nitrophenol	40.0	12.1	30	16 - 120	
N-Nitrosodiphenylamine	20.0	15.4	77	51 - 120	
N-Nitrosodi-n-propylamine	20.0	15.9	79	48 - 123	
2,2'-oxybis[1-chloropropane]	20.0	15.2	76	42 - 120	
Pentachlorophenol	40.0	30.0	75	14 - 120	
Phenanthrene	20.0	16.3	82	57 - 120	
Phenol	20.0	6.20	31	16 - 120	
Pyrene	20.0	19.1	96	50 - 120	
2,4,5-Trichlorophenol	20.0	15.6	78	47 - 120	
2,4,6-Trichlorophenol	20.0	16.5	83	43 - 120	
2,6-Dinitrotoluene	20.0	16.0	80	52 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	82	29 - 110
2-Fluorophenol (Surr)	50	15 - 110
2,4,6-Tribromophenol (Surr)	100	21 - 128
Nitrobenzene-d5 (Surr)	81	31 - 110
Phenol-d5 (Surr)	33	10 - 110
Terphenyl-d14 (Surr)	93	31 - 115

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221556

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-61960-9	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317017.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1520			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-9	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1544			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	68	66	49 - 110	3	30		
Acenaphthylene	70	69	49 - 110	2	37		
Acetophenone	73	69	45 - 110	5	42		
Anthracene	82	83	50 - 110	0	30		
Atrazine	90	92	55 - 110	2	30		
Benzaldehyde	76	72	24 - 119	5	74		
Benzo[a]anthracene	72	77	34 - 110	7	52		
Benzo[b]fluoranthene	69	72	21 - 110	4	64		
Benzo[k]fluoranthene	60	67	24 - 110	10	75		
Benzo[g,h,i]perylene	71	74	18 - 110	4	87		
Benzo[a]pyrene	65	69	17 - 110	6	68		
Butyl benzyl phthalate	77	79	48 - 110	3	30		
1,1'-Biphenyl	70	69	46 - 110	2	36		
Bis(2-chloroethoxy)methane	71	67	45 - 110	5	39		
Bis(2-chloroethyl)ether	75	65	30 - 110	14	56		
Bis(2-ethylhexyl) phthalate	56	59	10 - 110	6	85		
4-Bromophenyl phenyl ether	67	63	51 - 110	6	30		
Caprolactam	7	7	10 - 126	7	59	J F1	J F1
Carbazole	83	86	50 - 110	4	30		
4-Chloroaniline	14	10	20 - 110	30	50	F1	F1
4-Chloro-3-methylphenol	69	68	42 - 110	3	30		
2-Chloronaphthalene	70	68	46 - 110	3	34		
2-Chlorophenol	65	62	35 - 110	5	57		
4-Chlorophenyl phenyl ether	71	69	51 - 110	2	30		
Chrysene	72	77	36 - 110	6	49		
2-Methylnaphthalene	71	68	50 - 110	4	37		
3 & 4 Methylphenol	46	45	26 - 110	2	57		
Dibenz(a,h)anthracene	70	73	14 - 110	4	92		
Dibenzofuran	71	71	51 - 110	1	30		
3,3'-Dichlorobenzidine	79	84	10 - 110	6	99		
2,4-Dichlorophenol	73	69	48 - 110	6	35		
Diethyl phthalate	76	78	53 - 110	3	30		

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221556

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-61960-9	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317017.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1520			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-9	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1544			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dimethylphenol	63	61	27 - 110	4	62		
Dimethyl phthalate	75	74	54 - 110	1	30		
4,6-Dinitro-2-methylphenol	53	58	10 - 110	9	92		
2,4-Dinitrophenol	48	54	10 - 110	10	99		
2,4-Dinitrotoluene	81	86	56 - 110	5	30		
Di-n-butyl phthalate	78	81	50 - 110	3	30		
Di-n-octyl phthalate	55	59	10 - 110	6	95		
Fluoranthene	84	88	54 - 110	4	30		
Fluorene	70	69	51 - 110	1	30		
Hexachlorobenzene	58	63	49 - 110	8	30		
Hexachlorobutadiene	65	62	36 - 110	5	60		
Hexachlorocyclopentadiene	30	31	4 - 110	2	68	J	J
Hexachloroethane	58	56	40 - 110	3	52		
Indeno[1,2,3-cd]pyrene	69	74	16 - 110	7	89		
Isophorone	71	68	45 - 110	5	37		
2-Methylphenol	56	50	31 - 110	12	61		
Naphthalene	69	66	35 - 110	4	58		
2-Nitroaniline	72	70	42 - 110	2	30		
3-Nitroaniline	66	66	31 - 110	0	47		
4-Nitroaniline	75	81	26 - 110	8	50		
Nitrobenzene	67	65	43 - 110	2	42		
2-Nitrophenol	69	66	47 - 110	4	44		
4-Nitrophenol	21	22	10 - 110	7	74		
N-Nitrosodiphenylamine	74	73	41 - 110	0	30		
N-Nitrosodi-n-propylamine	72	65	42 - 110	10	39		
2,2'-oxybis[1-chloropropane]	68	65	26 - 110	5	63		
Pentachlorophenol	74	79	24 - 110	6	64		
Phenanthrene	77	78	52 - 110	1	30		
Phenol	16	18	10 - 125	11	62		
Pyrene	86	89	50 - 110	2	30		
2,4,5-Trichlorophenol	71	68	53 - 110	3	30		
2,4,6-Trichlorophenol	73	71	50 - 110	3	30		

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221556

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-61960-9	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317017.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1520			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-9	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1544			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,6-Dinitrotoluene	78	78	55 - 110	1	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	74	71	29 - 110
2-Fluorophenol (Surr)	31	31	15 - 110
2,4,6-Tribromophenol (Surr)	96	90	21 - 128
Nitrobenzene-d5 (Surr)	68	65	31 - 110
Phenol-d5 (Surr)	19	18	10 - 110
Terphenyl-d14 (Surr)	60	63	31 - 115

Method Blank - Batch: 240-221094

Method: WI-DRO
Preparation: 3520C

Lab Sample ID:	MB 240-221094/9-A	Analysis Batch:	240-221397	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-221094	Lab File ID:	P14F0314033.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/14/2016 2359	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/11/2016 0619			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.050	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-221094

Method: WI-DRO
Preparation: 3520C

LCS Lab Sample ID:	LCS 240-221094/10-A	Analysis Batch:	240-221397	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-221094	Lab File ID:	P14F0314034.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/15/2016 0026	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/11/2016 0619			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-221094/11-A	Analysis Batch:	240-221397	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-221094	Lab File ID:	P14F0314043.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/15/2016 0430	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/11/2016 0619			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	88	88	75 - 115	0	20		

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Method Blank - Batch: 240-221293 **Method: WI-DRO**
Preparation: 3520C

Lab Sample ID:	MB 240-221293/5-A	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-221293	Lab File ID:	P14F0315010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/15/2016 1546	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/12/2016 0930			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.050	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-221293 **Method: WI-DRO**
Preparation: 3520C

LCS Lab Sample ID:	LCS 240-221293/6-A	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-221293	Lab File ID:	P14F0315011.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/15/2016 1613	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/12/2016 0930			Injection Volume:	1 uL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-221293/7-A	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-221293	Lab File ID:	P14F0315016.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/15/2016 1829	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/12/2016 0930			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	80	79	75 - 115	0	20		

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Method Blank - Batch: 240-221145

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-221145/1-A	Analysis Batch:	240-221480	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-221145	Lab File ID:	I9031116A1.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/14/2016 1617	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1023				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	ND		1.0	200
Aluminum	ND		40	200
Cadmium	ND		0.14	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	ND		260	5000
Selenium	ND		4.0	5.0
Cobalt	ND		0.56	7.0
Copper	ND		1.9	25
Iron	19.9	J	13	100
Potassium	ND		70	5000
Magnesium	71.5	J	55	5000
Manganese	0.997	J	0.46	15
Sodium	210	J	180	5000
Nickel	1.19	J	0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Lab Control Sample - Batch: 240-221145

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-221145/2-A	Analysis Batch:	240-221480	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-221145	Lab File ID:	I9031116A1.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/14/2016 1621	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1023				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1830	91	80 - 120	
Aluminum	2000	1920	96	80 - 120	
Cadmium	50.0	47.3	95	80 - 120	
Chromium	200	190	95	80 - 120	
Silver	50.0	48.1	96	80 - 120	
Arsenic	2000	1970	98	80 - 120	
Beryllium	50.0	48.3	97	80 - 120	
Lead	500	463	93	80 - 120	
Calcium	50000	47700	95	80 - 120	
Selenium	2000	2030	102	80 - 120	
Cobalt	500	481	96	80 - 120	
Copper	250	240	96	80 - 120	
Iron	1000	978	98	80 - 120	
Potassium	50000	47200	94	80 - 120	
Magnesium	50000	47500	95	80 - 120	
Manganese	500	469	94	80 - 120	
Sodium	50000	46800	94	80 - 120	
Nickel	500	491	98	80 - 120	
Antimony	500	500	100	80 - 120	
Thallium	2000	1930	96	80 - 120	
Vanadium	500	483	97	80 - 120	
Zinc	500	500	100	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-61960-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221145

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID: 240-61960-9
Client Matrix: Water
Dilution: 1.0
Analysis Date: 03/14/2016 1633
Prep Date: 03/11/2016 1023
Leach Date: N/A

Analysis Batch: 240-221480
Prep Batch: 240-221145
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9031116A1.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-61960-9
Client Matrix: Water
Dilution: 1.0
Analysis Date: 03/14/2016 1637
Prep Date: 03/11/2016 1023
Leach Date: N/A

Analysis Batch: 240-221480
Prep Batch: 240-221145
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9031116A1.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	98	99	75 - 125	0	20		
Aluminum	104	103	75 - 125	1	20		
Cadmium	101	101	75 - 125	0	20		
Chromium	101	102	75 - 125	0	20		
Silver	103	104	75 - 125	1	20		
Arsenic	106	106	75 - 125	0	20		
Beryllium	104	104	75 - 125	0	20		
Lead	98	98	75 - 125	0	20		
Calcium	103	102	75 - 125	1	20		
Selenium	109	109	75 - 125	0	20		
Cobalt	104	104	75 - 125	0	20		
Copper	103	104	75 - 125	1	20		
Iron	104	103	75 - 125	0	20		
Potassium	103	102	75 - 125	1	20		
Magnesium	102	100	75 - 125	1	20		
Manganese	101	101	75 - 125	0	20		
Sodium	101	100	75 - 125	0	20		
Nickel	106	106	75 - 125	0	20		
Antimony	108	109	75 - 125	1	20		
Thallium	104	104	75 - 125	0	20		
Vanadium	104	103	75 - 125	0	20		
Zinc	107	106	75 - 125	0	20		

Method Blank - Batch: 240-221146

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-221146/1-A	Analysis Batch:	240-221648	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 1441	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.090	0.20

Lab Control Sample - Batch: 240-221146

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-221146/2-A	Analysis Batch:	240-221648	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0816	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	5.05	101	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221146

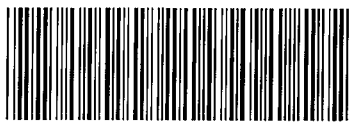
Method: 7470A
Preparation: 7470A
Dissolved

MS Lab Sample ID:	240-61960-9	Analysis Batch:	240-221648	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0820			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-9	Analysis Batch:	240-221648	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-221146	Lab File ID:	031516AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 0822			Final Weight/Volume:	50 mL
Prep Date:	03/11/2016 1200				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	97	75	80 - 120	26	20		F1 F2

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

TestAmerica Canton
4101 Shuffel Street, N. W.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

4.4/C3.9
1.2/C0.7 4.2/C3.7 2.8/C2.3
1.4/C0.9 0.8/C0.3

Chain of Custody Record

124236

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact			
Company Name: Arcadis	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 3/9/2016
Address: 430 First Avenue North, Suite 720	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:
City/State/Zip: Minneapolis MN 55401	Analysis Turnaround Time: ☒ CALENDAR DAYS ☐ WORKING DAYS		COC No: 1 of 2 COCs
Phone: 612-339-8434	TAT if different from Below ____		Sampler: Paige Schulz
Fax:	☒ 2 weeks		For Lab Use Only:
Project Name: Ford TCAP	☐ 1 week		Walk-in Client:
Site: St Paul MN	☐ 2 days		Lab Sampling:
PO# MN000625.0001	☐ 1 day		Job / SDG No.: 24006638

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	VOCs (8260)	SVOCs (8270)	TAL metals dissolved (6010)		ΔRO (wi mod Method)	Sample Specific Notes:
AMW-25 (20160308)	3/8/16	1110	G	AQ	8	Y	N	3	2	1		2	
AMW-24 (20160308)	3/8/16	1250	G	AQ	8	Y	N	3	2	1		2	
AMW-23B (20160308)	3/8/16	1405	G	AQ	8	Y	N	3	2	1		2	
AMW-23 (20160308)	3/8/16	1455	G	AQ	8	Y	N	3	2	1		2	
AMW-20 (20160308)	3/8/16	1555	G	AQ	8	Y	N	3	2	1		2	
Trip Blank-01 (20160308)	3/8/16	—	—	AQ	1	N	N	1	—	—		—	
Temperature Blank	—	—	—	AQ	1	N	N						
								2	1	4	/	2	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments: Level II 3 COOLERS

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Obschulz	Arcadis	3/9 1320	[signature]		3/9/16 13:15
RG	TA	3-9-16	1900 [signature]	TA	3.10.16 1130
[signature]	+A	3-1-16 1900	Received in Laboratory by:	Company:	Date/Time:

Page 110 of 114

03/24/2016

TestAmerica Canton

4101 Shuffel Street, N. N.

North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

Chain of Custody Record

124235

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinckley	Site Contact: Kelly Hoehn	Date:	COC No:
Company Name: Arcadis	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:	2 of 2 COCs
Address: 430 First Avenue North, Suite 720	Analysis Turnaround Time			Sampler: Paige Schulz
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			Job / SDG No.: 240066 38
Site: St. Paul MN	☐ 2 days			
PO # MN000625.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs 8260B	SVOCs 8270C	Ni D20	TAL metals (dissolved) 6010	Sample Specific Notes:
AMW-19(20160309)	3/9/16	0915	G	GW	8		N	3	2	2	1	
DUP-01(20160309)	3/9/16	—	G	GW	8		N	3	2	2	0	
AMW-22B(20160309)	3/9/16	1050	G	GW	18		Y	9	6	2	1	
AMW-22(20160309)	3/9/16	1155	G	GW	8		N	3	2	2	1	
AMW-07(20160309)	3/9/16	1240	G	GW	8		N	3	2	2	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
Level II
TAL metals have been field filtered

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

	Company	Date/Time	Received by	Company	Date/Time
Relinquished by:	Arcadis	3/9/1320		Arcadis	3/9/16 1315
Relinquished by:	TA	1900		TA	3-9-16 1900
Relinquished by:	TA	3-10-1930	Received in Laboratory by:	TA	3-10-16 1130

10/24/2016

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 61960
Canton Facility

Client Arcadis Site Name _____ Cooler unpacked by:

Cooler Received on 3-10-16 Opened on 3-10-16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box (Other) _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form
   IR GUN# 48 (CF **-1.9** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# 36 (CF **-1.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# I8 (CF **-0.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity_____ Yes (No)
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No (NA)
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC559158**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____.

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # :** 161960
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Orient	8	4.4	3.9	ice
		1.2	0.7	
		1.4	0.9	
		4.2	3.7	
		0.8	0.3	
		2.8	2.3	

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-25 (20160308)	240-61960-D-1	Plastic 500ml - with Nitric Acid	<2		
AMW-25 (20160308)	240-61960-G-1	Amber Glass 1 liter - Hydrochloric			
AMW-25 (20160308)	240-61960-H-1	Amber Glass 1 liter - Hydrochloric			
AMW-24 (20160308)	240-61960-D-2	Plastic 500ml - with Nitric Acid	<2		
AMW-24 (20160308)	240-61960-G-2	Amber Glass 1 liter - Hydrochloric			
AMW-24 (20160308)	240-61960-H-2	Amber Glass 1 liter - Hydrochloric			
AMW-23B (20160308)	240-61960-D-3	Plastic 500ml - with Nitric Acid	<2		
AMW-23B (20160308)	240-61960-G-3	Amber Glass 1 liter - Hydrochloric			
AMW-23B (20160308)	240-61960-H-3	Amber Glass 1 liter - Hydrochloric			
AMW-23 (20160308)	240-61960-D-4	Plastic 500ml - with Nitric Acid	<2		
AMW-23 (20160308)	240-61960-G-4	Amber Glass 1 liter - Hydrochloric			
AMW-23 (20160308)	240-61960-H-4	Amber Glass 1 liter - Hydrochloric			
AMW-20 (20160308)	240-61960-D-5	Plastic 500ml - with Nitric Acid	<2		
AMW-20 (20160308)	240-61960-G-5	Amber Glass 1 liter - Hydrochloric			
AMW-20 (20160308)	240-61960-H-5	Amber Glass 1 liter - Hydrochloric			
AMW-19 (20160309)	240-61960-D-7	Plastic 500ml - with Nitric Acid	<2		
AMW-19 (20160309)	240-61960-G-7	Amber Glass 1 liter - Hydrochloric			
AMW-19 (20160309)	240-61960-H-7	Amber Glass 1 liter - Hydrochloric			
DUP-01 (20160309)	240-61960-F-8	Amber Glass 1 liter - Hydrochloric			
DUP-01 (20160309)	240-61960-G-8	Amber Glass 1 liter - Hydrochloric			
AMW-22B (20160309)	240-61960-J-9	Plastic 500ml - with Nitric Acid	<2		
AMW-22B (20160309)	240-61960-Q-9	Amber Glass 1 liter - Hydrochloric			
AMW-22B (20160309)	240-61960-R-9	Amber Glass 1 liter - Hydrochloric			
AMW-22 (20160309)	240-61960-D-10	Plastic 500ml - with Nitric Acid	<2		
AMW-22 (20160309)	240-61960-G-10	Amber Glass 1 liter - Hydrochloric			
AMW-22 (20160309)	240-61960-H-10	Amber Glass 1 liter - Hydrochloric			
AMW-07 (20160309)	240-61960-D-11	Plastic 500ml - with Nitric Acid	<2		
AMW-07 (20160309)	240-61960-G-11	Amber Glass 1 liter - Hydrochloric			
AMW-07 (20160309)	240-61960-H-11	Amber Glass 1 liter - Hydrochloric			

March 25, 2016

Rob Ellis
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430 First Avenue North, Ste 720
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CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 61960-1
Sample date: 2016-03-09 2016-03-08
Report received by CADENA: 2016-03-24
Initial Data Verification completed by CADENA: 2016-03-25

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch 221437 method blank had a detection below the RL for methylene chloride. Qualification of client sample results was not required based on this method blank detection. (note: trip blank was treated as a QC sample so was not qualified based on this method blank detection)

GCMS VOC trip blank had a detection below the RL for methylene chloride. Qualification of client sample results was not required based on this trip blank detection.

GCMS VOC sample -001 container was not preserved to referenced criteria (pH was greater than 2). Sample was analyzed within 7 day holding time for an unpreserved VOC water so qualification was not required based on this sample preservation non-conformance.

GCMS SVOC sample -009 MS/MSD recoveries were outliers biased low for 4-chloroaniline and caprolactam. Client sample -009 results for these analytes should be considered to be estimated and qualified with UJ flags.

WI-DRO QC data did not include surrogate or batch QC MS recoveries.

Metals QC batch 221145 method blank had detections below the RL for magnesium, manganese, iron, nickel and sodium. Client sample -007 iron and samples -001, -002, -003, -004, -005, -007 and -010 nickel results should be considered to be non-detect at the RL and qualified with UB flags.

Metals sample -009 MSD recovery and MS/MSD RPD were outliers with the recovery biased low for mercury. Client sample -009 mercury results should be considered to be estimated and qualified with a UJ flag.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

10 Water sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC Other and Metals parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 61960-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)
240619601	AMW-25 (20160308)	3/8/2016	11:10:00	X	X	X	X	X
2406196010	AMW-22 (20160309)	3/9/2016	11:55:00	X	X	X	X	X
2406196011	AMW-07 (20160309)	3/9/2016	12:40:00	X	X	X	X	X
240619602	AMW-24 (20160308)	3/8/2016	12:50:00	X	X	X	X	X
240619603	AMW-23B (20160308)	3/8/2016	2:05:00	X	X	X	X	X
240619604	AMW-23 (20160308)	3/8/2016	2:55:00	X	X	X	X	X
240619605	AMW-20 (20160308)	3/8/2016	3:55:00	X	X	X	X	X
240619606	TRIPBLANK-01 (20160308)	3/8/2016	12:00:00	X				
240619607	AMW-19 (20160309)	3/9/2016	9:15:00	X	X	X	X	X
240619608	DUP-01 (20160309)	3/9/2016	12:00:00	X	X	X		
240619609	AMW-22B (20160309)	3/9/2016	10:50:00	X	X	X	X	X

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

		Sample Name:	AMW-25 (20160308)				AMW-22 (20160309)				AMW-24 (20160308)				AMW-23B (20160308)				AMW-23 (20160308)				AMW-20 (20160308)				AMW-19 (20160309)				AMW-22B (20160309)			
		Lab Sample ID:	240619601				2406196010				240619602				240619603				240619604				240619605				240619607				240619609			
		Sample Date:	3/8/2016				3/9/2016				3/8/2016				3/8/2016				3/8/2016				3/8/2016				3/9/2016				3/9/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC																																		
	OSW-8270C																																	
	4-Chloroaniline	106-47-8																													ND	1.9	ug/l	UJ
	Caprolactam	105-60-2																													ND	4.8	ug/l	UJ
Metals																																		
	OSW-6010B																																	
	Iron - Dissolved	7439-89-6																									30	100	ug/l	UB				
	Nickel - Dissolved	7440-02-0	1.7	40	ug/l	UB	2.3	40	ug/l	UB	5.1	40	ug/l	UB	0.99	40	ug/l	UB	3.1	40	ug/l	UB	3.2	40	ug/l	UB	1.7	40	ug/l	UB				
	OSW-7470A																																	
	Mercury - Dissolved	7439-97-6																													ND	0.20	ug/l	UJ

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

		Sample Name:	AMW-25 (20160308)				AMW-22 (20160309)				AMW-07 (20160309)			
		Lab Sample ID:	240619601				2406196010				2406196011			
		Sample Date:	3/8/2016				3/9/2016				3/9/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	330	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	27	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	130	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	130	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	130	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Acetone	67-64-1	ND	130	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	27	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	13	ug/l	---	1.6	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	27	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethyl ether	60-29-7	ND	27	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	120	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	13	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	170	27	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	130	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	260	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	42	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	37	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	16	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	67	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	13	ug/l	---	ND	1.0	ug/l	---	2.3	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	13	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

		Sample Name:	AMW-25 (20160308)				AMW-22 (20160309)				AMW-07 (20160309)			
		Lab Sample ID:	240619601				2406196010				2406196011			
		Sample Date:	3/8/2016				3/9/2016				3/9/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
2,4,5-Trichlorophenol	95-95-4	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4,6-Trichlorophenol	88-06-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4-Dichlorophenol	120-83-2	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
2,4-Dimethylphenol	105-67-9	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
2,4-Dinitrophenol	51-28-5	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4-Dinitrotoluene	121-14-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,6-Dinitrotoluene	606-20-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2-Chloronaphthalene	91-58-7	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
2-Chlorophenol	95-57-8	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
2-Methylnaphthalene	91-57-6	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
2-Methylphenol	95-48-7	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
2-Nitroaniline	88-74-4	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
2-Nitrophenol	88-75-5	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
3 & 4 Methylphenol	65794-96-9	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
3,3'-Dichlorobenzidine	91-94-1	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
3-Nitroaniline	99-09-2	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
4-Bromophenyl phenyl ether	101-55-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Chloro-3-methylphenol	59-50-7	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Chloroaniline	106-47-8	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Nitroaniline	100-01-6	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Nitrophenol	100-02-7	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Acenaphthene	83-32-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Acenaphthylene	208-96-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Acetophenone	98-86-2	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Anthracene	120-12-7	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Atrazine	1912-24-9	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Benzaldehyde	100-52-7	10	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Benzo[a]anthracene	56-55-3	ND	0.19	ug/l	---	ND	0.19	ug/l	---	0.28	0.19	ug/l	---
Benzo[a]pyrene	50-32-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---	0.22	0.19	ug/l	---
Benzo[b]fluoranthene	205-99-2	ND	0.19	ug/l	---	ND	0.19	ug/l	---	0.25	0.19	ug/l	---
Benzo[g,h,i]perylene	191-24-2	ND	0.19	ug/l	---	ND	0.19	ug/l	---	0.17	0.19	ug/l	J
Benzo[k]fluoranthene	207-08-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Bis(2-chloroethoxy)methane	111-91-1	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Bis(2-chloroethyl)ether	111-44-4	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Bis(2-ethylhexyl) phthalate	117-81-7	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Butyl benzyl phthalate	85-68-7	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Caprolactam	105-60-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Carbazole	86-74-8	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Chrysene	218-01-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---	0.33	0.19	ug/l	---
Di-n-butyl phthalate	84-74-2	1.7	4.8	ug/l	J	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Di-n-octyl phthalate	117-84-0	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Dibenz(a,h)anthracene	53-70-3	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Dibenzofuran	132-64-9	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Diethyl phthalate	84-66-2	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Dimethyl phthalate	131-11-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Fluoranthene	206-44-0	ND	0.19	ug/l	---	ND	0.19	ug/l	---	1.6	0.19	ug/l	---
Fluorene	86-73-7	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Hexachlorobenzene	118-74-1	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Hexachlorobutadiene	87-68-3	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Hexachlorocyclopentadiene	77-47-4	ND	9.5	ug/l	---	ND	9.6	ug/l	---	ND	9.6	ug/l	---
Hexachloroethane	67-72-1	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Indeno[1,2,3-cd]pyrene	193-39-5	ND	0.19	ug/l	---	ND	0.19	ug/l	---	0.15	0.19	ug/l	J
Isophorone	78-59-1	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
N-Nitrosodi-n-propylamine	621-64-7	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
N-Nitrosodiphenylamine	86-30-6	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Naphthalene	91-20-3	21	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Nitrobenzene	98-95-3	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Pentachlorophenol	87-86-5	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Phenanthrene	85-01-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---	0.18	0.19	ug/l	J
Phenol	108-95-2	ND	0.95	ug/l	---	ND	0.96	ug/l	---	ND	0.96	ug/l	---
Pyrene	129-00-0	ND	0.19	ug/l	---	ND	0.19	ug/l	---	0.39	0.19	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

			Sample Name:	AMW-25 (20160308)				AMW-22 (20160309)				AMW-07 (20160309)			
			Lab Sample ID:	240619601				2406196010				2406196011			
			Sample Date:	3/8/2016				3/9/2016				3/9/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	11	1.0	mg/l	---	ND	0.096	mg/l	---	ND	0.095	mg/l	---
Metals														
	OSW-6010B													
	Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---	ND	200	ug/l	---	120	200	ug/l	J
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---	7.2	10	ug/l	J	ND	10	ug/l	---
	Barium - Dissolved	7440-39-3	250	200	ug/l	---	170	200	ug/l	J	14	200	ug/l	J
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---	0.13	5.0	ug/l	J	0.73	5.0	ug/l	J
	Cadmium - Dissolved	7440-43-9	0.49	5.0	ug/l	J	0.41	5.0	ug/l	J	0.76	5.0	ug/l	J
	Calcium - Dissolved	7440-70-2	210000	5000	ug/l	---	140000	5000	ug/l	---	100000	5000	ug/l	---
	Chromium - Dissolved	7440-47-3	1.2	10	ug/l	J	1.0	10	ug/l	J	1.5	10	ug/l	J
	Cobalt - Dissolved	7440-48-4	ND	7.0	ug/l	---	1.2	7.0	ug/l	J	6.8	7.0	ug/l	J
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---	ND	25	ug/l	---	ND	25	ug/l	---
	Iron - Dissolved	7439-89-6	2400	100	ug/l	---	9000	100	ug/l	---	ND	100	ug/l	---
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---	ND	3.0	ug/l	---
	Magnesium - Dissolved	7439-95-4	65000	5000	ug/l	---	39000	5000	ug/l	---	37000	5000	ug/l	---
	Manganese - Dissolved	7439-96-5	1400	15	ug/l	---	1900	15	ug/l	---	68	15	ug/l	---
	Nickel - Dissolved	7440-02-0	1.7	40	ug/l	UB	2.3	40	ug/l	UB	34	40	ug/l	J
	Potassium - Dissolved	7440-09-7	4200	5000	ug/l	J	4300	5000	ug/l	J	4200	5000	ug/l	J
	Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Sodium - Dissolved	7440-23-5	75000	5000	ug/l	---	29000	5000	ug/l	---	22000	5000	ug/l	---
	Thallium - Dissolved	7440-28-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---	ND	7.0	ug/l	---	ND	7.0	ug/l	---
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---	ND	50	ug/l	---	98	50	ug/l	---
	OSW-7470A													
	Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---	ND	0.20	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

		Sample Name:	AMW-24 (20160308)				AMW-23B (20160308)				AMW-23 (20160308)			
		Lab Sample ID:	240619602				240619603				240619604			
		Sample Date:	3/8/2016				3/8/2016				3/8/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Acetone	67-64-1	0.95	10	ug/l	J	ND	10	ug/l	---	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	0.60	1.0	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

		Sample Name:	AMW-24 (20160308)				AMW-23B (20160308)				AMW-23 (20160308)			
		Lab Sample ID:	240619602				240619603				240619604			
		Sample Date:	3/8/2016				3/8/2016				3/8/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
2,4,5-Trichlorophenol	95-95-4	0.48	4.8	ug/l	J	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4,6-Trichlorophenol	88-06-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4-Dichlorophenol	120-83-2	0.69	1.9	ug/l	J	ND	1.9	ug/l	---	ND	1.9	ug/l	---
2,4-Dimethylphenol	105-67-9	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
2,4-Dinitrophenol	51-28-5	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4-Dinitrotoluene	121-14-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,6-Dinitrotoluene	606-20-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2-Chloronaphthalene	91-58-7	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
2-Chlorophenol	95-57-8	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
2-Methylnaphthalene	91-57-6	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
2-Methylphenol	95-48-7	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
2-Nitroaniline	88-74-4	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
2-Nitrophenol	88-75-5	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
3 & 4 Methylphenol	65794-96-9	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
3,3'-Dichlorobenzidine	91-94-1	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
3-Nitroaniline	99-09-2	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
4-Bromophenyl phenyl ether	101-55-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Chloro-3-methylphenol	59-50-7	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Chloroaniline	106-47-8	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Nitroaniline	100-01-6	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Nitrophenol	100-02-7	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Acenaphthene	83-32-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Acenaphthylene	208-96-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Acetophenone	98-86-2	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Anthracene	120-12-7	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Atrazine	1912-24-9	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Benzaldehyde	100-52-7	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Benzo[a]anthracene	56-55-3	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[a]pyrene	50-32-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[b]fluoranthene	205-99-2	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[g,h,i]perylene	191-24-2	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[k]fluoranthene	207-08-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Bis(2-chloroethoxy)methane	111-91-1	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Bis(2-chloroethyl)ether	111-44-4	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Bis(2-ethylhexyl) phthalate	117-81-7	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Butyl benzyl phthalate	85-68-7	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Caprolactam	105-60-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Carbazole	86-74-8	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Chrysene	218-01-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Di-n-butyl phthalate	84-74-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Di-n-octyl phthalate	117-84-0	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Dibenz(a,h)anthracene	53-70-3	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Dibenzofuran	132-64-9	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Diethyl phthalate	84-66-2	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Dimethyl phthalate	131-11-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Fluoranthene	206-44-0	ND	0.19	ug/l	---	1.5	0.19	ug/l	---	ND	0.19	ug/l	---
Fluorene	86-73-7	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Hexachlorobenzene	118-74-1	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Hexachlorobutadiene	87-68-3	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Hexachlorocyclopentadiene	77-47-4	ND	9.5	ug/l	---	ND	9.5	ug/l	---	ND	9.5	ug/l	---
Hexachloroethane	67-72-1	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Indeno[1,2,3-cd]pyrene	193-39-5	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Isophorone	78-59-1	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
N-Nitrosodi-n-propylamine	621-64-7	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
N-Nitrosodiphenylamine	86-30-6	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Naphthalene	91-20-3	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Nitrobenzene	98-95-3	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Pentachlorophenol	87-86-5	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Phenanthrene	85-01-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Phenol	108-95-2	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
Pyrene	129-00-0	ND	0.19	ug/l	---	0.15	0.19	ug/l	J	ND	0.19	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

			Sample Name:	AMW-24 (20160308)				AMW-23B (20160308)				AMW-23 (20160308)			
			Lab Sample ID:	240619602				240619603				240619604			
			Sample Date:	3/8/2016				3/8/2016				3/8/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	0.19	0.10	mg/l	---	0.086	0.10	mg/l	J	0.11	0.10	mg/l	---
Metals														
	OSW-6010B													
	Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---	ND	200	ug/l	---	ND	200	ug/l	---
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---	2.9	10	ug/l	J	ND	10	ug/l	---
	Barium - Dissolved	7440-39-3	110	200	ug/l	J	180	200	ug/l	J	110	200	ug/l	J
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Cadmium - Dissolved	7440-43-9	0.45	5.0	ug/l	J	0.29	5.0	ug/l	J	0.36	5.0	ug/l	J
	Calcium - Dissolved	7440-70-2	200000	5000	ug/l	---	80000	5000	ug/l	---	140000	5000	ug/l	---
	Chromium - Dissolved	7440-47-3	0.81	10	ug/l	J	0.60	10	ug/l	J	0.84	10	ug/l	J
	Cobalt - Dissolved	7440-48-4	2.7	7.0	ug/l	J	ND	7.0	ug/l	---	2.5	7.0	ug/l	J
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---	ND	25	ug/l	---	ND	25	ug/l	---
	Iron - Dissolved	7439-89-6	4200	100	ug/l	---	4000	100	ug/l	---	530	100	ug/l	---
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---	ND	3.0	ug/l	---
	Magnesium - Dissolved	7439-95-4	50000	5000	ug/l	---	27000	5000	ug/l	---	37000	5000	ug/l	---
	Manganese - Dissolved	7439-96-5	2100	15	ug/l	---	210	15	ug/l	---	2500	15	ug/l	---
	Nickel - Dissolved	7440-02-0	5.1	40	ug/l	UB	0.99	40	ug/l	UB	3.1	40	ug/l	UB
	Potassium - Dissolved	7440-09-7	7300	5000	ug/l	---	1900	5000	ug/l	J	3700	5000	ug/l	J
	Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Sodium - Dissolved	7440-23-5	90000	5000	ug/l	---	9000	5000	ug/l	---	43000	5000	ug/l	---
	Thallium - Dissolved	7440-28-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---	ND	7.0	ug/l	---	ND	7.0	ug/l	---
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---
	OSW-7470A													
	Mercury - Dissolved	7439-97-6	0.17	0.20	ug/l	J	0.16	0.20	ug/l	J	ND	0.20	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

		Sample Name:	AMW-20 (20160308)				TRIPBLANK-01 (20160308)				AMW-19 (20160309)			
		Lab Sample ID:	240619605				240619606				240619607			
		Sample Date:	3/8/2016				3/8/2016				3/9/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	5.0	ug/l	---	ND	10	ug/l	---
Acetone	67-64-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	1.0	ug/l	---	ND	2.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	1.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	0.69	1.0	ug/l	J	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

	Sample Name:	AMW-20 (20160308)				TRIPBLANK-01 (20160308)				AMW-19 (20160309)			
	Lab Sample ID:	240619605				240619606				240619607			
	Sample Date:	3/8/2016				3/8/2016				3/9/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	0.95	ug/l	---					ND	0.95	ug/l	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	0.95	ug/l	---					ND	0.95	ug/l	---
2,4,5-Trichlorophenol	95-95-4	ND	4.8	ug/l	---					ND	4.8	ug/l	---
2,4,6-Trichlorophenol	88-06-2	ND	4.8	ug/l	---					ND	4.8	ug/l	---
2,4-Dichlorophenol	120-83-2	ND	1.9	ug/l	---					ND	1.9	ug/l	---
2,4-Dimethylphenol	105-67-9	ND	1.9	ug/l	---					ND	1.9	ug/l	---
2,4-Dinitrophenol	51-28-5	ND	4.8	ug/l	---					ND	4.8	ug/l	---
2,4-Dinitrotoluene	121-14-2	ND	4.8	ug/l	---					ND	4.8	ug/l	---
2,6-Dinitrotoluene	606-20-2	ND	4.8	ug/l	---					ND	4.8	ug/l	---
2-Chloronaphthalene	91-58-7	ND	0.95	ug/l	---					ND	0.95	ug/l	---
2-Chlorophenol	95-57-8	ND	0.95	ug/l	---					ND	0.95	ug/l	---
2-Methylnaphthalene	91-57-6	ND	0.19	ug/l	---					ND	0.19	ug/l	---
2-Methylphenol	95-48-7	ND	0.95	ug/l	---					ND	0.95	ug/l	---
2-Nitroaniline	88-74-4	ND	1.9	ug/l	---					ND	1.9	ug/l	---
2-Nitrophenol	88-75-5	ND	1.9	ug/l	---					ND	1.9	ug/l	---
3 & 4 Methylphenol	65794-96-9	ND	1.9	ug/l	---					ND	1.9	ug/l	---
3,3'-Dichlorobenzidine	91-94-1	ND	4.8	ug/l	---					ND	4.8	ug/l	---
3-Nitroaniline	99-09-2	ND	1.9	ug/l	---					ND	1.9	ug/l	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	4.8	ug/l	---					ND	4.8	ug/l	---
4-Bromophenyl phenyl ether	101-55-3	ND	1.9	ug/l	---					ND	1.9	ug/l	---
4-Chloro-3-methylphenol	59-50-7	ND	1.9	ug/l	---					ND	1.9	ug/l	---
4-Chloroaniline	106-47-8	ND	1.9	ug/l	---					ND	1.9	ug/l	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	1.9	ug/l	---					ND	1.9	ug/l	---
4-Nitroaniline	100-01-6	ND	1.9	ug/l	---					ND	1.9	ug/l	---
4-Nitrophenol	100-02-7	ND	4.8	ug/l	---					ND	4.8	ug/l	---
Acenaphthene	83-32-9	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Acenaphthylene	208-96-8	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Acetophenone	98-86-2	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Anthracene	120-12-7	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Atrazine	1912-24-9	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Benzaldehyde	100-52-7	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Benzo[a]anthracene	56-55-3	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Benzo[a]pyrene	50-32-8	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Benzo[b]fluoranthene	205-99-2	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Benzo[g,h,i]perylene	191-24-2	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Benzo[k]fluoranthene	207-08-9	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Bis(2-chloroethoxy)methane	111-91-1	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Bis(2-chloroethyl)ether	111-44-4	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Bis(2-ethylhexyl) phthalate	117-81-7	ND	4.8	ug/l	---					ND	4.8	ug/l	---
Butyl benzyl phthalate	85-68-7	ND	1.9	ug/l	---					ND	1.9	ug/l	---
Caprolactam	105-60-2	ND	4.8	ug/l	---					ND	4.8	ug/l	---
Carbazole	86-74-8	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Chrysene	218-01-9	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Di-n-butyl phthalate	84-74-2	ND	4.8	ug/l	---					ND	4.8	ug/l	---
Di-n-octyl phthalate	117-84-0	ND	1.9	ug/l	---					ND	1.9	ug/l	---
Dibenz(a,h)anthracene	53-70-3	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Dibenzofuran	132-64-9	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Diethyl phthalate	84-66-2	ND	1.9	ug/l	---					ND	1.9	ug/l	---
Dimethyl phthalate	131-11-3	ND	1.9	ug/l	---					ND	1.9	ug/l	---
Fluoranthene	206-44-0	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Fluorene	86-73-7	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Hexachlorobenzene	118-74-1	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Hexachlorobutadiene	87-68-3	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Hexachlorocyclopentadiene	77-47-4	ND	9.5	ug/l	---					ND	9.5	ug/l	---
Hexachloroethane	67-72-1	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Indeno[1,2,3-cd]pyrene	193-39-5	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Isophorone	78-59-1	ND	0.95	ug/l	---					ND	0.95	ug/l	---
N-Nitrosodi-n-propylamine	621-64-7	ND	0.95	ug/l	---					ND	0.95	ug/l	---
N-Nitrosodiphenylamine	86-30-6	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Naphthalene	91-20-3	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Nitrobenzene	98-95-3	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Pentachlorophenol	87-86-5	ND	4.8	ug/l	---					ND	4.8	ug/l	---
Phenanthrene	85-01-8	ND	0.19	ug/l	---					ND	0.19	ug/l	---
Phenol	108-95-2	ND	0.95	ug/l	---					ND	0.95	ug/l	---
Pyrene	129-00-0	ND	0.19	ug/l	---					ND	0.19	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

			Sample Name:	AMW-20 (20160308)				TRIPBLANK-01 (20160308)				AMW-19 (20160309)			
			Lab Sample ID:	240619605				240619606				240619607			
			Sample Date:	3/8/2016				3/8/2016				3/9/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	0.088	0.10	mg/l	J					0.081	0.095	mg/l	J
Metals														
	OSW-6010B													
	Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---					ND	200	ug/l	---
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---					ND	10	ug/l	---
	Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---					ND	10	ug/l	---
	Barium - Dissolved	7440-39-3	130	200	ug/l	J					130	200	ug/l	J
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---					ND	5.0	ug/l	---
	Cadmium - Dissolved	7440-43-9	0.52	5.0	ug/l	J					0.50	5.0	ug/l	J
	Calcium - Dissolved	7440-70-2	170000	5000	ug/l	---					140000	5000	ug/l	---
	Chromium - Dissolved	7440-47-3	0.70	10	ug/l	J					0.75	10	ug/l	J
	Cobalt - Dissolved	7440-48-4	0.65	7.0	ug/l	J					ND	7.0	ug/l	---
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---					ND	25	ug/l	---
	Iron - Dissolved	7439-89-6	190	100	ug/l	---					30	100	ug/l	UB
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---					ND	3.0	ug/l	---
	Magnesium - Dissolved	7439-95-4	46000	5000	ug/l	---					41000	5000	ug/l	---
	Manganese - Dissolved	7439-96-5	380	15	ug/l	---					45	15	ug/l	---
	Nickel - Dissolved	7440-02-0	3.2	40	ug/l	UB					1.7	40	ug/l	UB
	Potassium - Dissolved	7440-09-7	2800	5000	ug/l	J					3100	5000	ug/l	J
	Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---					ND	5.0	ug/l	---
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---					ND	10	ug/l	---
	Sodium - Dissolved	7440-23-5	45000	5000	ug/l	---					35000	5000	ug/l	---
	Thallium - Dissolved	7440-28-0	ND	10	ug/l	---					ND	10	ug/l	---
	Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---					ND	7.0	ug/l	---
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---					ND	50	ug/l	---
	OSW-7470A													
	Mercury - Dissolved	7439-97-6	0.27	0.20	ug/l	---					0.16	0.20	ug/l	J

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

		Sample Name:	DUP-01 (20160309)				AMW-22B (20160309)			
		Lab Sample ID:	240619608				240619609			
		Sample Date:	3/9/2016				3/9/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC									
OSW-8260B									
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---
Acetone	67-64-1	ND	10	ug/l	---	1.8	10	ug/l	J
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	1.1	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	0.46	1.0	ug/l	J
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

		Sample Name:	DUP-01 (20160309)				AMW-22B (20160309)			
		Lab Sample ID:	240619608				240619609			
		Sample Date:	3/9/2016				3/9/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC									
OSW-8270C									
1,1'-Biphenyl	92-52-4	ND	0.95	ug/l	---	ND	0.96	ug/l	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	0.95	ug/l	---	ND	0.96	ug/l	---
2,4,5-Trichlorophenol	95-95-4	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4,6-Trichlorophenol	88-06-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4-Dichlorophenol	120-83-2	ND	1.9	ug/l	---	ND	1.9	ug/l	---
2,4-Dimethylphenol	105-67-9	ND	1.9	ug/l	---	ND	1.9	ug/l	---
2,4-Dinitrophenol	51-28-5	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4-Dinitrotoluene	121-14-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,6-Dinitrotoluene	606-20-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---
2-Chloronaphthalene	91-58-7	ND	0.95	ug/l	---	ND	0.96	ug/l	---
2-Chlorophenol	95-57-8	ND	0.95	ug/l	---	ND	0.96	ug/l	---
2-Methylnaphthalene	91-57-6	ND	0.19	ug/l	---	ND	0.19	ug/l	---
2-Methylphenol	95-48-7	ND	0.95	ug/l	---	ND	0.96	ug/l	---
2-Nitroaniline	88-74-4	ND	1.9	ug/l	---	ND	1.9	ug/l	---
2-Nitrophenol	88-75-5	ND	1.9	ug/l	---	ND	1.9	ug/l	---
3 & 4 Methylphenol	65794-96-9	ND	1.9	ug/l	---	ND	1.9	ug/l	---
3,3'-Dichlorobenzidine	91-94-1	ND	4.8	ug/l	---	ND	4.8	ug/l	---
3-Nitroaniline	99-09-2	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	4.8	ug/l	---	ND	4.8	ug/l	---
4-Bromophenyl phenyl ether	101-55-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Chloro-3-methylphenol	59-50-7	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Chloroaniline	106-47-8	ND	1.9	ug/l	---	ND	1.9	ug/l	UJ
4-Chlorophenyl phenyl ether	7005-72-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Nitroaniline	100-01-6	ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Nitrophenol	100-02-7	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Acenaphthene	83-32-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Acenaphthylene	208-96-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Acetophenone	98-86-2	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Anthracene	120-12-7	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Atrazine	1912-24-9	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Benzaldehyde	100-52-7	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Benzo[a]anthracene	56-55-3	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[a]pyrene	50-32-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[b]fluoranthene	205-99-2	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[g,h,i]perylene	191-24-2	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[k]fluoranthene	207-08-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Bis(2-chloroethoxy)methane	111-91-1	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Bis(2-chloroethyl)ether	111-44-4	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Bis(2-ethylhexyl) phthalate	117-81-7	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Butyl benzyl phthalate	85-68-7	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Caprolactam	105-60-2	ND	4.8	ug/l	---	ND	4.8	ug/l	UJ
Carbazole	86-74-8	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Chrysene	218-01-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Di-n-butyl phthalate	84-74-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Di-n-octyl phthalate	117-84-0	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Dibenz(a,h)anthracene	53-70-3	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Dibenzofuran	132-64-9	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Diethyl phthalate	84-66-2	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Dimethyl phthalate	131-11-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---
Fluoranthene	206-44-0	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Fluorene	86-73-7	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Hexachlorobenzene	118-74-1	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Hexachlorobutadiene	87-68-3	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Hexachlorocyclopentadiene	77-47-4	ND	9.5	ug/l	---	ND	9.6	ug/l	---
Hexachloroethane	67-72-1	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Indeno[1,2,3-cd]pyrene	193-39-5	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Isophorone	78-59-1	ND	0.95	ug/l	---	0.34	0.96	ug/l	J
N-Nitrosodi-n-propylamine	621-64-7	ND	0.95	ug/l	---	ND	0.96	ug/l	---
N-Nitrosodiphenylamine	86-30-6	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Naphthalene	91-20-3	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Nitrobenzene	98-95-3	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Pentachlorophenol	87-86-5	ND	4.8	ug/l	---	ND	4.8	ug/l	---
Phenanthrene	85-01-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---
Phenol	108-95-2	ND	0.95	ug/l	---	ND	0.96	ug/l	---
Pyrene	129-00-0	ND	0.19	ug/l	---	ND	0.19	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 61960-1

			Sample Name:	DUP-01 (20160309)				AMW-22B (20160309)			
			Lab Sample ID:	240619608				240619609			
			Sample Date:	3/9/2016				3/9/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC Other										
	PUBL-SW-141									
	WI Diesel Range Organics (C10-C28)	E-1004	0.10	0.095	mg/l	---	0.14	0.11	mg/l	---
Metals										
	OSW-6010B									
	Aluminum - Dissolved	7429-90-5					ND	200	ug/l	---
	Antimony - Dissolved	7440-36-0					ND	10	ug/l	---
	Arsenic - Dissolved	7440-38-2					ND	10	ug/l	---
	Barium - Dissolved	7440-39-3					140	200	ug/l	J
	Beryllium - Dissolved	7440-41-7					ND	5.0	ug/l	---
	Cadmium - Dissolved	7440-43-9					0.37	5.0	ug/l	J
	Calcium - Dissolved	7440-70-2					61000	5000	ug/l	---
	Chromium - Dissolved	7440-47-3					ND	10	ug/l	---
	Cobalt - Dissolved	7440-48-4					ND	7.0	ug/l	---
	Copper - Dissolved	7440-50-8					ND	25	ug/l	---
	Iron - Dissolved	7439-89-6					2400	100	ug/l	---
	Lead - Dissolved	7439-92-1					ND	3.0	ug/l	---
	Magnesium - Dissolved	7439-95-4					27000	5000	ug/l	---
	Manganese - Dissolved	7439-96-5					120	15	ug/l	---
	Nickel - Dissolved	7440-02-0					ND	40	ug/l	---
	Potassium - Dissolved	7440-09-7					16000	5000	ug/l	---
	Selenium - Dissolved	7782-49-2					ND	5.0	ug/l	---
	Silver - Dissolved	7440-22-4					ND	10	ug/l	---
	Sodium - Dissolved	7440-23-5					9600	5000	ug/l	---
	Thallium - Dissolved	7440-28-0					ND	10	ug/l	---
	Vanadium - Dissolved	7440-62-2					ND	7.0	ug/l	---
	Zinc - Dissolved	7440-66-6					ND	50	ug/l	---
	OSW-7470A									
	Mercury - Dissolved	7439-97-6					ND	0.20	ug/l	UJ

ANALYTICAL REPORT

Job Number: 240-62030-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
3/24/2016 3:46 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
03/24/2016

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CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-62030-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 3/11/2016 10:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1º C and 1.3º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)
Samples AMW-21 (20160309) (240-62030-1), AMW-26 (20160309) (240-62030-2) and TRIP BLANK-01 (240-62030-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/14/2016.

Methylene Chloride was detected in method blank MB 240-221437/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Method(s) 8260B: The following samples were submitted for volatile analysis with insufficient preservation (pH>2): AMW-21 (20160309) (240-62030-1) and AMW-26 (20160309) (240-62030-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)
Samples AMW-21 (20160309) (240-62030-1) and AMW-26 (20160309) (240-62030-2) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 03/15/2016 and analyzed on 03/17/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

4-Chloroaniline and Caprolactam failed the recovery criteria low for theMS/ MSD of sample 240-61960-9 in batch 240-221952. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO
Samples AMW-21 (20160309) (240-62030-1) and AMW-26 (20160309) (240-62030-2) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 03/12/2016 and analyzed on 03/15/2016.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following sample within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) mix. : AMW-26 (20160309) (240-62030-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP)

Samples AMW-21 (20160309) (240-62030-1) and AMW-26 (20160309) (240-62030-2) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 03/14/2016 and analyzed on 03/15/2016.

Several analytes were detected in method blank MB 240-221441/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Samples AMW-21 (20160309) (240-62030-1) and AMW-26 (20160309) (240-62030-2) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 03/14/2016 and analyzed on 03/15/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-62030-1	**AMW-21 (20160309)**					
Acetone		1.1	J	10	ug/L	8260B
Fluoranthene		1.3		0.19	ug/L	8270C
Isophorone		0.28	J	0.95	ug/L	8270C
WI Diesel Range Organics (C10-C28)		0.36		0.095	mg/L	WI-DRO
Dissolved						
Barium		43	J B	200	ug/L	6010B
Aluminum		48	J	200	ug/L	6010B
Chromium		1.2	J	10	ug/L	6010B
Calcium		150000	B	5000	ug/L	6010B
Cobalt		1.1	J	7.0	ug/L	6010B
Iron		65	J B	100	ug/L	6010B
Potassium		5300		5000	ug/L	6010B
Magnesium		44000	B	5000	ug/L	6010B
Manganese		2000	B	15	ug/L	6010B
Sodium		33000	B	5000	ug/L	6010B
Nickel		7.2	J	40	ug/L	6010B
Thallium		9.3	J	10	ug/L	6010B
240-62030-2	**AMW-26 (20160309)**					
1,2,4-Trimethylbenzene		0.45	J	1.0	ug/L	8260B
Acetone		3.4	J	10	ug/L	8260B
Carbon disulfide		0.38	J	1.0	ug/L	8260B
Chlorobenzene		1.7		1.0	ug/L	8260B
cis-1,2-Dichloroethene		1.8		1.0	ug/L	8260B
Ethylbenzene		1.8		1.0	ug/L	8260B
Naphthalene		33		1.0	ug/L	8260B
m-Xylene & p-Xylene		1.3	J	2.0	ug/L	8260B
2-Butanone (MEK)		0.64	J	10	ug/L	8260B
o-Xylene		0.43	J	1.0	ug/L	8260B
Acenaphthene		1.7		0.20	ug/L	8270C
Acenaphthylene		0.16	J	0.20	ug/L	8270C
Anthracene		0.62		0.20	ug/L	8270C
Benzo[a]anthracene		0.42		0.20	ug/L	8270C
Benzo[b]fluoranthene		0.45		0.20	ug/L	8270C
Benzo[k]fluoranthene		0.17	J	0.20	ug/L	8270C
Benzo[g,h,i]perylene		0.31		0.20	ug/L	8270C
Benzo[a]pyrene		0.38		0.20	ug/L	8270C
1,1'-Biphenyl		0.41	J	1.0	ug/L	8270C
Carbazole		2.8		1.0	ug/L	8270C
Chrysene		0.45		0.20	ug/L	8270C
2-Methylnaphthalene		2.2		0.20	ug/L	8270C
Dibenzofuran		1.7		1.0	ug/L	8270C
2,4-Dimethylphenol		0.76	J	2.0	ug/L	8270C
Di-n-butyl phthalate		1.9	J	5.1	ug/L	8270C

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
Fluoranthene		2.3		0.20	ug/L	8270C
Fluorene		2.2		0.20	ug/L	8270C
Indeno[1,2,3-cd]pyrene		0.23		0.20	ug/L	8270C
Isophorone		0.30	J	1.0	ug/L	8270C
Naphthalene		16		0.20	ug/L	8270C
Phenanthrene		3.0		0.20	ug/L	8270C
Pyrene		0.87		0.20	ug/L	8270C
WI Diesel Range Organics (C10-C28)		0.46		0.099	mg/L	WI-DRO
Dissolved						
Barium		210	B	200	ug/L	6010B
Chromium		1.2	J	10	ug/L	6010B
Arsenic		11		10	ug/L	6010B
Calcium		150000	B	5000	ug/L	6010B
Cobalt		1.3	J	7.0	ug/L	6010B
Iron		4600	B	100	ug/L	6010B
Potassium		6800		5000	ug/L	6010B
Magnesium		43000	B	5000	ug/L	6010B
Manganese		1700	B	15	ug/L	6010B
Sodium		57000	B	5000	ug/L	6010B
Nickel		3.5	J	40	ug/L	6010B
Thallium		8.6	J	10	ug/L	6010B
240-62030-3TB	**TRIP BLANK-01**					
Acetone		2.7	J	10	ug/L	8260B
Naphthalene		0.96	J	1.0	ug/L	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL CAN = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Method	Analyst	Analyst ID
SW846 8260B	Williams, Larry	LRW
SW846 8270C	Gruber, John	JMG
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Toth, Roger	RKT
SW846 7470A	Heakin, David	DSH

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-62030-1	AMW-21 (20160309)	Water	03/09/2016 1405	03/11/2016 1040
240-62030-2	AMW-26 (20160309)	Water	03/09/2016 1455	03/11/2016 1040
240-62030-3TB	TRIP BLANK-01	Water	03/09/2016 0000	03/11/2016 1040

SAMPLE RESULTS

Client Sample ID: **AMW-21 (20160309)**

Lab Sample ID: 240-62030-1 Date Sampled: 03/09/2016 1405
Client Matrix: Water Date Received: 03/11/2016 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5439.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1943			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1943				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	1.1	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Client Sample ID: AMW-21 (20160309)

Lab Sample ID: 240-62030-1 Date Sampled: 03/09/2016 1405
Client Matrix: Water Date Received: 03/11/2016 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5439.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1943			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1943				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		78 - 125
4-Bromofluorobenzene (Surr)	85		61 - 120
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	109		79 - 120

Client Sample ID: **AMW-26 (20160309)**

Lab Sample ID: 240-62030-2 Date Sampled: 03/09/2016 1455
Client Matrix: Water Date Received: 03/11/2016 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5440.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2005			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2005				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	0.45	J	0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	3.4	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	0.38	J	0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	1.7		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	1.8		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Client Sample ID: AMW-26 (20160309)

Lab Sample ID: 240-62030-2 Date Sampled: 03/09/2016 1455
Client Matrix: Water Date Received: 03/11/2016 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5440.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2005			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2005				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	1.8		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	33		0.45	1.0
m-Xylene & p-Xylene	1.3	J	0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	0.64	J	0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	0.43	J	0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		78 - 125
4-Bromofluorobenzene (Surr)	90		61 - 120
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	111		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Client Sample ID: **TRIP BLANK-01**

Lab Sample ID: 240-62030-3TB Date Sampled: 03/09/2016 0000
Client Matrix: Water Date Received: 03/11/2016 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5441.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2026			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2026				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	2.7	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Client Sample ID: **TRIP BLANK-01**

Lab Sample ID: 240-62030-3TB Date Sampled: 03/09/2016 0000
Client Matrix: Water Date Received: 03/11/2016 1040

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX5441.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2026			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2026				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	0.96	J	0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		78 - 125
4-Bromofluorobenzene (Surr)	88		61 - 120
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	108		79 - 120

Client Sample ID: **AMW-21 (20160309)**

Lab Sample ID: 240-62030-1 Date Sampled: 03/09/2016 1405
Client Matrix: Water Date Received: 03/11/2016 1040

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317026.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/17/2016 1855			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	1.3		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client Sample ID: **AMW-21 (20160309)**

Lab Sample ID: 240-62030-1 Date Sampled: 03/09/2016 1405
Client Matrix: Water Date Received: 03/11/2016 1040

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317026.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/17/2016 1855			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	0.28	J	0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	73		29 - 110
2-Fluorophenol (Surr)	31		15 - 110
2,4,6-Tribromophenol (Surr)	72		21 - 128
Nitrobenzene-d5 (Surr)	69		31 - 110
Phenol-d5 (Surr)	19		10 - 110
Terphenyl-d14 (Surr)	45		31 - 115

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Client Sample ID: AMW-26 (20160309)

Lab Sample ID: 240-62030-2 Date Sampled: 03/09/2016 1455
Client Matrix: Water Date Received: 03/11/2016 1040

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317027.D
Dilution:	1.0			Initial Weight/Volume:	990 mL
Analysis Date:	03/17/2016 1919			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	1.7		0.045	0.20
Acenaphthylene	0.16	J	0.049	0.20
Acetophenone	ND		0.34	1.0
Anthracene	0.62		0.089	0.20
Atrazine	ND		0.34	1.0
Benzaldehyde	ND		0.39	1.0
Benzo[a]anthracene	0.42		0.030	0.20
Benzo[b]fluoranthene	0.45		0.040	0.20
Benzo[k]fluoranthene	0.17	J	0.045	0.20
Benzo[g,h,i]perylene	0.31		0.047	0.20
Benzo[a]pyrene	0.38		0.052	0.20
Butyl benzyl phthalate	ND		0.26	2.0
1,1'-Biphenyl	0.41	J	0.13	1.0
Bis(2-chloroethoxy)methane	ND		0.32	1.0
Bis(2-chloroethyl)ether	ND		0.10	1.0
Bis(2-ethylhexyl) phthalate	ND		1.7	5.1
4-Bromophenyl phenyl ether	ND		0.22	2.0
Caprolactam	ND		0.20	5.1
Carbazole	2.8		0.28	1.0
4-Chloroaniline	ND		0.21	2.0
4-Chloro-3-methylphenol	ND		0.21	2.0
2-Chloronaphthalene	ND		0.10	1.0
2-Chlorophenol	ND		0.29	1.0
4-Chlorophenyl phenyl ether	ND		0.30	2.0
Chrysene	0.45		0.051	0.20
2-Methylnaphthalene	2.2		0.091	0.20
3 & 4 Methylphenol	ND		0.81	2.0
Dibenz(a,h)anthracene	ND		0.045	0.20
Dibenzofuran	1.7		0.020	1.0
3,3'-Dichlorobenzidine	ND		0.37	5.1
2,4-Dichlorophenol	ND		0.19	2.0
Diethyl phthalate	ND		0.61	2.0
2,4-Dimethylphenol	0.76	J	0.25	2.0
Dimethyl phthalate	ND		0.29	2.0
4,6-Dinitro-2-methylphenol	ND		2.4	5.1
2,4-Dinitrophenol	ND		0.32	5.1
2,4-Dinitrotoluene	ND		0.25	5.1
Di-n-butyl phthalate	1.9	J	1.7	5.1
Di-n-octyl phthalate	ND		0.23	2.0
Fluoranthene	2.3		0.045	0.20
Fluorene	2.2		0.041	0.20
Hexachlorobenzene	ND		0.086	0.20
Hexachlorobutadiene	ND		0.27	1.0
Hexachlorocyclopentadiene	ND		0.24	10
Hexachloroethane	ND		0.19	1.0
Indeno[1,2,3-cd]pyrene	0.23		0.044	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Client Sample ID: AMW-26 (20160309)

Lab Sample ID: 240-62030-2 Date Sampled: 03/09/2016 1455
Client Matrix: Water Date Received: 03/11/2016 1040

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Prep Method:	3510C	Prep Batch:	240-221556	Lab File ID:	60317027.D
Dilution:	1.0			Initial Weight/Volume:	990 mL
Analysis Date:	03/17/2016 1919			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	0.30	J	0.27	1.0
2-Methylphenol	ND		0.17	1.0
Naphthalene	16		0.063	0.20
2-Nitroaniline	ND		0.21	2.0
3-Nitroaniline	ND		0.28	2.0
4-Nitroaniline	ND		0.22	2.0
Nitrobenzene	ND		0.040	1.0
2-Nitrophenol	ND		0.28	2.0
4-Nitrophenol	ND		0.29	5.1
N-Nitrosodiphenylamine	ND		0.31	1.0
N-Nitrosodi-n-propylamine	ND		0.24	1.0
2,2'-oxybis[1-chloropropane]	ND		0.40	1.0
Pentachlorophenol	ND		0.27	5.1
Phenanthrene	3.0		0.063	0.20
Phenol	ND		0.61	1.0
Pyrene	0.87		0.042	0.20
2,4,5-Trichlorophenol	ND		0.30	5.1
2,4,6-Trichlorophenol	ND		0.24	5.1
2,6-Dinitrotoluene	ND		0.81	5.1

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	70		29 - 110
2-Fluorophenol (Surr)	30		15 - 110
2,4,6-Tribromophenol (Surr)	79		21 - 128
Nitrobenzene-d5 (Surr)	65		31 - 110
Phenol-d5 (Surr)	18		10 - 110
Terphenyl-d14 (Surr)	35		31 - 115

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Client Sample ID: AMW-21 (20160309)

Lab Sample ID: 240-62030-1 Date Sampled: 03/09/2016 1405
Client Matrix: Water Date Received: 03/11/2016 1040

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221293	Lab File ID:	P14F0315014.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	03/15/2016 1735			Final Weight/Volume:	5 mL
Prep Date:	03/12/2016 0930			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.36		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Client Sample ID: AMW-26 (20160309)

Lab Sample ID: 240-62030-2 Date Sampled: 03/09/2016 1455
Client Matrix: Water Date Received: 03/11/2016 1040

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Prep Method:	3520C	Prep Batch:	240-221293	Lab File ID:	P14F0315015.D
Dilution:	1.0			Initial Weight/Volume:	1010 mL
Analysis Date:	03/15/2016 1802			Final Weight/Volume:	5 mL
Prep Date:	03/12/2016 0930			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.46		0.050	0.099

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Client Sample ID: AMW-21 (20160309)

Lab Sample ID: 240-62030-1 Date Sampled: 03/09/2016 1405
Client Matrix: Water Date Received: 03/11/2016 1040

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-221722	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-221441	Lab File ID:	I9031516A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 2311			Final Weight/Volume:	50 mL
Prep Date:	03/14/2016 1123				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	43	J B	1.0	200
Aluminum	48	J	40	200
Cadmium	ND		0.14	5.0
Chromium	1.2	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	150000	B	260	5000
Selenium	ND		4.0	5.0
Cobalt	1.1	J	0.56	7.0
Copper	ND		1.9	25
Iron	65	J B	13	100
Potassium	5300		70	5000
Magnesium	44000	B	55	5000
Manganese	2000	B	0.46	15
Sodium	33000	B	180	5000
Nickel	7.2	J	0.76	40
Antimony	ND		2.4	10
Thallium	9.3	J	1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-221648	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-221442	Lab File ID:	031516AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 1206			Final Weight/Volume:	50 mL
Prep Date:	03/14/2016 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Client Sample ID: AMW-26 (20160309)

Lab Sample ID: 240-62030-2 Date Sampled: 03/09/2016 1455
Client Matrix: Water Date Received: 03/11/2016 1040

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-221722	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-221441	Lab File ID:	I9031516A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 2346			Final Weight/Volume:	50 mL
Prep Date:	03/14/2016 1123				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	210	B	1.0	200
Aluminum	ND		40	200
Cadmium	ND		0.14	5.0
Chromium	1.2	J	0.55	10
Silver	ND		0.92	10
Arsenic	11		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	150000	B	260	5000
Selenium	ND		4.0	5.0
Cobalt	1.3	J	0.56	7.0
Copper	ND		1.9	25
Iron	4600	B	13	100
Potassium	6800		70	5000
Magnesium	43000	B	55	5000
Manganese	1700	B	0.46	15
Sodium	57000	B	180	5000
Nickel	3.5	J	0.76	40
Antimony	ND		2.4	10
Thallium	8.6	J	1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-221648	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-221442	Lab File ID:	031516AH4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 1219			Final Weight/Volume:	50 mL
Prep Date:	03/14/2016 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-221437					
LCS 240-221437/4	Lab Control Sample	T	Water	8260B	
MB 240-221437/6	Method Blank	T	Water	8260B	
240-61960-H-9 MS	Matrix Spike	T	Water	8260B	
240-61960-I-9 MSD	Matrix Spike Duplicate	T	Water	8260B	
240-62030-1	AMW-21 (20160309)	T	Water	8260B	
240-62030-2	AMW-26 (20160309)	T	Water	8260B	
240-62030-3TB	TRIP BLANK-01	T	Water	8260B	

Report Basis
T = Total

GC/MS Semi VOA					
Prep Batch: 240-221556					
LCS 240-221556/24-A	Lab Control Sample	T	Water	3510C	
MB 240-221556/23-A	Method Blank	T	Water	3510C	
240-61960-P-9-A MS	Matrix Spike	T	Water	3510C	
240-61960-M-9-A MSD	Matrix Spike Duplicate	T	Water	3510C	
240-62030-1	AMW-21 (20160309)	T	Water	3510C	
240-62030-2	AMW-26 (20160309)	T	Water	3510C	
Analysis Batch:240-221952					
LCS 240-221556/24-A	Lab Control Sample	T	Water	8270C	240-221556
MB 240-221556/23-A	Method Blank	T	Water	8270C	240-221556
240-61960-P-9-A MS	Matrix Spike	T	Water	8270C	240-221556
240-61960-M-9-A MSD	Matrix Spike Duplicate	T	Water	8270C	240-221556
240-62030-1	AMW-21 (20160309)	T	Water	8270C	240-221556
240-62030-2	AMW-26 (20160309)	T	Water	8270C	240-221556

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-221293					
LCS 240-221293/6-A	Lab Control Sample	T	Water	3520C	
LCSD 240-221293/7-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 240-221293/5-A	Method Blank	T	Water	3520C	
240-62030-1	AMW-21 (20160309)	T	Water	3520C	
240-62030-2	AMW-26 (20160309)	T	Water	3520C	
Analysis Batch:240-221606					
LCS 240-221293/6-A	Lab Control Sample	T	Water	WI-DRO	240-221293
LCSD 240-221293/7-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-221293
MB 240-221293/5-A	Method Blank	T	Water	WI-DRO	240-221293
240-62030-1	AMW-21 (20160309)	T	Water	WI-DRO	240-221293
240-62030-2	AMW-26 (20160309)	T	Water	WI-DRO	240-221293

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-221441					
LCS 240-221441/2-A	Lab Control Sample	R	Water	3005A	
MB 240-221441/1-A	Method Blank	R	Water	3005A	
240-62030-1	AMW-21 (20160309)	D	Water	3005A	
240-62030-1MS	Matrix Spike	D	Water	3005A	
240-62030-1MSD	Matrix Spike Duplicate	D	Water	3005A	
240-62030-2	AMW-26 (20160309)	D	Water	3005A	
Prep Batch: 240-221442					
LCS 240-221442/2-A	Lab Control Sample	T	Water	7470A	
MB 240-221442/1-A	Method Blank	T	Water	7470A	
240-62030-1	AMW-21 (20160309)	D	Water	7470A	
240-62030-1MS	Matrix Spike	D	Water	7470A	
240-62030-1MSD	Matrix Spike Duplicate	D	Water	7470A	
240-62030-2	AMW-26 (20160309)	D	Water	7470A	
Analysis Batch:240-221648					
LCS 240-221442/2-A	Lab Control Sample	T	Water	7470A	240-221442
MB 240-221442/1-A	Method Blank	T	Water	7470A	240-221442
240-62030-1	AMW-21 (20160309)	D	Water	7470A	240-221442
240-62030-1MS	Matrix Spike	D	Water	7470A	240-221442
240-62030-1MSD	Matrix Spike Duplicate	D	Water	7470A	240-221442
240-62030-2	AMW-26 (20160309)	D	Water	7470A	240-221442
Analysis Batch:240-221722					
LCS 240-221441/2-A	Lab Control Sample	R	Water	6010B	240-221441
MB 240-221441/1-A	Method Blank	R	Water	6010B	240-221441
240-62030-1	AMW-21 (20160309)	D	Water	6010B	240-221441
240-62030-1MS	Matrix Spike	D	Water	6010B	240-221441
240-62030-1MSD	Matrix Spike Duplicate	D	Water	6010B	240-221441
240-62030-2	AMW-26 (20160309)	D	Water	6010B	240-221441

Report Basis
D = Dissolved
R = Total Recoverable
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-62030-1	AMW-21 (20160309)	109	85	99	109
240-62030-2	AMW-26 (20160309)	109	90	97	111
240-62030-3	TRIP BLANK-01	106	88	97	108
MB 240-221437/6		108	92	98	105
LCS 240-221437/4		103	108	102	103
240-61960-H-9 MS		103	102	107	103
240-61960-I-9 MSD		101	101	105	102

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	78-125
BFB = 4-Bromofluorobenzene (Surr)	61-120
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	79-120

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-62030-1	AMW-21 (20160309)	73	31	72	69	19	45
240-62030-2	AMW-26 (20160309)	70	30	79	65	18	35
MB 240-221556/23-A		83	53	96	77	35	90
LCS 240-221556/24-A		82	50	100	81	33	93
240-61960-P-9-A MS		74	31	96	68	19	60
240-61960-M-9-A MSD		71	31	90	65	18	63

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	29-110
2FP = 2-Fluorophenol (Surr)	15-110
TBP = 2,4,6-Tribromophenol (Surr)	21-128
NBZ = Nitrobenzene-d5 (Surr)	31-110
PHL = Phenol-d5 (Surr)	10-110
TPH = Terphenyl-d14 (Surr)	31-115

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Method Blank - Batch: 240-221437

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-221437/6	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5421.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1304	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1304				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Method Blank - Batch: 240-221437

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-221437/6	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5421.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1304	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1304				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	2.0
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	0.393	J	0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108	78 - 125
4-Bromofluorobenzene (Surr)	92	61 - 120
Toluene-d8 (Surr)	98	80 - 120
Dibromofluoromethane (Surr)	105	79 - 120

Lab Control Sample - Batch: 240-221437

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-221437/4	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5419.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1221	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1221				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	10.6	106	80 - 120	
1,1,1-Trichloroethane	10.0	10.4	104	77 - 123	
1,1,2,2-Tetrachloroethane	10.0	8.65	86	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.3	103	67 - 138	
1,1,2-Trichloroethane	10.0	9.75	98	80 - 120	
1,1-Dichloroethane	10.0	9.71	97	79 - 125	
1,1-Dichloroethene	10.0	10.0	100	76 - 124	
1,1-Dichloropropene	10.0	10.3	103	80 - 128	
1,2,3-Trichlorobenzene	10.0	9.15	91	66 - 120	
1,2,3-Trichloropropane	10.0	8.59	86	72 - 126	
1,2,4-Trichlorobenzene	10.0	9.56	96	61 - 120	
1,2,4-Trimethylbenzene	10.0	9.80	98	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	10.3	103	50 - 132	
1,2-Dichlorobenzene	10.0	9.74	97	79 - 120	
1,2-Dichloroethane	10.0	9.97	100	80 - 120	
1,2-Dichloropropane	10.0	9.85	98	78 - 124	
1,3,5-Trimethylbenzene	10.0	9.67	97	77 - 120	
1,3-Dichlorobenzene	10.0	9.29	93	79 - 120	
1,3-Dichloropropane	10.0	9.37	94	80 - 120	
1,4-Dichlorobenzene	10.0	9.39	94	79 - 120	
Allyl chloride	10.0	9.91	99	69 - 120	
2,2-Dichloropropane	10.0	10.3	103	71 - 122	
2-Chlorotoluene	10.0	9.01	90	80 - 120	
2-Hexanone	20.0	19.8	99	55 - 141	
Bromobenzene	10.0	8.53	85	80 - 120	
Bromochloromethane	10.0	10.1	101	80 - 120	
4-Chlorotoluene	10.0	9.06	91	80 - 120	
p-Isopropyltoluene	10.0	10.6	106	77 - 120	
Acetone	20.0	17.5	87	34 - 148	
Benzene	10.0	9.80	98	80 - 120	
Bromoform	10.0	9.48	95	56 - 122	
Bromomethane	10.0	7.40	74	38 - 132	
Carbon disulfide	10.0	9.14	91	65 - 144	
Carbon tetrachloride	10.0	11.4	114	77 - 131	
Chlorobenzene	10.0	9.46	95	80 - 120	
Chloroethane	10.0	7.79	78	36 - 126	
Chloroform	10.0	9.85	99	80 - 120	
Chloromethane	10.0	7.98	80	48 - 133	
cis-1,2-Dichloroethene	10.0	10.1	101	79 - 120	
cis-1,3-Dichloropropene	10.0	10.7	107	74 - 126	
Cyclohexane	10.0	10.0	100	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Lab Control Sample - Batch: 240-221437

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-221437/4	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5419.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 1221	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 1221				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	9.39	94	62 - 120	
Dibromomethane	10.0	10.2	102	80 - 120	
Bromodichloromethane	10.0	10.1	101	80 - 120	
Dichlorodifluoromethane	10.0	5.68	57	23 - 136	
Dichlorofluoromethane	10.0	7.96	80	40 - 160	
Ethyl ether	10.0	9.71	97	53 - 135	
Ethylbenzene	10.0	9.87	99	80 - 120	
1,2-Dibromoethane	10.0	10.0	100	80 - 120	
Naphthalene	10.0	8.67	87	53 - 121	
m-Xylene & p-Xylene	10.0	9.82	98	80 - 120	
n-Butylbenzene	10.0	10.6	106	74 - 120	
Isopropylbenzene	10.0	10.7	107	77 - 120	
Methyl acetate	50.0	50.6	101	67 - 131	
N-Propylbenzene	10.0	9.13	91	79 - 123	
2-Butanone (MEK)	20.0	19.1	96	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	21.2	106	64 - 135	
sec-Butylbenzene	10.0	10.0	100	77 - 120	
Methyl tert butyl ether	10.0	10.3	103	69 - 121	
Methylene Chloride	10.0	10.8	108	77 - 129	
o-Xylene	10.0	10.5	105	80 - 120	
Styrene	10.0	10.1	101	76 - 122	
tert-Butylbenzene	10.0	9.99	100	77 - 121	
Tetrachloroethene	10.0	9.77	98	78 - 121	
Tetrahydrofuran	20.0	21.1	105	61 - 136	
Toluene	10.0	9.63	96	80 - 120	
trans-1,2-Dichloroethene	10.0	10.3	103	80 - 124	
trans-1,3-Dichloropropene	10.0	9.43	94	75 - 131	
Trichloroethene	10.0	9.88	99	80 - 121	
Trichlorofluoromethane	10.0	8.84	88	61 - 133	
Vinyl chloride	10.0	7.84	78	52 - 121	
Methylcyclohexane	10.0	10.4	104	61 - 134	
Chlorodibromomethane	10.0	10.2	102	74 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103	78 - 125
4-Bromofluorobenzene (Surr)	108	61 - 120
Toluene-d8 (Surr)	102	80 - 120
Dibromofluoromethane (Surr)	103	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221437

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-61960-H-9 MS	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5443.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2110			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2110				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-I-9 MSD	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5444.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2132			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2132				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	97	102	72 - 120	4	22		
1,1,1-Trichloroethane	99	97	69 - 122	3	14		
1,1,2,2-Tetrachloroethane	94	97	61 - 130	3	18		
1,1,2-Trichloro-1,2,2-trifluoroethane	104	84	44 - 140	22	35		
1,1,2-Trichloroethane	98	99	72 - 125	1	19		
1,1-Dichloroethane	93	98	73 - 124	5	14		
1,1-Dichloroethene	100	95	67 - 124	5	24		
1,1-Dichloropropene	101	96	81 - 126	5	11		
1,2,3-Trichlorobenzene	73	77	46 - 120	5	35		
1,2,3-Trichloropropane	98	99	58 - 135	1	25		
1,2,4-Trichlorobenzene	65	74	48 - 120	13	28		
1,2,4-Trimethylbenzene	86	87	64 - 122	1	14		
1,2-Dibromo-3-Chloropropane	91	90	42 - 130	1	24		
1,2-Dichlorobenzene	84	89	67 - 118	5	15		
1,2-Dichloroethane	95	99	74 - 125	4	24		
1,2-Dichloropropane	95	97	73 - 122	2	15		
1,3,5-Trimethylbenzene	85	87	62 - 126	2	17		
1,3-Dichlorobenzene	85	87	65 - 120	3	15		
1,3-Dichloropropane	95	97	59 - 133	2	35		
1,4-Dichlorobenzene	85	88	66 - 120	4	16		
Allyl chloride	97	97	39 - 124	0	35		
2,2-Dichloropropane	79	78	48 - 126	0	30		
2-Chlorotoluene	88	88	70 - 122	0	18		
2-Hexanone	106	106	49 - 142	0	27		
Bromobenzene	88	91	73 - 120	3	13		
Bromochloromethane	96	100	60 - 132	4	35		
4-Chlorotoluene	87	90	74 - 120	3	15		
p-Isopropyltoluene	85	85	61 - 123	0	27		
Acetone	71	80	32 - 126	10	28		
Benzene	95	97	73 - 121	2	13		
Bromoform	85	90	45 - 121	5	19		
Bromomethane	43	34	26 - 136	24	35		

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221437

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-61960-H-9 MS	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5443.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2110			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2110				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-I-9 MSD	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5444.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2132			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2132				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Carbon disulfide	102	94	54 - 144	8	34		
Carbon tetrachloride	107	100	65 - 129	7	20		
Chlorobenzene	90	90	72 - 120	0	15		
Chloroethane	60	53	27 - 131	12	35		
Chloroform	96	99	73 - 121	3	17		
Chloromethane	48	47	39 - 134	3	20		
cis-1,2-Dichloroethene	94	100	66 - 124	6	22		
cis-1,3-Dichloropropene	90	95	60 - 120	5	21		
Cyclohexane	96	80	41 - 137	19	35		
Hexachlorobutadiene	69	71	48 - 120	4	34		
Dibromomethane	98	101	63 - 134	4	35		
Bromodichloromethane	91	99	72 - 120	8	19		
Dichlorodifluoromethane	55	48	14 - 137	13	34		
Dichlorofluoromethane	72	66	42 - 133	9	35		
Ethyl ether	97	100	63 - 136	3	35		
Ethylbenzene	92	90	68 - 121	2	16		
1,2-Dibromoethane	98	100	69 - 125	2	24		
Naphthalene	61	65	38 - 128	5	35		
m-Xylene & p-Xylene	92	89	66 - 123	3	15		
n-Butylbenzene	79	80	54 - 126	2	33		
Isopropylbenzene	89	89	61 - 122	1	20		
Methyl acetate	93	83	64 - 124	11	12		
N-Propylbenzene	90	86	63 - 129	5	29		
2-Butanone (MEK)	92	93	49 - 132	1	19		
4-Methyl-2-pentanone (MIBK)	105	108	58 - 136	3	32		
sec-Butylbenzene	85	83	61 - 123	2	29		
Methyl tert butyl ether	97	101	61 - 121	4	12		
Methylene Chloride	93	96	70 - 124	3	14		
o-Xylene	93	94	68 - 121	2	14		
Styrene	93	93	64 - 126	1	15		
tert-Butylbenzene	84	84	63 - 122	0	24		
Tetrachloroethene	94	89	59 - 125	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221437

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-61960-H-9 MS	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5443.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2110			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2110				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-I-9 MSD	Analysis Batch:	240-221437	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX5444.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/14/2016 2132			Final Weight/Volume:	5 mL
Prep Date:	03/14/2016 2132				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Tetrahydrofuran	104	101	16 - 161	3	35		
Toluene	96	95	72 - 122	0	15		
trans-1,2-Dichloroethene	101	101	72 - 125	0	25		
trans-1,3-Dichloropropene	86	89	58 - 132	4	22		
Trichloroethene	95	95	61 - 129	1	14		
Trichlorofluoromethane	85	74	49 - 133	14	25		
Vinyl chloride	78	81	44 - 122	4	35		
Methylcyclohexane	95	79	39 - 135	18	35		
Chlorodibromomethane	97	101	62 - 122	4	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103	101	78 - 125
4-Bromofluorobenzene (Surr)	102	101	61 - 120
Toluene-d8 (Surr)	107	105	80 - 120
Dibromofluoromethane (Surr)	103	102	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Method Blank - Batch: 240-221556

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-221556/23-A	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/17/2016 1057	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	ND		0.044	0.20
Acenaphthylene	ND		0.048	0.20
Acetophenone	ND		0.34	1.0
Anthracene	ND		0.088	0.20
Atrazine	ND		0.34	1.0
Benzaldehyde	ND		0.39	1.0
Benzo[a]anthracene	ND		0.030	0.20
Benzo[b]fluoranthene	ND		0.039	0.20
Benzo[k]fluoranthene	ND		0.045	0.20
Benzo[g,h,i]perylene	ND		0.046	0.20
Benzo[a]pyrene	ND		0.051	0.20
Butyl benzyl phthalate	ND		0.26	2.0
1,1'-Biphenyl	ND		0.13	1.0
Bis(2-chloroethoxy)methane	ND		0.32	1.0
Bis(2-chloroethyl)ether	ND		0.10	1.0
Bis(2-ethylhexyl) phthalate	ND		1.7	5.0
4-Bromophenyl phenyl ether	ND		0.22	2.0
Caprolactam	ND		0.20	5.0
Carbazole	ND		0.28	1.0
4-Chloroaniline	ND		0.21	2.0
4-Chloro-3-methylphenol	ND		0.21	2.0
2-Chloronaphthalene	ND		0.10	1.0
2-Chlorophenol	ND		0.29	1.0
4-Chlorophenyl phenyl ether	ND		0.30	2.0
Chrysene	ND		0.050	0.20
2-Methylnaphthalene	ND		0.090	0.20
3 & 4 Methylphenol	ND		0.80	2.0
Dibenz(a,h)anthracene	ND		0.045	0.20
Dibenzofuran	ND		0.020	1.0
3,3'-Dichlorobenzidine	ND		0.37	5.0
2,4-Dichlorophenol	ND		0.19	2.0
Diethyl phthalate	ND		0.60	2.0
2,4-Dimethylphenol	ND		0.25	2.0
Dimethyl phthalate	ND		0.29	2.0
4,6-Dinitro-2-methylphenol	ND		2.4	5.0
2,4-Dinitrophenol	ND		0.32	5.0
2,4-Dinitrotoluene	ND		0.25	5.0
Di-n-butyl phthalate	ND		1.7	5.0
Di-n-octyl phthalate	ND		0.23	2.0
Fluoranthene	ND		0.045	0.20
Fluorene	ND		0.041	0.20
Hexachlorobenzene	ND		0.085	0.20
Hexachlorobutadiene	ND		0.27	1.0
Hexachlorocyclopentadiene	ND		0.24	10
Hexachloroethane	ND		0.19	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Method Blank - Batch: 240-221556

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-221556/23-A	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/17/2016 1057	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Indeno[1,2,3-cd]pyrene	ND		0.043	0.20
Isophorone	ND		0.27	1.0
2-Methylphenol	ND		0.17	1.0
Naphthalene	ND		0.063	0.20
2-Nitroaniline	ND		0.21	2.0
3-Nitroaniline	ND		0.28	2.0
4-Nitroaniline	ND		0.22	2.0
Nitrobenzene	ND		0.040	1.0
2-Nitrophenol	ND		0.28	2.0
4-Nitrophenol	ND		0.29	5.0
N-Nitrosodiphenylamine	ND		0.31	1.0
N-Nitrosodi-n-propylamine	ND		0.24	1.0
2,2'-oxybis[1-chloropropane]	ND		0.40	1.0
Pentachlorophenol	ND		0.27	5.0
Phenanthrene	ND		0.062	0.20
Phenol	ND		0.60	1.0
Pyrene	ND		0.042	0.20
2,4,5-Trichlorophenol	ND		0.30	5.0
2,4,6-Trichlorophenol	ND		0.24	5.0
2,6-Dinitrotoluene	ND		0.80	5.0

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	83	29 - 110
2-Fluorophenol (Surr)	53	15 - 110
2,4,6-Tribromophenol (Surr)	96	21 - 128
Nitrobenzene-d5 (Surr)	77	31 - 110
Phenol-d5 (Surr)	35	10 - 110
Terphenyl-d14 (Surr)	90	31 - 115

Lab Control Sample - Batch: 240-221556

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-221556/24-A	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/17/2016 1121	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	20.0	15.3	76	55 - 120	
Acenaphthylene	20.0	15.1	76	55 - 120	
Acetophenone	20.0	15.9	80	50 - 120	
Anthracene	20.0	17.4	87	56 - 120	
Atrazine	40.0	37.0	92	65 - 161	
Benzaldehyde	40.0	32.5	81	40 - 122	
Benzo[a]anthracene	20.0	17.8	89	46 - 120	
Benzo[b]fluoranthene	20.0	17.3	86	24 - 120	
Benzo[k]fluoranthene	20.0	18.3	91	30 - 120	
Benzo[g,h,i]perylene	20.0	20.0	100	24 - 126	
Benzo[a]pyrene	20.0	17.9	89	24 - 120	
Butyl benzyl phthalate	20.0	17.9	89	51 - 120	
1,1'-Biphenyl	20.0	15.8	79	52 - 120	
Bis(2-chloroethoxy)methane	20.0	16.8	84	48 - 120	
Bis(2-chloroethyl)ether	20.0	15.7	78	43 - 120	
Bis(2-ethylhexyl) phthalate	20.0	16.7	83	21 - 125	
4-Bromophenyl phenyl ether	20.0	13.8	69	47 - 120	
Caprolactam	40.0	5.20	13	10 - 120	
Carbazole	20.0	17.2	86	57 - 120	
4-Chloroaniline	20.0	6.22	31	15 - 120	
4-Chloro-3-methylphenol	20.0	16.0	80	45 - 120	
2-Chloronaphthalene	20.0	15.6	78	47 - 120	
2-Chlorophenol	20.0	15.4	77	43 - 120	
4-Chlorophenyl phenyl ether	20.0	15.5	78	47 - 120	
Chrysene	20.0	18.2	91	49 - 120	
2-Methylnaphthalene	20.0	15.7	78	52 - 120	
3 & 4 Methylphenol	20.0	12.6	63	34 - 120	
Dibenz(a,h)anthracene	20.0	19.3	97	24 - 125	
Dibenzofuran	20.0	15.5	78	56 - 120	
3,3'-Dichlorobenzidine	40.0	37.9	95	29 - 120	
2,4-Dichlorophenol	20.0	16.8	84	46 - 120	
Diethyl phthalate	20.0	15.5	77	58 - 120	
2,4-Dimethylphenol	20.0	15.2	76	38 - 120	
Dimethyl phthalate	20.0	16.0	80	59 - 120	
4,6-Dinitro-2-methylphenol	40.0	28.1	70	33 - 120	
2,4-Dinitrophenol	40.0	28.5	71	10 - 120	
2,4-Dinitrotoluene	20.0	16.7	84	52 - 120	
Di-n-butyl phthalate	20.0	16.4	82	57 - 122	
Di-n-octyl phthalate	20.0	16.4	82	21 - 122	
Fluoranthene	20.0	17.6	88	57 - 120	
Fluorene	20.0	14.9	75	56 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Lab Control Sample - Batch: 240-221556

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-221556/24-A	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/17/2016 1121	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobenzene	20.0	13.1	66	52 - 120	
Hexachlorobutadiene	20.0	15.2	76	38 - 120	
Hexachlorocyclopentadiene	20.0	11.7	59	4 - 120	
Hexachloroethane	20.0	13.1	65	42 - 120	
Indeno[1,2,3-cd]pyrene	20.0	19.4	97	25 - 120	
Isophorone	20.0	16.9	85	48 - 123	
2-Methylphenol	20.0	13.9	69	38 - 120	
Naphthalene	20.0	15.7	78	52 - 120	
2-Nitroaniline	20.0	15.6	78	48 - 127	
3-Nitroaniline	20.0	15.5	77	52 - 120	
4-Nitroaniline	20.0	15.9	79	48 - 120	
Nitrobenzene	20.0	15.4	77	41 - 120	
2-Nitrophenol	20.0	16.5	83	42 - 120	
4-Nitrophenol	40.0	12.1	30	16 - 120	
N-Nitrosodiphenylamine	20.0	15.4	77	51 - 120	
N-Nitrosodi-n-propylamine	20.0	15.9	79	48 - 123	
2,2'-oxybis[1-chloropropane]	20.0	15.2	76	42 - 120	
Pentachlorophenol	40.0	30.0	75	14 - 120	
Phenanthrene	20.0	16.3	82	57 - 120	
Phenol	20.0	6.20	31	16 - 120	
Pyrene	20.0	19.1	96	50 - 120	
2,4,5-Trichlorophenol	20.0	15.6	78	47 - 120	
2,4,6-Trichlorophenol	20.0	16.5	83	43 - 120	
2,6-Dinitrotoluene	20.0	16.0	80	52 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	82	29 - 110
2-Fluorophenol (Surr)	50	15 - 110
2,4,6-Tribromophenol (Surr)	100	21 - 128
Nitrobenzene-d5 (Surr)	81	31 - 110
Phenol-d5 (Surr)	33	10 - 110
Terphenyl-d14 (Surr)	93	31 - 115

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221556

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-61960-P-9-A MS	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317017.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1520			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-M-9-A MSD	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1544			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	68	66	49 - 110	3	30		
Acenaphthylene	70	69	49 - 110	2	37		
Acetophenone	73	69	45 - 110	5	42		
Anthracene	82	83	50 - 110	0	30		
Atrazine	90	92	55 - 110	2	30		
Benzaldehyde	76	72	24 - 119	5	74		
Benzo[a]anthracene	72	77	34 - 110	7	52		
Benzo[b]fluoranthene	69	72	21 - 110	4	64		
Benzo[k]fluoranthene	60	67	24 - 110	10	75		
Benzo[g,h,i]perylene	71	74	18 - 110	4	87		
Benzo[a]pyrene	65	69	17 - 110	6	68		
Butyl benzyl phthalate	77	79	48 - 110	3	30		
1,1'-Biphenyl	70	69	46 - 110	2	36		
Bis(2-chloroethoxy)methane	71	67	45 - 110	5	39		
Bis(2-chloroethyl)ether	75	65	30 - 110	14	56		
Bis(2-ethylhexyl) phthalate	56	59	10 - 110	6	85		
4-Bromophenyl phenyl ether	67	63	51 - 110	6	30		
Caprolactam	7	7	10 - 126	7	59	J F1	J F1
Carbazole	83	86	50 - 110	4	30		
4-Chloroaniline	14	10	20 - 110	30	50	F1	F1
4-Chloro-3-methylphenol	69	68	42 - 110	3	30		
2-Chloronaphthalene	70	68	46 - 110	3	34		
2-Chlorophenol	65	62	35 - 110	5	57		
4-Chlorophenyl phenyl ether	71	69	51 - 110	2	30		
Chrysene	72	77	36 - 110	6	49		
2-Methylnaphthalene	71	68	50 - 110	4	37		
3 & 4 Methylphenol	46	45	26 - 110	2	57		
Dibenz(a,h)anthracene	70	73	14 - 110	4	92		
Dibenzofuran	71	71	51 - 110	1	30		
3,3'-Dichlorobenzidine	79	84	10 - 110	6	99		
2,4-Dichlorophenol	73	69	48 - 110	6	35		
Diethyl phthalate	76	78	53 - 110	3	30		

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221556

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-61960-P-9-A MS	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317017.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1520			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-M-9-A MSD	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1544			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dimethylphenol	63	61	27 - 110	4	62		
Dimethyl phthalate	75	74	54 - 110	1	30		
4,6-Dinitro-2-methylphenol	53	58	10 - 110	9	92		
2,4-Dinitrophenol	48	54	10 - 110	10	99		
2,4-Dinitrotoluene	81	86	56 - 110	5	30		
Di-n-butyl phthalate	78	81	50 - 110	3	30		
Di-n-octyl phthalate	55	59	10 - 110	6	95		
Fluoranthene	84	88	54 - 110	4	30		
Fluorene	70	69	51 - 110	1	30		
Hexachlorobenzene	58	63	49 - 110	8	30		
Hexachlorobutadiene	65	62	36 - 110	5	60		
Hexachlorocyclopentadiene	30	31	4 - 110	2	68	J	J
Hexachloroethane	58	56	40 - 110	3	52		
Indeno[1,2,3-cd]pyrene	69	74	16 - 110	7	89		
Isophorone	71	68	45 - 110	5	37		
2-Methylphenol	56	50	31 - 110	12	61		
Naphthalene	69	66	35 - 110	4	58		
2-Nitroaniline	72	70	42 - 110	2	30		
3-Nitroaniline	66	66	31 - 110	0	47		
4-Nitroaniline	75	81	26 - 110	8	50		
Nitrobenzene	67	65	43 - 110	2	42		
2-Nitrophenol	69	66	47 - 110	4	44		
4-Nitrophenol	21	22	10 - 110	7	74		
N-Nitrosodiphenylamine	74	73	41 - 110	0	30		
N-Nitrosodi-n-propylamine	72	65	42 - 110	10	39		
2,2'-oxybis[1-chloropropane]	68	65	26 - 110	5	63		
Pentachlorophenol	74	79	24 - 110	6	64		
Phenanthrene	77	78	52 - 110	1	30		
Phenol	16	18	10 - 125	11	62		
Pyrene	86	89	50 - 110	2	30		
2,4,5-Trichlorophenol	71	68	53 - 110	3	30		
2,4,6-Trichlorophenol	73	71	50 - 110	3	30		

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221556

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-61960-P-9-A MS	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317017.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1520			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-61960-M-9-A MSD	Analysis Batch:	240-221952	Instrument ID:	A4HP7
Client Matrix:	Water	Prep Batch:	240-221556	Lab File ID:	60317018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1040 mL
Analysis Date:	03/17/2016 1544			Final Weight/Volume:	2 mL
Prep Date:	03/15/2016 0901			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,6-Dinitrotoluene	78	78	55 - 110	1	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	74	71	29 - 110
2-Fluorophenol (Surr)	31	31	15 - 110
2,4,6-Tribromophenol (Surr)	96	90	21 - 128
Nitrobenzene-d5 (Surr)	68	65	31 - 110
Phenol-d5 (Surr)	19	18	10 - 110
Terphenyl-d14 (Surr)	60	63	31 - 115

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Method Blank - Batch: 240-221293 **Method: WI-DRO**
Preparation: 3520C

Lab Sample ID:	MB 240-221293/5-A	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-221293	Lab File ID:	P14F0315010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/15/2016 1546	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/12/2016 0930			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.050	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-221293 **Method: WI-DRO**
Preparation: 3520C

LCS Lab Sample ID:	LCS 240-221293/6-A	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-221293	Lab File ID:	P14F0315011.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/15/2016 1613	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/12/2016 0930			Injection Volume:	1 uL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-221293/7-A	Analysis Batch:	240-221606	Instrument ID:	A2HP14F
Client Matrix:	Water	Prep Batch:	240-221293	Lab File ID:	P14F0315016.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/15/2016 1829	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	03/12/2016 0930			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	80	79	75 - 115	0	20		

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Method Blank - Batch: 240-221441

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-221441/1-A	Analysis Batch:	240-221722	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-221441	Lab File ID:	I9031516A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 2304	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/14/2016 1123				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	3.39	J	1.0	200
Aluminum	ND		40	200
Cadmium	ND		0.14	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		2.9	10
Beryllium	ND		0.13	5.0
Lead	ND		1.9	3.0
Calcium	419	J	260	5000
Selenium	ND		4.0	5.0
Cobalt	ND		0.56	7.0
Copper	ND		1.9	25
Iron	44.1	J	13	100
Potassium	ND		70	5000
Magnesium	143	J	55	5000
Manganese	1.16	J	0.46	15
Sodium	356	J	180	5000
Nickel	ND		0.76	40
Antimony	ND		2.4	10
Thallium	ND		1.7	10
Vanadium	ND		2.4	7.0
Zinc	ND		9.6	50

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Lab Control Sample - Batch: 240-221441

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-221441/2-A	Analysis Batch:	240-221722	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-221441	Lab File ID:	I9031516A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 2308	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/14/2016 1123				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1950	97	80 - 120	
Aluminum	2000	1960	98	80 - 120	
Cadmium	50.0	51.2	102	80 - 120	
Chromium	200	200	100	80 - 120	
Silver	50.0	53.4	107	80 - 120	
Arsenic	2000	2030	101	80 - 120	
Beryllium	50.0	48.5	97	80 - 120	
Lead	500	480	96	80 - 120	
Calcium	50000	49300	99	80 - 120	
Selenium	2000	2080	104	80 - 120	
Cobalt	500	495	99	80 - 120	
Copper	250	252	101	80 - 120	
Iron	1000	1000	100	80 - 120	
Potassium	50000	47900	96	80 - 120	
Magnesium	50000	48900	98	80 - 120	
Manganese	500	502	100	80 - 120	
Sodium	50000	47800	96	80 - 120	
Nickel	500	506	101	80 - 120	
Antimony	500	508	102	80 - 120	
Thallium	2000	1980	99	80 - 120	
Vanadium	500	495	99	80 - 120	
Zinc	500	515	103	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-62030-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221441

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID: 240-62030-1
Client Matrix: Water
Dilution: 1.0
Analysis Date: 03/15/2016 2319
Prep Date: 03/14/2016 1123
Leach Date: N/A

Analysis Batch: 240-221722
Prep Batch: 240-221441
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9031516A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-62030-1
Client Matrix: Water
Dilution: 1.0
Analysis Date: 03/15/2016 2323
Prep Date: 03/14/2016 1123
Leach Date: N/A

Analysis Batch: 240-221722
Prep Batch: 240-221441
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9031516A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	102	103	75 - 125	1	20		
Aluminum	101	102	75 - 125	1	20		
Cadmium	107	108	75 - 125	1	20		
Chromium	102	105	75 - 125	2	20		
Silver	114	116	75 - 125	2	20		
Arsenic	108	110	75 - 125	1	20		
Beryllium	101	101	75 - 125	0	20		
Lead	99	100	75 - 125	1	20		
Calcium	96	103	75 - 125	2	20		
Selenium	110	112	75 - 125	2	20		
Cobalt	104	106	75 - 125	2	20		
Copper	104	107	75 - 125	2	20		
Iron	100	102	75 - 125	2	20		
Potassium	101	101	75 - 125	0	20		
Magnesium	100	100	75 - 125	0	20		
Manganese	98	115	75 - 125	3	20		
Sodium	100	100	75 - 125	0	20		
Nickel	106	108	75 - 125	2	20		
Antimony	108	109	75 - 125	1	20		
Thallium	103	105	75 - 125	2	20		
Vanadium	102	103	75 - 125	1	20		
Zinc	109	110	75 - 125	1	20		

Method Blank - Batch: 240-221442

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-221442/1-A	Analysis Batch:	240-221648	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-221442	Lab File ID:	031516AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 1201	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/14/2016 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.090	0.20

Lab Control Sample - Batch: 240-221442

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-221442/2-A	Analysis Batch:	240-221648	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-221442	Lab File ID:	031516AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 1203	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	03/14/2016 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	4.48	90	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-221442

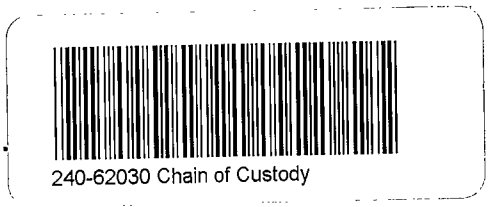
Method: 7470A
Preparation: 7470A
Dissolved

MS Lab Sample ID:	240-62030-1	Analysis Batch:	240-221648	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-221442	Lab File ID:	031516AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 1208			Final Weight/Volume:	50 mL
Prep Date:	03/14/2016 1400				
Leach Date:	N/A				

MSD Lab Sample ID:	240-62030-1	Analysis Batch:	240-221648	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-221442	Lab File ID:	031516AH4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2016 1210			Final Weight/Volume:	50 mL
Prep Date:	03/14/2016 1400				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	101	93	80 - 120	8	20		

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

TestAmerica Canton
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1.4/C1.1
1.8/C1.3

Chain of Custody Record

124237

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact			
Company Name: arcadis	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 3/9/16
Address: 430 First ave N #720	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:
City/State/Zip: Minneapolis, MN 55401			
Phone: 612-339-9434			
Fax:			
Project Name: Ford TCAP			
Site: St Paul MN			
PO#: MN000625.0001			

COC No: 1 of 1 COCs
Sampler: Paige Schulz
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.: 24006038

Analysis Turnaround Time
☒ CALENDAR DAYS ☐ WORKING DAYS
TAT if different from Below _____
☒ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	SVOCs (8270)	TAL metals dissolved	WI DRO	Sample Specific Notes:
amw-21(20160309)	3/9/16	1405	G	GW	8	Y	N	3	2	1	2	
amw-26(20160309)	3/9/16	1455	G	GW	8	Y	N	3	2	1	2	
Trip-Blank-01	3/9/16	—	—	—	1	N	N	1				
Temperature Blank	—	—	—	—	1	N	N					

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
Level II / 2 coolers / Tal metals have been field filtered

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
DBschultz arcadis	arcadis	3/10/16 1235	[signature]	TA	3-10-16 1240
			[signature]	TA	3-11-16 1040
			Received in Laboratory by:		

03/24/2016

TestAmerica Canton Sample Receipt Form/Narrative Login # : 172030
Canton Facility

Client Amedis Site Name _____ Cooler unpacked by:

Cooler Received on 3-11-16 Opened on 3-11-16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box (Client Cooler) Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form
   IR GUN# 48 (CF -1.9 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# 36 (CF -1.5 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# I8 (CF -0.5 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# HC559158
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

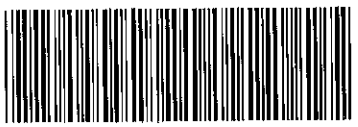
Time preserved: _____ Preservative(s) added/Lot number(s):_____.

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-21 (20160309)	240-62030-D-1	Plastic 500ml - with Nitric Acid	<2		
AMW-21 (20160309)	240-62030-G-1	Amber Glass 1 liter - Hydrochloric			
AMW-21 (20160309)	240-62030-H-1	Amber Glass 1 liter - Hydrochloric			
AMW-26 (20160309)	240-62030-D-2	Plastic 500ml - with Nitric Acid	<2		
AMW-26 (20160309)	240-62030-G-2	Amber Glass 1 liter - Hydrochloric			
AMW-26 (20160309)	240-62030-H-2	Amber Glass 1 liter - Hydrochloric			

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-62030 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica Canton
4101 Shuffel Street, N. W.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

1.4/C1.1
1.8/C1.3

Chain of Custody Record

124237

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 3/9/16	COC No.
Company Name: Arcadis	Tel/Fax: 269-832-7478	Lab Contact: Denise Pohl	Carrier:	1 of 1 COCs
Address: 430 First Ave N #720	**Analysis Turnaround Time**			Sampler: Paige Schultz
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Phone: 612-339-9434	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul MN	☐ 2 days			Job / SDG No.: 24006030
PO# MNN0025.0001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	VOCs (8260)	SVOCs (8270)	TAL metals dissolved	W.ORO	Sample Specific Notes:
amw-21(20160309)	3/9/16	1405	G	GW	8	Y	N	3	2	1	2	
amw-26(20160309)	3/9/16	1455	G	GW	8	Y	N	3	2	1	2	
Trip-Blank-01	3/9/16	—	—	—	1	N	N	1				
Temperature Blank	—	—	—	—	1	N	N					

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ______ Months

Special Instructions/QC Requirements & Comments:
Level II / 2 coolers / TAL metals have been field filtered

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: ____ Corr'd: ____		Therm ID No.:
Relinquished by: PDSchultz Arcadis	Company: Arcadis	Date/Time: 3/10/16 1235	Received by: [signature]	Company: TA	Date/Time: 3-10-16 1240
Relinquished by:	Company:	Date/Time:	Received by: [signature]	Company: TA	Date/Time: 3-11-16 1040
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 172030**
Canton Facility

Client Arcadis Site Name

Cooler unpacked by:

Cooler Received on 3.4.16 Opened on 3.4.16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box (Client Cooler) Box Other

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form
   IR GUN# 48 (CF **-1.9** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# 36 (CF **-1.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# I8 (CF **-0.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# HC559158
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____.

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # : 62030**
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client Cooler 1	I8	1.6	1.1	Ice
Client Cooler 2	I8	1.8	1.3	Ice

X:\X-Drive Document Control\SOPs\Work Instructions\Word Version Work Instructions\WI-NC-099H-071615 Cooler Receipt Form_page 2 - Multiple Coolers.doc rls

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-21 (20160309)	240-62030-D-1	Plastic 500ml - with Nitric Acid	<2		
AMW-21 (20160309)	240-62030-G-1	Amber Glass 1 liter - Hydrochloric			
AMW-21 (20160309)	240-62030-H-1	Amber Glass 1 liter - Hydrochloric			
AMW-26 (20160309)	240-62030-D-2	Plastic 500ml - with Nitric Acid	<2		
AMW-26 (20160309)	240-62030-G-2	Amber Glass 1 liter - Hydrochloric			
AMW-26 (20160309)	240-62030-H-2	Amber Glass 1 liter - Hydrochloric			

March 25, 2016

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: 62030-1
Sample date: 2016-03-09
Report received by CADENA: 2016-03-24
Initial Data Verification completed by CADENA: 2016-03-25

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch 221437 method blank had a detection below the RL for methylene chloride. Qualification of client sample results was not required based on this method blank detection. (note: trip blank was treated as a QC sample so was not qualified based on this method blank detection)

GCMS VOC trip blank had a detection below the RL for acetone and naphthalene. Client sample -001 and -002 acetone results should be considered to be non-detect at the RL and qualified with UB flags.

GCMS VOC sample -001 and -002 containers were not preserved to referenced criteria (pH was greater than 2). Sample was analyzed within 7 day holding time for an unpreserved VOC water so qualification was not required based on this sample preservation non-conformance.

GCMS SVOC QC batch 221952 MS/MSD recovery outliers were not determined using a sample from this submittal so qualification was not required based on these sample-specific QC outliers.

WI-DRO QC data did not include surrogate or batch QC MS recoveries.

Metals QC batch 221441 method blank had detections below the RL for barium, calciium, magnesium, manganese, iron and sodium. Client sample -001 iron results should be considered to be non-detect at the RL and qualified with UB flags.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

2 Water sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC Other and Metals parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 62030-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)
240620301	AMW-21 (20160309)	3/9/2016	2:05:00	X	X	X	X	X
240620302	AMW-26 (20160309)	3/9/2016	2:55:00	X	X	X	X	X
240620303	TRIP BLANK-01	3/9/2016	12:00:00	X				

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 62030-1

		Sample Name:	AMW-21 (20160309)				AMW-26 (20160309)			
		Lab Sample ID:	240620301				240620302			
		Sample Date:	3/9/2016				3/9/2016			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC										
OSW-8260B										
Acetone	67-64-1	1.1	10	ug/l	UB	3.4	10	ug/l	UB
Metals										
OSW-6010B										
Iron - Dissolved	7439-89-6	65	100	ug/l	UB				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 62030-1

		Sample Name:	AMW-21 (20160309)				AMW-26 (20160309)				TRIP BLANK-01			
		Lab Sample ID:	240620301				240620302				240620303			
		Sample Date:	3/9/2016				3/9/2016				3/9/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	0.45	1.0	ug/l	J	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	0.64	10	ug/l	J	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	5.0	ug/l	---
Acetone	67-64-1	1.1	10	ug/l	UB	3.4	10	ug/l	UB	2.7	10	ug/l	J
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	0.38	1.0	ug/l	J	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	1.7	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	1.8	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	1.8	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	1.3	2.0	ug/l	J	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	2.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	33	1.0	ug/l	---	0.96	1.0	ug/l	J
o-Xylene	95-47-6	ND	1.0	ug/l	---	0.43	1.0	ug/l	J	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 62030-1

		Sample Name:	AMW-21 (20160309)				AMW-26 (20160309)				TRIP BLANK-01			
		Lab Sample ID:	240620301				240620302				240620303			
		Sample Date:	3/9/2016				3/9/2016				3/9/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1'-Biphenyl	92-52-4	ND	0.95	ug/l	---	0.41	1.0	ug/l	J				
2,2'-oxybis[1-chloropropane]	108-60-1	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
2,4,5-Trichlorophenol	95-95-4	ND	4.8	ug/l	---	ND	5.1	ug/l	---				
2,4,6-Trichlorophenol	88-06-2	ND	4.8	ug/l	---	ND	5.1	ug/l	---				
2,4-Dichlorophenol	120-83-2	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
2,4-Dimethylphenol	105-67-9	ND	1.9	ug/l	---	0.76	2.0	ug/l	J				
2,4-Dinitrophenol	51-28-5	ND	4.8	ug/l	---	ND	5.1	ug/l	---				
2,4-Dinitrotoluene	121-14-2	ND	4.8	ug/l	---	ND	5.1	ug/l	---				
2,6-Dinitrotoluene	606-20-2	ND	4.8	ug/l	---	ND	5.1	ug/l	---				
2-Chloronaphthalene	91-58-7	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
2-Chlorophenol	95-57-8	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
2-Methylnaphthalene	91-57-6	ND	0.19	ug/l	---	2.2	0.20	ug/l	---				
2-Methylphenol	95-48-7	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
2-Nitroaniline	88-74-4	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
2-Nitrophenol	88-75-5	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
3 & 4 Methylphenol	65794-96-9	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
3,3'-Dichlorobenzidine	91-94-1	ND	4.8	ug/l	---	ND	5.1	ug/l	---				
3-Nitroaniline	99-09-2	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
4,6-Dinitro-2-methylphenol	534-52-1	ND	4.8	ug/l	---	ND	5.1	ug/l	---				
4-Bromophenyl phenyl ether	101-55-3	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
4-Chloro-3-methylphenol	59-50-7	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
4-Chloroaniline	106-47-8	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
4-Chlorophenyl phenyl ether	7005-72-3	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
4-Nitroaniline	100-01-6	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
4-Nitrophenol	100-02-7	ND	4.8	ug/l	---	ND	5.1	ug/l	---				
Acenaphthene	83-32-9	ND	0.19	ug/l	---	1.7	0.20	ug/l	---				
Acenaphthylene	208-96-8	ND	0.19	ug/l	---	0.16	0.20	ug/l	J				
Acetophenone	98-86-2	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
Anthracene	120-12-7	ND	0.19	ug/l	---	0.62	0.20	ug/l	---				
Atrazine	1912-24-9	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
Benzaldehyde	100-52-7	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
Benzo[a]anthracene	56-55-3	ND	0.19	ug/l	---	0.42	0.20	ug/l	---				
Benzo[a]pyrene	50-32-8	ND	0.19	ug/l	---	0.38	0.20	ug/l	---				
Benzo[b]fluoranthene	205-99-2	ND	0.19	ug/l	---	0.45	0.20	ug/l	---				
Benzo[g,h,i]perylene	191-24-2	ND	0.19	ug/l	---	0.31	0.20	ug/l	---				
Benzo[k]fluoranthene	207-08-9	ND	0.19	ug/l	---	0.17	0.20	ug/l	J				
Bis(2-chloroethoxy)methane	111-91-1	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
Bis(2-chloroethyl)ether	111-44-4	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
Bis(2-ethylhexyl) phthalate	117-81-7	ND	4.8	ug/l	---	ND	5.1	ug/l	---				
Butyl benzyl phthalate	85-68-7	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
Caprolactam	105-60-2	ND	4.8	ug/l	---	ND	5.1	ug/l	---				
Carbazole	86-74-8	ND	0.95	ug/l	---	2.8	1.0	ug/l	---				
Chrysene	218-01-9	ND	0.19	ug/l	---	0.45	0.20	ug/l	---				
Di-n-butyl phthalate	84-74-2	ND	4.8	ug/l	---	1.9	5.1	ug/l	J				
Di-n-octyl phthalate	117-84-0	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
Dibenz(a,h)anthracene	53-70-3	ND	0.19	ug/l	---	ND	0.20	ug/l	---				
Dibenzofuran	132-64-9	ND	0.95	ug/l	---	1.7	1.0	ug/l	---				
Diethyl phthalate	84-66-2	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
Dimethyl phthalate	131-11-3	ND	1.9	ug/l	---	ND	2.0	ug/l	---				
Fluoranthene	206-44-0	1.3	0.19	ug/l	---	2.3	0.20	ug/l	---				
Fluorene	86-73-7	ND	0.19	ug/l	---	2.2	0.20	ug/l	---				
Hexachlorobenzene	118-74-1	ND	0.19	ug/l	---	ND	0.20	ug/l	---				
Hexachlorobutadiene	87-68-3	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
Hexachlorocyclopentadiene	77-47-4	ND	9.5	ug/l	---	ND	10	ug/l	---				
Hexachloroethane	67-72-1	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
Indeno[1,2,3-cd]pyrene	193-39-5	ND	0.19	ug/l	---	0.23	0.20	ug/l	---				
Isophorone	78-59-1	0.28	0.95	ug/l	J	0.30	1.0	ug/l	J				
N-Nitrosodi-n-propylamine	621-64-7	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
N-Nitrosodiphenylamine	86-30-6	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
Naphthalene	91-20-3	ND	0.19	ug/l	---	16	0.20	ug/l	---				
Nitrobenzene	98-95-3	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
Pentachlorophenol	87-86-5	ND	4.8	ug/l	---	ND	5.1	ug/l	---				
Phenanthrene	85-01-8	ND	0.19	ug/l	---	3.0	0.20	ug/l	---				
Phenol	108-95-2	ND	0.95	ug/l	---	ND	1.0	ug/l	---				
Pyrene	129-00-0	ND	0.19	ug/l	---	0.87	0.20	ug/l	---				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 62030-1

		Sample Name:	AMW-21 (20160309)				AMW-26 (20160309)				TRIP BLANK-01			
		Lab Sample ID:	240620301				240620302				240620303			
		Sample Date:	3/9/2016				3/9/2016				3/9/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	0.36	0.095	mg/l	---	0.46	0.099	mg/l	---				
Metals														
	OSW-6010B													
	Aluminum - Dissolved	7429-90-5	48	200	ug/l	J	ND	200	ug/l	---				
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---				
	Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---	11	10	ug/l	---				
	Barium - Dissolved	7440-39-3	43	200	ug/l	J	210	200	ug/l	---				
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Calcium - Dissolved	7440-70-2	150000	5000	ug/l	---	150000	5000	ug/l	---				
	Chromium - Dissolved	7440-47-3	1.2	10	ug/l	J	1.2	10	ug/l	J				
	Cobalt - Dissolved	7440-48-4	1.1	7.0	ug/l	J	1.3	7.0	ug/l	J				
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---	ND	25	ug/l	---				
	Iron - Dissolved	7439-89-6	65	100	ug/l	UB	4600	100	ug/l	---				
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---				
	Magnesium - Dissolved	7439-95-4	44000	5000	ug/l	---	43000	5000	ug/l	---				
	Manganese - Dissolved	7439-96-5	2000	15	ug/l	---	1700	15	ug/l	---				
	Nickel - Dissolved	7440-02-0	7.2	40	ug/l	J	3.5	40	ug/l	J				
	Potassium - Dissolved	7440-09-7	5300	5000	ug/l	---	6800	5000	ug/l	---				
	Selenium - Dissolved	7782-49-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---				
	Sodium - Dissolved	7440-23-5	33000	5000	ug/l	---	57000	5000	ug/l	---				
	Thallium - Dissolved	7440-28-0	9.3	10	ug/l	J	8.6	10	ug/l	J				
	Vanadium - Dissolved	7440-62-2	ND	7.0	ug/l	---	ND	7.0	ug/l	---				
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---	ND	50	ug/l	---				
	OSW-7470A													
	Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---				

ANALYTICAL REPORT

Job Number: 240-65573-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
6/14/2016 3:07 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
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06/14/2016

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CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-65573-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/3/2016 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.5º C and 1.7º C.

The SVOCs for samples AMW-27(20160601) (240-65573-1) and AMW-31(20160601) (240-65573-2) were cancelled per email from client 06/06/2016. The analysis for samples on chain of custody 119190 were cancelled per email from client 06/06/2016. The TAL Metals samples were field filtered per email from client 06/06/2016.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-27(20160601) (240-65573-1), AMW-31(20160601) (240-65573-2) and TRIP BLANK (240-65573-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/13/2016.

Bromoform, Bromomethane and Chloroethane failed the recovery criteria high for LCS 240-234191/4. Refer to the QC report for details.

Bromomethane failed the recovery criteria high for the MS/MSD of sample 240-65860-3 in batch 240-234191. Refer to the QC report for details.

Method(s) 8260B: The laboratory control sample (LCS) for 234191 recovered outside control limits for multiple analyte(s). These analytes have been identified as poor performing analytes hen analyzed using this method; therefore, re-extraction/re-analysis was not performed. AMW-27(20160601) (240-65573-1), AMW-31(20160601) (240-65573-2), TRIP BLANK (240-65573-3) and (LCS 240-234191/4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples AMW-27(20160601) (240-65573-1) and AMW-31(20160601) (240-65573-2) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/04/2016 and analyzed on 06/07/2016.

Sample AMW-31(20160601) (240-65573-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-233151.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO
Samples AMW-27(20160601) (240-65573-1), AMW-31(20160601) (240-65573-2) and TRIP BLANK (240-65573-3) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were analyzed on 06/08/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)
Samples AMW-27(20160601) (240-65573-1) and AMW-31(20160601) (240-65573-2) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 06/04/2016 and analyzed on 06/08/2016.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

Samples AMW-27(20160601) (240-65573-1)[2X] and AMW-31(20160601) (240-65573-2)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8082: The following samples were diluted due to the nature of the sample matrix: AMW-27(20160601) (240-65573-1) and AMW-31(20160601) (240-65573-2). Elevated reporting limits (RLs) are provided.

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: AMW-27(20160601) (240-65573-1) and AMW-31(20160601) (240-65573-2). Reagents: 2540200,2103101 and 2283705

Method(s) 8082: The following sample contains an unknown pattern which does not resemble the laboratory known Aroclors. The sample was not quantified as containing an Aroclor. AMW-27(20160601) (240-65573-1)

Method(s) 3520C, 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-233150.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED RECOVERABLE METALS (ICP)
Samples AMW-27(20160601) (240-65573-1) and AMW-31(20160601) (240-65573-2) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/06/2016 and analyzed on 06/07/2016.

Method(s) 200.7 Rev 4.4, 6010B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: AMW-27(20160601) (240-65573-1) and AMW-31(20160601) (240-65573-2). The continuing calibration blanks and method blanks may not support the lower PQL.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY
Samples AMW-27(20160601) (240-65573-1) and AMW-31(20160601) (240-65573-2) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 06/06/2016 and analyzed on 06/07/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL CYANIDE
Samples AMW-27(20160601) (240-65573-1) and AMW-31(20160601) (240-65573-2) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 06/06/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65573-1	**AMW-27(20160601)**					
Acetone		2.3	J	10	ug/L	8260B
Chloroform		0.27	J	1.0	ug/L	8260B
Methyl tert butyl ether		0.24	J	1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.55		0.095	mg/L	WI-DRO
Total Recoverable						
Barium		67	J	200	ug/L	6010B
Aluminum		690		200	ug/L	6010B
Cadmium		0.30	J	5.0	ug/L	6010B
Chromium		6.5	J	10	ug/L	6010B
Arsenic		6.5	J	10	ug/L	6010B
Calcium		51000		5000	ug/L	6010B
Iron		2300		100	ug/L	6010B
Potassium		2800	J	5000	ug/L	6010B
Magnesium		15000		5000	ug/L	6010B
Manganese		330		15	ug/L	6010B
Sodium		130000		5000	ug/L	6010B
Nickel		9.3	J	40	ug/L	6010B
Antimony		7.0	J	10	ug/L	6010B
Vanadium		9.5	J	10	ug/L	6010B
240-65573-2	**AMW-31(20160601)**					
Acetone		2.4	J	10	ug/L	8260B
WI Diesel Range Organics (C10-C28)		2.6		0.48	mg/L	WI-DRO
Total Recoverable						
Barium		64	J	200	ug/L	6010B
Calcium		65000		5000	ug/L	6010B
Iron		1800		100	ug/L	6010B
Potassium		4300	J	5000	ug/L	6010B
Magnesium		19000		5000	ug/L	6010B
Manganese		640		15	ug/L	6010B
Sodium		120000		5000	ug/L	6010B
Nickel		1.9	J	40	ug/L	6010B
240-65573-3	**TRIP BLANK**					
Acetone		5.4	J	10	ug/L	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Purge and Trap	TAL CAN		SW846 5030B
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Purge and Trap	TAL CAN		SW846 5030B
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL CAN	SW846 8082	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Dissolved Metals	TAL CAN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Mercury (Dissolved)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A
Cyanide, Total and/or Amenable	TAL CAN	SW846 9012A	
Cyanide, Total and/or Amenable, Distillation	TAL CAN		SW846 9012A

Lab References:

TAL CAN = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Method	Analyst	Analyst ID
SW846 8260B	Evans, Laura	LEE
WI-GRO WI-GRO	Reed, Rachel T	RTR
SW846 8082	Bosworth, Heather M	HMB
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Toth, Roger	RKT
SW846 7470A	Dillon, William K	WKD
SW846 9012A	Nguyen, Diem	DTN

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-65573-1	AMW-27(20160601)	Water	06/01/2016 1025	06/03/2016 0920
240-65573-2	AMW-31(20160601)	Water	06/01/2016 1215	06/03/2016 0920
240-65573-3	TRIP BLANK	Water	06/01/2016 0000	06/03/2016 0920

SAMPLE RESULTS

Client Sample ID: **AMW-27(20160601)**

Lab Sample ID: 240-65573-1 Date Sampled: 06/01/2016 1025
Client Matrix: Water Date Received: 06/03/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXC8730.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1501			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1501				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	2.3	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND	*	0.32	1.0
Chloroform	0.27	J	0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: AMW-27(20160601)

Lab Sample ID: 240-65573-1 Date Sampled: 06/01/2016 1025
Client Matrix: Water Date Received: 06/03/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXC8730.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1501			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1501				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	0.24	J	0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		78 - 125
4-Bromofluorobenzene (Surr)	90		61 - 120
Toluene-d8 (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	108		79 - 120

Client Sample ID: **AMW-31(20160601)**

Lab Sample ID: 240-65573-2 Date Sampled: 06/01/2016 1215
Client Matrix: Water Date Received: 06/03/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXC8731.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1523			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1523				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	2.4	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND	*	0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: AMW-31(20160601)

Lab Sample ID: 240-65573-2 Date Sampled: 06/01/2016 1215
Client Matrix: Water Date Received: 06/03/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXC8731.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1523			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1523				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		78 - 125
4-Bromofluorobenzene (Surr)	85		61 - 120
Toluene-d8 (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	106		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65573-3 Date Sampled: 06/01/2016 0000
Client Matrix: Water Date Received: 06/03/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXC8732.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1545			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1545				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	5.4	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND	*	0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65573-3 Date Sampled: 06/01/2016 0000
Client Matrix: Water Date Received: 06/03/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXC8732.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1545			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1545				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		78 - 125
4-Bromofluorobenzene (Surr)	88		61 - 120
Toluene-d8 (Surr)	89		80 - 120
Dibromofluoromethane (Surr)	107		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: AMW-27(20160601)

Lab Sample ID: 240-65573-1 Date Sampled: 06/01/2016 1025
Client Matrix: Water Date Received: 06/03/2016 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-233624	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0060806.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1430			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1430			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: **AMW-31(20160601)**

Lab Sample ID: 240-65573-2 Date Sampled: 06/01/2016 1215
Client Matrix: Water Date Received: 06/03/2016 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-233624	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0060807.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1511			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1511			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-65573-3 Date Sampled: 06/01/2016 0000
Client Matrix: Water Date Received: 06/03/2016 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-233624	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0060808.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1551			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1551			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: AMW-27(20160601)

Lab Sample ID: 240-65573-1 Date Sampled: 06/01/2016 1025
Client Matrix: Water Date Received: 06/03/2016 0920

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-233542	Instrument ID:	A2HP11
Prep Method:	3520C	Prep Batch:	240-233150	Initial Weight/Volume:	1050 mL
Dilution:	2.0			Final Weight/Volume:	2 mL
Analysis Date:	06/08/2016 1315			Injection Volume:	1 uL
Prep Date:	06/04/2016 1021			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor-1016	ND		0.095	0.38
Aroclor-1221	ND		0.17	0.38
Aroclor-1232	ND		0.13	0.38
Aroclor-1242	ND		0.11	0.38
Aroclor-1248	ND		0.095	0.38
Aroclor-1254	ND		0.057	0.38
Aroclor-1260	ND		0.076	0.38

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	42		10 - 120
Tetrachloro-m-xylene	55		21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: **AMW-31(20160601)**

Lab Sample ID: 240-65573-2 Date Sampled: 06/01/2016 1215
Client Matrix: Water Date Received: 06/03/2016 0920

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-233542	Instrument ID:	A2HP11
Prep Method:	3520C	Prep Batch:	240-233150	Initial Weight/Volume:	1040 mL
Dilution:	20			Final Weight/Volume:	2 mL
Analysis Date:	06/08/2016 0954			Injection Volume:	1 uL
Prep Date:	06/04/2016 1021			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor-1016	ND		0.96	3.8
Aroclor-1221	ND		1.7	3.8
Aroclor-1232	ND		1.3	3.8
Aroclor-1242	ND		1.2	3.8
Aroclor-1248	ND		0.96	3.8
Aroclor-1254	ND		0.58	3.8
Aroclor-1260	ND		0.77	3.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	12	p	10 - 120
Tetrachloro-m-xylene	79		21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: **AMW-27(20160601)**

Lab Sample ID: 240-65573-1 Date Sampled: 06/01/2016 1025
Client Matrix: Water Date Received: 06/03/2016 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-233292	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-233151	Lab File ID:	P14R060627.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/07/2016 0057			Final Weight/Volume:	5 mL
Prep Date:	06/04/2016 1024			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.55		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: AMW-31(20160601)

Lab Sample ID: 240-65573-2 Date Sampled: 06/01/2016 1215
Client Matrix: Water Date Received: 06/03/2016 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-233482	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-233151	Lab File ID:	P14R060710.D
Dilution:	5.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/07/2016 1649			Final Weight/Volume:	5 mL
Prep Date:	06/04/2016 1024			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	2.6		0.24	0.48

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: AMW-27(20160601)

Lab Sample ID: 240-65573-1 Date Sampled: 06/01/2016 1025
Client Matrix: Water Date Received: 06/03/2016 0920

6010B Dissolved Metals-Total Recoverable

Analysis Method:	6010B	Analysis Batch:	240-233607	Instrument ID:	I12
Prep Method:	3005A	Prep Batch:	240-233259	Lab File ID:	I9060716B.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 2059			Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1033				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	67	J	2.4	200
Aluminum	690		40	200
Cadmium	0.30	J	0.29	5.0
Chromium	6.5	J	0.55	10
Silver	ND		0.92	10
Arsenic	6.5	J	3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	51000		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	2300		25	100
Potassium	2800	J	70	5000
Magnesium	15000		230	5000
Manganese	330		5.1	15
Sodium	130000		330	5000
Nickel	9.3	J	1.6	40
Antimony	7.0	J	3.1	10
Thallium	ND		2.1	10
Vanadium	9.5	J	4.4	10
Zinc	ND		16	50

7470A Mercury (Dissolved)

Analysis Method:	7470A	Analysis Batch:	240-233483	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-233260	Lab File ID:	0607B16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 1256			Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Client Sample ID: AMW-31(20160601)

Lab Sample ID: 240-65573-2 Date Sampled: 06/01/2016 1215
Client Matrix: Water Date Received: 06/03/2016 0920

6010B Dissolved Metals-Total Recoverable

Analysis Method:	6010B	Analysis Batch:	240-233607	Instrument ID:	I12
Prep Method:	3005A	Prep Batch:	240-233259	Lab File ID:	I9060716B.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 2103			Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1033				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	64	J	2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	65000		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	1800		25	100
Potassium	4300	J	70	5000
Magnesium	19000		230	5000
Manganese	640		5.1	15
Sodium	120000		330	5000
Nickel	1.9	J	1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (Dissolved)

Analysis Method:	7470A	Analysis Batch:	240-233483	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-233260	Lab File ID:	0607B16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 1258			Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

General Chemistry

Client Sample ID: **AMW-27(20160601)**

Lab Sample ID: 240-65573-1 Date Sampled: 06/01/2016 1025
Client Matrix: Water Date Received: 06/03/2016 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A
Analysis Batch: 240-233318	Analysis Date: 06/06/2016 1243						
Prep Batch: 240-233233	Prep Date: 06/06/2016 0916						

General Chemistry

Client Sample ID: **AMW-31(20160601)**

Lab Sample ID: 240-65573-2 Date Sampled: 06/01/2016 1215
Client Matrix: Water Date Received: 06/03/2016 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-233318 Analysis Date: 06/06/2016 1243
Prep Batch: 240-233233 Prep Date: 06/06/2016 0916

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Lab Section	Qualifier	Description
GC/MS VOA		
	*	LCS or LCSD is outside acceptance limits.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
Metals		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-234191					
LCS 240-234191/4	Lab Control Sample	T	Water	8260B	
MB 240-234191/6	Method Blank	T	Water	8260B	
240-65573-1	AMW-27(20160601)	T	Water	8260B	
240-65573-2	AMW-31(20160601)	T	Water	8260B	
240-65573-3	TRIP BLANK	T	Water	8260B	
240-65860-C-3 MS	Matrix Spike	T	Water	8260B	
240-65860-A-3 MSD	Matrix Spike Duplicate	T	Water	8260B	

Report Basis
T = Total

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Analysis Batch:240-233624					
LCS 240-233624/5	Lab Control Sample	T	Water	WI-GRO	
LCSD 240-233624/17	Lab Control Sample Duplicate	T	Water	WI-GRO	
MB 240-233624/4	Method Blank	T	Water	WI-GRO	
240-65573-1	AMW-27(20160601)	T	Water	WI-GRO	
240-65573-2	AMW-31(20160601)	T	Water	WI-GRO	
240-65573-3	TRIP BLANK	T	Water	WI-GRO	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-233150					
LCS 240-233150/18-A	Lab Control Sample	T	Water	3520C	
MB 240-233150/17-A	Method Blank	T	Water	3520C	
240-65573-1	AMW-27(20160601)	T	Water	3520C	
240-65573-2	AMW-31(20160601)	T	Water	3520C	
Prep Batch: 240-233151					
LCS 240-233151/4-A	Lab Control Sample	T	Water	3520C	
LCSD 240-233151/5-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 240-233151/3-A	Method Blank	T	Water	3520C	
240-65573-1	AMW-27(20160601)	T	Water	3520C	
240-65573-2	AMW-31(20160601)	T	Water	3520C	
Analysis Batch:240-233292					
LCS 240-233151/4-A	Lab Control Sample	T	Water	WI-DRO	240-233151
LCSD 240-233151/5-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-233151
MB 240-233151/3-A	Method Blank	T	Water	WI-DRO	240-233151
240-65573-1	AMW-27(20160601)	T	Water	WI-DRO	240-233151
Analysis Batch:240-233353					
LCS 240-233150/18-A	Lab Control Sample	T	Water	8082	240-233150
MB 240-233150/17-A	Method Blank	T	Water	8082	240-233150
Analysis Batch:240-233482					
240-65573-2	AMW-31(20160601)	T	Water	WI-DRO	240-233151
Analysis Batch:240-233542					
240-65573-1	AMW-27(20160601)	T	Water	8082	240-233150
240-65573-2	AMW-31(20160601)	T	Water	8082	240-233150

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-233259					
LCS 240-233259/2-A	Lab Control Sample	R	Water	3005A	
MB 240-233259/1-A	Method Blank	R	Water	3005A	
240-65545-F-1-B MS	Matrix Spike	R	Water	3005A	
240-65545-F-1-C MSD	Matrix Spike Duplicate	R	Water	3005A	
240-65573-1	AMW-27(20160601)	R	Water	3005A	
240-65573-2	AMW-31(20160601)	R	Water	3005A	
Prep Batch: 240-233260					
LCS 240-233260/2-A	Lab Control Sample	T	Water	7470A	
MB 240-233260/1-A	Method Blank	T	Water	7470A	
240-65545-F-1-E MS	Matrix Spike	T	Water	7470A	
240-65545-F-1-F MSD	Matrix Spike Duplicate	T	Water	7470A	
240-65573-1	AMW-27(20160601)	T	Water	7470A	
240-65573-2	AMW-31(20160601)	T	Water	7470A	
Analysis Batch:240-233483					
LCS 240-233260/2-A	Lab Control Sample	T	Water	7470A	240-233260
MB 240-233260/1-A	Method Blank	T	Water	7470A	240-233260
240-65545-F-1-E MS	Matrix Spike	T	Water	7470A	240-233260
240-65545-F-1-F MSD	Matrix Spike Duplicate	T	Water	7470A	240-233260
240-65573-1	AMW-27(20160601)	T	Water	7470A	240-233260
240-65573-2	AMW-31(20160601)	T	Water	7470A	240-233260
Analysis Batch:240-233607					
LCS 240-233259/2-A	Lab Control Sample	R	Water	6010B	240-233259
MB 240-233259/1-A	Method Blank	R	Water	6010B	240-233259
240-65545-F-1-B MS	Matrix Spike	R	Water	6010B	240-233259
240-65545-F-1-C MSD	Matrix Spike Duplicate	R	Water	6010B	240-233259
240-65573-1	AMW-27(20160601)	R	Water	6010B	240-233259
240-65573-2	AMW-31(20160601)	R	Water	6010B	240-233259

Report Basis
R = Total Recoverable
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 240-233233					
LCS 240-233233/2-A	Lab Control Sample	T	Water	9012A	
MB 240-233233/1-A	Method Blank	T	Water	9012A	
240-65329-A-1-B MS	Matrix Spike	T	Water	9012A	
240-65329-A-1-C MSD	Matrix Spike Duplicate	T	Water	9012A	
240-65573-1	AMW-27(20160601)	T	Water	9012A	
240-65573-2	AMW-31(20160601)	T	Water	9012A	
Analysis Batch:240-233318					
LCS 240-233233/2-A	Lab Control Sample	T	Water	9012A	240-233233
MB 240-233233/1-A	Method Blank	T	Water	9012A	240-233233
240-65329-A-1-B MS	Matrix Spike	T	Water	9012A	240-233233
240-65329-A-1-C MSD	Matrix Spike Duplicate	T	Water	9012A	240-233233
240-65573-1	AMW-27(20160601)	T	Water	9012A	240-233233
240-65573-2	AMW-31(20160601)	T	Water	9012A	240-233233

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-65573-1	AMW-27(20160601)	101	90	91	108
240-65573-2	AMW-31(20160601)	100	85	91	106
240-65573-3	TRIP BLANK	100	88	89	107
MB 240-234191/6		101	91	95	99
LCS 240-234191/4		99	104	100	102
240-65860-C-3 MS		99	101	97	102
240-65860-A-3 MSD		99	103	98	102

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	78-125
BFB = 4-Bromofluorobenzene (Surr)	61-120
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	79-120

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
240-65573-1	AMW-27(20160601)	42	55
240-65573-2	AMW-31(20160601)	12p	79
MB 240-233150/17-A		64	65
LCS 240-233150/18-A		56	61

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	10-120
TCX = Tetrachloro-m-xylene	21-120

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Method Blank - Batch: 240-234191

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-234191/6	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXC8718.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1028	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1028				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Method Blank - Batch: 240-234191

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-234191/6	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXC8718.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1028	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1028				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	2.0
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101	78 - 125
4-Bromofluorobenzene (Surr)	91	61 - 120
Toluene-d8 (Surr)	95	80 - 120
Dibromofluoromethane (Surr)	99	79 - 120

Lab Control Sample - Batch: 240-234191

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-234191/4	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXC8715.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 0921	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0921				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	10.3	103	80 - 120	
1,1,1-Trichloroethane	10.0	9.34	93	77 - 123	
1,1,2,2-Tetrachloroethane	10.0	9.86	99	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.31	93	67 - 138	
1,1,2-Trichloroethane	10.0	10.1	101	80 - 120	
1,1-Dichloroethane	10.0	9.17	92	79 - 125	
1,1-Dichloroethene	10.0	10.4	104	76 - 124	
1,1-Dichloropropene	10.0	9.09	91	80 - 128	
1,2,3-Trichlorobenzene	10.0	7.93	79	66 - 120	
1,2,3-Trichloropropane	10.0	10.4	104	72 - 126	
1,2,4-Trichlorobenzene	10.0	8.16	82	61 - 120	
1,2,4-Trimethylbenzene	10.0	9.13	91	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	10.3	103	50 - 132	
1,2-Dichlorobenzene	10.0	9.27	93	79 - 120	
1,2-Dichloroethane	10.0	10.1	101	80 - 120	
1,2-Dichloropropane	10.0	9.79	98	78 - 124	
1,3,5-Trimethylbenzene	10.0	9.22	92	77 - 120	
1,3-Dichlorobenzene	10.0	9.37	94	79 - 120	
1,3-Dichloropropane	10.0	9.77	98	80 - 120	
1,4-Dichlorobenzene	10.0	9.39	94	79 - 120	
Allyl chloride	10.0	10.9	109	69 - 120	
2,2-Dichloropropane	10.0	8.91	89	71 - 122	
2-Chlorotoluene	10.0	9.53	95	80 - 120	
2-Hexanone	20.0	18.5	93	55 - 141	
Bromobenzene	10.0	9.84	98	80 - 120	
Bromochloromethane	10.0	10.5	105	80 - 120	
4-Chlorotoluene	10.0	8.87	89	80 - 120	
p-Isopropyltoluene	10.0	8.73	87	77 - 120	
Acetone	20.0	16.0	80	34 - 148	
Benzene	10.0	9.92	99	80 - 120	
Bromoform	10.0	12.5	125	56 - 122	*
Bromomethane	10.0	16.0	160	38 - 132	*
Carbon disulfide	10.0	9.62	96	65 - 144	
Carbon tetrachloride	10.0	11.0	110	77 - 131	
Chlorobenzene	10.0	9.74	97	80 - 120	
Chloroethane	10.0	13.5	135	36 - 126	*
Chloroform	10.0	9.79	98	80 - 120	
Chloromethane	10.0	9.83	98	48 - 133	
cis-1,2-Dichloroethene	10.0	10.1	101	79 - 120	
cis-1,3-Dichloropropene	10.0	9.61	96	74 - 126	
Cyclohexane	10.0	7.48	75	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Lab Control Sample - Batch: 240-234191

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-234191/4	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXC8715.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 0921	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0921				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	7.21	72	62 - 120	
Dibromomethane	10.0	10.5	105	80 - 120	
Bromodichloromethane	10.0	10.4	104	80 - 120	
Dichlorodifluoromethane	10.0	11.3	113	23 - 136	
Dichlorofluoromethane	10.0	13.3	133	40 - 160	
Ethyl ether	10.0	12.9	129	53 - 135	
Ethylbenzene	10.0	9.96	100	80 - 120	
1,2-Dibromoethane	10.0	11.0	110	80 - 120	
Naphthalene	10.0	8.73	87	53 - 121	
m-Xylene & p-Xylene	10.0	9.84	98	80 - 120	
n-Butylbenzene	10.0	7.86	79	74 - 120	
Isopropylbenzene	10.0	10.2	102	77 - 120	
Methyl acetate	50.0	53.1	106	67 - 131	
N-Propylbenzene	10.0	9.14	91	79 - 123	
2-Butanone (MEK)	20.0	20.5	102	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	23.5	117	64 - 135	
sec-Butylbenzene	10.0	8.44	84	77 - 120	
Methyl tert butyl ether	10.0	11.4	114	69 - 121	
Methylene Chloride	10.0	8.37	84	77 - 129	
o-Xylene	10.0	10.0	100	80 - 120	
Styrene	10.0	10.5	105	76 - 122	
tert-Butylbenzene	10.0	8.94	89	77 - 121	
Tetrachloroethene	10.0	9.95	99	78 - 121	
Tetrahydrofuran	20.0	21.6	108	61 - 136	
Toluene	10.0	9.71	97	80 - 120	
trans-1,2-Dichloroethene	10.0	10.1	101	80 - 124	
trans-1,3-Dichloropropene	10.0	9.08	91	75 - 131	
Trichloroethene	10.0	10.6	106	80 - 121	
Trichlorofluoromethane	10.0	11.1	111	61 - 133	
Vinyl chloride	10.0	11.9	119	52 - 121	
Methylcyclohexane	10.0	7.52	75	61 - 134	
Chlorodibromomethane	10.0	10.2	102	74 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99	78 - 125
4-Bromofluorobenzene (Surr)	104	61 - 120
Toluene-d8 (Surr)	100	80 - 120
Dibromofluoromethane (Surr)	102	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234191

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65860-C-3 MS	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXC8720.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1113			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1113				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65860-A-3 MSD	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXC8721.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1135			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1135				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	95	102	69 - 122	7	14		
1,1,2,2-Tetrachloroethane	97	100	61 - 130	3	18		
1,1,2-Trichloro-1,2,2-trifluoroethane	112	133	44 - 140	17	35		
1,1,2-Trichloroethane	98	101	72 - 125	3	19		
1,1-Dichloroethane	90	94	73 - 124	4	14		
1,1-Dichloroethene	110	117	67 - 124	7	24		
1,2,4-Trichlorobenzene	84	91	48 - 120	8	28		
1,2-Dibromo-3-Chloropropane	96	104	42 - 130	8	24		
1,2-Dichlorobenzene	94	97	67 - 118	4	15		
1,2-Dichloroethane	99	100	74 - 125	1	24		
1,2-Dichloropropane	95	99	73 - 122	3	15		
1,3-Dichlorobenzene	94	97	65 - 120	4	15		
1,4-Dichlorobenzene	98	101	66 - 120	3	16		
2-Hexanone	92	92	49 - 142	0	27		
Acetone	84	82	32 - 126	3	28		
Benzene	97	100	73 - 121	3	13		
Bromoform	116	120	45 - 121	3	19		
Bromomethane	152	147	26 - 136	3	35	F1	F1
Carbon disulfide	97	103	54 - 144	6	34		
Carbon tetrachloride	111	122	65 - 129	9	20		
Chlorobenzene	98	102	72 - 120	3	15		
Chloroethane	130	128	27 - 131	2	35		
Chloroform	96	101	73 - 121	4	17		
Chloromethane	96	98	39 - 134	2	20		
cis-1,2-Dichloroethene	98	103	66 - 124	4	22		
cis-1,3-Dichloropropene	90	94	60 - 120	5	21		
Cyclohexane	88	103	41 - 137	16	35		
Bromodichloromethane	100	103	72 - 120	3	19		
Dichlorodifluoromethane	108	109	14 - 137	1	34		
Ethylbenzene	97	103	68 - 121	5	16		
1,2-Dibromoethane	107	109	69 - 125	2	24		
m-Xylene & p-Xylene	97	100	66 - 123	2	15		

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234191

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65860-C-3 MS	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXC8720.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1113			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1113				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65860-A-3 MSD	Analysis Batch:	240-234191	Instrument ID:	A3UX15
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXC8721.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1135			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1135				5 mL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Isopropylbenzene	102	109	61 - 122	7	20		
Methyl acetate	104	103	64 - 124	1	12		
2-Butanone (MEK)	99	96	49 - 132	4	19		
4-Methyl-2-pentanone (MIBK)	118	114	58 - 136	4	32		
Methyl tert butyl ether	111	115	61 - 121	4	12		
Methylene Chloride	70	74	70 - 124	5	14		
o-Xylene	100	101	68 - 121	1	14		
Styrene	103	107	64 - 126	4	15		
Tetrachloroethene	101	108	59 - 125	7	20		
Toluene	94	98	72 - 122	4	15		
trans-1,2-Dichloroethene	103	106	72 - 125	2	25		
trans-1,3-Dichloropropene	83	87	58 - 132	5	22		
Trichloroethene	106	110	61 - 129	4	14		
Trichlorofluoromethane	105	103	49 - 133	2	25		
Vinyl chloride	119	119	44 - 122	0	35		
Methylcyclohexane	88	103	39 - 135	16	35		
Chlorodibromomethane	94	98	62 - 122	5	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99	99	78 - 125
4-Bromofluorobenzene (Surr)	101	103	61 - 120
Toluene-d8 (Surr)	97	98	80 - 120
Dibromofluoromethane (Surr)	102	102	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Method Blank - Batch: 240-233624 **Method: WI-GRO**
Preparation: 5030B

Lab Sample ID:	MB 240-233624/4	Analysis Batch:	240-233624	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0060804.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1311	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1311			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-233624 **Method: WI-GRO**
Preparation: 5030B

LCS Lab Sample ID:	LCS 240-233624/5	Analysis Batch:	240-233624	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0060805.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1351	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1351			Injection Volume:	5 mL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-233624/17	Analysis Batch:	240-233624	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0060817.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 2153	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 2153			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	100	98	80 - 120	2	20		

Method Blank - Batch: 240-233150

Method: 8082
Preparation: 3520C

Lab Sample ID:	MB 240-233150/17-A	Analysis Batch:	240-233353	Instrument ID:	A2HP11
Client Matrix:	Water	Prep Batch:	240-233150	Lab File ID:	P110607019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/07/2016 1604	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/04/2016 1021			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor-1016	ND		0.050	0.20
Aroclor-1221	ND		0.090	0.20
Aroclor-1232	ND		0.070	0.20
Aroclor-1242	ND		0.060	0.20
Aroclor-1248	ND		0.050	0.20
Aroclor-1254	ND		0.030	0.20
Aroclor-1260	ND		0.040	0.20

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	64	10 - 120
Tetrachloro-m-xylene	65	21 - 120

Lab Control Sample - Batch: 240-233150

Method: 8082
Preparation: 3520C

Lab Sample ID:	LCS 240-233150/18-A	Analysis Batch:	240-233353	Instrument ID:	A2HP11
Client Matrix:	Water	Prep Batch:	240-233150	Lab File ID:	P110607020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/07/2016 1622	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/04/2016 1021			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor-1016	2.50	1.56	62	32 - 120	
Aroclor-1260	2.50	1.52	61	36 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	56	10 - 120
Tetrachloro-m-xylene	61	21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Method Blank - Batch: 240-233151 **Method: WI-DRO**
Preparation: 3520C

Lab Sample ID:	MB 240-233151/3-A	Analysis Batch:	240-233292	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-233151	Lab File ID:	P14R060625.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/07/2016 0002	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/04/2016 1024			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.050	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-233151 **Method: WI-DRO**
Preparation: 3520C

LCS Lab Sample ID:	LCS 240-233151/4-A	Analysis Batch:	240-233292	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-233151	Lab File ID:	P14R060626.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/07/2016 0030	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/04/2016 1024			Injection Volume:	1 uL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-233151/5-A	Analysis Batch:	240-233292	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-233151	Lab File ID:	P14R060629.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/07/2016 0152	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/04/2016 1024			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	94	93	75 - 115	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Method Blank - Batch: 240-233259

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-233259/1-A	Analysis Batch:	240-233607	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-233259	Lab File ID:	I9060716B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 2010	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1033				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	ND		2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	ND		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	ND		25	100
Potassium	ND		70	5000
Magnesium	ND		230	5000
Manganese	ND		5.1	15
Sodium	ND		330	5000
Nickel	ND		1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Lab Control Sample - Batch: 240-233259

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-233259/2-A	Analysis Batch:	240-233607	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-233259	Lab File ID:	I9060716B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 2015	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1033				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1970	98	80 - 120	
Aluminum	2000	2020	101	80 - 120	
Cadmium	50.0	52.8	106	80 - 120	
Chromium	200	198	99	80 - 120	
Silver	50.0	50.7	101	80 - 120	
Arsenic	2000	2090	104	80 - 120	
Beryllium	50.0	50.4	101	80 - 120	
Lead	500	497	99	80 - 120	
Calcium	50000	49800	100	80 - 120	
Selenium	2000	2140	107	80 - 120	
Cobalt	500	498	100	80 - 120	
Copper	250	255	102	80 - 120	
Iron	1000	1010	101	80 - 120	
Potassium	50000	48600	97	80 - 120	
Magnesium	50000	49400	99	80 - 120	
Manganese	500	504	101	80 - 120	
Sodium	50000	48700	97	80 - 120	
Nickel	500	507	101	80 - 120	
Antimony	500	501	100	80 - 120	
Thallium	2000	2020	101	80 - 120	
Vanadium	500	499	100	80 - 120	
Zinc	500	529	106	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233259

Method: 6010B
Preparation: 3005A
Total Recoverable

MS Lab Sample ID:	240-65545-F-1-B MS	Analysis Batch:	240-233607	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-233259	Lab File ID:	I9060716B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 2027			Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1033				
Leach Date:	N/A				

MSD Lab Sample ID:	240-65545-F-1-C MSD	Analysis Batch:	240-233607	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-233259	Lab File ID:	I9060716B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 2039			Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1033				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	99	98	75 - 125	1	20		
Aluminum	102	101	75 - 125	1	20		
Cadmium	107	106	75 - 125	1	20		
Chromium	99	98	75 - 125	1	20		
Silver	104	102	75 - 125	2	20		
Arsenic	107	105	75 - 125	1	20		
Beryllium	101	99	75 - 125	1	20		
Lead	98	98	75 - 125	1	20		
Calcium	96	95	75 - 125	0	20		
Selenium	109	108	75 - 125	1	20		
Cobalt	101	100	75 - 125	1	20		
Copper	104	102	75 - 125	2	20		
Iron	100	100	75 - 125	0	20		
Potassium	100	98	75 - 125	2	20		
Magnesium	101	98	75 - 125	1	20		
Manganese	102	100	75 - 125	1	20		
Sodium	101	99	75 - 125	1	20		
Nickel	102	101	75 - 125	1	20		
Antimony	103	101	75 - 125	1	20		
Thallium	101	100	75 - 125	1	20		
Vanadium	99	99	75 - 125	0	20		
Zinc	107	106	75 - 125	1	20		

Method Blank - Batch: 240-233260

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-233260/1-A	Analysis Batch:	240-233483	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-233260	Lab File ID:	0607B16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 1239	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1200				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.090	0.20

Lab Control Sample - Batch: 240-233260

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-233260/2-A	Analysis Batch:	240-233483	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-233260	Lab File ID:	0607B16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 1241	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1200				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	5.01	100	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233260

Method: 7470A
Preparation: 7470A

MS Lab Sample ID:	240-65545-F-1-E MS	Analysis Batch:	240-233483	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-233260	Lab File ID:	0607B16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 1245			Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1200				
Leach Date:	N/A				

MSD Lab Sample ID:	240-65545-F-1-F MSD	Analysis Batch:	240-233483	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-233260	Lab File ID:	0607B16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/07/2016 1247			Final Weight/Volume:	50 mL
Prep Date:	06/06/2016 1200				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	110	116	80 - 120	6	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Method Blank - Batch: 240-233233

Method: 9012A
Preparation: 9012A

Lab Sample ID:	MB 240-233233/1-A	Analysis Batch:	240-233318	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233233	Lab File ID:	060616 cn waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/06/2016 1237	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/06/2016 0916				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cyanide, Total	ND		0.0050	0.010

Lab Control Sample - Batch: 240-233233

Method: 9012A
Preparation: 9012A

Lab Sample ID:	LCS 240-233233/2-A	Analysis Batch:	240-233318	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233233	Lab File ID:	060616 cn waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/06/2016 1415	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/06/2016 0916				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0420	0.0400	95	69 - 118	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233233

Method: 9012A
Preparation: 9012A

MS Lab Sample ID:	240-65329-A-1-B MS	Analysis Batch:	240-233318	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233233	Lab File ID:	060616 cn waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/06/2016 1237			Final Weight/Volume:	25 mL
Prep Date:	06/06/2016 0916				
Leach Date:	N/A				

MSD Lab Sample ID:	240-65329-A-1-C MSD	Analysis Batch:	240-233318	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233233	Lab File ID:	060616 cn waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/06/2016 1237			Final Weight/Volume:	25 mL
Prep Date:	06/06/2016 0916				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Total	77	82	42 - 140	7	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65573-1

Method Reporting Limit Check - Batch: 240-233318

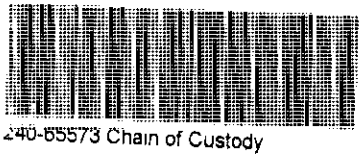
Method: 9012A
Preparation: N/A

Lab Sample ID:	MRL 240-233318/6	Analysis Batch:	240-233318	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	060616 cn waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2 mL
Analysis Date:	06/06/2016 1038	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0100	0.00940	94	70 - 130	J

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-65573 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica Canton
4101 Shuffel Street, N. W.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

22|C1,7
20|C1,5

Chain of Custody Record

119191

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/2/16	COC No:
Company Name: Arcadis	Tel/Fax: 269-832-7478	Lab Contact: Denise (Pohl)	Carrier:	1 of 2 COCs
Address: 436 1st Ave N	Analysis Turnaround Time			Sampler: Adam Thompson
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612 339 9434	TAT if different from Below			Walk-in Client
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul, MN	☐ 2 days			Job / SDG No 240066638
PO# MN000630.0002	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	VOC	SVOC	GRO	DRO	TAL Metals	Cyanide	PCB	Sample Specific Notes
AMW-27 (20160601)	6/1/16	1025	G	W	14		N	3	2	3	2	1	1	2	
AMW-31 (20160601)	6/1/16	1215	G	W	14		N	3	2	3	2	1	1	2	
Trip Blank															

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp (°C) Obs'd: _____ Corr'd: _____	Therm ID No _____

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
[signature]	Arcadis	6/2/16 1315	[signature]	FA	6-3-16 1115
Relinquished by	Company	Date/Time:	Received by	Company	Date/Time
			[signature]	TA	6-3-16 920
Relinquished by:	Company	Date/Time	Received in Laboratory by	Company	Date/Time:

TestAmerica Canton
4101 Shuffel Street, N. W.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

2.2/C1.7
1.6/C1.1

Chain of Custody Record

119190

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other.

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/2/16	COC No
Company Name: Arcadis	Tel/Fax: 269 932 7478	Lab Contact: Denise Pohl	Carrier:	2 of 2 COCs
Address: 430 1st Ave N #720	Analysis Turnaround Time			Sampler: Adam Thompson
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612 339 9434	TAT if different from Below			Walk-in Client:
Fax	☒ 2 weeks			Lab Sampling
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul, MN	☐ 2 days			Job / SDG No.: 240066 38
PO# MN000630.0002	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOC	SVOC	GRO	DRO	TAL Metals	Cyanide	PCB	Sample Specific Notes
AMW-11 (20160601)	6/1/16	1420	G	W	14		N	3	2	3	2	1	1	2	
AMW-18 (20160601)	6/1/16	1550	G	W	14		N	3	2	3	2	1	1	2	
Trip Blank															

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: Hold until further notice

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No	Cooler Temp (°C). Obs'd _____ Corr'd _____	Therm ID No.: _____

Relinquished by	Company	Date/Time:	Received by.	Company	Date/Time:
[signature]	Arcadis	6/2/16 1315	[signature]	TA	6-2-16 1315
Relinquished by. [signature]	Company TA	Date/Time 6-2-16	Received by: [signature]	Company TA	Date/Time 6-3-16 920
Relinquished by	Company	Date/Time	Received in Laboratory by	Company	Date/Time:

06/14/2016

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 66573**
Canton Facility

Client Arcadis Site Name _____ Cooler unpacked by:

Cooler Received on 6-3-16 Opened on 6-3-16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box (Other) _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form
   IR GUN# 48 (CF **-1.9** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# 36 (CF **-1.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# I8 (CF **-0.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity_____ Yes (No)
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No (NA)
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC559158**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # : 65573**
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	8	2.2	1.7	ice
|	|	~~1.6~~ 2.0 item	~~1.1~~ 1.5 item	|
|	|			|
|	|			|

X:\X-Drive Document Control\SOPs\Work Instructions\Word Version Work Instructions\WI-NC-099H-071615 Cooler Receipt Form_page 2 - Multiple Coolers doc rls

June 16, 2016

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000630.0002
Client project scope reference: Sample COC only was used to define project analytical requirements.
Laboratory: TestAmerica - North Canton
Laboratory submittal: 65573-1
Sample date: 2016-06-01
Report received by CADENA: 2016-06-14
Initial Data Verification completed by CADENA: 2016-06-16

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch 234191 LCS recoveries were outliers biased high for the following analytes: BROMFORM, BROMOMETHANE, CHLOROETHANE. Associated client sample results were non-detect so qualification was not required based on these high bias QC outliers.

GCMS VOC QC batch MS/MSD recovery outliers were not determined using a client sample so qualification was not required based on these sample-specific QC outliers.

WI-DRO, PCB QC batch did not include MS/MSD recovery data due to insufficient sample volume available for spiking according to the laboratory submittal case narrative.

WI-DRO, WI-GRO sample and QC results did not include surrogate recovery data.

GCMS VOC trip blank had a detection below the RL for acetone. Client samples -001, -002 acetone results should be considered to be non-detect at the RL and qualified with UB flags.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

2 Water sample(s) were analyzed for GCMS VOC, PCB, GC VOC, GC Other, Metals and General Chemistry parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JB	NON-DETECT AT THE CONCENTRATION REPORTED AND ESTIMATED
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
JUB	NON-DETECT AT THE REPORTING LIMIT AND ESTIMATED
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 65573-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Polychlorinated Biphenyls by GCECD	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy	Mercury (Manual Cold Vapor)	Total & Amenable Cyanides
240655731	AMW-27(20160601)	6/1/2016	10:25:00	X	X	X	X	X	X	X
240655732	AMW-31(20160601)	6/1/2016	12:15:00	X	X	X	X	X	X	X
240655733	TRIP BLANK	6/1/2016	12:00:00	X		X				

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65573-1

		Sample Name:	AMW-27(20160601)				AMW-31(20160601)			
		Lab Sample ID:	240655731				240655732			
		Sample Date:	6/1/2016				6/1/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC									
OSW-8260B									
Acetone	67-64-1	2.3	10	ug/l	UB	2.4	10	ug/l	UB

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65573-1

		Sample Name:	AMW-27(20160601)				AMW-31(20160601)				TRIP BLANK			
		Lab Sample ID:	240655731				240655732				240655733			
		Sample Date:	6/1/2016				6/1/2016				6/1/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	5.0	ug/l	---
Acetone	67-64-1	2.3	10	ug/l	UB	2.4	10	ug/l	UB	5.4	10	ug/l	J
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	0.27	1.0	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	0.24	1.0	ug/l	J	ND	1.0	ug/l	---	ND	2.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65573-1

			Sample Name:	AMW-27(20160601)				AMW-31(20160601)				TRIP BLANK			
			Lab Sample ID:	240655731				240655732				240655733			
			Sample Date:	6/1/2016				6/1/2016				6/1/2016			
					Report		Valid		Report		Valid		Report		Valid
	Analyte	Cas No.		Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
Pest & PCB															
	OSW-8082														
	Aroclor-1016	12674-11-2		ND	0.38	ug/l	---	ND	3.8	ug/l	---				
	Aroclor-1221	11104-28-2		ND	0.38	ug/l	---	ND	3.8	ug/l	---				
	Aroclor-1232	11141-16-5		ND	0.38	ug/l	---	ND	3.8	ug/l	---				
	Aroclor-1242	53469-21-9		ND	0.38	ug/l	---	ND	3.8	ug/l	---				
	Aroclor-1248	12672-29-6		ND	0.38	ug/l	---	ND	3.8	ug/l	---				
	Aroclor-1254	11097-69-1		ND	0.38	ug/l	---	ND	3.8	ug/l	---				
	Aroclor-1260	11096-82-5		ND	0.38	ug/l	---	ND	3.8	ug/l	---				
GC VOC															
	PUBL-SW-140														
	WI Gasoline Range Organics (C6-C10)	E-1005		ND	100	ug/l	---	ND	100	ug/l	---	ND	100	ug/l	---
GC Other															
	PUBL-SW-141														
	WI Diesel Range Organics (C10-C28)	E-1004		0.55	0.095	mg/l	---	2.6	0.48	mg/l	---				
Metals															
	OSW-6010B														
	Aluminum	7429-90-5		690	200	ug/l	---	ND	200	ug/l	---				
	Antimony	7440-36-0		7.0	10	ug/l	J	ND	10	ug/l	---				
	Arsenic	7440-38-2		6.5	10	ug/l	J	ND	10	ug/l	---				
	Barium	7440-39-3		67	200	ug/l	J	64	200	ug/l	J				
	Beryllium	7440-41-7		ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Cadmium	7440-43-9		0.30	5.0	ug/l	J	ND	5.0	ug/l	---				
	Calcium	7440-70-2		51000	5000	ug/l	---	65000	5000	ug/l	---				
	Chromium	7440-47-3		6.5	10	ug/l	J	ND	10	ug/l	---				
	Cobalt	7440-48-4		ND	7.0	ug/l	---	ND	7.0	ug/l	---				
	Copper	7440-50-8		ND	25	ug/l	---	ND	25	ug/l	---				
	Iron	7439-89-6		2300	100	ug/l	---	1800	100	ug/l	---				
	Lead	7439-92-1		ND	3.0	ug/l	---	ND	3.0	ug/l	---				
	Magnesium	7439-95-4		15000	5000	ug/l	---	19000	5000	ug/l	---				
	Manganese	7439-96-5		330	15	ug/l	---	640	15	ug/l	---				
	Nickel	7440-02-0		9.3	40	ug/l	J	1.9	40	ug/l	J				
	Potassium	7440-09-7		2800	5000	ug/l	J	4300	5000	ug/l	J				
	Selenium	7782-49-2		ND	15	ug/l	---	ND	15	ug/l	---				
	Silver	7440-22-4		ND	10	ug/l	---	ND	10	ug/l	---				
	Sodium	7440-23-5		130000	5000	ug/l	---	120000	5000	ug/l	---				
	Thallium	7440-28-0		ND	10	ug/l	---	ND	10	ug/l	---				
	Vanadium	7440-62-2		9.5	10	ug/l	J	ND	10	ug/l	---				
	Zinc	7440-66-6		ND	50	ug/l	---	ND	50	ug/l	---				
	OSW-7470A														
	Mercury	7439-97-6		ND	0.20	ug/l	---	ND	0.20	ug/l	---				
General Chemistry															
	OSW-9012A														
	Cyanide, Total	57-12-5		ND	0.010	mg/l	---	ND	0.010	mg/l	---				

ANALYTICAL REPORT

Job Number: 240-65672-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
6/20/2016 12:18 PM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
06/20/2016

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CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-65672-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/4/2016 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.1º C, 2.3º C and 18.7º C.

Receipt Exceptions: The following sample: DUP-02(20160602) was listed on the Chain of Custody (COC); however, no samples were received. Sample AMW-15(20160602) arrived 06/07/2016 above temperature and client to resample. Client requested 06/10/2016 for sample AMW-30(20160602) that the SVOC analysis not be done.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-14(20160602) (240-65672-1), AMW-30(20160602) (240-65672-3) and TRIP BLANK (240-65672-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/13/2016.

Bromoform failed the recovery criteria high for LCS 240-234233/4. Refer to the QC report for details.

Sample AMW-14(20160602) (240-65672-1)[500X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-234233 recovered outside control limits for the following analyte. Bromoform. Bromoform has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Sample AMW-14(20160602) (240-65672-1) was analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/08/2016 and analyzed on 06/13/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Isophorone was detected in method blank MB 240-233595/18-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Sample AMW-14(20160602) (240-65672-1)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: The following sample was diluted due to the nature of the sample matrix: AMW-14(20160602) (240-65672-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples AMW-14(20160602) (240-65672-1) and AMW-30(20160602) (240-65672-3) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/08/2016 and analyzed on 06/15/2016.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) mix : AMW-14(20160602) (240-65672-1) and AMW-30(20160602) (240-65672-3).

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-233553.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples AMW-14(20160602) (240-65672-1), AMW-30(20160602) (240-65672-3) and TRIP BLANK (240-65672-4) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were analyzed on 06/08/2016 and 06/13/2016.

Sample AMW-14(20160602) (240-65672-1)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples AMW-14(20160602) (240-65672-1) and AMW-30(20160602) (240-65672-3) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 06/08/2016 and analyzed on 06/10/2016 and 06/14/2016.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

Tetrachloro-m-xylene failed the surrogate recovery criteria low for AMW-30(20160602) (240-65672-3). Refer to the QC report for details.

Sample AMW-30(20160602) (240-65672-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: AMW-14(20160602) (240-65672-1) and AMW-30(20160602) (240-65672-3). Reagents: 2564857, 2103099, 2283702.

Method(s) 8082: The following sample was diluted due to the nature of the sample matrix: AMW-30(20160602) (240-65672-3). Elevated reporting limits (RLs) are provided.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-233554.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP)

Samples AMW-14(20160602) (240-65672-1) and AMW-30(20160602) (240-65672-3) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/08/2016 and analyzed on 06/10/2016.

Sodium was detected in method blank MB 240-233638/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Method(s) 200.7 Rev 4.4, 6010B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: AMW-14(20160602) (240-65672-1) and AMW-30(20160602) (240-65672-3). The continuing calibration blanks and method blanks may not support the lower PQL.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Samples AMW-14(20160602) (240-65672-1) and AMW-30(20160602) (240-65672-3) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 06/08/2016 and analyzed on 06/09/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Mercury was detected in method blank MB 240-233645/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

TOTAL CYANIDE

Samples AMW-14(20160602) (240-65672-1) and AMW-30(20160602) (240-65672-3) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 06/08/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65672-1	**AMW-14(20160602)**					
Ethylbenzene		2900		500	ug/L	8260B
m-Xylene & p-Xylene		7100		1000	ug/L	8260B
Methylene Chloride		210	J	500	ug/L	8260B
o-Xylene		2200		500	ug/L	8260B
2,4-Dimethylphenol		10		8.1	ug/L	8270C
Naphthalene		24		0.81	ug/L	8270C
WI Gasoline Range Organics (C6-C10)		13000		1000	ug/L	WI-GRO
WI Diesel Range Organics (C10-C28)		1.9		0.095	mg/L	WI-DRO
Dissolved						
Barium		210		200	ug/L	6010B
Arsenic		13		10	ug/L	6010B
Calcium		110000		5000	ug/L	6010B
Iron		3400		100	ug/L	6010B
Potassium		2700	J	5000	ug/L	6010B
Magnesium		22000		5000	ug/L	6010B
Manganese		690		15	ug/L	6010B
Sodium		130000	B	5000	ug/L	6010B
Nickel		2.1	J	40	ug/L	6010B
Mercury		0.16	J B	0.20	ug/L	7470A
240-65672-3	**AMW-30(20160602)**					
Acetone		1.0	J	10	ug/L	8260B
Tetrachloroethene		0.84	J	1.0	ug/L	8260B
Trichloroethene		34		1.0	ug/L	8260B
WI Gasoline Range Organics (C6-C10)		54	J	100	ug/L	WI-GRO
WI Diesel Range Organics (C10-C28)		0.72		0.095	mg/L	WI-DRO
Dissolved						
Barium		54	J	200	ug/L	6010B
Aluminum		29000		200	ug/L	6010B
Cadmium		1.0	J	5.0	ug/L	6010B
Chromium		8.6	J	10	ug/L	6010B
Beryllium		3.7	J	5.0	ug/L	6010B
Calcium		120000		5000	ug/L	6010B
Cobalt		69		7.0	ug/L	6010B
Copper		190		25	ug/L	6010B
Iron		3000		100	ug/L	6010B
Potassium		13000		5000	ug/L	6010B
Magnesium		45000		5000	ug/L	6010B
Manganese		1100		15	ug/L	6010B
Sodium		30000	B	5000	ug/L	6010B
Nickel		410		40	ug/L	6010B
Thallium		5.1	J	10	ug/L	6010B
Zinc		190		50	ug/L	6010B
Mercury		0.12	J B	0.20	ug/L	7470A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65672-4	**TRIP BLANK**					
Acetone		3.7	J	10	ug/L	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Purge and Trap	TAL CAN		SW846 5030B
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL CAN	SW846 8082	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
Cyanide, Total and/or Amenable	TAL CAN	SW846 9012A	
Cyanide, Total and/or Amenable, Distillation	TAL CAN		SW846 9012A

Lab References:

TAL CAN = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Method	Analyst	Analyst ID
SW846 8260B	Williams, Larry	LRW
SW846 8270C	Ulman, Mark	MRU
WI-GRO WI-GRO	Reed, Rachel T	RTR
SW846 8082	Matheny, Sarah	SEM
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Toth, Roger	RKT
SW846 7470A	Dillon, William K	WKD
SW846 9012A	Weimer, Joshua W	JWW

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-65672-1	AMW-14(20160602)	Water	06/02/2016 1150	06/04/2016 0935
240-65672-3	AMW-30(20160602)	Water	06/02/2016 1630	06/04/2016 0935
240-65672-4	TRIP BLANK	Water	06/01/2016 0000	06/04/2016 0935

SAMPLE RESULTS

Client Sample ID: **AMW-14(20160602)**

Lab Sample ID: 240-65672-1 Date Sampled: 06/02/2016 1150
Client Matrix: Water Date Received: 06/04/2016 0935

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2765.D
Dilution:	500			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2131			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2131				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		140	500
1,1,1-Trichloroethane	ND		220	500
1,1,2,2-Tetrachloroethane	ND		110	500
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		230	500
1,1,2-Trichloroethane	ND		120	500
1,1-Dichloroethane	ND		150	500
1,1-Dichloroethene	ND		230	500
1,1-Dichloropropene	ND		210	500
1,2,3-Trichlorobenzene	ND		190	500
1,2,3-Trichloropropane	ND		220	500
1,2,4-Trichlorobenzene	ND		160	500
1,2,4-Trimethylbenzene	ND		210	500
1,2-Dibromo-3-Chloropropane	ND		410	1000
1,2-Dichlorobenzene	ND		130	500
1,2-Dichloroethane	ND		120	500
1,2-Dichloropropane	ND		130	500
1,3,5-Trimethylbenzene	ND		240	500
1,3-Dichlorobenzene	ND		95	500
1,3-Dichloropropane	ND		95	500
1,4-Dichlorobenzene	ND		140	500
Allyl chloride	ND		420	1000
2,2-Dichloropropane	ND		130	500
2-Chlorotoluene	ND		200	500
2-Hexanone	ND		240	5000
Bromobenzene	ND		180	500
Bromochloromethane	ND		250	500
4-Chlorotoluene	ND		150	500
p-Isopropyltoluene	ND		220	500
Acetone	ND		470	5000
Benzene	ND		180	500
Bromoform	ND	*	280	500
Bromomethane	ND		220	500
Carbon disulfide	ND		190	500
Carbon tetrachloride	ND		220	500
Chlorobenzene	ND		130	500
Chloroethane	ND		160	500
Chloroform	ND		130	500
Chloromethane	ND		220	500
cis-1,2-Dichloroethene	ND		130	500
cis-1,3-Dichloropropene	ND		230	500
Cyclohexane	ND		230	500
Hexachlorobutadiene	ND		180	500
Dibromomethane	ND		210	500
Bromodichloromethane	ND		150	500
Dichlorodifluoromethane	ND		160	500
Dichlorofluoromethane	ND		150	1000

Client Sample ID: **AMW-14(20160602)**

Lab Sample ID: 240-65672-1 Date Sampled: 06/02/2016 1150
Client Matrix: Water Date Received: 06/04/2016 0935

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2765.D
Dilution:	500			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2131			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2131				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		190	1000
Ethylbenzene	2900		130	500
1,2-Dibromoethane	ND		160	500
Naphthalene	ND		230	500
m-Xylene & p-Xylene	7100		120	1000
n-Butylbenzene	ND		160	500
Isopropylbenzene	ND		180	500
Methyl acetate	ND		1100	5000
N-Propylbenzene	ND		200	500
2-Butanone (MEK)	ND		270	5000
4-Methyl-2-pentanone (MIBK)	ND		500	5000
sec-Butylbenzene	ND		240	500
Methyl tert butyl ether	ND		100	500
Methylene Chloride	210	J	170	500
o-Xylene	2200		130	500
Styrene	ND		230	500
tert-Butylbenzene	ND		210	500
Tetrachloroethene	ND		160	500
Tetrahydrofuran	ND		700	2500
Toluene	ND		120	500
trans-1,2-Dichloroethene	ND		150	500
trans-1,3-Dichloropropene	ND		280	500
Trichloroethene	ND		110	500
Trichlorofluoromethane	ND		250	500
Vinyl chloride	ND		150	500
Methylcyclohexane	ND		220	500
Chlorodibromomethane	ND		220	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		78 - 125
4-Bromofluorobenzene (Surr)	92		61 - 120
Toluene-d8 (Surr)	83		80 - 120
Dibromofluoromethane (Surr)	97		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: AMW-30(20160602)

Lab Sample ID: 240-65672-3 Date Sampled: 06/02/2016 1630
Client Matrix: Water Date Received: 06/04/2016 0935

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2751.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1621			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1621				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	1.0	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: AMW-30(20160602)

Lab Sample ID: 240-65672-3 Date Sampled: 06/02/2016 1630
Client Matrix: Water Date Received: 06/04/2016 0935

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2751.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1621			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1621				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	0.84	J	0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	34		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	105		78 - 125
4-Bromofluorobenzene (Surr)	83		61 - 120
Toluene-d8 (Surr)	82		80 - 120
Dibromofluoromethane (Surr)	95		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65672-4 Date Sampled: 06/01/2016 0000
Client Matrix: Water Date Received: 06/04/2016 0935

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2752.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1643			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1643				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	3.7	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65672-4 Date Sampled: 06/01/2016 0000
Client Matrix: Water Date Received: 06/04/2016 0935

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2752.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1643			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1643				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		78 - 125
4-Bromofluorobenzene (Surr)	81		61 - 120
Toluene-d8 (Surr)	82		80 - 120
Dibromofluoromethane (Surr)	99		79 - 120

Client Sample ID: **AMW-14(20160602)**

Lab Sample ID: 240-65672-1 Date Sampled: 06/02/2016 1150
Client Matrix: Water Date Received: 06/04/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-233595	Lab File ID:	60613017.D
Dilution:	4.0			Initial Weight/Volume:	990 mL
Analysis Date:	06/13/2016 1426			Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.18	0.81
Acenaphthylene	ND		0.19	0.81
Acetophenone	ND		1.4	4.0
Anthracene	ND		0.36	0.81
Atrazine	ND		1.4	4.0
Benzaldehyde	ND		1.6	4.0
Benzo[a]anthracene	ND		0.12	0.81
Benzo[b]fluoranthene	ND		0.16	0.81
Benzo[k]fluoranthene	ND		0.18	0.81
Benzo[g,h,i]perylene	ND		0.19	0.81
Benzo[a]pyrene	ND		0.21	0.81
Butyl benzyl phthalate	ND		1.1	8.1
1,1'-Biphenyl	ND		0.53	4.0
Bis(2-chloroethoxy)methane	ND		1.3	4.0
Bis(2-chloroethyl)ether	ND		0.40	4.0
Bis(2-ethylhexyl) phthalate	ND		6.9	20
4-Bromophenyl phenyl ether	ND		0.89	8.1
Caprolactam	ND		0.81	20
Carbazole	ND		1.1	4.0
4-Chloroaniline	ND		0.85	8.1
4-Chloro-3-methylphenol	ND		0.85	8.1
2-Chloronaphthalene	ND		0.40	4.0
2-Chlorophenol	ND		1.2	4.0
4-Chlorophenyl phenyl ether	ND		1.2	8.1
Chrysene	ND		0.20	0.81
2-Methylnaphthalene	ND		0.37	0.81
3 & 4 Methylphenol	ND		3.2	8.1
Dibenz(a,h)anthracene	ND		0.18	0.81
Dibenzofuran	ND		0.081	4.0
3,3'-Dichlorobenzidine	ND		1.5	20
2,4-Dichlorophenol	ND		0.77	8.1
Diethyl phthalate	ND		2.4	8.1
2,4-Dimethylphenol	10		1.0	8.1
Dimethyl phthalate	ND		1.2	8.1
4,6-Dinitro-2-methylphenol	ND		9.7	20
2,4-Dinitrophenol	ND		1.3	20
2,4-Dinitrotoluene	ND		1.0	20
Di-n-butyl phthalate	ND		6.9	20
Di-n-octyl phthalate	ND		0.93	8.1
Fluoranthene	ND		0.18	0.81
Fluorene	ND		0.16	0.81
Hexachlorobenzene	ND		0.34	0.81
Hexachlorobutadiene	ND		1.1	4.0
Hexachlorocyclopentadiene	ND		0.97	40
Hexachloroethane	ND		0.77	4.0
Indeno[1,2,3-cd]pyrene	ND		0.17	0.81

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: AMW-14(20160602)

Lab Sample ID: 240-65672-1 Date Sampled: 06/02/2016 1150
Client Matrix: Water Date Received: 06/04/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-233595	Lab File ID:	60613017.D
Dilution:	4.0			Initial Weight/Volume:	990 mL
Analysis Date:	06/13/2016 1426			Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		1.1	4.0
2-Methylphenol	ND		0.69	4.0
Naphthalene	24		0.25	0.81
2-Nitroaniline	ND		0.85	8.1
3-Nitroaniline	ND		1.1	8.1
4-Nitroaniline	ND		0.89	8.1
Nitrobenzene	ND		0.16	4.0
2-Nitrophenol	ND		1.1	8.1
4-Nitrophenol	ND		1.2	20
N-Nitrosodiphenylamine	ND		1.3	4.0
N-Nitrosodi-n-propylamine	ND		0.97	4.0
2,2'-oxybis[1-chloropropane]	ND		1.6	4.0
Pentachlorophenol	ND		1.1	20
Phenanthrene	ND		0.25	0.81
Phenol	ND		2.4	4.0
Pyrene	ND		0.17	0.81
2,4,5-Trichlorophenol	ND		1.2	20
2,4,6-Trichlorophenol	ND		0.97	20
2,6-Dinitrotoluene	ND		3.2	20

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	70		42 - 120
2-Fluorophenol (Surr)	26		10 - 120
2,4,6-Tribromophenol (Surr)	91		35 - 125
Nitrobenzene-d5 (Surr)	71		36 - 120
Phenol-d5 (Surr)	16		10 - 120
Terphenyl-d14 (Surr)	65		17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: AMW-14(20160602)

Lab Sample ID: 240-65672-1 Date Sampled: 06/02/2016 1150
Client Matrix: Water Date Received: 06/04/2016 0935

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-233624	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0060810.D
Dilution:	10			Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1712			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1712			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	13000		200	1000

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: AMW-30(20160602)

Lab Sample ID: 240-65672-3 Date Sampled: 06/02/2016 1630
Client Matrix: Water Date Received: 06/04/2016 0935

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234161	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061306.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 0842			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0842			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	54	J	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-65672-4 Date Sampled: 06/01/2016 0000
Client Matrix: Water Date Received: 06/04/2016 0935

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234161	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061307.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 0923			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0923			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: AMW-14(20160602)

Lab Sample ID: 240-65672-1 Date Sampled: 06/02/2016 1150
Client Matrix: Water Date Received: 06/04/2016 0935

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-233931	Instrument ID:	A2HP13
Prep Method:	3520C	Prep Batch:	240-233554	Initial Weight/Volume:	1000 mL
Dilution:	1.0			Final Weight/Volume:	2 mL
Analysis Date:	06/10/2016 0950			Injection Volume:	1 uL
Prep Date:	06/08/2016 0454			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor-1016	ND		0.050	0.20
Aroclor-1221	ND		0.090	0.20
Aroclor-1232	ND		0.070	0.20
Aroclor-1242	ND		0.060	0.20
Aroclor-1248	ND		0.050	0.20
Aroclor-1254	ND		0.030	0.20
Aroclor-1260	ND		0.040	0.20

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	29		10 - 120
Tetrachloro-m-xylene	54		21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: AMW-30(20160602)

Lab Sample ID: 240-65672-3 Date Sampled: 06/02/2016 1630
Client Matrix: Water Date Received: 06/04/2016 0935

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-234436	Instrument ID:	A2HP13
Prep Method:	3520C	Prep Batch:	240-233554	Initial Weight/Volume:	1050 mL
Dilution:	5.0			Final Weight/Volume:	2 mL
Analysis Date:	06/14/2016 2139			Injection Volume:	1 uL
Prep Date:	06/08/2016 0454			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor-1016	ND		0.24	0.95
Aroclor-1221	ND		0.43	0.95
Aroclor-1232	ND		0.33	0.95
Aroclor-1242	ND		0.29	0.95
Aroclor-1248	ND		0.24	0.95
Aroclor-1254	ND		0.14	0.95
Aroclor-1260	ND		0.19	0.95

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	27		10 - 120
Tetrachloro-m-xylene	16	X	21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: AMW-14(20160602)

Lab Sample ID: 240-65672-1 Date Sampled: 06/02/2016 1150
Client Matrix: Water Date Received: 06/04/2016 0935

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-233553	Lab File ID:	P14R061428.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 0016			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	1.9		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: AMW-30(20160602)

Lab Sample ID: 240-65672-3 Date Sampled: 06/02/2016 1630
Client Matrix: Water Date Received: 06/04/2016 0935

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-233553	Lab File ID:	P14R061429.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 0043			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.72		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: AMW-14(20160602)

Lab Sample ID: 240-65672-1 Date Sampled: 06/02/2016 1150
Client Matrix: Water Date Received: 06/04/2016 0935

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-233879	Instrument ID:	I12
Prep Method:	3005A	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/10/2016 0016			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	210		2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	13		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	110000		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	3400		25	100
Potassium	2700	J	70	5000
Magnesium	22000		230	5000
Manganese	690		5.1	15
Sodium	130000	B	330	5000
Nickel	2.1	J	1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-233843	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1246			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.16	J B	0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Client Sample ID: AMW-30(20160602)

Lab Sample ID: 240-65672-3 Date Sampled: 06/02/2016 1630
Client Matrix: Water Date Received: 06/04/2016 0935

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-233879	Instrument ID:	I12
Prep Method:	3005A	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/10/2016 0020			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	54	J	2.4	200
Aluminum	29000		40	200
Cadmium	1.0	J	0.29	5.0
Chromium	8.6	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	3.7	J	0.21	5.0
Lead	ND		1.9	3.0
Calcium	120000		710	5000
Selenium	ND		5.1	15
Cobalt	69		0.84	7.0
Copper	190		3.9	25
Iron	3000		25	100
Potassium	13000		70	5000
Magnesium	45000		230	5000
Manganese	1100		5.1	15
Sodium	30000	B	330	5000
Nickel	410		1.6	40
Antimony	ND		3.1	10
Thallium	5.1	J	2.1	10
Vanadium	ND		4.4	10
Zinc	190		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-233843	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1248			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.12	J B	0.090	0.20

General Chemistry

Client Sample ID: **AMW-14(20160602)**

Lab Sample ID: 240-65672-1 Date Sampled: 06/02/2016 1150
Client Matrix: Water Date Received: 06/04/2016 0935

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-233717 Analysis Date: 06/08/2016 1634
Prep Batch: 240-233692 Prep Date: 06/08/2016 1340

General Chemistry

Client Sample ID: **AMW-30(20160602)**

Lab Sample ID: 240-65672-3 Date Sampled: 06/02/2016 1630
Client Matrix: Water Date Received: 06/04/2016 0935

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-233717 Analysis Date: 06/08/2016 1614
Prep Batch: 240-233692 Prep Date: 06/08/2016 1340

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Lab Section	Qualifier	Description
GC/MS VOA		
	*	LCS or LCSD is outside acceptance limits.
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	X	Surrogate is outside control limits
Metals		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-234233					
LCS 240-234233/4	Lab Control Sample	T	Water	8260B	
MB 240-234233/6	Method Blank	T	Water	8260B	
240-65672-1	AMW-14(20160602)	T	Water	8260B	
240-65672-3	AMW-30(20160602)	T	Water	8260B	
240-65672-4	TRIP BLANK	T	Water	8260B	
240-65676-D-2 MS	Matrix Spike	T	Water	8260B	
240-65676-E-2 MSD	Matrix Spike Duplicate	T	Water	8260B	
GC/MS Semi VOA					
Prep Batch: 240-233595					
LCS 240-233595/19-A	Lab Control Sample	T	Water	3510C	
MB 240-233595/18-A	Method Blank	T	Water	3510C	
240-65672-1	AMW-14(20160602)	T	Water	3510C	
Analysis Batch:240-234180					
LCS 240-233595/19-A	Lab Control Sample	T	Water	8270C	240-233595
MB 240-233595/18-A	Method Blank	T	Water	8270C	240-233595
240-65672-1	AMW-14(20160602)	T	Water	8270C	240-233595
GC VOA					
Analysis Batch:240-233624					
LCS 240-233624/5	Lab Control Sample	T	Water	WI-GRO	
LCSD 240-233624/17	Lab Control Sample Duplicate	T	Water	WI-GRO	
MB 240-233624/4	Method Blank	T	Water	WI-GRO	
240-65672-1	AMW-14(20160602)	T	Water	WI-GRO	
Analysis Batch:240-234161					
LCS 240-234161/5	Lab Control Sample	T	Water	WI-GRO	
LCSD 240-234161/22	Lab Control Sample Duplicate	T	Water	WI-GRO	
MB 240-234161/4	Method Blank	T	Water	WI-GRO	
240-65672-3	AMW-30(20160602)	T	Water	WI-GRO	
240-65672-4	TRIP BLANK	T	Water	WI-GRO	

Report Basis
T = Total

Report Basis
T = Total

Report Basis
T = Total

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Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-233553					
LCS 240-233553/9-A	Lab Control Sample	T	Water	3520C	
LCSD 240-233553/10-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 240-233553/8-A	Method Blank	T	Water	3520C	
240-65672-1	AMW-14(20160602)	T	Water	3520C	
240-65672-3	AMW-30(20160602)	T	Water	3520C	
Prep Batch: 240-233554					
LCS 240-233554/9-A	Lab Control Sample	T	Water	3520C	
MB 240-233554/8-A	Method Blank	T	Water	3520C	
240-65672-1	AMW-14(20160602)	T	Water	3520C	
240-65672-3	AMW-30(20160602)	T	Water	3520C	
Analysis Batch:240-233931					
LCS 240-233554/9-A	Lab Control Sample	T	Water	8082	240-233554
MB 240-233554/8-A	Method Blank	T	Water	8082	240-233554
240-65672-1	AMW-14(20160602)	T	Water	8082	240-233554
Analysis Batch:240-234430					
LCS 240-233553/9-A	Lab Control Sample	T	Water	WI-DRO	240-233553
LCSD 240-233553/10-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-233553
MB 240-233553/8-A	Method Blank	T	Water	WI-DRO	240-233553
240-65672-1	AMW-14(20160602)	T	Water	WI-DRO	240-233553
240-65672-3	AMW-30(20160602)	T	Water	WI-DRO	240-233553
Analysis Batch:240-234436					
240-65672-3	AMW-30(20160602)	T	Water	8082	240-233554

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-233638					
LCS 240-233638/2-A	Lab Control Sample	R	Water	3005A	
MB 240-233638/1-A	Method Blank	R	Water	3005A	
240-65671-H-1-B MS	Matrix Spike	R	Water	3005A	
240-65671-H-1-C MSD	Matrix Spike Duplicate	R	Water	3005A	
240-65672-1	AMW-14(20160602)	D	Water	3005A	
240-65672-3	AMW-30(20160602)	D	Water	3005A	
Prep Batch: 240-233645					
LCS 240-233645/2-A	Lab Control Sample	T	Water	7470A	
MB 240-233645/1-A	Method Blank	T	Water	7470A	
190-10782-B-1-E MS	Matrix Spike	T	Water	7470A	
190-10782-B-1-F MSD	Matrix Spike Duplicate	T	Water	7470A	
240-65672-1	AMW-14(20160602)	D	Water	7470A	
240-65672-3	AMW-30(20160602)	D	Water	7470A	
Analysis Batch:240-233843					
LCS 240-233645/2-A	Lab Control Sample	T	Water	7470A	240-233645
MB 240-233645/1-A	Method Blank	T	Water	7470A	240-233645
190-10782-B-1-E MS	Matrix Spike	T	Water	7470A	240-233645
190-10782-B-1-F MSD	Matrix Spike Duplicate	T	Water	7470A	240-233645
240-65672-1	AMW-14(20160602)	D	Water	7470A	240-233645
240-65672-3	AMW-30(20160602)	D	Water	7470A	240-233645
Analysis Batch:240-233879					
LCS 240-233638/2-A	Lab Control Sample	R	Water	6010B	240-233638
MB 240-233638/1-A	Method Blank	R	Water	6010B	240-233638
240-65671-H-1-B MS	Matrix Spike	R	Water	6010B	240-233638
240-65671-H-1-C MSD	Matrix Spike Duplicate	R	Water	6010B	240-233638
240-65672-1	AMW-14(20160602)	D	Water	6010B	240-233638
240-65672-3	AMW-30(20160602)	D	Water	6010B	240-233638

Report Basis
D = Dissolved
R = Total Recoverable
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 240-233692					
LCS 240-233692/2-A	Lab Control Sample	T	Water	9012A	
MB 240-233692/1-A	Method Blank	T	Water	9012A	
190-10763-E-2-B MS	Matrix Spike	T	Water	9012A	
190-10763-E-2-C MSD	Matrix Spike Duplicate	T	Water	9012A	
240-65672-1	AMW-14(20160602)	T	Water	9012A	
240-65672-3	AMW-30(20160602)	T	Water	9012A	
Analysis Batch:240-233717					
LCS 240-233692/2-A	Lab Control Sample	T	Water	9012A	240-233692
MB 240-233692/1-A	Method Blank	T	Water	9012A	240-233692
190-10763-E-2-B MS	Matrix Spike	T	Water	9012A	240-233692
190-10763-E-2-C MSD	Matrix Spike Duplicate	T	Water	9012A	240-233692
240-65672-1	AMW-14(20160602)	T	Water	9012A	240-233692
240-65672-3	AMW-30(20160602)	T	Water	9012A	240-233692

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-65672-1	AMW-14(20160602)	109	92	83	97
240-65672-3	AMW-30(20160602)	105	83	82	95
240-65672-4	TRIP BLANK	106	81	82	99
MB 240-234233/6		107	81	82	96
LCS 240-234233/4		100	92	86	98
240-65676-D-2 MS		105	94	86	99
240-65676-E-2 MSD		101	90	83	98

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	78-125
BFB = 4-Bromofluorobenzene (Surr)	61-120
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	79-120

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-65672-1	AMW-14(20160602)	70	26	91	71	16	65
MB 240-233595/18-A		78	55	86	85	39	98
LCS 240-233595/19-A		76	48	92	86	34	90

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	42-120
2FP = 2-Fluorophenol (Surr)	10-120
TBP = 2,4,6-Tribromophenol (Surr)	35-125
NBZ = Nitrobenzene-d5 (Surr)	36-120
PHL = Phenol-d5 (Surr)	10-120
TPH = Terphenyl-d14 (Surr)	17-120

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
240-65672-1	AMW-14(20160602)	29	54
240-65672-3	AMW-30(20160602)	27	16X
MB 240-233554/8-A		55	64
LCS 240-233554/9-A		45	61

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	10-120
TCX = Tetrachloro-m-xylene	21-120

Method Blank - Batch: 240-234233

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-234233/6	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2745.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1316	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1316				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Method Blank - Batch: 240-234233

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-234233/6	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2745.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1316	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1316				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	2.0
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107	78 - 125
4-Bromofluorobenzene (Surr)	81	61 - 120
Toluene-d8 (Surr)	82	80 - 120
Dibromofluoromethane (Surr)	96	79 - 120

Lab Control Sample - Batch: 240-234233

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-234233/4	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2742.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1209	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1209				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	10.5	105	80 - 120	
1,1,1-Trichloroethane	10.0	11.1	111	77 - 123	
1,1,2,2-Tetrachloroethane	10.0	7.94	79	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.3	113	67 - 138	
1,1,2-Trichloroethane	10.0	9.21	92	80 - 120	
1,1-Dichloroethane	10.0	9.09	91	79 - 125	
1,1-Dichloroethene	10.0	9.73	97	76 - 124	
1,1-Dichloropropene	10.0	9.75	98	80 - 128	
1,2,3-Trichlorobenzene	10.0	9.60	96	66 - 120	
1,2,3-Trichloropropane	10.0	9.35	93	72 - 126	
1,2,4-Trichlorobenzene	10.0	8.61	86	61 - 120	
1,2,4-Trimethylbenzene	10.0	9.11	91	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	9.39	94	50 - 132	
1,2-Dichlorobenzene	10.0	9.10	91	79 - 120	
1,2-Dichloroethane	10.0	11.3	113	80 - 120	
1,2-Dichloropropane	10.0	8.86	89	78 - 124	
1,3,5-Trimethylbenzene	10.0	9.31	93	77 - 120	
1,3-Dichlorobenzene	10.0	9.21	92	79 - 120	
1,3-Dichloropropane	10.0	8.54	85	80 - 120	
1,4-Dichlorobenzene	10.0	9.26	93	79 - 120	
Allyl chloride	10.0	9.39	94	69 - 120	
2,2-Dichloropropane	10.0	10.3	103	71 - 122	
2-Chlorotoluene	10.0	9.01	90	80 - 120	
2-Hexanone	20.0	17.3	87	55 - 141	
Bromobenzene	10.0	9.43	94	80 - 120	
Bromochloromethane	10.0	10.7	107	80 - 120	
4-Chlorotoluene	10.0	8.80	88	80 - 120	
p-Isopropyltoluene	10.0	9.30	93	77 - 120	
Acetone	20.0	16.6	83	34 - 148	
Benzene	10.0	8.99	90	80 - 120	
Bromoform	10.0	12.6	126	56 - 122	*
Bromomethane	10.0	10.2	102	38 - 132	
Carbon disulfide	10.0	8.65	86	65 - 144	
Carbon tetrachloride	10.0	12.5	125	77 - 131	
Chlorobenzene	10.0	9.22	92	80 - 120	
Chloroethane	10.0	8.26	83	36 - 126	
Chloroform	10.0	10.3	103	80 - 120	
Chloromethane	10.0	7.70	77	48 - 133	
cis-1,2-Dichloroethene	10.0	9.85	99	79 - 120	
cis-1,3-Dichloropropene	10.0	9.69	97	74 - 126	
Cyclohexane	10.0	8.64	86	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Lab Control Sample - Batch: 240-234233

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-234233/4	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2742.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1209	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1209				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	9.67	97	62 - 120	
Dibromomethane	10.0	10.2	102	80 - 120	
Bromodichloromethane	10.0	10.9	109	80 - 120	
Dichlorodifluoromethane	10.0	9.05	90	23 - 136	
Dichlorofluoromethane	10.0	10.7	107	40 - 160	
Ethyl ether	10.0	8.95	89	53 - 135	
Ethylbenzene	10.0	9.38	94	80 - 120	
1,2-Dibromoethane	10.0	10.1	101	80 - 120	
Naphthalene	10.0	8.42	84	53 - 121	
m-Xylene & p-Xylene	10.0	8.91	89	80 - 120	
n-Butylbenzene	10.0	8.21	82	74 - 120	
Isopropylbenzene	10.0	9.92	99	77 - 120	
Methyl acetate	50.0	43.8	88	67 - 131	
N-Propylbenzene	10.0	9.43	94	79 - 123	
2-Butanone (MEK)	20.0	18.4	92	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	18.1	91	64 - 135	
sec-Butylbenzene	10.0	8.85	89	77 - 120	
Methyl tert butyl ether	10.0	9.80	98	69 - 121	
Methylene Chloride	10.0	10.0	100	77 - 129	
o-Xylene	10.0	9.57	96	80 - 120	
Styrene	10.0	9.94	99	76 - 122	
tert-Butylbenzene	10.0	9.23	92	77 - 121	
Tetrachloroethene	10.0	11.0	110	78 - 121	
Tetrahydrofuran	20.0	17.3	86	61 - 136	
Toluene	10.0	8.78	88	80 - 120	
trans-1,2-Dichloroethene	10.0	10.2	102	80 - 124	
trans-1,3-Dichloropropene	10.0	7.89	79	75 - 131	
Trichloroethene	10.0	10.8	108	80 - 121	
Trichlorofluoromethane	10.0	12.3	123	61 - 133	
Vinyl chloride	10.0	8.76	88	52 - 121	
Methylcyclohexane	10.0	9.26	93	61 - 134	
Chlorodibromomethane	10.0	10.4	104	74 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100	78 - 125
4-Bromofluorobenzene (Surr)	92	61 - 120
Toluene-d8 (Surr)	86	80 - 120
Dibromofluoromethane (Surr)	98	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234233

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65676-D-2 MS	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2766.D
Dilution:	8.33	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2153			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2153				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65676-E-2 MSD	Analysis Batch:	240-234233	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2767.D
Dilution:	8.33	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2216			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2216				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,2-Trichloroethane	91	88	72 - 125	4	19		
1,1-Dichloroethene	97	94	67 - 124	3	24		
1,2-Dichloroethane	117	111	74 - 125	5	24		
Benzene	91	90	73 - 121	1	13		
cis-1,2-Dichloroethene	97	93	66 - 124	2	22		
Tetrachloroethene	109	105	59 - 125	4	20		
Toluene	91	87	72 - 122	4	15		
Trichloroethene	103	91	61 - 129	3	14	E	E
Vinyl chloride	82	82	44 - 122	0	35		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	105	101	78 - 125
4-Bromofluorobenzene (Surr)	94	90	61 - 120
Toluene-d8 (Surr)	86	83	80 - 120
Dibromofluoromethane (Surr)	99	98	79 - 120

Method Blank - Batch: 240-233595

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-233595/18-A	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-233595	Lab File ID:	60613011.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/13/2016 1155	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	ND		0.044	0.20
Acenaphthylene	ND		0.048	0.20
Acetophenone	ND		0.34	1.0
Anthracene	ND		0.088	0.20
Atrazine	ND		0.34	1.0
Benzaldehyde	ND		0.39	1.0
Benzo[a]anthracene	ND		0.030	0.20
Benzo[b]fluoranthene	ND		0.039	0.20
Benzo[k]fluoranthene	ND		0.045	0.20
Benzo[g,h,i]perylene	ND		0.046	0.20
Benzo[a]pyrene	ND		0.051	0.20
Butyl benzyl phthalate	ND		0.26	2.0
1,1'-Biphenyl	ND		0.13	1.0
Bis(2-chloroethoxy)methane	ND		0.32	1.0
Bis(2-chloroethyl)ether	ND		0.10	1.0
Bis(2-ethylhexyl) phthalate	ND		1.7	5.0
4-Bromophenyl phenyl ether	ND		0.22	2.0
Caprolactam	ND		0.20	5.0
Carbazole	ND		0.28	1.0
4-Chloroaniline	ND		0.21	2.0
4-Chloro-3-methylphenol	ND		0.21	2.0
2-Chloronaphthalene	ND		0.10	1.0
2-Chlorophenol	ND		0.29	1.0
4-Chlorophenyl phenyl ether	ND		0.30	2.0
Chrysene	ND		0.050	0.20
2-Methylnaphthalene	ND		0.090	0.20
3 & 4 Methylphenol	ND		0.80	2.0
Dibenz(a,h)anthracene	ND		0.045	0.20
Dibenzofuran	ND		0.020	1.0
3,3'-Dichlorobenzidine	ND		0.37	5.0
2,4-Dichlorophenol	ND		0.19	2.0
Diethyl phthalate	ND		0.60	2.0
2,4-Dimethylphenol	ND		0.25	2.0
Dimethyl phthalate	ND		0.29	2.0
4,6-Dinitro-2-methylphenol	ND		2.4	5.0
2,4-Dinitrophenol	ND		0.32	5.0
2,4-Dinitrotoluene	ND		0.25	5.0
Di-n-butyl phthalate	ND		1.7	5.0
Di-n-octyl phthalate	ND		0.23	2.0
Fluoranthene	ND		0.045	0.20
Fluorene	ND		0.041	0.20
Hexachlorobenzene	ND		0.085	0.20
Hexachlorobutadiene	ND		0.27	1.0
Hexachlorocyclopentadiene	ND		0.24	10
Hexachloroethane	ND		0.19	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Method Blank - Batch: 240-233595

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-233595/18-A	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-233595	Lab File ID:	60613011.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/13/2016 1155	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Indeno[1,2,3-cd]pyrene	ND		0.043	0.20
Isophorone	0.285	J	0.27	1.0
2-Methylphenol	ND		0.17	1.0
Naphthalene	ND		0.063	0.20
2-Nitroaniline	ND		0.21	2.0
3-Nitroaniline	ND		0.28	2.0
4-Nitroaniline	ND		0.22	2.0
Nitrobenzene	ND		0.040	1.0
2-Nitrophenol	ND		0.28	2.0
4-Nitrophenol	ND		0.29	5.0
N-Nitrosodiphenylamine	ND		0.31	1.0
N-Nitrosodi-n-propylamine	ND		0.24	1.0
2,2'-oxybis[1-chloropropane]	ND		0.40	1.0
Pentachlorophenol	ND		0.27	5.0
Phenanthrene	ND		0.062	0.20
Phenol	ND		0.60	1.0
Pyrene	ND		0.042	0.20
2,4,5-Trichlorophenol	ND		0.30	5.0
2,4,6-Trichlorophenol	ND		0.24	5.0
2,6-Dinitrotoluene	ND		0.80	5.0

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	78	42 - 120
2-Fluorophenol (Surr)	55	10 - 120
2,4,6-Tribromophenol (Surr)	86	35 - 125
Nitrobenzene-d5 (Surr)	85	36 - 120
Phenol-d5 (Surr)	39	10 - 120
Terphenyl-d14 (Surr)	98	17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Lab Control Sample - Batch: 240-233595

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-233595/19-A	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-233595	Lab File ID:	60613012.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/13/2016 1220	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	20.0	18.4	92	57 - 120	
Acenaphthylene	20.0	15.5	77	55 - 120	
Acetophenone	20.0	16.2	81	60 - 120	
Anthracene	20.0	16.4	82	58 - 120	
Atrazine	40.0	41.2	103	61 - 132	
Benzaldehyde	40.0	33.2	83	60 - 120	
Benzo[a]anthracene	20.0	16.8	84	59 - 120	
Benzo[b]fluoranthene	20.0	19.7	98	62 - 120	
Benzo[k]fluoranthene	20.0	20.7	103	57 - 120	
Benzo[g,h,i]perylene	20.0	19.9	100	59 - 120	
Benzo[a]pyrene	20.0	19.2	96	60 - 120	
Butyl benzyl phthalate	20.0	18.4	92	61 - 120	
1,1'-Biphenyl	20.0	16.0	80	58 - 120	
Bis(2-chloroethoxy)methane	20.0	16.3	82	61 - 120	
Bis(2-chloroethyl)ether	20.0	14.9	74	55 - 120	
Bis(2-ethylhexyl) phthalate	20.0	17.6	88	62 - 123	
4-Bromophenyl phenyl ether	20.0	17.4	87	52 - 128	
Caprolactam	40.0	4.58	11	10 - 120	J
Carbazole	20.0	18.3	91	60 - 126	
4-Chloroaniline	20.0	3.07	15	10 - 120	
4-Chloro-3-methylphenol	20.0	16.6	83	59 - 120	
2-Chloronaphthalene	20.0	15.4	77	56 - 120	
2-Chlorophenol	20.0	14.7	74	57 - 120	
4-Chlorophenyl phenyl ether	20.0	16.2	81	58 - 120	
Chrysene	20.0	16.9	84	61 - 120	
2-Methylnaphthalene	20.0	15.7	79	58 - 120	
3 & 4 Methylphenol	20.0	12.4	62	46 - 120	
Dibenz(a,h)anthracene	20.0	20.5	102	61 - 120	
Dibenzofuran	20.0	16.3	82	58 - 120	
3,3'-Dichlorobenzidine	40.0	30.4	76	10 - 134	
2,4-Dichlorophenol	20.0	16.6	83	57 - 120	
Diethyl phthalate	20.0	17.0	85	62 - 120	
2,4-Dimethylphenol	20.0	14.5	73	55 - 120	
Dimethyl phthalate	20.0	17.2	86	62 - 120	
4,6-Dinitro-2-methylphenol	40.0	31.7	79	35 - 140	
2,4-Dinitrophenol	40.0	25.1	63	18 - 127	
2,4-Dinitrotoluene	20.0	17.9	90	65 - 120	
Di-n-butyl phthalate	20.0	20.3	101	59 - 128	
Di-n-octyl phthalate	20.0	19.9	100	58 - 120	
Fluoranthene	20.0	18.7	93	57 - 123	
Fluorene	20.0	15.6	78	56 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Lab Control Sample - Batch: 240-233595

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-233595/19-A	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-233595	Lab File ID:	60613012.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/13/2016 1220	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobenzene	20.0	16.7	83	47 - 127	
Hexachlorobutadiene	20.0	16.3	81	50 - 120	
Hexachlorocyclopentadiene	20.0	12.7	63	25 - 120	
Hexachloroethane	20.0	15.0	75	50 - 120	
Indeno[1,2,3-cd]pyrene	20.0	20.5	102	61 - 120	
Isophorone	20.0	16.7	84	61 - 120	
2-Methylphenol	20.0	13.7	69	52 - 120	
Naphthalene	20.0	15.1	75	54 - 120	
2-Nitroaniline	20.0	19.2	96	56 - 123	
3-Nitroaniline	20.0	15.3	77	36 - 120	
4-Nitroaniline	20.0	17.5	88	51 - 122	
Nitrobenzene	20.0	17.8	89	58 - 120	
2-Nitrophenol	20.0	18.3	91	62 - 120	
4-Nitrophenol	40.0	18.4	46	16 - 120	
N-Nitrosodiphenylamine	20.0	17.3	86	54 - 122	
N-Nitrosodi-n-propylamine	20.0	16.1	81	60 - 120	
2,2'-oxybis[1-chloropropane]	20.0	16.4	82	46 - 120	
Pentachlorophenol	40.0	33.9	85	35 - 121	
Phenanthrene	20.0	16.6	83	58 - 120	
Phenol	20.0	6.90	34	16 - 120	
Pyrene	20.0	19.1	95	60 - 120	
2,4,5-Trichlorophenol	20.0	17.2	86	57 - 120	
2,4,6-Trichlorophenol	20.0	17.3	86	60 - 120	
2,6-Dinitrotoluene	20.0	17.4	87	65 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	76	42 - 120
2-Fluorophenol (Surr)	48	10 - 120
2,4,6-Tribromophenol (Surr)	92	35 - 125
Nitrobenzene-d5 (Surr)	86	36 - 120
Phenol-d5 (Surr)	34	10 - 120
Terphenyl-d14 (Surr)	90	17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Method Blank - Batch: 240-233624 **Method: WI-GRO**
Preparation: 5030B

Lab Sample ID:	MB 240-233624/4	Analysis Batch:	240-233624	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0060804.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1311	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1311			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-233624 **Method: WI-GRO**
Preparation: 5030B

LCS Lab Sample ID:	LCS 240-233624/5	Analysis Batch:	240-233624	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0060805.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1351	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1351			Injection Volume:	5 mL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-233624/17	Analysis Batch:	240-233624	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0060817.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 2153	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 2153			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	100	98	80 - 120	2	20		

Method Blank - Batch: 240-234161

Method: WI-GRO
Preparation: 5030B

Lab Sample ID:	MB 240-234161/4	Analysis Batch:	240-234161	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061304.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 0721	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0721			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-234161

Method: WI-GRO
Preparation: 5030B

LCS Lab Sample ID:	LCS 240-234161/5	Analysis Batch:	240-234161	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061305.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 0801	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0801			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-234161/22	Analysis Batch:	240-234161	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061322.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1931	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1931			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	102	95	80 - 120	7	20		

Method Blank - Batch: 240-233554

Method: 8082
Preparation: 3520C

Lab Sample ID:	MB 240-233554/8-A	Analysis Batch:	240-233931	Instrument ID:	A2HP13
Client Matrix:	Water	Prep Batch:	240-233554	Lab File ID:	SIG10610016.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/10/2016 1159	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0454			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor-1016	ND		0.050	0.20
Aroclor-1221	ND		0.090	0.20
Aroclor-1232	ND		0.070	0.20
Aroclor-1242	ND		0.060	0.20
Aroclor-1248	ND		0.050	0.20
Aroclor-1254	ND		0.030	0.20
Aroclor-1260	ND		0.040	0.20

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	55	10 - 120
Tetrachloro-m-xylene	64	21 - 120

Lab Control Sample - Batch: 240-233554

Method: 8082
Preparation: 3520C

Lab Sample ID:	LCS 240-233554/9-A	Analysis Batch:	240-233931	Instrument ID:	A2HP13
Client Matrix:	Water	Prep Batch:	240-233554	Lab File ID:	SIG10610017.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/10/2016 1218	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0454			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor-1016	2.50	1.54	61	32 - 120	
Aroclor-1260	2.50	1.51	60	36 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	45	10 - 120
Tetrachloro-m-xylene	61	21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Method Blank - Batch: 240-233553 **Method: WI-DRO**
Preparation: 3520C

Lab Sample ID:	MB 240-233553/8-A	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-233553	Lab File ID:	P14R061426.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/14/2016 2321	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.050	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-233553 **Method: WI-DRO**
Preparation: 3520C

LCS Lab Sample ID:	LCS 240-233553/9-A	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-233553	Lab File ID:	P14R061427.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/14/2016 2348	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-233553/10-A	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-233553	Lab File ID:	P14R061434.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 0300	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	95	84	75 - 115	13	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Method Blank - Batch: 240-233638

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-233638/1-A	Analysis Batch:	240-233879	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 2303	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	ND		2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	ND		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	ND		25	100
Potassium	ND		70	5000
Magnesium	ND		230	5000
Manganese	ND		5.1	15
Sodium	875	J	330	5000
Nickel	ND		1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Lab Control Sample - Batch: 240-233638

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-233638/2-A	Analysis Batch:	240-233879	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 2307	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1850	92	80 - 120	
Aluminum	2000	1870	94	80 - 120	
Cadmium	50.0	50.7	101	80 - 120	
Chromium	200	185	92	80 - 120	
Silver	50.0	48.4	97	80 - 120	
Arsenic	2000	2010	101	80 - 120	
Beryllium	50.0	47.3	95	80 - 120	
Lead	500	480	96	80 - 120	
Calcium	50000	46900	94	80 - 120	
Selenium	2000	2060	103	80 - 120	
Cobalt	500	484	97	80 - 120	
Copper	250	238	95	80 - 120	
Iron	1000	959	96	80 - 120	
Potassium	50000	46500	93	80 - 120	
Magnesium	50000	46500	93	80 - 120	
Manganese	500	474	95	80 - 120	
Sodium	50000	45500	91	80 - 120	
Nickel	500	494	99	80 - 120	
Antimony	500	496	99	80 - 120	
Thallium	2000	1960	98	80 - 120	
Vanadium	500	454	91	80 - 120	
Zinc	500	509	102	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233638

Method: 6010B
Preparation: 3005A
Total Recoverable

MS Lab Sample ID: 240-65671-H-1-B MS
Client Matrix: Water
Dilution: 1.0
Analysis Date: 06/09/2016 2343
Prep Date: 06/08/2016 1146
Leach Date: N/A

Analysis Batch: 240-233879
Prep Batch: 240-233638
Leach Batch: N/A

Instrument ID: I12
Lab File ID: I12060916A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-65671-H-1-C MSD
Client Matrix: Water
Dilution: 1.0
Analysis Date: 06/09/2016 2347
Prep Date: 06/08/2016 1146
Leach Date: N/A

Analysis Batch: 240-233879
Prep Batch: 240-233638
Leach Batch: N/A

Instrument ID: I12
Lab File ID: I12060916A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	98	99	75 - 125	1	20		
Aluminum	101	101	75 - 125	0	20		
Cadmium	111	111	75 - 125	0	20		
Chromium	97	98	75 - 125	0	20		
Silver	106	106	75 - 125	0	20		
Arsenic	112	113	75 - 125	1	20		
Beryllium	99	100	75 - 125	1	20		
Lead	96	97	75 - 125	1	20		
Calcium	94	95	75 - 125	0	20		
Selenium	112	114	75 - 125	1	20		
Cobalt	106	106	75 - 125	1	20		
Copper	104	104	75 - 125	0	20		
Iron	99	101	75 - 125	1	20		
Potassium	104	106	75 - 125	1	20		
Magnesium	96	97	75 - 125	0	20		
Manganese	100	100	75 - 125	0	20		
Nickel	107	108	75 - 125	1	20		
Antimony	108	110	75 - 125	2	20		
Thallium	100	100	75 - 125	1	20		
Vanadium	97	98	75 - 125	2	20		
Zinc	112	113	75 - 125	0	20		

Method Blank - Batch: 240-233645

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-233645/1-A	Analysis Batch:	240-233843	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1220	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0964	J	0.090	0.20

Lab Control Sample - Batch: 240-233645

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-233645/2-A	Analysis Batch:	240-233843	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1222	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	4.94	99	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233645

Method: 7470A
Preparation: 7470A

MS Lab Sample ID:	190-10782-B-1-E MS	Analysis Batch:	240-233843	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1227			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				
Leach Date:	N/A				

MSD Lab Sample ID:	190-10782-B-1-F MSD	Analysis Batch:	240-233843	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1229			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	120	108	80 - 120	11	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Method Blank - Batch: 240-233692

Method: 9012A
Preparation: 9012A

Lab Sample ID:	MB 240-233692/1-A	Analysis Batch:	240-233717	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233692	Lab File ID:	060816 CN Waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2016 1629	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/08/2016 1340				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cyanide, Total	ND		0.0050	0.010

Lab Control Sample - Batch: 240-233692

Method: 9012A
Preparation: 9012A

Lab Sample ID:	LCS 240-233692/2-A	Analysis Batch:	240-233717	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233692	Lab File ID:	060816 CN Waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2016 1733	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/08/2016 1340				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0420	0.0431	103	69 - 118	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233692

Method: 9012A
Preparation: 9012A

MS Lab Sample ID:	190-10763-E-2-B MS	Analysis Batch:	240-233717	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233692	Lab File ID:	060816 CN Waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2016 1634			Final Weight/Volume:	25 mL
Prep Date:	06/08/2016 1340				
Leach Date:	N/A				

MSD Lab Sample ID:	190-10763-E-2-C MSD	Analysis Batch:	240-233717	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233692	Lab File ID:	060816 CN Waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2016 1634			Final Weight/Volume:	25 mL
Prep Date:	06/08/2016 1340				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Total	98	82	42 - 140	15	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65672-1

Method Reporting Limit Check - Batch: 240-233717

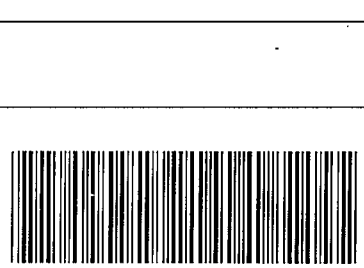
Method: 9012A
Preparation: N/A

Lab Sample ID:	MRL 240-233717/6	Analysis Batch:	240-233717	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	060816 CN Waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.0 mL
Analysis Date:	06/08/2016 1357	Units:	mg/L	Final Weight/Volume:	2.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0100	0.00951	95	70 - 130	J

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-65672 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

TestAmerica Canton
4101 Shuffel Street, N. W.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

2.8/C2.3
2.6/C2.1

Chain of Custody Record

119192

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/3/16	COC No:
Company Name: Arcadis	Tel/Fax:	Lab Contact: Denise Pohl	Carrier:	1 of 1 COCs
Address: 430 1st Ave N #720	Analysis Turnaround Time			Sampler: Adam Thorpe
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612 339 9434	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul, MN	☐ 2 days			Job / SDG No.: 240-66638
PO# MN000630.0002	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOC	SVOC	PCB	GRO	DRO	TAL Metals	Cyanide	Sample Specific Notes:
AMW-14 (20160602)	6/1/16	1150	G	W	14	Y	N	3	2	2	3	2	1	1	
AMW-15 (20160602)	6/1/16	1425	G	W	14	Y	N	3	2	2	3	2	1	1	
AMW-30 (20160602)	6/1/16	1630	G	W	14	Y	N	3	2	2	3	2	1	1	
Dup-02 (20160602)	6/1/16		G	W	14	Y	N	3	2	2	3	2	1	1	
Trip Blank															

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

	Company	Date/Time		Company	Date/Time
Relinquished by:	Arcadis	6/3/16 1445	Received by:	TA	6-3 1445
Relinquished by:	TA	6-3-16 1910	Received by:	JA	6-4-16 955
Relinquished by:			Received in Laboratory by:		

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 65672

Client Arcadis Site Name St. Paul

Cooler unpacked by: Ryan Henderson

Cooler Received on 6-4-16 Opened on 6-4-16

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # NOTE Foam Box Client Cooler Box Other multiple

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN# 48 (CF -1.9 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   IR GUN# 36 (CF -1.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   IR GUN# 18 (CF -0.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC559158
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Yes No
16. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM DJP Date 6/4/16 by HM via Verbal Voice Mail Other Email

Concerning #17

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Rec'd 1 cooler w/ ice - No Samples
Received 2 Coolers 6/4/16 w/ AMW-14 + AMW-15, T.B.
Missing coolers - Did not receive Samples!
AMW-15 / Dup-02 (all containers) - Still Missing. 6/7/16 AM
rec'd only 6-7-16 with Hightemps

18. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

Ref: SOP NC-SC-0005, Sample Receiving
L:\QAQC\QA Department\QA TARDIS\Document Control\Work Instructions\WI-NC-099X-011816 Cooler Receipt Form.doc djl

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # :** _____
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
TA No #	8	2.8	2.3	ICE
1	1	2.6	2.1	1
1	1	3.4	2.9	1
		↳ Cooler rec'd empty w/ice only - No Samples		
client	8	19.2	18.7	water
1	1			1

Coolers Rec'd 7

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-14(20160602)	240-65672-G-1	Plastic 250ml - with Sodium Hydro›	>12		
AMW-14(20160602)	240-65672-M-1	Amber Glass 1 liter - Hydrochloric	<2		
AMW-14(20160602)	240-65672-N-1	Amber Glass 1 liter - Hydrochloric	<2		
AMW-15(20160602)	240-65672-G-2	Plastic 250ml - with Sodium Hydro›	>12		
AMW-15(20160602)	240-65672-M-2	Amber Glass 1 liter - Hydrochloric	<2		
AMW-15(20160602)	240-65672-N-2	Amber Glass 1 liter - Hydrochloric	<2		
AMW-30(20160602)	240-65672-G-3	Plastic 250ml - with Sodium Hydro›	>12		
AMW-30(20160602)	240-65672-M-3	Amber Glass 1 liter - Hydrochloric	<2		
AMW-30(20160602)	240-65672-N-3	Amber Glass 1 liter - Hydrochloric	<2		

June 20, 2016

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000630.00002
Client project scope reference: Sample COC only was used to define project analytical requirements.
Laboratory: TestAmerica - North Canton
Laboratory submittal: 65672-1
Sample date: 2016-06-02 2016-06-01
Report received by CADENA: 2016-06-20
Initial Data Verification completed by CADENA: 2016-06-20

The following minor QC exceptions or missing information were noted:

MBK - METALS QC batch 233638 and 2233645 method blanks had detections below the RL for the following analytes: SODIUM, MERCURY. The following client sample results should be considered to be non-detect at the RL and qualified with UB flags: MERCURY - samples -001, -003.

TBK - GCMS VOC TRIP blanks had detections below the RL for the following analytes: ACETONE. The following client sample results should be considered to be non-detect at the RL and qualified with UB flags: ACETOEN - sample -003.

GCMS VOC QC batch 234233 LCS recoveries were outliers biased high for the following analytes: BROMOFORM. Associated client sample results were non-detect so qualification was not required based on these high bias QC outliers.

GCMS SVOC QC batch 233595 method blanks had detections below the RL for the following analytes: ISOPHORONE. Qualification of client sample results was not required based on these method blank detections.

WI-DRO and WI-GRO sample and QC results did not include surrogate recovery data. QC batches did not include MS/MSD recovery data.

PCB sample -003 surrogate recovery outliers did not result in qualification of client sample data.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

2 Water sample(s) were analyzed for GCMS VOC, GCMS SVOC, PCB, GC VOC, GC Other, Metals and General Chemistry parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JB	NON-DETECT AT THE CONCENTRATION REPORTED AND ESTIMATED
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
JUB	NON-DETECT AT THE REPORTING LIMIT AND ESTIMATED
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 65672-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Polychlorinated Biphenyls by GCECD	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)	Total & Amenable Cyanides
240656721	AMW-14(20160602)	6/2/2016	11:50:00	X	X	X	X	X	X	X	X
240656723	AMW-30(20160602)	6/2/2016	4:30:00	X		X	X	X	X	X	X
240656724	TRIP BLANK	6/1/2016	12:00:00	X			X				

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65672-1

		Sample Name:	AMW-14(20160602)				AMW-30(20160602)			
		Lab Sample ID:	240656721				240656723			
		Sample Date:	6/2/2016				6/2/2016			
	Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC										
	OSW-8260B									
	Acetone	67-64-1					1.0	10	ug/l	UB
Metals										
	OSW-7470A									
	Mercury - Dissolved	7439-97-6	0.16	0.20	ug/l	UB	0.12	0.20	ug/l	UB

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65672-1

		Sample Name:	AMW-14(20160602)				AMW-30(20160602)				TRIP BLANK			
		Lab Sample ID:	240656721				240656723				240656724			
		Sample Date:	6/2/2016				6/2/2016				6/1/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	1000	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	5000	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	5000	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	5000	ug/l	---	ND	10	ug/l	---	ND	5.0	ug/l	---
Acetone	67-64-1	ND	5000	ug/l	---	1.0	10	ug/l	UB	3.7	10	ug/l	J
Allyl chloride	107-05-1	ND	1000	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	1000	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethyl ether	60-29-7	ND	1000	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethylbenzene	100-41-4	2900	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	7100	1000	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	5000	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	2.0	ug/l	---
Methylcyclohexane	108-87-2	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	210	500	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	2200	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	500	ug/l	---	0.84	1.0	ug/l	J	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	2500	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	500	ug/l	---	34	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	500	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65672-1

		Sample Name:	AMW-14(20160602)				AMW-30(20160602)				TRIP BLANK			
		Lab Sample ID:	240656721				240656723				240656724			
		Sample Date:	6/2/2016				6/2/2016				6/1/2016			
Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC														
OSW-8270C														
1,1'-Biphenyl	92-52-4		ND	4.0	ug/l	---								
2,2'-oxybis[1-chloropropane]	108-60-1		ND	4.0	ug/l	---								
2,4,5-Trichlorophenol	95-95-4		ND	20	ug/l	---								
2,4,6-Trichlorophenol	88-06-2		ND	20	ug/l	---								
2,4-Dichlorophenol	120-83-2		ND	8.1	ug/l	---								
2,4-Dimethylphenol	105-67-9		10	8.1	ug/l	---								
2,4-Dinitrophenol	51-28-5		ND	20	ug/l	---								
2,4-Dinitrotoluene	121-14-2		ND	20	ug/l	---								
2,6-Dinitrotoluene	606-20-2		ND	20	ug/l	---								
2-Chloronaphthalene	91-58-7		ND	4.0	ug/l	---								
2-Chlorophenol	95-57-8		ND	4.0	ug/l	---								
2-Methylnaphthalene	91-57-6		ND	0.81	ug/l	---								
2-Methylphenol	95-48-7		ND	4.0	ug/l	---								
2-Nitroaniline	88-74-4		ND	8.1	ug/l	---								
2-Nitrophenol	88-75-5		ND	8.1	ug/l	---								
3 & 4 Methylphenol	65794-96-9		ND	8.1	ug/l	---								
3,3'-Dichlorobenzidine	91-94-1		ND	20	ug/l	---								
3-Nitroaniline	99-09-2		ND	8.1	ug/l	---								
4,6-Dinitro-2-methylphenol	534-52-1		ND	20	ug/l	---								
4-Bromophenyl phenyl ether	101-55-3		ND	8.1	ug/l	---								
4-Chloro-3-methylphenol	59-50-7		ND	8.1	ug/l	---								
4-Chloroaniline	106-47-8		ND	8.1	ug/l	---								
4-Chlorophenyl phenyl ether	7005-72-3		ND	8.1	ug/l	---								
4-Nitroaniline	100-01-6		ND	8.1	ug/l	---								
4-Nitrophenol	100-02-7		ND	20	ug/l	---								
Acenaphthene	83-32-9		ND	0.81	ug/l	---								
Acenaphthylene	208-96-8		ND	0.81	ug/l	---								
Acetophenone	98-86-2		ND	4.0	ug/l	---								
Anthracene	120-12-7		ND	0.81	ug/l	---								
Atrazine	1912-24-9		ND	4.0	ug/l	---								
Benzaldehyde	100-52-7		ND	4.0	ug/l	---								
Benzo[a]anthracene	56-55-3		ND	0.81	ug/l	---								
Benzo[a]pyrene	50-32-8		ND	0.81	ug/l	---								
Benzo[b]fluoranthene	205-99-2		ND	0.81	ug/l	---								
Benzo[g,h,i]perylene	191-24-2		ND	0.81	ug/l	---								
Benzo[k]fluoranthene	207-08-9		ND	0.81	ug/l	---								
Bis(2-chloroethoxy)methane	111-91-1		ND	4.0	ug/l	---								
Bis(2-chloroethyl)ether	111-44-4		ND	4.0	ug/l	---								
Bis(2-ethylhexyl) phthalate	117-81-7		ND	20	ug/l	---								
Butyl benzyl phthalate	85-68-7		ND	8.1	ug/l	---								
Caprolactam	105-60-2		ND	20	ug/l	---								
Carbazole	86-74-8		ND	4.0	ug/l	---								
Chrysene	218-01-9		ND	0.81	ug/l	---								
Di-n-butyl phthalate	84-74-2		ND	20	ug/l	---								
Di-n-octyl phthalate	117-84-0		ND	8.1	ug/l	---								
Dibenz(a,h)anthracene	53-70-3		ND	0.81	ug/l	---								
Dibenzofuran	132-64-9		ND	4.0	ug/l	---								
Diethyl phthalate	84-66-2		ND	8.1	ug/l	---								
Dimethyl phthalate	131-11-3		ND	8.1	ug/l	---								
Fluoranthene	206-44-0		ND	0.81	ug/l	---								
Fluorene	86-73-7		ND	0.81	ug/l	---								
Hexachlorobenzene	118-74-1		ND	0.81	ug/l	---								
Hexachlorobutadiene	87-68-3		ND	4.0	ug/l	---								
Hexachlorocyclopentadiene	77-47-4		ND	40	ug/l	---								
Hexachloroethane	67-72-1		ND	4.0	ug/l	---								
Indeno[1,2,3-cd]pyrene	193-39-5		ND	0.81	ug/l	---								
Isophorone	78-59-1		ND	4.0	ug/l	---								
N-Nitrosodi-n-propylamine	621-64-7		ND	4.0	ug/l	---								
N-Nitrosodiphenylamine	86-30-6		ND	4.0	ug/l	---								
Naphthalene	91-20-3		24	0.81	ug/l	---								
Nitrobenzene	98-95-3		ND	4.0	ug/l	---								
Pentachlorophenol	87-86-5		ND	20	ug/l	---								
Phenanthrene	85-01-8		ND	0.81	ug/l	---								
Phenol	108-95-2		ND	4.0	ug/l	---								
Pyrene	129-00-0		ND	0.81	ug/l	---								

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65672-1

		Sample Name:	AMW-14(20160602)				AMW-30(20160602)				TRIP BLANK			
		Lab Sample ID:	240656721				240656723				240656724			
		Sample Date:	6/2/2016				6/2/2016				6/1/2016			
				Report		Valid		Report		Valid		Report		Valid
	Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
Pest & PCB														
	OSW-8082													
	Aroclor-1016	12674-11-2	ND	0.20	ug/l	---	ND	0.95	ug/l	---				
	Aroclor-1221	11104-28-2	ND	0.20	ug/l	---	ND	0.95	ug/l	---				
	Aroclor-1232	11141-16-5	ND	0.20	ug/l	---	ND	0.95	ug/l	---				
	Aroclor-1242	53469-21-9	ND	0.20	ug/l	---	ND	0.95	ug/l	---				
	Aroclor-1248	12672-29-6	ND	0.20	ug/l	---	ND	0.95	ug/l	---				
	Aroclor-1254	11097-69-1	ND	0.20	ug/l	---	ND	0.95	ug/l	---				
	Aroclor-1260	11096-82-5	ND	0.20	ug/l	---	ND	0.95	ug/l	---				
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	13000	1000	ug/l	---	54	100	ug/l	J	ND	100	ug/l	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	1.9	0.095	mg/l	---	0.72	0.095	mg/l	---				
Metals														
	OSW-6010B													
	Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---	29000	200	ug/l	---				
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---				
	Arsenic - Dissolved	7440-38-2	13	10	ug/l	---	ND	10	ug/l	---				
	Barium - Dissolved	7440-39-3	210	200	ug/l	---	54	200	ug/l	J				
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---	3.7	5.0	ug/l	J				
	Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---	1.0	5.0	ug/l	J				
	Calcium - Dissolved	7440-70-2	110000	5000	ug/l	---	120000	5000	ug/l	---				
	Chromium - Dissolved	7440-47-3	ND	10	ug/l	---	8.6	10	ug/l	J				
	Cobalt - Dissolved	7440-48-4	ND	7.0	ug/l	---	69	7.0	ug/l	---				
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---	190	25	ug/l	---				
	Iron - Dissolved	7439-89-6	3400	100	ug/l	---	3000	100	ug/l	---				
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---				
	Magnesium - Dissolved	7439-95-4	22000	5000	ug/l	---	45000	5000	ug/l	---				
	Manganese - Dissolved	7439-96-5	690	15	ug/l	---	1100	15	ug/l	---				
	Nickel - Dissolved	7440-02-0	2.1	40	ug/l	J	410	40	ug/l	---				
	Potassium - Dissolved	7440-09-7	2700	5000	ug/l	J	13000	5000	ug/l	---				
	Selenium - Dissolved	7782-49-2	ND	15	ug/l	---	ND	15	ug/l	---				
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---				
	Sodium - Dissolved	7440-23-5	130000	5000	ug/l	---	30000	5000	ug/l	---				
	Thallium - Dissolved	7440-28-0	ND	10	ug/l	---	5.1	10	ug/l	J				
	Vanadium - Dissolved	7440-62-2	ND	10	ug/l	---	ND	10	ug/l	---				
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---	190	50	ug/l	---				
	OSW-7470A													
	Mercury - Dissolved	7439-97-6	0.16	0.20	ug/l	UB	0.12	0.20	ug/l	UB				
General Chemistry														
	OSW-9012A													
	Cyanide, Total	57-12-5	ND	0.010	mg/l	---	ND	0.010	mg/l	---				

ANALYTICAL REPORT

Job Number: 240-65681-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
6/17/2016 7:57 AM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
06/17/2016

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-65681-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/7/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.9º C and 1.5º C.

For sample AMW-08(20160603) (240-65681-2), due to limited volume for PCBs/SVOCs, client instructed the lab on 06/07/2016 (phone conversation) to proceed with SVOCs and they would collect additional sample for PCBs.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-29(20160603) (240-65681-1), AMW-08(20160603) (240-65681-2), AMW-28(20160603) (240-65681-3), DUP-04(20160603) (240-65681-4) and TRIP BLANK (240-65681-5) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/09/2016 and 06/13/2016.

Several analytes failed the recovery criteria high for LCS 240-234259/4. Refer to the QC report for details.

Several analytes failed the recovery criteria high for the MS of sample 240-65727-4 in batch 240-234259. Several analytes exceeded the RPD limit for the MSD of sample 240-65727-4 in batch 240-234259. Refer to the QC report for details.

Method(s) 8260B: The pH of the sample(s) was greater than 2. The samples were analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably, Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2.
AMW-29(20160603) (240-65681-1)

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-234259 recovered outside control limits for multiple analytes: These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Sample AMW-08(20160603) (240-65681-2) was analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/08/2016 and analyzed on 06/13/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Isophorone was detected in method blank MB 240-233595/18-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples AMW-29(20160603) (240-65681-1), AMW-08(20160603) (240-65681-2), AMW-28(20160603) (240-65681-3) and DUP-04(20160603) (240-65681-4) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/08/2016 and analyzed on 06/15/2016.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) mix : AMW-29(20160603) (240-65681-1), AMW-08(20160603) (240-65681-2), AMW-28(20160603) (240-65681-3) and DUP-04(20160603) (240-65681-4).

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-233553.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples AMW-29(20160603) (240-65681-1), AMW-08(20160603) (240-65681-2), AMW-28(20160603) (240-65681-3), DUP-04(20160603) (240-65681-4) and TRIP BLANK (240-65681-5) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were analyzed on 06/08/2016 and 06/13/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples AMW-29(20160603) (240-65681-1), AMW-28(20160603) (240-65681-3) and DUP-04(20160603) (240-65681-4) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 06/08/2016 and analyzed on 06/13/2016.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

Samples AMW-29(20160603) (240-65681-1)[20X], AMW-28(20160603) (240-65681-3)[20X] and DUP-04(20160603) (240-65681-4)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: AMW-29(20160603) (240-65681-1), AMW-28(20160603) (240-65681-3) and DUP-04(20160603) (240-65681-4). Reagents: 2564857, 2103099, 2283702

Method(s) 8082: The following samples were diluted due to the nature of the sample matrix: AMW-29(20160603) (240-65681-1), AMW-28(20160603) (240-65681-3) and DUP-04(20160603) (240-65681-4). Elevated reporting limits (RLs) are provided.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-233554.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP)

Samples AMW-29(20160603) (240-65681-1), AMW-08(20160603) (240-65681-2), AMW-28(20160603) (240-65681-3) and DUP-04(20160603) (240-65681-4) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/08/2016 and analyzed on 06/10/2016.

Sodium was detected in method blank MB 240-233638/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Method(s) 200.7 Rev 4.4, 6010B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: AMW-29(20160603) (240-65681-1), AMW-08(20160603) (240-65681-2), AMW-28(20160603) (240-65681-3) and DUP-04(20160603) (240-65681-4). The continuing calibration blanks and method blanks may not support the lower PQL.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Samples AMW-29(20160603) (240-65681-1), AMW-08(20160603) (240-65681-2), AMW-28(20160603) (240-65681-3) and DUP-04(20160603) (240-65681-4) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 06/08/2016 and analyzed on 06/09/2016.

Mercury was detected in method blank MB 240-233645/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL CYANIDE

Samples AMW-29(20160603) (240-65681-1), AMW-08(20160603) (240-65681-2), AMW-28(20160603) (240-65681-3) and DUP-04(20160603) (240-65681-4) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 06/08/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65681-1	**AMW-29(20160603)**					
Trichloroethene		9.1		1.0	ug/L	8260B
WI Gasoline Range Organics (C6-C10)		38	J	100	ug/L	WI-GRO
WI Diesel Range Organics (C10-C28)		0.94		0.095	mg/L	WI-DRO
Cyanide, Total		0.0065	J	0.010	mg/L	9012A
Dissolved						
Barium		88	J	200	ug/L	6010B
Aluminum		13000		200	ug/L	6010B
Cadmium		1.1	J	5.0	ug/L	6010B
Chromium		1.2	J	10	ug/L	6010B
Beryllium		1.6	J	5.0	ug/L	6010B
Calcium		61000		5000	ug/L	6010B
Cobalt		75		7.0	ug/L	6010B
Copper		40		25	ug/L	6010B
Iron		1100		100	ug/L	6010B
Potassium		5800		5000	ug/L	6010B
Magnesium		26000		5000	ug/L	6010B
Manganese		1400		15	ug/L	6010B
Sodium		18000	B	5000	ug/L	6010B
Nickel		320		40	ug/L	6010B
Zinc		380		50	ug/L	6010B
240-65681-2	**AMW-08(20160603)**					
Acetone		2.6	J	10	ug/L	8260B
Carbon disulfide		0.59	J	1.0	ug/L	8260B
Toluene		0.45	J	1.0	ug/L	8260B
Trichloroethene		5.4		1.0	ug/L	8260B
Bis(2-ethylhexyl) phthalate		2.6	J	4.9	ug/L	8270C
WI Diesel Range Organics (C10-C28)		0.30		0.10	mg/L	WI-DRO
Dissolved						
Barium		76	J	200	ug/L	6010B
Aluminum		54	J	200	ug/L	6010B
Cadmium		0.32	J	5.0	ug/L	6010B
Calcium		77000		5000	ug/L	6010B
Potassium		14000		5000	ug/L	6010B
Magnesium		62000		5000	ug/L	6010B
Manganese		130		15	ug/L	6010B
Sodium		21000	B	5000	ug/L	6010B
Nickel		13	J	40	ug/L	6010B
Mercury		0.13	J B	0.20	ug/L	7470A

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65681-3	**AMW-28(20160603)**					
Methylcyclohexane		1.0		1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.54		0.095	mg/L	WI-DRO
Dissolved						
Barium		36	J	200	ug/L	6010B
Aluminum		140	J	200	ug/L	6010B
Chromium		0.70	J	10	ug/L	6010B
Calcium		48000		5000	ug/L	6010B
Iron		1700		100	ug/L	6010B
Potassium		2200	J	5000	ug/L	6010B
Magnesium		15000		5000	ug/L	6010B
Manganese		220		15	ug/L	6010B
Sodium		37000	B	5000	ug/L	6010B
Nickel		13	J	40	ug/L	6010B
Mercury		0.12	J B	0.20	ug/L	7470A
240-65681-4	**DUP-04(20160603)**					
Methylcyclohexane		1.2		1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.62		0.095	mg/L	WI-DRO
Dissolved						
Barium		34	J	200	ug/L	6010B
Aluminum		54	J	200	ug/L	6010B
Chromium		1.1	J	10	ug/L	6010B
Calcium		47000		5000	ug/L	6010B
Iron		1600		100	ug/L	6010B
Potassium		2200	J	5000	ug/L	6010B
Magnesium		15000		5000	ug/L	6010B
Manganese		210		15	ug/L	6010B
Sodium		36000	B	5000	ug/L	6010B
Nickel		13	J	40	ug/L	6010B
Mercury		0.14	J B	0.20	ug/L	7470A
240-65681-5	**TRIP BLANK**					
Acetone		3.9	J	10	ug/L	8260B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Purge and Trap	TAL CAN		SW846 5030B
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL CAN	SW846 8082	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
Cyanide, Total and/or Amenable	TAL CAN	SW846 9012A	
Cyanide, Total and/or Amenable, Distillation	TAL CAN		SW846 9012A

Lab References:

TAL CAN = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method	Analyst	Analyst ID
SW846 8260B	Williams, Larry	LRW
SW846 8270C	Ulman, Mark	MRU
WI-GRO WI-GRO	Reed, Rachel T	RTR
SW846 8082	Bosworth, Heather M	HMB
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Toth, Roger	RKT
SW846 7470A	Dillon, William K	WKD
SW846 9012A	Weimer, Joshua W	JWW

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-65681-1	AMW-29(20160603)	Water	06/03/2016 1030	06/07/2016 0930
240-65681-2	AMW-08(20160603)	Water	06/03/2016 1135	06/07/2016 0930
240-65681-3	AMW-28(20160603)	Water	06/03/2016 1330	06/07/2016 0930
240-65681-4	DUP-04(20160603)	Water	06/03/2016 0000	06/07/2016 0930
240-65681-5	TRIP BLANK	Water	06/03/2016 0000	06/07/2016 0930

SAMPLE RESULTS

Client Sample ID: **AMW-29(20160603)**

Lab Sample ID: 240-65681-1 Date Sampled: 06/03/2016 1030
Client Matrix: Water Date Received: 06/07/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX6909.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2042			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2042				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND	*	0.28	1.0
1,1,1-Trichloroethane	ND	*	0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND	*	0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND	*	0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: AMW-29(20160603)

Lab Sample ID: 240-65681-1 Date Sampled: 06/03/2016 1030
Client Matrix: Water Date Received: 06/07/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX6909.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2042			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2042				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND	*	0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	9.1		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND	*	0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		78 - 125
4-Bromofluorobenzene (Surr)	81		61 - 120
Toluene-d8 (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	102		79 - 120

Client Sample ID: **AMW-08(20160603)**

Lab Sample ID: 240-65681-2 Date Sampled: 06/03/2016 1135
Client Matrix: Water Date Received: 06/07/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX6910.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2104			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2104				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND	*	0.28	1.0
1,1,1-Trichloroethane	ND	*	0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND	*	0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	2.6	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	0.59	J	0.38	1.0
Carbon tetrachloride	ND	*	0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: AMW-08(20160603)

Lab Sample ID: 240-65681-2 Date Sampled: 06/03/2016 1135
Client Matrix: Water Date Received: 06/07/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX6910.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2104			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2104				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND	*	0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	0.45	J	0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	5.4		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND	*	0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		78 - 125
4-Bromofluorobenzene (Surr)	86		61 - 120
Toluene-d8 (Surr)	111		80 - 120
Dibromofluoromethane (Surr)	102		79 - 120

Client Sample ID: **AMW-28(20160603)**

Lab Sample ID: 240-65681-3 Date Sampled: 06/03/2016 1330
Client Matrix: Water Date Received: 06/07/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX6911.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2125			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2125				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND	*	0.28	1.0
1,1,1-Trichloroethane	ND	*	0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND	*	0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND	*	0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: AMW-28(20160603)

Lab Sample ID: 240-65681-3 Date Sampled: 06/03/2016 1330
Client Matrix: Water Date Received: 06/07/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX6911.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2125			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2125				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND	*	0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	1.0		0.43	1.0
Chlorodibromomethane	ND	*	0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90		78 - 125
4-Bromofluorobenzene (Surr)	81		61 - 120
Toluene-d8 (Surr)	106		80 - 120
Dibromofluoromethane (Surr)	100		79 - 120

Client Sample ID: **DUP-04(20160603)**

Lab Sample ID: 240-65681-4 Date Sampled: 06/03/2016 0000
Client Matrix: Water Date Received: 06/07/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX6912.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2148			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2148				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND	*	0.28	1.0
1,1,1-Trichloroethane	ND	*	0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND	*	0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND	*	0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: DUP-04(20160603)

Lab Sample ID: 240-65681-4 Date Sampled: 06/03/2016 0000
Client Matrix: Water Date Received: 06/07/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXX6912.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 2148			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 2148				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND	*	0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	1.2		0.43	1.0
Chlorodibromomethane	ND	*	0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		78 - 125
4-Bromofluorobenzene (Surr)	91		61 - 120
Toluene-d8 (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	102		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-65681-5 Date Sampled: 06/03/2016 0000
Client Matrix: Water Date Received: 06/07/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM5837.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/09/2016 2318			Final Weight/Volume:	5 mL
Prep Date:	06/09/2016 2318				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	3.9	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65681-5 Date Sampled: 06/03/2016 0000
Client Matrix: Water Date Received: 06/07/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM5837.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/09/2016 2318			Final Weight/Volume:	5 mL
Prep Date:	06/09/2016 2318				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		78 - 125
4-Bromofluorobenzene (Surr)	96		61 - 120
Toluene-d8 (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	93		79 - 120

Client Sample ID: **AMW-08(20160603)**

Lab Sample ID: 240-65681-2 Date Sampled: 06/03/2016 1135
Client Matrix: Water Date Received: 06/07/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-233595	Lab File ID:	60613030.D
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Analysis Date:	06/13/2016 1632			Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.043	0.19
Acenaphthylene	ND		0.047	0.19
Acetophenone	ND		0.33	0.97
Anthracene	ND		0.085	0.19
Atrazine	ND		0.33	0.97
Benzaldehyde	ND		0.38	0.97
Benzo[a]anthracene	ND		0.029	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.045	0.19
Benzo[a]pyrene	ND		0.050	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.13	0.97
Bis(2-chloroethoxy)methane	ND		0.31	0.97
Bis(2-chloroethyl)ether	ND		0.097	0.97
Bis(2-ethylhexyl) phthalate	2.6	J	1.7	4.9
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.9
Carbazole	ND		0.27	0.97
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.097	0.97
2-Chlorophenol	ND		0.28	0.97
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.049	0.19
2-Methylnaphthalene	ND		0.088	0.19
3 & 4 Methylphenol	ND		0.78	1.9
Dibenz(a,h)anthracene	ND		0.043	0.19
Dibenzofuran	ND		0.019	0.97
3,3'-Dichlorobenzidine	ND		0.36	4.9
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.58	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.9
2,4-Dinitrophenol	ND		0.31	4.9
2,4-Dinitrotoluene	ND		0.24	4.9
Di-n-butyl phthalate	ND		1.7	4.9
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.043	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.083	0.19
Hexachlorobutadiene	ND		0.26	0.97
Hexachlorocyclopentadiene	ND		0.23	9.7
Hexachloroethane	ND		0.18	0.97
Indeno[1,2,3-cd]pyrene	ND		0.042	0.19

Client Sample ID: **AMW-08(20160603)**

Lab Sample ID: 240-65681-2 Date Sampled: 06/03/2016 1135
Client Matrix: Water Date Received: 06/07/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-233595	Lab File ID:	60613030.D
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Analysis Date:	06/13/2016 1632			Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.97
2-Methylphenol	ND		0.17	0.97
Naphthalene	ND		0.061	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.039	0.97
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.9
N-Nitrosodiphenylamine	ND		0.30	0.97
N-Nitrosodi-n-propylamine	ND		0.23	0.97
2,2'-oxybis[1-chloropropane]	ND		0.39	0.97
Pentachlorophenol	ND		0.26	4.9
Phenanthrene	ND		0.060	0.19
Phenol	ND		0.58	0.97
Pyrene	ND		0.041	0.19
2,4,5-Trichlorophenol	ND		0.29	4.9
2,4,6-Trichlorophenol	ND		0.23	4.9
2,6-Dinitrotoluene	ND		0.78	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	76		42 - 120
2-Fluorophenol (Surr)	28		10 - 120
2,4,6-Tribromophenol (Surr)	86		35 - 125
Nitrobenzene-d5 (Surr)	72		36 - 120
Phenol-d5 (Surr)	19		10 - 120
Terphenyl-d14 (Surr)	40		17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: AMW-29(20160603)

Lab Sample ID: 240-65681-1 Date Sampled: 06/03/2016 1030
Client Matrix: Water Date Received: 06/07/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-233624	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0060813.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1913			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1913			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	38	J	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: **AMW-08(20160603)**

Lab Sample ID: 240-65681-2 Date Sampled: 06/03/2016 1135
Client Matrix: Water Date Received: 06/07/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-233624	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0060814.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1954			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1954			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: **AMW-28(20160603)**

Lab Sample ID: 240-65681-3 Date Sampled: 06/03/2016 1330
Client Matrix: Water Date Received: 06/07/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-233624	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0060815.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 2034			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 2034			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: **DUP-04(20160603)**

Lab Sample ID: 240-65681-4 Date Sampled: 06/03/2016 0000
Client Matrix: Water Date Received: 06/07/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-233624	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0060816.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 2113			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 2113			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-65681-5 Date Sampled: 06/03/2016 0000
Client Matrix: Water Date Received: 06/07/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234161	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061308.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1003			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1003			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: **AMW-29(20160603)**

Lab Sample ID: 240-65681-1 Date Sampled: 06/03/2016 1030
Client Matrix: Water Date Received: 06/07/2016 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-234154	Instrument ID:	A2HP13
Prep Method:	3520C	Prep Batch:	240-233554	Initial Weight/Volume:	1050 mL
Dilution:	20			Final Weight/Volume:	2 mL
Analysis Date:	06/13/2016 1447			Injection Volume:	1 uL
Prep Date:	06/08/2016 0454			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor-1016	ND		0.95	3.8
Aroclor-1221	ND		1.7	3.8
Aroclor-1232	ND		1.3	3.8
Aroclor-1242	ND		1.1	3.8
Aroclor-1248	ND		0.95	3.8
Aroclor-1254	ND		0.57	3.8
Aroclor-1260	ND		0.76	3.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	19		10 - 120
Tetrachloro-m-xylene	54		21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: **AMW-28(20160603)**

Lab Sample ID: 240-65681-3 Date Sampled: 06/03/2016 1330
Client Matrix: Water Date Received: 06/07/2016 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-234154	Instrument ID:	A2HP13
Prep Method:	3520C	Prep Batch:	240-233554	Initial Weight/Volume:	970 mL
Dilution:	20			Final Weight/Volume:	2 mL
Analysis Date:	06/13/2016 1524			Injection Volume:	1 uL
Prep Date:	06/08/2016 0454			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor-1016	ND		1.0	4.1
Aroclor-1221	ND		1.9	4.1
Aroclor-1232	ND		1.4	4.1
Aroclor-1242	ND		1.2	4.1
Aroclor-1248	ND		1.0	4.1
Aroclor-1254	ND		0.62	4.1
Aroclor-1260	ND		0.82	4.1

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	15	p	10 - 120
Tetrachloro-m-xylene	48		21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: DUP-04(20160603)

Lab Sample ID: 240-65681-4 Date Sampled: 06/03/2016 0000
Client Matrix: Water Date Received: 06/07/2016 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-234154	Instrument ID:	A2HP13
Prep Method:	3520C	Prep Batch:	240-233554	Initial Weight/Volume:	1000 mL
Dilution:	20			Final Weight/Volume:	2 mL
Analysis Date:	06/13/2016 1601			Injection Volume:	1 uL
Prep Date:	06/08/2016 0454			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor-1016	ND		1.0	4.0
Aroclor-1221	ND		1.8	4.0
Aroclor-1232	ND		1.4	4.0
Aroclor-1242	ND		1.2	4.0
Aroclor-1248	ND		1.0	4.0
Aroclor-1254	ND		0.60	4.0
Aroclor-1260	ND		0.80	4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	42		10 - 120
Tetrachloro-m-xylene	47		21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: AMW-29(20160603)

Lab Sample ID: 240-65681-1 Date Sampled: 06/03/2016 1030
Client Matrix: Water Date Received: 06/07/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-233553	Lab File ID:	P14R061430.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 0110			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.94		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: **AMW-08(20160603)**

Lab Sample ID: 240-65681-2 Date Sampled: 06/03/2016 1135
Client Matrix: Water Date Received: 06/07/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-233553	Lab File ID:	P14R061431.D
Dilution:	1.0			Initial Weight/Volume:	970 mL
Analysis Date:	06/15/2016 0138			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.30		0.052	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: **AMW-28(20160603)**

Lab Sample ID: 240-65681-3 Date Sampled: 06/03/2016 1330
Client Matrix: Water Date Received: 06/07/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-233553	Lab File ID:	P14R061432.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 0205			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.54		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: **DUP-04(20160603)**

Lab Sample ID: 240-65681-4 Date Sampled: 06/03/2016 0000
Client Matrix: Water Date Received: 06/07/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-233553	Lab File ID:	P14R061433.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 0232			Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.62		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: AMW-29(20160603)

Lab Sample ID: 240-65681-1 Date Sampled: 06/03/2016 1030
Client Matrix: Water Date Received: 06/07/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-233879	Instrument ID:	I12
Prep Method:	3005A	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/10/2016 0024			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	88	J	2.4	200
Aluminum	13000		40	200
Cadmium	1.1	J	0.29	5.0
Chromium	1.2	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	1.6	J	0.21	5.0
Lead	ND		1.9	3.0
Calcium	61000		710	5000
Selenium	ND		5.1	15
Cobalt	75		0.84	7.0
Copper	40		3.9	25
Iron	1100		25	100
Potassium	5800		70	5000
Magnesium	26000		230	5000
Manganese	1400		5.1	15
Sodium	18000	B	330	5000
Nickel	320		1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	380		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-233843	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1250			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: AMW-08(20160603)

Lab Sample ID: 240-65681-2 Date Sampled: 06/03/2016 1135
Client Matrix: Water Date Received: 06/07/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-233879	Instrument ID:	I12
Prep Method:	3005A	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/10/2016 0028			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	76	J	2.4	200
Aluminum	54	J	40	200
Cadmium	0.32	J	0.29	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	77000		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	ND		25	100
Potassium	14000		70	5000
Magnesium	62000		230	5000
Manganese	130		5.1	15
Sodium	21000	B	330	5000
Nickel	13	J	1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-233843	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1252			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.13	J B	0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: AMW-28(20160603)

Lab Sample ID: 240-65681-3 Date Sampled: 06/03/2016 1330
Client Matrix: Water Date Received: 06/07/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-233879	Instrument ID:	I12
Prep Method:	3005A	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/10/2016 0737			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	36	J	2.4	200
Aluminum	140	J	40	200
Cadmium	ND		0.29	5.0
Chromium	0.70	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	48000		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	1700		25	100
Potassium	2200	J	70	5000
Magnesium	15000		230	5000
Manganese	220		5.1	15
Sodium	37000	B	330	5000
Nickel	13	J	1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-233843	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1254			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.12	J B	0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Client Sample ID: DUP-04(20160603)

Lab Sample ID: 240-65681-4 Date Sampled: 06/03/2016 0000
Client Matrix: Water Date Received: 06/07/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-233879	Instrument ID:	I12
Prep Method:	3005A	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/10/2016 0741			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	34	J	2.4	200
Aluminum	54	J	40	200
Cadmium	ND		0.29	5.0
Chromium	1.1	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	47000		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	1600		25	100
Potassium	2200	J	70	5000
Magnesium	15000		230	5000
Manganese	210		5.1	15
Sodium	36000	B	330	5000
Nickel	13	J	1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-233843	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1256			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.14	J B	0.090	0.20

General Chemistry

Client Sample ID: **AMW-29(20160603)**

Lab Sample ID: 240-65681-1 Date Sampled: 06/03/2016 1030
Client Matrix: Water Date Received: 06/07/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.0065	J	mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-233717 Analysis Date: 06/08/2016 1614
Prep Batch: 240-233692 Prep Date: 06/08/2016 1340

General Chemistry

Client Sample ID: **AMW-08(20160603)**

Lab Sample ID: 240-65681-2 Date Sampled: 06/03/2016 1135
Client Matrix: Water Date Received: 06/07/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-233717 Analysis Date: 06/08/2016 1614
Prep Batch: 240-233692 Prep Date: 06/08/2016 1341

General Chemistry

Client Sample ID: **AMW-28(20160603)**

Lab Sample ID: 240-65681-3 Date Sampled: 06/03/2016 1330
Client Matrix: Water Date Received: 06/07/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-233717 Analysis Date: 06/08/2016 1614
Prep Batch: 240-233692 Prep Date: 06/08/2016 1341

General Chemistry

Client Sample ID: **DUP-04(20160603)**

Lab Sample ID: 240-65681-4 Date Sampled: 06/03/2016 0000
Client Matrix: Water Date Received: 06/07/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-233717 Analysis Date: 06/08/2016 1614
Prep Batch: 240-233692 Prep Date: 06/08/2016 1341

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Lab Section	Qualifier	Description
GC/MS VOA		
	*	LCS or LCSD is outside acceptance limits.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
Metals		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-233866					
LCS 240-233866/4	Lab Control Sample	T	Water	8260B	
MB 240-233866/6	Method Blank	T	Water	8260B	
240-65635-B-10 MS	Matrix Spike	T	Water	8260B	
240-65635-B-10 MSD	Matrix Spike Duplicate	T	Water	8260B	
240-65681-5	TRIP BLANK	T	Water	8260B	
Analysis Batch:240-234259					
LCS 240-234259/4	Lab Control Sample	T	Water	8260B	
MB 240-234259/6	Method Blank	T	Water	8260B	
240-65681-1	AMW-29(20160603)	T	Water	8260B	
240-65681-2	AMW-08(20160603)	T	Water	8260B	
240-65681-3	AMW-28(20160603)	T	Water	8260B	
240-65681-4	DUP-04(20160603)	T	Water	8260B	
240-65727-D-4 MS	Matrix Spike	T	Water	8260B	
240-65727-E-4 MSD	Matrix Spike Duplicate	T	Water	8260B	

Report Basis
T = Total

GC/MS Semi VOA

Prep Batch: 240-233595					
LCS 240-233595/19-A	Lab Control Sample	T	Water	3510C	
MB 240-233595/18-A	Method Blank	T	Water	3510C	
240-65681-2	AMW-08(20160603)	T	Water	3510C	
Analysis Batch:240-234180					
LCS 240-233595/19-A	Lab Control Sample	T	Water	8270C	240-233595
MB 240-233595/18-A	Method Blank	T	Water	8270C	240-233595
240-65681-2	AMW-08(20160603)	T	Water	8270C	240-233595

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Analysis Batch:240-233624					
LCS 240-233624/5	Lab Control Sample	T	Water	WI-GRO	
LCSD 240-233624/17	Lab Control Sample Duplicate	T	Water	WI-GRO	
MB 240-233624/4	Method Blank	T	Water	WI-GRO	
240-65681-1	AMW-29(20160603)	T	Water	WI-GRO	
240-65681-2	AMW-08(20160603)	T	Water	WI-GRO	
240-65681-3	AMW-28(20160603)	T	Water	WI-GRO	
240-65681-4	DUP-04(20160603)	T	Water	WI-GRO	
Analysis Batch:240-234161					
LCS 240-234161/5	Lab Control Sample	T	Water	WI-GRO	
LCSD 240-234161/22	Lab Control Sample Duplicate	T	Water	WI-GRO	
MB 240-234161/4	Method Blank	T	Water	WI-GRO	
240-65681-5	TRIP BLANK	T	Water	WI-GRO	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-233553					
LCS 240-233553/9-A	Lab Control Sample	T	Water	3520C	
LCSD 240-233553/10-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 240-233553/8-A	Method Blank	T	Water	3520C	
240-65681-1	AMW-29(20160603)	T	Water	3520C	
240-65681-2	AMW-08(20160603)	T	Water	3520C	
240-65681-3	AMW-28(20160603)	T	Water	3520C	
240-65681-4	DUP-04(20160603)	T	Water	3520C	
Prep Batch: 240-233554					
LCS 240-233554/9-A	Lab Control Sample	T	Water	3520C	
MB 240-233554/8-A	Method Blank	T	Water	3520C	
240-65681-1	AMW-29(20160603)	T	Water	3520C	
240-65681-3	AMW-28(20160603)	T	Water	3520C	
240-65681-4	DUP-04(20160603)	T	Water	3520C	
Analysis Batch:240-233931					
LCS 240-233554/9-A	Lab Control Sample	T	Water	8082	240-233554
MB 240-233554/8-A	Method Blank	T	Water	8082	240-233554
Analysis Batch:240-234154					
240-65681-1	AMW-29(20160603)	T	Water	8082	240-233554
240-65681-3	AMW-28(20160603)	T	Water	8082	240-233554
240-65681-4	DUP-04(20160603)	T	Water	8082	240-233554
Analysis Batch:240-234430					
LCS 240-233553/9-A	Lab Control Sample	T	Water	WI-DRO	240-233553
LCSD 240-233553/10-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-233553
MB 240-233553/8-A	Method Blank	T	Water	WI-DRO	240-233553
240-65681-1	AMW-29(20160603)	T	Water	WI-DRO	240-233553
240-65681-2	AMW-08(20160603)	T	Water	WI-DRO	240-233553
240-65681-3	AMW-28(20160603)	T	Water	WI-DRO	240-233553
240-65681-4	DUP-04(20160603)	T	Water	WI-DRO	240-233553

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-233638					
LCS 240-233638/2-A	Lab Control Sample	R	Water	3005A	
MB 240-233638/1-A	Method Blank	R	Water	3005A	
240-65671-H-1-B MS	Matrix Spike	R	Water	3005A	
240-65671-H-1-C MSD	Matrix Spike Duplicate	R	Water	3005A	
240-65681-1	AMW-29(20160603)	D	Water	3005A	
240-65681-2	AMW-08(20160603)	D	Water	3005A	
240-65681-3	AMW-28(20160603)	D	Water	3005A	
240-65681-4	DUP-04(20160603)	D	Water	3005A	
Prep Batch: 240-233645					
LCS 240-233645/2-A	Lab Control Sample	T	Water	7470A	
MB 240-233645/1-A	Method Blank	T	Water	7470A	
190-10782-B-1-E MS	Matrix Spike	T	Water	7470A	
190-10782-B-1-F MSD	Matrix Spike Duplicate	T	Water	7470A	
240-65681-1	AMW-29(20160603)	D	Water	7470A	
240-65681-2	AMW-08(20160603)	D	Water	7470A	
240-65681-3	AMW-28(20160603)	D	Water	7470A	
240-65681-4	DUP-04(20160603)	D	Water	7470A	
Analysis Batch:240-233843					
LCS 240-233645/2-A	Lab Control Sample	T	Water	7470A	240-233645
MB 240-233645/1-A	Method Blank	T	Water	7470A	240-233645
190-10782-B-1-E MS	Matrix Spike	T	Water	7470A	240-233645
190-10782-B-1-F MSD	Matrix Spike Duplicate	T	Water	7470A	240-233645
240-65681-1	AMW-29(20160603)	D	Water	7470A	240-233645
240-65681-2	AMW-08(20160603)	D	Water	7470A	240-233645
240-65681-3	AMW-28(20160603)	D	Water	7470A	240-233645
240-65681-4	DUP-04(20160603)	D	Water	7470A	240-233645
Analysis Batch:240-233879					
LCS 240-233638/2-A	Lab Control Sample	R	Water	6010B	240-233638
MB 240-233638/1-A	Method Blank	R	Water	6010B	240-233638
240-65671-H-1-B MS	Matrix Spike	R	Water	6010B	240-233638
240-65671-H-1-C MSD	Matrix Spike Duplicate	R	Water	6010B	240-233638
240-65681-1	AMW-29(20160603)	D	Water	6010B	240-233638
240-65681-2	AMW-08(20160603)	D	Water	6010B	240-233638
240-65681-3	AMW-28(20160603)	D	Water	6010B	240-233638
240-65681-4	DUP-04(20160603)	D	Water	6010B	240-233638

Report Basis
D = Dissolved
R = Total Recoverable
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 240-233692					
LCS 240-233692/2-A	Lab Control Sample	T	Water	9012A	
MB 240-233692/1-A	Method Blank	T	Water	9012A	
190-10763-E-2-B MS	Matrix Spike	T	Water	9012A	
190-10763-E-2-C MSD	Matrix Spike Duplicate	T	Water	9012A	
240-65681-1	AMW-29(20160603)	T	Water	9012A	
240-65681-2	AMW-08(20160603)	T	Water	9012A	
240-65681-3	AMW-28(20160603)	T	Water	9012A	
240-65681-4	DUP-04(20160603)	T	Water	9012A	
Analysis Batch:240-233717					
LCS 240-233692/2-A	Lab Control Sample	T	Water	9012A	240-233692
MB 240-233692/1-A	Method Blank	T	Water	9012A	240-233692
190-10763-E-2-B MS	Matrix Spike	T	Water	9012A	240-233692
190-10763-E-2-C MSD	Matrix Spike Duplicate	T	Water	9012A	240-233692
240-65681-1	AMW-29(20160603)	T	Water	9012A	240-233692
240-65681-2	AMW-08(20160603)	T	Water	9012A	240-233692
240-65681-3	AMW-28(20160603)	T	Water	9012A	240-233692
240-65681-4	DUP-04(20160603)	T	Water	9012A	240-233692

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-65681-1	AMW-29(20160603)	94	81	102	102
240-65681-2	AMW-08(20160603)	95	86	111	102
240-65681-3	AMW-28(20160603)	90	81	106	100
240-65681-4	DUP-04(20160603)	107	91	105	102
240-65681-5	TRIP BLANK	95	96	103	93
MB 240-233866/6		97	98	103	95
MB 240-234259/6		109	91	104	105
LCS 240-233866/4		94	101	104	97
LCS 240-234259/4		101	105	106	98
240-65635-B-10 MS		98	98	105	95
240-65727-D-4 MS		109	114	108	100
240-65635-B-10 MSD		95	97	103	96
240-65727-E-4 MSD		86	102	105	95

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	78-125
BFB = 4-Bromofluorobenzene (Surr)	61-120
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	79-120

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-65681-2	AMW-08(20160603)	76	28	86	72	19	40
MB 240-233595/18-A		78	55	86	85	39	98
LCS 240-233595/19-A		76	48	92	86	34	90

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	42-120
2FP = 2-Fluorophenol (Surr)	10-120
TBP = 2,4,6-Tribromophenol (Surr)	35-125
NBZ = Nitrobenzene-d5 (Surr)	36-120
PHL = Phenol-d5 (Surr)	10-120
TPH = Terphenyl-d14 (Surr)	17-120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
240-65681-1	AMW-29(20160603)	19	54
240-65681-3	AMW-28(20160603)	15p	48
240-65681-4	DUP-04(20160603)	42	47
MB 240-233554/8-A		55	64
LCS 240-233554/9-A		45	61

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	10-120
TCX = Tetrachloro-m-xylene	21-120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method Blank - Batch: 240-233866

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-233866/6	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM5817.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/09/2016 1538	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/09/2016 1538				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method Blank - Batch: 240-233866

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-233866/6	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM5817.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/09/2016 1538	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/09/2016 1538				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	1.0
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97	78 - 125
4-Bromofluorobenzene (Surr)	98	61 - 120
Toluene-d8 (Surr)	103	80 - 120
Dibromofluoromethane (Surr)	95	79 - 120

Lab Control Sample - Batch: 240-233866

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-233866/4	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM5814.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/09/2016 1429	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/09/2016 1429				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	9.53	95	80 - 120	
1,1,1-Trichloroethane	10.0	10.1	101	77 - 123	
1,1,2,2-Tetrachloroethane	10.0	8.97	90	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.24	92	67 - 138	
1,1,2-Trichloroethane	10.0	9.66	97	80 - 120	
1,1-Dichloroethane	10.0	9.76	98	79 - 125	
1,1-Dichloroethene	10.0	9.48	95	76 - 124	
1,1-Dichloropropene	10.0	9.68	97	80 - 128	
1,2,3-Trichlorobenzene	10.0	8.92	89	66 - 120	
1,2,3-Trichloropropane	10.0	8.94	89	72 - 126	
1,2,4-Trichlorobenzene	10.0	9.34	93	61 - 120	
1,2,4-Trimethylbenzene	10.0	9.77	98	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	7.16	72	50 - 132	
1,2-Dichlorobenzene	10.0	9.81	98	79 - 120	
1,2-Dichloroethane	10.0	9.75	97	80 - 120	
1,2-Dichloropropane	10.0	9.97	100	78 - 124	
1,3,5-Trimethylbenzene	10.0	9.99	100	77 - 120	
1,3-Dichlorobenzene	10.0	9.82	98	79 - 120	
1,3-Dichloropropane	10.0	9.61	96	80 - 120	
1,4-Dichlorobenzene	10.0	9.98	100	79 - 120	
Allyl chloride	10.0	8.49	85	69 - 120	
2,2-Dichloropropane	10.0	10.3	103	71 - 122	
2-Chlorotoluene	10.0	9.61	96	80 - 120	
2-Hexanone	20.0	16.3	81	55 - 141	
Bromobenzene	10.0	10.1	101	80 - 120	
Bromochloromethane	10.0	8.84	88	80 - 120	
4-Chlorotoluene	10.0	9.72	97	80 - 120	
p-Isopropyltoluene	10.0	10.0	100	77 - 120	
Acetone	20.0	14.2	71	34 - 148	
Benzene	10.0	9.97	100	80 - 120	
Bromoform	10.0	8.64	86	56 - 122	
Bromomethane	10.0	6.27	63	38 - 132	
Carbon disulfide	10.0	9.45	94	65 - 144	
Carbon tetrachloride	10.0	9.49	95	77 - 131	
Chlorobenzene	10.0	9.95	100	80 - 120	
Chloroethane	10.0	7.62	76	36 - 126	
Chloroform	10.0	9.87	99	80 - 120	
Chloromethane	10.0	10.6	106	48 - 133	
cis-1,2-Dichloroethene	10.0	9.73	97	79 - 120	
cis-1,3-Dichloropropene	10.0	9.42	94	74 - 126	
Cyclohexane	10.0	10.2	102	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Lab Control Sample - Batch: 240-233866

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-233866/4	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM5814.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/09/2016 1429	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/09/2016 1429				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	9.39	94	62 - 120	
Dibromomethane	10.0	8.87	89	80 - 120	
Bromodichloromethane	10.0	9.23	92	80 - 120	
Dichlorodifluoromethane	10.0	9.81	98	23 - 136	
Dichlorofluoromethane	10.0	9.60	96	40 - 160	
Ethyl ether	10.0	9.26	93	53 - 135	
Ethylbenzene	10.0	10.2	102	80 - 120	
1,2-Dibromoethane	10.0	9.47	95	80 - 120	
Naphthalene	10.0	8.50	85	53 - 121	
m-Xylene & p-Xylene	10.0	10.0	100	80 - 120	
n-Butylbenzene	10.0	9.84	98	74 - 120	
Isopropylbenzene	10.0	10.4	104	77 - 120	
Methyl acetate	50.0	42.8	86	67 - 131	
N-Propylbenzene	10.0	9.70	97	79 - 123	
2-Butanone (MEK)	20.0	15.4	77	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	17.0	85	64 - 135	
sec-Butylbenzene	10.0	10.0	100	77 - 120	
Methyl tert butyl ether	10.0	9.24	92	69 - 121	
Methylene Chloride	10.0	9.83	98	77 - 129	
o-Xylene	10.0	10.0	100	80 - 120	
Styrene	10.0	10.1	101	76 - 122	
tert-Butylbenzene	10.0	10.0	100	77 - 121	
Tetrachloroethene	10.0	10.0	100	78 - 121	
Tetrahydrofuran	20.0	17.0	85	61 - 136	
Toluene	10.0	10.3	103	80 - 120	
trans-1,2-Dichloroethene	10.0	10.2	102	80 - 124	
trans-1,3-Dichloropropene	10.0	9.01	90	75 - 131	
Trichloroethene	10.0	9.84	98	80 - 121	
Trichlorofluoromethane	10.0	10.4	104	61 - 133	
Vinyl chloride	10.0	9.85	99	52 - 121	
Methylcyclohexane	10.0	9.74	97	61 - 134	
Chlorodibromomethane	10.0	8.76	88	74 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	78 - 125
4-Bromofluorobenzene (Surr)	101	61 - 120
Toluene-d8 (Surr)	104	80 - 120
Dibromofluoromethane (Surr)	97	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233866

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65635-B-10 MS	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM5838.D
Dilution:	66.67	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/09/2016 2340			Final Weight/Volume:	5 mL
Prep Date:	06/09/2016 2340				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65635-B-10 MSD	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM5839.D
Dilution:	66.67	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/10/2016 0003			Final Weight/Volume:	5 mL
Prep Date:	06/10/2016 0003				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	94	93	72 - 120	1	22		
1,1,1-Trichloroethane	99	99	69 - 122	0	14		
1,1,2,2-Tetrachloroethane	89	91	61 - 130	2	18		
1,1,2-Trichloro-1,2,2-trifluoroethane	79	82	44 - 140	3	35		
1,1,2-Trichloroethane	94	94	72 - 125	0	19		
1,1-Dichloroethane	96	98	73 - 124	2	14		
1,1-Dichloroethene	90	90	67 - 124	1	24		
1,1-Dichloropropene	92	92	81 - 126	0	11		
1,2,3-Trichlorobenzene	86	85	46 - 120	1	35		
1,2,3-Trichloropropane	90	92	58 - 135	3	25		
1,2,4-Trichlorobenzene	86	86	48 - 120	1	28		
1,2,4-Trimethylbenzene	89	92	64 - 122	3	14		
1,2-Dibromo-3-Chloropropane	73	75	42 - 130	2	24		
1,2-Dichlorobenzene	92	94	67 - 118	2	15		
1,2-Dichloroethane	97	97	74 - 125	1	24		
1,2-Dichloropropane	97	100	73 - 122	2	15		
1,3,5-Trimethylbenzene	90	92	62 - 126	3	17		
1,3-Dichlorobenzene	89	92	65 - 120	3	15		
1,3-Dichloropropane	93	92	59 - 133	1	35		
1,4-Dichlorobenzene	91	94	66 - 120	3	16		
Allyl chloride	86	87	39 - 124	1	35		
2,2-Dichloropropane	93	95	48 - 126	2	30		
2-Chlorotoluene	87	90	70 - 122	3	18		
Bromobenzene	91	93	73 - 120	2	13		
Bromochloromethane	87	92	60 - 132	5	35		
4-Chlorotoluene	87	89	74 - 120	3	15		
p-Isopropyltoluene	88	90	61 - 123	2	27		
Acetone	69	70	32 - 126	0	28		
Benzene	98	99	73 - 121	1	13		
Bromoform	87	89	45 - 121	1	19		
Bromomethane	87	70	26 - 136	21	35		
Carbon tetrachloride	92	92	65 - 129	0	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233866

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65635-B-10 MS	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM5838.D
Dilution:	66.67	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/09/2016 2340			Final Weight/Volume:	5 mL
Prep Date:	06/09/2016 2340				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65635-B-10 MSD	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM5839.D
Dilution:	66.67	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/10/2016 0003			Final Weight/Volume:	5 mL
Prep Date:	06/10/2016 0003				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chlorobenzene	93	93	72 - 120	1	15		
Chloroethane	89	76	27 - 131	15	35		
Chloroform	99	97	73 - 121	1	17		
Chloromethane	111	101	39 - 134	10	20		
cis-1,2-Dichloroethene	102	99	66 - 124	1	22		
cis-1,3-Dichloropropene	91	90	60 - 120	1	21		
Hexachlorobutadiene	77	79	48 - 120	3	34		
Dibromomethane	90	88	63 - 134	2	35		
Bromodichloromethane	93	92	72 - 120	1	19		
Dichlorodifluoromethane	85	82	14 - 137	4	34		
Dichlorofluoromethane	126	102	42 - 133	21	35		
Ethyl ether	91	93	63 - 136	2	35		
Ethylbenzene	95	94	68 - 121	1	16		
1,2-Dibromoethane	92	92	69 - 125	1	24		
Naphthalene	82	83	38 - 128	1	35		
m-Xylene & p-Xylene	92	92	66 - 123	0	15		
n-Butylbenzene	85	88	54 - 126	3	33		
Isopropylbenzene	94	94	61 - 122	0	20		
N-Propylbenzene	87	89	63 - 129	2	29		
2-Butanone (MEK)	75	74	49 - 132	2	19		
4-Methyl-2-pentanone (MIBK)	84	86	58 - 136	2	32		
sec-Butylbenzene	87	90	61 - 123	3	29		
Methyl tert butyl ether	92	92	61 - 121	0	12		
Methylene Chloride	99	101	70 - 124	1	14		
o-Xylene	93	94	68 - 121	0	14		
Styrene	95	94	64 - 126	1	15		
tert-Butylbenzene	91	93	63 - 122	3	24		
Tetrachloroethene	76	67	59 - 125	3	20		
Tetrahydrofuran	85	85	16 - 161	0	35		
Toluene	99	98	72 - 122	1	15		
trans-1,2-Dichloroethene	100	99	72 - 125	1	25		
trans-1,3-Dichloropropene	86	88	58 - 132	1	22		

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233866

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65635-B-10 MS	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM5838.D
Dilution:	66.67	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/09/2016 2340			Final Weight/Volume:	5 mL
Prep Date:	06/09/2016 2340				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65635-B-10 MSD	Analysis Batch:	240-233866	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM5839.D
Dilution:	66.67	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/10/2016 0003			Final Weight/Volume:	5 mL
Prep Date:	06/10/2016 0003				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Trichloroethene	92	95	61 - 129	2	14		
Trichlorofluoromethane	106	98	49 - 133	7	25		
Vinyl chloride	99	92	44 - 122	6	35		
Chlorodibromomethane	86	85	62 - 122	1	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	95	78 - 125
4-Bromofluorobenzene (Surr)	98	97	61 - 120
Toluene-d8 (Surr)	105	103	80 - 120
Dibromofluoromethane (Surr)	95	96	79 - 120

Method Blank - Batch: 240-234259

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-234259/6	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX6900.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1706	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1706				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method Blank - Batch: 240-234259

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-234259/6	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX6900.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1706	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1706				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	1.0
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109	78 - 125
4-Bromofluorobenzene (Surr)	91	61 - 120
Toluene-d8 (Surr)	104	80 - 120
Dibromofluoromethane (Surr)	105	79 - 120

Lab Control Sample - Batch: 240-234259

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-234259/4	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX6898.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1622	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1622				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	12.2	122	80 - 120	*
1,1,1-Trichloroethane	10.0	12.9	129	77 - 123	*
1,1,2,2-Tetrachloroethane	10.0	8.85	88	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	13.4	134	67 - 138	
1,1,2-Trichloroethane	10.0	11.2	112	80 - 120	
1,1-Dichloroethane	10.0	11.1	111	79 - 125	
1,1-Dichloroethene	10.0	11.2	112	76 - 124	
1,1-Dichloropropene	10.0	10.8	108	80 - 128	
1,2,3-Trichlorobenzene	10.0	8.42	84	66 - 120	
1,2,3-Trichloropropane	10.0	9.50	95	72 - 126	
1,2,4-Trichlorobenzene	10.0	8.65	87	61 - 120	
1,2,4-Trimethylbenzene	10.0	9.23	92	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	11.1	111	50 - 132	
1,2-Dichlorobenzene	10.0	10.1	101	79 - 120	
1,2-Dichloroethane	10.0	12.0	120	80 - 120	
1,2-Dichloropropane	10.0	11.1	111	78 - 124	
1,3,5-Trimethylbenzene	10.0	9.75	98	77 - 120	
1,3-Dichlorobenzene	10.0	9.81	98	79 - 120	
1,3-Dichloropropane	10.0	10.7	107	80 - 120	
1,4-Dichlorobenzene	10.0	9.78	98	79 - 120	
Allyl chloride	10.0	11.8	118	69 - 120	
2,2-Dichloropropane	10.0	14.2	142	71 - 122	*
2-Chlorotoluene	10.0	9.88	99	80 - 120	
2-Hexanone	20.0	19.3	97	55 - 141	
Bromobenzene	10.0	10.1	101	80 - 120	
Bromochloromethane	10.0	11.3	113	80 - 120	
4-Chlorotoluene	10.0	9.78	98	80 - 120	
p-Isopropyltoluene	10.0	9.34	93	77 - 120	
Acetone	20.0	16.1	80	34 - 148	
Benzene	10.0	9.99	100	80 - 120	
Bromoform	10.0	13.4	134	56 - 122	*
Bromomethane	10.0	6.39	64	38 - 132	
Carbon disulfide	10.0	13.5	135	65 - 144	
Carbon tetrachloride	10.0	14.0	140	77 - 131	*
Chlorobenzene	10.0	10.6	106	80 - 120	
Chloroethane	10.0	4.82	48	36 - 126	
Chloroform	10.0	11.0	110	80 - 120	
Chloromethane	10.0	9.95	99	48 - 133	
cis-1,2-Dichloroethene	10.0	10.6	106	79 - 120	
cis-1,3-Dichloropropene	10.0	11.5	115	74 - 126	
Cyclohexane	10.0	12.2	122	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Lab Control Sample - Batch: 240-234259

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-234259/4	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX6898.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1622	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1622				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	11.8	118	62 - 120	
Dibromomethane	10.0	10.8	108	80 - 120	
Bromodichloromethane	10.0	11.8	118	80 - 120	
Dichlorodifluoromethane	10.0	13.1	131	23 - 136	
Dichlorofluoromethane	10.0	9.18	92	40 - 160	
Ethyl ether	10.0	8.88	89	53 - 135	
Ethylbenzene	10.0	10.4	104	80 - 120	
1,2-Dibromoethane	10.0	11.3	113	80 - 120	
Naphthalene	10.0	7.07	71	53 - 121	
m-Xylene & p-Xylene	10.0	10.8	108	80 - 120	
n-Butylbenzene	10.0	8.90	89	74 - 120	
Isopropylbenzene	10.0	10.7	107	77 - 120	
Methyl acetate	50.0	50.8	102	67 - 131	
N-Propylbenzene	10.0	9.72	97	79 - 123	
2-Butanone (MEK)	20.0	17.3	87	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	20.2	101	64 - 135	
sec-Butylbenzene	10.0	8.97	90	77 - 120	
Methyl tert butyl ether	10.0	10.3	103	69 - 121	
Methylene Chloride	10.0	10.0	100	77 - 129	
o-Xylene	10.0	10.1	101	80 - 120	
Styrene	10.0	10.5	105	76 - 122	
tert-Butylbenzene	10.0	9.53	95	77 - 121	
Tetrachloroethene	10.0	12.3	123	78 - 121	*
Tetrahydrofuran	20.0	19.5	98	61 - 136	
Toluene	10.0	11.1	111	80 - 120	
trans-1,2-Dichloroethene	10.0	11.2	112	80 - 124	
trans-1,3-Dichloropropene	10.0	11.3	113	75 - 131	
Trichloroethene	10.0	11.1	111	80 - 121	
Trichlorofluoromethane	10.0	19.9	199	61 - 133	*
Vinyl chloride	10.0	9.24	92	52 - 121	
Methylcyclohexane	10.0	9.83	98	61 - 134	
Chlorodibromomethane	10.0	12.9	129	74 - 120	*

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101	78 - 125
4-Bromofluorobenzene (Surr)	105	61 - 120
Toluene-d8 (Surr)	106	80 - 120
Dibromofluoromethane (Surr)	98	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234259

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65727-D-4 MS	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX6921.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/14/2016 0104			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0104				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65727-E-4 MSD	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX6922.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/14/2016 0127			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0127				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	119	102	72 - 120	15	22		
1,1,1-Trichloroethane	126	95	69 - 122	28	14	F1	F2
1,1,2,2-Tetrachloroethane	79	87	61 - 130	10	18		
1,1,2-Trichloro-1,2,2-trifluoroethane	105	95	44 - 140	10	35		
1,1,2-Trichloroethane	102	101	72 - 125	1	19		
1,1-Dichloroethane	104	93	73 - 124	11	14		
1,1-Dichloroethene	97	96	67 - 124	1	24		
1,2,3-Trichlorobenzene	91	68	46 - 120	28	35		
1,2,3-Trichloropropane	85	86	58 - 135	1	25		
1,2,4-Trichlorobenzene	88	63	48 - 120	33	28		F2
1,2,4-Trimethylbenzene	81	78	64 - 122	4	14		
1,2-Dibromo-3-Chloropropane	131	83	42 - 130	44	24	F1	F2
1,2-Dichlorobenzene	125	90	67 - 118	33	15	F1	F2
1,2-Dichloroethane	113	89	74 - 125	24	24		
1,2-Dichloropropane	107	95	73 - 122	12	15		
1,3,5-Trimethylbenzene	81	77	62 - 126	5	17		
1,3-Dichlorobenzene	87	85	65 - 120	3	15		
1,4-Dichlorobenzene	89	85	66 - 120	5	16		
2-Hexanone	91	81	49 - 142	12	27		
Bromobenzene	90	87	73 - 120	4	13		
p-Isopropyltoluene	80	74	61 - 123	9	27		
Acetone	78	64	32 - 126	19	28		
Benzene	93	90	73 - 121	4	13		
Bromoform	128	104	45 - 121	21	19	F1	F2
Bromomethane	90	46	26 - 136	65	35		F2
Carbon disulfide	116	98	54 - 144	16	34		
Carbon tetrachloride	130	96	65 - 129	30	20	F1	F2
Chlorobenzene	101	91	72 - 120	10	15		
Chloroethane	66	34	27 - 131	64	35		F2
Chloroform	102	87	73 - 121	15	17		
Chloromethane	129	70	39 - 134	59	20		F2
cis-1,2-Dichloroethene	95	85	66 - 124	9	22		

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234259

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65727-D-4 MS	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX6921.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/14/2016 0104			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0104				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65727-E-4 MSD	Analysis Batch:	240-234259	Instrument ID:	A3UX10
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXX6922.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/14/2016 0127			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0127				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
cis-1,3-Dichloropropene	96	86	60 - 120	11	21		
Cyclohexane	94	80	41 - 137	16	35		
Bromodichloromethane	111	94	72 - 120	16	19		
Dichlorodifluoromethane	110	68	14 - 137	48	34		F2
Ethylbenzene	99	87	68 - 121	12	16		
1,2-Dibromoethane	105	99	69 - 125	6	24		
m-Xylene & p-Xylene	98	91	66 - 123	8	15		
n-Butylbenzene	95	66	54 - 126	37	33		F2
Isopropylbenzene	100	83	61 - 122	19	20		
Methyl acetate	97	85	64 - 124	13	12		F2
N-Propylbenzene	79	75	63 - 129	4	29		
2-Butanone (MEK)	85	73	49 - 132	15	19		
4-Methyl-2-pentanone (MIBK)	99	87	58 - 136	13	32		
sec-Butylbenzene	74	70	61 - 123	6	29		
Methyl tert butyl ether	93	83	61 - 121	12	12		
Methylene Chloride	89	84	70 - 124	6	14		
o-Xylene	96	88	68 - 121	9	14		
Styrene	93	92	64 - 126	1	15		
tert-Butylbenzene	79	74	63 - 122	7	24		
Tetrachloroethene	111	96	59 - 125	14	20		
Toluene	100	93	72 - 122	8	15		
trans-1,2-Dichloroethene	102	97	72 - 125	5	25		
trans-1,3-Dichloropropene	94	84	58 - 132	12	22		
Trichloroethene	102	77	61 - 129	22	14		F2
Trichlorofluoromethane	166	122	49 - 133	31	25	F1	F2
Vinyl chloride	135	85	44 - 122	45	35	F1	F2
Methylcyclohexane	72	69	39 - 135	5	35		
Chlorodibromomethane	118	104	62 - 122	13	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109	86	78 - 125
4-Bromofluorobenzene (Surr)	114	102	61 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Toluene-d8 (Surr)	108	105	80 - 120
Dibromofluoromethane (Surr)	100	95	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method Blank - Batch: 240-233595

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-233595/18-A	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-233595	Lab File ID:	60613011.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/13/2016 1155	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	ND		0.044	0.20
Acenaphthylene	ND		0.048	0.20
Acetophenone	ND		0.34	1.0
Anthracene	ND		0.088	0.20
Atrazine	ND		0.34	1.0
Benzaldehyde	ND		0.39	1.0
Benzo[a]anthracene	ND		0.030	0.20
Benzo[b]fluoranthene	ND		0.039	0.20
Benzo[k]fluoranthene	ND		0.045	0.20
Benzo[g,h,i]perylene	ND		0.046	0.20
Benzo[a]pyrene	ND		0.051	0.20
Butyl benzyl phthalate	ND		0.26	2.0
1,1'-Biphenyl	ND		0.13	1.0
Bis(2-chloroethoxy)methane	ND		0.32	1.0
Bis(2-chloroethyl)ether	ND		0.10	1.0
Bis(2-ethylhexyl) phthalate	ND		1.7	5.0
4-Bromophenyl phenyl ether	ND		0.22	2.0
Caprolactam	ND		0.20	5.0
Carbazole	ND		0.28	1.0
4-Chloroaniline	ND		0.21	2.0
4-Chloro-3-methylphenol	ND		0.21	2.0
2-Chloronaphthalene	ND		0.10	1.0
2-Chlorophenol	ND		0.29	1.0
4-Chlorophenyl phenyl ether	ND		0.30	2.0
Chrysene	ND		0.050	0.20
2-Methylnaphthalene	ND		0.090	0.20
3 & 4 Methylphenol	ND		0.80	2.0
Dibenz(a,h)anthracene	ND		0.045	0.20
Dibenzofuran	ND		0.020	1.0
3,3'-Dichlorobenzidine	ND		0.37	5.0
2,4-Dichlorophenol	ND		0.19	2.0
Diethyl phthalate	ND		0.60	2.0
2,4-Dimethylphenol	ND		0.25	2.0
Dimethyl phthalate	ND		0.29	2.0
4,6-Dinitro-2-methylphenol	ND		2.4	5.0
2,4-Dinitrophenol	ND		0.32	5.0
2,4-Dinitrotoluene	ND		0.25	5.0
Di-n-butyl phthalate	ND		1.7	5.0
Di-n-octyl phthalate	ND		0.23	2.0
Fluoranthene	ND		0.045	0.20
Fluorene	ND		0.041	0.20
Hexachlorobenzene	ND		0.085	0.20
Hexachlorobutadiene	ND		0.27	1.0
Hexachlorocyclopentadiene	ND		0.24	10
Hexachloroethane	ND		0.19	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method Blank - Batch: 240-233595

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-233595/18-A	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-233595	Lab File ID:	60613011.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/13/2016 1155	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Indeno[1,2,3-cd]pyrene	ND		0.043	0.20
Isophorone	0.285	J	0.27	1.0
2-Methylphenol	ND		0.17	1.0
Naphthalene	ND		0.063	0.20
2-Nitroaniline	ND		0.21	2.0
3-Nitroaniline	ND		0.28	2.0
4-Nitroaniline	ND		0.22	2.0
Nitrobenzene	ND		0.040	1.0
2-Nitrophenol	ND		0.28	2.0
4-Nitrophenol	ND		0.29	5.0
N-Nitrosodiphenylamine	ND		0.31	1.0
N-Nitrosodi-n-propylamine	ND		0.24	1.0
2,2'-oxybis[1-chloropropane]	ND		0.40	1.0
Pentachlorophenol	ND		0.27	5.0
Phenanthrene	ND		0.062	0.20
Phenol	ND		0.60	1.0
Pyrene	ND		0.042	0.20
2,4,5-Trichlorophenol	ND		0.30	5.0
2,4,6-Trichlorophenol	ND		0.24	5.0
2,6-Dinitrotoluene	ND		0.80	5.0

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	78	42 - 120
2-Fluorophenol (Surr)	55	10 - 120
2,4,6-Tribromophenol (Surr)	86	35 - 125
Nitrobenzene-d5 (Surr)	85	36 - 120
Phenol-d5 (Surr)	39	10 - 120
Terphenyl-d14 (Surr)	98	17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Lab Control Sample - Batch: 240-233595

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-233595/19-A	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-233595	Lab File ID:	60613012.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/13/2016 1220	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	20.0	18.4	92	57 - 120	
Acenaphthylene	20.0	15.5	77	55 - 120	
Acetophenone	20.0	16.2	81	60 - 120	
Anthracene	20.0	16.4	82	58 - 120	
Atrazine	40.0	41.2	103	61 - 132	
Benzaldehyde	40.0	33.2	83	60 - 120	
Benzo[a]anthracene	20.0	16.8	84	59 - 120	
Benzo[b]fluoranthene	20.0	19.7	98	62 - 120	
Benzo[k]fluoranthene	20.0	20.7	103	57 - 120	
Benzo[g,h,i]perylene	20.0	19.9	100	59 - 120	
Benzo[a]pyrene	20.0	19.2	96	60 - 120	
Butyl benzyl phthalate	20.0	18.4	92	61 - 120	
1,1'-Biphenyl	20.0	16.0	80	58 - 120	
Bis(2-chloroethoxy)methane	20.0	16.3	82	61 - 120	
Bis(2-chloroethyl)ether	20.0	14.9	74	55 - 120	
Bis(2-ethylhexyl) phthalate	20.0	17.6	88	62 - 123	
4-Bromophenyl phenyl ether	20.0	17.4	87	52 - 128	
Caprolactam	40.0	4.58	11	10 - 120	J
Carbazole	20.0	18.3	91	60 - 126	
4-Chloroaniline	20.0	3.07	15	10 - 120	
4-Chloro-3-methylphenol	20.0	16.6	83	59 - 120	
2-Chloronaphthalene	20.0	15.4	77	56 - 120	
2-Chlorophenol	20.0	14.7	74	57 - 120	
4-Chlorophenyl phenyl ether	20.0	16.2	81	58 - 120	
Chrysene	20.0	16.9	84	61 - 120	
2-Methylnaphthalene	20.0	15.7	79	58 - 120	
3 & 4 Methylphenol	20.0	12.4	62	46 - 120	
Dibenz(a,h)anthracene	20.0	20.5	102	61 - 120	
Dibenzofuran	20.0	16.3	82	58 - 120	
3,3'-Dichlorobenzidine	40.0	30.4	76	10 - 134	
2,4-Dichlorophenol	20.0	16.6	83	57 - 120	
Diethyl phthalate	20.0	17.0	85	62 - 120	
2,4-Dimethylphenol	20.0	14.5	73	55 - 120	
Dimethyl phthalate	20.0	17.2	86	62 - 120	
4,6-Dinitro-2-methylphenol	40.0	31.7	79	35 - 140	
2,4-Dinitrophenol	40.0	25.1	63	18 - 127	
2,4-Dinitrotoluene	20.0	17.9	90	65 - 120	
Di-n-butyl phthalate	20.0	20.3	101	59 - 128	
Di-n-octyl phthalate	20.0	19.9	100	58 - 120	
Fluoranthene	20.0	18.7	93	57 - 123	
Fluorene	20.0	15.6	78	56 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Lab Control Sample - Batch: 240-233595

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-233595/19-A	Analysis Batch:	240-234180	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-233595	Lab File ID:	60613012.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/13/2016 1220	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0904			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobenzene	20.0	16.7	83	47 - 127	
Hexachlorobutadiene	20.0	16.3	81	50 - 120	
Hexachlorocyclopentadiene	20.0	12.7	63	25 - 120	
Hexachloroethane	20.0	15.0	75	50 - 120	
Indeno[1,2,3-cd]pyrene	20.0	20.5	102	61 - 120	
Isophorone	20.0	16.7	84	61 - 120	
2-Methylphenol	20.0	13.7	69	52 - 120	
Naphthalene	20.0	15.1	75	54 - 120	
2-Nitroaniline	20.0	19.2	96	56 - 123	
3-Nitroaniline	20.0	15.3	77	36 - 120	
4-Nitroaniline	20.0	17.5	88	51 - 122	
Nitrobenzene	20.0	17.8	89	58 - 120	
2-Nitrophenol	20.0	18.3	91	62 - 120	
4-Nitrophenol	40.0	18.4	46	16 - 120	
N-Nitrosodiphenylamine	20.0	17.3	86	54 - 122	
N-Nitrosodi-n-propylamine	20.0	16.1	81	60 - 120	
2,2'-oxybis[1-chloropropane]	20.0	16.4	82	46 - 120	
Pentachlorophenol	40.0	33.9	85	35 - 121	
Phenanthrene	20.0	16.6	83	58 - 120	
Phenol	20.0	6.90	34	16 - 120	
Pyrene	20.0	19.1	95	60 - 120	
2,4,5-Trichlorophenol	20.0	17.2	86	57 - 120	
2,4,6-Trichlorophenol	20.0	17.3	86	60 - 120	
2,6-Dinitrotoluene	20.0	17.4	87	65 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	76	42 - 120
2-Fluorophenol (Surr)	48	10 - 120
2,4,6-Tribromophenol (Surr)	92	35 - 125
Nitrobenzene-d5 (Surr)	86	36 - 120
Phenol-d5 (Surr)	34	10 - 120
Terphenyl-d14 (Surr)	90	17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method Blank - Batch: 240-233624 **Method: WI-GRO**
Preparation: 5030B

Lab Sample ID:	MB 240-233624/4	Analysis Batch:	240-233624	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0060804.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1311	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1311			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-233624 **Method: WI-GRO**
Preparation: 5030B

LCS Lab Sample ID:	LCS 240-233624/5	Analysis Batch:	240-233624	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0060805.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 1351	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 1351			Injection Volume:	5 mL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-233624/17	Analysis Batch:	240-233624	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0060817.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/08/2016 2153	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 2153			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	100	98	80 - 120	2	20		

Method Blank - Batch: 240-234161 **Method: WI-GRO**
Preparation: 5030B

Lab Sample ID:	MB 240-234161/4	Analysis Batch:	240-234161	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061304.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 0721	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0721			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-234161 **Method: WI-GRO**
Preparation: 5030B

LCS Lab Sample ID:	LCS 240-234161/5	Analysis Batch:	240-234161	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061305.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 0801	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0801			Injection Volume:	5 mL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-234161/22	Analysis Batch:	240-234161	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061322.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/13/2016 1931	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 1931			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	102	95	80 - 120	7	20		

Method Blank - Batch: 240-233554

Method: 8082
Preparation: 3520C

Lab Sample ID:	MB 240-233554/8-A	Analysis Batch:	240-233931	Instrument ID:	A2HP13
Client Matrix:	Water	Prep Batch:	240-233554	Lab File ID:	SIG10610016.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/10/2016 1159	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0454			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor-1016	ND		0.050	0.20
Aroclor-1221	ND		0.090	0.20
Aroclor-1232	ND		0.070	0.20
Aroclor-1242	ND		0.060	0.20
Aroclor-1248	ND		0.050	0.20
Aroclor-1254	ND		0.030	0.20
Aroclor-1260	ND		0.040	0.20

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	55	10 - 120
Tetrachloro-m-xylene	64	21 - 120

Lab Control Sample - Batch: 240-233554

Method: 8082
Preparation: 3520C

Lab Sample ID:	LCS 240-233554/9-A	Analysis Batch:	240-233931	Instrument ID:	A2HP13
Client Matrix:	Water	Prep Batch:	240-233554	Lab File ID:	SIG10610017.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/10/2016 1218	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/08/2016 0454			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor-1016	2.50	1.54	61	32 - 120	
Aroclor-1260	2.50	1.51	60	36 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	45	10 - 120
Tetrachloro-m-xylene	61	21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method Blank - Batch: 240-233553 **Method: WI-DRO**
Preparation: 3520C

Lab Sample ID:	MB 240-233553/8-A	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-233553	Lab File ID:	P14R061426.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/14/2016 2321	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.050	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-233553 **Method: WI-DRO**
Preparation: 3520C

LCS Lab Sample ID:	LCS 240-233553/9-A	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-233553	Lab File ID:	P14R061427.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/14/2016 2348	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-233553/10-A	Analysis Batch:	240-234430	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-233553	Lab File ID:	P14R061434.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 0300	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/08/2016 0449			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	95	84	75 - 115	13	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method Blank - Batch: 240-233638

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-233638/1-A	Analysis Batch:	240-233879	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 2303	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	ND		2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	ND		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	ND		25	100
Potassium	ND		70	5000
Magnesium	ND		230	5000
Manganese	ND		5.1	15
Sodium	875	J	330	5000
Nickel	ND		1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Lab Control Sample - Batch: 240-233638

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-233638/2-A	Analysis Batch:	240-233879	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 2307	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1850	92	80 - 120	
Aluminum	2000	1870	94	80 - 120	
Cadmium	50.0	50.7	101	80 - 120	
Chromium	200	185	92	80 - 120	
Silver	50.0	48.4	97	80 - 120	
Arsenic	2000	2010	101	80 - 120	
Beryllium	50.0	47.3	95	80 - 120	
Lead	500	480	96	80 - 120	
Calcium	50000	46900	94	80 - 120	
Selenium	2000	2060	103	80 - 120	
Cobalt	500	484	97	80 - 120	
Copper	250	238	95	80 - 120	
Iron	1000	959	96	80 - 120	
Potassium	50000	46500	93	80 - 120	
Magnesium	50000	46500	93	80 - 120	
Manganese	500	474	95	80 - 120	
Sodium	50000	45500	91	80 - 120	
Nickel	500	494	99	80 - 120	
Antimony	500	496	99	80 - 120	
Thallium	2000	1960	98	80 - 120	
Vanadium	500	454	91	80 - 120	
Zinc	500	509	102	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233638

Method: 6010B
Preparation: 3005A
Total Recoverable

MS Lab Sample ID:	240-65671-H-1-B MS	Analysis Batch:	240-233879	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 2343			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				
Leach Date:	N/A				

MSD Lab Sample ID:	240-65671-H-1-C MSD	Analysis Batch:	240-233879	Instrument ID:	I12
Client Matrix:	Water	Prep Batch:	240-233638	Lab File ID:	I12060916A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 2347			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1146				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	98	99	75 - 125	1	20		
Aluminum	101	101	75 - 125	0	20		
Cadmium	111	111	75 - 125	0	20		
Chromium	97	98	75 - 125	0	20		
Silver	106	106	75 - 125	0	20		
Arsenic	112	113	75 - 125	1	20		
Beryllium	99	100	75 - 125	1	20		
Lead	96	97	75 - 125	1	20		
Calcium	94	95	75 - 125	0	20		
Selenium	112	114	75 - 125	1	20		
Cobalt	106	106	75 - 125	1	20		
Copper	104	104	75 - 125	0	20		
Iron	99	101	75 - 125	1	20		
Potassium	104	106	75 - 125	1	20		
Magnesium	96	97	75 - 125	0	20		
Manganese	100	100	75 - 125	0	20		
Nickel	107	108	75 - 125	1	20		
Antimony	108	110	75 - 125	2	20		
Thallium	100	100	75 - 125	1	20		
Vanadium	97	98	75 - 125	2	20		
Zinc	112	113	75 - 125	0	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method Blank - Batch: 240-233645

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-233645/1-A	Analysis Batch:	240-233843	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1220	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0964	J	0.090	0.20

Lab Control Sample - Batch: 240-233645

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-233645/2-A	Analysis Batch:	240-233843	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1222	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	4.94	99	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233645

Method: 7470A
Preparation: 7470A

MS Lab Sample ID:	190-10782-B-1-E MS	Analysis Batch:	240-233843	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1227			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				
Leach Date:	N/A				

MSD Lab Sample ID:	190-10782-B-1-F MSD	Analysis Batch:	240-233843	Instrument ID:	H4
Client Matrix:	Water	Prep Batch:	240-233645	Lab File ID:	0609A16H4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/09/2016 1229			Final Weight/Volume:	50 mL
Prep Date:	06/08/2016 1212				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	120	108	80 - 120	11	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method Blank - Batch: 240-233692

Method: 9012A
Preparation: 9012A

Lab Sample ID:	MB 240-233692/1-A	Analysis Batch:	240-233717	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233692	Lab File ID:	060816 CN Waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2016 1629	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/08/2016 1340				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cyanide, Total	ND		0.0050	0.010

Lab Control Sample - Batch: 240-233692

Method: 9012A
Preparation: 9012A

Lab Sample ID:	LCS 240-233692/2-A	Analysis Batch:	240-233717	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233692	Lab File ID:	060816 CN Waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2016 1733	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/08/2016 1340				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0420	0.0431	103	69 - 118	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-233692

Method: 9012A
Preparation: 9012A

MS Lab Sample ID:	190-10763-E-2-B MS	Analysis Batch:	240-233717	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233692	Lab File ID:	060816 CN Waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2016 1634			Final Weight/Volume:	25 mL
Prep Date:	06/08/2016 1340				
Leach Date:	N/A				

MSD Lab Sample ID:	190-10763-E-2-C MSD	Analysis Batch:	240-233717	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-233692	Lab File ID:	060816 CN Waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2016 1634			Final Weight/Volume:	25 mL
Prep Date:	06/08/2016 1340				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Total	98	82	42 - 140	15	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65681-1

Method Reporting Limit Check - Batch: 240-233717

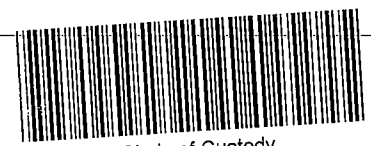
Method: 9012A
Preparation: N/A

Lab Sample ID:	MRL 240-233717/6	Analysis Batch:	240-233717	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	060816 CN Waters.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.0 mL
Analysis Date:	06/08/2016 1357	Units:	mg/L	Final Weight/Volume:	2.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0100	0.00951	95	70 - 130	J

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

TestAmerica Canton 2.0/1.5 1.4/0.9

4101 Shuffel Street, N. U.

North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

Chain of Custody Record

119193

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/6/16	COC No:
Company Name: Arcadis	Tel/Fax:	Lab Contact: Denise Pohl	Carrier:	1 of 1 COCs
Address: 430 1st Ave N #720	Analysis Turnaround Time			Sampler:
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612 339 9434	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul, MN	☐ 2 days			Job / SDG No.:
PO# MN000630.0002	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOC	TAL Metals	DRO	GRO	PCB	Cyanide	SVOC	Sample Specific Notes:
AMW-29(20160603)	6/3/16	1030	G	WT	12	Y	N	3	1	2	3	2	1		
AMW-08(20160603)	6/3/16	1135	G	WT	10	Y	N	3	1	1	3	1	1	1	Limited Quantity
AMW-28(20160603)	6/3/16	1330	G	WT	12	Y	N	3	1	2	3	2	1		
Dup-04(20160603)	6/3/16		G	WT	12	Y	N	3	1	2	3	2	1		
Trip Blank															

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Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Sample AMW-08 limited quantity for DRO, SVOC, + PCB analyses due to insufficient recharge

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by: Lindsey Kenyon	Company: Arcadis	Date/Time: 1245 6/6/16	Received by:	Company: TA	Date/Time: 6-6-16 1245
Relinquished by:	Company: TA	Date/Time: 6-6-16 1946	Received by:	Company: TA	Date/Time: 6.7.16 930
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

06/7/2016

TestAmerica Canton Sample Receipt Form/Narrative Login # : 65681
Canton Facility

Client Arcadis Site Name _____ Cooler unpacked by:

Cooler Received on 6-7-16 Opened on 6-7-16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box (Other) _____

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form

IR GUN# 48 (CF -1.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

IR GUN# 36 (CF -1.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

IR GUN# I8 (CF -0.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 4 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)

If yes, Questions 12-16 have been checked at the originating laboratory.

12. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# HC559158
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM DJP Date 6/7/16 by CWM via (Verbal) Voice Mail Other

Concerning Volume shortage for SVOCs + PCB for sample AMW-08.

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

The laboratory only received one liter to analyze SVOCs and PCBs for sample AMW-08 (20160603). Per client the lab will analyze for SVOC only and the client will send in PCB volume at a later date.

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative **Login #: 656811**
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	8	2.0	1.5	Ice
		1.4	0.9	
		2.0	1.5	
		1.0	1.5	

Temperature readings:

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-29(20160603)	240-65681-G-1	Plastic 250ml - with Sodium Hydro›	>12		
AMW-29(20160603)	240-65681-H-1	Plastic 500ml - with Nitric Acid	<2		
AMW-29(20160603)	240-65681-K-1	Amber Glass 1 liter - Hydrochloric			
AMW-29(20160603)	240-65681-L-1	Amber Glass 1 liter - Hydrochloric			
AMW-08(20160603)	240-65681-G-2	Plastic 250ml - with Sodium Hydro›	>12		
AMW-08(20160603)	240-65681-H-2	Plastic 500ml - with Nitric Acid	<2		
AMW-08(20160603)	240-65681-K-2	Amber Glass 1 liter - Hydrochloric			
AMW-28(20160603)	240-65681-G-3	Plastic 250ml - with Sodium Hydro›	>12		
AMW-28(20160603)	240-65681-H-3	Plastic 500ml - with Nitric Acid	<2		
AMW-28(20160603)	240-65681-K-3	Amber Glass 1 liter - Hydrochloric			
AMW-28(20160603)	240-65681-L-3	Amber Glass 1 liter - Hydrochloric			
DUP-04(20160603)	240-65681-G-4	Plastic 250ml - with Sodium Hydro›	>12		
DUP-04(20160603)	240-65681-H-4	Plastic 500ml - with Nitric Acid	<2		
DUP-04(20160603)	240-65681-K-4	Amber Glass 1 liter - Hydrochloric			
DUP-04(20160603)	240-65681-L-4	Amber Glass 1 liter - Hydrochloric			

June 17, 2016

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000630.0002
Client project scope reference: Sample COC only was used to define project analytical requirements.
Laboratory: TestAmerica - North Canton
Laboratory submittal: 65681-1
Sample date: 2016-06-03
Report received by CADENA: 2016-06-17
Initial Data Verification completed by CADENA: 2016-06-17

The following minor QC exceptions or missing information were noted:

TBK - GCMS VOC TRIP blanks had detections below the RL for the following analytes: ACETONE. The following client sample results should be considered to be non-detect at the RL and qualified with UB flags: ACETONE - sample -002. NOTE: Sample dilution factors are not included when assigning qualification based on trip blank detections.

MBK - METALS QC batch method blanks had detections below the RL for the following analytes: SODIUM, MERCURY. The following client sample results should be considered to be non-detect at the RL and qualified with UB flags: MERCURY - samples -002, -003, -004.

GCMS VOC QC batch 234259 LCS recoveries were outliers biased high for the following analytes: 1,1,1,2-TETRACHLOROETHANE, 1,1,1-TRICHLOROETHANE, 2,2-DICHLROPROPANE, BROMOFORM, CARBON TETRACHLORIDE, TETRACHLOROETHYLENE, TRICHLOROFLUOROMETHANE, CHLORODIBROMOMETHANE. Associated client sample results were non-detect so qualification was not required based on these high bias QC outliers.

GCMS VOC QC batch MS/MSD recovery outliers were not determined using a client sample so qualification was not required based on these sample-specific QC outliers.

GCMS SVOC QC batch method blanks had detections below the RL for the following analytes: ISOPHORONE. Qualification of client sample results was not required based on these method blank detections.

WI-DRO QC batch did not include MS/MSD recovery data due to insufficient sample volume available for spiking according to the laboratory submittal case narrative. WI-GRO QC batch did not include MS recovery data.

WI-DRO and WI-GRO sample and QC results did not include surrogate recovery data.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

4 Water sample(s) were analyzed for GCMS VOC, GCMS SVOC, PCB, GC VOC, GC Other, Metals and General Chemistry parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JB	NON-DETECT AT THE CONCENTRATION REPORTED AND ESTIMATED
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
JUB	NON-DETECT AT THE REPORTING LIMIT AND ESTIMATED
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 65681-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Polychlorinated Biphenyls by GCECD	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)	Total & Amenable Cyanides
240656811	AMW-29(20160603)	6/3/2016	10:30:00	X		X	X	X	X	X	X
240656812	AMW-08(20160603)	6/3/2016	11:35:00	X	X		X	X	X	X	X
240656813	AMW-28(20160603)	6/3/2016	1:30:00	X		X	X	X	X	X	X
240656814	DUP-04(20160603)	6/3/2016	12:00:00	X		X	X	X	X	X	X
240656815	TRIP BLANK	6/3/2016	12:00:00	X			X				

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65681-1

		Sample Name:	AMW-08(20160603)				AMW-28(20160603)				DUP-04(20160603)			
		Lab Sample ID:	240656812				240656813				240656814			
		Sample Date:	6/3/2016				6/3/2016				6/3/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC														
	OSW-8260B													
	Acetone	67-64-1	2.6	10	ug/l	UB								
Metals														
	OSW-7470A													
	Mercury - Dissolved	7439-97-6	0.13	0.20	ug/l	UB	0.12	0.20	ug/l	UB	0.14	0.20	ug/l	UB

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65681-1

		Sample Name:	AMW-29(20160603)				AMW-08(20160603)				AMW-28(20160603)			
		Lab Sample ID:	240656811				240656812				240656813			
		Sample Date:	6/3/2016				6/3/2016				6/3/2016			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC													
OSW-8260B													
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Acetone	67-64-1	ND	10	ug/l	---	2.6	10	ug/l	UB	ND	10	ug/l	---
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	0.59	1.0	ug/l	J	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Ethyl ether	60-29-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	1.0	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	0.45	1.0	ug/l	J	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	9.1	1.0	ug/l	---	5.4	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65681-1

			Sample Name:	AMW-29(20160603)				AMW-08(20160603)				AMW-28(20160603)			
			Lab Sample ID:	240656811				240656812				240656813			
			Sample Date:	6/3/2016				6/3/2016				6/3/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC														
OSW-8270C														
	1,1'-Biphenyl	92-52-4					ND	0.97	ug/l	---				
	2,2'-oxybis[1-chloropropane]	108-60-1					ND	0.97	ug/l	---				
	2,4,5-Trichlorophenol	95-95-4					ND	4.9	ug/l	---				
	2,4,6-Trichlorophenol	88-06-2					ND	4.9	ug/l	---				
	2,4-Dichlorophenol	120-83-2					ND	1.9	ug/l	---				
	2,4-Dimethylphenol	105-67-9					ND	1.9	ug/l	---				
	2,4-Dinitrophenol	51-28-5					ND	4.9	ug/l	---				
	2,4-Dinitrotoluene	121-14-2					ND	4.9	ug/l	---				
	2,6-Dinitrotoluene	606-20-2					ND	4.9	ug/l	---				
	2-Chloronaphthalene	91-58-7					ND	0.97	ug/l	---				
	2-Chlorophenol	95-57-8					ND	0.97	ug/l	---				
	2-Methylnaphthalene	91-57-6					ND	0.19	ug/l	---				
	2-Methylphenol	95-48-7					ND	0.97	ug/l	---				
	2-Nitroaniline	88-74-4					ND	1.9	ug/l	---				
	2-Nitrophenol	88-75-5					ND	1.9	ug/l	---				
	3 & 4 Methylphenol	65794-96-9					ND	1.9	ug/l	---				
	3,3'-Dichlorobenzidine	91-94-1					ND	4.9	ug/l	---				
	3-Nitroaniline	99-09-2					ND	1.9	ug/l	---				
	4,6-Dinitro-2-methylphenol	534-52-1					ND	4.9	ug/l	---				
	4-Bromophenyl phenyl ether	101-55-3					ND	1.9	ug/l	---				
	4-Chloro-3-methylphenol	59-50-7					ND	1.9	ug/l	---				
	4-Chloroaniline	106-47-8					ND	1.9	ug/l	---				
	4-Chlorophenyl phenyl ether	7005-72-3					ND	1.9	ug/l	---				
	4-Nitroaniline	100-01-6					ND	1.9	ug/l	---				
	4-Nitrophenol	100-02-7					ND	4.9	ug/l	---				
	Acenaphthene	83-32-9					ND	0.19	ug/l	---				
	Acenaphthylene	208-96-8					ND	0.19	ug/l	---				
	Acetophenone	98-86-2					ND	0.97	ug/l	---				
	Anthracene	120-12-7					ND	0.19	ug/l	---				
	Atrazine	1912-24-9					ND	0.97	ug/l	---				
	Benzaldehyde	100-52-7					ND	0.97	ug/l	---				
	Benzo[a]anthracene	56-55-3					ND	0.19	ug/l	---				
	Benzo[a]pyrene	50-32-8					ND	0.19	ug/l	---				
	Benzo[b]fluoranthene	205-99-2					ND	0.19	ug/l	---				
	Benzo[g,h,i]perylene	191-24-2					ND	0.19	ug/l	---				
	Benzo[k]fluoranthene	207-08-9					ND	0.19	ug/l	---				
	Bis(2-chloroethoxy)methane	111-91-1					ND	0.97	ug/l	---				
	Bis(2-chloroethyl)ether	111-44-4					ND	0.97	ug/l	---				
	Bis(2-ethylhexyl) phthalate	117-81-7					2.6	4.9	ug/l	J				
	Butyl benzyl phthalate	85-68-7					ND	1.9	ug/l	---				
	Caprolactam	105-60-2					ND	4.9	ug/l	---				
	Carbazole	86-74-8					ND	0.97	ug/l	---				
	Chrysene	218-01-9					ND	0.19	ug/l	---				
	Di-n-butyl phthalate	84-74-2					ND	4.9	ug/l	---				
	Di-n-octyl phthalate	117-84-0					ND	1.9	ug/l	---				
	Dibenz(a,h)anthracene	53-70-3					ND	0.19	ug/l	---				
	Dibenzofuran	132-64-9					ND	0.97	ug/l	---				
	Diethyl phthalate	84-66-2					ND	1.9	ug/l	---				
	Dimethyl phthalate	131-11-3					ND	1.9	ug/l	---				
	Fluoranthene	206-44-0					ND	0.19	ug/l	---				
	Fluorene	86-73-7					ND	0.19	ug/l	---				
	Hexachlorobenzene	118-74-1					ND	0.19	ug/l	---				
	Hexachlorobutadiene	87-68-3					ND	0.97	ug/l	---				
	Hexachlorocyclopentadiene	77-47-4					ND	9.7	ug/l	---				
	Hexachloroethane	67-72-1					ND	0.97	ug/l	---				
	Indeno[1,2,3-cd]pyrene	193-39-5					ND	0.19	ug/l	---				
	Isophorone	78-59-1					ND	0.97	ug/l	---				
	N-Nitrosodi-n-propylamine	621-64-7					ND	0.97	ug/l	---				
	N-Nitrosodiphenylamine	86-30-6					ND	0.97	ug/l	---				
	Naphthalene	91-20-3					ND	0.19	ug/l	---				
	Nitrobenzene	98-95-3					ND	0.97	ug/l	---				
	Pentachlorophenol	87-86-5					ND	4.9	ug/l	---				
	Phenanthrene	85-01-8					ND	0.19	ug/l	---				
	Phenol	108-95-2					ND	0.97	ug/l	---				
	Pyrene	129-00-0					ND	0.19	ug/l	---				
Pest & PCB														
OSW-8082														
	Aroclor-1016	12674-11-2	ND	3.8	ug/l	---					ND	4.1	ug/l	---
	Aroclor-1221	11104-28-2	ND	3.8	ug/l	---					ND	4.1	ug/l	---
	Aroclor-1232	11141-16-5	ND	3.8	ug/l	---					ND	4.1	ug/l	---
	Aroclor-1242	53469-21-9	ND	3.8	ug/l	---					ND	4.1	ug/l	---
	Aroclor-1248	12672-29-6	ND	3.8	ug/l	---					ND	4.1	ug/l	---
	Aroclor-1254	11097-69-1	ND	3.8	ug/l	---					ND	4.1	ug/l	---
	Aroclor-1260	11096-82-5	ND	3.8	ug/l	---					ND	4.1	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65681-1

			Sample Name:	AMW-29(20160603)				AMW-08(20160603)				AMW-28(20160603)			
			Lab Sample ID:	240656811				240656812				240656813			
			Sample Date:	6/3/2016				6/3/2016				6/3/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	WI Gasoline Range Organics (C6-C10)	E-1005	38	100	ug/l	J	ND	100	ug/l	---	ND	100	ug/l	---
GC Other														
	PUBL-SW-141													
	WI Diesel Range Organics (C10-C28)	E-1004	0.94	0.095	mg/l	---	0.30	0.10	mg/l	---	0.54	0.095	mg/l	---
Metals														
	OSW-6010B													
	Aluminum - Dissolved	7429-90-5	13000	200	ug/l	---	54	200	ug/l	J	140	200	ug/l	J
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Barium - Dissolved	7440-39-3	88	200	ug/l	J	76	200	ug/l	J	36	200	ug/l	J
	Beryllium - Dissolved	7440-41-7	1.6	5.0	ug/l	J	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Cadmium - Dissolved	7440-43-9	1.1	5.0	ug/l	J	0.32	5.0	ug/l	J	ND	5.0	ug/l	---
	Calcium - Dissolved	7440-70-2	61000	5000	ug/l	---	77000	5000	ug/l	---	48000	5000	ug/l	---
	Chromium - Dissolved	7440-47-3	1.2	10	ug/l	J	ND	10	ug/l	---	0.70	10	ug/l	J
	Cobalt - Dissolved	7440-48-4	75	7.0	ug/l	---	ND	7.0	ug/l	---	ND	7.0	ug/l	---
	Copper - Dissolved	7440-50-8	40	25	ug/l	---	ND	25	ug/l	---	ND	25	ug/l	---
	Iron - Dissolved	7439-89-6	1100	100	ug/l	---	ND	100	ug/l	---	1700	100	ug/l	---
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---	ND	3.0	ug/l	---
	Magnesium - Dissolved	7439-95-4	26000	5000	ug/l	---	62000	5000	ug/l	---	15000	5000	ug/l	---
	Manganese - Dissolved	7439-96-5	1400	15	ug/l	---	130	15	ug/l	---	220	15	ug/l	---
	Nickel - Dissolved	7440-02-0	320	40	ug/l	---	13	40	ug/l	J	13	40	ug/l	J
	Potassium - Dissolved	7440-09-7	5800	5000	ug/l	---	14000	5000	ug/l	---	2200	5000	ug/l	J
	Selenium - Dissolved	7782-49-2	ND	15	ug/l	---	ND	15	ug/l	---	ND	15	ug/l	---
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Sodium - Dissolved	7440-23-5	18000	5000	ug/l	---	21000	5000	ug/l	---	37000	5000	ug/l	---
	Thallium - Dissolved	7440-28-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Vanadium - Dissolved	7440-62-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Zinc - Dissolved	7440-66-6	380	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---
	OSW-7470A													
	Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---	0.13	0.20	ug/l	UB	0.12	0.20	ug/l	UB
General Chemistry														
	OSW-9012A													
	Cyanide, Total	57-12-5	0.0065	0.010	mg/l	J	ND	0.010	mg/l	---	ND	0.010	mg/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65681-1

		Sample Name:	DUP-04(20160603)				TRIP BLANK			
		Lab Sample ID:	240656814				240656815			
		Sample Date:	6/3/2016				6/3/2016			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC									
OSW-8260B									
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Acetone	67-64-1	ND	10	ug/l	---	3.9	10	ug/l	J
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Ethyl ether	60-29-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methylcyclohexane	108-87-2	1.2	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65681-1

		Sample Name:	DUP-04(20160603)				TRIP BLANK			
		Lab Sample ID:	240656814				240656815			
		Sample Date:	6/3/2016				6/3/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC										
OSW-8270C										
	1,1'-Biphenyl	92-52-4								
	2,2'-oxybis[1-chloropropane]	108-60-1								
	2,4,5-Trichlorophenol	95-95-4								
	2,4,6-Trichlorophenol	88-06-2								
	2,4-Dichlorophenol	120-83-2								
	2,4-Dimethylphenol	105-67-9								
	2,4-Dinitrophenol	51-28-5								
	2,4-Dinitrotoluene	121-14-2								
	2,6-Dinitrotoluene	606-20-2								
	2-Chloronaphthalene	91-58-7								
	2-Chlorophenol	95-57-8								
	2-Methylnaphthalene	91-57-6								
	2-Methylphenol	95-48-7								
	2-Nitroaniline	88-74-4								
	2-Nitrophenol	88-75-5								
	3 & 4 Methylphenol	65794-96-9								
	3,3'-Dichlorobenzidine	91-94-1								
	3-Nitroaniline	99-09-2								
	4,6-Dinitro-2-methylphenol	534-52-1								
	4-Bromophenyl phenyl ether	101-55-3								
	4-Chloro-3-methylphenol	59-50-7								
	4-Chloroaniline	106-47-8								
	4-Chlorophenyl phenyl ether	7005-72-3								
	4-Nitroaniline	100-01-6								
	4-Nitrophenol	100-02-7								
	Acenaphthene	83-32-9								
	Acenaphthylene	208-96-8								
	Acetophenone	98-86-2								
	Anthracene	120-12-7								
	Atrazine	1912-24-9								
	Benzaldehyde	100-52-7								
	Benzo[a]anthracene	56-55-3								
	Benzo[a]pyrene	50-32-8								
	Benzo[b]fluoranthene	205-99-2								
	Benzo[g,h,i]perylene	191-24-2								
	Benzo[k]fluoranthene	207-08-9								
	Bis(2-chloroethoxy)methane	111-91-1								
	Bis(2-chloroethyl)ether	111-44-4								
	Bis(2-ethylhexyl) phthalate	117-81-7								
	Butyl benzyl phthalate	85-68-7								
	Caprolactam	105-60-2								
	Carbazole	86-74-8								
	Chrysene	218-01-9								
	Di-n-butyl phthalate	84-74-2								
	Di-n-octyl phthalate	117-84-0								
	Dibenz(a,h)anthracene	53-70-3								
	Dibenzofuran	132-64-9								
	Diethyl phthalate	84-66-2								
	Dimethyl phthalate	131-11-3								
	Fluoranthene	206-44-0								
	Fluorene	86-73-7								
	Hexachlorobenzene	118-74-1								
	Hexachlorobutadiene	87-68-3								
	Hexachlorocyclopentadiene	77-47-4								
	Hexachloroethane	67-72-1								
	Indeno[1,2,3-cd]pyrene	193-39-5								
	Isophorone	78-59-1								
	N-Nitrosodi-n-propylamine	621-64-7								
	N-Nitrosodiphenylamine	86-30-6								
	Naphthalene	91-20-3								
	Nitrobenzene	98-95-3								
	Pentachlorophenol	87-86-5								
	Phenanthrene	85-01-8								
	Phenol	108-95-2								
	Pyrene	129-00-0								
Pest & PCB										
OSW-8082										
	Aroclor-1016	12674-11-2	ND	4.0	ug/l	---				
	Aroclor-1221	11104-28-2	ND	4.0	ug/l	---				
	Aroclor-1232	11141-16-5	ND	4.0	ug/l	---				
	Aroclor-1242	53469-21-9	ND	4.0	ug/l	---				
	Aroclor-1248	12672-29-6	ND	4.0	ug/l	---				
	Aroclor-1254	11097-69-1	ND	4.0	ug/l	---				
	Aroclor-1260	11096-82-5	ND	4.0	ug/l	---				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65681-1

			Sample Name:	DUP-04(20160603)			TRIP BLANK			
			Lab Sample ID:	240656814			240656815			
			Sample Date:	6/3/2016			6/3/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC										
	PUBL-SW-140									
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	100	ug/l	---	ND	100	ug/l	---
GC Other										
	PUBL-SW-141									
	WI Diesel Range Organics (C10-C28)	E-1004	0.62	0.095	mg/l	---				
Metals										
	OSW-6010B									
	Aluminum - Dissolved	7429-90-5	54	200	ug/l	J				
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---				
	Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---				
	Barium - Dissolved	7440-39-3	34	200	ug/l	J				
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---				
	Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---				
	Calcium - Dissolved	7440-70-2	47000	5000	ug/l	---				
	Chromium - Dissolved	7440-47-3	1.1	10	ug/l	J				
	Cobalt - Dissolved	7440-48-4	ND	7.0	ug/l	---				
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---				
	Iron - Dissolved	7439-89-6	1600	100	ug/l	---				
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---				
	Magnesium - Dissolved	7439-95-4	15000	5000	ug/l	---				
	Manganese - Dissolved	7439-96-5	210	15	ug/l	---				
	Nickel - Dissolved	7440-02-0	13	40	ug/l	J				
	Potassium - Dissolved	7440-09-7	2200	5000	ug/l	J				
	Selenium - Dissolved	7782-49-2	ND	15	ug/l	---				
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---				
	Sodium - Dissolved	7440-23-5	36000	5000	ug/l	---				
	Thallium - Dissolved	7440-28-0	ND	10	ug/l	---				
	Vanadium - Dissolved	7440-62-2	ND	10	ug/l	---				
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---				
	OSW-7470A									
	Mercury - Dissolved	7439-97-6	0.14	0.20	ug/l	UB				
General Chemistry										
	OSW-9012A									
	Cyanide, Total	57-12-5	ND	0.010	mg/l	---				

ANALYTICAL REPORT

Job Number: 240-65910-1

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
6/27/2016 10:35 AM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
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06/27/2016

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CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-65910-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/10/2016 9:20 AM and 6/11/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 1.3º C, 1.4º C, 1.9º C, 2.3º C and 2.9º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-25 (20160608) (240-65910-1), AMW-20 (20160608) (240-65972-1), AMW-24 (20160608) (240-65910-2), TRIP BLANK (240-65972-2), AMW-23 (20160608) (240-65910-3), AMW-23B (20160608) (240-65910-4) and DUP-01 (20160608) (240-65910-6) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/17/2016 and 06/21/2016.

Methylene Chloride was detected in method blank MB 240-234970/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Bromoform failed the recovery criteria high for LCS 240-234970/4. Bromoform, Bromomethane and Trichlorofluoromethane failed the recovery criteria high for LCS 240-235316/4. Refer to the QC report for details.

Methylene Chloride exceeded the RPD limit for the MSD of sample 240-65901-4 in batch 240-234970. 1,2,4-Trimethylbenzene and n-Butylbenzene failed the recovery criteria low for the MSD of sample AMW-25 (20160608)MSD (240-65910-1) in batch 240-234971. 1,2,4-Trimethylbenzene exceeded the RPD limit. 1,1-Dichloropropene, Hexachlorobutadiene, n-Butylbenzene and sec-Butylbenzene failed the recovery criteria low for the MS of sample 240-65968-12 in batch 240-235316. Bromoform failed the recovery criteria high. Several analytes failed the recovery criteria low for the MSD of sample 240-65968-12 in batch 240-235316. Refer to the QC report for details.

Sample AMW-25 (20160608) (240-65910-1)[8X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-234970 recovered outside control limits for the following analyte. Bromoform. Bromoform has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-235316 recovered outside control limits for multiple analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been

reported.AMW-20 (20160608) (240-65972-1) and (LCS 240-235316/4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-25 (20160608) (240-65910-1), AMW-20 (20160608) (240-65972-1), AMW-24 (20160608) (240-65910-2), AMW-23 (20160608) (240-65910-3), AMW-23B (20160608) (240-65910-4) and DUP-01 (20160608) (240-65910-6) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/14/2016 and analyzed on 06/15/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Caprolactam failed the recovery criteria low for the MS/MSD of sample 240-65968-12 in batch 240-234545. Refer to the QC report for details.

Sample AMW-25 (20160608) (240-65910-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: The following sample was diluted due to the nature of the sample matrix: AMW-25 (20160608) (240-65910-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples AMW-25 (20160608) (240-65910-1), AMW-20 (20160608) (240-65972-1), AMW-24 (20160608) (240-65910-2), AMW-23 (20160608) (240-65910-3), AMW-23B (20160608) (240-65910-4) and DUP-01 (20160608) (240-65910-6) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/13/2016 and 06/14/2016 and analyzed on 06/15/2016 and 06/16/2016.

Sample AMW-25 (20160608) (240-65910-1)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batches 240-234164 and 240-234342.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples AMW-25 (20160608) (240-65910-1), AMW-20 (20160608) (240-65972-1), AMW-24 (20160608) (240-65910-2), TRIP BLANK (240-65972-2), AMW-23 (20160608) (240-65910-3), AMW-23B (20160608) (240-65910-4) and DUP-01 (20160608) (240-65910-6) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were analyzed on 06/15/2016.

WI Gasoline Range Organics (C6-C10) was detected in method blank MB 240-234587/4 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Sample AMW-25 (20160608) (240-65910-1)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP)

Samples AMW-25 (20160608) (240-65910-1), AMW-20 (20160608) (240-65972-1), AMW-24 (20160608) (240-65910-2), AMW-23 (20160608) (240-65910-3), AMW-23B (20160608) (240-65910-4) and DUP-01 (20160608) (240-65910-6) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/13/2016 and 06/14/2016 and analyzed on 06/15/2016.

Sodium was detected in method blank MB 240-234408/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Calcium failed the recovery criteria low for the MS of sample AMW-25 (20160608)MS (240-65910-1) in batch 240-234547. Refer to the QC report for details.

Method(s) 200.7 Rev 4.4, 6010B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: AMW-25 (20160608) (240-65910-1), AMW-24 (20160608) (240-65910-2), AMW-23 (20160608) (240-65910-3), AMW-23B (20160608) (240-65910-4) and DUP-01 (20160608) (240-65910-6). The continuing calibration blanks and method blanks may not support the lower PQL.

Method(s) 6010B: The CRI associated with batch 240-234547 recovered above the upper control limit for vanadium. The samples associated with this CRI were below the requested reporting limit for the affected analytes; therefore, the data have been reported. The following samples are impacted: AMW-25 (20160608) (240-65910-1), AMW-24 (20160608) (240-65910-2), AMW-23 (20160608)

(240-65910-3), AMW-23B (20160608) (240-65910-4) and DUP-01 (20160608) (240-65910-6).

Method(s) 200.7 Rev 4.4, 6010B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: AMW-20 (20160608) (240-65972-1). The continuing calibration blanks and method blanks may not support the lower PQL.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Samples AMW-25 (20160608) (240-65910-1), AMW-20 (20160608) (240-65972-1), AMW-24 (20160608) (240-65910-2), AMW-23 (20160608) (240-65910-3), AMW-23B (20160608) (240-65910-4) and DUP-01 (20160608) (240-65910-6) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 06/13/2016 and 06/14/2016 and analyzed on 06/14/2016 and 06/16/2016.

Method(s) 245.1, 7470A: The laboratory control sample (LCS) for preparation batch 240-234410 and analytical batch 240-234773 recovered outside control limits for the following analytes: Hg. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL CYANIDE

Samples AMW-25 (20160608) (240-65910-1), AMW-20 (20160608) (240-65972-1), AMW-24 (20160608) (240-65910-2), AMW-23 (20160608) (240-65910-3), AMW-23B (20160608) (240-65910-4) and DUP-01 (20160608) (240-65910-6) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 06/15/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65910-1	**AMW-25 (20160608)**					
1,2,4-Trimethylbenzene		250	F2 F1	8.0	ug/L	8260B
p-Isopropyltoluene		3.7	J	8.0	ug/L	8260B
Ethylbenzene		95		8.0	ug/L	8260B
m-Xylene & p-Xylene		110		16	ug/L	8260B
n-Butylbenzene		160	F1	8.0	ug/L	8260B
Isopropylbenzene		13		8.0	ug/L	8260B
N-Propylbenzene		42		8.0	ug/L	8260B
sec-Butylbenzene		14		8.0	ug/L	8260B
Naphthalene		3.8		0.96	ug/L	8270C
WI Gasoline Range Organics (C6-C10)		10000	B	2000	ug/L	WI-GRO
WI Diesel Range Organics (C10-C28)		11		0.96	mg/L	WI-DRO
Dissolved						
Barium		200		200	ug/L	6010B
Chromium		1.6	J	10	ug/L	6010B
Arsenic		8.2	J	10	ug/L	6010B
Lead		2.0	J	3.0	ug/L	6010B
Calcium		220000		5000	ug/L	6010B
Cobalt		0.95	J	7.0	ug/L	6010B
Iron		2600		100	ug/L	6010B
Potassium		4200	J	5000	ug/L	6010B
Magnesium		70000		5000	ug/L	6010B
Manganese		1500		15	ug/L	6010B
Sodium		82000		5000	ug/L	6010B
Nickel		4.3	J	40	ug/L	6010B
Thallium		7.3	J	10	ug/L	6010B
Vanadium		4.4	J	10	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65910-2	**AMW-24 (20160608)**					
Caprolactam		0.28	J	4.8	ug/L	8270C
WI Gasoline Range Organics (C6-C10)		30	J B	100	ug/L	WI-GRO
WI Diesel Range Organics (C10-C28)		0.18		0.095	mg/L	WI-DRO
Cyanide, Total		0.013		0.010	mg/L	9012A
Dissolved						
Barium		100	J	200	ug/L	6010B
Chromium		1.0	J	10	ug/L	6010B
Arsenic		4.2	J	10	ug/L	6010B
Calcium		200000		5000	ug/L	6010B
Cobalt		2.3	J	7.0	ug/L	6010B
Iron		1800		100	ug/L	6010B
Potassium		7000		5000	ug/L	6010B
Magnesium		50000		5000	ug/L	6010B
Manganese		1700		15	ug/L	6010B
Sodium		92000		5000	ug/L	6010B
Nickel		5.1	J	40	ug/L	6010B
Thallium		8.5	J	10	ug/L	6010B
240-65910-3	**AMW-23 (20160608)**					
Acetone		2.1	J	10	ug/L	8260B
WI Gasoline Range Organics (C6-C10)		74	J	100	ug/L	WI-GRO
WI Diesel Range Organics (C10-C28)		0.050	J	0.095	mg/L	WI-DRO
Cyanide, Total		0.014		0.010	mg/L	9012A
Dissolved						
Barium		140	J	200	ug/L	6010B
Cadmium		0.29	J	5.0	ug/L	6010B
Chromium		1.0	J	10	ug/L	6010B
Calcium		130000		5000	ug/L	6010B
Cobalt		1.8	J	7.0	ug/L	6010B
Iron		450		100	ug/L	6010B
Potassium		3400	J	5000	ug/L	6010B
Magnesium		35000		5000	ug/L	6010B
Manganese		2200		15	ug/L	6010B
Sodium		40000		5000	ug/L	6010B
Nickel		2.2	J	40	ug/L	6010B
Thallium		10		10	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65910-4	**AMW-23B (20160608)**					
WI Gasoline Range Organics (C6-C10)		45	J	100	ug/L	WI-GRO
Dissolved						
Barium		180	J	200	ug/L	6010B
Chromium		0.77	J	10	ug/L	6010B
Arsenic		3.7	J	10	ug/L	6010B
Calcium		73000		5000	ug/L	6010B
Iron		5700		100	ug/L	6010B
Potassium		1800	J	5000	ug/L	6010B
Magnesium		25000		5000	ug/L	6010B
Manganese		220		15	ug/L	6010B
Sodium		8300		5000	ug/L	6010B
240-65910-6	**DUP-01 (20160608)**					
Acetone		2.0	J	10	ug/L	8260B
Naphthalene		0.10	J	0.19	ug/L	8270C
WI Gasoline Range Organics (C6-C10)		62	J	100	ug/L	WI-GRO
WI Diesel Range Organics (C10-C28)		0.074	J	0.095	mg/L	WI-DRO
Cyanide, Total		0.013		0.010	mg/L	9012A
Dissolved						
Barium		150	J	200	ug/L	6010B
Chromium		0.69	J	10	ug/L	6010B
Calcium		130000		5000	ug/L	6010B
Cobalt		1.9	J	7.0	ug/L	6010B
Iron		430		100	ug/L	6010B
Potassium		3300	J	5000	ug/L	6010B
Magnesium		35000		5000	ug/L	6010B
Manganese		2200		15	ug/L	6010B
Sodium		40000		5000	ug/L	6010B
Nickel		2.6	J	40	ug/L	6010B
Thallium		9.5	J	10	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65972-1	**AMW-20 (20160608)**					
Acetone		1.8	J	10	ug/L	8260B
Dissolved						
Barium		110	J	200	ug/L	6010B
Chromium		1.1	J	10	ug/L	6010B
Calcium		160000		5000	ug/L	6010B
Iron		45	J	100	ug/L	6010B
Potassium		2500	J	5000	ug/L	6010B
Magnesium		46000		5000	ug/L	6010B
Manganese		520		15	ug/L	6010B
Sodium		44000	B	5000	ug/L	6010B
Nickel		4.1	J	40	ug/L	6010B
Thallium		2.7	J	10	ug/L	6010B
240-65972-2	**TRIP BLANK**					
WI Gasoline Range Organics (C6-C10)		34	J B	100	ug/L	WI-GRO

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Purge and Trap	TAL CAN		SW846 5030B
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
Cyanide, Total and/or Amenable	TAL CAN	SW846 9012A	
Cyanide, Total and/or Amenable, Distillation	TAL CAN		SW846 9012A

Lab References:

TAL CAN = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method	Analyst	Analyst ID
SW846 8260B	Williams, Larry	LRW
SW846 8270C	Ulman, Mark	MRU
WI-GRO WI-GRO	Reed, Rachel T	RTR
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Toth, Roger	RKT
SW846 7470A	Dillon, William K	WKD
SW846 7470A	Heakin, David	DSH
SW846 9012A	Weimer, Joshua W	JWW

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-65910-1	AMW-25 (20160608)	Water	06/08/2016 0825	06/10/2016 0920
240-65910-2	AMW-24 (20160608)	Water	06/08/2016 0931	06/10/2016 0920
240-65910-3	AMW-23 (20160608)	Water	06/08/2016 1042	06/10/2016 0920
240-65910-4	AMW-23B (20160608)	Water	06/08/2016 1412	06/10/2016 0920
240-65910-6	DUP-01 (20160608)	Water	06/08/2016 0000	06/10/2016 0920
240-65972-1	AMW-20 (20160608)	Water	06/08/2016 1517	06/11/2016 0930
240-65972-2	TRIP BLANK	Water	06/08/2016 0000	06/11/2016 0930

SAMPLE RESULTS

Client Sample ID: **AMW-25 (20160608)**

Lab Sample ID: 240-65910-1 Date Sampled: 06/08/2016 0825
Client Matrix: Water Date Received: 06/10/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM6055.D
Dilution:	8.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2108			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2108				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		2.2	8.0
1,1,1-Trichloroethane	ND		3.5	8.0
1,1,2,2-Tetrachloroethane	ND		1.8	8.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.6	8.0
1,1,2-Trichloroethane	ND		1.9	8.0
1,1-Dichloroethane	ND		2.4	8.0
1,1-Dichloroethene	ND		3.6	8.0
1,1-Dichloropropene	ND		3.4	8.0
1,2,3-Trichlorobenzene	ND		3.0	8.0
1,2,3-Trichloropropane	ND		3.5	8.0
1,2,4-Trichlorobenzene	ND		2.6	8.0
1,2,4-Trimethylbenzene	250	F2 F1	3.3	8.0
1,2-Dibromo-3-Chloropropane	ND		6.6	16
1,2-Dichlorobenzene	ND		2.0	8.0
1,2-Dichloroethane	ND		1.8	8.0
1,2-Dichloropropane	ND		2.0	8.0
1,3,5-Trimethylbenzene	ND		3.8	8.0
1,3-Dichlorobenzene	ND		1.5	8.0
1,3-Dichloropropane	ND		1.5	8.0
1,4-Dichlorobenzene	ND		2.2	8.0
Allyl chloride	ND		6.7	16
2,2-Dichloropropane	ND		2.1	8.0
2-Chlorotoluene	ND		3.2	8.0
2-Hexanone	ND		3.8	80
Bromobenzene	ND		2.8	8.0
Bromochloromethane	ND		4.0	8.0
4-Chlorotoluene	ND		2.3	8.0
p-Isopropyltoluene	3.7	J	3.4	8.0
Acetone	ND		7.5	80
Benzene	ND		2.8	8.0
Bromoform	ND		4.5	8.0
Bromomethane	ND		3.5	8.0
Carbon disulfide	ND		3.0	8.0
Carbon tetrachloride	ND		3.4	8.0
Chlorobenzene	ND		2.0	8.0
Chloroethane	ND		2.6	8.0
Chloroform	ND		2.0	8.0
Chloromethane	ND		3.5	8.0
cis-1,2-Dichloroethene	ND		2.1	8.0
cis-1,3-Dichloropropene	ND		3.7	8.0
Cyclohexane	ND		3.6	8.0
Hexachlorobutadiene	ND		2.8	8.0
Dibromomethane	ND		3.4	8.0
Bromodichloromethane	ND		2.3	8.0
Dichlorodifluoromethane	ND		2.6	8.0
Dichlorofluoromethane	ND		2.4	16

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-25 (20160608)

Lab Sample ID: 240-65910-1 Date Sampled: 06/08/2016 0825
Client Matrix: Water Date Received: 06/10/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM6055.D
Dilution:	8.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2108			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2108				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		3.0	16
Ethylbenzene	95		2.0	8.0
1,2-Dibromoethane	ND		2.6	8.0
Naphthalene	ND		3.6	8.0
m-Xylene & p-Xylene	110		1.9	16
n-Butylbenzene	160	F1	2.5	8.0
Isopropylbenzene	13		2.8	8.0
Methyl acetate	ND		18	80
N-Propylbenzene	42		3.2	8.0
2-Butanone (MEK)	ND		4.2	80
4-Methyl-2-pentanone (MIBK)	ND		7.9	80
sec-Butylbenzene	14		3.8	8.0
Methyl tert butyl ether	ND		1.6	8.0
Methylene Chloride	ND		2.6	8.0
o-Xylene	ND		2.0	8.0
Styrene	ND		3.6	8.0
tert-Butylbenzene	ND		3.3	8.0
Tetrachloroethene	ND		2.5	8.0
Tetrahydrofuran	ND		11	40
Toluene	ND		1.8	8.0
trans-1,2-Dichloroethene	ND		2.4	8.0
trans-1,3-Dichloropropene	ND		4.5	8.0
Trichloroethene	ND		1.8	8.0
Trichlorofluoromethane	ND		3.9	8.0
Vinyl chloride	ND		2.3	8.0
Methylcyclohexane	ND		3.4	8.0
Chlorodibromomethane	ND		3.4	8.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		78 - 125
4-Bromofluorobenzene (Surr)	100		61 - 120
Toluene-d8 (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	97		79 - 120

Client Sample ID: **AMW-24 (20160608)**

Lab Sample ID: 240-65910-2 Date Sampled: 06/08/2016 0931
Client Matrix: Water Date Received: 06/10/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM6035.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1334			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1334				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-24 (20160608)

Lab Sample ID: 240-65910-2 Date Sampled: 06/08/2016 0931
Client Matrix: Water Date Received: 06/10/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM6035.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1334			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1334				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		78 - 125
4-Bromofluorobenzene (Surr)	95		61 - 120
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	92		79 - 120

Client Sample ID: **AMW-23 (20160608)**

Lab Sample ID: 240-65910-3 Date Sampled: 06/08/2016 1042
Client Matrix: Water Date Received: 06/10/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM6036.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1357			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1357				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	2.1	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-23 (20160608)

Lab Sample ID: 240-65910-3 Date Sampled: 06/08/2016 1042
Client Matrix: Water Date Received: 06/10/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM6036.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1357			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1357				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		78 - 125
4-Bromofluorobenzene (Surr)	100		61 - 120
Toluene-d8 (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	95		79 - 120

Client Sample ID: **AMW-23B (20160608)**

Lab Sample ID: 240-65910-4 Date Sampled: 06/08/2016 1412
Client Matrix: Water Date Received: 06/10/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM6037.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1420			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1420				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-23B (20160608)

Lab Sample ID: 240-65910-4 Date Sampled: 06/08/2016 1412
Client Matrix: Water Date Received: 06/10/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM6037.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1420			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1420				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		78 - 125
4-Bromofluorobenzene (Surr)	94		61 - 120
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	92		79 - 120

Client Sample ID: **DUP-01 (20160608)**

Lab Sample ID: 240-65910-6 Date Sampled: 06/08/2016 0000
Client Matrix: Water Date Received: 06/10/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM6038.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1442			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1442				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	2.0	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: **DUP-01 (20160608)**

Lab Sample ID: 240-65910-6 Date Sampled: 06/08/2016 0000
Client Matrix: Water Date Received: 06/10/2016 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXM6038.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1442			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1442				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		78 - 125
4-Bromofluorobenzene (Surr)	96		61 - 120
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	93		79 - 120

Client Sample ID: **AMW-20 (20160608)**

Lab Sample ID: 240-65972-1 Date Sampled: 06/08/2016 1517
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2910.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1814			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1814				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	1.8	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-20 (20160608)

Lab Sample ID: 240-65972-1 Date Sampled: 06/08/2016 1517
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2910.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1814			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1814				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		78 - 125
4-Bromofluorobenzene (Surr)	82		61 - 120
Toluene-d8 (Surr)	83		80 - 120
Dibromofluoromethane (Surr)	99		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65972-2 Date Sampled: 06/08/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234970	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2874.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2106			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2106				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65972-2 Date Sampled: 06/08/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-234970	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2874.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2106			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2106				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		78 - 125
4-Bromofluorobenzene (Surr)	84		61 - 120
Toluene-d8 (Surr)	84		80 - 120
Dibromofluoromethane (Surr)	102		79 - 120

Client Sample ID: **AMW-25 (20160608)**

Lab Sample ID: 240-65910-1 Date Sampled: 06/08/2016 0825
Client Matrix: Water Date Received: 06/10/2016 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615013.D
Dilution:	5.0			Initial Weight/Volume:	1040 mL
Analysis Date:	06/15/2016 1159			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.21	0.96
Acenaphthylene	ND		0.23	0.96
Acetophenone	ND		1.6	4.8
Anthracene	ND		0.42	0.96
Atrazine	ND		1.6	4.8
Benzaldehyde	ND		1.9	4.8
Benzo[a]anthracene	ND		0.14	0.96
Benzo[b]fluoranthene	ND		0.19	0.96
Benzo[k]fluoranthene	ND		0.21	0.96
Benzo[g,h,i]perylene	ND		0.22	0.96
Benzo[a]pyrene	ND		0.25	0.96
Butyl benzyl phthalate	ND		1.3	9.6
1,1'-Biphenyl	ND		0.62	4.8
Bis(2-chloroethoxy)methane	ND		1.5	4.8
Bis(2-chloroethyl)ether	ND		0.48	4.8
Bis(2-ethylhexyl) phthalate	ND		8.2	24
4-Bromophenyl phenyl ether	ND		1.1	9.6
Caprolactam	ND		0.96	24
Carbazole	ND		1.3	4.8
4-Chloroaniline	ND		1.0	9.6
4-Chloro-3-methylphenol	ND		1.0	9.6
2-Chloronaphthalene	ND		0.48	4.8
2-Chlorophenol	ND		1.4	4.8
4-Chlorophenyl phenyl ether	ND		1.4	9.6
Chrysene	ND		0.24	0.96
2-Methylnaphthalene	ND		0.43	0.96
3 & 4 Methylphenol	ND		3.8	9.6
Dibenz(a,h)anthracene	ND		0.21	0.96
Dibenzofuran	ND		0.096	4.8
3,3'-Dichlorobenzidine	ND		1.8	24
2,4-Dichlorophenol	ND		0.91	9.6
Diethyl phthalate	ND		2.9	9.6
2,4-Dimethylphenol	ND		1.2	9.6
Dimethyl phthalate	ND		1.4	9.6
4,6-Dinitro-2-methylphenol	ND		12	24
2,4-Dinitrophenol	ND		1.5	24
2,4-Dinitrotoluene	ND		1.2	24
Di-n-butyl phthalate	ND		8.2	24
Di-n-octyl phthalate	ND		1.1	9.6
Fluoranthene	ND		0.21	0.96
Fluorene	ND		0.19	0.96
Hexachlorobenzene	ND		0.41	0.96
Hexachlorobutadiene	ND		1.3	4.8
Hexachlorocyclopentadiene	ND		1.2	48
Hexachloroethane	ND		0.91	4.8
Indeno[1,2,3-cd]pyrene	ND		0.21	0.96

Client Sample ID: **AMW-25 (20160608)**

Lab Sample ID: 240-65910-1 Date Sampled: 06/08/2016 0825
Client Matrix: Water Date Received: 06/10/2016 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615013.D
Dilution:	5.0			Initial Weight/Volume:	1040 mL
Analysis Date:	06/15/2016 1159			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		1.3	4.8
2-Methylphenol	ND		0.82	4.8
Naphthalene	3.8		0.30	0.96
2-Nitroaniline	ND		1.0	9.6
3-Nitroaniline	ND		1.3	9.6
4-Nitroaniline	ND		1.1	9.6
Nitrobenzene	ND		0.19	4.8
2-Nitrophenol	ND		1.3	9.6
4-Nitrophenol	ND		1.4	24
N-Nitrosodiphenylamine	ND		1.5	4.8
N-Nitrosodi-n-propylamine	ND		1.2	4.8
2,2'-oxybis[1-chloropropane]	ND		1.9	4.8
Pentachlorophenol	ND		1.3	24
Phenanthrene	ND		0.30	0.96
Phenol	ND		2.9	4.8
Pyrene	ND		0.20	0.96
2,4,5-Trichlorophenol	ND		1.4	24
2,4,6-Trichlorophenol	ND		1.2	24
2,6-Dinitrotoluene	ND		3.8	24

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	67		42 - 120
2-Fluorophenol (Surr)	28		10 - 120
2,4,6-Tribromophenol (Surr)	79		35 - 125
Nitrobenzene-d5 (Surr)	66		36 - 120
Phenol-d5 (Surr)	17		10 - 120
Terphenyl-d14 (Surr)	56		17 - 120

Client Sample ID: **AMW-24 (20160608)**

Lab Sample ID: 240-65910-2 Date Sampled: 06/08/2016 0931
Client Matrix: Water Date Received: 06/10/2016 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615009.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1020			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	0.28	J	0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-24 (20160608)

Lab Sample ID: 240-65910-2 Date Sampled: 06/08/2016 0931
Client Matrix: Water Date Received: 06/10/2016 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615009.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1020			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	77		42 - 120
2-Fluorophenol (Surr)	32		10 - 120
2,4,6-Tribromophenol (Surr)	87		35 - 125
Nitrobenzene-d5 (Surr)	75		36 - 120
Phenol-d5 (Surr)	18		10 - 120
Terphenyl-d14 (Surr)	51		17 - 120

Client Sample ID: **AMW-23 (20160608)**

Lab Sample ID: 240-65910-3 Date Sampled: 06/08/2016 1042
Client Matrix: Water Date Received: 06/10/2016 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615010.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1045			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-23 (20160608)

Lab Sample ID: 240-65910-3 Date Sampled: 06/08/2016 1042
Client Matrix: Water Date Received: 06/10/2016 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615010.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1045			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	73		42 - 120
2-Fluorophenol (Surr)	29		10 - 120
2,4,6-Tribromophenol (Surr)	86		35 - 125
Nitrobenzene-d5 (Surr)	69		36 - 120
Phenol-d5 (Surr)	18		10 - 120
Terphenyl-d14 (Surr)	54		17 - 120

Client Sample ID: **AMW-23B (20160608)**

Lab Sample ID: 240-65910-4 Date Sampled: 06/08/2016 1412
Client Matrix: Water Date Received: 06/10/2016 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615011.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1110			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-23B (20160608)

Lab Sample ID: 240-65910-4 Date Sampled: 06/08/2016 1412
Client Matrix: Water Date Received: 06/10/2016 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615011.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1110			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	75		42 - 120
2-Fluorophenol (Surr)	31		10 - 120
2,4,6-Tribromophenol (Surr)	86		35 - 125
Nitrobenzene-d5 (Surr)	77		36 - 120
Phenol-d5 (Surr)	18		10 - 120
Terphenyl-d14 (Surr)	51		17 - 120

Client Sample ID: **DUP-01 (20160608)**

Lab Sample ID: 240-65910-6 Date Sampled: 06/08/2016 0000
Client Matrix: Water Date Received: 06/10/2016 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615012.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1135			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: **DUP-01 (20160608)**

Lab Sample ID: 240-65910-6 Date Sampled: 06/08/2016 0000
Client Matrix: Water Date Received: 06/10/2016 0920

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615012.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1135			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	0.10	J	0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	72		42 - 120
2-Fluorophenol (Surr)	26		10 - 120
2,4,6-Tribromophenol (Surr)	89		35 - 125
Nitrobenzene-d5 (Surr)	72		36 - 120
Phenol-d5 (Surr)	16		10 - 120
Terphenyl-d14 (Surr)	53		17 - 120

Client Sample ID: **AMW-20 (20160608)**

Lab Sample ID: 240-65972-1 Date Sampled: 06/08/2016 1517
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615007.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	06/15/2016 0931			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.043	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.33	0.96
Anthracene	ND		0.085	0.19
Atrazine	ND		0.33	0.96
Benzaldehyde	ND		0.37	0.96
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.045	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.13	0.96
Bis(2-chloroethoxy)methane	ND		0.31	0.96
Bis(2-chloroethyl)ether	ND		0.096	0.96
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.96
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.096	0.96
2-Chlorophenol	ND		0.28	0.96
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.087	0.19
3 & 4 Methylphenol	ND		0.77	1.9
Dibenz(a,h)anthracene	ND		0.043	0.19
Dibenzofuran	ND		0.019	0.96
3,3'-Dichlorobenzidine	ND		0.36	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.58	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.31	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.043	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.082	0.19
Hexachlorobutadiene	ND		0.26	0.96
Hexachlorocyclopentadiene	ND		0.23	9.6
Hexachloroethane	ND		0.18	0.96
Indeno[1,2,3-cd]pyrene	ND		0.042	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-20 (20160608)

Lab Sample ID: 240-65972-1 Date Sampled: 06/08/2016 1517
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615007.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	06/15/2016 0931			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.96
2-Methylphenol	ND		0.16	0.96
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.96
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.96
N-Nitrosodi-n-propylamine	ND		0.23	0.96
2,2'-oxybis[1-chloropropane]	ND		0.38	0.96
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.060	0.19
Phenol	ND		0.58	0.96
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.77	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	70		42 - 120
2-Fluorophenol (Surr)	30		10 - 120
2,4,6-Tribromophenol (Surr)	76		35 - 125
Nitrobenzene-d5 (Surr)	67		36 - 120
Phenol-d5 (Surr)	18		10 - 120
Terphenyl-d14 (Surr)	77		17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-25 (20160608)

Lab Sample ID: 240-65910-1 Date Sampled: 06/08/2016 0825
Client Matrix: Water Date Received: 06/10/2016 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061506.D
Dilution:	20			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 1358			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 1358			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	10000	B	400	2000

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-24 (20160608)

Lab Sample ID: 240-65910-2 Date Sampled: 06/08/2016 0931
Client Matrix: Water Date Received: 06/10/2016 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061507.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 1440			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 1440			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	30	J B	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-23 (20160608)

Lab Sample ID: 240-65910-3 Date Sampled: 06/08/2016 1042
Client Matrix: Water Date Received: 06/10/2016 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234394	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061424.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 0131			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 0131			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	74	J	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: **AMW-23B (20160608)**

Lab Sample ID: 240-65910-4 Date Sampled: 06/08/2016 1412
Client Matrix: Water Date Received: 06/10/2016 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234394	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061425.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 0212			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 0212			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	45	J	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: **DUP-01 (20160608)**

Lab Sample ID: 240-65910-6 Date Sampled: 06/08/2016 0000
Client Matrix: Water Date Received: 06/10/2016 0920

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234394	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061426.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 0252			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 0252			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	62	J	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-20 (20160608)

Lab Sample ID: 240-65972-1 Date Sampled: 06/08/2016 1517
Client Matrix: Water Date Received: 06/11/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061508.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 1523			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 1523			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-65972-2 Date Sampled: 06/08/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061509.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 1605			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 1605			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	34	J B	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-25 (20160608)

Lab Sample ID: 240-65910-1 Date Sampled: 06/08/2016 0825
Client Matrix: Water Date Received: 06/10/2016 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234867	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234164	Lab File ID:	P14R061608.D
Dilution:	10			Initial Weight/Volume:	1040 mL
Analysis Date:	06/16/2016 2012			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0528			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	11		0.48	0.96

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-24 (20160608)

Lab Sample ID: 240-65910-2 Date Sampled: 06/08/2016 0931
Client Matrix: Water Date Received: 06/10/2016 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234164	Lab File ID:	P14R061511.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 2011			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0528			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.18		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-23 (20160608)

Lab Sample ID: 240-65910-3 Date Sampled: 06/08/2016 1042
Client Matrix: Water Date Received: 06/10/2016 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234164	Lab File ID:	P14R061512.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 2039			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0528			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.050	J	0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-23B (20160608)

Lab Sample ID: 240-65910-4 Date Sampled: 06/08/2016 1412
Client Matrix: Water Date Received: 06/10/2016 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234164	Lab File ID:	P14R061513.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 2107			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0528			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: **DUP-01 (20160608)**

Lab Sample ID: 240-65910-6 Date Sampled: 06/08/2016 0000
Client Matrix: Water Date Received: 06/10/2016 0920

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234164	Lab File ID:	P14R061514.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 2134			Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0528			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.074	J	0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-20 (20160608)

Lab Sample ID: 240-65972-1 Date Sampled: 06/08/2016 1517
Client Matrix: Water Date Received: 06/11/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234342	Lab File ID:	P14R061533.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/16/2016 0614			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-25 (20160608)

Lab Sample ID: 240-65910-1 Date Sampled: 06/08/2016 0825
Client Matrix: Water Date Received: 06/10/2016 0920

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234547	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234282	Lab File ID:	I9061416A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 0052			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1313				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	200		2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	1.6	J	0.55	10
Silver	ND		0.92	10
Arsenic	8.2	J	3.3	10
Beryllium	ND		0.21	5.0
Lead	2.0	J	1.9	3.0
Calcium	220000		710	5000
Selenium	ND		5.1	15
Cobalt	0.95	J	0.84	7.0
Copper	ND		3.9	25
Iron	2600		25	100
Potassium	4200	J	70	5000
Magnesium	70000		230	5000
Manganese	1500		5.1	15
Sodium	82000		330	5000
Nickel	4.3	J	1.6	40
Antimony	ND		3.1	10
Thallium	7.3	J	2.1	10
Vanadium	4.4	J	4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234540	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234284	Lab File ID:	0614A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/14/2016 0938			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1330				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-24 (20160608)

Lab Sample ID: 240-65910-2 Date Sampled: 06/08/2016 0931
Client Matrix: Water Date Received: 06/10/2016 0920

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234547	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234282	Lab File ID:	I9061416A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 0205			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1313				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	100	J	2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	1.0	J	0.55	10
Silver	ND		0.92	10
Arsenic	4.2	J	3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	200000		710	5000
Selenium	ND		5.1	15
Cobalt	2.3	J	0.84	7.0
Copper	ND		3.9	25
Iron	1800		25	100
Potassium	7000		70	5000
Magnesium	50000		230	5000
Manganese	1700		5.1	15
Sodium	92000		330	5000
Nickel	5.1	J	1.6	40
Antimony	ND		3.1	10
Thallium	8.5	J	2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234540	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234284	Lab File ID:	0614A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/14/2016 1017			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1330				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-23 (20160608)

Lab Sample ID: 240-65910-3 Date Sampled: 06/08/2016 1042
Client Matrix: Water Date Received: 06/10/2016 0920

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234547	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234282	Lab File ID:	I9061416A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 0210			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1313				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	140	J	2.4	200
Aluminum	ND		40	200
Cadmium	0.29	J	0.29	5.0
Chromium	1.0	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	130000		710	5000
Selenium	ND		5.1	15
Cobalt	1.8	J	0.84	7.0
Copper	ND		3.9	25
Iron	450		25	100
Potassium	3400	J	70	5000
Magnesium	35000		230	5000
Manganese	2200		5.1	15
Sodium	40000		330	5000
Nickel	2.2	J	1.6	40
Antimony	ND		3.1	10
Thallium	10		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234540	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234284	Lab File ID:	0614A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/14/2016 1020			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1330				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-23B (20160608)

Lab Sample ID: 240-65910-4 Date Sampled: 06/08/2016 1412
Client Matrix: Water Date Received: 06/10/2016 0920

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234547	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234282	Lab File ID:	I9061416A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 0222			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1313				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	180	J	2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	0.77	J	0.55	10
Silver	ND		0.92	10
Arsenic	3.7	J	3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	73000		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	5700		25	100
Potassium	1800	J	70	5000
Magnesium	25000		230	5000
Manganese	220		5.1	15
Sodium	8300		330	5000
Nickel	ND		1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234540	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234284	Lab File ID:	0614A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/14/2016 1022			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1330				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: **DUP-01 (20160608)**

Lab Sample ID: 240-65910-6 Date Sampled: 06/08/2016 0000
Client Matrix: Water Date Received: 06/10/2016 0920

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234547	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234282	Lab File ID:	I9061416A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 0226			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1313				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	150	J	2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	0.69	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	130000		710	5000
Selenium	ND		5.1	15
Cobalt	1.9	J	0.84	7.0
Copper	ND		3.9	25
Iron	430		25	100
Potassium	3300	J	70	5000
Magnesium	35000		230	5000
Manganese	2200		5.1	15
Sodium	40000		330	5000
Nickel	2.6	J	1.6	40
Antimony	ND		3.1	10
Thallium	9.5	J	2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234540	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234284	Lab File ID:	0614A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/14/2016 1024			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1330				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Client Sample ID: AMW-20 (20160608)

Lab Sample ID: 240-65972-1 Date Sampled: 06/08/2016 1517
Client Matrix: Water Date Received: 06/11/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234630	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2204			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	110	J	2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	1.1	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	160000		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	45	J	25	100
Potassium	2500	J	70	5000
Magnesium	46000		230	5000
Manganese	520		5.1	15
Sodium	44000	B	330	5000
Nickel	4.1	J	1.6	40
Antimony	ND		3.1	10
Thallium	2.7	J	2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234773	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0932			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND	*	0.090	0.20

General Chemistry

Client Sample ID: **AMW-25 (20160608)**

Lab Sample ID: 240-65910-1 Date Sampled: 06/08/2016 0825
Client Matrix: Water Date Received: 06/10/2016 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A
Analysis Batch: 240-234667	Analysis Date: 06/15/2016 1335						
Prep Batch: 240-234626	Prep Date: 06/15/2016 1142						

General Chemistry

Client Sample ID: **AMW-24 (20160608)**

Lab Sample ID: 240-65910-2 Date Sampled: 06/08/2016 0931
Client Matrix: Water Date Received: 06/10/2016 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.013		mg/L	0.0050	0.010	1.0	9012A
Analysis Batch: 240-234667	Analysis Date: 06/15/2016 1335						
Prep Batch: 240-234626	Prep Date: 06/15/2016 1142						

General Chemistry

Client Sample ID: **AMW-23 (20160608)**

Lab Sample ID: 240-65910-3 Date Sampled: 06/08/2016 1042
Client Matrix: Water Date Received: 06/10/2016 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.014		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-234667 Analysis Date: 06/15/2016 1335
Prep Batch: 240-234626 Prep Date: 06/15/2016 1142

General Chemistry

Client Sample ID: **AMW-23B (20160608)**

Lab Sample ID: 240-65910-4 Date Sampled: 06/08/2016 1412
Client Matrix: Water Date Received: 06/10/2016 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A
Analysis Batch: 240-234667	Analysis Date: 06/15/2016 1341						
Prep Batch: 240-234626	Prep Date: 06/15/2016 1142						

General Chemistry

Client Sample ID: **DUP-01 (20160608)**

Lab Sample ID: 240-65910-6 Date Sampled: 06/08/2016 0000
Client Matrix: Water Date Received: 06/10/2016 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.013		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-234667 Analysis Date: 06/15/2016 1341
Prep Batch: 240-234626 Prep Date: 06/15/2016 1142

General Chemistry

Client Sample ID: **AMW-20 (20160608)**

Lab Sample ID: 240-65972-1 Date Sampled: 06/08/2016 1517
Client Matrix: Water Date Received: 06/11/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-234667 Analysis Date: 06/15/2016 1401
Prep Batch: 240-234626 Prep Date: 06/15/2016 1142

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Section	Qualifier	Description
GC/MS VOA		
	*	LCS or LCSD is outside acceptance limits.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	*	LCS or LCSD is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-234970					
LCS 240-234970/4	Lab Control Sample	T	Water	8260B	
MB 240-234970/6	Method Blank	T	Water	8260B	
240-65901-A-4 MS	Matrix Spike	T	Water	8260B	
240-65901-C-4 MSD	Matrix Spike Duplicate	T	Water	8260B	
240-65972-2	TRIP BLANK	T	Water	8260B	
Analysis Batch:240-234971					
LCS 240-234971/4	Lab Control Sample	T	Water	8260B	
MB 240-234971/6	Method Blank	T	Water	8260B	
240-65910-1	AMW-25 (20160608)	T	Water	8260B	
240-65910-1MS	Matrix Spike	T	Water	8260B	
240-65910-1MSD	Matrix Spike Duplicate	T	Water	8260B	
240-65910-2	AMW-24 (20160608)	T	Water	8260B	
240-65910-3	AMW-23 (20160608)	T	Water	8260B	
240-65910-4	AMW-23B (20160608)	T	Water	8260B	
240-65910-6	DUP-01 (20160608)	T	Water	8260B	
Analysis Batch:240-235316					
LCS 240-235316/4	Lab Control Sample	T	Water	8260B	
MB 240-235316/6	Method Blank	T	Water	8260B	
240-65968-D-12 MS	Matrix Spike	T	Water	8260B	
240-65968-E-12 MSD	Matrix Spike Duplicate	T	Water	8260B	
240-65972-1	AMW-20 (20160608)	T	Water	8260B	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-234392					
LCS 240-234392/23-A	Lab Control Sample	T	Water	3510C	
MB 240-234392/22-A	Method Blank	T	Water	3510C	
240-65910-1	AMW-25 (20160608)	T	Water	3510C	
240-65910-2	AMW-24 (20160608)	T	Water	3510C	
240-65910-3	AMW-23 (20160608)	T	Water	3510C	
240-65910-4	AMW-23B (20160608)	T	Water	3510C	
240-65910-6	DUP-01 (20160608)	T	Water	3510C	
240-65968-O-12-A MS	Matrix Spike	T	Water	3510C	
240-65968-Q-12-A MSD	Matrix Spike Duplicate	T	Water	3510C	
240-65972-1	AMW-20 (20160608)	T	Water	3510C	
Analysis Batch:240-234545					
LCS 240-234392/23-A	Lab Control Sample	T	Water	8270C	240-234392
MB 240-234392/22-A	Method Blank	T	Water	8270C	240-234392
240-65910-1	AMW-25 (20160608)	T	Water	8270C	240-234392
240-65910-2	AMW-24 (20160608)	T	Water	8270C	240-234392
240-65910-3	AMW-23 (20160608)	T	Water	8270C	240-234392
240-65910-4	AMW-23B (20160608)	T	Water	8270C	240-234392
240-65910-6	DUP-01 (20160608)	T	Water	8270C	240-234392
240-65968-O-12-A MS	Matrix Spike	T	Water	8270C	240-234392
240-65968-Q-12-A MSD	Matrix Spike Duplicate	T	Water	8270C	240-234392
240-65972-1	AMW-20 (20160608)	T	Water	8270C	240-234392

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Analysis Batch:240-234394					
LCS 240-234394/21	Lab Control Sample	T	Water	WI-GRO	
LCSD 240-234394/29	Lab Control Sample Duplicate	T	Water	WI-GRO	
MB 240-234394/20	Method Blank	T	Water	WI-GRO	
240-65910-3	AMW-23 (20160608)	T	Water	WI-GRO	
240-65910-4	AMW-23B (20160608)	T	Water	WI-GRO	
240-65910-6	DUP-01 (20160608)	T	Water	WI-GRO	
Analysis Batch:240-234587					
LCS 240-234587/5	Lab Control Sample	T	Water	WI-GRO	
LCSD 240-234587/24	Lab Control Sample Duplicate	T	Water	WI-GRO	
MB 240-234587/4	Method Blank	T	Water	WI-GRO	
240-65910-1	AMW-25 (20160608)	T	Water	WI-GRO	
240-65910-2	AMW-24 (20160608)	T	Water	WI-GRO	
240-65972-1	AMW-20 (20160608)	T	Water	WI-GRO	
240-65972-2	TRIP BLANK	T	Water	WI-GRO	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-234164					
LCS 240-234164/7-A	Lab Control Sample	T	Water	3520C	
LCSD 240-234164/8-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 240-234164/6-A	Method Blank	T	Water	3520C	
240-65910-1	AMW-25 (20160608)	T	Water	3520C	
240-65910-2	AMW-24 (20160608)	T	Water	3520C	
240-65910-3	AMW-23 (20160608)	T	Water	3520C	
240-65910-4	AMW-23B (20160608)	T	Water	3520C	
240-65910-6	DUP-01 (20160608)	T	Water	3520C	
Prep Batch: 240-234342					
LCS 240-234342/15-A	Lab Control Sample	T	Water	3520C	
LCSD 240-234342/16-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 240-234342/14-A	Method Blank	T	Water	3520C	
240-65972-1	AMW-20 (20160608)	T	Water	3520C	
Analysis Batch:240-234670					
LCS 240-234164/7-A	Lab Control Sample	T	Water	WI-DRO	240-234164
LCSD 240-234164/8-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-234164
MB 240-234164/6-A	Method Blank	T	Water	WI-DRO	240-234164
LCS 240-234342/15-A	Lab Control Sample	T	Water	WI-DRO	240-234342
LCSD 240-234342/16-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-234342
MB 240-234342/14-A	Method Blank	T	Water	WI-DRO	240-234342
240-65910-2	AMW-24 (20160608)	T	Water	WI-DRO	240-234164
240-65910-3	AMW-23 (20160608)	T	Water	WI-DRO	240-234164
240-65910-4	AMW-23B (20160608)	T	Water	WI-DRO	240-234164
240-65910-6	DUP-01 (20160608)	T	Water	WI-DRO	240-234164
240-65972-1	AMW-20 (20160608)	T	Water	WI-DRO	240-234342
Analysis Batch:240-234867					
240-65910-1	AMW-25 (20160608)	T	Water	WI-DRO	240-234164

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-234282					
LCS 240-234282/2-A	Lab Control Sample	R	Water	3005A	
MB 240-234282/1-A	Method Blank	R	Water	3005A	
240-65910-1	AMW-25 (20160608)	D	Water	3005A	
240-65910-1MS	Matrix Spike	D	Water	3005A	
240-65910-1MSD	Matrix Spike Duplicate	D	Water	3005A	
240-65910-2	AMW-24 (20160608)	D	Water	3005A	
240-65910-3	AMW-23 (20160608)	D	Water	3005A	
240-65910-4	AMW-23B (20160608)	D	Water	3005A	
240-65910-6	DUP-01 (20160608)	D	Water	3005A	
Prep Batch: 240-234284					
LCS 240-234284/2-A	Lab Control Sample	T	Water	7470A	
MB 240-234284/1-A	Method Blank	T	Water	7470A	
240-65910-1	AMW-25 (20160608)	D	Water	7470A	
240-65910-1MS	Matrix Spike	D	Water	7470A	
240-65910-1MSD	Matrix Spike Duplicate	D	Water	7470A	
240-65910-2	AMW-24 (20160608)	D	Water	7470A	
240-65910-3	AMW-23 (20160608)	D	Water	7470A	
240-65910-4	AMW-23B (20160608)	D	Water	7470A	
240-65910-6	DUP-01 (20160608)	D	Water	7470A	
Prep Batch: 240-234408					
LCS 240-234408/2-A	Lab Control Sample	R	Water	3005A	
MB 240-234408/1-A	Method Blank	R	Water	3005A	
240-65972-1	AMW-20 (20160608)	D	Water	3005A	
240-65972-1MS	Matrix Spike	D	Water	3005A	
240-65972-1MSD	Matrix Spike Duplicate	D	Water	3005A	
Prep Batch: 240-234410					
LCS 240-234410/2-A	Lab Control Sample	T	Water	7470A	
MB 240-234410/1-A	Method Blank	T	Water	7470A	
240-65972-1	AMW-20 (20160608)	D	Water	7470A	
240-65972-1MS	Matrix Spike	D	Water	7470A	
240-65972-1MSD	Matrix Spike Duplicate	D	Water	7470A	
Analysis Batch:240-234540					
LCS 240-234284/2-A	Lab Control Sample	T	Water	7470A	240-234284
MB 240-234284/1-A	Method Blank	T	Water	7470A	240-234284
240-65910-1	AMW-25 (20160608)	D	Water	7470A	240-234284
240-65910-1MS	Matrix Spike	D	Water	7470A	240-234284
240-65910-1MSD	Matrix Spike Duplicate	D	Water	7470A	240-234284
240-65910-2	AMW-24 (20160608)	D	Water	7470A	240-234284
240-65910-3	AMW-23 (20160608)	D	Water	7470A	240-234284
240-65910-4	AMW-23B (20160608)	D	Water	7470A	240-234284
240-65910-6	DUP-01 (20160608)	D	Water	7470A	240-234284

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-234547					
LCS 240-234282/2-A	Lab Control Sample	R	Water	6010B	240-234282
MB 240-234282/1-A	Method Blank	R	Water	6010B	240-234282
240-65910-1	AMW-25 (20160608)	D	Water	6010B	240-234282
240-65910-1MS	Matrix Spike	D	Water	6010B	240-234282
240-65910-1MSD	Matrix Spike Duplicate	D	Water	6010B	240-234282
240-65910-2	AMW-24 (20160608)	D	Water	6010B	240-234282
240-65910-3	AMW-23 (20160608)	D	Water	6010B	240-234282
240-65910-4	AMW-23B (20160608)	D	Water	6010B	240-234282
240-65910-6	DUP-01 (20160608)	D	Water	6010B	240-234282
Analysis Batch:240-234630					
LCS 240-234408/2-A	Lab Control Sample	R	Water	6010B	240-234408
MB 240-234408/1-A	Method Blank	R	Water	6010B	240-234408
240-65972-1	AMW-20 (20160608)	D	Water	6010B	240-234408
240-65972-1MS	Matrix Spike	D	Water	6010B	240-234408
240-65972-1MSD	Matrix Spike Duplicate	D	Water	6010B	240-234408
Analysis Batch:240-234773					
LCS 240-234410/2-A	Lab Control Sample	T	Water	7470A	240-234410
MB 240-234410/1-A	Method Blank	T	Water	7470A	240-234410
240-65972-1	AMW-20 (20160608)	D	Water	7470A	240-234410
240-65972-1MS	Matrix Spike	D	Water	7470A	240-234410
240-65972-1MSD	Matrix Spike Duplicate	D	Water	7470A	240-234410

Report Basis
D = Dissolved
R = Total Recoverable
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 240-234626					
LCS 240-234626/2-A	Lab Control Sample	T	Water	9012A	
MB 240-234626/1-A	Method Blank	T	Water	9012A	
240-65890-D-7-B MS	Matrix Spike	T	Water	9012A	
240-65890-D-7-C MSD	Matrix Spike Duplicate	T	Water	9012A	
240-65910-1	AMW-25 (20160608)	T	Water	9012A	
240-65910-2	AMW-24 (20160608)	T	Water	9012A	
240-65910-3	AMW-23 (20160608)	T	Water	9012A	
240-65910-4	AMW-23B (20160608)	T	Water	9012A	
240-65910-6	DUP-01 (20160608)	T	Water	9012A	
240-65972-1	AMW-20 (20160608)	T	Water	9012A	
Analysis Batch:240-234667					
LCS 240-234626/2-A	Lab Control Sample	T	Water	9012A	240-234626
MB 240-234626/1-A	Method Blank	T	Water	9012A	240-234626
240-65890-D-7-B MS	Matrix Spike	T	Water	9012A	240-234626
240-65890-D-7-C MSD	Matrix Spike Duplicate	T	Water	9012A	240-234626
240-65910-1	AMW-25 (20160608)	T	Water	9012A	240-234626
240-65910-2	AMW-24 (20160608)	T	Water	9012A	240-234626
240-65910-3	AMW-23 (20160608)	T	Water	9012A	240-234626
240-65910-4	AMW-23B (20160608)	T	Water	9012A	240-234626
240-65910-6	DUP-01 (20160608)	T	Water	9012A	240-234626
240-65972-1	AMW-20 (20160608)	T	Water	9012A	240-234626

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-65910-1	AMW-25 (20160608)	98	100	103	97
240-65910-2	AMW-24 (20160608)	94	95	101	92
240-65910-3	AMW-23 (20160608)	99	100	103	95
240-65910-4	AMW-23B (20160608)	96	94	101	92
240-65910-6	DUP-01 (20160608)	94	96	100	93
240-65972-1	AMW-20 (20160608)	109	82	83	99
240-65972-2	TRIP BLANK	113	84	84	102
MB 240-234970/6		107	82	83	96
MB 240-234971/6		94	97	101	91
MB 240-235316/6		108	82	84	98
LCS 240-234970/4		103	94	87	100
LCS 240-234971/4		94	97	100	91
LCS 240-235316/4		104	93	87	97
240-65910-1 MS	AMW-25 (20160608) MS	96	99	102	95
240-65901-A-4 MS		106	93	88	101
240-65968-D-12 MS		103	95	86	100
240-65910-1 MSD	AMW-25 (20160608) MSD	94	102	103	95
240-65901-C-4 MSD		104	90	86	99
240-65968-E-12 MSD		102	90	86	98

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	78-125
BFB = 4-Bromofluorobenzene (Surr)	61-120
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	79-120

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-65910-1	AMW-25 (20160608)	67	28	79	66	17	56
240-65910-2	AMW-24 (20160608)	77	32	87	75	18	51
240-65910-3	AMW-23 (20160608)	73	29	86	69	18	54
240-65910-4	AMW-23B (20160608)	75	31	86	77	18	51
240-65910-6	DUP-01 (20160608)	72	26	89	72	16	53
240-65972-1	AMW-20 (20160608)	70	30	76	67	18	77
MB 240-234392/22-A		87	60	92	93	44	100
LCS 240-234392/23-A		83	51	100	90	36	95
240-65968-O-12-A MS		73	31	84	80	19	46
240-65968-Q-12-A MSD		79	29	92	84	17	53

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	42-120
2FP = 2-Fluorophenol (Surr)	10-120
TBP = 2,4,6-Tribromophenol (Surr)	35-125
NBZ = Nitrobenzene-d5 (Surr)	36-120
PHL = Phenol-d5 (Surr)	10-120
TPH = Terphenyl-d14 (Surr)	17-120

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method Blank - Batch: 240-234970

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-234970/6	Analysis Batch:	240-234970	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2854.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1313	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1313				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method Blank - Batch: 240-234970

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-234970/6	Analysis Batch:	240-234970	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2854.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1313	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1313				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	1.0
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	0.349	J	0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107	78 - 125
4-Bromofluorobenzene (Surr)	82	61 - 120
Toluene-d8 (Surr)	83	80 - 120
Dibromofluoromethane (Surr)	96	79 - 120

Lab Control Sample - Batch: 240-234970

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-234970/4	Analysis Batch:	240-234970	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2852.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1228	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1228				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	10.8	108	80 - 120	
1,1,1-Trichloroethane	10.0	11.3	113	77 - 123	
1,1,2,2-Tetrachloroethane	10.0	8.13	81	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.1	111	67 - 138	
1,1,2-Trichloroethane	10.0	9.06	91	80 - 120	
1,1-Dichloroethane	10.0	8.88	89	79 - 125	
1,1-Dichloroethene	10.0	9.29	93	76 - 124	
1,1-Dichloropropene	10.0	9.45	94	80 - 128	
1,2,3-Trichlorobenzene	10.0	8.79	88	66 - 120	
1,2,3-Trichloropropane	10.0	9.18	92	72 - 126	
1,2,4-Trichlorobenzene	10.0	8.12	81	61 - 120	
1,2,4-Trimethylbenzene	10.0	8.71	87	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	8.91	89	50 - 132	
1,2-Dichlorobenzene	10.0	8.86	89	79 - 120	
1,2-Dichloroethane	10.0	10.9	109	80 - 120	
1,2-Dichloropropane	10.0	8.63	86	78 - 124	
1,3,5-Trimethylbenzene	10.0	8.95	90	77 - 120	
1,3-Dichlorobenzene	10.0	9.06	91	79 - 120	
1,3-Dichloropropane	10.0	8.72	87	80 - 120	
1,4-Dichlorobenzene	10.0	8.85	89	79 - 120	
Allyl chloride	10.0	8.97	90	69 - 120	
2,2-Dichloropropane	10.0	10.1	101	71 - 122	
2-Chlorotoluene	10.0	8.63	86	80 - 120	
2-Hexanone	20.0	17.9	90	55 - 141	
Bromobenzene	10.0	9.11	91	80 - 120	
Bromochloromethane	10.0	10.5	105	80 - 120	
4-Chlorotoluene	10.0	8.69	87	80 - 120	
p-Isopropyltoluene	10.0	9.01	90	77 - 120	
Acetone	20.0	16.7	84	34 - 148	
Benzene	10.0	8.69	87	80 - 120	
Bromoform	10.0	13.3	133	56 - 122	*
Bromomethane	10.0	9.86	99	38 - 132	
Carbon disulfide	10.0	8.77	88	65 - 144	
Carbon tetrachloride	10.0	12.4	124	77 - 131	
Chlorobenzene	10.0	9.28	93	80 - 120	
Chloroethane	10.0	7.66	77	36 - 126	
Chloroform	10.0	10.1	101	80 - 120	
Chloromethane	10.0	7.04	70	48 - 133	
cis-1,2-Dichloroethene	10.0	9.41	94	79 - 120	
cis-1,3-Dichloropropene	10.0	9.51	95	74 - 126	
Cyclohexane	10.0	8.55	85	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Control Sample - Batch: 240-234970

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-234970/4	Analysis Batch:	240-234970	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2852.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1228	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1228				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	8.68	87	62 - 120	
Dibromomethane	10.0	10.2	102	80 - 120	
Bromodichloromethane	10.0	10.7	107	80 - 120	
Dichlorodifluoromethane	10.0	8.88	89	23 - 136	
Dichlorofluoromethane	10.0	9.91	99	40 - 160	
Ethyl ether	10.0	8.38	84	53 - 135	
Ethylbenzene	10.0	9.29	93	80 - 120	
1,2-Dibromoethane	10.0	10.3	103	80 - 120	
Naphthalene	10.0	7.55	75	53 - 121	
m-Xylene & p-Xylene	10.0	8.79	88	80 - 120	
n-Butylbenzene	10.0	7.76	78	74 - 120	
Isopropylbenzene	10.0	9.85	99	77 - 120	
Methyl acetate	50.0	42.6	85	67 - 131	
N-Propylbenzene	10.0	8.98	90	79 - 123	
2-Butanone (MEK)	20.0	18.2	91	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	18.7	94	64 - 135	
sec-Butylbenzene	10.0	8.29	83	77 - 120	
Methyl tert butyl ether	10.0	9.62	96	69 - 121	
Methylene Chloride	10.0	9.34	93	77 - 129	
o-Xylene	10.0	9.32	93	80 - 120	
Styrene	10.0	9.86	99	76 - 122	
tert-Butylbenzene	10.0	8.87	89	77 - 121	
Tetrachloroethene	10.0	10.6	106	78 - 121	
Tetrahydrofuran	20.0	17.0	85	61 - 136	
Toluene	10.0	8.80	88	80 - 120	
trans-1,2-Dichloroethene	10.0	9.88	99	80 - 124	
trans-1,3-Dichloropropene	10.0	8.19	82	75 - 131	
Trichloroethene	10.0	10.7	107	80 - 121	
Trichlorofluoromethane	10.0	12.1	121	61 - 133	
Vinyl chloride	10.0	8.27	83	52 - 121	
Methylcyclohexane	10.0	9.21	92	61 - 134	
Chlorodibromomethane	10.0	10.9	109	74 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103	78 - 125
4-Bromofluorobenzene (Surr)	94	61 - 120
Toluene-d8 (Surr)	87	80 - 120
Dibromofluoromethane (Surr)	100	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234970

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65901-A-4 MS	Analysis Batch:	240-234970	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2875.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2129			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2129				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65901-C-4 MSD	Analysis Batch:	240-234970	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2876.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2151			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2151				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	114	99	69 - 122	14	14		
Acetone	82	70	32 - 126	16	28		
Benzene	91	79	73 - 121	13	13		
Chlorobenzene	94	83	72 - 120	12	15		
cis-1,2-Dichloroethene	99	87	66 - 124	12	22		
Ethylbenzene	93	81	68 - 121	14	16		
m-Xylene & p-Xylene	88	76	66 - 123	14	15		
2-Butanone (MEK)	88	77	49 - 132	14	19		
4-Methyl-2-pentanone (MIBK)	97	81	58 - 136	18	32		
Methylene Chloride	88	76	70 - 124	16	14		F2
o-Xylene	94	82	68 - 121	14	14		
Toluene	90	78	72 - 122	15	15		
trans-1,2-Dichloroethene	100	89	72 - 125	11	25		
Trichloroethene	107	94	61 - 129	13	14		
Vinyl chloride	68	72	44 - 122	4	35		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106	104	78 - 125
4-Bromofluorobenzene (Surr)	93	90	61 - 120
Toluene-d8 (Surr)	88	86	80 - 120
Dibromofluoromethane (Surr)	101	99	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method Blank - Batch: 240-234971

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-234971/6	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM6034.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1311	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1311				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method Blank - Batch: 240-234971

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-234971/6	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM6034.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1311	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1311				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	2.0
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	78 - 125
4-Bromofluorobenzene (Surr)	97	61 - 120
Toluene-d8 (Surr)	101	80 - 120
Dibromofluoromethane (Surr)	91	79 - 120

Lab Control Sample - Batch: 240-234971

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-234971/4	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM6032.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1226	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1226				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	8.84	88	80 - 120	
1,1,1-Trichloroethane	10.0	9.48	95	77 - 123	
1,1,2,2-Tetrachloroethane	10.0	9.00	90	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.65	86	67 - 138	
1,1,2-Trichloroethane	10.0	9.63	96	80 - 120	
1,1-Dichloroethane	10.0	9.21	92	79 - 125	
1,1-Dichloroethene	10.0	8.51	85	76 - 124	
1,1-Dichloropropene	10.0	9.24	92	80 - 128	
1,2,3-Trichlorobenzene	10.0	8.69	87	66 - 120	
1,2,3-Trichloropropane	10.0	9.07	91	72 - 126	
1,2,4-Trichlorobenzene	10.0	8.87	89	61 - 120	
1,2,4-Trimethylbenzene	10.0	9.25	93	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	7.21	72	50 - 132	
1,2-Dichlorobenzene	10.0	9.40	94	79 - 120	
1,2-Dichloroethane	10.0	9.56	96	80 - 120	
1,2-Dichloropropane	10.0	9.66	97	78 - 124	
1,3,5-Trimethylbenzene	10.0	9.41	94	77 - 120	
1,3-Dichlorobenzene	10.0	9.39	94	79 - 120	
1,3-Dichloropropane	10.0	9.45	95	80 - 120	
1,4-Dichlorobenzene	10.0	9.61	96	79 - 120	
Allyl chloride	10.0	8.41	84	69 - 120	
2,2-Dichloropropane	10.0	9.56	96	71 - 122	
2-Chlorotoluene	10.0	9.22	92	80 - 120	
2-Hexanone	20.0	17.6	88	55 - 141	
Bromobenzene	10.0	9.38	94	80 - 120	
Bromochloromethane	10.0	8.60	86	80 - 120	
4-Chlorotoluene	10.0	9.27	93	80 - 120	
p-Isopropyltoluene	10.0	9.38	94	77 - 120	
Acetone	20.0	16.3	81	34 - 148	
Benzene	10.0	9.52	95	80 - 120	
Bromoform	10.0	8.58	86	56 - 122	
Bromomethane	10.0	8.46	85	38 - 132	
Carbon disulfide	10.0	8.87	89	65 - 144	
Carbon tetrachloride	10.0	9.05	91	77 - 131	
Chlorobenzene	10.0	9.56	96	80 - 120	
Chloroethane	10.0	7.78	78	36 - 126	
Chloroform	10.0	9.48	95	80 - 120	
Chloromethane	10.0	10.2	102	48 - 133	
cis-1,2-Dichloroethene	10.0	9.13	91	79 - 120	
cis-1,3-Dichloropropene	10.0	9.00	90	74 - 126	
Cyclohexane	10.0	9.53	95	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Control Sample - Batch: 240-234971

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-234971/4	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM6032.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 1226	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 1226				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	8.33	83	62 - 120	
Dibromomethane	10.0	8.90	89	80 - 120	
Bromodichloromethane	10.0	8.92	89	80 - 120	
Dichlorodifluoromethane	10.0	8.49	85	23 - 136	
Dichlorofluoromethane	10.0	10.6	106	40 - 160	
Ethyl ether	10.0	9.15	91	53 - 135	
Ethylbenzene	10.0	9.59	96	80 - 120	
1,2-Dibromoethane	10.0	9.35	94	80 - 120	
Naphthalene	10.0	8.36	84	53 - 121	
m-Xylene & p-Xylene	10.0	9.49	95	80 - 120	
n-Butylbenzene	10.0	9.25	93	74 - 120	
Isopropylbenzene	10.0	9.69	97	77 - 120	
Methyl acetate	50.0	43.7	87	67 - 131	
N-Propylbenzene	10.0	9.11	91	79 - 123	
2-Butanone (MEK)	20.0	16.4	82	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	17.8	89	64 - 135	
sec-Butylbenzene	10.0	9.45	94	77 - 120	
Methyl tert butyl ether	10.0	9.06	91	69 - 121	
Methylene Chloride	10.0	9.86	99	77 - 129	
o-Xylene	10.0	9.25	93	80 - 120	
Styrene	10.0	9.42	94	76 - 122	
tert-Butylbenzene	10.0	9.60	96	77 - 121	
Tetrachloroethene	10.0	9.35	93	78 - 121	
Tetrahydrofuran	20.0	17.8	89	61 - 136	
Toluene	10.0	9.75	97	80 - 120	
trans-1,2-Dichloroethene	10.0	9.55	96	80 - 124	
trans-1,3-Dichloropropene	10.0	8.95	90	75 - 131	
Trichloroethene	10.0	9.45	94	80 - 121	
Trichlorofluoromethane	10.0	10.0	100	61 - 133	
Vinyl chloride	10.0	9.35	93	52 - 121	
Methylcyclohexane	10.0	9.22	92	61 - 134	
Chlorodibromomethane	10.0	8.36	84	74 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	78 - 125
4-Bromofluorobenzene (Surr)	97	61 - 120
Toluene-d8 (Surr)	100	80 - 120
Dibromofluoromethane (Surr)	91	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234971

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65910-1	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM6056.D
Dilution:	8.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2131			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2131				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65910-1	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM6057.D
Dilution:	8.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2154			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2154				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	90	89	72 - 120	1	22		
1,1,1-Trichloroethane	96	95	69 - 122	0	14		
1,1,2,2-Tetrachloroethane	87	83	61 - 130	4	18		
1,1,2-Trichloro-1,2,2-trifluoroethane	81	81	44 - 140	0	35		
1,1,2-Trichloroethane	92	91	72 - 125	1	19		
1,1-Dichloroethane	94	91	73 - 124	3	14		
1,1-Dichloroethene	85	84	67 - 124	0	24		
1,1-Dichloropropene	91	91	81 - 126	1	11		
1,2,3-Trichlorobenzene	89	88	46 - 120	1	35		
1,2,3-Trichloropropane	88	84	58 - 135	4	25		
1,2,4-Trichlorobenzene	95	92	48 - 120	3	28		
1,2,4-Trimethylbenzene	100	45	64 - 122	15	14	E	F1 F2
1,2-Dibromo-3-Chloropropane	76	69	42 - 130	9	24		
1,2-Dichlorobenzene	94	94	67 - 118	0	15		
1,2-Dichloroethane	92	92	74 - 125	0	24		
1,2-Dichloropropane	95	94	73 - 122	2	15		
1,3,5-Trimethylbenzene	97	95	62 - 126	2	17		
1,3-Dichlorobenzene	91	91	65 - 120	0	15		
1,3-Dichloropropane	91	87	59 - 133	4	35		
1,4-Dichlorobenzene	94	94	66 - 120	0	16		
Allyl chloride	80	77	39 - 124	5	35		
2,2-Dichloropropane	95	97	48 - 126	2	30		
2-Chlorotoluene	92	91	70 - 122	1	18		
2-Hexanone	75	73	49 - 142	4	27		
Bromobenzene	90	90	73 - 120	0	13		
Bromochloromethane	87	84	60 - 132	3	35		
4-Chlorotoluene	90	91	74 - 120	0	15		
p-Isopropyltoluene	92	91	61 - 123	1	27		
Acetone	72	66	32 - 126	8	28		
Benzene	95	94	73 - 121	1	13		
Bromoform	81	77	45 - 121	5	19		
Bromomethane	123	103	26 - 136	18	35		

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234971

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65910-1	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM6056.D
Dilution:	8.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2131			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2131				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65910-1	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM6057.D
Dilution:	8.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2154			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2154				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Carbon disulfide	95	93	54 - 144	2	34		
Carbon tetrachloride	86	87	65 - 129	1	20		
Chlorobenzene	92	93	72 - 120	0	15		
Chloroethane	108	97	27 - 131	11	35		
Chloroform	94	94	73 - 121	0	17		
Chloromethane	79	73	39 - 134	8	20		
cis-1,2-Dichloroethene	94	93	66 - 124	1	22		
cis-1,3-Dichloropropene	83	82	60 - 120	1	21		
Cyclohexane	91	91	41 - 137	0	35		
Hexachlorobutadiene	82	85	48 - 120	3	34		
Dibromomethane	87	83	63 - 134	5	35		
Bromodichloromethane	87	88	72 - 120	1	19		
Dichlorodifluoromethane	85	83	14 - 137	2	34		
Dichlorofluoromethane	127	114	42 - 133	11	35		
Ethyl ether	89	85	63 - 136	4	35		
Ethylbenzene	97	71	68 - 121	13	16		
1,2-Dibromoethane	88	88	69 - 125	1	24		
Naphthalene	91	89	38 - 128	3	35		
m-Xylene & p-Xylene	100	69	66 - 123	14	15		
n-Butylbenzene	96	49	54 - 126	17	33		F1
Isopropylbenzene	96	93	61 - 122	3	20		
Methyl acetate	82	78	64 - 124	5	12		
N-Propylbenzene	93	81	63 - 129	9	29		
2-Butanone (MEK)	70	68	49 - 132	2	19		
4-Methyl-2-pentanone (MIBK)	83	79	58 - 136	5	32		
sec-Butylbenzene	93	88	61 - 123	4	29		
Methyl tert butyl ether	90	88	61 - 121	2	12		
Methylene Chloride	96	98	70 - 124	2	14		
o-Xylene	94	94	68 - 121	0	14		
Styrene	93	94	64 - 126	1	15		
tert-Butylbenzene	93	93	63 - 122	0	24		
Tetrachloroethene	89	91	59 - 125	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234971

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65910-1	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM6056.D
Dilution:	8.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2131			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2131				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65910-1	Analysis Batch:	240-234971	Instrument ID:	A3UX16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXM6057.D
Dilution:	8.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/17/2016 2154			Final Weight/Volume:	5 mL
Prep Date:	06/17/2016 2154				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Tetrahydrofuran	79	78	16 - 161	2	35		
Toluene	95	96	72 - 122	1	15		
trans-1,2-Dichloroethene	97	96	72 - 125	1	25		
trans-1,3-Dichloropropene	80	79	58 - 132	2	22		
Trichloroethene	93	93	61 - 129	0	14		
Trichlorofluoromethane	93	89	49 - 133	5	25		
Vinyl chloride	93	94	44 - 122	1	35		
Methylcyclohexane	85	87	39 - 135	3	35		
Chlorodibromomethane	80	80	62 - 122	0	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	94	78 - 125
4-Bromofluorobenzene (Surr)	99	102	61 - 120
Toluene-d8 (Surr)	102	103	80 - 120
Dibromofluoromethane (Surr)	95	95	79 - 120

Method Blank - Batch: 240-235316

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-235316/6	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2893.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1149	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1149				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Method Blank - Batch: 240-235316

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-235316/6	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2893.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1149	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1149				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	2.0
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108	78 - 125
4-Bromofluorobenzene (Surr)	82	61 - 120
Toluene-d8 (Surr)	84	80 - 120
Dibromofluoromethane (Surr)	98	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Control Sample - Batch: 240-235316

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-235316/4	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2890.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1041	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1041				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	10.8	108	80 - 120	
1,1,1-Trichloroethane	10.0	11.3	113	77 - 123	
1,1,2,2-Tetrachloroethane	10.0	8.40	84	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.9	109	67 - 138	
1,1,2-Trichloroethane	10.0	9.23	92	80 - 120	
1,1-Dichloroethane	10.0	8.84	88	79 - 125	
1,1-Dichloroethene	10.0	9.50	95	76 - 124	
1,1-Dichloropropene	10.0	9.56	96	80 - 128	
1,2,3-Trichlorobenzene	10.0	8.87	89	66 - 120	
1,2,3-Trichloropropane	10.0	9.56	96	72 - 126	
1,2,4-Trichlorobenzene	10.0	8.00	80	61 - 120	
1,2,4-Trimethylbenzene	10.0	9.05	90	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	10.8	108	50 - 132	
1,2-Dichlorobenzene	10.0	9.12	91	79 - 120	
1,2-Dichloroethane	10.0	11.0	110	80 - 120	
1,2-Dichloropropane	10.0	8.85	89	78 - 124	
1,3,5-Trimethylbenzene	10.0	9.09	91	77 - 120	
1,3-Dichlorobenzene	10.0	9.16	92	79 - 120	
1,3-Dichloropropane	10.0	8.76	88	80 - 120	
1,4-Dichlorobenzene	10.0	9.08	91	79 - 120	
Allyl chloride	10.0	9.97	100	69 - 120	
2,2-Dichloropropane	10.0	10.7	107	71 - 122	
2-Chlorotoluene	10.0	9.19	92	80 - 120	
2-Hexanone	20.0	16.8	84	55 - 141	
Bromobenzene	10.0	9.72	97	80 - 120	
Bromochloromethane	10.0	10.5	105	80 - 120	
4-Chlorotoluene	10.0	9.10	91	80 - 120	
p-Isopropyltoluene	10.0	9.16	92	77 - 120	
Acetone	20.0	16.0	80	34 - 148	
Benzene	10.0	8.86	89	80 - 120	
Bromoform	10.0	14.6	146	56 - 122	*
Bromomethane	10.0	13.4	134	38 - 132	*
Carbon disulfide	10.0	9.74	97	65 - 144	
Carbon tetrachloride	10.0	12.4	124	77 - 131	
Chlorobenzene	10.0	9.34	93	80 - 120	
Chloroethane	10.0	11.5	115	36 - 126	
Chloroform	10.0	10.3	103	80 - 120	
Chloromethane	10.0	7.74	77	48 - 133	
cis-1,2-Dichloroethene	10.0	9.62	96	79 - 120	
cis-1,3-Dichloropropene	10.0	10.0	100	74 - 126	
Cyclohexane	10.0	8.49	85	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Control Sample - Batch: 240-235316

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-235316/4	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2890.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1041	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1041				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	8.76	88	62 - 120	
Dibromomethane	10.0	9.93	99	80 - 120	
Bromodichloromethane	10.0	11.1	111	80 - 120	
Dichlorodifluoromethane	10.0	8.84	88	23 - 136	
Dichlorofluoromethane	10.0	12.4	124	40 - 160	
Ethyl ether	10.0	8.69	87	53 - 135	
Ethylbenzene	10.0	9.12	91	80 - 120	
1,2-Dibromoethane	10.0	10.3	103	80 - 120	
Naphthalene	10.0	8.04	80	53 - 121	
m-Xylene & p-Xylene	10.0	8.75	87	80 - 120	
n-Butylbenzene	10.0	7.90	79	74 - 120	
Isopropylbenzene	10.0	9.61	96	77 - 120	
Methyl acetate	50.0	43.3	87	67 - 131	
N-Propylbenzene	10.0	9.32	93	79 - 123	
2-Butanone (MEK)	20.0	17.9	90	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	18.8	94	64 - 135	
sec-Butylbenzene	10.0	8.53	85	77 - 120	
Methyl tert butyl ether	10.0	10.2	102	69 - 121	
Methylene Chloride	10.0	9.28	93	77 - 129	
o-Xylene	10.0	9.35	94	80 - 120	
Styrene	10.0	9.62	96	76 - 122	
tert-Butylbenzene	10.0	9.05	91	77 - 121	
Tetrachloroethene	10.0	10.6	106	78 - 121	
Tetrahydrofuran	20.0	17.0	85	61 - 136	
Toluene	10.0	8.81	88	80 - 120	
trans-1,2-Dichloroethene	10.0	10.3	103	80 - 124	
trans-1,3-Dichloropropene	10.0	8.49	85	75 - 131	
Trichloroethene	10.0	10.5	105	80 - 121	
Trichlorofluoromethane	10.0	13.5	135	61 - 133	*
Vinyl chloride	10.0	8.21	82	52 - 121	
Methylcyclohexane	10.0	9.08	91	61 - 134	
Chlorodibromomethane	10.0	11.4	114	74 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104	78 - 125
4-Bromofluorobenzene (Surr)	93	61 - 120
Toluene-d8 (Surr)	87	80 - 120
Dibromofluoromethane (Surr)	97	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-235316

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65968-D-12 MS	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2897.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1323			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1323				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65968-E-12 MSD	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2898.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1345			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1345				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	101	92	72 - 120	9	22		
1,1,1-Trichloroethane	104	94	69 - 122	10	14		
1,1,2,2-Tetrachloroethane	80	75	61 - 130	6	18		
1,1,2-Trichloro-1,2,2-trifluoroethane	79	75	44 - 140	5	35		
1,1,2-Trichloroethane	90	85	72 - 125	6	19		
1,1-Dichloroethane	86	80	73 - 124	7	14		
1,1-Dichloroethene	84	78	67 - 124	8	24		
1,1-Dichloropropene	80	74	81 - 126	8	11	F1	F1
1,2,3-Trichlorobenzene	64	70	46 - 120	8	35		
1,2,3-Trichloropropane	93	85	58 - 135	9	25		
1,2,4-Trichlorobenzene	62	62	48 - 120	1	28		
1,2,4-Trimethylbenzene	70	65	64 - 122	6	14		
1,2-Dibromo-3-Chloropropane	99	89	42 - 130	11	24		
1,2-Dichlorobenzene	77	73	67 - 118	5	15		
1,2-Dichloroethane	109	101	74 - 125	7	24		
1,2-Dichloropropane	84	79	73 - 122	7	15		
1,3,5-Trimethylbenzene	70	64	62 - 126	8	17		
1,3-Dichlorobenzene	76	71	65 - 120	6	15		
1,3-Dichloropropane	84	79	59 - 133	7	35		
1,4-Dichlorobenzene	77	70	66 - 120	9	16		
Allyl chloride	85	85	39 - 124	0	35		
2,2-Dichloropropane	78	69	48 - 126	12	30		
2-Chlorotoluene	73	66	70 - 122	9	18		F1
2-Hexanone	81	74	49 - 142	8	27		
Bromobenzene	83	79	73 - 120	5	13		
Bromochloromethane	106	96	60 - 132	10	35		
4-Chlorotoluene	74	66	74 - 120	12	15		F1
p-Isopropyltoluene	66	62	61 - 123	7	27		
Acetone	86	83	32 - 126	3	28		
Benzene	82	78	73 - 121	6	13		
Bromoform	137	121	45 - 121	12	19	F1	
Bromomethane	96	102	26 - 136	5	35		

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-235316

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65968-D-12 MS	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2897.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1323			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1323				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65968-E-12 MSD	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2898.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1345			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1345				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Carbon disulfide	80	74	54 - 144	7	34		
Carbon tetrachloride	104	98	65 - 129	6	20		
Chlorobenzene	81	75	72 - 120	8	15		
Chloroethane	80	91	27 - 131	13	35		
Chloroform	102	93	73 - 121	9	17		
Chloromethane	60	67	39 - 134	10	20		
cis-1,2-Dichloroethene	93	87	66 - 124	7	22		
cis-1,3-Dichloropropene	85	79	60 - 120	8	21		
Cyclohexane	58	54	41 - 137	7	35		
Hexachlorobutadiene	47	48	48 - 120	3	34	F1	
Dibromomethane	101	94	63 - 134	7	35		
Bromodichloromethane	106	97	72 - 120	9	19		
Dichlorodifluoromethane	58	61	14 - 137	5	34		
Dichlorofluoromethane	98	102	42 - 133	4	35		
Ethyl ether	84	78	63 - 136	8	35		
Ethylbenzene	76	69	68 - 121	10	16		
1,2-Dibromoethane	101	91	69 - 125	10	24		
Naphthalene	65	69	38 - 128	6	35		
m-Xylene & p-Xylene	73	66	66 - 123	10	15		
n-Butylbenzene	52	49	54 - 126	5	33	F1	F1
Isopropylbenzene	78	71	61 - 122	10	20		
Methyl acetate	73	68	64 - 124	7	12		
N-Propylbenzene	68	64	63 - 129	7	29		
2-Butanone (MEK)	78	71	49 - 132	8	19		
4-Methyl-2-pentanone (MIBK)	89	85	58 - 136	5	32		
sec-Butylbenzene	59	56	61 - 123	6	29	F1	F1
Methyl tert butyl ether	98	91	61 - 121	7	12		
Methylene Chloride	89	85	70 - 124	4	14		
o-Xylene	81	73	68 - 121	10	14		
Styrene	82	72	64 - 126	14	15		
tert-Butylbenzene	69	63	63 - 122	9	24		
Tetrachloroethene	85	79	59 - 125	8	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-235316

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65968-D-12 MS	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2897.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1323			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1323				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65968-E-12 MSD	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2898.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1345			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1345				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Tetrahydrofuran	82	73	16 - 161	11	35		
Toluene	78	72	72 - 122	8	15		
trans-1,2-Dichloroethene	92	85	72 - 125	7	25		
trans-1,3-Dichloropropene	75	68	58 - 132	11	22		
Trichloroethene	90	82	61 - 129	7	14		
Trichlorofluoromethane	93	95	49 - 133	2	25		
Vinyl chloride	72	74	44 - 122	3	35		
Methylcyclohexane	60	54	39 - 135	10	35		
Chlorodibromomethane	110	98	62 - 122	12	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103	102	78 - 125
4-Bromofluorobenzene (Surr)	95	90	61 - 120
Toluene-d8 (Surr)	86	86	80 - 120
Dibromofluoromethane (Surr)	100	98	79 - 120

Method Blank - Batch: 240-234392

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-234392/22-A	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 0753	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	ND		0.044	0.20
Acenaphthylene	ND		0.048	0.20
Acetophenone	ND		0.34	1.0
Anthracene	ND		0.088	0.20
Atrazine	ND		0.34	1.0
Benzaldehyde	ND		0.39	1.0
Benzo[a]anthracene	ND		0.030	0.20
Benzo[b]fluoranthene	ND		0.039	0.20
Benzo[k]fluoranthene	ND		0.045	0.20
Benzo[g,h,i]perylene	ND		0.046	0.20
Benzo[a]pyrene	ND		0.051	0.20
Butyl benzyl phthalate	ND		0.26	2.0
1,1'-Biphenyl	ND		0.13	1.0
Bis(2-chloroethoxy)methane	ND		0.32	1.0
Bis(2-chloroethyl)ether	ND		0.10	1.0
Bis(2-ethylhexyl) phthalate	ND		1.7	5.0
4-Bromophenyl phenyl ether	ND		0.22	2.0
Caprolactam	ND		0.20	5.0
Carbazole	ND		0.28	1.0
4-Chloroaniline	ND		0.21	2.0
4-Chloro-3-methylphenol	ND		0.21	2.0
2-Chloronaphthalene	ND		0.10	1.0
2-Chlorophenol	ND		0.29	1.0
4-Chlorophenyl phenyl ether	ND		0.30	2.0
Chrysene	ND		0.050	0.20
2-Methylnaphthalene	ND		0.090	0.20
3 & 4 Methylphenol	ND		0.80	2.0
Dibenz(a,h)anthracene	ND		0.045	0.20
Dibenzofuran	ND		0.020	1.0
3,3'-Dichlorobenzidine	ND		0.37	5.0
2,4-Dichlorophenol	ND		0.19	2.0
Diethyl phthalate	ND		0.60	2.0
2,4-Dimethylphenol	ND		0.25	2.0
Dimethyl phthalate	ND		0.29	2.0
4,6-Dinitro-2-methylphenol	ND		2.4	5.0
2,4-Dinitrophenol	ND		0.32	5.0
2,4-Dinitrotoluene	ND		0.25	5.0
Di-n-butyl phthalate	ND		1.7	5.0
Di-n-octyl phthalate	ND		0.23	2.0
Fluoranthene	ND		0.045	0.20
Fluorene	ND		0.041	0.20
Hexachlorobenzene	ND		0.085	0.20
Hexachlorobutadiene	ND		0.27	1.0
Hexachlorocyclopentadiene	ND		0.24	10
Hexachloroethane	ND		0.19	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method Blank - Batch: 240-234392

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-234392/22-A	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 0753	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Indeno[1,2,3-cd]pyrene	ND		0.043	0.20
Isophorone	ND		0.27	1.0
2-Methylphenol	ND		0.17	1.0
Naphthalene	ND		0.063	0.20
2-Nitroaniline	ND		0.21	2.0
3-Nitroaniline	ND		0.28	2.0
4-Nitroaniline	ND		0.22	2.0
Nitrobenzene	ND		0.040	1.0
2-Nitrophenol	ND		0.28	2.0
4-Nitrophenol	ND		0.29	5.0
N-Nitrosodiphenylamine	ND		0.31	1.0
N-Nitrosodi-n-propylamine	ND		0.24	1.0
2,2'-oxybis[1-chloropropane]	ND		0.40	1.0
Pentachlorophenol	ND		0.27	5.0
Phenanthrene	ND		0.062	0.20
Phenol	ND		0.60	1.0
Pyrene	ND		0.042	0.20
2,4,5-Trichlorophenol	ND		0.30	5.0
2,4,6-Trichlorophenol	ND		0.24	5.0
2,6-Dinitrotoluene	ND		0.80	5.0

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	87	42 - 120
2-Fluorophenol (Surr)	60	10 - 120
2,4,6-Tribromophenol (Surr)	92	35 - 125
Nitrobenzene-d5 (Surr)	93	36 - 120
Phenol-d5 (Surr)	44	10 - 120
Terphenyl-d14 (Surr)	100	17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Control Sample - Batch: 240-234392

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-234392/23-A	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 0817	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	20.0	18.9	95	57 - 120	
Acenaphthylene	20.0	16.4	82	55 - 120	
Acetophenone	20.0	17.1	86	60 - 120	
Anthracene	20.0	17.3	87	58 - 120	
Atrazine	40.0	41.7	104	61 - 132	
Benzaldehyde	40.0	34.2	85	60 - 120	
Benzo[a]anthracene	20.0	17.5	88	59 - 120	
Benzo[b]fluoranthene	20.0	20.5	103	62 - 120	
Benzo[k]fluoranthene	20.0	20.1	100	57 - 120	
Benzo[g,h,i]perylene	20.0	20.9	105	59 - 120	
Benzo[a]pyrene	20.0	19.5	98	60 - 120	
Butyl benzyl phthalate	20.0	20.1	100	61 - 120	
1,1'-Biphenyl	20.0	16.7	84	58 - 120	
Bis(2-chloroethoxy)methane	20.0	17.5	87	61 - 120	
Bis(2-chloroethyl)ether	20.0	15.2	76	55 - 120	
Bis(2-ethylhexyl) phthalate	20.0	20.1	100	62 - 123	
4-Bromophenyl phenyl ether	20.0	17.8	89	52 - 128	
Caprolactam	40.0	5.79	14	10 - 120	
Carbazole	20.0	18.1	90	60 - 126	
4-Chloroaniline	20.0	4.51	23	10 - 120	
4-Chloro-3-methylphenol	20.0	18.7	94	59 - 120	
2-Chloronaphthalene	20.0	16.4	82	56 - 120	
2-Chlorophenol	20.0	15.9	80	57 - 120	
4-Chlorophenyl phenyl ether	20.0	17.8	89	58 - 120	
Chrysene	20.0	17.5	87	61 - 120	
2-Methylnaphthalene	20.0	16.8	84	58 - 120	
3 & 4 Methylphenol	20.0	13.7	69	46 - 120	
Dibenz(a,h)anthracene	20.0	21.0	105	61 - 120	
Dibenzofuran	20.0	17.4	87	58 - 120	
3,3'-Dichlorobenzidine	40.0	34.6	86	10 - 134	
2,4-Dichlorophenol	20.0	18.2	91	57 - 120	
Diethyl phthalate	20.0	18.4	92	62 - 120	
2,4-Dimethylphenol	20.0	17.5	88	55 - 120	
Dimethyl phthalate	20.0	17.7	88	62 - 120	
4,6-Dinitro-2-methylphenol	40.0	34.3	86	35 - 140	
2,4-Dinitrophenol	40.0	32.4	81	18 - 127	
2,4-Dinitrotoluene	20.0	19.5	97	65 - 120	
Di-n-butyl phthalate	20.0	19.9	100	59 - 128	
Di-n-octyl phthalate	20.0	22.0	110	58 - 120	
Fluoranthene	20.0	18.0	90	57 - 123	
Fluorene	20.0	16.7	84	56 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Control Sample - Batch: 240-234392

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-234392/23-A	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 0817	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobenzene	20.0	17.0	85	47 - 127	
Hexachlorobutadiene	20.0	18.6	93	50 - 120	
Hexachlorocyclopentadiene	20.0	16.1	81	25 - 120	
Hexachloroethane	20.0	16.7	83	50 - 120	
Indeno[1,2,3-cd]pyrene	20.0	20.8	104	61 - 120	
Isophorone	20.0	17.9	90	61 - 120	
2-Methylphenol	20.0	14.5	72	52 - 120	
Naphthalene	20.0	16.5	82	54 - 120	
2-Nitroaniline	20.0	19.9	99	56 - 123	
3-Nitroaniline	20.0	16.9	84	36 - 120	
4-Nitroaniline	20.0	18.8	94	51 - 122	
Nitrobenzene	20.0	18.4	92	58 - 120	
2-Nitrophenol	20.0	19.9	100	62 - 120	
4-Nitrophenol	40.0	19.8	49	16 - 120	
N-Nitrosodiphenylamine	20.0	17.3	86	54 - 122	
N-Nitrosodi-n-propylamine	20.0	17.6	88	60 - 120	
2,2'-oxybis[1-chloropropane]	20.0	16.4	82	46 - 120	
Pentachlorophenol	40.0	38.4	96	35 - 121	
Phenanthrene	20.0	17.2	86	58 - 120	
Phenol	20.0	7.44	37	16 - 120	
Pyrene	20.0	19.3	97	60 - 120	
2,4,5-Trichlorophenol	20.0	19.1	96	57 - 120	
2,4,6-Trichlorophenol	20.0	18.1	90	60 - 120	
2,6-Dinitrotoluene	20.0	18.8	94	65 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	83	42 - 120
2-Fluorophenol (Surr)	51	10 - 120
2,4,6-Tribromophenol (Surr)	100	35 - 125
Nitrobenzene-d5 (Surr)	90	36 - 120
Phenol-d5 (Surr)	36	10 - 120
Terphenyl-d14 (Surr)	95	17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234392

Method: 8270C
Preparation: 3510C

MS Lab Sample ID: 240-65968-O-12-A MS
Client Matrix: Water
Dilution: 1.0
Analysis Date: 06/15/2016 1811
Prep Date: 06/14/2016 0859
Leach Date: N/A

Analysis Batch: 240-234545
Prep Batch: 240-234392
Leach Batch: N/A

Instrument ID: A4HP9
Lab File ID: 60615028.D
Initial Weight/Volume: 1050 mL
Final Weight/Volume: 2 mL
Injection Volume: 1 uL

MSD Lab Sample ID: 240-65968-Q-12-A MSD
Client Matrix: Water
Dilution: 1.0
Analysis Date: 06/15/2016 1836
Prep Date: 06/14/2016 0859
Leach Date: N/A

Analysis Batch: 240-234545
Prep Batch: 240-234392
Leach Batch: N/A

Instrument ID: A4HP9
Lab File ID: 60615029.D
Initial Weight/Volume: 1050 mL
Final Weight/Volume: 2 mL
Injection Volume: 1 uL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	84	90	37 - 120	7	35		
Acenaphthylene	71	77	40 - 120	9	31		
Acetophenone	73	81	43 - 120	10	30		
Anthracene	73	83	36 - 120	13	35		
Atrazine	93	104	50 - 122	11	25		
Benzaldehyde	74	83	42 - 120	12	32		
Benzo[a]anthracene	65	67	18 - 120	3	35		
Benzo[b]fluoranthene	69	64	14 - 120	6	35		
Benzo[k]fluoranthene	69	77	13 - 120	11	35		
Benzo[g,h,i]perylene	72	73	10 - 120	2	35		
Benzo[a]pyrene	70	69	13 - 120	1	35		
Butyl benzyl phthalate	79	87	28 - 120	9	29		
1,1'-Biphenyl	73	78	45 - 120	7	26		
Bis(2-chloroethoxy)methane	75	82	50 - 120	10	26		
Bis(2-chloroethyl)ether	66	72	45 - 120	8	28		
Bis(2-ethylhexyl) phthalate	66	69	10 - 120	5	29		
4-Bromophenyl phenyl ether	75	85	32 - 120	13	27		
Caprolactam	6	5	10 - 120	14	35	J F1	J F1
Carbazole	81	90	55 - 120	11	21		
4-Chloroaniline	11	14	10 - 120	27	35		
4-Chloro-3-methylphenol	76	76	49 - 120	0	24		
2-Chloronaphthalene	70	76	43 - 120	8	26		
2-Chlorophenol	67	70	43 - 120	5	27		
4-Chlorophenyl phenyl ether	75	82	41 - 120	9	28		
Chrysene	64	68	17 - 120	4	35		
2-Methylnaphthalene	73	80	42 - 120	8	35		
3 & 4 Methylphenol	44	42	26 - 120	6	23		
Dibenz(a,h)anthracene	72	72	10 - 120	0	35		
Dibenzofuran	75	82	44 - 120	9	23		
3,3'-Dichlorobenzidine	43	57	10 - 120	28	35		
2,4-Dichlorophenol	79	85	44 - 120	6	25		
Diethyl phthalate	81	87	51 - 120	6	21		

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234392

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-65968-O-12-A MS	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615028.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1811			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65968-Q-12-A MSD	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615029.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1836			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dimethylphenol	64	69	38 - 120	7	28		
Dimethyl phthalate	80	87	54 - 120	9	22		
4,6-Dinitro-2-methylphenol	55	68	10 - 135	20	35		
2,4-Dinitrophenol	40	48	10 - 122	19	35		
2,4-Dinitrotoluene	83	95	50 - 120	13	24		
Di-n-butyl phthalate	85	94	34 - 120	9	26		
Di-n-octyl phthalate	75	73	10 - 120	2	35		
Fluoranthene	77	80	28 - 120	4	35		
Fluorene	73	81	38 - 120	11	32		
Hexachlorobenzene	70	77	17 - 120	9	35		
Hexachlorobutadiene	77	80	32 - 120	4	35		
Hexachlorocyclopentadiene	49	55	10 - 120	11	35	J	
Hexachloroethane	66	72	10 - 120	8	35		
Indeno[1,2,3-cd]pyrene	71	72	10 - 120	1	35		
Isophorone	77	85	52 - 120	10	26		
2-Methylphenol	52	52	34 - 120	0	27		
Naphthalene	71	75	37 - 120	6	33		
2-Nitroaniline	84	93	49 - 120	10	30		
3-Nitroaniline	64	72	10 - 120	11	35		
4-Nitroaniline	81	85	29 - 120	5	34		
Nitrobenzene	79	86	47 - 120	8	25		
2-Nitrophenol	86	92	47 - 120	8	27		
4-Nitrophenol	28	24	10 - 120	16	35		
N-Nitrosodiphenylamine	66	80	46 - 120	20	23		
N-Nitrosodi-n-propylamine	79	82	49 - 120	4	26		
2,2'-oxybis[1-chloropropane]	73	81	39 - 120	10	27		
Pentachlorophenol	79	89	32 - 120	11	26		
Phenanthrene	74	84	38 - 120	12	35		
Phenol	20	18	10 - 120	14	35		
Pyrene	78	83	26 - 120	5	35		
2,4,5-Trichlorophenol	82	91	49 - 120	11	24		
2,4,6-Trichlorophenol	78	86	51 - 120	10	22		

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234392

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-65968-O-12-A MS	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615028.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1811			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65968-Q-12-A MSD	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615029.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1836			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,6-Dinitrotoluene	86	88	54 - 120	2	22		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	73	79	42 - 120
2-Fluorophenol (Surr)	31	29	10 - 120
2,4,6-Tribromophenol (Surr)	84	92	35 - 125
Nitrobenzene-d5 (Surr)	80	84	36 - 120
Phenol-d5 (Surr)	19	17	10 - 120
Terphenyl-d14 (Surr)	46	53	17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method Blank - Batch: 240-234394

Method: WI-GRO
Preparation: 5030B

Lab Sample ID:	MB 240-234394/20	Analysis Batch:	240-234394	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061420.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/14/2016 2249	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 2249			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-234394

Method: WI-GRO
Preparation: 5030B

LCS Lab Sample ID:	LCS 240-234394/21	Analysis Batch:	240-234394	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061421.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/14/2016 2330	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 2330			Injection Volume:	5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-234394/29	Analysis Batch:	240-234394	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061429.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 0453	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 0453			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	94	114	80 - 120	19	20		

Method Blank - Batch: 240-234587

Method: WI-GRO
Preparation: 5030B

Lab Sample ID:	MB 240-234587/4	Analysis Batch:	240-234587	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061504.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 1235	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 1235			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	49.6	J	20	100

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-234587

Method: WI-GRO
Preparation: 5030B

LCS Lab Sample ID:	LCS 240-234587/5	Analysis Batch:	240-234587	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061505.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 1317	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 1317			Injection Volume:	5 mL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-234587/24	Analysis Batch:	240-234587	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061525.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/16/2016 0322	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/16/2016 0322			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	104	95	80 - 120	9	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method Blank - Batch: 240-234164 **Method: WI-DRO**
Preparation: 3520C

Lab Sample ID:	MB 240-234164/6-A	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-234164	Lab File ID:	P14R061508.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 1848	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0528			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.050	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-234164 **Method: WI-DRO**
Preparation: 3520C

LCS Lab Sample ID:	LCS 240-234164/7-A	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-234164	Lab File ID:	P14R061509.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 1916	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0528			Injection Volume:	1 uL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-234164/8-A	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-234164	Lab File ID:	P14R061515.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 2201	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/13/2016 0528			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	84	82	75 - 115	2	20		

Method Blank - Batch: 240-234342 **Method: WI-DRO**
Preparation: 3520C

Lab Sample ID:	MB 240-234342/14-A	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-234342	Lab File ID:	P14R061519.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 2351	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.050	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-234342 **Method: WI-DRO**
Preparation: 3520C

LCS Lab Sample ID:	LCS 240-234342/15-A	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-234342	Lab File ID:	P14R061520.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/16/2016 0018	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-234342/16-A	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-234342	Lab File ID:	P14R061534.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/16/2016 0642	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	96	99	75 - 115	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method Blank - Batch: 240-234282

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-234282/1-A	Analysis Batch:	240-234547	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-234282	Lab File ID:	I9061416A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 0044	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1313				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	ND		2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	ND		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	ND		25	100
Potassium	ND		70	5000
Magnesium	ND		230	5000
Manganese	ND		5.1	15
Sodium	ND		330	5000
Nickel	ND		1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Control Sample - Batch: 240-234282

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-234282/2-A	Analysis Batch:	240-234547	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-234282	Lab File ID:	I9061416A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 0048	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1313				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1890	94	80 - 120	
Aluminum	2000	1950	97	80 - 120	
Cadmium	50.0	49.9	100	80 - 120	
Chromium	200	189	95	80 - 120	
Silver	50.0	47.5	95	80 - 120	
Arsenic	2000	1980	99	80 - 120	
Beryllium	50.0	48.3	97	80 - 120	
Lead	500	478	96	80 - 120	
Calcium	50000	47900	96	80 - 120	
Selenium	2000	2040	102	80 - 120	
Cobalt	500	482	96	80 - 120	
Copper	250	237	95	80 - 120	
Iron	1000	1000	100	80 - 120	
Potassium	50000	46100	92	80 - 120	
Magnesium	50000	48100	96	80 - 120	
Manganese	500	525	105	80 - 120	
Sodium	50000	46000	92	80 - 120	
Nickel	500	488	98	80 - 120	
Antimony	500	488	98	80 - 120	
Thallium	2000	1920	96	80 - 120	
Vanadium	500	485	97	80 - 120	
Zinc	500	507	101	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234282

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID: 240-65910-1
Client Matrix: Water
Dilution: 1.0
Analysis Date: 06/15/2016 0100
Prep Date: 06/13/2016 1313
Leach Date: N/A

Analysis Batch: 240-234547
Prep Batch: 240-234282
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9061416A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-65910-1
Client Matrix: Water
Dilution: 1.0
Analysis Date: 06/15/2016 0104
Prep Date: 06/13/2016 1313
Leach Date: N/A

Analysis Batch: 240-234547
Prep Batch: 240-234282
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9061416A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	95	100	75 - 125	4	20		
Aluminum	96	100	75 - 125	4	20		
Cadmium	100	105	75 - 125	5	20		
Chromium	94	99	75 - 125	4	20		
Silver	98	102	75 - 125	5	20		
Arsenic	100	106	75 - 125	5	20		
Beryllium	96	100	75 - 125	4	20		
Lead	92	96	75 - 125	4	20		
Calcium	65	103	75 - 125	7	20	4	4
Selenium	100	105	75 - 125	5	20		
Cobalt	96	101	75 - 125	5	20		
Copper	99	104	75 - 125	5	20		
Iron	80	103	75 - 125	6	20		
Potassium	93	98	75 - 125	4	20		
Magnesium	85	99	75 - 125	6	20		
Manganese	77	108	75 - 125	8	20		
Sodium	80	96	75 - 125	6	20		
Nickel	96	102	75 - 125	5	20		
Antimony	100	105	75 - 125	6	20		
Thallium	94	99	75 - 125	5	20		
Vanadium	96	98	75 - 125	3	20		
Zinc	99	104	75 - 125	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method Blank - Batch: 240-234408

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-234408/1-A	Analysis Batch:	240-234630	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2148	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	ND		2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	ND		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	ND		25	100
Potassium	ND		70	5000
Magnesium	ND		230	5000
Manganese	ND		5.1	15
Sodium	626	J	330	5000
Nickel	ND		1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Lab Control Sample - Batch: 240-234408

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-234408/2-A	Analysis Batch:	240-234630	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2200	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1900	95	80 - 120	
Aluminum	2000	1930	97	80 - 120	
Cadmium	50.0	50.3	101	80 - 120	
Chromium	200	191	96	80 - 120	
Silver	50.0	49.8	100	80 - 120	
Arsenic	2000	2040	102	80 - 120	
Beryllium	50.0	48.8	98	80 - 120	
Lead	500	478	96	80 - 120	
Calcium	50000	48300	97	80 - 120	
Selenium	2000	2090	105	80 - 120	
Cobalt	500	483	97	80 - 120	
Copper	250	241	97	80 - 120	
Iron	1000	1000	100	80 - 120	
Potassium	50000	46700	93	80 - 120	
Magnesium	50000	48000	96	80 - 120	
Manganese	500	489	98	80 - 120	
Sodium	50000	46500	93	80 - 120	
Nickel	500	492	98	80 - 120	
Antimony	500	500	100	80 - 120	
Thallium	2000	1930	97	80 - 120	
Vanadium	500	489	98	80 - 120	
Zinc	500	500	100	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234408

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID: 240-65972-1
Client Matrix: Water
Dilution: 1.0
Analysis Date: 06/15/2016 2212
Prep Date: 06/14/2016 0937
Leach Date: N/A

Analysis Batch: 240-234630
Prep Batch: 240-234408
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9061516A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-65972-1
Client Matrix: Water
Dilution: 1.0
Analysis Date: 06/15/2016 2216
Prep Date: 06/14/2016 0937
Leach Date: N/A

Analysis Batch: 240-234630
Prep Batch: 240-234408
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9061516A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	99	98	75 - 125	1	20		
Aluminum	101	100	75 - 125	1	20		
Cadmium	107	106	75 - 125	1	20		
Chromium	97	96	75 - 125	1	20		
Silver	104	103	75 - 125	1	20		
Arsenic	108	106	75 - 125	2	20		
Beryllium	100	99	75 - 125	1	20		
Lead	99	97	75 - 125	2	20		
Calcium	102	106	75 - 125	1	20		
Selenium	110	108	75 - 125	2	20		
Cobalt	102	100	75 - 125	2	20		
Copper	104	103	75 - 125	1	20		
Iron	103	101	75 - 125	2	20		
Potassium	99	99	75 - 125	0	20		
Magnesium	99	100	75 - 125	1	20		
Manganese	102	102	75 - 125	0	20		
Sodium	97	99	75 - 125	1	20		
Nickel	102	101	75 - 125	2	20		
Antimony	106	104	75 - 125	2	20		
Thallium	101	99	75 - 125	2	20		
Vanadium	102	101	75 - 125	1	20		
Zinc	104	103	75 - 125	2	20		

Method Blank - Batch: 240-234284

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-234284/1-A	Analysis Batch:	240-234540	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234284	Lab File ID:	0614A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/14/2016 0933	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1330				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.090	0.20

Lab Control Sample - Batch: 240-234284

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-234284/2-A	Analysis Batch:	240-234540	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234284	Lab File ID:	0614A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/14/2016 0936	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1330				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	5.41	108	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234284

Method: 7470A
Preparation: 7470A
Dissolved

MS Lab Sample ID:	240-65910-1	Analysis Batch:	240-234540	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234284	Lab File ID:	0614A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/14/2016 0940			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1330				
Leach Date:	N/A				

MSD Lab Sample ID:	240-65910-1	Analysis Batch:	240-234540	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234284	Lab File ID:	0614A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/14/2016 0942			Final Weight/Volume:	50 mL
Prep Date:	06/13/2016 1330				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	114	113	80 - 120	1	20		

Method Blank - Batch: 240-234410

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-234410/1-A	Analysis Batch:	240-234773	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0927	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.090	0.20

Lab Control Sample - Batch: 240-234410

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-234410/2-A	Analysis Batch:	240-234773	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0930	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	6.58	132	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234410

Method: 7470A
Preparation: 7470A
Dissolved

MS Lab Sample ID:	240-65972-1	Analysis Batch:	240-234773	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0934			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				
Leach Date:	N/A				

MSD Lab Sample ID:	240-65972-1	Analysis Batch:	240-234773	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0937			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	113	109	80 - 120	4	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method Blank - Batch: 240-234626

Method: 9012A
Preparation: 9012A

Lab Sample ID:	MB 240-234626/1-A	Analysis Batch:	240-234667	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234626	Lab File ID:	061516 CN Waters 1.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 1335	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/15/2016 1142				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cyanide, Total	ND		0.0050	0.010

Lab Control Sample - Batch: 240-234626

Method: 9012A
Preparation: 9012A

Lab Sample ID:	LCS 240-234626/2-A	Analysis Batch:	240-234667	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234626	Lab File ID:	061516 CN Waters 1.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 1431	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/15/2016 1142				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0420	0.0452	108	69 - 118	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234626

Method: 9012A
Preparation: 9012A

MS Lab Sample ID:	240-65890-D-7-B MS	Analysis Batch:	240-234667	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234626	Lab File ID:	061516 CN Waters 1.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 1335			Final Weight/Volume:	25 mL
Prep Date:	06/15/2016 1142				
Leach Date:	N/A				

MSD Lab Sample ID:	240-65890-D-7-C MSD	Analysis Batch:	240-234667	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234626	Lab File ID:	061516 CN Waters 1.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 1335			Final Weight/Volume:	25 mL
Prep Date:	06/15/2016 1142				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Total	89	85	42 - 140	5	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65910-1

Method Reporting Limit Check - Batch: 240-234667

Method: 9012A
Preparation: N/A

Lab Sample ID:	MRL 240-234667/7	Analysis Batch:	240-234667	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	061516 CN Waters 1.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.0 mL
Analysis Date:	06/15/2016 1142	Units:	mg/L	Final Weight/Volume:	2.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0100	0.00857	86	70 - 130	J

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

TestAmerica Canton
4101 Shuffel Street, N. U.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

0.9/C1.9
0.3/C1.3
1.3/C2.3
1.0/C2.0
1.9/C2.9

Chain of Custody Record

119299

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoch	Date: 6/9/16	COC No:
Company Name: Arcadis	Tel/Fax: 269 832 7478	Lab Contact: Denise Pohl	Carrier:	1 of 1 COCs
Address: 4700 1st Ave N #720	Analysis Turnaround Time			Sampler:
City/State/Zip: Minneapolis, MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			Job / SDG No.: 240006638
Site: St Paul MN	☐ 2 days			
PO # MN000630.0002	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOC	SVOC	TAL Metals (Dissolved)	Cyanide	DRO	GRO	Sample Specific Notes:
AMW-25 (20160608)	6/8/16	0825	G	WT	12	N	N	3	2	1	1	2	3	
AMW-24 (20160608)	6/8/16	0931	G	WT	12	N	N	3	2	1	1	2	3	
AMW-23 (20160608)	6/8/16	1042	G	WT	12	N	N	3	2	1	1	2	3	
AMW-23B (20160608)	6/8/16	1412	G	WT	12	N	N	3	2	1	1	2	3	
AMW-20 (20160608)	6/8/16	1517	G	WT	12	N	N	3	2	1	1	2	3	
Dup-01 (20160608)	6/8/16	—	G	WT	12	N	N	3	2	1	1	2	3	
Trip Blank								X					X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
Level IV

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd:	Corr'd:	Therm ID No.:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Arcadis	6/9/16 1130			6/9/16 11:30
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				TA/Canton	6/10/16 9:20

TestAmerica Canton Sample Receipt Form/Narrative Login # : 105910

Canton Facility

Client Arcadis Site Name 6/10/16 Cooler unpacked by:

Cooler Received on 6/10/16 Opened on 6/10/16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1.	Cooler temperature upon receipt	☒ See Multiple Cooler Form
	IR GUN# IR-8 (CF +1.3 °C) Observed Cooler Temp. ____ °C	Corrected Cooler Temp. ____ °C
	IR GUN #36 (CF +1.0°C) Observed Cooler Temp. ____ °C	Corrected Cooler Temp. ____ °C
2.	Were custody seals on the outside of the cooler(s)? If Yes Quantity 5	(Yes) No
	-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes) No NA
	-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)
3.	Shippers' packing slip attached to the cooler(s)?	(Yes) No
4.	Did custody papers accompany the sample(s)?	(Yes) No
5.	Were the custody papers relinquished & signed in the appropriate place?	(Yes) No
6.	Was/were the person(s) who collected the samples clearly identified on the COC?	Yes No
7.	Did all bottles arrive in good condition (Unbroken)?	(Yes) No
8.	Could all bottle labels be reconciled with the COC?	(Yes) No
9.	Were correct bottle(s) used for the test(s) indicated?	(Yes) No
10.	Sufficient quantity received to perform indicated analyses?	Yes (No)
11.	Are these work share samples?	
	If yes, Questions 11-15 have been checked at the originating laboratory.	
11.	Were sample(s) at the correct pH upon receipt?	(Yes) No NA pH Strip Lot# **HC559158**
12.	Were VOAs on the COC?	(Yes) No
13.	Were air bubbles >6 mm in any VOA vials?	Yes (No) NA
14.	Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes (No)
15.	Was a LL Hg or Me Hg trip blank present?	Yes (No)

Contacted PM DSP Date 6/10/16 by JM via (Verbal) Voice Mail Other

Concerning #14

Samples processed by:

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Did not receive T.B. listed on COC.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # :** 605910
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	36	0.9	1.9	ICE
		0.3	1.3	
		1.3	2.3	
		1.0	2.0	
		1.9	2.9	

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-25 (20160608)	240-65910-G-1	Plastic 250ml - with Sodium Hydro	>12		
AMW-25 (20160608)	240-65910-H-1	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-25 (20160608)	240-65910-K-1	Amber Glass 1 liter - Sulfuric Acid			
AMW-25 (20160608)	240-65910-L-1	Amber Glass 1 liter - Sulfuric Acid			
AMW-24 (20160608)	240-65910-G-2	Plastic 250ml - with Sodium Hydro	>12		
AMW-24 (20160608)	240-65910-H-2	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-24 (20160608)	240-65910-K-2	Amber Glass 1 liter - Sulfuric Acid			
AMW-24 (20160608)	240-65910-L-2	Amber Glass 1 liter - Sulfuric Acid			
AMW-23 (20160608)	240-65910-G-3	Plastic 250ml - with Sodium Hydro	>12		
AMW-23 (20160608)	240-65910-H-3	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-23 (20160608)	240-65910-K-3	Amber Glass 1 liter - Sulfuric Acid			
AMW-23 (20160608)	240-65910-L-3	Amber Glass 1 liter - Sulfuric Acid			
AMW-23B (20160608)	240-65910-G-4	Plastic 250ml - with Sodium Hydro	>12		
AMW-23B (20160608)	240-65910-H-4	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-23B (20160608)	240-65910-K-4	Amber Glass 1 liter - Sulfuric Acid			
AMW-23B (20160608)	240-65910-L-4	Amber Glass 1 liter - Sulfuric Acid			
AMW-20 (20160608)	240-65910-G-5	Plastic 250ml - with Sodium Hydro	>12		
AMW-20 (20160608)	240-65910-H-5	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-20 (20160608)	240-65910-K-5	Amber Glass 1 liter - Sulfuric Acid			
AMW-20 (20160608)	240-65910-L-5	Amber Glass 1 liter - Sulfuric Acid			
DUP-01 (20160608)	240-65910-G-6	Plastic 250ml - with Sodium Hydro	>12		
DUP-01 (20160608)	240-65910-H-6	Plastic 500ml - w/ Nitric - Dis.	<2		
DUP-01 (20160608)	240-65910-K-6	Amber Glass 1 liter - Sulfuric Acid			
DUP-01 (20160608)	240-65910-L-6	Amber Glass 1 liter - Sulfuric Acid			

TestAmerica Canton
4101 Shuffel Street, N. W.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

0.9/C1.9
0.3/C1.3 1.0/C2.0
1.3/C2.3 1.9/C2.9

Chain of Custody Record

0.4/1.4

119299

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/9/16	COC No:
Company Name: Arcadis	Tel/Fax: 269 832 7478	Lab Contact: Denise Pohl	Carrier:	1 of 1 COCs
Address: 430 1st Ave N #720	Analysis Turnaround Time			Sampler:
City/State/Zip: Minneapolis, MN 55401	X CALENDAR DAYS / WORKING DAYS			For Lab Use Only:
Phone: 612-339-4434	TAT if different from Below			Walk-in Client:
Fax:	X 2 weeks / 1 week / 2 days / 1 day			Lab Sampling:
Project Name: Ford TCAP				Job / SDG No.: 24006638
Site: St Paul MN				
P.O.#: MN000630.0002				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	VOC	SVOC	TAL Metals (Dissolved)	Cyanide	DRO	GRO	Sample Specific Notes
AMW-25 (20160608)	6/8/16	0825	G	WT	12	N	N	3	2	1	1	2	3	
AMW-24 (20160608)	6/8/16	0931	G	WT	12	N	N	3	2	1	1	2	3	
AMW-23 (20160608)	6/8/16	1042	G	WT	12	N	N	3	2	1	1	2	3	
AMW-23B (20160608)	6/8/16	1412	G	WT	12	N	N	3	2	1	1	2	3	
AMW-20 (20160608)	6/8/16	1517	G	WT	12	N	N	3	2	1	1	2	3	
Dup-01 (20160608)	6/8/16	–	G	WT	12	N	N	3	2	1	1	2	3	
Trip Blank								X					X	

240-65972 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
Non-Hazard Flammable Skin Irritant Poison B X Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Return to Client X Disposal by Lab Archive for Months

Special Instructions/QC Requirements & Comments: Level IV

Custody Seals Intact Yes No | Custody Seal No. | Cooler Temp. (°C) Obs'd Corr'd Therm ID No.

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
[signature]	Arcadis	6/9/16 1130	[signature]		6/9/16 11:30
			Received in Laboratory by: [signature]	TA Canton	6/10/16 9:20
			Jacquelyn Jenel	TANC	6/11/16 930

06/27/2016

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 165972**

Canton Facility

Client Arcadis Site Name _____ Cooler unpacked by: T. Jewel

Cooler Received on 6-11-16 Opened on 6-13-16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box (Client Cooler) Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

☐ See Multiple Cooler Form

1. Cooler temperature upon receipt
   IR GUN# IR-8 (CF +1.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF +1.0°C) Observed Cooler Temp. 0.4 °C Corrected Cooler Temp. 1.4 °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes (No)
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No (NA)
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No AEF 6-13-16
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)

If yes, Questions 11-15 have been checked at the originating laboratory.

11. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC559158**
12. Were VOAs on the COC? (Yes) No
13. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Multiple (Yes) No
15. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

This is the missing Sample from Chain 119299 received on Saturday 6-11-16.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-20 (20160608	240-65972-G-1	Plastic 250ml - with Sodium Hydro>	>12	_____	_____
AMW-20 (20160608	240-65972-H-1	Plastic 500ml - w/ Nitric - Dis.	<2	_____	_____
AMW-20 (20160608	240-65972-K-1	Amber Glass 1 liter - Hydrochloric	_____	_____	_____
AMW-20 (20160608	240-65972-L-1	Amber Glass 1 liter - Hydrochloric	_____	_____	_____

June 29, 2016

Kris Hinskey
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000630.0002
Client project scope reference: Sample COC only was used to define project analytical requirements.
Laboratory: TestAmerica - North Canton
Laboratory submittal: 65910-1
Sample date: 2016-06-08
Report received by CADENA: 2016-06-27
Initial Data Verification completed by CADENA: 2016-06-29

The following minor QC exceptions or missing information were noted:

MBK - WI-GRO QC batch 234587 method blanks had detections below the RL. The following client sample results should be considered to be non-detect at the RL and qualified with UB flags: WI-GRO - sample -002.

MSD - GCMS VOC sample -001 MS and MSD recovery outliers or one recovery along with the MS/MSD RPD were outliers with the recovery biased low for the following analytes: 1,2,4-TRIMETHYLEBENZENE. Client sample results for these analytes should be considered to be estimated and qualified with a J flag if detected and UJ flags if non-detect.

GCMS VOC QC batch 234970 method blanks had detections below the RL for the following analytes: METHYLENE CHLORIDE. Qualification of client sample results was not required based on these method blank detections.

METALS QC batch 234408 method blanks had detections below the RL for the following analytes: SODIUM. Qualification of client sample results was not required based on these method blank detections.

GCMS VOC and WI-GRO TRIP blanks had detections below the RL for the following analytes: WI-GRO. Qualification of client sample results was not required based on these TRIP blank detections. NOTE: Sample dilution factors are not included when assigning qualification based on trip blank detections.

METALS QC batch 234410 and GCMS VOC QC batch 234970/235316 LCS recoveries were outliers biased high for the following analytes: MERCURY, BROMFORM, BROMOMETHANE, TRICHLOROFLUOROMETHANE. Associated client sample results were non-detect so qualification was not required based on these high bias QC outliers.

METALS sample -001 MS and or MSD recovery outliers were not used to qualify results for CALCIUM due to high levels of these target analytes in the original sample relative to the spike concentration (4X rule).

GCMS VOC sample -001 and sample -004 MS or MSD recoveries but not both or RPD only were outliers for N-BUTYLBENZENE, METHYLENE CHLORIDE so client sample results were not qualified based on these QC outliers alone.

GCMS SVOC and GCMS VOC QC batch 235316 MS/MSD recovery outliers were not determined using a client sample so qualification was not required based on these sample-specific QC outliers.

WI-DRO QC batch 234164 and 2334342 did not include MS/MSD recovery data due to insufficient sample volume available for spiking according to the laboratory submittal case narrative.

WI-GRO and WI-DRO sample and QC results did not include surrogate recovery data.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

6 Water sample(s) were analyzed for GCMS VOC, GCMS SVOC, GC VOC, GC Other, Metals and General Chemistry parameter(s). 1Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JB	NON-DETECT AT THE CONCENTRATION REPORTED AND ESTIMATED
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
JUB	NON-DETECT AT THE REPORTING LIMIT AND ESTIMATED
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 65910-1

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)	Total & Amenable Cyanides
240659101	AMW-25 (20160608)	6/8/2016	8:25:00	X	X	X	X	X	X	X
240659102	AMW-24 (20160608)	6/8/2016	9:31:00	X	X	X	X	X	X	X
240659103	AMW-23 (20160608)	6/8/2016	10:42:00	X	X	X	X	X	X	X
240659104	AMW-23B (20160608)	6/8/2016	2:12:00	X	X	X	X	X	X	X
240659106	DUP-01 (20160608)	6/8/2016	12:00:00	X	X	X	X	X	X	X
240659721	AMW-20 (20160608)	6/8/2016	3:17:00	X	X	X	X	X	X	X
240659722	TRIP BLANK	6/8/2016	12:00:00	X		X				

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65910-1

		Sample Name:	AMW-25 (20160608)				AMW-24 (20160608)			
		Lab Sample ID:	240659101				240659102			
		Sample Date:	6/8/2016				6/8/2016			
Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC									
OSW-8260B									
1,2,4-Trimethylbenzene	95-63-6	250	8.0	ug/l	J				
GC VOC									
PUBL-SW-140									
WI Gasoline Range Organics (C6-C10)	E-1005					30	100	ug/l	UB

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65910-1

		Sample Name:	AMW-25 (20160608)				AMW-24 (20160608)				AMW-23 (20160608)				AMW-23B (20160608)			
		Lab Sample ID:	240659101				240659102				240659103				240659104			
		Sample Date:	6/8/2016				6/8/2016				6/8/2016				6/8/2016			
Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																		
OSW-8260B																		
1,1,1,2-Tetrachloroethane	630-20-6		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6		250	8.0	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8		ND	16	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3		ND	80	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6		ND	80	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1		ND	80	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Acetone	67-64-1		ND	80	ug/l	---	ND	10	ug/l	---	2.1	10	ug/l	J	ND	10	ug/l	---
Allyl chloride	107-05-1		ND	16	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4		ND	16	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethyl ether	60-29-7		ND	16	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4		95	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8		13	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1		110	16	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9		ND	80	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8		160	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1		42	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6		3.7	8.0	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8		14	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9		ND	40	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4		ND	8.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65910-1

			Sample Name:	AMW-25 (20160608)				AMW-24 (20160608)				AMW-23 (20160608)				AMW-23B (20160608)			
			Lab Sample ID:	240659101				240659102				240659103				240659104			
			Sample Date:	6/8/2016				6/8/2016				6/8/2016				6/8/2016			
	Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC																			
	OSW-8270C																		
	1,1'-Biphenyl	92-52-4		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	2,2'-oxybis[1-chloropropane]	108-60-1		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	2,4,5-Trichlorophenol	95-95-4		ND	24	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	2,4,6-Trichlorophenol	88-06-2		ND	24	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	2,4-Dichlorophenol	120-83-2		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	2,4-Dimethylphenol	105-67-9		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	2,4-Dinitrophenol	51-28-5		ND	24	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	2,4-Dinitrotoluene	121-14-2		ND	24	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	2,6-Dinitrotoluene	606-20-2		ND	24	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	2-Chloronaphthalene	91-58-7		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	2-Chlorophenol	95-57-8		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	2-Methylnaphthalene	91-57-6		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	2-Methylphenol	95-48-7		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	2-Nitroaniline	88-74-4		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	2-Nitrophenol	88-75-5		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	3 & 4 Methylphenol	65794-96-9		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	3,3'-Dichlorobenzidine	91-94-1		ND	24	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	3-Nitroaniline	99-09-2		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4,6-Dinitro-2-methylphenol	534-52-1		ND	24	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	4-Bromophenyl phenyl ether	101-55-3		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4-Chloro-3-methylphenol	59-50-7		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4-Chloroaniline	106-47-8		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4-Chlorophenyl phenyl ether	7005-72-3		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4-Nitroaniline	100-01-6		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4-Nitrophenol	100-02-7		ND	24	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	Acenaphthene	83-32-9		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Acenaphthylene	208-96-8		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Acetophenone	98-86-2		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Anthracene	120-12-7		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Atrazine	1912-24-9		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Benzaldehyde	100-52-7		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Benzo[a]anthracene	56-55-3		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Benzo[a]pyrene	50-32-8		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Benzo[b]fluoranthene	205-99-2		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Benzo[g,h,i]perylene	191-24-2		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Benzo[k]fluoranthene	207-08-9		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Bis(2-chloroethoxy)methane	111-91-1		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Bis(2-chloroethyl)ether	111-44-4		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Bis(2-ethylhexyl) phthalate	117-81-7		ND	24	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	Butyl benzyl phthalate	85-68-7		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	Caprolactam	105-60-2		ND	24	ug/l	---	0.28	4.8	ug/l	J	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	Carbazole	86-74-8		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Chrysene	218-01-9		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Di-n-butyl phthalate	84-74-2		ND	24	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	Di-n-octyl phthalate	117-84-0		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	Dibenz(a,h)anthracene	53-70-3		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Dibenzofuran	132-64-9		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Diethyl phthalate	84-66-2		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	Dimethyl phthalate	131-11-3		ND	9.6	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---	ND	1.9	ug/l	---
	Fluoranthene	206-44-0		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Fluorene	86-73-7		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Hexachlorobenzene	118-74-1		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Hexachlorobutadiene	87-68-3		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Hexachlorocyclopentadiene	77-47-4		ND	48	ug/l	---	ND	9.5	ug/l	---	ND	9.5	ug/l	---	ND	9.5	ug/l	---
	Hexachloroethane	67-72-1		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Indeno[1,2,3-cd]pyrene	193-39-5		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Isophorone	78-59-1		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	N-Nitrosodi-n-propylamine	621-64-7		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	N-Nitrosodiphenylamine	86-30-6		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Naphthalene	91-20-3		3.8	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Nitrobenzene	98-95-3		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Pentachlorophenol	87-86-5		ND	24	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---	ND	4.8	ug/l	---
	Phenanthrene	85-01-8		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Phenol	108-95-2		ND	4.8	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---	ND	0.95	ug/l	---
	Pyrene	129-00-0		ND	0.96	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---	ND	0.19	ug/l	---
GC VOC																			
	PUBL-SW-140																		
	WI Gasoline Range Organics (C6-C10)	E-1005		10000	2000	ug/l	---	30	100	ug/l	UB	74	100	ug/l	J	45	100	ug/l	J
GC Other																			
	PUBL-SW-141																		
	WI Diesel Range Organics (C10-C28)	E-1004		11	0.96	mg/l	---	0.18	0.095	mg/l	---	0.050	0.095	mg/l	J	ND	0.095	mg/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65910-1

		Sample Name:	AMW-25 (20160608)				AMW-24 (20160608)				AMW-23 (20160608)				AMW-23B (20160608)			
		Lab Sample ID:	240659101				240659102				240659103				240659104			
		Sample Date:	6/8/2016				6/8/2016				6/8/2016				6/8/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
Metals																		
	OSW-6010B																	
	Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---	ND	200	ug/l	---	ND	200	ug/l	---	ND	200	ug/l	---
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Arsenic - Dissolved	7440-38-2	8.2	10	ug/l	J	4.2	10	ug/l	J	ND	10	ug/l	---	3.7	10	ug/l	J
	Barium - Dissolved	7440-39-3	200	200	ug/l	---	100	200	ug/l	J	140	200	ug/l	J	180	200	ug/l	J
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	0.29	5.0	ug/l	J	ND	5.0	ug/l	---
	Calcium - Dissolved	7440-70-2	220000	5000	ug/l	---	200000	5000	ug/l	---	130000	5000	ug/l	---	73000	5000	ug/l	---
	Chromium - Dissolved	7440-47-3	1.6	10	ug/l	J	1.0	10	ug/l	J	1.0	10	ug/l	J	0.77	10	ug/l	J
	Cobalt - Dissolved	7440-48-4	0.95	7.0	ug/l	J	2.3	7.0	ug/l	J	1.8	7.0	ug/l	J	ND	7.0	ug/l	---
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---	ND	25	ug/l	---	ND	25	ug/l	---	ND	25	ug/l	---
	Iron - Dissolved	7439-89-6	2600	100	ug/l	---	1800	100	ug/l	---	450	100	ug/l	---	5700	100	ug/l	---
	Lead - Dissolved	7439-92-1	2.0	3.0	ug/l	J	ND	3.0	ug/l	---	ND	3.0	ug/l	---	ND	3.0	ug/l	---
	Magnesium - Dissolved	7439-95-4	70000	5000	ug/l	---	50000	5000	ug/l	---	35000	5000	ug/l	---	25000	5000	ug/l	---
	Manganese - Dissolved	7439-96-5	1500	15	ug/l	---	1700	15	ug/l	---	2200	15	ug/l	---	220	15	ug/l	---
	Nickel - Dissolved	7440-02-0	4.3	40	ug/l	J	5.1	40	ug/l	J	2.2	40	ug/l	J	ND	40	ug/l	---
	Potassium - Dissolved	7440-09-7	4200	5000	ug/l	J	7000	5000	ug/l	---	3400	5000	ug/l	J	1800	5000	ug/l	J
	Selenium - Dissolved	7782-49-2	ND	15	ug/l	---	ND	15	ug/l	---	ND	15	ug/l	---	ND	15	ug/l	---
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Sodium - Dissolved	7440-23-5	82000	5000	ug/l	---	92000	5000	ug/l	---	40000	5000	ug/l	---	8300	5000	ug/l	---
	Thallium - Dissolved	7440-28-0	7.3	10	ug/l	J	8.5	10	ug/l	J	10	10	ug/l	---	ND	10	ug/l	---
	Vanadium - Dissolved	7440-62-2	4.4	10	ug/l	J	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---
	OSW-7470A																	
	Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---	ND	0.20	ug/l	---	ND	0.20	ug/l	---
General Chemistry																		
	OSW-9012A																	
	Cyanide, Total	57-12-5	ND	0.010	mg/l	---	0.013	0.010	mg/l	---	0.014	0.010	mg/l	---	ND	0.010	mg/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65910-1

		Sample Name:	DUP-01 (20160608)				AMW-20 (20160608)				TRIP BLANK			
		Lab Sample ID:	240659106				240659721				240659722			
		Sample Date:	6/8/2016				6/8/2016				6/8/2016			
Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC														
OSW-8260B														
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8		ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3		ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6		ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1		ND	10	ug/l	---	ND	10	ug/l	---	ND	5.0	ug/l	---
Acetone	67-64-1		2.0	10	ug/l	J	1.8	10	ug/l	J	ND	10	ug/l	---
Allyl chloride	107-05-1		ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4		ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethyl ether	60-29-7		ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---
Ethylbenzene	100-41-4		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1		ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9		ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	2.0	ug/l	---
Methylcyclohexane	108-87-2		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
o-Xylene	95-47-6		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Styrene	100-42-5		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9		ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4		ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65910-1

		Sample Name:	DUP-01 (20160608)				AMW-20 (20160608)				TRIP BLANK			
		Lab Sample ID:	240659106				240659721				240659722			
		Sample Date:	6/8/2016				6/8/2016				6/8/2016			
				Report		Valid		Report		Valid		Report		Valid
Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
GC/MS SVOC														
OSW-8270C														
1,1'-Biphenyl	92-52-4	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
2,2'-oxybis[1-chloropropane]	108-60-1	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
2,4,5-Trichlorophenol	95-95-4	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
2,4,6-Trichlorophenol	88-06-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
2,4-Dichlorophenol	120-83-2	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
2,4-Dimethylphenol	105-67-9	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
2,4-Dinitrophenol	51-28-5	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
2,4-Dinitrotoluene	121-14-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
2,6-Dinitrotoluene	606-20-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
2-Chloronaphthalene	91-58-7	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
2-Chlorophenol	95-57-8	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
2-Methylnaphthalene	91-57-6	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
2-Methylphenol	95-48-7	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
2-Nitroaniline	88-74-4	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
2-Nitrophenol	88-75-5	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
3 & 4 Methylphenol	65794-96-9	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
3,3'-Dichlorobenzidine	91-94-1	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
3-Nitroaniline	99-09-2	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
4,6-Dinitro-2-methylphenol	534-52-1	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
4-Bromophenyl phenyl ether	101-55-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
4-Chloro-3-methylphenol	59-50-7	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
4-Chloroaniline	106-47-8	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
4-Chlorophenyl phenyl ether	7005-72-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
4-Nitroaniline	100-01-6	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
4-Nitrophenol	100-02-7	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
Acenaphthene	83-32-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Acenaphthylene	208-96-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Acetophenone	98-86-2	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Anthracene	120-12-7	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Atrazine	1912-24-9	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Benzaldehyde	100-52-7	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Benzo[a]anthracene	56-55-3	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Benzo[a]pyrene	50-32-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Benzo[b]fluoranthene	205-99-2	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Benzo[g,h,i]perylene	191-24-2	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Benzo[k]fluoranthene	207-08-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Bis(2-chloroethoxy)methane	111-91-1	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Bis(2-chloroethyl)ether	111-44-4	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Bis(2-ethylhexyl) phthalate	117-81-7	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
Butyl benzyl phthalate	85-68-7	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
Caprolactam	105-60-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
Carbazole	86-74-8	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Chrysene	218-01-9	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Di-n-butyl phthalate	84-74-2	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
Di-n-octyl phthalate	117-84-0	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
Dibenz(a,h)anthracene	53-70-3	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Dibenzofuran	132-64-9	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Diethyl phthalate	84-66-2	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
Dimethyl phthalate	131-11-3	ND	1.9	ug/l	---	ND	1.9	ug/l	---				
Fluoranthene	206-44-0	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Fluorene	86-73-7	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Hexachlorobenzene	118-74-1	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Hexachlorobutadiene	87-68-3	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Hexachlorocyclopentadiene	77-47-4	ND	9.5	ug/l	---	ND	9.6	ug/l	---				
Hexachloroethane	67-72-1	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Indeno[1,2,3-cd]pyrene	193-39-5	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Isophorone	78-59-1	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
N-Nitrosodi-n-propylamine	621-64-7	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
N-Nitrosodiphenylamine	86-30-6	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Naphthalene	91-20-3	0.10	0.19	ug/l	J	ND	0.19	ug/l	---				
Nitrobenzene	98-95-3	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Pentachlorophenol	87-86-5	ND	4.8	ug/l	---	ND	4.8	ug/l	---				
Phenanthrene	85-01-8	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
Phenol	108-95-2	ND	0.95	ug/l	---	ND	0.96	ug/l	---				
Pyrene	129-00-0	ND	0.19	ug/l	---	ND	0.19	ug/l	---				
GC VOC													
PUBL-SW-140													
WI Gasoline Range Organics (C6-C10)	E-1005	62	100	ug/l	J	ND	100	ug/l	---	34	100	ug/l	J
GC Other													
PUBL-SW-141													
WI Diesel Range Organics (C10-C28)	E-1004	0.074	0.095	mg/l	J	ND	0.095	mg/l	---				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65910-1

		Sample Name:	DUP-01 (20160608)				AMW-20 (20160608)				TRIP BLANK			
		Lab Sample ID:	240659106				240659721				240659722			
		Sample Date:	6/8/2016				6/8/2016				6/8/2016			
				Report		Valid		Report		Valid		Report		Valid
Analyte		Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
Metals														
	OSW-6010B													
	Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---	ND	200	ug/l	---				
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---	ND	10	ug/l	---				
	Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---	ND	10	ug/l	---				
	Barium - Dissolved	7440-39-3	150	200	ug/l	J	110	200	ug/l	J				
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Calcium - Dissolved	7440-70-2	130000	5000	ug/l	---	160000	5000	ug/l	---				
	Chromium - Dissolved	7440-47-3	0.69	10	ug/l	J	1.1	10	ug/l	J				
	Cobalt - Dissolved	7440-48-4	1.9	7.0	ug/l	J	ND	7.0	ug/l	---				
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---	ND	25	ug/l	---				
	Iron - Dissolved	7439-89-6	430	100	ug/l	---	45	100	ug/l	J				
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---				
	Magnesium - Dissolved	7439-95-4	35000	5000	ug/l	---	46000	5000	ug/l	---				
	Manganese - Dissolved	7439-96-5	2200	15	ug/l	---	520	15	ug/l	---				
	Nickel - Dissolved	7440-02-0	2.6	40	ug/l	J	4.1	40	ug/l	J				
	Potassium - Dissolved	7440-09-7	3300	5000	ug/l	J	2500	5000	ug/l	J				
	Selenium - Dissolved	7782-49-2	ND	15	ug/l	---	ND	15	ug/l	---				
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---	ND	10	ug/l	---				
	Sodium - Dissolved	7440-23-5	40000	5000	ug/l	---	44000	5000	ug/l	---				
	Thallium - Dissolved	7440-28-0	9.5	10	ug/l	J	2.7	10	ug/l	J				
	Vanadium - Dissolved	7440-62-2	ND	10	ug/l	---	ND	10	ug/l	---				
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---	ND	50	ug/l	---				
	OSW-7470A													
	Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---				
General Chemistry														
	OSW-9012A													
	Cyanide, Total	57-12-5	0.013	0.010	mg/l	---	ND	0.010	mg/l	---				

ANALYTICAL REPORT

Job Number: 240-65968-2

Job Description: Ford TCAP - E200572

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Attention: Kristoffer Hinskey

Approved for release.
Denise Pohl
Project Manager II
6/27/2016 10:08 AM

Denise Pohl, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9789
denise.pohl@testamericainc.com
06/27/2016

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CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford TCAP - E200572

Report Number: 240-65968-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/11/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 13 coolers at receipt time were 1.3º C, 1.4º C, 1.6º C, 2.4º C, 2.4º C, 2.6º C, 2.8º C, 3.0º C, 3.1º C, 3.1º C, 3.3º C, 3.6º C and 4.8º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-05B (20160609) (240-65968-6), AMW-22 (20160609) (240-65968-7), AMW-22B (20160609) (240-65968-8), AMW-19 (20160609) (240-65968-9), DUP-03 (20160609) (240-65968-10), TRIP BLANK (240-65968-11), AMW-07 (20160610) (240-65968-12), AMW-26 (20160610) (240-65968-13) and AMW-21 (20160610) (240-65968-14) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/21/2016.

Bromoform, Bromomethane and Trichlorofluoromethane failed the recovery criteria high for LCS 240-235316/4. Refer to the QC report for details.

1,1-Dichloropropene, Hexachlorobutadiene, n-Butylbenzene and sec-Butylbenzene failed the recovery criteria low for the MS of sample AMW-07 (20160610)MS (240-65968-12) in batch 240-235316. Bromoform failed the recovery criteria high. Several analytes failed the recovery criteria low for the MSD of sample AMW-07 (20160610)MSD (240-65968-12) in batch 240-235316. Refer to the QC report for details.

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-235316 recovered outside control limits for multiple analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.AMW-05B (20160609) (240-65968-6), AMW-22 (20160609) (240-65968-7), AMW-22B (20160609) (240-65968-8), AMW-19 (20160609) (240-65968-9), DUP-03 (20160609) (240-65968-10), TRIP BLANK (240-65968-11), AMW-07 (20160610) (240-65968-12), AMW-26 (20160610) (240-65968-13), AMW-21 (20160610) (240-65968-14) and (LCS 240-235316/4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples AMW-22 (20160609) (240-65968-7), AMW-22B (20160609) (240-65968-8), AMW-19 (20160609) (240-65968-9), AMW-07 (20160610) (240-65968-12), AMW-26 (20160610) (240-65968-13) and AMW-21 (20160610) (240-65968-14) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 06/14/2016 and analyzed on 06/15/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Caprolactam failed the recovery criteria low for the MS/MSD of sample AMW-07 (20160610)MS/MSD (240-65968-12) in batch 240-234545. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN DRO

Samples AMW-05B (20160609) (240-65968-6), AMW-22 (20160609) (240-65968-7), AMW-22B (20160609) (240-65968-8), AMW-19 (20160609) (240-65968-9), DUP-03 (20160609) (240-65968-10), AMW-07 (20160610) (240-65968-12), AMW-26 (20160610) (240-65968-13) and AMW-21 (20160610) (240-65968-14) were analyzed for Wisconsin DRO in accordance with Wisconsin DNR Modified DRO. The samples were prepared on 06/14/2016 and analyzed on 06/16/2016.

Method(s) WI-DRO: Significant peaks, readily distinguished from background, were detected in the following samples within five minutes after the end of the analytical window defined by the last component eluting in the WI Diesel Range Organics (C10-C28) mix: AMW-26 (20160610) (240-65968-13) and AMW-21 (20160610) (240-65968-14).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

WISCONSIN GRO

Samples AMW-05B (20160609) (240-65968-6), AMW-22 (20160609) (240-65968-7), AMW-22B (20160609) (240-65968-8), AMW-19 (20160609) (240-65968-9), DUP-03 (20160609) (240-65968-10), TRIP BLANK (240-65968-11), AMW-07 (20160610) (240-65968-12), AMW-26 (20160610) (240-65968-13) and AMW-21 (20160610) (240-65968-14) were analyzed for Wisconsin GRO in accordance with Wisconsin DNR Modified GRO. The samples were analyzed on 06/15/2016 and 06/16/2016.

WI Gasoline Range Organics (C6-C10) was detected in method blank MB 240-234587/4 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-234342.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples AMW-05B (20160609) (240-65968-6) and DUP-03 (20160609) (240-65968-10) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 06/14/2016 and 06/17/2016 and analyzed on 06/16/2016 and 06/21/2016.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

DCB Decachlorobiphenyl failed the surrogate recovery criteria low for AMW-05B (20160609) (240-65968-6). Tetrachloro-m-xylene failed the surrogate recovery criteria low for MB 240-234344/8-A. Refer to the QC report for details.

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: AMW-05B (20160609) (240-65968-6) and DUP-03 (20160609) (240-65968-10). Reagents: 2540199, 2564856, 2103098, 2586316, 2103100 and 2283703.

Method(s) 8082: The continuing calibration verification (CCV) associated with batch 235257 recovered above the upper control limit for 1221 and 1254. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) 8082: TCMX failed low in the method blank of the original run for the following samples: AMW-05B (20160609) (240-65968-6) and DUP-03 (20160609) (240-65968-10). The samples were re-extracted out of hold time. The QC of the re-extract batch passed. But, samples 2 and 6 DCB failed below 10%. The samples are consumed, no re-extract could be performed. Both sets of data has been reported:

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batches 240-234344 and 240-234897.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP)

Samples AMW-05B (20160609) (240-65968-6), AMW-22 (20160609) (240-65968-7), AMW-22B (20160609) (240-65968-8), AMW-19 (20160609) (240-65968-9), DUP-03 (20160609) (240-65968-10), AMW-07 (20160610) (240-65968-12), AMW-26 (20160610) (240-65968-13) and AMW-21 (20160610) (240-65968-14) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846

Method 6010B. The samples were prepared on 06/14/2016 and analyzed on 06/15/2016.

Sodium was detected in method blank MB 240-234408/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Method(s) 200.7 Rev 4.4, 6010B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: AMW-05B (20160609) (240-65968-6), AMW-22 (20160609) (240-65968-7), AMW-22B (20160609) (240-65968-8), AMW-19 (20160609) (240-65968-9), DUP-03 (20160609) (240-65968-10), AMW-07 (20160610) (240-65968-12), AMW-26 (20160610) (240-65968-13) and AMW-21 (20160610) (240-65968-14). The continuing calibration blanks and method blanks may not support the lower PQL.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY (CVAA)

Samples AMW-05B (20160609) (240-65968-6), AMW-22 (20160609) (240-65968-7), AMW-22B (20160609) (240-65968-8), AMW-19 (20160609) (240-65968-9), DUP-03 (20160609) (240-65968-10), AMW-07 (20160610) (240-65968-12), AMW-26 (20160610) (240-65968-13) and AMW-21 (20160610) (240-65968-14) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 06/14/2016 and analyzed on 06/16/2016.

Mercury failed the recovery criteria high for LCS 240-234410/2-A. Refer to the QC report for details.

Method(s) 245.1, 7470A: The laboratory control sample (LCS) for preparation batch 240-234410 and analytical batch 240-234773 recovered outside control limits for the following analytes: Hg. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL CYANIDE

Samples AMW-05B (20160609) (240-65968-6), AMW-22 (20160609) (240-65968-7), AMW-22B (20160609) (240-65968-8), AMW-19 (20160609) (240-65968-9), DUP-03 (20160609) (240-65968-10), AMW-07 (20160610) (240-65968-12), AMW-26 (20160610) (240-65968-13) and AMW-21 (20160610) (240-65968-14) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 06/15/2016 and 06/17/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65968-6	**AMW-05B (20160609)**					
Trichloroethene		0.91	J	1.0	ug/L	8260B
WI Gasoline Range Organics (C6-C10)		34	J B	100	ug/L	WI-GRO
WI Diesel Range Organics (C10-C28)		0.18		0.095	mg/L	WI-DRO
Dissolved						
Barium		55	J	200	ug/L	6010B
Chromium		1.2	J	10	ug/L	6010B
Calcium		140000		5000	ug/L	6010B
Cobalt		6.5	J	7.0	ug/L	6010B
Iron		7100		100	ug/L	6010B
Potassium		3600	J	5000	ug/L	6010B
Magnesium		44000		5000	ug/L	6010B
Manganese		200		15	ug/L	6010B
Sodium		39000	B	5000	ug/L	6010B
Nickel		10	J	40	ug/L	6010B
240-65968-7	**AMW-22 (20160609)**					
Acetone		1.6	J	10	ug/L	8260B
cis-1,2-Dichloroethene		0.95	J	1.0	ug/L	8260B
WI Gasoline Range Organics (C6-C10)		87	J B	100	ug/L	WI-GRO
Cyanide, Total		0.015		0.010	mg/L	9012A
Dissolved						
Barium		180	J	200	ug/L	6010B
Chromium		1.0	J	10	ug/L	6010B
Arsenic		9.7	J	10	ug/L	6010B
Calcium		140000		5000	ug/L	6010B
Cobalt		1.2	J	7.0	ug/L	6010B
Iron		8300		100	ug/L	6010B
Potassium		4000	J	5000	ug/L	6010B
Magnesium		38000		5000	ug/L	6010B
Manganese		1900		15	ug/L	6010B
Sodium		31000	B	5000	ug/L	6010B
Thallium		8.8	J	10	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65968-8	**AMW-22B (20160609)**					
Acetone		1.2	J	10	ug/L	8260B
cis-1,2-Dichloroethene		0.82	J	1.0	ug/L	8260B
WI Gasoline Range Organics (C6-C10)		45	J B	100	ug/L	WI-GRO
WI Diesel Range Organics (C10-C28)		0.048	J	0.095	mg/L	WI-DRO
Dissolved						
Barium		160	J	200	ug/L	6010B
Chromium		1.1	J	10	ug/L	6010B
Calcium		74000		5000	ug/L	6010B
Iron		3400		100	ug/L	6010B
Potassium		2600	J	5000	ug/L	6010B
Magnesium		29000		5000	ug/L	6010B
Manganese		140		15	ug/L	6010B
Sodium		6100	B	5000	ug/L	6010B
240-65968-9	**AMW-19 (20160609)**					
Acetone		1.5	J	10	ug/L	8260B
WI Gasoline Range Organics (C6-C10)		36	J B	100	ug/L	WI-GRO
Dissolved						
Barium		120	J	200	ug/L	6010B
Chromium		0.74	J	10	ug/L	6010B
Calcium		150000		5000	ug/L	6010B
Iron		25	J	100	ug/L	6010B
Potassium		1900	J	5000	ug/L	6010B
Magnesium		42000		5000	ug/L	6010B
Manganese		26		15	ug/L	6010B
Sodium		27000	B	5000	ug/L	6010B
240-65968-10	**DUP-03 (20160609)**					
Acetone		1.0	J	10	ug/L	8260B
Trichloroethene		0.79	J	1.0	ug/L	8260B
WI Diesel Range Organics (C10-C28)		0.13		0.095	mg/L	WI-DRO
Dissolved						
Barium		56	J	200	ug/L	6010B
Chromium		1.3	J	10	ug/L	6010B
Calcium		140000		5000	ug/L	6010B
Cobalt		6.5	J	7.0	ug/L	6010B
Iron		7100		100	ug/L	6010B
Potassium		3600	J	5000	ug/L	6010B
Magnesium		44000		5000	ug/L	6010B
Manganese		190		15	ug/L	6010B
Sodium		39000	B	5000	ug/L	6010B
Nickel		7.9	J	40	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65968-11	**TRIP BLANK**					
WI Gasoline Range Organics (C6-C10)		26	J B	100	ug/L	WI-GRO
240-65968-12	**AMW-07 (20160610)**					
Trichloroethene		1.9		1.0	ug/L	8260B
Anthracene		0.20		0.19	ug/L	8270C
Benzo[a]anthracene		1.1		0.19	ug/L	8270C
Benzo[b]fluoranthene		1.2		0.19	ug/L	8270C
Benzo[k]fluoranthene		0.58		0.19	ug/L	8270C
Benzo[g,h,i]perylene		0.68		0.19	ug/L	8270C
Benzo[a]pyrene		0.99		0.19	ug/L	8270C
Caprolactam		0.37	J F1	4.9	ug/L	8270C
Chrysene		1.2		0.19	ug/L	8270C
Fluoranthene		1.8		0.19	ug/L	8270C
Indeno[1,2,3-cd]pyrene		0.52		0.19	ug/L	8270C
Phenanthrene		0.84		0.19	ug/L	8270C
Pyrene		2.4		0.19	ug/L	8270C
Dissolved						
Barium		13	J	200	ug/L	6010B
Aluminum		340		200	ug/L	6010B
Chromium		2.3	J	10	ug/L	6010B
Beryllium		0.91	J	5.0	ug/L	6010B
Calcium		79000		5000	ug/L	6010B
Cobalt		11		7.0	ug/L	6010B
Iron		46	J	100	ug/L	6010B
Potassium		3700	J	5000	ug/L	6010B
Magnesium		28000		5000	ug/L	6010B
Manganese		69		15	ug/L	6010B
Sodium		12000	B	5000	ug/L	6010B
Nickel		40		40	ug/L	6010B
Zinc		97		50	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65968-13	**AMW-26 (20160610)**					
Acetone		2.4	J	10	ug/L	8260B
Chlorobenzene		1.9		1.0	ug/L	8260B
cis-1,2-Dichloroethene		1.5		1.0	ug/L	8260B
Ethylbenzene		0.39	J	1.0	ug/L	8260B
Naphthalene		2.1		1.0	ug/L	8260B
Acenaphthene		1.8		0.19	ug/L	8270C
Acenaphthylene		0.21		0.19	ug/L	8270C
Anthracene		1.3		0.19	ug/L	8270C
Benzo[a]anthracene		1.6		0.19	ug/L	8270C
Benzo[b]fluoranthene		2.0		0.19	ug/L	8270C
Benzo[k]fluoranthene		0.51		0.19	ug/L	8270C
Benzo[g,h,i]perylene		0.91		0.19	ug/L	8270C
Benzo[a]pyrene		1.4		0.19	ug/L	8270C
1,1'-Biphenyl		0.38	J	0.96	ug/L	8270C
Bis(2-ethylhexyl) phthalate		2.3	J	4.8	ug/L	8270C
Carbazole		1.5		0.96	ug/L	8270C
Chrysene		1.5		0.19	ug/L	8270C
2-Methylnaphthalene		0.36		0.19	ug/L	8270C
Dibenzofuran		1.4		0.96	ug/L	8270C
Fluoranthene		4.1		0.19	ug/L	8270C
Fluorene		2.3		0.19	ug/L	8270C
Indeno[1,2,3-cd]pyrene		0.75		0.19	ug/L	8270C
Naphthalene		1.3		0.19	ug/L	8270C
Phenanthrene		5.2		0.19	ug/L	8270C
Pyrene		3.6		0.19	ug/L	8270C
WI Gasoline Range Organics (C6-C10)		38	J B	100	ug/L	WI-GRO
WI Diesel Range Organics (C10-C28)		0.41		0.10	mg/L	WI-DRO
Dissolved						
Barium		200		200	ug/L	6010B
Chromium		1.6	J	10	ug/L	6010B
Arsenic		12		10	ug/L	6010B
Calcium		150000		5000	ug/L	6010B
Cobalt		1.1	J	7.0	ug/L	6010B
Iron		7600		100	ug/L	6010B
Potassium		5900		5000	ug/L	6010B
Magnesium		41000		5000	ug/L	6010B
Manganese		2000		15	ug/L	6010B
Sodium		45000	B	5000	ug/L	6010B
Nickel		3.0	J	40	ug/L	6010B
Thallium		7.8	J	10	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-65968-14	**AMW-21 (20160610)**					
Acetone		2.6	J	10	ug/L	8260B
Carbon disulfide		0.56	J	1.0	ug/L	8260B
cis-1,2-Dichloroethene		0.27	J	1.0	ug/L	8260B
Anthracene		0.25		0.19	ug/L	8270C
Benzo[a]anthracene		0.71		0.19	ug/L	8270C
Benzo[b]fluoranthene		0.68		0.19	ug/L	8270C
Benzo[k]fluoranthene		0.36		0.19	ug/L	8270C
Benzo[g,h,i]perylene		0.40		0.19	ug/L	8270C
Benzo[a]pyrene		0.51		0.19	ug/L	8270C
Bis(2-ethylhexyl) phthalate		6.0		4.8	ug/L	8270C
Chrysene		0.70		0.19	ug/L	8270C
Fluoranthene		1.2		0.19	ug/L	8270C
Fluorene		0.12	J	0.19	ug/L	8270C
Indeno[1,2,3-cd]pyrene		0.32		0.19	ug/L	8270C
Phenanthrene		0.68		0.19	ug/L	8270C
Pyrene		1.4		0.19	ug/L	8270C
WI Diesel Range Organics (C10-C28)		0.72		0.10	mg/L	WI-DRO
Dissolved						
Barium		36	J	200	ug/L	6010B
Chromium		1.6	J	10	ug/L	6010B
Arsenic		5.1	J	10	ug/L	6010B
Calcium		140000		5000	ug/L	6010B
Cobalt		1.3	J	7.0	ug/L	6010B
Iron		40	J	100	ug/L	6010B
Potassium		4500	J	5000	ug/L	6010B
Magnesium		40000		5000	ug/L	6010B
Manganese		1700		15	ug/L	6010B
Sodium		28000	B	5000	ug/L	6010B
Nickel		3.3	J	40	ug/L	6010B
Thallium		6.4	J	10	ug/L	6010B

METHOD SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CAN	SW846 8260B	
Purge and Trap	TAL CAN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL CAN	SW846 8270C	
Liquid-Liquid Extraction (Separatory Funnel)	TAL CAN		SW846 3510C
Wisconsin - Gasoline Range Organics (GC)	TAL CAN	WI-GRO WI-GRO	
Purge and Trap	TAL CAN		SW846 5030B
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL CAN	SW846 8082	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Wisconsin - Diesel Range Organics (GC)	TAL CAN	WI-DRO WI-DRO	
Liquid-Liquid Extraction (Continuous)	TAL CAN		SW846 3520C
Metals (ICP)	TAL CAN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
Cyanide, Total and/or Amenable	TAL CAN	SW846 9012A	
Cyanide, Total and/or Amenable, Distillation	TAL CAN		SW846 9012A

Lab References:

TAL CAN = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Method	Analyst	Analyst ID
SW846 8260B	Williams, Larry	LRW
SW846 8270C	Ulman, Mark	MRU
WI-GRO WI-GRO	Reed, Rachel T	RTR
SW846 8082	Grant, Katie	KMG
SW846 8082	Hass, Lori	LSH
WI-DRO WI-DRO	Bolgrin, Deborah	DEB
SW846 6010B	Toth, Roger	RKT
SW846 7470A	Dillon, William K	WKD
SW846 9012A	Weimer, Joshua W	JWW
SW846 9012A	Woodward, Bruce	BLW

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-65968-6	AMW-05B (20160609)	Water	06/09/2016 1425	06/11/2016 0930
240-65968-7	AMW-22 (20160609)	Water	06/09/2016 1542	06/11/2016 0930
240-65968-8	AMW-22B (20160609)	Water	06/09/2016 1640	06/11/2016 0930
240-65968-9	AMW-19 (20160609)	Water	06/09/2016 1731	06/11/2016 0930
240-65968-10	DUP-03 (20160609)	Water	06/09/2016 0000	06/11/2016 0930
240-65968-11	TRIP BLANK	Water	06/09/2016 0000	06/11/2016 0930
240-65968-12	AMW-07 (20160610)	Water	06/10/2016 0730	06/11/2016 0930
240-65968-12MS	AMW-07 (20160610)	Water	06/10/2016 0730	06/11/2016 0930
240-65968-12MSD	AMW-07 (20160610)	Water	06/10/2016 0730	06/11/2016 0930
240-65968-13	AMW-26 (20160610)	Water	06/10/2016 1031	06/11/2016 0930
240-65968-14	AMW-21 (20160610)	Water	06/10/2016 0933	06/11/2016 0930

SAMPLE RESULTS

Client Sample ID: **AMW-05B (20160609)**

Lab Sample ID: 240-65968-6 Date Sampled: 06/09/2016 1425
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2902.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1515			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1515				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-05B (20160609)

Lab Sample ID: 240-65968-6 Date Sampled: 06/09/2016 1425
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2902.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1515			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1515				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	0.91	J	0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		78 - 125
4-Bromofluorobenzene (Surr)	82		61 - 120
Toluene-d8 (Surr)	83		80 - 120
Dibromofluoromethane (Surr)	99		79 - 120

Client Sample ID: **AMW-22 (20160609)**

Lab Sample ID: 240-65968-7 Date Sampled: 06/09/2016 1542
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2903.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1537			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1537				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	1.6	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	0.95	J	0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-22 (20160609)

Lab Sample ID: 240-65968-7 Date Sampled: 06/09/2016 1542
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2903.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1537			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1537				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		78 - 125
4-Bromofluorobenzene (Surr)	82		61 - 120
Toluene-d8 (Surr)	84		80 - 120
Dibromofluoromethane (Surr)	98		79 - 120

Client Sample ID: **AMW-22B (20160609)**

Lab Sample ID: 240-65968-8 Date Sampled: 06/09/2016 1640
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2904.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1600			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1600				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	1.2	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	0.82	J	0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-22B (20160609)

Lab Sample ID: 240-65968-8 Date Sampled: 06/09/2016 1640
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2904.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1600			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1600				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		78 - 125
4-Bromofluorobenzene (Surr)	84		61 - 120
Toluene-d8 (Surr)	84		80 - 120
Dibromofluoromethane (Surr)	100		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-19 (20160609)

Lab Sample ID: 240-65968-9 Date Sampled: 06/09/2016 1731
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2905.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1622			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1622				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	1.5	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-19 (20160609)

Lab Sample ID: 240-65968-9 Date Sampled: 06/09/2016 1731
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2905.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1622			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1622				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		78 - 125
4-Bromofluorobenzene (Surr)	81		61 - 120
Toluene-d8 (Surr)	84		80 - 120
Dibromofluoromethane (Surr)	103		79 - 120

Client Sample ID: **DUP-03 (20160609)**

Lab Sample ID: 240-65968-10 Date Sampled: 06/09/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2906.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1645			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1645				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	1.0	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: **DUP-03 (20160609)**

Lab Sample ID: 240-65968-10 Date Sampled: 06/09/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2906.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1645			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1645				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	0.79	J	0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		78 - 125
4-Bromofluorobenzene (Surr)	83		61 - 120
Toluene-d8 (Surr)	85		80 - 120
Dibromofluoromethane (Surr)	104		79 - 120

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-65968-11 Date Sampled: 06/09/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2907.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1707			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65968-11 Date Sampled: 06/09/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2907.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1707			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	1.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	5.0
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	2.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	111		78 - 125
4-Bromofluorobenzene (Surr)	83		61 - 120
Toluene-d8 (Surr)	82		80 - 120
Dibromofluoromethane (Surr)	99		79 - 120

Client Sample ID: **AMW-07 (20160610)**

Lab Sample ID: 240-65968-12 Date Sampled: 06/10/2016 0730
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2896.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1300			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1300				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND	F1	0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND	F1	0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND	F1	0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	F1 *	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND	F1	0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-07 (20160610)

Lab Sample ID: 240-65968-12 Date Sampled: 06/10/2016 0730
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2896.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1300			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1300				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND	F1	0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND	F1	0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	1.9		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		78 - 125
4-Bromofluorobenzene (Surr)	85		61 - 120
Toluene-d8 (Surr)	84		80 - 120
Dibromofluoromethane (Surr)	100		79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-26 (20160610)

Lab Sample ID: 240-65968-13 Date Sampled: 06/10/2016 1031
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2908.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1730			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1730				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	2.4	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	1.9		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	1.5		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-26 (20160610)

Lab Sample ID: 240-65968-13 Date Sampled: 06/10/2016 1031
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2908.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1730			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1730				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	0.39	J	0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	2.1		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		78 - 125
4-Bromofluorobenzene (Surr)	82		61 - 120
Toluene-d8 (Surr)	82		80 - 120
Dibromofluoromethane (Surr)	101		79 - 120

Client Sample ID: **AMW-21 (20160610)**

Lab Sample ID: 240-65968-14 Date Sampled: 06/10/2016 0933
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2909.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1752			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1752				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	2.6	J	0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND	*	0.56	1.0
Bromomethane	ND	*	0.44	1.0
Carbon disulfide	0.56	J	0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	0.27	J	0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0
Dichlorofluoromethane	ND		0.30	2.0

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-21 (20160610)

Lab Sample ID: 240-65968-14 Date Sampled: 06/10/2016 0933
Client Matrix: Water Date Received: 06/11/2016 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	UXR2909.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1752			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1752				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND	*	0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		78 - 125
4-Bromofluorobenzene (Surr)	81		61 - 120
Toluene-d8 (Surr)	81		80 - 120
Dibromofluoromethane (Surr)	97		79 - 120

Client Sample ID: **AMW-22 (20160609)**

Lab Sample ID: 240-65968-7 Date Sampled: 06/09/2016 1542
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615025.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1656			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-22 (20160609)

Lab Sample ID: 240-65968-7 Date Sampled: 06/09/2016 1542
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615025.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1656			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	75		42 - 120
2-Fluorophenol (Surr)	33		10 - 120
2,4,6-Tribromophenol (Surr)	84		35 - 125
Nitrobenzene-d5 (Surr)	73		36 - 120
Phenol-d5 (Surr)	21		10 - 120
Terphenyl-d14 (Surr)	77		17 - 120

Client Sample ID: **AMW-22B (20160609)**

Lab Sample ID: 240-65968-8 Date Sampled: 06/09/2016 1640
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615023.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1606			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client Sample ID: **AMW-22B (20160609)**

Lab Sample ID: 240-65968-8 Date Sampled: 06/09/2016 1640
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615023.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1606			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	71		42 - 120
2-Fluorophenol (Surr)	26		10 - 120
2,4,6-Tribromophenol (Surr)	84		35 - 125
Nitrobenzene-d5 (Surr)	68		36 - 120
Phenol-d5 (Surr)	17		10 - 120
Terphenyl-d14 (Surr)	69		17 - 120

Client Sample ID: **AMW-19 (20160609)**

Lab Sample ID: 240-65968-9 Date Sampled: 06/09/2016 1731
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615024.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1631			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.042	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.32	0.95
Anthracene	ND		0.084	0.19
Atrazine	ND		0.32	0.95
Benzaldehyde	ND		0.37	0.95
Benzo[a]anthracene	ND		0.028	0.19
Benzo[b]fluoranthene	ND		0.038	0.19
Benzo[k]fluoranthene	ND		0.043	0.19
Benzo[g,h,i]perylene	ND		0.044	0.19
Benzo[a]pyrene	ND		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.12	0.95
Bis(2-chloroethoxy)methane	ND		0.30	0.95
Bis(2-chloroethyl)ether	ND		0.095	0.95
Bis(2-ethylhexyl) phthalate	ND		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.95
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.095	0.95
2-Chlorophenol	ND		0.28	0.95
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	ND		0.048	0.19
2-Methylnaphthalene	ND		0.086	0.19
3 & 4 Methylphenol	ND		0.76	1.9
Dibenz(a,h)anthracene	ND		0.042	0.19
Dibenzofuran	ND		0.019	0.95
3,3'-Dichlorobenzidine	ND		0.35	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.57	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.30	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	ND		0.042	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.081	0.19
Hexachlorobutadiene	ND		0.26	0.95
Hexachlorocyclopentadiene	ND		0.23	9.5
Hexachloroethane	ND		0.18	0.95
Indeno[1,2,3-cd]pyrene	ND		0.041	0.19

Client Sample ID: **AMW-19 (20160609)**

Lab Sample ID: 240-65968-9 Date Sampled: 06/09/2016 1731
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615024.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1631			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.95
2-Methylphenol	ND		0.16	0.95
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.95
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.95
N-Nitrosodi-n-propylamine	ND		0.23	0.95
2,2'-oxybis[1-chloropropane]	ND		0.38	0.95
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	ND		0.059	0.19
Phenol	ND		0.57	0.95
Pyrene	ND		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.76	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	64		42 - 120
2-Fluorophenol (Surr)	24		10 - 120
2,4,6-Tribromophenol (Surr)	77		35 - 125
Nitrobenzene-d5 (Surr)	64		36 - 120
Phenol-d5 (Surr)	14		10 - 120
Terphenyl-d14 (Surr)	73		17 - 120

Client Sample ID: **AMW-07 (20160610)**

Lab Sample ID: 240-65968-12 Date Sampled: 06/10/2016 0730
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615027.D
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Analysis Date:	06/15/2016 1746			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.043	0.19
Acenaphthylene	ND		0.047	0.19
Acetophenone	ND		0.33	0.97
Anthracene	0.20		0.085	0.19
Atrazine	ND		0.33	0.97
Benzaldehyde	ND		0.38	0.97
Benzo[a]anthracene	1.1		0.029	0.19
Benzo[b]fluoranthene	1.2		0.038	0.19
Benzo[k]fluoranthene	0.58		0.043	0.19
Benzo[g,h,i]perylene	0.68		0.045	0.19
Benzo[a]pyrene	0.99		0.050	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.13	0.97
Bis(2-chloroethoxy)methane	ND		0.31	0.97
Bis(2-chloroethyl)ether	ND		0.097	0.97
Bis(2-ethylhexyl) phthalate	ND		1.7	4.9
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	0.37	J F1	0.19	4.9
Carbazole	ND		0.27	0.97
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.097	0.97
2-Chlorophenol	ND		0.28	0.97
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	1.2		0.049	0.19
2-Methylnaphthalene	ND		0.088	0.19
3 & 4 Methylphenol	ND		0.78	1.9
Dibenz(a,h)anthracene	ND		0.043	0.19
Dibenzofuran	ND		0.019	0.97
3,3'-Dichlorobenzidine	ND		0.36	4.9
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.58	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.9
2,4-Dinitrophenol	ND		0.31	4.9
2,4-Dinitrotoluene	ND		0.24	4.9
Di-n-butyl phthalate	ND		1.7	4.9
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	1.8		0.043	0.19
Fluorene	ND		0.039	0.19
Hexachlorobenzene	ND		0.083	0.19
Hexachlorobutadiene	ND		0.26	0.97
Hexachlorocyclopentadiene	ND		0.23	9.7
Hexachloroethane	ND		0.18	0.97
Indeno[1,2,3-cd]pyrene	0.52		0.042	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-07 (20160610)

Lab Sample ID: 240-65968-12 Date Sampled: 06/10/2016 0730
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615027.D
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Analysis Date:	06/15/2016 1746			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.97
2-Methylphenol	ND		0.17	0.97
Naphthalene	ND		0.061	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.039	0.97
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.9
N-Nitrosodiphenylamine	ND		0.30	0.97
N-Nitrosodi-n-propylamine	ND		0.23	0.97
2,2'-oxybis[1-chloropropane]	ND		0.39	0.97
Pentachlorophenol	ND		0.26	4.9
Phenanthrene	0.84		0.060	0.19
Phenol	ND		0.58	0.97
Pyrene	2.4		0.041	0.19
2,4,5-Trichlorophenol	ND		0.29	4.9
2,4,6-Trichlorophenol	ND		0.23	4.9
2,6-Dinitrotoluene	ND		0.78	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	79		42 - 120
2-Fluorophenol (Surr)	30		10 - 120
2,4,6-Tribromophenol (Surr)	90		35 - 125
Nitrobenzene-d5 (Surr)	79		36 - 120
Phenol-d5 (Surr)	18		10 - 120
Terphenyl-d14 (Surr)	58		17 - 120

Client Sample ID: **AMW-26 (20160610)**

Lab Sample ID: 240-65968-13 Date Sampled: 06/10/2016 1031
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615030.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	06/15/2016 1901			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	1.8		0.043	0.19
Acenaphthylene	0.21		0.046	0.19
Acetophenone	ND		0.33	0.96
Anthracene	1.3		0.085	0.19
Atrazine	ND		0.33	0.96
Benzaldehyde	ND		0.37	0.96
Benzo[a]anthracene	1.6		0.028	0.19
Benzo[b]fluoranthene	2.0		0.038	0.19
Benzo[k]fluoranthene	0.51		0.043	0.19
Benzo[g,h,i]perylene	0.91		0.045	0.19
Benzo[a]pyrene	1.4		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	0.38	J	0.13	0.96
Bis(2-chloroethoxy)methane	ND		0.31	0.96
Bis(2-chloroethyl)ether	ND		0.096	0.96
Bis(2-ethylhexyl) phthalate	2.3	J	1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	1.5		0.27	0.96
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.096	0.96
2-Chlorophenol	ND		0.28	0.96
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	1.5		0.048	0.19
2-Methylnaphthalene	0.36		0.087	0.19
3 & 4 Methylphenol	ND		0.77	1.9
Dibenz(a,h)anthracene	ND		0.043	0.19
Dibenzofuran	1.4		0.019	0.96
3,3'-Dichlorobenzidine	ND		0.36	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.58	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.31	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	4.1		0.043	0.19
Fluorene	2.3		0.039	0.19
Hexachlorobenzene	ND		0.082	0.19
Hexachlorobutadiene	ND		0.26	0.96
Hexachlorocyclopentadiene	ND		0.23	9.6
Hexachloroethane	ND		0.18	0.96
Indeno[1,2,3-cd]pyrene	0.75		0.042	0.19

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-26 (20160610)

Lab Sample ID: 240-65968-13 Date Sampled: 06/10/2016 1031
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615030.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	06/15/2016 1901			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.96
2-Methylphenol	ND		0.16	0.96
Naphthalene	1.3		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.96
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.96
N-Nitrosodi-n-propylamine	ND		0.23	0.96
2,2'-oxybis[1-chloropropane]	ND		0.38	0.96
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	5.2		0.060	0.19
Phenol	ND		0.58	0.96
Pyrene	3.6		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.77	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	54		42 - 120
2-Fluorophenol (Surr)	26		10 - 120
2,4,6-Tribromophenol (Surr)	65		35 - 125
Nitrobenzene-d5 (Surr)	54		36 - 120
Phenol-d5 (Surr)	16		10 - 120
Terphenyl-d14 (Surr)	37		17 - 120

Client Sample ID: **AMW-21 (20160610)**

Lab Sample ID: 240-65968-14 Date Sampled: 06/10/2016 0933
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615026.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	06/15/2016 1721			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	ND		0.043	0.19
Acenaphthylene	ND		0.046	0.19
Acetophenone	ND		0.33	0.96
Anthracene	0.25		0.085	0.19
Atrazine	ND		0.33	0.96
Benzaldehyde	ND		0.37	0.96
Benzo[a]anthracene	0.71		0.028	0.19
Benzo[b]fluoranthene	0.68		0.038	0.19
Benzo[k]fluoranthene	0.36		0.043	0.19
Benzo[g,h,i]perylene	0.40		0.045	0.19
Benzo[a]pyrene	0.51		0.049	0.19
Butyl benzyl phthalate	ND		0.25	1.9
1,1'-Biphenyl	ND		0.13	0.96
Bis(2-chloroethoxy)methane	ND		0.31	0.96
Bis(2-chloroethyl)ether	ND		0.096	0.96
Bis(2-ethylhexyl) phthalate	6.0		1.6	4.8
4-Bromophenyl phenyl ether	ND		0.21	1.9
Caprolactam	ND		0.19	4.8
Carbazole	ND		0.27	0.96
4-Chloroaniline	ND		0.20	1.9
4-Chloro-3-methylphenol	ND		0.20	1.9
2-Chloronaphthalene	ND		0.096	0.96
2-Chlorophenol	ND		0.28	0.96
4-Chlorophenyl phenyl ether	ND		0.29	1.9
Chrysene	0.70		0.048	0.19
2-Methylnaphthalene	ND		0.087	0.19
3 & 4 Methylphenol	ND		0.77	1.9
Dibenz(a,h)anthracene	ND		0.043	0.19
Dibenzofuran	ND		0.019	0.96
3,3'-Dichlorobenzidine	ND		0.36	4.8
2,4-Dichlorophenol	ND		0.18	1.9
Diethyl phthalate	ND		0.58	1.9
2,4-Dimethylphenol	ND		0.24	1.9
Dimethyl phthalate	ND		0.28	1.9
4,6-Dinitro-2-methylphenol	ND		2.3	4.8
2,4-Dinitrophenol	ND		0.31	4.8
2,4-Dinitrotoluene	ND		0.24	4.8
Di-n-butyl phthalate	ND		1.6	4.8
Di-n-octyl phthalate	ND		0.22	1.9
Fluoranthene	1.2		0.043	0.19
Fluorene	0.12	J	0.039	0.19
Hexachlorobenzene	ND		0.082	0.19
Hexachlorobutadiene	ND		0.26	0.96
Hexachlorocyclopentadiene	ND		0.23	9.6
Hexachloroethane	ND		0.18	0.96
Indeno[1,2,3-cd]pyrene	0.32		0.042	0.19

Client Sample ID: **AMW-21 (20160610)**

Lab Sample ID: 240-65968-14 Date Sampled: 06/10/2016 0933
Client Matrix: Water Date Received: 06/11/2016 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Prep Method:	3510C	Prep Batch:	240-234392	Lab File ID:	60615026.D
Dilution:	1.0			Initial Weight/Volume:	1040 mL
Analysis Date:	06/15/2016 1721			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Isophorone	ND		0.26	0.96
2-Methylphenol	ND		0.16	0.96
Naphthalene	ND		0.060	0.19
2-Nitroaniline	ND		0.20	1.9
3-Nitroaniline	ND		0.27	1.9
4-Nitroaniline	ND		0.21	1.9
Nitrobenzene	ND		0.038	0.96
2-Nitrophenol	ND		0.27	1.9
4-Nitrophenol	ND		0.28	4.8
N-Nitrosodiphenylamine	ND		0.30	0.96
N-Nitrosodi-n-propylamine	ND		0.23	0.96
2,2'-oxybis[1-chloropropane]	ND		0.38	0.96
Pentachlorophenol	ND		0.26	4.8
Phenanthrene	0.68		0.060	0.19
Phenol	ND		0.58	0.96
Pyrene	1.4		0.040	0.19
2,4,5-Trichlorophenol	ND		0.29	4.8
2,4,6-Trichlorophenol	ND		0.23	4.8
2,6-Dinitrotoluene	ND		0.77	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl (Surr)	67		42 - 120
2-Fluorophenol (Surr)	30		10 - 120
2,4,6-Tribromophenol (Surr)	83		35 - 125
Nitrobenzene-d5 (Surr)	77		36 - 120
Phenol-d5 (Surr)	18		10 - 120
Terphenyl-d14 (Surr)	31		17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-05B (20160609)

Lab Sample ID: 240-65968-6 Date Sampled: 06/09/2016 1425
Client Matrix: Water Date Received: 06/11/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061516.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 2110			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 2110			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	34	J B	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-22 (20160609)

Lab Sample ID: 240-65968-7 Date Sampled: 06/09/2016 1542
Client Matrix: Water Date Received: 06/11/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061517.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 2152			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 2152			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	87	J B	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-22B (20160609)

Lab Sample ID: 240-65968-8 Date Sampled: 06/09/2016 1640
Client Matrix: Water Date Received: 06/11/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061518.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 2235			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 2235			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	45	J B	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-19 (20160609)

Lab Sample ID: 240-65968-9 Date Sampled: 06/09/2016 1731
Client Matrix: Water Date Received: 06/11/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061519.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 2316			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 2316			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	36	J B	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: **DUP-03 (20160609)**

Lab Sample ID: 240-65968-10 Date Sampled: 06/09/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061520.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 2357			Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 2357			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 240-65968-11 Date Sampled: 06/09/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061521.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/16/2016 0038			Final Weight/Volume:	5 mL
Prep Date:	06/16/2016 0038			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	26	J B	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-07 (20160610)

Lab Sample ID: 240-65968-12 Date Sampled: 06/10/2016 0730
Client Matrix: Water Date Received: 06/11/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061522.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/16/2016 0119			Final Weight/Volume:	5 mL
Prep Date:	06/16/2016 0119			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-26 (20160610)

Lab Sample ID: 240-65968-13 Date Sampled: 06/10/2016 1031
Client Matrix: Water Date Received: 06/11/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061523.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/16/2016 0200			Final Weight/Volume:	5 mL
Prep Date:	06/16/2016 0200			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	38	J B	20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-21 (20160610)

Lab Sample ID: 240-65968-14 Date Sampled: 06/10/2016 0933
Client Matrix: Water Date Received: 06/11/2016 0930

WI-GRO Wisconsin - Gasoline Range Organics (GC)

Analysis Method:	WI-GRO	Analysis Batch:	240-234587	Instrument ID:	YPID
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	Y0061524.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/16/2016 0241			Final Weight/Volume:	5 mL
Prep Date:	06/16/2016 0241			Injection Volume:	5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
WI Gasoline Range Organics (C6-C10)	ND		20	100

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-05B (20160609)

Lab Sample ID: 240-65968-6 Date Sampled: 06/09/2016 1425
Client Matrix: Water Date Received: 06/11/2016 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-234707	Instrument ID:	A2HP13
Prep Method:	3520C	Prep Batch:	240-234344	Initial Weight/Volume:	1050 mL
Dilution:	1.0			Final Weight/Volume:	2 mL
Analysis Date:	06/16/2016 1056			Injection Volume:	1 uL
Prep Date:	06/14/2016 0610			Result Type:	SECONDARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor-1016	ND		0.048	0.19
Aroclor-1221	ND		0.086	0.19
Aroclor-1232	ND		0.067	0.19
Aroclor-1242	ND		0.057	0.19
Aroclor-1248	ND		0.048	0.19
Aroclor-1254	ND		0.029	0.19
Aroclor-1260	ND		0.038	0.19

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	40		10 - 120
Tetrachloro-m-xylene	46		21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-05B (20160609)

Lab Sample ID: 240-65968-6 Date Sampled: 06/09/2016 1425
Client Matrix: Water Date Received: 06/11/2016 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-235257	Instrument ID:	A2HP11
Prep Method:	3520C	Prep Batch:	240-234897	Initial Weight/Volume:	1050 mL
Dilution:	1.0			Final Weight/Volume:	2 mL
Analysis Date:	06/21/2016 1033	Run Type:	RE	Injection Volume:	1 uL
Prep Date:	06/17/2016 0536			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor-1016	ND	H	0.048	0.19
Aroclor-1221	ND	H	0.086	0.19
Aroclor-1232	ND	H	0.067	0.19
Aroclor-1242	ND	H	0.057	0.19
Aroclor-1248	ND	H	0.048	0.19
Aroclor-1254	ND	H	0.029	0.19
Aroclor-1260	ND	H	0.038	0.19

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	9	X	10 - 120
Tetrachloro-m-xylene	47		21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: **DUP-03 (20160609)**

Lab Sample ID: 240-65968-10 Date Sampled: 06/09/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-234707	Instrument ID:	A2HP13
Prep Method:	3520C	Prep Batch:	240-234344	Initial Weight/Volume:	1040 mL
Dilution:	1.0			Final Weight/Volume:	2 mL
Analysis Date:	06/16/2016 1114			Injection Volume:	1 uL
Prep Date:	06/14/2016 0610			Result Type:	SECONDARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor-1016	ND		0.048	0.19
Aroclor-1221	ND		0.087	0.19
Aroclor-1232	ND		0.067	0.19
Aroclor-1242	ND		0.058	0.19
Aroclor-1248	ND		0.048	0.19
Aroclor-1254	ND		0.029	0.19
Aroclor-1260	ND		0.038	0.19

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	43		10 - 120
Tetrachloro-m-xylene	60		21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: **DUP-03 (20160609)**

Lab Sample ID: 240-65968-10 Date Sampled: 06/09/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	240-235257	Instrument ID:	A2HP11
Prep Method:	3520C	Prep Batch:	240-234897	Initial Weight/Volume:	1010 mL
Dilution:	1.0			Final Weight/Volume:	2 mL
Analysis Date:	06/21/2016 1051	Run Type:	RE	Injection Volume:	1 uL
Prep Date:	06/17/2016 0536			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor-1016	ND	H	0.050	0.20
Aroclor-1221	ND	H	0.089	0.20
Aroclor-1232	ND	H	0.069	0.20
Aroclor-1242	ND	H	0.059	0.20
Aroclor-1248	ND	H	0.050	0.20
Aroclor-1254	ND	H	0.030	0.20
Aroclor-1260	ND	H	0.040	0.20

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	30		10 - 120
Tetrachloro-m-xylene	49		21 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-05B (20160609)

Lab Sample ID: 240-65968-6 Date Sampled: 06/09/2016 1425
Client Matrix: Water Date Received: 06/11/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234342	Lab File ID:	P14R061525.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/16/2016 0235			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.18		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-22 (20160609)

Lab Sample ID: 240-65968-7 Date Sampled: 06/09/2016 1542
Client Matrix: Water Date Received: 06/11/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234342	Lab File ID:	P14R061526.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/16/2016 0303			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-22B (20160609)

Lab Sample ID: 240-65968-8 Date Sampled: 06/09/2016 1640
Client Matrix: Water Date Received: 06/11/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234342	Lab File ID:	P14R061527.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/16/2016 0330			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.048	J	0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-19 (20160609)

Lab Sample ID: 240-65968-9 Date Sampled: 06/09/2016 1731
Client Matrix: Water Date Received: 06/11/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234342	Lab File ID:	P14R061528.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/16/2016 0357			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: **DUP-03 (20160609)**

Lab Sample ID: 240-65968-10 Date Sampled: 06/09/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234342	Lab File ID:	P14R061529.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/16/2016 0425			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.13		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-07 (20160610)

Lab Sample ID: 240-65968-12 Date Sampled: 06/10/2016 0730
Client Matrix: Water Date Received: 06/11/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234342	Lab File ID:	P14R061530.D
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Analysis Date:	06/16/2016 0452			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.048	0.095

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-26 (20160610)

Lab Sample ID: 240-65968-13 Date Sampled: 06/10/2016 1031
Client Matrix: Water Date Received: 06/11/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234342	Lab File ID:	P14R061531.D
Dilution:	1.0			Initial Weight/Volume:	980 mL
Analysis Date:	06/16/2016 0520			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.41		0.051	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-21 (20160610)

Lab Sample ID: 240-65968-14 Date Sampled: 06/10/2016 0933
Client Matrix: Water Date Received: 06/11/2016 0930

WI-DRO Wisconsin - Diesel Range Organics (GC)

Analysis Method:	WI-DRO	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Prep Method:	3520C	Prep Batch:	240-234342	Lab File ID:	P14R061532.D
Dilution:	1.0			Initial Weight/Volume:	980 mL
Analysis Date:	06/16/2016 0547			Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
WI Diesel Range Organics (C10-C28)	0.72		0.051	0.10

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-05B (20160609)

Lab Sample ID: 240-65968-6 Date Sampled: 06/09/2016 1425
Client Matrix: Water Date Received: 06/11/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234630	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2252			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	55	J	2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	1.2	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	140000		710	5000
Selenium	ND		5.1	15
Cobalt	6.5	J	0.84	7.0
Copper	ND		3.9	25
Iron	7100		25	100
Potassium	3600	J	70	5000
Magnesium	44000		230	5000
Manganese	200		5.1	15
Sodium	39000	B	330	5000
Nickel	10	J	1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234773	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0954			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-22 (20160609)

Lab Sample ID: 240-65968-7 Date Sampled: 06/09/2016 1542
Client Matrix: Water Date Received: 06/11/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234630	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2256			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	180	J	2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	1.0	J	0.55	10
Silver	ND		0.92	10
Arsenic	9.7	J	3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	140000		710	5000
Selenium	ND		5.1	15
Cobalt	1.2	J	0.84	7.0
Copper	ND		3.9	25
Iron	8300		25	100
Potassium	4000	J	70	5000
Magnesium	38000		230	5000
Manganese	1900		5.1	15
Sodium	31000	B	330	5000
Nickel	ND		1.6	40
Antimony	ND		3.1	10
Thallium	8.8	J	2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234773	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0956			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-22B (20160609)

Lab Sample ID: 240-65968-8 Date Sampled: 06/09/2016 1640
Client Matrix: Water Date Received: 06/11/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234630	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2300			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	160	J	2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	1.1	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	74000		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	3400		25	100
Potassium	2600	J	70	5000
Magnesium	29000		230	5000
Manganese	140		5.1	15
Sodium	6100	B	330	5000
Nickel	ND		1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234773	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0958			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-19 (20160609)

Lab Sample ID: 240-65968-9 Date Sampled: 06/09/2016 1731
Client Matrix: Water Date Received: 06/11/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234630	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2304			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	120	J	2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	0.74	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	150000		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	25	J	25	100
Potassium	1900	J	70	5000
Magnesium	42000		230	5000
Manganese	26		5.1	15
Sodium	27000	B	330	5000
Nickel	ND		1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234773	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 1000			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: DUP-03 (20160609)

Lab Sample ID: 240-65968-10 Date Sampled: 06/09/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234630	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2308			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	56	J	2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	1.3	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	140000		710	5000
Selenium	ND		5.1	15
Cobalt	6.5	J	0.84	7.0
Copper	ND		3.9	25
Iron	7100		25	100
Potassium	3600	J	70	5000
Magnesium	44000		230	5000
Manganese	190		5.1	15
Sodium	39000	B	330	5000
Nickel	7.9	J	1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234773	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 1002			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-07 (20160610)

Lab Sample ID: 240-65968-12 Date Sampled: 06/10/2016 0730
Client Matrix: Water Date Received: 06/11/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234630	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2312			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	13	J	2.4	200
Aluminum	340		40	200
Cadmium	ND		0.29	5.0
Chromium	2.3	J	0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	0.91	J	0.21	5.0
Lead	ND		1.9	3.0
Calcium	79000		710	5000
Selenium	ND		5.1	15
Cobalt	11		0.84	7.0
Copper	ND		3.9	25
Iron	46	J	25	100
Potassium	3700	J	70	5000
Magnesium	28000		230	5000
Manganese	69		5.1	15
Sodium	12000	B	330	5000
Nickel	40		1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	97		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234773	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 1005			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-26 (20160610)

Lab Sample ID: 240-65968-13 Date Sampled: 06/10/2016 1031
Client Matrix: Water Date Received: 06/11/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234630	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2316			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	200		2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	1.6	J	0.55	10
Silver	ND		0.92	10
Arsenic	12		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	150000		710	5000
Selenium	ND		5.1	15
Cobalt	1.1	J	0.84	7.0
Copper	ND		3.9	25
Iron	7600		25	100
Potassium	5900		70	5000
Magnesium	41000		230	5000
Manganese	2000		5.1	15
Sodium	45000	B	330	5000
Nickel	3.0	J	1.6	40
Antimony	ND		3.1	10
Thallium	7.8	J	2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234773	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 1007			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Client Sample ID: AMW-21 (20160610)

Lab Sample ID: 240-65968-14 Date Sampled: 06/10/2016 0933
Client Matrix: Water Date Received: 06/11/2016 0930

6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	240-234630	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2321			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Barium	36	J	2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	1.6	J	0.55	10
Silver	ND		0.92	10
Arsenic	5.1	J	3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	140000		710	5000
Selenium	ND		5.1	15
Cobalt	1.3	J	0.84	7.0
Copper	ND		3.9	25
Iron	40	J	25	100
Potassium	4500	J	70	5000
Magnesium	40000		230	5000
Manganese	1700		5.1	15
Sodium	28000	B	330	5000
Nickel	3.3	J	1.6	40
Antimony	ND		3.1	10
Thallium	6.4	J	2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-234773	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 1009			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	ND		0.090	0.20

General Chemistry

Client Sample ID: **AMW-05B (20160609)**

Lab Sample ID: 240-65968-6 Date Sampled: 06/09/2016 1425
Client Matrix: Water Date Received: 06/11/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A
Analysis Batch: 240-234693	Analysis Date: 06/15/2016 2022						
Prep Batch: 240-234688	Prep Date: 06/15/2016 1825						

General Chemistry

Client Sample ID: **AMW-22 (20160609)**

Lab Sample ID: 240-65968-7 Date Sampled: 06/09/2016 1542
Client Matrix: Water Date Received: 06/11/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.015		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-234693 Analysis Date: 06/15/2016 2022
Prep Batch: 240-234688 Prep Date: 06/15/2016 1825

General Chemistry

Client Sample ID: **AMW-22B (20160609)**

Lab Sample ID: 240-65968-8 Date Sampled: 06/09/2016 1640
Client Matrix: Water Date Received: 06/11/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A
Analysis Batch: 240-234693	Analysis Date: 06/15/2016 2022						
Prep Batch: 240-234688	Prep Date: 06/15/2016 1825						

General Chemistry

Client Sample ID: **AMW-19 (20160609)**

Lab Sample ID: 240-65968-9 Date Sampled: 06/09/2016 1731
Client Matrix: Water Date Received: 06/11/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-234693 Analysis Date: 06/15/2016 2022
Prep Batch: 240-234688 Prep Date: 06/15/2016 1825

General Chemistry

Client Sample ID: **DUP-03 (20160609)**

Lab Sample ID: 240-65968-10 Date Sampled: 06/09/2016 0000
Client Matrix: Water Date Received: 06/11/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-234693 Analysis Date: 06/15/2016 2022
Prep Batch: 240-234688 Prep Date: 06/15/2016 1825

General Chemistry

Client Sample ID: **AMW-07 (20160610)**

Lab Sample ID: 240-65968-12 Date Sampled: 06/10/2016 0730
Client Matrix: Water Date Received: 06/11/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-234984 Analysis Date: 06/17/2016 1048
Prep Batch: 240-234923 Prep Date: 06/17/2016 0811

General Chemistry

Client Sample ID: **AMW-26 (20160610)**

Lab Sample ID: 240-65968-13 Date Sampled: 06/10/2016 1031
Client Matrix: Water Date Received: 06/11/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-234984 Analysis Date: 06/17/2016 1049
Prep Batch: 240-234923 Prep Date: 06/17/2016 0811

General Chemistry

Client Sample ID: **AMW-21 (20160610)**

Lab Sample ID: 240-65968-14 Date Sampled: 06/10/2016 0933
Client Matrix: Water Date Received: 06/11/2016 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	ND		mg/L	0.0050	0.010	1.0	9012A

Analysis Batch: 240-234984 Analysis Date: 06/17/2016 1049
Prep Batch: 240-234923 Prep Date: 06/17/2016 0811

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Lab Section	Qualifier	Description
GC/MS VOA		
	*	LCS or LCSD is outside acceptance limits.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time
	X	Surrogate is outside control limits
Metals		
	B	Compound was found in the blank and sample.
	*	LCS or LCSD is outside acceptance limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:240-235316					
LCS 240-235316/4	Lab Control Sample	T	Water	8260B	
MB 240-235316/6	Method Blank	T	Water	8260B	
240-65968-6	AMW-05B (20160609)	T	Water	8260B	
240-65968-7	AMW-22 (20160609)	T	Water	8260B	
240-65968-8	AMW-22B (20160609)	T	Water	8260B	
240-65968-9	AMW-19 (20160609)	T	Water	8260B	
240-65968-10	DUP-03 (20160609)	T	Water	8260B	
240-65968-11	TRIP BLANK	T	Water	8260B	
240-65968-12	AMW-07 (20160610)	T	Water	8260B	
240-65968-12MS	Matrix Spike	T	Water	8260B	
240-65968-12MSD	Matrix Spike Duplicate	T	Water	8260B	
240-65968-13	AMW-26 (20160610)	T	Water	8260B	
240-65968-14	AMW-21 (20160610)	T	Water	8260B	

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 240-234392					
LCS 240-234392/23-A	Lab Control Sample	T	Water	3510C	
MB 240-234392/22-A	Method Blank	T	Water	3510C	
240-65968-7	AMW-22 (20160609)	T	Water	3510C	
240-65968-8	AMW-22B (20160609)	T	Water	3510C	
240-65968-9	AMW-19 (20160609)	T	Water	3510C	
240-65968-12	AMW-07 (20160610)	T	Water	3510C	
240-65968-12MS	Matrix Spike	T	Water	3510C	
240-65968-12MSD	Matrix Spike Duplicate	T	Water	3510C	
240-65968-13	AMW-26 (20160610)	T	Water	3510C	
240-65968-14	AMW-21 (20160610)	T	Water	3510C	
Analysis Batch:240-234545					
LCS 240-234392/23-A	Lab Control Sample	T	Water	8270C	240-234392
MB 240-234392/22-A	Method Blank	T	Water	8270C	240-234392
240-65968-7	AMW-22 (20160609)	T	Water	8270C	240-234392
240-65968-8	AMW-22B (20160609)	T	Water	8270C	240-234392
240-65968-9	AMW-19 (20160609)	T	Water	8270C	240-234392
240-65968-12	AMW-07 (20160610)	T	Water	8270C	240-234392
240-65968-12MS	Matrix Spike	T	Water	8270C	240-234392
240-65968-12MSD	Matrix Spike Duplicate	T	Water	8270C	240-234392
240-65968-13	AMW-26 (20160610)	T	Water	8270C	240-234392
240-65968-14	AMW-21 (20160610)	T	Water	8270C	240-234392

Report Basis
T = Total

GC VOA

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Analysis Batch:240-234587					
LCS 240-234587/5	Lab Control Sample	T	Water	WI-GRO	
LCSD 240-234587/24	Lab Control Sample Duplicate	T	Water	WI-GRO	
MB 240-234587/4	Method Blank	T	Water	WI-GRO	
240-65968-6	AMW-05B (20160609)	T	Water	WI-GRO	
240-65968-7	AMW-22 (20160609)	T	Water	WI-GRO	
240-65968-8	AMW-22B (20160609)	T	Water	WI-GRO	
240-65968-9	AMW-19 (20160609)	T	Water	WI-GRO	
240-65968-10	DUP-03 (20160609)	T	Water	WI-GRO	
240-65968-11	TRIP BLANK	T	Water	WI-GRO	
240-65968-12	AMW-07 (20160610)	T	Water	WI-GRO	
240-65968-13	AMW-26 (20160610)	T	Water	WI-GRO	
240-65968-14	AMW-21 (20160610)	T	Water	WI-GRO	

Report Basis
T = Total

TestAmerica Canton

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-234342					
LCS 240-234342/15-A	Lab Control Sample	T	Water	3520C	
LCSD 240-234342/16-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 240-234342/14-A	Method Blank	T	Water	3520C	
240-65968-6	AMW-05B (20160609)	T	Water	3520C	
240-65968-7	AMW-22 (20160609)	T	Water	3520C	
240-65968-8	AMW-22B (20160609)	T	Water	3520C	
240-65968-9	AMW-19 (20160609)	T	Water	3520C	
240-65968-10	DUP-03 (20160609)	T	Water	3520C	
240-65968-12	AMW-07 (20160610)	T	Water	3520C	
240-65968-13	AMW-26 (20160610)	T	Water	3520C	
240-65968-14	AMW-21 (20160610)	T	Water	3520C	
Prep Batch: 240-234344					
LCS 240-234344/9-A	Lab Control Sample	T	Water	3520C	
MB 240-234344/8-A	Method Blank	T	Water	3520C	
240-65968-6	AMW-05B (20160609)	T	Water	3520C	
240-65968-10	DUP-03 (20160609)	T	Water	3520C	
Analysis Batch:240-234670					
LCS 240-234342/15-A	Lab Control Sample	T	Water	WI-DRO	240-234342
LCSD 240-234342/16-A	Lab Control Sample Duplicate	T	Water	WI-DRO	240-234342
MB 240-234342/14-A	Method Blank	T	Water	WI-DRO	240-234342
240-65968-6	AMW-05B (20160609)	T	Water	WI-DRO	240-234342
240-65968-7	AMW-22 (20160609)	T	Water	WI-DRO	240-234342
240-65968-8	AMW-22B (20160609)	T	Water	WI-DRO	240-234342
240-65968-9	AMW-19 (20160609)	T	Water	WI-DRO	240-234342
240-65968-10	DUP-03 (20160609)	T	Water	WI-DRO	240-234342
240-65968-12	AMW-07 (20160610)	T	Water	WI-DRO	240-234342
240-65968-13	AMW-26 (20160610)	T	Water	WI-DRO	240-234342
240-65968-14	AMW-21 (20160610)	T	Water	WI-DRO	240-234342
Analysis Batch:240-234707					
LCS 240-234344/9-A	Lab Control Sample	T	Water	8082	240-234344
MB 240-234344/8-A	Method Blank	T	Water	8082	240-234344
240-65968-6	AMW-05B (20160609)	T	Water	8082	240-234344
240-65968-10	DUP-03 (20160609)	T	Water	8082	240-234344
Prep Batch: 240-234897					
LCS 240-234897/21-A	Lab Control Sample	T	Water	3520C	
MB 240-234897/20-A	Method Blank	T	Water	3520C	
240-65968-6RE	AMW-05B (20160609)	T	Water	3520C	
240-65968-10RE	DUP-03 (20160609)	T	Water	3520C	

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:240-235257					
LCS 240-234897/21-A	Lab Control Sample	T	Water	8082	240-234897
MB 240-234897/20-A	Method Blank	T	Water	8082	240-234897
240-65968-6RE	AMW-05B (20160609)	T	Water	8082	240-234897
240-65968-10RE	DUP-03 (20160609)	T	Water	8082	240-234897

Report Basis
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-234408					
LCS 240-234408/2-A	Lab Control Sample	R	Water	3005A	
MB 240-234408/1-A	Method Blank	R	Water	3005A	
240-65968-6	AMW-05B (20160609)	D	Water	3005A	
240-65968-7	AMW-22 (20160609)	D	Water	3005A	
240-65968-8	AMW-22B (20160609)	D	Water	3005A	
240-65968-9	AMW-19 (20160609)	D	Water	3005A	
240-65968-10	DUP-03 (20160609)	D	Water	3005A	
240-65968-12	AMW-07 (20160610)	D	Water	3005A	
240-65968-13	AMW-26 (20160610)	D	Water	3005A	
240-65968-14	AMW-21 (20160610)	D	Water	3005A	
240-65972-H-1-B MS	Matrix Spike	D	Water	3005A	
240-65972-H-1-C MSD	Matrix Spike Duplicate	D	Water	3005A	
Prep Batch: 240-234410					
LCS 240-234410/2-A	Lab Control Sample	T	Water	7470A	
MB 240-234410/1-A	Method Blank	T	Water	7470A	
240-65968-6	AMW-05B (20160609)	D	Water	7470A	
240-65968-7	AMW-22 (20160609)	D	Water	7470A	
240-65968-8	AMW-22B (20160609)	D	Water	7470A	
240-65968-9	AMW-19 (20160609)	D	Water	7470A	
240-65968-10	DUP-03 (20160609)	D	Water	7470A	
240-65968-12	AMW-07 (20160610)	D	Water	7470A	
240-65968-13	AMW-26 (20160610)	D	Water	7470A	
240-65968-14	AMW-21 (20160610)	D	Water	7470A	
240-65972-H-1-E MS	Matrix Spike	D	Water	7470A	
240-65972-H-1-F MSD	Matrix Spike Duplicate	D	Water	7470A	
Analysis Batch:240-234630					
LCS 240-234408/2-A	Lab Control Sample	R	Water	6010B	240-234408
MB 240-234408/1-A	Method Blank	R	Water	6010B	240-234408
240-65968-6	AMW-05B (20160609)	D	Water	6010B	240-234408
240-65968-7	AMW-22 (20160609)	D	Water	6010B	240-234408
240-65968-8	AMW-22B (20160609)	D	Water	6010B	240-234408
240-65968-9	AMW-19 (20160609)	D	Water	6010B	240-234408
240-65968-10	DUP-03 (20160609)	D	Water	6010B	240-234408
240-65968-12	AMW-07 (20160610)	D	Water	6010B	240-234408
240-65968-13	AMW-26 (20160610)	D	Water	6010B	240-234408
240-65968-14	AMW-21 (20160610)	D	Water	6010B	240-234408
240-65972-H-1-B MS	Matrix Spike	D	Water	6010B	240-234408
240-65972-H-1-C MSD	Matrix Spike Duplicate	D	Water	6010B	240-234408

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-234773					
LCS 240-234410/2-A	Lab Control Sample	T	Water	7470A	240-234410
MB 240-234410/1-A	Method Blank	T	Water	7470A	240-234410
240-65968-6	AMW-05B (20160609)	D	Water	7470A	240-234410
240-65968-7	AMW-22 (20160609)	D	Water	7470A	240-234410
240-65968-8	AMW-22B (20160609)	D	Water	7470A	240-234410
240-65968-9	AMW-19 (20160609)	D	Water	7470A	240-234410
240-65968-10	DUP-03 (20160609)	D	Water	7470A	240-234410
240-65968-12	AMW-07 (20160610)	D	Water	7470A	240-234410
240-65968-13	AMW-26 (20160610)	D	Water	7470A	240-234410
240-65968-14	AMW-21 (20160610)	D	Water	7470A	240-234410
240-65972-H-1-E MS	Matrix Spike	D	Water	7470A	240-234410
240-65972-H-1-F MSD	Matrix Spike Duplicate	D	Water	7470A	240-234410

Report Basis
D = Dissolved
R = Total Recoverable
T = Total

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 240-234688					
LCS 240-234688/2-A	Lab Control Sample	T	Water	9012A	
MB 240-234688/1-A	Method Blank	T	Water	9012A	
240-65937-D-7-B MS	Matrix Spike	T	Water	9012A	
240-65937-D-7-C MSD	Matrix Spike Duplicate	T	Water	9012A	
240-65968-6	AMW-05B (20160609)	T	Water	9012A	
240-65968-7	AMW-22 (20160609)	T	Water	9012A	
240-65968-8	AMW-22B (20160609)	T	Water	9012A	
240-65968-9	AMW-19 (20160609)	T	Water	9012A	
240-65968-10	DUP-03 (20160609)	T	Water	9012A	
Analysis Batch:240-234693					
LCS 240-234688/2-A	Lab Control Sample	T	Water	9012A	240-234688
MB 240-234688/1-A	Method Blank	T	Water	9012A	240-234688
240-65937-D-7-B MS	Matrix Spike	T	Water	9012A	240-234688
240-65937-D-7-C MSD	Matrix Spike Duplicate	T	Water	9012A	240-234688
240-65968-6	AMW-05B (20160609)	T	Water	9012A	240-234688
240-65968-7	AMW-22 (20160609)	T	Water	9012A	240-234688
240-65968-8	AMW-22B (20160609)	T	Water	9012A	240-234688
240-65968-9	AMW-19 (20160609)	T	Water	9012A	240-234688
240-65968-10	DUP-03 (20160609)	T	Water	9012A	240-234688
Prep Batch: 240-234923					
LCS 240-234923/2-A	Lab Control Sample	T	Water	9012A	
MB 240-234923/1-A	Method Blank	T	Water	9012A	
240-65891-B-3-B MS	Matrix Spike	T	Water	9012A	
240-65891-B-3-C MSD	Matrix Spike Duplicate	T	Water	9012A	
240-65968-12	AMW-07 (20160610)	T	Water	9012A	
240-65968-13	AMW-26 (20160610)	T	Water	9012A	
240-65968-14	AMW-21 (20160610)	T	Water	9012A	
Analysis Batch:240-234984					
LCS 240-234923/2-A	Lab Control Sample	T	Water	9012A	240-234923
MB 240-234923/1-A	Method Blank	T	Water	9012A	240-234923
240-65891-B-3-B MS	Matrix Spike	T	Water	9012A	240-234923
240-65891-B-3-C MSD	Matrix Spike Duplicate	T	Water	9012A	240-234923
240-65968-12	AMW-07 (20160610)	T	Water	9012A	240-234923
240-65968-13	AMW-26 (20160610)	T	Water	9012A	240-234923
240-65968-14	AMW-21 (20160610)	T	Water	9012A	240-234923

Report Basis
T = Total

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec	DBFM %Rec
240-65968-6	AMW-05B (20160609)	107	82	83	99
240-65968-7	AMW-22 (20160609)	106	82	84	98
240-65968-8	AMW-22B (20160609)	106	84	84	100
240-65968-9	AMW-19 (20160609)	110	81	84	103
240-65968-10	DUP-03 (20160609)	115	83	85	104
240-65968-11	TRIP BLANK	111	83	82	99
240-65968-12	AMW-07 (20160610)	109	85	84	100
240-65968-13	AMW-26 (20160610)	109	82	82	101
240-65968-14	AMW-21 (20160610)	109	81	81	97
MB 240-235316/6		108	82	84	98
LCS 240-235316/4		104	93	87	97
240-65968-12 MS	AMW-07 (20160610) MS	103	95	86	100
240-65968-12 MSD	AMW-07 (20160610) MSD	102	90	86	98

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	78-125
BFB = 4-Bromofluorobenzene (Surr)	61-120
TOL = Toluene-d8 (Surr)	80-120
DBFM = Dibromofluoromethane (Surr)	79-120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	TBP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
240-65968-7	AMW-22 (20160609)	75	33	84	73	21	77
240-65968-8	AMW-22B (20160609)	71	26	84	68	17	69
240-65968-9	AMW-19 (20160609)	64	24	77	64	14	73
240-65968-12	AMW-07 (20160610)	79	30	90	79	18	58
240-65968-13	AMW-26 (20160610)	54	26	65	54	16	37
240-65968-14	AMW-21 (20160610)	67	30	83	77	18	31
MB 240-234392/22-A		87	60	92	93	44	100
LCS 240-234392/23-A		83	51	100	90	36	95
240-65968-12 MS	AMW-07 (20160610) MS	73	31	84	80	19	46
240-65968-12 MSD	AMW-07 (20160610) MSD	79	29	92	84	17	53

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl (Surr)	42-120
2FP = 2-Fluorophenol (Surr)	10-120
TBP = 2,4,6-Tribromophenol (Surr)	35-125
NBZ = Nitrobenzene-d5 (Surr)	36-120
PHL = Phenol-d5 (Surr)	10-120
TPH = Terphenyl-d14 (Surr)	17-120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
240-65968-6 RE	AMW-05B (20160609) RE	9X	47
240-65968-6	AMW-05B (20160609)	40	46
240-65968-10 RE	DUP-03 (20160609) RE	30	49
240-65968-10	DUP-03 (20160609)	43	60
MB 240-234344/8-A		48	2X
MB 240-234897/20-A		61	51
LCS 240-234344/9-A		63	74
LCS 240-234897/21-A		65	59

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	10-120
TCX = Tetrachloro-m-xylene	21-120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Method Blank - Batch: 240-235316

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-235316/6	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2893.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1149	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1149				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.28	1.0
1,1,1-Trichloroethane	ND		0.44	1.0
1,1,2,2-Tetrachloroethane	ND		0.22	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.45	1.0
1,1,2-Trichloroethane	ND		0.24	1.0
1,1-Dichloroethane	ND		0.30	1.0
1,1-Dichloroethene	ND		0.45	1.0
1,1-Dichloropropene	ND		0.42	1.0
1,2,3-Trichlorobenzene	ND		0.37	1.0
1,2,3-Trichloropropane	ND		0.44	1.0
1,2,4-Trichlorobenzene	ND		0.32	1.0
1,2,4-Trimethylbenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.82	2.0
1,2-Dichlorobenzene	ND		0.25	1.0
1,2-Dichloroethane	ND		0.23	1.0
1,2-Dichloropropane	ND		0.25	1.0
1,3,5-Trimethylbenzene	ND		0.48	1.0
1,3-Dichlorobenzene	ND		0.19	1.0
1,3-Dichloropropane	ND		0.19	1.0
1,4-Dichlorobenzene	ND		0.27	1.0
Allyl chloride	ND		0.84	2.0
2,2-Dichloropropane	ND		0.26	1.0
2-Chlorotoluene	ND		0.40	1.0
2-Hexanone	ND		0.48	10
Bromobenzene	ND		0.35	1.0
Bromochloromethane	ND		0.50	1.0
4-Chlorotoluene	ND		0.29	1.0
p-Isopropyltoluene	ND		0.43	1.0
Acetone	ND		0.94	10
Benzene	ND		0.35	1.0
Bromoform	ND		0.56	1.0
Bromomethane	ND		0.44	1.0
Carbon disulfide	ND		0.38	1.0
Carbon tetrachloride	ND		0.43	1.0
Chlorobenzene	ND		0.25	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.25	1.0
Chloromethane	ND		0.44	1.0
cis-1,2-Dichloroethene	ND		0.26	1.0
cis-1,3-Dichloropropene	ND		0.46	1.0
Cyclohexane	ND		0.45	1.0
Hexachlorobutadiene	ND		0.35	1.0
Dibromomethane	ND		0.42	1.0
Bromodichloromethane	ND		0.29	1.0
Dichlorodifluoromethane	ND		0.32	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Method Blank - Batch: 240-235316

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 240-235316/6	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2893.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1149	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1149				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorofluoromethane	ND		0.30	2.0
Ethyl ether	ND		0.37	2.0
Ethylbenzene	ND		0.25	1.0
1,2-Dibromoethane	ND		0.32	1.0
Naphthalene	ND		0.45	1.0
m-Xylene & p-Xylene	ND		0.24	2.0
n-Butylbenzene	ND		0.31	1.0
Isopropylbenzene	ND		0.35	1.0
Methyl acetate	ND		2.3	10
N-Propylbenzene	ND		0.40	1.0
2-Butanone (MEK)	ND		0.53	10
4-Methyl-2-pentanone (MIBK)	ND		0.99	10
sec-Butylbenzene	ND		0.48	1.0
Methyl tert butyl ether	ND		0.20	1.0
Methylene Chloride	ND		0.33	1.0
o-Xylene	ND		0.25	1.0
Styrene	ND		0.45	1.0
tert-Butylbenzene	ND		0.41	1.0
Tetrachloroethene	ND		0.31	1.0
Tetrahydrofuran	ND		1.4	5.0
Toluene	ND		0.23	1.0
trans-1,2-Dichloroethene	ND		0.30	1.0
trans-1,3-Dichloropropene	ND		0.56	1.0
Trichloroethene	ND		0.22	1.0
Trichlorofluoromethane	ND		0.49	1.0
Vinyl chloride	ND		0.29	1.0
Methylcyclohexane	ND		0.43	1.0
Chlorodibromomethane	ND		0.43	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108	78 - 125
4-Bromofluorobenzene (Surr)	82	61 - 120
Toluene-d8 (Surr)	84	80 - 120
Dibromofluoromethane (Surr)	98	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Lab Control Sample - Batch: 240-235316

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-235316/4	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2890.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1041	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1041				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	10.0	10.8	108	80 - 120	
1,1,1-Trichloroethane	10.0	11.3	113	77 - 123	
1,1,2,2-Tetrachloroethane	10.0	8.40	84	71 - 123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.9	109	67 - 138	
1,1,2-Trichloroethane	10.0	9.23	92	80 - 120	
1,1-Dichloroethane	10.0	8.84	88	79 - 125	
1,1-Dichloroethene	10.0	9.50	95	76 - 124	
1,1-Dichloropropene	10.0	9.56	96	80 - 128	
1,2,3-Trichlorobenzene	10.0	8.87	89	66 - 120	
1,2,3-Trichloropropane	10.0	9.56	96	72 - 126	
1,2,4-Trichlorobenzene	10.0	8.00	80	61 - 120	
1,2,4-Trimethylbenzene	10.0	9.05	90	76 - 120	
1,2-Dibromo-3-Chloropropane	10.0	10.8	108	50 - 132	
1,2-Dichlorobenzene	10.0	9.12	91	79 - 120	
1,2-Dichloroethane	10.0	11.0	110	80 - 120	
1,2-Dichloropropane	10.0	8.85	89	78 - 124	
1,3,5-Trimethylbenzene	10.0	9.09	91	77 - 120	
1,3-Dichlorobenzene	10.0	9.16	92	79 - 120	
1,3-Dichloropropane	10.0	8.76	88	80 - 120	
1,4-Dichlorobenzene	10.0	9.08	91	79 - 120	
Allyl chloride	10.0	9.97	100	69 - 120	
2,2-Dichloropropane	10.0	10.7	107	71 - 122	
2-Chlorotoluene	10.0	9.19	92	80 - 120	
2-Hexanone	20.0	16.8	84	55 - 141	
Bromobenzene	10.0	9.72	97	80 - 120	
Bromochloromethane	10.0	10.5	105	80 - 120	
4-Chlorotoluene	10.0	9.10	91	80 - 120	
p-Isopropyltoluene	10.0	9.16	92	77 - 120	
Acetone	20.0	16.0	80	34 - 148	
Benzene	10.0	8.86	89	80 - 120	
Bromoform	10.0	14.6	146	56 - 122	*
Bromomethane	10.0	13.4	134	38 - 132	*
Carbon disulfide	10.0	9.74	97	65 - 144	
Carbon tetrachloride	10.0	12.4	124	77 - 131	
Chlorobenzene	10.0	9.34	93	80 - 120	
Chloroethane	10.0	11.5	115	36 - 126	
Chloroform	10.0	10.3	103	80 - 120	
Chloromethane	10.0	7.74	77	48 - 133	
cis-1,2-Dichloroethene	10.0	9.62	96	79 - 120	
cis-1,3-Dichloropropene	10.0	10.0	100	74 - 126	
Cyclohexane	10.0	8.49	85	60 - 140	

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Lab Control Sample - Batch: 240-235316

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 240-235316/4	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2890.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1041	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1041				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobutadiene	10.0	8.76	88	62 - 120	
Dibromomethane	10.0	9.93	99	80 - 120	
Bromodichloromethane	10.0	11.1	111	80 - 120	
Dichlorodifluoromethane	10.0	8.84	88	23 - 136	
Dichlorofluoromethane	10.0	12.4	124	40 - 160	
Ethyl ether	10.0	8.69	87	53 - 135	
Ethylbenzene	10.0	9.12	91	80 - 120	
1,2-Dibromoethane	10.0	10.3	103	80 - 120	
Naphthalene	10.0	8.04	80	53 - 121	
m-Xylene & p-Xylene	10.0	8.75	87	80 - 120	
n-Butylbenzene	10.0	7.90	79	74 - 120	
Isopropylbenzene	10.0	9.61	96	77 - 120	
Methyl acetate	50.0	43.3	87	67 - 131	
N-Propylbenzene	10.0	9.32	93	79 - 123	
2-Butanone (MEK)	20.0	17.9	90	56 - 138	
4-Methyl-2-pentanone (MIBK)	20.0	18.8	94	64 - 135	
sec-Butylbenzene	10.0	8.53	85	77 - 120	
Methyl tert butyl ether	10.0	10.2	102	69 - 121	
Methylene Chloride	10.0	9.28	93	77 - 129	
o-Xylene	10.0	9.35	94	80 - 120	
Styrene	10.0	9.62	96	76 - 122	
tert-Butylbenzene	10.0	9.05	91	77 - 121	
Tetrachloroethene	10.0	10.6	106	78 - 121	
Tetrahydrofuran	20.0	17.0	85	61 - 136	
Toluene	10.0	8.81	88	80 - 120	
trans-1,2-Dichloroethene	10.0	10.3	103	80 - 124	
trans-1,3-Dichloropropene	10.0	8.49	85	75 - 131	
Trichloroethene	10.0	10.5	105	80 - 121	
Trichlorofluoromethane	10.0	13.5	135	61 - 133	*
Vinyl chloride	10.0	8.21	82	52 - 121	
Methylcyclohexane	10.0	9.08	91	61 - 134	
Chlorodibromomethane	10.0	11.4	114	74 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104	78 - 125
4-Bromofluorobenzene (Surr)	93	61 - 120
Toluene-d8 (Surr)	87	80 - 120
Dibromofluoromethane (Surr)	97	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-235316

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65968-12	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2897.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1323			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1323				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65968-12	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2898.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1345			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1345				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	101	92	72 - 120	9	22		
1,1,1-Trichloroethane	104	94	69 - 122	10	14		
1,1,2,2-Tetrachloroethane	80	75	61 - 130	6	18		
1,1,2-Trichloro-1,2,2-trifluoroethane	79	75	44 - 140	5	35		
1,1,2-Trichloroethane	90	85	72 - 125	6	19		
1,1-Dichloroethane	86	80	73 - 124	7	14		
1,1-Dichloroethene	84	78	67 - 124	8	24		
1,1-Dichloropropene	80	74	81 - 126	8	11	F1	F1
1,2,3-Trichlorobenzene	64	70	46 - 120	8	35		
1,2,3-Trichloropropane	93	85	58 - 135	9	25		
1,2,4-Trichlorobenzene	62	62	48 - 120	1	28		
1,2,4-Trimethylbenzene	70	65	64 - 122	6	14		
1,2-Dibromo-3-Chloropropane	99	89	42 - 130	11	24		
1,2-Dichlorobenzene	77	73	67 - 118	5	15		
1,2-Dichloroethane	109	101	74 - 125	7	24		
1,2-Dichloropropane	84	79	73 - 122	7	15		
1,3,5-Trimethylbenzene	70	64	62 - 126	8	17		
1,3-Dichlorobenzene	76	71	65 - 120	6	15		
1,3-Dichloropropane	84	79	59 - 133	7	35		
1,4-Dichlorobenzene	77	70	66 - 120	9	16		
Allyl chloride	85	85	39 - 124	0	35		
2,2-Dichloropropane	78	69	48 - 126	12	30		
2-Chlorotoluene	73	66	70 - 122	9	18		F1
2-Hexanone	81	74	49 - 142	8	27		
Bromobenzene	83	79	73 - 120	5	13		
Bromochloromethane	106	96	60 - 132	10	35		
4-Chlorotoluene	74	66	74 - 120	12	15		F1
p-Isopropyltoluene	66	62	61 - 123	7	27		
Acetone	86	83	32 - 126	3	28		
Benzene	82	78	73 - 121	6	13		
Bromoform	137	121	45 - 121	12	19	F1	
Bromomethane	96	102	26 - 136	5	35		

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-235316

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65968-12	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2897.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1323			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1323				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65968-12	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2898.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1345			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1345				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Carbon disulfide	80	74	54 - 144	7	34		
Carbon tetrachloride	104	98	65 - 129	6	20		
Chlorobenzene	81	75	72 - 120	8	15		
Chloroethane	80	91	27 - 131	13	35		
Chloroform	102	93	73 - 121	9	17		
Chloromethane	60	67	39 - 134	10	20		
cis-1,2-Dichloroethene	93	87	66 - 124	7	22		
cis-1,3-Dichloropropene	85	79	60 - 120	8	21		
Cyclohexane	58	54	41 - 137	7	35		
Hexachlorobutadiene	47	48	48 - 120	3	34	F1	
Dibromomethane	101	94	63 - 134	7	35		
Bromodichloromethane	106	97	72 - 120	9	19		
Dichlorodifluoromethane	58	61	14 - 137	5	34		
Dichlorofluoromethane	98	102	42 - 133	4	35		
Ethyl ether	84	78	63 - 136	8	35		
Ethylbenzene	76	69	68 - 121	10	16		
1,2-Dibromoethane	101	91	69 - 125	10	24		
Naphthalene	65	69	38 - 128	6	35		
m-Xylene & p-Xylene	73	66	66 - 123	10	15		
n-Butylbenzene	52	49	54 - 126	5	33	F1	F1
Isopropylbenzene	78	71	61 - 122	10	20		
Methyl acetate	73	68	64 - 124	7	12		
N-Propylbenzene	68	64	63 - 129	7	29		
2-Butanone (MEK)	78	71	49 - 132	8	19		
4-Methyl-2-pentanone (MIBK)	89	85	58 - 136	5	32		
sec-Butylbenzene	59	56	61 - 123	6	29	F1	F1
Methyl tert butyl ether	98	91	61 - 121	7	12		
Methylene Chloride	89	85	70 - 124	4	14		
o-Xylene	81	73	68 - 121	10	14		
Styrene	82	72	64 - 126	14	15		
tert-Butylbenzene	69	63	63 - 122	9	24		
Tetrachloroethene	85	79	59 - 125	8	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-235316

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	240-65968-12	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2897.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1323			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1323				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65968-12	Analysis Batch:	240-235316	Instrument ID:	A3UX17
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UXR2898.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/21/2016 1345			Final Weight/Volume:	5 mL
Prep Date:	06/21/2016 1345				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Tetrahydrofuran	82	73	16 - 161	11	35		
Toluene	78	72	72 - 122	8	15		
trans-1,2-Dichloroethene	92	85	72 - 125	7	25		
trans-1,3-Dichloropropene	75	68	58 - 132	11	22		
Trichloroethene	90	82	61 - 129	7	14		
Trichlorofluoromethane	93	95	49 - 133	2	25		
Vinyl chloride	72	74	44 - 122	3	35		
Methylcyclohexane	60	54	39 - 135	10	35		
Chlorodibromomethane	110	98	62 - 122	12	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103	102	78 - 125
4-Bromofluorobenzene (Surr)	95	90	61 - 120
Toluene-d8 (Surr)	86	86	80 - 120
Dibromofluoromethane (Surr)	100	98	79 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Method Blank - Batch: 240-234392

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-234392/22-A	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 0753	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	ND		0.044	0.20
Acenaphthylene	ND		0.048	0.20
Acetophenone	ND		0.34	1.0
Anthracene	ND		0.088	0.20
Atrazine	ND		0.34	1.0
Benzaldehyde	ND		0.39	1.0
Benzo[a]anthracene	ND		0.030	0.20
Benzo[b]fluoranthene	ND		0.039	0.20
Benzo[k]fluoranthene	ND		0.045	0.20
Benzo[g,h,i]perylene	ND		0.046	0.20
Benzo[a]pyrene	ND		0.051	0.20
Butyl benzyl phthalate	ND		0.26	2.0
1,1'-Biphenyl	ND		0.13	1.0
Bis(2-chloroethoxy)methane	ND		0.32	1.0
Bis(2-chloroethyl)ether	ND		0.10	1.0
Bis(2-ethylhexyl) phthalate	ND		1.7	5.0
4-Bromophenyl phenyl ether	ND		0.22	2.0
Caprolactam	ND		0.20	5.0
Carbazole	ND		0.28	1.0
4-Chloroaniline	ND		0.21	2.0
4-Chloro-3-methylphenol	ND		0.21	2.0
2-Chloronaphthalene	ND		0.10	1.0
2-Chlorophenol	ND		0.29	1.0
4-Chlorophenyl phenyl ether	ND		0.30	2.0
Chrysene	ND		0.050	0.20
2-Methylnaphthalene	ND		0.090	0.20
3 & 4 Methylphenol	ND		0.80	2.0
Dibenz(a,h)anthracene	ND		0.045	0.20
Dibenzofuran	ND		0.020	1.0
3,3'-Dichlorobenzidine	ND		0.37	5.0
2,4-Dichlorophenol	ND		0.19	2.0
Diethyl phthalate	ND		0.60	2.0
2,4-Dimethylphenol	ND		0.25	2.0
Dimethyl phthalate	ND		0.29	2.0
4,6-Dinitro-2-methylphenol	ND		2.4	5.0
2,4-Dinitrophenol	ND		0.32	5.0
2,4-Dinitrotoluene	ND		0.25	5.0
Di-n-butyl phthalate	ND		1.7	5.0
Di-n-octyl phthalate	ND		0.23	2.0
Fluoranthene	ND		0.045	0.20
Fluorene	ND		0.041	0.20
Hexachlorobenzene	ND		0.085	0.20
Hexachlorobutadiene	ND		0.27	1.0
Hexachlorocyclopentadiene	ND		0.24	10
Hexachloroethane	ND		0.19	1.0

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Method Blank - Batch: 240-234392

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 240-234392/22-A	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615003.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 0753	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Indeno[1,2,3-cd]pyrene	ND		0.043	0.20
Isophorone	ND		0.27	1.0
2-Methylphenol	ND		0.17	1.0
Naphthalene	ND		0.063	0.20
2-Nitroaniline	ND		0.21	2.0
3-Nitroaniline	ND		0.28	2.0
4-Nitroaniline	ND		0.22	2.0
Nitrobenzene	ND		0.040	1.0
2-Nitrophenol	ND		0.28	2.0
4-Nitrophenol	ND		0.29	5.0
N-Nitrosodiphenylamine	ND		0.31	1.0
N-Nitrosodi-n-propylamine	ND		0.24	1.0
2,2'-oxybis[1-chloropropane]	ND		0.40	1.0
Pentachlorophenol	ND		0.27	5.0
Phenanthrene	ND		0.062	0.20
Phenol	ND		0.60	1.0
Pyrene	ND		0.042	0.20
2,4,5-Trichlorophenol	ND		0.30	5.0
2,4,6-Trichlorophenol	ND		0.24	5.0
2,6-Dinitrotoluene	ND		0.80	5.0

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	87	42 - 120
2-Fluorophenol (Surr)	60	10 - 120
2,4,6-Tribromophenol (Surr)	92	35 - 125
Nitrobenzene-d5 (Surr)	93	36 - 120
Phenol-d5 (Surr)	44	10 - 120
Terphenyl-d14 (Surr)	100	17 - 120

Lab Control Sample - Batch: 240-234392

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-234392/23-A	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 0817	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	20.0	18.9	95	57 - 120	
Acenaphthylene	20.0	16.4	82	55 - 120	
Acetophenone	20.0	17.1	86	60 - 120	
Anthracene	20.0	17.3	87	58 - 120	
Atrazine	40.0	41.7	104	61 - 132	
Benzaldehyde	40.0	34.2	85	60 - 120	
Benzo[a]anthracene	20.0	17.5	88	59 - 120	
Benzo[b]fluoranthene	20.0	20.5	103	62 - 120	
Benzo[k]fluoranthene	20.0	20.1	100	57 - 120	
Benzo[g,h,i]perylene	20.0	20.9	105	59 - 120	
Benzo[a]pyrene	20.0	19.5	98	60 - 120	
Butyl benzyl phthalate	20.0	20.1	100	61 - 120	
1,1'-Biphenyl	20.0	16.7	84	58 - 120	
Bis(2-chloroethoxy)methane	20.0	17.5	87	61 - 120	
Bis(2-chloroethyl)ether	20.0	15.2	76	55 - 120	
Bis(2-ethylhexyl) phthalate	20.0	20.1	100	62 - 123	
4-Bromophenyl phenyl ether	20.0	17.8	89	52 - 128	
Caprolactam	40.0	5.79	14	10 - 120	
Carbazole	20.0	18.1	90	60 - 126	
4-Chloroaniline	20.0	4.51	23	10 - 120	
4-Chloro-3-methylphenol	20.0	18.7	94	59 - 120	
2-Chloronaphthalene	20.0	16.4	82	56 - 120	
2-Chlorophenol	20.0	15.9	80	57 - 120	
4-Chlorophenyl phenyl ether	20.0	17.8	89	58 - 120	
Chrysene	20.0	17.5	87	61 - 120	
2-Methylnaphthalene	20.0	16.8	84	58 - 120	
3 & 4 Methylphenol	20.0	13.7	69	46 - 120	
Dibenz(a,h)anthracene	20.0	21.0	105	61 - 120	
Dibenzofuran	20.0	17.4	87	58 - 120	
3,3'-Dichlorobenzidine	40.0	34.6	86	10 - 134	
2,4-Dichlorophenol	20.0	18.2	91	57 - 120	
Diethyl phthalate	20.0	18.4	92	62 - 120	
2,4-Dimethylphenol	20.0	17.5	88	55 - 120	
Dimethyl phthalate	20.0	17.7	88	62 - 120	
4,6-Dinitro-2-methylphenol	40.0	34.3	86	35 - 140	
2,4-Dinitrophenol	40.0	32.4	81	18 - 127	
2,4-Dinitrotoluene	20.0	19.5	97	65 - 120	
Di-n-butyl phthalate	20.0	19.9	100	59 - 128	
Di-n-octyl phthalate	20.0	22.0	110	58 - 120	
Fluoranthene	20.0	18.0	90	57 - 123	
Fluorene	20.0	16.7	84	56 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Lab Control Sample - Batch: 240-234392

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 240-234392/23-A	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 0817	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobenzene	20.0	17.0	85	47 - 127	
Hexachlorobutadiene	20.0	18.6	93	50 - 120	
Hexachlorocyclopentadiene	20.0	16.1	81	25 - 120	
Hexachloroethane	20.0	16.7	83	50 - 120	
Indeno[1,2,3-cd]pyrene	20.0	20.8	104	61 - 120	
Isophorone	20.0	17.9	90	61 - 120	
2-Methylphenol	20.0	14.5	72	52 - 120	
Naphthalene	20.0	16.5	82	54 - 120	
2-Nitroaniline	20.0	19.9	99	56 - 123	
3-Nitroaniline	20.0	16.9	84	36 - 120	
4-Nitroaniline	20.0	18.8	94	51 - 122	
Nitrobenzene	20.0	18.4	92	58 - 120	
2-Nitrophenol	20.0	19.9	100	62 - 120	
4-Nitrophenol	40.0	19.8	49	16 - 120	
N-Nitrosodiphenylamine	20.0	17.3	86	54 - 122	
N-Nitrosodi-n-propylamine	20.0	17.6	88	60 - 120	
2,2'-oxybis[1-chloropropane]	20.0	16.4	82	46 - 120	
Pentachlorophenol	40.0	38.4	96	35 - 121	
Phenanthrene	20.0	17.2	86	58 - 120	
Phenol	20.0	7.44	37	16 - 120	
Pyrene	20.0	19.3	97	60 - 120	
2,4,5-Trichlorophenol	20.0	19.1	96	57 - 120	
2,4,6-Trichlorophenol	20.0	18.1	90	60 - 120	
2,6-Dinitrotoluene	20.0	18.8	94	65 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	83	42 - 120
2-Fluorophenol (Surr)	51	10 - 120
2,4,6-Tribromophenol (Surr)	100	35 - 125
Nitrobenzene-d5 (Surr)	90	36 - 120
Phenol-d5 (Surr)	36	10 - 120
Terphenyl-d14 (Surr)	95	17 - 120

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234392

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-65968-12	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615028.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1811			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65968-12	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615029.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1836			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	84	90	37 - 120	7	35		
Acenaphthylene	71	77	40 - 120	9	31		
Acetophenone	73	81	43 - 120	10	30		
Anthracene	73	83	36 - 120	13	35		
Atrazine	93	104	50 - 122	11	25		
Benzaldehyde	74	83	42 - 120	12	32		
Benzo[a]anthracene	65	67	18 - 120	3	35		
Benzo[b]fluoranthene	69	64	14 - 120	6	35		
Benzo[k]fluoranthene	69	77	13 - 120	11	35		
Benzo[g,h,i]perylene	72	73	10 - 120	2	35		
Benzo[a]pyrene	70	69	13 - 120	1	35		
Butyl benzyl phthalate	79	87	28 - 120	9	29		
1,1'-Biphenyl	73	78	45 - 120	7	26		
Bis(2-chloroethoxy)methane	75	82	50 - 120	10	26		
Bis(2-chloroethyl)ether	66	72	45 - 120	8	28		
Bis(2-ethylhexyl) phthalate	66	69	10 - 120	5	29		
4-Bromophenyl phenyl ether	75	85	32 - 120	13	27		
Caprolactam	6	5	10 - 120	14	35	J F1	J F1
Carbazole	81	90	55 - 120	11	21		
4-Chloroaniline	11	14	10 - 120	27	35		
4-Chloro-3-methylphenol	76	76	49 - 120	0	24		
2-Chloronaphthalene	70	76	43 - 120	8	26		
2-Chlorophenol	67	70	43 - 120	5	27		
4-Chlorophenyl phenyl ether	75	82	41 - 120	9	28		
Chrysene	64	68	17 - 120	4	35		
2-Methylnaphthalene	73	80	42 - 120	8	35		
3 & 4 Methylphenol	44	42	26 - 120	6	23		
Dibenz(a,h)anthracene	72	72	10 - 120	0	35		
Dibenzofuran	75	82	44 - 120	9	23		
3,3'-Dichlorobenzidine	43	57	10 - 120	28	35		
2,4-Dichlorophenol	79	85	44 - 120	6	25		
Diethyl phthalate	81	87	51 - 120	6	21		

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234392

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-65968-12	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615028.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1811			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65968-12	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615029.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1836			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dimethylphenol	64	69	38 - 120	7	28		
Dimethyl phthalate	80	87	54 - 120	9	22		
4,6-Dinitro-2-methylphenol	55	68	10 - 135	20	35		
2,4-Dinitrophenol	40	48	10 - 122	19	35		
2,4-Dinitrotoluene	83	95	50 - 120	13	24		
Di-n-butyl phthalate	85	94	34 - 120	9	26		
Di-n-octyl phthalate	75	73	10 - 120	2	35		
Fluoranthene	77	80	28 - 120	4	35		
Fluorene	73	81	38 - 120	11	32		
Hexachlorobenzene	70	77	17 - 120	9	35		
Hexachlorobutadiene	77	80	32 - 120	4	35		
Hexachlorocyclopentadiene	49	55	10 - 120	11	35	J	
Hexachloroethane	66	72	10 - 120	8	35		
Indeno[1,2,3-cd]pyrene	71	72	10 - 120	1	35		
Isophorone	77	85	52 - 120	10	26		
2-Methylphenol	52	52	34 - 120	0	27		
Naphthalene	71	75	37 - 120	6	33		
2-Nitroaniline	84	93	49 - 120	10	30		
3-Nitroaniline	64	72	10 - 120	11	35		
4-Nitroaniline	81	85	29 - 120	5	34		
Nitrobenzene	79	86	47 - 120	8	25		
2-Nitrophenol	86	92	47 - 120	8	27		
4-Nitrophenol	28	24	10 - 120	16	35		
N-Nitrosodiphenylamine	66	80	46 - 120	20	23		
N-Nitrosodi-n-propylamine	79	82	49 - 120	4	26		
2,2'-oxybis[1-chloropropane]	73	81	39 - 120	10	27		
Pentachlorophenol	79	89	32 - 120	11	26		
Phenanthrene	74	84	38 - 120	12	35		
Phenol	20	18	10 - 120	14	35		
Pyrene	78	83	26 - 120	5	35		
2,4,5-Trichlorophenol	82	91	49 - 120	11	24		
2,4,6-Trichlorophenol	78	86	51 - 120	10	22		

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234392

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	240-65968-12	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615028.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1811			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	240-65968-12	Analysis Batch:	240-234545	Instrument ID:	A4HP9
Client Matrix:	Water	Prep Batch:	240-234392	Lab File ID:	60615029.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1050 mL
Analysis Date:	06/15/2016 1836			Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0859			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,6-Dinitrotoluene	86	88	54 - 120	2	22		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl (Surr)	73	79	42 - 120
2-Fluorophenol (Surr)	31	29	10 - 120
2,4,6-Tribromophenol (Surr)	84	92	35 - 125
Nitrobenzene-d5 (Surr)	80	84	36 - 120
Phenol-d5 (Surr)	19	17	10 - 120
Terphenyl-d14 (Surr)	46	53	17 - 120

Method Blank - Batch: 240-234587

Method: WI-GRO
Preparation: 5030B

Lab Sample ID:	MB 240-234587/4	Analysis Batch:	240-234587	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061504.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 1235	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 1235			Injection Volume:	5 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Gasoline Range Organics (C6-C10)	49.6	J	20	100

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-234587

Method: WI-GRO
Preparation: 5030B

LCS Lab Sample ID:	LCS 240-234587/5	Analysis Batch:	240-234587	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061505.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/15/2016 1317	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/15/2016 1317			Injection Volume:	5 mL
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 240-234587/24	Analysis Batch:	240-234587	Instrument ID:	YPID
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Y0061525.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/16/2016 0322	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/16/2016 0322			Injection Volume:	5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Gasoline Range Organics (C6-C10)	104	95	80 - 120	9	20		

Method Blank - Batch: 240-234344

Method: 8082
Preparation: 3520C

Lab Sample ID:	MB 240-234344/8-A	Analysis Batch:	240-234707	Instrument ID:	A2HP13
Client Matrix:	Water	Prep Batch:	240-234344	Lab File ID:	SIG10616019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/16/2016 1151	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0610			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor-1016	ND		0.050	0.20
Aroclor-1221	ND		0.090	0.20
Aroclor-1232	ND		0.070	0.20
Aroclor-1242	ND		0.060	0.20
Aroclor-1248	ND		0.050	0.20
Aroclor-1254	ND		0.030	0.20
Aroclor-1260	ND		0.040	0.20

Surrogate	% Rec		Acceptance Limits
DCB Decachlorobiphenyl	48		10 - 120
Tetrachloro-m-xylene	2	X	21 - 120

Lab Control Sample - Batch: 240-234344

Method: 8082
Preparation: 3520C

Lab Sample ID:	LCS 240-234344/9-A	Analysis Batch:	240-234707	Instrument ID:	A2HP13
Client Matrix:	Water	Prep Batch:	240-234344	Lab File ID:	SIG10616020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/16/2016 1209	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/14/2016 0610			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor-1016	2.50	1.96	78	32 - 120	
Aroclor-1260	2.50	2.02	81	36 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	63	10 - 120
Tetrachloro-m-xylene	74	21 - 120

Method Blank - Batch: 240-234897

Method: 8082
Preparation: 3520C

Lab Sample ID:	MB 240-234897/20-A	Analysis Batch:	240-235257	Instrument ID:	A2HP11
Client Matrix:	Water	Prep Batch:	240-234897	Lab File ID:	P110621009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/21/2016 0807	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/17/2016 0536			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor-1016	ND		0.050	0.20
Aroclor-1221	ND		0.090	0.20
Aroclor-1232	ND		0.070	0.20
Aroclor-1242	ND		0.060	0.20
Aroclor-1248	ND		0.050	0.20
Aroclor-1254	ND		0.030	0.20
Aroclor-1260	ND		0.040	0.20

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	61	10 - 120
Tetrachloro-m-xylene	51	21 - 120

Lab Control Sample - Batch: 240-234897

Method: 8082
Preparation: 3520C

Lab Sample ID:	LCS 240-234897/21-A	Analysis Batch:	240-235257	Instrument ID:	A2HP11
Client Matrix:	Water	Prep Batch:	240-234897	Lab File ID:	P110621010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/21/2016 0825	Units:	ug/L	Final Weight/Volume:	2 mL
Prep Date:	06/17/2016 0536			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor-1016	2.50	1.65	66	32 - 120	
Aroclor-1260	2.50	1.70	68	36 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	65	10 - 120
Tetrachloro-m-xylene	59	21 - 120

Method Blank - Batch: 240-234342 **Method: WI-DRO**
Preparation: 3520C

Lab Sample ID:	MB 240-234342/14-A	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-234342	Lab File ID:	P14R061519.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/15/2016 2351	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
WI Diesel Range Organics (C10-C28)	ND		0.050	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 240-234342 **Method: WI-DRO**
Preparation: 3520C

LCS Lab Sample ID:	LCS 240-234342/15-A	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-234342	Lab File ID:	P14R061520.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/16/2016 0018	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 240-234342/16-A	Analysis Batch:	240-234670	Instrument ID:	A2HP14R
Client Matrix:	Water	Prep Batch:	240-234342	Lab File ID:	P14R061534.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/16/2016 0642	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	06/14/2016 0555			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
WI Diesel Range Organics (C10-C28)	96	99	75 - 115	3	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Method Blank - Batch: 240-234408

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-234408/1-A	Analysis Batch:	240-234630	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2148	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Barium	ND		2.4	200
Aluminum	ND		40	200
Cadmium	ND		0.29	5.0
Chromium	ND		0.55	10
Silver	ND		0.92	10
Arsenic	ND		3.3	10
Beryllium	ND		0.21	5.0
Lead	ND		1.9	3.0
Calcium	ND		710	5000
Selenium	ND		5.1	15
Cobalt	ND		0.84	7.0
Copper	ND		3.9	25
Iron	ND		25	100
Potassium	ND		70	5000
Magnesium	ND		230	5000
Manganese	ND		5.1	15
Sodium	626	J	330	5000
Nickel	ND		1.6	40
Antimony	ND		3.1	10
Thallium	ND		2.1	10
Vanadium	ND		4.4	10
Zinc	ND		16	50

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Lab Control Sample - Batch: 240-234408

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-234408/2-A	Analysis Batch:	240-234630	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-234408	Lab File ID:	I9061516A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2200	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 0937				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium	2000	1900	95	80 - 120	
Aluminum	2000	1930	97	80 - 120	
Cadmium	50.0	50.3	101	80 - 120	
Chromium	200	191	96	80 - 120	
Silver	50.0	49.8	100	80 - 120	
Arsenic	2000	2040	102	80 - 120	
Beryllium	50.0	48.8	98	80 - 120	
Lead	500	478	96	80 - 120	
Calcium	50000	48300	97	80 - 120	
Selenium	2000	2090	105	80 - 120	
Cobalt	500	483	97	80 - 120	
Copper	250	241	97	80 - 120	
Iron	1000	1000	100	80 - 120	
Potassium	50000	46700	93	80 - 120	
Magnesium	50000	48000	96	80 - 120	
Manganese	500	489	98	80 - 120	
Sodium	50000	46500	93	80 - 120	
Nickel	500	492	98	80 - 120	
Antimony	500	500	100	80 - 120	
Thallium	2000	1930	97	80 - 120	
Vanadium	500	489	98	80 - 120	
Zinc	500	500	100	80 - 120	

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234408

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID: 240-65972-H-1-B MS
Client Matrix: Water
Dilution: 1.0
Analysis Date: 06/15/2016 2212
Prep Date: 06/14/2016 0937
Leach Date: N/A

Analysis Batch: 240-234630
Prep Batch: 240-234408
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9061516A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 240-65972-H-1-C MSD
Client Matrix: Water
Dilution: 1.0
Analysis Date: 06/15/2016 2216
Prep Date: 06/14/2016 0937
Leach Date: N/A

Analysis Batch: 240-234630
Prep Batch: 240-234408
Leach Batch: N/A

Instrument ID: I9
Lab File ID: I9061516A.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Barium	99	98	75 - 125	1	20		
Aluminum	101	100	75 - 125	1	20		
Cadmium	107	106	75 - 125	1	20		
Chromium	97	96	75 - 125	1	20		
Silver	104	103	75 - 125	1	20		
Arsenic	108	106	75 - 125	2	20		
Beryllium	100	99	75 - 125	1	20		
Lead	99	97	75 - 125	2	20		
Calcium	102	106	75 - 125	1	20		
Selenium	110	108	75 - 125	2	20		
Cobalt	102	100	75 - 125	2	20		
Copper	104	103	75 - 125	1	20		
Iron	103	101	75 - 125	2	20		
Potassium	99	99	75 - 125	0	20		
Magnesium	99	100	75 - 125	1	20		
Manganese	102	102	75 - 125	0	20		
Sodium	97	99	75 - 125	1	20		
Nickel	102	101	75 - 125	2	20		
Antimony	106	104	75 - 125	2	20		
Thallium	101	99	75 - 125	2	20		
Vanadium	102	101	75 - 125	1	20		
Zinc	104	103	75 - 125	2	20		

Method Blank - Batch: 240-234410

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-234410/1-A	Analysis Batch:	240-234773	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0927	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.090	0.20

Lab Control Sample - Batch: 240-234410

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-234410/2-A	Analysis Batch:	240-234773	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0930	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	6.58	132	80 - 120	*

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234410

Method: 7470A
Preparation: 7470A
Dissolved

MS Lab Sample ID:	240-65972-H-1-E MS	Analysis Batch:	240-234773	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0934			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				
Leach Date:	N/A				

MSD Lab Sample ID:	240-65972-H-1-F MSD	Analysis Batch:	240-234773	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-234410	Lab File ID:	0616A16H1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/16/2016 0937			Final Weight/Volume:	50 mL
Prep Date:	06/14/2016 1200				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	113	109	80 - 120	4	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Method Blank - Batch: 240-234688

Method: 9012A
Preparation: 9012A

Lab Sample ID:	MB 240-234688/1-A	Analysis Batch:	240-234693	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234688	Lab File ID:	061516 CN Waters 2.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2016	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/15/2016 1825				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cyanide, Total	ND		0.0050	0.010

Lab Control Sample - Batch: 240-234688

Method: 9012A
Preparation: 9012A

Lab Sample ID:	LCS 240-234688/2-A	Analysis Batch:	240-234693	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234688	Lab File ID:	061516 CN Waters 2.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2046	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/15/2016 1825				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0420	0.0473	113	69 - 118	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234688

Method: 9012A
Preparation: 9012A

MS Lab Sample ID:	240-65937-D-7-B MS	Analysis Batch:	240-234693	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234688	Lab File ID:	061516 CN Waters 2.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2016			Final Weight/Volume:	25 mL
Prep Date:	06/15/2016 1825				
Leach Date:	N/A				

MSD Lab Sample ID:	240-65937-D-7-C MSD	Analysis Batch:	240-234693	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234688	Lab File ID:	061516 CN Waters 2.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/15/2016 2016			Final Weight/Volume:	25 mL
Prep Date:	06/15/2016 1825				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Total	128	120	42 - 140	7	20		

Method Blank - Batch: 240-234923

Method: 9012A
Preparation: 9012A

Lab Sample ID:	MB 240-234923/1-A	Analysis Batch:	240-234984	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234923	Lab File ID:	cn-061716.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/17/2016 1043	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/17/2016 0811				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cyanide, Total	ND		0.0050	0.010

Lab Control Sample - Batch: 240-234923

Method: 9012A
Preparation: 9012A

Lab Sample ID:	LCS 240-234923/2-A	Analysis Batch:	240-234984	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234923	Lab File ID:	cn-061716.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/17/2016 1043	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/17/2016 0811				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0400	0.0362	91	69 - 118	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-234923

Method: 9012A
Preparation: 9012A

MS Lab Sample ID:	240-65891-B-3-B MS	Analysis Batch:	240-234984	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234923	Lab File ID:	cn-061716.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/17/2016 1043			Final Weight/Volume:	25 mL
Prep Date:	06/17/2016 0811				
Leach Date:	N/A				

MSD Lab Sample ID:	240-65891-B-3-C MSD	Analysis Batch:	240-234984	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	240-234923	Lab File ID:	cn-061716.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/17/2016 1043			Final Weight/Volume:	25 mL
Prep Date:	06/17/2016 0811				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Total	87	88	42 - 140	1	20		

Client: ARCADIS U.S., Inc. Job Number: 240-65968-2

Method Reporting Limit Check - Batch: 240-234984

Method: 9012A
Preparation: N/A

Lab Sample ID:	MRL 240-234984/6	Analysis Batch:	240-234984	Instrument ID:	SAURON
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	cn-061716.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2 mL
Analysis Date:	06/17/2016 0925	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0100	0.00912	91	70 - 130	J

2.6/C3.6 2.0/C3.0 1.4/C2.4 2.1/C3.1 3.8/C4.8
1.8/C2.8 2.1/C3.1 2.3/C3.3 0.4/C1.4
1.4/C2.4 1.6/C2.6 0.3/C1.3 0.6/C1.6

Chain of Custody Record

119964

TestAmerica Canton
4101 Shuffel Street, N. W.
North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/10/16	COC No:
Company Name: Arcadis	Tel/Fax: 269-579-5402	Lab Contact: Denise Pohl	Carrier:	1 of 2 COCs
Address: 430 First Avenue North, Ste 720	Analysis Turnaround Time			Sampler: Adam Thompson
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TCAP	☐ 1 week			
Site: St Paul MN	☐ 2 days			Job / SDG No.: 240066638
PO # MN000630.0002	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	SVOCs (8270)	GRO (w/ modified)	DRO (w/ modified)	Cyanide (6010)	PCBs (8082)	TAL metals, dissolved (6010)	Sample Specific Notes:
AMW-15 (20160609)	6/9/16	0850	G	AQ	14	Y	N	3	2	3	2	1	2	1	
DUP-02 (20160609)	6/9/16	—	G	AQ	14	Y	N	3	2	3	2	1	2	1	
AMW-01 (20160610)	6/10/16	0621	G	AQ		Y	N	3	2	3	2	1	2	1	
AMW-06 (20160610)	6/10/16	0553	G	AQ		Y	N	3	1	3	1	1	1	1	Limited Quantity
Trip Blank		—	—	AQ											
Temp Blank	—	—	—	AQ											

240-65968 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ | 2 | 1 | 2 | 2 | 5 | 1 | 4 |

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
4 Coolers Level IV AMW-06 Limited Quantity for PCB, SVOC, DRO

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Arcadis	6/10/16 1300		TA	6-10-16 1300
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TA	6-10-16 1900		TA Can	6/11/16 0930
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton

4101 Shuffel Street, N. W.

North Canton, OH 44720
Phone: 330.497.9396 Fax: 330.497.0772

Chain of Custody Record

119965

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kris Hinskey	Site Contact: Kelly Hoehn	Date: 6/10/16	COC No:
Company Name: Arcadis	Tel/Fax: 269-579-5402	Lab Contact: Denise Pott	Carrier:	2 of 2 COCs
Address: 430 First Avenue North, Ste 720	Analysis Turnaround Time			Sampler: Adam Thompson
City/State/Zip: Minneapolis MN 55401	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-339-9434	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Ford TLAP	☐ 1 week			
Site: St Paul MN	☐ 2 days			Job / SDG No.: 240066638
PO # MN000630.0002	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260)	SVOC (827c)	GRO (w/ Mod)	DRO (w/ Mod)	Cyanide (6010)	PCBs (8082)	TAL Metals, dissolved (6010)	Sample Specific Notes:
AMW-05B (20160609)	6/9/16	1425	G	AQ	12	Y	N	3		3	2	1	2	1	
AMW-22 (20160609)	6/9/16	1542	G	AQ	12	Y	N	3	2	3	2	1		1	
AMW-22B (20160609)	6/9/16	1640	G	AQ	12	Y	N	3	2	3	2	1		1	
AMW-19 (20160609)	6/9/16	1731	G	AQ	12	Y	N	3	2	3	2	1		1	
MW-03 (20160609)	6/9/16	—	G	AQ	12	Y	N	3		3	2	1	2	1	
Trip Blank								X		X					
AMW-07 (20160610)	6/10/16	0730	G	AQ	22	Y	Y	9	6	3	2	1		1	X MS/MSD on VOCs/SVOCs only
AMW-26 (20160610)	6/10/16	1031	G	AQ	12	Y	N	3	2	3	2	1		1	
AMW-21 (20160610)	6/10/16	0933	G	AQ	12	Y	N	3	2	3	2	1		1	
								21	2	2	5	1	4		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Level IV

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Arcadis	6/10/16 1300		TA	6-10-16 1300
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TA	6-10-16		TA Can	6/11/16 0930
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 160568**

Canton Facility

Client Arcadis Site Name _____ Cooler unpacked by: DSO

Cooler Received on 06-11-16 Opened on 06-13-16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box (Client Cooler) Box Other _____

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN# IR-8 (CF +1.3 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #36 (CF +1.0°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity_____ Yes (No)
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No (NA)
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? Yes (No)
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)

If yes, Questions 11-15 have been checked at the originating laboratory.

11. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC559158**
12. Were VOAs on the COC? (Yes) No
13. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #B528304US (Yes) No
15. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

~~Received Sample #20 and was not listed on COC.~~ QLF 6-13-16

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # : 605968**
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	36	2.6	3.6	Ice
		1.8	2.8	
		1.4	2.4	
		2.0	3.0	
		2.1	3.1	
		1.6	2.6	
		1.4	2.4	
		2.3	3.3	
		0.3	1.3	
		2.1	3.1	
		0.4	1.4	
		0.6	1.6	
		3.8	4.8	

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-15 (20160609)	240-65968-G-1	Plastic 250ml - with Sodium Hydro	>12		
AMW-15 (20160609)	240-65968-H-1	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-15 (20160609)	240-65968-M-1	Amber Glass 1 liter - Hydrochloric			
AMW-15 (20160609)	240-65968-N-1	Amber Glass 1 liter - Hydrochloric			
DUP-02 (20160609)	240-65968-G-2	Plastic 250ml - with Sodium Hydro	>12		
DUP-02 (20160609)	240-65968-H-2	Plastic 500ml - w/ Nitric - Dis.	<2		
DUP-02 (20160609)	240-65968-M-2	Amber Glass 1 liter - Hydrochloric			
DUP-02 (20160609)	240-65968-N-2	Amber Glass 1 liter - Hydrochloric			
AMW-01 (20160609)	240-65968-G-3	Plastic 250ml - with Sodium Hydro	>12		
AMW-01 (20160609)	240-65968-H-3	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-01 (20160609)	240-65968-M-3	Amber Glass 1 liter - Hydrochloric			
AMW-01 (20160609)	240-65968-N-3	Amber Glass 1 liter - Hydrochloric			
AMW-06 (20160609)	240-65968-G-4	Plastic 250ml - with Sodium Hydro	>12		
AMW-06 (20160609)	240-65968-H-4	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-06 (20160609)	240-65968-K-4	Amber Glass 1 liter - Hydrochloric			
AMW-05B (20160609)	240-65968-G-6	Plastic 250ml - with Sodium Hydro	>12		
AMW-05B (20160609)	240-65968-H-6	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-05B (20160609)	240-65968-K-6	Amber Glass 1 liter - Hydrochloric			
AMW-05B (20160609)	240-65968-L-6	Amber Glass 1 liter - Hydrochloric			
AMW-22 (20160609)	240-65968-G-7	Plastic 250ml - with Sodium Hydro	>12		
AMW-22 (20160609)	240-65968-H-7	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-22 (20160609)	240-65968-K-7	Amber Glass 1 liter - Hydrochloric			
AMW-22 (20160609)	240-65968-L-7	Amber Glass 1 liter - Hydrochloric			
AMW-22B (20160609)	240-65968-G-8	Plastic 250ml - with Sodium Hydro	>12		
AMW-22B (20160609)	240-65968-H-8	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-22B (20160609)	240-65968-K-8	Amber Glass 1 liter - Hydrochloric			
AMW-22B (20160609)	240-65968-L-8	Amber Glass 1 liter - Hydrochloric			
AMW-19 (20160609)	240-65968-G-9	Plastic 250ml - with Sodium Hydro	>12		
AMW-19 (20160609)	240-65968-H-9	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-19 (20160609)	240-65968-K-9	Amber Glass 1 liter - Hydrochloric			
AMW-19 (20160609)	240-65968-L-9	Amber Glass 1 liter - Hydrochloric			
DUP-03 (20160609)	240-65968-G-10	Plastic 250ml - with Sodium Hydro	>12		
DUP-03 (20160609)	240-65968-H-10	Plastic 500ml - w/ Nitric - Dis.	<2		
DUP-03 (20160609)	240-65968-K-10	Amber Glass 1 liter - Hydrochloric			
DUP-03 (20160609)	240-65968-L-10	Amber Glass 1 liter - Hydrochloric			
AMW-07 (20160610)	240-65968-M-12	Plastic 250ml - with Sodium Hydro	>12		
AMW-07 (20160610)	240-65968-N-12	Plastic 500ml - w/ Nitric - Dis.	<2		

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AMW-07 (20160610)	240-65968-U-12	Amber Glass 1 liter - Hydrochloric			
AMW-07 (20160610)	240-65968-V-12	Amber Glass 1 liter - Hydrochloric			
AMW-26 (20160610)	240-65968-G-13	Plastic 250ml - with Sodium Hydro	>12		
AMW-26 (20160610)	240-65968-H-13	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-26 (20160610)	240-65968-K-13	Amber Glass 1 liter - Hydrochloric			
AMW-26 (20160610)	240-65968-L-13	Amber Glass 1 liter - Hydrochloric			
AMW-21 (20160610)	240-65968-G-14	Plastic 250ml - with Sodium Hydro	>12		
AMW-21 (20160610)	240-65968-H-14	Plastic 500ml - w/ Nitric - Dis.	<2		
AMW-21 (20160610)	240-65968-K-14	Amber Glass 1 liter - Hydrochloric			
AMW-21 (20160610)	240-65968-L-14	Amber Glass 1 liter - Hydrochloric			

June 29, 2016

Kris Hinskey
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000630.0002
Client project scope reference: Sample COC only was used to define project analytical requirements.
Laboratory: TestAmerica - North Canton
Laboratory submittal: 65968-2
Sample date: 2016-06-09 2016-06-10
Report received by CADENA: 2016-06-27
Initial Data Verification completed by CADENA: 2016-06-29

The following minor QC exceptions or missing information were noted:

MSD - GCMS VOC sample -012 MS and MSD recovery outliers or one recovery along with the MS/MSD RPD were outliers with the recovery biased low for the following analytes: 1,1-DICHLOROPROPENE, N-BUTYLBENZENE, SEC-BUTYLBENZENE. Client sample results for these analytes should be considered to be estimated and qualified with a J flag if detected and UJ flags if non-detect.

MSD - GCMS SVOC sample -012 MS and MSD recovery outliers or one recovery along with the MS/MSD RPD were outliers with the recovery biased low for the following analytes: CAPROLACTAM. Client sample results for these analytes should be considered to be estimated and qualified with a J flag if detected and UJ flags if non-detect.

MBK - WI-GRO QC batch 234587 method blanks had detections below the RL. The following client sample results should be considered to be non-detect at the RL and qualified with UB flags: WI-GRO - samples -006, -007, -008, -009, -013.

SUR - PCB surrogates recovered less than 10% or did not recover in samples -006RE-ANALYSIS, METHOD BLANK for QC BATCH 234344. Associated client sample non-detect results are considered to be unusable and have been qualified with R flags. Detected analyte results are considered to be estimated and qualified with J flags. Original run results for client sample -006 were considered to be the usable data in place of these unusable results.

METALS QC batch 234410 and GCMS VOC QC batch 235316 LCS recoveries were outliers biased high for the following analytes: MERCURY, BROMOMETHANE, BROMOFORM, TRICHLOROFLUOROMETHANE. Associated client sample results were non-detect so qualification was not required based on these high bias QC outliers.

WI-GRO and WI-DRO sample and QC results did not include surrogate recovery data.

PCB QC batch 234344 and 234897 and WI-GRO QC batch 234342 did not include MS/MSD recovery data due to insufficient sample volume available for spiking according to the laboratory submittal case narrative.

HTQ - PCB sample -006RE-ANALYSIS and -010RE-ANALYSIS were analyzed outside of referenced holding time so all associated results should be considered to be estimated and qualified with J flags if detected and UJ flags if non-detect. NOTE: Sample -006 re-analysis also had surrogate recoveries below 10% so these results were considered to be unusable.

GCMS VOC sample -012 MS or MSD recoveries but not both or RPD only were outliers for 2-CHLOROTOLUENE, 4-CHLOROTOLUENE, BROMOFORM, HEXACHLOROBUTADIENE so client sample results were not qualified based on these QC outliers alone.

PCB QC batch CCV response outliers as noted in the laboratory submittal case narrative were not used to qualify client sample results as part of this level 2 data package verification review.

METALS QC batch 234408 method blanks had detections below the RL for the following analytes: SODIUM. Qualification of client sample results was not required based on these method blank detections.

GCMS VOC/WI-GRO TRIP blanks had detections below the RL for the following analytes: WI-GRO. Qualification of client sample results was not required based on these TRIP blank detections. NOTE: Sample dilution factors are not included when assigning qualification based on trip blank detections.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

8 Water sample(s) were analyzed for GCMS VOC, GCMS SVOC, PCB, GC VOC, GC Other, Metals and General Chemistry parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JB	NON-DETECT AT THE CONCENTRATION REPORTED AND ESTIMATED
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
JUB	NON-DETECT AT THE REPORTING LIMIT AND ESTIMATED
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: 65968-2

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Semivolatiles by GCMS	Polychlorinated Biphenyls by GCECD	Wisconsin GRO Method	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)	Total & Amenable Cyanides
2406596810	DUP-03 (20160609)	6/9/2016	12:00:00	X		X	X	X	X	X	X
2406596811	TRIP BLANK	6/9/2016	12:00:00	X			X				
2406596812	AMW-07 (20160610)	6/10/2016	7:30:00	X	X		X	X	X	X	X
2406596813	AMW-26 (20160610)	6/10/2016	10:31:00	X	X		X	X	X	X	X
2406596814	AMW-21 (20160610)	6/10/2016	9:33:00	X	X		X	X	X	X	X
240659686	AMW-05B (20160609)	6/9/2016	2:25:00	X		X	X	X	X	X	X
240659687	AMW-22 (20160609)	6/9/2016	3:42:00	X	X		X	X	X	X	X
240659688	AMW-22B (20160609)	6/9/2016	4:40:00	X	X		X	X	X	X	X
240659689	AMW-19 (20160609)	6/9/2016	5:31:00	X	X		X	X	X	X	X

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65968-2

		Sample Name:	AMW-07 (20160610)				AMW-26 (20160610)				AMW-05B (20160609)				AMW-22 (20160609)				AMW-22B (20160609)				AMW-19 (20160609)			
		Lab Sample ID:	2406596812				2406596813				240659686				240659687				240659688				240659689			
		Sample Date:	6/10/2016				6/10/2016				6/9/2016				6/9/2016				6/9/2016				6/9/2016			
Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																										
OSW-8260B																										
1,1-Dichloropropene	563-58-6		ND	1.0	ug/l	UJ																				
n-Butylbenzene	104-51-8		ND	1.0	ug/l	UJ																				
sec-Butylbenzene	135-98-8		ND	1.0	ug/l	UJ																				
GC/MS SVOC																										
OSW-8270C																										
Caprolactam	105-60-2		0.37	4.9	ug/l	J																				
GC VOC																										
PUBL-SW-140																										
WI Gasoline Range Organics (C6-C10)	E-1005						38	100	ug/l	UB	34	100	ug/l	UB	87	100	ug/l	UB	45	100	ug/l	UB	36	100	ug/l	UB

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65968-2

		Sample Name:	DUP-03 (20160609)				TRIP BLANK				AMW-07 (20160610)				AMW-26 (20160610)			
		Lab Sample ID:	2406596810				2406596811				2406596812				2406596813			
		Sample Date:	6/9/2016				6/9/2016				6/10/2016				6/10/2016			
				Report		Valid		Report		Valid		Report		Valid		Report		Valid
Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
GC/MS VOC																	
OSW-8260B																	
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	UJ	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	5.0	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Acetone	67-64-1	1.0	10	ug/l	J	ND	10	ug/l	---	ND	10	ug/l	---	2.4	10	ug/l	J
Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	1.9	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	1.5	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	1.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	1.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	0.39	1.0	ug/l	J
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	2.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	UJ	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	2.1	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	UJ	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	0.79	1.0	ug/l	J	ND	1.0	ug/l	---	1.9	1.0	ug/l	---	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65968-2

		Sample Name:	DUP-03 (20160609)				TRIP BLANK				AMW-07 (20160610)				AMW-26 (20160610)			
		Lab Sample ID:	2406596810				2406596811				2406596812				2406596813			
		Sample Date:	6/9/2016				6/9/2016				6/10/2016				6/10/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC																		
OSW-8270C																		
	1,1'-Biphenyl	92-52-4									ND	0.97	ug/l	---	0.38	0.96	ug/l	J
	2,2'-oxybis[1-chloropropane]	108-60-1									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	2,4,5-Trichlorophenol	95-95-4									ND	4.9	ug/l	---	ND	4.8	ug/l	---
	2,4,6-Trichlorophenol	88-06-2									ND	4.9	ug/l	---	ND	4.8	ug/l	---
	2,4-Dichlorophenol	120-83-2									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	2,4-Dimethylphenol	105-67-9									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	2,4-Dinitrophenol	51-28-5									ND	4.9	ug/l	---	ND	4.8	ug/l	---
	2,4-Dinitrotoluene	121-14-2									ND	4.9	ug/l	---	ND	4.8	ug/l	---
	2,6-Dinitrotoluene	606-20-2									ND	4.9	ug/l	---	ND	4.8	ug/l	---
	2-Chloronaphthalene	91-58-7									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	2-Chlorophenol	95-57-8									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	2-Methylnaphthalene	91-57-6									ND	0.19	ug/l	---	0.36	0.19	ug/l	---
	2-Methylphenol	95-48-7									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	2-Nitroaniline	88-74-4									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	2-Nitrophenol	88-75-5									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	3 & 4 Methylphenol	65794-96-9									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	3,3'-Dichlorobenzidine	91-94-1									ND	4.9	ug/l	---	ND	4.8	ug/l	---
	3-Nitroaniline	99-09-2									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4,6-Dinitro-2-methylphenol	534-52-1									ND	4.9	ug/l	---	ND	4.8	ug/l	---
	4-Bromophenyl phenyl ether	101-55-3									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4-Chloro-3-methylphenol	59-50-7									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4-Chloroaniline	106-47-8									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4-Chlorophenyl phenyl ether	7005-72-3									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4-Nitroaniline	100-01-6									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	4-Nitrophenol	100-02-7									ND	4.9	ug/l	---	ND	4.8	ug/l	---
	Acenaphthene	83-32-9									ND	0.19	ug/l	---	1.8	0.19	ug/l	---
	Acenaphthylene	208-96-8									ND	0.19	ug/l	---	0.21	0.19	ug/l	---
	Acetophenone	98-86-2									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	Anthracene	120-12-7									0.20	0.19	ug/l	---	1.3	0.19	ug/l	---
	Atrazine	1912-24-9									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	Benzaldehyde	100-52-7									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	Benzo[a]anthracene	56-55-3									1.1	0.19	ug/l	---	1.6	0.19	ug/l	---
	Benzo[a]pyrene	50-32-8									0.99	0.19	ug/l	---	1.4	0.19	ug/l	---
	Benzo[b]fluoranthene	205-99-2									1.2	0.19	ug/l	---	2.0	0.19	ug/l	---
	Benzo[g,h,i]perylene	191-24-2									0.68	0.19	ug/l	---	0.91	0.19	ug/l	---
	Benzo[k]fluoranthene	207-08-9									0.58	0.19	ug/l	---	0.51	0.19	ug/l	---
	Bis(2-chloroethoxy)methane	111-91-1									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	Bis(2-chloroethyl)ether	111-44-4									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	Bis(2-ethylhexyl) phthalate	117-81-7									ND	4.9	ug/l	---	2.3	4.8	ug/l	J
	Butyl benzyl phthalate	85-68-7									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	Caprolactam	105-60-2									0.37	4.9	ug/l	J	ND	4.8	ug/l	---
	Carbazole	86-74-8									ND	0.97	ug/l	---	1.5	0.96	ug/l	---
	Chrysene	218-01-9									1.2	0.19	ug/l	---	1.5	0.19	ug/l	---
	Di-n-butyl phthalate	84-74-2									ND	4.9	ug/l	---	ND	4.8	ug/l	---
	Di-n-octyl phthalate	117-84-0									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	Dibenz(a,h)anthracene	53-70-3									ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Dibenzofuran	132-64-9									ND	0.97	ug/l	---	1.4	0.96	ug/l	---
	Diethyl phthalate	84-66-2									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	Dimethyl phthalate	131-11-3									ND	1.9	ug/l	---	ND	1.9	ug/l	---
	Fluoranthene	206-44-0									1.8	0.19	ug/l	---	4.1	0.19	ug/l	---
	Fluorene	86-73-7									ND	0.19	ug/l	---	2.3	0.19	ug/l	---
	Hexachlorobenzene	118-74-1									ND	0.19	ug/l	---	ND	0.19	ug/l	---
	Hexachlorobutadiene	87-68-3									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	Hexachlorocyclopentadiene	77-47-4									ND	9.7	ug/l	---	ND	9.6	ug/l	---
	Hexachloroethane	67-72-1									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	Indeno[1,2,3-cd]pyrene	193-39-5									0.52	0.19	ug/l	---	0.75	0.19	ug/l	---
	Isophorone	78-59-1									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	N-Nitrosodi-n-propylamine	621-64-7									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	N-Nitrosodiphenylamine	86-30-6									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	Naphthalene	91-20-3									ND	0.19	ug/l	---	1.3	0.19	ug/l	---
	Nitrobenzene	98-95-3									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	Pentachlorophenol	87-86-5									ND	4.9	ug/l	---	ND	4.8	ug/l	---
	Phenanthrene	85-01-8									0.84	0.19	ug/l	---	5.2	0.19	ug/l	---
	Phenol	108-95-2									ND	0.97	ug/l	---	ND	0.96	ug/l	---
	Pyrene	129-00-0									2.4	0.19	ug/l	---	3.6	0.19	ug/l	---
Pest & PCB																		
OSW-8082																		
	Aroclor-1016	12674-11-2	ND	0.20	ug/l	---												
	Aroclor-1221	11104-28-2	ND	0.20	ug/l	---												
	Aroclor-1232	11141-16-5	ND	0.20	ug/l	---												
	Aroclor-1242	53469-21-9	ND	0.20	ug/l	---												
	Aroclor-1248	12672-29-6	ND	0.20	ug/l	---												
	Aroclor-1254	11097-69-1	ND	0.20	ug/l	---												
	Aroclor-1260	11096-82-5	ND	0.20	ug/l	---												

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65968-2

		Sample Name:	DUP-03 (20160609)				TRIP BLANK				AMW-07 (20160610)				AMW-26 (20160610)			
		Lab Sample ID:	2406596810				2406596811				2406596812				2406596813			
		Sample Date:	6/9/2016				6/9/2016				6/10/2016				6/10/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC																		
	PUBL-SW-140																	
	WI Gasoline Range Organics (C6-C10)	E-1005	ND	100	ug/l	---	26	100	ug/l	J	ND	100	ug/l	---	38	100	ug/l	UB
GC Other																		
	PUBL-SW-141																	
	WI Diesel Range Organics (C10-C28)	E-1004	0.13	0.095	mg/l	---					ND	0.095	mg/l	---	0.41	0.10	mg/l	---
Metals																		
	OSW-6010B																	
	Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---					340	200	ug/l	---	ND	200	ug/l	---
	Antimony - Dissolved	7440-36-0	ND	10	ug/l	---					ND	10	ug/l	---	ND	10	ug/l	---
	Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---					ND	10	ug/l	---	12	10	ug/l	---
	Barium - Dissolved	7440-39-3	56	200	ug/l	J					13	200	ug/l	J	200	200	ug/l	---
	Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---					0.91	5.0	ug/l	J	ND	5.0	ug/l	---
	Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---					ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Calcium - Dissolved	7440-70-2	140000	5000	ug/l	---					79000	5000	ug/l	---	150000	5000	ug/l	---
	Chromium - Dissolved	7440-47-3	1.3	10	ug/l	J					2.3	10	ug/l	J	1.6	10	ug/l	J
	Cobalt - Dissolved	7440-48-4	6.5	7.0	ug/l	J					11	7.0	ug/l	---	1.1	7.0	ug/l	J
	Copper - Dissolved	7440-50-8	ND	25	ug/l	---					ND	25	ug/l	---	ND	25	ug/l	---
	Iron - Dissolved	7439-89-6	7100	100	ug/l	---					46	100	ug/l	J	7600	100	ug/l	---
	Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---					ND	3.0	ug/l	---	ND	3.0	ug/l	---
	Magnesium - Dissolved	7439-95-4	44000	5000	ug/l	---					28000	5000	ug/l	---	41000	5000	ug/l	---
	Manganese - Dissolved	7439-96-5	190	15	ug/l	---					69	15	ug/l	---	2000	15	ug/l	---
	Nickel - Dissolved	7440-02-0	7.9	40	ug/l	J					40	40	ug/l	---	3.0	40	ug/l	J
	Potassium - Dissolved	7440-09-7	3600	5000	ug/l	J					3700	5000	ug/l	J	5900	5000	ug/l	---
	Selenium - Dissolved	7782-49-2	ND	15	ug/l	---					ND	15	ug/l	---	ND	15	ug/l	---
	Silver - Dissolved	7440-22-4	ND	10	ug/l	---					ND	10	ug/l	---	ND	10	ug/l	---
	Sodium - Dissolved	7440-23-5	39000	5000	ug/l	---					12000	5000	ug/l	---	45000	5000	ug/l	---
	Thallium - Dissolved	7440-28-0	ND	10	ug/l	---					ND	10	ug/l	---	7.8	10	ug/l	J
	Vanadium - Dissolved	7440-62-2	ND	10	ug/l	---					ND	10	ug/l	---	ND	10	ug/l	---
	Zinc - Dissolved	7440-66-6	ND	50	ug/l	---					97	50	ug/l	---	ND	50	ug/l	---
	OSW-7470A																	
	Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---					ND	0.20	ug/l	---	ND	0.20	ug/l	---
General Chemistry																		
	OSW-9012A																	
	Cyanide, Total	57-12-5	ND	0.010	mg/l	---					ND	0.010	mg/l	---	ND	0.010	mg/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65968-2

		Sample Name:	AMW-21 (20160610)				AMW-05B (20160609)				AMW-22 (20160609)				AMW-22B (20160609)			
		Lab Sample ID:	2406596814				240659686				240659687				240659688			
		Sample Date:	6/10/2016				6/9/2016				6/9/2016				6/9/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																		
OSW-8260B																		
	1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Butanone (MEK)	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Acetone	67-64-1	2.6	10	ug/l	J	ND	10	ug/l	---	1.6	10	ug/l	J	1.2	10	ug/l	J
	Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Carbon disulfide	75-15-0	0.56	1.0	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,2-Dichloroethene	156-59-2	0.27	1.0	ug/l	J	ND	1.0	ug/l	---	0.95	1.0	ug/l	J	0.82	1.0	ug/l	J
	cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Ethyl ether	60-29-7	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	N-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Trichloroethene	79-01-6	ND	1.0	ug/l	---	0.91	1.0	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65968-2

		Sample Name:	AMW-21 (20160610)				AMW-05B (20160609)				AMW-22 (20160609)				AMW-22B (20160609)			
		Lab Sample ID:	2406596814				240659686				240659687				240659688			
		Sample Date:	6/10/2016				6/9/2016				6/9/2016				6/9/2016			
				Report		Valid		Report		Valid		Report		Valid		Report		Valid
Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
GC/MS SVOC																	
OSW-8270C																	
1,1'-Biphenyl	92-52-4	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
2,4,5-Trichlorophenol	95-95-4	ND	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4,6-Trichlorophenol	88-06-2	ND	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4-Dichlorophenol	120-83-2	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
2,4-Dimethylphenol	105-67-9	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
2,4-Dinitrophenol	51-28-5	ND	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,4-Dinitrotoluene	121-14-2	ND	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
2,6-Dinitrotoluene	606-20-2	ND	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
2-Chloronaphthalene	91-58-7	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
2-Chlorophenol	95-57-8	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
2-Methylnaphthalene	91-57-6	ND	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
2-Methylphenol	95-48-7	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
2-Nitroaniline	88-74-4	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
2-Nitrophenol	88-75-5	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
3 & 4 Methylphenol	65794-96-9	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
3,3'-Dichlorobenzidine	91-94-1	ND	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
3-Nitroaniline	99-09-2	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
4-Bromophenyl phenyl ether	101-55-3	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Chloro-3-methylphenol	59-50-7	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Chloroaniline	106-47-8	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Nitroaniline	100-01-6	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
4-Nitrophenol	100-02-7	ND	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
Acenaphthene	83-32-9	ND	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Acenaphthylene	208-96-8	ND	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Acetophenone	98-86-2	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Anthracene	120-12-7	0.25	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Atrazine	1912-24-9	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Benzaldehyde	100-52-7	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Benzo[a]anthracene	56-55-3	0.71	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[a]pyrene	50-32-8	0.51	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[b]fluoranthene	205-99-2	0.68	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[g,h,i]perylene	191-24-2	0.40	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Benzo[k]fluoranthene	207-08-9	0.36	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Bis(2-chloroethoxy)methane	111-91-1	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Bis(2-chloroethyl)ether	111-44-4	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Bis(2-ethylhexyl) phthalate	117-81-7	6.0	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
Butyl benzyl phthalate	85-68-7	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
Caprolactam	105-60-2	ND	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
Carbazole	86-74-8	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Chrysene	218-01-9	0.70	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Di-n-butyl phthalate	84-74-2	ND	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
Di-n-octyl phthalate	117-84-0	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
Dibenz(a,h)anthracene	53-70-3	ND	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Dibenzofuran	132-64-9	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Diethyl phthalate	84-66-2	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
Dimethyl phthalate	131-11-3	ND	1.9	ug/l	---					ND	1.9	ug/l	---	ND	1.9	ug/l	---
Fluoranthene	206-44-0	1.2	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Fluorene	86-73-7	0.12	0.19	ug/l	J					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Hexachlorobenzene	118-74-1	ND	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Hexachlorobutadiene	87-68-3	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Hexachlorocyclopentadiene	77-47-4	ND	9.6	ug/l	---					ND	9.5	ug/l	---	ND	9.5	ug/l	---
Hexachloroethane	67-72-1	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Indeno[1,2,3-cd]pyrene	193-39-5	0.32	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Isophorone	78-59-1	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
N-Nitrosodi-n-propylamine	621-64-7	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
N-Nitrosodiphenylamine	86-30-6	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Naphthalene	91-20-3	ND	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Nitrobenzene	98-95-3	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Pentachlorophenol	87-86-5	ND	4.8	ug/l	---					ND	4.8	ug/l	---	ND	4.8	ug/l	---
Phenanthrene	85-01-8	0.68	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Phenol	108-95-2	ND	0.96	ug/l	---					ND	0.95	ug/l	---	ND	0.95	ug/l	---
Pyrene	129-00-0	1.4	0.19	ug/l	---					ND	0.19	ug/l	---	ND	0.19	ug/l	---
Pest & PCB																	
OSW-8082																	
Aroclor-1016	12674-11-2					ND	0.19	ug/l	---								
Aroclor-1221	11104-28-2					ND	0.19	ug/l	---								
Aroclor-1232	11141-16-5					ND	0.19	ug/l	---								
Aroclor-1242	53469-21-9					ND	0.19	ug/l	---								
Aroclor-1248	12672-29-6					ND	0.19	ug/l	---								
Aroclor-1254	11097-69-1					ND	0.19	ug/l	---								
Aroclor-1260	11096-82-5					ND	0.19	ug/l	---								

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65968-2

			Sample Name:	AMW-21 (20160610)				AMW-05B (20160609)				AMW-22 (20160609)				AMW-22B (20160609)			
			Lab Sample ID:	2406596814				240659686				240659687				240659688			
			Sample Date:	6/10/2016				6/9/2016				6/9/2016				6/9/2016			
	Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC																			
	PUBL-SW-140																		
	WI Gasoline Range Organics (C6-C10)	E-1005		ND	100	ug/l	---	34	100	ug/l	UB	87	100	ug/l	UB	45	100	ug/l	UB
GC Other																			
	PUBL-SW-141																		
	WI Diesel Range Organics (C10-C28)	E-1004		0.72	0.10	mg/l	---	0.18	0.095	mg/l	---	ND	0.095	mg/l	---	0.048	0.095	mg/l	J
Metals																			
	OSW-6010B																		
	Aluminum - Dissolved	7429-90-5		ND	200	ug/l	---	ND	200	ug/l	---	ND	200	ug/l	---	ND	200	ug/l	---
	Antimony - Dissolved	7440-36-0		ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Arsenic - Dissolved	7440-38-2		5.1	10	ug/l	J	ND	10	ug/l	---	9.7	10	ug/l	J	ND	10	ug/l	---
	Barium - Dissolved	7440-39-3		36	200	ug/l	J	55	200	ug/l	J	180	200	ug/l	J	160	200	ug/l	J
	Beryllium - Dissolved	7440-41-7		ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Cadmium - Dissolved	7440-43-9		ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Calcium - Dissolved	7440-70-2		140000	5000	ug/l	---	140000	5000	ug/l	---	140000	5000	ug/l	---	74000	5000	ug/l	---
	Chromium - Dissolved	7440-47-3		1.6	10	ug/l	J	1.2	10	ug/l	J	1.0	10	ug/l	J	1.1	10	ug/l	J
	Cobalt - Dissolved	7440-48-4		1.3	7.0	ug/l	J	6.5	7.0	ug/l	J	1.2	7.0	ug/l	J	ND	7.0	ug/l	---
	Copper - Dissolved	7440-50-8		ND	25	ug/l	---	ND	25	ug/l	---	ND	25	ug/l	---	ND	25	ug/l	---
	Iron - Dissolved	7439-89-6		40	100	ug/l	J	7100	100	ug/l	---	8300	100	ug/l	---	3400	100	ug/l	---
	Lead - Dissolved	7439-92-1		ND	3.0	ug/l	---	ND	3.0	ug/l	---	ND	3.0	ug/l	---	ND	3.0	ug/l	---
	Magnesium - Dissolved	7439-95-4		40000	5000	ug/l	---	44000	5000	ug/l	---	38000	5000	ug/l	---	29000	5000	ug/l	---
	Manganese - Dissolved	7439-96-5		1700	15	ug/l	---	200	15	ug/l	---	1900	15	ug/l	---	140	15	ug/l	---
	Nickel - Dissolved	7440-02-0		3.3	40	ug/l	J	10	40	ug/l	J	ND	40	ug/l	---	ND	40	ug/l	---
	Potassium - Dissolved	7440-09-7		4500	5000	ug/l	J	3600	5000	ug/l	J	4000	5000	ug/l	J	2600	5000	ug/l	J
	Selenium - Dissolved	7782-49-2		ND	15	ug/l	---	ND	15	ug/l	---	ND	15	ug/l	---	ND	15	ug/l	---
	Silver - Dissolved	7440-22-4		ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Sodium - Dissolved	7440-23-5		28000	5000	ug/l	---	39000	5000	ug/l	---	31000	5000	ug/l	---	6100	5000	ug/l	---
	Thallium - Dissolved	7440-28-0		6.4	10	ug/l	J	ND	10	ug/l	---	8.8	10	ug/l	J	ND	10	ug/l	---
	Vanadium - Dissolved	7440-62-2		ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Zinc - Dissolved	7440-66-6		ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---
	OSW-7470A																		
	Mercury - Dissolved	7439-97-6		ND	0.20	ug/l	---	ND	0.20	ug/l	---	ND	0.20	ug/l	---	ND	0.20	ug/l	---
General Chemistry																			
	OSW-9012A																		
	Cyanide, Total	57-12-5		ND	0.010	mg/l	---	ND	0.010	mg/l	---	0.015	0.010	mg/l	---	ND	0.010	mg/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65968-2

Sample Name: AMW-19 (20160609)
Lab Sample ID: 240659689
Sample Date: 6/9/2016

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC					
OSW-8260B					
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---
1,2-Dibromo-3-Chloropropane	96-12-8	ND	2.0	ug/l	---
1,2-Dibromoethane	106-93-4	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	10	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---
2-Hexanone	591-78-6	ND	10	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	10	ug/l	---
Acetone	67-64-1	1.5	10	ug/l	J
Allyl chloride	107-05-1	ND	2.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	1.0	ug/l	---
Bromomethane	74-83-9	ND	1.0	ug/l	---
Carbon disulfide	75-15-0	ND	1.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---
Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---
Chloroform	67-66-3	ND	1.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---
Cyclohexane	110-82-7	ND	1.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	2.0	ug/l	---
Ethyl ether	60-29-7	ND	2.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---
Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---
Isopropylbenzene	98-82-8	ND	1.0	ug/l	---
m-Xylene & p-Xylene	179601-23-1	ND	2.0	ug/l	---
Methyl acetate	79-20-9	ND	10	ug/l	---
Methyl tert butyl ether	1634-04-4	ND	1.0	ug/l	---
Methylcyclohexane	108-87-2	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---
N-Propylbenzene	103-65-1	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	1.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65968-2

Sample Name: AMW-19 (20160609)
Lab Sample ID: 240659689
Sample Date: 6/9/2016

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC					
OSW-8270C					
1,1'-Biphenyl	92-52-4	ND	0.95	ug/l	---
2,2'-oxybis[1-chloropropane]	108-60-1	ND	0.95	ug/l	---
2,4,5-Trichlorophenol	95-95-4	ND	4.8	ug/l	---
2,4,6-Trichlorophenol	88-06-2	ND	4.8	ug/l	---
2,4-Dichlorophenol	120-83-2	ND	1.9	ug/l	---
2,4-Dimethylphenol	105-67-9	ND	1.9	ug/l	---
2,4-Dinitrophenol	51-28-5	ND	4.8	ug/l	---
2,4-Dinitrotoluene	121-14-2	ND	4.8	ug/l	---
2,6-Dinitrotoluene	606-20-2	ND	4.8	ug/l	---
2-Chloronaphthalene	91-58-7	ND	0.95	ug/l	---
2-Chlorophenol	95-57-8	ND	0.95	ug/l	---
2-Methylnaphthalene	91-57-6	ND	0.19	ug/l	---
2-Methylphenol	95-48-7	ND	0.95	ug/l	---
2-Nitroaniline	88-74-4	ND	1.9	ug/l	---
2-Nitrophenol	88-75-5	ND	1.9	ug/l	---
3 & 4 Methylphenol	65794-96-9	ND	1.9	ug/l	---
3,3'-Dichlorobenzidine	91-94-1	ND	4.8	ug/l	---
3-Nitroaniline	99-09-2	ND	1.9	ug/l	---
4,6-Dinitro-2-methylphenol	534-52-1	ND	4.8	ug/l	---
4-Bromophenyl phenyl ether	101-55-3	ND	1.9	ug/l	---
4-Chloro-3-methylphenol	59-50-7	ND	1.9	ug/l	---
4-Chloroaniline	106-47-8	ND	1.9	ug/l	---
4-Chlorophenyl phenyl ether	7005-72-3	ND	1.9	ug/l	---
4-Nitroaniline	100-01-6	ND	1.9	ug/l	---
4-Nitrophenol	100-02-7	ND	4.8	ug/l	---
Acenaphthene	83-32-9	ND	0.19	ug/l	---
Acenaphthylene	208-96-8	ND	0.19	ug/l	---
Acetophenone	98-86-2	ND	0.95	ug/l	---
Anthracene	120-12-7	ND	0.19	ug/l	---
Atrazine	1912-24-9	ND	0.95	ug/l	---
Benzaldehyde	100-52-7	ND	0.95	ug/l	---
Benzo[a]anthracene	56-55-3	ND	0.19	ug/l	---
Benzo[a]pyrene	50-32-8	ND	0.19	ug/l	---
Benzo[b]fluoranthene	205-99-2	ND	0.19	ug/l	---
Benzo[g,h,i]perylene	191-24-2	ND	0.19	ug/l	---
Benzo[k]fluoranthene	207-08-9	ND	0.19	ug/l	---
Bis(2-chloroethoxy)methane	111-91-1	ND	0.95	ug/l	---
Bis(2-chloroethyl)ether	111-44-4	ND	0.95	ug/l	---
Bis(2-ethylhexyl) phthalate	117-81-7	ND	4.8	ug/l	---
Butyl benzyl phthalate	85-68-7	ND	1.9	ug/l	---
Caprolactam	105-60-2	ND	4.8	ug/l	---
Carbazole	86-74-8	ND	0.95	ug/l	---
Chrysene	218-01-9	ND	0.19	ug/l	---
Di-n-butyl phthalate	84-74-2	ND	4.8	ug/l	---
Di-n-octyl phthalate	117-84-0	ND	1.9	ug/l	---
Dibenz(a,h)anthracene	53-70-3	ND	0.19	ug/l	---
Dibenzofuran	132-64-9	ND	0.95	ug/l	---
Diethyl phthalate	84-66-2	ND	1.9	ug/l	---
Dimethyl phthalate	131-11-3	ND	1.9	ug/l	---
Fluoranthene	206-44-0	ND	0.19	ug/l	---
Fluorene	86-73-7	ND	0.19	ug/l	---
Hexachlorobenzene	118-74-1	ND	0.19	ug/l	---
Hexachlorobutadiene	87-68-3	ND	0.95	ug/l	---
Hexachlorocyclopentadiene	77-47-4	ND	9.5	ug/l	---
Hexachloroethane	67-72-1	ND	0.95	ug/l	---
Indeno[1,2,3-cd]pyrene	193-39-5	ND	0.19	ug/l	---
Isophorone	78-59-1	ND	0.95	ug/l	---
N-Nitrosodi-n-propylamine	621-64-7	ND	0.95	ug/l	---
N-Nitrosodiphenylamine	86-30-6	ND	0.95	ug/l	---
Naphthalene	91-20-3	ND	0.19	ug/l	---
Nitrobenzene	98-95-3	ND	0.95	ug/l	---
Pentachlorophenol	87-86-5	ND	4.8	ug/l	---
Phenanthrene	85-01-8	ND	0.19	ug/l	---
Phenol	108-95-2	ND	0.95	ug/l	---
Pyrene	129-00-0	ND	0.19	ug/l	---
Pest & PCB					
OSW-8082					
Aroclor-1016	12674-11-2				
Aroclor-1221	11104-28-2				
Aroclor-1232	11141-16-5				
Aroclor-1242	53469-21-9				
Aroclor-1248	12672-29-6				
Aroclor-1254	11097-69-1				
Aroclor-1260	11096-82-5				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: 65968-2

Sample Name: AMW-19 (20160609)
Lab Sample ID: 240659689
Sample Date: 6/9/2016

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC VOC					
PUBL-SW-140					
WI Gasoline Range Organics (C6-C10)	E-1005	36	100	ug/l	UB
GC Other					
PUBL-SW-141					
WI Diesel Range Organics (C10-C28)	E-1004	ND	0.095	mg/l	---
Metals					
OSW-6010B					
Aluminum - Dissolved	7429-90-5	ND	200	ug/l	---
Antimony - Dissolved	7440-36-0	ND	10	ug/l	---
Arsenic - Dissolved	7440-38-2	ND	10	ug/l	---
Barium - Dissolved	7440-39-3	120	200	ug/l	J
Beryllium - Dissolved	7440-41-7	ND	5.0	ug/l	---
Cadmium - Dissolved	7440-43-9	ND	5.0	ug/l	---
Calcium - Dissolved	7440-70-2	150000	5000	ug/l	---
Chromium - Dissolved	7440-47-3	0.74	10	ug/l	J
Cobalt - Dissolved	7440-48-4	ND	7.0	ug/l	---
Copper - Dissolved	7440-50-8	ND	25	ug/l	---
Iron - Dissolved	7439-89-6	25	100	ug/l	J
Lead - Dissolved	7439-92-1	ND	3.0	ug/l	---
Magnesium - Dissolved	7439-95-4	42000	5000	ug/l	---
Manganese - Dissolved	7439-96-5	26	15	ug/l	---
Nickel - Dissolved	7440-02-0	ND	40	ug/l	---
Potassium - Dissolved	7440-09-7	1900	5000	ug/l	J
Selenium - Dissolved	7782-49-2	ND	15	ug/l	---
Silver - Dissolved	7440-22-4	ND	10	ug/l	---
Sodium - Dissolved	7440-23-5	27000	5000	ug/l	---
Thallium - Dissolved	7440-28-0	ND	10	ug/l	---
Vanadium - Dissolved	7440-62-2	ND	10	ug/l	---
Zinc - Dissolved	7440-66-6	ND	50	ug/l	---
OSW-7470A					
Mercury - Dissolved	7439-97-6	ND	0.20	ug/l	---
General Chemistry					
OSW-9012A					
Cyanide, Total	57-12-5	ND	0.010	mg/l	---

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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February 17, 2016

Jim Ziska
Arcadis US
430 1st Ave North
Minneapolis, MN 55401

RE: Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Dear Jim Ziska:
Enclosed are the analytical results for sample(s) received by the laboratory on February 13, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christopher Hyska for
Laurie Woelfel
laurie.woelfel@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
Virginia VELAP ID: 460263
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Virginia VELAP Certification ID: 460263
Virginia VELAP ID: 460263
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

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SAMPLE SUMMARY

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40128259001	**AMW-27 (20160211)**	Water	02/11/16 14:53	02/13/16 10:25
40128259002	**AMW-28 (20160211)**	Water	02/11/16 12:55	02/13/16 10:25
40128259003	**AMW-29 (20160212)**	Water	02/12/16 09:30	02/13/16 10:25
40128259004	**AMW-30 (20160211)**	Water	02/11/16 08:45	02/13/16 10:25
40128259005	**AMW-31 (20160212)**	Water	02/12/16 11:10	02/13/16 10:25
40128259006	**TRIP BLANK**	Water	02/12/16 00:00	02/13/16 10:25
40128259007	**DUP 01 (20160211)**	Water	02/11/16 00:00	02/13/16 11:59

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SAMPLE ANALYTE COUNT

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40128259001	**AMW-27 (20160211)**	EPA 8082	BDS	10	PASI-G
		WI MOD DRO	CAH	1	PASI-G
		EPA 6010	DLB	22	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8260	LAP	71	PASI-G
		EPA 9012	DAW	1	PASI-G
40128259002	**AMW-28 (20160211)**	EPA 8082	BDS	10	PASI-G
		WI MOD DRO	CAH	1	PASI-G
		EPA 6010	DLB	22	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8260	LAP	71	PASI-G
		EPA 9012	DAW	1	PASI-G
40128259003	**AMW-29 (20160212)**	EPA 8082	BDS	10	PASI-G
		WI MOD DRO	CAH	1	PASI-G
		EPA 6010	DLB	22	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8260	LAP	71	PASI-G
		EPA 9012	DAW	1	PASI-G
40128259004	**AMW-30 (20160211)**	EPA 8082	BDS	10	PASI-G
		WI MOD DRO	CAH	1	PASI-G
		EPA 6010	DLB	22	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8260	LAP	71	PASI-G
		EPA 9012	DAW	1	PASI-G
40128259005	**AMW-31 (20160212)**	EPA 8082	BDS	10	PASI-G
		WI MOD DRO	CAH	1	PASI-G
		EPA 6010	DLB	22	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8260	LAP	71	PASI-G
		EPA 9012	DAW	1	PASI-G
40128259006	**TRIP BLANK**	EPA 8260	LAP	71	PASI-G
40128259007	**DUP 01 (20160211)**	EPA 8082	BDS	10	PASI-G
		WI MOD DRO	CAH	1	PASI-G
		EPA 6010	DLB	22	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8260	LAP	71	PASI-G
		EPA 9012	DAW	1	PASI-G

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-27 (20160211) **Lab ID: 40128259001** Collected: 02/11/16 14:53 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510							
PCB-1016 (Aroclor 1016)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:37	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:37	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:37	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:37	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:37	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:37	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:37	11096-82-5	
PCB, Total	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:37	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	79	%	55-130	1	02/16/16 09:30	02/17/16 00:37	877-09-8	
Decachlorobiphenyl (S)	0	%	34-130	1	02/16/16 09:30	02/17/16 00:37	2051-24-3	1q,S0
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**0.91**	mg/L	0.048	1	02/16/16 08:32	02/16/16 11:27		T4
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Aluminum, Dissolved	**4810**	ug/L	500	1	02/16/16 09:46	02/17/16 09:40	7429-90-5	M0
Antimony, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:40	7440-36-0	
Arsenic, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:40	7440-38-2	
Barium, Dissolved	**166**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:40	7440-39-3	
Beryllium, Dissolved	**<4.0**	ug/L	4.0	1	02/16/16 09:46	02/17/16 09:40	7440-41-7	
Cadmium, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:40	7440-43-9	
Calcium, Dissolved	**74300**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:40	7440-70-2	P6
Chromium, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:40	7440-47-3	
Cobalt, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:40	7440-48-4	
Copper, Dissolved	**44.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:40	7440-50-8	
Iron, Dissolved	**5110**	ug/L	100	1	02/16/16 09:46	02/17/16 09:40	7439-89-6	
Lead, Dissolved	**<12.0**	ug/L	12.0	1	02/16/16 09:46	02/17/16 09:40	7439-92-1	
Magnesium, Dissolved	**18600**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:40	7439-95-4	
Manganese, Dissolved	**256**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:40	7439-96-5	
Nickel, Dissolved	**31.6**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:40	7440-02-0	
Potassium, Dissolved	**3480**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:40	7440-09-7	
Selenium, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:40	7782-49-2	
Silver, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:40	7440-22-4	
Sodium, Dissolved	**266000**	ug/L	10000	10	02/16/16 09:46	02/17/16 10:04	7440-23-5	P6
Thallium, Dissolved	**<40.0**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:40	7440-28-0	
Vanadium, Dissolved	**11.8**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:40	7440-62-2	
Zinc, Dissolved	**<40.0**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:40	7440-66-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury, Dissolved	**<0.20**	ug/L	0.20	1	02/17/16 08:50	02/17/16 13:23	7439-97-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	**<20.0**	ug/L	20.0	1		02/15/16 13:46	67-64-1	
Allyl chloride	**<5.0**	ug/L	5.0	1		02/15/16 13:46	107-05-1	
Benzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	71-43-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-27 (20160211) **Lab ID: 40128259001** Collected: 02/11/16 14:53 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Bromobenzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	108-86-1	
Bromochloromethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	75-27-4	
Bromoform	**<5.0**	ug/L	5.0	1		02/15/16 13:46	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		02/15/16 13:46	74-83-9	
2-Butanone (MEK)	**<20.0**	ug/L	20.0	1		02/15/16 13:46	78-93-3	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	104-51-8	
sec-Butylbenzene	**<5.0**	ug/L	5.0	1		02/15/16 13:46	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	98-06-6	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		02/15/16 13:46	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	108-90-7	
Chloroethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	75-00-3	
Chloroform	**<5.0**	ug/L	5.0	1		02/15/16 13:46	67-66-3	
Chloromethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	74-87-3	
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	95-49-8	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	106-43-4	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		02/15/16 13:46	96-12-8	
Dibromochloromethane	**<5.0**	ug/L	5.0	1		02/15/16 13:46	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		02/15/16 13:46	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	95-50-1	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	541-73-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	106-46-7	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	75-71-8	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	156-60-5	
Dichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	75-43-4	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	78-87-5	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	142-28-9	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	594-20-7	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	563-58-6	
cis-1,3-Dichloropropene	**<5.0**	ug/L	5.0	1		02/15/16 13:46	10061-01-5	
trans-1,3-Dichloropropene	**<20.0**	ug/L	20.0	1		02/15/16 13:46	10061-02-6	
Diethyl ether (Ethyl ether)	**<5.0**	ug/L	5.0	1		02/15/16 13:46	60-29-7	
Ethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	100-41-4	
Hexachloro-1,3-butadiene	**<5.0**	ug/L	5.0	1		02/15/16 13:46	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		02/15/16 13:46	98-82-8	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	99-87-6	
Methylene Chloride	**<1.0**	ug/L	1.0	1		02/15/16 13:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<20.0**	ug/L	20.0	1		02/15/16 13:46	108-10-1	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		02/15/16 13:46	1634-04-4	
Naphthalene	**<5.0**	ug/L	5.0	1		02/15/16 13:46	91-20-3	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	103-65-1	
Styrene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	100-42-5	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-27 (20160211) **Lab ID: 40128259001** Collected: 02/11/16 14:53 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	127-18-4	
Tetrahydrofuran	**<5.0**	ug/L	5.0	1		02/15/16 13:46	109-99-9	
Toluene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	108-88-3	
1,2,3-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 13:46	87-61-6	
1,2,4-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 13:46	120-82-1	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 13:46	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<5.0**	ug/L	5.0	1		02/15/16 13:46	76-13-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	95-63-6	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	108-67-8	
Vinyl chloride	**<1.0**	ug/L	1.0	1		02/15/16 13:46	75-01-4	
m&p-Xylene	**<2.0**	ug/L	2.0	1		02/15/16 13:46	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	1		02/15/16 13:46	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	97	%	70-130	1		02/15/16 13:46	460-00-4	
Dibromofluoromethane (S)	98	%	70-130	1		02/15/16 13:46	1868-53-7	
Toluene-d8 (S)	93	%	70-130	1		02/15/16 13:46	2037-26-5	
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012A							
Cyanide	**<0.023**	mg/L	0.023	1	02/16/16 10:05	02/16/16 12:37	57-12-5	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-28 (20160211) **Lab ID: 40128259002** Collected: 02/11/16 12:55 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510							
PCB-1016 (Aroclor 1016)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:55	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:55	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:55	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:55	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:55	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:55	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:55	11096-82-5	
PCB, Total	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 00:55	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	73	%	55-130	1	02/16/16 09:30	02/17/16 00:55	877-09-8	
Decachlorobiphenyl (S)	70	%	34-130	1	02/16/16 09:30	02/17/16 00:55	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**0.69**	mg/L	0.048	1	02/16/16 08:32	02/16/16 11:37		T4
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Aluminum, Dissolved	**1080**	ug/L	500	1	02/16/16 09:46	02/17/16 09:47	7429-90-5	
Antimony, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:47	7440-36-0	
Arsenic, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:47	7440-38-2	
Barium, Dissolved	**108**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:47	7440-39-3	
Beryllium, Dissolved	**<4.0**	ug/L	4.0	1	02/16/16 09:46	02/17/16 09:47	7440-41-7	
Cadmium, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:47	7440-43-9	
Calcium, Dissolved	**80600**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:47	7440-70-2	
Chromium, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:47	7440-47-3	
Cobalt, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:47	7440-48-4	
Copper, Dissolved	**60.9**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:47	7440-50-8	
Iron, Dissolved	**2870**	ug/L	100	1	02/16/16 09:46	02/17/16 09:47	7439-89-6	
Lead, Dissolved	**<12.0**	ug/L	12.0	1	02/16/16 09:46	02/17/16 09:47	7439-92-1	
Magnesium, Dissolved	**19200**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:47	7439-95-4	
Manganese, Dissolved	**533**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:47	7439-96-5	
Nickel, Dissolved	**47.6**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:47	7440-02-0	
Potassium, Dissolved	**2760**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:47	7440-09-7	
Selenium, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:47	7782-49-2	
Silver, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:47	7440-22-4	
Sodium, Dissolved	**198000**	ug/L	10000	10	02/16/16 09:46	02/17/16 10:11	7440-23-5	
Thallium, Dissolved	**<40.0**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:47	7440-28-0	
Vanadium, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:47	7440-62-2	
Zinc, Dissolved	**42.3**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:47	7440-66-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury, Dissolved	**<0.20**	ug/L	0.20	1	02/17/16 08:50	02/17/16 13:26	7439-97-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	**<20.0**	ug/L	20.0	1		02/15/16 14:09	67-64-1	
Allyl chloride	**<5.0**	ug/L	5.0	1		02/15/16 14:09	107-05-1	
Benzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	71-43-2	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-28 (20160211) **Lab ID: 40128259002** Collected: 02/11/16 12:55 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Bromobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	108-86-1	
Bromochloromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	75-27-4	
Bromoform	**<5.0**	ug/L	5.0	1		02/15/16 14:09	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		02/15/16 14:09	74-83-9	
2-Butanone (MEK)	**<20.0**	ug/L	20.0	1		02/15/16 14:09	78-93-3	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	104-51-8	
sec-Butylbenzene	**<5.0**	ug/L	5.0	1		02/15/16 14:09	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	98-06-6	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		02/15/16 14:09	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	108-90-7	
Chloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	75-00-3	
Chloroform	**<5.0**	ug/L	5.0	1		02/15/16 14:09	67-66-3	
Chloromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	74-87-3	
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	95-49-8	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	106-43-4	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		02/15/16 14:09	96-12-8	
Dibromochloromethane	**<5.0**	ug/L	5.0	1		02/15/16 14:09	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		02/15/16 14:09	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	95-50-1	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	541-73-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	106-46-7	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	75-71-8	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	156-60-5	
Dichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	75-43-4	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	78-87-5	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	142-28-9	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	594-20-7	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	563-58-6	
cis-1,3-Dichloropropene	**<5.0**	ug/L	5.0	1		02/15/16 14:09	10061-01-5	
trans-1,3-Dichloropropene	**<20.0**	ug/L	20.0	1		02/15/16 14:09	10061-02-6	
Diethyl ether (Ethyl ether)	**<5.0**	ug/L	5.0	1		02/15/16 14:09	60-29-7	
Ethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	100-41-4	
Hexachloro-1,3-butadiene	**<5.0**	ug/L	5.0	1		02/15/16 14:09	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		02/15/16 14:09	98-82-8	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	99-87-6	
Methylene Chloride	**<1.0**	ug/L	1.0	1		02/15/16 14:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<20.0**	ug/L	20.0	1		02/15/16 14:09	108-10-1	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		02/15/16 14:09	1634-04-4	
Naphthalene	**<5.0**	ug/L	5.0	1		02/15/16 14:09	91-20-3	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	103-65-1	
Styrene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	100-42-5	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-28 (20160211) **Lab ID: 40128259002** Collected: 02/11/16 12:55 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	127-18-4	
Tetrahydrofuran	**<5.0**	ug/L	5.0	1		02/15/16 14:09	109-99-9	
Toluene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	108-88-3	
1,2,3-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 14:09	87-61-6	
1,2,4-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 14:09	120-82-1	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:09	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<5.0**	ug/L	5.0	1		02/15/16 14:09	76-13-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	95-63-6	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	108-67-8	
Vinyl chloride	**<1.0**	ug/L	1.0	1		02/15/16 14:09	75-01-4	
m&p-Xylene	**<2.0**	ug/L	2.0	1		02/15/16 14:09	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	1		02/15/16 14:09	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	97	%	70-130	1		02/15/16 14:09	460-00-4	
Dibromofluoromethane (S)	99	%	70-130	1		02/15/16 14:09	1868-53-7	
Toluene-d8 (S)	89	%	70-130	1		02/15/16 14:09	2037-26-5	
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012A							
Cyanide	**<0.023**	mg/L	0.023	1	02/16/16 10:05	02/16/16 12:38	57-12-5	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-29 (20160212) **Lab ID: 40128259003** Collected: 02/12/16 09:30 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510							
PCB-1016 (Aroclor 1016)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:13	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:13	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:13	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:13	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:13	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:13	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:13	11096-82-5	
PCB, Total	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:13	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	85	%	55-130	1	02/16/16 09:30	02/17/16 01:13	877-09-8	
Decachlorobiphenyl (S)	0	%	34-130	1	02/16/16 09:30	02/17/16 01:13	2051-24-3	1q,S0
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**1.0**	mg/L	0.048	1	02/16/16 08:32	02/16/16 11:46		T4
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Aluminum, Dissolved	**14200**	ug/L	500	1	02/16/16 09:46	02/17/16 09:49	7429-90-5	
Antimony, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:49	7440-36-0	
Arsenic, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:49	7440-38-2	
Barium, Dissolved	**191**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:49	7440-39-3	
Beryllium, Dissolved	**<4.0**	ug/L	4.0	1	02/16/16 09:46	02/17/16 09:49	7440-41-7	
Cadmium, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:49	7440-43-9	
Calcium, Dissolved	**76200**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:49	7440-70-2	
Chromium, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:49	7440-47-3	
Cobalt, Dissolved	**67.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:49	7440-48-4	
Copper, Dissolved	**130**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:49	7440-50-8	
Iron, Dissolved	**3230**	ug/L	100	1	02/16/16 09:46	02/17/16 09:49	7439-89-6	
Lead, Dissolved	**<12.0**	ug/L	12.0	1	02/16/16 09:46	02/17/16 09:49	7439-92-1	
Magnesium, Dissolved	**22500**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:49	7439-95-4	
Manganese, Dissolved	**1400**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:49	7439-96-5	
Nickel, Dissolved	**328**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:49	7440-02-0	
Potassium, Dissolved	**5730**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:49	7440-09-7	
Selenium, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:49	7782-49-2	
Silver, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:49	7440-22-4	
Sodium, Dissolved	**313000**	ug/L	10000	10	02/16/16 09:46	02/17/16 10:14	7440-23-5	
Thallium, Dissolved	**<40.0**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:49	7440-28-0	
Vanadium, Dissolved	**7.6**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:49	7440-62-2	
Zinc, Dissolved	**396**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:49	7440-66-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury, Dissolved	**<0.20**	ug/L	0.20	1	02/17/16 08:50	02/17/16 13:28	7439-97-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	**<20.0**	ug/L	20.0	1		02/15/16 14:31	67-64-1	
Allyl chloride	**<5.0**	ug/L	5.0	1		02/15/16 14:31	107-05-1	
Benzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	71-43-2	

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(920)469-2436

ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-29 (20160212) **Lab ID: 40128259003** Collected: 02/12/16 09:30 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Bromobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	108-86-1	
Bromochloromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	75-27-4	
Bromoform	**<5.0**	ug/L	5.0	1		02/15/16 14:31	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		02/15/16 14:31	74-83-9	
2-Butanone (MEK)	**<20.0**	ug/L	20.0	1		02/15/16 14:31	78-93-3	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	104-51-8	
sec-Butylbenzene	**<5.0**	ug/L	5.0	1		02/15/16 14:31	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	98-06-6	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		02/15/16 14:31	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	108-90-7	
Chloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	75-00-3	
Chloroform	**<5.0**	ug/L	5.0	1		02/15/16 14:31	67-66-3	
Chloromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	74-87-3	
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	95-49-8	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	106-43-4	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		02/15/16 14:31	96-12-8	
Dibromochloromethane	**<5.0**	ug/L	5.0	1		02/15/16 14:31	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		02/15/16 14:31	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	95-50-1	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	541-73-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	106-46-7	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	75-71-8	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	156-60-5	
Dichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	75-43-4	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	78-87-5	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	142-28-9	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	594-20-7	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	563-58-6	
cis-1,3-Dichloropropene	**<5.0**	ug/L	5.0	1		02/15/16 14:31	10061-01-5	
trans-1,3-Dichloropropene	**<20.0**	ug/L	20.0	1		02/15/16 14:31	10061-02-6	
Diethyl ether (Ethyl ether)	**<5.0**	ug/L	5.0	1		02/15/16 14:31	60-29-7	
Ethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	100-41-4	
Hexachloro-1,3-butadiene	**<5.0**	ug/L	5.0	1		02/15/16 14:31	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		02/15/16 14:31	98-82-8	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	99-87-6	
Methylene Chloride	**<1.0**	ug/L	1.0	1		02/15/16 14:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<20.0**	ug/L	20.0	1		02/15/16 14:31	108-10-1	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		02/15/16 14:31	1634-04-4	
Naphthalene	**<5.0**	ug/L	5.0	1		02/15/16 14:31	91-20-3	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	103-65-1	
Styrene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	100-42-5	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-29 (20160212) **Lab ID: 40128259003** Collected: 02/12/16 09:30 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	127-18-4	
Tetrahydrofuran	**<5.0**	ug/L	5.0	1		02/15/16 14:31	109-99-9	
Toluene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	108-88-3	
1,2,3-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 14:31	87-61-6	
1,2,4-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 14:31	120-82-1	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	79-00-5	
Trichloroethene	**11.4**	ug/L	1.0	1		02/15/16 14:31	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:31	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<5.0**	ug/L	5.0	1		02/15/16 14:31	76-13-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	95-63-6	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	108-67-8	
Vinyl chloride	**<1.0**	ug/L	1.0	1		02/15/16 14:31	75-01-4	
m&p-Xylene	**<2.0**	ug/L	2.0	1		02/15/16 14:31	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	1		02/15/16 14:31	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	1		02/15/16 14:31	460-00-4	
Dibromofluoromethane (S)	104	%	70-130	1		02/15/16 14:31	1868-53-7	
Toluene-d8 (S)	92	%	70-130	1		02/15/16 14:31	2037-26-5	
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012A							
Cyanide	**<0.023**	mg/L	0.023	1	02/16/16 10:05	02/16/16 12:38	57-12-5	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-30 (20160211) **Lab ID: 40128259004** Collected: 02/11/16 08:45 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510							
PCB-1016 (Aroclor 1016)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 01:31	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 01:31	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 01:31	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 01:31	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 01:31	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 01:31	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 01:31	11096-82-5	
PCB, Total	**<0.47**	ug/L	0.47	1	02/16/16 09:30	02/17/16 01:31	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	91	%	55-130	1	02/16/16 09:30	02/17/16 01:31	877-09-8	
Decachlorobiphenyl (S)	91	%	34-130	1	02/16/16 09:30	02/17/16 01:31	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**0.22**	mg/L	0.047	1	02/16/16 08:32	02/16/16 11:55		T4
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Aluminum, Dissolved	**9500**	ug/L	500	1	02/16/16 09:46	02/17/16 09:52	7429-90-5	
Antimony, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:52	7440-36-0	
Arsenic, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:52	7440-38-2	
Barium, Dissolved	**158**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:52	7440-39-3	
Beryllium, Dissolved	**<4.0**	ug/L	4.0	1	02/16/16 09:46	02/17/16 09:52	7440-41-7	
Cadmium, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:52	7440-43-9	
Calcium, Dissolved	**108000**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:52	7440-70-2	
Chromium, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:52	7440-47-3	
Cobalt, Dissolved	**50.6**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:52	7440-48-4	
Copper, Dissolved	**120**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:52	7440-50-8	
Iron, Dissolved	**1410**	ug/L	100	1	02/16/16 09:46	02/17/16 09:52	7439-89-6	
Lead, Dissolved	**<12.0**	ug/L	12.0	1	02/16/16 09:46	02/17/16 09:52	7439-92-1	
Magnesium, Dissolved	**37000**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:52	7439-95-4	
Manganese, Dissolved	**802**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:52	7439-96-5	
Nickel, Dissolved	**252**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:52	7440-02-0	
Potassium, Dissolved	**11600**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:52	7440-09-7	
Selenium, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:52	7782-49-2	
Silver, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:52	7440-22-4	
Sodium, Dissolved	**222000**	ug/L	10000	10	02/16/16 09:46	02/17/16 10:16	7440-23-5	
Thallium, Dissolved	**<40.0**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:52	7440-28-0	
Vanadium, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:52	7440-62-2	
Zinc, Dissolved	**133**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:52	7440-66-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury, Dissolved	**<0.20**	ug/L	0.20	1	02/17/16 08:50	02/17/16 13:30	7439-97-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	**<20.0**	ug/L	20.0	1		02/15/16 14:54	67-64-1	
Allyl chloride	**<5.0**	ug/L	5.0	1		02/15/16 14:54	107-05-1	
Benzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	71-43-2	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-30 (20160211) **Lab ID: 40128259004** Collected: 02/11/16 08:45 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Bromobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	108-86-1	
Bromochloromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	75-27-4	
Bromoform	**<5.0**	ug/L	5.0	1		02/15/16 14:54	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		02/15/16 14:54	74-83-9	
2-Butanone (MEK)	**<20.0**	ug/L	20.0	1		02/15/16 14:54	78-93-3	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	104-51-8	
sec-Butylbenzene	**<5.0**	ug/L	5.0	1		02/15/16 14:54	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	98-06-6	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		02/15/16 14:54	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	108-90-7	
Chloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	75-00-3	
Chloroform	**<5.0**	ug/L	5.0	1		02/15/16 14:54	67-66-3	
Chloromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	74-87-3	
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	95-49-8	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	106-43-4	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		02/15/16 14:54	96-12-8	
Dibromochloromethane	**<5.0**	ug/L	5.0	1		02/15/16 14:54	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		02/15/16 14:54	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	95-50-1	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	541-73-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	106-46-7	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	75-71-8	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	156-60-5	
Dichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	75-43-4	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	78-87-5	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	142-28-9	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	594-20-7	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	563-58-6	
cis-1,3-Dichloropropene	**<5.0**	ug/L	5.0	1		02/15/16 14:54	10061-01-5	
trans-1,3-Dichloropropene	**<20.0**	ug/L	20.0	1		02/15/16 14:54	10061-02-6	
Diethyl ether (Ethyl ether)	**<5.0**	ug/L	5.0	1		02/15/16 14:54	60-29-7	
Ethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	100-41-4	
Hexachloro-1,3-butadiene	**<5.0**	ug/L	5.0	1		02/15/16 14:54	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		02/15/16 14:54	98-82-8	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	99-87-6	
Methylene Chloride	**<1.0**	ug/L	1.0	1		02/15/16 14:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<20.0**	ug/L	20.0	1		02/15/16 14:54	108-10-1	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		02/15/16 14:54	1634-04-4	
Naphthalene	**<5.0**	ug/L	5.0	1		02/15/16 14:54	91-20-3	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	103-65-1	
Styrene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	100-42-5	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-30 (20160211) **Lab ID: 40128259004** Collected: 02/11/16 08:45 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	127-18-4	
Tetrahydrofuran	**<5.0**	ug/L	5.0	1		02/15/16 14:54	109-99-9	
Toluene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	108-88-3	
1,2,3-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 14:54	87-61-6	
1,2,4-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 14:54	120-82-1	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	79-00-5	
Trichloroethene	**24.5**	ug/L	1.0	1		02/15/16 14:54	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 14:54	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<5.0**	ug/L	5.0	1		02/15/16 14:54	76-13-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	95-63-6	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	108-67-8	
Vinyl chloride	**<1.0**	ug/L	1.0	1		02/15/16 14:54	75-01-4	
m&p-Xylene	**<2.0**	ug/L	2.0	1		02/15/16 14:54	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	1		02/15/16 14:54	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	92	%	70-130	1		02/15/16 14:54	460-00-4	
Dibromofluoromethane (S)	100	%	70-130	1		02/15/16 14:54	1868-53-7	
Toluene-d8 (S)	92	%	70-130	1		02/15/16 14:54	2037-26-5	
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012A							
Cyanide	**<0.023**	mg/L	0.023	1	02/16/16 10:05	02/16/16 12:41	57-12-5	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-31 (20160212) **Lab ID: 40128259005** Collected: 02/12/16 11:10 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510							
PCB-1016 (Aroclor 1016)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:49	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:49	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:49	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:49	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:49	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:49	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:49	11096-82-5	
PCB, Total	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 01:49	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	88	%	55-130	1	02/16/16 09:30	02/17/16 01:49	877-09-8	
Decachlorobiphenyl (S)	0	%	34-130	1	02/16/16 09:30	02/17/16 01:49	2051-24-3	1q,S0
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**0.41**	mg/L	0.048	1	02/16/16 08:32	02/16/16 12:04		T4
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Aluminum, Dissolved	**<500**	ug/L	500	1	02/16/16 09:46	02/17/16 09:54	7429-90-5	
Antimony, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:54	7440-36-0	
Arsenic, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:54	7440-38-2	
Barium, Dissolved	**35.3**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:54	7440-39-3	
Beryllium, Dissolved	**<4.0**	ug/L	4.0	1	02/16/16 09:46	02/17/16 09:54	7440-41-7	
Cadmium, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:54	7440-43-9	
Calcium, Dissolved	**38900**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:54	7440-70-2	
Chromium, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:54	7440-47-3	
Cobalt, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:54	7440-48-4	
Copper, Dissolved	**12.9**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:54	7440-50-8	
Iron, Dissolved	**433**	ug/L	100	1	02/16/16 09:46	02/17/16 09:54	7439-89-6	
Lead, Dissolved	**<12.0**	ug/L	12.0	1	02/16/16 09:46	02/17/16 09:54	7439-92-1	
Magnesium, Dissolved	**11600**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:54	7439-95-4	
Manganese, Dissolved	**286**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:54	7439-96-5	
Nickel, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:54	7440-02-0	
Potassium, Dissolved	**11700**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:54	7440-09-7	
Selenium, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:54	7782-49-2	
Silver, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:54	7440-22-4	
Sodium, Dissolved	**162000**	ug/L	10000	10	02/16/16 09:46	02/17/16 10:19	7440-23-5	
Thallium, Dissolved	**<40.0**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:54	7440-28-0	
Vanadium, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:54	7440-62-2	
Zinc, Dissolved	**<40.0**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:54	7440-66-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury, Dissolved	**<0.20**	ug/L	0.20	1	02/17/16 08:50	02/17/16 13:33	7439-97-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	**<20.0**	ug/L	20.0	1		02/15/16 15:16	67-64-1	
Allyl chloride	**<5.0**	ug/L	5.0	1		02/15/16 15:16	107-05-1	
Benzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	71-43-2	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-31 (20160212) **Lab ID: 40128259005** Collected: 02/12/16 11:10 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Bromobenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	108-86-1	
Bromochloromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	75-27-4	
Bromoform	**<5.0**	ug/L	5.0	1		02/15/16 15:16	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		02/15/16 15:16	74-83-9	
2-Butanone (MEK)	**<20.0**	ug/L	20.0	1		02/15/16 15:16	78-93-3	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	104-51-8	
sec-Butylbenzene	**<5.0**	ug/L	5.0	1		02/15/16 15:16	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	98-06-6	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		02/15/16 15:16	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	108-90-7	
Chloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	75-00-3	
Chloroform	**<5.0**	ug/L	5.0	1		02/15/16 15:16	67-66-3	
Chloromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	74-87-3	
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	95-49-8	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	106-43-4	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		02/15/16 15:16	96-12-8	
Dibromochloromethane	**<5.0**	ug/L	5.0	1		02/15/16 15:16	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		02/15/16 15:16	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	95-50-1	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	541-73-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	106-46-7	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	75-71-8	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	156-60-5	
Dichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	75-43-4	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	78-87-5	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	142-28-9	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	594-20-7	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	563-58-6	
cis-1,3-Dichloropropene	**<5.0**	ug/L	5.0	1		02/15/16 15:16	10061-01-5	
trans-1,3-Dichloropropene	**<20.0**	ug/L	20.0	1		02/15/16 15:16	10061-02-6	
Diethyl ether (Ethyl ether)	**<5.0**	ug/L	5.0	1		02/15/16 15:16	60-29-7	
Ethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	100-41-4	
Hexachloro-1,3-butadiene	**<5.0**	ug/L	5.0	1		02/15/16 15:16	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		02/15/16 15:16	98-82-8	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	99-87-6	
Methylene Chloride	**<1.0**	ug/L	1.0	1		02/15/16 15:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<20.0**	ug/L	20.0	1		02/15/16 15:16	108-10-1	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		02/15/16 15:16	1634-04-4	
Naphthalene	**<5.0**	ug/L	5.0	1		02/15/16 15:16	91-20-3	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	103-65-1	
Styrene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	100-42-5	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: AMW-31 (20160212) **Lab ID: 40128259005** Collected: 02/12/16 11:10 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	127-18-4	
Tetrahydrofuran	**<5.0**	ug/L	5.0	1		02/15/16 15:16	109-99-9	
Toluene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	108-88-3	
1,2,3-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 15:16	87-61-6	
1,2,4-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 15:16	120-82-1	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 15:16	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<5.0**	ug/L	5.0	1		02/15/16 15:16	76-13-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	95-63-6	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	108-67-8	
Vinyl chloride	**<1.0**	ug/L	1.0	1		02/15/16 15:16	75-01-4	
m&p-Xylene	**<2.0**	ug/L	2.0	1		02/15/16 15:16	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	1		02/15/16 15:16	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	93	%	70-130	1		02/15/16 15:16	460-00-4	
Dibromofluoromethane (S)	99	%	70-130	1		02/15/16 15:16	1868-53-7	
Toluene-d8 (S)	88	%	70-130	1		02/15/16 15:16	2037-26-5	
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012A							
Cyanide	**<0.023**	mg/L	0.023	1	02/16/16 10:05	02/16/16 12:41	57-12-5	

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(920)469-2436

ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: TRIP BLANK **Lab ID: 40128259006** Collected: 02/12/16 00:00 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	**<20.0**	ug/L	20.0	1		02/15/16 15:39	67-64-1	
Allyl chloride	**<5.0**	ug/L	5.0	1		02/15/16 15:39	107-05-1	
Benzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	71-43-2	
Bromobenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	108-86-1	
Bromochloromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	75-27-4	
Bromoform	**<5.0**	ug/L	5.0	1		02/15/16 15:39	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		02/15/16 15:39	74-83-9	
2-Butanone (MEK)	**<20.0**	ug/L	20.0	1		02/15/16 15:39	78-93-3	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	104-51-8	
sec-Butylbenzene	**<5.0**	ug/L	5.0	1		02/15/16 15:39	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	98-06-6	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		02/15/16 15:39	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	108-90-7	
Chloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	75-00-3	
Chloroform	**<5.0**	ug/L	5.0	1		02/15/16 15:39	67-66-3	
Chloromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	74-87-3	
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	95-49-8	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	106-43-4	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		02/15/16 15:39	96-12-8	
Dibromochloromethane	**<5.0**	ug/L	5.0	1		02/15/16 15:39	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		02/15/16 15:39	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	95-50-1	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	541-73-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	106-46-7	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	75-71-8	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	156-60-5	
Dichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	75-43-4	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	78-87-5	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	142-28-9	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	594-20-7	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	563-58-6	
cis-1,3-Dichloropropene	**<5.0**	ug/L	5.0	1		02/15/16 15:39	10061-01-5	
trans-1,3-Dichloropropene	**<20.0**	ug/L	20.0	1		02/15/16 15:39	10061-02-6	
Diethyl ether (Ethyl ether)	**<5.0**	ug/L	5.0	1		02/15/16 15:39	60-29-7	
Ethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	100-41-4	
Hexachloro-1,3-butadiene	**<5.0**	ug/L	5.0	1		02/15/16 15:39	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		02/15/16 15:39	98-82-8	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	99-87-6	
Methylene Chloride	**<1.0**	ug/L	1.0	1		02/15/16 15:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<20.0**	ug/L	20.0	1		02/15/16 15:39	108-10-1	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		02/15/16 15:39	1634-04-4	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: TRIP BLANK **Lab ID: 40128259006** Collected: 02/12/16 00:00 Received: 02/13/16 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Naphthalene	**<5.0**	ug/L	5.0	1		02/15/16 15:39	91-20-3	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	103-65-1	
Styrene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	127-18-4	
Tetrahydrofuran	**<5.0**	ug/L	5.0	1		02/15/16 15:39	109-99-9	
Toluene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	108-88-3	
1,2,3-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 15:39	87-61-6	
1,2,4-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 15:39	120-82-1	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 15:39	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<5.0**	ug/L	5.0	1		02/15/16 15:39	76-13-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	95-63-6	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	108-67-8	
Vinyl chloride	**<1.0**	ug/L	1.0	1		02/15/16 15:39	75-01-4	
m&p-Xylene	**<2.0**	ug/L	2.0	1		02/15/16 15:39	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	1		02/15/16 15:39	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	1		02/15/16 15:39	460-00-4	
Dibromofluoromethane (S)	106	%	70-130	1		02/15/16 15:39	1868-53-7	
Toluene-d8 (S)	98	%	70-130	1		02/15/16 15:39	2037-26-5	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: DUP 01 (20160211) **Lab ID: 40128259007** Collected: 02/11/16 00:00 Received: 02/13/16 11:59 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510							
PCB-1016 (Aroclor 1016)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 02:07	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 02:07	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 02:07	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 02:07	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 02:07	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 02:07	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 02:07	11096-82-5	
PCB, Total	**<0.48**	ug/L	0.48	1	02/16/16 09:30	02/17/16 02:07	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	84	%	55-130	1	02/16/16 09:30	02/17/16 02:07	877-09-8	
Decachlorobiphenyl (S)	0	%	34-130	1	02/16/16 09:30	02/17/16 02:07	2051-24-3	1q,S0
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**1.2**	mg/L	0.048	1	02/16/16 08:32	02/16/16 12:13		T4
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Aluminum, Dissolved	**3880**	ug/L	500	1	02/16/16 09:46	02/17/16 09:57	7429-90-5	
Antimony, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:57	7440-36-0	
Arsenic, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:57	7440-38-2	
Barium, Dissolved	**168**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:57	7440-39-3	
Beryllium, Dissolved	**<4.0**	ug/L	4.0	1	02/16/16 09:46	02/17/16 09:57	7440-41-7	
Cadmium, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:57	7440-43-9	
Calcium, Dissolved	**76800**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:57	7440-70-2	
Chromium, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:57	7440-47-3	
Cobalt, Dissolved	**<5.0**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:57	7440-48-4	
Copper, Dissolved	**42.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:57	7440-50-8	
Iron, Dissolved	**3960**	ug/L	100	1	02/16/16 09:46	02/17/16 09:57	7439-89-6	
Lead, Dissolved	**<12.0**	ug/L	12.0	1	02/16/16 09:46	02/17/16 09:57	7439-92-1	
Magnesium, Dissolved	**19100**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:57	7439-95-4	
Manganese, Dissolved	**251**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:57	7439-96-5	
Nickel, Dissolved	**31.1**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:57	7440-02-0	
Potassium, Dissolved	**3460**	ug/L	1000	1	02/16/16 09:46	02/17/16 09:57	7440-09-7	
Selenium, Dissolved	**<20.0**	ug/L	20.0	1	02/16/16 09:46	02/17/16 09:57	7782-49-2	
Silver, Dissolved	**<10.0**	ug/L	10.0	1	02/16/16 09:46	02/17/16 09:57	7440-22-4	
Sodium, Dissolved	**275000**	ug/L	10000	10	02/16/16 09:46	02/17/16 10:21	7440-23-5	
Thallium, Dissolved	**<40.0**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:57	7440-28-0	
Vanadium, Dissolved	**10.5**	ug/L	5.0	1	02/16/16 09:46	02/17/16 09:57	7440-62-2	
Zinc, Dissolved	**<40.0**	ug/L	40.0	1	02/16/16 09:46	02/17/16 09:57	7440-66-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury, Dissolved	**<0.20**	ug/L	0.20	1	02/17/16 08:50	02/17/16 13:40	7439-97-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	**<20.0**	ug/L	20.0	1		02/15/16 16:01	67-64-1	
Allyl chloride	**<5.0**	ug/L	5.0	1		02/15/16 16:01	107-05-1	
Benzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	71-43-2	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: DUP 01 (20160211) **Lab ID: 40128259007** Collected: 02/11/16 00:00 Received: 02/13/16 11:59 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Bromobenzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	108-86-1	
Bromochloromethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	75-27-4	
Bromoform	**<5.0**	ug/L	5.0	1		02/15/16 16:01	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		02/15/16 16:01	74-83-9	
2-Butanone (MEK)	**<20.0**	ug/L	20.0	1		02/15/16 16:01	78-93-3	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	104-51-8	
sec-Butylbenzene	**<5.0**	ug/L	5.0	1		02/15/16 16:01	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	98-06-6	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		02/15/16 16:01	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	108-90-7	
Chloroethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	75-00-3	
Chloroform	**5.4**	ug/L	5.0	1		02/15/16 16:01	67-66-3	
Chloromethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	74-87-3	
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	95-49-8	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	106-43-4	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		02/15/16 16:01	96-12-8	
Dibromochloromethane	**<5.0**	ug/L	5.0	1		02/15/16 16:01	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		02/15/16 16:01	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	95-50-1	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	541-73-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	106-46-7	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	75-71-8	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	156-60-5	
Dichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	75-43-4	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	78-87-5	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	142-28-9	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	594-20-7	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	563-58-6	
cis-1,3-Dichloropropene	**<5.0**	ug/L	5.0	1		02/15/16 16:01	10061-01-5	
trans-1,3-Dichloropropene	**<20.0**	ug/L	20.0	1		02/15/16 16:01	10061-02-6	
Diethyl ether (Ethyl ether)	**<5.0**	ug/L	5.0	1		02/15/16 16:01	60-29-7	
Ethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	100-41-4	
Hexachloro-1,3-butadiene	**<5.0**	ug/L	5.0	1		02/15/16 16:01	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		02/15/16 16:01	98-82-8	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	99-87-6	
Methylene Chloride	**<1.0**	ug/L	1.0	1		02/15/16 16:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<20.0**	ug/L	20.0	1		02/15/16 16:01	108-10-1	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		02/15/16 16:01	1634-04-4	
Naphthalene	**<5.0**	ug/L	5.0	1		02/15/16 16:01	91-20-3	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	103-65-1	
Styrene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	100-42-5	

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ANALYTICAL RESULTS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Sample: DUP 01 (20160211) **Lab ID: 40128259007** Collected: 02/11/16 00:00 Received: 02/13/16 11:59 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	127-18-4	
Tetrahydrofuran	**<5.0**	ug/L	5.0	1		02/15/16 16:01	109-99-9	
Toluene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	108-88-3	
1,2,3-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 16:01	87-61-6	
1,2,4-Trichlorobenzene	**<5.0**	ug/L	5.0	1		02/15/16 16:01	120-82-1	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		02/15/16 16:01	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<5.0**	ug/L	5.0	1		02/15/16 16:01	76-13-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	95-63-6	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	108-67-8	
Vinyl chloride	**<1.0**	ug/L	1.0	1		02/15/16 16:01	75-01-4	
m&p-Xylene	**<2.0**	ug/L	2.0	1		02/15/16 16:01	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	1		02/15/16 16:01	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	93	%	70-130	1		02/15/16 16:01	460-00-4	
Dibromofluoromethane (S)	99	%	70-130	1		02/15/16 16:01	1868-53-7	
Toluene-d8 (S)	93	%	70-130	1		02/15/16 16:01	2037-26-5	
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012A							
Cyanide	**<0.023**	mg/L	0.023	1	02/16/16 10:05	02/16/16 12:42	57-12-5	

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QUALITY CONTROL DATA

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

QC Batch: MERP/5566 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259007

METHOD BLANK: 1295979 Matrix: Water
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.20	0.20	02/17/16 13:12	

LABORATORY CONTROL SAMPLE: 1295980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.3	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1295981 1295982

Parameter	Units	40127837010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.10	5	5	5.3	5.1	106	103	85-115	3	20	

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QUALITY CONTROL DATA

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

QC Batch: MPRP/13343 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259007

METHOD BLANK: 1295653 Matrix: Water
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	<500	500	02/17/16 09:35	
Antimony, Dissolved	ug/L	<20.0	20.0	02/17/16 09:35	
Arsenic, Dissolved	ug/L	<20.0	20.0	02/17/16 09:35	
Barium, Dissolved	ug/L	<5.0	5.0	02/17/16 09:35	
Beryllium, Dissolved	ug/L	<4.0	4.0	02/17/16 09:35	
Cadmium, Dissolved	ug/L	<5.0	5.0	02/17/16 09:35	
Calcium, Dissolved	ug/L	<1000	1000	02/17/16 09:35	
Chromium, Dissolved	ug/L	<10.0	10.0	02/17/16 09:35	
Cobalt, Dissolved	ug/L	<5.0	5.0	02/17/16 09:35	
Copper, Dissolved	ug/L	<10.0	10.0	02/17/16 09:35	
Iron, Dissolved	ug/L	<100	100	02/17/16 09:35	
Lead, Dissolved	ug/L	<12.0	12.0	02/17/16 09:35	
Magnesium, Dissolved	ug/L	<1000	1000	02/17/16 09:35	
Manganese, Dissolved	ug/L	<5.0	5.0	02/17/16 09:35	
Nickel, Dissolved	ug/L	<10.0	10.0	02/17/16 09:35	
Potassium, Dissolved	ug/L	<1000	1000	02/17/16 09:35	
Selenium, Dissolved	ug/L	<20.0	20.0	02/17/16 09:35	
Silver, Dissolved	ug/L	<10.0	10.0	02/17/16 09:35	
Sodium, Dissolved	ug/L	<1000	1000	02/17/16 09:35	
Thallium, Dissolved	ug/L	<40.0	40.0	02/17/16 09:35	
Vanadium, Dissolved	ug/L	<5.0	5.0	02/17/16 09:35	
Zinc, Dissolved	ug/L	<40.0	40.0	02/17/16 09:35	

LABORATORY CONTROL SAMPLE: 1295654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	5000	4820	96	80-120	
Antimony, Dissolved	ug/L	500	485	97	80-120	
Arsenic, Dissolved	ug/L	500	468	94	80-120	
Barium, Dissolved	ug/L	500	488	98	80-120	
Beryllium, Dissolved	ug/L	500	484	97	80-120	
Cadmium, Dissolved	ug/L	500	488	98	80-120	
Calcium, Dissolved	ug/L	5000	4810	96	80-120	
Chromium, Dissolved	ug/L	500	489	98	80-120	
Cobalt, Dissolved	ug/L	500	489	98	80-120	
Copper, Dissolved	ug/L	500	484	97	80-120	
Iron, Dissolved	ug/L	5000	4950	99	80-120	
Lead, Dissolved	ug/L	500	486	97	80-120	
Magnesium, Dissolved	ug/L	5000	4820	96	80-120	
Manganese, Dissolved	ug/L	500	483	97	80-120	

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QUALITY CONTROL DATA

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

LABORATORY CONTROL SAMPLE: 1295654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel, Dissolved	ug/L	500	496	99	80-120	
Potassium, Dissolved	ug/L	5000	4800	96	80-120	
Selenium, Dissolved	ug/L	500	484	97	80-120	
Silver, Dissolved	ug/L	250	239	96	80-120	
Sodium, Dissolved	ug/L	5000	4760	95	80-120	
Thallium, Dissolved	ug/L	500	477	95	80-120	
Vanadium, Dissolved	ug/L	500	489	98	80-120	
Zinc, Dissolved	ug/L	500	497	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1295655 1295656

Parameter	Units	40128259001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	4810	5000	5000	16600	16600	237	235	75-125	1	20	M0
Antimony, Dissolved	ug/L	<20.0	500	500	484	499	96	99	75-125	3	20	
Arsenic, Dissolved	ug/L	<20.0	500	500	486	499	95	98	75-125	2	20	
Barium, Dissolved	ug/L	166	500	500	649	671	97	101	75-125	3	20	
Beryllium, Dissolved	ug/L	<4.0	500	500	478	492	95	98	75-125	3	20	
Cadmium, Dissolved	ug/L	<5.0	500	500	488	504	98	101	75-125	3	20	
Calcium, Dissolved	ug/L	74300	5000	5000	78500	82500	84	165	75-125	5	20	P6
Chromium, Dissolved	ug/L	<10.0	500	500	496	510	97	100	75-125	3	20	
Cobalt, Dissolved	ug/L	<5.0	500	500	488	503	97	100	75-125	3	20	
Copper, Dissolved	ug/L	44.0	500	500	532	552	98	102	75-125	4	20	
Iron, Dissolved	ug/L	5110	5000	5000	10600	10800	109	114	75-125	2	20	
Lead, Dissolved	ug/L	<12.0	500	500	481	496	94	97	75-125	3	20	
Magnesium, Dissolved	ug/L	18600	5000	5000	23600	24600	101	120	75-125	4	20	
Manganese, Dissolved	ug/L	256	500	500	728	754	94	100	75-125	4	20	
Nickel, Dissolved	ug/L	31.6	500	500	516	537	97	101	75-125	4	20	
Potassium, Dissolved	ug/L	3480	5000	5000	8730	9000	105	110	75-125	3	20	
Selenium, Dissolved	ug/L	<20.0	500	500	484	500	96	99	75-125	3	20	
Silver, Dissolved	ug/L	<10.0	250	250	238	245	95	98	75-125	3	20	
Sodium, Dissolved	ug/L	266000	5000	5000	274000	281000	158	306	75-125	3	20	P6
Thallium, Dissolved	ug/L	<40.0	500	500	467	480	93	96	75-125	3	20	
Vanadium, Dissolved	ug/L	11.8	500	500	498	515	97	101	75-125	3	20	
Zinc, Dissolved	ug/L	<40.0	500	500	514	529	99	102	75-125	3	20	

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QUALITY CONTROL DATA

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

QC Batch: MSV/32234 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259006, 40128259007

METHOD BLANK: 1295353 Matrix: Water
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259006, 40128259007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<1.0	1.0	02/15/16 11:09	
1,1,1-Trichloroethane	ug/L	<1.0	1.0	02/15/16 11:09	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	1.0	02/15/16 11:09	
1,1,2-Trichloroethane	ug/L	<1.0	1.0	02/15/16 11:09	
1,1,2-Trichlorotrifluoroethane	ug/L	<5.0	5.0	02/15/16 11:09	
1,1-Dichloroethane	ug/L	<1.0	1.0	02/15/16 11:09	
1,1-Dichloroethene	ug/L	<1.0	1.0	02/15/16 11:09	
1,1-Dichloropropene	ug/L	<1.0	1.0	02/15/16 11:09	
1,2,3-Trichlorobenzene	ug/L	<5.0	5.0	02/15/16 11:09	
1,2,3-Trichloropropane	ug/L	<1.0	1.0	02/15/16 11:09	
1,2,4-Trichlorobenzene	ug/L	<5.0	5.0	02/15/16 11:09	
1,2,4-Trimethylbenzene	ug/L	<1.0	1.0	02/15/16 11:09	
1,2-Dibromo-3-chloropropane	ug/L	<5.0	5.0	02/15/16 11:09	
1,2-Dibromoethane (EDB)	ug/L	<1.0	1.0	02/15/16 11:09	
1,2-Dichlorobenzene	ug/L	<1.0	1.0	02/15/16 11:09	
1,2-Dichloroethane	ug/L	<1.0	1.0	02/15/16 11:09	
1,2-Dichloropropane	ug/L	<1.0	1.0	02/15/16 11:09	
1,3,5-Trimethylbenzene	ug/L	<1.0	1.0	02/15/16 11:09	
1,3-Dichlorobenzene	ug/L	<1.0	1.0	02/15/16 11:09	
1,3-Dichloropropane	ug/L	<1.0	1.0	02/15/16 11:09	
1,4-Dichlorobenzene	ug/L	<1.0	1.0	02/15/16 11:09	
2,2-Dichloropropane	ug/L	<1.0	1.0	02/15/16 11:09	
2-Butanone (MEK)	ug/L	<20.0	20.0	02/15/16 11:09	
2-Chlorotoluene	ug/L	<1.0	1.0	02/15/16 11:09	
4-Chlorotoluene	ug/L	<1.0	1.0	02/15/16 11:09	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	5.0	02/15/16 11:09	
Acetone	ug/L	<20.0	20.0	02/15/16 11:09	
Allyl chloride	ug/L	<5.0	5.0	02/15/16 11:09	
Benzene	ug/L	<1.0	1.0	02/15/16 11:09	
Bromobenzene	ug/L	<1.0	1.0	02/15/16 11:09	
Bromochloromethane	ug/L	<1.0	1.0	02/15/16 11:09	
Bromodichloromethane	ug/L	<1.0	1.0	02/15/16 11:09	
Bromoform	ug/L	<1.0	1.0	02/15/16 11:09	
Bromomethane	ug/L	<5.0	5.0	02/15/16 11:09	
Carbon tetrachloride	ug/L	<1.0	1.0	02/15/16 11:09	
Chlorobenzene	ug/L	<1.0	1.0	02/15/16 11:09	
Chloroethane	ug/L	<1.0	1.0	02/15/16 11:09	
Chloroform	ug/L	<5.0	5.0	02/15/16 11:09	
Chloromethane	ug/L	<1.0	1.0	02/15/16 11:09	
cis-1,2-Dichloroethene	ug/L	<1.0	1.0	02/15/16 11:09	
cis-1,3-Dichloropropene	ug/L	<1.0	1.0	02/15/16 11:09	

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QUALITY CONTROL DATA

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

METHOD BLANK: 1295353 Matrix: Water
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259006, 40128259007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	<1.0	1.0	02/15/16 11:09	
Dibromomethane	ug/L	<1.0	1.0	02/15/16 11:09	
Dichlorodifluoromethane	ug/L	<1.0	1.0	02/15/16 11:09	
Dichlorofluoromethane	ug/L	<1.0	1.0	02/15/16 11:09	
Diethyl ether (Ethyl ether)	ug/L	<5.0	5.0	02/15/16 11:09	
Ethylbenzene	ug/L	<1.0	1.0	02/15/16 11:09	
Hexachloro-1,3-butadiene	ug/L	<5.0	5.0	02/15/16 11:09	
Isopropylbenzene (Cumene)	ug/L	<1.0	1.0	02/15/16 11:09	
m&p-Xylene	ug/L	<2.0	2.0	02/15/16 11:09	
Methyl-tert-butyl ether	ug/L	<1.0	1.0	02/15/16 11:09	
Methylene Chloride	ug/L	<1.0	1.0	02/15/16 11:09	
n-Butylbenzene	ug/L	<1.0	1.0	02/15/16 11:09	
n-Propylbenzene	ug/L	<1.0	1.0	02/15/16 11:09	
Naphthalene	ug/L	<5.0	5.0	02/15/16 11:09	
o-Xylene	ug/L	<1.0	1.0	02/15/16 11:09	
p-Isopropyltoluene	ug/L	<1.0	1.0	02/15/16 11:09	
sec-Butylbenzene	ug/L	<5.0	5.0	02/15/16 11:09	
Styrene	ug/L	<1.0	1.0	02/15/16 11:09	
tert-Butylbenzene	ug/L	<1.0	1.0	02/15/16 11:09	
Tetrachloroethene	ug/L	<1.0	1.0	02/15/16 11:09	
Tetrahydrofuran	ug/L	<5.0	5.0	02/15/16 11:09	
Toluene	ug/L	<1.0	1.0	02/15/16 11:09	
trans-1,2-Dichloroethene	ug/L	<1.0	1.0	02/15/16 11:09	
trans-1,3-Dichloropropene	ug/L	<1.0	1.0	02/15/16 11:09	
Trichloroethene	ug/L	<1.0	1.0	02/15/16 11:09	
Trichlorofluoromethane	ug/L	<1.0	1.0	02/15/16 11:09	
Vinyl chloride	ug/L	<1.0	1.0	02/15/16 11:09	
4-Bromofluorobenzene (S)	%	96	70-130	02/15/16 11:09	
Dibromofluoromethane (S)	%	101	70-130	02/15/16 11:09	
Toluene-d8 (S)	%	98	70-130	02/15/16 11:09	

LABORATORY CONTROL SAMPLE: 1295354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.4	102	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	19.5	98	70-130	
1,1,2-Trichloroethane	ug/L	20	21.6	108	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	20	22.0	110	50-150	
1,1-Dichloroethane	ug/L	20	18.7	93	70-130	
1,1-Dichloroethene	ug/L	20	17.1	85	70-130	
1,2,4-Trichlorobenzene	ug/L	20	20.3	102	70-130	
1,2-Dibromo-3-chloropropane	ug/L	20	18.5	93	50-150	
1,2-Dibromoethane (EDB)	ug/L	20	21.1	106	70-130	
1,2-Dichlorobenzene	ug/L	20	22.4	112	70-130	

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QUALITY CONTROL DATA

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

LABORATORY CONTROL SAMPLE: 1295354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	20	22.4	112	70-131	
1,2-Dichloropropane	ug/L	20	20.1	101	70-130	
1,3-Dichlorobenzene	ug/L	20	22.0	110	70-130	
1,4-Dichlorobenzene	ug/L	20	22.7	114	70-130	
Benzene	ug/L	20	17.2	86	70-130	
Bromodichloromethane	ug/L	20	21.6	108	70-130	
Bromoform	ug/L	20	21.1	105	68-130	
Bromomethane	ug/L	20	13.1	65	38-137	
Carbon tetrachloride	ug/L	20	21.0	105	70-130	
Chlorobenzene	ug/L	20	21.9	110	70-130	
Chloroethane	ug/L	20	14.6	73	70-136	
Chloroform	ug/L	20	20.6	103	70-130	
Chloromethane	ug/L	20	13.7	68	48-144	
cis-1,2-Dichloroethene	ug/L	20	17.3	87	70-130	
cis-1,3-Dichloropropene	ug/L	20	19.5	98	70-130	
Dibromochloromethane	ug/L	20	22.2	111	70-130	
Dichlorodifluoromethane	ug/L	20	10	50	33-157	
Ethylbenzene	ug/L	20	20.3	101	70-132	
Isopropylbenzene (Cumene)	ug/L	20	21.0	105	70-130	
m&p-Xylene	ug/L	40	40.1	100	70-131	
Methyl-tert-butyl ether	ug/L	20	18.6	93	48-141	
Methylene Chloride	ug/L	20	18.0	90	70-130	
o-Xylene	ug/L	20	19.1	96	70-131	
Styrene	ug/L	20	19.4	97	70-130	
Tetrachloroethene	ug/L	20	23.1	116	70-130	
Toluene	ug/L	20	20.6	103	70-130	
trans-1,2-Dichloroethene	ug/L	20	18.0	90	70-130	
trans-1,3-Dichloropropene	ug/L	20	20.6	103	70-130	
Trichloroethene	ug/L	20	21.4	107	70-130	
Trichlorofluoromethane	ug/L	20	19.8	99	50-150	
Vinyl chloride	ug/L	20	15.0	75	65-142	
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			96	70-130	
Toluene-d8 (S)	%			101	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

QC Batch: OEXT/29667 Analysis Method: EPA 8082
QC Batch Method: EPA 3510 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259007

METHOD BLANK: 1295626 Matrix: Water
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	<0.50	0.50	02/16/16 23:24	
PCB-1221 (Aroclor 1221)	ug/L	<0.50	0.50	02/16/16 23:24	
PCB-1232 (Aroclor 1232)	ug/L	<0.50	0.50	02/16/16 23:24	
PCB-1242 (Aroclor 1242)	ug/L	<0.50	0.50	02/16/16 23:24	
PCB-1248 (Aroclor 1248)	ug/L	<0.50	0.50	02/16/16 23:24	
PCB-1254 (Aroclor 1254)	ug/L	<0.50	0.50	02/16/16 23:24	
PCB-1260 (Aroclor 1260)	ug/L	<0.50	0.50	02/16/16 23:24	
Decachlorobiphenyl (S)	%	102	34-130	02/16/16 23:24	
Tetrachloro-m-xylene (S)	%	95	55-130	02/16/16 23:24	

LABORATORY CONTROL SAMPLE & LCSD: 1295627 1295628

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L		<0.50	<0.50					20	
PCB-1221 (Aroclor 1221)	ug/L		<0.50	<0.50					20	
PCB-1232 (Aroclor 1232)	ug/L		<0.50	<0.50					20	
PCB-1242 (Aroclor 1242)	ug/L		<0.50	<0.50					20	
PCB-1248 (Aroclor 1248)	ug/L		<0.50	<0.50					20	
PCB-1254 (Aroclor 1254)	ug/L		<0.50	<0.50					20	
PCB-1260 (Aroclor 1260)	ug/L	5	5.5	5.5	109	111	63-130	1	20	
Decachlorobiphenyl (S)	%				115	117	34-130			
Tetrachloro-m-xylene (S)	%				103	104	55-130			

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

QC Batch: OEXT/29666 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259007

METHOD BLANK: 1295623 Matrix: Water
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/L	<0.050	0.050	02/16/16 11:18	

LABORATORY CONTROL SAMPLE & LCSD: 1295624 1295625

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/L	1	0.83	1.0	83	101	75-115	20	20	

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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

QC Batch: WETA/32384 Analysis Method: EPA 9012
QC Batch Method: EPA 9012A Analysis Description: 9012 Cyanide
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259007

METHOD BLANK: 1295443 Matrix: Water
Associated Lab Samples: 40128259001, 40128259002, 40128259003, 40128259004, 40128259005, 40128259007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	<0.023	0.023	02/16/16 12:13	

LABORATORY CONTROL SAMPLE: 1295444

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.097	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1295445 1295446

Parameter	Units	40128145001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	<0.0068	.1	.1	0.099	0.095	94	90	90-110	4	20	

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: GCSV/14061

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Surrogate DCB could not be accurately quantified due to matrix interferences.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
S0	Surrogate recovery outside laboratory control limits.
T4	Result reported for hydrocarbons within the method-specific range that do not match pattern of laboratory standard.

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DE000372.0003 FORD TCAP
Pace Project No.: 40128259

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40128259001	**AMW-27 (20160211)**	EPA 3510	OEXT/29667	EPA 8082	GCSV/14061
40128259002	**AMW-28 (20160211)**	EPA 3510	OEXT/29667	EPA 8082	GCSV/14061
40128259003	**AMW-29 (20160212)**	EPA 3510	OEXT/29667	EPA 8082	GCSV/14061
40128259004	**AMW-30 (20160211)**	EPA 3510	OEXT/29667	EPA 8082	GCSV/14061
40128259005	**AMW-31 (20160212)**	EPA 3510	OEXT/29667	EPA 8082	GCSV/14061
40128259007	**DUP 01 (20160211)**	EPA 3510	OEXT/29667	EPA 8082	GCSV/14061
40128259001	**AMW-27 (20160211)**	WI MOD DRO	OEXT/29666	WI MOD DRO	GCSV/14057
40128259002	**AMW-28 (20160211)**	WI MOD DRO	OEXT/29666	WI MOD DRO	GCSV/14057
40128259003	**AMW-29 (20160212)**	WI MOD DRO	OEXT/29666	WI MOD DRO	GCSV/14057
40128259004	**AMW-30 (20160211)**	WI MOD DRO	OEXT/29666	WI MOD DRO	GCSV/14057
40128259005	**AMW-31 (20160212)**	WI MOD DRO	OEXT/29666	WI MOD DRO	GCSV/14057
40128259007	**DUP 01 (20160211)**	WI MOD DRO	OEXT/29666	WI MOD DRO	GCSV/14057
40128259001	**AMW-27 (20160211)**	EPA 3010	MPRP/13343	EPA 6010	ICP/11838
40128259002	**AMW-28 (20160211)**	EPA 3010	MPRP/13343	EPA 6010	ICP/11838
40128259003	**AMW-29 (20160212)**	EPA 3010	MPRP/13343	EPA 6010	ICP/11838
40128259004	**AMW-30 (20160211)**	EPA 3010	MPRP/13343	EPA 6010	ICP/11838
40128259005	**AMW-31 (20160212)**	EPA 3010	MPRP/13343	EPA 6010	ICP/11838
40128259007	**DUP 01 (20160211)**	EPA 3010	MPRP/13343	EPA 6010	ICP/11838
40128259001	**AMW-27 (20160211)**	EPA 7470	MERP/5566	EPA 7470	MERC/7790
40128259002	**AMW-28 (20160211)**	EPA 7470	MERP/5566	EPA 7470	MERC/7790
40128259003	**AMW-29 (20160212)**	EPA 7470	MERP/5566	EPA 7470	MERC/7790
40128259004	**AMW-30 (20160211)**	EPA 7470	MERP/5566	EPA 7470	MERC/7790
40128259005	**AMW-31 (20160212)**	EPA 7470	MERP/5566	EPA 7470	MERC/7790
40128259007	**DUP 01 (20160211)**	EPA 7470	MERP/5566	EPA 7470	MERC/7790
40128259001	**AMW-27 (20160211)**	EPA 8260	MSV/32234		
40128259002	**AMW-28 (20160211)**	EPA 8260	MSV/32234		
40128259003	**AMW-29 (20160212)**	EPA 8260	MSV/32234		
40128259004	**AMW-30 (20160211)**	EPA 8260	MSV/32234		
40128259005	**AMW-31 (20160212)**	EPA 8260	MSV/32234		
40128259006	**TRIP BLANK**	EPA 8260	MSV/32234		
40128259007	**DUP 01 (20160211)**	EPA 8260	MSV/32234		
40128259001	**AMW-27 (20160211)**	EPA 9012A	WETA/32384	EPA 9012	WETA/32403
40128259002	**AMW-28 (20160211)**	EPA 9012A	WETA/32384	EPA 9012	WETA/32403
40128259003	**AMW-29 (20160212)**	EPA 9012A	WETA/32384	EPA 9012	WETA/32403
40128259004	**AMW-30 (20160211)**	EPA 9012A	WETA/32384	EPA 9012	WETA/32403
40128259005	**AMW-31 (20160212)**	EPA 9012A	WETA/32384	EPA 9012	WETA/32403
40128259007	**DUP 01 (20160211)**	EPA 9012A	WETA/32384	EPA 9012	WETA/32403

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

40128259

Page: 1 of 1

Section A Required Client Information:

Company: Arcadis
Address: 430 1st Ave N
Minneapolis, MN
Email To: Jim.Ziska@arcadis.com
Phone: 612 339-9434 Fax:
Requested Due Date/TAT: 3 days

Section B Required Project Information:

Report To: Jim Ziska
Copy To: Kris Hinsky
Purchase Order No.:
Project Name: Ford TCAP
Project Number: MN000630.0001
PE 000372.0003

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MN

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	VOC 8260B (N)	PCB 8082 (N)	Cyanide 9012A Calc (N)	WI_DRO (N)	Mercury 7470A and TAL Metals (Y)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	AMW-27 (20160211) 001	WT	G	2/11/16	1453				9	2		1	5	1					X	X	X	X	X	3-40mL B, 1-250mLp G	4-1Lag AABB, 1-500mLp D
2	AMW-28 (20160211) 002	WT	G	2/11/16	1255				9	2		1	5	1					X	X	X	X	X		
3	AMW-29 (20160212) 003	WT	G	2/12/16	0930				9	2		1	5	1					X	X	X	X	X		
4	AMW-30 (20160211) 004	WT	G	2/11/16	0845				9	2		1	5	1					X	X	X	X	X		
5	AMW-31 (20160212) 005	WT	G	2/12/16	1110				9	2		1	5	1					X	X	X	X	X		
6																									
7	TRIP BLANK 006																								
8	TEMP BLANK			2/12/16																					
9	Dup 01 (20160211) ①			2/11/16	—																		3-40mL B		
10																									
11	① dup 01 added by lab per samples recieved																								
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] / Arcadis	2/12/16	1800							
	FedEx	2/13/16	1025	Katie Schramm Pace	2/13/16	1025	1.5, 1.2	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Sample Condition Upon Receipt

Pace Analytical Services, Inc.

WO# : 40128259

Project #: 40128259

Client Name: Arcadis

Courier: ☑ Fed Ex ☐ UPS ☐ Client ☐ Pace Other:

① **Tracking #:** 8043394392O2, 782369141562, 782369141573, 782369141551

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used SR-516 **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 1.5, 1.2 /Corr: 1.5, 1.2 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☑ yes ☐ no

Person examining contents: Date: 2/13/16 Initials: BH

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out: BH 2/13/16	☑Yes ☐No ☐N/A	2. 007 dup 01 added by lab per samples recieved BH 2/13/16
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7. 3 day TAT KF 2/13/16
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9. HNO_3 + NaOH bottles not ours
-Pace Containers Used:	☐Yes ☑No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☐Yes ☑No ☐N/A	12. 003 2-1LagB times are 1110 006 2-1LagB times are 0930 BH 2/13/16
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☑ HNO3 ☐ H2SO4 ☑ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. KF 2/13/16 (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes ☐No ☐N/A	001-005 1-500mlP^D pH=3, after adding 4 pumps 1.25 mL HNO_3 lot # 124118 001-005 1-500mlP^D pH≤2 KF 2/13/16
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☑Yes ☐No	Initial when completed BH / Lab Std #ID of preservative 124118 / Date/Time: 2/13/16
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☐N/A	14.
Trip Blank Present:	☐Yes ☐No ☐N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution: all vials sealed with ZnAct sticker but label preserv. says HCl KF 2/13/16

① 782369141551

Project Manager Review: LW **Date:** 2/15/16

February 17, 2016

Rob Ellis
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

CADENA project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: DE000372.0003
Laboratory: PACE Laboratories Inc. - Green Bay
Laboratory submittal: 40128259
Sample date: 2016-02-11 2016-02-12
Report received by CADENA: 2016-02-17
Initial Data Verification completed by CADENA: 2016-02-17

The following significant QC anomalies were identified during verification of the analytical report:

PCB surrogate recoveries were outliers biased low and less than 10% for 1 out of 2 surrogates in client samples -001, -003, -005 and -007. PCB results for these samples should be considered to be unusable and qualified with R flags if non-detect and estimated and J flags if detected.

The following minor QC exceptions or missing information were noted:

Metals sample -001 MS/MSD recoveries were outliers biased high for aluminum. Client sample aluminum results should be considered to be estimated and qualified with a J flag. MS/MSD recoveries for calcium and sodium were no considered to be statistically reliable so were not used to qualify results due to elevated levels of target analyte in the original sample matrix relative to the amount spiked (4X rule).

WI-DRO samples and batch QC did not include surrogate or MS/MSD recovery data.

PCB and GCMS VOC QC batches did not include MS recovery data.

GCMS VOC trip blank was non-detect for all target analytes.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

6 Water sample(s) were analyzed for GCMS VOC, PCB, GC Other, Metals and General Chemistry parameter(s). 1 Trip blank was analyzed for GCMS VOC parameters.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Qualifiers added during verification have been added to the electronic data which is available for download from the CADENA CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at http://clms.cadenaco.com/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

CADENA Project ID: E200572
Laboratory: PACE Laboratories Inc.-Green Bay
Laboratory Submittal: 40128259

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics bg GCMS	Polychlorinated Biphenyls by GCECD	Wisconsin DRO Method	Metals by ICP Spectroscopy(D)	Mercury (Manual Cold Vapor)(D)	Total & Amenable Cyanides
40128259001	AMW-27 (20160211)	2/11/2016	2:53:00	X	X	X	X	X	X
40128259002	AMW-28 (20160211)	2/11/2016	12:55:00	X	X	X	X	X	X
40128259003	AMW-29 (20160212)	2/12/2016	9:30:00	X	X	X	X	X	X
40128259004	AMW-30 (20160211)	2/11/2016	8:45:00	X	X	X	X	X	X
40128259005	AMW-31 (20160212)	2/12/2016	11:10:00	X	X	X	X	X	X
40128259006	TRIP BLANK	2/12/2016	12:00:00	X					
40128259007	DUP 01 (20160211)	2/11/2016	12:00:00	X	X	X	X	X	X

Qualified Results Summary

CADENA Project ID: E200572
Laboratory: PACE Laboratories Inc. - Green Bay
Laboratory Submittal: 40128259

			Sample Name:	AMW-27 (20160211)				AMW-29 (20160212)				AMW-31 (20160212)				DUP 01 (20160211)			
			Lab Sample ID:	40128259001				40128259003				40128259005				40128259007			
			Sample Date:	2/11/2016				2/12/2016				2/12/2016				2/11/2016			
	Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
Pest & PCB																			
	OSW-8082																		
	PCB, Total	1336-36-3		ND	0.47	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R
	PCB-1016 (Aroclor 1016)	12674-11-2		ND	0.47	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R
	PCB-1221 (Aroclor 1221)	11104-28-2		ND	0.47	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R
	PCB-1232 (Aroclor 1232)	11141-16-5		ND	0.47	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R
	PCB-1242 (Aroclor 1242)	53469-21-9		ND	0.47	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R
	PCB-1248 (Aroclor 1248)	12672-29-6		ND	0.47	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R
	PCB-1254 (Aroclor 1254)	11097-69-1		ND	0.47	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R
	PCB-1260 (Aroclor 1260)	11096-82-5		ND	0.47	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R	ND	0.48	ug/l	R
Metals																			
	OSW-6010																		
	Aluminum, Dissolved - Dissolved	7429-90-5		4810	500	ug/l	J												

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: PACE Laboratories Inc. - Green Bay
Laboratory Submittal: 40128259

		Sample Name:	AMW-27 (20160211)				AMW-28 (20160211)				AMW-29 (20160212)			
		Lab Sample ID:	40128259001				40128259002				40128259003			
		Sample Date:	2/11/2016				2/11/2016				2/12/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC														
OSW-8260														
	1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichlorotrifluoroethane	76-13-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichlorobenzene	87-61-6	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trichlorobenzene	120-82-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dibromo-3-chloropropane	96-12-8	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	1,2-Dibromoethane (EDB)	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Butanone (MEK)	78-93-3	ND	20.0	ug/l	---	ND	20.0	ug/l	---	ND	20.0	ug/l	---
	2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	4-Methyl-2-pentanone (MIBK)	108-10-1	ND	20.0	ug/l	---	ND	20.0	ug/l	---	ND	20.0	ug/l	---
	Acetone	67-64-1	ND	20.0	ug/l	---	ND	20.0	ug/l	---	ND	20.0	ug/l	---
	Allyl chloride	107-05-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromoform	75-25-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Bromomethane	74-83-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroform	67-66-3	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,3-Dichloropropene	10061-01-5	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Dibromochloromethane	124-48-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Diethyl ether (Ethyl ether)	60-29-7	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Hexachloro-1,3-butadiene	87-68-3	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Isopropylbenzene (Cumene)	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	m&p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Methyl-tert-butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	n-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Naphthalene	91-20-3	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	sec-Butylbenzene	135-98-8	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,3-Dichloropropene	10061-02-6	ND	20.0	ug/l	---	ND	20.0	ug/l	---	ND	20.0	ug/l	---
	Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	11.4	1.0	ug/l	---
	Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: PACE Laboratories Inc. - Green Bay
Laboratory Submittal: 40128259

		Sample Name:	AMW-27 (20160211)				AMW-28 (20160211)				AMW-29 (20160212)			
		Lab Sample ID:	40128259001				40128259002				40128259003			
		Sample Date:	2/11/2016				2/11/2016				2/12/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
Pest & PCB														
OSW-8082														
	PCB, Total	1336-36-3	ND	0.47	ug/l	R	ND	0.47	ug/l	---	ND	0.48	ug/l	R
	PCB-1016 (Aroclor 1016)	12674-11-2	ND	0.47	ug/l	R	ND	0.47	ug/l	---	ND	0.48	ug/l	R
	PCB-1221 (Aroclor 1221)	11104-28-2	ND	0.47	ug/l	R	ND	0.47	ug/l	---	ND	0.48	ug/l	R
	PCB-1232 (Aroclor 1232)	11141-16-5	ND	0.47	ug/l	R	ND	0.47	ug/l	---	ND	0.48	ug/l	R
	PCB-1242 (Aroclor 1242)	53469-21-9	ND	0.47	ug/l	R	ND	0.47	ug/l	---	ND	0.48	ug/l	R
	PCB-1248 (Aroclor 1248)	12672-29-6	ND	0.47	ug/l	R	ND	0.47	ug/l	---	ND	0.48	ug/l	R
	PCB-1254 (Aroclor 1254)	11097-69-1	ND	0.47	ug/l	R	ND	0.47	ug/l	---	ND	0.48	ug/l	R
	PCB-1260 (Aroclor 1260)	11096-82-5	ND	0.47	ug/l	R	ND	0.47	ug/l	---	ND	0.48	ug/l	R
GC Other														
PUBL-SW-141														
	Diesel Range Organics	E-1004	0.91	0.048	mg/l	---	0.69	0.048	mg/l	---	1.0	0.048	mg/l	---
Metals														
OSW-6010														
	Aluminum, Dissolved - Dissolved	7429-90-5	4810	500	ug/l	J	1080	500	ug/l	---	14200	500	ug/l	---
	Antimony, Dissolved - Dissolved	7440-36-0	ND	20.0	ug/l	---	ND	20.0	ug/l	---	ND	20.0	ug/l	---
	Arsenic, Dissolved - Dissolved	7440-38-2	ND	20.0	ug/l	---	ND	20.0	ug/l	---	ND	20.0	ug/l	---
	Barium, Dissolved - Dissolved	7440-39-3	166	5.0	ug/l	---	108	5.0	ug/l	---	191	5.0	ug/l	---
	Beryllium, Dissolved - Dissolved	7440-41-7	ND	4.0	ug/l	---	ND	4.0	ug/l	---	ND	4.0	ug/l	---
	Cadmium, Dissolved - Dissolved	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Calcium, Dissolved - Dissolved	7440-70-2	74300	1000	ug/l	---	80600	1000	ug/l	---	76200	1000	ug/l	---
	Chromium, Dissolved - Dissolved	7440-47-3	ND	10.0	ug/l	---	ND	10.0	ug/l	---	ND	10.0	ug/l	---
	Cobalt, Dissolved - Dissolved	7440-48-4	ND	5.0	ug/l	---	ND	5.0	ug/l	---	67.0	5.0	ug/l	---
	Copper, Dissolved - Dissolved	7440-50-8	44.0	10.0	ug/l	---	60.9	10.0	ug/l	---	130	10.0	ug/l	---
	Iron, Dissolved - Dissolved	7439-89-6	5110	100	ug/l	---	2870	100	ug/l	---	3230	100	ug/l	---
	Lead, Dissolved - Dissolved	7439-92-1	ND	12.0	ug/l	---	ND	12.0	ug/l	---	ND	12.0	ug/l	---
	Magnesium, Dissolved - Dissolved	7439-95-4	18600	1000	ug/l	---	19200	1000	ug/l	---	22500	1000	ug/l	---
	Manganese, Dissolved - Dissolved	7439-96-5	256	5.0	ug/l	---	533	5.0	ug/l	---	1400	5.0	ug/l	---
	Nickel, Dissolved - Dissolved	7440-02-0	31.6	10.0	ug/l	---	47.6	10.0	ug/l	---	328	10.0	ug/l	---
	Potassium, Dissolved - Dissolved	7440-09-7	3480	1000	ug/l	---	2760	1000	ug/l	---	5730	1000	ug/l	---
	Selenium, Dissolved - Dissolved	7782-49-2	ND	20.0	ug/l	---	ND	20.0	ug/l	---	ND	20.0	ug/l	---
	Silver, Dissolved - Dissolved	7440-22-4	ND	10.0	ug/l	---	ND	10.0	ug/l	---	ND	10.0	ug/l	---
	Sodium, Dissolved - Dissolved	7440-23-5	266000	10000	ug/l	---	198000	10000	ug/l	---	313000	10000	ug/l	---
	Thallium, Dissolved - Dissolved	7440-28-0	ND	40.0	ug/l	---	ND	40.0	ug/l	---	ND	40.0	ug/l	---
	Vanadium, Dissolved - Dissolved	7440-62-2	11.8	5.0	ug/l	---	ND	5.0	ug/l	---	7.6	5.0	ug/l	---
	Zinc, Dissolved - Dissolved	7440-66-6	ND	40.0	ug/l	---	42.3	40.0	ug/l	---	396	40.0	ug/l	---
OSW-7470														
	Mercury, Dissolved - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---	ND	0.20	ug/l	---
General Chemistry														
OSW-9012														
	Cyanide	57-12-5	ND	0.023	mg/l	---	ND	0.023	mg/l	---	ND	0.023	mg/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: PACE Laboratories Inc. - Green Bay
Laboratory Submittal: 40128259

		Sample Name:	AMW-30 (20160211)				AMW-31 (20160212)				TRIP BLANK			
		Lab Sample ID:	40128259004				40128259005				40128259006			
		Sample Date:	2/11/2016				2/12/2016				2/12/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC														
OSW-8260														
	1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichlorotrifluoroethane	76-13-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichlorobenzene	87-61-6	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trichlorobenzene	120-82-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dibromo-3-chloropropane	96-12-8	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	1,2-Dibromoethane (EDB)	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Butanone (MEK)	78-93-3	ND	20.0	ug/l	---	ND	20.0	ug/l	---	ND	20.0	ug/l	---
	2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	4-Methyl-2-pentanone (MIBK)	108-10-1	ND	20.0	ug/l	---	ND	20.0	ug/l	---	ND	20.0	ug/l	---
	Acetone	67-64-1	ND	20.0	ug/l	---	ND	20.0	ug/l	---	ND	20.0	ug/l	---
	Allyl chloride	107-05-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromoform	75-25-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Bromomethane	74-83-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroform	67-66-3	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Chloromethane	74-87-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,3-Dichloropropene	10061-01-5	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Dibromochloromethane	124-48-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Diethyl ether (Ethyl ether)	60-29-7	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Hexachloro-1,3-butadiene	87-68-3	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Isopropylbenzene (Cumene)	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	m&p-Xylene	179601-23-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Methyl-tert-butyl ether	1634-04-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Methylene Chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	n-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Naphthalene	91-20-3	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	sec-Butylbenzene	135-98-8	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,3-Dichloropropene	10061-02-6	ND	20.0	ug/l	---	ND	20.0	ug/l	---	ND	20.0	ug/l	---
	Trichloroethene	79-01-6	24.5	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: PACE Laboratories Inc. - Green Bay
Laboratory Submittal: 40128259

		Sample Name:	AMW-30 (20160211)				AMW-31 (20160212)				TRIP BLANK			
		Lab Sample ID:	40128259004				40128259005				40128259006			
		Sample Date:	2/11/2016				2/12/2016				2/12/2016			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
Pest & PCB														
OSW-8082														
	PCB, Total	1336-36-3	ND	0.47	ug/l	---	ND	0.48	ug/l	R				
	PCB-1016 (Aroclor 1016)	12674-11-2	ND	0.47	ug/l	---	ND	0.48	ug/l	R				
	PCB-1221 (Aroclor 1221)	11104-28-2	ND	0.47	ug/l	---	ND	0.48	ug/l	R				
	PCB-1232 (Aroclor 1232)	11141-16-5	ND	0.47	ug/l	---	ND	0.48	ug/l	R				
	PCB-1242 (Aroclor 1242)	53469-21-9	ND	0.47	ug/l	---	ND	0.48	ug/l	R				
	PCB-1248 (Aroclor 1248)	12672-29-6	ND	0.47	ug/l	---	ND	0.48	ug/l	R				
	PCB-1254 (Aroclor 1254)	11097-69-1	ND	0.47	ug/l	---	ND	0.48	ug/l	R				
	PCB-1260 (Aroclor 1260)	11096-82-5	ND	0.47	ug/l	---	ND	0.48	ug/l	R				
GC Other														
PUBL-SW-141														
	Diesel Range Organics	E-1004	0.22	0.047	mg/l	---	0.41	0.048	mg/l	---				
Metals														
OSW-6010														
	Aluminum, Dissolved - Dissolved	7429-90-5	9500	500	ug/l	---	ND	500	ug/l	---				
	Antimony, Dissolved - Dissolved	7440-36-0	ND	20.0	ug/l	---	ND	20.0	ug/l	---				
	Arsenic, Dissolved - Dissolved	7440-38-2	ND	20.0	ug/l	---	ND	20.0	ug/l	---				
	Barium, Dissolved - Dissolved	7440-39-3	158	5.0	ug/l	---	35.3	5.0	ug/l	---				
	Beryllium, Dissolved - Dissolved	7440-41-7	ND	4.0	ug/l	---	ND	4.0	ug/l	---				
	Cadmium, Dissolved - Dissolved	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Calcium, Dissolved - Dissolved	7440-70-2	108000	1000	ug/l	---	38900	1000	ug/l	---				
	Chromium, Dissolved - Dissolved	7440-47-3	ND	10.0	ug/l	---	ND	10.0	ug/l	---				
	Cobalt, Dissolved - Dissolved	7440-48-4	50.6	5.0	ug/l	---	ND	5.0	ug/l	---				
	Copper, Dissolved - Dissolved	7440-50-8	120	10.0	ug/l	---	12.9	10.0	ug/l	---				
	Iron, Dissolved - Dissolved	7439-89-6	1410	100	ug/l	---	433	100	ug/l	---				
	Lead, Dissolved - Dissolved	7439-92-1	ND	12.0	ug/l	---	ND	12.0	ug/l	---				
	Magnesium, Dissolved - Dissolved	7439-95-4	37000	1000	ug/l	---	11600	1000	ug/l	---				
	Manganese, Dissolved - Dissolved	7439-96-5	802	5.0	ug/l	---	286	5.0	ug/l	---				
	Nickel, Dissolved - Dissolved	7440-02-0	252	10.0	ug/l	---	ND	10.0	ug/l	---				
	Potassium, Dissolved - Dissolved	7440-09-7	11600	1000	ug/l	---	11700	1000	ug/l	---				
	Selenium, Dissolved - Dissolved	7782-49-2	ND	20.0	ug/l	---	ND	20.0	ug/l	---				
	Silver, Dissolved - Dissolved	7440-22-4	ND	10.0	ug/l	---	ND	10.0	ug/l	---				
	Sodium, Dissolved - Dissolved	7440-23-5	222000	10000	ug/l	---	162000	10000	ug/l	---				
	Thallium, Dissolved - Dissolved	7440-28-0	ND	40.0	ug/l	---	ND	40.0	ug/l	---				
	Vanadium, Dissolved - Dissolved	7440-62-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Zinc, Dissolved - Dissolved	7440-66-6	133	40.0	ug/l	---	ND	40.0	ug/l	---				
OSW-7470														
	Mercury, Dissolved - Dissolved	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---				
General Chemistry														
OSW-9012														
	Cyanide	57-12-5	ND	0.023	mg/l	---	ND	0.023	mg/l	---				

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: PACE Laboratories Inc. - Green Bay
Laboratory Submittal: 40128259

Sample Name: DUP 01 (20160211)
Lab Sample ID: 40128259007
Sample Date: 2/11/2016

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC					
OSW-8260					
1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---
1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---
1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	5.0	ug/l	---
1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---
1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---
1,2,3-Trichlorobenzene	87-61-6	ND	5.0	ug/l	---
1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---
1,2,4-Trichlorobenzene	120-82-1	ND	5.0	ug/l	---
1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---
1,2-Dibromo-3-chloropropane	96-12-8	ND	5.0	ug/l	---
1,2-Dibromoethane (EDB)	106-93-4	ND	1.0	ug/l	---
1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---
1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---
1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---
1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---
1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---
1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---
1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---
2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---
2-Butanone (MEK)	78-93-3	ND	20.0	ug/l	---
2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---
4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---
4-Methyl-2-pentanone (MIBK)	108-10-1	ND	20.0	ug/l	---
Acetone	67-64-1	ND	20.0	ug/l	---
Allyl chloride	107-05-1	ND	5.0	ug/l	---
Benzene	71-43-2	ND	1.0	ug/l	---
Bromobenzene	108-86-1	ND	1.0	ug/l	---
Bromochloromethane	74-97-5	ND	1.0	ug/l	---
Bromodichloromethane	75-27-4	ND	1.0	ug/l	---
Bromoform	75-25-2	ND	5.0	ug/l	---
Bromomethane	74-83-9	ND	5.0	ug/l	---
Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---
Chlorobenzene	108-90-7	ND	1.0	ug/l	---
Chloroethane	75-00-3	ND	1.0	ug/l	---
Chloroform	67-66-3	5.4	5.0	ug/l	---
Chloromethane	74-87-3	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	ug/l	---
Dibromochloromethane	124-48-1	ND	5.0	ug/l	---
Dibromomethane	74-95-3	ND	1.0	ug/l	---
Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---
Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---
Diethyl ether (Ethyl ether)	60-29-7	ND	5.0	ug/l	---
Ethylbenzene	100-41-4	ND	1.0	ug/l	---
Hexachloro-1,3-butadiene	87-68-3	ND	5.0	ug/l	---
Isopropylbenzene (Cumene)	98-82-8	ND	1.0	ug/l	---
m&p-Xylene	179601-23-1	ND	2.0	ug/l	---
Methyl-tert-butyl ether	1634-04-4	ND	1.0	ug/l	---
Methylene Chloride	75-09-2	ND	1.0	ug/l	---
n-Butylbenzene	104-51-8	ND	1.0	ug/l	---
n-Propylbenzene	103-65-1	ND	1.0	ug/l	---
Naphthalene	91-20-3	ND	5.0	ug/l	---
o-Xylene	95-47-6	ND	1.0	ug/l	---
p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---
sec-Butylbenzene	135-98-8	ND	5.0	ug/l	---
Styrene	100-42-5	ND	1.0	ug/l	---
tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---
Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---
Toluene	108-88-3	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---
trans-1,3-Dichloropropene	10061-02-6	ND	20.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---
Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---

Analytical Results Summary

CADENA Project ID: E200572
Laboratory: PACE Laboratories Inc. - Green Bay
Laboratory Submittal: 40128259

Sample Name: DUP 01 (20160211)
Lab Sample ID: 40128259007
Sample Date: 2/11/2016

Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier
Pest & PCB					
OSW-8082					
PCB, Total	1336-36-3	ND	0.48	ug/l	R
PCB-1016 (Aroclor 1016)	12674-11-2	ND	0.48	ug/l	R
PCB-1221 (Aroclor 1221)	11104-28-2	ND	0.48	ug/l	R
PCB-1232 (Aroclor 1232)	11141-16-5	ND	0.48	ug/l	R
PCB-1242 (Aroclor 1242)	53469-21-9	ND	0.48	ug/l	R
PCB-1248 (Aroclor 1248)	12672-29-6	ND	0.48	ug/l	R
PCB-1254 (Aroclor 1254)	11097-69-1	ND	0.48	ug/l	R
PCB-1260 (Aroclor 1260)	11096-82-5	ND	0.48	ug/l	R
GC Other					
PUBL-SW-141					
Diesel Range Organics	E-1004	1.2	0.048	mg/l	---
Metals					
OSW-6010					
Aluminum, Dissolved - Dissolved	7429-90-5	3880	500	ug/l	---
Antimony, Dissolved - Dissolved	7440-36-0	ND	20.0	ug/l	---
Arsenic, Dissolved - Dissolved	7440-38-2	ND	20.0	ug/l	---
Barium, Dissolved - Dissolved	7440-39-3	168	5.0	ug/l	---
Beryllium, Dissolved - Dissolved	7440-41-7	ND	4.0	ug/l	---
Cadmium, Dissolved - Dissolved	7440-43-9	ND	5.0	ug/l	---
Calcium, Dissolved - Dissolved	7440-70-2	76800	1000	ug/l	---
Chromium, Dissolved - Dissolved	7440-47-3	ND	10.0	ug/l	---
Cobalt, Dissolved - Dissolved	7440-48-4	ND	5.0	ug/l	---
Copper, Dissolved - Dissolved	7440-50-8	42.0	10.0	ug/l	---
Iron, Dissolved - Dissolved	7439-89-6	3960	100	ug/l	---
Lead, Dissolved - Dissolved	7439-92-1	ND	12.0	ug/l	---
Magnesium, Dissolved - Dissolved	7439-95-4	19100	1000	ug/l	---
Manganese, Dissolved - Dissolved	7439-96-5	251	5.0	ug/l	---
Nickel, Dissolved - Dissolved	7440-02-0	31.1	10.0	ug/l	---
Potassium, Dissolved - Dissolved	7440-09-7	3460	1000	ug/l	---
Selenium, Dissolved - Dissolved	7782-49-2	ND	20.0	ug/l	---
Silver, Dissolved - Dissolved	7440-22-4	ND	10.0	ug/l	---
Sodium, Dissolved - Dissolved	7440-23-5	275000	10000	ug/l	---
Thallium, Dissolved - Dissolved	7440-28-0	ND	40.0	ug/l	---
Vanadium, Dissolved - Dissolved	7440-62-2	10.5	5.0	ug/l	---
Zinc, Dissolved - Dissolved	7440-66-6	ND	40.0	ug/l	---
OSW-7470					
Mercury, Dissolved - Dissolved	7439-97-6	ND	0.20	ug/l	---
General Chemistry					
OSW-9012					
Cyanide	57-12-5	ND	0.023	mg/l	---

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. MN000613.0003

FORD E200572

Lot #: A0K080453

Rebecca Forbort

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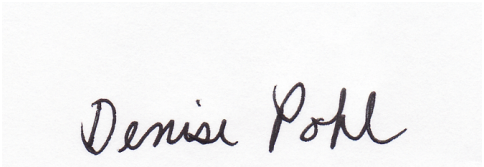
Suite 720
Minneapolis, MN 55401

TESTAMERICA LABORATORIES, INC.



Approved for release.
Denise Pohl
Project Manager
11/29/2010 3:46 PM

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November 29, 2010

CASE NARRATIVE

A0K080453

The following report contains the analytical results for five water samples and one quality control sample submitted to TestAmerica North Canton by ARCADIS U.S., Inc. from the FORD E200572 Site, project number MN000613.0003. The samples were received November 06, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

All parameters were evaluated to the method detection limit and include qualified results where applicable.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were1.5 and 2.8°C.

See TestAmerica's Cooler Receipt Form for additional information.

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 0314042. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

GASOLINE RANGE ORGANICS

The analytical results met the requirements of the laboratory's QA/QC program.

DIESEL RANGE ORGANICS

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

CASE NARRATIVE (continued)

DIESEL RANGE ORGANICS (continued)

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 0314041. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A0K080453

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SW-01 11/04/10 09:40 001				
Barium	53.4 B	200	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	0.90 J	10	ug/L	SW846 8270C
Acetone	1.8 J	10	ug/L	SW846 8260B
Chloromethane	0.51 J	1.0	ug/L	SW846 8260B
Hardness, as CaCO3	200	5	mg/L	SM18 2340C
SW-02 11/04/10 10:20 002				
Barium	51.3 B	200	ug/L	SW846 6010B
Hardness, as CaCO3	190	5	mg/L	SM18 2340C
SW-03 11/04/10 11:00 003				
Barium	54.0 B	200	ug/L	SW846 6010B
Hardness, as CaCO3	180	5	mg/L	SM18 2340C
SW-04 11/04/10 11:50 004				
Diesel Range Organics	0.086 J	0.10	mg/L	WI-DRO DRO
Barium	55.0 B	200	ug/L	SW846 6010B
Butyl benzyl phthalate	1.0 J	10	ug/L	SW846 8270C
Acetone	2.6 J	10	ug/L	SW846 8260B
Chloromethane	0.31 J	1.0	ug/L	SW846 8260B
Hardness, as CaCO3	190	5	mg/L	SM18 2340C
OUTFALL-01 11/04/10 12:40 005				
Arsenic	5.9 B	10.0	ug/L	SW846 6010B
Barium	132 B	200	ug/L	SW846 6010B
bis(2-Ethylhexyl) phthalate	1.4 J	10	ug/L	SW846 8270C
Caprolactam	6.2 J	10	ug/L	SW846 8270C
Acetone	3.2 J	10	ug/L	SW846 8260B
sec-Butylbenzene	0.18 J	1.0	ug/L	SW846 8260B
Cyclohexane	0.45 J	1.0	ug/L	SW846 8260B
Ethylbenzene	0.24 J	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.36 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	0.62 J	1.0	ug/L	SW846 8260B

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EXECUTIVE SUMMARY - Detection Highlights

A0K080453

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
OUTFALL-01 11/04/10 12:40 005				
n-Propylbenzene	0.37 J	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	0.63 J	2.0	ug/L	SW846 8260B
o-Xylene	0.24 J	1.0	ug/L	SW846 8260B
Hardness, as CaCO3	570	25	mg/L	SM18 2340C
TB-02(20101104) 11/04/10 006				
Acetone	7.5 J	10	ug/L	SW846 8260B
Methyl ethyl ketone	0.62 J	10	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A0K080453

PARAMETER	ANALYTICAL METHOD
Diesel Range Organics	WI-DRO DRO
Gasoline Range Organics	WI-GRO GRO
Hardness, Total	SM18 2340C
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

WI-DRO "Modified DRO: Method for Determining Diesel Range Organics", Wisconsin DNR, PUBL-SW-141, September, 1995.

WI-GRO "Modified GRO: Method for Determining Gasoline Range Organics", Wisconsin DNR, PUBL-SW-140, September, 1995.

SAMPLE SUMMARY

A0K080453

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L9PJF	001	SW-01	11/04/10	09:40
L9PJK	002	SW-02	11/04/10	10:20
L9PJN	003	SW-03	11/04/10	11:00
L9PJT	004	SW-04	11/04/10	11:50
L9PJX	005	OUTFALL-01	11/04/10	12:40
L9PJ2	006	TB-02(20101104)	11/04/10	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS U.S., Inc.

Client Sample ID: SW-01

GC/MS Volatiles

Lot-Sample #...: A0K080453-001 **Work Order #...:** L9PJF1AA **Matrix.....:** WG
Date Sampled...: 11/04/10 09:40 **Date Received..:** 11/06/10
Prep Date.....: 11/17/10 **Analysis Date..:** 11/17/10
Prep Batch #...: 0328206
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.8 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	**0.51 J**	**1.0**	**ug/L**	**0.30**
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: SW-01

GC/MS Volatiles

Lot-Sample #...: A0K080453-001 **Work Order #...:** L9PJF1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(75 - 121)
1,2-Dichloroethane-d4	101	(63 - 129)
Toluene-d8	90	(74 - 115)
4-Bromofluorobenzene	77	(66 - 117)

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ARCADIS U.S., Inc.

Client Sample ID: SW-01

GC/MS Volatiles

Lot-Sample #...: A0K080453-001 **Work Order #...:** L9PJF1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: SW-01

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-001 **Work Order #...:** L9PJF1AC **Matrix.....:** WG
Date Sampled...: 11/04/10 09:40 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/13/10
Prep Batch #...: 0314042
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.10
Acenaphthylene	ND	10	ug/L	0.10
Acetophenone	ND	10	ug/L	0.34
Anthracene	ND	10	ug/L	0.10
Atrazine	ND	10	ug/L	0.34
Benzaldehyde	ND	10	ug/L	0.39
Benzo(a)anthracene	ND	10	ug/L	0.10
Benzo(b)fluoranthene	ND	10	ug/L	0.10
Benzo(k)fluoranthene	ND	10	ug/L	0.10
Benzo(ghi)perylene	ND	10	ug/L	0.10
Benzo(a)pyrene	ND	10	ug/L	0.10
1,1'-Biphenyl	ND	10	ug/L	0.80
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.32
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.10
bis(2-Ethylhexyl) phthalate	**0.90 J**	**10**	**ug/L**	**0.80**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.80
Butyl benzyl phthalate	ND	10	ug/L	0.80
Caprolactam	ND	10	ug/L	0.80
Carbazole	ND	10	ug/L	0.28
4-Chloroaniline	ND	10	ug/L	0.80
4-Chloro-3-methylphenol	ND	10	ug/L	0.80
2-Chloronaphthalene	ND	10	ug/L	0.10
2-Chlorophenol	ND	10	ug/L	0.29
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.30
Chrysene	ND	10	ug/L	0.10
Dibenz(a,h)anthracene	ND	10	ug/L	0.10
Dibenzofuran	ND	10	ug/L	0.10
Di-n-butyl phthalate	ND	10	ug/L	0.67
3,3'-Dichlorobenzidine	ND	50	ug/L	0.37
2,4-Dichlorophenol	ND	10	ug/L	0.80
Diethyl phthalate	ND	10	ug/L	0.60
2,4-Dimethylphenol	ND	10	ug/L	0.80
Dimethyl phthalate	ND	10	ug/L	0.29
4,6-Dinitro-2-methylphenol	ND	50	ug/L	2.4

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ARCADIS U.S., Inc.

Client Sample ID: SW-01

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-001 **Work Order #...:** L9PJF1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	2.4
2,4-Dinitrotoluene	ND	10	ug/L	0.27
2,6-Dinitrotoluene	ND	10	ug/L	0.80
Di-n-octyl phthalate	ND	10	ug/L	0.80
Fluoranthene	ND	10	ug/L	0.10
Fluorene	ND	10	ug/L	0.10
Hexachlorobenzene	ND	10	ug/L	0.10
Hexachlorobutadiene	ND	10	ug/L	0.27
Hexachlorocyclopenta-diene	ND	50	ug/L	0.80
Hexachloroethane	ND	10	ug/L	0.80
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.10
Isophorone	ND	10	ug/L	0.27
2-Methylnaphthalene	ND	10	ug/L	0.10
2-Methylphenol	ND	10	ug/L	0.80
4-Methylphenol	ND	10	ug/L	0.80
Naphthalene	ND	10	ug/L	0.10
2-Nitroaniline	ND	50	ug/L	0.80
3-Nitroaniline	ND	50	ug/L	0.28
4-Nitroaniline	ND	50	ug/L	0.80
Nitrobenzene	ND	10	ug/L	0.040
2-Nitrophenol	ND	10	ug/L	0.28
4-Nitrophenol	ND	50	ug/L	2.4
N-Nitrosodiphenylamine	ND	10	ug/L	0.31
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.80
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	0.40
Pentachlorophenol	ND	10	ug/L	2.4
Phenanthrene	ND	10	ug/L	0.10
Phenol	ND	10	ug/L	0.60
Pyrene	ND	10	ug/L	0.10
2,4,5-Trichloro-phenol	ND	10	ug/L	0.30
2,4,6-Trichloro-phenol	ND	10	ug/L	0.80

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	51	(27 - 111)
2-Fluorobiphenyl	55	(28 - 110)
Terphenyl-d14	72	(37 - 119)
Phenol-d5	48	(10 - 110)
2-Fluorophenol	22	(10 - 110)
2,4,6-Tribromophenol	63	(22 - 120)

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ARCADIS U.S., Inc.

Client Sample ID: SW-01

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-001 **Work Order #...:** L9PJF1AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: SW-01

GC Volatiles

Lot-Sample #...: A0K080453-001 **Work Order #...:** L9PJF1AD **Matrix.....:** WG
Date Sampled...: 11/04/10 09:40 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/10/10
Prep Batch #...: 0315169
Dilution Factor: 1 **Method.....:** WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

ARCADIS U.S., Inc.

Client Sample ID: SW-01

GC Semivolatiles

Lot-Sample #...: A0K080453-001 **Work Order #...:** L9PJF1AE **Matrix.....:** WG
Date Sampled...: 11/04/10 09:40 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/12/10
Prep Batch #...: 0314041
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	ND	0.10	mg/L	0.016

ARCADIS U.S., Inc.

Client Sample ID: SW-01

TOTAL Metals

Lot-Sample #...: A0K080453-001 **Matrix.....:** WG
Date Sampled...: 11/04/10 09:40 **Date Received..:** 11/06/10

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0313014						
Arsenic	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJF1AG
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**53.4 B**	**200**	**ug/L**	**SW846 6010B**	**11/09-11/11/10**	**L9PJF1AK**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJF1AL
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJF1AH
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJF1AM
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJF1AJ
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJF1AN
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	11/09/10	L9PJF1AF
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: SW-01

General Chemistry

Lot-Sample #...: A0K080453-001 **Work Order #...:** L9PJF **Matrix.....:** WG
Date Sampled...: 11/04/10 09:40 **Date Received..:** 11/06/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3	**200**	**5**	**mg/L**	**SM18 2340C**	**11/17/10**	**0321178**

Dilution Factor: 1 MDL.....: 3

ARCADIS U.S., Inc.

Client Sample ID: SW-02

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-002 **Work Order #...:** L9PJK1AA **Matrix.....:** WG
Date Sampled...: 11/04/10 10:20 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/13/10
Prep Batch #...: 0314042
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.10
Acenaphthylene	ND	10	ug/L	0.10
Acetophenone	ND	10	ug/L	0.34
Anthracene	ND	10	ug/L	0.10
Atrazine	ND	10	ug/L	0.34
Benzaldehyde	ND	10	ug/L	0.39
Benzo(a)anthracene	ND	10	ug/L	0.10
Benzo(b)fluoranthene	ND	10	ug/L	0.10
Benzo(k)fluoranthene	ND	10	ug/L	0.10
Benzo(ghi)perylene	ND	10	ug/L	0.10
Benzo(a)pyrene	ND	10	ug/L	0.10
1,1'-Biphenyl	ND	10	ug/L	0.80
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.32
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.10
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.80
4-Bromophenyl phenyl ether	ND	10	ug/L	0.80
Butyl benzyl phthalate	ND	10	ug/L	0.80
Caprolactam	ND	10	ug/L	0.80
Carbazole	ND	10	ug/L	0.28
4-Chloroaniline	ND	10	ug/L	0.80
4-Chloro-3-methylphenol	ND	10	ug/L	0.80
2-Chloronaphthalene	ND	10	ug/L	0.10
2-Chlorophenol	ND	10	ug/L	0.29
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.30
Chrysene	ND	10	ug/L	0.10
Dibenz(a,h)anthracene	ND	10	ug/L	0.10
Dibenzofuran	ND	10	ug/L	0.10
Di-n-butyl phthalate	ND	10	ug/L	0.67
3,3'-Dichlorobenzidine	ND	50	ug/L	0.37
2,4-Dichlorophenol	ND	10	ug/L	0.80
Diethyl phthalate	ND	10	ug/L	0.60
2,4-Dimethylphenol	ND	10	ug/L	0.80
Dimethyl phthalate	ND	10	ug/L	0.29
4,6-Dinitro-2-methylphenol	ND	50	ug/L	2.4

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ARCADIS U.S., Inc.

Client Sample ID: SW-02

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-002 **Work Order #...:** L9PJK1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	2.4
2,4-Dinitrotoluene	ND	10	ug/L	0.27
2,6-Dinitrotoluene	ND	10	ug/L	0.80
Di-n-octyl phthalate	ND	10	ug/L	0.80
Fluoranthene	ND	10	ug/L	0.10
Fluorene	ND	10	ug/L	0.10
Hexachlorobenzene	ND	10	ug/L	0.10
Hexachlorobutadiene	ND	10	ug/L	0.27
Hexachlorocyclopenta-diene	ND	50	ug/L	0.80
Hexachloroethane	ND	10	ug/L	0.80
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.10
Isophorone	ND	10	ug/L	0.27
2-Methylnaphthalene	ND	10	ug/L	0.10
2-Methylphenol	ND	10	ug/L	0.80
4-Methylphenol	ND	10	ug/L	0.80
Naphthalene	ND	10	ug/L	0.10
2-Nitroaniline	ND	50	ug/L	0.80
3-Nitroaniline	ND	50	ug/L	0.28
4-Nitroaniline	ND	50	ug/L	0.80
Nitrobenzene	ND	10	ug/L	0.040
2-Nitrophenol	ND	10	ug/L	0.28
4-Nitrophenol	ND	50	ug/L	2.4
N-Nitrosodiphenylamine	ND	10	ug/L	0.31
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.80
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	0.40
Pentachlorophenol	ND	10	ug/L	2.4
Phenanthrene	ND	10	ug/L	0.10
Phenol	ND	10	ug/L	0.60
Pyrene	ND	10	ug/L	0.10
2,4,5-Trichloro-phenol	ND	10	ug/L	0.30
2,4,6-Trichloro-phenol	ND	10	ug/L	0.80

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	59	(27 - 111)
2-Fluorobiphenyl	61	(28 - 110)
Terphenyl-d14	86	(37 - 119)
Phenol-d5	57	(10 - 110)
2-Fluorophenol	40	(10 - 110)
2,4,6-Tribromophenol	65	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: SW-02

GC Semivolatiles

Lot-Sample #...: A0K080453-002 **Work Order #...:** L9PJK1AC **Matrix.....:** WG
Date Sampled...: 11/04/10 10:20 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/12/10
Prep Batch #...: 0314041
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	ND	0.10	mg/L	0.016

ARCADIS U.S., Inc.

Client Sample ID: SW-02

TOTAL Metals

Lot-Sample #...: A0K080453-002 **Matrix.....:** WG
Date Sampled...: 11/04/10 10:20 **Date Received..:** 11/06/10

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0313014						
Arsenic	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJK1AE
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**51.3 B**	**200**	**ug/L**	**SW846 6010B**	**11/09-11/11/10**	**L9PJK1AH**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJK1AJ
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJK1AF
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJK1AK
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJK1AG
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJK1AL
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	11/09/10	L9PJK1AD
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: SW-02

General Chemistry

Lot-Sample #...: A0K080453-002 **Work Order #...:** L9PJK **Matrix.....:** WG
Date Sampled...: 11/04/10 10:20 **Date Received..:** 11/06/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3	**190**	**5**	**mg/L**	**SM18 2340C**	**11/17/10**	**0321178**

Dilution Factor: 1 MDL.....: 3

ARCADIS U.S., Inc.

Client Sample ID: SW-03

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-003 **Work Order #...:** L9PJN1AA **Matrix.....:** WG
Date Sampled...: 11/04/10 11:00 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/13/10
Prep Batch #...: 0314042
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.10
Acenaphthylene	ND	10	ug/L	0.10
Acetophenone	ND	10	ug/L	0.34
Anthracene	ND	10	ug/L	0.10
Atrazine	ND	10	ug/L	0.34
Benzaldehyde	ND	10	ug/L	0.39
Benzo(a)anthracene	ND	10	ug/L	0.10
Benzo(b)fluoranthene	ND	10	ug/L	0.10
Benzo(k)fluoranthene	ND	10	ug/L	0.10
Benzo(ghi)perylene	ND	10	ug/L	0.10
Benzo(a)pyrene	ND	10	ug/L	0.10
1,1'-Biphenyl	ND	10	ug/L	0.80
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.32
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.10
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.80
4-Bromophenyl phenyl ether	ND	10	ug/L	0.80
Butyl benzyl phthalate	ND	10	ug/L	0.80
Caprolactam	ND	10	ug/L	0.80
Carbazole	ND	10	ug/L	0.28
4-Chloroaniline	ND	10	ug/L	0.80
4-Chloro-3-methylphenol	ND	10	ug/L	0.80
2-Chloronaphthalene	ND	10	ug/L	0.10
2-Chlorophenol	ND	10	ug/L	0.29
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.30
Chrysene	ND	10	ug/L	0.10
Dibenz(a,h)anthracene	ND	10	ug/L	0.10
Dibenzofuran	ND	10	ug/L	0.10
Di-n-butyl phthalate	ND	10	ug/L	0.67
3,3'-Dichlorobenzidine	ND	50	ug/L	0.37
2,4-Dichlorophenol	ND	10	ug/L	0.80
Diethyl phthalate	ND	10	ug/L	0.60
2,4-Dimethylphenol	ND	10	ug/L	0.80
Dimethyl phthalate	ND	10	ug/L	0.29
4,6-Dinitro-2-methylphenol	ND	50	ug/L	2.4

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ARCADIS U.S., Inc.

Client Sample ID: SW-03

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-003 **Work Order #...:** L9PJN1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	2.4
2,4-Dinitrotoluene	ND	10	ug/L	0.27
2,6-Dinitrotoluene	ND	10	ug/L	0.80
Di-n-octyl phthalate	ND	10	ug/L	0.80
Fluoranthene	ND	10	ug/L	0.10
Fluorene	ND	10	ug/L	0.10
Hexachlorobenzene	ND	10	ug/L	0.10
Hexachlorobutadiene	ND	10	ug/L	0.27
Hexachlorocyclopenta-diene	ND	50	ug/L	0.80
Hexachloroethane	ND	10	ug/L	0.80
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.10
Isophorone	ND	10	ug/L	0.27
2-Methylnaphthalene	ND	10	ug/L	0.10
2-Methylphenol	ND	10	ug/L	0.80
4-Methylphenol	ND	10	ug/L	0.80
Naphthalene	ND	10	ug/L	0.10
2-Nitroaniline	ND	50	ug/L	0.80
3-Nitroaniline	ND	50	ug/L	0.28
4-Nitroaniline	ND	50	ug/L	0.80
Nitrobenzene	ND	10	ug/L	0.040
2-Nitrophenol	ND	10	ug/L	0.28
4-Nitrophenol	ND	50	ug/L	2.4
N-Nitrosodiphenylamine	ND	10	ug/L	0.31
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.80
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	0.40
Pentachlorophenol	ND	10	ug/L	2.4
Phenanthrene	ND	10	ug/L	0.10
Phenol	ND	10	ug/L	0.60
Pyrene	ND	10	ug/L	0.10
2,4,5-Trichloro-phenol	ND	10	ug/L	0.30
2,4,6-Trichloro-phenol	ND	10	ug/L	0.80

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	51	(27 - 111)
2-Fluorobiphenyl	55	(28 - 110)
Terphenyl-d14	71	(37 - 119)
Phenol-d5	48	(10 - 110)
2-Fluorophenol	17	(10 - 110)
2,4,6-Tribromophenol	61	(22 - 120)

ARCADIS U.S., Inc.

Client Sample ID: SW-03

GC Volatiles

Lot-Sample #...: A0K080453-003 **Work Order #...:** L9PJN1AC **Matrix.....:** WG
Date Sampled...: 11/04/10 11:00 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/10/10
Prep Batch #...: 0315169
Dilution Factor: 1 **Method.....:** WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

ARCADIS U.S., Inc.

Client Sample ID: SW-03

GC Semivolatiles

Lot-Sample #...: A0K080453-003 **Work Order #...:** L9PJN1AD **Matrix.....:** WG
Date Sampled...: 11/04/10 11:00 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/12/10
Prep Batch #...: 0314041
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	ND	0.10	mg/L	0.016

ARCADIS U.S., Inc.

Client Sample ID: SW-03

TOTAL Metals

Lot-Sample #...: A0K080453-003 **Matrix.....:** WG
Date Sampled...: 11/04/10 11:00 **Date Received..:** 11/06/10

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0313014						
Arsenic	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJN1AF
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**54.0 B**	**200**	**ug/L**	**SW846 6010B**	**11/09-11/11/10**	**L9PJN1AJ**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJN1AK
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJN1AG
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJN1AL
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJN1AH
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJN1AM
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	11/09/10	L9PJN1AE
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: SW-03

General Chemistry

Lot-Sample #...: A0K080453-003 **Work Order #...:** L9PJN **Matrix.....:** WG
Date Sampled...: 11/04/10 11:00 **Date Received..:** 11/06/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3	**180**	**5**	**mg/L**	**SM18 2340C**	**11/17/10**	**0321178**

Dilution Factor: 1 MDL.....: 3

ARCADIS U.S., Inc.

Client Sample ID: SW-04

GC/MS Volatiles

Lot-Sample #...: A0K080453-004 **Work Order #...:** L9PJT1AA **Matrix.....:** WG
Date Sampled...: 11/04/10 11:50 **Date Received..:** 11/06/10
Prep Date.....: 11/17/10 **Analysis Date..:** 11/17/10
Prep Batch #...: 0328206
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.6 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	**0.31 J**	**1.0**	**ug/L**	**0.30**
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: SW-04

GC/MS Volatiles

Lot-Sample #...: A0K080453-004 **Work Order #...:** L9PJT1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(75 - 121)
1,2-Dichloroethane-d4	102	(63 - 129)
Toluene-d8	90	(74 - 115)
4-Bromofluorobenzene	79	(66 - 117)

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ARCADIS U.S., Inc.

Client Sample ID: SW-04

GC/MS Volatiles

Lot-Sample #...: A0K080453-004 **Work Order #...:** L9PJT1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: SW-04

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-004 **Work Order #...:** L9PJT1AC **Matrix.....:** WG
Date Sampled...: 11/04/10 11:50 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/13/10
Prep Batch #...: 0314042
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.10
Acenaphthylene	ND	10	ug/L	0.10
Acetophenone	ND	10	ug/L	0.34
Anthracene	ND	10	ug/L	0.10
Atrazine	ND	10	ug/L	0.34
Benzaldehyde	ND	10	ug/L	0.39
Benzo(a)anthracene	ND	10	ug/L	0.10
Benzo(b)fluoranthene	ND	10	ug/L	0.10
Benzo(k)fluoranthene	ND	10	ug/L	0.10
Benzo(ghi)perylene	ND	10	ug/L	0.10
Benzo(a)pyrene	ND	10	ug/L	0.10
1,1'-Biphenyl	ND	10	ug/L	0.80
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.32
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.10
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	0.80
4-Bromophenyl phenyl ether	ND	10	ug/L	0.80
Butyl benzyl phthalate	**1.0 J**	**10**	**ug/L**	**0.80**
Caprolactam	ND	10	ug/L	0.80
Carbazole	ND	10	ug/L	0.28
4-Chloroaniline	ND	10	ug/L	0.80
4-Chloro-3-methylphenol	ND	10	ug/L	0.80
2-Chloronaphthalene	ND	10	ug/L	0.10
2-Chlorophenol	ND	10	ug/L	0.29
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.30
Chrysene	ND	10	ug/L	0.10
Dibenz(a,h)anthracene	ND	10	ug/L	0.10
Dibenzofuran	ND	10	ug/L	0.10
Di-n-butyl phthalate	ND	10	ug/L	0.67
3,3'-Dichlorobenzidine	ND	50	ug/L	0.37
2,4-Dichlorophenol	ND	10	ug/L	0.80
Diethyl phthalate	ND	10	ug/L	0.60
2,4-Dimethylphenol	ND	10	ug/L	0.80
Dimethyl phthalate	ND	10	ug/L	0.29
4,6-Dinitro-2-methylphenol	ND	50	ug/L	2.4

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ARCADIS U.S., Inc.

Client Sample ID: SW-04

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-004 **Work Order #...:** L9PJT1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	2.4
2,4-Dinitrotoluene	ND	10	ug/L	0.27
2,6-Dinitrotoluene	ND	10	ug/L	0.80
Di-n-octyl phthalate	ND	10	ug/L	0.80
Fluoranthene	ND	10	ug/L	0.10
Fluorene	ND	10	ug/L	0.10
Hexachlorobenzene	ND	10	ug/L	0.10
Hexachlorobutadiene	ND	10	ug/L	0.27
Hexachlorocyclopenta-diene	ND	50	ug/L	0.80
Hexachloroethane	ND	10	ug/L	0.80
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.10
Isophorone	ND	10	ug/L	0.27
2-Methylnaphthalene	ND	10	ug/L	0.10
2-Methylphenol	ND	10	ug/L	0.80
4-Methylphenol	ND	10	ug/L	0.80
Naphthalene	ND	10	ug/L	0.10
2-Nitroaniline	ND	50	ug/L	0.80
3-Nitroaniline	ND	50	ug/L	0.28
4-Nitroaniline	ND	50	ug/L	0.80
Nitrobenzene	ND	10	ug/L	0.040
2-Nitrophenol	ND	10	ug/L	0.28
4-Nitrophenol	ND	50	ug/L	2.4
N-Nitrosodiphenylamine	ND	10	ug/L	0.31
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.80
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	0.40
Pentachlorophenol	ND	10	ug/L	2.4
Phenanthrene	ND	10	ug/L	0.10
Phenol	ND	10	ug/L	0.60
Pyrene	ND	10	ug/L	0.10
2,4,5-Trichloro-phenol	ND	10	ug/L	0.30
2,4,6-Trichloro-phenol	ND	10	ug/L	0.80

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(27 - 111)
2-Fluorobiphenyl	58	(28 - 110)
Terphenyl-d14	76	(37 - 119)
Phenol-d5	56	(10 - 110)
2-Fluorophenol	42	(10 - 110)
2,4,6-Tribromophenol	67	(22 - 120)

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ARCADIS U.S., Inc.

Client Sample ID: SW-04

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-004 **Work Order #...:** L9PJT1AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: SW-04

GC Volatiles

Lot-Sample #...: A0K080453-004 **Work Order #...:** L9PJT1AD **Matrix.....:** WG
Date Sampled...: 11/04/10 11:50 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/10/10
Prep Batch #...: 0315169
Dilution Factor: 1 **Method.....:** WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

ARCADIS U.S., Inc.

Client Sample ID: SW-04

GC Semivolatiles

Lot-Sample #...: A0K080453-004 **Work Order #...:** L9PJT1AE **Matrix.....:** WG
Date Sampled...: 11/04/10 11:50 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/12/10
Prep Batch #...: 0314041
Dilution Factor: 1 **Method.....:** WI-DRO DRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	**0.086 J**	**0.10**	**mg/L**	**0.016**

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: SW-04

TOTAL Metals

Lot-Sample #...: A0K080453-004 **Matrix.....:** WG
Date Sampled...: 11/04/10 11:50 **Date Received..:** 11/06/10

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0313014						
Arsenic	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJT1AG
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**55.0 B**	**200**	**ug/L**	**SW846 6010B**	**11/09-11/11/10**	**L9PJT1AK**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJT1AL
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJT1AH
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJT1AM
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJT1AJ
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJT1AN
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	11/09/10	L9PJT1AF
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: SW-04

General Chemistry

Lot-Sample #...: A0K080453-004 **Work Order #...:** L9PJT **Matrix.....:** WG
Date Sampled...: 11/04/10 11:50 **Date Received..:** 11/06/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3	**190**	**5**	**mg/L**	**SM18 2340C**	**11/17/10**	**0321178**

Dilution Factor: 1 MDL.....: 3

ARCADIS U.S., Inc.

Client Sample ID: OUTFALL-01

GC/MS Volatiles

Lot-Sample #...: A0K080453-005 **Work Order #...:** L9PJX1AA **Matrix.....:** WG
Date Sampled...: 11/04/10 12:40 **Date Received..:** 11/06/10
Prep Date.....: 11/17/10 **Analysis Date..:** 11/17/10
Prep Batch #...: 0328206
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**3.2 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	**0.18 J**	**1.0**	**ug/L**	**0.13**
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	**0.45 J**	**1.0**	**ug/L**	**0.12**
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: OUTFALL-01

GC/MS Volatiles

Lot-Sample #...: A0K080453-005 **Work Order #...:** L9PJX1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	**0.24 J**	**1.0**	**ug/L**	**0.17**
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	**0.36 J**	**1.0**	**ug/L**	**0.13**
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	**0.62 J**	**1.0**	**ug/L**	**0.13**
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	**0.37 J**	**1.0**	**ug/L**	**0.14**
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	**0.63 J**	**2.0**	**ug/L**	**0.24**
o-Xylene	**0.24 J**	**1.0**	**ug/L**	**0.14**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(75 - 121)
1,2-Dichloroethane-d4	100	(63 - 129)
Toluene-d8	94	(74 - 115)
4-Bromofluorobenzene	88	(66 - 117)

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ARCADIS U.S., Inc.

Client Sample ID: OUTFALL-01

GC/MS Volatiles

Lot-Sample #...: A0K080453-005 **Work Order #...:** L9PJX1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: OUTFALL-01

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-005 **Work Order #...:** L9PJX1AC **Matrix.....:** WG
Date Sampled...: 11/04/10 12:40 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/13/10
Prep Batch #...: 0314042
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.10
Acenaphthylene	ND	10	ug/L	0.10
Acetophenone	ND	10	ug/L	0.34
Anthracene	ND	10	ug/L	0.10
Atrazine	ND	10	ug/L	0.34
Benzaldehyde	ND	10	ug/L	0.39
Benzo(a)anthracene	ND	10	ug/L	0.10
Benzo(b)fluoranthene	ND	10	ug/L	0.10
Benzo(k)fluoranthene	ND	10	ug/L	0.10
Benzo(ghi)perylene	ND	10	ug/L	0.10
Benzo(a)pyrene	ND	10	ug/L	0.10
1,1'-Biphenyl	ND	10	ug/L	0.80
bis(2-Chloroethoxy) methane	ND	10	ug/L	0.32
bis(2-Chloroethyl)-ether	ND	10	ug/L	0.10
bis(2-Ethylhexyl) phthalate	**1.4 J**	**10**	**ug/L**	**0.80**
4-Bromophenyl phenyl ether	ND	10	ug/L	0.80
Butyl benzyl phthalate	ND	10	ug/L	0.80
Caprolactam	**6.2 J**	**10**	**ug/L**	**0.80**
Carbazole	ND	10	ug/L	0.28
4-Chloroaniline	ND	10	ug/L	0.80
4-Chloro-3-methylphenol	ND	10	ug/L	0.80
2-Chloronaphthalene	ND	10	ug/L	0.10
2-Chlorophenol	ND	10	ug/L	0.29
4-Chlorophenyl phenyl ether	ND	10	ug/L	0.30
Chrysene	ND	10	ug/L	0.10
Dibenz(a,h)anthracene	ND	10	ug/L	0.10
Dibenzofuran	ND	10	ug/L	0.10
Di-n-butyl phthalate	ND	10	ug/L	0.67
3,3'-Dichlorobenzidine	ND	50	ug/L	0.37
2,4-Dichlorophenol	ND	10	ug/L	0.80
Diethyl phthalate	ND	10	ug/L	0.60
2,4-Dimethylphenol	ND	10	ug/L	0.80
Dimethyl phthalate	ND	10	ug/L	0.29
4,6-Dinitro-2-methylphenol	ND	50	ug/L	2.4

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ARCADIS U.S., Inc.

Client Sample ID: OUTFALL-01

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-005 **Work Order #...:** L9PJX1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2,4-Dinitrophenol	ND	50	ug/L	2.4
2,4-Dinitrotoluene	ND	10	ug/L	0.27
2,6-Dinitrotoluene	ND	10	ug/L	0.80
Di-n-octyl phthalate	ND	10	ug/L	0.80
Fluoranthene	ND	10	ug/L	0.10
Fluorene	ND	10	ug/L	0.10
Hexachlorobenzene	ND	10	ug/L	0.10
Hexachlorobutadiene	ND	10	ug/L	0.27
Hexachlorocyclopenta-diene	ND	50	ug/L	0.80
Hexachloroethane	ND	10	ug/L	0.80
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	0.10
Isophorone	ND	10	ug/L	0.27
2-Methylnaphthalene	ND	10	ug/L	0.10
2-Methylphenol	ND	10	ug/L	0.80
4-Methylphenol	ND	10	ug/L	0.80
Naphthalene	ND	10	ug/L	0.10
2-Nitroaniline	ND	50	ug/L	0.80
3-Nitroaniline	ND	50	ug/L	0.28
4-Nitroaniline	ND	50	ug/L	0.80
Nitrobenzene	ND	10	ug/L	0.040
2-Nitrophenol	ND	10	ug/L	0.28
4-Nitrophenol	ND	50	ug/L	2.4
N-Nitrosodiphenylamine	ND	10	ug/L	0.31
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	0.80
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	0.40
Pentachlorophenol	ND	10	ug/L	2.4
Phenanthrene	ND	10	ug/L	0.10
Phenol	ND	10	ug/L	0.60
Pyrene	ND	10	ug/L	0.10
2,4,5-Trichloro-phenol	ND	10	ug/L	0.30
2,4,6-Trichloro-phenol	ND	10	ug/L	0.80

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	44	(27 - 111)
2-Fluorobiphenyl	47	(28 - 110)
Terphenyl-d14	53	(37 - 119)
Phenol-d5	47	(10 - 110)
2-Fluorophenol	36	(10 - 110)
2,4,6-Tribromophenol	54	(22 - 120)

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ARCADIS U.S., Inc.

Client Sample ID: OUTFALL-01

GC/MS Semivolatiles

Lot-Sample #...: A0K080453-005 **Work Order #...:** L9PJX1AC **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: OUTFALL-01

GC Volatiles

Lot-Sample #...: A0K080453-005 **Work Order #...:** L9PJX1AD **Matrix.....:** WG
Date Sampled...: 11/04/10 12:40 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/10/10
Prep Batch #...: 0315169
Dilution Factor: 1 **Method.....:** WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

ARCADIS U.S., Inc.

Client Sample ID: OUTFALL-01

TOTAL Metals

Lot-Sample #...: A0K080453-005 **Matrix.....:** WG
Date Sampled...: 11/04/10 12:40 **Date Received..:** 11/06/10

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0313014						
Arsenic	**5.9 B**	**10.0**	**ug/L**	**SW846 6010B**	**11/09-11/11/10**	**L9PJX1AF**
		Dilution Factor: 1		MDL.....: 3.2		
Barium	**132 B**	**200**	**ug/L**	**SW846 6010B**	**11/09-11/11/10**	**L9PJX1AJ**
		Dilution Factor: 1		MDL.....: 0.67		
Cadmium	ND	5.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJX1AK
		Dilution Factor: 1		MDL.....: 0.66		
Lead	ND	3.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJX1AG
		Dilution Factor: 1		MDL.....: 1.9		
Chromium	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJX1AL
		Dilution Factor: 1		MDL.....: 2.2		
Selenium	ND	5.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJX1AH
		Dilution Factor: 1		MDL.....: 4.1		
Silver	ND	10.0	ug/L	SW846 6010B	11/09-11/11/10	L9PJX1AM
		Dilution Factor: 1		MDL.....: 2.2		
Mercury	ND	0.20	ug/L	SW846 7470A	11/09/10	L9PJX1AE
		Dilution Factor: 1		MDL.....: 0.12		

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: OUTFALL-01

General Chemistry

Lot-Sample #...: A0K080453-005 **Work Order #...:** L9PJX **Matrix.....:** WG
Date Sampled...: 11/04/10 12:40 **Date Received..:** 11/06/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3	**570**	**25**	**mg/L**	**SM18 2340C**	**11/17/10**	**0321178**

Dilution Factor: 5 MDL.....: 16

ARCADIS U.S., Inc.

Client Sample ID: TB-02(20101104)

GC/MS Volatiles

Lot-Sample #...: A0K080453-006 **Work Order #...:** L9PJ21AA **Matrix.....:** WQ
Date Sampled...: 11/04/10 **Date Received..:** 11/06/10
Prep Date.....: 11/17/10 **Analysis Date..:** 11/17/10
Prep Batch #...: 0328206
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**7.5 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**0.62 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: TB-02(20101104)

GC/MS Volatiles

Lot-Sample #...: A0K080453-006 **Work Order #...:** L9PJ21AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(75 - 121)
1,2-Dichloroethane-d4	106	(63 - 129)
Toluene-d8	96	(74 - 115)
4-Bromofluorobenzene	84	(66 - 117)

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ARCADIS U.S., Inc.

Client Sample ID: TB-02(20101104)

GC/MS Volatiles

Lot-Sample #...: A0K080453-006 **Work Order #...:** L9PJ21AA **Matrix.....:** WQ

NOTE(S):

J Estimated result. Result is less than RL.

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QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AA **Matrix.....:** WATER
MB Lot-Sample #: A0K240000-206
Prep Date.....: 11/17/10
Analysis Date..: 11/17/10 **Prep Batch #...:** 0328206
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(75 - 121)
1,2-Dichloroethane-d4	99	(63 - 129)
Toluene-d8	95	(74 - 115)
4-Bromofluorobenzene	87	(66 - 117)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AA **Matrix.....:** WATER
MB Lot-Sample #: A0K100000-042

Prep Date.....: 11/10/10
Analysis Date..: 11/13/10 **Prep Batch #...:** 0314042
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Atrazine	ND	10	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)- ether	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
4,6-Dinitro- 2-methylphenol	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	55	(27 - 111)
2-Fluorobiphenyl	56	(28 - 110)
Terphenyl-d14	68	(37 - 119)
Phenol-d5	51	(10 - 110)
2-Fluorophenol	34	(10 - 110)
2,4,6-Tribromophenol	53	(22 - 120)

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9V531AA **Matrix.....:** WATER
MB Lot-Sample #: A0K110000-169
Prep Date.....: 11/10/10
Analysis Date..: 11/10/10 **Prep Batch #...:** 0315169
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/L	WI-GRO GRO

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHT1AA **Matrix.....:** WATER
MB Lot-Sample #: A0K100000-041
Prep Date.....: 11/10/10
Analysis Date..: 11/12/10 **Prep Batch #...:** 0314041
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	ND	0.10	mg/L	WI-DRO DRO

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A0K080453 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A0K090000-014 **Prep Batch #...:** 0313014						
Arsenic	ND	10.0	ug/L	SW846 6010B	11/09-11/10/10	L9P351AC
		Dilution Factor: 1				
Barium	ND	200	ug/L	SW846 6010B	11/09-11/10/10	L9P351AF
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	11/09-11/10/10	L9P351AG
		Dilution Factor: 1				
Lead	ND	3.0	ug/L	SW846 6010B	11/09-11/10/10	L9P351AD
		Dilution Factor: 1				
Chromium	ND	10.0	ug/L	SW846 6010B	11/09-11/10/10	L9P351AH
		Dilution Factor: 1				
Selenium	ND	5.0	ug/L	SW846 6010B	11/09-11/10/10	L9P351AE
		Dilution Factor: 1				
Silver	ND	10.0	ug/L	SW846 6010B	11/09-11/10/10	L9P351AJ
		Dilution Factor: 1				
Mercury	ND	0.20	ug/L	SW846 7470A	11/09/10	L9P351AA
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A0K080453 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3	Work Order #: L96G81AA			MB Lot-Sample #:	A0K170000-178	
	ND	5	mg/L	SM18 2340C	11/17/10	0321178
	Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K240000-206 MAH561AD-LCSD
Prep Date.....: 11/17/10 **Analysis Date..:** 11/17/10
Prep Batch #...: 0328206
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	112	(43 - 136)			SW846 8260B
	106	(43 - 136)	5.4	(0-30)	SW846 8260B
Benzene	**97**	**(83 - 112)**			**SW846 8260B**
	95	**(83 - 112)**	**2.2**	**(0-30)**	**SW846 8260B**
1,2-Dichloroethene (total)	98	(82 - 114)			SW846 8260B
	98	(82 - 114)	0.18	(0-30)	SW846 8260B
Bromobenzene	97	(76 - 115)			SW846 8260B
	97	(76 - 115)	0.48	(0-30)	SW846 8260B
Bromochloromethane	100	(77 - 120)			SW846 8260B
	99	(77 - 120)	0.37	(0-30)	SW846 8260B
Bromodichloromethane	104	(72 - 121)			SW846 8260B
	100	(72 - 121)	4.0	(0-30)	SW846 8260B
Bromoform	104	(40 - 131)			SW846 8260B
	105	(40 - 131)	0.67	(0-30)	SW846 8260B
Bromomethane	87	(11 - 185)			SW846 8260B
	104	(11 - 185)	18	(0-30)	SW846 8260B
Methyl ethyl ketone	104	(60 - 126)			SW846 8260B
	100	(60 - 126)	3.6	(0-30)	SW846 8260B
n-Butylbenzene	91	(66 - 125)			SW846 8260B
	92	(66 - 125)	1.4	(0-30)	SW846 8260B
Xylenes (total)	99	(83 - 112)			SW846 8260B
	99	(83 - 112)	0.23	(0-30)	SW846 8260B
sec-Butylbenzene	96	(70 - 117)			SW846 8260B
	97	(70 - 117)	0.89	(0-30)	SW846 8260B
tert-Butylbenzene	97	(71 - 115)			SW846 8260B
	97	(71 - 115)	0.59	(0-30)	SW846 8260B
Carbon disulfide	121	(62 - 142)			SW846 8260B
	122	(62 - 142)	0.69	(0-30)	SW846 8260B
Carbon tetrachloride	108	(66 - 128)			SW846 8260B
	105	(66 - 128)	2.8	(0-30)	SW846 8260B
Chlorobenzene	**97**	**(85 - 110)**			**SW846 8260B**
	97	**(85 - 110)**	**0.33**	**(0-30)**	**SW846 8260B**
Chlorodibromomethane	105	(64 - 119)			SW846 8260B
	103	(64 - 119)	1.5	(0-30)	SW846 8260B
Chloroethane	90	(25 - 153)			SW846 8260B
	102	(25 - 153)	12	(0-30)	SW846 8260B
n-Hexane	122	(66 - 137)			SW846 8260B
	120	(66 - 137)	1.6	(0-30)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K240000-206 MAH561AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	101	(79 - 117)			SW846 8260B
	101	(79 - 117)	0.10	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	62	(52 - 131)			SW846 8260B
	62	(52 - 131)	0.12	(0-30)	SW846 8260B
Acetonitrile	96	(15 - 184)			SW846 8260B
	93	(15 - 184)	3.5	(0-30)	SW846 8260B
Chloromethane	78	(44 - 126)			SW846 8260B
	81	(44 - 126)	3.9	(0-30)	SW846 8260B
Acrolein	94	(51 - 170)			SW846 8260B
	97	(51 - 170)	2.8	(0-30)	SW846 8260B
Vinyl acetate	129	(46 - 161)			SW846 8260B
	131	(46 - 161)	1.6	(0-30)	SW846 8260B
Acrylonitrile	107	(66 - 132)			SW846 8260B
	106	(66 - 132)	1.7	(0-30)	SW846 8260B
2-Chlorotoluene	95	(76 - 116)			SW846 8260B
	94	(76 - 116)	1.2	(0-30)	SW846 8260B
4-Chlorotoluene	93	(77 - 115)			SW846 8260B
	92	(77 - 115)	0.72	(0-30)	SW846 8260B
Cyclohexane	116	(54 - 121)			SW846 8260B
	116	(54 - 121)	0.48	(0-30)	SW846 8260B
Iodomethane	116	(72 - 141)			SW846 8260B
	119	(72 - 141)	2.5	(0-30)	SW846 8260B
Isopropyl ether	102	(77 - 118)			SW846 8260B
	104	(77 - 118)	1.8	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	66	(42 - 136)			SW846 8260B
	70	(42 - 136)	5.2	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	102	(79 - 113)			SW846 8260B
	102	(79 - 113)	0.17	(0-30)	SW846 8260B
Dibromomethane	106	(81 - 120)			SW846 8260B
	103	(81 - 120)	3.0	(0-30)	SW846 8260B
1,2-Dichlorobenzene	87	(81 - 110)			SW846 8260B
	89	(81 - 110)	2.0	(0-30)	SW846 8260B
1,3-Dichlorobenzene	90	(80 - 110)			SW846 8260B
	92	(80 - 110)	1.6	(0-30)	SW846 8260B
1,4-Dichlorobenzene	88	(82 - 110)			SW846 8260B
	90	(82 - 110)	2.2	(0-30)	SW846 8260B
Dichlorodifluoromethane	98	(19 - 129)			SW846 8260B
	96	(19 - 129)	2.0	(0-30)	SW846 8260B
1,1-Dichloroethane	100	(82 - 115)			SW846 8260B
	100	(82 - 115)	0.030	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K240000-206 MAH561AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	102	(71 - 127)			SW846 8260B
	102	(71 - 127)	0.13	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	96	(80 - 113)			SW846 8260B
	94	(80 - 113)	1.6	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	100	(83 - 117)			SW846 8260B
	101	(83 - 117)	1.2	(0-30)	SW846 8260B
1,1-Dichloroethene	**110**	**(78 - 131)**			**SW846 8260B**
	110	**(78 - 131)**	**0.43**	**(0-30)**	**SW846 8260B**
1,2-Dichloropropane	99	(81 - 115)			SW846 8260B
	96	(81 - 115)	3.0	(0-30)	SW846 8260B
1,3-Dichloropropane	102	(79 - 116)			SW846 8260B
	100	(79 - 116)	2.1	(0-30)	SW846 8260B
2,2-Dichloropropane	84	(50 - 129)			SW846 8260B
	85	(50 - 129)	0.82	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	94	(61 - 115)			SW846 8260B
	93	(61 - 115)	0.67	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	108	(58 - 117)			SW846 8260B
	107	(58 - 117)	0.81	(0-30)	SW846 8260B
1,1-Dichloropropene	105	(83 - 114)			SW846 8260B
	106	(83 - 114)	0.89	(0-30)	SW846 8260B
Ethylbenzene	101	(83 - 112)			SW846 8260B
	101	(83 - 112)	0.12	(0-30)	SW846 8260B
Hexachlorobutadiene	74	(36 - 134)			SW846 8260B
	74	(36 - 134)	0.56	(0-30)	SW846 8260B
2-Hexanone	109	(55 - 133)			SW846 8260B
	104	(55 - 133)	4.7	(0-30)	SW846 8260B
Isopropylbenzene	103	(75 - 114)			SW846 8260B
	103	(75 - 114)	0.10	(0-30)	SW846 8260B
p-Isopropyltoluene	97	(74 - 120)			SW846 8260B
	98	(74 - 120)	0.67	(0-30)	SW846 8260B
Methyl acetate	99	(58 - 131)			SW846 8260B
	98	(58 - 131)	1.0	(0-30)	SW846 8260B
Methylcyclohexane	118	(56 - 127)			SW846 8260B
	118	(56 - 127)	0.76	(0-30)	SW846 8260B
Methylene chloride	89	(66 - 131)			SW846 8260B
	87	(66 - 131)	1.6	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	104	(63 - 128)			SW846 8260B
	103	(63 - 128)	1.2	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	97	(52 - 144)			SW846 8260B
	96	(52 - 144)	1.8	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K240000-206 MAH561AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	87	(32 - 141)			SW846 8260B
	88	(32 - 141)	0.34	(0-30)	SW846 8260B
n-Propylbenzene	98	(74 - 121)			SW846 8260B
	102	(74 - 121)	3.0	(0-30)	SW846 8260B
Styrene	102	(79 - 114)			SW846 8260B
	102	(79 - 114)	0.19	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	101	(72 - 116)			SW846 8260B
	102	(72 - 116)	1.5	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	99	(68 - 118)			SW846 8260B
	102	(68 - 118)	2.6	(0-30)	SW846 8260B
Tetrachloroethene	104	(79 - 114)			SW846 8260B
	104	(79 - 114)	0.56	(0-30)	SW846 8260B
Toluene	**99**	**(84 - 111)**			**SW846 8260B**
	97	**(84 - 111)**	**2.2**	**(0-30)**	**SW846 8260B**
1,2,3-Trichlorobenzene	88	(54 - 126)			SW846 8260B
	89	(54 - 126)	0.89	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	78	(48 - 135)			SW846 8260B
	78	(48 - 135)	0.23	(0-30)	SW846 8260B
1,1,1-Trichloroethane	102	(74 - 118)			SW846 8260B
	101	(74 - 118)	1.3	(0-30)	SW846 8260B
1,1,2-Trichloroethane	103	(80 - 112)			SW846 8260B
	100	(80 - 112)	3.4	(0-30)	SW846 8260B
Trichloroethene	**101**	**(76 - 117)**			**SW846 8260B**
	99	**(76 - 117)**	**2.6**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	123	(49 - 157)			SW846 8260B
	123	(49 - 157)	0.17	(0-30)	SW846 8260B
1,2,3-Trichloropropane	102	(73 - 129)			SW846 8260B
	103	(73 - 129)	1.3	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	133	(74 - 151)			SW846 8260B
	136	(74 - 151)	2.4	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	98	(76 - 120)			SW846 8260B
	99	(76 - 120)	1.2	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	96	(72 - 118)			SW846 8260B
	97	(72 - 118)	1.6	(0-30)	SW846 8260B
Vinyl chloride	92	(53 - 127)			SW846 8260B
	96	(53 - 127)	5.0	(0-30)	SW846 8260B
m-Xylene & p-Xylene	99	(83 - 113)			SW846 8260B
	99	(83 - 113)	0.64	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K240000-206 MAH561AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	101	(83 - 113)			SW846 8260B
	99	(83 - 113)	2.0	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(75 - 121)
	95	(75 - 121)
1,2-Dichloroethane-d4	99	(63 - 129)
	96	(63 - 129)
Toluene-d8	97	(74 - 115)
	95	(74 - 115)
4-Bromofluorobenzene	98	(66 - 117)
	98	(66 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K240000-206 MAH561AD-LCSD
Prep Date.....: 11/17/10 **Analysis Date..:** 11/17/10
Prep Batch #...: 0328206
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acetone	20	22	ug/L	112		SW846 8260B
	20	21	ug/L	106	5.4	SW846 8260B
Benzene	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	10	**9.5**	**ug/L**	**95**	**2.2**	**SW846 8260B**
1,2-Dichloroethene (total)	20	20	ug/L	98		SW846 8260B
	20	20	ug/L	98	0.18	SW846 8260B
Bromobenzene	10	9.7	ug/L	97		SW846 8260B
	10	9.7	ug/L	97	0.48	SW846 8260B
Bromochloromethane	10	10	ug/L	100		SW846 8260B
	10	9.9	ug/L	99	0.37	SW846 8260B
Bromodichloromethane	10	10	ug/L	104		SW846 8260B
	10	10	ug/L	100	4.0	SW846 8260B
Bromoform	10	10	ug/L	104		SW846 8260B
	10	10	ug/L	105	0.67	SW846 8260B
Bromomethane	10	8.7	ug/L	87		SW846 8260B
	10	10	ug/L	104	18	SW846 8260B
Methyl ethyl ketone	20	21	ug/L	104		SW846 8260B
	20	20	ug/L	100	3.6	SW846 8260B
n-Butylbenzene	10	9.1	ug/L	91		SW846 8260B
	10	9.2	ug/L	92	1.4	SW846 8260B
Xylenes (total)	30	30	ug/L	99		SW846 8260B
	30	30	ug/L	99	0.23	SW846 8260B
sec-Butylbenzene	10	9.6	ug/L	96		SW846 8260B
	10	9.7	ug/L	97	0.89	SW846 8260B
tert-Butylbenzene	10	9.7	ug/L	97		SW846 8260B
	10	9.7	ug/L	97	0.59	SW846 8260B
Carbon disulfide	10	12	ug/L	121		SW846 8260B
	10	12	ug/L	122	0.69	SW846 8260B
Carbon tetrachloride	10	11	ug/L	108		SW846 8260B
	10	10	ug/L	105	2.8	SW846 8260B
Chlorobenzene	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**0.33**	**SW846 8260B**
Chlorodibromomethane	10	10	ug/L	105		SW846 8260B
	10	10	ug/L	103	1.5	SW846 8260B
Chloroethane	10	9.0	ug/L	90		SW846 8260B
	10	10	ug/L	102	12	SW846 8260B
n-Hexane	10	12	ug/L	122		SW846 8260B
	10	12	ug/L	120	1.6	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K240000-206 MAH561AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Chloroform	10	10	ug/L	101		SW846 8260B
	10	10	ug/L	101	0.10	SW846 8260B
2-Chloroethyl vinyl ether	10	6.2	ug/L	62		SW846 8260B
	10	6.2	ug/L	62	0.12	SW846 8260B
Acetonitrile	30	29	ug/L	96		SW846 8260B
	30	28	ug/L	93	3.5	SW846 8260B
Chloromethane	10	7.8	ug/L	78		SW846 8260B
	10	8.1	ug/L	81	3.9	SW846 8260B
Acrolein	30	28	ug/L	94		SW846 8260B
	30	29	ug/L	97	2.8	SW846 8260B
Vinyl acetate	10	13	ug/L	129		SW846 8260B
	10	13	ug/L	131	1.6	SW846 8260B
Acrylonitrile	30	32	ug/L	107		SW846 8260B
	30	32	ug/L	106	1.7	SW846 8260B
2-Chlorotoluene	10	9.5	ug/L	95		SW846 8260B
	10	9.4	ug/L	94	1.2	SW846 8260B
4-Chlorotoluene	10	9.3	ug/L	93		SW846 8260B
	10	9.2	ug/L	92	0.72	SW846 8260B
Cyclohexane	10	12	ug/L	116		SW846 8260B
	10	12	ug/L	116	0.48	SW846 8260B
Iodomethane	10	12	ug/L	116		SW846 8260B
	10	12	ug/L	119	2.5	SW846 8260B
Isopropyl ether	10	10	ug/L	102		SW846 8260B
	10	10	ug/L	104	1.8	SW846 8260B
1,2-Dibromo-3-chloro-propane	10	6.6	ug/L	66		SW846 8260B
	10	7.0	ug/L	70	5.2	SW846 8260B
1,2-Dibromoethane (EDB)	10	10	ug/L	102		SW846 8260B
	10	10	ug/L	102	0.17	SW846 8260B
Dibromomethane	10	11	ug/L	106		SW846 8260B
	10	10	ug/L	103	3.0	SW846 8260B
1,2-Dichlorobenzene	10	8.7	ug/L	87		SW846 8260B
	10	8.9	ug/L	89	2.0	SW846 8260B
1,3-Dichlorobenzene	10	9.0	ug/L	90		SW846 8260B
	10	9.2	ug/L	92	1.6	SW846 8260B
1,4-Dichlorobenzene	10	8.8	ug/L	88		SW846 8260B
	10	9.0	ug/L	90	2.2	SW846 8260B
Dichlorodifluoromethane	10	9.8	ug/L	98		SW846 8260B
	10	9.6	ug/L	96	2.0	SW846 8260B
1,1-Dichloroethane	10	10	ug/L	100		SW846 8260B
	10	10	ug/L	100	0.030	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K240000-206 MAH561AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,2-Dichloroethane	10	10	ug/L	102		SW846 8260B
	10	10	ug/L	102	0.13	SW846 8260B
cis-1,2-Dichloroethene	10	9.6	ug/L	96		SW846 8260B
	10	9.4	ug/L	94	1.6	SW846 8260B
trans-1,2-Dichloroethene	10	10	ug/L	100		SW846 8260B
	10	10	ug/L	101	1.2	SW846 8260B
1,1-Dichloroethene	**10**	**11**	**ug/L**	**110**		**SW846 8260B**
	10	**11**	**ug/L**	**110**	**0.43**	**SW846 8260B**
1,2-Dichloropropane	10	9.9	ug/L	99		SW846 8260B
	10	9.6	ug/L	96	3.0	SW846 8260B
1,3-Dichloropropane	10	10	ug/L	102		SW846 8260B
	10	10	ug/L	100	2.1	SW846 8260B
2,2-Dichloropropane	10	8.4	ug/L	84		SW846 8260B
	10	8.5	ug/L	85	0.82	SW846 8260B
cis-1,3-Dichloropropene	10	9.4	ug/L	94		SW846 8260B
	10	9.3	ug/L	93	0.67	SW846 8260B
trans-1,3-Dichloropropene	10	11	ug/L	108		SW846 8260B
	10	11	ug/L	107	0.81	SW846 8260B
1,1-Dichloropropene	10	11	ug/L	105		SW846 8260B
	10	11	ug/L	106	0.89	SW846 8260B
Ethylbenzene	10	10	ug/L	101		SW846 8260B
	10	10	ug/L	101	0.12	SW846 8260B
Hexachlorobutadiene	10	7.4	ug/L	74		SW846 8260B
	10	7.4	ug/L	74	0.56	SW846 8260B
2-Hexanone	20	22	ug/L	109		SW846 8260B
	20	21	ug/L	104	4.7	SW846 8260B
Isopropylbenzene	10	10	ug/L	103		SW846 8260B
	10	10	ug/L	103	0.10	SW846 8260B
p-Isopropyltoluene	10	9.7	ug/L	97		SW846 8260B
	10	9.8	ug/L	98	0.67	SW846 8260B
Methyl acetate	10	9.9	ug/L	99		SW846 8260B
	10	9.8	ug/L	98	1.0	SW846 8260B
Methylcyclohexane	10	12	ug/L	118		SW846 8260B
	10	12	ug/L	118	0.76	SW846 8260B
Methylene chloride	10	8.9	ug/L	89		SW846 8260B
	10	8.7	ug/L	87	1.6	SW846 8260B
4-Methyl-2-pentanone (MIBK	20	21	ug/L	104		SW846 8260B
	20	21	ug/L	103	1.2	SW846 8260B
Methyl tert-butyl ether (MTBE)	10	9.7	ug/L	97		SW846 8260B
	10	9.6	ug/L	96	1.8	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K240000-206 MAH561AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Naphthalene	10	8.7	ug/L	87		SW846 8260B
	10	8.8	ug/L	88	0.34	SW846 8260B
n-Propylbenzene	10	9.8	ug/L	98		SW846 8260B
	10	10	ug/L	102	3.0	SW846 8260B
Styrene	10	10	ug/L	102		SW846 8260B
	10	10	ug/L	102	0.19	SW846 8260B
1,1,1,2-Tetrachloroethane	10	10	ug/L	101		SW846 8260B
	10	10	ug/L	102	1.5	SW846 8260B
1,1,2,2-Tetrachloroethane	10	9.9	ug/L	99		SW846 8260B
	10	10	ug/L	102	2.6	SW846 8260B
Tetrachloroethene	10	10	ug/L	104		SW846 8260B
	10	10	ug/L	104	0.56	SW846 8260B
Toluene	**10**	**9.9**	**ug/L**	**99**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**2.2**	**SW846 8260B**
1,2,3-Trichlorobenzene	10	8.8	ug/L	88		SW846 8260B
	10	8.9	ug/L	89	0.89	SW846 8260B
1,2,4-Trichloro-benzene	10	7.8	ug/L	78		SW846 8260B
	10	7.8	ug/L	78	0.23	SW846 8260B
1,1,1-Trichloroethane	10	10	ug/L	102		SW846 8260B
	10	10	ug/L	101	1.3	SW846 8260B
1,1,2-Trichloroethane	10	10	ug/L	103		SW846 8260B
	10	10	ug/L	100	3.4	SW846 8260B
Trichloroethene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**2.6**	**SW846 8260B**
Trichlorofluoromethane	10	12	ug/L	123		SW846 8260B
	10	12	ug/L	123	0.17	SW846 8260B
1,2,3-Trichloropropane	10	10	ug/L	102		SW846 8260B
	10	10	ug/L	103	1.3	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	10	13	ug/L	133		SW846 8260B
	10	14	ug/L	136	2.4	SW846 8260B
1,2,4-Trimethylbenzene	10	9.8	ug/L	98		SW846 8260B
	10	9.9	ug/L	99	1.2	SW846 8260B
1,3,5-Trimethylbenzene	10	9.6	ug/L	96		SW846 8260B
	10	9.7	ug/L	97	1.6	SW846 8260B
Vinyl chloride	10	9.2	ug/L	92		SW846 8260B
	10	9.6	ug/L	96	5.0	SW846 8260B
m-Xylene & p-Xylene	20	20	ug/L	99		SW846 8260B
	20	20	ug/L	99	0.64	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** MAH561AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K240000-206 MAH561AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
o-Xylene	10	10	ug/L	101		SW846 8260B
	10	9.9	ug/L	99	2.0	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(75 - 121)
	95	(75 - 121)
1,2-Dichloroethane-d4	99	(63 - 129)
	96	(63 - 129)
Toluene-d8	97	(74 - 115)
	95	(74 - 115)
4-Bromofluorobenzene	98	(66 - 117)
	98	(66 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-042 L9RHW1AD-LCSD
Prep Date.....: 11/10/10 **Analysis Date..:** 11/13/10
Prep Batch #...: 0314042
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichloro-benzene	**59**	**(25 - 110)**			**SW846 8270C**
	62	**(25 - 110)**	**5.4**	**(0-30)**	**SW846 8270C**
Acenaphthene	**68**	**(40 - 110)**			**SW846 8270C**
	71	**(40 - 110)**	**5.1**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**55**	**(19 - 110)**			**SW846 8270C**
	57	**(19 - 110)**	**3.0**	**(0-30)**	**SW846 8270C**
Acenaphthylene	70	(43 - 110)			SW846 8270C
	88	(43 - 110)	22	(0-30)	SW846 8270C
Acetophenone	66	(50 - 130)			SW846 8270C
	70	(50 - 130)	5.4	(0-30)	SW846 8270C
Anthracene	73	(54 - 114)			SW846 8270C
	75	(54 - 114)	2.0	(0-30)	SW846 8270C
Atrazine	65	(50 - 130)			SW846 8270C
	79	(50 - 130)	21	(0-30)	SW846 8270C
1,2-Dichlorobenzene	57	(23 - 110)			SW846 8270C
	60	(23 - 110)	4.2	(0-30)	SW846 8270C
1,3-Dichlorobenzene	52	(19 - 110)			SW846 8270C
	54	(19 - 110)	4.6	(0-30)	SW846 8270C
Benzaldehyde	83	(10 - 130)			SW846 8270C
	85	(10 - 130)	2.1	(0-30)	SW846 8270C
Benzo(a)anthracene	73	(55 - 115)			SW846 8270C
	75	(55 - 115)	2.8	(0-30)	SW846 8270C
Benzo(b)fluoranthene	72	(43 - 122)			SW846 8270C
	70	(43 - 122)	2.8	(0-30)	SW846 8270C
Benzo(k)fluoranthene	74	(43 - 124)			SW846 8270C
	68	(43 - 124)	8.9	(0-30)	SW846 8270C
Benzo(ghi)perylene	78	(45 - 120)			SW846 8270C
	85	(45 - 120)	7.8	(0-30)	SW846 8270C
Benzo(a)pyrene	63	(43 - 116)			SW846 8270C
	71	(43 - 116)	13	(0-30)	SW846 8270C
1,1'-Biphenyl	65	(50 - 130)			SW846 8270C
	80	(50 - 130)	21	(0-30)	SW846 8270C
bis(2-Chloroethoxy) methane	73	(39 - 110)			SW846 8270C
	76	(39 - 110)	4.6	(0-30)	SW846 8270C
bis(2-Chloroethyl)-ether	72	(34 - 113)			SW846 8270C
	74	(34 - 113)	3.0	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-042 L9RHW1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
bis(2-Ethylhexyl) phthalate	72	(36 - 163)			SW846 8270C
	75	(36 - 163)	3.8	(0-30)	SW846 8270C
4-Bromophenyl phenyl ether	66	(51 - 114)			SW846 8270C
	76	(51 - 114)	14	(0-30)	SW846 8270C
Butyl benzyl phthalate	66	(53 - 126)			SW846 8270C
	74	(53 - 126)	12	(0-30)	SW846 8270C
Caprolactam	75	(50 - 130)			SW846 8270C
	79	(50 - 130)	4.6	(0-30)	SW846 8270C
Carbazole	70	(53 - 120)			SW846 8270C
	75	(53 - 120)	7.6	(0-30)	SW846 8270C
4-Chloroaniline	66	(10 - 110)			SW846 8270C
	68	(10 - 110)	2.6	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	**69**	**(39 - 110)**			**SW846 8270C**
	73	**(39 - 110)**	**5.8**	**(0-30)**	**SW846 8270C**
Benzoic acid	27	(10 - 129)			SW846 8270C
	29	(10 - 129)	5.7	(0-30)	SW846 8270C
1,4-Dioxane	54	(10 - 110)			SW846 8270C
	53	(10 - 110)	2.3	(0-30)	SW846 8270C
Pyridine	59	(10 - 110)			SW846 8270C
	53	(10 - 110)	10	(0-30)	SW846 8270C
2-Chloronaphthalene	68	(39 - 110)			SW846 8270C
	85	(39 - 110)	22	(0-30)	SW846 8270C
2-Chlorophenol	**64**	**(27 - 110)**			**SW846 8270C**
	66	**(27 - 110)**	**3.3**	**(0-30)**	**SW846 8270C**
Aniline	59	(10 - 130)			SW846 8270C
	60	(10 - 130)	2.9	(0-30)	SW846 8270C
Benzyl alcohol	73	(10 - 130)			SW846 8270C
	76	(10 - 130)	4.0	(0-30)	SW846 8270C
4-Chlorophenyl phenyl ether	73	(50 - 115)			SW846 8270C
	91	(50 - 115)	23	(0-30)	SW846 8270C
N-Nitrosodimethylamine	54	(10 - 130)			SW846 8270C
	55	(10 - 130)	1.0	(0-30)	SW846 8270C
1-Methylnaphthalene	68	(10 - 130)			SW846 8270C
	71	(10 - 130)	5.4	(0-30)	SW846 8270C
1,2-Dinitrobenzene	81	(10 - 130)			SW846 8270C
	99	(10 - 130)	20	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-042 L9RHW1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
2,3,5,6-Tetrachlorophenol	72	(10 - 130)			SW846 8270C
	82	(10 - 130)	13	(0-30)	SW846 8270C
Chrysene	74	(55 - 115)			SW846 8270C
	80	(55 - 115)	7.5	(0-30)	SW846 8270C
Dibenz(a,h)anthracene	77	(46 - 122)			SW846 8270C
	84	(46 - 122)	8.7	(0-30)	SW846 8270C
Dibenzofuran	72	(46 - 111)			SW846 8270C
	80	(46 - 111)	11	(0-30)	SW846 8270C
Di-n-butyl phthalate	69	(55 - 122)			SW846 8270C
	83	(55 - 122)	19	(0-30)	SW846 8270C
3,3'-Dichlorobenzidine	55	(19 - 110)			SW846 8270C
	58	(19 - 110)	4.8	(0-30)	SW846 8270C
2,4-Dichlorophenol	69	(33 - 110)			SW846 8270C
	76	(33 - 110)	9.4	(0-30)	SW846 8270C
Diethyl phthalate	69	(33 - 134)			SW846 8270C
	74	(33 - 134)	7.2	(0-30)	SW846 8270C
2,4-Dimethylphenol	36	(12 - 110)			SW846 8270C
	37	(12 - 110)	2.0	(0-30)	SW846 8270C
Dimethyl phthalate	72	(15 - 143)			SW846 8270C
	93	(15 - 143)	26	(0-30)	SW846 8270C
4,6-Dinitro-2-methylphenol	60	(28 - 112)			SW846 8270C
	70	(28 - 112)	16	(0-30)	SW846 8270C
2,4-Dinitrophenol	41	(17 - 112)			SW846 8270C
	41	(17 - 112)	1.2	(0-30)	SW846 8270C
2,4-Dinitrotoluene	**75**	**(52 - 123)**			**SW846 8270C**
	84	**(52 - 123)**	**10**	**(0-30)**	**SW846 8270C**
2,6-Dinitrotoluene	78	(52 - 119)			SW846 8270C
	98	(52 - 119)	23	(0-30)	SW846 8270C
Di-n-octyl phthalate	70	(44 - 128)			SW846 8270C
	78	(44 - 128)	9.7	(0-30)	SW846 8270C
Fluoranthene	84	(54 - 122)			SW846 8270C
	90	(54 - 122)	6.9	(0-30)	SW846 8270C
Fluorene	69	(47 - 112)			SW846 8270C
	89	(47 - 112)	25	(0-30)	SW846 8270C
Hexachlorobenzene	65	(51 - 112)			SW846 8270C
	77	(51 - 112)	17	(0-30)	SW846 8270C
Hexachlorobutadiene	46	(13 - 110)			SW846 8270C
	50	(13 - 110)	7.7	(0-30)	SW846 8270C
Hexachlorocyclopenta-diene	8.4 a	(10 - 110)			SW846 8270C
	8.8 a	(10 - 110)	5.0	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-042 L9RHW1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Hexachloroethane	43	(12 - 110)			SW846 8270C
	46	(12 - 110)	6.8	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	76	(46 - 121)			SW846 8270C
	84	(46 - 121)	9.8	(0-30)	SW846 8270C
Isophorone	70	(44 - 128)			SW846 8270C
	73	(44 - 128)	4.1	(0-30)	SW846 8270C
2-Methylnaphthalene	79	(35 - 110)			SW846 8270C
	84	(35 - 110)	6.2	(0-30)	SW846 8270C
2-Methylphenol	65	(30 - 110)			SW846 8270C
	69	(30 - 110)	6.7	(0-30)	SW846 8270C
4-Methylphenol	70	(32 - 110)			SW846 8270C
	73	(32 - 110)	3.6	(0-30)	SW846 8270C
Naphthalene	66	(31 - 110)			SW846 8270C
	69	(31 - 110)	3.9	(0-30)	SW846 8270C
2-Nitroaniline	70	(43 - 130)			SW846 8270C
	87	(43 - 130)	21	(0-30)	SW846 8270C
3-Nitroaniline	73	(45 - 116)			SW846 8270C
	90	(45 - 116)	21	(0-30)	SW846 8270C
4-Nitroaniline	69	(45 - 120)			SW846 8270C
	91	(45 - 120)	27	(0-30)	SW846 8270C
Nitrobenzene	70	(37 - 115)			SW846 8270C
	73	(37 - 115)	3.7	(0-30)	SW846 8270C
2-Nitrophenol	70	(29 - 110)			SW846 8270C
	74	(29 - 110)	5.3	(0-30)	SW846 8270C
4-Nitrophenol	**72**	**(12 - 130)**			**SW846 8270C**
	72	**(12 - 130)**	**0.23**	**(0-30)**	**SW846 8270C**
N-Nitrosodiphenylamine	68	(53 - 113)			SW846 8270C
	80	(53 - 113)	16	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	**70**	**(37 - 121)**			**SW846 8270C**
	71	**(37 - 121)**	**2.0**	**(0-30)**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	76	(25 - 128)			SW846 8270C
	78	(25 - 128)	2.5	(0-30)	SW846 8270C
Pentachlorophenol	**60**	**(26 - 110)**			**SW846 8270C**
	69	**(26 - 110)**	**13**	**(0-30)**	**SW846 8270C**
Phenanthrene	71	(52 - 114)			SW846 8270C
	74	(52 - 114)	4.3	(0-30)	SW846 8270C
Phenol	**66**	**(14 - 112)**			**SW846 8270C**
	68	**(14 - 112)**	**2.7**	**(0-30)**	**SW846 8270C**

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-042 L9RHW1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Pyrene	**77**	**(55 - 120)**			**SW846 8270C**
	74	**(55 - 120)**	**4.2**	**(0-30)**	**SW846 8270C**
2,4,5-Trichloro-phenol	72	(39 - 110)			SW846 8270C
	90	(39 - 110)	22	(0-30)	SW846 8270C
2,4,6-Trichloro-phenol	73	(35 - 110)			SW846 8270C
	87	(35 - 110)	18	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(27 - 111)
	65	(27 - 111)
2-Fluorobiphenyl	63	(28 - 110)
	79	(28 - 110)
Terphenyl-d14	82	(37 - 119)
	80	(37 - 119)
Phenol-d5	62	(10 - 110)
	65	(10 - 110)
2-Fluorophenol	38	(10 - 110)
	35	(10 - 110)
2,4,6-Tribromophenol	66	(22 - 120)
	75	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-042 L9RHW1AD-LCSD
Prep Date.....: 11/10/10 **Analysis Date..:** 11/13/10
Prep Batch #...: 0314042
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,2,4-Trichloro-benzene	**20**	**12**	**ug/L**	**59**		**SW846 8270C**
	20	**12**	**ug/L**	**62**	**5.4**	**SW846 8270C**
Acenaphthene	**20**	**14**	**ug/L**	**68**		**SW846 8270C**
	20	**14**	**ug/L**	**71**	**5.1**	**SW846 8270C**
1,4-Dichlorobenzene	**20**	**11**	**ug/L**	**55**		**SW846 8270C**
	20	**11**	**ug/L**	**57**	**3.0**	**SW846 8270C**
Acenaphthylene	20	14	ug/L	70		SW846 8270C
	20	18	ug/L	88	22	SW846 8270C
Acetophenone	20	13	ug/L	66		SW846 8270C
	20	14	ug/L	70	5.4	SW846 8270C
Anthracene	20	15	ug/L	73		SW846 8270C
	20	15	ug/L	75	2.0	SW846 8270C
Atrazine	20	13	ug/L	65		SW846 8270C
	20	16	ug/L	79	21	SW846 8270C
1,2-Dichlorobenzene	20	11	ug/L	57		SW846 8270C
	20	12	ug/L	60	4.2	SW846 8270C
1,3-Dichlorobenzene	20	10	ug/L	52		SW846 8270C
	20	11	ug/L	54	4.6	SW846 8270C
Benzaldehyde	20	17	ug/L	83		SW846 8270C
	20	17	ug/L	85	2.1	SW846 8270C
Benzo(a)anthracene	20	15	ug/L	73		SW846 8270C
	20	15	ug/L	75	2.8	SW846 8270C
Benzo(b)fluoranthene	20	14	ug/L	72		SW846 8270C
	20	14	ug/L	70	2.8	SW846 8270C
Benzo(k)fluoranthene	20	15	ug/L	74		SW846 8270C
	20	14	ug/L	68	8.9	SW846 8270C
Benzo(ghi)perylene	20	16	ug/L	78		SW846 8270C
	20	17	ug/L	85	7.8	SW846 8270C
Benzo(a)pyrene	20	13	ug/L	63		SW846 8270C
	20	14	ug/L	71	13	SW846 8270C
1,1'-Biphenyl	20	13	ug/L	65		SW846 8270C
	20	16	ug/L	80	21	SW846 8270C
bis(2-Chloroethoxy) methane	20	15	ug/L	73		SW846 8270C
	20	15	ug/L	76	4.6	SW846 8270C
bis(2-Chloroethyl)-ether	20	14	ug/L	72		SW846 8270C
	20	15	ug/L	74	3.0	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-042 L9RHW1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
bis(2-Ethylhexyl) phthalate	20	14	ug/L	72		SW846 8270C
	20	15	ug/L	75	3.8	SW846 8270C
4-Bromophenyl phenyl ether	20	13	ug/L	66		SW846 8270C
	20	15	ug/L	76	14	SW846 8270C
Butyl benzyl phthalate	20	13	ug/L	66		SW846 8270C
	20	15	ug/L	74	12	SW846 8270C
Caprolactam	20	15	ug/L	75		SW846 8270C
	20	16	ug/L	79	4.6	SW846 8270C
Carbazole	20	14	ug/L	70		SW846 8270C
	20	15	ug/L	75	7.6	SW846 8270C
4-Chloroaniline	20	13	ug/L	66		SW846 8270C
	20	14	ug/L	68	2.6	SW846 8270C
4-Chloro-3-methylphenol	**20**	**14**	**ug/L**	**69**		**SW846 8270C**
	20	**15**	**ug/L**	**73**	**5.8**	**SW846 8270C**
Benzoic acid	20		ug/L	27		SW846 8270C
	20		ug/L	29	5.7	SW846 8270C
1,4-Dioxane	20	11	ug/L	54		SW846 8270C
	20	11	ug/L	53	2.3	SW846 8270C
Pyridine	20	12	ug/L	59		SW846 8270C
	20	11	ug/L	53	10	SW846 8270C
2-Chloronaphthalene	20	14	ug/L	68		SW846 8270C
	20	17	ug/L	85	22	SW846 8270C
2-Chlorophenol	**20**	**13**	**ug/L**	**64**		**SW846 8270C**
	20	**13**	**ug/L**	**66**	**3.3**	**SW846 8270C**
Aniline	20	12	ug/L	59		SW846 8270C
	20	12	ug/L	60	2.9	SW846 8270C
Benzyl alcohol	20	15	ug/L	73		SW846 8270C
	20	15	ug/L	76	4.0	SW846 8270C
4-Chlorophenyl phenyl ether	20	15	ug/L	73		SW846 8270C
	20	18	ug/L	91	23	SW846 8270C
N-Nitrosodimethylamine	20	11	ug/L	54		SW846 8270C
	20	11	ug/L	55	1.0	SW846 8270C
1-Methylnaphthalene	20	14	ug/L	68		SW846 8270C
	20	14	ug/L	71	5.4	SW846 8270C
1,2-Dinitrobenzene	20	16	ug/L	81		SW846 8270C
	20	20	ug/L	99	20	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-042 L9RHW1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
2,3,5,6-Tetrachlorophenol	20	14	ug/L	72		SW846 8270C
	20	16	ug/L	82	13	SW846 8270C
Chrysene	20	15	ug/L	74		SW846 8270C
	20	16	ug/L	80	7.5	SW846 8270C
Dibenz(a,h)anthracene	20	15	ug/L	77		SW846 8270C
	20	17	ug/L	84	8.7	SW846 8270C
Dibenzofuran	20	14	ug/L	72		SW846 8270C
	20	16	ug/L	80	11	SW846 8270C
Di-n-butyl phthalate	20	14	ug/L	69		SW846 8270C
	20	17	ug/L	83	19	SW846 8270C
3,3'-Dichlorobenzidine	20	11	ug/L	55		SW846 8270C
	20	12	ug/L	58	4.8	SW846 8270C
2,4-Dichlorophenol	20	14	ug/L	69		SW846 8270C
	20	15	ug/L	76	9.4	SW846 8270C
Diethyl phthalate	20	14	ug/L	69		SW846 8270C
	20	15	ug/L	74	7.2	SW846 8270C
2,4-Dimethylphenol	20	7.2	ug/L	36		SW846 8270C
	20	7.4	ug/L	37	2.0	SW846 8270C
Dimethyl phthalate	20	14	ug/L	72		SW846 8270C
	20	19	ug/L	93	26	SW846 8270C
4,6-Dinitro-2-methylphenol	20	12	ug/L	60		SW846 8270C
	20	14	ug/L	70	16	SW846 8270C
2,4-Dinitrophenol	20	8.1	ug/L	41		SW846 8270C
	20	8.2	ug/L	41	1.2	SW846 8270C
2,4-Dinitrotoluene	**20**	**15**	**ug/L**	**75**		**SW846 8270C**
	20	**17**	**ug/L**	**84**	**10**	**SW846 8270C**
2,6-Dinitrotoluene	20	16	ug/L	78		SW846 8270C
	20	20	ug/L	98	23	SW846 8270C
Di-n-octyl phthalate	20	14	ug/L	70		SW846 8270C
	20	16	ug/L	78	9.7	SW846 8270C
Fluoranthene	20	17	ug/L	84		SW846 8270C
	20	18	ug/L	90	6.9	SW846 8270C
Fluorene	20	14	ug/L	69		SW846 8270C
	20	18	ug/L	89	25	SW846 8270C
Hexachlorobenzene	20	13	ug/L	65		SW846 8270C
	20	15	ug/L	77	17	SW846 8270C
Hexachlorobutadiene	20	9.3	ug/L	46		SW846 8270C
	20	10	ug/L	50	7.7	SW846 8270C
Hexachlorocyclopenta-diene	20	1.7 a	ug/L	8.4		SW846 8270C
	20	1.8 a	ug/L	8.8	5.0	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-042 L9RHW1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Hexachloroethane	20	8.5	ug/L	43		SW846 8270C
	20	9.1	ug/L	46	6.8	SW846 8270C
Indeno(1,2,3-cd)pyrene	20	15	ug/L	76		SW846 8270C
	20	17	ug/L	84	9.8	SW846 8270C
Isophorone	20	14	ug/L	70		SW846 8270C
	20	15	ug/L	73	4.1	SW846 8270C
2-Methylnaphthalene	20	16	ug/L	79		SW846 8270C
	20	17	ug/L	84	6.2	SW846 8270C
2-Methylphenol	20	13	ug/L	65		SW846 8270C
	20	14	ug/L	69	6.7	SW846 8270C
4-Methylphenol	40	28	ug/L	70		SW846 8270C
	40	29	ug/L	73	3.6	SW846 8270C
Naphthalene	20	13	ug/L	66		SW846 8270C
	20	14	ug/L	69	3.9	SW846 8270C
2-Nitroaniline	20	14	ug/L	70		SW846 8270C
	20	17	ug/L	87	21	SW846 8270C
3-Nitroaniline	20	15	ug/L	73		SW846 8270C
	20	18	ug/L	90	21	SW846 8270C
4-Nitroaniline	20	14	ug/L	69		SW846 8270C
	20	18	ug/L	91	27	SW846 8270C
Nitrobenzene	20	14	ug/L	70		SW846 8270C
	20	15	ug/L	73	3.7	SW846 8270C
2-Nitrophenol	20	14	ug/L	70		SW846 8270C
	20	15	ug/L	74	5.3	SW846 8270C
4-Nitrophenol	**20**	**14**	**ug/L**	**72**		**SW846 8270C**
	20	**14**	**ug/L**	**72**	**0.23**	**SW846 8270C**
N-Nitrosodiphenylamine	20	14	ug/L	68		SW846 8270C
	20	16	ug/L	80	16	SW846 8270C
N-Nitrosodi-n-propyl-amine	**20**	**14**	**ug/L**	**70**		**SW846 8270C**
	20	**14**	**ug/L**	**71**	**2.0**	**SW846 8270C**
bis(2-Chloroisopropyl) ether	20	15	ug/L	76		SW846 8270C
	20	16	ug/L	78	2.5	SW846 8270C
Pentachlorophenol	**20**	**12**	**ug/L**	**60**		**SW846 8270C**
	20	**14**	**ug/L**	**69**	**13**	**SW846 8270C**
Phenanthrene	20	14	ug/L	71		SW846 8270C
	20	15	ug/L	74	4.3	SW846 8270C
Phenol	**20**	**13**	**ug/L**	**66**		**SW846 8270C**
	20	**14**	**ug/L**	**68**	**2.7**	**SW846 8270C**

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-042 L9RHW1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Pyrene	**20**	**15**	**ug/L**	**77**		**SW846 8270C**
	20	**15**	**ug/L**	**74**	**4.2**	**SW846 8270C**
2,4,5-Trichloro-phenol	20	14	ug/L	72		SW846 8270C
	20	18	ug/L	90	22	SW846 8270C
2,4,6-Trichloro-phenol	20	15	ug/L	73		SW846 8270C
	20	17	ug/L	87	18	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(27 - 111)
	65	(27 - 111)
2-Fluorobiphenyl	63	(28 - 110)
	79	(28 - 110)
Terphenyl-d14	82	(37 - 119)
	80	(37 - 119)
Phenol-d5	62	(10 - 110)
	65	(10 - 110)
2-Fluorophenol	38	(10 - 110)
	35	(10 - 110)
2,4,6-Tribromophenol	66	(22 - 120)
	75	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9V531AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K110000-169 L9V531AD-LCSD
Prep Date.....: 11/10/10 **Analysis Date..:** 11/10/10
Prep Batch #...: 0315169
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**87**	**(80 - 120)**			**WI-GRO GRO**
	105	**(80 - 120)**	**19**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9V531AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K110000-169 L9V531AD-LCSD
Prep Date.....: 11/10/10 **Analysis Date..:** 11/10/10
Prep Batch #...: 0315169
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**200**	**170**	**ug/L**	**87**		**WI-GRO GRO**
	200	**210**	**ug/L**	**105**	**19**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHT1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-041 L9RHT1AD-LCSD
Prep Date.....: 11/10/10 **Analysis Date..:** 11/12/10
Prep Batch #...: 0314041
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**81**	**(75 - 115)**			**WI-DRO DRO**
	83	**(75 - 115)**	**2.3**	**(0-20)**	**WI-DRO DRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A0K080453 **Work Order #...:** L9RHT1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K100000-041 L9RHT1AD-LCSD
Prep Date.....: 11/10/10 **Analysis Date..:** 11/12/10
Prep Batch #...: 0314041
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Diesel Range Organics	**0.50**	**0.40**	**mg/L**	**81**		**WI-DRO DRO**
	0.50	**0.41**	**mg/L**	**83**	**2.3**	**WI-DRO DRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A0K080453 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A0K090000-014 **Prep Batch #...:** 0313014					
Arsenic	103	(80 - 120)	SW846 6010B Dilution Factor: 1	11/09-11/10/10	L9P351AL
Barium	105	(80 - 120)	SW846 6010B Dilution Factor: 1	11/09-11/10/10	L9P351AP
Lead	106	(80 - 120)	SW846 6010B Dilution Factor: 1	11/09-11/10/10	L9P351AM
Cadmium	107	(80 - 120)	SW846 6010B Dilution Factor: 1	11/09-11/10/10	L9P351AQ
Selenium	107	(80 - 120)	SW846 6010B Dilution Factor: 1	11/09-11/10/10	L9P351AN
Chromium	105	(80 - 120)	SW846 6010B Dilution Factor: 1	11/09-11/10/10	L9P351AR
Silver	100	(80 - 120)	SW846 6010B Dilution Factor: 1	11/09-11/10/10	L9P351AT
Mercury	95	(81 - 123)	SW846 7470A Dilution Factor: 1	11/09/10	L9P351AK

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A0K080453 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A0K090000-014 **Prep Batch #...:** 0313014							
Arsenic	2000	2050	ug/L	103	SW846 6010B	11/09-11/10/10	L9P351AL
			Dilution Factor: 1				
Barium	2000	2100	ug/L	105	SW846 6010B	11/09-11/10/10	L9P351AP
			Dilution Factor: 1				
Lead	500	530	ug/L	106	SW846 6010B	11/09-11/10/10	L9P351AM
			Dilution Factor: 1				
Cadmium	50.0	53.4	ug/L	107	SW846 6010B	11/09-11/10/10	L9P351AQ
			Dilution Factor: 1				
Selenium	2000	2140	ug/L	107	SW846 6010B	11/09-11/10/10	L9P351AN
			Dilution Factor: 1				
Chromium	200	211	ug/L	105	SW846 6010B	11/09-11/10/10	L9P351AR
			Dilution Factor: 1				
Silver	50.0	49.8	ug/L	100	SW846 6010B	11/09-11/10/10	L9P351AT
			Dilution Factor: 1				
Mercury	5.0	4.8	ug/L	95	SW846 7470A	11/09/10	L9P351AK
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A0K080453 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3		Work Order #: L96G81AC	LCS Lot-Sample#: A0K170000-178		
	102	(88 - 110)	SM18 2340C	11/17/10	0321178
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A0K080453 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3	Work Order #: L96G81AC				LCS Lot-Sample#: A0K170000-178		
	200	210	mg/L	102	SM18 2340C	11/17/10	0321178
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9LEJ1A3-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K050448-005 L9LEJ1A4-MSD
Date Sampled...: 11/03/10 15:05 **Date Received..:** 11/05/10
Prep Date.....: 11/17/10 **Analysis Date..:** 11/17/10
Prep Batch #...: 0328206
Dilution Factor: 10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	110	(33 - 145)			SW846 8260B
	116	(33 - 145)	5.0	(0-30)	SW846 8260B
Benzene	**93**	**(72 - 121)**			**SW846 8260B**
	96	**(72 - 121)**	**0.98**	**(0-30)**	**SW846 8260B**
Bromobenzene	94	(71 - 116)			SW846 8260B
	97	(71 - 116)	3.2	(0-30)	SW846 8260B
1,2-Dichloroethene (total)	97	(75 - 119)			SW846 8260B
	99	(75 - 119)	2.3	(0-30)	SW846 8260B
Bromochloromethane	100	(73 - 121)			SW846 8260B
	102	(73 - 121)	2.3	(0-30)	SW846 8260B
Bromodichloromethane	98	(67 - 120)			SW846 8260B
	94	(67 - 120)	4.6	(0-30)	SW846 8260B
Bromoform	57	(32 - 128)			SW846 8260B
	44	(32 - 128)	27	(0-30)	SW846 8260B
Bromomethane	80	(10 - 186)			SW846 8260B
	84	(10 - 186)	4.9	(0-30)	SW846 8260B
Methyl ethyl ketone	105	(54 - 129)			SW846 8260B
	106	(54 - 129)	1.0	(0-30)	SW846 8260B
n-Butylbenzene	86	(56 - 127)			SW846 8260B
	88	(56 - 127)	2.5	(0-30)	SW846 8260B
sec-Butylbenzene	91	(60 - 119)			SW846 8260B
	94	(60 - 119)	3.5	(0-30)	SW846 8260B
Xylenes (total)	98	(76 - 116)			SW846 8260B
	96	(76 - 116)	1.4	(0-30)	SW846 8260B
tert-Butylbenzene	92	(61 - 119)			SW846 8260B
	94	(61 - 119)	2.0	(0-30)	SW846 8260B
Carbon disulfide	122	(57 - 147)			SW846 8260B
	124	(57 - 147)	1.5	(0-30)	SW846 8260B
Carbon tetrachloride	98	(59 - 129)			SW846 8260B
	96	(59 - 129)	2.5	(0-30)	SW846 8260B
Chlorobenzene	**96**	**(80 - 110)**			**SW846 8260B**
	94	**(80 - 110)**	**1.9**	**(0-30)**	**SW846 8260B**
Chlorodibromomethane	83	(56 - 118)			SW846 8260B
	72	(56 - 118)	14	(0-30)	SW846 8260B
Chloroethane	95	(21 - 165)			SW846 8260B
	101	(21 - 165)	6.4	(0-30)	SW846 8260B
n-Hexane	114	(54 - 138)			SW846 8260B
	118	(54 - 138)	3.3	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9LEJ1A3-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K050448-005 L9LEJ1A4-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	102	(76 - 118)			SW846 8260B
	102	(76 - 118)	0.67	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(10 - 150)			SW846 8260B
	0.0 a	(10 - 150)	0.0	(0-30)	SW846 8260B
Acetonitrile	99	(12 - 182)			SW846 8260B
	103	(12 - 182)	3.5	(0-30)	SW846 8260B
Chloromethane	67	(33 - 132)			SW846 8260B
	71	(33 - 132)	5.7	(0-30)	SW846 8260B
Acrolein	96	(47 - 168)			SW846 8260B
	98	(47 - 168)	2.3	(0-30)	SW846 8260B
Acrylonitrile	108	(62 - 133)			SW846 8260B
	111	(62 - 133)	2.3	(0-30)	SW846 8260B
Vinyl acetate	129	(43 - 157)			SW846 8260B
	134	(43 - 157)	3.9	(0-30)	SW846 8260B
2-Chlorotoluene	94	(69 - 117)			SW846 8260B
	91	(69 - 117)	2.5	(0-30)	SW846 8260B
4-Chlorotoluene	91	(71 - 116)			SW846 8260B
	93	(71 - 116)	2.7	(0-30)	SW846 8260B
Cyclohexane	107	(49 - 123)			SW846 8260B
	112	(49 - 123)	5.2	(0-30)	SW846 8260B
Iodomethane	108	(66 - 144)			SW846 8260B
	113	(66 - 144)	4.4	(0-30)	SW846 8260B
Isopropyl ether	103	(73 - 118)			SW846 8260B
	103	(73 - 118)	0.48	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	63	(32 - 139)			SW846 8260B
	61	(32 - 139)	2.6	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	100	(74 - 113)			SW846 8260B
	101	(74 - 113)	0.59	(0-30)	SW846 8260B
Dibromomethane	106	(77 - 121)			SW846 8260B
	108	(77 - 121)	1.5	(0-30)	SW846 8260B
1,2-Dichlorobenzene	88	(75 - 111)			SW846 8260B
	89	(75 - 111)	1.0	(0-30)	SW846 8260B
1,3-Dichlorobenzene	88	(73 - 110)			SW846 8260B
	92	(73 - 110)	4.0	(0-30)	SW846 8260B
1,4-Dichlorobenzene	88	(75 - 110)			SW846 8260B
	89	(75 - 110)	1.3	(0-30)	SW846 8260B
Dichlorodifluoromethane	90	(17 - 128)			SW846 8260B
	94	(17 - 128)	4.6	(0-30)	SW846 8260B
1,1-Dichloroethane	102	(79 - 116)			SW846 8260B
	103	(79 - 116)	1.1	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9LEJ1A3-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K050448-005 L9LEJ1A4-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	115	(68 - 129)			SW846 8260B
	114	(68 - 129)	1.0	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	96	(70 - 120)			SW846 8260B
	97	(70 - 120)	1.1	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	98	(80 - 119)			SW846 8260B
	101	(80 - 119)	3.6	(0-30)	SW846 8260B
1,1-Dichloroethene	**107**	**(74 - 135)**			**SW846 8260B**
	109	**(74 - 135)**	**2.0**	**(0-30)**	**SW846 8260B**
1,2-Dichloropropane	99	(78 - 115)			SW846 8260B
	99	(78 - 115)	0.01	(0-30)	SW846 8260B
1,3-Dichloropropane	104	(74 - 118)			SW846 8260B
	102	(74 - 118)	1.9	(0-30)	SW846 8260B
2,2-Dichloropropane	81	(38 - 127)			SW846 8260B
	80	(38 - 127)	1.6	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	75	(51 - 110)			SW846 8260B
	67	(51 - 110)	11	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	82	(46 - 116)			SW846 8260B
	63	(46 - 116)	26	(0-30)	SW846 8260B
1,1-Dichloropropene	106	(80 - 114)			SW846 8260B
	106	(80 - 114)	0.08	(0-30)	SW846 8260B
Ethylbenzene	99	(75 - 116)			SW846 8260B
	98	(75 - 116)	1.2	(0-30)	SW846 8260B
Hexachlorobutadiene	68	(27 - 132)			SW846 8260B
	71	(27 - 132)	4.6	(0-30)	SW846 8260B
2-Hexanone	112	(47 - 139)			SW846 8260B
	109	(47 - 139)	2.6	(0-30)	SW846 8260B
Isopropylbenzene	99	(68 - 116)			SW846 8260B
	97	(68 - 116)	1.8	(0-30)	SW846 8260B
p-Isopropyltoluene	94	(64 - 122)			SW846 8260B
	95	(64 - 122)	1.3	(0-30)	SW846 8260B
Methyl acetate	104	(47 - 130)			SW846 8260B
	105	(47 - 130)	1.7	(0-30)	SW846 8260B
Methylcyclohexane	107	(49 - 127)			SW846 8260B
	112	(49 - 127)	4.3	(0-30)	SW846 8260B
Methylene chloride	88	(63 - 128)			SW846 8260B
	89	(63 - 128)	1.6	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	107	(56 - 131)			SW846 8260B
	108	(56 - 131)	0.33	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	97	(46 - 144)			SW846 8260B
	99	(46 - 144)	2.5	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9LEJ1A3-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K050448-005 L9LEJ1A4-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	84	(15 - 158)			SW846 8260B
	88	(15 - 158)	4.7	(0-30)	SW846 8260B
n-Propylbenzene	94	(64 - 124)			SW846 8260B
	97	(64 - 124)	2.6	(0-30)	SW846 8260B
Styrene	101	(71 - 117)			SW846 8260B
	98	(71 - 117)	2.3	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	97	(64 - 118)			SW846 8260B
	92	(64 - 118)	5.3	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	102	(63 - 122)			SW846 8260B
	104	(63 - 122)	1.9	(0-30)	SW846 8260B
Tetrachloroethene	101	(70 - 117)			SW846 8260B
	98	(70 - 117)	3.2	(0-30)	SW846 8260B
Toluene	**98**	**(78 - 114)**			**SW846 8260B**
	97	**(78 - 114)**	**0.84**	**(0-30)**	**SW846 8260B**
1,2,3-Trichlorobenzene	87	(45 - 129)			SW846 8260B
	87	(45 - 129)	0.93	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	72	(38 - 138)			SW846 8260B
	74	(38 - 138)	3.6	(0-30)	SW846 8260B
1,1,1-Trichloroethane	99	(68 - 121)			SW846 8260B
	102	(68 - 121)	2.4	(0-30)	SW846 8260B
1,1,2-Trichloroethane	103	(75 - 115)			SW846 8260B
	102	(75 - 115)	0.42	(0-30)	SW846 8260B
Trichloroethene	**103**	**(66 - 120)**			**SW846 8260B**
	100	**(66 - 120)**	**3.1**	**(0-30)**	**SW846 8260B**
Trichlorofluoromethane	118	(46 - 157)			SW846 8260B
	121	(46 - 157)	2.3	(0-30)	SW846 8260B
1,2,3-Trichloropropane	105	(67 - 132)			SW846 8260B
	107	(67 - 132)	1.4	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	126	(70 - 152)			SW846 8260B
	132	(70 - 152)	4.6	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	95	(67 - 124)			SW846 8260B
	97	(67 - 124)	2.0	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	95	(63 - 121)			SW846 8260B
	96	(63 - 121)	1.3	(0-30)	SW846 8260B
Vinyl chloride	89	(49 - 130)			SW846 8260B
	94	(49 - 130)	5.8	(0-30)	SW846 8260B
m-Xylene & p-Xylene	98	(75 - 117)			SW846 8260B
	95	(75 - 117)	2.6	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9LEJ1A3-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K050448-005 L9LEJ1A4-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	98	(76 - 116)			SW846 8260B
	99	(76 - 116)	0.77	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(75 - 121)
	100	(75 - 121)
1,2-Dichloroethane-d4	105	(63 - 129)
	102	(63 - 129)
Toluene-d8	97	(74 - 115)
	96	(74 - 115)
4-Bromofluorobenzene	99	(66 - 117)
	96	(66 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9LEJ1A3-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K050448-005 L9LEJ1A4-MSD
Date Sampled...: 11/03/10 15:05 **Date Received..:** 11/05/10
Prep Date.....: 11/17/10 **Analysis Date..:** 11/17/10
Prep Batch #...: 0328206
Dilution Factor: 10

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acetone	ND	200	220	ug/L	110		SW846 8260B
	ND	200	230	ug/L	116	5.0	SW846 8260B
Benzene	**280**	**100**	**370**	**ug/L**	**93**		**SW846 8260B**
	280	**100**	**380**	**ug/L**	**96**	**0.98**	**SW846 8260B**
Bromobenzene	ND	100	94	ug/L	94		SW846 8260B
	ND	100	97	ug/L	97	3.2	SW846 8260B
1,2-Dichloroethene (total)	ND	200	190	ug/L	97		SW846 8260B
	ND	200	200	ug/L	99	2.3	SW846 8260B
Bromochloromethane	ND	100	100	ug/L	100		SW846 8260B
	ND	100	100	ug/L	102	2.3	SW846 8260B
Bromodichloromethane	ND	100	98	ug/L	98		SW846 8260B
	ND	100	94	ug/L	94	4.6	SW846 8260B
Bromoform	ND	100	57	ug/L	57		SW846 8260B
	ND	100	44	ug/L	44	27	SW846 8260B
Bromomethane	ND	100	80	ug/L	80		SW846 8260B
	ND	100	84	ug/L	84	4.9	SW846 8260B
Methyl ethyl ketone	ND	200	210	ug/L	105		SW846 8260B
	ND	200	210	ug/L	106	1.0	SW846 8260B
n-Butylbenzene	ND	100	86	ug/L	86		SW846 8260B
	ND	100	88	ug/L	88	2.5	SW846 8260B
sec-Butylbenzene	ND	100	91	ug/L	91		SW846 8260B
	ND	100	94	ug/L	94	3.5	SW846 8260B
Xylenes (total)	ND	300	290	ug/L	98		SW846 8260B
	ND	300	290	ug/L	96	1.4	SW846 8260B
tert-Butylbenzene	ND	100	92	ug/L	92		SW846 8260B
	ND	100	94	ug/L	94	2.0	SW846 8260B
Carbon disulfide	ND	100	120	ug/L	122		SW846 8260B
	ND	100	120	ug/L	124	1.5	SW846 8260B
Carbon tetrachloride	ND	100	98	ug/L	98		SW846 8260B
	ND	100	96	ug/L	96	2.5	SW846 8260B
Chlorobenzene	**ND**	**100**	**96**	**ug/L**	**96**		**SW846 8260B**
	ND	**100**	**94**	**ug/L**	**94**	**1.9**	**SW846 8260B**
Chlorodibromomethane	ND	100	83	ug/L	83		SW846 8260B
	ND	100	72	ug/L	72	14	SW846 8260B
Chloroethane	ND	100	95	ug/L	95		SW846 8260B
	ND	100	100	ug/L	101	6.4	SW846 8260B
n-Hexane	ND	100	110	ug/L	114		SW846 8260B
	ND	100	120	ug/L	118	3.3	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9LEJ1A3-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K050448-005 L9LEJ1A4-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Chloroform	ND	100	100	ug/L	102		SW846 8260B
	ND	100	100	ug/L	102	0.67	SW846 8260B
2-Chloroethyl vinyl ether	ND	100	0.0	ug/L	0.0 a		SW846 8260B
	ND	100	0.0	ug/L	0.0 a	0.0	SW846 8260B
Acetonitrile	ND	300	300	ug/L	99		SW846 8260B
	ND	300	310	ug/L	103	3.5	SW846 8260B
Chloromethane	ND	100	67	ug/L	67		SW846 8260B
	ND	100	71	ug/L	71	5.7	SW846 8260B
Acrolein	ND	300	290	ug/L	96		SW846 8260B
	ND	300	290	ug/L	98	2.3	SW846 8260B
Acrylonitrile	ND	300	320	ug/L	108		SW846 8260B
	ND	300	330	ug/L	111	2.3	SW846 8260B
Vinyl acetate	ND	100	130	ug/L	129		SW846 8260B
	ND	100	130	ug/L	134	3.9	SW846 8260B
2-Chlorotoluene	ND	100	94	ug/L	94		SW846 8260B
	ND	100	91	ug/L	91	2.5	SW846 8260B
4-Chlorotoluene	ND	100	91	ug/L	91		SW846 8260B
	ND	100	93	ug/L	93	2.7	SW846 8260B
Cyclohexane	ND	100	110	ug/L	107		SW846 8260B
	ND	100	110	ug/L	112	5.2	SW846 8260B
Iodomethane	ND	100	110	ug/L	108		SW846 8260B
	ND	100	110	ug/L	113	4.4	SW846 8260B
Isopropyl ether	ND	100	100	ug/L	103		SW846 8260B
	ND	100	100	ug/L	103	0.48	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	100	63	ug/L	63		SW846 8260B
	ND	100	61	ug/L	61	2.6	SW846 8260B
1,2-Dibromoethane (EDB)	ND	100	100	ug/L	100		SW846 8260B
	ND	100	100	ug/L	101	0.59	SW846 8260B
Dibromomethane	ND	100	110	ug/L	106		SW846 8260B
	ND	100	110	ug/L	108	1.5	SW846 8260B
1,2-Dichlorobenzene	ND	100	88	ug/L	88		SW846 8260B
	ND	100	89	ug/L	89	1.0	SW846 8260B
1,3-Dichlorobenzene	ND	100	88	ug/L	88		SW846 8260B
	ND	100	92	ug/L	92	4.0	SW846 8260B
1,4-Dichlorobenzene	ND	100	88	ug/L	88		SW846 8260B
	ND	100	89	ug/L	89	1.3	SW846 8260B
Dichlorodifluoromethane	ND	100	90	ug/L	90		SW846 8260B
	ND	100	94	ug/L	94	4.6	SW846 8260B
1,1-Dichloroethane	ND	100	100	ug/L	102		SW846 8260B
	ND	100	100	ug/L	103	1.1	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9LEJ1A3-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K050448-005 L9LEJ1A4-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2-Dichloroethane	ND	100	110	ug/L	115		SW846 8260B
	ND	100	110	ug/L	114	1.0	SW846 8260B
cis-1,2-Dichloroethene	ND	100	96	ug/L	96		SW846 8260B
	ND	100	97	ug/L	97	1.1	SW846 8260B
trans-1,2-Dichloroethene	ND	100	98	ug/L	98		SW846 8260B
	ND	100	100	ug/L	101	3.6	SW846 8260B
1,1-Dichloroethene	**ND**	**100**	**110**	**ug/L**	**107**		**SW846 8260B**
	ND	**100**	**110**	**ug/L**	**109**	**2.0**	**SW846 8260B**
1,2-Dichloropropane	ND	100	99	ug/L	99		SW846 8260B
	ND	100	99	ug/L	99	0.01	SW846 8260B
1,3-Dichloropropane	ND	100	100	ug/L	104		SW846 8260B
	ND	100	100	ug/L	102	1.9	SW846 8260B
2,2-Dichloropropane	ND	100	81	ug/L	81		SW846 8260B
	ND	100	80	ug/L	80	1.6	SW846 8260B
cis-1,3-Dichloropropene	ND	100	75	ug/L	75		SW846 8260B
	ND	100	67	ug/L	67	11	SW846 8260B
trans-1,3-Dichloropropene	ND	100	82	ug/L	82		SW846 8260B
	ND	100	63	ug/L	63	26	SW846 8260B
1,1-Dichloropropene	ND	100	110	ug/L	106		SW846 8260B
	ND	100	110	ug/L	106	0.08	SW846 8260B
Ethylbenzene	ND	100	99	ug/L	99		SW846 8260B
	ND	100	98	ug/L	98	1.2	SW846 8260B
Hexachlorobutadiene	ND	100	68	ug/L	68		SW846 8260B
	ND	100	71	ug/L	71	4.6	SW846 8260B
2-Hexanone	ND	200	220	ug/L	112		SW846 8260B
	ND	200	220	ug/L	109	2.6	SW846 8260B
Isopropylbenzene	ND	100	99	ug/L	99		SW846 8260B
	ND	100	97	ug/L	97	1.8	SW846 8260B
p-Isopropyltoluene	ND	100	94	ug/L	94		SW846 8260B
	ND	100	95	ug/L	95	1.3	SW846 8260B
Methyl acetate	ND	100	100	ug/L	104		SW846 8260B
	ND	100	110	ug/L	105	1.7	SW846 8260B
Methylcyclohexane	ND	100	110	ug/L	107		SW846 8260B
	ND	100	110	ug/L	112	4.3	SW846 8260B
Methylene chloride	ND	100	88	ug/L	88		SW846 8260B
	ND	100	89	ug/L	89	1.6	SW846 8260B
4-Methyl-2-pentanone (MIB	ND	200	210	ug/L	107		SW846 8260B
	ND	200	220	ug/L	108	0.33	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	100	97	ug/L	97		SW846 8260B
	ND	100	99	ug/L	99	2.5	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9LEJ1A3-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K050448-005 L9LEJ1A4-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Naphthalene	ND	100	84	ug/L	84		SW846 8260B
	ND	100	88	ug/L	88	4.7	SW846 8260B
n-Propylbenzene	ND	100	94	ug/L	94		SW846 8260B
	ND	100	97	ug/L	97	2.6	SW846 8260B
Styrene	ND	100	100	ug/L	101		SW846 8260B
	ND	100	98	ug/L	98	2.3	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	100	97	ug/L	97		SW846 8260B
	ND	100	92	ug/L	92	5.3	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	100	100	ug/L	102		SW846 8260B
	ND	100	100	ug/L	104	1.9	SW846 8260B
Tetrachloroethene	ND	100	100	ug/L	101		SW846 8260B
	ND	100	98	ug/L	98	3.2	SW846 8260B
Toluene	**ND**	**100**	**98**	**ug/L**	**98**		**SW846 8260B**
	ND	**100**	**97**	**ug/L**	**97**	**0.84**	**SW846 8260B**
1,2,3-Trichlorobenzene	ND	100	87	ug/L	87		SW846 8260B
	ND	100	87	ug/L	87	0.93	SW846 8260B
1,2,4-Trichloro-benzene	ND	100	72	ug/L	72		SW846 8260B
	ND	100	74	ug/L	74	3.6	SW846 8260B
1,1,1-Trichloroethane	ND	100	99	ug/L	99		SW846 8260B
	ND	100	100	ug/L	102	2.4	SW846 8260B
1,1,2-Trichloroethane	ND	100	100	ug/L	103		SW846 8260B
	ND	100	100	ug/L	102	0.42	SW846 8260B
Trichloroethene	**ND**	**100**	**100**	**ug/L**	**103**		**SW846 8260B**
	ND	**100**	**100**	**ug/L**	**100**	**3.1**	**SW846 8260B**
Trichlorofluoromethane	ND	100	120	ug/L	118		SW846 8260B
	ND	100	120	ug/L	121	2.3	SW846 8260B
1,2,3-Trichloropropane	ND	100	110	ug/L	105		SW846 8260B
	ND	100	110	ug/L	107	1.4	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	100	130	ug/L	126		SW846 8260B
	ND	100	130	ug/L	132	4.6	SW846 8260B
1,2,4-Trimethylbenzene	ND	100	95	ug/L	95		SW846 8260B
	ND	100	97	ug/L	97	2.0	SW846 8260B
1,3,5-Trimethylbenzene	ND	100	95	ug/L	95		SW846 8260B
	ND	100	96	ug/L	96	1.3	SW846 8260B
Vinyl chloride	ND	100	89	ug/L	89		SW846 8260B
	ND	100	94	ug/L	94	5.8	SW846 8260B
m-Xylene & p-Xylene	ND	200	200	ug/L	98		SW846 8260B
	ND	200	190	ug/L	95	2.6	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9LEJ1A3-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K050448-005 L9LEJ1A4-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
o-Xylene	ND	100	98	ug/L	98		SW846 8260B
	ND	100	99	ug/L	99	0.77	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(75 - 121)
	100	(75 - 121)
1,2-Dichloroethane-d4	105	(63 - 129)
	102	(63 - 129)
Toluene-d8	97	(74 - 115)
	96	(74 - 115)
4-Bromofluorobenzene	99	(66 - 117)
	96	(66 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9PJX1AP-MS **Matrix.....:** WG
MS Lot-Sample #: A0K080453-005 L9PJX1AQ-MSD
Date Sampled...: 11/04/10 12:40 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/10/10
Prep Batch #...: 0315169
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**85**	**(80 - 120)**			**WI-GRO GRO**
	102	**(80 - 120)**	**17**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: A0K080453 **Work Order #...:** L9PJX1AP-MS **Matrix.....:** WG
MS Lot-Sample #: A0K080453-005 L9PJX1AQ-MSD
Date Sampled...: 11/04/10 12:40 **Date Received..:** 11/06/10
Prep Date.....: 11/10/10 **Analysis Date..:** 11/10/10
Prep Batch #...: 0315169
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	**ND**	**200**	**180**	**ug/L**	**85**		**WI-GRO GRO**
	ND	**200**	**220**	**ug/L**	**102**	**17**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A0K080453 **Matrix.....:** WG
Date Sampled...: 11/04/10 09:40 **Date Received..:** 11/06/10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A0K080453-001 **Prep Batch #...:** 0313014							
Arsenic	104	(75 - 125)			SW846 6010B	11/09-11/11/10	L9PJF1AT
	106	(75 - 125)	1.6	(0-20)	SW846 6010B	11/09-11/11/10	L9PJF1AU
		Dilution Factor: 1					
Barium	106	(75 - 125)			SW846 6010B	11/09-11/11/10	L9PJF1A1
	108	(75 - 125)	2.2	(0-20)	SW846 6010B	11/09-11/11/10	L9PJF1A2
		Dilution Factor: 1					
Cadmium	106	(75 - 125)			SW846 6010B	11/09-11/11/10	L9PJF1A3
	108	(75 - 125)	1.8	(0-20)	SW846 6010B	11/09-11/11/10	L9PJF1A4
		Dilution Factor: 1					
Lead	106	(75 - 125)			SW846 6010B	11/09-11/11/10	L9PJF1AV
	108	(75 - 125)	1.6	(0-20)	SW846 6010B	11/09-11/11/10	L9PJF1AW
		Dilution Factor: 1					
Chromium	107	(75 - 125)			SW846 6010B	11/09-11/11/10	L9PJF1A5
	109	(75 - 125)	1.7	(0-20)	SW846 6010B	11/09-11/11/10	L9PJF1A6
		Dilution Factor: 1					
Selenium	108	(75 - 125)			SW846 6010B	11/09-11/11/10	L9PJF1AX
	109	(75 - 125)	1.4	(0-20)	SW846 6010B	11/09-11/11/10	L9PJF1A0
		Dilution Factor: 1					
Silver	101	(75 - 125)			SW846 6010B	11/09-11/11/10	L9PJF1A7
	104	(75 - 125)	2.4	(0-20)	SW846 6010B	11/09-11/11/10	L9PJF1A8
		Dilution Factor: 1					
Mercury	91	(69 - 134)			SW846 7470A	11/09/10	L9PJF1AQ
	92	(69 - 134)	1.2	(0-20)	SW846 7470A	11/09/10	L9PJF1AR
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A0K080453 **Matrix.....:** WG
Date Sampled...: 11/04/10 09:40 **Date Received..:** 11/06/10

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A0K080453-001 **Prep Batch #...:** 0313014									
Arsenic									
	ND	2000	2080	ug/L	104		SW846 6010B	11/09-11/11/10	L9PJF1AT
	ND	2000	2110	ug/L	106	1.6	SW846 6010B	11/09-11/11/10	L9PJF1AU
			Dilution Factor: 1						
Barium									
	53.4	2000	2170	ug/L	106		SW846 6010B	11/09-11/11/10	L9PJF1A1
	53.4	2000	2220	ug/L	108	2.2	SW846 6010B	11/09-11/11/10	L9PJF1A2
			Dilution Factor: 1						
Cadmium									
	ND	50.0	53.2	ug/L	106		SW846 6010B	11/09-11/11/10	L9PJF1A3
	ND	50.0	54.1	ug/L	108	1.8	SW846 6010B	11/09-11/11/10	L9PJF1A4
			Dilution Factor: 1						
Lead									
	ND	500	530	ug/L	106		SW846 6010B	11/09-11/11/10	L9PJF1AV
	ND	500	538	ug/L	108	1.6	SW846 6010B	11/09-11/11/10	L9PJF1AW
			Dilution Factor: 1						
Chromium									
	ND	200	213	ug/L	107		SW846 6010B	11/09-11/11/10	L9PJF1A5
	ND	200	217	ug/L	109	1.7	SW846 6010B	11/09-11/11/10	L9PJF1A6
			Dilution Factor: 1						
Selenium									
	ND	2000	2150	ug/L	108		SW846 6010B	11/09-11/11/10	L9PJF1AX
	ND	2000	2180	ug/L	109	1.4	SW846 6010B	11/09-11/11/10	L9PJF1A0
			Dilution Factor: 1						
Silver									
	ND	50.0	50.6	ug/L	101		SW846 6010B	11/09-11/11/10	L9PJF1A7
	ND	50.0	51.8	ug/L	104	2.4	SW846 6010B	11/09-11/11/10	L9PJF1A8
			Dilution Factor: 1						
Mercury									
	ND	1.0	0.91	ug/L	91		SW846 7470A	11/09/10	L9PJF1AQ
	ND	1.0	0.92	ug/L	92	1.2	SW846 7470A	11/09/10	L9PJF1AR
			Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A0K080453 **Matrix.....:** WATER
Date Sampled...: 11/08/10 14:35 **Date Received..:** 11/08/10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3	WO#: L9T7R1AT-MS/L9T7R1AU-MSD					MS Lot-Sample #: A0K100579-008	
	89	(87 - 114)			SM18 2340C	11/17/10	0321179
	91	(87 - 114)	1.4	(0-20)	SM18 2340C	11/17/10	0321179
	Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A0K080453 **Matrix.....:** WATER
Date Sampled...: 11/08/10 14:35 **Date Received..:** 11/08/10

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3	WO#: L9T7R1AT-MS/L9T7R1AU-MSD						MS Lot-Sample #: A0K100579-008		
	490	1000	1400	mg/L	89		SM18 2340C	11/17/10	0321179
	490	1000	1400	mg/L	91	1.4	SM18 2340C	11/17/10	0321179
			Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

GC VOLATILE DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SAMPLE DATA

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111009.D
Lab Smp Id: L9PJF1AD Client Smp ID: SW-01
Inj Date : 10-NOV-2010 14:24
Operator : 01616 Inst ID: ypid.i
Smp Info : L9PJF1AD,5.0ML
Misc Info : Y01110
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YFGRO.m
Meth Date : 13-Oct-2010 13:47 Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700-22.000			33460914	1.02153	0.204

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111009.D

Date : 10-NOV-2010 14:24

Client ID: SW-01

Instrument: ypid.i

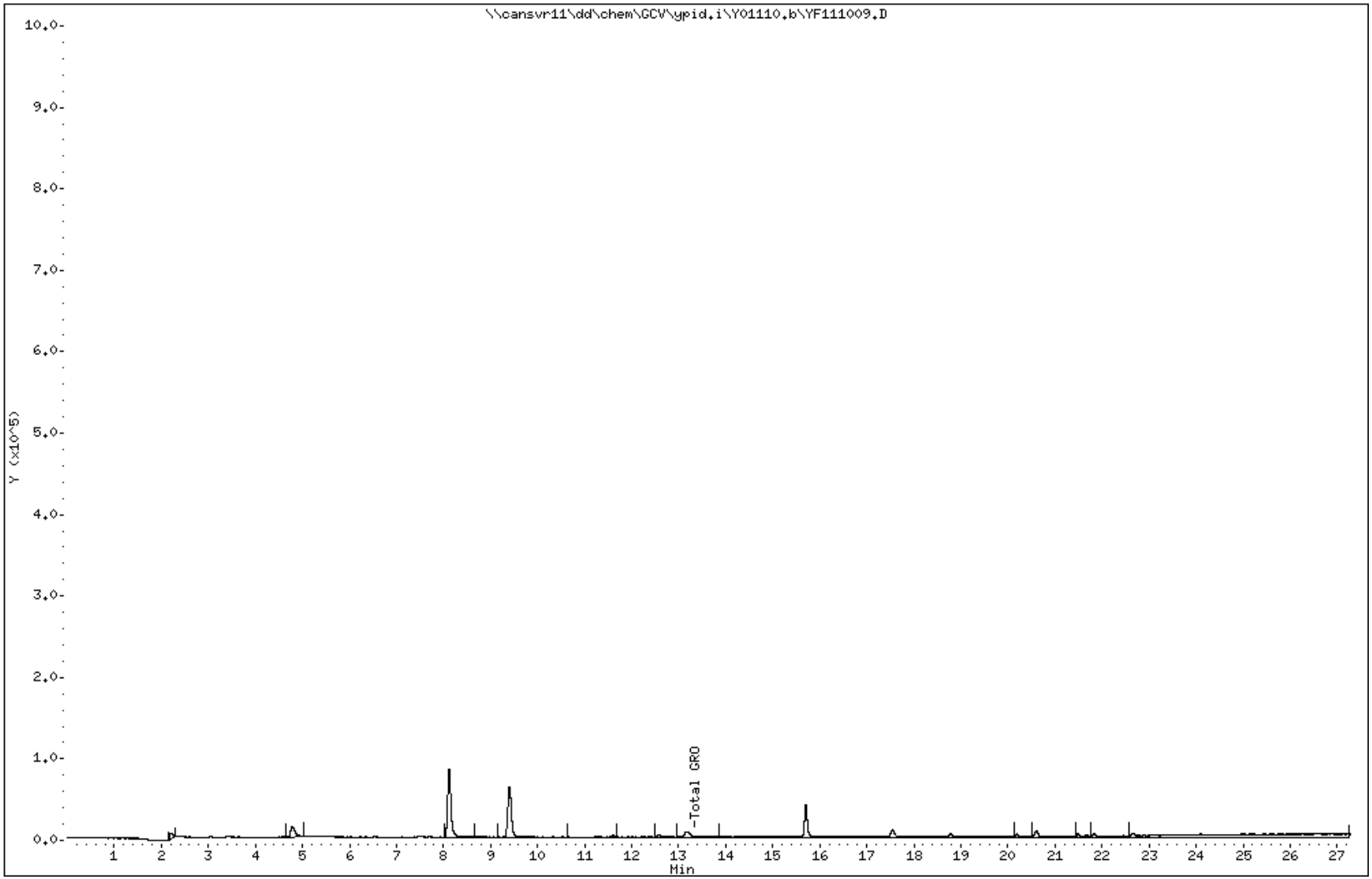
Sample Info: L9PJF1AD,5.0ML

Purge Volume: 5.0

Operator: 01616

Column phase:

Column diameter: 2.00



TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111010.D
Lab Smp Id: L9PJN1AC Client Smp ID: SW-03
Inj Date : 10-NOV-2010 15:01
Operator : 01616 Inst ID: ypid.i
Smp Info : L9PJN1AC,5.0ML
Misc Info : Y01110
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YFGRO.m
Meth Date : 13-Oct-2010 13:47 Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

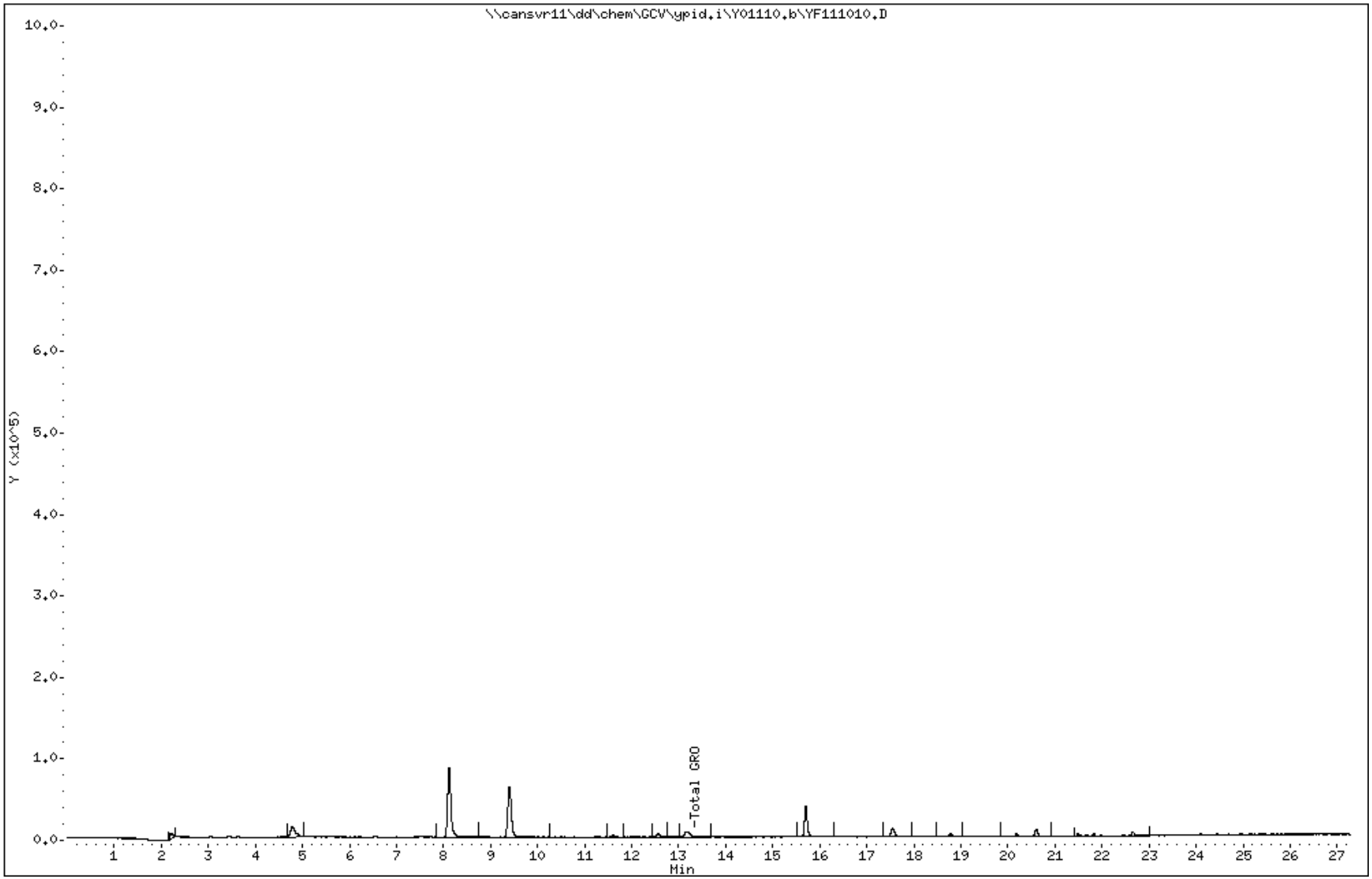
Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)	
S 4 Total GRO	4.700-22.000			25614263			(M)

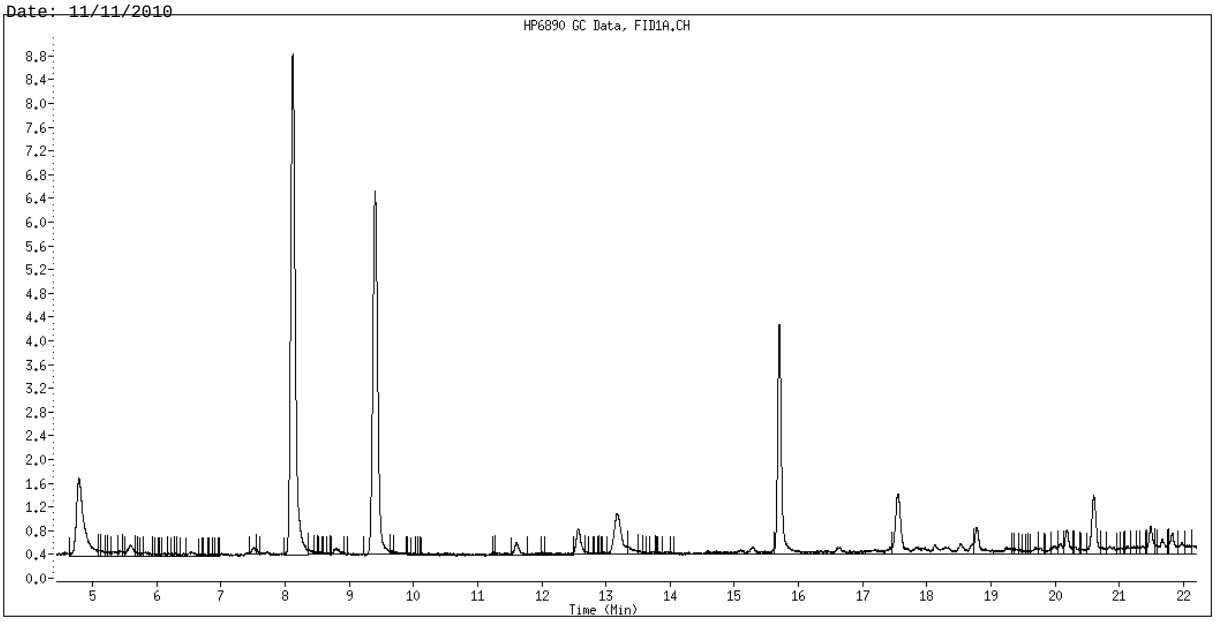
QC Flag Legend

M - Compound response manually integrated.

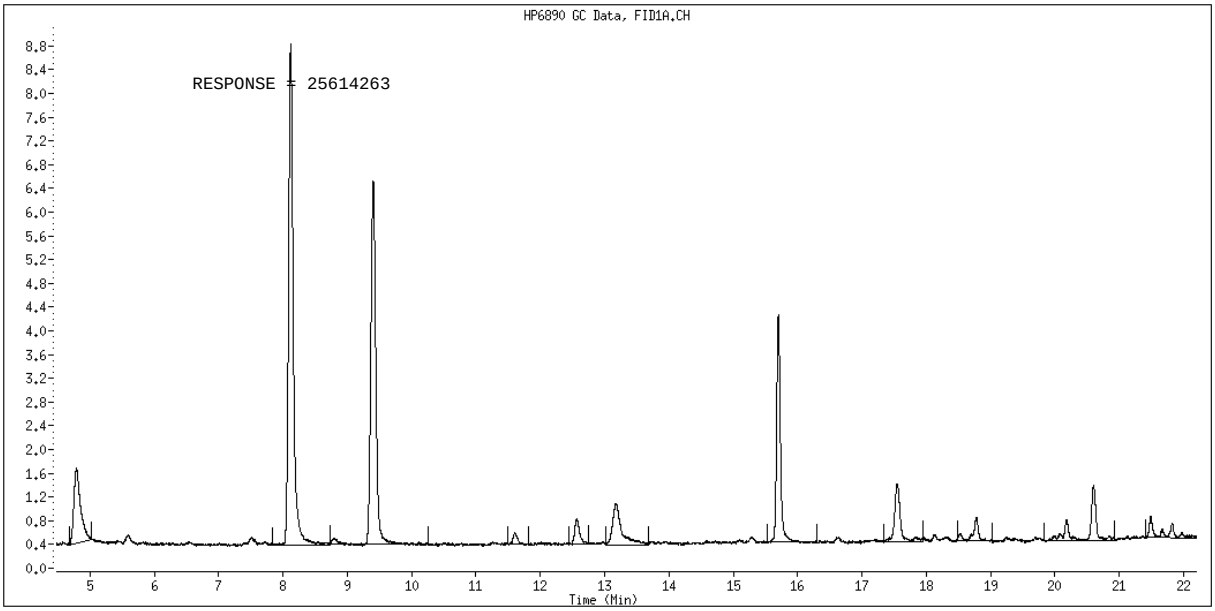
Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111010.D
Date : 10-NOV-2010 15:01
Client ID: SW-03
Instrument: ypid.i
Sample Info: L9PJN1AC,5.0ML
Purge Volume: 5.0
Operator: 01616
Column phase:
Column diameter: 2.00



Data File Name: YF111010.D
Inj. Date and Time: 10-NOV-2010 15:01
Instrument ID: ypid.i
Client ID: SW-03
Compound Name: Total GRO
CAS #: Q796
Report Date: 11/11/2010



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111011.D
Lab Smp Id: L9PJT1AD Client Smp ID: SW-04
Inj Date : 10-NOV-2010 15:37
Operator : 01616 Inst ID: ypid.i
Smp Info : L9PJT1AD,5.0ML
Misc Info : Y01110
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YFGRO.m
Meth Date : 13-Oct-2010 13:47 Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

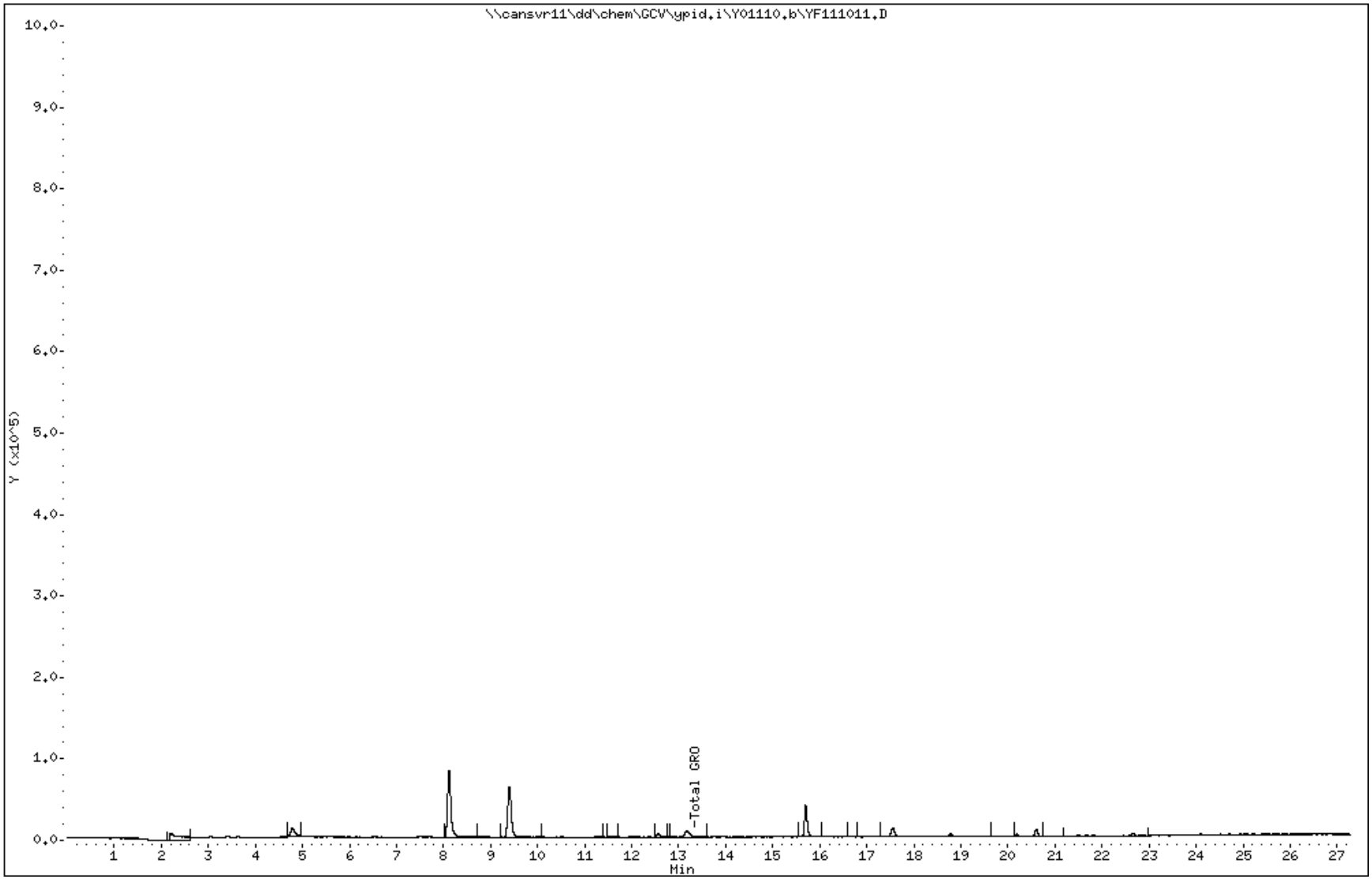
					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)	
S 4 Total GRO	4.700-22.000			25278108			(M)

QC Flag Legend

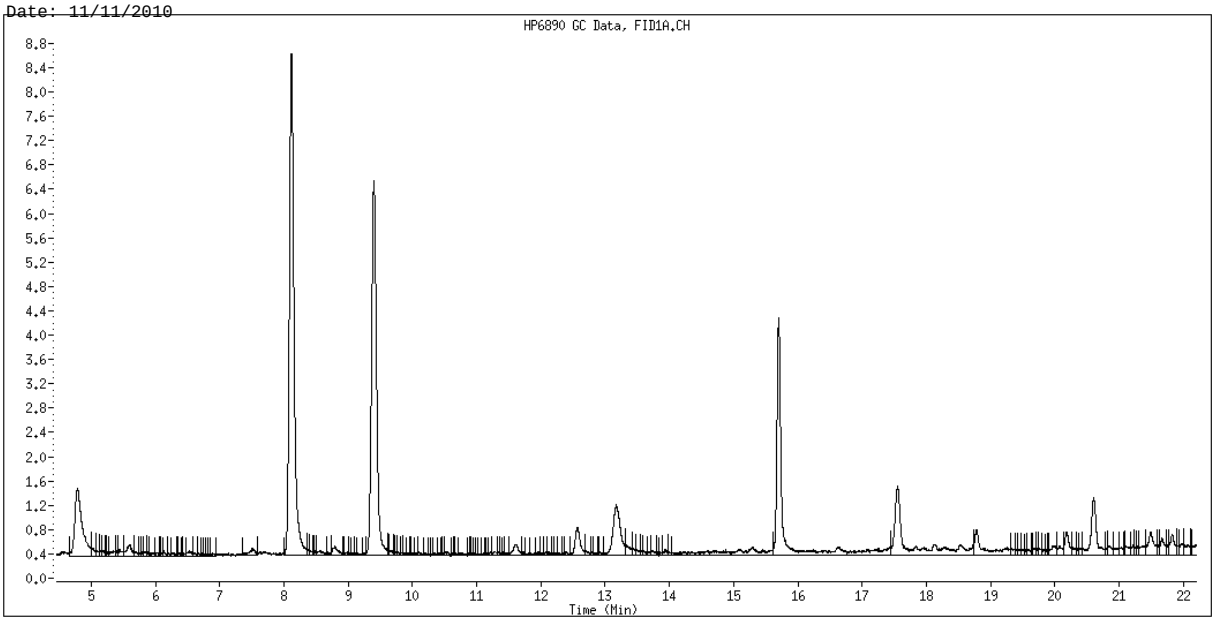
M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111011.D
Date : 10-NOV-2010 15:37
Client ID: SW-04
Sample Info: L9PJT1AD,5.0ML
Purge Volume: 5.0
Column phase:

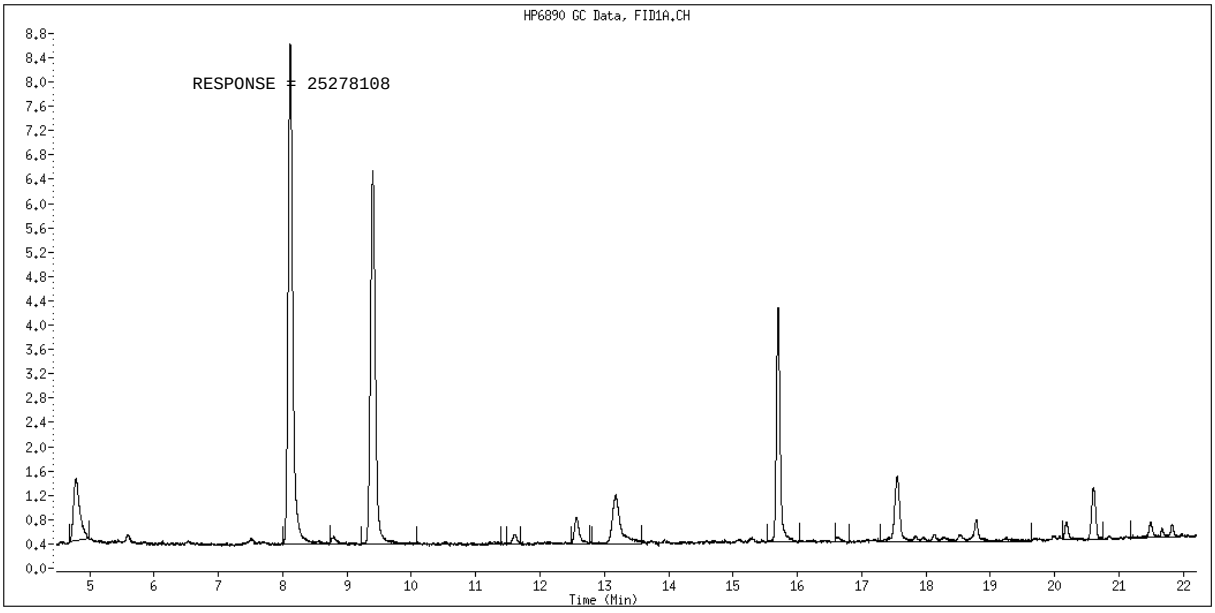
Instrument: ypid.i
Operator: 01616
Column diameter: 2.00



Data File Name: YF111011.D
Inj. Date and Time: 10-NOV-2010 15:37
Instrument ID: ypid.i
Client ID: SW-04
Compound Name: Total GRO
CAS #: Q796
Report Date: 11/11/2010



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111012.D
Lab Smp Id: L9PJX1AD Client Smp ID: OUTFALL-01
Inj Date : 10-NOV-2010 16:14
Operator : 01616 Inst ID: ypid.i
Smp Info : L9PJX1AD,5.0ML
Misc Info : Y01110
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YFGRO.m
Meth Date : 13-Oct-2010 13:47 Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700-22.000			48353781	72.7767	14.555(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111012.D

Date : 10-NOV-2010 16:14

Client ID: OUTFALL-01

Instrument: ypid.i

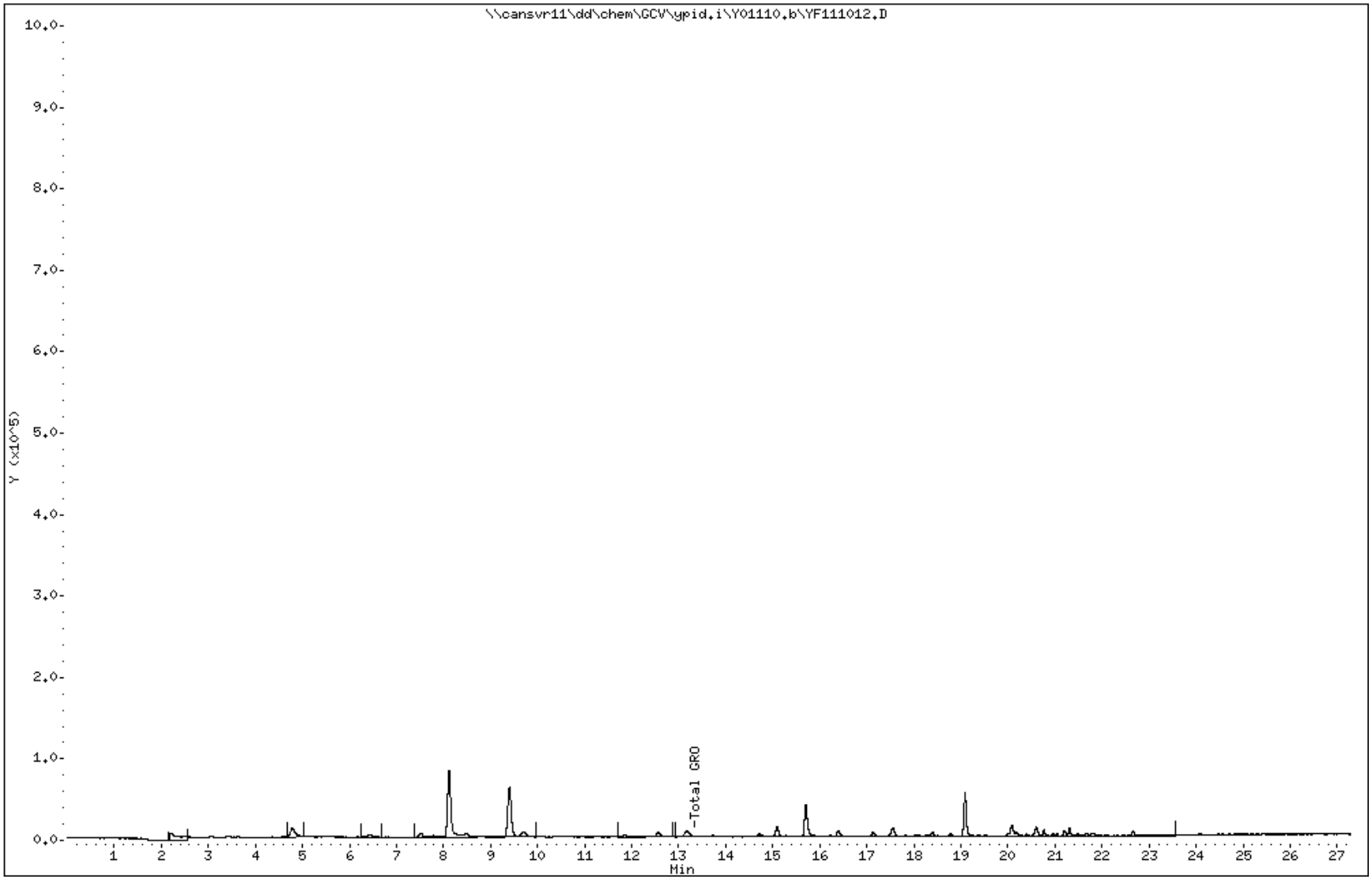
Sample Info: L9PJX1AD,5.0ML

Purge Volume: 5.0

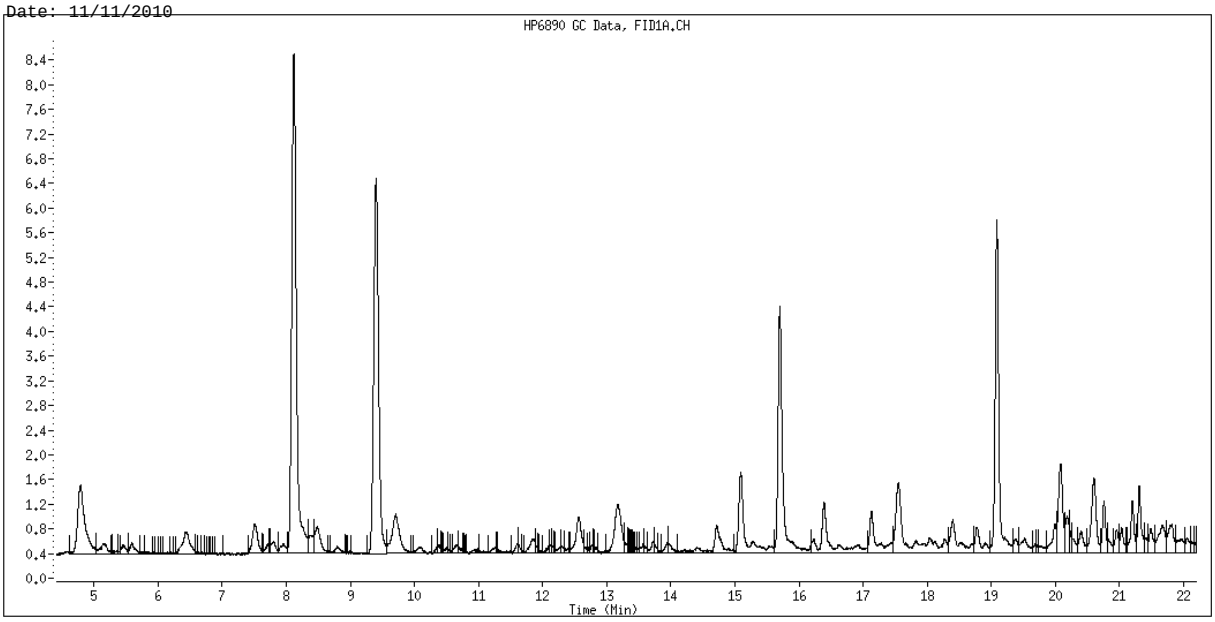
Operator: 01616

Column phase:

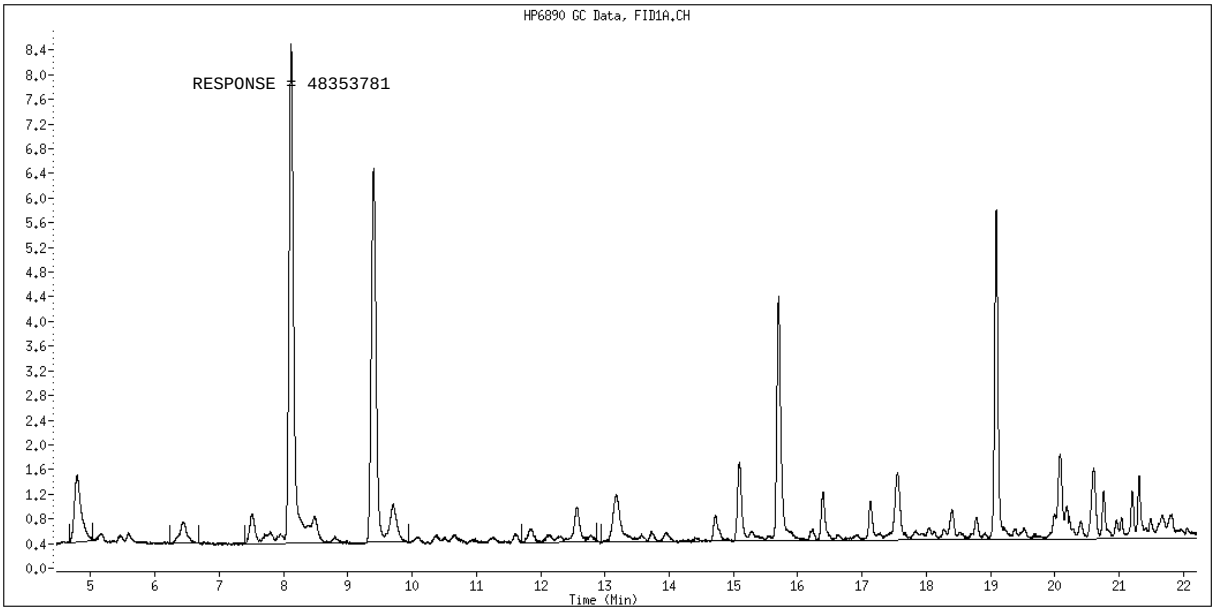
Column diameter: 2.00



Data File Name: YF111012.D
Inj. Date and Time: 10-NOV-2010 16:14
Instrument ID: ypid.i
Client ID: OUTFALL-01
Compound Name: Total GRO
CAS #: Q796
Report Date: 11/11/2010



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

RAW QC DATA

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111006.D
Lab Smp Id: l9v531ac
Inj Date : 10-NOV-2010 12:39
Operator : 01616 Inst ID: ypid.i
Smp Info : l9v531ac
Misc Info : Y01110
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YFGRO.m
Meth Date : 11-Nov-2010 12:24 fausnigb Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANPGCV06

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700-22.000			213738163	869.613	173.922

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111006.D

Date : 10-NOV-2010 12:39

Client ID:

Instrument: ypid.i

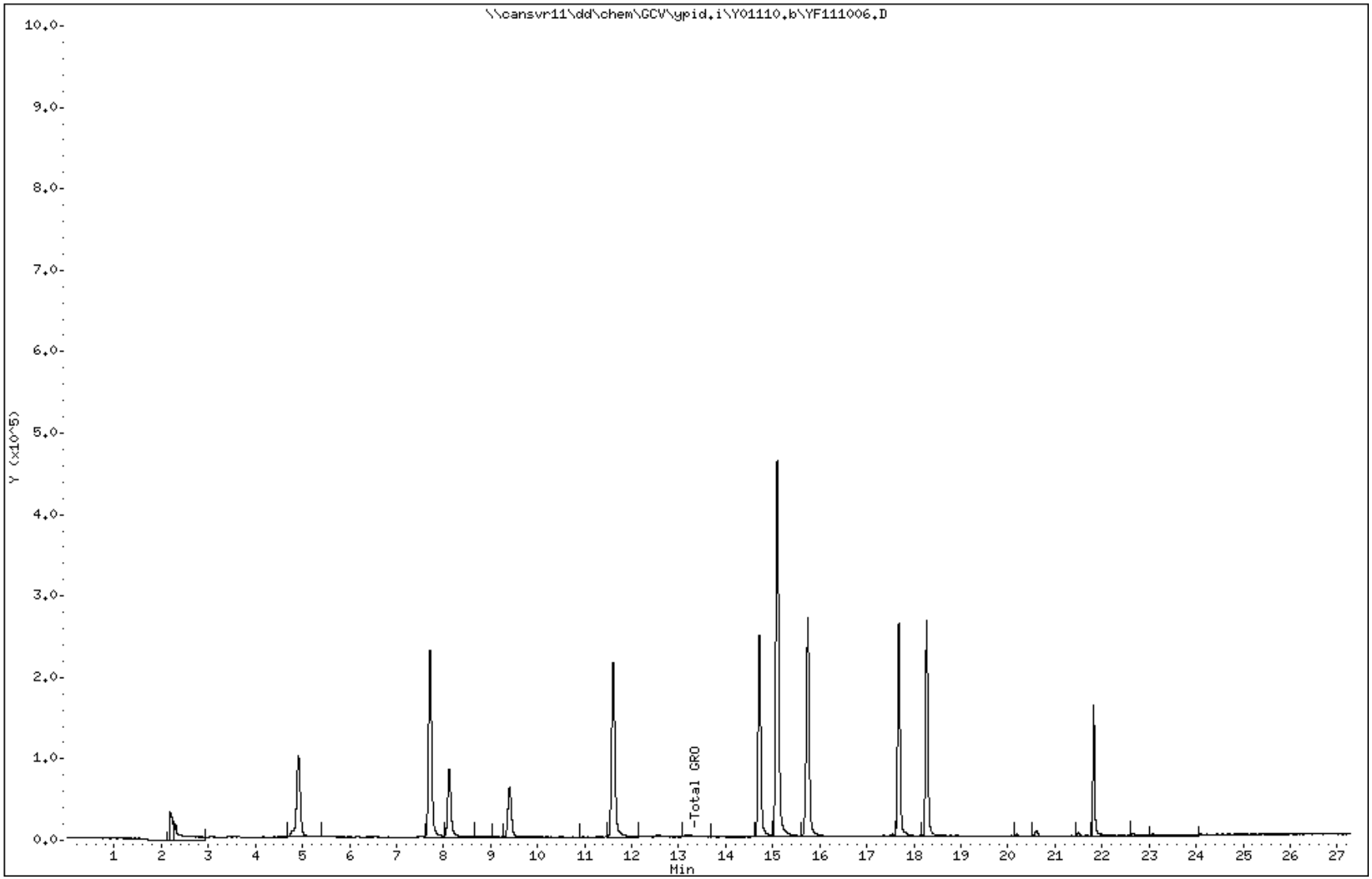
Sample Info: l9v531ac

Purge Volume: 5.0

Operator: 01616

Column phase:

Column diameter: 2.00



TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111020.D
Lab Smp Id: l9v531ad
Inj Date : 10-NOV-2010 21:03
Operator : 01616 Inst ID: ypid.i
Smp Info : l9v531ad
Misc Info : Y01110
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YFGRO.m
Meth Date : 11-Nov-2010 12:24 fausnigb Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANPGCV06

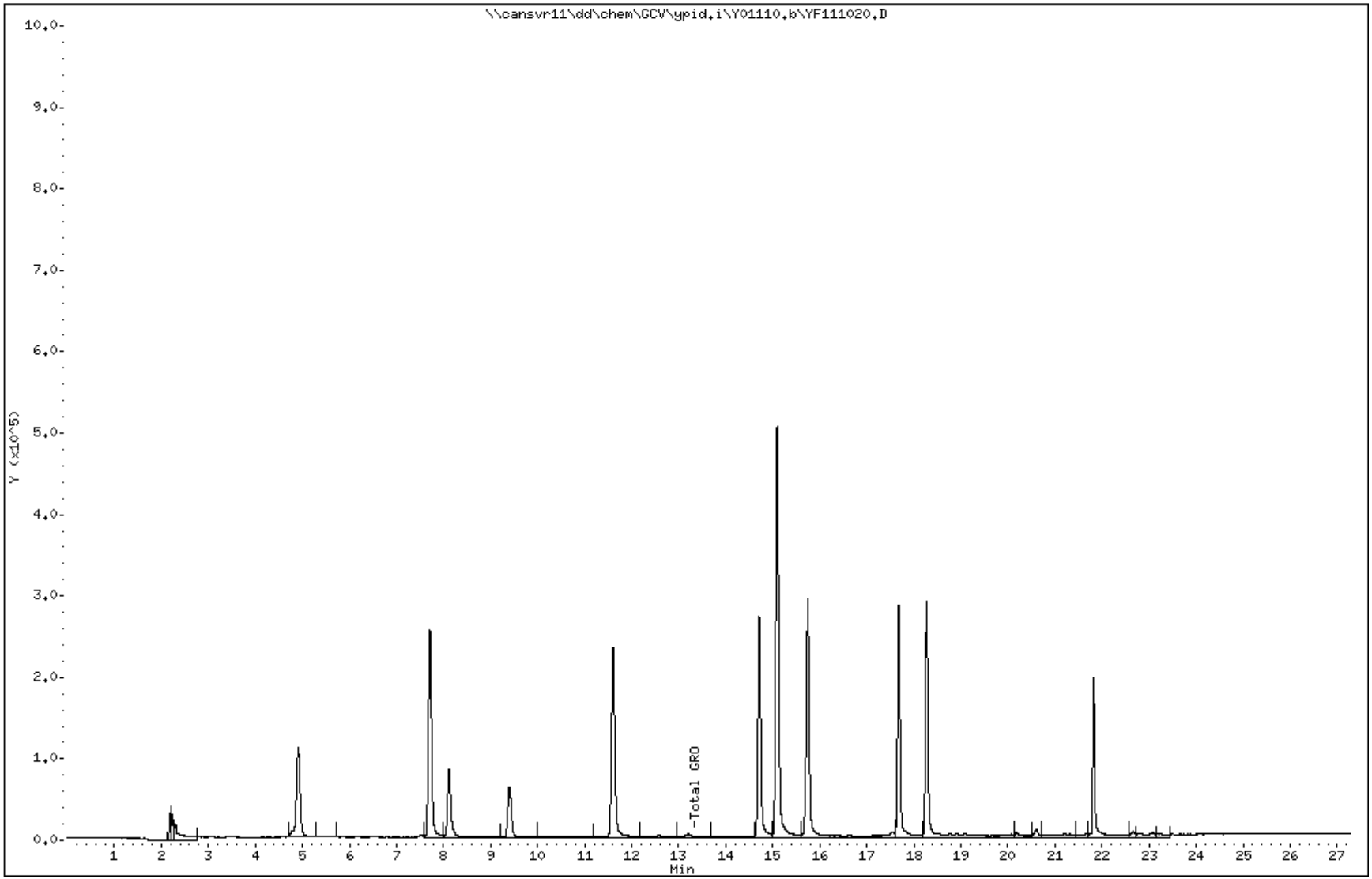
Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700-22.000			251994942	1053.94	210.787

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111020.D
Date : 10-NOV-2010 21:03
Client ID:
Sample Info: 19v531ad
Purge Volume: 5.0
Column phase:

Instrument: ypid.i
Operator: 01616
Column diameter: 2.00



TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111008.D
Lab Smp Id: l9v531aa
Inj Date : 10-NOV-2010 13:48
Operator : 01616 Inst ID: ypid.i
Smp Info : l9v531aa
Misc Info : Y01110
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YFGRO.m
Meth Date : 11-Nov-2010 12:24 fausnigb Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANPGCV06

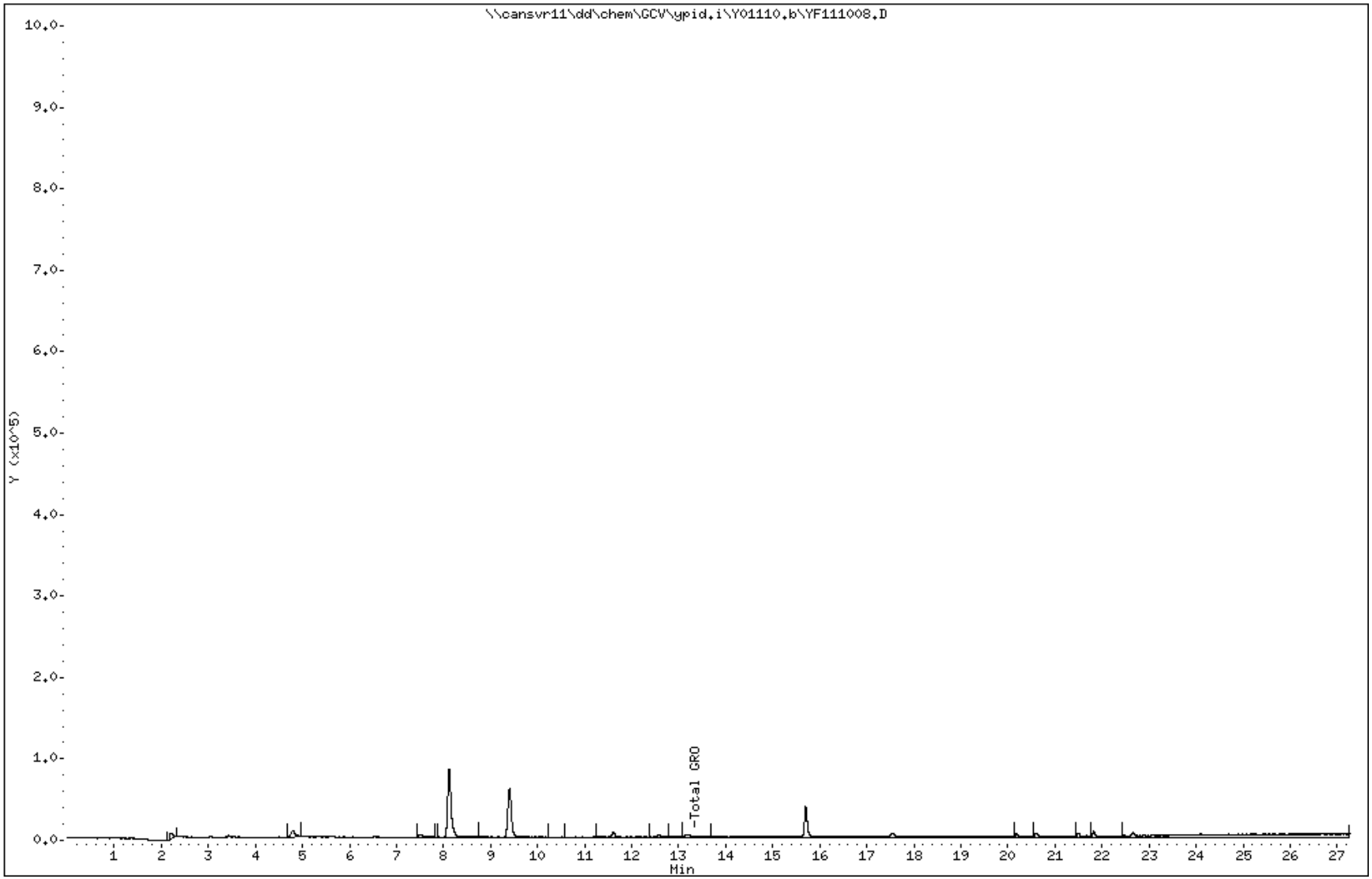
Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

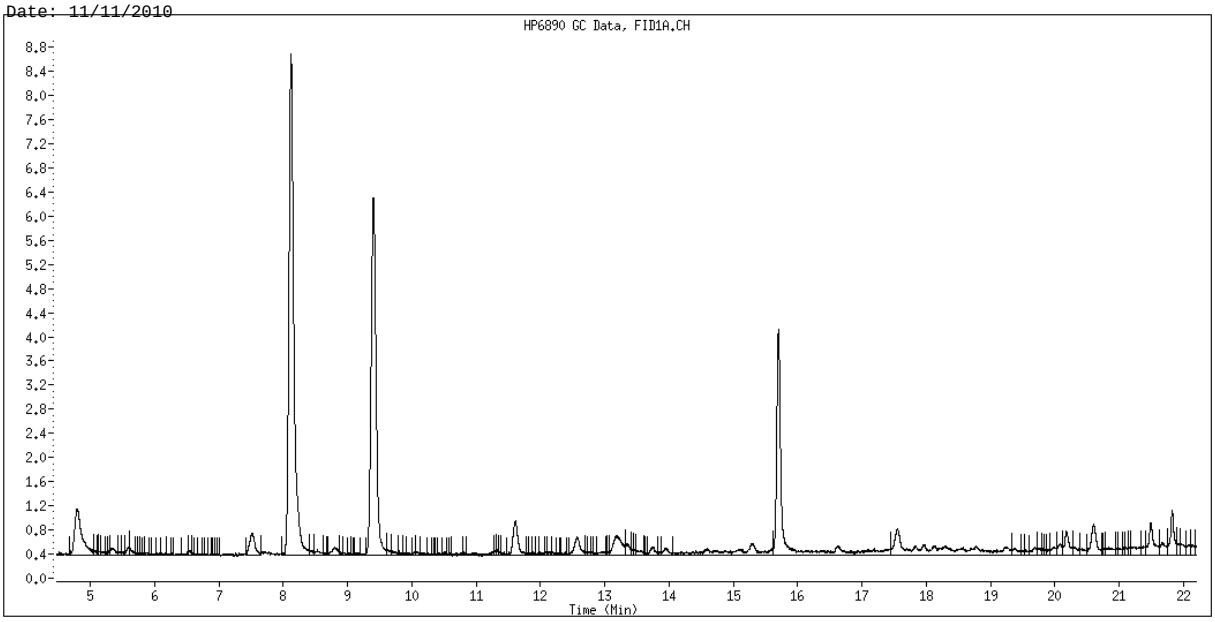
					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	Compound Not Detected.					

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111008.D
Date : 10-NOV-2010 13:48
Client ID:
Sample Info: 19v531aa
Purge Volume: 5.0
Column phase:

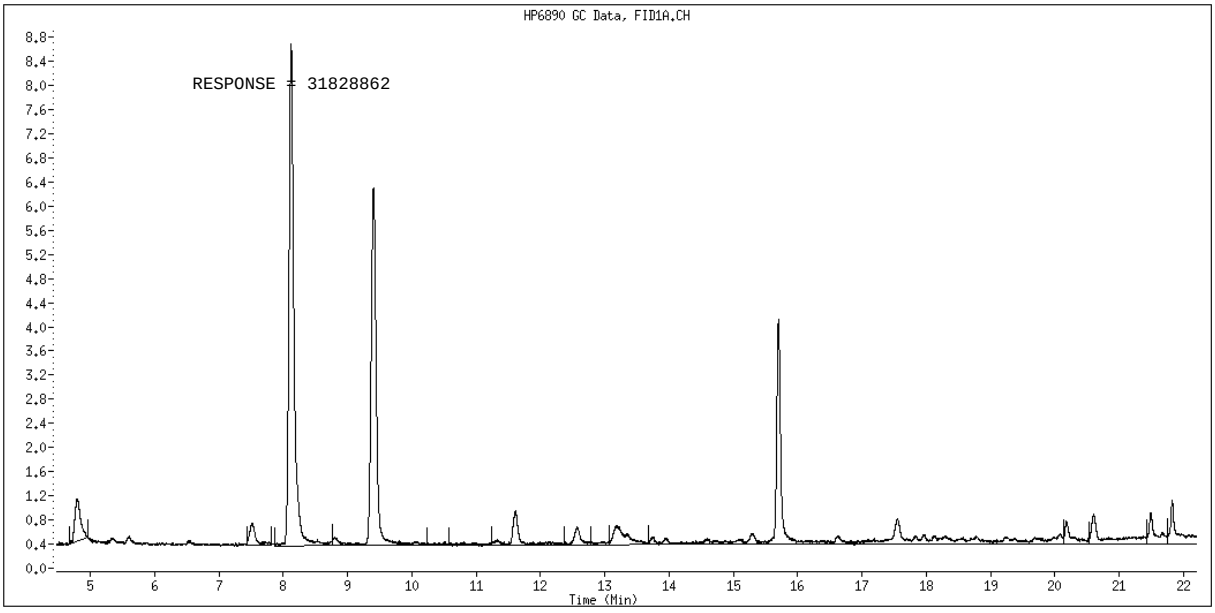
Instrument: ypid.i
Operator: 01616
Column diameter: 2.00



Data File Name: YF111008.D
Inj. Date and Time: 10-NOV-2010 13:48
Instrument ID: ypid.i
Client ID:
Compound Name: Total GRO
CAS #: Q796
Report Date: 11/11/2010



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111013.D
Lab Smp Id: L9PJXMS
Inj Date : 10-NOV-2010 16:50
Operator : 01616 Inst ID: ypid.i
Smp Info : L9PJXMS,5.0ML
Misc Info : Y01110
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YFGRO.m
Meth Date : 13-Oct-2010 13:47 Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

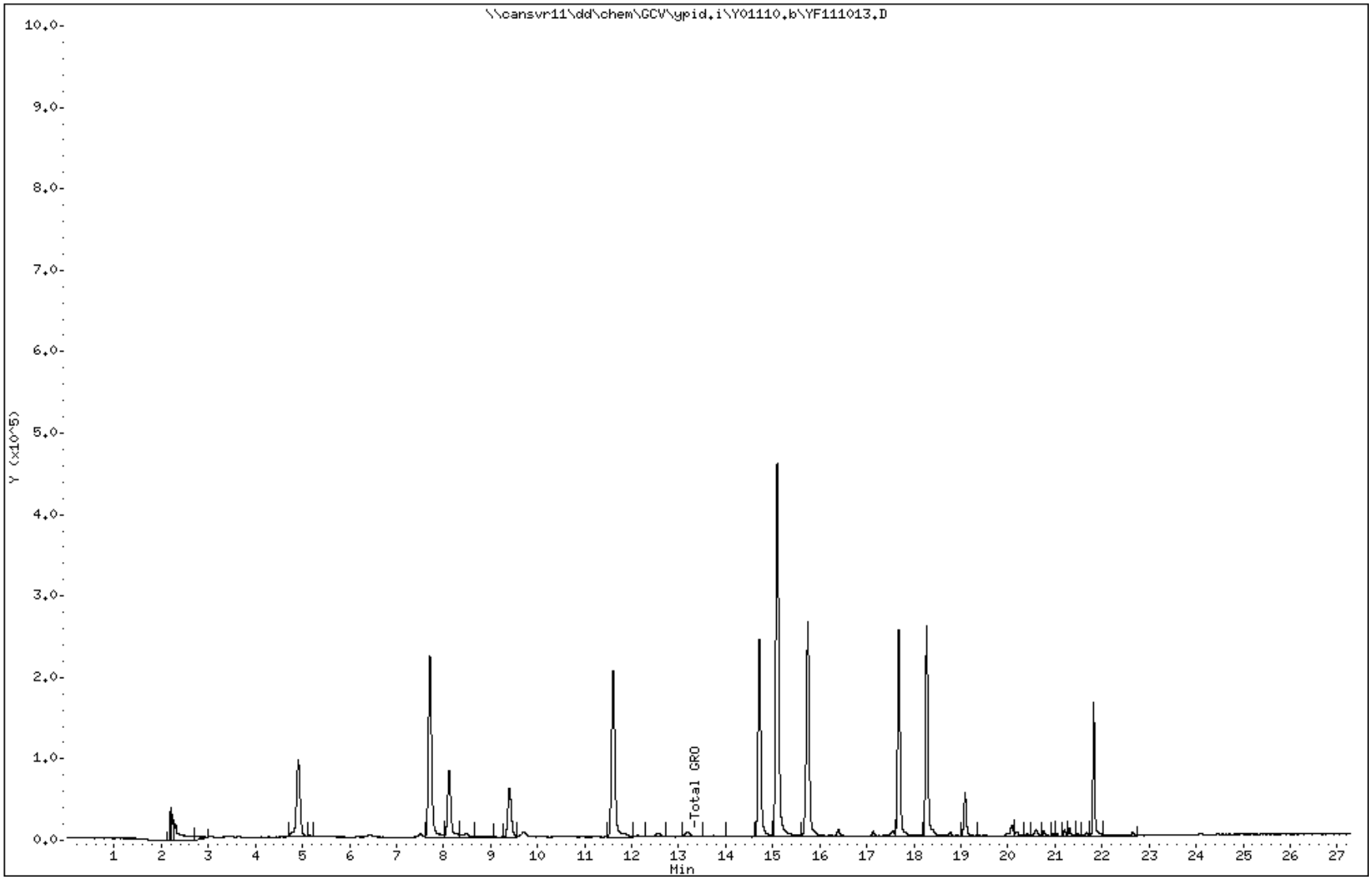
Concentration Formula: Amt * DF * 1/Vw * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vw	5.000	
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/Kg)
S 4 Total GRO	4.700-22.000			223925175	918.695	183.738

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111013.D
Date : 10-NOV-2010 16:50
Client ID:
Sample Info: L9PJXMS,5.0ML
Volume Injected (uL): 100.0
Column phase:

Instrument: ypid.i
Operator: 01616
Column diameter: 2.00



TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111014.D
Lab Smp Id: L9PJXMSD
Inj Date : 10-NOV-2010 17:26
Operator : 01616 Inst ID: ypid.i
Smp Info : L9PJXMSD,5.0ML
Misc Info : Y01110
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YFGRO.m
Meth Date : 13-Oct-2010 13:47 Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

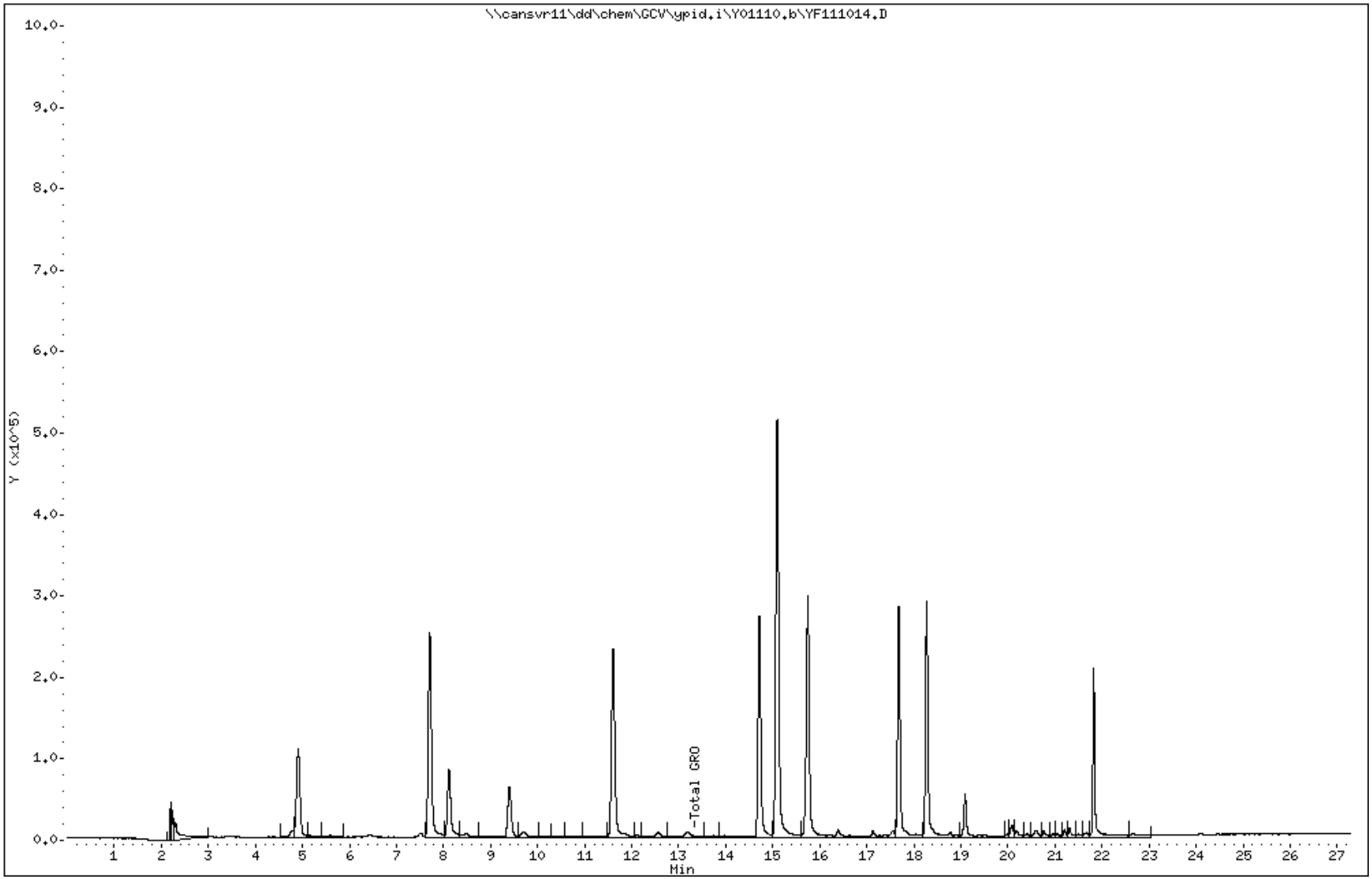
Concentration Formula: Amt * DF * 1/Vw * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vw	5.000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
S 4 Total GRO	4.700	-22.000		259653564	1090.84	218.167

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01110.b\YF111014.D
Date : 10-NOV-2010 17:26
Client ID:
Sample Info: L9PJXMSD,5.0ML
Volume Injected (uL): 100.0
Column phase:

Instrument: ypid.i
Operator: 01616
Column diameter: 2.00



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DIESEL RANGE ORGANICS DATA

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SAMPLE DATA

TestAmerica North Canton

Diesel DRO

Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\062B1201.D
Lab Smp Id: L9PJF1AE Client Smp ID: SW-01
Inj Date : 12-NOV-2010 15:11
Operator : 2398 Inst ID: a2hp6.i
Smp Info : L9PJF1AE
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\DRO6b.m
Meth Date : 12-Nov-2010 14:04 Quant Type: ESTD
Cal Date : 28-OCT-2010 12:48 Cal File: 057B0701.D
Als bottle: 62
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	930.000	initial vol.
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
S 4 DRO	Compound Not Detected.					
$ 2 Nonane	Compound Not Detected.					

Data File: \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\062B1201.D

Date : 12-NOV-2010 15:11

Client ID: SW-01

Instrument: a2hp6.i

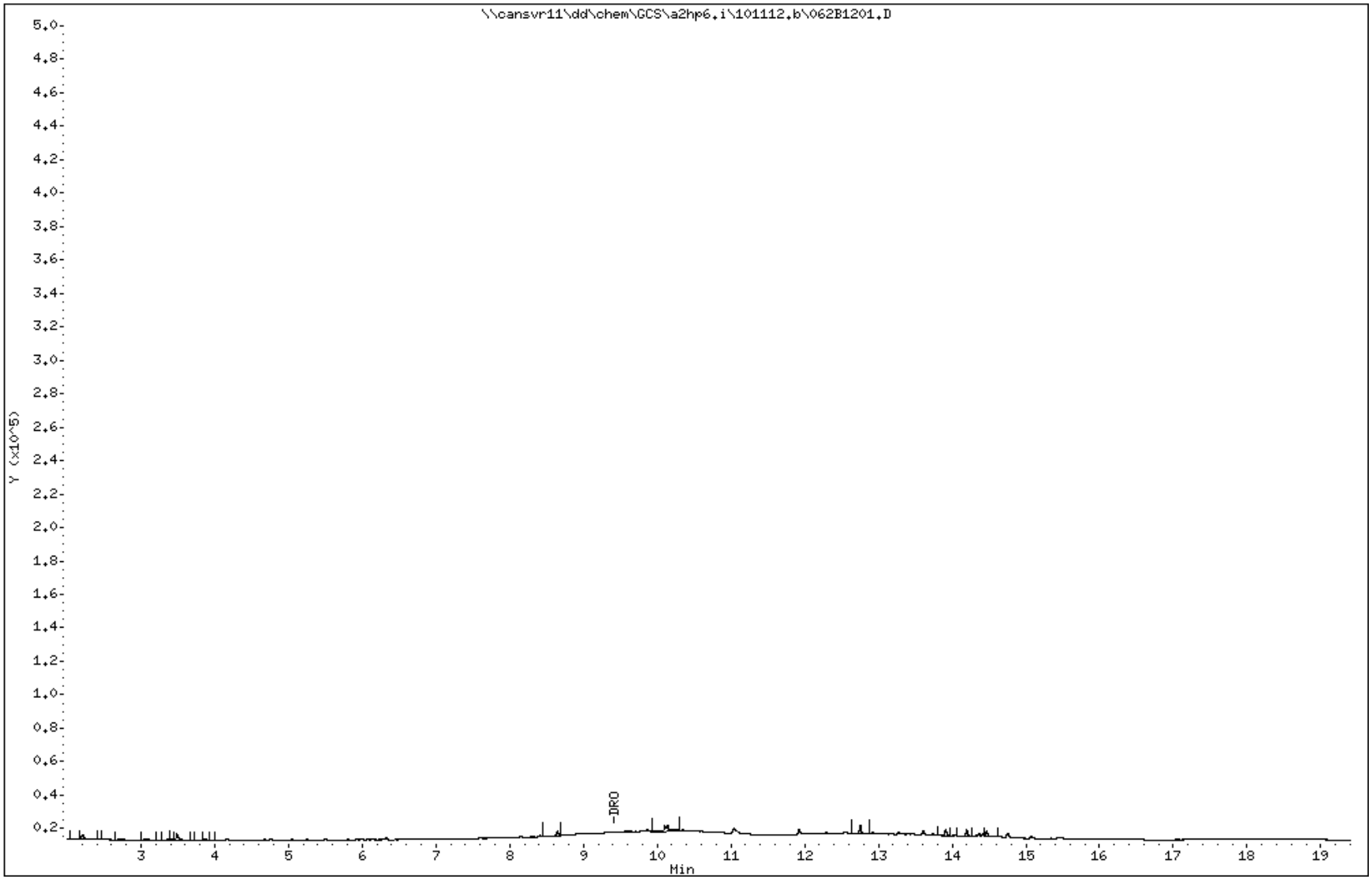
Sample Info: L9PJF1AE

Volume Injected (uL): 1.0

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica North Canton

Diesel DRO

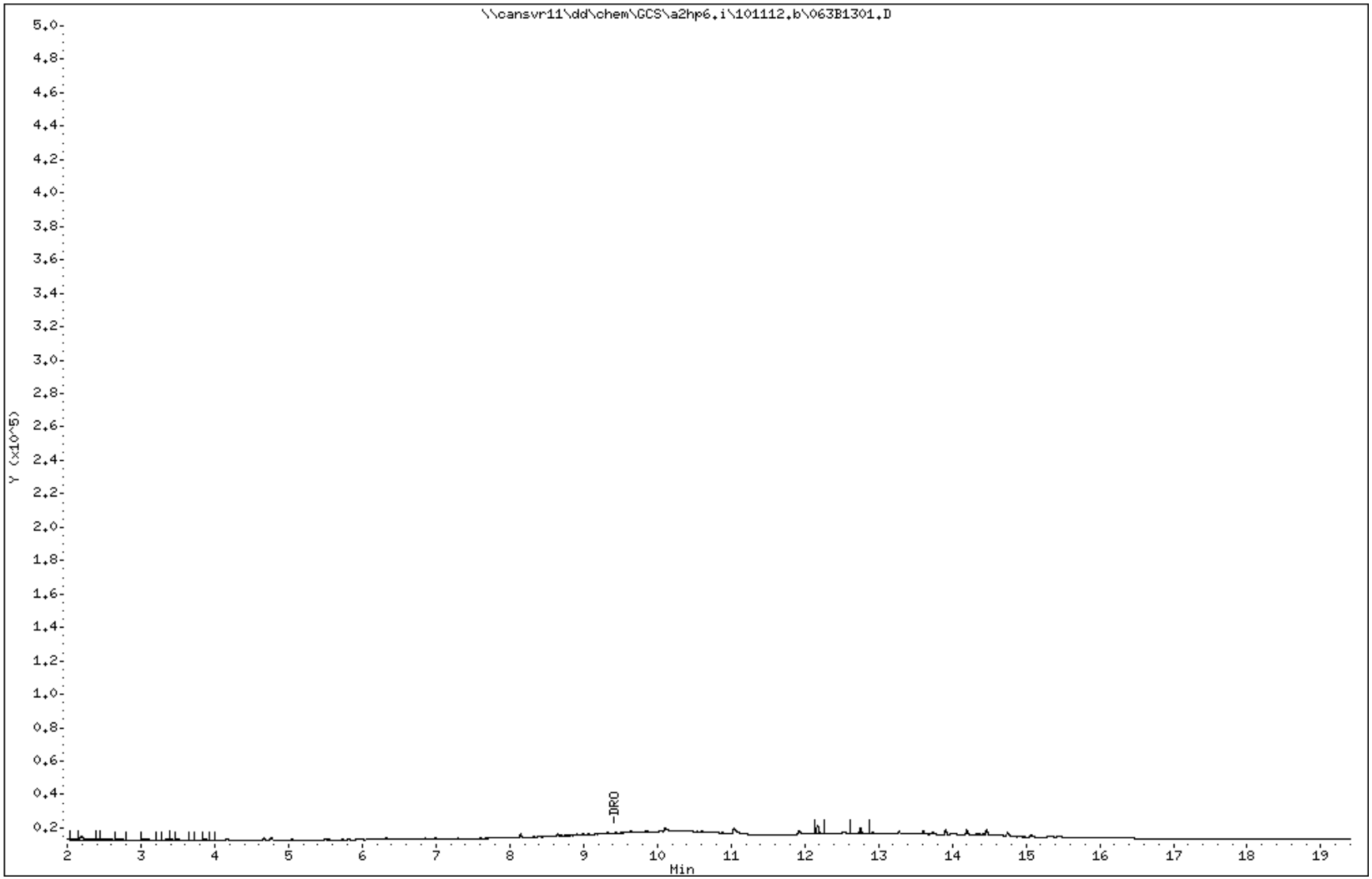
Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\063B1301.D
Lab Smp Id: L9PJK1AC Client Smp ID: SW-02
Inj Date : 12-NOV-2010 15:40
Operator : 2398 Inst ID: a2hp6.i
Smp Info : L9PJK1AC
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\DRO6b.m
Meth Date : 12-Nov-2010 14:04 Quant Type: ESTD
Cal Date : 28-OCT-2010 12:48 Cal File: 057B0701.D
Als bottle: 63
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	920.000	initial vol.
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
S 4 DRO	Compound Not Detected.					
$ 2 Nonane	Compound Not Detected.					

Data File: \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\063B1301.D
Date : 12-NOV-2010 15:40
Client ID: SW-02
Instrument: a2hp6.i
Sample Info: L9PJK1AC
Volume Injected (uL): 1.0
Operator: 2398
Column phase: db-625
Column diameter: 0.32



TestAmerica North Canton

Diesel DRO

Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\064B1401.D
Lab Smp Id: L9PJN1AD Client Smp ID: SW-03
Inj Date : 12-NOV-2010 16:08
Operator : 2398 Inst ID: a2hp6.i
Smp Info : L9PJN1AD
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\DRO6b.m
Meth Date : 12-Nov-2010 14:04 Quant Type: ESTD
Cal Date : 28-OCT-2010 12:48 Cal File: 057B0701.D
Als bottle: 64
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	910.000	initial vol.
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
S 4 DRO	Compound Not Detected.					
$ 2 Nonane	Compound Not Detected.					

Data File: \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\064B1401.D

Date : 12-NOV-2010 16:08

Client ID: SW-03

Instrument: a2hp6.i

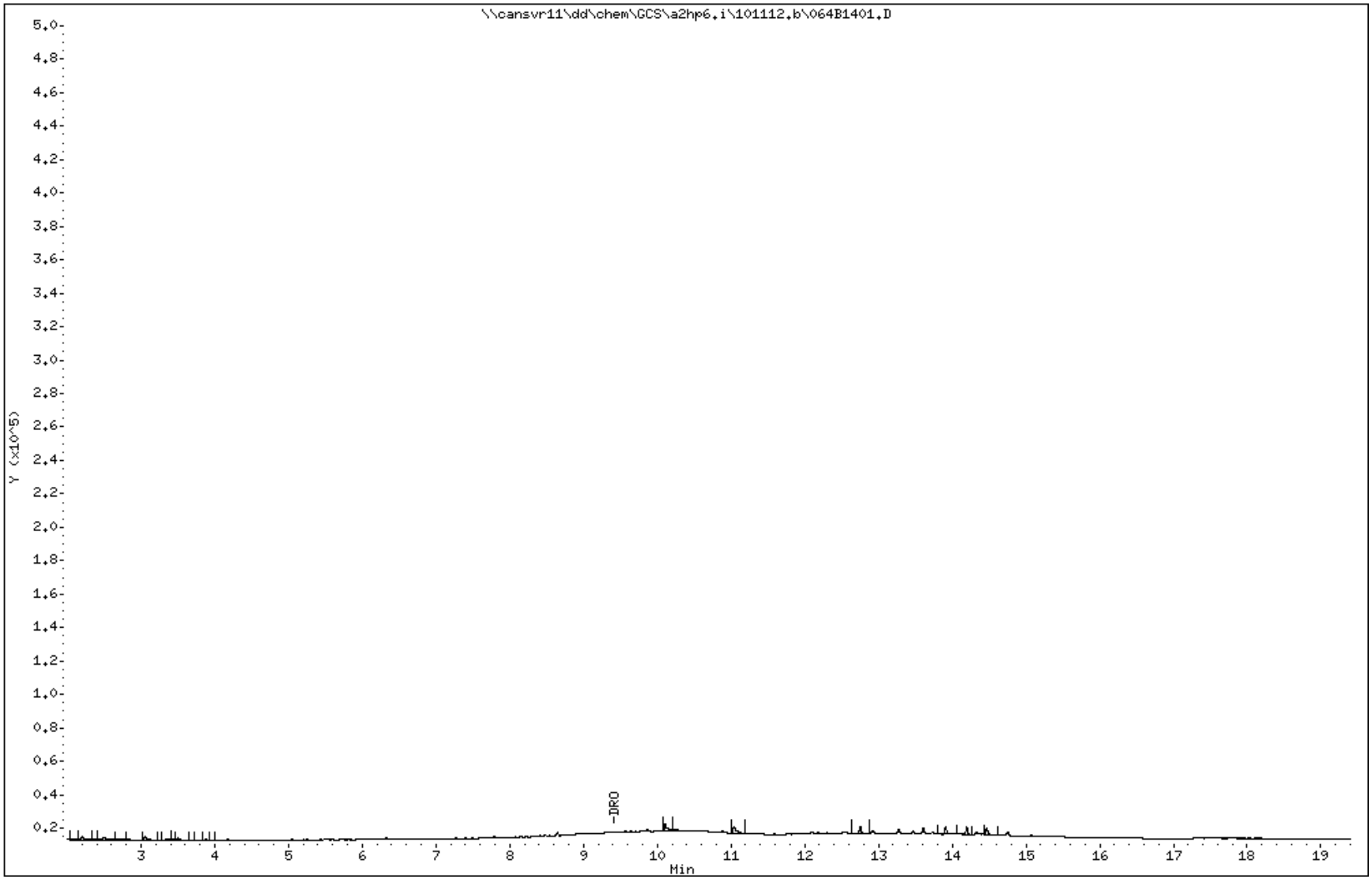
Sample Info: L9PJN1AD

Volume Injected (uL): 1.0

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica North Canton

Diesel DRO

Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\065B1501.D
Lab Smp Id: L9PJT1AE Client Smp ID: SW-04
Inj Date : 12-NOV-2010 16:37
Operator : 2398 Inst ID: a2hp6.i
Smp Info : L9PJT1AE
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\DRO6b.m
Meth Date : 12-Nov-2010 14:04 Quant Type: ESTD
Cal Date : 28-OCT-2010 12:48 Cal File: 057B0701.D
Als bottle: 65
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	950.000	initial vol.
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 DRO	5.152	-13.714		36634665	81.7257	86.03
$ 2 Nonane	Compound Not Detected.					

Data File: \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\065B1501.D

Date : 12-NOV-2010 16:37

Client ID: SW-04

Instrument: a2hp6.i

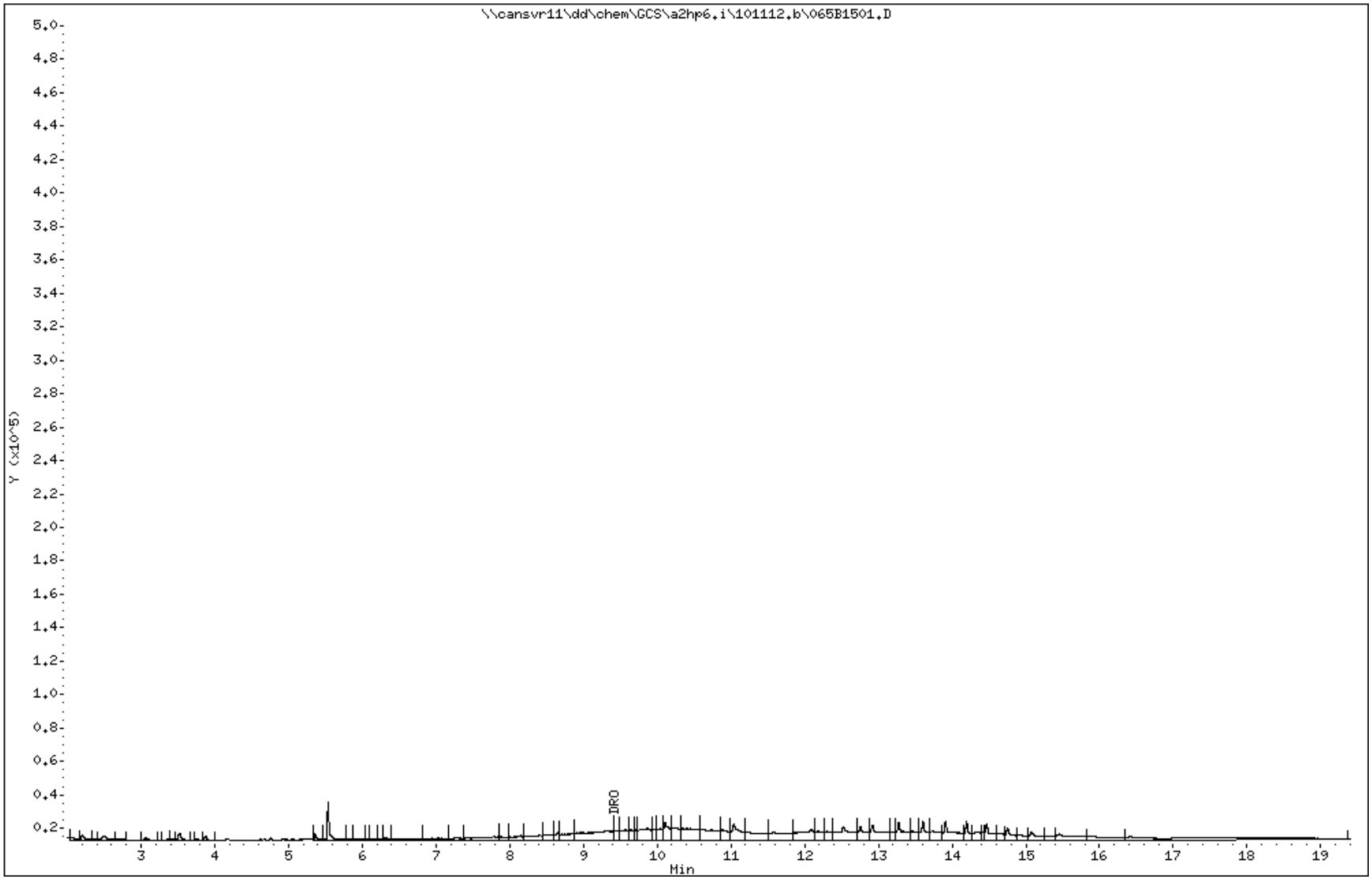
Sample Info: L9PJT1AE

Volume Injected (uL): 1.0

Operator: 2398

Column phase: db-625

Column diameter: 0.32



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RAW QC DATA

TestAmerica North Canton

Diesel DRO

Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\061B1101.D
Lab Smp Id: L9RHT1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 12-NOV-2010 14:43
Operator : 2398 Inst ID: a2hp6.i
Smp Info : L9RHT1AC
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\DRO6b.m
Meth Date : 12-Nov-2010 14:04 Quant Type: ESTD
Cal Date : 28-OCT-2010 12:48 Cal File: 057B0701.D
Als bottle: 61 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	1000.000	initial vol.
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
S 4 DRO	5.152	-13.714		161732862	404.694	404.7
$ 2 Nonane	Compound Not Detected.					

Data File: \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\061B1101.D

Date : 12-NOV-2010 14:43

Client ID: INTRA-LAB CHECK

Instrument: a2hp6.i

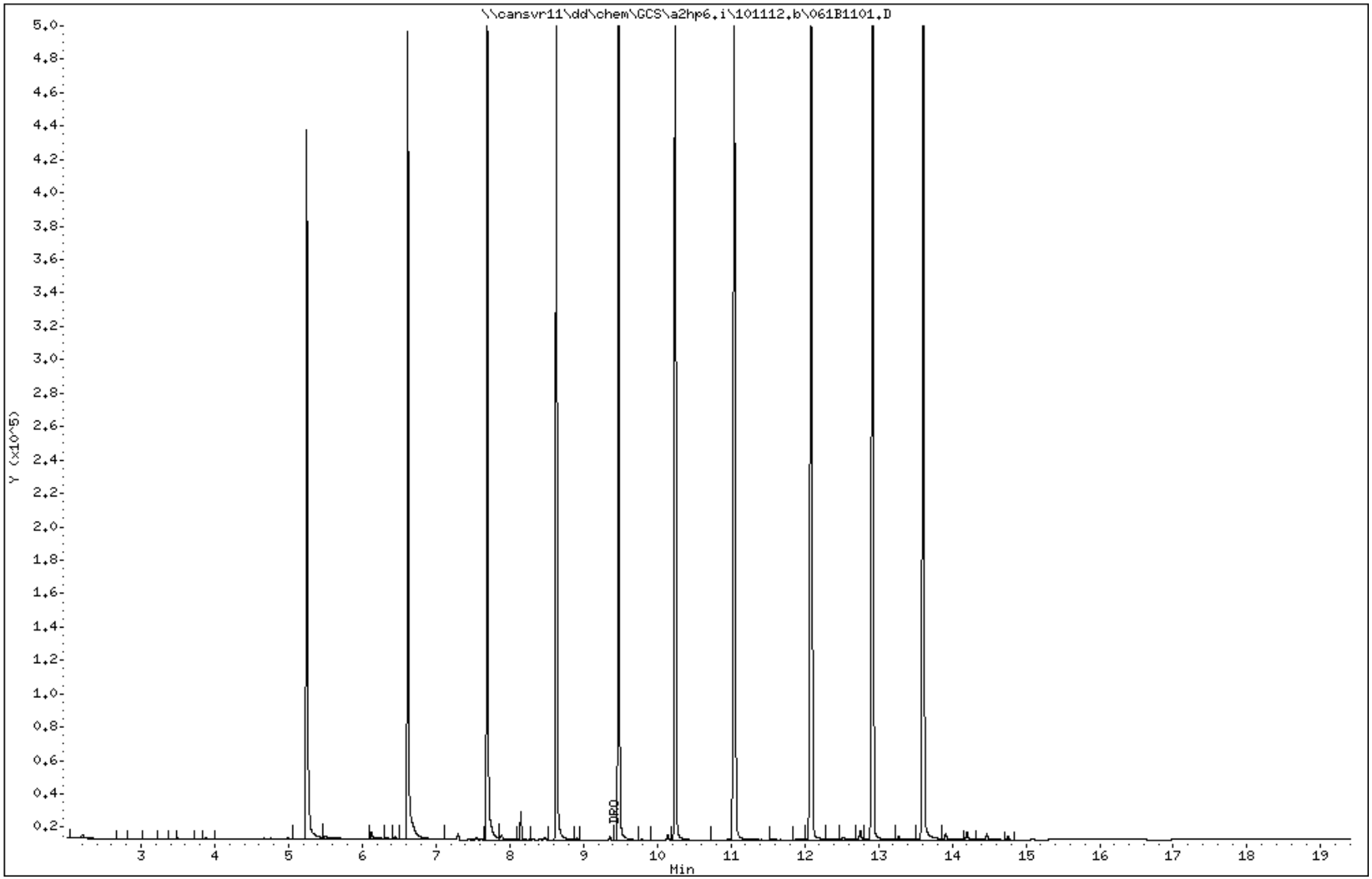
Sample Info: L9RHT1AC

Volume Injected (uL): 1.0

Operator: 2398

Column phase: db-625

Column diameter: 0.32



TestAmerica North Canton

Diesel DRO

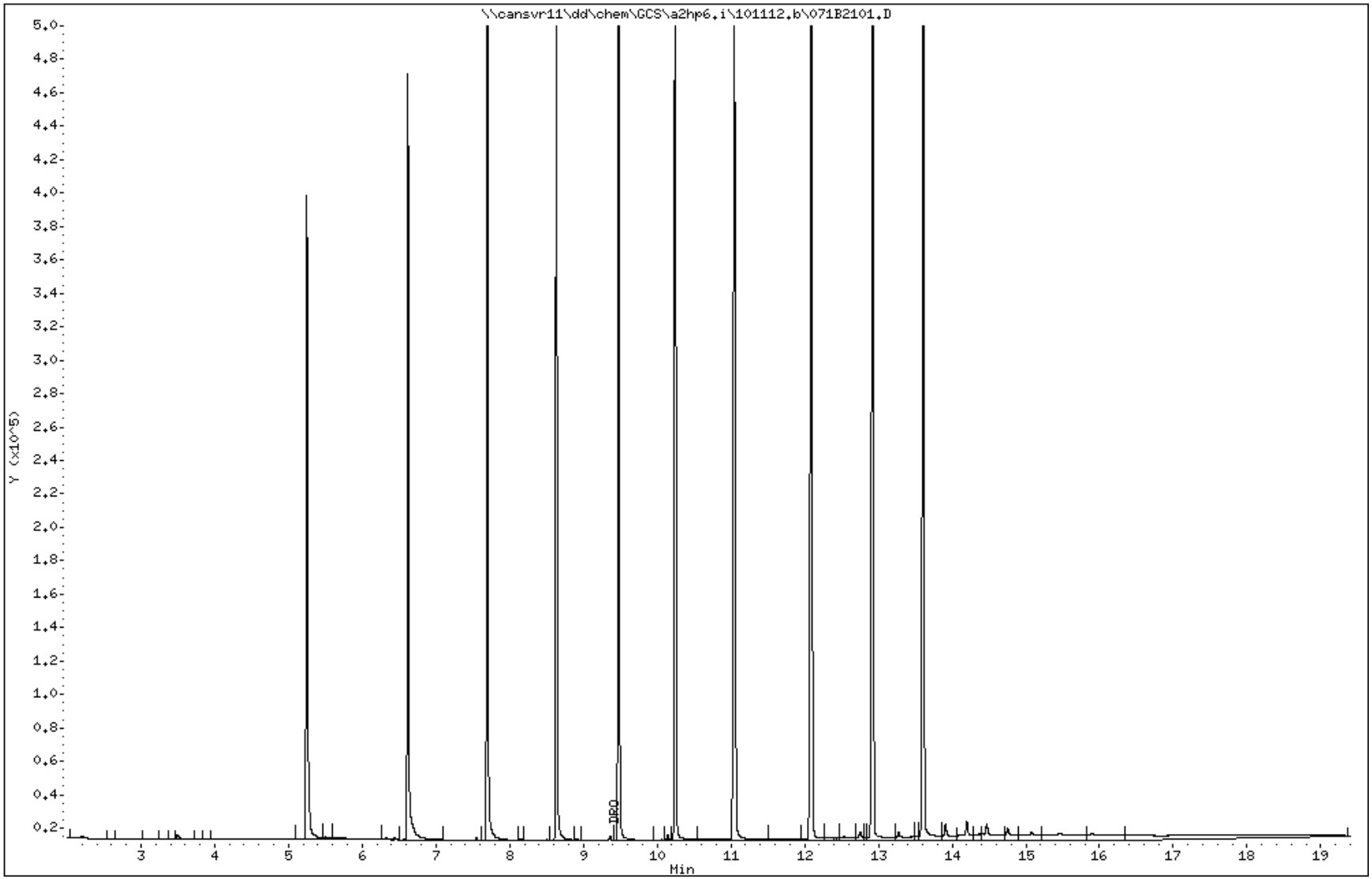
Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\071B2101.D
Lab Smp Id: L9RHT1AD Client Smp ID: INTRA-LAB CHECK
Inj Date : 12-NOV-2010 19:26
Operator : 2398 Inst ID: a2hp6.i
Smp Info : L9RHT1AD
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\DRO6b.m
Meth Date : 12-Nov-2010 14:04 Quant Type: ESTD
Cal Date : 28-OCT-2010 12:48 Cal File: 057B0701.D
Als bottle: 71 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	1000.000	initial vol.
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
S 4 DRO	5.152	-13.714		165334189	413.992	414.0
$ 2 Nonane	Compound Not Detected.					

Data File: \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\071B2101.D
Date : 12-NOV-2010 19:26
Client ID: INTRA-LAB CHECK
Instrument: a2hp6.i
Sample Info: L9RHT1AD
Volume Injected (uL): 1.0
Operator: 2398
Column phase: db-625
Column diameter: 0.32



TestAmerica North Canton

Diesel DRO

Data file : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\060B1001.D
Lab Smp Id: L9RHT1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 12-NOV-2010 14:15
Operator : 2398 Inst ID: a2hp6.i
Smp Info : L9RHT1AA
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\DRO6b.m
Meth Date : 12-Nov-2010 14:04 Quant Type: ESTD
Cal Date : 28-OCT-2010 12:48 Cal File: 057B0701.D
Als bottle: 60 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: 1-dro_vap.sub
Target Version: 4.14
Processing Host: CANSVR10

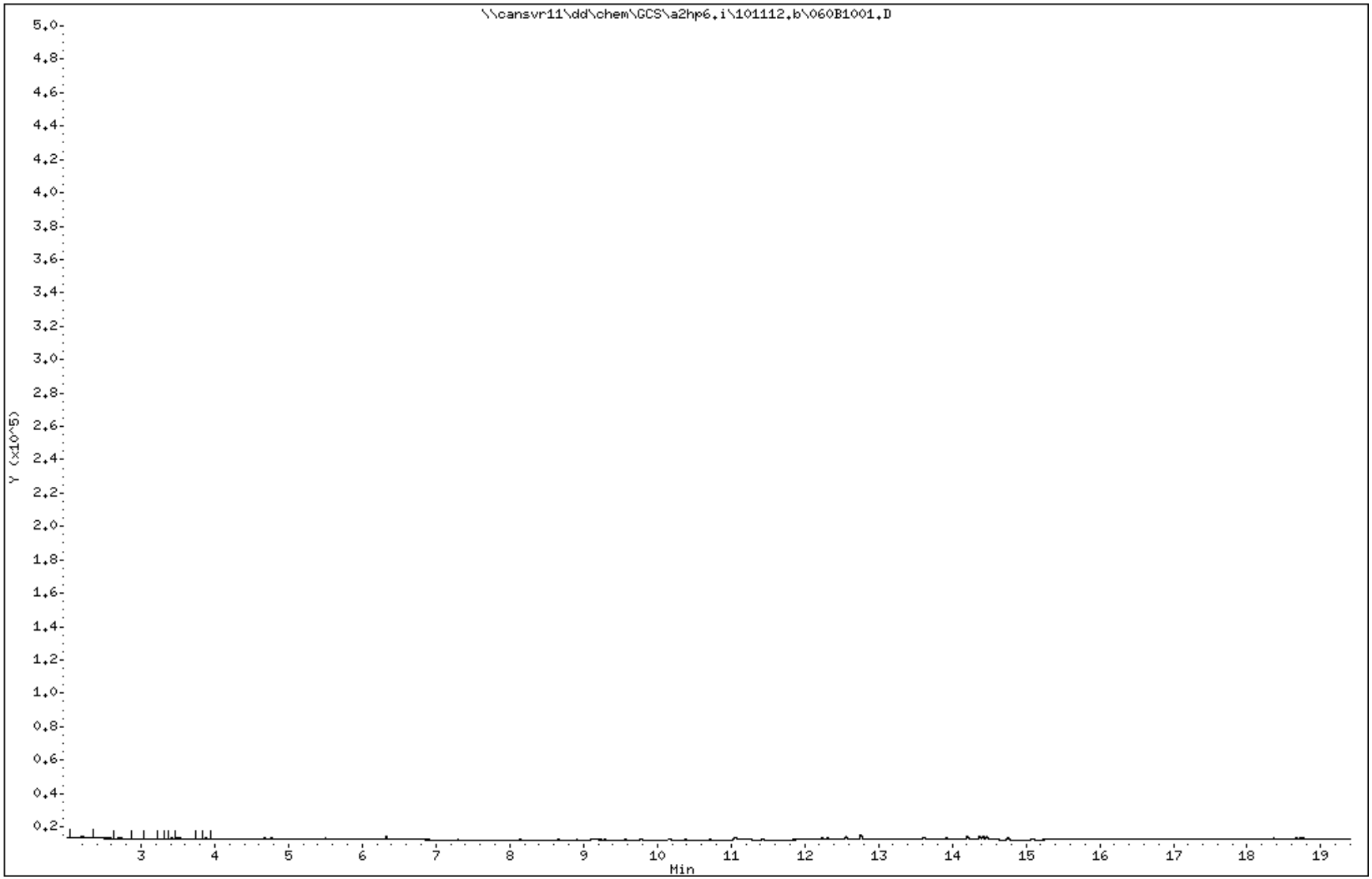
Concentration Formula: Amt * DF * Vt/Vi/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1000.000	final vol.
Vi	1.000	volume injected
Vo	1000.000	initial vol.
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
S 4 DRO	Compound Not Detected.					
$ 2 Nonane	Compound Not Detected.					

Data File: \\cansvr11\dd\chem\GCS\a2hp6.i\101112.b\060B1001.D
Date : 12-NOV-2010 14:15
Client ID: INTRA-LAB BLANK
Sample Info: L9RHT1AA
Volume Injected (uL): 1.0
Column phase: db-625

Instrument: a2hp6.i
Operator: 2398
Column diameter: 0.32



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Watertown Division
602 Commerce Drive
Watertown, WI 53094

Phone 920-261-1660 or 800-833-7036
Fax 920-261-8120

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring: ____

Client Name: ARCADIS
Client #: ____
Address: 430 1st Ave N. Ste 720
City/State/Zip Code: Minneapolis, MN 55401
Project Manager: Rob Ellis
Telephone Number: 612-339-9434 Fax: 612-336-4538
Sampler Name: (Print Name) Trista Nelson-Kalmes
Sampler Signature: Trista Nelson-Kalmes

Project Name: Ford
Project #: MN000013.0003
Site/Location ID: ____ State: MN
Report To: Bryan Zinda
Invoice To: Rob Ellis
Quote #: ____ PO#: Ford-TCMP-03/220575-2

E-mail address: ____

TAT: X Standard; ___ Rush (surcharges may apply)
Date Needed: ____
Fax Results: Y (N)
E-mail: (Y) N

Matrix: SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify Other

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix	HNO3	HCl	NaOH	H2SO4	Methanol	None	Other (Specify)	VOC (8260)	SVOC (8270)	GRO (WI)	DRO (WI)	RCRA Metals (total) + hardness						REMARKS
SW-01	11/4/10	0940	G			1	7				1		3	1	3	1	1						
SW-02		1020																					
SW-03		1100																					
SW-04		1150																					
Outfall-01		1240																					
TB-02(20101104)	—						2						2										

QC Deliverables: None; X Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: ____

Special Instructions: Send to North Canton

Relinquished By:	Date: 11/4/10	Time: 1015	Received By:	Date: 11-5	Time: 1030
Relinquished By:	Date: 11-5-10	Time: 1700	Received By:	Date: 11/6/10	Time: 1010
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp:
Custody Seals: Y N N/A
Bottles Supplied by TestAmerica: Y N
Method of Shipment:

TAL-0020 (1207)

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 470K080453
North Canton Facility

Client Arcadis Project Ford By: [signature]
Cooler Received on 11/6/10 Opened on 11/8/10 (Signature)
FedEx [X] UPS [ ] DHL [ ] FAS [ ] Stetson [ ] Client Drop Off [ ] TestAmerica Courier [ ] Other
TestAmerica Cooler # Multiple Coolers [X] Foam Box [ ] Client Cooler [ ] Other
1. Were custody seals on the outside of the cooler(s)? Yes [X] No [X] Intact? Yes [ ] No [ ] NA [X]
If YES, Quantity Quantity Unsalvageable
Were custody seals on the outside of cooler(s) signed and dated? Yes [ ] No [ ] NA [X]
Were custody seals on the bottle(s)? Yes [ ] No [X]
If YES, are there any exceptions?
2. Shippers' packing slip attached to the cooler(s)? Yes [X] No [ ]
3. Did custody papers accompany the sample(s)? Yes [X] No [ ] Relinquished by client? Yes [ ] No [ ]
4. Were the custody papers signed in the appropriate place? Yes [X] No [ ]
5. Packing material used: Bubble Wrap [X] Foam [ ] None [ ] Other brown paper
6. Cooler temperature upon receipt °C See back of form for multiple coolers/temps [X] (BACK)
METHOD: IR [X] Other [ ]
COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] Water [ ] None [ ]
7. Did all bottles arrive in good condition (Unbroken)? Yes [ ] No [X]
8. Could all bottle labels be reconciled with the COC? Yes [X] No [ ]
9. Were sample(s) at the correct pH upon receipt? Yes [X] No [ ] NA [ ]
10. Were correct bottle(s) used for the test(s) indicated? Yes [X] No [ ]
11. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [X] NA [ ]
12. Sufficient quantity received to perform indicated analyses? Yes [X] No [ ]
13. Was a trip blank present in the cooler(s)? Yes [X] No [ ] Were VOAs on the COC? Yes [X] No [ ]
Contacted PM DSP Date 11/8/10 by AM via Verbal [X] Voice Mail [ ] Other [ ]
Concerning 14/15

14. CHAIN OF CUSTODY

The following discrepancies occurred:
COC = no tests rec'd for SW-02, 03, 04 + Outfall-01
rec'd SVOC, DRO + Metals + hardness nan bottle for 02 - will log.
rec'd VOC GRO vials for 03 - will log + DRO, SVOC + Met. + hardness will log.
rec'd VOC, SVOC, GRO, DRO, Metals + Hardness for 04 - will log
rec'd VOC, GRO, Met., hardness + SVOC bottle for outfall-01 - will log.

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) Outfall-01/11-4-10/12:30 (1xL) DRO were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 051010-HNO_3; *Sulfuric Acid Lot#* 051010-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN/NaOH$. What time was preservative added to sample(s)?

Client ID	pH	Date	Initials
SW-01	<2 <2	11-8-10	LMB
SW-02	<2 <2	"	"
SW-03	<2 <2	"	"
SW-04	<2 <2	"	"
Outfall-01	<2	"	"

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant
TA No #	1,5°C	IR	wet ice
1	2,8°C	1	1

Discrepancies Cont'd:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

December 01, 2010

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000613.0003
Laboratory: TestAmerica - North Canton
Laboratory submittal: A0K080453
Sample date: 2010-11-04
Report received by Enovis: 2010-11-29
Initial Data Verification completed by Enovis: 2010-12-01

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

5 Water sample(s) and 1 water trip blank were analyzed for GCMS VOC, GCMS SVOC, GRO, DRO, Metals and General Chemistry parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, MS/MSD Recovery, MS/MSD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the Enovis CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch MS/MSD recovery outliers were not performed on a sample from this submittal. Qualification of client sample results is not required based on these sample-matrix specific QC outliers.

GCMS VOC trip blank had a detection below the RL for Acetone and MEK. Client samples -001, -004 and -005 Acetone results should all be considered to be non-detect at the RL and qualified with UB flags. The MEK detection did not require qualification for client sample results.

GCMS SVOC LCS and LCSduplicate recoveries were outside of laboratory control limits biased low for Hexachlorocyclopentadiene. Client samples -001, -002, -003, -004 and -005 results for this analyte should be considered to be estimated and qualified with UJ flags.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia, Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

Enovis Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: A0K080453

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	GCMS VOC	GCMS SVOC	Wisconsin GRO Method	DRO	ICP Metals	Mercury (Manual Cold Vapor)	Hardness by EDTA Titrimetric Method
A0K080453001	SW-01	11/4/2010	9:40:00	X	X	X	X	X	X	X
A0K080453002	SW-02	11/4/2010	10:20:00		X		X	X	X	X
A0K080453003	SW-03	11/4/2010	11:00:00		X	X	X	X	X	X
A0K080453004	SW-04	11/4/2010	11:50:00	X	X	X	X	X	X	X
A0K080453005	OUTFALL-01	11/4/2010	12:40:00	X	X	X		X	X	X
A0K080453006	TB-02(20101104)	11/4/2010	12:00:00	X						

Qualified Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A0K080453

		Sample Name:	SW-01				SW-02				SW-03				SW-04				OUTFALL-01			
		Lab Sample ID:	A0K080453001				A0K080453002				A0K080453003				A0K080453004				A0K080453005			
		Sample Date:	11/4/2010				11/4/2010				11/4/2010				11/4/2010				11/4/2010			
Analyte	**Cas No.**		**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC																						
OSW-8260B																						
Acetone	67-64-1		1.8	10	ug/l	UB									2.6	10	ug/l	UB	3.2	10	ug/l	UB
GC/MS SVOC																						
OSW-8270C																						
Hexachlorocyclopentadiene	77-47-4		ND	50	ug/l	UJ	ND	50	ug/l	UJ	ND	50	ug/l	UJ	ND	50	ug/l	UJ	ND	50	ug/l	UJ

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A0K080453

		Sample Name:	SW-01				SW-02				SW-03			
		Lab Sample ID:	A0K080453001				A0K080453002				A0K080453003			
		Sample Date:	11/4/2010				11/4/2010				11/4/2010			
Analyte	Cas No.		Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC														
OSW-8260B														
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.0	ug/l	---								
1,1,1-Trichloroethane	71-55-6		ND	1.0	ug/l	---								
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.0	ug/l	---								
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		ND	1.0	ug/l	---								
1,1,2-Trichloroethane	79-00-5		ND	1.0	ug/l	---								
1,1-Dichloroethane	75-34-3		ND	1.0	ug/l	---								
1,1-Dichloroethene	75-35-4		ND	1.0	ug/l	---								
1,1-Dichloropropene	563-58-6		ND	1.0	ug/l	---								
1,2,3-Trichlorobenzene	87-61-6		ND	1.0	ug/l	---								
1,2,3-Trichloropropane	96-18-4		ND	1.0	ug/l	---								
1,2,4-Trichlorobenzene	120-82-1		ND	1.0	ug/l	---								
1,2,4-Trimethylbenzene	95-63-6		ND	1.0	ug/l	---								
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8		ND	2.0	ug/l	---								
1,2-Dibromoethane (EDB)	106-93-4		ND	1.0	ug/l	---								
1,2-Dichlorobenzene	95-50-1		ND	1.0	ug/l	---								
1,2-Dichloroethane	107-06-2		ND	1.0	ug/l	---								
1,2-Dichloropropane	78-87-5		ND	1.0	ug/l	---								
1,3,5-Trimethylbenzene	108-67-8		ND	1.0	ug/l	---								
1,3-Dichlorobenzene	541-73-1		ND	1.0	ug/l	---								
1,3-Dichloropropane	142-28-9		ND	1.0	ug/l	---								
1,4-Dichlorobenzene	106-46-7		ND	1.0	ug/l	---								
2,2-Dichloropropane	594-20-7		ND	1.0	ug/l	---								
2-Chlorotoluene	95-49-8		ND	1.0	ug/l	---								
2-Hexanone	591-78-6		ND	10	ug/l	---								
4-Chlorotoluene	106-43-4		ND	1.0	ug/l	---								
4-Methyl-2-pentanone (MIBK)	108-10-1		ND	5.0	ug/l	---								
Acetone	67-64-1		1.8	10	ug/l	UB								
Allyl chloride	107-05-1		ND	2.0	ug/l	---								
Benzene	71-43-2		ND	1.0	ug/l	---								
Bromobenzene	108-86-1		ND	1.0	ug/l	---								
Bromochloromethane	74-97-5		ND	1.0	ug/l	---								
Bromodichloromethane	75-27-4		ND	1.0	ug/l	---								
Bromoform	75-25-2		ND	1.0	ug/l	---								
Bromomethane	74-83-9		ND	1.0	ug/l	---								
Carbon disulfide	75-15-0		ND	1.0	ug/l	---								
Carbon tetrachloride	56-23-5		ND	1.0	ug/l	---								
Chlorobenzene	108-90-7		ND	1.0	ug/l	---								
Chlorodibromomethane	124-48-1		ND	1.0	ug/l	---								
Chloroethane	75-00-3		ND	1.0	ug/l	---								
Chloroform	67-66-3		ND	1.0	ug/l	---								
Chloromethane	74-87-3		0.51	1.0	ug/l	J								
cis-1,2-Dichloroethene	156-59-2		ND	1.0	ug/l	---								
cis-1,3-Dichloropropene	10061-01-5		ND	1.0	ug/l	---								
Cyclohexane	110-82-7		ND	1.0	ug/l	---								
Dibromomethane	74-95-3		ND	1.0	ug/l	---								
Dichlorodifluoromethane	75-71-8		ND	1.0	ug/l	---								
Dichlorofluoromethane	75-43-4		ND	1.0	ug/l	---								
Ethyl ether	60-29-7		ND	1.0	ug/l	---								
Ethylbenzene	100-41-4		ND	1.0	ug/l	---								
Hexachlorobutadiene	87-68-3		ND	1.0	ug/l	---								
Isopropylbenzene	98-82-8		ND	1.0	ug/l	---								
m-Xylene & p-Xylene	136777-61-2		ND	2.0	ug/l	---								
Methyl acetate	79-20-9		ND	10	ug/l	---								
Methyl ethyl ketone	78-93-3		ND	10	ug/l	---								
Methyl tert-butyl ether (MTBE)	1634-04-4		ND	2.0	ug/l	---								
Methylcyclohexane	108-87-2		ND	1.0	ug/l	---								
Methylene chloride	75-09-2		ND	1.0	ug/l	---								
n-Butylbenzene	104-51-8		ND	1.0	ug/l	---								
n-Propylbenzene	103-65-1		ND	1.0	ug/l	---								
Naphthalene	91-20-3		ND	1.0	ug/l	---								
o-Xylene	95-47-6		ND	1.0	ug/l	---								
p-Isopropyltoluene	99-87-6		ND	1.0	ug/l	---								
sec-Butylbenzene	135-98-8		ND	1.0	ug/l	---								
Styrene	100-42-5		ND	1.0	ug/l	---								
tert-Butylbenzene	98-06-6		ND	1.0	ug/l	---								
Tetrachloroethene	127-18-4		ND	1.0	ug/l	---								
Tetrahydrofuran	109-99-9		ND	5.0	ug/l	---								
Toluene	108-88-3		ND	1.0	ug/l	---								
trans-1,2-Dichloroethene	156-60-5		ND	1.0	ug/l	---								
trans-1,3-Dichloropropene	10061-02-6		ND	1.0	ug/l	---								
Trichloroethene	79-01-6		ND	1.0	ug/l	---								
Trichlorofluoromethane	75-69-4		ND	1.0	ug/l	---								
Vinyl chloride	75-01-4		ND	1.0	ug/l	---								

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A0K080453

		Sample Name:	SW-01				SW-02				SW-03			
		Lab Sample ID:	A0K080453001				A0K080453002				A0K080453003			
		Sample Date:	11/4/2010				11/4/2010				11/4/2010			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC														
	OSW-8270C													
	1,1-Biphenyl	92-52-4	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2,2-oxybis(1-Chloropropane)	108-60-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2,4,5-Trichlorophenol	95-95-4	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2,4,6-Trichlorophenol	88-06-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2,4-Dichlorophenol	120-83-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2,4-Dimethylphenol	105-67-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2,4-Dinitrophenol	51-28-5	ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---
	2,4-Dinitrotoluene	121-14-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2,6-Dinitrotoluene	606-20-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2-Chloronaphthalene	91-58-7	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2-Chlorophenol	95-57-8	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2-Methylnaphthalene	91-57-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2-Methylphenol	95-48-7	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	2-Nitroaniline	88-74-4	ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---
	2-Nitrophenol	88-75-5	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	3,3-Dichlorobenzidine	91-94-1	ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---
	3-Nitroaniline	99-09-2	ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---
	4,6-Dinitro-2-methylphenol	534-52-1	ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---
	4-Bromophenyl phenyl ether	101-55-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	4-Chloro-3-methylphenol	59-50-7	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	4-Chloroaniline	106-47-8	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	4-Chlorophenyl phenyl ether	7005-72-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	4-Methylphenol	106-44-5	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	4-Nitroaniline	100-01-6	ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---
	4-Nitrophenol	100-02-7	ND	50	ug/l	---	ND	50	ug/l	---	ND	50	ug/l	---
	Acenaphthene	83-32-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Acenaphthylene	208-96-8	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Acetophenone	98-86-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Anthracene	120-12-7	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Atrazine	1912-24-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Benzaldehyde	100-52-7	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Benzo(a)anthracene	56-55-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Benzo(a)pyrene	50-32-8	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Benzo(b)fluoranthene	205-99-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Benzo(ghi)perylene	191-24-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Benzo(k)fluoranthene	207-08-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	bis(2-Chloroethoxy)methane	111-91-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	bis(2-Chloroethyl) ether	111-44-4	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	bis(2-Ethylhexyl) phthalate	117-81-7	0.90	10	ug/l	J	ND	10	ug/l	---	ND	10	ug/l	---
	Butyl benzyl phthalate	85-68-7	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Caprolactam	105-60-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Carbazole	86-74-8	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Chrysene	218-01-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Di-n-butyl phthalate	84-74-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Di-n-octyl phthalate	117-84-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Dibenz(a,h)anthracene	53-70-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Dibenzofuran	132-64-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Diethyl phthalate	84-66-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Dimethyl phthalate	131-11-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Fluoranthene	206-44-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Fluorene	86-73-7	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Hexachlorobenzene	118-74-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Hexachlorobutadiene	87-68-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Hexachlorocyclopentadiene	77-47-4	ND	50	ug/l	UJ	ND	50	ug/l	UJ	ND	50	ug/l	UJ
	Hexachloroethane	67-72-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Indeno(1,2,3-cd)pyrene	193-39-5	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Isophorone	78-59-1	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	N-Nitrosodi-n-propylamine	621-64-7	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	N-Nitrosodiphenylamine	86-30-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Naphthalene	91-20-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Nitrobenzene	98-95-3	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Pentachlorophenol	87-86-5	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Phenanthrene	85-01-8	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Phenol	108-95-2	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Pyrene	129-00-0	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A0K080453

		Sample Name:	SW-01				SW-02				SW-03			
		Lab Sample ID:	A0K080453001				A0K080453002				A0K080453003			
		Sample Date:	11/4/2010				11/4/2010				11/4/2010			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	Gasoline Range Organics	E-1005	ND	100	ug/l	---					ND	100	ug/l	---
GC Other														
	OSW-8015B-MOD													
	Diesel Range Organics	E-1004	ND	0.10	mg/l	---	ND	0.10	mg/l	---	ND	0.10	mg/l	---
Metals														
	OSW-6010B													
	Arsenic	7440-38-2	ND	10.0	ug/l	---	ND	10.0	ug/l	---	ND	10.0	ug/l	---
	Barium	7440-39-3	53.4	200	ug/l	J	51.3	200	ug/l	J	54.0	200	ug/l	J
	Cadmium	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Chromium	7440-47-3	ND	10.0	ug/l	---	ND	10.0	ug/l	---	ND	10.0	ug/l	---
	Lead	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---	ND	3.0	ug/l	---
	Selenium	7782-49-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Silver	7440-22-4	ND	10.0	ug/l	---	ND	10.0	ug/l	---	ND	10.0	ug/l	---
	OSW-7470A													
	Mercury	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---	ND	0.20	ug/l	---
General Chemistry														
	APHA-2340C													
	Hardness, as CaCO3	E-11778	200	5	mg/l	---	190	5	mg/l	---	180	5	mg/l	---

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A0K080453

		Sample Name:	SW-04				OUTFALL-01				TB-02(20101104)			
		Lab Sample ID:	A0K080453004				A0K080453005				A0K080453006			
		Sample Date:	11/4/2010				11/4/2010				11/4/2010			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC														
OSW-8260B														
	1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	1,2-Dibromoethane (EDB)	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	4-Methyl-2-pentanone (MIBK)	108-10-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Acetone	67-64-1	2.6	10	ug/l	UB	3.2	10	ug/l	UB	7.5	10	ug/l	J
	Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloromethane	74-87-3	0.31	1.0	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Cyclohexane	110-82-7	ND	1.0	ug/l	---	0.45	1.0	ug/l	J	ND	1.0	ug/l	---
	Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Ethyl ether	60-29-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Ethylbenzene	100-41-4	ND	1.0	ug/l	---	0.24	1.0	ug/l	J	ND	1.0	ug/l	---
	Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	0.36	1.0	ug/l	J	ND	1.0	ug/l	---
	m-Xylene & p-Xylene	136777-61-2	ND	2.0	ug/l	---	0.63	2.0	ug/l	J	ND	2.0	ug/l	---
	Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Methyl ethyl ketone	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---	0.62	10	ug/l	J
	Methyl tert-butyl ether (MTBE)	1634-04-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	0.62	1.0	ug/l	J	ND	1.0	ug/l	---
	Methylene chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	n-Propylbenzene	103-65-1	ND	1.0	ug/l	---	0.37	1.0	ug/l	J	ND	1.0	ug/l	---
	Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	o-Xylene	95-47-6	ND	1.0	ug/l	---	0.24	1.0	ug/l	J	ND	1.0	ug/l	---
	p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	0.18	1.0	ug/l	J	ND	1.0	ug/l	---
	Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A0K080453

	Sample Name:	SW-04				OUTFALL-01				TB-02(20101104)			
	Lab Sample ID:	A0K080453004				A0K080453005				A0K080453006			
	Sample Date:	11/4/2010				11/4/2010				11/4/2010			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS SVOC													
OSW-8270C													
1,1-Biphenyl	92-52-4	ND	10	ug/l	---	ND	10	ug/l	---				
2,2-oxybis(1-Chloropropane)	108-60-1	ND	10	ug/l	---	ND	10	ug/l	---				
2,4,5-Trichlorophenol	95-95-4	ND	10	ug/l	---	ND	10	ug/l	---				
2,4,6-Trichlorophenol	88-06-2	ND	10	ug/l	---	ND	10	ug/l	---				
2,4-Dichlorophenol	120-83-2	ND	10	ug/l	---	ND	10	ug/l	---				
2,4-Dimethylphenol	105-67-9	ND	10	ug/l	---	ND	10	ug/l	---				
2,4-Dinitrophenol	51-28-5	ND	50	ug/l	---	ND	50	ug/l	---				
2,4-Dinitrotoluene	121-14-2	ND	10	ug/l	---	ND	10	ug/l	---				
2,6-Dinitrotoluene	606-20-2	ND	10	ug/l	---	ND	10	ug/l	---				
2-Chloronaphthalene	91-58-7	ND	10	ug/l	---	ND	10	ug/l	---				
2-Chlorophenol	95-57-8	ND	10	ug/l	---	ND	10	ug/l	---				
2-Methylnaphthalene	91-57-6	ND	10	ug/l	---	ND	10	ug/l	---				
2-Methylphenol	95-48-7	ND	10	ug/l	---	ND	10	ug/l	---				
2-Nitroaniline	88-74-4	ND	50	ug/l	---	ND	50	ug/l	---				
2-Nitrophenol	88-75-5	ND	10	ug/l	---	ND	10	ug/l	---				
3,3-Dichlorobenzidine	91-94-1	ND	50	ug/l	---	ND	50	ug/l	---				
3-Nitroaniline	99-09-2	ND	50	ug/l	---	ND	50	ug/l	---				
4,6-Dinitro-2-methylphenol	534-52-1	ND	50	ug/l	---	ND	50	ug/l	---				
4-Bromophenyl phenyl ether	101-55-3	ND	10	ug/l	---	ND	10	ug/l	---				
4-Chloro-3-methylphenol	59-50-7	ND	10	ug/l	---	ND	10	ug/l	---				
4-Chloroaniline	106-47-8	ND	10	ug/l	---	ND	10	ug/l	---				
4-Chlorophenyl phenyl ether	7005-72-3	ND	10	ug/l	---	ND	10	ug/l	---				
4-Methylphenol	106-44-5	ND	10	ug/l	---	ND	10	ug/l	---				
4-Nitroaniline	100-01-6	ND	50	ug/l	---	ND	50	ug/l	---				
4-Nitrophenol	100-02-7	ND	50	ug/l	---	ND	50	ug/l	---				
Acenaphthene	83-32-9	ND	10	ug/l	---	ND	10	ug/l	---				
Acenaphthylene	208-96-8	ND	10	ug/l	---	ND	10	ug/l	---				
Acetophenone	98-86-2	ND	10	ug/l	---	ND	10	ug/l	---				
Anthracene	120-12-7	ND	10	ug/l	---	ND	10	ug/l	---				
Atrazine	1912-24-9	ND	10	ug/l	---	ND	10	ug/l	---				
Benzaldehyde	100-52-7	ND	10	ug/l	---	ND	10	ug/l	---				
Benzo(a)anthracene	56-55-3	ND	10	ug/l	---	ND	10	ug/l	---				
Benzo(a)pyrene	50-32-8	ND	10	ug/l	---	ND	10	ug/l	---				
Benzo(b)fluoranthene	205-99-2	ND	10	ug/l	---	ND	10	ug/l	---				
Benzo(ghi)perylene	191-24-2	ND	10	ug/l	---	ND	10	ug/l	---				
Benzo(k)fluoranthene	207-08-9	ND	10	ug/l	---	ND	10	ug/l	---				
bis(2-Chloroethoxy)methane	111-91-1	ND	10	ug/l	---	ND	10	ug/l	---				
bis(2-Chloroethyl) ether	111-44-4	ND	10	ug/l	---	ND	10	ug/l	---				
bis(2-Ethylhexyl) phthalate	117-81-7	ND	10	ug/l	---	1.4	10	ug/l	J				
Butyl benzyl phthalate	85-68-7	1.0	10	ug/l	J	ND	10	ug/l	---				
Caprolactam	105-60-2	ND	10	ug/l	---	6.2	10	ug/l	J				
Carbazole	86-74-8	ND	10	ug/l	---	ND	10	ug/l	---				
Chrysene	218-01-9	ND	10	ug/l	---	ND	10	ug/l	---				
Di-n-butyl phthalate	84-74-2	ND	10	ug/l	---	ND	10	ug/l	---				
Di-n-octyl phthalate	117-84-0	ND	10	ug/l	---	ND	10	ug/l	---				
Dibenz(a,h)anthracene	53-70-3	ND	10	ug/l	---	ND	10	ug/l	---				
Dibenzofuran	132-64-9	ND	10	ug/l	---	ND	10	ug/l	---				
Diethyl phthalate	84-66-2	ND	10	ug/l	---	ND	10	ug/l	---				
Dimethyl phthalate	131-11-3	ND	10	ug/l	---	ND	10	ug/l	---				
Fluoranthene	206-44-0	ND	10	ug/l	---	ND	10	ug/l	---				
Fluorene	86-73-7	ND	10	ug/l	---	ND	10	ug/l	---				
Hexachlorobenzene	118-74-1	ND	10	ug/l	---	ND	10	ug/l	---				
Hexachlorobutadiene	87-68-3	ND	10	ug/l	---	ND	10	ug/l	---				
Hexachlorocyclopentadiene	77-47-4	ND	50	ug/l	UJ	ND	50	ug/l	UJ				
Hexachloroethane	67-72-1	ND	10	ug/l	---	ND	10	ug/l	---				
Indeno(1,2,3-cd)pyrene	193-39-5	ND	10	ug/l	---	ND	10	ug/l	---				
Isophorone	78-59-1	ND	10	ug/l	---	ND	10	ug/l	---				
N-Nitrosodi-n-propylamine	621-64-7	ND	10	ug/l	---	ND	10	ug/l	---				
N-Nitrosodiphenylamine	86-30-6	ND	10	ug/l	---	ND	10	ug/l	---				
Naphthalene	91-20-3	ND	10	ug/l	---	ND	10	ug/l	---				
Nitrobenzene	98-95-3	ND	10	ug/l	---	ND	10	ug/l	---				
Pentachlorophenol	87-86-5	ND	10	ug/l	---	ND	10	ug/l	---				
Phenanthrene	85-01-8	ND	10	ug/l	---	ND	10	ug/l	---				
Phenol	108-95-2	ND	10	ug/l	---	ND	10	ug/l	---				
Pyrene	129-00-0	ND	10	ug/l	---	ND	10	ug/l	---				

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A0K080453

		Sample Name:	SW-04				OUTFALL-01				TB-02(20101104)			
		Lab Sample ID:	A0K080453004				A0K080453005				A0K080453006			
		Sample Date:	11/4/2010				11/4/2010				11/4/2010			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC VOC														
	PUBL-SW-140													
	Gasoline Range Organics	E-1005	ND	100	ug/l	---	ND	100	ug/l	---				
GC Other														
	OSW-8015B-MOD													
	Diesel Range Organics	E-1004	0.086	0.10	mg/l	J								
Metals														
	OSW-6010B													
	Arsenic	7440-38-2	ND	10.0	ug/l	---	5.9	10.0	ug/l	J				
	Barium	7440-39-3	55.0	200	ug/l	J	132	200	ug/l	J				
	Cadmium	7440-43-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Chromium	7440-47-3	ND	10.0	ug/l	---	ND	10.0	ug/l	---				
	Lead	7439-92-1	ND	3.0	ug/l	---	ND	3.0	ug/l	---				
	Selenium	7782-49-2	ND	5.0	ug/l	---	ND	5.0	ug/l	---				
	Silver	7440-22-4	ND	10.0	ug/l	---	ND	10.0	ug/l	---				
	OSW-7470A													
	Mercury	7439-97-6	ND	0.20	ug/l	---	ND	0.20	ug/l	---				
General Chemistry														
	APHA-2340C													
	Hardness, as CaCO3	E-11778	190	5	mg/l	---	570	25	mg/l	---				

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. E200572

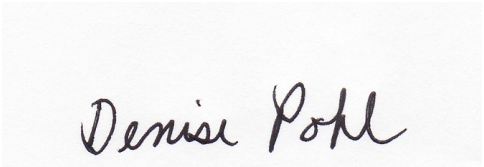
FORD TCAP MN E200572

Lot #: A0K110533

Rebecca Forbort

ARCADIS U.S., Inc.
430 1st. Ave. North
Suite 720
Minneapolis, MN 55401

TESTAMERICA LABORATORIES, INC.



Approved for release.
Denise Pohl
Project Manager
11/30/2010 1:05 PM

Denise Pohl
Project Manager
denise.pohl@testamericainc.com

November 30, 2010

CASE NARRATIVE

A0K110533

The following report contains the analytical results for two water samples and one quality control sample submitted to TestAmerica North Canton by ARCADIS U.S., Inc. from the FORD TCAP MN E200572 Site, project number E200572. The samples were received November 11, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

All parameters were evaluated to the method detection limit and include qualified results where applicable.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.3°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for batch(es) 0330020 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

GASOLINE RANGE ORGANICS

The matrix spike/matrix spike duplicate(s) for batch(es) 0321051 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A0K110533

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SW-02(20101110) 11/10/10 10:50 001				
Acetone	1.4 J	10	ug/L	SW846 8260B
Chloromethane	0.32 J	1.0	ug/L	SW846 8260B
SW-03(20101110) 11/10/10 11:05 002				
Acetone	2.2 J	10	ug/L	SW846 8260B
Chloromethane	0.37 J	1.0	ug/L	SW846 8260B
TB-01(20101110) 11/10/10 003				
Acetone	5.0 J	10	ug/L	SW846 8260B
Methyl ethyl ketone	0.70 J	10	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A0K110533

PARAMETER	ANALYTICAL METHOD
Gasoline Range Organics	WI-GRO GRO
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

WI-GRO "Modified GRO: Method for Determining Gasoline Range Organics", Wisconsin DNR, PUBL-SW-140, September, 1995.

SAMPLE SUMMARY

A0K110533

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L9WT7	001	SW-02(20101110)	11/10/10	10:50
L9WVD	002	SW-03(20101110)	11/10/10	11:05
L9WVR	003	TB-01(20101110)	11/10/10	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS U.S., Inc.

Client Sample ID: SW-02(20101110)

GC/MS Volatiles

Lot-Sample #...: A0K110533-001 **Work Order #...:** L9WT71AA **Matrix.....:** WG
Date Sampled...: 11/10/10 10:50 **Date Received..:** 11/11/10
Prep Date.....: 11/23/10 **Analysis Date..:** 11/23/10
Prep Batch #...: 0330020
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**1.4 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	**0.32 J**	**1.0**	**ug/L**	**0.30**
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: SW-02(20101110)

GC/MS Volatiles

Lot-Sample #...: A0K110533-001 **Work Order #...:** L9WT71AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(75 - 121)
1,2-Dichloroethane-d4	107	(63 - 129)
Toluene-d8	96	(74 - 115)
4-Bromofluorobenzene	82	(66 - 117)

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ARCADIS U.S., Inc.

Client Sample ID: SW-02(20101110)

GC/MS Volatiles

Lot-Sample #...: A0K110533-001 **Work Order #...:** L9WT71AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: SW-02(20101110)

GC Volatiles

Lot-Sample #...: A0K110533-001 **Work Order #...:** L9WT71AC **Matrix.....:** WG
Date Sampled...: 11/10/10 10:50 **Date Received..:** 11/11/10
Prep Date.....: 11/16/10 **Analysis Date..:** 11/16/10
Prep Batch #...: 0321051
Dilution Factor: 1 **Method.....:** WI-GRO GRO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	100	ug/L	26

ARCADIS U.S., Inc.

Client Sample ID: SW-03(20101110)

GC/MS Volatiles

Lot-Sample #...: A0K110533-002 **Work Order #...:** L9WVD1AA **Matrix.....:** WG
Date Sampled...: 11/10/10 11:05 **Date Received..:** 11/11/10
Prep Date.....: 11/23/10 **Analysis Date..:** 11/23/10
Prep Batch #...: 0330020
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**2.2 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	ND	10	ug/L	0.57
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	**0.37 J**	**1.0**	**ug/L**	**0.30**
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: SW-03(20101110)

GC/MS Volatiles

Lot-Sample #...: A0K110533-002 **Work Order #...:** L9WVD1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(75 - 121)
1,2-Dichloroethane-d4	113	(63 - 129)
Toluene-d8	98	(74 - 115)
4-Bromofluorobenzene	88	(66 - 117)

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ARCADIS U.S., Inc.

Client Sample ID: SW-03(20101110)

GC/MS Volatiles

Lot-Sample #...: A0K110533-002 **Work Order #...:** L9WVD1AA **Matrix.....:** WG

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: TB-01(20101110)

GC/MS Volatiles

Lot-Sample #...: A0K110533-003 **Work Order #...:** L9WVR1AA **Matrix.....:** WQ
Date Sampled...: 11/10/10 **Date Received..:** 11/11/10
Prep Date.....: 11/23/10 **Analysis Date..:** 11/23/10
Prep Batch #...: 0330020
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**5.0 J**	**10**	**ug/L**	**1.1**
Benzene	ND	1.0	ug/L	0.13
Bromobenzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
Methyl ethyl ketone	**0.70 J**	**10**	**ug/L**	**0.57**
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Allyl chloride	ND	2.0	ug/L	0.35
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
Cyclohexane	ND	1.0	ug/L	0.12
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
Dichlorofluoromethane	ND	1.0	ug/L	0.42
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13

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ARCADIS U.S., Inc.

Client Sample ID: TB-01(20101110)

GC/MS Volatiles

Lot-Sample #...: A0K110533-003 **Work Order #...:** L9WVR1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
1,1-Dichloropropene	ND	1.0	ug/L	0.13
Ethylbenzene	ND	1.0	ug/L	0.17
Ethyl ether	ND	1.0	ug/L	0.31
Hexachlorobutadiene	ND	1.0	ug/L	0.30
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methyl acetate	ND	10	ug/L	0.38
Methylcyclohexane	ND	1.0	ug/L	0.13
Methylene chloride	ND	1.0	ug/L	0.33
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	0.32
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	0.17
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Tetrahydrofuran	ND	5.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(75 - 121)
1,2-Dichloroethane-d4	106	(63 - 129)
Toluene-d8	91	(74 - 115)
4-Bromofluorobenzene	78	(66 - 117)

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ARCADIS U.S., Inc.

Client Sample ID: TB-01(20101110)

GC/MS Volatiles

Lot-Sample #...: A0K110533-003 **Work Order #...:** L9WVR1AA **Matrix.....:** WQ

NOTE(S):

J Estimated result. Result is less than RL.

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QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AA **Matrix.....:** WATER
MB Lot-Sample #: A0K260000-020

Prep Date.....: 11/23/10
Analysis Date..: 11/23/10 **Prep Batch #...:** 0330020
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl ether	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	**0.51 J**	**5.0**	**ug/L**	**SW846 8260B**
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(75 - 121)
1,2-Dichloroethane-d4	98	(63 - 129)
Toluene-d8	90	(74 - 115)
4-Bromofluorobenzene	82	(66 - 117)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AA **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L955Q1AA **Matrix.....:** WATER
MB Lot-Sample #: A0K170000-051
Prep Date.....: 11/16/10
Analysis Date..: 11/16/10 **Prep Batch #...:** 0321051
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/L	WI-GRO GRO

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K260000-020 MAKN21AD-LCSD
Prep Date.....: 11/23/10 **Analysis Date..:** 11/23/10
Prep Batch #...: 0330020
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	138 a	(43 - 136)			SW846 8260B
	130	(43 - 136)	6.2	(0-30)	SW846 8260B
Benzene	**96**	**(83 - 112)**			**SW846 8260B**
	94	**(83 - 112)**	**1.9**	**(0-30)**	**SW846 8260B**
1,2-Dichloroethene (total)	97	(82 - 114)			SW846 8260B
	95	(82 - 114)	2.1	(0-30)	SW846 8260B
Bromobenzene	92	(76 - 115)			SW846 8260B
	91	(76 - 115)	0.74	(0-30)	SW846 8260B
Bromochloromethane	98	(77 - 120)			SW846 8260B
	98	(77 - 120)	0.050	(0-30)	SW846 8260B
Bromodichloromethane	103	(72 - 121)			SW846 8260B
	100	(72 - 121)	3.6	(0-30)	SW846 8260B
Bromoform	105	(40 - 131)			SW846 8260B
	107	(40 - 131)	1.4	(0-30)	SW846 8260B
Bromomethane	84	(11 - 185)			SW846 8260B
	64	(11 - 185)	27	(0-30)	SW846 8260B
Methyl ethyl ketone	111	(60 - 126)			SW846 8260B
	106	(60 - 126)	4.2	(0-30)	SW846 8260B
n-Butylbenzene	91	(66 - 125)			SW846 8260B
	90	(66 - 125)	2.1	(0-30)	SW846 8260B
Xylenes (total)	96	(83 - 112)			SW846 8260B
	97	(83 - 112)	0.84	(0-30)	SW846 8260B
sec-Butylbenzene	95	(70 - 117)			SW846 8260B
	93	(70 - 117)	2.7	(0-30)	SW846 8260B
tert-Butylbenzene	92	(71 - 115)			SW846 8260B
	92	(71 - 115)	0.81	(0-30)	SW846 8260B
Carbon disulfide	111	(62 - 142)			SW846 8260B
	105	(62 - 142)	6.1	(0-30)	SW846 8260B
Carbon tetrachloride	108	(66 - 128)			SW846 8260B
	102	(66 - 128)	6.3	(0-30)	SW846 8260B
Chlorobenzene	**93**	**(85 - 110)**			**SW846 8260B**
	95	**(85 - 110)**	**1.9**	**(0-30)**	**SW846 8260B**
Chlorodibromomethane	103	(64 - 119)			SW846 8260B
	101	(64 - 119)	1.9	(0-30)	SW846 8260B
Chloroethane	86	(25 - 153)			SW846 8260B
	73	(25 - 153)	17	(0-30)	SW846 8260B
n-Hexane	119	(66 - 137)			SW846 8260B
	122	(66 - 137)	2.3	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K260000-020 MAKN21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	100	(79 - 117)			SW846 8260B
	99	(79 - 117)	1.3	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	61	(52 - 131)			SW846 8260B
	62	(52 - 131)	1.9	(0-30)	SW846 8260B
Acetonitrile	108	(15 - 184)			SW846 8260B
	97	(15 - 184)	11	(0-30)	SW846 8260B
Chloromethane	76	(44 - 126)			SW846 8260B
	81	(44 - 126)	6.7	(0-30)	SW846 8260B
Acrolein	83	(51 - 170)			SW846 8260B
	83	(51 - 170)	0.24	(0-30)	SW846 8260B
Vinyl acetate	132	(46 - 161)			SW846 8260B
	128	(46 - 161)	2.7	(0-30)	SW846 8260B
Acrylonitrile	111	(66 - 132)			SW846 8260B
	109	(66 - 132)	2.0	(0-30)	SW846 8260B
2-Chlorotoluene	91	(76 - 116)			SW846 8260B
	90	(76 - 116)	1.0	(0-30)	SW846 8260B
4-Chlorotoluene	90	(77 - 115)			SW846 8260B
	89	(77 - 115)	1.2	(0-30)	SW846 8260B
Cyclohexane	112	(54 - 121)			SW846 8260B
	106	(54 - 121)	4.9	(0-30)	SW846 8260B
Iodomethane	108	(72 - 141)			SW846 8260B
	93	(72 - 141)	15	(0-30)	SW846 8260B
Isopropyl ether	103	(77 - 118)			SW846 8260B
	102	(77 - 118)	1.3	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	83	(42 - 136)			SW846 8260B
	85	(42 - 136)	3.0	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	100	(79 - 113)			SW846 8260B
	102	(79 - 113)	2.5	(0-30)	SW846 8260B
Dibromomethane	106	(81 - 120)			SW846 8260B
	104	(81 - 120)	1.9	(0-30)	SW846 8260B
1,2-Dichlorobenzene	86	(81 - 110)			SW846 8260B
	86	(81 - 110)	0.19	(0-30)	SW846 8260B
1,3-Dichlorobenzene	89	(80 - 110)			SW846 8260B
	88	(80 - 110)	1.2	(0-30)	SW846 8260B
1,4-Dichlorobenzene	88	(82 - 110)			SW846 8260B
	86	(82 - 110)	2.6	(0-30)	SW846 8260B
Dichlorodifluoromethane	71	(19 - 129)			SW846 8260B
	74	(19 - 129)	3.6	(0-30)	SW846 8260B
1,1-Dichloroethane	99	(82 - 115)			SW846 8260B
	97	(82 - 115)	2.1	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K260000-020 MAKN21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	107	(71 - 127)			SW846 8260B
	103	(71 - 127)	3.6	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	95	(80 - 113)			SW846 8260B
	93	(80 - 113)	2.1	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	98	(83 - 117)			SW846 8260B
	96	(83 - 117)	2.2	(0-30)	SW846 8260B
1,1-Dichloroethene	**106**	**(78 - 131)**			**SW846 8260B**
	104	**(78 - 131)**	**1.9**	**(0-30)**	**SW846 8260B**
1,2-Dichloropropane	99	(81 - 115)			SW846 8260B
	97	(81 - 115)	1.5	(0-30)	SW846 8260B
1,3-Dichloropropane	100	(79 - 116)			SW846 8260B
	100	(79 - 116)	0.15	(0-30)	SW846 8260B
2,2-Dichloropropane	86	(50 - 129)			SW846 8260B
	80	(50 - 129)	7.5	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	95	(61 - 115)			SW846 8260B
	94	(61 - 115)	0.87	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	106	(58 - 117)			SW846 8260B
	109	(58 - 117)	3.1	(0-30)	SW846 8260B
1,1-Dichloropropene	105	(83 - 114)			SW846 8260B
	103	(83 - 114)	1.3	(0-30)	SW846 8260B
Ethylbenzene	96	(83 - 112)			SW846 8260B
	96	(83 - 112)	0.080	(0-30)	SW846 8260B
Hexachlorobutadiene	74	(36 - 134)			SW846 8260B
	74	(36 - 134)	0.46	(0-30)	SW846 8260B
2-Hexanone	108	(55 - 133)			SW846 8260B
	107	(55 - 133)	1.6	(0-30)	SW846 8260B
Isopropylbenzene	100	(75 - 114)			SW846 8260B
	99	(75 - 114)	0.19	(0-30)	SW846 8260B
p-Isopropyltoluene	95	(74 - 120)			SW846 8260B
	94	(74 - 120)	0.50	(0-30)	SW846 8260B
Methyl acetate	106	(58 - 131)			SW846 8260B
	101	(58 - 131)	5.3	(0-30)	SW846 8260B
Methylcyclohexane	115	(56 - 127)			SW846 8260B
	111	(56 - 127)	2.9	(0-30)	SW846 8260B
Methylene chloride	83	(66 - 131)			SW846 8260B
	79	(66 - 131)	5.6	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	106	(63 - 128)			SW846 8260B
	103	(63 - 128)	2.3	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	99	(52 - 144)			SW846 8260B
	96	(52 - 144)	2.6	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K260000-020 MAKN21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	88	(32 - 141)			SW846 8260B
	86	(32 - 141)	2.0	(0-30)	SW846 8260B
n-Propylbenzene	95	(74 - 121)			SW846 8260B
	94	(74 - 121)	1.6	(0-30)	SW846 8260B
Styrene	98	(79 - 114)			SW846 8260B
	99	(79 - 114)	1.0	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	99	(72 - 116)			SW846 8260B
	99	(72 - 116)	0.62	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	100	(68 - 118)			SW846 8260B
	100	(68 - 118)	0.35	(0-30)	SW846 8260B
Tetrachloroethene	98	(79 - 114)			SW846 8260B
	101	(79 - 114)	3.0	(0-30)	SW846 8260B
Toluene	**96**	**(84 - 111)**			**SW846 8260B**
	96	**(84 - 111)**	**0.17**	**(0-30)**	**SW846 8260B**
1,2,3-Trichlorobenzene	90	(54 - 126)			SW846 8260B
	84	(54 - 126)	7.0	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	77	(48 - 135)			SW846 8260B
	77	(48 - 135)	0.020	(0-30)	SW846 8260B
1,1,1-Trichloroethane	98	(74 - 118)			SW846 8260B
	95	(74 - 118)	3.0	(0-30)	SW846 8260B
1,1,2-Trichloroethane	99	(80 - 112)			SW846 8260B
	100	(80 - 112)	1.2	(0-30)	SW846 8260B
Trichloroethene	**97**	**(76 - 117)**			**SW846 8260B**
	96	**(76 - 117)**	**0.64**	**(0-20)**	**SW846 8260B**
Trichlorofluoromethane	121	(49 - 157)			SW846 8260B
	116	(49 - 157)	4.0	(0-30)	SW846 8260B
1,2,3-Trichloropropane	107	(73 - 129)			SW846 8260B
	102	(73 - 129)	5.0	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	128	(74 - 151)			SW846 8260B
	121	(74 - 151)	5.4	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	95	(76 - 120)			SW846 8260B
	95	(76 - 120)	0.080	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	94	(72 - 118)			SW846 8260B
	92	(72 - 118)	1.4	(0-30)	SW846 8260B
Vinyl chloride	85	(53 - 127)			SW846 8260B
	86	(53 - 127)	0.88	(0-30)	SW846 8260B
m-Xylene & p-Xylene	96	(83 - 113)			SW846 8260B
	96	(83 - 113)	0.50	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K260000-020 MAKN21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	96	(83 - 113)			SW846 8260B
	97	(83 - 113)	1.5	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(75 - 121)
	97	(75 - 121)
1,2-Dichloroethane-d4	102	(63 - 129)
	99	(63 - 129)
Toluene-d8	93	(74 - 115)
	95	(74 - 115)
4-Bromofluorobenzene	97	(66 - 117)
	98	(66 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K260000-020 MAKN21AD-LCSD
Prep Date.....: 11/23/10 **Analysis Date..:** 11/23/10
Prep Batch #...: 0330020
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acetone	20	28 a	ug/L	138		SW846 8260B
	20	26	ug/L	130	6.2	SW846 8260B
Benzene	**10**	**9.6**	**ug/L**	**96**		**SW846 8260B**
	10	**9.4**	**ug/L**	**94**	**1.9**	**SW846 8260B**
1,2-Dichloroethene (total)	20	19	ug/L	97		SW846 8260B
	20	19	ug/L	95	2.1	SW846 8260B
Bromobenzene	10	9.2	ug/L	92		SW846 8260B
	10	9.1	ug/L	91	0.74	SW846 8260B
Bromochloromethane	10	9.8	ug/L	98		SW846 8260B
	10	9.8	ug/L	98	0.050	SW846 8260B
Bromodichloromethane	10	10	ug/L	103		SW846 8260B
	10	10	ug/L	100	3.6	SW846 8260B
Bromoform	10	11	ug/L	105		SW846 8260B
	10	11	ug/L	107	1.4	SW846 8260B
Bromomethane	10	8.4	ug/L	84		SW846 8260B
	10	6.4	ug/L	64	27	SW846 8260B
Methyl ethyl ketone	20	22	ug/L	111		SW846 8260B
	20	21	ug/L	106	4.2	SW846 8260B
n-Butylbenzene	10	9.1	ug/L	91		SW846 8260B
	10	9.0	ug/L	90	2.1	SW846 8260B
Xylenes (total)	30	29	ug/L	96		SW846 8260B
	30	29	ug/L	97	0.84	SW846 8260B
sec-Butylbenzene	10	9.5	ug/L	95		SW846 8260B
	10	9.3	ug/L	93	2.7	SW846 8260B
tert-Butylbenzene	10	9.2	ug/L	92		SW846 8260B
	10	9.2	ug/L	92	0.81	SW846 8260B
Carbon disulfide	10	11	ug/L	111		SW846 8260B
	10	10	ug/L	105	6.1	SW846 8260B
Carbon tetrachloride	10	11	ug/L	108		SW846 8260B
	10	10	ug/L	102	6.3	SW846 8260B
Chlorobenzene	**10**	**9.3**	**ug/L**	**93**		**SW846 8260B**
	10	**9.5**	**ug/L**	**95**	**1.9**	**SW846 8260B**
Chlorodibromomethane	10	10	ug/L	103		SW846 8260B
	10	10	ug/L	101	1.9	SW846 8260B
Chloroethane	10	8.6	ug/L	86		SW846 8260B
	10	7.3	ug/L	73	17	SW846 8260B
n-Hexane	10	12	ug/L	119		SW846 8260B
	10	12	ug/L	122	2.3	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K260000-020 MAKN21AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Chloroform	10	10	ug/L	100		SW846 8260B
	10	9.9	ug/L	99	1.3	SW846 8260B
2-Chloroethyl vinyl ether	10	6.1	ug/L	61		SW846 8260B
	10	6.2	ug/L	62	1.9	SW846 8260B
Acetonitrile	30	32	ug/L	108		SW846 8260B
	30	29	ug/L	97	11	SW846 8260B
Chloromethane	10	7.6	ug/L	76		SW846 8260B
	10	8.1	ug/L	81	6.7	SW846 8260B
Acrolein	30	25	ug/L	83		SW846 8260B
	30	25	ug/L	83	0.24	SW846 8260B
Vinyl acetate	10	13	ug/L	132		SW846 8260B
	10	13	ug/L	128	2.7	SW846 8260B
Acrylonitrile	30	33	ug/L	111		SW846 8260B
	30	33	ug/L	109	2.0	SW846 8260B
2-Chlorotoluene	10	9.1	ug/L	91		SW846 8260B
	10	9.0	ug/L	90	1.0	SW846 8260B
4-Chlorotoluene	10	9.0	ug/L	90		SW846 8260B
	10	8.9	ug/L	89	1.2	SW846 8260B
Cyclohexane	10	11	ug/L	112		SW846 8260B
	10	11	ug/L	106	4.9	SW846 8260B
Iodomethane	10	11	ug/L	108		SW846 8260B
	10	9.3	ug/L	93	15	SW846 8260B
Isopropyl ether	10	10	ug/L	103		SW846 8260B
	10	10	ug/L	102	1.3	SW846 8260B
1,2-Dibromo-3-chloro-propane	10	8.3	ug/L	83		SW846 8260B
	10	8.5	ug/L	85	3.0	SW846 8260B
1,2-Dibromoethane (EDB)	10	10	ug/L	100		SW846 8260B
	10	10	ug/L	102	2.5	SW846 8260B
Dibromomethane	10	11	ug/L	106		SW846 8260B
	10	10	ug/L	104	1.9	SW846 8260B
1,2-Dichlorobenzene	10	8.6	ug/L	86		SW846 8260B
	10	8.6	ug/L	86	0.19	SW846 8260B
1,3-Dichlorobenzene	10	8.9	ug/L	89		SW846 8260B
	10	8.8	ug/L	88	1.2	SW846 8260B
1,4-Dichlorobenzene	10	8.8	ug/L	88		SW846 8260B
	10	8.6	ug/L	86	2.6	SW846 8260B
Dichlorodifluoromethane	10	7.1	ug/L	71		SW846 8260B
	10	7.4	ug/L	74	3.6	SW846 8260B
1,1-Dichloroethane	10	9.9	ug/L	99		SW846 8260B
	10	9.7	ug/L	97	2.1	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K260000-020 MAKN21AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,2-Dichloroethane	10	11	ug/L	107		SW846 8260B
	10	10	ug/L	103	3.6	SW846 8260B
cis-1,2-Dichloroethene	10	9.5	ug/L	95		SW846 8260B
	10	9.3	ug/L	93	2.1	SW846 8260B
trans-1,2-Dichloroethene	10	9.8	ug/L	98		SW846 8260B
	10	9.6	ug/L	96	2.2	SW846 8260B
1,1-Dichloroethene	**10**	**11**	**ug/L**	**106**		**SW846 8260B**
	10	**10**	**ug/L**	**104**	**1.9**	**SW846 8260B**
1,2-Dichloropropane	10	9.9	ug/L	99		SW846 8260B
	10	9.7	ug/L	97	1.5	SW846 8260B
1,3-Dichloropropane	10	10	ug/L	100		SW846 8260B
	10	10	ug/L	100	0.15	SW846 8260B
2,2-Dichloropropane	10	8.6	ug/L	86		SW846 8260B
	10	8.0	ug/L	80	7.5	SW846 8260B
cis-1,3-Dichloropropene	10	9.5	ug/L	95		SW846 8260B
	10	9.4	ug/L	94	0.87	SW846 8260B
trans-1,3-Dichloropropene	10	11	ug/L	106		SW846 8260B
	10	11	ug/L	109	3.1	SW846 8260B
1,1-Dichloropropene	10	10	ug/L	105		SW846 8260B
	10	10	ug/L	103	1.3	SW846 8260B
Ethylbenzene	10	9.6	ug/L	96		SW846 8260B
	10	9.6	ug/L	96	0.080	SW846 8260B
Hexachlorobutadiene	10	7.4	ug/L	74		SW846 8260B
	10	7.4	ug/L	74	0.46	SW846 8260B
2-Hexanone	20	22	ug/L	108		SW846 8260B
	20	21	ug/L	107	1.6	SW846 8260B
Isopropylbenzene	10	10	ug/L	100		SW846 8260B
	10	9.9	ug/L	99	0.19	SW846 8260B
p-Isopropyltoluene	10	9.5	ug/L	95		SW846 8260B
	10	9.4	ug/L	94	0.50	SW846 8260B
Methyl acetate	10	11	ug/L	106		SW846 8260B
	10	10	ug/L	101	5.3	SW846 8260B
Methylcyclohexane	10	11	ug/L	115		SW846 8260B
	10	11	ug/L	111	2.9	SW846 8260B
Methylene chloride	10	8.3	ug/L	83		SW846 8260B
	10	7.9	ug/L	79	5.6	SW846 8260B
4-Methyl-2-pentanone (MIBK	20	21	ug/L	106		SW846 8260B
	20	21	ug/L	103	2.3	SW846 8260B
Methyl tert-butyl ether (MTBE)	10	9.9	ug/L	99		SW846 8260B
	10	9.6	ug/L	96	2.6	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K260000-020 MAKN21AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Naphthalene	10	8.8	ug/L	88		SW846 8260B
	10	8.6	ug/L	86	2.0	SW846 8260B
n-Propylbenzene	10	9.5	ug/L	95		SW846 8260B
	10	9.4	ug/L	94	1.6	SW846 8260B
Styrene	10	9.8	ug/L	98		SW846 8260B
	10	9.9	ug/L	99	1.0	SW846 8260B
1,1,1,2-Tetrachloroethane	10	9.9	ug/L	99		SW846 8260B
	10	9.9	ug/L	99	0.62	SW846 8260B
1,1,2,2-Tetrachloroethane	10	10	ug/L	100		SW846 8260B
	10	10	ug/L	100	0.35	SW846 8260B
Tetrachloroethene	10	9.8	ug/L	98		SW846 8260B
	10	10	ug/L	101	3.0	SW846 8260B
Toluene	**10**	**9.6**	**ug/L**	**96**		**SW846 8260B**
	10	**9.6**	**ug/L**	**96**	**0.17**	**SW846 8260B**
1,2,3-Trichlorobenzene	10	9.0	ug/L	90		SW846 8260B
	10	8.4	ug/L	84	7.0	SW846 8260B
1,2,4-Trichloro-benzene	10	7.7	ug/L	77		SW846 8260B
	10	7.7	ug/L	77	0.020	SW846 8260B
1,1,1-Trichloroethane	10	9.8	ug/L	98		SW846 8260B
	10	9.5	ug/L	95	3.0	SW846 8260B
1,1,2-Trichloroethane	10	9.9	ug/L	99		SW846 8260B
	10	10	ug/L	100	1.2	SW846 8260B
Trichloroethene	**10**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	10	**9.6**	**ug/L**	**96**	**0.64**	**SW846 8260B**
Trichlorofluoromethane	10	12	ug/L	121		SW846 8260B
	10	12	ug/L	116	4.0	SW846 8260B
1,2,3-Trichloropropane	10	11	ug/L	107		SW846 8260B
	10	10	ug/L	102	5.0	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	10	13	ug/L	128		SW846 8260B
	10	12	ug/L	121	5.4	SW846 8260B
1,2,4-Trimethylbenzene	10	9.5	ug/L	95		SW846 8260B
	10	9.5	ug/L	95	0.080	SW846 8260B
1,3,5-Trimethylbenzene	10	9.4	ug/L	94		SW846 8260B
	10	9.2	ug/L	92	1.4	SW846 8260B
Vinyl chloride	10	8.5	ug/L	85		SW846 8260B
	10	8.6	ug/L	86	0.88	SW846 8260B
m-Xylene & p-Xylene	20	19	ug/L	96		SW846 8260B
	20	19	ug/L	96	0.50	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** MAKN21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K260000-020 MAKN21AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
o-Xylene	10	9.6	ug/L	96		SW846 8260B
	10	9.7	ug/L	97	1.5	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(75 - 121)
	97	(75 - 121)
1,2-Dichloroethane-d4	102	(63 - 129)
	99	(63 - 129)
Toluene-d8	93	(74 - 115)
	95	(74 - 115)
4-Bromofluorobenzene	97	(66 - 117)
	98	(66 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L955Q1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K170000-051 L955Q1AD-LCSD
Prep Date.....: 11/16/10 **Analysis Date..:** 11/16/10
Prep Batch #...: 0321051
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**97**	**(80 - 120)**			**WI-GRO GRO**
	95	**(80 - 120)**	**2.0**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L955Q1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0K170000-051 L955Q1AD-LCSD
Prep Date.....: 11/16/10 **Analysis Date..:** 11/16/10
Prep Batch #...: 0321051
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**200**	**190**	**ug/L**	**97**		**WI-GRO GRO**
	200	**190**	**ug/L**	**95**	**2.0**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L9XAJ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K110584-002 L9XAJ1AD-MSD
Date Sampled...: 11/10/10 10:45 **Date Received..:** 11/11/10
Prep Date.....: 11/23/10 **Analysis Date..:** 11/23/10
Prep Batch #...: 0330020
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acetone	101	(33 - 145)			SW846 8260B
	107	(33 - 145)	5.6	(0-30)	SW846 8260B
Benzene	**92**	**(72 - 121)**			**SW846 8260B**
	92	**(72 - 121)**	**0.31**	**(0-30)**	**SW846 8260B**
Bromobenzene	85	(71 - 116)			SW846 8260B
	89	(71 - 116)	4.4	(0-30)	SW846 8260B
1,2-Dichloroethene (total)	92	(75 - 119)			SW846 8260B
	94	(75 - 119)	2.7	(0-30)	SW846 8260B
Bromochloromethane	93	(73 - 121)			SW846 8260B
	94	(73 - 121)	0.57	(0-30)	SW846 8260B
Bromodichloromethane	97	(67 - 120)			SW846 8260B
	97	(67 - 120)	0.42	(0-30)	SW846 8260B
Bromoform	93	(32 - 128)			SW846 8260B
	94	(32 - 128)	0.81	(0-30)	SW846 8260B
Bromomethane	74	(10 - 186)			SW846 8260B
	78	(10 - 186)	5.1	(0-30)	SW846 8260B
Methyl ethyl ketone	101	(54 - 129)			SW846 8260B
	104	(54 - 129)	3.0	(0-30)	SW846 8260B
n-Butylbenzene	84	(56 - 127)			SW846 8260B
	88	(56 - 127)	3.7	(0-30)	SW846 8260B
sec-Butylbenzene	87	(60 - 119)			SW846 8260B
	91	(60 - 119)	4.1	(0-30)	SW846 8260B
Xylenes (total)	90	(76 - 116)			SW846 8260B
	92	(76 - 116)	1.8	(0-30)	SW846 8260B
tert-Butylbenzene	87	(61 - 119)			SW846 8260B
	90	(61 - 119)	3.6	(0-30)	SW846 8260B
Carbon disulfide	104	(57 - 147)			SW846 8260B
	105	(57 - 147)	0.72	(0-30)	SW846 8260B
Carbon tetrachloride	102	(59 - 129)			SW846 8260B
	102	(59 - 129)	0.26	(0-30)	SW846 8260B
Chlorobenzene	**87**	**(80 - 110)**			**SW846 8260B**
	89	**(80 - 110)**	**2.3**	**(0-30)**	**SW846 8260B**
Chlorodibromomethane	95	(56 - 118)			SW846 8260B
	95	(56 - 118)	0.17	(0-30)	SW846 8260B
Chloroethane	76	(21 - 165)			SW846 8260B
	83	(21 - 165)	8.1	(0-30)	SW846 8260B
n-Hexane	116	(54 - 138)			SW846 8260B
	124	(54 - 138)	7.1	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L9XAJ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K110584-002 L9XAJ1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloroform	98	(76 - 118)			SW846 8260B
	98	(76 - 118)	0.62	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(10 - 150)			SW846 8260B
	0.0 a	(10 - 150)	0.0	(0-30)	SW846 8260B
Acetonitrile	97	(12 - 182)			SW846 8260B
	95	(12 - 182)	2.0	(0-30)	SW846 8260B
Chloromethane	75	(33 - 132)			SW846 8260B
	80	(33 - 132)	5.8	(0-30)	SW846 8260B
Acrolein	88	(47 - 168)			SW846 8260B
	85	(47 - 168)	3.8	(0-30)	SW846 8260B
Acrylonitrile	106	(62 - 133)			SW846 8260B
	105	(62 - 133)	0.44	(0-30)	SW846 8260B
Vinyl acetate	127	(43 - 157)			SW846 8260B
	126	(43 - 157)	0.46	(0-30)	SW846 8260B
2-Chlorotoluene	86	(69 - 117)			SW846 8260B
	89	(69 - 117)	3.2	(0-30)	SW846 8260B
4-Chlorotoluene	84	(71 - 116)			SW846 8260B
	86	(71 - 116)	2.8	(0-30)	SW846 8260B
Cyclohexane	107	(49 - 123)			SW846 8260B
	109	(49 - 123)	1.8	(0-30)	SW846 8260B
Iodomethane	99	(66 - 144)			SW846 8260B
	102	(66 - 144)	3.1	(0-30)	SW846 8260B
Isopropyl ether	96	(73 - 118)			SW846 8260B
	98	(73 - 118)	2.4	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	74	(32 - 139)			SW846 8260B
	75	(32 - 139)	0.73	(0-30)	SW846 8260B
1,2-Dibromoethane (EDB)	96	(74 - 113)			SW846 8260B
	98	(74 - 113)	1.9	(0-30)	SW846 8260B
Dibromomethane	104	(77 - 121)			SW846 8260B
	102	(77 - 121)	2.3	(0-30)	SW846 8260B
1,2-Dichlorobenzene	81	(75 - 111)			SW846 8260B
	83	(75 - 111)	2.5	(0-30)	SW846 8260B
1,3-Dichlorobenzene	83	(73 - 110)			SW846 8260B
	84	(73 - 110)	1.5	(0-30)	SW846 8260B
1,4-Dichlorobenzene	82	(75 - 110)			SW846 8260B
	83	(75 - 110)	0.93	(0-30)	SW846 8260B
Dichlorodifluoromethane	71	(17 - 128)			SW846 8260B
	76	(17 - 128)	6.4	(0-30)	SW846 8260B
1,1-Dichloroethane	98	(79 - 116)			SW846 8260B
	98	(79 - 116)	0.53	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L9XAJ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K110584-002 L9XAJ1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2-Dichloroethane	101	(68 - 129)			SW846 8260B
	100	(68 - 129)	1.3	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	89	(70 - 120)			SW846 8260B
	92	(70 - 120)	3.4	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	94	(80 - 119)			SW846 8260B
	96	(80 - 119)	2.0	(0-30)	SW846 8260B
1,1-Dichloroethene	**103**	**(74 - 135)**			**SW846 8260B**
	105	**(74 - 135)**	**2.6**	**(0-30)**	**SW846 8260B**
1,2-Dichloropropane	95	(78 - 115)			SW846 8260B
	97	(78 - 115)	2.1	(0-30)	SW846 8260B
1,3-Dichloropropane	94	(74 - 118)			SW846 8260B
	97	(74 - 118)	2.5	(0-30)	SW846 8260B
2,2-Dichloropropane	81	(38 - 127)			SW846 8260B
	81	(38 - 127)	0.24	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	83	(51 - 110)			SW846 8260B
	86	(51 - 110)	4.3	(0-30)	SW846 8260B
trans-1,3-Dichloropropene	99	(46 - 116)			SW846 8260B
	101	(46 - 116)	2.4	(0-30)	SW846 8260B
1,1-Dichloropropene	102	(80 - 114)			SW846 8260B
	102	(80 - 114)	0.27	(0-30)	SW846 8260B
Ethylbenzene	92	(75 - 116)			SW846 8260B
	91	(75 - 116)	0.24	(0-30)	SW846 8260B
Hexachlorobutadiene	70	(27 - 132)			SW846 8260B
	73	(27 - 132)	3.9	(0-30)	SW846 8260B
2-Hexanone	101	(47 - 139)			SW846 8260B
	104	(47 - 139)	3.0	(0-30)	SW846 8260B
Isopropylbenzene	91	(68 - 116)			SW846 8260B
	94	(68 - 116)	3.5	(0-30)	SW846 8260B
p-Isopropyltoluene	89	(64 - 122)			SW846 8260B
	91	(64 - 122)	2.8	(0-30)	SW846 8260B
Methyl acetate	97	(47 - 130)			SW846 8260B
	100	(47 - 130)	3.4	(0-30)	SW846 8260B
Methylcyclohexane	112	(49 - 127)			SW846 8260B
	114	(49 - 127)	1.7	(0-30)	SW846 8260B
Methylene chloride	77	(63 - 128)			SW846 8260B
	79	(63 - 128)	2.5	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	101	(56 - 131)			SW846 8260B
	102	(56 - 131)	0.86	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	91	(46 - 144)			SW846 8260B
	93	(46 - 144)	2.1	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L9XAJ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K110584-002 L9XAJ1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Naphthalene	75	(15 - 158)			SW846 8260B
	83	(15 - 158)	9.6	(0-30)	SW846 8260B
n-Propylbenzene	90	(64 - 124)			SW846 8260B
	93	(64 - 124)	3.8	(0-30)	SW846 8260B
Styrene	92	(71 - 117)			SW846 8260B
	93	(71 - 117)	0.91	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	92	(64 - 118)			SW846 8260B
	92	(64 - 118)	0.57	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	94	(63 - 122)			SW846 8260B
	98	(63 - 122)	3.8	(0-30)	SW846 8260B
Tetrachloroethene	90	(70 - 117)			SW846 8260B
	95	(70 - 117)	5.4	(0-30)	SW846 8260B
Toluene	**91**	**(78 - 114)**			**SW846 8260B**
	93	**(78 - 114)**	**2.7**	**(0-30)**	**SW846 8260B**
1,2,3-Trichlorobenzene	82	(45 - 129)			SW846 8260B
	86	(45 - 129)	5.1	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	69	(38 - 138)			SW846 8260B
	70	(38 - 138)	2.1	(0-30)	SW846 8260B
1,1,1-Trichloroethane	96	(68 - 121)			SW846 8260B
	97	(68 - 121)	0.76	(0-30)	SW846 8260B
1,1,2-Trichloroethane	95	(75 - 115)			SW846 8260B
	98	(75 - 115)	3.0	(0-30)	SW846 8260B
Trichloroethene	**91**	**(66 - 120)**			**SW846 8260B**
	94	**(66 - 120)**	**4.0**	**(0-30)**	**SW846 8260B**
Trichlorofluoromethane	116	(46 - 157)			SW846 8260B
	116	(46 - 157)	0.41	(0-30)	SW846 8260B
1,2,3-Trichloropropane	98	(67 - 132)			SW846 8260B
	102	(67 - 132)	3.9	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	127	(70 - 152)			SW846 8260B
	127	(70 - 152)	0.03	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	88	(67 - 124)			SW846 8260B
	91	(67 - 124)	3.1	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	88	(63 - 121)			SW846 8260B
	90	(63 - 121)	2.4	(0-30)	SW846 8260B
Vinyl chloride	82	(49 - 130)			SW846 8260B
	86	(49 - 130)	4.7	(0-30)	SW846 8260B
m-Xylene & p-Xylene	90	(75 - 117)			SW846 8260B
	92	(75 - 117)	2.4	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L9XAJ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K110584-002 L9XAJ1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Xylene	91	(76 - 116)			SW846 8260B
	92	(76 - 116)	0.65	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(75 - 121)
	97	(75 - 121)
1,2-Dichloroethane-d4	104	(63 - 129)
	99	(63 - 129)
Toluene-d8	95	(74 - 115)
	92	(74 - 115)
4-Bromofluorobenzene	96	(66 - 117)
	92	(66 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L9XAJ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K110584-002 L9XAJ1AD-MSD
Date Sampled...: 11/10/10 10:45 **Date Received..:** 11/11/10
Prep Date.....: 11/23/10 **Analysis Date..:** 11/23/10
Prep Batch #...: 0330020
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acetone	ND	20	20	ug/L	101		SW846 8260B
	ND	20	21	ug/L	107	5.6	SW846 8260B
Benzene	**ND**	**10**	**9.2**	**ug/L**	**92**		**SW846 8260B**
	ND	**10**	**9.2**	**ug/L**	**92**	**0.31**	**SW846 8260B**
Bromobenzene	ND	10	8.5	ug/L	85		SW846 8260B
	ND	10	8.9	ug/L	89	4.4	SW846 8260B
1,2-Dichloroethene (total)	ND	20	18	ug/L	92		SW846 8260B
	ND	20	19	ug/L	94	2.7	SW846 8260B
Bromochloromethane	ND	10	9.3	ug/L	93		SW846 8260B
	ND	10	9.4	ug/L	94	0.57	SW846 8260B
Bromodichloromethane	ND	10	9.7	ug/L	97		SW846 8260B
	ND	10	9.7	ug/L	97	0.42	SW846 8260B
Bromoform	ND	10	9.3	ug/L	93		SW846 8260B
	ND	10	9.4	ug/L	94	0.81	SW846 8260B
Bromomethane	ND	10	7.4	ug/L	74		SW846 8260B
	ND	10	7.8	ug/L	78	5.1	SW846 8260B
Methyl ethyl ketone	ND	20	20	ug/L	101		SW846 8260B
	ND	20	21	ug/L	104	3.0	SW846 8260B
n-Butylbenzene	ND	10	8.4	ug/L	84		SW846 8260B
	ND	10	8.8	ug/L	88	3.7	SW846 8260B
sec-Butylbenzene	ND	10	8.7	ug/L	87		SW846 8260B
	ND	10	9.1	ug/L	91	4.1	SW846 8260B
Xylenes (total)	ND	30	27	ug/L	90		SW846 8260B
	ND	30	28	ug/L	92	1.8	SW846 8260B
tert-Butylbenzene	ND	10	8.7	ug/L	87		SW846 8260B
	ND	10	9.0	ug/L	90	3.6	SW846 8260B
Carbon disulfide	ND	10	10	ug/L	104		SW846 8260B
	ND	10	10	ug/L	105	0.72	SW846 8260B
Carbon tetrachloride	ND	10	10	ug/L	102		SW846 8260B
	ND	10	10	ug/L	102	0.26	SW846 8260B
Chlorobenzene	**ND**	**10**	**8.7**	**ug/L**	**87**		**SW846 8260B**
	ND	**10**	**8.9**	**ug/L**	**89**	**2.3**	**SW846 8260B**
Chlorodibromomethane	ND	10	9.5	ug/L	95		SW846 8260B
	ND	10	9.5	ug/L	95	0.17	SW846 8260B
Chloroethane	ND	10	7.6	ug/L	76		SW846 8260B
	ND	10	8.3	ug/L	83	8.1	SW846 8260B
n-Hexane	ND	10	12	ug/L	116		SW846 8260B
	ND	10	12	ug/L	124	7.1	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L9XAJ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K110584-002 L9XAJ1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Chloroform	ND	10	9.8	ug/L	98		SW846 8260B
	ND	10	9.8	ug/L	98	0.62	SW846 8260B
2-Chloroethyl vinyl ether	ND	10	0.0	ug/L	0.0 a		SW846 8260B
	ND	10	0.0	ug/L	0.0 a	0.0	SW846 8260B
Acetonitrile	ND	30	29	ug/L	97		SW846 8260B
	ND	30	29	ug/L	95	2.0	SW846 8260B
Chloromethane	ND	10	7.5	ug/L	75		SW846 8260B
	ND	10	8.0	ug/L	80	5.8	SW846 8260B
Acrolein	ND	30	26	ug/L	88		SW846 8260B
	ND	30	25	ug/L	85	3.8	SW846 8260B
Acrylonitrile	ND	30	32	ug/L	106		SW846 8260B
	ND	30	32	ug/L	105	0.44	SW846 8260B
Vinyl acetate	ND	10	13	ug/L	127		SW846 8260B
	ND	10	13	ug/L	126	0.46	SW846 8260B
2-Chlorotoluene	ND	10	8.6	ug/L	86		SW846 8260B
	ND	10	8.9	ug/L	89	3.2	SW846 8260B
4-Chlorotoluene	ND	10	8.4	ug/L	84		SW846 8260B
	ND	10	8.6	ug/L	86	2.8	SW846 8260B
Cyclohexane	ND	10	11	ug/L	107		SW846 8260B
	ND	10	11	ug/L	109	1.8	SW846 8260B
Iodomethane	ND	10	9.9	ug/L	99		SW846 8260B
	ND	10	10	ug/L	102	3.1	SW846 8260B
Isopropyl ether	ND	10	9.6	ug/L	96		SW846 8260B
	ND	10	9.8	ug/L	98	2.4	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	10	7.4	ug/L	74		SW846 8260B
	ND	10	7.5	ug/L	75	0.73	SW846 8260B
1,2-Dibromoethane (EDB)	ND	10	9.6	ug/L	96		SW846 8260B
	ND	10	9.8	ug/L	98	1.9	SW846 8260B
Dibromomethane	ND	10	10	ug/L	104		SW846 8260B
	ND	10	10	ug/L	102	2.3	SW846 8260B
1,2-Dichlorobenzene	ND	10	8.1	ug/L	81		SW846 8260B
	ND	10	8.3	ug/L	83	2.5	SW846 8260B
1,3-Dichlorobenzene	ND	10	8.3	ug/L	83		SW846 8260B
	ND	10	8.4	ug/L	84	1.5	SW846 8260B
1,4-Dichlorobenzene	ND	10	8.2	ug/L	82		SW846 8260B
	ND	10	8.3	ug/L	83	0.93	SW846 8260B
Dichlorodifluoromethane	ND	10	7.1	ug/L	71		SW846 8260B
	ND	10	7.6	ug/L	76	6.4	SW846 8260B
1,1-Dichloroethane	ND	10	9.8	ug/L	98		SW846 8260B
	ND	10	9.8	ug/L	98	0.53	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L9XAJ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K110584-002 L9XAJ1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2-Dichloroethane	ND	10	10	ug/L	101		SW846 8260B
	ND	10	10	ug/L	100	1.3	SW846 8260B
cis-1,2-Dichloroethene	ND	10	8.9	ug/L	89		SW846 8260B
	ND	10	9.2	ug/L	92	3.4	SW846 8260B
trans-1,2-Dichloroethene	ND	10	9.4	ug/L	94		SW846 8260B
	ND	10	9.6	ug/L	96	2.0	SW846 8260B
1,1-Dichloroethene	**ND**	**10**	**10**	**ug/L**	**103**		**SW846 8260B**
	ND	**10**	**11**	**ug/L**	**105**	**2.6**	**SW846 8260B**
1,2-Dichloropropane	ND	10	9.5	ug/L	95		SW846 8260B
	ND	10	9.7	ug/L	97	2.1	SW846 8260B
1,3-Dichloropropane	ND	10	9.4	ug/L	94		SW846 8260B
	ND	10	9.7	ug/L	97	2.5	SW846 8260B
2,2-Dichloropropane	ND	10	8.1	ug/L	81		SW846 8260B
	ND	10	8.1	ug/L	81	0.24	SW846 8260B
cis-1,3-Dichloropropene	ND	10	8.3	ug/L	83		SW846 8260B
	ND	10	8.6	ug/L	86	4.3	SW846 8260B
trans-1,3-Dichloropropene	ND	10	9.9	ug/L	99		SW846 8260B
	ND	10	10	ug/L	101	2.4	SW846 8260B
1,1-Dichloropropene	ND	10	10	ug/L	102		SW846 8260B
	ND	10	10	ug/L	102	0.27	SW846 8260B
Ethylbenzene	ND	10	9.2	ug/L	92		SW846 8260B
	ND	10	9.1	ug/L	91	0.24	SW846 8260B
Hexachlorobutadiene	ND	10	7.0	ug/L	70		SW846 8260B
	ND	10	7.3	ug/L	73	3.9	SW846 8260B
2-Hexanone	ND	20	20	ug/L	101		SW846 8260B
	ND	20	21	ug/L	104	3.0	SW846 8260B
Isopropylbenzene	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	9.4	ug/L	94	3.5	SW846 8260B
p-Isopropyltoluene	ND	10	8.9	ug/L	89		SW846 8260B
	ND	10	9.1	ug/L	91	2.8	SW846 8260B
Methyl acetate	ND	10	9.7	ug/L	97		SW846 8260B
	ND	10	10	ug/L	100	3.4	SW846 8260B
Methylcyclohexane	ND	10	11	ug/L	112		SW846 8260B
	ND	10	11	ug/L	114	1.7	SW846 8260B
Methylene chloride	ND	10	7.7	ug/L	77		SW846 8260B
	ND	10	7.9	ug/L	79	2.5	SW846 8260B
4-Methyl-2-pentanone (MIB	ND	20	20	ug/L	101		SW846 8260B
	ND	20	20	ug/L	102	0.86	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	9.3	ug/L	93	2.1	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L9XAJ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K110584-002 L9XAJ1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Naphthalene	ND	10	7.5	ug/L	75		SW846 8260B
	ND	10	8.3	ug/L	83	9.6	SW846 8260B
n-Propylbenzene	ND	10	9.0	ug/L	90		SW846 8260B
	ND	10	9.3	ug/L	93	3.8	SW846 8260B
Styrene	ND	10	9.2	ug/L	92		SW846 8260B
	ND	10	9.3	ug/L	93	0.91	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	10	9.2	ug/L	92		SW846 8260B
	ND	10	9.2	ug/L	92	0.57	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	10	9.4	ug/L	94		SW846 8260B
	ND	10	9.8	ug/L	98	3.8	SW846 8260B
Tetrachloroethene	0.31	10	9.3	ug/L	90		SW846 8260B
	0.31	10	9.8	ug/L	95	5.4	SW846 8260B
Toluene	**ND**	**10**	**9.1**	**ug/L**	**91**		**SW846 8260B**
	ND	**10**	**9.3**	**ug/L**	**93**	**2.7**	**SW846 8260B**
1,2,3-Trichlorobenzene	ND	10	8.2	ug/L	82		SW846 8260B
	ND	10	8.6	ug/L	86	5.1	SW846 8260B
1,2,4-Trichloro-benzene	ND	10	6.9	ug/L	69		SW846 8260B
	ND	10	7.0	ug/L	70	2.1	SW846 8260B
1,1,1-Trichloroethane	0.22	10	9.8	ug/L	96		SW846 8260B
	0.22	10	9.9	ug/L	97	0.76	SW846 8260B
1,1,2-Trichloroethane	ND	10	9.5	ug/L	95		SW846 8260B
	ND	10	9.8	ug/L	98	3.0	SW846 8260B
Trichloroethene	**ND**	**10**	**9.1**	**ug/L**	**91**		**SW846 8260B**
	ND	**10**	**9.4**	**ug/L**	**94**	**4.0**	**SW846 8260B**
Trichlorofluoromethane	ND	10	12	ug/L	116		SW846 8260B
	ND	10	12	ug/L	116	0.41	SW846 8260B
1,2,3-Trichloropropane	ND	10	9.8	ug/L	98		SW846 8260B
	ND	10	10	ug/L	102	3.9	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	13	ug/L	127		SW846 8260B
	ND	10	13	ug/L	127	0.03	SW846 8260B
1,2,4-Trimethylbenzene	ND	10	8.8	ug/L	88		SW846 8260B
	ND	10	9.1	ug/L	91	3.1	SW846 8260B
1,3,5-Trimethylbenzene	ND	10	8.8	ug/L	88		SW846 8260B
	ND	10	9.0	ug/L	90	2.4	SW846 8260B
Vinyl chloride	ND	10	8.2	ug/L	82		SW846 8260B
	ND	10	8.6	ug/L	86	4.7	SW846 8260B
m-Xylene & p-Xylene	ND	20	18	ug/L	90		SW846 8260B
	ND	20	18	ug/L	92	2.4	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L9XAJ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K110584-002 L9XAJ1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
o-Xylene	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	9.2	ug/L	92	0.65	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(75 - 121)
	97	(75 - 121)
1,2-Dichloroethane-d4	104	(63 - 129)
	99	(63 - 129)
Toluene-d8	95	(74 - 115)
	92	(74 - 115)
4-Bromofluorobenzene	96	(66 - 117)
	92	(66 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L90AK1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K120443-005 L90AK1AE-MSD
Date Sampled...: 11/11/10 15:29 **Date Received..:** 11/12/10
Prep Date.....: 11/16/10 **Analysis Date..:** 11/16/10
Prep Batch #...: 0321051
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**81**	**(80 - 120)**			**WI-GRO GRO**
	76 a	**(80 - 120)**	**2.1**	**(0-20)**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: A0K110533 **Work Order #...:** L90AK1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: A0K120443-005 L90AK1AE-MSD
Date Sampled...: 11/11/10 15:29 **Date Received..:** 11/12/10
Prep Date.....: 11/16/10 **Analysis Date..:** 11/16/10
Prep Batch #...: 0321051
Dilution Factor: 5

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	**1400**	**1000**	**2200**	**ug/L**	**81**		**WI-GRO GRO**
	1400	**1000**	**2100**	**ug/L**	**76 a**	**2.1**	**WI-GRO GRO**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

GC VOLATILE DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SAMPLE DATA

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YF111609.D
Lab Smp Id: L9WT71AC Client Smp ID: SW-02(20101110)
Inj Date : 16-NOV-2010 14:31
Operator : 01616 Inst ID: ypid.i
Smp Info : L9WT71AC,5.0ML
Misc Info : Y01116
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YFGRO.m
Meth Date : 13-Oct-2010 13:47 Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700-22.000			28425024		(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YF111609.D

Date : 16-NOV-2010 14:31

Client ID: SW-02(20101110)

Instrument: ypid.i

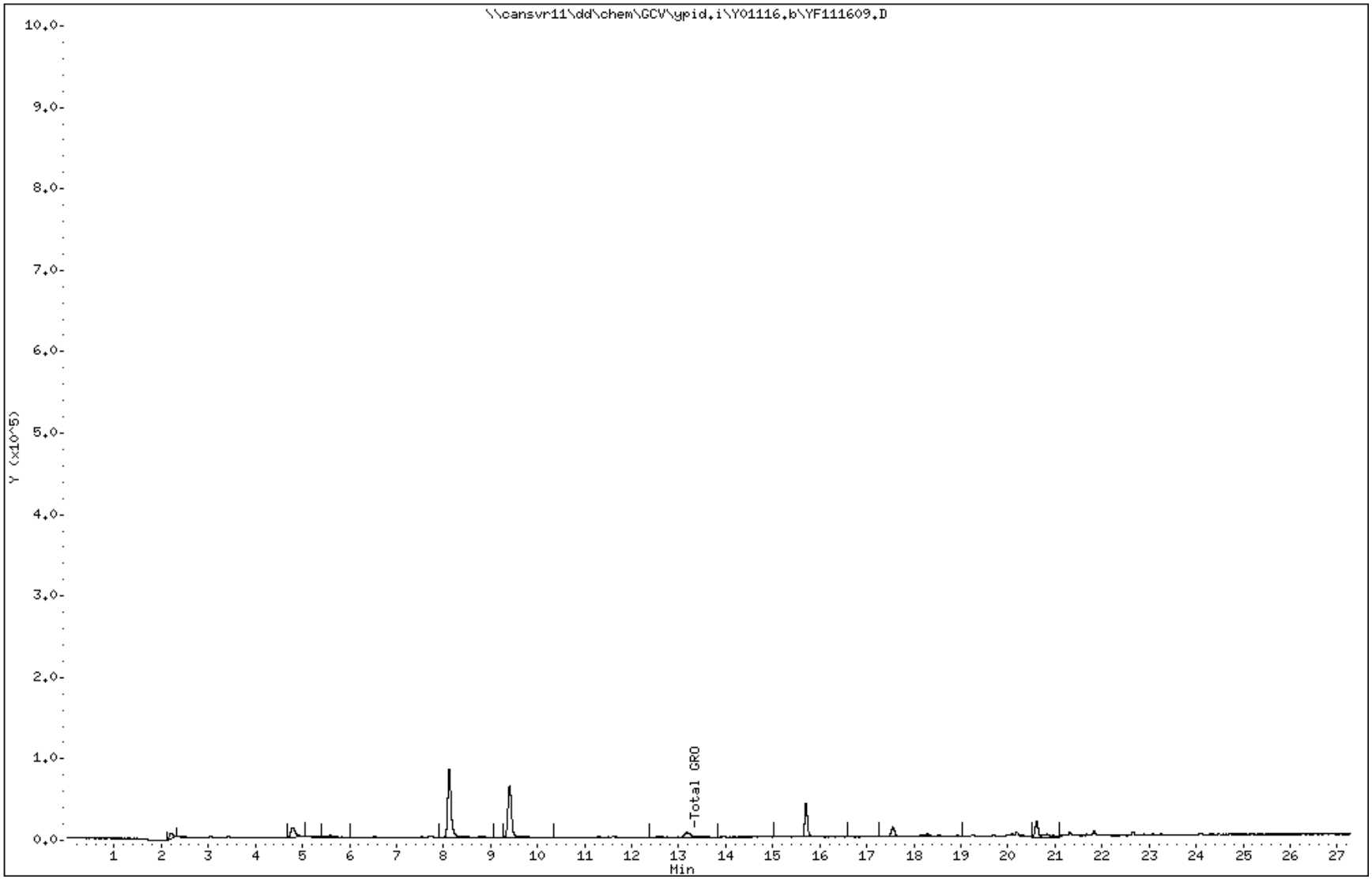
Sample Info: L9WT71AC,5.0ML

Purge Volume: 5.0

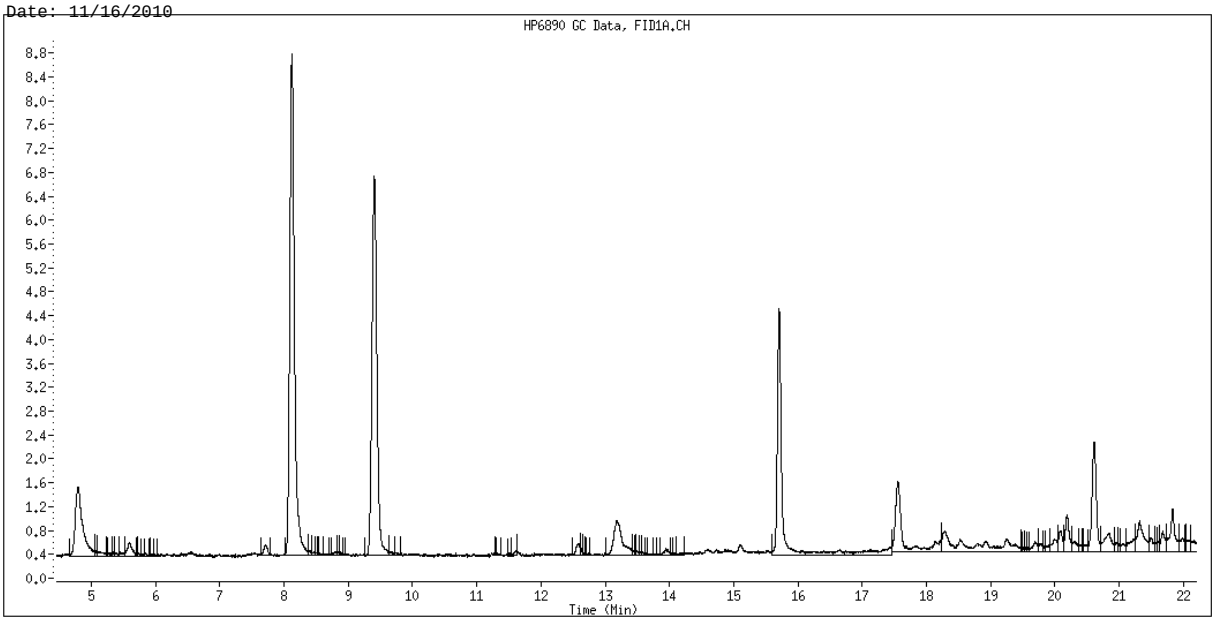
Operator: 01616

Column phase:

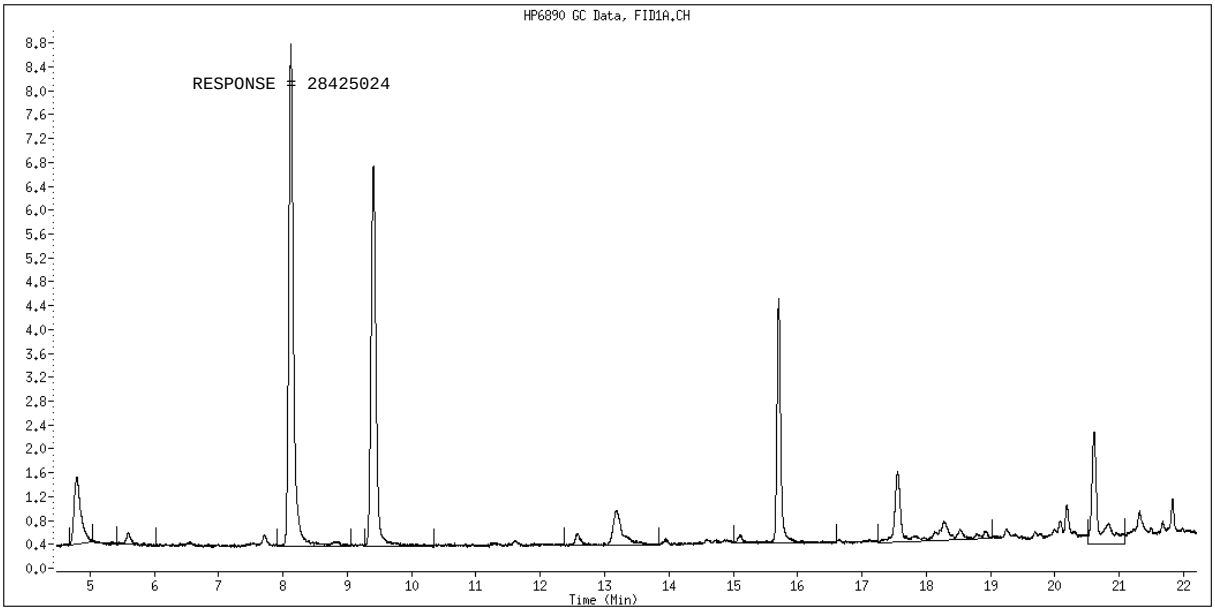
Column diameter: 2.00



Data File Name: YF111609.D
Inj. Date and Time: 16-NOV-2010 14:31
Instrument ID: ypid.i
Client ID: SW-02(20101110)
Compound Name: Total GRO
CAS #: Q796
Report Date: 11/16/2010



Original Integration



Manual Integration

Manually Integrated By: fausnightb
Manual Integration Reason: Baseline Event

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RAW QC DATA

TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YF111603.D
Lab Smp Id: l955q1ac
Inj Date : 16-NOV-2010 10:30
Operator : 01616 Inst ID: ypid.i
Smp Info : l955q1ac
Misc Info : Y01116
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YFGRO.m
Meth Date : 17-Nov-2010 08:02 fausnigb Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANPGCV06

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700-22.000			234765725	970.926	194.185

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YF111603.D

Date : 16-NOV-2010 10:30

Client ID:

Instrument: ypid.i

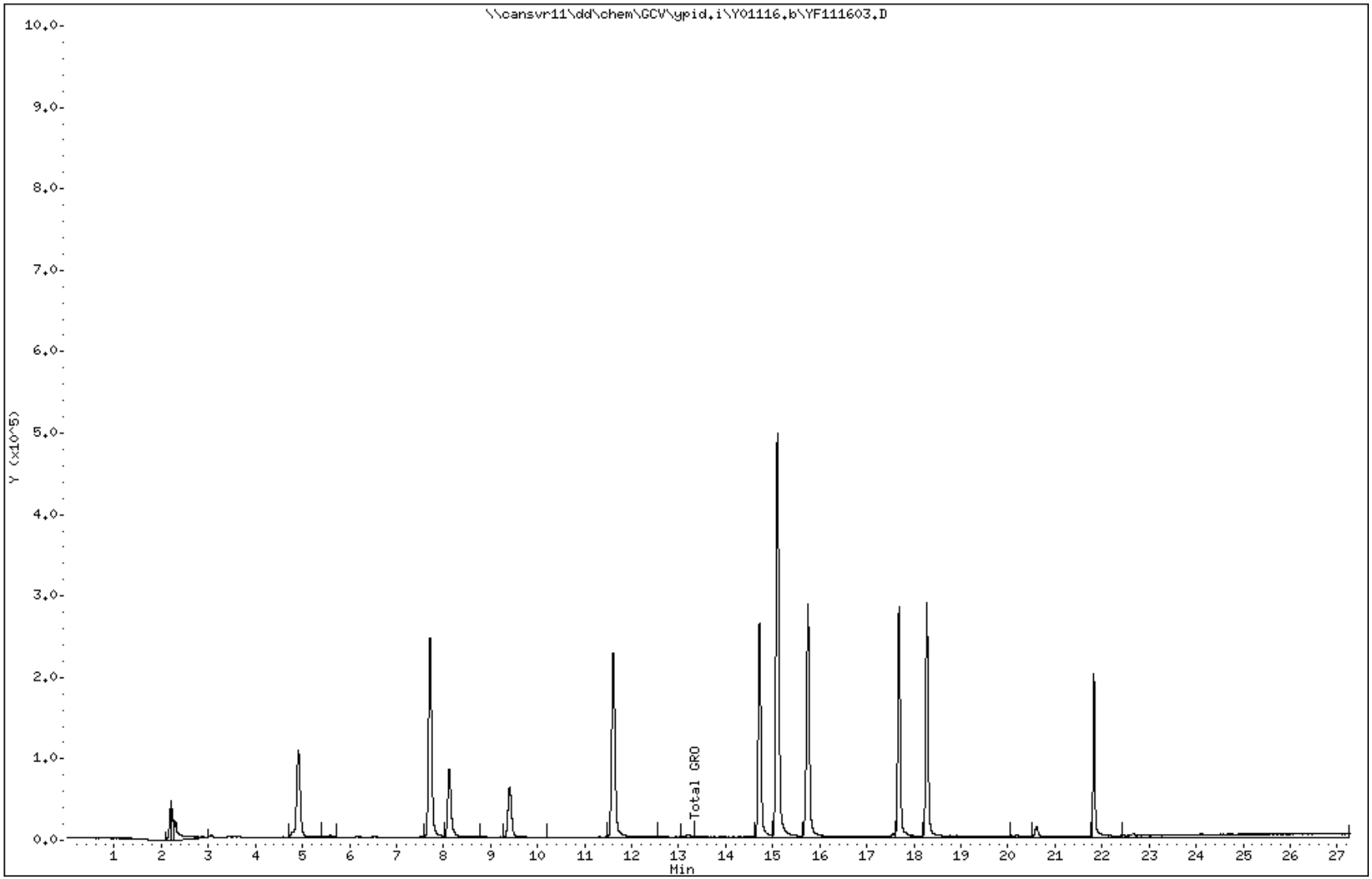
Sample Info: 1955q1ac

Purge Volume: 5.0

Operator: 01616

Column phase:

Column diameter: 2.00



TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YF111615.D
Lab Smp Id: l955q1ad
Inj Date : 16-NOV-2010 18:09
Operator : 01616 Inst ID: ypid.i
Smp Info : l955q1ad
Misc Info : Y01116
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YFGRO.m
Meth Date : 17-Nov-2010 08:02 fausnigb Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANPGCV06

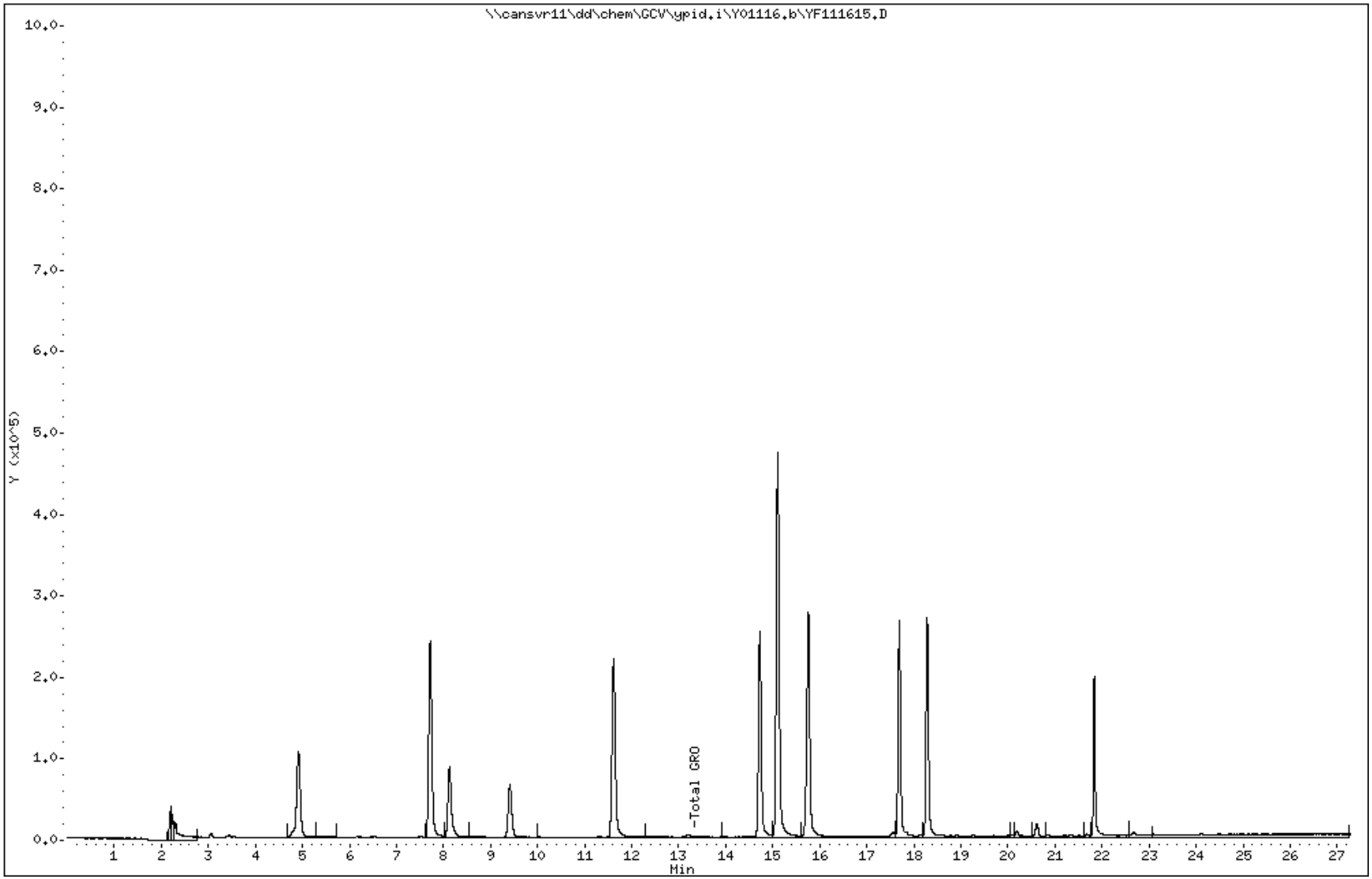
Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	4.700-22.000			230810581	951.869	190.373

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YF111615.D
Date : 16-NOV-2010 18:09
Client ID:
Sample Info: 1955q1ad
Purge Volume: 5.0
Column phase:

Instrument: ypid.i
Operator: 01616
Column diameter: 2.00



TestAmerica North Canton

Data file : \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YF111604.D
Lab Smp Id: l955q1aa
Inj Date : 16-NOV-2010 11:29
Operator : 01616 Inst ID: ypid.i
Smp Info : l955q1aa
Misc Info : Y01116
Comment :
Method : \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YFGRO.m
Meth Date : 17-Nov-2010 08:02 fausnigb Quant Type: ESTD
Cal Date : 11-OCT-2010 12:18 Cal File: YF101108.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: CANPGCV06

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Purge Volume
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)
S 4 Total GRO	Compound Not Detected.					

Data File: \\cansvr11\dd\chem\GCV\ypid.i\Y01116.b\YF111604.D

Date : 16-NOV-2010 11:29

Client ID:

Instrument: ypid.i

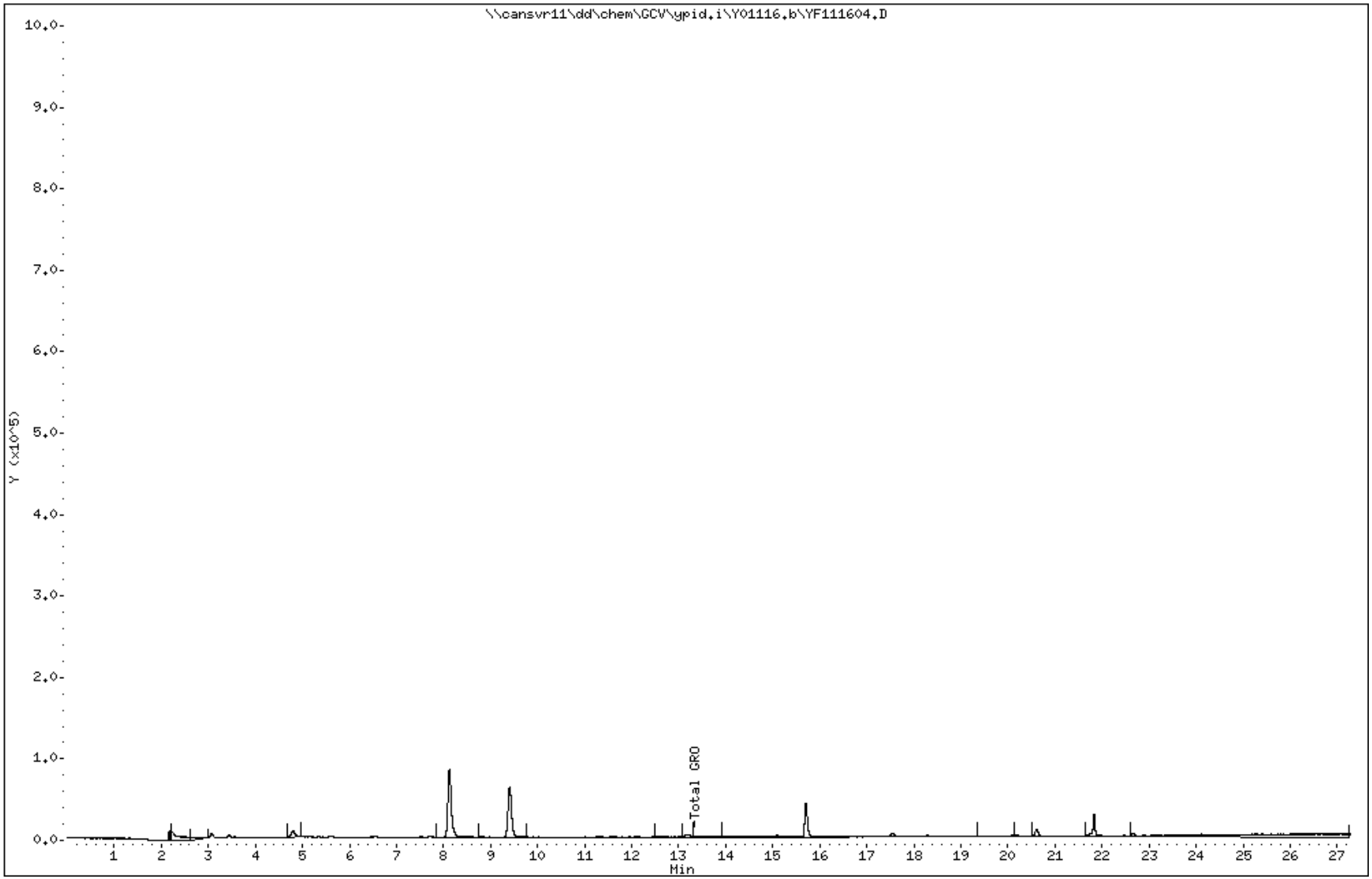
Sample Info: 1955q1aa

Purge Volume: 5.0

Operator: 01616

Column phase:

Column diameter: 2.00



Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

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TAL-4124-280 (0508)

Client: ARCADIS	Project Manager: Bryan Zinda bryan.zinda@arcadis-us.com	Date: 11/10/10	Chain of Custody Number: 126464
Address: 430 1st Ave N Suite 720	Telephone Number (Area Code)/Fax Number: 612-373-0234 / 612-336-4538	Lab Number	Page 1 of 1
City: Minneapolis	State: MN Zip Code: 55406	Site Contact: A. Troschinetz	Lab Contact: Denise Pohl
Project Name and Location (State): FORD TCAP (MN)		Carrier/Waybill Number	
Contract/Purchase Order/Quote No.: ENOVIS # E200572			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: VOCs 8260	GRO WI modified	Temperature	Special Instructions/ Conditions of Receipt
SW-02 (201D1110)	11/10/10	1050		X						6			3	3		
SW-03 (20101110)	11/10/10	1105		X						3			3			
TB-01 (20101110)	11/10/10	—		X									1			Trip Blank provided by TestAmerica
TEMP BLANK	11/10/10	—		X			1								1	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☒ Other By 12/1/10

QC Requirements (Specify)
Level 2 + Please adhere to MN-specific lab methods.

1. Relinquished By: Alexis M. Troschinetz	Date: 11/10/10	Time: 1330	1. Received By	Date: 11/11/10	Time: 9:20am
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 440110533
North Canton Facility

Client Aradis Project _____ By: _____ (Signature)
Cooler Received on 11/11/10 Opened on 11/11/10
FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____
TestAmerica Cooler # _____ Multiple Coolers ☐ Foam Box ☐ Client Cooler ☒ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 1 Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt 1.3 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐ _____
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

_____

_____

_____

_____

_____

_____

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 051010-HNO_3; *Sulfuric Acid Lot#* 051010-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN/NaOH$. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica
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END OF REPORT

December 01, 2010

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000591.0001.0001
Laboratory: TestAmerica - North Canton
Laboratory submittal: A0K110533
Sample date: 2010-11-10
Report received by Enovis: 2010-11-30
Initial Data Verification completed by Enovis: 2010-12-01

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

2 Water sample(s) and 1 water trip blank were analyzed for GCMS VOC and GRO parameter(s).

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD RPD, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

Qualifiers added during verification have been added to the electronic data which is available for download from the Enovis CLMS. Refer to the attached table of analytical results that have been qualified during verification.

The following minor QC exceptions or missing information were noted:

GCMS VOC trip blank had detections below the RL for Acetone and MEK. Client samples -001 and -002 results for Acetone should be considered to be non-detect at the RL and qualified with UB flags. The MEK detection did not require qualifications for client sample results.

GCMS VOC method blank had a detection below the RL for Tetrahydrofuran. Qualification of client sample results is not required based on this method blank detection.

GCMS VOC LCS recoveries were outside of laboratory control limits biased high for Acetone. The LCS duplicate and LCS/LCSduplicate RPD were acceptable so qualification of client sample results was not required based on this QC outlier alone.

GCMS VOC and GRO MS/MSD recovery outliers were not performed on a sample from this submittal. Qualification of client sample results is not required based on these sample-matrix specific QC outliers.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia, Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

SAMPLING AND ANALYSIS SUMMARY

Enovis Project ID: E200572
Laboratory: TestAmerica-North Canton
Laboratory Submittal: A0K110533

Lab Sample ID	Sample ID	Collection Date (mm/yy/dd)	Collection Time (hh:mm:ss)	Volatile Organics by GCMS	Wisconsin GRO Method
A0K110533001	SW-02(20101110)	11/10/2010	10:50:00	X	X
A0K110533002	SW-03(20101110)	11/10/2010	11:05:00	X	
A0K110533003	TB-01(20101110)	11/10/2010	12:00:00	X	

Qualified Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A0K110533

		Sample Name:	SW-02(20101110)				SW-03(20101110)			
		Lab Sample ID:	A0K110533001				A0K110533002			
		Sample Date:	11/10/2010				11/10/2010			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC									
OSW-8260B									
Acetone	67-64-1	1.4	10	ug/l	UB	2.2	10	ug/l	UB

Analytical Results Summary

Enovis Project ID: E200572
Laboratory: TestAmerica - North Canton
Laboratory Submittal: A0K110533

		Sample Name:	SW-02(20101110)				SW-03(20101110)				TB-01(20101110)			
		Lab Sample ID:	A0K110533001				A0K110533002				A0K110533003			
		Sample Date:	11/10/2010				11/10/2010				11/10/2010			
	Analyte	**Cas No.**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**	**Result**	**Report Limit**	**Units**	**Valid Qualifier**
GC/MS VOC														
	OSW-8260B													
	1,1,1,2-Tetrachloroethane	630-20-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,1-Trichloroethane	71-55-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1,2-Trichloroethane	79-00-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethane	75-34-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,1-Dichloropropene	563-58-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichlorobenzene	87-61-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,3-Trichloropropane	96-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trichlorobenzene	120-82-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2,4-Trimethylbenzene	95-63-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	1,2-Dibromoethane (EDB)	106-93-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichlorobenzene	95-50-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloroethane	107-06-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,2-Dichloropropane	78-87-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3,5-Trimethylbenzene	108-67-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichlorobenzene	541-73-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,3-Dichloropropane	142-28-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	1,4-Dichlorobenzene	106-46-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2,2-Dichloropropane	594-20-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Chlorotoluene	95-49-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	2-Hexanone	591-78-6	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	4-Chlorotoluene	106-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	4-Methyl-2-pentanone (MIBK)	108-10-1	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Acetone	67-64-1	1.4	10	ug/l	UB	2.2	10	ug/l	UB	5.0	10	ug/l	J
	Allyl chloride	107-05-1	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Benzene	71-43-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromobenzene	108-86-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromochloromethane	74-97-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromodichloromethane	75-27-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromoform	75-25-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Bromomethane	74-83-9	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Carbon disulfide	75-15-0	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Carbon tetrachloride	56-23-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorobenzene	108-90-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chlorodibromomethane	124-48-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroethane	75-00-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloroform	67-66-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Chloromethane	74-87-3	0.32	1.0	ug/l	J	0.37	1.0	ug/l	J	ND	1.0	ug/l	---
	cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	cis-1,3-Dichloropropene	10061-01-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Cyclohexane	110-82-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dibromomethane	74-95-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorodifluoromethane	75-71-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Dichlorofluoromethane	75-43-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Ethyl ether	60-29-7	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Ethylbenzene	100-41-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Hexachlorobutadiene	87-68-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Isopropylbenzene	98-82-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	m-Xylene & p-Xylene	136777-61-2	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Methyl acetate	79-20-9	ND	10	ug/l	---	ND	10	ug/l	---	ND	10	ug/l	---
	Methyl ethyl ketone	78-93-3	ND	10	ug/l	---	ND	10	ug/l	---	0.70	10	ug/l	J
	Methyl tert-butyl ether (MTBE)	1634-04-4	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
	Methylcyclohexane	108-87-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Methylene chloride	75-09-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	n-Butylbenzene	104-51-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	n-Propylbenzene	103-65-1	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Naphthalene	91-20-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	o-Xylene	95-47-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	p-Isopropyltoluene	99-87-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	sec-Butylbenzene	135-98-8	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Styrene	100-42-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	tert-Butylbenzene	98-06-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Tetrahydrofuran	109-99-9	ND	5.0	ug/l	---	ND	5.0	ug/l	---	ND	5.0	ug/l	---
	Toluene	108-88-3	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	trans-1,3-Dichloropropene	10061-02-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Trichlorofluoromethane	75-69-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
	Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
GC VOC														
	PUBL-SW-140													
	Gasoline Range Organics	E-1005	ND	100	ug/l	---								

APPENDIX F

Field Sampling Plan and Addendum

ARCADIS
Infrastructure, environment, facilities

Imagine the result

Field Sampling Plan

Ford St. Paul Assembly Plant
St. Paul, Minnesota

PREPARED FOR
Ford Motor Company

ARCADIS

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Staff Scientist

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Project Scientist

Bryan Zinda, PE
Project Manager

Field Sampling Plan

Ford St. Paul Assembly Plant
St. Paul, Minnesota

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Date:
June 18, 2007

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Appendices

A	Rotasonic Soil Sampling Procedures, Decontamination, Monitoring Well Installation
B	Hollow Stem Auger Drilling, Subsurface Soil Sampling Protocol and Temporary Monitoring Well Installation/Sampling
C	Hand Auger Sampling Procedures
D	Groundwater Sampling Protocol
E	Surface-Water Sampling Protocol
F	Surface Soil and Waste Material Sampling Protocol
G	Geophysical Logging
H	Field Instrumentation Operating Procedures
I	Chain-of-Custody Procedures
J	ARCADIS Field Forms / Logs

1. Introduction

ARCADIS has prepared this Field Sampling Plan (FSP) for the investigation to be conducted at the Twin Cities Assembly Plant (TCAP). The investigation will be performed in accordance with the scope of work contained in the work plan(s) prepared by ARCADIS for the Site (ARCADIS, 2007).

The FSP provides the framework for the sampling methodology and data collection activities to be conducted at TCAP. Included in the FSP are Standard Operating Protocols & Procedures (SOPs) which detail the elements of the various anticipated field tasks: reconnaissance survey, drilling and installation of monitoring wells; field measurements; sample collection; and chain-of-custody procedures. The FSP incorporates accepted and standard methodology for federal and State of Minnesota, Minnesota Pollution Control Agency (MPCA) environmental programs. The format and contents of the FSP have been prepared in accordance with the following U.S. Environmental Protection Agency (USEPA) guidance documents:

- USEPA. October 1988. Guidance for Conducting Remedial Investigation and Feasibility Studies Under CERCLA. Interim Final. EPA/540/G-89/004.
- USEPA. December 1987. Compendium of Superfund Field Operations Methods. EPA/P-87/001.
- USEPA. May 1978, revised May 1986. NEIC Policies and Procedures. EPA-330/9-78-001-R.

The SOPs were also prepared in accordance with the following State of Minnesota regulations and guidance:

- MPCA Voluntary Investigation and Cleanup (VIC) Program
- MPCA Petroleum Remediation Program (PRP)
- Minnesota Department of Health (MDH) Requirements

The investigation work plan presents the known site history and scope of work.. This FSP serves as a supplement to the work plan, providing detailed SOPs for the execution of the activities described in the work plan. Information which is incorporated

in the work plan is not repeated herein. This FSP will be provided to and followed by the field team.

2. Sample Locations and Frequency

The environmental media which will or may be sampled during the course of investigative activities at the site include:

- Groundwater
- Surface water
- Subsurface soils
- Surface soils
- Waste Materials
- Geophysical Logging

The anticipated locations and number of these samples are specified in the investigation work plan. Groundwater samples will be collected from the designated monitoring well locations. Soil samples will be collected from the designated hand auger, surface soil location, or soil borings. Surface water samples will be collected from designated sampling locations.

Selected samples of environmental media will be collected and placed into sample containers in accordance with the SOPs presented in this FSP. In addition to the soil samples collected for laboratory analyses, samples will also be collected for geologic characterization.

3. Location and Sample Nomenclature

Location: A sample designation system will be used to identify samples for laboratory analyses. A list of identifiers used for each sample will be maintained in the project logbook by the ARCADIS Field Team Leader.

Each location will have a unique sample location name. Since soil borings and monitoring wells have previously been completed at the site, investigative locations

completed by ARCADIS will start with A, followed by a one to two letter designation to describe the type of sample. A two digit sequential number will then follow to provide a unique identifier for each sample location. Given the potential for more soil borings a three digit sequential number will be used for soil borings. The following are the sample prefix designations that will be employed at TCAP to identify sample locations.

ASB – Soil Boring

AMW- Monitoring Well

HA – Hand Auger Boring

ASD – Sediment Location

AGM-SS – Surface Soil Location

AWS – Wipe Sample Location

ST – Sheen Test

Samples: Each sample that is collected will be designated by a unique sample identification number. The first part of the identifier will correspond to the location and the second part of the sample by the sample depth (if applicable) and the sample date. For example, a soil sample collected from ASB-001 from 4-6' on June 1, 2007 would be labeled: ASB-001_4-6' (20070601). A water sample collected from this location would be referenced by ASB-001 (20070601). The screened interval of the temporary well should be noted in the field book. Repetitive sampling points, such as samples collected from groundwater monitoring wells or piezometers, will be suffixed by the date collected.

Equipment blanks and trip blanks will be unique and identified by their associated prefix numbered sequentially (to differentiate between multiple samples collected on the same date), and suffixed by the date. The ARCADIS sampler will indicate in the logbook the sampling equipment corresponding to each equipment blank.

EB - Equipment Blank Ex. EB (20070601)

TB – Trip Blank Ex. TB (20070601)

In the event that one or more EB or TB samples are collected on the same date, a number will be suffixed after the sample name. Ex. EB-01 (20070601)

Field duplicates will be identified with a unique sample identification number; such that the laboratory will not be aware that the sample is a duplicate (duplicates will be numbered sequentially). The ARCADIS Field Team Leader will note in the logbook where the duplicate samples were collected so this information will be available when the laboratory data is reviewed

DUP – Duplicate Sample Ex. DUP-001

Unlike the other quality assurance samples, MS/MSD samples are not separate samples; therefore, they are not assigned unique sample numbers. The only difference between a MS/MSD sample and a standard sample is that additional sample volume is collected at the location that the MS/MSD sample is obtained. These samples will be identified by adding a "MS" and "MSD" to the identifier of the sample where the MS/MSD sample is collected.

4. Field Quality Assurance Program

The Quality Assurance/Quality Control (QA/QC) protocols for the work described in this Work Plan will meet or exceed the standards of care required by the State of Minnesota and by Ford. Field QC samples to be collected during the sampling program include the following:

- Trip blanks
- Matrix spike/matrix spike duplicates
- Duplicates.
- Equipment blanks.

Trip blanks consist of an aliquot of distilled water that is sealed in a sample bottle by the analytical laboratory prior to shipping sample bottles to the Site. The trip blank is used to determine if any cross-contamination occurs between aqueous samples during shipment. Trip blanks are analyzed for VOCs only. Trip blanks will be prepared in glass vials (40 milliliter) with Teflon-lined lids by the analytical laboratory and shipped to the sampling team. Upon arrival at Site, the sealed trip blank bottles will be placed in a

cooler and will be brought to the field by the sampling team. A trip blank will be shipped to the analytical laboratory each day of field sampling for aqueous volatiles. If multiple coolers are required to store and transport aqueous VOC samples, a trip blank will be placed in each cooler.

Matrix Spike/Matrix Spike Duplicates (MS/MSD) for organic analysis are performed at a predetermined frequency. If an MS/MSD is requested by the field personnel, triple sample volume must be collected and submitted to the analytical laboratory to ensure the laboratory has sufficient volume for MS/MSD analysis. One MS/MSD will be collected/analyzed for every 20 samples (i.e., 5 percent) in a sample delivery group.

Duplicates (Blind Duplicates) will be collected/analyzed at a frequency of one per every 20 samples (i.e., 5 percent) water samples collected.

Equipment blank samples are sometimes collected to verify that the effectiveness of the decontamination process for non-dedicated or reusable sampling equipment. Equipment rinsates are collected from the final rinse water generated using a laboratory-grade water source.

5. Field Logbooks/Documentation

The field logbook(s) will provide the means of recording data from collection activities performed. As such, entries will be described in as much detail as possible so that a particular situation can be reconstructed without reliance on memory.

Field logbooks will be field survey books or notebooks. Field logbooks will be assigned to field personnel, but will be stored in the document control center when not in use.

- The title page of each field logbook will contain the following:
- Project name.
- Project start date.
- End date.

Entries into the logbook will contain a variety of information including the date, start time, weather, names of all sampling team members present, level of personal protection being used if other than level D, and the signature of the person making the

entry. The names of visitors to the Site, field sampling or investigation team personnel, and the purpose of their visit will also be recorded in the field logbook.

Measurements made and samples collected will be recorded in the field logbook. All entries will be made in indelible ink and no erasures will be made. If an incorrect entry is made, the information will be crossed out with a single strike mark. Whenever a sample is collected, or a measurement is made, a detailed description of the location of the station, which may include compass and distance measurements (if necessary or not obvious), shall be recorded. The number of the photographs taken of the station, if any, will also be noted.

The equipment used to collect samples will be noted, along with the time of sampling, sample description, depth at which the sample was collected, and volume and number of containers. Field duplicate samples, which will receive separate sample identification numbers, will be noted in the field logbook.

6. Data Collection Protocols and Procedures

The equipment, protocols and procedures for the data collection activities are described in detail in the appended SOPs. Equipment decontamination procedures are also included in the SOPs.

The following SOPs are included as appendices to the FSP:

FSP Appendix	Title
A	Rotasonic Soil Sampling Procedures, Decontamination, Monitoring Well Installation
B	Hollow Stem Auger Drilling, Subsurface Soil Sampling Protocol and Temporary Monitoring Well Installation/Sampling
C	Hand Auger Sampling Procedures
D	Groundwater Sampling Protocol
E	Surface-Water Sampling Protocol

FSP Appendix	Title
F	Surface Soil and Waste Material Sampling Protocol
G	Geophysical Logging
H	Field Instrumentation Operating Procedures
I	Chain-of-Custody Procedures
J	ARCADIS Field Forms / Logs

7. Investigative-Generated Wastes

Drill cuttings and purge water generated during the field investigation will be handled in an appropriate manner that complies with federal, state, and local regulations. Immediately after generation all soil and groundwater investigative derived waste (IDW) will be containerized and properly labeled pending characterization. Soil and rock cuttings that appear not to be impacted (based upon PID readings, visual observation and best professional judgment) will be grouped together for composite sampling. Soil and rock cuttings from locations which appear to have higher impacts will be containerized separately from the composite group and placed in a separate 55-gallon drum for waste characterization and disposal. The waste will be sampled as specified in the work plan and may include Toxicity Characteristic Leaching Procedure (TCLP) VOCs, TCLP SVOCs and TCLP Metals, total PCBs, total sulfide and cyanide, corrosivity, flashpoint, pH, TCLP herbicides and pesticides as needed.

Purge water generated during the monitoring well development and groundwater sampling of the monitoring wells and temporary wells will be containerized and labeled. The groundwater analytical results from the wells should be sufficient to characterize the purge water for disposal. Based on the analytical results the purge water will be disposed of via the sanitary sewer, at the on-site waste water treatment plant, if the existing permit allows or by a disposal facility. Refer to the work plan for sampling parameters if additional waste characterization is needed.

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Appendix A

Rotasonic Soil Sampling
Procedures, Decontamination,
Monitoring Well Installation

1. Rotasonic Drilling

Rotasonic drilling is the preferred drilling method for completing boreholes for monitoring wells at TCAP due to the presence of bedrock at a shallow depth and the ability of the method to provide continuous core samples with nearly undisturbed accuracy. An ARCADIS field inspector will be present at the operating drill rig and will be responsible for the collection and logging of soil and rock samples, monitoring of drilling decontamination operations, recording of groundwater data, deciding on final drilling depths and screen intervals (in consultation with the project manager), preparing the boring logs and well completion diagrams, and recording the well installation procedures. Additionally, the field inspector will maintain a log recording daily events, including arrivals and departures at the site by any and all personnel and equipment, and times of work start-up and stoppage. The forms to be used by the field inspector as part of the Quality Assurance/Quality Control (QA/QC) measures of the project are included in Appendix J.

Drilling with the Rotasonic method is accomplished by imparting high-frequency vibrations from a sonic drill head to a dual string of drill pipe. A rotational drive in the drill head also rotates the drill pipe to assist the vibratory drill action. The vibratory action of the drill pipe transfers energy to the drill bit so that subsurface materials are either:

1. Fluidized and forced into the inner sampling pipe or pushed aside (such as in unconsolidated material),

2. Sheared and captured by the sampling pipe (such as in clays and shales), or

3. Fractured and retained in the sampling pipe (such as in consolidated rock).

Rotasonic drilling usually requires no drilling fluid in unconsolidated sediments. Water or air is required as a drilling fluid to transport cuttings when drilling through boulders or consolidated rock, and water may be added to lubricate the annular space between the outer drill pipe and the inner sampling pipe to shorten drilling time when drilling in unconsolidated sediment.

If any problems are encountered or questions arise during the field investigation that are beyond the scope of expertise/responsibility of the field inspector, she/he will temporarily halt all field activities in order to confer with the project manager. In this way, a technically sound decision will be made by several experienced individuals.

2. Formation Sampling

Soil samples will be collected continuously to the total depth of the borehole at each designated Rotasonic location. The dual-pipe drill string consists of a 4-inch internal-diameter pipe and sampling tube inside of a 6-inch internal-diameter drive casing. The drive casing is advanced to ensure that the borehole remains open upon extraction of the sampling pipe. Drilling will proceed by:

1. Vibrating the inner sampling string into place,
2. Advancing the 6-inch outer casing over the sampling string to the same depth,
3. Retrieving the inner pipe string and sample barrel with the sample inside while the outer casing remains in place,
4. Retrieving the cored sample from the sampling tube,
5. Adding another length of pipe to the sampling string, and
6. Advancing the sampling string to a depth 5 or 10 ft beyond the end of the outer casing. This process will be repeated until the target depth of the soil boring is reached.

Pushing the soils out of the sample barrel, a clean four-inch plastic bag will be used to collect samples continuously to the depth specified in the work plan. New plastic is used for each sample collection.

The collected soil samples will be described, cataloged and retained by the on-site field inspector. It is the responsibility of the field inspector to ensure that between sample collections, the sampling device is cleaned according to the protocol outlined in Section 6 of this Appendix. In this way, if contamination is encountered at one elevation in the borehole, it will not be transferred to lower elevations in the borehole. A detailed soil sampling protocol is as follows:

1. The cleaned sample pipe will be given to the driller (or helper), by the ARCADIS field inspector who will make sure that the individual is wearing clean, disposable gloves.
2. The sample pipe string will be advanced to the target depth.

3. The ARCADIS field inspector will obtain the sample pipe string from the driller and the sample will be extruded from the pipe and placed into plastic bags.

4. The sample will be screened for volatile organic compound (VOCs) using a photoionization detector (PID).

5. The ARCADIS Sample/Core Log will be filled out as discussed below.

6. The sampling equipment will be cleaned as previously described.

After collection, soil and rock samples will be visually identified by the field inspector using the USCS classification System. The information recorded on the sample/core log by the field inspector will include:

- Soil/rock sample interval
- Amount of sample recovered
- Sample color
- Sample texture
- Sample moisture content
- Organic vapor readings
- Unusual characteristics
- Depth to water
- Drill rig behavior and penetration rate

An example sample/core log is present in Appendix J. Representative soil samples from each sampled interval will be placed in clean glass jars with screw-type lids for future reference. Each sample container will be labeled with the site name and the boring and sample number.

3. Analytical Sampling

3.1 Field Screening

Each soil sample collected will be screened with a PID. The information will then be recorded on the ARCADIS Sample/Core Log. Calibration procedures for the PID are in Appendix H.

3.2 Laboratory Analysis

A subset of soil samples may be containerized and submitted for laboratory analysis. The analytical parameters for each boring location are presented in the work plan. Soil samples will be transferred to clean, laboratory-supplied containers, preserved in accordance with the applicable analytical methodology, labeled, and placed in a cooler with ice.

3.3 Sample Labels and Chain-of-Custody Form

Sample labels are necessary for proper sample identification. The labels will be affixed to the sample containers prior to the time of sampling and will not be affixed to lids or caps. To track QA/QC handling protocols the labels will be filled out by sampling personnel, and the ARCADIS Chain-of-Custody form (see Appendix G) will be completed in the field before the sampling team leaves the site. Labels will include sample identification, project number, date and time collected, and analyses to be performed.

The sampling team will be responsible for maintaining custody of the samples until they are delivered to the carrier or the laboratory. The Chain-of-Custody form will then be signed and custody formally relinquished. The containers (bearing custody seals) will be in view at all times or will be stored in a secure place restricted to authorized personnel. Chain-of-Custody procedures are discussed in Appendix G.

4. Monitoring Well Installation and Development

4.1 Monitoring Well Installation

The installation of each monitoring well will begin immediately after borehole completion, or as directed by the Project Manager. Once monitoring well installation has begun, breaks will not be taken until the well has been completed and secured against

unauthorized access. In cases of unscheduled delays, such as personal injury, equipment breakdowns, or sudden inclement weather, installation will be resumed as soon as practical.

4.2 Well Construction

Monitoring wells will be constructed of 2-inch diameter Schedule 40 PVC and stainless steel screen. The well screens will be fabricated and have an inside diameter equal to the well casing. Fittings (couplings) will not restrict the inside well diameter as joints will be internally threaded. Glues, solvents, or chemical cleaners will not be used to join the casing and screen lengths. All screens, casings, and fittings will be new material. The lengths of casing and screen will be measured and recorded by the field inspector prior to installation. All casing and screens will be decontaminated prior to installation.

Monitoring well depths and screen zones will be determined following a review, by all technical project personnel, of all available borehole data, including the field inspector's and driller's sample logs.

Monitoring well screen depths will be calculated by the field inspector by maintaining accurate measurements of screen and casing placed in the borehole. Upon well completion, the field inspector will verify the screen length by sounding the well for total depth and comparing this value to the total measured length of the well materials that were lowered into the borehole.

4.3 Gravel Pack

A gravel pack will be installed in the borehole annulus around the screen. Clean silica sand backfill, suitable for the formation and screen slot size, will be placed around the screen; a weighted steel tape will be placed down the annulus periodically to measure the depth to the gravel pack to be sure it is not bridging and that it is at least 2 feet above the top of the screen.

A representative sample of the gravel pack material will be supplied to ARCADIS by the driller prior to use. The gravel pack material will be described, in writing by ARCADIS, using the following general guidelines: lithology, grain-size distribution, trade name (if any) and source (including company and location), and its suitability for use will be determined in advance of well construction.

4.4 Bentonite Seal

A bentonite seal approximately 2 to 3 feet thick will be placed on the top of the gravel pack using a tremie pipe. The thickness of the seal will be verified by field measurements of the depth to the gravel pack and depth to the top of the seal.

4.5 Bentonite/Cement Grout

A slurry of bentonite (5 percent)/cement (95 percent) will be placed using a tremie pipe in the annulus between the borehole and/or surface casing and the well casing. The bentonite/cement grout will be placed from the top of the bentonite seal to approximately 2 feet below grade.

4.6 Protective Casing

A locking steel protective casing and/or steel flush mount cover will be set over each well head and cemented in place to a minimum depth of 2 feet below land surface. Each protective pipe will be painted to increase visibility.

The top of the well casing will serve as the measuring point for the groundwater level measurements. The well location will be surveyed to the nearest foot and the measuring point will be marked on the well casing and surveyed to the nearest 0.01 foot (relative to mean sea level).

4.7 Monitoring Well Construction Diagram

A well construction diagram will be prepared by the on-site field inspector for each well and will show the following items:

The bottom of the borehole (that part of the borehole most deeply penetrated by drilling and/or sampling).

The screen setting depth.

The gravel pack interval.

The bentonite seal interval.

The grout interval.

The borehole and will casing diameters

The height of the well casing (without cap/plug) above ground surface.

The protective casing.

Each well construction diagram will be included as part of the QA/QC procedures. An example of a well construction diagram is in Appendix J.

4.8 Monitoring Well Development

A record of well development will be maintained along with the other pertinent well data as part of the QA/QC procedures. Well development will be accomplished using an appropriate technique(s), such as pumping with a centrifugal pump, low-flow submersible pump, surging with air, mechanical surging of the well, or any combination of the above. Development will continue until the well responds to water-level changes in the formation, and the well produces clear, sediment-free water to the extent possible. Development water will be collected and disposed of properly.

Dispersing agents, acids, disinfectants, or other additives will not be used during development nor will they be introduced into the well at any other time. During development, water will be removed from the entire column of water standing in the well by periodically lowering and raising the pump intake.

Well development will include the rinsing of the interior well casing above the water column in the well using only water from that well. The well will be covered with a clean well cap which will be rinsed with distilled water prior to installation. The result of this operation will be a well casing free of extraneous materials (grout, bentonite, sand, etc.).

The following data will be recorded as part of development and QA/QC procedures:

The static water-level measured from the top of the well casing before and after development is completed.

The calculated quantity of fluid standing in the well prior to development.

The sounded well depth before and after development to determine if siltation has occurred inside the well.

The physical character (e.g., clarity, color, particulates, and odor) of water removed, including changes during development.

They type and size/capacity of pump used.

The surging techniques used.

The quantity of fluid/water removed and the time of removal (both incremental and total values).

5. Groundwater Sampling

Collection of groundwater samples from the monitoring wells will be conducted in accordance with the procedures in Appendix D.

In addition to groundwater samples from the monitoring wells, groundwater samples may be collected from discrete intervals within the designated soil boring locations. Groundwater samples will be collected using a standard one-inch temporary PVC well. New, clean temporary wells will be constructed for each designated boring. Dedicated tubing will be lowered into the water column, attached to a peristaltic pump, and a groundwater sample will be collected. In an attempt to minimize turbidity, every effort will be made to remove a minimum of one gallon of groundwater before the analytical sample is collected. In low yielding formations (till), this amount may not be achievable. Groundwater samples will be collected in laboratory containers labeled and placed in an ice filled cooler. Samples will be collected according to volatilization sensitivities. Sample shipment and chain-of-custody procedures will be followed according to procedures outlined in Appendix G.

6. Decontamination

The drilling casings, rods, samplers, tools, water tanks, drilling rig, and any piece of equipment that can come into contact (directly or indirectly) with the formation or well will be decontaminated on-site prior to set up for drilling. Decontamination protocols will also be followed between boreholes (at a fixed on-site location) and before leaving the site at the end of the project. The on-site decontamination activities will be monitored by the ARCADIS field inspector.

Equipment used to sample unconsolidated sediments (e.g. sample barrel, stainless-steel spatulas) will be decontaminated prior to each sample collection. Disposable

gloves will be worn while equipment is cleaned to avoid contamination and the gloves will be changed frequently. The procedure for cleaning this equipment is as follows:

1. Prepare a 2-percent solution of laboratory grade detergent and distilled water in a bucket.

2. Disassemble the split-spoon sampler and immerse the parts and spatula in the laboratory grade detergent solution.

3. Scrub equipment in the bucket with a brush to remove any adhering particles.

4. Rinse the equipment with copious amounts of distilled water.

5. Place clean equipment on a clean polyethylene sheet.

All collected decontamination water will be collected and sampled. Based on the results of the laboratory analysis, the decontamination water will be disposed on site or sent off-site for disposal.

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Appendix B

Hollow Stem Auger Drilling, Subsurface Soil Sampling Protocol and Temporary Monitoring Well Installation/Sampling

1. Hollow Stem Auger Drilling

The hollow-stem auger drilling method will be utilized for the drilling of soil borings and the installation of monitoring wells if rotasonic drilling methods are unnecessary. An ARCADIS field inspector will be present at the operating drill rig and will be responsible for the collection and logging of soil samples, monitoring of drilling decontamination operations, recording of groundwater data, deciding on final drilling depths (in consultation with the project manager), and preparing the boring logs. Additionally, the field inspector will maintain a log recording daily events, including arrivals and departures at the site by any and all personnel and equipment, and times of work start-up and stoppage. The forms to be used by the field inspector as part of the Quality Assurance/Quality Control (QA/QC) measures of the project are included in Appendix J.

This drilling technique involves rotating a drill bit into the subsurface on a string of auger flights. Soil cuttings are continuously lifted to land surface along the outside of the flights, while drill rods and a plug are used inside the flights to keep the soil out. The plug is removable for split-spoon sampling inside the flights.

Potable water may be used during drilling if required to keep loose sand from heaving inside the auger flights (due to differential hydrostatic pressure). Sand heaving would prevent collection of representative split-spoon samples and proper installation of well casing and screen. If water is added, the volume used will be carefully documented so that at a minimum, an equivalent volume will be removed during well development.

If any problems are encountered or questions arise during the field investigation that are beyond the scope of expertise/responsibility of the field inspector, she/he will temporarily halt all field activities in order to confer with the project manager. In this way, a technically sound decision will be made by several experienced individuals.

2. Formation Sampling

2.1 Split-Spoon Sampling

Split-spoon soil samples of unconsolidated sediments will be collected in 2-foot intervals from land surface to the total depth of drilling. These samples will be collected through the auger flights. An enlarged split-spoon sampler, which is 24 inches long and 3 inches in diameter, will be used for sampling. Drill cuttings will be examined in 2-foot intervals throughout the entire depth of the hole.

The collected split-spoon soil samples will be described, cataloged and retained by the on-site field inspector. It is the responsibility of the field inspector to ensure that between sample collections, the sampling device is cleaned according to the protocol outlined previously. In this way, if contamination is encountered at one elevation in the borehole, it will not be transferred to lower elevations in the borehole. A detailed soil sampling protocol is as follows:

1. The cleaned split-spoon sampler will be given to the driller (or helper), by the ARCADIS field inspector who will make sure that the individual is wearing clean, disposable gloves.

2. The split-spoon sample will then be collected by the driller using the standard penetration test. (ASTM D1586).

3. The ARCADIS field inspector will obtain the split-spoon sampling device from the driller and will place it on clean polyethylene sheeting.

4. The end cap will be unscrewed and the spoon opened to expose the sample.

5. The sample will be screened for volatile organic compound (VOCs) as discussed below.

6. The ARCADIS Sample/Core Log will be filled out as discussed below.

7. The sampling equipment will be cleaned as previously described.

After collection, split-spoon samples of unconsolidated material will be visually identified by the field inspector using the USCS classification System. The information recorded on the sample/core log by the field inspector will include:

- Soil sample interval
- Sampling hammer weight and distance of fall
- Blow count (per 6-inch interval)
- Amount of sample recovered
- Sample color

- Sample texture
- Sample moisture content
- Organic vapor readings
- Unusual characteristics
- Depth to water
- Drill rig behavior and penetration rate

An example sample/core log is present in Appendix J. Representative soil samples from each sampled interval will be placed in clean glass jars with screw-type lids for future reference. Each sample container will be labeled with the site name and the boring and sample number.

3. Analytical Sampling

3.1 Field Screening

Each split-spoon soil sample collected will be screened with a Photo-ionization Detector (PID). The information will then be recorded on the ARCADIS Sample/Core Log. Calibration procedures for the PID are in Appendix H.

3.2 Laboratory Analysis

A subset of soil samples may be containerized and submitted for laboratory analysis. The analytical parameters for each boring location are presented in the work plan. Soil samples will be transferred to clean, laboratory-supplied containers, preserved in accordance with the applicable analytical methodology, labeled, and placed in a cooler with ice.

3.3 Sample Labels and Chain-of-Custody Form

Sample labels are necessary for proper sample identification. The labels will be affixed to the sample containers prior to the time of sampling and will not be affixed to lids or caps. To track QA/QC handling protocols the labels will be filled out by sampling personnel, and the ARCADIS Chain-of-Custody form (see Appendix J) will be

completed in the field before the sampling team leaves the site. Labels will include sample identification, project number, date and time collected, and analyses to be performed.

The sampling team will be responsible for maintaining custody of the samples until they are delivered to the carrier or the laboratory. The Chain-of-Custody form will then be signed and custody formally relinquished. The containers (bearing custody seals) will be in view at all times or will be stored in a secure place restricted to authorized personnel. Chain-of-Custody procedures are discussed in Appendix G.

4. Groundwater Sampling

Groundwater samples may be collected from discrete intervals within the designated HSA soil boring locations. Groundwater samples are collected using a standard one-inch temporary PVC well. New, clean temporary wells will be constructed for each designated boring. Dedicated polyethylene tubing will be lowered into the water column, and attached to a peristaltic pump, and the groundwater sample will be collected. In an attempt to minimize turbidity, every effort will be made to remove a minimum of one gallon of groundwater before the analytical sample is collected. In low yielding formations (till), this amount may not be achievable. Groundwater samples will be collected in laboratory containers, labeled and placed in an ice-filled cooler. Samples will be collected according to volatilization sensitivities. Sample shipment and chain-of-custody procedures will be followed according to procedures outlined in Appendix I.

5. Decontamination

The drilling casings, rods, samplers, tools, water tanks, drilling rig, and any piece of equipment that can come into contact (directly or indirectly) with the formation will be decontaminated on-site prior to set up for drilling. Decontamination protocols will also be followed between boreholes (at a fixed on-site location) and before leaving the site at the end of the project. The on-site decontamination activities will be monitored by the ARCADIS field inspector.

Equipment used to sample unconsolidated sediments (e.g. split-spoon samplers, stainless-steel spatulas) will be decontaminated prior to each sample collection. Disposable gloves will be worn while equipment is cleaned to avoid contamination and the gloves will be changed frequently. The procedure for cleaning this equipment is as follows:

1. Prepare a 2-percent solution of laboratory grade detergent and distilled water in a bucket.

2. Disassemble the split-spoon sampler and immerse the parts and spatula in the laboratory grade detergent solution.

3. Scrub equipment in the bucket with a brush to remove any adhering particles.

4. Rinse the equipment with copious amounts of distilled water.

5. Place clean equipment on a clean polyethylene sheet.

6. Reassemble the cleaned split-spoon sampler.

7. Transfer the split-spoon sampler to the driller (or helper) and make sure that this individual is wearing clean, disposable gloves.

All collected decontamination water will be collected and sampled. Based on the results of the laboratory analysis, the decontamination water will be disposed on site or sent off-site for disposal.

Appendix C

Hand Auger Sampling Procedures

1. Hand Auger Sampling Procedures

Hand auguring will be required to be performed in the sand tunnels underneath the Ford Twin Cities Assembly Plant to collect soil samples due to accessibility issues.

The hand auger consists of the auger bucket, a series of extensions, and a 'T' handle. The auger bucket is approximately 4 inches wide and 6 inches in height. The hand auger will be used to hand drill a hole to the desired depth determined in the work plan, and is withdrawn every 6 inches to either dump or collect soil.

2. Formation Sampling

Soil samples will be collected continuously to the total depth of the borehole at each designated location. Pushing the soils out of the sample barrel, a clean four-inch plastic bag will be used to collect samples continuously to the depth specified in the work plan. New plastic is used for each sample collection. A detailed soil sampling protocol is as follows:

1. Make sure all equipment has been properly cleaned prior to use.
2. Attach the auger bucket to a drill rod extension, and attach the 'T' handle to the drill rod.
3. Make sure the area to be drilled/sampled is cleared of debris before starting.
4. Begin augering in desired location, periodically (~ 6 inches) removing and depositing soil onto plastic sheeting.
5. When desired depth is reached for sampling, collect the sample from the auger bucket after auger is removed from the hole.
6. If more than one sample is taken from the same hole, be sure to thoroughly decontaminant all equipment between each sample.
7. Once the total depth is reached, abandon the hole per Minnesota Department of Health regulations.

After collection, soil samples of unconsolidated material will be visually identified by the field inspector using the USCS classification System. The information recorded on the sample/core log by the field inspector will include:

- Soil sample interval
- Amount of sample recovered
- Sample color
- Sample texture
- Sample moisture content
- Organic vapor readings
- Unusual characteristics
- Depth to water
- Drill rig behavior and penetration rate

An example sample/core log is present in Appendix J. Representative soil samples from each sampled interval will be placed in clean glass jars with screw-type lids for future reference. Each sample container will be labeled with the site name and the boring and sample number.

3. Analytical Sampling

3.1 Field Screening

Each soil sample collected will be screened with a Photo-ionization Detector (PID). The information will then be recorded on the ARCADIS Sample/Core Log. Calibration procedures for the PID are in Appendix H.

3.2 Laboratory Analysis

A subset of soil samples may be containerized and submitted for laboratory analysis. The analytical parameters for each boring location are presented in the work plan. Soil

samples will be transferred to clean, laboratory-supplied containers, preserved in accordance with the applicable analytical methodology, labeled, and placed in a cooler with ice.

3.3 Sample Labels and Chain-of-Custody Form

Sample labels are necessary for proper sample identification. The labels will be affixed to the sample containers prior to the time of sampling and will not be affixed to lids or caps. To track QA/QC handling protocols the labels will be filled out by sampling personnel, and the ARCADIS Chain-of-Custody form (see Appendix J) will be completed in the field before the sampling team leaves the site. Labels will include sample identification, project number, date and time collected, and analyses to be performed.

The sampling team will be responsible for maintaining custody of the samples until they are delivered to the carrier or the laboratory. The Chain-of-Custody form will then be signed and custody formally relinquished. The containers (bearing custody seals) will be in view at all times or will be stored in a secure place restricted to authorized personnel. Chain-of-Custody procedures are discussed in Appendix J.

4. Decontamination

Any piece of equipment that can come into contact (directly or indirectly) with the formation will be decontaminated on-site prior to set up for augering. Decontamination protocols will also be followed between boreholes (at a fixed on-site location) and before leaving the site at the end of the project. The on-site decontamination activities will be monitored by the ARCADIS field inspector.

Equipment used to sample unconsolidated sediments (e.g. sample barrel, stainless-steel spatulas) will be decontaminated prior to each sample collection. Disposable gloves will be worn while equipment is cleaned to avoid contamination and the gloves will be changed frequently. The procedure for cleaning this equipment is as follows:

1. Prepare a 2-percent solution laboratory grade detergent and distilled water in a bucket.

2. Disassemble the split-spoon sampler and immerse the parts and spatula in the laboratory grade detergent solution.

3. Scrub equipment in the bucket with a brush to remove any adhering particles.

4. Rinse the equipment with copious amounts of distilled water.

5. Place clean equipment on a clean polyethylene sheet.

All collected decontamination water will be collected and sampled. Based on the results of the laboratory analysis, the decontamination water will be disposed on site or sent off-site for disposal.

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Appendix D

Groundwater Sampling Protocol

1. Groundwater Sampling Protocol

Valid water-chemistry data are integral to hydrogeologic investigations that characterize groundwater quality conditions. The data will be confirmed by quality-control measures instituted during sampling, sample handling, and analysis. Without checks on the procedures, contradictory results are possible, and incomplete or incorrect conclusions may result.

Quality control includes proper sampling procedures for well purging prior to sampling, sample-removal methods that utilize acceptable materials for all equipment and supplies, sample processing (including filtration, preservation, labeling, and bottle filling), and sample shipment. The ARCADIS project manager and field personnel will work closely with the analytical laboratory to assure that samples reach the laboratory in proper condition.

ARCADIS groundwater sampling protocol is based on standard practices as published in, "Manual of Ground-Water Sampling Procedures", by Scalf and others, NWWA/EPA, 1981 and "Handbook for Sampling and Sample Preservation of Water and Wastewater", EPA, 1982, as well as on ARCADIS' extensive experience.

Pertinent information regarding groundwater sampling procedures will be recorded on ARCADIS daily and sampling logs. Copies of these forms are included in Appendix J.

2. Preparation of Sampling Equipment

The sampling equipment will be thoroughly cleaned before each use. Any supplies, such as tubing or rope that cannot be properly cleaned after each use will be discarded in an appropriate manner. Water level measuring equipment will be cleaned with a laboratory-grade detergent solution, and rinsed with distilled water prior to use. A new length of polypropylene cord will be attached to a new dedicated bailer prior to the collection of each sample. Equipment, such as specific conductance, dissolved oxygen and pH meters, will be calibrated daily according to manufacturer's instructions.

3. Sampling Equipment

The equipment needed for sampling groundwater is listed below:

Electric water level probe	Thermometer
Clean towels	Sample bottles
Distilled water	Indelible marking pens
Plastic sheeting	Brushes
Polypropylene rope	Pump
Polyethylene Disposable Bailers	½ - inch Polyethylene tubing
Laboratory Grade Detergent	Clear tape
Buckets, graduated	Generator or Battery
Gloves (Nitrile, or equivalent)	Beakers
pH Meter and buffers	Ice
Multi-parameter probe	Coolers

4. Arrival at the Site

Upon arrival at the site, sampling personnel will check in with the appropriate personnel to coordinate sampling team activities and to obtain necessary clearances.

4.1 Opening the Well

Upon arrival at the well site, sampling personnel will check the well for aboveground damage, record the well designation, wipe the top of the well clean, and then remove the cap and wipe the top of the well casing with a clean cloth. Plastic sheeting will be placed around the well to protect sampling equipment from potential contamination.

4.2 Sounding the Well

The total depth of the wells will be measured (sounded) prior to sampling. With this information, the sampling team can calculate the volume to water in the well and determine if formation material has accumulated in the well. The well depth will be measured to an accuracy of 0.01 feet below the measuring point.

4.3 Measuring Well Stick-Up

The height of the measuring point above ground surface (the stick-up) will be measured to determine whether the well has been disturbed since installation. The stick-up will be measured to an accuracy of 0.01 feet.

4.4 Measuring the Water Level

Prior to purging and sampling, the static water level in the well will be measured and the volume of standing water in the well will be calculated. A full round of water levels will be taken prior to water sampling. The date and time of each measurement will be recorded. Each measurement will be made to an accuracy of 0.01 feet below the measuring point. Care will be taken to avoid cross contamination of the wells by thoroughly cleaning the measuring instrument between well sampling events.

Water levels will be measured in monitoring wells by using an electric water level probe and oil/water interface probe where separate-phase product is present or suspected. The measuring point, which is permanently marked on each well, will be used to assure consistent water-level readings. The procedure will be as follows:

1. The well will be identified and its number recorded.

2. The top of the well will be wiped with a clean cloth.

3. The well cap or plug will be removed; the inside of the casing will be wiped with a clean cloth; and the cap will be placed down in a manner so as to keep it clean. Personnel will wait approximately 10 minutes, if necessary, prior to measuring the water level to allow the water to stabilize.

4. The air within the well will be analyzed for VOCs by using a photoionization detector.

5. The first 5 feet of the steel measuring tape or electric probe will be cleaned as described above and then the depth to water will be measured from the top of the well casing.

6. The volume of water in the well will be calculated.

4.5 Purging the Well

Standing water will be removed from the well casing prior to collecting groundwater samples; a centrifugal pump, low-flow submersible pump or disposable bailer will be used The tubing from the pump will be set just below the anticipated dynamic (pumping) water level. New tubing will be dedicated to each well sampled.

The water level in the pumped well will be monitored in the event that it drops enough to make it necessary to reduce the discharge rate and/or lower the tubing. It is important that the entire water column volume be evacuated prior to sampling. The tubing will be set at the pumping water level and just prior to completion of the evacuation, the tubing will be lifted or the discharge increased so that suction is broken. The entire column of water will thus be removed from the well. Three to five times the calculated volume of water in the well will be removed so that the sample subsequently collected will be representative of the zone screened. The volume of standing water in each well will be calculated by subtracting the depth to water from the sounded depth of the well. This number will then be multiplied by a coefficient which relates the diameter of the well to gallons per linear foot to obtain the volume of standing water in the well.

4.6 Collection of Groundwater Sample

After a well has been evacuated, a groundwater sample will be collected with a disposable, bottom-filling bailer. The bailer will be lowered slowly so that the water surface is minimally disturbed. Water will enter the bailer through a hole in the bottom end plug and will be prevented from draining out by an inert ball check-valve. A polypropylene rope will be used to raise and lower the bailer, and the cord will be discarded after each well sampling event. The bailer will not come in contact with any surfaces outside of the well casing. Sampling personnel will wear a new pair of disposable gloves for each well sampled and when handling a clean bailer.

4.7 Filling the Containers

The containers will be inspected to ensure that they are the correct type and number, and if required, have the correct preservative. The labels will then be properly filled out and affixed to the containers. Water samples will be carefully poured into the containers, avoiding agitation or turbulence, which might result in loss of VOCs and/or excessive oxygenation of the samples. Care will also be exercised to avoid breakage and to eliminate the entry or contact of, any substance with the interior surface of the bottles, vials, or caps, other than the water sample being collected. Caps will not be removed until the actual sampling time and then just long enough to fill the container. The containers for volatile organic analyses will be topped off to eliminate any headspace or air bubbles and will be tightly closed with Teflon-lined septums held in place by open-top screw caps. The sample bottles will be prepared with appropriate preservatives prior to sampling, and the sample containers will be kept cool, dust-free, and out of the sun. The procedures that ARCADIS personnel will follow to collect groundwater samples are described below:

1. All containers will be labeled, marked according to project, well, date, etc., and wrapped with clear tape.

2. Clean gloves will be worn by personnel when they are handling a clean bailer.

3. The bailer will be placed on clean plastic sheeting. An appropriate length of new polypropylene cord will be attached to the bailer using a secure knot.

4. The bailer will be lowered into the well and into the water column gradually to minimize turbulence. The bailer will be allowed to sink and become fully submerged. Water from the first bailer will be discarded as a final rinse prior to sampling.

5. The 40 milliliter (ml) vials for VOCs will then be filled in such a manner as to ensure that there are no air bubbles.

6. After volatile organic samples have been collected, field parameters will be analyzed from the next water sample. The remaining sample containers will be filled in the order of the parameter's volatilization sensitivity.

7. The pH, specific conductance, ORP, dissolved oxygen, and temperature measurements, if required, will be taken after the meters have been calibrated, as necessary.

8. The well cap will be closed and the well will be locked.

9. Groundwater samples will be packed on ice in a cooler. The ARCADIS Water Sampling Log form and ARCADIS Chain-of-Custody form will be completed. Samples will be delivered or shipped to the laboratory within 24 hours after sample collection and the receiver's signature will be obtained on the Chain-of-Custody form.

10. The cord, gloves, bailer and sheeting will be discarded in a proper manner.

5. Field Analysis

If required, measurements for temperature, pH, ORP, dissolved oxygen, and specific conductance will be made in the field at the time of groundwater sampling because these properties change during sample storage. Field measurements will be recorded on the ARCADIS Water Sampling Log (see Appendix J) to track QA/QC protocols.

6. Quality Control

Quality-control (QC) samples will be used to monitor sampling and laboratory performance. The types of QC samples that will be included in this investigation are replicates and blanks. To ensure unbiased handling and analysis by the laboratory, the identity of QC samples will be disguised by means of coding so that the laboratory does not know which samples are included for QC purposes. Detailed QC procedures are outlined in the Quality Assurance Project Plan (QAPP).

6.1 Replicate Analyses

Replicate samples are samples collected from the same well and are identical within the limits of normal concentration fluctuations. Collection and analysis of such samples allow a check to be made on laboratory reproducibility. Five percent of all groundwater samples collected at this site will be replicated. The procedures to be used for taking replicate samples are discussed below.

When collecting samples for volatile organic compound (VOC) analysis, the water from the bailer will be distributed first to fill one VOC container and then to fill the second VOC container. Adequate water will be available to fill the bottles completely before they are capped. For other analytes, the bailer of water will be split to fill portions of each sample container until the containers are filled.

6.2 Blanks

Trip blanks will be incorporated into this field investigation. A trip blank is a sample composed of organic-free water (prepared by the laboratory) which is filled in the laboratory and travels unopened with the sample bottles. It is analyzed along with the field samples for the constituents of interest. Analysis of trip blanks detects whether samples have been contaminated by VOCs as a result of handling in the field, during shipment, or in the laboratory. One trip blank will accompany each day's shipment of water samples to the laboratory for VOC analysis. If multiple coolers of samples are shipped, a trip blank will be placed in each cooler.

7. Record Keeping

All ARCADIS personnel involved in sample collection will carefully document the handling history of all groundwater samples and blanks collected. Standard ARCADIS forms (see Appendix J) will be completed to document the integrity of each sample from the time the sampling team enters the site through sample collection and shipment.

7.1 Daily Log

Daily logs will be used by the field team for QA/QC purposes to record all sampling events and field observations. Entries in the daily logs will be dated by the person making the entry, and the logs will be kept in a secure, dry place. The following types of information will be included on the daily logs:

1. Date and time of arrival at site.

2. Client identification number.

3. Location.

4. Weather.

5. Sampling team members.
6. Work progression
7. QC samples.
8. Departure time.
9. Delays.
10. Unusual situations.
11. Well damage.
12. Departure from established QA/QC field procedures.
13. Instrument problems.
14. Accidents.

7.2 Well Sampling Log

The sampling team will prepare an ARCADIS Water Sampling Log for QA/QC purposes (see Appendix J) at the time of sampling to record information about each sample collected. In addition to project information and well evacuation data, the log includes the following information on sampling:

1. Date and time of sampling.
2. Well evacuation data.
3. Physical appearance of samples.
4. Field observations.
5. Results of field analyses.
6. Sampling method and material.

7. Sample parameters.

8. Sample container and preservation.

9. Sampling personnel.

7.3 Sample Labels and Chain-of-Custody Form

Sample labels are necessary for proper sample identification. The labels will be affixed to the sample containers prior to the time of sampling and will not be affixed to lids or caps. To track QA/QC handling protocols the labels will be filled out by sampling personnel and the ARCADIS Chain-of-Custody form will be completed in the field before the sampling team leaves the site. Labels will include sample identification, project number, date and time collected, analyses to be performed, and pH adjustment information where required.

The sampling team will be responsible for maintaining custody of the samples until they are delivered to the carrier or the laboratory. The Chain-of-Custody form will then be signed and custody formally relinquished. The containers (bearing custody seals) will be in view at all times or will be stored in a secure place restricted to authorized personnel. Chain-of-Custody procedures are discussed in more detail in Appendix I.

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Appendix E

Surface-Water/Sediment
Sampling Protocol

1. Sample Collection - General

Sampling will not be conducted under adverse weather conditions, specifically during precipitation. The sampling stations will initially be evaluated by the sampling team to determine access and field conditions at the time of sampling. Any conditions which will interfere with the execution of sampling the manner described herein will be reported to the Project Manager.

Sampling will proceed from downstream locations to upstream locations. A suitable work area will be set up as close to the sampling station as possible. Plastic sheeting will be spread on the ground as a work surface for the sampling equipment.

The sampling team will be supplied with water-proof outer garments. Personnel will wear neoprene, nitrile or rubber boots which have been thoroughly decontaminated. Decontamination will consist of a laboratory grade detergent, potable water rinse and final rinse with distilled water. The location of the sampling station and the sample designations will be described on the ARCADIS Water Sampling Log. Other pertinent data including weather conditions and flow conditions will be recorded.

2. Surface-Water Sampling

2.1 Sampling Procedure

The station number where the sample is to be taken and sample designation will be recorded on the Water Sampling Log. Dedicated disposable pre-washed glass flasks supplied by the laboratory will be used to obtain the water samples. Care will be taken to avoid contact of the flask with any potential contaminants after its protective wrapping is removed. If enough water is present, the surface water will be sampled by lowering the flask from the surface to the bottom at an even speed, so that water enters the bottle from each depth yielding an integrated sample. Otherwise, as much water as possible will be collected into the flask by positioning the mouth of the flask in the upstream direction. Sampling team members will always position themselves downstream of the sample point, and will take care not to stir up sediment or soils when collecting the water samples. The sample will be transferred from the flask directly into the sample containers.

Sampling personnel will wear disposable plastic gloves during handling of sampling equipment and containers. The gloves will be disposed after sampling is completed at each station.

Sample shipment and documentation will be in accordance with Appendix I Chain-of-Custody Procedures.

2.2 Field Analyses

After the laboratory containers are filled, an additional sample will be collected in a clean, unpreserved glass container and its color, odor and appearance will be noted. The pH, temperature, turbidity, and specific conductance of the sample will be measured. Temperature will be measured immediately after collection of the sample in order to calibrate the pH and specific conductance meters.

pH will be measured with a glass hydrogen-ion electrode compared against a reference electrode of known potential by means of a pH meter. Calibration of the pH meter will be completed before analysis with two buffer solution standards bracketing the sample pH (nominal values of 4 and 7 or 7 and 11). Before a measurement is made, the probe will be completely rinsed with deionized or distilled water. The probe will be lowered into the sample and gently stirred and allowed to equilibrate. The pH will be recorded as soon as the reading on the meter equilibrates. Between measurements the probe will be rinsed with deionized or distilled water. The pH meter will be calibrated frequently during the sampling round to ensure accurate and precise measurements.

Specific conductance will be measured with a battery-powered specific conductance meter. The instrument will be adjusted to the temperature of the sample. The probe will be lowered into the sample and the reading taken within seconds after immersion. Before each sampling event, the probe will be rinsed with deionized or distilled water. The specific conductance meter will be calibrated frequently to ensure accurate and precise measurements. The field analyses and sample descriptions will be recorded on ARCADIS Water Sampling Log.

3. Sediment Sampling

Equipment: Small diameter solid probe, Stainless-Steel hand driven T-handle core sampler, sediment baskets for sampler, PVC or stainless-steel sleeve of at least 2-inch greater diameter than sampling device, alconox detergent, 10% HNO_2 solution, three spray bottles, measuring tape, large plastic cooler with ice, four 1-gallon plastic containers for in-field waste liquid disposal.

1. Prior to sampling, all equipment should be thoroughly cleaned with a laboratory grade detergent, and then rinsed three times with de-ionized (DI) water. Stainless steel sampling equipment should then be sprayed with 10% HNO_2, and finally rinsed with DI.

2. Upon reaching the sampling location, the depth of sediments should be probed with the solid rod in a location near (but down stream) where the samples will be collected from.

3. The PVC sleeve or stainless-steel tube should be set through the water column firmly into the sediment.

4. The hand-driven sampling apparatus should be assembled and it should be ensured that the sediment basket is properly inserted.

5. The sampler should be inserted into the sleeve and the driving apparatus connected.

6. The sampler should then be driven to collect the sediment from the first 6 inches of sediment in the bottom of the stream.

7. Advance the sleeve to the approximate depth of the leading edge of the sampling device.

8. Carefully remove the sampling device from the hole by turning the tube in a twisting motion to break the connection between the sediments in the tube and the underlying material.

9. Open the sampling device and record a description of the sediments on the sample log-sheet then place the appropriate sediments into the sample containers and preserve accordingly.

10. Decontaminate the sample probe.

11. Repeat as necessary to collect the number of samples specified in the field sampling plan.

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Appendix F

Surface Soil and Waste Material Sampling Protocol

1. Surface Soil and Waste Material Sampling Protocol

Surficial soil samples will be collected from the upper 2 inches of soil using a pre-cleaned trowel or spade. Vegetation will be removed from the designated sampling area. A sufficient number of discrete grab samples will be collected for the required sample volume.

Sampling personnel will wear disposable gloves during the handling of sampling equipment and sample containers. Sampling equipment will be decontaminated before use and between sample locations.

Samples for chemical analysis will be packaged as efficiently and expeditiously as possible. If sample recovery is insufficient, a second core or trowel will be retrieved as close to the original location as possible. Samples will be transferred directly to the sample containers.

A representative sample will be retained and examined by the field hydrogeologist. The description will be recorded along with the other pertinent sampling information on an ARCADIS. Sample/Core Log. The sample will be screened with a photoionization detector at the time of examination. The meter will be calibrated and used in accordance with Appendix H, Field Instrumentation Operating Procedures.

An equipment blank will be collected to assess the decontamination procedures used during sample collection. The sample will be prepared by pouring organic-free water over the trowel (which has been decontaminated and is ready for sampling) and then into the sampling container(s). One equipment blank will be incorporated into the sampling program for each day's collection of samples and will be analyzed for the same suite of constituents as the soil samples. Blank analyses are discussed in more detail in the QAPP.

The sampling team will be responsible for maintaining custody of the samples until they are delivered to the carrier or the laboratory. The Chain-of-Custody form will then be signed and custody formally relinquished. The containers (bearing custody seals) will be in view at all times or will be stored in a secure place restricted to authorized personnel. Chain-of-Custody procedures are discussed in more detail in Appendix I

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Appendix G

Geophysical Logging

1. Geophysical Logging

A geophysical study will be conducted using EM-31 and EM-61 frequency domain electromagnetic methods (EM). This done by inducing electrical currents in the subsurface by electromagnetic waves generated on the surface. The geophysical surveys will be used to first identify any metallic properties in the subsurface. A second survey will be preformed to determine changes in electrical conductivity from difference in soil types, disturbances etc. that could result from waste disposal. The field work will be preformed by a subcontractor with oversight provided by ARCADIS to ensure accuracy and safety.

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Appendix H

Field Instrumentation Operating Procedures

1. Field Instrumentation Operation Procedures

Field instruments used during the investigation will be calibrated and operated in accordance with the following standard operating procedures and with the manufacturers' instructions.

1.1 Air Monitoring Equipment

- A photoionization detector (PID) with a 11.7 electronvolt (eV) lamp will be used on a semi-continuous basis during intrusive field operations (drilled, sampling, etc.).

- Calibration of the instrument shall be performed on-site prior to use on a daily basis. The calibration gas will consist of a supply of zero air and mixture of 100 parts per million (ppm) isobutylene and air. The calibration procedure is detailed in the manufacturer's instructions.

1.2 Field Analysis Instruments

Field analysis of groundwater may include measurements of pH, temperature, ORP, dissolved oxygen, and specific conductance. Field instruments for the measurement of pH and specific conductance will be calibrated with standard solutions prior to sampling. Calibrations will be recorded in the field book.

Appendix I

Chain-of-Custody Procedures

1. Chain-of-Custody Procedures

1. The field personnel will be responsible for maintaining custody of the samples until they are delivered to the overnight common carrier or courier for shipment to the laboratory. All samples shipped to a laboratory will be accompanied by the ARCADIS Chain-of-Custody Record (see Appendix J). The Chain-of-Custody Record will be completed in the field; the original form will accompany the shipment, and a copy will be retained by the field hydrogeologist in the field project file.

2. A separate Chain-of-Custody Record will be filled out for the contents of each shipment container (cooler). The form will be placed in a plastic bag and taped to the underside of the lid of the cooler.

3. To provide a means of detecting any potential tampering during shipment, all shipment containers (coolers) will be affixed with signed sample seals. Two seals will be affixed to each cooler on opposite ends. In addition, a 2-inch wide transparent tape will be wrapped entirely around the cooler.

4. If the shipment is sent by common courier, an air bill or bill of lading will be used. Receipts from courier, air bills, and bills of lading will be retained in the field project file.

The chain of custody must include at a minimum the following information:

- Project number.
- Project name.
- Laboratory name.
- Sampler(s) name.
- Unique Sample Identification.
- Sample collection time and date.
- Sample type (water, soil, etc.).
- Sample bottle/container description.

- Analyses to be performed.
- Number of containers per analysis.
- Signature spaces for persons controlling and releasing sample possession.
- Sample delivery method.

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Appendix J

ARCADIS Field Forms/Logs

1. ARCADIS Field Forms/Logs

The following Forms and Logs are presented in Appendix J:

- Groundwater Sampling Forms;
- Soil Log / Test Pit Forms;
- Well Construction Log;
- Standard Chain of Custody Form;
- Tailgate Health and Safety Log.

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Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0001	Page	1 of
Site Location	St. Paul, MN			Date	
Site/Well No.		Replicate No.		Code No.	
Weather		Sampling Time:	Begin	End	

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	
Depth to Water (ft bmp)	
Water-Level Elevation (ft)	
Water Column in Well (ft)	
Casing Diameter/Type	
Gallons in Well	
Gallons Pumped/Bailed Prior to Sampling	
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin end
Pumping Rate (gpm)	
Evacuation Method	

Field Parameters

Color	
Odor	
Appearance	
pH (s.u.)	
Conductivity (mS/cm)	
(µmhos/cm)	---
Turbidity (NTU)	---
Temperature (°C)	
Dissolved Oxygen (mg/L)	
ORP (mV)	
Sampling Method	
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOC 465F Method 8260	40 mL VOA	3	HCl
SVOC Method 8270	1L Amber	2	None
RCRA Metals (Method 6010)	500 mL Plastic	1	HNO_3
PCBs (Method 8082)	1L Amber	2	None

Sampling Personnel

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

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Unconsolidated Boring Log

Boring/Well	
Project Number	MN000591.0001
Client Name	Ford Motor Co.
Site Location	St. Paul, MN
Date	
Prepared by	
Start Time and Date	
Finish Time and Date	
PID or FID with Lamp Size	PID 11.7 eV
Calibration Gas/Time/Results	

Boring Location Sketch

Drilling Contractor	
Driller & Helper	
Drilling Method	Hollow Stem Augers
Sampling Interval	Continuous
Hammer Weight	
Drop Height	
Total Depth Drilled	
Borehole Diameter	8 1/4 inches
Drilling Fluid Used	
Sample Device	Split Spoon
Dimensions	2 in. X 24 in.

A	B	C	D	E	F	G						
Sample Time	Sample ID & Type	Sample Interval (ft bls)	Sample Core Recovery (ft)	Blow Count	PID (ppm)	1 Density/ Consistency	2 Soil Color	3 Grain Size Modifier	4 Grain Size	5 Secondary Characteristics	6 Moisture Content	7 to 9 Remarks and Other Characteristics

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Unconsolidated Boring Log

Boring/Well		Site Location	St. Paul
Project Number	MN000591.0001	Date	
Client Name	Ford Motor Company	Prepared by	

A	B	C	D	E	F	G						
Sample Time	Sample ID & Type	Sample Interval (ft bls)	Sample Core Recovery (ft)	Blow Count	PID (ppm)	1 Density/ Consistency	2 Soil Color	3 Grain Size Modifier	4 Grain Size	5 Secondary Characteristics	6 Moisture Content	7 to 9 Remarks and Other Characteristics

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Sample/Core Log

Boring/Well _____ Project/No. _____ Page ____ of ____

Site Location _____ Drilling Started _____ Drilling Completed _____

Total Depth Drilled _____ Feet Hole Diameter _____ inches Driller _____ Helper _____ Type of Sample/ Coring Device _____

Length and Diameter of Coring Device _____ Hammer Weight _____ Hammer Drop _____ ins. Sampling Interval _____ feet

Land-Surface Elev. _____ feet ☐ Surveyed ☐ Estimated Datum _____

Drilling Fluid Used _____ Drilling Method _____

Drilling Contractor _____ Prepared By _____

Depth (Feet)	Time	Sample/ Run No.	Sample Interval/ Type	Time/Hydraulic Pressure or Blows per 6 Inches		Core Recovery (feet)	N Value/ RQD	PID/FID	USCS	Sample/Core Description	Sketch

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Sample/Core Log (Cont.d)

Boring/Well _____ Page ____ of ____

Prepared by _____

Depth (Feet)	Time	Sample/ Run No.	Sample Interval/ Type	Time/Hydraulic Pressure or Blows per 6 Inches		Core Recovery (feet)	N Value/ RQD	PID/FID	USCS	Sample/Core Description	Sketch

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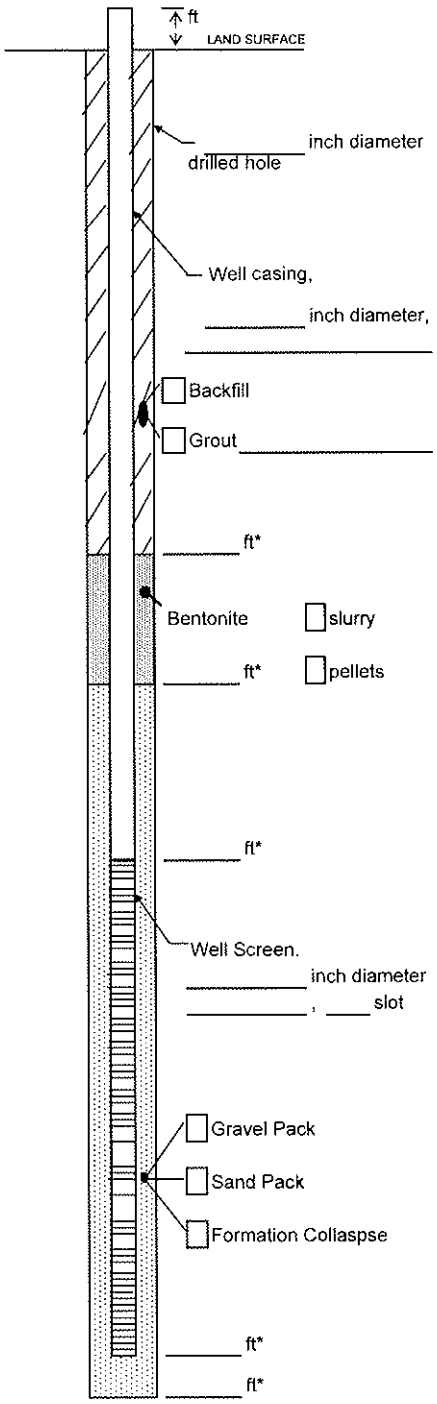
Well Construction Log

(Uncolsolidated)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

* Depth Below Land Surface

Project Ford Well

Town/City St. Paul

County Ramsey State MN

Permit No.

Land-Surface Elevation and Datum:

feet ☐ Surveyed

☐ Estimated

Installation Date(s)

Drilling Method

Drilling Contractor

Drilling Fluid

Development Technique(s) and Date(s)

Fluid Loss During Drilling gallons

Water Removed During Development gallons

Static Depth to Water feet below M.P.

Pumping Depth to Water feet below M.P.

Pumping Duration hours

Yield gpm Date

Specific Capacity gpm/ft

Well Purpose

Remarks

Prepared by

TestAmerica
ANALYTICAL TESTING CORPORATION

CHAIN OF CUSTODY RECORD

☐ Nashville, TN ☐ Dayton, OH ☐ Indianapolis, IN
☐ Orlando, FL ☐ Watertown, WI
☐ Cedar Falls, IA ☐ Pontiac, MI

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?

Compliance Monitoring? Yes No

Enforcement Action? Yes No

Client Name/Account #: _____

Address: _____

City/State/Zip: _____

Project Manager: _____

Telephone Number: _____ **Fax No.:** _____

Sampler Name: (Print) _____

Sampler Signature: _____

Report To: _____

Invoice To: _____

TA Quote #: _____

Project ID: _____

Project #: _____

Sample ID / Description	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Ice	HNO_3 (Red Label)	HCl (Blue Label)	NaOH (Orange Label)	H_2SO_4 Plastic (Yellow Label)	H_2SO_4 Glass(Yellow Label)	None (Black Label)	Other (Specify)	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	Analyze For:										RUSH TAT (Pre-Schedule)	Standard TAT	Fax Results	Send QC with report

Special Instructions:

Method of Shipment: FEDEX

Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time

Laboratory Comments:

Temperature Upon Receipt:

VOCs Free of Headspace? Y N

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Site Activities Tailgate Safety Briefing Sign-in Log

Project Number:	Project Name:	
Date:	Time:	
Briefing Conducted by:	Signature:	Company:

This sign-in log documents the tailgate briefing conducted in accordance with the HASP. Personnel who perform work operations on Site are required to attend each briefing and to acknowledge receipt of each briefing, daily.

TOPICS COVERED (check all those covered):

- ☐ General PPE Usage
- ☐ Hand Tool Use
- ☐ Power Tool Use
- ☐ Hearing Conservation
- ☐ Respiratory Protection
- ☐ Personal Hygiene
- ☐ Exposure Guidelines
- ☐ Decon Procedures
- ☐ Traffic Safety
- ☐ Lockout/Tagout
- ☐ Smoking, Eating, Drinking, Chewing Prohibitions
- ☐ Slips, Trips, Falls
- ☐ Heat Stress
- ☐ Cold Stress
- ☐ Site Control
- ☐ Work Zones
- ☐ Excavation Safety
- ☐ Confined Space
- ☐ Changes to the HASP
- ☐ Initial Review of Hazard Evaluation (Section E of the H&S Plan)
- ☐ Emergency Procedures include route to hospital
- ☐ JSA(s) reviewed (specify): _____
- ☐ Other Topics (specify): _____

Personnel Sign-in List

Printed Name	Signature	Company Name

Amendment 1- Appendix K

Direct Push Drilling, Subsurface Soil Sampling Protocol, and Temporary Monitoring Well Installation / Sampling

Field Sampling Plan

September 14, 2007

Direct Push Drilling, Subsurface Soil Sampling Protocol, and Temporary Monitoring Well Installation/Sampling

1. Direct Push Soil Borings

The direct push soil borings method will be utilized for the drilling of soil borings at locations where the anticipated geology would deem this technique applicable. An ARCADIS field inspector will be present at the operating drill rig and will be responsible for the collection and logging of soil samples, monitoring of drilling decontamination operations, recording of groundwater data, deciding on final drilling depths (in consultation with the project manager), and preparing the boring logs. Additionally, the field inspector will maintain a log recording daily events, including arrivals and departures at the site by any and all personnel and equipment, and times of work start-up and stoppage. The forms to be used by the field inspector as part of the Quality Assurance/Quality Control (QA/QC) measures of the project are included in Appendix J.

This drilling technique involves pushing a 48 inch or 60 inch core barrel into the subsurface. The core barrel is lined with an open ended sample liner. The tip of the core barrel contains a cutting shoe and is open at the leading end. The leading end is driven hydraulically into the ground and then pulled back to retrieve the sample. A new liner is placed in the tube, additional core barrel is attached and the core barrel is advanced down the existing hole. If the soil is not stable, a retractable drill point will be placed on the tip of the cutting shoe. The point is held in place by a 1.25 inch outer diameter (OD) center rod. Once the rod has reached the appropriate sample depth, the center rod is removed and the core barrel is advanced. The core sample is then removed by pulling out of the hole and the point is retrieved from the top of the sample. This is completed until the total depth of sampling is reached.

Dual tube direct push technique can also be used if soil conditions deem it necessary. Dual tube consists using two sets of probe rods to retrieve a continuous soil core. This is comprised of a larger diameter (3.25 inch OD) outer casing and a smaller diameter (1.75 – 1.85 inch OD) core barrel with liner. The tooling is advanced into the subsurface. The inner rods are removed and the sample core is then retrieved leaving the outer casing in place. A new sample sheath and liner are placed back in the outer casing and an additional larger diameter is placed on the string. The rods are advanced further into the subsurface and the core sample is extracted as described above. If necessary a retractable drive tip will be placed on the tip of the inner core barrel to allow the rods to be driven through a pre-cored boring or undisturbed hole to the desired depth.

If any problems are encountered or questions arise during the field investigations that are beyond the scope of expertise/responsibility of the field inspector, she/he will temporarily halt all field activities in order to confer with the project manager. In this way, a technically sound decision will be made by several experienced individuals.

2. Formation Sampling

Core Barrel Sampling

Core barrel soil samples of unconsolidated sediments will be collected in 4-foot or 5-foot intervals from land surface to the total depth of drilling. These samples will be collected through the sample liners. A core barrel sampler, which is 48 inches or 60 inches long and 1.75 to 3 inches in diameter, will be used for sampling. Actual sizes will depend on the tooling of drilling contractor. Drill cuttings will be examined in 2-foot intervals throughout the entire depth of the hole.

The collected core barrel soil samples will be described, cataloged and retained by the on-site field inspector. It is the responsibility of the field inspector to ensure that between sample collections, the sampling device is cleaned according to the protocol outlined previously. In this way, if contamination is encountered at one elevation in the borehole, it will not be transferred to lower elevations in the borehole. A detailed soil sampling protocol is as follows:

1. The cleaned core barrel sampler will be given to the driller (or helper), by the ARCADIS field inspector who will make sure that the individual is wearing clean, disposable gloves.

2. The core barrel sample with liner will then be collected by the driller.

3. The ARCADIS field inspector will obtain the sample liner from the driller and will place it on clean polyethylene sheeting.

4. The liner will be opened by cutting the liner down the length of the liner to expose the sample.

5. The sample will be screened for volatile organic compound (VOCs) as discussed below.

6. The ARCADIS Sample/Core Log will be filled out as discussed below.

7. The sampling equipment will be cleaned as previously described.

After collection, core barrel samples of unconsolidated material will be visually identified by the field inspector using the USCS classification System. The information recorded on the sample/core log by the field inspector will include:

- Soil sample interval
- Amount of sample recovered
- Sample color
- Sample texture
- Sample moisture content
- Organic vapor readings
- Unusual characteristics
- Depth to water
- Drill rig behavior and penetration rate

An example sample/core log is present in Appendix J.

3. Analytical Sampling

3.1 Field Screening

Each core barrel soil sample collected will be screened with a Photo-ionization Detector (PID). The information will then be recorded on the ARCADIS Sample/Core Log. Calibration procedures for the PID are in Appendix H.

3.2 Laboratory Analysis

A subset of soil samples may be containerized and submitted for laboratory analysis. The analytical parameters for each boring location are presented in the work plan. Soil samples will be transferred to clean, laboratory-supplied containers, preserved in

accordance with the applicable analytical methodology, labeled, and placed in a cooler with ice.

3.3 Sample Labels and Chain-of-Custody Form

Sample labels are necessary for proper sample identification. The labels will be affixed to the sample containers prior to the time of sampling and will not be affixed to lids or caps. To track QA/QC handling protocols the labels will be filled out by sampling personnel, and the ARCADIS Chain-of-Custody form (see Appendix J) will be completed in the field before the sampling team leaves the site. Labels will include sample identification, project number, date and time collected, and analyses to be performed.

The sampling team will be responsible for maintaining custody of the samples until they are delivered to the carrier or the laboratory. The Chain-of-Custody form will then be signed and custody formally relinquished. The containers (bearing custody seals) will be in view at all times or will be stored in a secure place restricted to authorized personnel. Chain-of-Custody procedures are discussed in Appendix G.

4. Groundwater Sampling

Groundwater samples may be collected from discrete intervals within the designated direct push soil boring locations. Groundwater samples are collected using a standard one-inch temporary PVC well. New, clean temporary wells will be constructed for each designated boring. Dedicated polyethylene tubing will be lowered into the water column, and attached to a peristaltic pump, and the groundwater sample will be collected. In an attempt to minimize turbidity, every effort will be made to remove a minimum of one gallon of groundwater before the analytical sample is collected. In low yielding formations (till), this amount may not be achievable. Groundwater samples will be collected in laboratory containers, labeled and placed in an ice-filled cooler. Samples will be collected according to volatilization sensitivities. Sample shipment and chain-of-custody procedures will be followed according to procedures outlined in Appendix I.

5. Decontamination

The drilling casings, rods, samplers, tools, water tanks, drilling rig, and any piece of equipment that can come into contact (directly or indirectly) with the formation will be decontaminated on-site prior to set up for drilling. Decontamination protocols will also

be followed between boreholes (at a fixed on-site location) and before leaving the site at the end of the project. The on-site decontamination activities will be monitored by the ARCADIS field inspector.

Equipment used to sample unconsolidated sediments (e.g. core barrel samplers, stainless-steel spatulas) will be decontaminated prior to each sample collection. Disposable gloves will be worn while equipment is cleaned to avoid contamination and the gloves will be changed frequently. The procedure for cleaning this equipment is as follows:

1. Prepare a 2-percent solution of laboratory grade detergent and distilled water in a bucket.

2. Disassemble the core barrel sampler and immerse the parts and spatula in the laboratory grade detergent solution.

3. Scrub equipment in the bucket with a brush to remove any adhering particles.

4. Rinse the equipment with copious amounts of distilled water.

5. Place clean equipment on a clean polyethylene sheet.

6. Reassemble the cleaned core barrel sampler.

7. Transfer the core barrel sampler to the driller (or helper) and make sure that this individual is wearing clean, disposable gloves.

All collected decontamination water will be collected and sampled. Based on the results of the laboratory analysis, the decontamination water will be disposed on site or sent off-site for disposal

Amendment 1- Appendix D

Groundwater Sampling Protocol

Field Sampling Plan

December 18, 2007

1. Field Filtered Groundwater Samples

Groundwater samples that are collected for dissolved metals will be field filtered using a clean 0.45 micron disposable filter for each well. For wells that are purged and sampled using a bailer the groundwater collected will be transferred to a clean 1000 mL beaker at each well. A plastic disposable 60 mL syringe will be used to push the water through the filter into the appropriate bottle

For wells that are purged and sampled using a Grundfos™ pump, water will be pumped through the 0.45 micron disposable filter and into the appropriate bottle. The filter will be connected one half inch poly tubing from the pump utilizing Masterflex™ tubing.

ARCADIS

Amendment 3

Field Sampling Plan dated
June 18, 2007

Amendment Dated
January 23, 2008

1. Sample Nomenclature

Location: A sample designation system has been development and implemented to identify samples for laboratory analyses. Each location has a unique sample location name. Since other sample nomenclature has already been developed, excavation confirmation location samples completed by ARACDIS in the same manor and will start with an A, followed by an E and number to designate the excavation area. Following the E, the letters CS and a three digit number shallow follow to provide a unique identifier for each sample location. The following will be a sample prefix designation that will be employed at TCAP to identify excavation confirmation soil samples:

A_E01_CS ARCADIS Excavation Area Confirmation Sample

For example, a confirmation sample collected from excavation area 1 on January 23, 2008 would be labeled: A_E01_CS-001 (20080123)

1. Sample Nomenclature

Location: A sample designation system has been development and implemented to identify samples for laboratory analyses. Each location has a unique sample location name. Since other sample nomenclature has already been developed, excavation confirmation location samples completed by ARACDIS in the same manor and will start

with an A, followed by an SP and number to designate the seep sample area. Following the SP, a two digit number shall follow to provide a unique identifier for each sample location. The following will be a sample prefix designation that will be employed at TCAP to identify excavation confirmation soil samples:

ASP-01 ARCADIS Seep Sample

For example, a seep sample collected from seep area 1 on April 25, 2008 would be labeled: ASP-01 (20080425)

2. Seep Sampling Procedure

Sampling will not be conducted under adverse weather conditions, specifically during precipitation. The sampling stations will initially be evaluated by the sampling team to determine access and field conditions at the time of sampling. Any conditions which will interfere with the execution of sampling the manner described herein will be reported to the Project Manager.

Sampling will proceed from shallow lithology to deeper lithology. A suitable work area will be set up as close to the sampling station as possible. Plastic sheeting will be spread on the ground as a work surface for the sampling equipment.

The location of the sampling station and the sample designations will be described on the ARCADIS Water Sampling Log. Other pertinent data including weather conditions and flow conditions will be recorded.

2.1 Sampling Procedure

The station number where the sample is to be taken and sample designation will be recorded on the Water Sampling Log. Dedicated disposable pre-washed beakers will be used to obtain the water samples. Care will be taken to avoid contact of the beaker with any potential contaminants after its protective wrapping is removed. If enough water is present, the seep water will be sampled by funneling the water from the seep to the beaker. Sampling team members will always position themselves away from the sample point, and will take care not to stir up sediment or soils when collecting the water samples. The sample will be transferred from the beaker directly into the sample containers.

Sampling personnel will wear disposable plastic gloves during handling of sampling equipment and containers. The gloves will be disposed after sampling is completed at each station.

Sample shipment and documentation will be in accordance with Appendix I Chain-of-Custody Procedures.

2.2 Field Analyses

After the laboratory containers are filled, an additional sample will be collected in a clean, unpreserved glass container and its color, odor and appearance will be noted. The pH, temperature, oxidation-reduction potential, and specific conductance of the sample will be measured using a mutli-paramter probe. The mutli-paramter probe will be calibrated prior to analysis. The multi-parameter probe will be deconed in between each seep sample with deionized or distilled water. The field analyses and sample descriptions will be recorded on ARCADIS Water Sampling Log.

1. Location and Sample Nomenclature (Revision 1.0)

Location: A sample designation system will be used to identify samples for laboratory analyses. A list of identifiers used for each sample will be maintained in the project logbook by the ARCADIS Field Team Leader.

Each location will have a unique sample location name. Since soil borings and monitoring wells have previously been completed at the site, investigative locations completed by ARCADIS will start with A, followed by a one to two letter designation to describe the type of sample. A four digit number and up to two letter designation will then follow to provide a unique identifier for each sample location. The first set of two numbers will designate the Focus Area of the boring, and the second set of two numbers will give the sequential designation. For delineation locations, the letters represent the direction from the original boring location. The following are sample prefex designations that will be employed at TCAP to identify sample locations.

ASB — Soil Boring

AMW- Monitoring Well

AHA – Hand Auger Boring

ASD – Sediment Location

AS – Surface Soil Location

AWS -Wipe Sample Location

ST – Sheen Test

Samples: Each sample that is collected will be designated by a unique sample identification number. The first part of the identifier will correspond to the location and the second part of the sample by the sample depth (if applicable) and the sample date. For example, a soil sample collected within Focus Area 1 from soil boring 1 from 4-6' on July 25, 2013 would be labeled: ASB-0101_4-6 (20130725). A water sample collected from this location would be referenced by ASB-0101_7-12 (20130725). The screened interval of the temporary well will also be noted in the field book. Repetitive sampling points, such as samples collected from groundwater monitoring wells, will be suffixed by the date collected.

Equipment blanks and trip blanks will be unique and identified by their associated prefix numbered sequentially (to differentiate between multiple samples collected on the same date), and suffixed by the date. The ARCADIS sampler will note each equipment blank and its corresponding sampling equipment in the field book.

EB - Equipment Blank	Ex. EB (20130725)
TB- Trip Blank	Ex. TB (20130725)

In the event that one or more EB or TB samples are collected on the same date, a number will be suffixed after the sample name. Ex. EB-01 (20130725)

Field duplicates will be identified with a unique sample identification number; such that the laboratory will not be aware that the sample is a duplicate (duplicates will be numbered sequentially). The ARCADIS Field Team Leader will note in the logbook where the duplicate samples were collected so this information will be available when the laboratory data is reviewed

DUP – Duplicate Sample Ex. DUP-001

Unlike the other quality assurance samples, MS/MSD samples are not separate samples; therefore, they are not assigned unique sample numbers. The only difference between a MS/MSD sample and a standard sample is that additional sample volume is collected at the location where the MS/MSD sample is obtained. These samples will be identified by adding a "MS" and "MSD" to the identifier of the sample where the MS/MSD sample is collected.

APPENDIX G

Standard Operating Procedures

EXECUTIVE SUMMARY

Damaging an underground or above ground utility can result in serious injury and loss of life, disrupt essential services, and create significant liability to ARCADIS, clients and subcontractors. Therefore, it is ARCADIS' policy that the following steps be completed prior to beginning any subsurface intrusive work:

- The presence of existing or known utilities will be investigated and cleared (to the extent feasible) by locating, marking, and, where appropriate, visually verifying (potholing) before the start of any subsurface intrusive work.
- A minimum of **three (3) reliable lines** of evidence are required for an acceptable utility clearance. Each location of subsurface intrusive work must have at least 3 reliable lines of evidence. All lines of evidence used during the utility clearance procedure will be recorded on the Utility and Structures Checklist of equivalent client provided checklist or permit. If a line of evidence is lost or not apparent, STOP WORK, and reestablish the line of evidence prior to resuming subsurface intrusive work. The Utility Structures and Checklist is valid for 15 business days from the date of completion.
- The lines of evidence used will be reasonable and appropriate for the conditions expected to be encountered (soil type, water table, etc.) and the type of utilities expected to be encountered (e.g., gas line versus an irrigation line).
- Contact the State One Call or equivalent service (Nationwide "811") as required by law. The State One Call or equivalent service (Nationwide "811") can only be used as a reliable line of evidence when working within the public right of way or easement.
- For point clearance (single intrusive point, used as 1 of the 3 required reliable lines of evidence) the borehole must be cleared to 110% of the diameter of the intrusive device (i.e. auger, drill head, etc.) or an additional 2 inches of overall diameter, whichever is greater.
- Utility clearance information will be documented on the ARCADIS Utility and Structures Checklist (USC) or equivalent client provided checklist or permit.
- Employees overseeing utility clearance activities will:
    - Be familiar with the contents of this standard & ARC HSFS-019 Supplement 2;
    - Have one year field experience in the identification of utilities; and
    - Have training and six months experience in the proper operation and results interpretation of any clearance equipment used by ARCADIS employees, including without limitation, magnetometers and ground penetrating radar.
- All utility strikes must be reported to Corporate Health and Safety and Legal within 24 hours using the Utility Line Strike Investigation Form. **Do not enter the incident into 4-Sight until approved to do so by Corporate Legal. Refer to ARC HSFS-019 Supplement 5, Utility Strike Emergency Action Plan Guidelines.**

Report Utility Incident Now

1. POLICY

It is the practice of ARCADIS and its affiliated companies to implement appropriate, reasonable and practical standards within acceptable and customary industry practices to promote the health and safety of its employees, and avoid and mitigate exposure of risk in the performance of their work. In furtherance of this policy, ARCADIS promotes and encourages compliance by all employees with this policy and standards relating to work in the vicinity of subsurface, submarine or aboveground utilities.

2. PURPOSE AND SCOPE

2.1 Purpose

This standard directs general safety standards and best practices associated with the identification and management of subsurface, submarine and aboveground utilities on project sites. Utility location SOP for submarine utilities can found in ARC HSFS-019 Supplement 6.

2.2 Scope

This standard assigns responsibilities and expectations for proper utility clearance by both ARCADIS employees and ARCADIS subcontractors at project sites.

3. DEFINITIONS

Definitions relating to Utility Clearance can be found in Exhibit 1.

4. RESPONSIBILITIES

4.1 Project Manager Responsibilities

For every project site having the potential to come into contact with utilities, Project Managers must ensure that:

- The requirements of this standard are followed.
- Local regulations governing utility clearance are followed. This includes ensuring local and or state laws defining activities or depth of intrusive work/excavation requiring utility clearance are reviewed as they vary by location. For further information refer to One-Call and State Law Directory.
- Efforts are made to work with the client, project site representatives and subcontractors to identify the nature of any utilities, and to determine what control processes need to be implemented by ARCADIS and the subcontractors to prevent damage to these utilities and to properly manage the effects in the event there is utility damage.
- Utility clearance activities are only delegated to a Task Manager or other individual meeting the requirements of section 4.2 below, as appropriate. However, even if the Project Manager delegates certain responsibilities, the Project Manager maintains primary responsibility for a complete utility clearance. For additional information on PM responsibilities and best practices refer to ARC HSFS-019 Supplement 1.

- Project Managers or designee must review the Utility and Structures Checklist with staff and AUS subcontractors (including "Sub-of-Subs" when conducting subsurface intrusive work) conducting subsurface intrusive work, prior to staff beginning subsurface intrusive work. The PM or designee review must be documented on the Utility and Structures Checklist prior to starting subsurface intrusive work.

4.2 Field Personnel Responsibilities

ARCADIS field personnel conducting work on a project site having the potential to come into contact with utilities have the responsibility to:

- Read, understand, and follow this standard and ARC HSFS-019 Supplement 2 and complete the appropriate checklists during the on-site utility locate process.
- Complete a minimum of 1 year of utility clearance related experience before accepting responsibility for any utility clearance tasks.
- Complete training and have 6 months of experience in operating and interpreting the results of remote sensing technologies, including without limitation, magnetometers and ground penetrating radar, before operating such technologies. Field staff should understand the technologies being utilized by a private utility locate contractor, and how they are operating in comparison with the site conditions. Refer to ARC HSFS-019 Supplement 3 for more information.
- Prior to beginning subsurface intrusive work the Utility and Structures Checklist must be completed and signed off on by the staff member completing or overseeing the clearance. Confirm that the Utility and Structures Checklist was reviewed by the Project Manager or designee as discussed in Section 4.1 above. Review the Utility and Structures Checklist daily during subsurface intrusive activities to insure all utilities are identified and markings are present.
- Use their STOP WORK Authority to eliminate any reasonable concern if utilities cannot be reasonably located and contact the Project Manager to review the STOP WORK situation and confirm the direction of action moving forward.
- Ensure that ARCADIS subcontractors conduct their own reasonable independent utility clearance efforts as required by ARCADIS' standard subcontract, and are aware of any ARCADIS clearance standards used onsite.
- Be on site during utility locate activities, and any active subsurface intrusive activities involving contractor under contract to ARCADIS.

4.3 ARCADIS Subcontractor Responsibilities

According to ARCADIS' standard subcontract, subcontractors have agreed to take responsibility for any damages resulting from a utility impact caused by their work. Therefore, ARCADIS subcontractors are expected to take reasonable time and diligence to conduct their own independent utility clearance using reasonable standards and processes. Subcontractors have the responsibility to

stop their work if utility concerns are identified and will report those concerns to the ARCADIS employee overseeing their work activities. ARCADIS staff should reinforce these responsibilities with subcontractors during job safety briefings.

In jurisdictions where the actual contractor performing the subsurface intrusive work activity is required to perform utility clearance notifications, the contractor will perform the clearance notification and will provide evidence of the notification to ARCADIS (ticket or ticket number, etc.). Refer to ARC HSFS-019 Supplement 4 for Best Practices for State One Call procedures.

5. STANDARD

5.1 General

Protocols to be followed during utility clearance activities are outlined in:

- Best Practices for Project Managers (or Their Delegates) Concerning Utility Clearance (ARC HSFS-019 Supplement 1).
- Best Practices for Field Personnel Concerning Utility Clearance (ARC HSFS-019 Supplement 2).
- Use and Limitations of Common Underground Locating Technologies and Clearance Methods (ARC HSFS-019 Supplement 3)
- Best Practices for State One Call Procedures (ARC HSFS-019 Supplement 4)
- Emergency Action Plan guidelines for Utility Strikes (HSFS-019 Supplement 5)
- Utility Location Standard Operating Procedure for Aquatic Work Activities (ARC HSFS-019 Supplement 6)

5.2 Lines of Evidence

A minimum of 3 lines of evidence are required for an appropriate utility clearance as defined in this standard. Each location of subsurface intrusive work must have at least 3 reliable lines of evidence. All lines of evidence used during the utility clearance procedure will be recorded on the Utility and Structures Checklist of equivalent client provided checklist or permit. If a line of evidence is lost or not apparent, STOP WORK, and reestablish the line of evidence prior to resuming subsurface intrusive work. Generally, the following lines of evidence may be used to meet this minimum utility clearance requirement.

1. Contacting the State One Call or equivalent service (Nationwide "811") is required by law, regardless if it will be used as a line of evidence. Contacting the State One Call or equivalent service (Nationwide "811") is an acceptable reliable line of evidence when working within the public right of way or easement. Note that One Call can provide valuable information regarding locations and types of utilities entering the private property.

View the Utilities and Structures Checklist

Note: For work on private property or in areas not served by State One Call or equivalent service, consider using a reputable private utility locating company to locate and mark the utilities. Use of a private utility locator is encouraged for all projects with subsurface or submarine utilities. When working with a private locater it is best practice to pre-plan clearance areas, review required clearance equipment and the re-clearing/confirmation of any public utility mark outs (State One Call or equivalent service Nationwide "811");

2. Use detailed scaled site utility plans, preferably in the form of an "as-built" or "record" drawing, to identify and/or confirm utility locations. Document request and/or receipt of utility drawings from the property owner/client on the Utilities and Structures Checklist;

3. Interview(s) with knowledgeable site or client personal. The following questions should be asked during the interview and answers documented on the Utility and Structures Checklist:

   - Employees(s) Name and Affiliation(s) with the site
   - Types of utilities , including utility composition and location of utilities onsite
   - Depths of known utilities
   - Any other pertinent information regarding utilities on the site; or

4. Conduct a detailed visual site inspection of areas around all planned subsurface intrusive work points or areas to identify and/or confirm utility locations. For underground utilities, conduct an inspection for structures that tend to indicate the presence and general location of such utilities, including, but not limited to manholes, vaults, valve covers, valve markers, telephone pedestals, transformer housings, fire hydrants, spigots, sprinkler heads, air relief valves, backflow preventers, meters, downspouts going into the subsurface, power poles with wiring going into the subsurface and line markers. Saw cut lines and concrete /asphalt repairs often yield valuable information regarding utility locations. Always discuss the presence of utilities with the site owner, operator and/or occupant to identify any potential utilities that might not be readily identified by non-intrusive clearing methods or may be:

   - At depths > 5 ft. below ground surface; or
   - At very shallow depths (< 2ft below ground surface) such as communication lines, electrical conduits/wiring, irrigation lines, etc.

If one of the above lines of evidence cannot be utilized, or if using the above lines of evidence does not adequately identify utilities with reasonable certainty, one or more additional lines of evidence must be utilized. Commonly used lines of evidence are listed on the Utility and Structures Checklist.

A discussion of use and limitations associated with common utility location and clearance methods is provided in ARC HSFS-019 Supplement 3.

Standard operating procedures for utility location in subaquatic settings are presented in ARC HSFS-019 Supplement 6.

The lines of evidence will be recorded on the Utility and Structures Checklist or equivalent client provided checklist or permit.

Note: If a line of evidence is lost, utility markings removed / worn, or area of previous clearance not confirmed, STOP WORK and reestablish the line(s) of evidence prior to resuming subsurface intrusive work. Each location of subsurface intrusive work must have 3 reliable lines of evidence. All lines of evidence used during the utility clearance procedure will be recorded on the Utility and Structures Checklist of equivalent client provided checklist or permit. If a line of evidence is lost or not apparent STOP WORK, and reestablish the line of evidence prior to resuming subsurface intrusive work. The Utility Structures and Checklist is valid for 15 business days from the date of completion.

5.3 Color Codes Used for Utility Markings

The following colors are used for marking utilities. Some government agencies or large industrial facilities may use additional colors not provided below. ARCADIS policy is to assume any paint marking or pin flag color not provided below is a subsurface utility marking until proven otherwise.

If utilities or subsurface anomalies are identified but the utility type or anomalies are not classified it is recommend that a pink (Temporary Survey Marking) marking be used. Once the type of utility is established the pink marks should be repainted / remarked to represent the correct type of utility.

COLOR	Utility Line
WHITE	Proposed Excavation
PINK	Temporary Survey Markings
RED	Electrical Power Lines, Cables, Conduit and Lighting Cables
YELLOW	Gas, Oil, Steam, Petroleum or Gaseous Materials
ORANGE	Communication, Alarm or Signal Lines, Cables or Conduit
BLUE	Potable Water
PURPLE	Reclaimed Water, Irrigation and Slurry Lines
GREEN	Sewer and Drain Lines

APWA and ANSI standard Z-53.1

5.4 Locating Technologies

There are several types of locating technologies that can be used to identify and locate utilities in the subsurface. Project teams need to work closely with private utility locators (PUL) in order to best match locating technology with site conditions. To provide the best results all possible locating technologies should be available for use and implementation at the project location. Any potential

interferences should also be discussed up front and then at the project site during utility location activities. Potential interferences could be soil moisture, soil type, standing water on concrete/asphalt, rebar, fencing, and metal structures that are in the subsurface. Employees overseeing locating technology activities should have an understanding of device operation and limitations. For further information refer to ARC HSFS-019 Supplement 3, Use and Limitations of Common Utility Location Technologies and Clearance Methods.

5.5 Clearance Methods

In some cases, proposed subsurface intrusive locations may be pre-cleared using other intrusive methods. Determine the clearance or soft dig method based on site conditions and utilize the least invasive method possible. The number of subsurface intrusive locations and soil type should be taken into consideration. The following clearance methods are listed from least invasive to most:

1. Vacuum Extraction/Potholing (air or water based),
2. Air knifing,
3. Hydro knifing,
4. Probing,
5. Hand auguring
6. Hand digging, and
7. Posthole digging.

Single point clearance must be 110% of the proposed subsurface intrusive area, or the diameter plus 2”, whichever is greater. 3-Point clearance must be installed in a triangular pattern around the proposed borehole and in a configuration not to allow for utilities to enter the borehole. 3-Point clearance must be 110% of the proposed intrusive area, or the diameter of the intrusive area plus 2”, whichever is greater. Each method of clearance should be documented on the Utility and Structure Checklist.

Manual clearing methods such as shoveling, using pick axes, digging bars and other hand tools should be avoided completely or only used when absolutely necessary and used with caution. Excessive down force, prying or use in poor/obstructed visibility conditions is prohibited as these tools can damage utilities.

Surface cover (e.g., asphalt) removal methods within the 30-inch Tolerance Zone that pose excessive down force such as Jackhammering should be used with extreme caution. Methods that only cut the surface cover (coring or saw cutting) present less risk due to the absence of the downward force which could cause collateral damage to shallow subsurface utilities. Note that utilities are often present at the concrete or pavement/soil interface or encased within the concrete or pavement and are easily damaged during concrete coring or pavement removal. Always work slowly, methodically and frequently STOP WORK to evaluate conditions during these work activities.

For borings and excavations, if the utility is known to be at depths where hand clearing is not feasible or creates additional safety concerns, no work will be performed within the 30 inch Tolerance Zone vertically or horizontally of the utility unless manual clearing is performed under the oversight of an Excavation Competent Person as defined in ARC HSCS005 ARCADIS Excavation and Trenching.

5.5.1 Temporary Backfilling of Pre-Cleared Boreholes

In some cases, it may be necessary to temporarily backfill a pre-cleared location until the remaining subsurface activities are performed. At these locations where subsurface intrusive work does not immediately follow pre-clearance, it is important to properly backfill and mark the pre-cleared location in order to relocate the pre-cleared location. In general, wooden stakes, survey markers, whiskers, paint marking or other surficial markings alone are inadequate because these markings can be easily removed, damaged or otherwise lost leading to uncertainty regarding the pre-cleared location. Although the specific steps for backfilling a pre-cleared location will depend on site specific conditions, use the following additional steps to prevent loss of the pre-cleared location:

- Backfill a pre-cleared location with clean sand or other granular material that is significantly different than the surrounding subsurface native material. Native soil should not be used to backfill a pre-cleared location that may require further subsurface work.
- Backfill the top 2 feet of a pre-cleared location with dyed sand or gravel to facilitate re-location.
- Use hammered wooden stakes or delineators to mark locations as an additional measure, if practical.
- In the event that the pre-cleared borehole is located on asphalt or concrete and an asphalt cold patch is required, use white paint to mark the intrusive location with a circle over the asphalt cold patch.
- In some instances, such as projects potentially affected by unexploded ordinance (UXO), the pre-cleared borehole may require that a PVC of matching diameter pipe be inserted into the pre-cleared borehole, filled with clean sand and affixed with a matching cap. Contact the project manager to identify any client-specific requirements.
- Always use a physical subsurface marker such as described above to identify the pre-cleared borehole location. Never rely solely on field measurements or GPS coordinates.
- If a utility or anomaly/obstruction is encountered during the pre-clearing process, backfill the hole with the native soil and mark the location with a pink painted X and/or NO.

In the event that a previously pre-cleared location cannot be located, the location must be re-cleared prior to performing subsurface intrusive work.

5.6 Acceptable Clearance for Working in Vicinity of Subsurface Utilities

Prior to the start of subsurface intrusive activities (i.e. excavations, vertical drilling, installing grounding rod, etc.), all utilities must be located and measures instituted to avoid subsurface utility hazards. Do not conduct subsurface work within 30 inches of a line marking in all directions. If the centerline of the utility is marked, the diameter of the utility or utility bank must be incorporated into the 30 inch Tolerance Zone, See Figure 1 located in Exhibit 2. If subsurface work must take place within the 30 inch Tolerance Zone of the line marking, the utility must be exposed (potholed) by soft dig / clearance methods prior to starting subsurface intrusive work (see Section 5.5 for options); **no mechanized equipment is permitted for the exposing of the utility**. Once the utility has been exposed, if mechanized equipment is planned for use within the 30 inch

Tolerance Zone of the utility, such activity must receive pre-approval by Corporate H&S, as necessary, to mitigate or accept the risk associated with the planned work. Additional excavation safety procedures may have to be developed as part of the approval to proceed. It should be noted that any disturbance within the 30 inches or disruption of the bedding materials could affect the integrity of the utility.

For horizontal borings, to avoid striking a utility, damage from vibration, damage by pressure of the advancing boring, do not drill within 30 inches in all directions (3D cylinder) a of a line marking. Make sure to factor the diameter of the line or utility bank when computing 30 inch Tolerance Zone. When crossing a utility during horizontal drilling it is recommend that the utility be exposed 30 inches in a 360° direction. When exposing utilities for horizontal borings the utility must be exposed (potholed) by soft dig / clearance methods. This recommendation applies even if the operating contractor has technology that places the location to within a few inches. Make sure to factor the diameter of the utility when determining the 30 inch Tolerance Zone. If subsurface work must take place within the 30 inch Tolerance Zone of the line marking, the utility must be exposed (potholed) by soft dig / clearance methods prior to starting subsurface intrusive work (see Section 5.5 for options); **no mechanized equipment is permitted for the exposing of the utility**. Once the utility has been exposed, if mechanized equipment is planned for use within the 30 inch Tolerance Zone of the utility, such activity must receive pre-approval by Corporate H&S, as necessary, to mitigate or accept the risk associated with the planned work. Additional excavation safety procedures may have to be developed as part of the approval to proceed. It should be noted that any disturbance within the 30 inches or disruption of the bedding materials could affect the integrity of the utility.

Additional cautions for horizontal borings include gravity utilities such as sewers and storm drains as the depth of these utilities will change (sometimes significantly) as they run across the project site. Always obtain the utility depth at the location where the boring will actually cross the line by collecting sewer depth inverts from identified manholes and interpolating those depths to the area of the subsurface intrusive work.

During well installations and well abandonment via mechanical equipment, the 30 inch Tolerance Zone rule applies outward from the outside edge of the largest diameter auger or tool to be used for installation and abandonment (over drilling). In cases where wells have been previously installed and the 30 inch rule has not been followed, work proposed using mechanized equipment to work within the 30 inch Tolerance Zone will require approval from Corporate H&S.

5.7 Acceptable Clearance for Working in Vicinity of Overhead Power Lines

No work will be performed by ARCADIS or our subcontractor near overhead power lines where any Unqualified Person or equipment is within the limits specified below, unless the power line has been properly covered or de-energized by the owner or operator of the power line. Qualified Person approach distances are defined in Exhibit 5A and 5B of ARC HSFS0006 Electrical Safety Standard.

Power Line Voltage Phase to phase (kV)	Minimum Safe Clearance (feet)
50 or below	10
Above 50 to 200	15
Above 200 to 350	20
Above 350 to 500	25
Above 500 to 750	35
Above 750 to 1,000	45

ANSI standard B30.5-1994, 5-3.4.5

5.7.1 Reducing Vehicle and Mechanical Equipment Clearance Requirements

Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines shall be operated so that a clearance of 10 ft. (305 cm) is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10kV over that voltage. However, under any of the following conditions, the clearance may be reduced:

- If the vehicle is in transit with its structure lowered, the clearance may be reduced to 4 ft. (122 cm). If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10 kV over that voltage.

- If insulating barriers are installed to prevent contact with the lines, and if the barriers are rated for the voltage of the line being guarded and are not a part of or an attachment to the vehicle or its raised structure, the clearance may be reduced to a distance within the designed working dimensions of the insulating barrier.

- If the equipment is an aerial lift insulated for the voltage involved, and if the work is performed by a qualified person, the clearance (between the uninsulated portion of the aerial lift and the power line) may be reduced to the distance given in OSHA 1910.333(c)(3)(ii)(C) Table S-5. Reference information from OSHA 1910.333 Table S-5 and NFPA 70E Table 130.4(C)(a) for alternating-current systems and 130.4(C)(b) for the distances associated with direct-current voltage Systems is included as Exhibit 5 of ARC HSFS0006 Electrical Safety Standard.

Employees standing on the ground may not contact the vehicle or mechanical equipment or any of its attachments unless:

- The employee is using protective equipment rated for the voltage; or

- The equipment is located so that no uninsulated part of its structure (that portion of the structure that provides a conductive path to employees on the ground) can come closer to the line than permitted in this section of this standard.

If any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines is intentionally grounded, employees working on the ground near the point of grounding may not stand at the grounding location whenever there is a possibility of overhead line contact. Additional precautions, such as the use of barricades or insulation, shall be taken to protect employees from hazardous ground potentials, depending on earth resistivity and fault currents, which can develop within the first few feet or more outward from the grounding point.

When a machine is in contact with an overhead power line, do not allow anyone to come near or touch the machine. Stay away from the machine and summon outside assistance.

5.8 Reporting Utility Incidents

ARCADIS field personnel involved with any subsurface, submarine, and above-ground utility strikes should immediately STOP WORK and contact the Project Manager to discuss the incident. The utility strike must be reported to Corporate Health and Safety and Legal Departments immediately, and no later than 24 hours. Use the Utility Line Strike Investigation Form as part of the notification process.

Selected utility strike incidents may also utilize a conference call with operations management to review findings and lessons learned. The Divisional Health and Safety Director will make the determination concerning the need to have the incident review call, and will arrange the call, if deemed necessary.

5.9 Relationship of this standard to the Project Specific HASP

With the exception of the Utility and Structures Checklist, this standard, including most supplements, are not designed to be printed off and attached to project HASPs. During project health and safety planning, this standard will be reviewed and applicable clearance technologies and methods will be documented on the Utility and Structures Checklist.

Additionally, emergency action standards specific to utility strikes should be addressed. ARC HSFS-019 Supplement 5 provides general guidelines for emergency response to utility strikes. Applicable information may be attached to the Utility and Structures Checklist to facilitate communication of response expectations.

5.10 Required Contract Terms and Conditions

ARCADIS' standard client and subcontractor contracts contain required terms and conditions defining responsibility for utility clearance and the allocation of risk associated with an impacted utility. These terms and conditions have prescribed language concerning subsurface work that is presented in ARCADIS client contracts and ARCADIS subcontractor contracts, which can be found on the Legal Source site. If such provisions cannot be agreed upon, the reasons are documented and other risk-management actions should be identified, such as limits of liability, add additional physical investigations, additional lines of evidence or utility location, assignment of risk to subcontractors, etc. In addition, any changes to these terms and conditions require approval by Legal Services.

6. TRAINING

Employees responsible for coordinating or conducting utility clearance activities will be familiar with the requirements of this standard. ARCADIS in-house 8-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) refresher provides awareness-level training regarding this utility location and clearance standard.

7. REFERENCES

- Utility and Structures Checklist
- Utility Line Strike Investigation Form
- ARC HSFS-019 Supplement 1, Best Practices for Project Managers (or Their Delegates) Concerning Utility Clearance
- ARC HSFS-019 Supplement 2, Best Practices for Field Personnel Concerning Utility Clearance
- ARC HSFS-019 Supplement 3, Use and Limitations Associated with Location Technologies and Common Utility Clearance Methods
- ARC HSFS-019 Supplement 4, Best Practices for State One Call Procedures and Notifications
- ARC HSFS-019 Supplement 5, Emergency Action Plan guidelines for Utility Strikes
- ARC HSFS-019 Supplement 6, Utility Location SOP for Aquatic Work Activities
- Figure 1 - 30 inch Tolerance Zone
- ARC HSCS005 Excavation and Trenching
- One-Call and State Law Directory

8. RECORDS

8.1 Utility Clearance Records

All records (maps, checklists and documentation of communications) used to determine the location of utilities should be retained and kept in the project file.

9. APPROVALS AND HISTORY OF CHANGE

Approved By: Tony Tremblay, CSP – Corporate H&S, Director of Technical Programs

History of Change

Revision Date	Revision Number	Standard Developer or Revised By / Approver	Reason for change
13 December 2006	01	Mike Thomas/Pat Vollertsen	Original document
26 March 2007	02	Mike Thomas/Pat Vollertsen	Put in new company format
15 May 2007	03	Mike Thomas/Pat Vollertsen	Added nation-wide 811 number
6 September 2007	04	Mike Thomas/Pat Vollertsen	Changing over to new template format
22 February 2008	05	Mija Coppola	Changing over to new template format
13 January 2009	06	Mija Coppola	Define lines of evidence
4 October 2010	07	Sam Moyers/Mija Coppola	Reformatting and addition of utility clearance information
13 February 2012	08	Sam Moyers/Mija Coppola	Modified link information for utility strike reporting, clarified local/state requirements in section 4.1 and 4.3
28 January 2013	09	Tony Tremblay	Utility and Structures Checklist revised; hyperlink updated
12 February 2013	10	Amanda Tine/Tony Tremblay	Clarified clearance boundaries for Unqualified staff in Section 5.7 and added information about vehicles and equipment being used near power lines in Section 5.7.1

Revision Date	Revision Number	Standard Developer or Revised By / Approver	Reason for change
15 March 2013	11	Kurt Merkle, Rebecca Lindeman / Tony Tremblay	Added additional text to standard for recent lessons learned, added section 5.4 (Locating Technologies) and 5.5 (Clearance Methodologies), added additional details to section 5.6 when working in close proximity to subsurface utilities, and added Supplement 6 - Utility Location SOP for Aquatic Work Activities.
07 July 2013	12	Andrew McDonald/ Tony Tremblay	Removed HSFS-019 Supplement 1, Utility Definitions. Added hyperlink for One-Call and State Law Directory. Segregated evidence of sewer or storm drains in USC list. Removed Sam Moyers and added Andrew McDonald as author.
26 September 2014	13	Andrew McDonald/Tony Tremblay	Added Exhibit 1. Definitions and 30 inch tolerance zone. Clarified use of 811 or state one call as a reliable line of evidence. Added best practice to cover backfilling of pre-cleared boreholes. Updated USC list to cover soft dig termination depths and PM review.
23 February 2015	14	Tony Tremblay	Page number correction

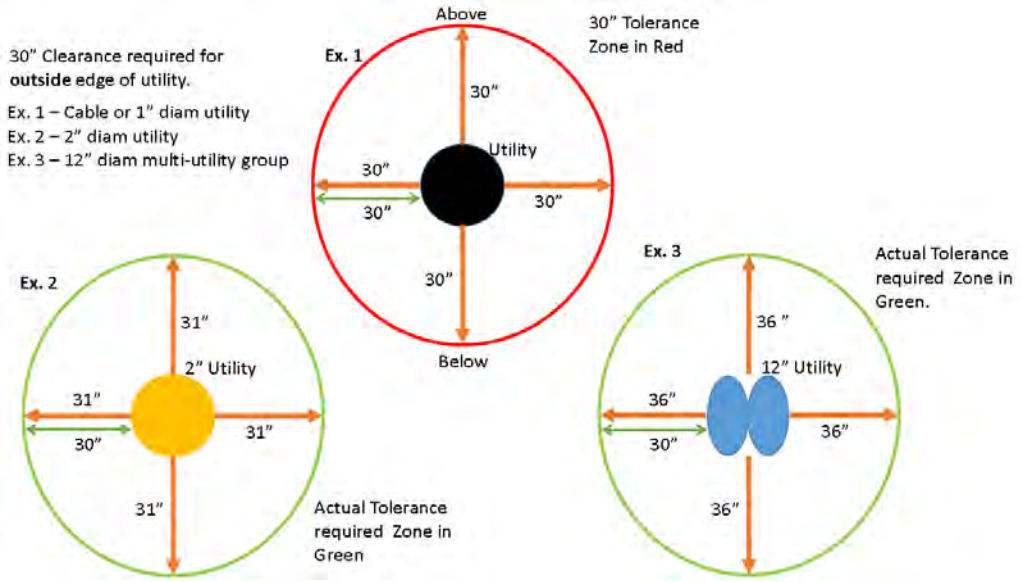
EXHIBIT 1 – DEFINITIONS

Above Ground Utilities - For the purpose of this procedure, above ground utilities include, but are not limited to: any above ground line, pipe, conduit, system, or facility used for producing, storing, conveying, transmitting or distributing communication or telecommunications signals, electricity, gas, liquid, petroleum and petroleum products, coal slurry, hazardous liquids or gases, water under pressure, steam, sanitary sewage, storm water, or other materials, liquids, or gases.

Subsurface Utilities - For the purposes of this procedure, subsurface utilities include, but are not limited to: any underground line, pipe, conduit, system, or facility used for producing, storing, conveying, transmitting or distributing communication or telecommunications signals, electricity, gas, liquid, petroleum and petroleum products, coal slurry, hazardous liquids or gases, water under pressure, steam, storm water, or sanitary sewage; underground storage tanks; tunnels and cisterns; and septic tanks and lines.

Tolerance Zone – The area within 30 inches in all directions from the outside diameter of a located/marked utility in which special care is to be taken. If the centerline of the utility is marked, the diameter of the utility or utility bank must be incorporated into the 30 inches. This area must be hand cleared with non-mechanized equipment. Once the utility has been exposed, if mechanized equipment is planned for use within the 30 inch Tolerance Zone of the utility, such activity must receive pre-approval by Corporate H&S, to mitigate or accept the risk associated with the planned work. See Figure 1 – 30” Tolerance Zone.

EXHIBIT 2 – TOLERANCE ZONE (Figure 1)



ARCADIS
Infrastructure, environment, facilities

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Field Log Book Entries

Rev. #: 0

Rev Date: 11 August 2009

Approval Signatures

Prepared by: Andrew Kanik Date: 8/11/09

Reviewed by: Michael J. Hefflich Date: 8/11/09
(Technical Expert)

I. Scope and Application

This ARCADIS Standard Operating Procedure covers the entries needed in a field log book for environmental investigations.

This SOP does not address all of the entries that may be needed for a specific project, and does not address health and safety, equipment decontamination, field parameter measurements, sample preservation, chain-of-custody, or laboratory analysis. For direction on requirements in these areas, refer to other ARCADIS SOPs, the project work plans including the quality assurance project plan, sampling plan, and health and safety plan, as appropriate.

II. Personnel Qualifications

ARCADIS personnel participating in fieldwork and making entries into the field log book should have a minimum of one (1) year of field experience (or be under the supervision and accompanied in the field by someone who does) and current health and safety training including 40-hour HAZWOPER training, site supervisor training, site-specific training, first aid, and CPR, as needed. Field personnel will also be compliant with client-specific training requirements. In addition, ARCADIS field sampling personnel will be versed in the relevant SOPs and posses the required skills and experience necessary to successfully complete the desired field work.

III. Equipment List

- Field Log Book
- Ball point (medium point) pen with blue or black ink (black preferred). A fine point Sharpie pen may be used if the ink does not bleed through the page and become visible on back side of the page. If weather conditions prevent the use of a pen, indicate so in the log and use an alternate writing instrument .
- Zip-lock baggie or other weather-proof container to protect the field log book from the elements.

IV. Cautions

All entries in the field log must be legible and archivable. Do not leave the field log book exposed to the elements or other conditions that might moisten the pages and smear/dissolve the entries. When not in the field, the log book should be stored in a location that is easily accessible to field crews.

V. Health and Safety Considerations

ARCADIS field personnel will be familiar and compliant with Client-specific health and safety requirements.

VI. Procedure

- Print legibly. Do not use cursive writing.
- The name of the project, project number and project location should be written in indelible ink on the outside of the field log book.
- On the inside of the front cover, write "If Found, Please Return to ARCADIS" and include the appropriate address and phone number, the name of the person to which the book is assigned, and the name of the project manager.
- Reserve the first page of the book for a Table of Contents.
- Reserve the last five (5) pages of the book for important contacts, notes, reminders, etc.
- Each day of field work, the following should be recorded in the field log book as applicable:

    a) Project Name

    b) Date and time arrived

    c) Work Site Location

    d) Names of people on-site related to the project including ARCADIS employees, visitors, subcontractor employees, agency personnel, client representative, etc.

    e) Describe the work to be performed briefly, and list the equipment on-site

    f) Indicate the health and safety (H&S) level to be used

    g) Record instrument calibrations and checks

    h) Record time and general content of H&S briefing

    i) Describe the weather conditions, including temperature, precipitation, and wind speed and direction

    j) List periodic time entries in the far left hand column of each page

    k) Minimize unused space on each page

- The tailgate meeting must be recorded in the log book and the tailgate form completed. If H&S monitoring is performed, record the time and results of initial and followup monitoring.

- Note factual observations including collection of QA/QC samples, delays, well damage, accidents, work plan deviations, instrument problems, and problem resolutions.
- Describe work performed and how documented such as photographs, sample core logs, water sampling logs, etc.
- Describe bases for field decisions including pertinent conversations with visitors, regulators, or project personnel.
- Note final instrument calibrations and checks.
- Sign the log book at the end of each day at a minimum. Draw a line to the end of the page to indicate no further entries on that page. Sign the bottom of each page if possible.
- If an entry to the log book is changed, strike out the deleted text or item with a single line such that the entry remains legible, and initial and date the change. Such changes should only be made by the same person that made the initial entry.
- Field log book entries must be made in the field at the site, not at a later time at a different location. Supplemental entries to the log book may be made at a later date. The supplemental entry must be clearly identified as such and the entry must be signed and dated as described in this SOP.
- Problems noted in the field log book must be brought to the attention of the project manager and task manager in a timely fashion. Problems may be reported in person, on the telephone, or in a written daily log form. If daily logs are prepared and you will not be able to personally give the daily log to the project manager, send the daily log via FAX or overnight courier to the project manager and task manager.

VII. Waste Management

Investigation-derived waste will be managed as described in the Investigation-Derived Waste Handling and Storage SOP. A drum/waste inventory should be maintained on a pre-designated page in the field log book.

VIII. Data Recording and Management

Each page of the field log book should be scanned for electronic/digital archiving at periodic intervals. This will ensure that copies of the field notes are available in the event the field book is lost or damaged, and that field data can be easily disseminated to others without the risk of physically sending the field log book. Field log books that are full should be archived with the project files, and readily retrievable.

IX. Quality Assurance

Be mindful that the field log book may be produced in court. All entries should be legible (as discussed above). Entries should also be in English, unless working in a country where English is not the predominant language or you are directed otherwise by the project manager.

X. References

Not Applicable

ARCADIS
Infrastructure, environment, facilities

Imagine the result

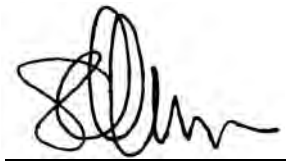
Soil Description

Rev. #: 0

Rev Date: May 20, 2008

Approval Signatures

Prepared by: Date: 5/22/08

Reviewed by:  Date: 5/22/08

(Technical Expert)

I. Scope and Application

This ARCADIS standard operating procedure (SOP) describes proper soil description procedures. This SOP should be followed for all unconsolidated material unless there is an established client-required specific SOP or regulatory-required specific SOP. In cases where there is a required specific SOP, it should be followed and should be referenced and/or provided as an appendix to reports that include soil classifications and/or boring logs. When following a required non-ARCADIS SOP, additional information required by this SOP should be included in field notes with client approval.

This SOP has been developed to emphasize field observation and documentation of details required to:

- make hydrostratigraphic interpretations guided by depositional environment/geologic settings;
- provide information needed to understand the distribution of constituents of concern; properly design wells, piezometers, and/or additional field investigations; and develop appropriate remedial strategies.

This SOP incorporates elements from various standard systems such as ASTM D2488-06, Unified Soil Classification System, Burmister and Wentworth. However, none of these standard systems focus specifically on contaminant hydrogeology and remedial design. Therefore, although each of these systems contain valuable guidance and information related to correct descriptions, strict application of these systems can omit information critical to our clients and the projects that we perform.

This SOP does not address details of health and safety; drilling method selection; boring log preparation; sample collection; or laboratory analysis. Refer to other ARCADIS SOPS, the project work plans including the quality assurance project plan, sampling plan, and health and safety plan (HASP), as appropriate.

II. Personnel Qualifications

Soil descriptions will be completed only by persons who have been trained in ARCADIS soil description procedures. Field personnel will complete training on the ARCADIS soil description SOP in the office and/or in the field under the guidance of an experienced field geologist. For sites where soil descriptions have not previously been well documented, soil descriptions should be performed only by trained persons with a degree in geology or a geology-related discipline.

III. Equipment List

The following equipment should be taken to the field to facilitate soil descriptions:

- field book, field forms or PDA to record soil descriptions;
- field book for supplemental notes;
- this SOP for Soil Descriptions and any project-specific SOP (if required);
- field card showing Wentworth scale;
- Munsell® soil color chart;
- tape measure divided into tenths of a foot;
- stainless steel knife or spatula;
- hand lens;
- water squirt bottle;
- jar with lid;
- personal protective equipment (PPE), as required by the HASP; and
- digital camera.

IV. Cautions

Drilling and drilling-related hazards including subsurface utilities are discussed in other SOPs and site-specific HASPs and are not discussed herein.

Soil samples may contain hazardous substances that can result in exposure to persons describing soils. Routes for exposure may include dermal contact, inhalation and ingestion. Refer to the project specific HASP for guidance in these situations.

V. Health and Safety Considerations

Field activities associated with soil sampling and description will be performed in accordance with a site-specific HASP, a copy of which will be present on site during such activities. Know what hazardous substances may be present in the soil and understand their hazards. Always avoid the temptation to touch soils with bare hands, detect odors by placing soils close to your nose, or tasting soils.

VI. Procedure

1. Select the appropriate sampling method to obtain representative samples in accordance with the selected sub-surface exploration method, e.g. split-spoon or Shelby sample for hollow-stem drilling, Lexan or acetate sleeves for dual-tube direct push, etc.

2. Proceed with field activities in required sequence. Although completion of soil descriptions is often not the first activity after opening sampler, identification of stratigraphic changes is often necessary to select appropriate intervals for field screening and/or selection of laboratory samples.

3. Examine all of each individual soil sample (this is different than examining each sample selected for laboratory analysis), and record the following for each stratum:

- depth interval;
- principal component with descriptors, as appropriate;
- amount and identification of minor component(s) with descriptors as appropriate;
- moisture;
- consistency/density;
- color; and
- additional description or comments (recorded as notes).

The above is described more fully below.

DEPTH

To measure and record the depth below ground level (bgl) of top and bottom of each stratum, the following information should be recorded.

1. Measured depth to the top and bottom of sampled interval. Use starting depth of sample based upon measured tool length information and the length of sample interval.

2. Length of sample recovered, not including slough (material that has fallen into hole from previous interval), expressed as fraction with length of recovered sample as numerator over length of sampled interval as denominator (e.g. 14/24 for 14 inches recovered from 24-inch sampling interval that had 2 inches of slough discarded).

3. Thickness of each stratum measured sequentially from the top of recovery to the bottom of recovery.

4. Any observations of sample condition or drilling activity that would help identify whether there was loss from the top of the sampling interval, loss from the bottom of the sampling interval, or compression of the sampling interval. Examples: 14/24, gravel in nose of spoon; or 10/18 bottom 6 inches of spoon empty.

DETERMINATION OF COMPONENTS

Obtain a representative sample of soil from a single stratum. If multiple strata are present in a single sample interval, each stratum should be described separately. More specifically, if the sample is from a 2-foot long split-spoon where strata of coarse sand, fine sand and clay are present, then the resultant description should be of the three individual strata unless a combined description can clearly describe the interbedded nature of the three strata. Example: Fine Sand with interbedded lenses of Silt and Clay, ranging between 1 and 3 inches thick.

Identify principal component and express volume estimates for minor components on logs using the following standard modifiers.

Modifier	Percent of Total Sample (by volume)
and	36 - 50
some	21 - 35
little	10 - 20
trace	<10

Determination of components is based on using the Udden-Wentworth particle size classification (see below) and measurement of the average grain size diameter. Each size grade or class differs from the next larger grade or class by a constant ratio of ½. Due to visual limitations, the finer classifications of Wentworth's scale cannot be distinguished in the field and the subgroups are not included. Visual determinations in the field should be made carefully by comparing the sample to the field gauge card that shows Udden-Wentworth scale or by measuring with a ruler. Use of field sieves s

recommended to assist in estimating percentage of coarse grain sizes. Settling test or wash method (Appendix X4 of ASTM D2488) is recommended for determining presence and estimating percentage of clay and silt.

Udden-Wenworth Scale Modified ARCADIS, 2008			
Size Class	Millimeters	Inches	Standard Sieve #
Boulder	256 – 4096	10.08+	
Large cobble	128 - 256	5.04 -10.08	
Small cobble	64 - 128	2.52 – 5.04	
Very large pebble	32 – 64	0.16 - 2.52	
Large pebble	16 – 32	0.63 – 1.26	
Medium pebble	8 – 16	0.31 – 0.63	
Small pebble	4 – 8	0.16 – 0.31	No. 5 +
Granule	2 – 4	0.08 – 0.16	No.5 – No.10
Very coarse sand	1 -2	0.04 – 0.08	No.10 – No.18
Coarse sand	½ - 1	0.02 – 0.04	No.18 - No.35
Medium sand	¼ - ½	0.01 – 0.02	No.35 - No.60
Fine sand	1/8 -¼	0.005 – 0.1	No.60 - No.120
Very fine sand	1/16 – 1/8	0.002 – 0.005	No. 120 – No. 230
Silt (subgroups not included)	1/256 – 1/16	0.0002 – 0.002	Not applicable (analyze by pipette or hydrometer)
Clay (subgroups not included	1/2048 – 1/256	.00002 – 0.0002	

Identify components as follows. Remove particles greater than very large pebbles (64-mm diameter) from the soil sample. Record the volume estimate of the greater than very large pebbles. Examine the sample fraction of very large pebbles and smaller particles and estimate the volume percentage of the pebbles, granules, sand, silt and clay. Use the jar method, visual method, and/or wash method (Appendix X4 of ASTM D2488) to estimate the volume percentages of each category.

Determination of actual dry weight of each Udden-Wentworth fraction requires laboratory grain-size analysis using sieve sizes corresponding to Udden-Wentworth fractions and is highly recommended to determine grain-size distributions for each hydrostratigraphic unit.

Lab or field sieve analysis is advisable to characterize the variability and facies trends within each hydrostratigraphic unit. Field sieve-analysis can be performed on selected samples to estimate dry weight fraction of each category using ASTM D2488 Standard Practice for Classification of Soils for Engineering Purposes as guidance, but replace required sieve sizes with the following Udden-Wentworth set: U.S. Standard sieve mesh sizes 6; 12; 20; 40; 70; 140; and 270 to retain pebbles; granules; very coarse sand; coarse sand; medium sand; fine sand; and very fine sand, respectively.

PRINCIPAL COMPONENT

The principal component is the size fraction or range of size fractions containing the majority of the volume. Examples: the principal component in a sample that contained 55% pebbles would be “Pebbles”; or the principal component in a sample that was 20% fine sand, 30% medium sand and 25% coarse sand would be “Fine to coarse Sand” or for a sample that was 40% silt and 45% clay the principal component would be “Clay and Silt”.

Include appropriate descriptors with the principal component. These descriptors vary for different particle sizes as follows.

Angularity – Describe the angularity for very coarse sand and larger particles in accordance with the table below (ASTM D-2488-06). Figures showing examples of angularity are available in ASTM D-2488-06 and the ARCADIS Soil Description Field Guide.

Description	Criteria
Angular	Particles have sharp edges and relatively plane sides with unpolished surfaces.
Subangular	Particles are similar to angular description but have rounded edges.
Subrounded	Particles have nearly plane sides but have well-rounded corners and edges.
Rounded	Particles have smoothly curved sides and no edges.

Plasticity – Describe the plasticity for silt and clay based on observations made during the following test method (ASTM D-2488-06).

- As in the dilatancy test below, select enough material to mold into a ball about ½ inch (12 mm) in diameter. Mold the material, adding water if necessary, until it has a soft, but not sticky, consistency.

- Shape the test specimen into an elongated pat and roll by hand on a smooth surface or between the palms into a thread about 1/8 inch (3 mm) in diameter. (If the sample is too wet to roll easily, it should be spread into a thin layer and allowed to lose some water by evaporation.) Fold the sample threads and reroll repeatedly until the thread crumbles at a diameter of about 1/8 inch. The thread will crumble when the soil is near the plastic limit.

Description	Criteria
Nonplastic	A $^{1}/_{8}$ inch (3 mm) thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit

Dilatancy – Describe the dilatancy for silt and silt-sand mixtures using the following field test method (ASTM D-2488-06).

- From the specimen select enough material to mold into a ball about ½ inch (12 mm) in diameter. Mold the material adding water if necessary, until it has a soft, but not sticky, consistency.
- Smooth the ball in the palm of one hand with a small spatula.
- Shake horizontally, striking the side of the hand vigorously with the other hand several times.
- Note the reaction of water appearing on the surface of the soil.
- Squeeze the sample by closing the hand or pinching the soil between the fingers, and not the reaction as none, slow, or rapid in accordance with the table below. The reaction is the speed with which water appears while shaking and disappears while squeezing.

Description	Criteria
None	No visible change in the specimen.
Slow	Water appears slowly on the surface of the specimen during shaking and does not disappear or disappears slowly upon squeezing.
Rapid	Water appears quickly on the surface of the specimen during shaking and disappears quickly upon squeezing.

MINOR COMPONENT(S)

The minor component(s) are the size fraction(s) containing less than 50% volume. Example: the identified components are estimated to be 60% medium sand to granules, 25 % silt and clay; 15 % pebbles – there are two identified minor components: silt and clay; and pebbles.

Include a standard modifier to indicate percentage of minor components (see Table on Page 5) and the same descriptors that would be used for a principal component. Plasticity should be provided as a descriptor for the silt and clay. Dilatancy should be provided for silt and silt-sand mixtures. Angularity should be provided as a descriptor for pebbles and coarse sand. For the example above, the minor constituents with

modifiers could be: some silt and clay, low plasticity; little medium to large pebbles, sub-round.

SORTING

Sorting is the opposite of grading, which is a commonly used term in the USCS or ASTM methods to describe the uniformity of the particle size distribution in a sample. Well-sorted samples are poorly graded and poorly sorted samples are well graded. ARCADIS prefers the use of sorting for particle size distributions and grading to describe particle size distribution trends in the vertical profile of a sample or hydrostratigraphic unit because of the relationship between sorting and the energy of the depositional process. For soils with sand-sized or larger particles, sorting should be determined as follows:

- Well sorted – the range of particle sizes is limited (e.g. the sample is comprised of predominantly one or two grain sizes)
- Poorly sorted – a wide range of particle sizes are present

You can also use sieve analysis to estimate sorting from a sedimentological perspective; sorting is the statistical equivalent of standard deviation. Smaller standard deviations correspond to higher degree of sorting (see Remediation Hydraulics, 2008).

MOISTURE

Moisture content should be described for every sample since increases or decreases in water content is critical information. Moisture should be described in accordance with the table below (percentages should not be used unless determined in the laboratory).

Description	Criteria
Dry	Absence of moisture, dry to touch, dusty.
Moist	Damp but no visible water.
Wet (Saturated)	Visible free water, soil is usually below the water table.

CONSISTENCY or DENSITY

This can be determined by standard penetration test (SPT) blow counts (ASTM D-1586) or field tests in accordance with the tables below. For SPT blow counts the N-value is used. The N-value is the blows per foot for the 6" to 18" interval. Example: for 24-inch spoon, recorded blows per 6-inch interval are: 4/6/9/22. Since the second interval is 6" to12", the third interval is 12" to 18", the N value is 6+9, or 15. Fifty blow counts for less than 6 inches is considered refusal.

Fine-grained soil – Consistency

Description	Criteria
Very soft	N-value < 2 or easily penetrated several inches by thumb.
Soft	N-value 2-4 or easily penetrated one inch by thumb.
Medium stiff	N-value 9-15 or indented about ¼ inch by thumb with great effort.
Very stiff	N-value 16-30 or readily indented by thumb nail.
Hard	N-value > than 30 or indented by thumbnail with difficulty

Coarse-grained soil – Density

Description	Criteria
Very loose	N-value 1- 4
Loose	N-value 5-10
Medium dense	N-value 11-30
Dense	N-value 31- 50
Very dense	N-value >50

COLOR

Color should be described using simple basic terminology and modifiers based on the Munsell system. Munsell alpha-numeric codes are required for all samples. If the sample contains layers or patches of varying colors this should be noted and all representative colors should be described. The colors should be described for moist

samples. If the sample is dry it should be wetted prior to comparing the sample to the Munsell chart.

ADDITIONAL COMMENTS (NOTES)

Additional comments should be made where observed and should be presented as notes with reference to a specific depth interval(s) to which they apply. Some of the significant information that may be observed includes the following.

- **Odor** - You should not make an effort to smell samples by placing near your nose since this can result in unnecessary exposure to hazardous materials. However, odors should be noted if they are detected during the normal sampling procedures. Odors should be based upon descriptors such as those used in NIOSH "Pocket Guide to Chemical Hazards", e.g. "pungent" or "sweet" and should not indicate specific chemicals such as "phenol-like" odor or "BTEX" odor.
- Structure
- Bedding planes (laminated, banded, geologic contacts)
- Presence of roots, root holes, organic material, man-made materials, minerals, etc.
- Mineralogy
- Cementation
- NAPL presence/characteristics, including sheen (based on client-specific guidance)
- Reaction with HCl (typically used only for special soil conditions)
- Origin, if known (capital letters: LACUSTRINE; FILL; etc.)

EXAMPLE DESCRIPTIONS

51.4 to 54.0' Clay, some silt, medium to high plasticity; trace small to large pebbles, subround to subangular up to 2" diameter; moist; stiff; dark grayish brown (10YR 4/2) NOTE: Lacustrine; laminated 0.01 to 0.02 feet thick, laminations brownish yellow (10 YR 4/3).

32.5 to 38.0' Sand, medium to Pebbles, coarse; sub-round to sub-angular; trace silt; poorly sorted; wet; grayish brown (10YR5/2). NOTE: sedimentary, igneous and metamorphic particles.

Unlike the first example where a density of cohesive soils could be estimated, this rotosonic sand and pebble sample was disturbed during drilling (due to vibrations in a loose Sand and Pebble matrix) so no density description could be provided. Neither sample had noticeable odor so odor comments were not included.

The standard generic description order is presented below.

- Depth

- Principal Components
    - Angularity for very coarse sand and larger particles
    - Plasticity for silt and clay
    - Dilatancy for silt and silt-sand mixtures
- Minor Components
- Sorting
- Moisture
- Consistency or Density
- Color
- Additional Comments

VII. Waste Management

Project-specific requirements should be identified and followed. The following procedures, or similar waste management procedures are generally required.

Water generated during cleaning procedures will be collected and contained onsite in appropriate containers for future analysis and appropriate disposal. PPE (such as gloves, disposable clothing, and other disposable equipment) resulting from personnel cleaning procedures and soil sampling/handling activities will be placed in plastic bags. These bags will be transferred into appropriately labeled 55-gallon drums or a covered roll-off box for appropriate disposal.

Soil materials will be placed in sealed 55-gallon steel drums or covered roll-off boxes and stored in a secured area. Once full, the material will be analyzed to determine the appropriate disposal method.

VIII. Data Recording and Management

Upon collection of soil samples, the soil sample should be logged on a standard boring log and/or in the field log book depending on Data Quality Objectives (DQOs) for the task/project. Two examples of standard boring logs are presented below.

The general scheme for soil logging entries is presented above; however, depending on task/project DQOs, specific logging entries that are not applicable to task/project goals may be omitted at the project manager's discretion. In any case, use of a consistent logging procedure is required.

Completed logs and/or logbook will be maintained in the task/project field records file. Digital photographs of typical soil types observed at the site and any unusual features should be obtained whenever possible. All photographs should include a ruler or common object for scale. Photo location, depth and orientation must be recorded in the daily log or log book and a label showing this information in the photo is useful.

ARCADIS Page ____ of ____

Sample Log

Well/Boring _____ Project Name and No. _____

Site Location _____ Drilling Started _____ Drilling Completed _____

Total Depth Drilled _____ feet Hole Diameter _____ inches Sampling Interval _____ feet

Length and Diameter of Sampling Device _____ Type of Sampling Device _____

Drilling Method _____ Drilling Fluid Used _____

Drilling Contractor _____ Driller _____ Helper _____

Prepared By _____ Hammer Weight _____ Hammer Drop _____ Inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)

http://team/Sites/Offices/North/Northeast Area/Northeast Area Geoscience Forms/Sample Core Log XLS - Sheet1

IX. Quality Assurance

Soil descriptions should be completed only by appropriately trained personnel. Descriptions should be reviewed by an experienced field geologist for content, format and consistency. Edited boring logs should be reviewed by the original author to assure that content has not changed.

X. References

ARCADIS Soil Description Field Guide, 2008 (in progress)

Munsell® Color Chart – available from Forestry Suppliers, Inc.- Item 77341 "Munsell® Color Soil Color Charts

Field Gauge Card that Shows Udden-Wentworth scale – available from Forestry Suppliers, Inc. – Item 77332 "Sand Grain Sizing Folder"

ASTM D-1586, Test Method for Penetration Test and Split-Barrel Sampling of Soils

ASTM D-2488-00, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)

United States Bureau of Reclamation. Engineering Geology Field Manual. United States Department of Interior, Bureau of Reclamation. http://www.usbr.gov/pmts/geology/fieldmap.htm

Petrology of Sedimentary Rocks, Robert L. Folk, 1980, p. 1-48

NIOSH Pocket Guide to Chemical Hazards

Remediation Hydraulics, Fred C. Payne, Joseph A. Quinnan, and Scott T. Potter, 2008, p 59-63

ARCADIS
Infrastructure, environment, buildings

Imagine the result

Soil Drilling and Sample Collection

Rev. #: 3

Rev Date: September 26, 2014

Approval Signatures

Prepared by: _____ Date: 03/08/2011

Reviewed by: _____ Date: 03/08/2011
(Technical Expert)

Reviewed by: _____ Date: 09/26/2014
(Eric Killenbeck)

I. Scope and Application

Overburden drilling is commonly performed using the hollow-stem auger drilling method. Other drilling methods suitable for overburden drilling, which are sometimes necessary due to site-specific geologic conditions, include: drive-and-wash, spun casing, Rotasonic, dual-rotary (Barber Rig), and fluid/mud rotary. Direct-push techniques (e.g., Geoprobe or cone penetrometer) may also be used. The drilling method to be used at a given site will be selected based on site-specific consideration of anticipated drilling depths, site or regional geologic knowledge, types of sampling to be conducted, required sample quality and volume, and cost.

No oils or grease will be used on equipment introduced into the boring (e.g., drill rod, casing, or sampling tools).

II. Personnel Qualifications

The Project Manager (a qualified geologist, environmental scientist, or engineer) will identify the appropriate soil boring locations, depth and soil sample intervals in a written plan.

Personnel responsible for overseeing drilling operations must have at least 16 hours of prior training overseeing drilling activities with an experienced geologist, environmental scientist, or engineer with at least 2 years of prior experience.

III. Equipment List

The following materials will be available during soil boring and sampling activities, as required:

- Site Plan with proposed soil boring/well locations;
- Work Plan or Field Sampling Plan (FSP), and site Health and Safety Plan (HASP);
- personal protective equipment (PPE), as required by the HASP;
- drilling equipment required by the American Society for Testing and Materials (ASTM) D 1586, when performing split-spoon sampling;
- disposable plastic liners, when drilling with direct-push equipment;
- appropriate soil sampling equipment (e.g., stainless steel spatulas, knife);

- equipment cleaning materials;
- appropriate sample containers and labels;
- chain-of-custody forms;
- insulated coolers with ice, when collecting samples requiring preservation by chilling;
- photoionization detector (PID) or flame ionization detector (FID); and
- field notebook and/or personal digital assistant (PDA).

IV. Cautions

Prior to beginning field work, the ARCADIS utility policy must be review and implemented. The ARCADIS utility location policy is outlined on the Health and Safety Team Site (http://apex/HS/Pages/default.aspx).

Avoid using drilling fluids or materials that could impact groundwater or soil quality, or could be incompatible with the subsurface conditions or a remediation design. The quality of water used for drilling should also be taken into consideration.

Water used for drilling and sampling of soil or bedrock, decontamination of drilling/sampling equipment, or grouting boreholes upon completion will be of a quality acceptable for project objectives. Testing of water supply should be considered.

Specifications of materials used for backfilling of a bore hole will be obtained, reviewed and approved to meet state and/or federal requirements, as well as project quality objectives.

V. Health and Safety Considerations

Field activities associated with drilling will be performed in accordance with a site-specific Health and Safety Plan (HASP), a copy of which will be present on site during such activities.

VI. Procedure

Drilling Procedures

The drilling contractor will be responsible for obtaining accurate and representative samples; informing the supervising geologist of changes in drilling pressure; and keeping a separate general log of soils encountered, including blow counts (i.e., the number of blows from a soil sampling drive weight [140 pounds] required to drive the split-barrel sampler in 6-inch increments). The term "samples" means soil materials from particular depth intervals, whether or not portions of these materials are submitted for laboratory analysis. Records will also be kept of occurrences of premature refusal due to boulders or construction materials that may have been used as fill. Where a boring cannot be advanced to the desired depth, the boring will be abandoned and an additional boring will be advanced at an adjacent location to obtain the required sample. Where it is desirable to avoid leaving vertical connections between depth intervals, the borehole will be sealed using cement and/or bentonite. Multiple refusals may lead to a decision by the supervising geologist to abandon that sampling location.

Soil Characterization Procedures

Soils encountered while drilling soil borings will be collected using one of the following methods:

- 2-inch split-barrel (split-spoon) sampler, if using the ASTM D 1586 - Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils
- Plastic internal soil sample sleeves if using direct-push drilling.

Soils are typically field screened with an FID or PID at sites where volatile organic compounds are present in the subsurface. Field screening is performed using one of the following methods:

- Upon opening the sampler, the soil is split open and the PID or FID probe is placed in the opening and covered with a gloved hand. Such readings should be obtained at several locations along the length of the sample
- A portion of the collected soil is placed in a jar, which is covered with aluminum foil, sealed, and allowed to warm to room temperature. After warming, the cover is removed, the foil is pieced with the FID or PID probe, and a reading is obtained.

Samples selected for laboratory analysis will be handled, packed, and shipped in accordance with the procedures outlined in the Work Plan, FSP, or Chain-of-Custody, Handling, Packing, and Shipping SOP.

A geologist will be onsite during drilling and sampling operations to describe each soil interval on the soil boring log, including:

- percent recovery;
- structure and degree of sample disturbance;
- soil type;
- color;
- moisture condition;
- density;
- grain-size;
- consistency; and
- other observations, particularly relating to the presence of waste materials

Further details regarding geologic description of soils are presented in the Soil Description SOP.

Particular care will be taken to fully describe any sheens observed, oil saturation, staining, discoloration, evidence of chemical impacts, or unnatural materials.

VII. Waste Management

Water generated during cleaning procedures will be collected and contained onsite in appropriate containers for future analysis and appropriate disposal.

PPE (such as gloves, disposable clothing, and other disposable equipment) resulting from personnel cleaning procedures and soil sampling/handling activities will be placed in plastic bags. These bags will be transferred into appropriately labeled 55-gallon drums or a covered roll-off box for appropriate disposal.

Soil materials will be placed in sealed 55-gallon steel drums or covered roll-off boxes and stored in a secured area. Once full, the material will be analyzed to determine the appropriate disposal method.

VIII. Data Recording and Management

The supervising geologist or scientist will be responsible for documenting drilling events using a bound field notebook and/or PDA to record all relevant information in a clear and concise format. The record of drilling events will include:

- start and finish dates of drilling;
- name and location of project;
- project number, client, and site location;
- sample number and depths;
- blow counts and recovery;
- depth to water;
- type of drilling method;
- drilling equipment specifications, including the diameter of drilling tools;
- documentation of any elevated organic vapor readings;
- names of drillers, inspectors, or other people onsite; and
- weather conditions.

IX. Quality Assurance

Equipment will be cleaned prior to use onsite, between each drilling location, and prior to leaving the site. Drilling equipment and associated tools, including augers, drill rods, sampling equipment, wrenches, and other equipment or tools that may have come in contact with soils and/or waste materials will be cleaned with high-pressure steam-cleaning equipment using a potable water source. The drilling equipment will be cleaned in an area designated by the supervising engineer or geologist that is located outside of the work zone. More elaborate cleaning procedures may be required for reusable soil samplers (split-spoons) when soil samples are obtained for laboratory analysis of chemical constituents.

X. References

American Society of Testing and Materials (ASTM) D 1586 - *Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils*.

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Water Level Measurement

Rev. #: 2

Rev Date: February 24, 2011

Approval Signatures

Prepared by: Date: 02/24/2011

Reviewed by: Date: 02/24/2011

(Technical Expert)

I. Scope and Application

The objective of this Standard Operating Procedure (SOP) is to describe procedures to measure and record groundwater and surface-water elevations. Water levels may be measured using an electronic water-level probe, oil-water level indicator, or a pressure transducer from established reference points (e.g. top of casing). Reference points will be surveyed to evaluate fluid elevations relative to mean sea level (msl). This SOP describes the equipment, field procedures, materials, and documentation procedures to measure and record groundwater and surface-water elevations using the aforementioned equipment.

This is a standard (i.e., typically applicable) operating procedure which may be varied or changed as required, dependent upon site conditions, equipment limitations, or limitations imposed by the procedure. The ultimate procedure employed will be documented in the project work plans or reports.

II. Personnel Qualifications

ARCADIS field sampling personnel will have current health and safety training including 40-hour HAZWOPER training, site supervisor training, site-specific training, first aid, and CPR, as needed. In addition, ARCADIS field sampling personnel will be versed in the relevant SOPs and posses the required skills and experience necessary to successfully complete the desired field work.

III. Equipment List

The following materials, as required, shall be available during water level measurements:

- Appropriate personal protective equipment as specified in the Site Health and Safety Plan
- Equipment decontamination supplies
- Electronic water-level indicator
- Electronic oil-water level indicator
- Mini-Troll® or Troll® pressure transducer
- In-Situ™ data logger

- Laptop computer with the Win-Situ software package installed
- Photoionization detector (PID) and/or organic vapor analyzer
- Non-phosphate laboratory soap (Alconox or equivalent)
- Deionized/distilled water
- 150-foot measuring tape
- Solvent (methanol/acetone) rinse
- Portable containers
- Hacksaw
- Pliers
- Plastic sheeting
- “Write-in-the-Rain” Field logbook and or PDA (Personal Digital Assistant)
- Indelible ink pen.

IV. Cautions

Electronic water-level probes and oil-water interface probes can sometimes produce false-positive readings. For example, if the inside surface of the well has condensation above the water level, then an electronic water-level probe may produce a signal by contacting the side of the well rather than the true water level in the well. To produce reliable data, the electronic water level probe and/or interface probe should be raised and lowered several times at the approximate depth where the instrument produces a tone indicating a fluid interface to verify consistent, repeatable results.

The graduated tape or cable with depth markings is designed to indicate the depth of the electronic sensor that detects the fluid interface, but not the depth of the bottom of the instrument. When using these devices to measure the total well depth, the additional length of the instrument below the electronic sensor must be added to the apparent well depth reading, as observed on the tape or cable of the instrument, to obtain the true total depth of the well. If the depth markings on the tape or cable are

worn or otherwise difficult to read, extra care must be taken in obtaining the depth readings.

V. Health and Safety Considerations

The HASP will be followed, as appropriate, to ensure the safety of field personnel. Access to wells may expose field personnel to hazardous materials such as contaminated groundwater or oil. Other potential hazards include stinging insects that may inhabit well heads, other biologic hazards, and potentially the use of sharp cutting tools (scissors, knife). Appropriate personal protective equipment (PPE) will be worn during these activities. Field personnel will thoroughly review client-specific health and safety requirements, which may preclude the use of fixed/folding-blade knives.

VI. Procedure

Electronic Water-Level Indicators and Oil-Water Indicators

Calibration procedures and groundwater level measurement procedures for electronic water-level indicators and oil-water indicators are described in the sections below.

Calibration Procedures

The indicator probe will be tested to verify that the meter has been correctly calibrated by the manufacturer. The following steps will be used to verify the accuracy of the indicator:

1. Measure the lengths between each increment marker on the indicator with a measuring tape. The appropriate length of indicator measuring tape, suitable to cover the depth range for the wells of interest, will be checked for accuracy.

2. If the indicator measuring tape is inaccurate, the probe will be sent back to the manufacturer.

3. Equipment calibration will be recorded in the field logbook and/or PDA.

Groundwater Level Measurement Procedures

A detailed procedure for obtaining water elevations will be as follows:

1. Identify site and monitoring well number in field notebook along with date, time, personnel and weather conditions using indelible ink.

2. Use safety equipment as specified in the Health and Safety Plan.

3. Decontaminate the indicator probe and tape in accordance with the appropriate cleaning procedures.

4. Place clean plastic sheeting on the ground next to the well.

5. Unlock and open the monitoring well cover while standing upwind from the well.

6. Measure the volatile organics present in the monitoring well head space with a PID and record the PID reading in the field logbook.

7. Allow the water level in the well to equilibrate with atmospheric pressure for a few minutes. Locate a measuring reference point on the monitoring well casing. If one is not found, create a reference point by notching the highest point on the inner casing (or outer if an inner casing is not present) with a hacksaw. All downhole measurements will be taken from the reference point. Document the creation of any new reference point or alteration of the existing reference point.

8. Measure to the nearest 0.01 foot and record the height of the inner and outer casing from reference point to ground level.

9. Slowly lower the level indicator probe until it touches the bottom of the well. Record the total depth of the well from the top of the inner casing (or outer casing if inner casing is not present). Measure depth to water level as the probe is drawn back up through the water column. If used to measure the level of surface water, slowly lower from the surveyed reference point, as appropriate. Double check all measurements and record depths to the nearest 0.01 foot.

10. Decontaminate the instrument using appropriate cleaning procedures.

11. Lock the well when all activities are completed.

Pressure Transducers

The detailed procedure for obtaining water elevations using a Mini-Troll® or Troll® pressure transducer with an In-Situ™ data logger and the Win-Situ software package will be as follows:

Setup Procedures

1. Connect the Mini-Troll® or Troll® transducer to a laptop computer serial port.

2. Open the Win-Situ software package on the laptop computer.

3. Verify that the Win-Situ software recognizes the transducer.

4. Synchronize the clock on the laptop computer with that of the transducer.

5. Add a test to the transducer and input the specifications of the test (e.g., frequency of data collection, start data collection).

6. Disconnect the transducer from the laptop computer, and prepare the transducer for field deployment.

Field Procedures

1. Decontaminate all equipment entering the monitoring well using appropriate cleaning procedures.

2. Connect transducer to laptop computer, and start the Win-Situ program.

3. Lower the transducer gently below the water table or surface-water level.

4. Take a water level reading from the transducer using the Win-Situ software package. Lift the transducer approximately 1-foot, and verify the transducer response on the Win-Situ program (i.e. depth to water should be 1-foot less).

5. Upon verification, set the transducer to the desired depth. Position the instrument below the lowest anticipated water level, but not so low that its range will be exceeded at the highest anticipated water level. The maximum operating depth below water is equal to 2.31 feet times the psi rating of the transducer (e.g., 23.1 feet for a 10 psi transducer).

6. Secure the cable at the well head or fixed object adjacent to surface-water body to prevent drift and movement.

7. Obtain a manual water-level reading using the procedure noted above, and record the measurement in the field notebook or PDA.

8. Set reference point (e.g. depth to water, groundwater elevation) and input it into the Win-Situ software package.

9. Periodically download data and collect additional manual depth-to-water measurements using the same water-level or oil-water indicator probe used during the equipment setup to verify the accuracy of the transducer.

VII. Waste Management

Decontamination fluids, PPE, and other disposable equipment will be properly stored on site in labeled containers and disposed of properly. Be certain that waste containers are properly labeled and documented in the field log book. Review appropriate waste management SOPs, which may be state- or client-specific.

VIII. Data Recording and Management

Groundwater level measurements should be documented in the field logbook and/or PDA. The following information will be documented in the field logbook:

- Sample identification
- Measurement time
- Total well depth
- Depth to water

Groundwater elevations recorded using a Mini-Troll® or Troll® pressure transducer with an In-Situ™ data logger and the Win-Situ software package will be downloaded and stored in the central project file.

IX. Quality Assurance

As described in the detailed procedure, the electronic water-level meter and/or oil-water interface probe will be calibrated prior to use versus an engineer's rule to ensure accurate length demarcations on the tape or cable. Fluid interface measurements will be verified by gently raising and lowering the instrument through each interface to confirm repeatable results.

X. References

No literature references are required for this SOP.

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Monitoring Well Installation

Rev. #: 3

Rev Date: February 2, 2011

Approval Signatures

Prepared by: Date: 2/2/2011

Reviewed by: Date: 2/2/2011

(Technical Expert)

I. Scope and Application

The procedures set out herein are designed to produce standard groundwater monitoring wells suitable for: (1) groundwater sampling, (2) water level measurement, (3) bulk hydraulic conductivity testing of formations adjacent to the open interval of the well.

Monitoring well boreholes in unconsolidated (overburden) materials are typically drilled using the hollow-stem auger drilling method. Other drilling methods that are also suitable for installing overburden monitoring wells, and are sometimes necessary due to site-specific geologic conditions, include: drive-and-wash, spun casing, Rotasonic, dual-rotary (Barber Rig), and fluid/mud rotary with core barrel or roller bit. Direct-push techniques (e.g., Geoprobe or cone penetrometer) and driven well points may also be used in some cases within the overburden. Monitoring wells within consolidated materials such as bedrock are commonly drilled using water-rotary (coring or tri-cone roller bit), air rotary or Rotasonic methods. The drilling method to be used at a given site will be selected based on site-specific consideration of anticipated drilling/well depths, site or regional geologic knowledge, type of monitoring to be conducted using the installed well, and cost.

No oils or grease will be used on equipment introduced into the boring (e.g., drill rod, casing, or sampling tools). No polyvinyl chloride (PVC) glue/cement will be used in constructing or retrofitting monitoring wells that will be used for water-quality monitoring. No coated bentonite pellets will be used in the well drilling or construction process. Specifications of materials to be installed in the well will be obtained prior to mobilizing onsite, including:

- well casing;
- bentonite;
- sand; and
- grout.

Well materials will be inspected and, if needed, cleaned prior to installation.

II. Personnel Qualifications

Monitoring well installation activities will be performed by persons who have been trained in proper well installation procedures under the guidance of an experienced field geologist, engineer, or technician. Where field sampling is performed for soil or

bedrock characterization, field personnel will have undergone in-field training in soil or bedrock description methods, as described in the appropriate SOP(s) for those activities.

III. Equipment List

The following materials will be available during soil boring and monitoring well installation activities, as required:

- Site Plan with proposed soil boring/well locations;
- Work Plan or Field Sampling Plan (FSP), and site Health and Safety Plan (HASP);
- personal protective equipment (PPE), as required by the HASP;
- traffic cones, delineators, caution tape, and/or fencing as appropriate for securing the work area, if such are not provided by drillers;
- appropriate soil sampling equipment (e.g., stainless steel spatulas, knife);
- soil and/or bedrock logging equipment as specified in the appropriate SOPs;
- appropriate sample containers and labels;
- drum labels as required for investigation derived waste handling;
- chain-of-custody forms;
- insulated coolers with ice, when collecting samples requiring preservation by chilling;
- photoionization detector (PID) or flame ionization detector (FID);
- ziplock style bags;
- water level or oil/water interface meter;
- locks and keys for securing the well after installation;
- decontamination equipment (bucket, distilled or deionized water, cleansers appropriate for removing expected chemicals of concern, paper towels);

- field notebook.

Prior to mobilizing to the site, ARCADIS personnel will contact the drilling subcontractor or in-house driller (as appropriate) to confirm that appropriate sampling and well installation equipment will be provided. Specifications of the sampling and well installation equipment are expected to vary by project, and so communication with the driller will be necessary to ensure that the materials provided will meet the project objectives. Equipment typically provided by the driller could include:

- drilling equipment required by the American Society of Testing and Materials (ASTM) D 1586, when performing split-spoon sampling;
- disposable plastic liners, when drilling with direct-push equipment;
- drums for investigation derived waste;
- drilling and sampling equipment decontamination materials;
- decontamination pad materials, if required; and
- well construction materials.

IV. Cautions

Prior to beginning field work, underground utilities in the vicinity of the drilling areas will be delineated by the drilling contractor or an independent underground utility locator service. See separate SOP for utility clearance.

Some regulatory agencies require a minimum annular space between the well or permanent casing and the borehole wall. When specified, the minimum clearance is typically 2 inches on all sides (e.g., a 2-inch diameter well requires a 6-inch diameter borehole). In addition, some regulatory agencies have specific requirements regarding grout mixtures. Determine whether the oversight agency has any such requirements prior to finalizing the drilling and well installation plan.

If dense non-aqueous phase liquids (DNAPL) are known or expected to exist at the site, refer to the DNAPL Contingency Plan SOP for additional details regarding drilling and well installation to reduce the potential for inadvertent DNAPL remobilization.

Similarly, if light non-aqueous phase liquids (LNAPLs) are known or expected to be present as “perched” layers above the water table, refer to the DNAPL Contingency

Plan. Follow the general provisions and concepts in the DNAPL contingency plan during drilling above the water table at known or expected LNAPL sites.

Avoid using drilling fluids or materials that could impact groundwater or soil quality, or could be incompatible with the subsurface conditions.

Similarly, consider the material compatibility between the well materials and the surrounding environment. For example, PVC well materials are not preferred when DNAPL is present. In addition, some groundwater conditions leach metals from stainless steel.

Water used for drilling and sampling of soil or bedrock, decontamination of drilling/sampling equipment, or grouting boreholes upon completion will be of a quality acceptable for project objectives. Testing of water supply should be considered.

Specifications of materials used for backfilling bore hole will be obtained, reviewed and approved to meet project quality objectives. Bentonite is not recommended where DNAPLs are likely to be present. In these situations, neat cement grout is preferred.

No coated bentonite pellets will be used in monitoring well construction, as the coating could impact the water quality in the completed well.

Monitoring wells may be installed with Schedule 40 polyvinyl chloride (PVC) to a maximum depth of 200 feet below ground surface (bgs). PVC monitoring wells between 200 and 400 feet total depth will be constructed using Schedule 80 PVC. Monitoring wells deeper than 400 feet will be constructed using steel.

V. Health and Safety Considerations

Field activities associated with monitoring well installation will be performed in accordance with a site-specific HASP, a copy of which will be present on site during such activities.

VI. Procedures

The procedures for installing groundwater monitoring wells are presented below:

Hollow-Stem Auger, Drive-and-Wash, Spun Casing, Fluid/Mud Rotary, Rotasonic, and Dual-Rotary Drilling Methods

1. Locate boring/well location, establish work zone, and set up sampling equipment decontamination area.

2. Advance boring to desired depth. Collect soil and/or bedrock samples at appropriate interval as specified in the Work Plan and/or FSP. Collect, document, and store samples for laboratory analysis as specified in the Work Plan and/or FSP. Decontaminate equipment between samples in accordance with the Work Plan and/or FSP. A common sampling method that produces high-quality soil samples with relatively little soil disturbance is the ASTM D 1586 - Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils. Split-spoon samples are obtained during drilling using hollow-stem auger, drive-and-wash, spun casing, and fluid/mud rotary. Rotasonic drilling produces large-diameter soil cores that tend to be more disturbed than split-spoon samples due to the vibratory action of the drill casing. Dual-rotary removes cuttings by compressed air and allows only a general assessment of geology. High-quality bedrock samples can be obtained by coring.

3. Describe each soil or bedrock sample as outlined in the appropriate SOP. Record descriptions in the field notebook and/or personal digital assistant (PDA). It should be noted that PDA logs must be electronically backed up and transferred to a location accessible to other project team members as soon as feasible to retain and protect the field data. During soil boring advancement, document all drilling events in field notebook, including blow counts (number of blows required to advance split-spoon sampler in 6-inch increments) and work stoppages. Blow counts will not be available if Rotasonic, dual-rotary, or direct-push methods are used. When drilling in bedrock, the rate of penetration (minutes per foot) is recorded.

4. If it is necessary to install a monitor well into a permeable zone below a confining layer, particularly if the deeper zone is believed to have water quality that differs significantly from the zone above the confining layer, then a telescopic well construction should be considered. In this case, the borehole is advanced approximately 3 to 5 feet into the top of the confining layer, and a permanent casing (typically PVC, black steel or stainless steel) is installed into the socket drilled into the top of the confining layer. The casing is then grouted in place. The preferred methods of grouting telescoping casings include: pressure-injection grouting using an inflatable packer installed temporarily into the base of the casing, such that grout is injected out the bottom of the casing until it is observed at ground surface outside the casing; displacement-method grouting (also known as the Halliburton method), which entails filling the casing with grout and displacing the grout out the bottom of the casing by pushing a drillable plug, typically made of wood to the bottom of the casing, following by tremie grouting the remainder of the annulus outside the casing; or tremie grouting the annulus surrounding the casing using a tremie pipe installed to the base of the borehole. In all three cases, the casing is grouted to the ground

surface, and the grout is allowed to set prior to drilling deeper through the casing. Site-specific criteria and work plans should be created for the completion of non-standard monitoring wells, including telescopic wells.

5. In consolidated formations such as competent bedrock, a monitoring well may be completed with an open borehole interval without a screen and sandpack. In these cases, the borehole is advanced to the targeted depth of the top of the open interval. A permanent casing is then grouted in place following the procedures described in Step 4 above. After the grout sets, the borehole is advanced by drilling through the permanent casing to the targeted bottom depth of the open interval, which then serves as the monitoring interval for the well. If open-borehole interval stability is found to be questionable or if a specific depth interval is later selected for monitoring, a screened monitoring well may later be installed within the open-borehole interval, depending on the annular space and well diameter requirements.

6. Before installing a screened well – or after drilling an open-bedrock well –, it is important to confirm that the borehole has been advanced into the saturated zone. This is particularly important for wells installed to monitor the water table and/or the shallow saturated zone, as the capillary fringe may cause soils above the water table to appear saturated. If one or more previously installed monitoring wells exist nearby, use the depth to water at such well(s) to estimate the water-table depth at the new borehole location.

   To verify that the borehole has been advanced into the saturated zone, it is necessary to measure the water level in the borehole. For boreholes drilled without using water (e.g., hollow-stem auger, cable-tool, air rotary, air hammer), verify the presence of groundwater (and /or LNAPL, if applicable) in the borehole using an electronic water level probe, oil-water interface probe, or a new or decontaminated bailer. For boreholes drilled using water (e.g., drive and wash, spun-casing with roller-bit wash, rotasonic, or water rotary with core or roller bit), monitor the water level in the borehole as it re-equilibrates to the static level. In low-permeability units like clay, fine-grained glacial tills, shale and other bedrock formations, it may be necessary to wait overnight to allow the water level to equilibrate. To the extent practicable, ensure that the depth of the well below the apparent water table is deep enough so that the installed well can monitor groundwater year-round, accounting for seasonal water-table fluctuations. In most cases, the well should be installed at least five feet below the water-table depth, determined as described above. When in doubt, err on the side of slightly deeper well installation.

If necessary, the borehole should be drilled deeper to ensure that the well may intersects the water table or a permeable water-bearing zone.

7. Upon completing the borehole to the desired depth, if a screened well construction is desired, install the monitoring well by lowering the screen and casing assembly with sump through the augers or casing. Monitoring wells typically will be constructed of 2-inch-diameter, flush-threaded PVC or stainless steel slotted well screen and blank riser casing. Smaller diameters may be used if wells are installed using direct-push methodology or if multiple wells are to be installed in a single borehole. The screen length will be specified in the Work Plan or FSP based on regulatory requirements and specific monitoring objectives. Monitoring well screens are usually 5 to 10 feet long, but may be up to 25 feet long in very low permeability, thick geologic formations. The screen length will depend on the purpose for the well and the objectives of the groundwater investigation. Typically, the slot size will be 0.010 inch and the sand pack will be 20-40, Morie No. 0, or equivalent. In very fine-grained formations where sample turbidity needs to be minimized, it may be preferred to use a 0.006-inch slot size and 30-65, Morie No. 00, or equivalent sand pack. Alternatively, where monitoring wells are installed in coarse-grained deposits and higher well yield is required, a 0.020-inch slot size and 10-20, Morie No. 1, or equivalent sand pack may be preferred. To the extent practicable, the slot size and sand pack gradation may be predetermined in the Work Plan or FSP based on site-specific grain-size analysis or other geologic considerations or monitoring objectives. A blank sump may be attached below the well screen if the well is being installed for DNAPL recovery/monitoring purposes. If so, the annular space around the sump will be backfilled with neat cement grout to the bottom of the well screen prior to placing the sand pack around the screen. A blank riser will extend from the top of the screen to approximately 2.5 feet above grade or, if necessary, just below grade where conditions warrant a flush-mounted monitoring well. For wells greater than 50 feet deep, centralizers may be desired to assist in centralizing the monitoring well in the borehole during construction.

8. When the monitoring well assembly has been set in place and the grout has been placed around the sump (if any), place a washed silica sand pack in the annular space from the bottom of the boring to a height of 1 to 2 feet above the top of the well screen. The sand pack is placed and drilling equipment extracted in increments until the top of the sand pack is at the appropriate depth. The sand pack will be consistent with the screen slot size and the soil particle size in the screened interval, as specified in the Work Plan or FSP. A hydrated bentonite seal (a minimum of 2 feet thick) will then be placed in the annular space above the sand pack. If non-hydrated bentonite is used, the bentonite

should be permitted to hydrate in place for a minimum of 30 minutes before proceeding. No coated bentonite pellets will be used in monitoring well drilling or construction. Potable water may be added to hydrate the bentonite if the seal is above the water table. Monitor the placement of the sand pack and bentonite with a weighted tape measure. During the extraction of the augers or casing, a cement/bentonite or neat cement grout will be placed in the annular space from the bentonite seal to a depth approximately 2 feet bgs.

9. Place a locking, steel protective casing (extended at least 1.5 feet below grade and 2 feet above grade) over the riser casing and secure with a neat cement seal. Alternatively, for flush-mount completions, place a steel curb box with a bolt-down lid over the riser casing and secure with a neat cement seal. In either case, the cement seal will extend approximately 1.5 to 2.0 feet below grade and laterally at least 1 foot in all directions from the protective casing, and should slope gently away to promote drainage away from the well. Monitoring wells will be labeled with the appropriate designation on both the inner and outer well casings or inside of the curb box lid.

   When an above-grade completion is used, the PVC riser will be sealed using an expandable locking plug and the top of the well will be vented by drilling a small-diameter (1/8 inch) hole near the top of the well casing or through the locking plug, or by cutting a vertical slot in the top of the well casing. When a flush-mount installation is used, the PVC riser will be sealed using an unvented, expandable locking plug.

10. During well installation, record construction details and actual measurements relayed by the drilling contractor and tabulate materials used (e.g., screen and riser footages; bags of bentonite, cement, and sand) in the field notebook.

11. After completing the well installation, lock the well, clean the area, and dispose of materials in accordance with the procedures outlined in Section VII below.

Direct-Push Method

The direct-push drilling method may also be used to complete soil borings and install monitoring wells. Examples of this technique include the Diedrich ESP vibratory probe system, GeoProbe®, or AMS Power Probe® dual-tube system. Environmental probe systems typically use a hydraulically operated percussion hammer. Depending on the equipment used, the hammer delivers 140- to 350-foot pounds of energy with each blow. The hammer provides the force needed to penetrate very stiff/medium dense soil formations. The hammer simultaneously advances an outer steel casing that contains a dual-tube liner for sampling soil. The outside diameter (OD) of the outer

casing ranges from 1.75 to 2.4 inches and the OD of the inner sampling tube ranges from 1.1 to 1.8 inches. The outer casing isolates shallow layers and permits the unit to continue to probe at depth. The double-rod system provides a borehole that may be tremie-grouted from the bottom up. Alternatively, the inside diameter (ID) of the steel casing provides clearance for the installation of small-diameter (e.g., 0.75- to 1-inch ID) micro-wells. The procedures for installing monitoring wells in soil using the direct-push method are described below.

1. Locate boring/well location, establish work zone, and set up sample equipment decontamination area.

2. Advance soil boring to designated depth, collecting samples at intervals specified in the Work Plan. Samples will be collected using dedicated, disposable, plastic liners. Describe samples in accordance with the procedures outlined in Step 3 above. Collect samples for laboratory analysis as specified in the Work Plan and/or FSP.

3. Upon advancing the borehole to the desired depth, install the micro-well through the inner drill casing. The micro-well will consist of approximately 1-inch ID PVC or stainless steel slotted screen and blank riser. The sand pack, bentonite seal, and cement/bentonite grout will be installed as described, where applicable, in Step 7 and 8 above.

4. Install protective steel casing or flush-mount, as appropriate, as described in Step 9 above. During well installation, record construction details and tabulate materials used.

5. After completing the well installation, lock the well, clean the area, and dispose of materials in accordance with the procedures outlined in Section VII below.

Driven Well Point Installation

Well points will be installed by pushing or driving using a drilling rig or direct-push rig, or hand-driven where possible. The well point construction materials will consist of a 1- to 2-inch-diameter threaded steel casing with either 0.010- or 0.020-inch slotted stainless steel screen. The screen length will vary depending on the hydrogeologic conditions of the site. The casings will be joined together with threaded couplings and the terminal end will consist of a steel well point. Because they are driven or pushed to the desired depth, well points do not have annular backfill materials such as sand pack or grout.

VII. Waste Management

Investigation-derived wastes (IDW), including soil cuttings and excess drilling fluids (if used), decontamination liquids, and disposable materials (well material packages, PPE, etc.), will be placed in clearly labeled, appropriate containers, or managed as otherwise specified in the Work Plan, FSP, and/or IDW management SOP.

VIII. Data Recording and Management

Drilling activities will be documented in a field notebook. Pertinent information will include personnel present on site, times of arrival and departure, significant weather conditions, timing of well installation activities, soil descriptions, well construction specifications (screen and riser material and diameter, sump length, screen length and slot size, riser length, sand pack type), and quantities of materials used. In addition, the locations of newly-installed wells will be documented photographically or in a site sketch. If appropriate, a measuring wheel or engineer's tape will be used to determine approximate distances between important site features.

The well or piezometer location, ground surface elevation, and inner and outer casing elevations will be surveyed using the method specified in the site Work Plan. Generally, a local baseline control will be set up. This local baseline control can then be tied into the appropriate vertical and horizontal datum, such as the National Geodetic Vertical Datum of 1929 or 1988 and the State Plane Coordinate System. At a minimum, the elevation of the top of the inner casing used for water-level measurements should be measured to the nearest 0.01 foot. Elevations will be established in relation to the National Geodetic Vertical Datum of 1929. A permanent mark will be placed on top of the inner casing to mark the point for water-level measurements.

IX. Quality Assurance

All drilling equipment and associated tools (including augers, drill rods, sampling equipment, wrenches, and any other equipment or tools) that may have come in contact with soil will be cleaned in accordance with the procedures outlined in the appropriate SOP. Well materials will also be cleaned prior to well installation.

X. References

American Society of Testing and Materials (ASTM) D 1586 - *Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils*.

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Monitoring Well Development

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Prepared by: Date: 03/22/2010

Reviewed by: Date: 03/22/2010

(Technical Expert)

I. Scope and Application

Monitoring wells (or piezometers, well points, or micro-wells) will be developed to clear them of fine-grained sediment to enhance the hydraulic connection between the well and the surrounding geologic formation. Development will be accomplished by evacuating well water by either pumping or bailing. Prior to pumping or bailing, the screened interval will be gently surged using a surge block, bailer, or inertia pump with optional surgeblock fitting as appropriate. Accumulated sediment in the bottom of the well (if present) will be removed by bailing with a bottom-loading bailer or via pumping using a submersible or inertia pump with optional surge-block fitting. Wells will also be gently brushed with a weighted brush to assist in removing loose debris, silt or flock attached to the inside of the well riser and/or screen prior to development. Pumping methods will be selected based on site-specific geologic conditions, anticipated well yield, water table depth, and groundwater monitoring objectives, and may include one or more of the following:

- submersible pump
- inertial pump (Waterra™ pump or equivalent)
- bladder pump
- peristaltic pump
- centrifugal pump

When developing a well using the pumping method, the pump (or, with inertial pumps, the tubing) is lowered to the screened portion of the well. During purging, the pump or tubing is moved up and down the screened interval until the well yields relatively clear water.

Submersible pumps have a motor-driven impeller that pushes the groundwater through discharge tubing to the ground surface. Inertial pumps have a check valve at the bottom of stiff tubing which, when operated up and down, lifts water to the ground surface. Bladder pumps have a bottom check valve and a flexible internal bladder that fills from below and is then compressed using pressurized air to force water out the top of the bladder through the discharge tubing to the ground surface. These three types of pumps have a wide range of applicability in terms of well depth and water depth.

Centrifugal and peristaltic pumps use atmospheric pressure to lift water from the well, and therefore can only be practically used where the depth to water is less than 25 feet.

II. Personnel Qualifications

Monitoring well development activities will be performed by persons who have been trained in proper well development procedures under the guidance of an experienced field geologist, engineer, or technician.

III. Equipment List

Materials for monitoring well development using a pump include the following:

- health and safety equipment, as required by the site Health and Safety Plan (HASP):
- cleaning equipment
- photoionization detector (PID) to measure headspace vapors
- pump
- polyethylene pump discharge tubing
- plastic sheeting
- power source (generator or battery)
- field notebook and/or personal digital assistant (PDA)
- graduated pails
- appropriate containers

- monitoring well keys
- water level indicator

Materials for monitoring well development using a bailer include the following:

- personal protective equipment (PPE) as required by the HASP
- cleaning equipment
- PID to measure headspace vapors
- bottom-loading bailer, sand bailer
- polypropylene or nylon rope
- plastic sheeting
- graduated pails
- appropriate containers
- keys to wells
- field notebook and/or PDA
- water level indicator
- weighted brush for well brushing

IV. Cautions

Where surging is performed to assist in removing fine-grained material from the sand pack, surging must be performed in a gentle manner. Excessive suction could promote fine-grained sediment entry into the outside of the sand pack from the formation.

Avoid using development fluids or materials that could impact groundwater or soil quality, or could be incompatible with the subsurface conditions.

In some cases it may be necessary to add potable water to a well to allow surging and development, especially for new monitoring wells installed in low permeability formations. Before adding potable water to a well, the Project Manager (PM) must be notified and the PM shall make the decision regarding the appropriateness and applicability of adding potable water to a well during well development procedures. If potable water is to be added to a well as part of development, the potable water source should be sampled and analyzed for constituents of concern, and the results evaluated by the PM prior to adding the potable water to the well. If potable water is added to a well for development purposes, at the end of development the well will be purged dry to remove the potable water, or if the well no longer goes dry then the well will be purged to remove at least three times the volume of potable water that was added.

V. Health and Safety Considerations

Field activities associated with monitoring well development will be performed in accordance with a site-specific HASP, a copy of which will be present on site during such activities.

VI. Procedure

The procedures for monitoring well development are described below. (Note: Steps 7, 8, and 10 can be performed at the same time using an inertial pump with a surge-block fitting.)

1. Don appropriate PPE (as required by the HASP).

2. Place plastic sheeting around the well.

3. Clean all equipment entering each monitoring well, except for new, disposable materials that have not been previously used.

4. Open the well cover while standing upwind of the well, remove well cap. Insert PID probe approximately 4 to 6 inches into the casing or the well headspace and cover with gloved hand. Record the PID reading in the field notebook. If the well headspace reading is less than 5 PID units, proceed; if the headspace reading is greater than 5 PID units, screen the air within the breathing zone. If the PID reading in the breathing zone is below 5 PID units, proceed. If the PID reading is above 5 PID units, move upwind from well for 5 minutes to allow the volatiles to dissipate. Repeat the breathing zone test. If the reading is still above 5 PID units, don the appropriate respiratory protection in accordance with the requirements of the HASP. Record all PID readings.

5. Obtain an initial measurement of the depth to water and the total well depth from the reference point at the top of the well casing. Record these measurements in the field log book.

6. Prior to redeveloping older wells that may contain solid particulate debris along the inside of the well casing and screen, gently lower and raise a weighted brush along the entire length of the well screen and riser to free and assist in removing loose debris, silt or flock. Perform a minimum of 4 “passes” along the screened and cased intervals of the well below the static water level in the well. Allow the resulting suspended material to settle for a minimum of one day prior to continuing with redevelopment activities.

7. Lower a surge block or bailer into the screened portion of the well. Gently raise and lower the surge block or bailer within the screened interval of the well to force water in and out of the screen slots and sand pack. Continue surging for 15 to 30 minutes.

8. Lower a bottom-loading bailer, submersible pump, or inertia pump tubing with check valve to the bottom of the well and gently bounce the bailer, pump, pump tubing on the bottom of the well to collect/remove accumulated sediment, if any. Remove and empty the bailer, if used. Repeat until the bailed/pumped water is free of excessive sediment and the bottom of the well feels solid. Alternatively, measurement of the well depth with a water level indicator can be used to verify that sediment and/or silt has been removed to the extent practicable, based on a comparison with the well installation log or previous measurement of total well depth.

9. After surging the well and removing excess accumulated sediment from the bottom of the well, re-measure the depth-to-water and the total well depth from the reference point at the top of the well casing. Record these measurements in the field log book.

10. Remove formation water by pumping or bailing. Where pumping is used, measure and record the pre-pumping water level. Operate the pump at a relatively constant rate. Measure the pumping rate using a calibrated container and stop watch, and record the pumping rate in the field log book. Measure and record the water level in the well at least

once every 5 minutes during pumping. Note any relevant observations in terms of water color, visual level of turbidity, sheen, odors, etc. Pump or bail until termination criteria specified in the Field Sampling Plan (FSP) are reached. Record the total volume of water purged from the well.

11. If the well goes dry, stop pumping or bailing. Note the time that the well went dry. After allowing the well to recover, note the time and depth to water. Resume pumping or bailing when sufficient water has recharged the well.

12. Contain all water in appropriate containers.

13. When complete, secure the lid back on the well.

14. Place disposable materials in plastic bags for appropriate disposal and decontaminate reusable, downhole pump components and/or bailer.

VII. Waste Management

Materials generated during monitoring well installation and development will be placed in appropriate labeled containers and disposed of as described in the Work Plan or Field Sampling Plan.

VIII. Data Recording and Management

Well development activities will be documented in a proper field notebook and/or PDA. Pertinent information will include personnel present on site; times of arrival and departure; significant weather conditions; timing of well development activities; development method(s); observations of purge water color, turbidity, odor, sheen, etc.; purge rate; and water levels before and during pumping.

IX. Quality Assurance

All reused, non-disposable, downhole well development equipment will be cleaned in accordance with the procedures outlined in the Field Equipment Cleaning-Decontamination SOP.

X. References

Not applicable.

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Bailer-Grab Groundwater Sampling

Rev. #: 0

Rev Date: March 10, 2009

Approval Signatures

Prepared by: _____ Date: 3/10/09
Loren North

Reviewed by: _____ Date: 3/10/09
Michael Gefell (Technical Expert)

I. Scope and Application

The objective of this Standard Operating Procedure (SOP) is to describe the procedure to collect groundwater samples using bailers with no purging of the monitoring well, piezometer, etc. This SOP describes the equipment, field procedures, materials, and documentation procedures necessary to collect groundwater samples by "bailer grab" sampling.

This SOP may be varied or changed, as required, depending on site conditions, equipment limitations, or limitations imposed by the procedure. The ultimate procedure employed will be documented in the project work plans or reports.

II. Personnel Qualifications

Field sampling personnel will have current health and safety training, including 40-hour Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) training, site supervisor training, site-specific training, first aid, and cardiopulmonary resuscitation (CPR), as needed. In addition, field sampling personnel will be versed in the relevant SOPs and possess the required skills and experience necessary to successfully complete the desired field work.

III. Equipment List

- Electronic water-level or oil-water level indicator;
- Plastic sheeting;
- Masking tape;
- Tape measure;
- Appropriate cleaning materials;
- Well keys;
- Bailer;
- Polyethylene or nylon rope;
- Field notebook/logs/forms; and

- Personal protective equipment (PPE), as required by the Health and Safety Plan (HASP).

IV. Cautions

Two types of bailers are available for obtaining grab samples from wells: a point-source bailer; and an open bailer. A point source bailer is constructed of stainless steel and has dual ball valves at the top and bottom which prevent mixing of water with a sample collected at a discrete interval. Open bailers can be stainless steel, Teflon®, PVC, or polyethylene. Disposable open bailers are typically made of polyethylene. An open bailer has one bottom ball valve. After the point-source or open bailer is lowered to the desired depth, the bailer is retrieved upward and the valve(s) retain the sample of water in the bailer. Because the top of the open bailer is exposed to the water in the overlying water column, it is possible that the sample could mix, to some degree with the water column above the bailer upon removal from the well. Thus, open bailers should not be used in situations where a substantial water column length exists above the sampling depth. In addition, bailer grab sampling is not recommended in monitoring wells (or piezometers) containing a floating layer of light, non-aqueous phase liquid (LNAPL), also known as separate phase hydrocarbons.

Avoid introduction of surface soils or other materials by staging down-hole equipment on a clean and dry working surface.

A Shipping Determination must be performed, by DOT-trained personnel, for all environmental and geotechnical samples that are to be shipped, as well as some types of environmental equipment/supplies that are to be shipped.

V. Health and Safety Considerations

Upon opening monitoring wells, monitor well headspace and breathing zone using equipment specified in the HASP. Follow the HASP in terms of PPE and other safety requirements.

VI. Procedure

1. Open the well and obtained a depth to water measurement using a properly decontaminated water level indicator or oil-water level indicator.

2. Based on the depth to water and the total well depth (based on well log, accounting for the “stickup height above grade”), calculate the length of the water column and the depth to the midpoint of the saturated screened or open interval from the top of casing (call this distance Z).

3. Tie an appropriate length of new, disposable polyethylene or nylon rope to a new, disposable or properly decontaminated bailer and, using a tape measure, measure from the midpoint of the bailer up the rope to the distance Z calculated above – mark the rope at this height with a knot or piece of masking tape. Avoid allowing the bailer or the rope to contact the ground surface by placing these on clean plastic sheeting next to the well, if necessary.

4. Slowly lower the bailer into the well; the rate of lowering should be no more than 0.5-ft per second within the water column. When the mark on the rope is at the top of casing, indicating that the midpoint of the bailer is at the midpoint of the saturated screened or open interval, slowly raise and retrieve the bailer from the well.

5. Fill sample vials and bottles as usual. If field filtering of metals samples is required, decant the water from the bailer into a sterile container and use a decontaminated peristaltic pump to pump the water through an appropriate disposable filter, collecting the filtered water directly in the appropriate sample containers. If field parameters are needed, measure them in the sterile container using appropriate field probes, or else use a downhole probe. Collect quality assurance/quality control (QA/QC) samples at the appropriate frequency as required under the standard sampling program. If additional sample volume is required at a well, repeat Step 4; however, repeat deployment of the bailer should be avoided if possible because it could increase sample turbidity and compromise sample quality.

6. Cap the well, properly decontaminate the water level meter or interface probe, and dispose of waste materials.

VII. Waste Management

Decontamination water will be disposed of properly. Rinse water, PPE, and other residuals generated during equipment decontamination will be placed in appropriate containers and labeled.

VIII. Data Recording and Management

Water-level measurements and depth calculations will be documented on the groundwater sampling log and/or the field logbook, including the following information:

- Well designation;
- Water-level measurement time;

- Total well depth;
- Depth to water; and
- Depth to midpoint of saturated screened or open interval.

In addition, the following information regarding the groundwater sample will be recorded:

- Type, size, and construction materials of bailer (point source or open);
- Type of rope;
- Time of sample collection;
- Type and volume of glassware filled, for which analytical methods;
- Field observations regarding groundwater sample (color; odor; presence of sheen, film, or particulate (if any); and
- Field parameter measurements.

IX. Quality Assurance

Depending on data quality objectives and data end use, aqueous QA/QC samples may be obtained.

X. References

N/A

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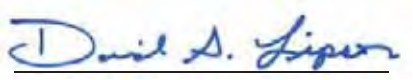
Low-Flow Groundwater Purging and Sampling Procedures for Monitoring Wells

Rev. #: 4

Rev Date: February 2, 2011

Approval Signatures

Prepared by:  Date: 2/2/2011

Reviewed by: Date: 2/2/2011

(Technical Expert)

I. Scope and Application

Groundwater samples will be collected from monitoring wells to evaluate groundwater quality. The protocol presented in this standard operating procedure (SOP) describes the procedures to be used to purge monitoring wells and collect groundwater samples. This protocol has been developed in accordance with the United States Environmental Protection Agency (USEPA) Region I Low Stress (Low Flow) Purging and Sampling Procedures for the Collection of Groundwater Samples from Monitoring Wells (USEPA SOP No. GW0001; July 30, 1996). Both filtered and unfiltered groundwater samples may be collected using this low-flow sampling method. Filtered samples will be obtained using a 0.45-micron disposable filter. No wells will be sampled until well development has been performed in accordance with the procedures presented in the SOP titled Monitoring Well Development, unless that well has been sampled or developed within the prior 1-year time period. Groundwater samples will not be collected within 1 week following well development.

II. Personnel Qualifications

ARCADIS personnel directing, supervising, or leading groundwater sample collection activities should have a minimum of 2 years of previous groundwater sampling experience. ARCADIS personnel providing assistance to groundwater sample collection and associated activities should have a minimum of 6 months of related experience or an advanced degree in environmental sciences, engineering, hydrogeology, or geology.

The supervisor of the groundwater sampling team will have at least 1 year of previous supervised groundwater sampling experience.

Prior to mobilizing to the field, the groundwater sampling team should review and be thoroughly familiar with relevant site-specific documents including but not limited to the site work plan, field sampling plan, QAPP, HASP, and historical information. Additionally, the groundwater sampling team should review and be thoroughly familiar with documentation provided by equipment manufacturers for all equipment that will be used in the field prior to mobilization.

III. Equipment List

Specific to this activity, the following materials (or equivalent) will be available:

- Health and safety equipment (as required in the site Health and Safety Plan [HASP]).

- Site Plan, well construction records, prior groundwater sampling records (if available).
- Sampling pump, which may consist of one or more of the following:
  - submersible pump (e.g., Grundfos Redi-Flo 2);
  - peristaltic pump (e.g., ISCO Model 150); and/or
  - bladder pump (e.g., Marschalk System 1, QED Well Wizard, Geotech, etc.).
- Appropriate controller and power source for pump:
  - Submersible and peristaltic pumps require electric power from either a generator or a deep cell battery.
  - Submersible pumps such as Grundfos require a pump controller to run the pump
  - Bladder pumps require a pump controller and a gas source (e.g., air compressor or compressed N_2 or CO_2 gas cylinders).
- Teflon® tubing or Teflon®-lined polyethylene tubing of an appropriate size for the pump being used. For peristaltic pumps, dedicated Tygon® tubing (or other type as specified by the manufacturer) will also be used through the pump apparatus.
- Water-level probe (e.g., Solinist Model 101).
- Water-quality (temperature/pH/specific conductivity/ORP/turbidity/dissolved oxygen) meter and flow-through measurement cell. Several brands may be used, including:
  - YSI 6-Series Multi-Parameter Instrument;
  - Hydrolab Series 3 or Series 4a Multiprobe and Display; and/or
  - Horiba U-10 or U-22 Water Quality Monitoring System.
- Supplemental turbidity meter (e.g., Horiba U-10, Hach 2100P, LaMotte 2020). Turbidity measurements collected with multi-parameter meters have been shown to sometimes be unreliable due to fouling of the optic lens of the

turbidity meter within the flow-through cell. A supplemental turbidity meter will be used to verify turbidity data during purging if such fouling is suspected. Note that industry improvements may eliminate the need for these supplemental measurements in the future.

- Appropriate water sample containers (supplied by the laboratory).
- Appropriate blanks (trip blank supplied by the laboratory).
- 0.45-micron disposable filters (if field filtering is required).
- Large glass mixing container (if sampling with a bailer).
- Teflon® stirring rod (if sampling with a bailer).
- Cleaning equipment.
- Groundwater sampling log (attached) or bound field logbook.

Note that in the future, the client may acquire different makes/models of some of this equipment if the listed makes/models are no longer available, or as a result of general upgrades or additional equipment acquisitions. In the event that the client uses a different make/model of the equipment listed, the client will use an equivalent type of equipment (e.g., pumps, flow-through analytical cells) and note the specific make/model of the equipment used during a sampling event on the groundwater sampling log. In addition, should the client desire to change to a markedly different sampling methodology (e.g., discrete interval samplers, passive diffusion bags, or a yet to be developed technique), the client will submit a proposed SOP for the new methodology for USEPA approval prior to implementing such a change.

The maintenance requirements for the above equipment generally involve decontamination or periodic cleaning, battery charging, and proper storage, as specified by the manufacturer. For operational difficulties, the equipment will be serviced by a qualified technician.

IV. Cautions

If heavy precipitation occurs and no cover over the sampling area and monitoring well can be erected, sampling must be discontinued until adequate cover is provided. Rain water could contaminate groundwater samples.

Do not use permanent marker or felt-tip pens for labels on sample container or sample coolers – use indelible ink. The permanent markers could introduce volatile constituents into the samples.

It may be necessary to field filter some parameters (e.g., metals) prior to collection, depending on preservation, analytical method, and project quality objectives.

Store and/or stage empty and full sample containers and coolers out of direct sunlight.

To mitigate potential cross-contamination, groundwater samples are to be collected in a pre-determined order from least impacted to impacted based on previous analytical data. If no analytical data are available, samples are collected in order of upgradient, then furthest downgradient to source area locations.

Be careful not to over-tighten lids with Teflon liners or septa (e.g., 40 mL vials). Over-tightening can cause the glass to shatter or impair the integrity of the Teflon seal.

V. Health and Safety Considerations

Use caution and appropriate cut resistant gloves when tightening lids to 40 mL vials. These vials can break while tightening and can lacerate hand. Amber vials (thinner glass) are more prone to breakage.

If thunder or lighting is present, discontinue sampling and take cover until 30 minutes have passed after the last occurrence of thunder or lighting.

Use caution when removing well caps as well may be under pressure, cap can dislodge forcefully and cause injury.

Use caution when opening protective casing on stickup wells as wasps frequently nest inside the tops of the covers. Also watch for fire ant mounds near well pads when sampling in the south or western U.S.

VI. Procedure

Groundwater will be purged from the wells using an appropriate pump. Peristaltic pumps will initially be used to purge and sample all wells when applicable. If the depth to water is below the sampling range of a peristaltic pump (approximately 25 feet), submersible pumps or bladder pumps will be used provided the well is constructed with a casing diameter greater than or equal to 2 inches (the minimum well diameter capable of accommodating such pumps). Bladder pumps are preferred over peristaltic and submersible pumps if sampling of VOCs is required to prevent volatilization. For smaller diameter wells where the depth to water is below the sampling range of a

peristaltic pump, alternative sampling methods (i.e., bailing or small diameter bladder pumps) will be used to purge and sample the groundwater. Purge water will be collected and containerized.

1. Calibrate field instruments according to manufacturer procedures for calibration.

2. Measure initial depth to groundwater prior to placement of pumps.

3. Prepare and install pump in well: For submersible and non-dedicated bladder pumps, decontaminate pump according to site decontamination procedures. Non-dedicated bladder pumps will require a new Teflon® bladder and attachment of an air line, sample discharge line, and safety cable prior to placement in the well. Attach the air line tubing to the air port on the top of the bladder pump. Attach the sample discharge tubing to the water port on the top of the bladder pump. Care should be taken not to reverse the air and discharge tubing lines during bladder pump set-up as this could result in bladder failure or rupture. Attach and secure a safety cable to the eyebolt on the top of bladder pump (if present, depending on pump model used). Slowly lower pump, safety cable, tubing, and electrical lines into the well to a depth corresponding to the approximate center of the saturated screen section of the well. Take care to avoid twisting and tangling of safety cable, tubing, and electrical lines while lowering pump into well; twisted and tangled lines could result in the pump becoming stuck in the well casing. Also, make sure to keep tubing and lines from touching the ground or other surfaces while introducing them into the well as this could lead to well contamination. If a peristaltic pump is being used, slowly lower the sampling tubing into the well to a depth corresponding to the approximate center of the saturated screen section of the well. The pump intake or sampling tube must be kept at least 2 feet above the bottom of the well to prevent mobilization of any sediment present in the bottom of the well.

4. If using a bladder pump, connect the air line to the pump controller output port. The pump controller should then be connected to a supply line from an air compressor or compressed gas cylinder using an appropriate regulator and air hose. Take care to tighten the regulator connector onto the gas cylinder (if used) to prevent leaks. Teflon tape may be used on the threads of the cylinder to provide a tighter seal. Once the air compressor or gas cylinder is connected to the pump controller, turn on the compressor or open the valve on the cylinder to begin the gas flow. Turn on the pump controller if an on/off switch is present and verify that all batteries are charged and fully operating before beginning to pump.

5. Connect the pump discharge water line to the bottom inlet port on the flow-through cell connected to the water quality meter.

6. Measure the water level again with the pump in the well before starting the pump. Start pumping the well at 200 to 500 milliliters (mL) per minute (or at lower site-specific rate if specified). The pump rate should be adjusted to cause little or no water level drawdown in the well (less than 0.3 feet below the initial static depth to water measurement) and the water level should stabilize. The water level should be monitored every 3 to 5 minutes (or as appropriate, lower flow rates may require longer time between readings) during pumping if the well diameter is of sufficient size to allow such monitoring. Care should be taken not to break pump suction or cause entrainment of air in the sample. Record pumping rate adjustments and depths to water. If necessary, pumping rates should be reduced to the minimum capabilities of the pump to avoid pumping the well dry and/or to stabilize indicator parameters. A steady flow rate should be maintained to the extent practicable. Groundwater sampling records from previous sampling events (if available) should be reviewed prior to mobilization to estimate the optimum pumping rate and anticipated drawdown for the well in order to more efficiently reach a stabilized pumping condition.

   If the recharge rate of the well is very low, alternative purging techniques should be used, which will vary based on the well construction and screen position. For wells screened across the water table, the well should be pumped dry and sampling should commence as soon as the volume in the well has recovered sufficiently to permit collection of samples. For wells screened entirely below the water table, the well should be pumped until a stabilized level (which may be below the maximum displacement goal of 0.3 feet) can be maintained and monitoring for stabilization of field indicator parameters can commence. If a lower stabilization level cannot be maintained, the well should be pumped until the drawdown is at a level slightly higher than the bentonite seal above the well screen. Sampling should commence after one well volume has been removed and the well has recovered sufficiently to permit collection of samples.

   During purging, monitor the field indicator parameters (e.g., turbidity, temperature, specific conductance, pH, etc.) every 3 to 5 minutes (or as appropriate). Field indicator parameters will be measured using a flow-through analytical cell or a clean container such as a glass beaker. Record field indicator parameters on the groundwater sampling log. The well is considered stabilized and ready for sample collection when turbidity values remain within 10% (or within 1 NTU if the turbidity reading is less than 10 NTU), the specific conductance and temperature values remain within 3%, ORP readings remain within ± 10 mV and pH remains within 0.1 units for three consecutive readings collected at 3- to 5-minute intervals (or other appropriate interval, alternate stabilization goals may exist in different geographic regions, consult the site-specific Work Plan for stabilization criteria). If the field indicator parameters do not stabilize within 1 hour of the start of purging, but the groundwater turbidity is

below the goal of 50 NTU and the values for all other parameters are within 10%, the well can be sampled. If the parameters have stabilized but the turbidity is not in the range of the 50 NTU goal, the pump flow rate should be decreased to a minimum rate of 100 mL/min to reduce turbidity levels as low as possible. Dissolved oxygen is extremely susceptible to various external influences (including temperature or the presence of bubbles on the DO meter); care should be taken to minimize the agitation or other disturbance of water within the flow-through cell while collecting these measurements. If air bubbles are present on the DO probe or in the discharge tubing, remove them before taking a measurement. If dissolved oxygen values are not within acceptable range for the temperature of groundwater (Attachment 1), then again check for and remove air bubbles on probe before re-measuring. If the dissolved oxygen value is 0.00 or less, then the meter should be serviced and re-calibrated. If the dissolved oxygen values are above possible results, then the meter should be serviced and re-calibrated.

During extreme weather conditions, stabilization of field indicator parameters may be difficult to obtain. Modifications to the sampling procedures to alleviate these conditions (e.g., measuring the water temperature in the well adjacent to the pump intake) will be documented in the field notes. If other field conditions exist that preclude stabilization of certain parameters, an explanation of why the parameters did not stabilize will also be documented in the field logbook.

7. Complete the sample label(s) and cover the label(s) with clear packing tape to secure the label onto the container.

8. After the indicator parameters have stabilized, collect groundwater samples by diverting flow out of the unfiltered discharge tubing into the appropriate labeled sample container. If a flow-through analytical cell is being used to measure field parameters, the flow-through cell should be disconnected after stabilization of the field indicator parameters and prior to groundwater sample collection. Under no circumstances should analytical samples be collected from the discharge of the flow-through cell. When the container is full, tightly screw on the cap. Samples should be collected in the following order: VOCs, TOC, SVOCs, metals and cyanide, and others (or other order as defined in the site-specific Work Plan).

9. If sampling for total and filtered metals and/or PCBs, a filtered and unfiltered sample will be collected. Install an in-line, disposable 0.45-micron particle filter on the discharge tubing after the appropriate unfiltered groundwater sample has been collected. Continue to run the pump until an initial volume of “flush” water has been run through the filter in accordance with the manufacturer’s directions (generally 100 to 300 mL). Collect filtered groundwater sample by diverting flow

out of the filter into the appropriately labeled sample container. When the container is full, tightly screw on the cap.

10. Secure with packing material and store at 4°C in an insulated transport container provided by the laboratory.

11. Record on the groundwater sampling log or bound field logbook the time sampling procedures were completed, any pertinent observations of the sample (e.g., physical appearance, and the presence or lack of odors or sheens), and the values of the stabilized field indicator parameters as measured during the final reading during purging (Attachment 2 – Example Sampling Log).

12. Turn off the pump and air compressor or close the gas cylinder valve if using a bladder pump set-up. Slowly remove the pump, tubing, lines, and safety cable from the well. Do not allow the tubing or lines to touch the ground or any other surfaces which could contaminate them. .

13. If tubing is to be dedicated to a well, it should be folded to a length that will allow the well to be capped and also facilitate retrieval of the tubing during later sampling events. A length of rope or string should be used to tie the tubing to the well cap. Alternatively, if tubing and safety line are to be saved and reused for sampling the well at a later date they may be coiled neatly and placed in a clean plastic bag that is clearly labeled with the well ID. Make sure the bag is tightly sealed before placing it in storage.

14. Secure the well and properly dispose of personal protective equipment (PPE) and disposable equipment.

15. Complete the procedures for packaging, shipping, and handling with associated chain-of-custody.

16. Complete decontamination procedures for flow-through analytical cell and submersible or bladder pump, as appropriate.

17. At the end of the day, perform calibration check of field instruments.

If it is not technically feasible to use the low-flow sampling method, purging and sampling of monitoring wells may be conducted using the bailer method as outlined below:

1. Don appropriate PPE (as required by the HASP).

2. Place plastic sheeting around the well.

3. Clean sampling equipment.

4. Open the well cover while standing upwind of the well. Remove well cap and place on the plastic sheeting. Insert PID probe approximately 4 to 6 inches into the casing or the well headspace and cover with gloved hand. Record the PID reading in the field log. If the well headspace reading is less than 5 PID units, proceed; if the headspace reading is greater than 5 PID units, screen the air within the breathing zone. If the breathing zone reading is less than 5 PID units, proceed. If the PID reading in the breathing zone is above 5 PID units, move upwind from well for 5 minutes to allow the volatiles to dissipate. Repeat the breathing zone test. If the reading is still above 5 PID units, don appropriate respiratory protection in accordance with the requirements of the HASP. Record all PID readings. For wells that are part of the regular weekly monitoring program and prior PID measurements have not resulted in a breathing zone reading above 5 PID units, PID measurements will be taken monthly.

5. Measure the depth to water and determine depth of well by examining drilling log data or by direct measurement. Calculate the volume of water in the well (in gallons) by using the length of the water column (in feet), multiplying by 0.163 for a 2-inch well or by 0.653 for a 4-inch well. For other well diameters, use the formula:

   Volume (in gallons) = π TIMES well radius (in feet) squared TIMES length of water column (in feet) TIMES 7.481 (gallons per cubic foot)

6. Measure a length of rope or twine at least 10 feet greater than the total depth of the well. Secure one end of the rope to the well casing and secure the other end to the bailer. Test the knots and make sure the rope will not loosen. Check bailers so that all parts are intact and will not be lost in the well.

7. Lower bailer into well and remove one well volume of water. Contain all water in appropriate containers.

8. Monitor the field indicator parameters (e.g., turbidity, temperature, specific conductance, and pH). Measure field indicator parameters using a clean container such as a glass beaker or sampling cups provided with the instrument. Record field indicator parameters on the groundwater sampling log.

9. Repeat Steps 7 and 8 until three or four well volumes have been removed. Examine the field indicator parameter data to determine if the parameters have stabilized. The well is considered stabilized and ready for sample collection when turbidity values remain within 10% (or within 1 NTU if the turbidity reading is less than 10 NTU), the specific conductance and temperature values remain

within 3%, and pH remains within 0.1 units for three consecutive readings collected once per well volume removed.

10. If the field indicator parameters have not stabilized, remove a maximum of five well volumes prior to sample collection. Alternatively, five well volumes may be removed without measuring the field indicator parameters.

11. If the recharge rate of the well is very low, wells screened across the water table may be bailed dry and sampling should commence as soon as the volume in the well has recovered sufficiently to permit collection of samples. For wells screened entirely below the water table, the well should only be bailed down to a level slightly higher than the bentonite seal above the well screen. The well should not be bailed completely dry, to maintain the integrity of the seal. Sampling should commence as soon as the well volume has recovered sufficiently to permit sample collection.

12. Following purging, allow water level in well to recharge to a sufficient level to permit sample collection.

13. Complete the sample label and cover the label with clear packing tape to secure the label onto the container.

14. Slowly lower the bailer into the screened portion of the well and carefully retrieve a filled bailer from the well causing minimal disturbance to the water and any sediment in the well.

15. The sample collection order (as appropriate) will be as follows:

    a. VOCs;

    b TOC;

    c. SVOCs;

    d. metals and cyanide; and

    e. others.

16. When sampling for volatiles, collect water samples directly from the bailer into 40-mL vials with Teflon®-lined septa.

17. For other analytical samples, remove the cap from the large glass mixing container and slowly empty the bailer into the large glass mixing container. The

sample for dissolved metals and/or filtered PCBs should either be placed directly from the bailer into a pressure filter apparatus or pumped directly from the bailer with a peristaltic pump, through an in-line filter, into the pre-preserved sample bottle.

18. Continue collecting samples until the mixing container contains a sufficient volume for all laboratory samples.

19. Mix the entire sample volume with the Teflon® stirring rod and transfer the appropriate volume into the laboratory jar(s). Secure the sample jar cap(s) tightly.

20. If sampling for total and filtered metals and/or PCBs, a filtered and unfiltered sample will be collected. Sample filtration for the filtered sample will be performed in the field using a peristaltic pump prior to preservation. Install new medical-grade silicone tubing in the pump head. Place new Teflon® tubing into the sample mixing container and attach to the intake side of pump tubing. Attach (clamp) a new 0.45-micron filter (note the filter flow direction). Turn the pump on and dispense the filtered liquid directly into the laboratory sample bottles.

21. Secure with packing material and store at 4°C in an insulated transport container provided by the laboratory.

22. After sample containers have been filled, remove one additional volume of groundwater. Measure the pH, temperature, turbidity, and conductivity. Record on the groundwater sampling log or bound field logbook the time sampling procedures were completed, any pertinent observations of the sample (e.g., physical appearance, and the presence or lack of odors or sheens), and the values of the field indicator parameters.

23. Remove bailer from well, secure well, and properly dispose of PPE and disposable equipment.

24. If a bailer is to be dedicated to a well, it should be secured inside the well above the water table, if possible. Dedicated bailers should be tied to the well cap so that inadvertent loss of the bailer will not occur when the well is opened.

25. Complete the procedures for packaging, shipping, and handling with associated chain-of-custody.

VII. Waste Management

Materials generated during groundwater sampling activities, including disposable equipment, will be placed in appropriate containers. Containerized waste will be disposed of by the client consistent with the procedures identified in the HASP.

VIII. Data Recording and Management

Initial field logs and chain-of-custody records will be transmitted to the ARCADIS PM at the end of each day unless otherwise directed by the PM. The groundwater team leader retains copies of the groundwater sampling logs.

IX. Quality Assurance

In addition to the quality control samples to be collected in accordance with this SOP, the following quality control procedures should be observed in the field:

- Collect samples from monitoring wells in order of increasing concentration, to the extent known based on review of historical site information if available.
- Equipment blanks should include the pump and tubing (if using disposable tubing) or the pump only (if using tubing dedicated to each well).
- Collect equipment blanks after wells with higher concentrations (if known) have been sampled.
- Operate all monitoring instrumentation in accordance with manufacturer's instructions and calibration procedures. Calibrate instruments at the beginning of each day and verify the calibration at the end of each day. Record all calibration activities in the field notebook.
- Clean all groundwater sampling equipment prior to use in the first well and after each subsequent well using procedures for equipment decontamination.

X. References

United States Environmental Protection Agency (USEPA). 1986. RCRA Groundwater Monitoring Technical Enforcement Guidance Document (September 1986).

USEPA Region II. 1998. *Ground Water Sampling Procedure Low Stress (Low Flow) Purging and Sampling*.

USEPA. 1991. Handbook Groundwater, Volume II Methodology, Office of Research and Development, Washington, DC. USEPN62S, /6-90/016b (July, 1991).

U.S. Geological Survey (USGS). 1977. National Handbook of Recommended Methods for Water-Data Acquisition: USGS Office of Water Data Coordination. Reston, Virginia.

Attachment 1

Groundwater Sampling Log

Attachment 2

Oxygen Solubility in Fresh Water

Temperature (degrees C)	**Dissolved Oxygen** (mg/L)
0	14.6
1	14.19
2	13.81
3	13.44
4	13.09
5	12.75
6	12.43
7	12.12
8	11.83
9	11.55
10	11.27
11	11.01
12	10.76
13	10.52
14	10.29
15	10.07
16	9.85
17	9.65
18	9.45
19	9.26
20	9.07
21	8.9
22	8.72
23	8.56
24	8.4
25	8.24
26	8.09
27	7.95
28	7.81
29	7.67
30	7.54
31	7.41
32	7.28
33	7.16
34	7.05
35	6.93

Reference: Vesilind, P.A., *Introduction to Environmental Engineering*, PWS Publishing Company, Boston, 468 pages (1996).

ARCADIS
Infrastructure · Water · Environment · Buildings

Imagine the result

Chain-of-Custody, Handling, Packing and Shipping

Rev. #: 2

Rev Date: March 6, 2009

Approval Signatures

Prepared by: _____ Date: 3/6/09
Caron Koll

Reviewed by: _____ Date: 3/6/09
Jane Kennedy(Technical Expert)

I. Scope and Application

This Standard Operating Procedure (SOP) describes the chain-of-custody, handling, packing, and shipping procedures for the management of samples to decrease the potential for cross-contamination, tampering, mis-identification, and breakage, and to insure that samples are maintained in a controlled environment from the time of collection until receipt by the analytical laboratory.

II. Personnel Qualifications

ARCADIS field sampling personnel will have current health and safety training, including 40-hour HAZWOPER training, Department of Transportation (DOT) training, site supervisor training, and site-specific training, as needed. In addition, ARCADIS field sampling personnel will be versed in the relevant SOPs and possess the skills and experience necessary to successfully complete the desired field work.

III. Equipment List

The following list provides materials that may be required for each project. Project documents and sample collection requirements should be reviewed prior to initiating field operations:

- indelible ink pens (black or blue);
- polyethylene bags (resealable-type);
- clear packing tape, strapping tape, duct tape;
- chain of custody
- DOT shipping forms, as applicable
- custody seals or tape;
- appropriate sample containers and labels,;
- insulated coolers of adequate size for samples and sufficient ice to maintain 4°C during collection and transfer of samples;
- wet ice;
- cushioning and absorbent material (i.e., bubble wrap or bags);

- temperature blank
- sample return shipping papers and addresses; and
- field notebook.

IV. Cautions

Review project requirements and select appropriate supplies prior to field mobilization.

Insure that appropriate sample containers with applicable preservatives, coolers, and packing material have been supplied by the laboratory.

Understand the offsite transfer requirements for the facility at which samples are collected.

If overnight courier service is required schedule pick-up or know where the drop-off service center is located and the hours of operation. Prior to using air transportation, confirm air shipment is acceptable under DOT and International Air Transport Association (IATA) regulation

Schedule pick-up time for laboratory courier or know location of laboratory/service center and hours of operation.

Understand DOT and IATA shipping requirements and evaluate dangerous goods shipping regulations relative to the samples being collected (i.e. complete an ARCADIS shipping determination). Review the ARCADIS SOPs for shipping, packaging and labeling of dangerous goods. Potential samples requiring compliance with this DOT regulation include:

- Methanol preservation for Volatile Organic Compounds in soil samples
- Non-aqueous phase liquids (NAPL)

V. Health and Safety Considerations

Follow health and safety procedures outlined in the project/site Health and Safety Plan (HASP).

Use caution and appropriate cut resistant gloves when tightening lids to 40 mL vials. These vials can break while tightening and can lacerate hand. Amber vials (thinner glass) are more prone to breakage.

Some sample containers contain preservatives.

- The preservatives must be retained in the sample container and should in no instance be rinsed out.
- Preservatives may be corrosive and standard care should be exercised to reduce potential contact to personnel skin or clothing. Follow project safety procedures if spillage is observed.
- If sample container caps are broken discard the bottle. Do not use for sample collection.

VI. Procedure

Chain-of-Custody Procedures

1. Prior to collecting samples, complete the chain-of-custody record header information by filling in the project number, project name, and the name(s) of the sampling technician(s) and other relevant project information. Attachment 1 provides an example chain-o- custody record

2. Chain-of-custody information MUST be printed legibly using indelible ink (black or blue).

3. After sample collection, enter the individual sample information on the chain-of-custody:

    a. Sample Identification indicates the well number or soil location that the sample was collected from. Appropriate values for this field include well locations, grid points, or soil boring identification numbers (e.g., MW-3, X-20, SB-30). When the depth interval is included, the complete sample ID would be “SB-30 (0.5-1.0) where the depth interval is in feet. Please note it is very important that the use of hyphens in sample names and depth units (i.e., feet or inches) remain consistent for all samples entered on the chain-of-custody form. DO NOT use the apostrophe or quotes in the sample ID. Sample names may also use the abbreviations “FB,” “TB,” and “DUP” as prefixes or suffixes to indicate that the sample is a field blank, trip blank, or field duplicate, respectively. NOTE: The sample

nomenclature may be dictated by the project database and require unique identification for each sample collected for the project. Consult the project data management plan for additional information regarding sample identification.

b. List the date of sample collection. The date format to be followed should be mm/dd/yy (e.g., 03/07/09) or mm/dd/yyyy (e.g. 03/07/2009).

c. List the time that the sample was collected. The time value should be presented using military format. For example, 3:15 P.M. should be entered as 15:15.

d. The composite field should be checked if the sample is a composite over a period of time or from several different locations and mixed prior to placing in sample containers.

e. The “Grab”. field should be marked with an “X” if the sample was collected as an individual grab sample. (e.g. monitoring well sample or soil interval).

f. Any sample preservation should be noted.

g. The analytical parameters that the samples are being analyzed for should be written legibly on the diagonal lines. As much detail as possible should be presented to allow the analytical laboratory to properly analyze the samples. For example, polychlorinated biphenyl (PCB) analyses may be represented by entering “PCBs” or “Method 8082.” Multiple methods and/or analytical parameters may be combined for each column (e.g., PCBs/VOCs/SVOCs or 8082/8260/8270). These columns should also be used to present project-specific parameter lists (e.g., Appendix IX+3 target analyte list. Each sample that requires a particular parameter analysis will be identified by placing the number of containers in the appropriate analytical parameter column. For metals in particular, indicate which metals are required.

h. Number of containers for each method requested. This information may be included under the parameter or as a total for the sample based on the chain of custody form used.

i. Note which samples should be used for site specific matrix spikes.

j. Indicate any special project requirements.

k. Indicate turnaround time required.

l. Provide contact name and phone number in the event that problems are encountered when samples are received at the laboratory.

m. If available attach the Laboratory Task Order or Work Authorization forms

n. The remarks field should be used to communicate special analytical requirements to the laboratory. These requirements may be on a per sample basis such as “extract and hold sample until notified,” or may be used to inform the laboratory of special reporting requirements for the entire sample delivery group (SDG). Reporting requirements that should be specified in the remarks column include: 1) turnaround time; 2) contact and address where data reports should be sent; 3) name of laboratory project manager; and 4) type of sample preservation used.

o. The “Relinquished By” field should contain the signature of the sampling technician who relinquished custody of the samples to the shipping courier or the analytical laboratory.

p. The “Date” field following the signature block indicates the date the samples were relinquished. The date format should be mm/dd/yyyy (e.g., 03/07/2005).

q. The “Time” field following the signature block indicates the time that the samples were relinquished. The time value should be presented using military format. For example, 3:15 P.M. should be entered as 15:15.

r. The “Received By” section is signed by sample courier or laboratory representative who received the samples from the sampling technician or it is signed upon laboratory receipt from the overnight courier service.

3. Complete as many chain-of-custody forms as necessary to properly document the collection and transfer of the samples to the analytical laboratory.

4. Upon completing the chain-of-custody forms, forward two copies to the analytical laboratory and retain one copy for the field records.

5. If electronic chain-of-custody forms are utilized, sign the form and make 1 copy for ARCADIS internal records and forward the original with the samples to the laboratory.

Handling Procedures

1. After completing the sample collection procedures, record the following information in the field notebook with indelible ink:

   - project number and site name;
   - sample identification code and other sample identification information, if appropriate;
   - sampling method;
   - date;
   - name of sampler(s);
   - time;
   - location (project reference);
   - location of field duplicates and both sample identifications;
   - locations that field QC samples were collected including equipment blanks, field blanks and additional sample volume for matrix spikes; and
   - any comments.

2. Complete the sample label with the following information in indelible ink:

   - sample type (e.g., surface water);
   - sample identification code and other sample identification information, if applicable;
   - analysis required;
   - date;
   - time sampled; and
   - initials of sampling personnel;

- sample matrix; and
- preservative added, if applicable.

3. Cover the label with clear packing tape to secure the label onto the container and to protect the label from liquid.

4. Confirm that all caps on the sample containers are secure and tightly closed.

5. In some instances it may be necessary to wrap the sample container cap with clear packing tape to prevent it from becoming loose.

6. For some projects individual custody seals may be required. Custody seal evidence tape may be placed on the shipping container or they may be placed on each sample container such that the cooler or cap cannot be opened without breaking the custody seal. The custody seal should be initialed and dated prior to relinquishing the samples.

Packing Procedures

Following collection, samples must be placed on wet ice to initiate cooling to 4°C immediately. Retain samples on ice until ready to pack for shipment to the laboratory.

1. Secure the outside and inside of the drain plug at the bottom of the cooler being used for sample transport with “Duct” tape.

2. Place a new large heavy duty plastic garbage bag inside each cooler

3. Place each sample bottle wrapped in bubble wrap inside the garbage bag. VOC vials may be grouped by sample in individual resealable plastic bags). If a cooler temperature blank is supplied by the laboratory, it should be packaged following the same procedures as the samples. If the laboratory did not include a temperature blank, do not add one. Place 1 to 2 inches of cushioning material (i.e., vermiculite) at the bottom of the cooler.

4. Place the sealed sample containers upright in the cooler.

5. Package ice in large resealable plastic bags and place inside the large garbage bag in the cooler. Samples placed on ice will be cooled to and maintained at a temperature of approximately 4°C.

6. Fill the remaining space in the cooler with cushioning material such as bubble wrap. The cooler must be securely packed and cushioned in an upright position and be surrounded (Note: to comply with 49 CFR 173.4, filled cooler must not exceed 64 pounds).

7. Place the completed chain-of-custody record(s) in a large resealable bag and tape the bag to the inside of the cooler lid.

8. Close the lid of the cooler and fasten with packing tape.

9. Wrap strapping tape around both ends of the cooler.

10. Mark the cooler on the outside with the following information: shipping address, return address, “Fragile, Handle with Care” labels on the top and on one side, and arrows indicating “This Side Up” on two adjacent sides.

11. Place custody seal evidence tape over front right and back left of the cooler lid, initial and date, then cover with clear plastic tape.

Note: Procedure numbers 2, 3, 5, and 6 may be modified in cases where laboratories provide customized shipping coolers. These cooler types are designed so the sample bottles and ice packs fit snugly within preformed styrofoam cushioning and insulating packing material.

Shipping Procedures

1. All samples will be delivered by an express carrier within 48 hours of sample collection. Alternatively, samples may be delivered directly to the laboratory or laboratory service center or a laboratory courier may be used for sample pickup.

2. If parameters with short holding times are required (e.g., VOCs [EnCore™ Sampler], nitrate, nitrite, ortho-phosphate and BOD), sampling personnel will take precautions to ship or deliver samples to the laboratory so that the holding times will not be exceeded.

3. Samples must be maintained at 4°C±2°C until shipment and through receipt at the laboratory

4. All shipments must be in accordance with DOT regulations and ARCADIS dangerous goods shipping SOPs.

5. When the samples are received by the laboratory, laboratory personnel will complete the chain-of-custody by recording the date and time of receipt of samples, measuring and recording the internal temperature of the shipping container, and checking the sample identification numbers on the containers to ensure they correspond with the chain-of-custody forms.

Any deviations between the chain-of-custody and the sample containers, broken containers, or temperature excursions will be communicated to ARCADIS immediately by the laboratory.

VII. Waste Management

Not applicable

VIII. Data Recording and Management

Chain-of-custody records will be transmitted to the ARCADIS PM or designee at the end of each day unless otherwise directed by the ARCADIS PM. The sampling team leader retains copies of the chain-of-custody forms for filing in . the project file. Record retention shall be in accordance with project requirements.

IX. Quality Assurance

Chain-of-custody forms will be legibly completed in accordance with the applicable project documents such as Sampling and Analysis Plan (SAP), Quality Assurance Project Plan (QAPP), Work Plan, or other project guidance documents. A copy of the completed chain-of-custody form will be sent to the ARCADIS Project Manager or designee for review.

X. References

Not Applicable

Attachment 1

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page ___ of ___

Lab Work Order #

Send Results to:

Contact & Company Name: | Telephone:

Address: | Fax:

City | State | Zip | E-mail Address:

Project Name/Location (City, State): | Project #:

Sampler's Printed Name: | Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix

Preservative								
Filtered (✓)								
# of Containers								
Container Information								

PARAMETER ANALYSIS & METHOD

REMARKS

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil | SE - Sediment | NL - NAPL/Oil
W - Water | SL - Sludge | SW - Sample Wipe
T - Tissue | A - Air | Other: _____

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Printed Name:	Printed Name:	Printed Name:
☐ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm:	Firm/Courier:	Firm/Courier:	Firm:
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time:	Date/Time:	Date/Time:	Date/Time:

20730826 CofC AR Form 01.12.2007

Distribution: **WHITE – Laboratory returns with results** **YELLOW – Lab copy** **PINK – Retained by BBL**

ARCADIS
Infrastructure, environment, buildings

Imagine the result

Investigation-Derived Waste Handling and Storage

Rev. #: 2

Rev Date: March 6, 2009

Approval Signatures

Prepared by: Andrew Kamik Date: 3/6/09

Reviewed by: Liz Marsh Date: 3/6/09
(Technical Expert)

I. Scope and Application

The objective of this Standard Operating Procedure (SOP) is to describe the procedures to manage investigation-derived wastes (IDW), both hazardous and non-hazardous, generated during site activities, which may include, but are not limited to - drilling, trenching/excavation, construction, demolition, monitoring well sampling, soil sampling, decontamination and remediation. Please note that this SOP is intended for materials that have been deemed a solid waste as defined by 40 CFR § 261.2 (which may includes liquids, solids, and sludges). In some cases, field determinations will be made based on field screening or previous data that materials are not considered a solid waste. IDW may include soil, groundwater, drilling fluids, decontamination liquids, personal protective equipment (PPE), sorbent materials, construction and demolition debris, and disposable sampling materials that may have come in contact with potentially impacted materials. IDW will be collected and staged at the point of generation. Quantities small enough to be containerized in 55-gallon drums will be taken to a designated temporary storage area (discussed in further detail under Drum Storage) onsite pending characterization and disposal. Waste materials will be analyzed for constituents of concern to evaluate proper disposal methods. PPE and disposable sampling equipment will be placed in DOT-approved drums prior to disposal and typically does not require laboratory analysis. This SOP describes the necessary equipment, field procedures, materials, regulatory references, and documentation procedures necessary for proper handling and storage of IDW up to the time it is properly disposed. The procedures for handling IDW are based on the United States Environmental Protection Agency's Guide to Management of Investigation Derived Wastes (USEPA, 1992). IDW is assumed to be contaminated with the site constituents of concern (COCs) until analytical evidence indicates otherwise. IDW will be managed to ensure the protection of human health and the environment and will comply with all applicable or relevant and appropriate requirements (ARAR). The following Laws and Regulations on Hazardous Waste Management are potential ARAR for this site.

State Laws and Regulations

- To Be Determined Based on Location of Site and Location of Treatment, Storage, and/or Disposal Facility (TSDF) to be utilized

Federal Laws and Regulations

- Resource Conservation and Recovery Act (RCRA) 42 USC § 6901-6987
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 42 USC § 9601-9675

- Superfund Amendments and Reauthorization Act (SARA)
- Department of Transportation (DOT) Hazardous Materials Transportation

Pending characterization, IDW will be stored appropriately within each area of contamination (AOC). Under RCRA, "storage" is defined as the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere" (40 CFR § 260.10). The onsite waste staging area will be in a secure and controlled area. Waste characterization can either be based on generator knowledge, such as using materials safety data sheets (MSDS'), or can be based upon analytical results. The laboratory used for waste characterization analysis must have the appropriate state and federal certifications and be approved by ARCADIS and Client. IDW will be classified as RCRA hazardous or non-regulated under RCRA based on the waste characterization.

If IDW is characterized as RCRA hazardous waste, RCRA and DOT requirements must be followed for packaging, labeling, transporting, storing, and record keeping as described in 40 CFR § 262 and 49 CFR § 171-178. Wastes judged to potentially meet the criteria for hazardous wastes shall be stored in DOT approved packaging. Waste material classified as RCRA non-hazardous may be handled and disposed of as an industrial waste.

Liquid wastes judged to potentially meet the criteria for hazardous wastes shall be stored in DOT approved 55 gallon drums or other approved containers that are compatible with the type of material stored therein. Solid materials deemed to potentially meet hazardous criteria will be drummed where practicable. Large quantities of potentially hazardous solid materials must be containerized (such as in a roll-off box) for up to a maximum of 90 or 180 days as described in the Excavated Solids Section. Waste material classified as non-hazardous may be handled and disposed of as an industrial waste and is not subject to the 90-day or 180-day on-site storage limitation.

This is a standard (i.e., typically applicable) operating procedure which may be varied or changed as required, dependent upon site conditions, equipment limitations, or limitations imposed by the procedure. The ultimate procedure employed will be documented in the project work plans or reports. If changes to the sampling procedures are required due to unanticipated field conditions, the changes will be discussed with the Project Manager and Client as soon as practicable and documented in the report.

II. Personnel Qualifications

ARCADIS field sampling personnel will have current health and safety training including 40-hour HAZWOPER training, site supervisor training, site-specific training, first aid, and CPR, as needed. ARCADIS personnel may sign manifests on a case-to-case basis for clients, provided the appropriate agreement is in place between ARCADIS and the client documenting that ARCADIS is not the generator, but is acting as authorized representative for the generator. ARCADIS personnel who sign hazardous waste manifests will have the current DOT hazardous materials transportation training according to 49 CFR § 172.704. ARCADIS field personnel will also comply with client-specific training such as LPS. In addition, ARCADIS field sampling personnel will be versed in the relevant SOPs and posses the required skills and experience necessary to successfully complete the desired field work.

III. Equipment List

The following materials, as required, shall be available for IDW handling and storage:

Appropriate personal protective equipment as specified in the Site Health and Safety Plan

- 55-gallon steel drums, DOT 1A2 or equivalent
- ¾ -inch socket wrench
- Hammer
- Leather gloves
- Drum dolly
- Appropriate drum labels (outdoor waterproof self adhesive)
- Polyethylene storage tank
- Appropriate labeling, packing, chain-of-custody forms, and shipping materials as specified in the *Chain-of-Custody* SOP and *Field Sampling Handling, Packing, and Shipping* SOP.
- Indelible ink and/or permanent marking pens
- Plastic sheeting

- Appropriate sample containers, labels, and forms
- Stainless-steel bucket auger
- Stainless steel spatula or knife
- Stainless steel hand spade
- Stainless steel scoop
- Digital camera
- Field logbook.

IV. Cautions

- Filled drums can be very heavy, always use appropriate moving techniques and equipment.
- Similar media will be stored in the same drums to aid in sample analysis and disposal.
- Drum lids must be secured to prevent rainwater from entering the drums.
- Drums containing solid material may not contain any free liquids.
- Waste containers stored for extended periods of time may be subject to deterioration. Drum over packs may be used as secondary containment.
- All drums must be in good condition to prevent potential leakage and facilitate subsequent disposal. Inspect the drums for dents and rust, and verify the drum has a secure lid prior to use.

V. Health and Safety Considerations

- Appropriate personal protective equipment must be worn by all field personnel within the designated work area.
- Air monitoring may be required during certain field activities as required in the Site Health and Safety Plan.

- If excavating in potentially hazardous areas is possible, contingency plans should be developed to address the potential for encountering gross contamination or non-aqueous phase liquids.

- ARCADIS field personnel will be familiar and compliant with Client-specific health and safety requirements such as Chevron's hand safety policy including the prohibition of fixed and/or folding blade knives.

VI. Procedure

Waste storage and handling procedures to be used depend upon the type of generated waste. For this reason, IDW should be stored in a secure location onsite in separate 55-gallon storage drums, solids can be stockpiled onsite (if non-hazardous), and purge water may be stored in polyethylene tanks. Waste materials such as broken sample bottles or equipment containers and wrappings will be stored in 55-gallon drums unless they were not in contact with sample media.

Management of IDW

Minimization of IDW should be considered by the Project Manager during all phases of the project. Site managers may want to consider techniques such as replacing solvent-based cleaners with aqueous-based cleaners for decontamination of equipment, reuse of equipment (where it can be decontaminated), limitation of traffic between exclusion and support zones, and drilling methods and sampling techniques that generate little waste. Alternative drilling and subsurface sampling methods may include the use of small diameter boreholes, as well as borehole testing methods such as a core penetrometer or direct push technique instead of coring (EPA, 1993).

Drum Storage

Drums containing hazardous waste shall be stored in accordance with the requirements of 40 CFR 265 Subpart I (for containers) and 265 Subpart DD (for containment buildings). All 55-gallon drums will be stored at a secure, centralized on-site location that is readily accessible for vehicular pick-up. Drums confirmed as, or believed to contain hazardous waste will be stored over an impervious surface provided with secondary containment. The storage location will, for drums containing liquid, have a containment system that can contain at least the larger of 10% of the aggregate volume of staged materials or 100% of the volume of the largest container. Drums will be closed during storage and be in good condition in accordance with the Guide to Management of Investigation-Derived Wastes (USEPA, 1992).

Hazardous Waste Determination

Waste material must be characterized to determine if it meets any of the federal definitions of hazardous waste as required by 40 CFR § 262.11. If the waste does not meet any of the federal definitions, it must then be established if any state-specific hazardous waste criteria exist/apply.

Generator Status

Once hazardous waste determination has been made, the generator status will be determined. Large quantity generators (LQG) are generators who generate more than 1,000 kilograms of hazardous waste in a calendar month. Small quantity generators (SQG) of hazardous waste are generators who generate greater than 100 kilograms but less than 1,000 kilograms of hazardous waste in a calendar month. Conditionally exempt small quantity generators (CESQG) are generators who generate less than 100 kilograms of hazardous waste per month. Please note that a generator status may change from month to month and that a notice of this change is usually required by the generator's state agency.

Accumulation Time for Hazardous Waste

A LQG may accumulate hazardous waste on site for 90 days or less without a permit and without having interim status provided that such accumulation is in compliance with specifications in 40 CFR § 262.34. A SQG may accumulate hazardous waste on site for 180 days or less without a permit or without having interim status subject to the requirements of 40 CFR § 262.34(d). CESQG requirements are found in 40 CFR § 261.5. **NOTE**: The CESQG and SQG provisions of 40 CFR § 261.5, 262.20(e), 262.42(b) and 262.44 may not be recognized by some states (e.g. Rhode Island). **State-specific regulations must be reviewed and understood prior to the generation of hazardous waste.**

Satellite Accumulation of Hazardous Waste

Satellite accumulation (SAA) shall mean the accumulation of as much as fifty-five (55) gallons of hazardous waste, or the accumulation of as much as one quart of acutely hazardous waste, in containers at or near any point of generation where the waste initially accumulates, which is under the control of the operator of the process generating the waste, without a permit or interim status and without complying with the requirements of 40 CFR § 262.34(a) and without any storage time limit, provided that the generator complies with 40 CFR § 262.34(c)(1)(i).

Once more than 55 gallons of hazardous waste accumulates in SAA, the generator has three days to move this waste into storage.

Storage recommendations for hazardous waste include:

- Ignitable Hazardous wastes must be >50 feet from the property line per 40 CFR § 265.176 (LQG generators only).
- Hazardous waste must be stored on a concrete slab (asphalt is acceptable if there are no free liquids in the waste) per 40 CFR § 265.176.
- Drainage must be directed away from the accumulation area.
- Area must be properly vented.
- Area must be secure.

Drum/Container Labeling

Drums will be labeled on both the side and lid of the drum using a permanent marking pen. Old drum labels must be removed to the extent possible, descriptions crossed out should any information remain, and new labels affixed on top of the old labels. Other containers used to store various types of waste (polyethylene tanks, roll-off boxes, end-dump trailers, etc.) will be labeled with an appropriate "Waste Container" or “Testing in Progress” label pending characterization. Drums and containers will be labeled as follows:

- Appropriate waste characterization label (Testing In Progress, Hazardous, or Non-Hazardous)
- Waste generator's name (e.g., client name)
- Project name
- Name and telephone number of ARCADIS project manager
- Composition of contents (e.g., used oil, acetone 40%, toluene 60%)
- Media (e.g., solid, liquid)
- Accumulation start date

- Drum number of total drums as reconciled with the Drum Inventory maintained in the field log book.

IDW containers will remain closed except when adding or removing waste. Immediately upon beginning to place waste into the drum/container, a “Waste Container” or “Testing in Progress” label will be filled out to include the information specified above, and affixed to the container. Once the contents of the container are identified as either non-hazardous or hazardous, the following additional labels will be applied. Containers with waste determined to be non-hazardous will be labeled with a green and white "Non-Hazardous Waste" label over the "Waste Container" label. Containers with waste determined to be hazardous will be stored in an onsite storage area and will be labeled with the "Hazardous Waste" label and affixed over the "Waste Container" label. The ACCUMULATION DATE for the hazardous waste is the date the waste is first placed in the container and is the same date as the date on the "Waste Container" label. DOT hazardous class labels must be applied to all hazardous waste containers for shipment offsite to an approved disposal or recycling facility. In addition a DOT proper shipping name shall be included on the hazardous waste label. The transporter should be equipped with the appropriate DOT placards. However, placarding or offering placards to the initial transporter is the responsibility of the generator per 40 CFR § 262.33.

Inspections and Documentation

All IDW will be documented as generated on a Drum Inventory Log maintained in the field log book. The Drum Inventory will record the generation date, type, quantity, matrix and origin (e.g. Boring-1, Test Pit 3, etc) of materials in every drum, as well as a unique identification number for each drum. The drum inventory will be used during drum pickup to assist with labeling of drums. The drum storage area and any other areas of temporarily staged waste, such as soil/debris piles, will be inspected weekly. The weekly inspections will be recorded in the field notebook or on a Weekly Inspection Log. Digital photographs will be taken upon the initial generation and drumming/staging of waste, and final labeling after characterization to document compliance with labeling and storage protocols, and condition of the container. Evidence of damage, tampering or other discrepancy should be documented photographically.

Emergency Response and Notifications

Specific procedures for responding to site emergencies will be detailed in the HASP. If the generator is designated as a LQG, a Contingency Plan will need to be prepared to include emergency response and notification procedures per 40 CFR § 265 Subpart D. In the event of a fire, explosion, or other release which could threaten human health

outside of the site or when Client or ARCADIS has knowledge of a spill that has reached surface water, Client or ARCADIS must immediately notify the National Response Center (800-424-8802) in accordance with 40 CFR § 262.34. Other notifications to state agencies may also be necessary.

Drilling Soil Cuttings and Muds

Soil cuttings are solid to semi-solid soils generated during trenching activities, subsurface soil sampling, or installation of monitoring wells. Depending on the drilling method, drilling fluids known as "muds" may be used to remove soil cuttings. Drilling fluids flushed from the borehole must be directed into a settling section of a mud pit. This allows reuse of the decanted fluids after removal of the settled sediments. Soil cuttings will be labeled and stored in 55-gallon drums with bolt-sealed lids.

Excavated Solids

Excavated solids may include, but are not limited to soil, fill and construction and demolition debris. Excavated solids may be temporarily stockpiled onsite as long as the material is a RCRA non-hazardous waste and the solids will be treated onsite pursuant to a certified, authorized, or permitted treatment method, or properly disposed off-site. Stockpiled materials characterized as hazardous must be immediately containerized and removed from the site within 90 days of generation (except for soils using satellite accumulation). Excavated solids should be stockpiled and maintained in a secure area onsite. At a minimum, the floor of the stockpile area will be covered with a 20-mil high density polyethylene liner that is supported by a foundation or at least a 60-mil high density polyethylene liner that is not supported by a foundation. The excavated material will not contain free liquids. The owner/operator will provide controls for windblown dispersion, run-on control, and precipitation runoff. The run-on control system will prevent flow onto the active portion of the pile during peak discharge from at least a 25-year storm and the run-off management system will collect and control at least the water volume resulting from a 24-hour, 25-year storm (EPA, 1992). Additionally, the stockpile area will be inspected on a weekly basis and after storm events. Individual states may require that the stockpile be inspected/certified by a licensed professional engineer. Stockpiled material will be covered with a 6-mil polyvinyl chloride (PVC) liner. The stockpile cover will be secured in place with appropriate material (concrete blocks, weights, etc.) to prevent the movement of the cover. Excavated solids may also be placed in roll off containers and covered with a 6-mil PVC liner pending results for waste characterization.

Decontamination Solutions

Decontamination solutions are generated during the decontamination of personal protective equipment and sampling equipment. Decontamination solutions may range from detergents, organic solvents and acids used to decontaminate small field sampling equipment to steam cleaning rinsate used to wash heavy field equipment. These solutions are to be labeled and stored in 55-gallon drums with bolt-sealed lids.

Disposable Equipment

Disposable equipment includes personal protective equipment (tyvek coveralls, gloves, booties and APR cartridges) and disposable sampling equipment such as trowels or disposable bailers. If the media sampled exhibits hazardous characteristics per results of waste characterization sampling, disposable equipment will also be disposed of as a hazardous waste. These materials will be stored onsite in labeled 55-gallon drums pending analytical results for waste characterization.

Purge Water

Purge water includes groundwater generated during well development, groundwater sampling, or aquifer testing. The volume of groundwater generated will dictate the appropriate storage procedure. Monitoring well development and groundwater sampling may generate three well volumes of groundwater or more. This volume will be stored in labeled 55-gallon drums. Aquifer tests may generate significantly greater volumes of groundwater depending on the well yield and the duration of the test. Therefore, large-volume portable polyethylene tanks will be considered for temporary storage pending groundwater-waste characterization.

Purged Water Storage Tank Decontamination and Removal

The following procedures will be used for inspection, cleaning, and offsite removal of storage tanks used for temporary storage of purge water. These procedures are intended to be used for rented portable tanks such as Baker Tanks or Rain for Rent containers. Storage tanks will be made of inert polyethylene materials.

The major steps for preparing a rented tank for return to a vendor include characterizing the purge water, disposing of the purge water, decontaminating the tank, final tank inspection, and mobilization. Decontamination and inspection procedures are describe in further detail below.

- Tank Cleaning: Most vendors require that tanks be free of any sediment and water before returning, a professional cleaning service may be required. Each

specific vendor should be consulted concerning specific requirements for returning tanks.

- Tank Inspection: After emptying the tank, purged water storage tanks should be inspected for debris, chemical staining, and physical damage. The vendors require that tanks be returned in the original condition (i.e., free of sediment, staining and no physical damage).

VII. Waste Characterization Sampling and Shipping

Soil/Solids Characterization

Waste characterization will be conducted in accordance with waste hauler, waste handling facility, and state/federal requirements. In general, RCRA hazardous wastes are those solid wastes determined by a Toxicity Characteristic Leaching Procedure (TCLP) test or to contain levels of certain toxic metals, pesticides, or other organic chemicals above specific federally regulated thresholds. If the one or more of 40 toxic compounds listed in Table I of 40 CFR § 261.24 are detected in the sample at levels above the maximum unregulated concentrations, the waste must be characterized as a toxic hazardous waste. Wastes can also be considered “listed” hazardous waste depending on site-specific processes.

Composite soil samples will be collected at a frequency of one sample per 10 cubic yard basis for stockpiled soil or one per 55-gallon drum for containerized. A four point composite sample will be collected per 10 cubic yards of stockpiled material and for each drum. Sample and composite frequencies may be adjusted in accordance with the waste handling facility’s requirements. Waste characterization samples may be analyzed for the TCLP volatile organic compounds (VOCs), TCLP semi-volatile organic compounds (SVOCs), TCLP RCRA metals, and polychlorinated biphenyls, as well as corrosivity (pH), reactivity and flammability (flashpoint). Additional samples may be collected and analyzed by the laboratory on a contingency basis.

Wastewater Characterization

Waste characterization will be conducted in accordance with the requirements of the waste hauler, waste handling facility, and state/federal governments. In general, purge water should be analyzed by methods appropriate for the known contaminants, if any, that have been historically detected in the monitoring wells. Samples will be collected and analyzed in accordance with the requirements of the waste disposal facility.

Wastewater characterization samples may be analyzed for TCLP volatile organic compounds (VOCs), TCLP semi-volatile organic compounds (SVOCs), TCLP RCRA

metals, and polychlorinated biphenyls, as well as corrosivity (pH), reactivity and flammability (flashpoint). Additional samples may be collected and analyzed by the laboratory on a contingency basis.

Sample Handling and Shipping

All samples will be appropriately labeled, packed, and shipped, and the chain-of-custody will be filled out in accordance with the Chain-of-Custody SOP and Field Sampling Handling, Packing, and Shipping SOP and Hazardous Materials Packaging and Shipping SOP.

It should be noted that additional training is required for packaging and shipping of hazardous and/or dangerous materials. Please reference the following ARCADIS intranet team page for more information: http://team/sites/hazmat/default.aspx.

Preparing Waste Shipment Documentation (Hazardous and Non-Hazardous)

Waste profiles will be prepared by the ARCADIS PM and forwarded, along with laboratory analytical data to the Client PM for approval/signature. The Client PM will then return the profile to ARCADIS who will then forward to the waste removal contractor for preparation of a manifest. The manifest will be reviewed by ARCADIS prior to forwarding to the Client PM for approval. Upon approval of the manifest, the Client PM will return the original signed manifest directly to the waste contractor or to the ARCADIS PM for forwarding to the waste contractor.

Final drum labeling and pickup will be supervised by an ARCADIS representative who is experienced with waste labeling procedures. The ARCADIS representative will have a copy of the drum inventory maintained in the field book and will reconcile the drum inventory with the profile numbers on the labels and on the manifest. Different profile numbers will be generated for different matrices or materials in the drums. For example, the profile number for drill cuttings will be different than the profile number for purge water. **When there are multiple profiles it is critical that the proper label, with the profile number appropriate to a specific material be affixed to the proper drums.** A copy of the ARCADIS drum inventory will be provided to the waste transporter during drum pickup and to the facility receiving the waste.

VIII. Data Recording and Management

Waste characterization sample handling, packing, and shipping procedures will be documented in accordance with the *Quality Assurance Project Plan*, if one exists. Copies of the chains-of-custody forms will be maintained in the project file.

Following waste characterization, IDW containers will be re-labeled with the appropriate waste hazardous or non-hazardous waste labels and the client will initiate disposal at the appropriate waste disposal facility.

IX. Quality Assurance

The chain-of-custody and sample labels for waste characterization samples will be filled out in accordance with the *Quality Assurance Project Plan*.

X. References

United States Environmental Protection Agency (USEPA). 1992. Guide to Management of Investigation-Derived Wastes. Office of Remedial and Emergency Response. Hazardous Site Control Division. January 1992.

USEPA. 1991. *Guide to Discharging CERCLA Aqueous Wastes to Publicly Owned Treatment Works (POTWs)*. Office of Remedial and Emergency Response. Hazardous Site Control Division 0S-220W. March 1991.

APPENDIX H

Soil Boring Logs

Date Start/Finish: 6/15/2015 / 6/15/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973107.44
Easting: 484447.51

Drilled Depth (ft): 90
Surface Elevation (ft): 772.59

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1001**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
0				CONCRETE		(0.0 - 0.5) CONCRETE, hard, dry, 10.00YR 7/1 light gray
-1		0.0		FILL		(0.5 - 1.0) POORLY GRADED SAND, medium sand, subround to subangular, well sorted, loose, moist, 10.00YR 7/3 very pale brown
-2	38					
-3		0.0		FILL		(1.0 - 4.5) CLAYEY SILT and very fine to medium sand, nonplastic to low plasticity, rapid dilatancy, medium stiff to stiff, moist to dry, no odor, GLEY 1 6/10GY greenish gray
-4						
-5		0.0		FILL		(4.5 - 11.0) SANDY LEAN CLAY WITH GRAVEL, some very fine to medium sand, medium plasticity, no dilatancy, trace very large pebbles to large cobbles,very stiff, moist, no odor, GLEY 1 6/10GY greenish gray
-6		0.0				
-7	36					
-8		1.1				
-9						
-10		0.7				
-11		1.2				
-12	35			FILL		(11.0 - 15.5) LEAN TO FAT CLAY, little to trace silt, high plasticity, no dilatancy, trace granules, soft, moist, slight, 5.00YR 2.5/1 black
-13		3.7				
-14		1.9				
-15						
-16		0.0		FILL		(15.5 - 26.0) SANDY SILT, nonplastic, rapid dilatancy, little to trace fine to medium sand, very coarse, hard, moist, no odor, mottling 5Y 4/1 dark gray and GLEY 1 6/10GY greenish gray
-17	19					
-18		2.9				
-19						
-20		2.7				
-21		1.9				
-22	20					
-23		2.7				
-24						
-25		2.8				
-26		1.9		FILL		(26.0 - 26.5) CLAYEY SILT, nonplastic to low plasticity, slow dilatancy, some fine to coarse sand, stiff to very stiff, moist, no odor, 5.00YR 5/3 reddish brown
-27	40			FILL		(26.5 - 31.5) SILT, little to trace clay, nonplastic to low plasticity, rapid dilatancy, stiff to very stiff, moist, GLEY 1 6/10GY greenish gray
-28		0.8				
-29						
-30		0.0				

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Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1001_39-42 (20150615), ASB-1001_50-54 (20150615),
ASB-1001_65-70 (20150615), ASB-1001_72-74 (20150615), ASB-1001_80-82 (20150615).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals,
TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End of Boring - 90 ft bgs

Date Start/Finish: 6/15/2015 / 6/15/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973107.44
Easting: 484447.51

Drilled Depth (ft): 90
Surface Elevation (ft): 772.59

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1001**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-30						
-31		3.2				
-32	37			FILL		(31.5 - 33.0) CLAY, some silt, trace small pebbles, medium to high plasticity, no dilatancy, soft to medium stiff, moist, GLEY 1 6/10GY greenish gray
-33		3.1		FILL		(33.0 - 37.0) SANDY SILT, little to trace very fine to fine sand, nonplastic, slow dilatancy, very stiff to hard, moist, GLEY 1 6/10GY greenish gray
-34		2.8				
-35	27					
-36		3.9				
-37						
-38		71.1		FILL		(37.0 - 41.0) CLAY, some silt, medium to high plasticity, no dilatancy, organic, wood, metal pieces, soft, moist, slight, 10.00YR 3/1 very dark gray
-39		77.9	■			
-40	42					
-41		88.9		FILL		(41.0 - 46.0) CLAY, high plasticity, wood, metal pieces, soft, moist, odor (solvent), 10.00YR 2/1 black
-42						
-43		176.2				
-44						
-45		193.4				
-46						
-47		223.2		FILL		(46.0 - 50.0) CLAYEY SILT, nonplastic to low plasticity, very stiff, moist, odor, GLEY 1 6/10GY greenish gray
-48						
-49		238.1				
-50						
-51	48	310.3	■	FILL		(50.0 - 57.0) CLAYEY SILT, nonplastic to low plasticity, slow dilatancy, inorganic, stiff, moist, odor, stratified, mottling, GLEY 1 6/5GY greenish gray
-52						
-53		298.9				
-54						
-55		301.1				
-56	30	299.7				
-57						
-58		62.2		FILL		(57.0 - 63.0) CLAYEY SILT, nonplastic, rapid dilatancy, organic, roots, wood, medium stiff, moist, odor, homogeneous, 10.00YR 3/1 very dark gray
-59						
-60		41.0				

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Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1001_39-42 (20150615), ASB-1001_50-54 (20150615),
ASB-1001_65-70 (20150615), ASB-1001_72-74 (20150615), ASB-1001_80-82 (20150615).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals,
TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End of Boring - 90 ft bgs

Date Start/Finish: 6/15/2015 / 6/15/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973107.44
Easting: 484447.51

Drilled Depth (ft): 90
Surface Elevation (ft): 772.59

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1001**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-60 to -63	22	25.2				
-63 to -67		20.8		Other		(63.0 - 67.0) ORGANIC, inorganics, wood, metal pieces, wire, hard, moist, odor, laminated, 10.00YR 7/1 light gray
-65 to -68	32	25.9	■			
-67 to -70		14.1	■	FILL		(67.0 - 77.0) WELL GRADED SAND WITH SILT, small pebbles to large pebbles, inorganics, metal pieces, wire, subround to subangular, poorly sorted, loose, dry, no odor, 5.00Y 6/1 gray
-70 to -72	44	234.8				
-72 to -74		2000	■			
-74 to -75		398.7				
-75 to -77	46	52.4				
-77 to -78		12.1		SC-SM		(77.0 - 80.0) CLAYEY SAND, some silt to fine sand, subround to subangular, well sorted, loose, moist, slightly homogeneous, 10.00YR 7/2 light gray
-78 to -80		3.1				
-80 to -82	50	52.1	■	SC-SM		(80.0 - 84.0) CLAYEY SAND WITH GRAVEL, some silt, very fine to small pebbles, trace medium pebbles, 2.5Y 7/4 pale yellow, subround to subangular, poorly sorted, medium dense to dense, wet to moist, slightly homogeneous, 5.00Y 3/1 very dark gray
-82 to -84		24.9				
-84 to -85		3.7		GW-GM		(84.0 - 87.0) WELL GRADED SAND WITH SILT AND GRAVEL, some very fine sand to very large pebbles, angular to subround, poorly sorted, loose, wet, no odor, homogeneous, 2.50Y 6/2 light brownish gray
-85 to -87	54	0.0				
-87 to -89		0.0		ML		(87.0 - 90.0) SANDY SILT, trace fine sand, trace clay, low to medium plasticity, slow dilatancy, medium stiff, wet to moist, homogeneous, 2.50Y 2.5/1 black
-89 to -90		0.0				

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Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1001_39-42 (20150615), ASB-1001_50-54 (20150615), ASB-1001_65-70 (20150615), ASB-1001_72-74 (20150615), ASB-1001_80-82 (20150615).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End of Boring - 90 ft bgs

Date Start/Finish: 6/16/2015 / 6/16/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973104.05
Easting: 484398.72

Drilled Depth (ft): 95
Surface Elevation (ft): 770.52

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1002**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
0				CONCRETE		(0.0 - 0.5) CONCRETE, dry, 7.50YR 7/2 pinkish gray
-1		0.0		FILL		(0.5 - 1.5) WELL GRADED SAND WITH GRAVEL, some silt, angular to subround, poorly sorted, loose to medium dense, moist to dry, 10.00YR 7/2 light gray
-2	51					
-3		0.0		FILL		(1.5 - 7.0) CLAYEY SILT, trace very fine to medium sand, low plasticity, medium stiff, moist, no odor, homogeneous, GLEY 1 6/10GY greenish gray
-4						
-5		0.0				
-6		0.0				
-7	52			FILL		(7.0 - 7.5) CLAYEY SILT, low to medium plasticity, hard, moist, minor slight parting, no odor, GLEY 1 4/10Y dark greenish gray
-8		0.0		FILL		(7.5 - 8.0) WELL GRADED SAND WITH SILT AND GRAVEL, subangular to angular, poorly sorted, loose to medium dense, dry, no odor, 2.50Y 7/3 pale yellow
-9				FILL		(8.0 - 12.0) LEAN CLAY, some silt, medium plasticity, no dilatancy, medium stiff, moist, slight odor, homogeneous, 5.00Y 2.5/1 black
-10						
-11		0.0				
-12	38			FILL		(12.0 - 18.0) LEAN CLAY WITH GRAVEL, some silt and small to medium pebbles, medium to high plasticity, no dilatancy, little to trace fine sand, subangular to angular, soft, moist, no odor, mottling GLEY1 6/10GY greenish gray and 5.00Y 3/1 very dark gray
-13		0.0				
-14						
-15		0.0				
-16		0.0				
-17	29					
-18		0.0		FILL		(18.0 - 27.0) LEAN CLAY, medium plasticity, trace small to medium pebbles, medium stiff, moist, no odor, homogeneous, mottling 10YR 4/2 dark grayish brown and GLEY 1 6/10GY greenish gray
-19						
-20						
-21		0.0				
-22	26					
-23		0.0				
-24						
-25						
-26		0.0				
-27	31					
-28		0.0		FILL		(27.0 - 33.0) LEAN CLAY WITH GRAVEL, little silt, medium to high plasticity, no dilatancy, organics, medium stiff, moist, no odor, homogeneous, mottling 10YR 4/2 very dark brown and GLEY 1 6/10GY greenish gray
-29						
-30						
-31		0.0				
-32						

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Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1002_55-60 (20150616), ASB-1002_60-64 (20150616), ASB-1002_75-77 (20150616), ASB-1002_80-84 (20150616), ASB-1002_92-95 (20150616).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation. ASB-1002_75-77 also analyzed for PCBs.
End boring at 95 feet

Date Start/Finish: 6/16/2015 / 6/16/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973104.05
Easting: 484398.72

Drilled Depth (ft): 95
Surface Elevation (ft): 770.52

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1002**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-32	29	0.0				
-33				FILL		(33.0 - 35.0) CLAY, low plasticity, hard, moist, no odor, GLEY 1 6/5G greenish gray
-34		0.0				
-35	44	0.0		FILL		(35.0 - 36.5) CLAY, little silt and small to medium pebbles, high plasticity, no dilatancy, soft, moist, no odor, 10.00YR 3/1 very dark gray
-36						
-37				FILL		(36.5 - 45.0) SILT, little clay, low to medium plasticity, slow dilatancy, trace fine sand, very stiff to hard, moist, no odor, mottling 2.5Y 7/4 pale yellow and GLEY 1 6/10GY greenish gray
-38		0.0				
-39						
-40		0.0				
-41	30	0.0				
-42						
-43		0.0				
-44						
-45		0.0				
-46	30	0.0		FILL		(45.0 - 55.0) CLAY, trace granules, very stiff to hard, moist, no odor, GLEY 1 6/10GY greenish gray
-47						
-48		0.0				
-49						
-50		0.0				
-51	27	2.1				
-52						
-53		3.1				
-54						
-55	29	40.2		FILL		(55.0 - 62.0) CLAY, little to trace small pebbles to medium cobbles, some glass, hard, moist, minor odor (solvent), GLEY 1 5/10GY greenish gray
-56						
-57						
-58		55.7				
-59						
-60						
-61	63	2000				
-62						
-63		2000		FILL		(62.0 - 64.0) LEAN CLAY WITH SAND, some to little very fine to medium sand, trace small to medium pebbles, low to medium plasticity, glass, soft to medium stiff, moist, odor (solvent), 10.00YR 3/3 dark brown
-64						

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1002_55-60 (20150616), ASB-1002_60-64 (20150616),
ASB-1002_75-77 (20150616), ASB-1002_80-84 (20150616), ASB-1002_92-95 (20150616).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs,
TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation. ASB-1002_75-77 also analyzed for PCBs.
End boring at 95 feet

Date Start/Finish: 6/16/2015 / 6/16/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973104.05
Easting: 484398.72

Drilled Depth (ft): 95
Surface Elevation (ft): 770.52

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1002**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-64 to -65		1972		FILL		(64.0 - 65.0) SANDSTONE, very fine to large pebbles, dense, moist, no odor, 10.00YR 7/6 yellow
-65 to -69	57	2000		FILL		(65.0 - 69.0) LEAN CLAY, some to little silt to fine sand, medium plasticity, no dilatancy, glass, organics, wood, metal pieces, soft, moist, minor odor (solvent), 10.00YR 3/1 very dark gray
-67 to -69		2000				
-69 to -75	80	231.2		FILL		(69.0 - 75.0) POORLY GRADED SAND, very fine, subround, well sorted, loose, moist, odor, 10.00YR 7/2 light gray
-70 to -74		1578				
-72 to -74		1598				
-74 to -75		421.2				
-75 to -77	60	2000	■	FILL		(75.0 - 77.0) LEAN CLAY, medium plasticity, glass, organics, inorganics, wood, metal pieces, soft, moist, strong odor (solvent), 2.50Y 2.5/1 black
-77 to -84		541.2		SW		(77.0 - 84.0) WELL GRADED SAND WITH GRAVEL, very fine sand to large pebbles, trace inorganic rubber, poorly sorted, loose, moist, odor, 2.50Y 5/1 gray
-80 to -84	47	321.5	■			
-82 to -84		120.2				
-84 to -95				SW		(84.0 - 95.0) WELL GRADED SAND WITH GRAVEL, fine sand to medium pebbles, angular to subround, poorly sorted, loose, wet, no odor, 2.50Y 5/1 gray
-85 to -89	54	7.7				
-86 to -89		2.4				
-89 to -90		0.0				
-90 to -92	38	146.0				
-91 to -93		38.4	■			
-93 to -95		12.2				

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1002_55-60 (20150616), ASB-1002_60-64 (20150616), ASB-1002_75-77 (20150616), ASB-1002_80-84 (20150616), ASB-1002_92-95 (20150616).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation. ASB-1002_75-77 also analyzed for PCBs.
End boring at 95 feet

Date Start/Finish: 6/17/2015 / 6/17/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973062.93
Easting: 484375.58

Drilled Depth (ft): 95
Surface Elevation (ft): 769.69

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1003**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
0	8	0.0		CONCRETE		(0.0 - 0.6) CONCRETE, 10.00YR 7/1 light gray
-1				FILL		(0.6 - 3.0) CONCRETE, WELL GRADED GRAVEL, some very fine sand to very large pebbles, subangular to angular, poorly sorted, medium dense, dry, no odor, 10.00YR 7/1 light gray
-2						
-3				FILL		(3.0 - 5.0) SANDY SILT/SILTY SAND, trace clay, nonplastic, very fine sand to small pebbles, subangular to angular, poorly sorted, loose, moist, no odor, 10.00YR 4/1 dark gray
-4						
-5	14	0.0		FILL		(5.0 - 13.0) SANDY SILT/SILTY SAND, trace clay, nonplastic, very fine sand to small pebbles, subangular to angular, poorly sorted, loose, moist, no odor, 10.00YR 4/1 dark gray
-6						
-7						
-8						
-9						
-10	36	0.0				
-11						
-12		0.0				
-13						
-14		0.3		FILL		(13.0 - 15.0) SILTY SAND WITH GRAVEL, some silt, fine sand to large pebbles, poorly sorted, loose to medium dense, moist, no odor, 5.00Y 2.5/1 black
-15	48	0.4		FILL		(15.0 - 19.0) LEAN CLAY WITH GRAVEL, some silt, medium plasticity, no dilatancy, some medium pebbles, angular to subround, soft, moist, wet due to water from drill rig, no odor,mottling GLEY1 6/10GY greenish gray and 2.50Y 3/1 very dark gray
-16						
-17						
-18		0.4				(19.0 - 20.0) POORLY GRADED GRAVEL, mostly medium to large pebbles, some to little medium sand, subangular, well sorted, medium dense to dense, moist, no odor, 5.00Y 6/3 pale olive
-19		0.4		FILL		
-20	27	0.0		FILL		(20.0 - 33.0) WELL GRADED GRAVEL WITH SILT AND SAND, coarse sand to medium pebbles, some silt, trace metal pieces, subround to subangular, poorly sorted, medium dense, moist, no odor, homogeneous, 5.00Y 3/1 very dark gray
-21						
-22						
-23		0.0				
-24		0.2				
-25	49	0.0				
-26						
-27						
-28		0.0				
-29		0.0				
-30						
-31		0.2				
-32						

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Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1003_60-64 (20150617) and ASB-1003_70-74 (20150617).

Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals,
TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
Low recovery 0-10, End boring at 95 feet

Date Start/Finish: 6/17/2015 / 6/17/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973062.93
Easting: 484375.58

Drilled Depth (ft): 95
Surface Elevation (ft): 769.69

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1003**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-32	47					
-33		0.1		FILL		(33.0 - 35.0) CLAYEY SILT, nonplastic to low plasticity, hard, moist, no odor, homogeneous, GLEY 1 6/10GY greenish gray
-34						
-35		0.0				
-36	48	0.0		FILL		(35.0 - 39.0) POORLY GRADED SAND, little to trace granules, subround to subangular, well sorted, very loose, wet due to drill operations, no odor, 5.00Y 4/2 olive gray
-37						
-38		0.0				
-39		0.0		FILL		(39.0 - 41.0) FAT CLAY, trace silt, metal pieces, medium stiff, moist, no odor, 10.00YR 3/1 very dark gray
-40						
-41	72	0.0		FILL		(41.0 - 48.0) CONCRETE, WELL GRADED GRAVEL, fine sand to small cobbles, angular, medium dense, dry, no odor, GLEY 1 8/N white
-42						
-43		0.0				
-44						
-45		0.0				
-46						
-47		0.0				
-48						
-49		0.0		FILL		(48.0 - 50.0) WELL GRADED SAND WITH GRAVEL, fine sand to large pebbles, little to trace clay to silt, subround to subangular, poorly sorted, loose to medium dense, moist, no odor, GLEY 1 3/N very dark gray
-50	0			Other		(50.0 - 60.0) No Recovery
-51						
-52						
-53						
-54						
-55						
-56						
-57						
-58						
-59						
-60	48	3.2		FILL		(60.0 - 66.0) LEAN CLAY WITH GRAVEL, and silt, low to medium plasticity, metal pieces, some to little small to pebbles, soft, wet due to drill operations, odor (solvent), 5.00Y 2.5/1 black
-61						
-62		4.3				
-63						
-64						

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1003_60-64 (20150617) and ASB-1003_70-74 (20150617).

Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals,
TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation

Low recovery 0-10, End boring at 95 feet

Date Start/Finish: 6/17/2015 / 6/17/2015 **Drilling Company:** Cascade Drilling, LP **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Core Barrel	**Northing:** 4973062.93 **Easting:** 484375.58 **Drilled Depth (ft):** 95 **Surface Elevation (ft):** 769.69 **Descriptions By:** Tom Darmon	**Well/Boring ID:** **ASB-1003** **Client:** Ford Motor Company **Location:** Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-64						
-65		2.2				(66.0 - 67.0) SANDY SILT/SILTY SAND, little small pebbles, medium to coarse sand, subangular to angular, poorly sorted, loose, moist, odor (solvent), GLEY 1 3/N very dark gray
-66		0.9		FILL		
-67						
-68		0.0		SP		(67.0 - 74.0) POORLY GRADED SAND, medium, subround, well sorted, loose, moist, no odor, GLEY 1 7/N light gray
-69						
-70		0.0				
-71	55	0.0				
-72						
-73		0.0				
-74						(74.0 - 75.0) SILTY SAND WITH GRAVEL, some to little silt, subround to subangular, poorly sorted, loose to medium dense, moist, no odor, GLEY 1 3/N very dark gray
-75		0.0		SM		
-76		0.0		SP		(75.0 - 77.0) POORLY GRADED SAND, medium to coarse sand, trace small pebbles, subround to subangular, well sorted, loose, moist, no odor, GLEY 1 5/10Y greenish gray
-77	27					
-78		0.0		SP		(77.0 - 90.0) POORLY GRADED SAND WITH GRAVEL, medium to large pebbles, subround to subangular, well sorted, loose, wet, no odor, GLEY 1 5/10Y greenish gray
-79						
-80						
-81		0.0				
-82	36					
-83		0.0				
-84						
-85						
-86		0.0				
-87						
-88		0.0				
-89						
-90		0.0				
-91				GW		(90.0 - 92.0) WELL GRADED GRAVEL, some medium to coarse sand, subround to subangular, poorly sorted, loose, wet, no odor, 10.00YR 3/6 dark yellowish brown
-92		0.0				
-93				SP		(92.0 - 95.0) POORLY GRADED SAND, medium, subround to subangular, well sorted, wet, no odor, 10.00YR 7/2 light gray
-94		0.0				
-95						

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Remarks:

ft: feet NA: Not applicable/not available

Soil samples ASB-1003_60-64 (20150617) and ASB-1003_70-74 (20150617).

Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals,
TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation

Low recovery 0-10, End boring at 95 feet

Date Start/Finish: 6/19/2015 / 6/19/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973139.71
Easting: 484438.87

Drilled Depth (ft): 85
Surface Elevation (ft): 772.39

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1004**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
0				CONCRETE		(0.0 - 0.6) CONCRETE, 10.00YR 7/1 light gray
-1		0.0		FILL		(0.6 - 2.0) POORLY GRADED SAND, little silt to coarse sand, trace plastic liner, subround to subangular, well sorted, loose, moist, 10.00YR 6/1 gray
-2	25					
-3		0.0		FILL		(2.0 - 5.0) LEAN CLAY, little to trace silt, medium to high plasticity, no dilatancy, soft to medium stiff, moist, no odor, GLEY 1 3/5G very dark greenish gray
-4						
-5		0.0				
-6		0.2		FILL		(5.0 - 9.0) WELL GRADED SAND WITH GRAVEL, little silt, trace clay, subround to subangular, poorly sorted, loose to medium dense, moist, no odor, 2.50Y 3/2 very dark grayish brown
-7	27					
-8		0.1				
-9						(9.0 - 10.0) LEAN CLAY, medium plasticity, no dilatancy, stiff, moist, no odor, GLEY 1 6/10GY greenish gray
-10		0.0		FILL		
-11		0.1		FILL		(10.0 - 20.0) LEAN TO FAT CLAY, some to little silt and medium pebbles, low plasticity, slow dilatancy, stiff, moist, no odor, mottling GLEY1 3/5GY very dark greenish gray and GLEY 1 6/10GY greenish gray
-12						
-13	24	0.0				
-14						
-15		0.0				
-16		0.0				
-17	25					
-18		0.0				
-19						
-20		0.1				
-21		0.1		FILL		(20.0 - 25.0) LEAN CLAY, some silt, medium plasticity, little to trace small pebbles to small cobbles, soft, moist, no odor, GLEY 1 3/5GY very dark greenish gray
-22	33					
-23		0.0				
-24						
-25						
-26		0.6		FILL		(25.0 - 29.0) LEAN CLAY, little silt, medium plasticity, soft, wet from drill operations, no odor, GLEY 1 2.5/N black
-27	20					
-28		0.5				
-29						

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1004_37-40 (20150619), ASB-1004_60-62 (20150619), ASB-1004_69-70 (20150619), ASB-1004_78-80 (20150619), ASB-1004_83-85 (20150619).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
Groundwater at 85 feet. End boring at 85 feet

Date Start/Finish: 6/19/2015 / 6/19/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973139.71
Easting: 484438.87

Drilled Depth (ft): 85
Surface Elevation (ft): 772.39

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1004**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-29				FILL		(29.0 - 32.0) LEAN CLAY, little silt, medium plasticity, stiff, moist, no odor, GLEY 1 5/5G greenish gray
-30						
-31		0.3				
-32	37			FILL		(32.0 - 37.0) LEAN CLAY, little silt, low to medium plasticity, no dilatancy, medium stiff, moist, no odor, GLEY 1 3/2-5G very dark grayish green
-33		0.4				
-34						
-35						
-36		0.6				
-37				FILL		(37.0 - 47.0) CLAY, nonplastic to low plasticity, hard, moist, no odor, GLEY 1 6/5GY greenish gray
-38	32	0.8	■			
-39						
-40						
-41		0.2				
-42	60					
-43		0.1				
-44		0.0				
-45						
-46		0.0				
-47				FILL		(47.0 - 52.0) CLAY, little silt, medium plasticity, very soft, wet from drill operations, no odor, GLEY 1 2.5/N black
-48	45	0.0				
-49						
-50		0.0				
-51		0.0				
-52				FILL		(52.0 - 55.0) CLAY, low plasticity, stiff to very stiff, moist, no odor, GLEY 1 6/5GY greenish gray
-53	52	0.1				
-54						
-55		0.1				
-56				FILL		(55.0 - 56.0) CLAY, some silt, medium plasticity, soft, wet from drill operatons, no odor, GLEY 1 2.5/N black
-57		0.2		FILL		(56.0 - 59.5) LEAN CLAY, some to little silt, medium plasticity, no dilatancy, soft, moist, no odor, GLEY 1 5/5G greenish gray
-58	60					

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1004_37-40 (20150619), ASB-1004_60-62 (20150619), ASB-1004_69-70 (20150619), ASB-1004_78-80 (20150619), ASB-1004_83-85 (20150619).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
Groundwater at 85 feet. End boring at 85 feet

Date Start/Finish: 6/19/2015 / 6/19/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973139.71
Easting: 484438.87

Drilled Depth (ft): 85
Surface Elevation (ft): 772.39

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1004**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-58		0.0				(59.5 - 60.0) WELL GRADED SAND WITH SILT AND GRAVEL, very fine sand to medium pebbles, subround to subangular, poorly sorted, loose, moist, no odor, 2.50Y 6/3 light yellowish brown
-59		0.0		FILL		
-60				FILL		(60.0 - 64.0) CLAYEY SILT, little medium sand, nonplastic to low plasticity, no dilatancy, organics, medium stiff, moist, odor (solvent), parting, GLEY 1 7/N light gray
-61		571.2	■			
-62	52					
-63		328.1				
-64				FILL		(64.0 - 65.0) CLAYEY SILT, little to trace medium pebbles, nonplastic to low plasticity, organics, medium stiff to stiff, moist, odor (solvent), GLEY 1 6/10GY greenish gray
-65				FILL		(65.0 - 68.5) LEAN CLAY WITH GRAVEL, some to little silt, medium plasticity, organics, roots, wood, metal pieces, soft to medium stiff, moist, minor odor (solvent), GLEY 1 2.5/N black
-66		380.9				
-67	42					
-68		289.7				
-69				SM		(68.5 - 71.0) POORLY GRADED SAND, little to trace silt to fine sand, subround, well sorted, loose, moist, moderate to slight odor, GLEY 1 2.5/N black
-70		609.2	■			
-71		181.1		GW		(71.0 - 71.5) POORLY GRADED GRAVEL, small pebbles to very large pebbles, subround to subangular, well sorted, loose, dry, no odor, GLEY 1 8/10Y light greenish gray
-72				CL		(71.5 - 77.0) SANDY LEAN CLAY, some to little silt, low to medium plasticity, trace medium to large pebbles, soft, moist, no odor, GLEY 1 2.5/N black
-73	53	88.2				
-74						
-75		10.2				
-76		4.2				
-77				GP		(77.0 - 78.0) POORLY GRADED GRAVEL, medium to coarse sand, subround to subangular, poorly sorted, medium dense, moist, no odor, 2.50Y 8/2 pale yellow
-78	43	1.1	■	SW		(78.0 - 84.0) WELL GRADED SAND, fine, some to little silt, trace clay, well sorted, medium dense, wet to moist, no odor, GLEY 1 2.5/N black
-79						
-80		0.8	■			
-81		3.2				
-82	49					
-83						
-84		8.1	■			
-85				SW		(84.0 - 85.0) WELL GRADED SAND WITH GRAVEL, medium sand to large pebbles, subround to subangular, poorly sorted, wet to moist, no odor, 10.00YR 7/2 light gray

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1004_37-40 (20150619), ASB-1004_60-62 (20150619), ASB-1004_69-70 (20150619), ASB-1004_78-80 (20150619), ASB-1004_83-85 (20150619).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
Groundwater at 85 feet. End boring at 85 feet

Date Start/Finish: 6/18/2015 / 6/18/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973088.06
Easting: 484462.21

Drilled Depth (ft): 85
Surface Elevation (ft): 773.78

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1005**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
0				CONCRETE		(0.0 - 0.6) CONCRETE, dry, 10.00YR 8/2 very pale brown
-1		0.0		FILL		(0.6 - 3.0) POORLY GRADED SAND WITH GRAVEL, medium sand to small pebbles, subround to subangular, well sorted, loose, moist, no odor, 10.00YR 6/3 pale brown
-2	30					
-3		0.8		FILL		(3.0 - 5.0) LEAN TO FAT CLAY, some to little silt, medium to high plasticity, no dilatancy, wood, very stiff to hard, moist, slight odor, GLEY 1 6/10GY greenish gray
-4						
-5		1.5		FILL		(5.0 - 8.0) CLAYEY SAND WITH GRAVEL, medium sand to large pebbles, subround to subangular, poorly sorted, loose to medium dense, moist, slight, 10.00YR 6/4 light yellowish brown
-6		14.2				
-7	33					
-8		66.3		FILL		(8.0 - 10.0) CLAYEY SILT, nonplastic to low plasticity, no dilatancy, organics, wood, hard, moist, slight odor, GLEY 1 6/10GY greenish gray
-9						
-10				FILL		(10.0 - 13.0) CLAY, high plasticity, organics, wood, soft, moist, odor, GLEY 1 4/N dark gray
-11		66.9				
-12	36					
-13		72.1	■	FILL		(13.0 - 22.0) CLAYEY SILT, low plasticity, little to trace small to medium pebbles, hard, moist, slight odor, GLEY 1 6/10GY greenish gray
-14						
-15		72.9				
-16		32.1				
-17	19					
-18		14.4				
-19						
-20		7.2				
-21		5.3				
-22	40					
-23		3.1		FILL		(22.0 - 24.5) CLAY, trace silt, high plasticity, no dilatancy, moist, no odor, GLEY 1 3/N very dark gray
-24						
-25				FILL		(24.5 - 32.0) CLAYEY SILT, low plasticity, medium stiff to stiff, moist, slight odor, mottling 10Y 6/4 pale olive and GLEY 1 6/10GY greenish gray
-26		5.2				
-27	48					
-28		6.2				
-29						

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1005_12-14 (20150618), ASB-1005_37-40 (20150618), ASB-1005_46-50 (20150618), ASB-1005_78-80 (20150618).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End boring at 85 feet

Date Start/Finish: 6/18/2015 / 6/18/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973088.06
Easting: 484462.21

Drilled Depth (ft): 85
Surface Elevation (ft): 773.78

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1005**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-29						
-30						
-31		67.8				
-32	33			FILL		(32.0 - 37.0) LEAN CLAY, little to trace silt, medium to high plasticity, soft, moist, slight odor, GLEY 1 2.5/10Y greenish black
-33		157.9				
-34						
-35						
-36		197.8				
-37						
-38	40	203.7	■	FILL		(37.0 - 42.0) CLAYEY SILT, some to little clay, low to medium plasticity, no dilatancy, medium stiff, moist, odor (solvent), GLEY 1 6/10GY greenish gray
-39		222.8	■			
-40						
-41		47.8				
-42	37					
-43		27.2		FILL		(42.0 - 44.0) CLAY, little to trace silt, high plasticity, no dilatancy, soft to medium stiff, moist, slight solvent odor, GLEY 1 3/10Y very dark greenish gray
-44		19.1		FILL		(44.0 - 45.0) LEAN CLAY, some to little silt, low plasticity, no dilatancy, hard, moist, odor, GLEY 1 6/10GY greenish gray
-45				FILL		(45.0 - 49.0) CLAY, some small pebbles, medium to high plasticity, organics, wood, metal pieces, soft, moist, slight odor, GLEY 1 3/10Y very dark greenish gray
-46		4.9	■			
-47	40					
-48		4.6	■			
-49				FILL		(49.0 - 50.0) SILT, nonplastic, little organics, wood, soft to medium stiff, moist, slight odor, GLEY 1 2.5/N black
-50						
-51		0.0		FILL		(50.0 - 54.0) LEAN CLAY WITH GRAVEL, little silt, medium plasticity, no dilatancy, trace small to medium pebbles, large pebbles, trace red brick, soft to medium stiff, moist, no odor, mottling GLEY1 6/10GY greenish gray and GLEY 1 2.5/10Y greenish black
-52						
-53	47	0.0				
-54						(54.0 - 55.0) CLAYEY SAND WITH GRAVEL, mostly small cobbles, dense, dry, no odor, GLEY 1 8/10Y light greenish gray
-55		0.0		FILL		
-56				FILL		(55.0 - 57.0) CLAY, little medium pebbles, high plasticity, little to trace silt, soft, wet to moist from drill operations, slight odor, GLEY1 3/10Y very dark greenish gray
-57		0.0				
-58	39			FILL		(57.0 - 59.0) CLAYEY SILT, little medium pebbles, low plasticity, soft, moist, no odor,

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1005_12-14 (20150618), ASB-1005_37-40 (20150618), ASB-1005_46-50 (20150618), ASB-1005_78-80 (20150618).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End boring at 85 feet

Date Start/Finish: 6/18/2015 / 6/18/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973088.06
Easting: 484462.21

Drilled Depth (ft): 85
Surface Elevation (ft): 773.78

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1005**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-58		0.0				GLEY 1 5/5G greenish gray
-59		0.0		FILL		(59.0 - 60.0) POORLY GRADED GRAVEL and glass, angular to subround, well sorted, loose, dry, light gray
-60				FILL		(60.0 - 62.0) LEAN CLAY WITH GRAVEL, some to little silt, medium plasticity, slow dilatancy, some medium pebbles, glass, soft, moist, no odor, GLEY 1 4/5G dark greenish gray
-61		0.0				
-62	47			FILL		
-63		0.0				(62.0 - 65.0) POORLY GRADED SAND, little to trace small to medium pebbles, subround to subangular, well sorted, loose to medium dense, moist, no odor, 2.50Y 5/4 light olive brown
-64		0.0				
-65				FILL		(65.0 - 69.0) FILL, glass and sand, coarse sand, trace plastic, angular, well sorted, loose, moist, 2.50Y 4/3 olive brown
-66		0.0				
-67	47					
-68		0.0				
-69		0.0		FILL		(69.0 - 70.0) FILL, glass, dry, white
-70				FILL		(70.0 - 72.0) POORLY GRADED SAND WITH SILT, coarse sand, glass, subangular, well sorted, loose to medium dense, moist, no odor, 2.50Y 4/3 olive brown
-71		0.0				
-72	60			FILL		(72.0 - 73.5) FILL, glass, trace medium sand and small cobbles, angular, poorly sorted, loose to medium dense, dry, no odor, GLEY 1 7/N light gray
-73		0.0				
-74		0.0		FILL		(73.5 - 78.0) SANDY LEAN CLAY, some silt, medium to high plasticity, no dilatancy, some medium sand to small pebbles, soft to medium stiff, moist, no odor, 5.00Y 6/3 pale olive
-75						
-76		0.0				
-77						
-78		0.0				
-79				SC-SM		(78.0 - 85.0) CLAYEY SAND, little silt to fine sand, well sorted, medium dense, wet to moist, no odor, 5.00Y 3/1 very dark gray
-80	65	0.0				
-81						
-82		0.0				
-83						
-84		0.0				
-85						

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1005_12-14 (20150618), ASB-1005_37-40 (20150618), ASB-1005_46-50 (20150618), ASB-1005_78-80 (20150618).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End boring at 85 feet

Date Start/Finish: 6/22/2015 / 6/22/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973128.67
Easting: 484383.19

Drilled Depth (ft): 85
Surface Elevation (ft): 770.23

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1006**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
0				CONCRETE		(0.0 - 0.5) CONCRETE, 10.00YR 8/2 very pale brown
-1	44	0.0		FILL		(0.5 - 6.0) POORLY GRADED SAND WITH GRAVEL, medium sand to medium pebbles, subround to subangular, loose, wet, no odor, 10.00YR 4/2 dark grayish brown
-2						
-3		0.0				
-4						
-5		0.0				
-6	36	0.0		FILL		(6.0 - 10.0) LEAN CLAY WITH SAND, little silt, medium to high plasticity, little to trace small pebbles, very stiff to hard, moist, no odor, GLEY 1 4/10Y dark greenish gray
-7						
-8		0.0				
-9						
-10		0.0				
-11	39	0.0		FILL		(10.0 - 13.0) LEAN CLAY WITH SAND, some silt, medium plasticity, little small to medium pebbles, soft, wet from drill operation , no odor, 10.00YR 3/1 very dark gray
-12						
-13		0.0				
-14				FILL		(13.0 - 15.0) LEAN CLAY, little silt, medium plasticity, stiff, moist, no odor, GLEY 1 6/10GY greenish gray
-15		0.0				
-16	38	0.0		FILL		(15.0 - 17.5) LEAN CLAY WITH SAND, little silt, medium plasticity, little small to medium pebbles, soft, moist, no odor, 10.00YR 4/3 brown
-17						
-18		0.0		FILL		(17.5 - 22.0) LEAN CLAY, some to little silt, medium plasticity, no dilatancy, stiff, moist, no odor, GLEY 1 6/10GY greenish gray
-19						
-20		0.0				
-21	35	0.0				
-22						
-23		0.0		FILL		(22.0 - 25.0) CLAYEY SILT, trace small pebbles, low plasticity, medium stiff, moist to dry, no odor, mottling GLEY1 6/5GY greenish gray and GLEY 1 8/10Y light greenish gray
-24						
-25		0.0				
-26	16	0.0		FILL		(25.0 - 30.0) LEAN CLAY, little to trace silt, medium to high plasticity, no dilatancy, soft to medium stiff, moist, no odor, GLEY 1 5/10GY greenish gray
-27						
-28		0.0				
-29						

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Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1006_39-42 (20150622), ASB-1006_52-54 (20150622), ASB-1006_57-60 (20150622), ASB-1006_65-67 (20150622), ASB-1006_78-80 (20150622).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End of Boring at 85 feet.

Date Start/Finish: 6/22/2015 / 6/22/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973128.67
Easting: 484383.19

Drilled Depth (ft): 85
Surface Elevation (ft): 770.23

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1006**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-29						
-30						
-31		0.0		FILL		(30.0 - 32.0) LEAN CLAY WITH SAND, some to little medium sand, medium to high plasticity, soft, moist, no odor, sand 10YR 7/3 very pale brown and clay GLEY 1 2.5/N black
-32	27					
-33		0.0		FILL		(32.0 - 38.0) LEAN CLAY, some to little silt, medium plasticity, very stiff, moist to dry, no odor, GLEY 1 6/10GY greenish gray
-34						
-35						
-36		0.0				
-37	29					
-38		0.0		FILL		(38.0 - 40.0) LEAN CLAY WITH SAND, medium sand and clay, medium to high plasticity, trace silt, soft, moist, no odor, sand 10YR /3 pale brown and clay GLEY 1 2.5/N black
-39			■			
-40				FILL		(40.0 - 45.0) LEAN CLAY, some to little silt, low to medium plasticity, stiff, moist to dry, no odor, GLEY 1 5/10GY greenish gray
-41		0.0	■			
-42	47					
-43		0.0				
-44						
-45		0.0				
-46				FILL		(45.0 - 51.0) CLAYEY SILT, nonplastic to low plasticity, hard, moist to dry, no odor, mottling GLEY1 3/5G very dark greenish gray and GLEY 1 6/10GY greenish gray
-47	48					
-48		0.0				
-49						
-50		0.0				
-51		0.0				
-52	48			FILL		(51.0 - 57.0) CLAYEY SILT, nonplastic to low plasticity, medium stiff, moist to dry, no odor, GLEY 1 5/5GY greenish gray
-53		0.0	■			
-54						
-55		0.0				
-56	49	0.0				
-57						
-58			■	FILL		(57.0 - 60.0) ORGANICS, SANDY LEAN CLAY WITH GRAVEL, some to little medium

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1006_39-42 (20150622), ASB-1006_52-54 (20150622), ASB-1006_57-60 (20150622), ASB-1006_65-67 (20150622), ASB-1006_78-80 (20150622).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End of Boring at 85 feet.

Date Start/Finish: 6/22/2015 / 6/22/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973128.67
Easting: 484383.19

Drilled Depth (ft): 85
Surface Elevation (ft): 770.23

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1006**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-58		22.1	■			sand to medium pebble, medium plasticity, organics, wood, soft, moist, moderate staining, slight odor, GLEY 1 2.5/N black
-59		25.1	■			
-60	58	0.0		FILL		(60.0 - 63.0) LEAN CLAY, trace small pebbles, low to medium plasticity, soft to medium stiff, moist, no odor, GLEY 1 6/10GY greenish gray
-61						
-62						
-63		11.8		FILL		(63.0 - 64.0) CLAY, little silt, medium to high plasticity, organics, inorganics, wood,soft, moist, no odor, GLEY 1 2.5/N black
-64				FILL		(64.0 - 65.0) CLAY, some silt, low to medium plasticity, medium stiff to stiff, moist, no odor, GLEY 1 6/10GY greenish gray
-65	45	15.3	■	FILL		(65.0 - 67.0) POORLY GRADED SAND, fine, metal pieces, subround, well sorted, very loose, moist, no odor, 5.00Y 6/1 gray
-66						
-67		2.8		FILL		(67.0 - 71.0) POORLY GRADED SAND, fine sand to granules, subround to subangular, well sorted, loose, moist, moderate no odor, GLEY 1 2.5/N black
-68						
-69						
-70	58	0.0		SP		(71.0 - 77.0) POORLY GRADED SAND WITH GRAVEL, medium sand to medium pebbles, subround to subangular, well sorted, loose, moist, no odor, 2.50Y 6/1 gray
-71						
-72		0.0				
-73						
-74		0.0				
-75	50	0.0				
-76						
-77		0.0		SC		(77.0 - 78.0) CLAYEY SAND, very fine, poorly sorted, medium dense, moist, no odor, 2.50Y 5/1 gray
-78			■	SW-SM		(78.0 - 80.0) WELL GRADED SAND WITH SILT, some to little silt, fine to coarse sand, trace small pebbles, poorly sorted, moist, no odor, 2.50Y 4/1 dark gray
-79		0.0				
-80	57	0.0		GP		(80.0 - 85.0) POORLY GRADED GRAVEL, some medium to coarse sand, small pebbles, medium pebbles, large pebbles, well sorted, loose, wet, no odor, 2.50Y 6/1 gray
-81						
-82						
-83		0.0				
-84						
-85		0.0				

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1006_39-42 (20150622), ASB-1006_52-54 (20150622), ASB-1006_57-60 (20150622), ASB-1006_65-67 (20150622), ASB-1006_78-80 (20150622).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End of Boring at 85 feet.

Date Start/Finish: 6/23/2015 / 6/23/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973080.75
Easting: 484412.01

Drilled Depth (ft): 80
Surface Elevation (ft): 770.99

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1007**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Stratigraphic Description
0	12	0.0		CONCRETE	(0.0 - 0.6) CONCRETE, 10.00YR 8/2 very pale brown
-1				FILL	(0.6 - 4.0) CONCRETE, GLEY 1 8/N white
-2		0.0			
-3	30				(4.0 - 4.5) POORLY GRADED SAND WITH SILT AND GRAVEL, some silt and medium to coarse sand, small pebbles, subround to subangular, well sorted, loose to medium dense, moist, 10.00YR 5/4 yellowish brown
-4		0.0		FILL	
-5				FILL	(4.5 - 5.0) CLAYEY SILT, low plasticity, stiff to very stiff, moist to dry, no odor, GLEY 1 4/10GY dark greenish gray
-6		0.0		FILL	(5.0 - 7.0) CLAYEY SAND, medium to coarse sand, little clay to silt, subround to subangular, poorly sorted, loose, moist, no odor, GLEY 1 4/10Y dark greenish gray
-7	27				
-8		0.0		FILL	(7.0 - 10.0) CLAY, some silt, medium plasticity, trace small to medium pebbles, soft to medium stiff, moist, no odor, GLEY 1 4/10GY dark greenish gray
-9					
-10				FILL	(10.0 - 19.0) CLAYEY SAND WITH GRAVEL, medium to coarse sand and small to medium pebbles, subangular to round, poorly sorted, loose, moist, no odor, GLEY 1 3/N very dark gray
-11		1.5			
-12	27				
-13		2.0			
-14					
-15					
-16					
-17	8	1.8			
-18					
-19				FILL	(19.0 - 20.0) CLAYEY SILT, some to little clay, nonplastic to low plasticity, little small pebbles, medium stiff to stiff, moist, no odor, GLEY 1 5/10GY greenish gray
-20				CONCRETE	(20.0 - 21.0) CONCRETE, FILL, and medium sand, some medium to large pebbles, subangular to angular, well sorted, medium dense, dry, no odor, GLEY 1 8/N white
-21		4.6		FILL	
-22	52				(21.0 - 29.5) WELL GRADED SAND WITH SILT AND GRAVEL, some silt and medium to coarse sand, granules to medium pebbles,subround to subangular, poorly sorted, loose, moist, no odor, GLEY 1 2.5/N black
-23		10.3			
-24					
-25					
-26		4.1			
-27					

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1007_22-25 (20150623), ASB-1007_62-65 (20150623), ASB-1007_67-70 (20150623), ASB-1007_75-77 (20150623).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End boring at 80 feet.

Date Start/Finish: 6/23/2015 / 6/23/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973080.75
Easting: 484412.01

Drilled Depth (ft): 80
Surface Elevation (ft): 770.99

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1007**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-27	40	3.8		FILL		(29.5 - 30.0) CLAY, some silt, medium plasticity, soft, moist, no odor, GLEY 1 5/10GY greenish gray
-30	49	0.2		FILL		(30.0 - 33.0) CLAYEY SILT, trace granules to small pebbles, low plasticity, soft, moist, no odor, GLEY 1 2.5/N black
-33		0.3		FILL		(33.0 - 35.0) CLAYEY SILT, nonplastic to low plasticity, very stiff, moist to dry, no odor, GLEY 1 6/10GY greenish gray
-34		0.0				
-35	50	0.0		FILL		(35.0 - 37.0) LEAN CLAY, little silt, medium to high plasticity, soft, moist, no odor, GLEY 1 3/10Y very dark greenish gray
-37		1.6		FILL		(37.0 - 40.0) CLAYEY SILT, some clay, low to medium plasticity, medium stiff to stiff, moist to dry, GLEY 1 6/10GY greenish gray
-40	38	0.0		FILL		(40.0 - 47.0) CLAY, some to little silt, medium to high plasticity, no dilatancy, medium stiff, moist, no odor, GLEY 1 6/10GY greenish gray
-41		0.0				
-44		0.0				
-45	50	0.0				
-47		0.0		FILL		(47.0 - 55.0) CLAYEY SILT, low to medium plasticity, stiff to very stiff, moist, no odor, GLEY 1 6/10GY greenish gray
-49		0.0				
-50	47	0.0				
-52		0.0				
-54						

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1007_22-25 (20150623), ASB-1007_62-65 (20150623), ASB-1007_67-70 (20150623), ASB-1007_75-77 (20150623).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End boring at 80 feet.

Date Start/Finish: 6/23/2015 / 6/23/2015 **Drilling Company:** Cascade Drilling, LP **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Core Barrel	**Northing:** 4973080.75 **Easting:** 484412.01 **Drilled Depth (ft):** 80 **Surface Elevation (ft):** 770.99 **Descriptions By:** Tom Darmon	**Well/Boring ID:** **ASB-1007** **Client:** Ford Motor Company **Location:** Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-54		0.0				
-55	38	0.0		FILL		(55.0 - 59.0) CLAY, little silt, medium to high plasticity, trace small pebbles, very stiff to hard, moist, no odor, mottling GLEY1 3/N very dark gray and GLEY 1 5/10GY greenish gray
-56						
-57						
-58		0.2				
-59				CONCRETE		(59.0 - 60.0) CONCRETE, light gray
-60	58	3.2		FILL		(60.0 - 63.0) CLAY, little silt, medium to high plasticity, organics, wood, soft, moist, no odor, GLEY 1 3/5GY very dark greenish gray
-61						
-62			■			
-63		52.1		FILL		(63.0 - 65.0) WELL GRADED GRAVEL WITH SAND, medium sand to large pebbles, subround to subangular, poorly sorted, loose, moist to dry, no odor, 5.00Y 6/3 pale olive
-64						
-65	59	139.8		FILL		(65.0 - 66.5) CLAYEY SAND WITH GRAVEL,CONCRETE, medium to small cobbles, subangular to angular, poorly sorted, medium dense, moist to dry, slight, GLEY 1 7/N light gray
-66				FILL		(66.5 - 73.0) CLAYEY SAND, some to little silt, medium sand, glass, organics, metal wire, inorganics, wood, rubber, poorly sorted, loose to medium dense, moist, minor odor (solvent), GLEY 1 2.5/N black
-67						
-68		1794	■			
-69						
-70	60	1210				
-71						
-72						
-73		82.1		FILL		(73.0 - 75.0) WELL GRADED SAND WITH GRAVEL, fine to medium pebbles, subround to subangular, poorly sorted, loose, moist to dry, slight odor, GLEY 1 8/N white
-74						
-75	44	2.4	■	SP		(75.0 - 80.0) POORLY GRADED SAND, medium, subround, well sorted, loose, moist, no odor, GLEY 1 7/N light gray
-76						
-77						
-78		1.8				
-79						
-80		2.3				

ARCADIS

Remarks:

ft: feet NA: Not applicable/not available

Soil samples ASB-1007_22-25 (20150623), ASB-1007_62-65 (20150623), ASB-1007_67-70 (20150623), ASB-1007_75-77 (20150623).

Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation

End boring at 80 feet.

Date Start/Finish: 6/24/2015 / 6/24/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973098.43
Easting: 484377.92

Drilled Depth (ft): 80
Surface Elevation (ft): 769.40

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1008**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
0				CONCRETE		(0.0 - 0.6) CONCRETE, 10.00YR 8/2 very pale brown
-1		0.0		FILL		(0.6 - 2.5) POORLY GRADED SAND, medium to coarse sand, subround to subangular, well sorted, loose, moist, no odor, 10.00YR 4/3 brown
-2	29					
-3		0.0		FILL		(2.5 - 5.0) LEAN CLAY, little silt, medium plasticity, medium stiff to stiff, moist, no odor, GLEY 1 4/5GY dark greenish gray
-4						
-5		0.0				
-6		0.0		FILL		(5.0 - 9.0) CLAYEY SAND WITH GRAVEL, fine to medium sand, some to little clay, little small pebbles, subround to subangular, poorly sorted, medium dense, moist, no odor, 2.50Y 5/2 grayish brown
-7	14					
-8		0.0				
-9						(9.0 - 10.0) CLAYEY SILT, nonplastic to low plasticity, hard, moist to dry, no odor, GLEY 1 6/10GY greenish gray
-10		0.0		FILL		
-11		0.0		FILL		(10.0 - 14.0) SANDY LEAN CLAY, medium sand, medium plasticity, no dilatancy, soft, moist, no odor, 5.00Y 4/2 olive gray
-12	44					
-13		0.0				
-14						(14.0 - 15.0) SANDY FAT CLAY, little to trace fine sand, medium to high plasticity, no dilatancy, medium stiff, moist, no odor, GLEY 1 3/10Y very dark greenish gray
-15		0.0		FILL		
-16		0.0		FILL		(15.0 - 18.0) CLAYEY SAND, little silt to fine sand, medium to coarse sand, subround, poorly sorted, loose to medium dense, moist, no odor, 2.50Y 5/2 grayish brown
-17	29					
-18		0.0				
-19				FILL		(18.0 - 20.0) SANDY LEAN CLAY, little very fine to fine sand, medium plasticity, no dilatancy, little to trace small pebbles, soft, moist, no odor, GLEY 1 3/N very dark gray
-20		0.0				
-21		0.0		FILL		(20.0 - 25.0) FAT CLAY, trace small pebbles, high plasticity, soft to medium stiff, moist, no odor, GLEY 1 3/N very dark gray
-22	46					
-23		0.0				
-24						
-25		0.0				
-26		0.0		FILL		(25.0 - 29.0) LEAN CLAY, some to little silt, medium plasticity, soft, moist, no odor, GLEY 1 3/N very dark gray
-27						

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1008_30-33 (20150624), ASB-1008_52-54 (20150624), ASB-1008_70-72 (20150624).

Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation

End of Boring at 80 feet.

Date Start/Finish: 6/24/2015 / 6/24/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973098.43
Easting: 484377.92

Drilled Depth (ft): 80
Surface Elevation (ft): 769.40

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1008**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-27	48	0.0		FILL		(29.0 - 30.0) CLAYEY SAND WITH GRAVEL, some to little silt, small to medium pebbles, trace small cobbles, poorly sorted, loose to medium dense, moist to dry, no odor, GLEY 1 8/N white
-28						
-29						
-30	50	2.4	■	FILL		(30.0 - 33.0) CLAYEY SAND WITH GRAVEL, trace clay to silt, subround to subangular, poorly sorted, loose to medium dense, moist, moderate no odor, GLEY 1 3/N very dark gray
-31						
-32						
-33		0.0		FILL		(33.0 - 38.0) POORLY GRADED SAND WITH GRAVEL, and fine to medium sand, small to large pebbles, subround to subangular, well sorted, loose, dry, no odor, 5.00Y 8/1 white
-34						
-35	39	0.0				
-36						
-37		0.0				
-38				FILL		(38.0 - 39.0) POORLY GRADED GRAVEL, and fine to coarse sand, subangular, well sorted, moist, no odor, GLEY 1 2.5/N black
-39		0.0		FILL		(39.0 - 40.0) POORLY GRADED GRAVEL, some to little medium sand, angular to subround, well sorted, loose, moist to dry, GLEY 1 7/N light gray
-40	54	0.0		FILL		(40.0 - 43.0) LEAN CLAY WITH GRAVEL, some silt, low to medium plasticity, little to trace small pebbles, soft to medium stiff, moist, no odor, GLEY 1 5/N gray
-41						
-42						
-43		0.0		FILL		(43.0 - 44.0) LEAN CLAY, trace small pebbles, medium to high plasticity, no dilatancy, soft to medium stiff, moist, no odor, GLEY 1 5/5G greenish gray
-44		0.0		FILL		(44.0 - 49.5) CLAYEY SAND WITH GRAVEL, some to little silt and fine to coarse sand, trace small pebbles, subround to subangular, poorly sorted, medium dense, moist, minor to no odor, 10.00YR 5/3 brown
-45	37	0.0				
-46						
-47		0.0				
-48						
-49		0.0		FILL		(49.5 - 50.0) FAT CLAY, high plasticity, organics, wood, soft, moist, moderate to no odor, GLEY 1 4/10Y dark greenish gray
-50		0.0		FILL		(50.0 - 53.5) CLAYEY SAND WITH GRAVEL, fine to coarse sand, little clay and silt, trace small pebbles, subround to subangular, poorly sorted, loose to medium dense, moist, no odor, 10.00YR 5/3 brown
-51	42					
-52						
-53		0.0	■			(53.5 - 54.5) CLAY, little silt, medium to high plasticity, soft, moist, no odor, GLEY 1
-54						

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1008_30-33 (20150624), ASB-1008_52-54 (20150624), ASB-1008_70-72 (20150624).

Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation

End of Boring at 80 feet.

Date Start/Finish: 6/24/2015 / 6/24/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973098.43
Easting: 484377.92

Drilled Depth (ft): 80
Surface Elevation (ft): 769.40

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1008**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-54		0.0		FILL		4/N dark gray
-55	38	0.0		FILL		(54.5 - 55.0) CLAYEY SILT, low plasticity, very stiff to hard, moist, no odor, GLEY 1 6/10GY greenish gray
-56		0.0		FILL		(55.0 - 57.0) CLAY, little silt, medium to high plasticity, soft to medium stiff, moist, no odor, GLEY 1 6/10GY greenish gray
-57						
-58		0.0		FILL		(57.0 - 68.0) CLAYEY SILT, low to medium plasticity, stiff to hard, moist to dry, no odor, GLEY 1 6/10GY greenish gray
-59		0.0				
-60	45					
-61		0.0				
-62						
-63		0.0				
-64		0.0				
-65	43					
-66		0.0				
-67						
-68		0.0		SP-SM		(68.0 - 70.0) POORLY GRADED SAND WITH SILT, fine, subround, well sorted, loose, moist, 10.00YR 7/2 light gray
-69		0.0				
-70	42					
-71		0.0		SP-SM		(70.0 - 73.0) POORLY GRADED SAND WITH SILT, very fine sand, some silt, trace organics, well sorted, medium dense, moist, no odor, GLEY 1 3/N very dark gray
-72						
-73		0.0		SP		(73.0 - 78.0) POORLY GRADED SAND, medium, subround, well sorted, loose, moist, no odor, GLEY 1 7/N light gray
-74		0.0				
-75	48					
-76		0.0				
-77						
-78		0.0		SW		(78.0 - 80.0) WELL GRADED SAND WITH GRAVEL, fine to very coarse sand, granules to medium pebbles, subround to round, poorly sorted, moist, no odor, GLEY 1 7/N light gray
-79						
-80						

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1008_30-33 (20150624), ASB-1008_52-54 (20150624), ASB-1008_70-72 (20150624).

Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation

End of Boring at 80 feet.

Date Start/Finish: 6/24/2015 / 6/25/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973095.02
Easting: 484337.88

Drilled Depth (ft): 80
Surface Elevation (ft): 770.56

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1009**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
0				CONCRETE		(0.0 - 0.6) CONCRETE, 10.00YR 7/1 light gray
-1	26	0.0		FILL		(0.6 - 4.0) WELL GRADED SAND WITH GRAVEL, fine sand to medium pebbles, subround to subangular, poorly sorted, loose, dry, no odor, 2.50Y 5/1 gray
-2						
-3		0.0				(4.0 - 4.5) WELL GRADED SAND WITH GRAVEL,fine sand to medium pebbles, trace clay, subround to subangular, poorly sorted, medium dense to dense, moist, no odor, 2.50Y 3/1 very dark gray
-4				FILL		
-5		0.0		FILL		(4.5 - 9.5) LEAN CLAY WITH SAND, some fine to medium sand, medium plasticity, no dilatancy, trace silt, medium to small cobbles,medium stiff, moist, no odor, mottling 10YR 6/6 brownish yellow, GLEY1 6/10GY greenish gray, and GLEY 1 4/10Y dark greenish
-6	18	0.0				
-7						
-8		0.0				
-9						
-10		0.0		FILL		(9.5 - 11.0) CLAYEY SAND WITH GRAVEL, medium to coarse sand, some small pebbles, trace silt, subangular to round, poorly sorted, loose to medium dense, moist, no odor, GLEY 1 5/10Y greenish gray
-11	28	0.0		FILL		(11.0 - 19.0) SANDY LEAN CLAY, little silt, fine to medium sand, little small pebbles, medium plasticity, trace large cobbles, soft, moist, no odor, GLEY 1 3/10Y very dark greenish gray
-12						
-13		0.0				
-14						
-15		0.0				
-16	40	0.0				
-17						
-18		0.0				
-19		0.4		FILL		(19.0 - 23.0) POORLY GRADED SAND WITH SILT, medium to coarse sand, subround to subangular, well sorted, loose, moist to wet due to drill operation, no odor, GLEY 1 5/10Y greenish gray
-20						
-21	39	0.6				
-22						
-23		0.0				
-24				FILL		(23.0 - 25.0) LEAN CLAY, some to little silt, medium to high plasticity, medium stiff to stiff, moist, no odor, GLEY 1 6/10GY greenish gray
-25		0.0				
-26		0.0		FILL		(25.0 - 29.0) LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND, some to little silt, medium plasticity, some to little coarse sand to medium pebbles, soft to medium stiff, moist, no odor, GLEY 1 5/5GY greenish gray
-27						

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1009_42-44 (20150624), ASB-1009_55-57 (20150624), ASB-1009_62-65 (20150624), ASB-1009_70-72 (20150625).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End of Boring at 80 feet.

Date Start/Finish: 6/24/2015 / 6/25/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973095.02
Easting: 484337.88

Drilled Depth (ft): 80
Surface Elevation (ft): 770.56

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1009**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-27	34	0.0				
-28						
-29				FILL		(29.0 - 35.0) CONCRETE,WELL GRADED SAND WITH GRAVEL, some to little small to medium pebbles, metal pieces, subangular to round, poorly sorted, loose to medium dense, dry, no odor,concrete, GLEY 1 8/N white
-30		0.0				
-31	29					
-32		0.0				
-33						
-34						
-35		0.0		FILL		(35.0 - 38.0) LEAN CLAY, medium plasticity, organics, wood,medium stiff, moist, no odor, GLEY 1 5/5GY greenish gray
-36	48					
-37		0.0		FILL		(38.0 - 40.0) CONCRETE,WELL GRADED SAND,fine sand to very large pebbles, small cobbles, angular to subround, poorly sorted, very loose, dry, no odor, 2.50Y 8/1 white
-38						
-39						
-40		0.0		FILL		(40.0 - 43.0) WELL GRADED SAND WITH GRAVEL, fine to coarse sand, some small to medium pebbles, subround to subangular, poorly sorted, loose, dry, no odor, 2.50Y 7/1 light gray
-41						
-42	50					
-43		0.0				
-44				FILL		(43.0 - 47.0) LEAN CLAY, little to trace silt, medium to high plasticity, very stiff to hard, moist, no odor, mottling GLEY1 2.5/N black and GLEY 1 5/10GY greenish gray
-45		0.0				
-46		0.0				
-47	40					
-48		0.0		FILL		(47.0 - 48.5) ORGANIC, wood, moist, 2.50Y 5/6 light olive brown
-49						
-50		0.0		FILL		(48.5 - 55.0) LEAN CLAY, medium to high plasticity, no dilatancy, trace organics, wood, soft to medium stiff, moist to wet due to drill operation , no odor, GLEY 1 2.5/N black
-51		0.0				
-52	39					
-53		0.0				
-54						

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1009_42-44 (20150624), ASB-1009_55-57 (20150624), ASB-1009_62-65 (20150624), ASB-1009_70-72 (20150625).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End of Boring at 80 feet.

Date Start/Finish: 6/24/2015 / 6/25/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973095.02
Easting: 484337.88

Drilled Depth (ft): 80
Surface Elevation (ft): 770.56

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1009**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-54		0.0				
-55						
-56		0.0	■	FILL		(55.0 - 57.0) LEAN CLAY, little to trace silt, glass, organics, medium plasticity, soft to medium stiff, moist, no odor, GLEY 1 2.5/N black
-57	65					
-58		0.0		FILL		(57.0 - 60.0) CONCRETE,WELL GRADED SAND WITH GRAVEL, fine sand to large pebbles, angular to subround, poorly sorted, moist to dry, no odor, 2.50Y 7/3 pale yellow
-59						
-60						
-61		0.0		FILL		(60.0 - 63.0) WELL GRADED SAND WITH SILT AND GRAVEL, mostly small to medium pebbles, some silt, subround to subangular, poorly sorted, wet due to drilling operation, soil initially moist, no odor, GLEY 1 3/N very dark gray
-62	47					
-63		4.3	■	FILL		(63.0 - 65.0) POORLY GRADED SAND WITH GRAVEL, medium to coarse sand, little medium pebbles, subround to subangular, well sorted, loose, moist, no odor, GLEY 1 7/N light gray
-64						
-65						
-66		0.0		FILL		(65.0 - 67.5) POORLY GRADED SAND, fine to medium, subround to round, moist, no odor, GLEY 1 7/N light gray
-67	46					
-68		0.0		FILL		(67.5 - 69.0) POORLY GRADED SAND, medium to coarse, some to little small pebbles, subround to subangular, well sorted, moist, no odor, 5.00Y 3/1 very dark gray
-69				SP		(69.0 - 70.0) POORLY GRADED SAND WITH GRAVEL, medium to coarse, some to little small to medium pebbles, subround to subangular, well sorted, loose, moist, no odor, 5.00Y 6/2 light olive gray
-70						
-71		0.0	■	SP		(70.0 - 73.0) POORLY GRADED SAND, medium to coarse, subround to subangular, well sorted, very loose, moist, GLEY 1 7/N light gray
-72	52					
-73		0.0		ML		(73.0 - 74.0) CLAYEY SILT, nonplastic, trace very fine, soft, moist, no odor, layer, GLEY 1 7/N light gray
-74						
-75				GP		(74.0 - 80.0) POORLY GRADED SAND WITH GRAVEL, coarse sand to medium pebbles, subround to subangular, well sorted, loose to medium dense, moist, no odor, 2.50Y 6/1 gray
-76		0.0				
-77	50					
-78		0.0				
-79						
-80						

ARCADIS

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1009_42-44 (20150624), ASB-1009_55-57 (20150624), ASB-1009_62-65 (20150624), ASB-1009_70-72 (20150625).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End of Boring at 80 feet.

Date Start/Finish: 6/25/2015 / 6/25/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973051.39
Easting: 484352.50

Drilled Depth (ft): 75
Surface Elevation (ft): 772.14

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1010**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
0				CONCRETE		(0.0 - 0.6) CONCRETE, 10.00YR 7/1 light gray
-1		0.0		FILL		(0.6 - 4.0) WELL GRADED SAND WITH GRAVEL, little silt, small to medium pebbles, subround to subangular, poorly sorted, loose to medium dense, moist to dry, no odor, 10.00YR 4/1 dark gray
-2	17					
-3		0.0				
-4						
-5				FILL		(4.0 - 8.0) LEAN CLAY, some silt, medium plasticity, trace small pebbles, stiff to very stiff, moist to dry, no odor, 10.00YR 4/1 dark gray
-6		0.0				
-7	60					
-8		0.0				
-9				FILL		(8.0 - 10.0) WELL GRADED SAND WITH GRAVEL, mostly fine to medium, some to little small to medium pebbles, subangular to round, poorly sorted, loose, moist to dry, no odor, 10.00YR 7/1 light gray
-10				FILL		(10.0 - 18.5) WELL GRADED SAND WITH GRAVEL, mostly medium to coarse sand with medium to large pebbles and silt, trace small cobbles, subangular to round, poorly sorted, wet due to drilling fluid, no odor, 2.50Y 4/2 dark grayish brown
-11		0.0				
-12	38					
-13		0.0				
-14						
-15		0.0				
-16						
-17	40					
-18		0.0				
-19				CONCRETE		(18.5 - 20.0) CONCRETE, GLEY 1 7/N light gray
-20		0.0				
-21				FILL		(20.0 - 25.0) CLAYEY SAND WITH GRAVEL, mostly medium sand to small pebbles, some to little clay, silt, subround to subangular, poorly sorted, medium dense to dense, wet to moist from drilling operation, no odor, GLEY 1 2.5/N black
-22		0.0				
-23	43					
-24		0.0				
-25						

Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1010_38-40 (20150625), ASB-1010_55-57 (20150625), ASB-1010_70-73 (20150625).

Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation

End of Boring at 75 feet.

Date Start/Finish: 6/25/2015 / 6/25/2015 **Drilling Company:** Cascade Drilling, LP **Driller's Name:** Jason Drabek **Drilling Method:** Sonic **Sampling Method:** Core Barrel	**Northing:** 4973051.39 **Easting:** 484352.50 **Drilled Depth (ft):** 75 **Surface Elevation (ft):** 772.14 **Descriptions By:** Tom Darmon	**Well/Boring ID:** **ASB-1010** **Client:** Ford Motor Company **Location:** Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-25						
-26	54	0.0		FILL		(25.0 - 28.0) CLAYEY SAND WITH GRAVEL, medium, some small to medium pebbles, some to little clay and silt, subround to subangular, poorly sorted, medium dense, wet to moist from drilling operation, no odor, GLEY 1 4/N dark gray
-27		0.0				
-28		0.0		FILL		(28.0 - 30.0) SANDY SILT, little to trace medium sand, nonplastic to low plasticity, trace clay, small pebbles, soft, moist, no odor, GLEY 1 2.5/N black
-29		0.0				
-30	58	0.2		FILL		(30.0 - 35.0) LEAN TO FAT CLAY, little silt, medium to high plasticity, little to trace small to medium pebbles, soft, moist, no odor, mottling GLEY1 6/10GY greenish gray and GLEY 1 2.5/N black
-31		0.0				
-32		0.0				
-33						
-34						
-35	50	0.0		FILL		(35.0 - 38.5) WELL GRADED SAND, medium to very coarse, subround, well sorted, very loose, wet possibly from drilling operation , no odor, 5.00Y 3/1 very dark gray
-36						
-37						
-38						
-39		0.3		FILL		(38.5 - 40.0) WELL GRADED SAND WITH GRAVEL, coarse sand to medium pebbles, angular to subround, poorly sorted, loose, moist, no odor, 5.00Y 6/2 light olive gray
-40	56	0.0		FILL		(40.0 - 44.0) LEAN CLAY, some silt, medium plasticity, trace small pebbles, soft to medium stiff, moist, no odor, GLEY 1 5/10GY greenish gray
-41						
-42		0.0				
-43						
-44		0.0		FILL		(44.0 - 45.0) CLAYEY SILT, some fine to medium sand, nonplastic to low plasticity, trace small pebbles,soft, moist, no odor, GLEY 1 3/N very dark gray
-45	30	0.0		FILL		(45.0 - 47.5) LEAN CLAY, little to trace silt, medium to high plasticity, trace small pebbles, soft, moist, no odor, GLEY 1 6/10GY greenish gray
-46						
-47						
-48		0.0		FILL		(47.5 - 50.0) LEAN CLAY, some to little silt, medium plasticity, trace small pebbles, soft, moist, no odor, GLEY 1 5/10Y greenish gray
-49						
-50						

ARCADIS

Remarks:

ft: feet NA: Not applicable/not available

Soil samples ASB-1010_38-40 (20150625), ASB-1010_55-57 (20150625), ASB-1010_70-73 (20150625).

Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation

End of Boring at 75 feet.

Date Start/Finish: 6/25/2015 / 6/25/2015
Drilling Company: Cascade Drilling, LP
Driller's Name: Jason Drabek
Drilling Method: Sonic
Sampling Method: Core Barrel

Northing: 4973051.39
Easting: 484352.50

Drilled Depth (ft): 75
Surface Elevation (ft): 772.14

Descriptions By: Tom Darmon

Well/Boring ID: **ASB-1010**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (feet)	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description
-50 to -51	49	0.0		FILL		(50.0 - 53.0) LEAN CLAY,and silt, low to medium plasticity, trace small pebbles, soft, moist, no odor, GLEY 1 4/10Y dark greenish gray
-51 to -52		0.0				
-52 to -53		0.0		FILL		(53.0 - 55.0) LEAN TO FAT CLAY, little to trace silt, medium to high plasticity, trace small pebbles, soft, moist, no odor, GLEY 1 3/N very dark gray
-53 to -54		0.0				
-54 to -55	59	0.0	■	FILL		(55.0 - 58.0) FAT CLAY, trace silt and small pebbles, high plasticity, medium stiff, moist, no odor, mottling GLEY1 3/10Y very dark greenish gray and GLEY 1 5/10GY greenish gray
-55 to -56		0.0				
-56 to -57		0.0		FILL		(58.0 - 60.0) LEAN TO FAT CLAY, little to trace silt, small pebbles, medium to high plasticity, medium stiff to stiff, moist, no odor, mottling 10YR 6/4 light yellowish brown and GLEY 1 5/10GY greenish gray
-57 to -58		0.0				
-58 to -59	43	0.0		FILL		(60.0 - 65.0) LEAN TO FAT CLAY, little to trace silt, medium to high plasticity, trace small pebbles, very stiff to hard, moist, no odor, GLEY 1 5/10GY greenish gray
-59 to -60		0.0				
-60 to -61		0.0				
-61 to -62		0.0				
-62 to -63	57	0.0		FILL		(65.0 - 69.0) LEAN CLAY, some to little silt and small pebbles, medium plasticity, organics, wood, medium stiff, moist, no odor, GLEY 1 2.5/N black
-63 to -64		0.0				
-64 to -65		0.0				
-65 to -66		0.0		SP		(69.0 - 74.0) POORLY GRADED SAND, medium,subround, well sorted, loose, moist, no odor, GLEY 1 7/N light gray
-66 to -67	60	0.0	■			
-67 to -68		0.0				
-68 to -69		0.0				
-69 to -70		0.0				
-70 to -71		0.0		SP		(74.0 - 75.0) POORLY GRADED SAND, little to trace small pebbles, subangular to round, well sorted, loose, moist, no odor, 2.50Y 6/1 gray
-71 to -72		0.0				
-72 to -73		0.0				
-73 to -74		0.0				
-74 to -75		0.0				

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Remarks:
ft: feet NA: Not applicable/not available

Soil samples ASB-1010_38-40 (20150625), ASB-1010_55-57 (20150625), ASB-1010_70-73 (20150625).
Soil samples analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and Chromium 3+/Chromium 6+ speciation
End of Boring at 75 feet.

ARCADIS

WELL CONSTRUCTION LOG

WELL NO.: **AMW-05**

TOTAL DEPTH: **29.0** feet bgs

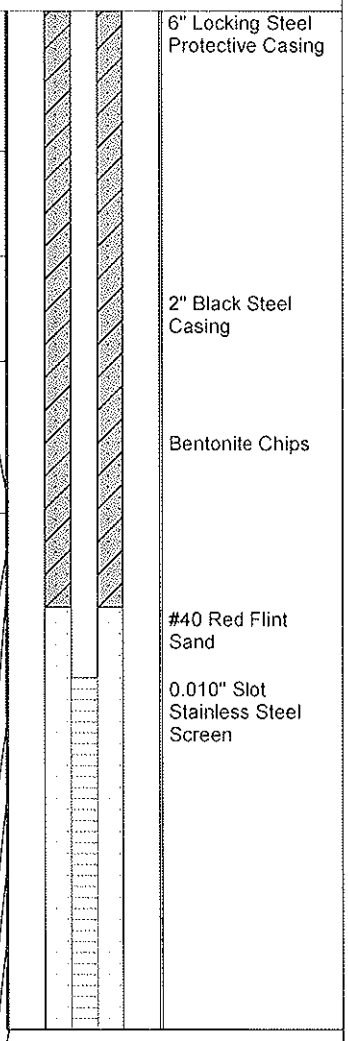
PROJECT INFORMATION

CLIENT:	**Ford Motor Company**
PROJECT:	**Twin Cities Assembly Plant**
SITE LOCATION:	**St. Paul, Minnesota**
LOGGED BY:	**AMF**
DATE STARTED:	**7/2/2007 4:45:00 PM**
DATE COMPLETED:	**7/2/2007 6:20:00 PM**

DRILLING INFORMATION

DRILLING CO.:	**Boart Longyear**
DRILLER:	**Jim**
DRILLING METHOD:	**Sonic**
COORDINATES:	**ELEVATIONS (feet MSL):**
Northing: 4973377.0226	**Surface: 722.07**
Easting: 484332.2764	**TOC: 725.25**

DEPTH (feet)	SOIL SYMBOLS	USCS/ STRATIGRAPHIC UNITS	PID (ppm)	RECOVERY (in.)	SOIL DESCRIPTION
0		SW	2.6	30	(0.0 - 4.0) SW: FILL (WELL GRADED SAND WITH GRAVEL), brown, fine to coarse grained sand, with some silt and gravel, angular to round, gravel composed of black & blue gray shale, dry
2			1.1		
4		GC	5.0	65	(4.0 - 7.0) GC: CLAYEY GRAVEL WITH SAND, black, gravel and clay with some fine to coarse grained sand, moist, subangular to round, up to 70mm, moist
6			3.2		
8		GC	2.4		(7.0 - 10.0) GC: CLAYEY GRAVEL, blue gray, gravel and cobbles composed of shale with some clay, dense, dry, hard
10		SM	2.4		(10.0 - 14.0) SM: SILTY SAND WITH GRAVEL, tan, fine to coarse grained sand, with some gravel, little silt, dry
12			2.6		(14.0 - 14.3) SM: SILTY SAND WITH GRAVEL, tan, fine to coarse grained sand, with some gravel, little silt, dry
14		SM	3.4	82	(14.3 - 15.2) SW: WELL GRADED SAND WITH GRAVEL, brown, fine sand with little medium to coarse sand and gravel up to 10mm, loose, dry
16		SW			
18		SM / ML	5.6		(15.2 - 16.0) SM: SILTY SAND WITH GRAVEL, dark brown, silt some fine to coarse grained sand and gravel up to 50mm, angular to round, loose, dry
20		SP	5.6		(16.0 - 20.0) ML: SILT WITH SAND, brown, silt with some fine sand, and trace gravel up to 10mm, dry-moist at 18'
22		SP	6.7		(20.0 - 22.0) SP: POORLY GRADED SAND WITH GRAVEL, white/tan, fine grained sand, with limestone cobbles, loose, moist
24		SANDSTONE		36	(22.0 - 24.0) SP: POORLY GRADED SAND, white/tan, fine grained, SAND loose, moist/wet
26		SANDSTONE		58	(24.0 - 26.0) SANDSTONE: SANDSTONE, white/tan, fine grained sand, loose
28					(26.0 - 29.0) SANDSTONE: SANDSTONE, white/tan, loose, wet



Notes:
bgs: below ground surface
MSL: Mean Sea Level
TOC: Top of Casing
AMW: ARCADIS Monitoring Well
ppm: parts per million
in.: inch
PID: Photo-ionization Detector

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WELL CONSTRUCTION LOG

WELL NO.: **AMW-05B**

TOTAL DEPTH: **55.0** feet bgs

PROJECT INFORMATION

CLIENT:	**Ford Motor Company**
PROJECT:	**Twin Cities Assembly Plant**
SITE LOCATION:	**St. Paul, Minnesota**
LOGGED BY:	**TNK**
DATE STARTED:	**7/19/2007 9:45:00 AM**
DATE COMPLETED:	**7/19/2007**

DRILLING INFORMATION

DRILLING CO.:	**Boart Longyear**
DRILLER:	**Dale**
DRILLING METHOD:	**Sonic**
COORDINATES:	**ELEVATIONS (feet MSL):**
Northing: 4973374.9626	**Surface: 721.79**
Easting: 484333.0966	**TOC: 723.99**

DEPTH (feet)	SOIL SYMBOLS	USCS/ STRATIGRAPHIC UNITS	PID (ppm)	RECOVERY (in.)	SOIL DESCRIPTION	WELL CONSTRUCTION DETAILS
0					(0.0 - 30.0) Blind drill, no recovery	6" Locking Steel Protective Casing
2						
4						
6						
8						
10						2" Black Steel Casing
12						
14						
16						
18						
20						Neat Cement Grout
22						
24						
26						
28						
30		SANDSTONE			(30.0 - 32.0) SANDSTONE: SANSTONE, tan, fine to coarse grained sand, mostly medium, little silt, loose, moist, friable	
32						

Notes:
bgs: below ground surface
MSL: Mean Sea Level
TOC: Top of Casing
AMW: ARCADIS Monitoring Well
ppm: parts per million
in.: inch
PID: Photo-ionization Detector

ARCADIS

WELL CONSTRUCTION LOG

WELL NO.: **AMW-05B**

TOTAL DEPTH: **55.0** **feet bgs**

PROJECT INFORMATION

CLIENT:	**Ford Motor Company**
PROJECT:	**Twin Cities Assembly Plant**
SITE LOCATION:	**St. Paul, Minnesota**
LOGGED BY:	**TNK**
DATE STARTED:	**7/19/2007 9:45:00 AM**
DATE COMPLETED:	**7/19/2007**

DRILLING INFORMATION

DRILLING CO.:	**Boart Longyear**
DRILLER:	**Dale**
DRILLING METHOD:	**Sonic**
COORDINATES:	**ELEVATIONS (feet MSL):**
Northing: 4973374.9626	**Surface: 721.79**
Easting: 484333.0966	**TOC: 723.99**

DEPTH (feet)	SOIL SYMBOLS	USCS/ STRATIGRAPHIC UNITS	PID (ppm)	RECOVERY (in.)	SOIL DESCRIPTION	WELL CONSTRUCTION DETAILS
32		SANDSTONE		72	(32.0 - 35.0) SANDSTONE: SANSTONE, white to gray, very fine to coarse sand, mostly fine to medium, little silt, moist, friable	
34		SANDSTONE				
36		SANDSTONE		72	(35.0 - 37.0) SANDSTONE: SANSTONE, white, fine to coarse grained sand, loose, moist, friable	
38		SANDSTONE			(37.0 - 38.0) SANDSTONE: SANSTONE, orange, very fine to coarse sand, mostly medium, trace silt, loose, moist-wet, friable	
40		SANDSTONE		72	(38.0 - 40.0) SANDSTONE: SANSTONE, white, very fine to medium sand, mostly fine, loose, very moist-wet, friable	#7 Red Flint Sand
42		SANDSTONE			(40.0 - 41.5) SANDSTONE: SANSTONE, orange, fine to coarse grained sand, mostly medium to coarse, trace silt, friable, very moist	#40 Red Flint Sand
44						0.010" Slot Stainless Steel Screen
46		SANDSTONE		72	(41.5 - 45.0) SANDSTONE: SANSTONE, white/tan, very fine to medium sand, mostly fine, Sandstone, loose, some silt, moist, friable	
48					(45.0 - 50.0) SANDSTONE: SANSTONE, loose white/tan, very fine to medium sand, mostly fine, some silt, moist, friable	
50		SANDSTONE		72	(50.0 - 55.0) SANDSTONE: SANSTONE, tan, very fine to medium sand, mostly fine, some silt, loose, wet, friable	
52						
54						

Notes:
bgs: below ground surface
MSL: Mean Sea Level
TOC: Top of Casing
AMW: ARCADIS Monitoring Well
ppm: parts per million
in.: inch
PID: Photo-ionization Detector

ARCADIS

WELL CONSTRUCTION LOG

WELL NO.: **AMW-07**

TOTAL DEPTH: **45.0** feet bgs

PROJECT INFORMATION

CLIENT:	**Ford Motor Company**
PROJECT:	**Twin Cities Assembly Plant**
SITE LOCATION:	**St. Paul, Minnesota**
LOGGED BY:	**MM**
DATE STARTED:	**7/4/2007 8:10:00 AM**
DATE COMPLETED:	**7/4/2007 11:30:00 AM**

DRILLING INFORMATION

DRILLING CO.:	**Boart Longyear**
DRILLER:	**Jim**
DRILLING METHOD:	**Sonic**
COORDINATES:	**ELEVATIONS (feet MSL):**
Northing: 4973223.3593	**Surface: 733.71**
Easting: 484399.1649	**TOC: 733.48**

DEPTH (feet)	SOIL SYMBOLS	USCS/ STRATIGRAPHIC UNITS	PID (ppm)	RECOVERY (in.)	SOIL DESCRIPTION	WELL CONSTRUCTION DETAILS
0		FILL	1.3	52	(0.0 - 0.3) FILL: FILL, Asphalt	Flush Mount Vault
2		SM			(0.3 - 2.0) SM: FILL (WELL GRADED SAND WITH GRAVEL), brown, very fine to coarse sand, mostly fine, some fine to coarse gravel, up to 1.75", angular to subangular, and fill, crumbly, moist, medium soft	
4		OL	2.5			
6		SM	2.6	50	(2.0 - 5.0) OL: FILL (WELL GRADED SAND WITH GRAVEL), dark brown, very fine to coarse sand, mostly fine, some fine grained gravel, subangular to subround, orange mottling, plant fragments, fine slate fragments, and fill, medium hard, moist	
		SM	3.9			
8		SM	5.8		(5.0 - 6.7) SM: FILL (WELL GRADED SAND WITH GRAVEL), brown, very fine to coarse sand, mostly fine, and some fine to coarse gravel, up to 1.5", subangular to subround, brick/concrete fragments and fill, soft, moist	
10		SM	6.4			2" Black Steel Casing
12		SM			(6.7 - 8.0) SM: FILL (SILTY SAND), very fine to fine sand, mostly very fine, little silt, trace fine gravel, subrounded, soft, moist	
		SM	7.2			
14					(8.0 - 10.0) SM: FILL (WELL GRADED SAND WITH GRAVEL), dark brown, very fine to coarse sand, mostly fine, some fine to coarse gravel, subangular to subround, up to 1.5", brick fragments, glass and fill, soft, pliable	
16						
18				60	(10.0 - 11.0) SM: FILL (WELL GRADED SAND WITH GRAVEL), brown, very fine to medium sand, mostly very fine, little fine grained gravel, subrounded, and fill, soft	
20					(11.0 - 12.5) SM: FILL (WELL GRADED SAND WITH GRAVEL), slough	Neat Cement Grout
22						
24					(12.5 - 25.0) SM: FILL (WELL GRADED SAND WITH GRAVEL), brown, very fine to coarse sand, fine to coarse gravel, up to 2", angular to subround, brick fill, moist FILL (SILTY SAND) fine to coarse gravel, up to 2", angular to subrounded, brick fragments, moist	
26		SM	17.2			
28		SM	25.7		(25.0 - 27.7) SM: FILL (WELL GRADED SAND WITH GRAVEL), brown, very fine to coarse sand, fine to coarse gravel, up to 2", angular to subround, brick fill, moist	
30		SAND	7.7	106	(27.7 - 29.3) SM: WELL GRADED SAND WITH GRAVEL, brown, very fine to coarse sand, mostly fine, some fine to coarse gravel, up to 1.25", subrounded, trace cobbles, up to 4", subrounded, trace silt and clay,	#7 Red Flint Sand
32						

Notes:
bgs: below ground surface
MSL: Mean Sea Level
TOC: Top of Casing
AMW: ARCADIS Monitoring Well
ppm: parts per million
in.: inch
PID: Photo-ionization Detector

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WELL CONSTRUCTION LOG

WELL NO.: **AMW-07**

TOTAL DEPTH: **45.0** **feet bgs**

PROJECT INFORMATION

CLIENT:	**Ford Motor Company**
PROJECT:	**Twin Cities Assembly Plant**
SITE LOCATION:	**St. Paul, Minnesota**
LOGGED BY:	**MM**
DATE STARTED:	**7/4/2007 8:10:00 AM**
DATE COMPLETED:	**7/4/2007 11:30:00 AM**

DRILLING INFORMATION

DRILLING CO.:	**Boart Longyear**
DRILLER:	**Jim**
DRILLING METHOD:	**Sonic**

COORDINATES:
Northing: 4973223.3593
Easting: 484399.1649

ELEVATIONS (feet MSL):
Surface: 733.71
TOC: 733.48

DEPTH (feet)	SOIL SYMBOLS	USCS/ STRATIGRAPHIC UNITS	PID (ppm)	RECOVERY (in.)	SOIL DESCRIPTION	WELL CONSTRUCTION DETAILS
32					plant particles	
34		OL	9.1		(29.3 - 31.9) SAND: POORLY GRADED SAND, light tan, very fine to fine sand, mostly fine, soft, moist	#40 Red Flint Sand
36		CL	32.1		(31.9 - 35.0) OL: ORGANIC SOIL, dark brown, silt and clay, organic, trace fine to fine sand, mostly very fine, soft, orange mottling, plant fragments, moist	0.010" Slot Stainless Steel Screen
38		SAND	36.6		(35.0 - 37.7) CL: LEAN CLAY WITH SAND, brown, clay and silt, trace fine to medium grained sand, mostly fine, trace fine grained, gravel, medium hard, moist, subrounded	
40			36.5	153		
42			31.6		(37.7 - 45.0) SAND: SANDSTONE, light tan, very fine to fine sand, mostly very fine, orange/black mottling, moist, soft	
44						

Notes:
bgs: below ground surface
MSL: Mean Sea Level
TOC: Top of Casing
AMW: ARCADIS Monitoring Well
ppm: parts per million
in.: inch
PID: Photo-ionization Detector

Date Start/Finish: 11/3/2011 / 11/3/2011
Drilling Company: Stevens Drilling
Driller's Name: Dan Hunter
Drilling Method: Geoprobe
Sampling Method: Direct Push

Northing: 4972984.9689
Easting: 484232.1812

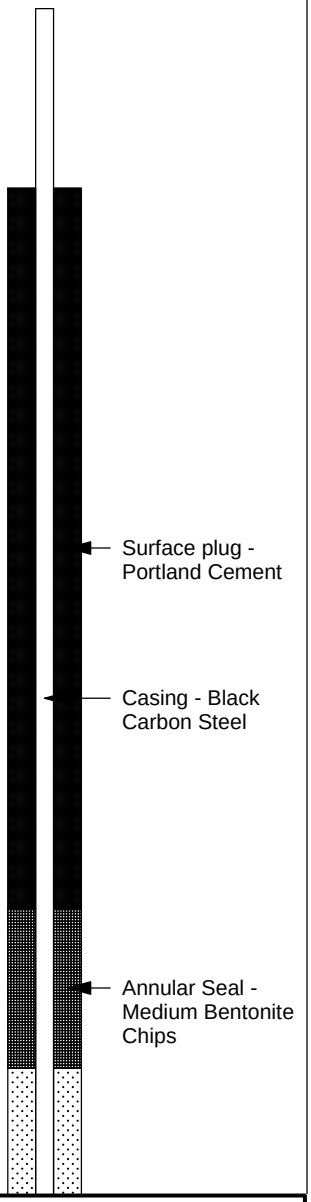
Drilled Depth (feet bgs): 28
Surface Elevation: 705.60

Descriptions By: KAH

Well/Boring ID: **AMW-19**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (bgs)	Recovery (in)	PID	USCS Code	Geologic Column	Stratigraphic Description
0	20	0.1	SP		(0.0 - 6.8) POORLY GRADED SAND, v. fine to coarse, mostly medium, little v. coarse sand to v. large pebbles, tr. organics, round to subangular, well sorted, loose to medium dense, dry to slightly moist; silty v. fine to fine sand layer 6.42-6.83 ft, brown (10YR 4/3)
-5	48	0.1/0.1	SP		(6.8 - 8.0) POORLY GRADED SAND, very fine to fine sand, trace medium, round, well sorted, loose to medium dense, slightly moist, brown (10YR 5/3)
-10	48	0.1/0.1	SP		(8.0 - 10.7) POORLY GRADED SAND, fine to very coarse, mostly medium, little granules to large pebbles, trace organics, round to subangular, well sorted, loose to medium dense, dry to slightly moist, silty very fine to fine sand layer 10.42 -10.67 ft, brown (10YR 4/3)
			SP		(10.7 - 12.0) POORLY GRADED SAND, very fine to fine sand, trace medium, round, well sorted, loose to medium dense, slightly moist, brown (10YR 5/3), dark brown partings from 9 ft to 9.42 ft
			SP		(12.0 - 16.0) POORLY GRADED SAND, fine to very coarse, mostly



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Remarks:
bgs: below ground surface
NA: Not applicable/not available
v: very
Coordinates given in UTM Zone 15N

Date Start/Finish: 11/3/2011 / 11/3/2011
Drilling Company: Stevens Drilling
Driller's Name: Dan Hunter
Drilling Method: Geoprobe
Sampling Method: Direct Push

Northing: 4972984.9689
Easting: 484232.1812

Drilled Depth (feet bgs): 28
Surface Elevation: NA

Descriptions By: KAH

Well/Boring ID: **AMW-19**

Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (bgs)	Recovery (in)	PID	USCS Code	Geologic Column	Stratigraphic Description	Well Construction
	45	0.1/0.1			coarse, little granule to large pebbles, trace very large pebbles, round to subangular, well sorted, loose, dry to slightly moist, yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4)	
-15						
	48	0.4	SP		(16.0 - 20.0) POORLY GRADED SAND, fine to coarse, mostly medium, little very coarse, trace granule to medium pebbles, well sorted, medium dense, slightly moist, dark yellowish brown (10YR 4/4)	Filter Pack - Red Flint #15
-20	27		SP		(20.0 - 28.0) POORLY GRADED SAND, coarse to v. coarse, some granules, little small to large pebbles, tr. silt to fine sand, round to subangular, well sorted, loose, wet, olive brown (2.5Y 4/3); fine to very coarse sand seams between 21-26 ft, dark gray (5Y 4/1)	Screen - Sch 40 PVC .01" Slot
-25	32					

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Remarks:
bgs: below ground surface
NA: Not applicable/not available
v: very
Coordinates given in UTM Zone 15N

Date Start/Finish: 11/3/2011 / 11/3/2011
Drilling Company: Stevens Drilling
Driller's Name: Dan Hunter
Drilling Method: Geoprobe
Sampling Method: Direct Push

Northing: 4972935.2694
Easting: 484235.7607

Drilled Depth (feet bgs): 28
Surface Elevation: 707.58

Descriptions By: KAH

Well/Boring ID: **AMW-20**

Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (bgs)	Recovery (in)	PID	USCS Code	Geologic Column	Stratigraphic Description
0	25	1.9	SP		(0.0 - 2.0) POORLY GRADED SAND, silt, very fine to fine sand, little to trace organics, round, well sorted, loose, slightly moist to dry, grayish brown (2.5Y 5/2)
			SW		(2.0 - 10.0) WELL GRADED SAND WITH GRAVEL, very fine to very coarse, mostly coarse, little granules to small pebbles, trace medium to large pebbles, trace silt/organics, round to subangular, poorly sorted, loose, dry, light yellowish brown (2.5Y 6/4)
-5	28	0.1/0.1			
-10	46	0.0/0.0	SP		(10.0 - 11.5) POORLY GRADED SAND, very fine to fine, trace silt, round, well sorted, medium dense, slightly moist, light yellowish brown (2.5Y 6/3)
			SM		(11.5 - 12.0) SILTY SAND, very fine to fine sand, trace organics/clay, medium stiff, slightly moist
			SW		(12.0 - 13.8) WELL GRADED SAND WITH GRAVEL, very fine to

Well Construction

- Surface plug - Portland Cement
- Casing - Black Carbon Steel
- Annular Seal - Medium Bentonite

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Remarks:
bgs: below ground surface
NA: Not applicable/not available
v: very
Coordinates given in UTM Zone 15N

Date Start/Finish: 11/3/2011 / 11/3/2011
Drilling Company: Stevens Drilling
Driller's Name: Dan Hunter
Drilling Method: Geoprobe
Sampling Method: Direct Push

Northing: 4972935.2694
Easting: 484235.7607

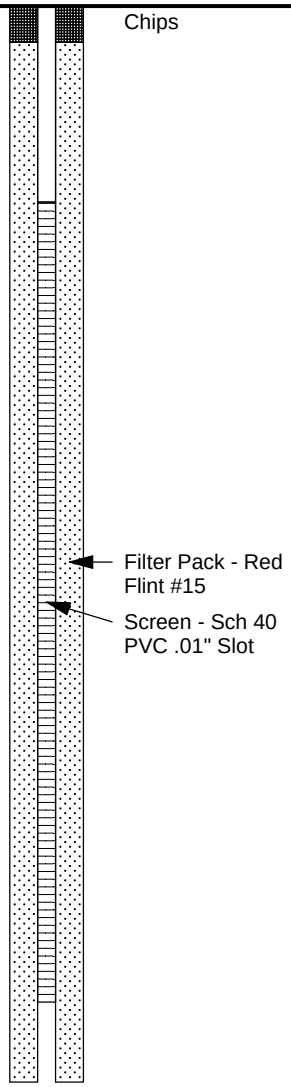
Drilled Depth (feet bgs): 28
Surface Elevation: NA

Descriptions By: KAH

Well/Boring ID: **AMW-20**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (bgs)	Recovery (in)	PID	USCS Code	Geologic Column	Stratigraphic Description
					very coarse, mostly coarse, little granules to small pebbles, trace medium to large pebbles, trace silt/organics, round to subangular, poorly sorted, loose, slightly moist, light yellowish brown (2.5Y 6/4)
	43	0.0/0.0	SP		(13.8 - 15.2) POORLY GRADED SAND, very fine to fine, trace silt, round, well sorted, medium dense, slightly moist, light yellowish brown (2.5Y 6/3)
-15			ML		(15.2 - 16.0) SANDY SILT, little clay, trace organics, dense, slightly moist, no to low plasticity, no dilatency, very fine to fine sand seam at 15.3 ft, trace silt, medium dense, slightly moist, dark olive brown (2.5Y 3/3)
			SW		(16.0 - 17.1) WELL GRADED SAND WITH GRAVEL, very fine to very coarse, mostly coarse, little granules to small pebbles, trace medium to large pebbles, trace silt/organics, round to subangular, poorly sorted, loose, slightly moist, light yellowish brown (2.5Y 6/4)
	43	0.1/0.1	SP		(17.1 - 18.5) POORLY GRADED SAND, very fine to fine, trace silt, round, well sorted, medium dense, slightly moist, light yellowish brown (2.5Y 6/3)
			ML		(18.5 - 19.4) SANDY SILT, little clay, trace organics, dense, slightly moist, no to low plasticity, no dilatency, very fine to fine sand seam, dense, slightly moist, very dark brown (10YR 2/2)
-20			SW		(19.4 - 20.0) POORLY GRADED SAND, fine to coarse, mostly medium, little very coarse, trace granules, round to subangular, well sorted, loose, slightly moist
	24		SP		(20.0 - 21.7) WELL GRADED SAND WITH GRAVEL, very fine sand to granules, mostly medium to coarse sand, little small pebble, trace medium pebbles/silt, round to subangular, poorly sorted, medium dense, wet
					(21.7 - 24.0) POORLY GRADED SAND, fine to coarse, mostly medium, little very coarse to granules, trace small to large pebbles, round to subround, well sorted, loose, wet
-25	21		SW		(24.0 - 28.0) WELL GRADED SAND WITH GRAVEL, very fine sand to granules, mostly coarse to granules, little small pebbles to medium pebbles, trace large pebbles and silt; round to subangular, dense, wet



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Remarks:
bgs: below ground surface
NA: Not applicable/not available
v: very
Coordinates given in UTM Zone 15N

Date Start/Finish: 12/8/2015 / 12/9/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4973159.261
Easting: 484324.686

Borehole Depth (ft bgs): 60
Surface Elevation (ft): 737.04
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-21**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	0	24	0.0		FILL		(0.0 - 5.0) FILL, CLAYEY SAND, very fine to medium, some clay, trace organics, poorly sorted, dry, loose, no odor, 2.5YR 3/4 dark reddish brown		6" Pro Top Outer Casing
5	-5	14.4	0.0		FILL		(5.0 - 10.5) FILL, POORLY GRADED SAND, very fine to medium, well sorted, dry, loose, no odor, 2.5YR 3/4 dark reddish brown		
10	-10	42	0.0		FILL		(10.5 - 16.0) FILL, LEAN CLAY, little silt, little fine gravel, low plasticity, moist, wet at 10.5 ft only, very stiff, no odor, dark gray mottling, transitions to white and dry at 15 ft bgs		
15	-15		0.2						
		54	1.2		FILL		(16.0 - 20.0) FILL, CLAYEY SAND, fine to medium, trace silt, trace fine gravel, moist, medium dense, mild odor (petroleum-like), GLEY2 2.5/10G greenish black		
20	-20	42	0.0		FILL		(20.0 - 32.0) FILL, LEAN CLAY, low plasticity, little silt, trace fine gravel, moist, stiff, no odor, gray and black mottling, GLEY1 5/5GY greenish gray		Annular Seal Cement Grout (0-42 ft bgs)
25	-25	36	0.2						2" diameter Stainless Steel Riser (0-46 ft bgs)
30	-30								

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Remarks: ft: feet NA: Not applicable/not available bgs: feet below ground surface

Soil samples AMW-21_5-10 (20151208), AMW-21_16-20 (20151208), AMW-21_32-35 (20151208).

Soil samples analyzed for SVOCs. AMW-21_16-20 (20151208) also analyzed for VOCs, DRO and GRO.

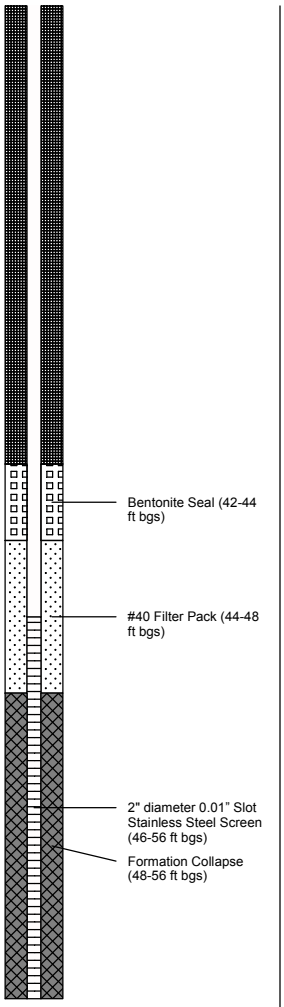
Date Start/Finish: 12/8/2015 / 12/9/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4973159.261
Easting: 484324.686

Borehole Depth (ft bgs): 60
Surface Elevation (ft): 737.04
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-21**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH / ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
30 -30		0.2						
	18	0.0		FILL		(32.0 - 49.0) FILL, POORLY GRADED SAND WITH GRAVEL, fine to medium, some medium gravel, trace silt, well sorted, dry, loose, no odor, poor recovery due to rock in core, 10YR 6/8 brownish yellow		
35 -35	6	0.1						
40 -40	18	0.0						
45 -45	15.5	0.0						
		0.0		FILL		(49.0 - 55.0) FILL, POORLY GRADED SAND, medium to coarse, trace fine pebbles, trace silt, subround to subangular, well sorted, wet, loose, no odor, 5YR 3/3 dark reddish brown		
50 -50	20.5	0.0						
55 -55				FILL		(55.0 - 60.0) FILL, POORLY GRADED GRAVEL, trace silt, subround to subangular, well sorted, wet, loose, no odor, poor recovery, multicolor		
	2.5	0.0						
60 -60								



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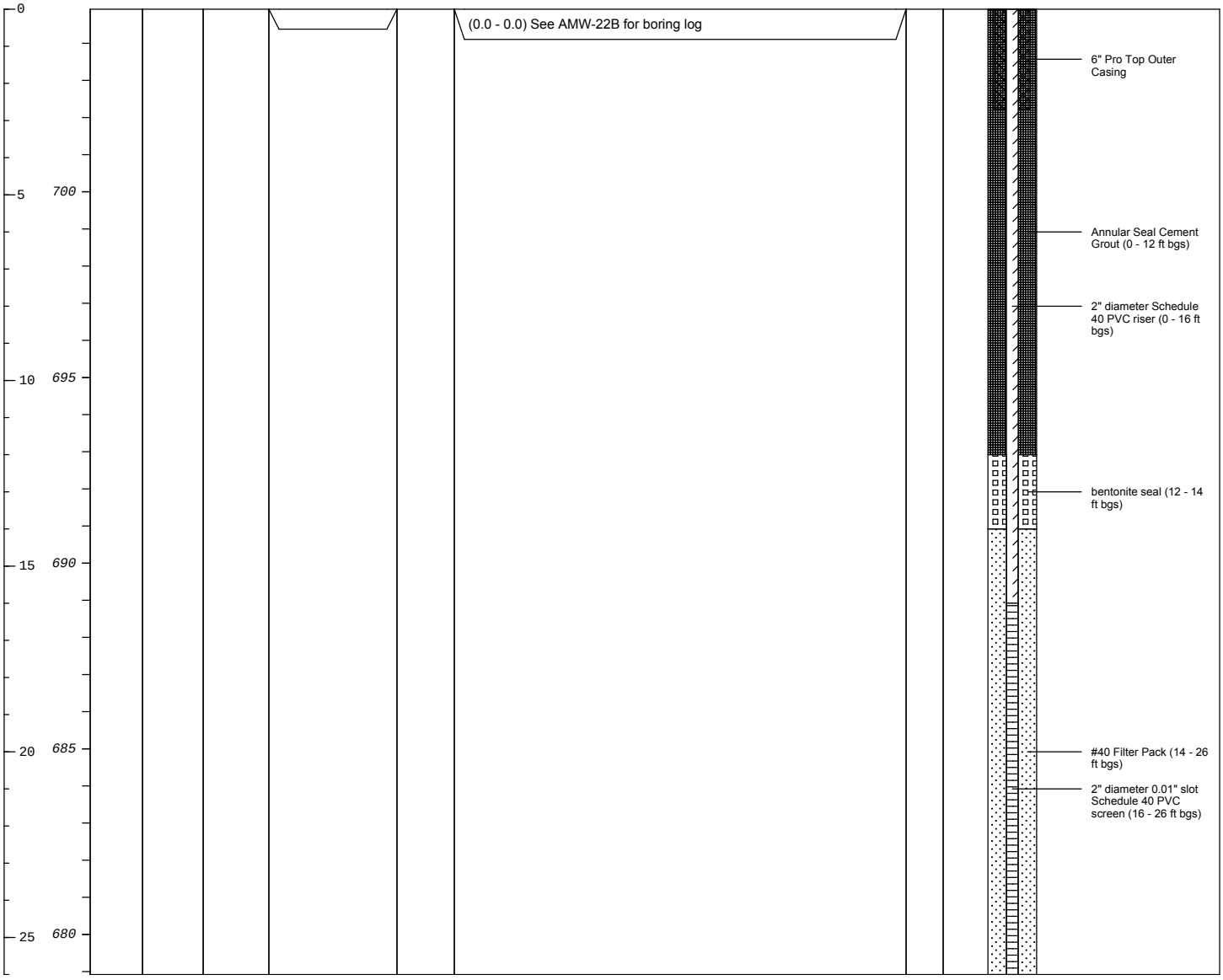
Remarks: ft: feet NA: Not applicable/not available bgs: feet below ground surface

Soil samples AMW-21_5-10 (20151208), AMW-21_16-20 (20151208), AMW-21_32-35 (20151208).

Soil samples analyzed for SVOCs. AMW-21_16-20 (20151208) also analyzed for VOCs, DRO and GRO.

Date Start/Finish: 12/9/2015 / 12/9/2015 **Drilling Company:** Matrix Environmental **Driller's Name:** Eric Widmark, Cody Eystad **Drilling Method:** Geoprobe Direct Push **Sampling Method:** Macrocore	**Northing:** 4973122.54 **Easting:** 484262.46 **Borehole Depth (ft bgs):** 26 **Surface Elevation (ft):** 704.92 **Descriptions By:** I. Stewart	**Well/Boring ID: AMW-22** **Client:** Ford Motor Company **Location:** Saint Paul, MN

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction



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Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Date Start/Finish: 12/9/2015 / 12/9/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4973124.01
Easting: 484263.31

Borehole Depth (ft bgs): 45
Surface Elevation (ft): 704.90
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-22B**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0									
		21.5	0.0		SW		(0.0 - 18.0) WELL GRADED SAND, very fine to medium, trace gravel, trace clay, trace silt, poorly sorted, transitions to little coarse gravel at 10 ft bgs, dry, loose, no odor, 10YR 6/3 pale brown		6" Pro Top Outer Casing
5	700								
		15.5	0.0						
10	695								
		14	0.0						
15	690								Annular Seal Cement Grout (0 - 29 ft bgs)
		15.5	0.0						2" diameter stainless steel riser (0 - 33.2 ft bgs)
			0.0		SP		(18.0 - 25.0) POORLY GRADED SAND WITH GRAVEL, very fine to coarse, subround to subangular, trace fine pebbles, little coarse gravel, trace silt, well sorted, wet, loose 10YR 6/3 pale brown		
20	685	30	0.0						
25	680				SP		(25.0 - 38.0) POORLY GRADED SAND WITH GRAVEL, coarse to very coarse sand, subround to subangular, trace fine pebbles, little coarse gravel, trace silt, well sorted, wet, loose 10YR 6/3 pale brown		
		33.5	0.0						
30	675								bentonite seal (29 - 31 ft bgs)
		18	0.0						
35	670								
		14	0.0						#40 Filter Pack (31 - 38 ft bgs)
					SP		(38.0 - 45.0) POORLY GRADED SAND WITH GRAVEL, coarse to very coarse sand, subround to subangular, trace pebbles, little coarse gravel, trace silt, well sorted, wet, loose, large chuncks of limestone, 10YR 6/3 pale brown		2" diameter 0.01" slot stainless steel screen (33.2 - 43.2 ft bgs)
40	665								Formation Collapse (38 - 43.2 ft bgs)
		21.5	0.0						
45	660								

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

End of boring at 45 ft bgs - refusal

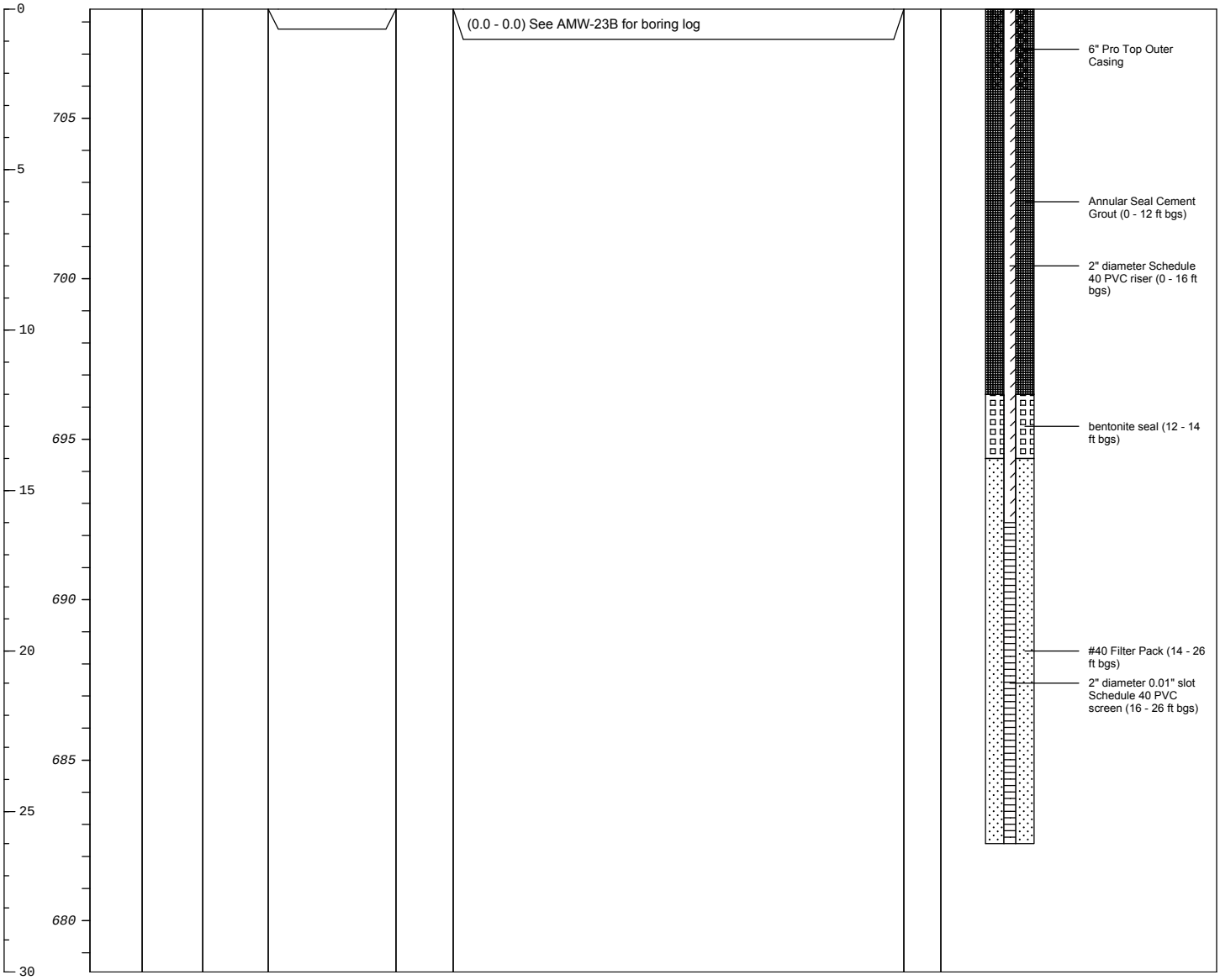
Date Start/Finish: 12/10/2015 / 12/10/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4972953.22
Easting: 484304.50

Borehole Depth (ft bgs): 30
Surface Elevation (ft): 708.40
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-23**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction



Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Date Start/Finish: 12/15/2015 / 12/15/2015
Drilling Company: Matrix Environmental
Driller's Name: Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4972954.15
Easting: 484303.16

Borehole Depth (ft bgs): 45
Surface Elevation (ft): 708.82
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-23B**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	708.82	26.5	0.1		SC		(0.0 - 3.0) CLAYEY SAND, very fine to medium, trace silt, some clay (low plasticity), poorly sorted, little organics, moist, no odor, 7.5YR 3/2 dark brown		6" Pro Top Outer Casing
			0.1		SP		(3.0 - 7.0) POORLY GRADED SAND WITH GRAVEL, fine to medium, some fine to medium gravel, trace silt, well sorted, dry, loose, no odor, 10YR 6/4 light yellowish brown		
5	705	27.5	0.0		SP		(7.0 - 8.0) POORLY GRADED SAND WITH GRAVEL, fine to medium, some fine to medium gravel, trace clay, well sorted, dry, loose, no odor, 10YR 6/4 light yellowish brown		
10	700	23	0.1		SP		(8.0 - 16.0) POORLY GRADED SAND, fine to medium, well sorted, dry, loose, no odor, 10YR 6/4 light yellowish brown		Annular Seal Cement Grout (0 - 31 ft bgs)
15	695	32.5	0.0		SP		(16.0 - 27.0) POORLY GRADED SAND WITH GRAVEL, fine to medium, some fine to medium gravel, subround to subangular, well sorted, dry, moist to wet at 19 ft bgs, loose, no odor, 10YR 6/4 light yellowish brown		2" diameter stainless steel riser (0 - 35 ft bgs)
20	690		0.1						
		30	0.1						
25	685	36	0.4		GP		(27.0 - 30.0) POORLY GRADED GRAVEL WITH SAND, fine to coarse sand, subangular to subround, trace silt, well sorted, wet, loose, 10YR 6/4 light yellowish brown		bentonite seal (31 - 33 ft bgs)
30	680	24	0.2		GW		(30.0 - 45.0) POORLY GRADED GRAVEL WITH SAND, fine to coarse sand, subangular to subround, well sorted, wet, loose, no odor, 10YR 6/4 light yellowish brown		#40 Filter Pack (33 - 37 ft bgs)
35	675	24	0.2						2" diameter 0.01" slot stainless steel screen (35 - 45 ft bgs)
40	670	30	0.2						Formation Collapse (37 - 45 ft bgs)
45	665								

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Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

End of boring at 45 ft bgs - refusal

Date Start/Finish: 12/10/2015 / 12/10/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4972989.30
Easting: 484408.18

Borehole Depth (ft bgs): 25
Surface Elevation (ft): 705.28
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-24**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	705	21.5	0.0		SC		(0.0 - 4.0) CLAYEY SAND, fine to coarse, trace silt, trace organics, some clay (low plasticity), well sorted, moist, no odor, 7.5YR 3/2 dark brown		6" Pro Top Outer Casing
			0.0		SP		(4.0 - 13.0) POORLY GRADED SAND, fine to medium, trace silt, trace fine pebbles, well sorted, dry, loose, no odor, white gravel/rock lens at 8.5 ft bgs, 10YR 6/4 light yellowish brown		Annular Seal Cement Grout (0 - 8 ft bgs)
5	700	23	0.0						2" diameter Schedule 40 PVC riser (0 - 13 ft bgs)
10	695	30	0.0						bentonite seal (8 - 10 ft bgs)
					SP		(13.0 - 15.0) POORLY GRADED SAND, fine to medium, trace silt, well sorted, dry, loose, no odor, 10YR 6/4 light yellowish brown		
15	690	24	0.1		GP		(15.0 - 22.0) POORLY GRADED GRAVEL WITH SAND, medium to coarse, trace silt, subround to subangular, well sorted, wet, loose, no odor, 10YR 6/4 light yellowish brown		#40 Filter Pack (10 - 23 ft bgs)
20	685	30	0.1		SP		(22.0 - 25.0) POORLY GRADED SAND, coarse to very coarse, subround to round, trace silt, some fine gravel/pebbles, wet, no odor, 10YR 6/4 light yellowish brown		2" diameter 0.01" slot Schedule 40 PVC screen (13 - 23 ft bgs)
25									

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

End of boring at 25 ft bgs - refusal

Date Start/Finish: 12/11/2015 / 12/11/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4973009.34
Easting: 484469.23

Borehole Depth (ft bgs): 25
Surface Elevation (ft): 703.19
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-25**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	703	24	0.0		SC		(0.0 - 3.0) CLAYEY SAND, fine to medium grained, trace silt, trace organics, some clay (low plasticity), moist, medium dense, no odor, 7.5YR 3/2 dark brown		6" Pro Top Outer Casing
	700		0.0		SP		(3.0 - 14.0) POORLY GRADED SAND, fine to medium, trace silt, well sorted, dry, loose, no odor, 10YR 6/4 light yellowish brown		Annular Seal Cement Grout (0 - 8 ft bgs)
5		33.5	0.1						2" diameter Schedule 40 PVC riser (0 - 12 ft bgs)
	695								bentonite seal (8 - 10 ft bgs)
10		24	0.1						
	690								
			102.7		SP		(14.0 - 15.0) POORLY GRADED SAND, fine to medium, trace silt, well sorted, dry, loose, strong odor (petroleum-like), black (stained)		
15		15.5	56.2		GP		(15.0 - 18.0) POORLY GRADED GRAVEL WITH SAND, fine to coarse, subround to subangular, trace silt, wet, medium dense, strong odor (petroleum-like), 10YR 2/1 black (stained)		#40 Filter Pack (10 - 22 ft bgs)
	685								2" diameter 0.01" slot Schedule 40 PVC screen (12 - 22 ft bgs)
			18.1		GP		(18.0 - 20.0) POORLY GRADED GRAVEL WITH SAND, fine to coarse, subround to subangular, trace silt, wet, medium dense, 10YR 6/4 light yellowish brown		
20									
		26	2.4		SP		(20.0 - 25.0) POORLY GRADED SAND AND GRAVEL, fine to medium, trace silt, some fine to medium gravel, well sorted, wet, loose, no odor, 10YR 6/4 light yellowish brown		
	680								
25									

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Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

End of boring at 25 feet bgs - refusal

Date Start/Finish: 9/15/2015 / 9/16/2015
Drilling Company: Cascade Drilling
Driller's Name: Mark Biermaier
Drilling Method: Roto-sonic
Sampling Method: Core Barrel

Northing: 4973077.96
Easting: 484369.96

Borehole Depth (ft bgs): 90.5
Surface Elevation (ft): 769.46
Descriptions By:
K. Hoehn

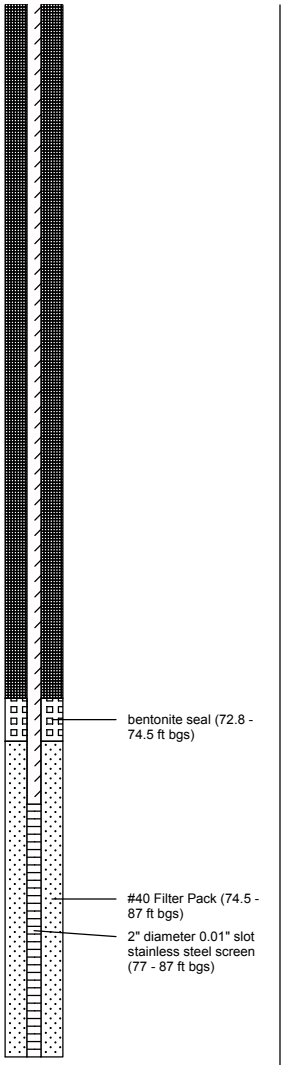
Well/Boring ID: **AMW-26**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	769	56	0		FILL		(0.0 - 0.7) WELL GRADED SAND, trace silt, little coarse sand, little medium pebbles, subangular, poorly sorted, loose, dry, 2.5Y 5/3 light olive brown		Surface Concrete Pad Vault
			0		FILL				
			0.3						
5	765		1		CONCRETE		(0.7 - 3.8) SILTY CLAY, some very fine sand, little medium to coarse sand, trace granules to large pebbles, subround to subangular, poorly sorted, moist to dry, mottling, moderate cementation, 5Y 2.5/1 black		
		52	1.5		FILL		(3.8 - 4.4) CONCRETE		
10	760		1.2				(4.4 - 12.9) SANDY SILT, little coarse sand, trace granules to large pebbles, subround to subangular, poorly sorted, moist to dry, weak cementation, wood pieces, concrete at 28 inches, 3/4" piece of rebar, 10YR 3/1 very dark gray		
			1.2		CONCRETE		(12.9 - 15.0) CONCRETE		
15	755	110	1.1		FILL		(15.0 - 25.0) SILTY CLAY, little fine sand, trace small pebbles, low plasticity, subround, poorly sorted, wet to moist, 10YR 2/2 very dark brown		
			0.8						
			1.1						
			0.2						
20	750		0.8						
			0.3						
			0.2						
			0.3						
25	745	89	0.3		FILL		(25.0 - 26.8) CLAYEY SILT, little fine sand, soft, wet to moist, 2.5YR 2.5/1 reddish black		
			0.3		FILL		(26.8 - 35.0) SILTY SAND, mostly medium to coarse, little small to medium pebbles, subround, poorly sorted, soft, wet to moist, concrete, 2.5Y 3/1 very dark gray		
30	740		0.3						
			0.4						
			0.5						
			1.4						
35	735	105	2.9		FILL		(35.0 - 45.0) SANDY LEAN CLAY, little small pebbles, trace large pebbles, roots, soft, wet to moist, strong odor (organic), 2.5Y 2.5/1 black		Annular Seal Cement Grout (0 - 72.8 ft bgs) 2" diameter black carbon steel riser (0 - 77 ft bgs)
			3.9						
40	730		3.2						
			4.1						
			4						
			6.2						
45	725		0.4						

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Date Start/Finish: 9/15/2015 / 9/16/2015 **Drilling Company:** Cascade Drilling **Driller's Name:** Mark Biermaier **Drilling Method:** Roto-sonic **Sampling Method:** Core Barrel	**Northing:** 4973077.96 **Easting:** 484369.96 **Borehole Depth (ft bgs):** 90.5 **Surface Elevation (ft):** 769.46 **Descriptions By:** K. Hoehn	**Well/Boring ID: AMW-26** **Client:** Ford Motor Company **Location:** Saint Paul, MN

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
50	720	100	2 1.6 1 1.1 1.1 0.7 0.7 0.5 0.2 5.6		FILL		(45.0 - 50.0) SANDY LEAN CLAY, little medium sand, trace small to medium pebbles, soft, moist, 2.5Y 3/1 very dark gray		
55	715				FILL		(50.0 - 55.0) CLAY, little to trace fine to medium sand, trace small pebbles, low plasticity, soft to medium stiff, moist to dry, strong odor (organic), mottling, 2.5Y 2.5/1 black		
60	710	85	6 5.4 2.8 2.3 1.4 3.6		FILL		(55.0 - 62.5) SANDY LEAN CLAY, little medium sand, trace coarse sand, trace small pebbles, low plasticity, soft, wet to moist, strong odor (asphalt), 5Y 3/1 very dark gray		
					ASPHALT		(62.5 - 63.8) ASPHALT		
65	705		3.9		FILL		(63.8 - 64.6) CLAY, little fine sand, little medium to coarse sand, low plasticity, stiff, moist to dry, strong odor (asphalt), mottling, 2.5Y 2.5/1 black		
			0.3		CONCRETE		(64.6 - 65.0) CONCRETE		
70	700	88	0.1 0 0.1		FILL		(65.0 - 71.7) CLAY, little to trace medium sand, low plasticity, stiff, wet to moist, strong odor (asphalt), mottling, 2.5Y 2.5/1 black		
75	695		0 0		SP		(71.7 - 75.0) POORLY GRADED SAND, little silt, subangular, well sorted, loose, dry, 2.5Y 5/2 grayish brown		
			15.2		SP-SM		(75.0 - 76.4) POORLY GRADED SAND/SILTY SAND, mostly fine to medium sand, roots, subangular, well sorted, loose, 2.5Y 2.5/1 black		
80	690	43	3.4 0.8 0.6		SW		(76.4 - 85.0) WELL GRADED SAND, little coarse sand, little granules to large pebbles, subangular, poorly sorted, loose, moist to dry, 5Y 4/2 olive gray		
85	685				SW		(85.0 - 86.5) WELL GRADED COARSE SAND WITH GRAVEL, mostly coarse sand, little small to large pebbles, subround to subangular, poorly sorted, loose, wet, 5Y 5/2 olive gray		
90	680	55			SW		(86.5 - 90.5) WELL GRADED SAND, mostly medium to coarse sand, trace granules, subround to subangular, poorly sorted, loose, wet, fining downwards, 5Y 5/2 olive gray		



Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Date Start/Finish: 1/20/2016 / 1/21/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973213.4981
Easting: 484510.2548

Borehole Depth (ft bgs): 125
Surface Elevation (ft): 812.406
Descriptions By: B. Evans

Well/Boring ID: **AMW-29**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH / ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0 / 810	36	0.3 - 0.5		FILL		(0.0 - 6.0) SAND/SILT/GRAVEL, dark brown (7.5YR 3/3), silt mixed with very fine to coarse sand, fine to coarse gravel, angular to subangular, rock fragments greater than 2 inch diameter, poorly sorted, loose, some yellow brick fragments, trace broken concrete pieces, roots top 1 ft, frozen, moist		6" Pro Top Outer Casing
5 / 805	60	0.5 - 6.8		FILL		(6.0 - 8.0) SAND/GRAVEL/SILT, dark yellowish brown (10YR 4/4), very fine to very coarse sand mixed with fine to very coarse gravel, angular to subround, some cobbles/rocks to greater than 4 inch diameter, poorly sorted, silty, loose, moist		
10 / 800	48	0.1 - 0.4		FILL		(8.0 - 12.5) CLAY/SAND, yellowish brown (10YR 5/4), soft, plastic, clay mixed with very fine to medium sand, some coarse sand, trace fine to medium gravel, angular to subangular, slightly firm, poorly sorted, moist to wet at 10 ft		
				FILL		(12.5 - 13.0) SAND, brown (10YR 4/3), medium grained, well sorted, some very fine to fine, trace silt, loose, wet		
15 / 795	72	0.1 - 0.3		FILL		(13.0 - 14.0) SAND/SILT/GRAVEL, dark gray (10YR 4/1), very fine to coarse sand with silt, some soft clay, fine to coarse gravel, angular to subangular, cobbles up to 4 inch diameter, firm, slightly plastic, wet (till-like)		
				LIMESTONE		(14.0 - 15.0) LIMESTONE, darky gray (10YR 4/1), hard, dense, cryptocrystalline, broken to 1 inch thick and 4 inch long pieces, some vugs, some fossils, solution erosion, horizontal bedding/fracturing, wet (drill fluids)		
				LIMESTONE		(15.0 - 17.0) LIMESTONE, dark grayish brown (10YR 4/2), hard, dense, micritic, cryptocrystalline, broken pieces up to 1 inch thick, some fossils, some vugs, solution erosion, horizontal bedding/fracturing, vuggy, wet (drill fluids)		
20 / 790	60	0.0 - 0.1		LIMESTONE		(17.0 - 20.0) LIMESTONE, grayish brown (10YR 5/2), hard, dense, cryptocrystalline, extremely fossiliferous, mostly shells, broken pieces between 1 to 6 inches long, horizontal bedding/fracturing, vuggy, possible solution alteration, moist		
25 / 785	60	0.3 - 0.7		SHALE		(20.0 - 25.0) LIMESTONE, grayish brown (10YR 5/2), hard, dense, cryptocrystalline, extremely fossiliferous, mostly shells, broken pieces between 4 to 10 inches long, horizontal bedding/fracturing, some vugs, possible solution alteration, moist		
				LIMESTONE		(25.0 - 28.0) SHALE, dark greenish gray (GLEY1 4/1), hard, broken fissile pieces and flakes		
30 / 780	60	0.3 - 0.7		LIMESTONE		(28.0 - 30.0) LIMESTONE, dark gray (10YR 4/1), hard, dense, cryptocrystalline, micritic, very fossiliferous, mostly shells, broken pieces 1 to 6 inches, horizontal bedding/fracturing		
35 / 775	60	0.2 - 0.6				(30.0 - 42.0) LIMESTONE/MUDSTONE, dark gray (10YR 4/1) to grayish brown (10YR 5/2), hard, dense, broken pieces up to 1 inch thick, angular broken fragments up to 1 inch diameter, cryptocrystalline, limestone interbedded with micritic and mudstone materials, horizontal bedding/fracturing, mainly fossils, some soft flow deformational features, wet (drill fluids), vuggy from 40-42 ft		
40								

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Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.4 ppm

Date Start/Finish: 1/20/2016 / 1/21/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973213.4981
Easting: 484510.2548

Borehole Depth (ft bgs): 125
Surface Elevation (ft): 812.406
Descriptions By: B. Evans

Well/Boring ID: **AMW-29**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
	770	60	0.2 - 0.3		SHALE		(42.0 - 47.0) SHALE, dark greenish gray (GLEY1 4/1), pulverized to powder and hard, fissile, brittle, horizontal bedding, dry to moist		
45									
	765	60	0.1 - 0.5		SANDSTONE		(47.0 - 48.0) SANDSTONE, greenish gray (GLEY1 6/1), hard, firm, friable, very fine to fine grained, spherical, some medium grains in secondary cemented matrix		
					SANDSTONE		(48.0 - 50.0) SANDSTONE, white (10YR 8/1) to yellow (5Y 8/6) also with some yellow mottling (10YR 7/8), mostly firm, friable, slightly brittle, fracturing horizontally and also loose, crushed, mostly very fine to fine spherical grains with cemented matrix, some medium grained, moist		
50					SANDSTONE				
	760	60	0.1 - 0.3				(50.0 - 55.0) SANDSTONE, white (7.5YR 8/1) with areas of yellow (10YR 8/6) mottling and pale yellow (5Y 8/4) colored in some areas, mostly soft, loose, pulverized grained, very fine to fine grained, well sorted, some medium grains with silt-like pulverized cementation, wet (drill fluids)		
55					SANDSTONE				
	755	0	--				(55.0 - 60.0) No Recovery		
60					SANDSTONE		(60.0 - 65.0) No Recovery		
	750	0	--						
65					SANDSTONE		(65.0 - 70.0) SANDSTONE, very pale brown (10YR 8/2), pulverized to soft, loose, very fine to fine grained with silt-like pulverized cementation, well sorted, moist (drill fluids)		
	745	60	0.5 - 0.8						
70					SANDSTONE		(70.0 - 75.0) SANDSTONE, very pale brown (10YR 8/3) to white (7.5YR 8/1), pulverized to soft, loose, very fine grained, well sorted with silt-like pulverized cementation, trace fine grains, moist (drill fluid)		
	740	60	0.9 - 3.5						
75					SANDSTONE		(75.0 - 80.0) No Recovery		
	735	0	--						
80					SANDSTONE		(80.0 - 85.0) No Recovery		
	730	0	--						

Annular Seal Cement Grout (0 - 106 ft bgs)

2" diameter black steel riser (0 - 111 ft bgs)

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.4 ppm

Date Start/Finish: 1/20/2016 / 1/21/2016 **Drilling Company:** Cascade Drilling **Driller's Name:** Roy Buckenberger **Drilling Method:** Roto-Sonic **Sampling Method:** Core Barrel	**Northing:** 4973213.4981 **Easting:** 484510.2548 **Borehole Depth (ft bgs):** 125 **Surface Elevation (ft):** 812.406 **Descriptions By:** B. Evans	**Well/Boring ID: AMW-29** **Client:** Ford Motor Company **Location:** Saint Paul, MN

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
85	725	60	0.3 - 0.6		SANDSTONE		(85.0 - 90.0) SANDSTONE, very pale brown (10YR 8/3) to white (7.5YR 8/1) with some yellow mottling (10YR 7/8), much yellow staining 86.3 to 86.5 ft, mostly soft, loose, pulverized grains, some harder, friable pieces, horizontal bedding/fracturing, very fine to fine spherical grains with silt-like pulverized cementation, well sorted, moist (drill fluids)		
90	720	12	0.5		SANDSTONE		(90.0 - 100.0) SANDSTONE, white (7.5YR 8/1), mostly soft, loose, pulverized grains, some harder, friable pieces, horizontal bedding/fracturing, very fine to fine spherical grains with silt-like pulverized cementation, well sorted, moist (drill fluids)		
95	715	60	0.2 - 0.6						
100	710	60	0.2 - 0.3		SANDSTONE		(100.0 - 110.0) SANDSTONE, white (7.5YR 8/1) with yellow mottling 102 to 105 ft, heavily mottling and staining to a pale yellow (2.5Y 8/4), mostly soft, loose, pulverized grains, some harder, friable pieces, horizontal bedding/fracturing, very fine to fine spherical grains with silt-like pulverized cementation, well sorted, moist (drill fluids)		
105	705	60	0.3 - 0.6						5020 Industrial Fine Sand (106 - 108 ft bgs)
110	700	0	--		SANDSTONE		(110.0 - 115.0) No Recovery		
115	695	60	0.3 - 1.7		SANDSTONE		(115.0 - 120.0) SANDSTONE, white (7.5YR 8/1) with yellow (10YR 7/8) mottling, mostly soft, loose, pulverized grains, some harder, friable pieces, horizontal bedding/fracturing, very fine to fine spherical grains with silt-like pulverized cementation, well sorted, wet (drill fluids) to possible saturation		2" diameter 0.01" slot stainless steel screen (111 - 121 ft bgs) #40 Filter Pack (108 - 125 ft bgs)
120	690	60	0.2 - 1.8		SANDSTONE		(120.0 - 125.0) SANDSTONE, white (7.5YR 8/1) with heavy yellow (10YR 7/8) mottling/staining, mostly soft, loose, pulverized grains, some harder, friable pieces, horizontal bedding/fracturing, very fine to fine spherical grains with silt-like pulverized cementation, well sorted, wet (drill fluids) to possible saturation		
125									

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.4 ppm

Date Start/Finish: 1/22/2016 / 1/25/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973410.4607
Easting: 484420.2375

Borehole Depth (ft bgs): 120
Surface Elevation (ft): 812.366
Descriptions By: B. Evans

Well/Boring ID: **AMW-30**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH / ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0 / 810	60	0.1 - 0.3		FILL		(0.0 - 1.5) SILT, dark brown (10YR 3/3), some very fine to coarse sand, fine to coarse gravel, angular to subangular, roots, frozen		6" Pro Top Outer Casing
				FILL		(1.5 - 4.0) CLAY, very dark brown (10YR 2/2), soft, very silty, moderately plastic, roots, moist		
5 / 805	60	0.7 - 1.9		FILL		(4.0 - 6.7) SAND/GRAVEL, dark yellowish brown (10YR 4/4), very coarse sand, some silt, fine to coarse gravel, mostly angular, poorly sorted, loose, moist		
				FILL		(6.7 - 10.0) SAND, yellowish brown (10YR 5/6), mostly medium grained, some very fine to fine, trace silt, well sorted, loose, trace fine to coarse gravel, subangular to subround, stone up to 2 inch diameter, wet		
10 / 800	48	0.5 - 2.5		FILL		(10.0 - 11.0) SAND, yellowish brown (10YR 5/6), mostly medium grained, some very fine to fine, little silt, well sorted, loose, little fine to coarse gravel, subangular to subround, stone up to 2 inch diameter, wet		
				SHALE		(11.0 - 14.0) SHALE, dark greenish gray (GLEY1 4/1), hard, brittle, mostly crushed pieces compacted to firm core, some fissile pieces, horizontal bedding, moist to dry		
15 / 795	72	0.1 - 0.3		LIMESTONE		(14.0 - 17.0) LIMESTONE, grayish brown (10YR 5/2), very hard, dense, cryptocrystalline, broken pieces, horizontal bedding/fracturing, some fossils, vuggy, secondary solution features/erosion, slightly micritic, wet (drill fluid)		
20 / 790	60	0.1		LIMESTONE		(17.0 - 28.0) LIMESTONE, light grayish brown (10YR 6/2) with gray (10YR 5/1), fossil specs, very hard, dense, cryptocrystalline, broken into pieces between 3 - 10 inches, very fossiliferous, mainly shell, vuggy, horizontal bedding/fracturing, secondary solution erosion/pitting, wet (drill fluids) to dry at core		
25 / 785	60	0.3 - 0.4		LIMESTONE		(28.0 - 30.0) LIMESTONE, dark gray (10YR 4/1), hard dense, broken angular pieces up to 2 inches, micritic, some fossils, wet (drill fluids)		
30 / 780	60	0.1 - 0.3		LIMESTONE		(30.0 - 35.0) LIMESTONE, dark gray (10YR 4/1) to grayish brown (10YR 5/2), hard, dense, cryptocrystalline, pieces up to 1 inch thick, fossils, soft, flow/deformational features, horizontal bedding/fracturing, some vugs, solution erosion, trace secondary calcite, worm tubes, wet (drill fluids) to dry at core		
35 / 775	0	--		NO RECOVERY		(35.0 - 40.0) No Recovery		
40 / 770				NO RECOVERY		(40.0 - 45.0) No Recovery. Limestone/sandstone contact depth unconfirmed.		

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.3 ppm.

Date Start/Finish: 1/22/2016 / 1/25/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973410.4607
Easting: 484420.2375

Borehole Depth (ft bgs): 120
Surface Elevation (ft): 812.366
Descriptions By:
B. Evans

Well/Boring ID: **AMW-30**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
45	770	0	--				(45.0 - 47.0) SANDSTONE, light gray (2.5Y 7/1) to yellow (2.5Y 7/6), firm, friable pieces mixed with pulverized loose grains, fine to very fine spherical grains in cementation and loose with silt-like pulverized cementation, horizontal bedding		
					SANDSTONE				
50	765	60	0.3 - 1.7		SANDSTONE		(47.0 - 50.0) SANDSTONE, light gray (2.5Y 7/1) to yellow (2.5Y 7/6), soft, loose with few firm, friable pieces up to 1/2 inch, wet (drill fluids)		
					SANDSTONE		(50.0 - 60.0) SANDSTONE, white (7.5YR 8/1) with several bands of pale yellow (2.5Y 8/3), soft, loose, pulverized grains, very fine to fine grained, well sorted, silt-like pulverized cementation, wet (drill fluids)		
55	760	60	0.3 - 2.8						Annular Seal Cement Grout (0 - 104 ft bgs)
	755	60	0.3 - 1.0						2" diameter black steel riser (0 - 109 ft bgs)
60					SANDSTONE		(60.0 - 65.0) SANDSTONE, white (7.5YR 8/1) with some pale yellow (2.5Y 8/3) banding between 2 - 3 inches thick, mostly soft, loose pulverized grains, some firmer, easily friable cores 3 to 4 inches long, very fine to fine grained, well sorted, with silt-like pulverized cementation, some layering, wet (drill fluids)		
	750	60	1.2 - 2.5						
65					SANDSTONE		(65.0 - 70.0) No Recovery		
	745	0	--						
70					SANDSTONE		(70.0 - 75.0) No Recovery		
	740	0	--						
75					SANDSTONE		(75.0 - 85.0) SANDSTONE, white (2.5YR 8/1) to pale yellow (2.5Y 8/4) with yellow (10YR 7/8) mottling, loose, soft to slightly firm, pulverized grains, mostly very fine grained, well sorted, with silt-like pulverized cementation, wet (drill fluids)		
	735	60	0.3 - 1.2						
80									
	730	60	0.5						
85									

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.3 ppm.

Date Start/Finish: 1/22/2016 / 1/25/2016 **Drilling Company:** Cascade Drilling **Driller's Name:** Roy Buckenberger **Drilling Method:** Roto-Sonic **Sampling Method:** Core Barrel	**Northing:** 4973410.4607 **Easting:** 484420.2375 **Borehole Depth (ft bgs):** 120 **Surface Elevation (ft):** 812.366 **Descriptions By:** B. Evans	**Well/Boring ID: AMW-30** **Client:** Ford Motor Company **Location:** Saint Paul, MN

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
85	725	0	--		SANDSTONE		(85.0 - 90.0) No Recovery		
90	720	0	--		SANDSTONE		(90.0 - 95.0) No Recovery		
95	715	60	1.6 - 5.7		SANDSTONE		(95.0 - 100.0) SANDSTONE, white (7.5YR 8/1), no mottling, pulverized to soft, loose grains, very fine to fine grained, mostly very fine grained, well sorted, with silt-like pulverized cementation, moist (drill fluids), trace pieces sandstone up to 1 inch diameter, slightly hard, very friable, cemented very fine to fine spherical grains		
100	710	60	1.1 - 2.1		SANDSTONE		(100.0 - 115.0) SANDSTONE, white (7.5YR 8/1), trace yellow (10YR 7/8) mottling, pulverized to soft, loose grains, very fine to fine grained, mostly very fine grained, well sorted, with silt-like pulverized cementation, moist (drill fluids) to possible saturation at 110 ft, trace pieces sandstone up to 1 inch diameter, slightly hard, very friable, cemented very fine to fine spherical grains		
105	705	60	0.6 - 1.1						5020 Industrial Fine Sand (104 - 106 ft bgs)
110	700	24	1.0 - 2.2						#40 Filter Pack (106 - 120 ft bgs)
115	695	60	0.3 - 0.8		SANDSTONE		(115.0 - 117.0) SANDSTONE, yellow (10YR 7/8), pulverized to soft, loose grains, very fine to fine grained, mostly very fine grained, well sorted, with silt-like pulverized cementation, moist (drill fluids) to possible saturation, trace pieces sandstone up to 1 inch diameter, slightly hard, very friable, cemented very fine to fine spherical grains		2" diameter 0.01" slot stainless steel screen (109 - 119 ft bgs)
120					SANDSTONE		(117.0 - 118.0) SANDSTONE, very pale brown (10YR 8/4), pulverized to soft, loose grains, very fine to fine grained, mostly very fine grained, well sorted, with silt-like pulverized cementation, moist (drill fluids) to possible saturation, trace pieces sandstone up to 1 inch diameter, slightly hard, very friable, cemented very fine to fine spherical grains		
					SANDSTONE		(118.0 - 120.0) SANDSTONE, white (7.5YR 8/1), trace yellow (10YR 7/8) mottling, pulverized to soft, loose grains, very fine to fine grained, mostly very fine grained, well sorted, with silt-like pulverized cementation, moist (drill fluids) to possible saturation, trace pieces sandstone up to 1 inch diameter, slightly hard, very friable, cemented very fine to fine spherical grains		

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.3 ppm.

Date Start/Finish: 1/25/2016 / 1/27/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973613.0129
Easting: 484356.5505

Borehole Depth (ft bgs): 120
Surface Elevation (ft): 812.009
Descriptions By: B. Evans

Well/Boring ID: **AMW-31**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	810	48	0.0		FILL		(0.0 - 1.3) SILT/SAND/GRAVEL, dark brown (10YR 3/3), silt with very fine to coarse sand, fine to coarse gravel, angular to subround, poorly sorted, roots, frozen, loose		6" Pro Top Outer Casing
5	805	84	0.0 - 1.5		FILL		(1.3 - 5.0) SILT, very dark brown (10YR 2/2), soft, loose to stiff, frozen, some very fine to fine sand, roots and organic material, some red brick fragments, moist		
10	800	96	0.0		FILL		(5.0 - 12.0) SAND/SILT, dark yellowish brown (10YR 4/6), mostly very fine to fine, some medium to coarse, poorly sorted, very silty/clayey, some fine to coarse gravel, angular to subround, slightly loose to slightly plastic, wet, trace pebbles		
15	795				LIMESTONE		(12.0 - 15.0) LIMESTONE, very dark greenish gray (GLEY1 3/1) changing to very dark grayish brown (10YR 3/2) at 13.5 ft, hard, dense, cryptocrystalline, broken pieces up to 1 inch thick, very shaley to 13.5 ft, micritic to 15 ft, horizontal bedding/fracturing, fossiliferous, crinoid/coral, some vugs, solution erosion, wet (drill fluids)		
20	790	36	0.0		LIMESTONE		(15.0 - 26.3) LIMESTONE, grayish brown (10YR 5/2) with gray (10YR 5/1), fossil specks, hard, dense, cryptocrystalline, broken into 3 to 5 ft cores, horizontal bedding/fracturing, very fossiliferous, shells in horizontal planes, vuggy, micritic, possible secondary solution erosion/pitting, wet (drill fluids)		
25	785	48	0.0 - 0.1		LIMESTONE		(26.3 - 30.0) LIMESTONE, dark greenish gray (GLEY1 4/1), hard, dense, cryptocrystalline, 3-5 inches long cores, broken, angular pieces, horizontal bedding/fracturing, some fossils, few vugs, very shaley and micritic, wet (drill fluid)		
30	780	0	--		LIMESTONE		(30.0 - 35.0) No Recovery		
35	775	60	0.2 - 0.8		LIMESTONE		(35.0 - 44.5) LIMESTONE/MUDSTONE, dark gray (10YR 4/1) and grayish brown (10YR 5/2), hard, dense, cryptocrystalline, broken pieces up to 1 inch thick, horizontal bedding/fracturing, interlayer limestone, micritic with mudstone, soft flow features, fossils, worm tubes, wet (drill fluids)		
40									

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Background PID: 0.0-0.1 ppm

Date Start/Finish: 1/25/2016 / 1/27/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973613.0129
Easting: 484356.5505

Borehole Depth (ft bgs): 120
Surface Elevation (ft): 812.009
Descriptions By:
B. Evans

Well/Boring ID: **AMW-31**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH / ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
770	60	0.1 - 0.4						
45				SHALE		(44.5 - 47.5) SHALE, greenish gray (GLEY1 5/1), hard, broken fissile pieces, horizontal bedding/fracturing, dry		
765	60	0.1 - 0.6		SANDSTONE		(47.5 - 50.0) SANDSTONE, greenish gray (GLEY1 6/1), hard, firm, friable cores, horizontal fracturing, spherical very fine to fine grained in cementation, moist		
50				SANDSTONE		(50.0 - 52.0) SANDSTONE, yellow (10YR 7/6), hard, firm, broken pieces with loose grains, friable, pulverized very fine to fine grained, soft, loose, very fine to fine spherical grains in cementation, moist		
760	60	0.1 - 0.8		SANDSTONE		(52.0 - 65.0) SANDSTONE, white (7.5YR 8/1) with some yellow (2.5Y 7/6) bands and mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		Annular Seal Cement Grout (0 - 105 ft bgs) 2" diameter black steel riser (0 - 110 ft bgs)
55								
755	60	1.0 - 3.1						
60								
750	60	1.4 - 3.4						
65				SANDSTONE		(65.0 - 68.5) SANDSTONE, white (7.5YR 8/1), no mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
745	60	0.1 - 0.6		SANDSTONE		(68.5 - 70.0) SANDSTONE, white (7.5YR 8/1) with some yellow (2.5Y 8/6) staining and yellow (10YR 7/8) mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
70				SANDSTONE				
740	60	0.3 - 0.4		SANDSTONE		(70.0 - 71.5) SANDSTONE, white (7.5YR 8/1) with some yellow (2.5Y 8/6) staining, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
75				SANDSTONE		(71.5 - 75.0) SANDSTONE, white (7.5YR 8/1) with yellow (10YR 7/8) mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
735	60	0.2 - 0.7				(75.0 - 85.0) SANDSTONE, white (7.5YR 8/1) to pale yellow (2.5Y 8/4) with some yellow (10YR 7/8) staining/mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
80								

ARCADIS

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Background PID: 0.0-0.1 ppm

Date Start/Finish: 1/25/2016 / 1/27/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973613.0129
Easting: 484356.5505

Borehole Depth (ft bgs): 120
Surface Elevation (ft): 812.009
Descriptions By: B. Evans

Well/Boring ID: **AMW-31**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
	730	60	0.1 - 2.2						
85					SANDSTONE		(85.0 - 90.0) SANDSTONE, pale yellow (2.5Y 8/4) with some yellow (10YR 7/8) mottling soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
	725	60	0.1 - 0.7						
90					SANDSTONE		(90.0 - 92.5) SANDSTONE, white (7.5YR 8/1), no mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
	720	24	1.7 - 2.8		SANDSTONE		(92.5 - 95.0) SANDSTONE, pale yellow (2.5Y 8/2) with some yellow (10YR 7/8) mottling soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
95					SANDSTONE		(95.0 - 97.0) SANDSTONE, white (7.5YR 8/1), no mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
	715	60	0.2 - 1.9		SANDSTONE		(97.0 - 97.5) SANDSTONE, white (7.5YR 8/1) with yellow (10YR 7/8) staining, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
100					SANDSTONE		(97.5 - 99.0) SANDSTONE, white (7.5YR 8/1), no mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
	710	48	0.0 - 0.2		SANDSTONE		(99.0 - 100.0) SANDSTONE, white (7.5YR 8/1) with yellow (10YR 7/8) mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
105					SANDSTONE		(100.0 - 105.0) SANDSTONE, white (7.5YR 8/1) with yellow (10YR 7/8) mottling from 103 to 104 ft, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids) to possible saturation		5020 Industrial Fine Sand (105 - 107 ft bgs)
	705	60	0.1 - 0.6						
110					SANDSTONE		(105.0 - 110.0) SANDSTONE, white (7.5YR 8/1) with some variations pale yellow (2.5Y 8/4), trace yellow (10YR 7/8) mottling in pale yellow, soft, loose, pulverized grains, very fine to fine grained, well sorted with silt-like pulverized cementation, wet (drills fluid) to possible saturation		#40 Filter Pack (107 - 120 ft bgs)
	700	60	0.1 - 0.3		SANDSTONE		(110.0 - 114.0) SANDSTONE, white (7.5YR 8/1) with some yellow (10YR 7/8) mottling to 111 ft, soft, loose, pulverized grains, very fine to fine grained, well sorted with silt-like pulverized cementation, wet (drills fluid) to possible saturation		2" diameter 0.01" slot stainless steel screen (110 - 120 ft bgs)
115					NO RECOVERY		(114.0 - 115.0) SANDSTONE, pale yellow (2.5Y 8/4), soft, loose, pulverized grains, very fine to fine grained, well sorted with silt-like pulverized cementation, wet (drills fluid) to possible saturation		
	695	0	--				(115.0 - 120.0) No Recovery		
120									

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Background PID: 0.0-0.1 ppm

APPENDIX I

Field Logs

7/25/07
ARCADIS: J. Dammel
Purpose: GW Sampling
Weather: 80s-90s, Sunny
0930: ARCADIS on-site, will begin to purge AMW-10 dry
0945: approx 6 gal bailed from AMW-10, well dry will go off site & return to take samples
1115 Sample's YSI AMW-10

Monday 13 August 2007
ARCADIS: J. Dammel
Purpose: soil samples, water levels
Weather: 70s, sunny

1000: ARCADIS on-site, ballparks
1030: took soil sample Alum-SS-001 (ASB049)
1045: took soil sample Alum-SS-002 (ASB051)
1050: took soil sample Alum-SS-003 (ASB-053)

ID	time	DTW	TD	Vol
AMW-05	1135	—	30.96	
AMW-05B	1130	32.83	54.98	
AMW-07	1143	43.21	44.78	
AMW-01	1152	27.20	41.61	
AMW-06	1202	30.22	43.15	
AMW-08	1211	18.90	42.21	
AMW-02	1217	24.43	42.64	
AMW-03A	1230	18.71	39.36	
AMW-03B	1238	100.82	150.96	
AMW-04	1247	39.14	60.76	
MW4	1253	7.64	8.14	
MW5	1256	2.72	4.20	
MW6	1300	2.12	4.33	

ID	time	DTW	TD	vol
AMW-09	1341	78.82	89.26	
AMW-08	1333	38.13	44.44	
Unknown 1	1310	7.76	11.56	
Unknown 2	1313	17.44	23.86	

1410 Gary P/U sample
1415 ~~ARCADIS~~ off-site

09/17/07 Monday p.1/1

purpose: Set up Surface Sampling and Soil Boring Locations; Surface Sampling

ARCADIS: T. Nelson-Kalmes, M. Meerkosen

Weather: Sunny, to Cloudy, 80's, Humid

0755 on-site, Begin SS and SB Locations

1045 Finish SS and SB Locations

1100 T. Nelson-Kalmes off-site

1110 M. Meerkosen; Lunch

1215 on-site, Begin Surface Sampling
AGM-SS-004 → 039

1730 Finish Surface Sampling
AGM-SS-004 → 039; All Samples Taken at 0-0.5'.

* Gary from Test America's Sample pick-up at 1530.
1735 off-site

purpose: GW Sampling
ARCADIS: M. Meerwien, T. Nelson, KALMES
WEATHER: Sunny 30's

0830 on-site

0835 Begin AMW-5B (pumping)
W.L Meter not working

0850 off-site

0940 on-site ~~AMW~~
Begin pumping AMW-5B
DTW = 32.31', purged ~ 25gal

Time	Temp	Cond	ORP	DO	pH	gal
0955	11.46	0.984	-134.2	1.47	6.86	5
1000	12.56	0.973	-140.3	1.03	6.69	10
1005	13.05	0.981	-143.4	0.82	6.64	15
1010	13.00	0.986	-143.3	0.89	6.67	20
1015	11.03	0.997	-183.5	1.21	6.60	25

1025 Sample AMW-5B & MS/MSD
VOC's, SVOC, PCB, RCRA Metals (Total & Field Filtered), Turbid, Lite Brown, Sulfer Smell

1100 Decon Grundfos, Empty Buckets

1120 Generator not working, stop at gas station for oil.

1215 Generator starts, Go to AMW-3B

1300 Begin pumping AMW-3B, Ball 5gal from AMW-3A
Purge/Ball ~ 17gal AMW-3A
Purged ~ 40gal AMW-3B
DTW = 100.66' AMW-3B
DTW = 17.53' AMW-3A

Time	Temp	Cond.	ORP	DO	pH	gal
1325	11.37	0.524	-183.9		7.62	5
1330	10.56	0.469	-184.2		7.24	10
1334	11.16	0.457	-191.8		7.16	15
1340	11.19	0.454	-206.9		7.12	20
1345	11.16	0.454	-207.7		7.11	25
1346	11.10	0.455	-207.8		7.10	30
1350	10.97	0.454	-207.9		7.10	35
1352	10.96	0.454	-207.9		7.11	37

1350 BEGIN SAMPLING AMW-3B, VOC, SVOC, PCB, RCRA METALS (TOTAL & FIELD FILTERED); CLEAR, SULFER SMELL

1430 DECON GRUNFOS, EMPTY BUCKETS

1500 BEGIN SAMPLING EQUIPMENT BLANK EB-001 FOR VOC, SVOC, PCB, RCRA METALS (TOTAL & FIELD FILTERED)

1540 WAIT FOR GARY FROM TEST AMERICA.

1630 GARY FROM TEST AMERICA CALLED. HE WILL MEET US AT ARCADIS FOR SAMPLE PICK-UP

1635 OFF-SITE

* SAMPLES PICKED UP AT ARCADIS AT 17:15 *

12/18/07 Tuesday p.1

purpose: GW Sampling
ARCADIS: M. Meerkosen
Weather: 20's, p. Cloudy

0730 pick-up ice

0740 on-site sign in, stop at Aristeo trailer for badge update. Does not recognize my name at Security

0800 Assess Sample Containers/ Sample Container Count

Still needed from Gary at Test America:

20 PCB
20 SVOC
22 RCRA Metals

Called Gary to inform

12/18/07 Tuesday p.2

0830 Begin Bailing AMW-3A
DTW = 17.45'
~12 gals to Bail

0905 Begin Sampling AMW-3A for VOC, SVOC, PCB, RCRA Metals (Total & Field Filtered), ~17 gal Bailed

* Duplicate Taken (Dup-001) *

Time	Temp	Cond	ORP	DO	pH	gal
0905	9.4	0.929	-91.1	4.84	7.15	17

1000 Finish Sampling AMW-3A, Slight odor, clear, black particles, clean-up, Empty Buckets

1055 AMW-4
DTW = 36.29' TD = 60.76'
Vol (gal) = 19.5 gal

1105 BEGIN BAILING AMW-4,
~19.5 gal

1137 FINISH BAILING AMW-4,
BAILED DRY, ~9 gal BAILED,
GO TO POLYTANK TO EMPTY
BUCKETS

1201 AMW-09
DTW = 77.69' TD = 89.26'
VOL (x5) = ~9.0 gal

1205 BEGIN BAILING AMW-09,
~9.0 gal

1225 FINISH BAILING AMW-09,
BAILED DRY, ~3.5 gal BAILED,
MOVE TO AMW-08

1238 AMW-08
DTW = 38.04' TD = 44.44'
VOL (x5) = ~5.0 gal

1245 BEGIN BAILING AMW-08,
~5.0 gal

1253 FINISH BAILING AMW-08,
BAILED DRY, ~2.3 gal BAILED,
MOVE TO AMW-01

1258 AMW-01
DTW = 26.39' TD = 41.61'
VOL (x5) = ~12.0 gal

1303 BEGIN BAILING AMW-01, ~12.0 gal
~~BAILED DRY, ~5.5 gal BAILED~~

1319 FINISH BAILING AMW-01, BAILED
DRY, ~5.5 gal BAILED, CLEAN UP,
GO TO POLYTANK TO EMPTY BUCKETS.

1330 AMW-06
DTW = 24.60' TD = 43.15'
VOL (x5) = ~13.0 gal

1400 FINISH BAILING AMW-06,
BAILED DRY, ~7.0 gal BAILED,
CLEAN-UP, GO TO POLYTANK TO
EMPTY BUCKETS

12/18/07 TUESDAY 5/

1405 GARY HERE FROM TEST AMERICA FOR SAMPLE CONTAINER DROP OFF.

1415 AMW-10
DTW = 20.30' TD = 42.21'
VOLUME (x5) = ~17.5 gal

1420 BEGIN BAILING AMW-10, ~17.5 gal

1437 FINISH BAILING AMW-10, BAILED DRY, ~8.0 gal BAILED, CLEAN-UP, MOVE TO AMW-02

0240 AMW-02
DTW = 25.28' TD = 42.64'
VOL (x5) = ~14.0 gal

1445 BEGIN BAILING AMW-02, ~14.0 gal

12/18/07 TUESDAY 6/

1502 FINISH BAILING AMW-02, BAILED DRY, ~7.0 gal BAILED, CLEAN-UP, MOVE TO AMW-07

1506 AMW-07
DTW = 42.68 TD = 44.78'
VOL (x5) = ~1.5 gal

1512 BEGIN BAILING AMW-07, ~1.5 gal

1525 FINISH BAILING AMW-07, ~1.5 gal BAILED. SAMPLE 12/19/07, CLEAN UP, MOVE TO AMW-5A

1527 AMW-05A
DTW = DRY TD = 30.96
VOL (x5)

1532 GO TO POLYTANK TO EMPTY BUCKETS, LOAD UP COOLERS TO DROP OFF AT TRAILER.

1600 OFF-SITE

12/19/07 WEDNESDAY p.1/6

purpose: GW Sampling
ARCADIS: M. MEEHLSEN
WEATHER: 20's, FOGGY, AIR POLLUTANT ALERT

0700 ON-SITE, SIGN-IN; BADGE SHOWS MY NAME, BUT NOW "INVALID" AT SECURITY IN FRONT BUILDING. WILL GO TO GARY LATER TO FIX.

PICK-up BUCKETS IN TRAILER.

0715 MW-6
DTW = 4.45 TD = ~~4.33~~ 5.03
VOL(ES) = 0.5 gal

0727 MW-5
DTW = DRY TD = 9.40
VOL(ES) —

0731 MW-4
DTW = 7.54 TD = 8.30
VOL(ES) = ~0.6 gal

12/19/07 WEDNESDAY 2/6

0745 BEGIN BAILING MW-6, ~ 0.5 gal

0755 WATER COULD NOT BE PULLED OUT OF WELL WITH CHECK VALVE. 0 gal BAILED

0757 BEGIN BAILING MW-4, ~0.6 gal

0810 FINISH BAILING MW-4, ~~BAILED~~ DRY, ~ 200 mL BAILED

0812 TRIKA CALLED: OK TO USE BAILER ON MW-6.

0818 BEGIN BAILING MW-6, NOT ENOUGH WATER TO FILL BAILER. NO WATER BAILED.

0826 BEGIN BAILING MW-4.

0830 FINISH BAILING MW-4, ~400 mL BAILED, MOVE TO AMW-4

0833 BEGIN BAILING AMW-04

0900 FINISH BAILING AMW-04, BAILED DRY, ~ 6.5 gal BAILED, MOVE TO AMW-08

0910 BEGIN BAILING AMW-08

0920 FINISH BAILING AMW-08, BAILED DRY, ~ 7.5 gal BAILED, MOVE TO AMW-09.

0923 BEGIN BAILING AMW-09

0935 FINISH BAILING AMW-09, BAILED DRY, ~1.5 gal BAILED, MOVE TO AMW-01

0944 BEGIN BAILING AMW-01

1000 FINISH BAILING AMW-01, BAILED DRY, ~ 5.5 gal BAILED, GO TO POLYTANKS TO EMPTY BUCKETS.

1015 BEGIN BAILING AMW-06

1024 FINISH BAILING AMW-06, BAILED DRY, ~ 1.0 gal BAILED, MOVE TO AMW-10

1024 BEGIN BAILING AMW-10

1041 FINISH BAILING AMW-10, BAILED DRY, ~ 7.0 gal BAILED, MOVE TO AMW-02

1043 BEGIN BAILING AMW-02

1056 FINISH BAILING AMW-02, BAILED DRY, ~ 4.5 gal BAILED, GO TO POLYTANK TO EMPTY BUCKETS; ALL MONITORING WELLS BAILED DRY 2x, EXCEPT AMW-07; AMW-07 BAILED 5 VOL. ON 12/18/07

1105 FINISH EMPTYING BUCKETS, LUNCH, OFF-SITE

1125 ON-SITE, GW SAMPLING PREP

12/19/07 WEDNESDAY

1310 START/BEGIN SAMPLING MW-4 FOR VOC's, SVOC, PCB, RCRA METALS (TOTAL & FIELD FILTERED)

1333 FINISH SAMPLING MW-4, VOC's & RCRA (FIELD FILTERED); WILL RETURN TO FINISH SAMPLING; WELL DRY. MOVE TO AMW-4

1336 BEGIN SAMPLING AMW-04 FOR VOC, SVOC, PCB, RCRA METALS (TOTAL & FIELD FILTERED)
DTW = 42.14

Temp	Cond	ORP	DO	pH	gal
9.13	0.975	-135.9	6.54	7.15	15.5

1416 FINISH SAMPLING AMW-04, SLIGHTLY TURBID SLIGHT ODOR, CLEAN-up. BACK TO MW-4

1418 RESUME BEGIN SAMPLING MW-4

12/19/07 WEDNESDAY

Temp	Cond	ORP	DO	pH	gal/mL
3.36	0.830	-149.7	12.44	7.50	600 mL

1436 FINISH SAMPLING MW-4, TURBID, SLIGHT ODOR, ONLY ABLE TO SAMPLE RCRA METALS (TOTAL), CLEAN-up; MOVE TO AMW-01, SAMPLING PREP

1500 BEGIN SAMPLING AMW-01 FOR VOC, SVOC, PCB, RCRA METALS (TOTAL & FIELD FILTERED)
DTW = 32.36'

Temp	Cond	ORP	DO	pH	gal
9.09	0.930	-139.6	4.66	7.11	11

1535 FINISH SAMPLING AMW-01, SLIGHTLY TURBID, BLACK PARTICLES. CLEAN-up.

1545 OFF-SITE

12/20/07 THURSDAY p.1/

PURPOSE: GW SAMPLING, SOIL SAMPLING IN BALLFIELDS

ARCADIS: M. MEEHLHOSEN

WEATHER: 20's - 30's, p. CLOUDY

0700 ON-SITE, CHECK-IN, LOAD UP TRUCK WITH SAMPLE CONTAINERS, GW SAMPLING PREP

0740 BEGIN SAMPLING AMW-07 FOR VOC's, SVOC, PCB, RCRA METALS (TOTAL & FIELD FILTERED)
DTW = 42.75'

Temp	Cond	ORP	DO	pH	gal
10.77	~~58.8~~ 581	-51.9	6.38	6.00	1.5

0825 FINISH SAMPLING AMW-07, SLIGHTLY TURBID, CLEAN UP, MOVE TO BALLFIELDS

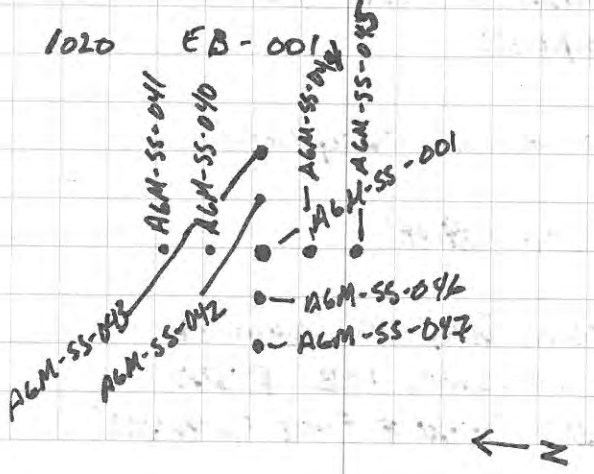
12/20/07 THURSDAY 2/

0833 ON-SITE AT BALLFIELDS, SET UP

0920 BEGIN SOIL SAMPLING AGM-SS-040 THRU AGM-SS-047

TIME	SAMPLE ID
0925	AGM-SS-040
0930	AGM-SS-041
0935	AGM-SS-042
0940	AGM-SS-043
0945	AGM-SS-044
0950	AGM-SS-045
0955	AGM-SS-046
1000	AGM-SS-047

1020 EB-001



1030 BEGIN PID READINGS

SAMPLE ID	PID (ppm)
AGM-SS-040	0.5
AGM-SS-041	0.4
AGM-SS-042	0.3
AGM-SS-043	0.4
AGM-SS-044	0.4
AGM-SS-045	0.5
AGM-SS-046	0.5
AGM-SS-047	0.4

1055 OFF-SITE AT BALLFIELDS, RETURN TO FORD FOR GW SAMPLING

1110 AMW-08, GW SAMPLING PREP

DTW = 39.38'

1125 BEGIN SAMPLING AMW-08 FOR VOC, SVOC, PCB, RCRA METALS (TOTAL & FIELD FILTERED)

Temp	Cond	ORP	DO	pH	%Q
11.27	1022	-139.9	1.76	7.33	4.8

1155 FINISH SAMPLING AMW-08, TURBID, NO ODOR, CLEAR sys. MOVE TO AMW-09

1200 AMW-09, GW SAMPLING PREP

1210 GARY FROM TEST AMERICA WILL BE HERE AT 2:00pm; WRITING OUT CHAINS NOW

1300 FINISH CHAINS; GET ICE, LUNCH, OFF-SITE

1315 ON-SITE, AMW-09 GW SAMPLING PREP

1345 MEET TRIKA AT SECURITY, WAIT FOR GARY FROM TEST AMERICA

1410 GARY FROM TEST AMERICA HERE PICKED UP 5 COOLERS

1423 AMW-09
DTW = 85.54'

1430 BEGIN SAMPLING AMW-09 FOR VOC, SVOC, PCB, RCRA METALS (TOTAL & FIELD FILTERED)

1500 FINISH SAMPLING AMW-09, ONLY VOC, RCRA METALS (TOTAL & DISSOLVED), SVOC, PARTIAL CONTAINER OF PCB, WELL DRY, NO READINGS, MOVE TO AMW-10

1506 AMW-10
DTW = 18.21'

TEMP	COND	ORP	DO	pH	gal
11.71	0.954	-163.5	1.74	7.54	15 gal

1540 FINISH SAMPLING AMW-10, TURBID, SLIGHT ODOR, CLEAN-up, MOVE TO AMW-02

1542 AMW-02
DTW = 29.14'

1550 BEGIN SAMPLING AMW-02 FOR VOC, SVOC, PCB, RCRA METALS (TOTAL & FIELD FILTERED)

TEMP	COND	ORP	pH	DO	gal
9.42	0.867	-83.5	7.57	6.60	11.5

1625 FINISH SAMPLING AMW-02, TURBID, SLIGHT ODOR, CLEAN-up, EMPTY BUCKETS

1640 OFF-SITE

12/21/07 FRIDAY p.1/1

PURPOSE: GW SAMPLING
ARCADIS: M. MEEHUSEN
WEATHER: 30's, FOGGY

0755 ON-SITE, SIGN-IN, TALK WITH JOHN MEYER

0803 AMW-06
DTW = 39.34

0815 BEGIN SAMPLING AMW-06
FOR VOC, SVOC, PCB, RCRA METALS (TOTAL & FIELD FILTERED)

0830 FINISH SAMPLING AMW-06, ONLY VOC's, RCRA METALS (TOTAL & FIELD FILTERED), 1 (ONE) JAR OF SVOC.
WELL DRY, NO READINGS, TURBID.

0833 PICKUP EQUIPMENT FROM TRAILER & DROP OF GARBAGE.

0900 OFF-SITE

1/9/08 WEDNESDAY 1/1

purpose: GW LEVEL MEASUREMENTS
ARCADIS: M. MEEHUSEN
WEATHER: 20's, p. Sunny

0920 ON-SITE, CHECK-IN

WELL ID	TIME	DTW	TD
AMW-05	0930	0 Dry	
AMW-5B	0938	32.43	
AMW-7	0933	42.85	
AMW-10	0941	18.45	
AMW-02	0947	25.00	
AMW-06	0952	30.53	
AMW-01	0956	26.76	
AMW-08	1003	38.19	
AMW-09	1010	81.23	
AMW-3B	1027	100.86	
AMW-3A	1038	17.90	
AMW-4	1048	39.13	
MW-4	1055	7.47	
MW-5	1063	0 Dry	
MW-6	1050	0 Dry	

7.17.07 p 1/2

ARCADIS: A. Fiskness, J. Dammel
Purpose: GW Sampling
Weather: 80°F, Sunny

09:30 Onsite assemble bottles for sampling.

1030 Set up at AMW-03A & B

1115 Collect water samples from AMW-03A and Dup-001 (20070717)

1145 Finished sampling at AMW-03A

11:55 Collect samples from AMW-04 for water

12:15 Finished sampling at AMW-04

1300 Collect Samples from AMW-01

1310 Finished collecting water samples from AMW-01

1325 Collect water Samples at AMW-02

1335 Finished sampling at AMW-02

1355 Begin sampling at AMW-07

1420 Finished collecting water Samples at AMW-07

7.17.07 p 2/2

1435 Meet Gary from Test America to exchange samples

1445 Go to Trailer to assemble bottles for remaining samples

1520 Head to office

Wed 7/18/07 p1/3

ARCADIS: A. Fiskness
Purpose: Gw sampling
Weather: 85°F, Mostly cloudy, humid

0930 AMF onsite, assemble equipment

0920 Collect water samples at AMW-08
0945 Finished sampling at AMW-08 clean up area
1005 Collect water samples at AMW-09
1110 AMW-09 bailed dry will finish collecting samples later today
11:25 Set up to sample at AMW-03B and collect MS & MSD
11:30 Begin purging AMW-03B w/ the grundfos pump
11:55 Finished purging AMW-03B and collect samples and MS & MSD
12:15 Pump slowed and stopped trouble shot pump only about 1/3 of bottles filled
1300 Unable to get going again in well will move to next wells and finish sampling later

Wed 7/18/07 p2/3

1310 Collect samples from MW-4
DTW = 7.90 TD = 8.14

1340 MW-4 purged dry while sampling Collected samples for VOC, and 1/2 container for RCRA Metals

1350 Collect samples from MW-5
1400 MW-5 purged dry will cont. to sample later

1405 Collect samples from MW-6
1415 Purged MW-6 dry
1420 Finish collecting samples from MW-5
1425 Purged dry MW-5 after Filling the metals container

1440 Clean up at MW-6, Collected sample for VOC, RCRA Metals and LL for SVOC
1500 Collect samples from AMW-06
1510 AMW-06 Bailed dry unable to collect samples for PCB's

7/18/07 P3/7

1600 Resume sampling AMW-03B with a bailer.
1700 Finished sampling. Beginning to rain w/ thunder and lightning clean up and head back office.
1715 Transfered water to tank, AMF offsite.

7/19/07 P4

ARCADIS: A. Fiskness, J. Dammel
Purpose: GW Sampling
Weather: 70°F

0800 Pack coolers
0910 Collect EQuipment Blank EB-001 (20070719)
0930 load up truck
1045 ARCADIS on-site @ AMW-6
1100 filled 1.25 bottles (1L) for PCBs, will return later to finish due to dry well
1115 begin to take water from AMW-9
1140 finished taking water from AMW-9, all bottles are filled will return to take YSI
1150 Begin to sample MW 6, 5, 4
1340 returned to AMW-06 got ~0.25L, will send out and PCB jar ~60% full
1400 YSI taken for AMW-09
1415 ARCADIS off-site

7/24/07
ARCADIS: J. Dammel
Purpose: GW Sampling
Weather: 80's, sunny

1040: ARCADIS on site, get drum, begin bailing AMW-10 dry

ID	time	DTW	TD	WC	1vol	5vol
AMW-10	1045	20.09	42.36	22.27	3.56	17.82
AMW-05B	1120	32.53	55.16	22.63	3.62	18.10
AMW3B	1310	100.72	~~[illegible]~~ 150.94			

1115: AMW-10 dry after ~ 5.5 gal.
1120: Begin to take depths, purge @ AMW-5B
1200 Purged ~15 gal from AMW5B, will return w/. sample bottles & will purge last 3 gal.
1300 Take water levels @ AMW-3B
1345 took H_2O samples @ AMW-05B

ID	time	DTW	TD
AMW-7	1410	42.91	44.92

1420: Purge AMW10 Dry ~3 gal.
1515: met w/. Gary from Test America
— ARCADIS off-site

Joseph W Dammel

7/25/07
ARCADIS: J. Dammel
Purpose: GW Sampling
Weather: 80s-90s, Sunny
0930: ARCADIS on-site, will begin to purge AMW-10 dry
0945: approx 6 gal bailed from AMW-10, well dry will go off site & return to take samples
1115 Sample's YSI AMW-10

Monday 13 August 2007
ARCADIS: J. Dammel
Purpose: soil samples, water levels
Weather: 70s, sunny

1000: ARCADIS on-site, ballparks
1030: took soil sample Alum-SS-001 (ASB049)
1045: took soil sample Alum-SS-002 (ASB051)
1050: took soil sample Alum-SS-003 (ASB-053)

ID	time	DTW	TD	Vol
AMW-05	1135	—	30.96	
AMW-05B	1130	32.83	54.98	
AMW-07	1143	43.21	44.78	
AMW-01	1152	27.20	41.61	
AMW-06	1202	30.22	43.15	
AMW-08	1211	18.90	42.21	
AMW-02	1217	24.43	42.64	
AMW-03A	1230	18.71	39.36	
AMW-03B	1238	100.82	150.96	
AMW-04	1247	39.14	60.76	
MW4	1253	7.64	8.14	
MW5	1256	2.72	4.20	
MW6	1300	2.12	4.33	

Monday 6-18-07 page 1/

ARCADIS: A. Fiskness
Purpose: Utility Meet
Weather: 80°F, Lite Rain

08:45 AMF onsite at Ford plant at Cretin Ave meet w/ John From Ford and Quality Locators.
09:00 AMF at Cleveland and Ford Pkwy meet location, Dave Hendrich there meet w/ other locators.
09:30 AMF Begin painting boring locations
10:30 Mellissa M ~~is~~ F assisting to locate boring locations
10:45 Paint locations
12:45 Locations painted
13:00 Talk with Quality location who is locating Excel, Comcast + Qwest, Aaron. He is having another person assist him in locating.
13:45 Meet w/ Stew from City of St. Paul for utility clearing.

651-696-0557 Security

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16:00 Talk w/ locators; locations are not all cleared yet. They will be back in the morning to finish.

Tuesday 6/19/07 p1/

ARCADIS: A. Fiskness, J. Dammel
Purpose: Finish utility locating begin drilling
Weather: 75°F, Sunny, windy

07:30 Finish packing equipment go to site.
07:50 Onsite meet w/ other ARCADIS (Trika Nelson-Holmes, Ryan Dorn, Bryan Zinda) and Drillers Boart + Bergerson-Caswell
08:00 AMF Checking clearing for boring locations + assisting locators.
09:00 Quality + City have cleared all West and S. of the main plant.

1000 Boart + Bergerson unload and set up decon pad in the Ballpen by the river (Disposal Area C)
11:00 Boart Gets water from Hydrant by Fuel D:1 House E of Main Building 1800gal

6/19/07 p2/

12:00 Begin Setting up at AMW-08
13:00 Set up ~~Move to~~ A go to lunch
14:00 Onsite Go over H+S

14:10 Begin AMW-08 core thru asphalt then will Hand auger to 5ft BGS

14:35 Collect soil Sample at AMW-08 from 3.5 to 5
Amw-08_3.5-5 (20070619)
For GRO, DRO, VOC, SVOC, PCB's, RCRA metals Dry wt

ID Amw-08_3.5-5

Param	Jar wt	Sample wt	MeOH	Time	Jar
VOC	63.2g	25.1g	Y	14:35	2oz Tared
GRO	82.8g	25.1g	Y	14:35	"
DRO	113.6g	51.4g	N	14:35	4oz Tared
SVOC					
RCRA metals	—	—	N	14:35	8oz Jar
PCBs					
Dry wt	—	—	N	14:35	8oz Plastic

6/19/07 P3/

19:00 Finished drilling at AMW-08
TD = 48.5. Shale is at 45' BGS
Will set well from 35' to 45'
BGS in the Limestone

Wednesday 6/20/07 P4/3

ARCADIS: A. Fiskness
Purpose: Bedrock Well installation
Weather: 75°F, P. Cloudy

7:30 Tailgate safety meeting with Boart, Bergerson & ARCADIS

8:00 Onsite at AMW-08, Boart setting up to complete the well. Water is at 42' BGS will set the well from 35' to 45' SS 10 slot screen w/ #40 Red flint sand.

4 bags of #40 sand
1 bag of fine sand

9:15 Mixing grout to grout up the well
10:00 Finished setting well, will complete the surface of the well at a later date. Cleaning up at well location.
10:30 Drillers to the staging area to decon the Drill rig
11:45 Drillers are finished decoaning will meet w/ John Meyers and setup

16:45 cont At AMW-09

17:30 Ford Workers finish moving trucks from the Area. Call TKNK to come up here and double check the utilities. Area is clear will set up drill rig.

BF

1300 Offsite for lunch

1400 Onsite begin coring through asphalt surface and then will hand auger through soil until refusal

Sample Area	Jar	Sample wt	Time	Pres	Jar
GRO	93.2g	25.5g	14:30	Y	2oz Tared
VOC	93.0g	25.1g	14:30	Y	"
DRO	113.4g	51.2g	14:30	N	4oz Tared
SVOC	—				
RCRA metals	—	—	14:30	N	8oz
PCBs	—				
Dry wt	Plastic Jar		14:30	N	

16:00 AMF meeting Joe & Gary from ARCADIS Test America to transfer samples

1630 Back at AMW-09, Trika at AMW-09

1700 Trika offsite

1820 Drilled to 45' BF in shale will stop for the day. Clean and secure area. Rain moving in to area.

18:30 Everyone offsite.

Thur 6/21/07 p1/

ARCADIS: A. Fiskness
Purpose: MW well installation
Weather: 75°F, Sunny

06:50 Onsite a Bullpen area C for tailgate Meeting
07:00 At AMW-09 Boart replacing alternator on drill rig.
07:40 Resume drilling at AMW-09

0945 John Meyers onsite, he would like all drilling water contained. He also brought over oil absorbant pads as there is a slight sheen from water running across the hydraulic piston for the walk way work area on the drill rig. Boart used the pads to soak up any petrol sheen
1000 John offsite.

11:20 Drill rig out of water at 90' BGS Will get more water from hydrant behind plant.
11:45 At site AMW-09 w/ 1880 gal of water. Resume drilling AMW-09.

Thurs 6/21/07 p2/

12:10 Finished Drilling at AMW-09 to 95' Stake is at 90'. Will Set a well from 80' to 90'
12:25 Everyone off site for lunch
13:15 Onsite for Lunch, Boart returned to location. Will set the well.
Sand — 1111 Bags #40
Fine Sand - 1 Bag. #7

Mixing high solids Cement Grout

1500 AMF off site, Boart Cleaning up around AMW-09
16:00 Boart Decomming tooling
16:45 Set up rig at AMW-02 in the Grass area by Hidden Falls Park.
1730 Finished setting up at AMW-02 AMF + TKN

Fri 6/22/07 p1/

ARCADIS: A. Fiskness, M. Meeuwsen
Purpose: MW installation
Weather: 75°F, Cloudy

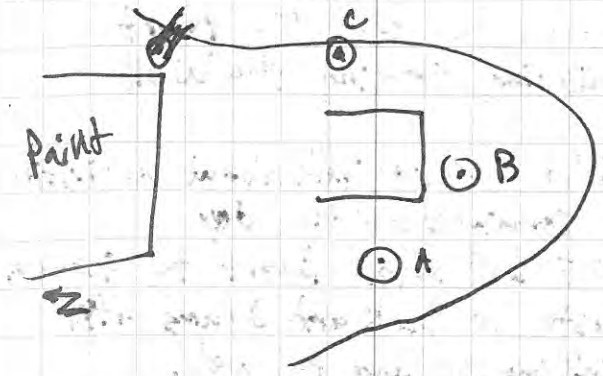
06:45 AMF + MM onsite conduct H&S Meeting w/ Board
07:00 At AMW-02 set up for drilling
07:25 Begin Drilling at AMW-02
07:35 Collect soil sample from 5-6' BGS
AMW-02-5-6'(20070622)

Sample Param	Jar Wt	Sample Wt	Time	Pres	Jar Type
VOC	76.4g	25.9g	07:35	Y	2oz Tare
GRO	76.4	25.3	07:35	Y	2oz Tare
DRO	114.6	52.6	07:35	N	4oz Tare
SVOC					
RCRA metal	} —	—	07:35	N	4oz Jar
PCB's					
Dry wt	plastic	Jar	07:35	N	8oz

1000 Finished drilling to 43' BGS will set the well from 30' to 40' BGS
1000 Break setting well at AMW-02

6/22/07 p2/

10:40 Find Existing wells to collect water levels and replace locks



ID	DTW	TD	Comments
10:50 Well A	2.13'	4.32'	Vault cap needs replacing as metal is stuck in hole of cap
10:55 Well B	2.02'	4.20'	No vault cap and Manway is damaged
11:00 Well C	7.73'	9.11'	Stick up
11:10 AMW-09	~~42.16~~ 41.40'	90.2'	Measured to GS
11:20 AMW-08	32'	44.3'	Measured to GS

6/22/07 p3/

11:30	wal	DTW	TD	Comments
11:30	E	7.77'	11.56'	Stick up by General Stores receiving loading dock 18
11:32	W	17.34'	23.86'	

11:40 Return to AMW-02 Boart finishing setting the well

12:00 Trika onsite, Talk about activities for remainder of the day

12:45 AMF off site. Boart to transfer waste to tank and drums after finishing setting the well.

Monday 6/25/07 p1/2

ARCADIS: A. Fiskness
Purpose: Well installation
Weather: 75°F, Sunny

06:50 Onsite, Meet w/ Boart, go over H&S.

07:10 Begin setting up at AMW-03B to drill deep well.

08:00 Begin drilling AMW-03B

08:10 collect soil sample from AMW-03B-0.5-1.5 (20070625) 0.5 ft - 1.5 ft

Sample Param	Jar wt	sample wt	Pres	Time	Jar Type
VOC	83.0g	250g	Y	8:10	2oz Tared
GRO	113.6g	246.6g	Y	8:10	4oz tared
DRO	114.6g	486.6g	N	8:10	4oz tared
PCB, SVOC, RCRA metals	—	—	N	8:10	8oz
Dry wt	—	—	N	8:10	8oz Plastic Jar

1000 Boart transfering 350 gal of drilling water into tank at staging area

6/26/07 P2/

wed 6/27/07 P1

ARCADIS: A. Fishness
Purpose: MW installation
Weather: 70°F sunny

06:55 AMF onsite, H+S tailgate meeting with Boart
0700 Boart at AMW-03B prep to resume drilling. Replacing hydraulic hose that leaked.
0740 Resume drilling at AMW-03B
1020 4" Core barrel locked in, difficulty retriving sample through 6" and 6" locked in 8" casing.
11:15 Boart will complete well pads at AMW-08 + AMW-09 and install bumper posts a AMW-02.
Boart 320-412-6007 Jim Cell

Note:
Boat Baited 6 gal water from AMW-09
and removed 6 gal water from AMW-02

Thurs 6/28/07

AREADIS: A. Fiskness, B. Zinda

Purpose: MW Installation

Weather: 59°F, Sunny

06:55 Conduct Tail gate H+S meeting

07:00 Boart will resume drilling at AMW-03B.

07:35 Boart drilling at AMW-03B

11:15 Boart having difficulty pulling sampler from boring. A new rig is on its way.

11:30 Boart getting another tank of water.

12:15 Tank full, Everyone offsite for lunch.

13:00 Everyone onsite. Boart cleaning up at AMW-03B.

13:30 New drill rig for Boart onsite. Setting up the drill rig. AMF to assist MM w/ soil Borings

14:15 AMF onsite Boart drilling at AMW-03B

16:00 ~~Finish~~ Able to get everything unstuck will drill with water and cut through SS.

Loads of Water/Mud

Time	Gallons	Type	Total at staging area
11:00	~~300~~	Mud	1800 gal
13:00	300	Mud	2100 gal
16:30	~~300~~	Mud	2400 gal
18:10	300 300	Mud	2700 gal

18:30 Drilled to 115' BGS w/out sampling. Will continue down to water or 150' BGS. Drilling in water should be easier.

19:00 Finished drilling for the day will clean up at AMW-03B.

19:20 Everyone offsite for the night.

ARCADIS: A. Fiskness
Purpose: MW installation
Weather: 65°F, Sunny

06:45 Onsite at staging area, conduct H & S tailgate meeting.
07:00 Everyone onsite to resume drilling.
07:10 Board getting another load of water - 1900g.
07:45 Board water tank full, return to AMW-03B to drill
0810 Resume drilling at AMW-03B
08:50 Drilled to 135' ~~water~~ drilling if easier and likely due to water in the formation. Changed at 130' BGS
10:35 Begin setting well, will set it at 140'-150'

Loads of water

Time	Gallons	Type	Total @ Staging Area
08:25	300	mud	3000
08:50	300	mud	3300
10:05	300	mud	
10:40	300	Mud	

12:15 Well set and sand pack poured in well. Board off site to get cement for Grout and lunch. AMF off site.

13:15 Board on site mixing grout. Will use cement grout to seal well.

15:15 Board finished mixing grout and grouting up AMW-03B. Clean up and secure area.

ARCADIS: A. Fiskness, M. Meeusen, B. Zinda
Purpose: MW Installation
Weather: 65°F, Cloudy

07:40 AMF onsite, Conduct Tailgate H&S meeting

0900 Onsite Board to get another tank full of water.

0940 Tank of water is full set up at AMW-03A to do boring/well will Drill to 40' and set well From 30' to 40' BGS See boring log for AMW-03B for stratigraphy.

09:10 Begin boring AMW-03A

11:45 Drilled to 40ft will set the well from 30' to 40' BGS.

1200 Board pouring sand pack down well bags used IIII, (fine sand bag

12:45 Grout up well w/ Neat cement

1300 Begin Cleaning up area around AMW-03A

1330 John Meyers onsite, He would like for Board us to clean up more of the fine sediment on the concrete.

13:45 Will pressure wash off the concrete and put sand bags around the storm water drain to filter out any fine material.

1400 John offsite, Boart continuing to clean up area.

1445 Finished cleaning up, drive down to staging area and decon rig/tooling.

16:10 Begin setting up at AMW-05 (well in grass by Fence to power plant)

16:45 Begin drilling at AMW-05

1705 Will sample AMW-05 from 20-22' BGS above SS. and in area that is moist.

Sample Parm	Time	Jar wt	Sample wt	Pres	Jar
VOC	17:05			MeOH	2oz tared
GRO	17:05	76.9g	25.7g	MeOH	2oz
DRO	17:05	144.4g	51.5g	None	4oz tared
SVOC	1705	~	~	None	50z Jar
PCB					
RCRA Metals					
Dry wt	17:05	~	~	None	Plastic

1820 Finished drilling to 29'. Will set the well From 19' to 29'

1830 Beginning to set well pouring #40 sand down well. 4 bags of sand for sand pack. Using bentonite Chips to seal well as sand pack extends up past the bedrock.

19:30 Beginning to rain clean up area ~~and~~

19:35 Everyone offsite.

ARCADIS: A. Fiskness, B. Zinda, M. Meensen
Purpose: MW Installation
Weather: 75°F, P. Cloudy, humid

06:50 ARCADIS + Boart onsite, H+S tailgate meeting
07:10 Begin setting up at AMW-06 on the NW side of the plant. Boart getting a truck load of water.
0945 Begin drilling AMW-06
Calibrate PID w/ 100 ppm isobutylene reading 100.0 ppm

Collect soil samples from 4-5' BGS at AMW-06

sample point	Time	Jar wt	Sample wt	Pres	Jar
VOC	9:45	76.0g	26.9g	MeoH	2oz Tared
GRO		76.4g	27.3g	"	"
DRO		~~[illegible]~~	49.1g	—	4oz Tared
SVOC		~~[illegible]~~			
RCRA metals			—	—	
PCBs					8oz Jar
Dry wt		—	—	—	Plastic

1030 Finished Drilling at AMW-06 TD drilled 42' shale at 41' will set well from 31' to 41' BGS
Pouring sand in well
4 bags #40
10:45 Mixing grout to seal well.

11:00 Measure water level at AMW-02
DTW = 24.00' TD = 42.11'
Stick up height ~2.5'.

11:15 Finishing up well at AMW-06 Cleaning up area around AMW-06
11:45 Boart driving vehicles to staging area for decon ing.
12:00 Jim Finishing up protop for AMW-06 Bob + Oliver offsite for lunch
12:15 Talk w/ Bryan Zinda about utility locating. He said to call Bill Johnson of Quality Contractors about the Excell Energy duct 651-248-8975

7/3/07 p 3/3

13:45 Finished installing pro-top at AMW-06

14:00 INCLEMENT WEATHER; THUNDER & LIGHTNING; CEASE DRILLING.

16:00 WEATHER CLEAR, BEGIN PROTOP / BALLASTS INSTALLATION AT AMW-05

17:00 PVC (GRAY) FOUND NEXT TO WELL PIPE @ ~1.5ft AND ~2.0 ft. CEASED PROTOP / BALLAST INSTALLATION. CALLED BRYAN AND ANDY TO NOTIFY. WILL WAIT FOR PRIVATE LOCATERS TO LOCATE.

1730 OFF-SITE (BOART & ARCADIS)

7/4/07 p 1/2

PURPOSE: MONITORING WELL INSTALLATION
ARCADIS: M. MEEMKEN
WEATHER: SUNNY, 80's, HUMID

0730 ON-SITE, MEET WITH BOART

0740 SAFETY MTG

0750 SET-UP AMW-~~06~~ 07

0810 BEGIN DRILLING AMW-~~06~~ 07, CALIBRATE PID USING ISOBUTYLENE -100 ppm; CALIBRATED @ 100 ppm

AMW-~~06~~ 07-38-40(20070704)

PARAMETERS	TIME	JR WT	SOIL WT	PRES	JAR
VOC	09:33	75.7	25.0	MeOH	2oz
GRO		76.6	25.6	MeOH	2oz
DRO		113.9	54.3	—	4oz
SVOC		}	—	—	8oz
PCB					
RCRA					
Dry WT		—	-		plastic

7/4/07 2/2

AMW-02

TOC
DTW = 23.7" TD = 6.5 40.0

0°1455 BEGIN DEVELOPING AMW-02
6 gal removed before bailing dry

7/5/07 P4/3

ARCADIS: A. Fiskness
Purpose: MW Installation
Weather: 70°F, Sunny

06:45 AMF onsite, Boart on-site Conduct tailgate Safety Meeting and discuss utilities that were ~~encountered~~ encountered on Tuesday Night and Wednesday while installing pro-top and bumper posts

0700 Jim from Boart shows AMF the utilities encountered.

07:15 Call John Meyers and inform John of the utilities that were found.

07:30 Boart at plant to get a truck load of water.

07:45 ~~AMF~~ Waste Management onsite to ~~pick up~~ drop off rolloff box.

08:00 AMF & John Meyers took at locations where utilities were encountered; AMW-05 & AMW-06

08:10 John offsite, he is ok with moving AMW-03 to the concrete behind the fence

08:15 AMF + Boart checking location for AMW-01. Overhead line is low will only be able to access location thru gate. Utilities not fully painted will need private locator to relocate utilities.

0900 Call w/ Becky, move AMW-01 to SE bull-pen will need private locator to locate utilities

0930 Boart beginning to set concrete pads

12:45 water level at AMW-02
DTW = 30.48' TD = 42.6'

1630 Boart saw cut pad and removed concrete. Cleaning up area and putting waste into rolloff.

17:15 Boart to clean up around AMW-06 backfill bumper post holes.

17:25 AMF Measure water level at AMW-0
DTW = 42.43' TD = 44.78'

1800 Put equipment away in trailer

14/08 Boart off site.

Friday 7/6/07 p1/2

ARCADIS: A. Fiskness, T. Nelson
Purpose: MW Installation
Weather: 70°F, Sunny

06:45 Conduct Tailgate H+S Meeting
0730 Board to AMW-08, 09, 03A+B to mix and pour concrete pads
09:45 Meet Jim from Hance to locate 3 wells and determine what utilities were encountered.
10:45 Call with Bill Johnson from Excel; They are locating the tunnel.
11:45 Meet with Bill (excel) and Mike (From Quality) the tunnel is located We are cleared to drill in the parking lot
1200 Board finished w/ concrete pads.
12:15 Tim onsite show her well locations that were cleared.
12:45 AMF off site.
13:30 Board on Site from lunch.
13:40 Set up at AMW-01.
13:50 Begin drilling AMW-01
Calibrate PID w/100ppm Isobutylene → 100 ppm

Friday 7/6/07 p.2/2

Collect Soil sample from AMW-01 (8-10')

	Jar	Sample
VOC	80.6 g	29.5 g
GRO	82.7 g	29.5 g
DRO	123.5 g	55.5 g
SVOC	—	—
PCB	—	—
RCRA Metals	—	—
Dry wt	—	—

15:40 Finished drilling AMW-01 to 39' bgs. No good recovery from 19-39'. Jim hit SS @ 39' bgs.
15:50 Call A. Fiskness → don't keep 2' of core from 19-39' bgs.
16:00 Have Board drill 3 more feet.
→ No recovery → 1" of Sand
Will Set well monday
Screen 29'-39' bgs
14:20 Board begins to clear out hole and set 6" casing.
-clean up
17:10 Every one off site.

Monday 7/9/07 p1/4

ARCADIS: A. Fiskness
Purpose: MW Installation
Weather: 80°F, Sunny

0630 AMF onsite, check staging area. Drum and rolloff containers that were not covered have some water in them after the rain.
0700 Assemble equipment and get new ID badge from Gerry at H&S trailer
0720 Tailgate H&S meeting w/ Boart prior to Drilling.
0730 Boart onsite at AMW-01 to set the well. ~600 gal of water from drilling is containerized for disposal

0900 Total Depth to TOC is 41.6'
0940 Clean up around AMW-01, ~~begin~~ during equipment to staging Area for decon

1000 Total Water Stored in Staging Area

Tank ID	Vol Gal.	Actual	Date Sampled	Date Emptied
1	1100	1100		7-9-07
2	1100	1100		-
3	1100	1100		-
4	1100	1100		-
5	1500	1100		-

7/9/07 p2/4

1040 Boart getting a load of water ~ 1800 gal
1100 Set up at AMW-04 in the upper ball park next to ~~the~~ the ball fields
11:30 Show John Meyers the location of AMW-10 in S. Entrance of Plant. Discuss the location as utilities and traffic restricts the possible locations we determine that we will need to wait to do the well with a different drill rig. Possible location is unsafe from truck traffic and will block the fuel unloading pad.

11:45 Boart finishing up pre-top for AMW-01
12:00 Everyone offsite for lunch
12:30 Onsite set up to drill AMW-04
1235 Calibrate PID w/ 100ppm Isobutylene reading 100.0 ppm

12:50 Begin Drilling AMW-04

13:20 will collect sample from 2-3' BGS at AMW-04

AMW-04_2-3' (20070709)

Sample Parameter	Jar	Sample	Pres	Time	Jar Type
VOC	75.6g	25.6g	MeOH	12:50	2oz Tan
GRO	76.4g	25.3g	"	12:50	"
DRO	114.6g	52.0g	—	12:50	40z tan
SVOC					
RCRA Metals	—	—	—	12:50	4oz
PCB's					
Dry wt	—	—	—	12:50	Plastic

1445 Joe picks up samples to bring to the lab

1500 5- bolts connecting the augers/barrels to the head are broken. Boart will need to get replacements

1515 Boart digging post holes for AMW-01

1545 Measure water level at AMW-01
DTW = 6.56' from TOC
TD = 41.26'
Stickup height ~ 2.7'

1600 Jim from Boart is back w/ the necessary bolts for the drill rig will repair the rig and resume drilling

18:50 Finished drilling for the day. Secure area for the evening.

Tuesday 7/10/07 P1/3

ARCADIS: A. Fishkuess
Purpose: MW Installation
Weather: 70°F, Cloudy

0700 Onsite, assemble equipment and conduct HTS tailgate Meeting.

0725 Resume drilling

0750 Drilled to 66' at AMW-1
Shale is at 61.5' BGS w/ St. Peter Sand stone at 64' BGS
will set the Well screen from 51' to 61' BGS.

0915 Board setting well
9 bags of #40 Red Flint sand
1 bag of fine sand #7

1000 Begin cutting Concrete for the pad around the well

1200 Offsite for lunch

1250 Board onsite resume removing concrete to pour new pad for AMW-04

1430 Finished with pad for AMW-04
Clean up area

7/10/07 P2/3

1500 Board Unloading drums instaging area

1520 Jim Informs me that Oliver's Bag were stolen today from the lower bullpen. He is leaving tonight and had put his luggage under plastic tarps and Garboge bags by the other equipment at 10:30. When they got back over there tonight it was gone.

1530 Talk with Security about the bags They (Chance Brown) will pull the video of the entrance to the bullpen and see if they can determine anything.

1550 Back at bullpen unloading equipment

Tank	Capacity Vol	Vol
MAW-1	1100	—
2	1100	1100
3	1100	250
4	1000	1100
5	1500	1500

7/10/07 P3/3

1620 Total Drums - 33
~~A full~~ ~~B~~
partial or full - ~~A~~ 11
empty - 22

1700 AMF offsite to office

wednesday 7/11/07 P1/

ARCADIS: A. Fiskness
Purpose: Well installation + Development
Weather: 60°F, Sunny

06:45 AMF at the staging area

0730 Develop wells

Well ID1	DTW	TD	Vol removed	Permit #
AMW-05	—	30.96'	—	751339
AMW-07	42.64'	44.78'	6gal	751338
AMW-01	21.21'	41.26'	6.5gal	751337
AMW-02				751330
AMW-03A	18.04'	39.18'	24gal	751333
AMW-03B	100.87'	150.98'	55gal	751332
AMW-04	38.52'	59.46'	7gal	751334
AMW-06	32.01'	42.35'	5gal	751331
AMW-08	36.40'	44.26'	3.5gal	751336
AMW-09	76.69'	88.65'	4gal	751335

07:35 AMW-05 is dry move to AMW-07
07:45 Begin bailing AMW-07
08:25 Removed 6 gal from AMW-07
Water was turbid and became clear
a slight sheen visible on the water
w/ black flocs

0930 Begin bailing AMW-01
0910 Bailed AMW-01 dry after 6.5 gal. Black flocs visible on surface of water w/ slight sheen on flocs
0925 Begin bailing AMW-08 very turbid
0945 Bailed well dry after 2.5 gal. Water turbid some black flocculates on the water w/ slight sheen on flocs
0950 Begin bailing AMW-09, turbid after removing .5gal
1040 Removed 4gal water from AMW-09. Well bailed dry. Black flocs on surface

10:50 Begin bailing AMW-04, water turbid
11:40 Well bailed dry after removing (AMW-04) 6 gal. water turbid

1645 Begin bailing AMW-03A

13:25 Bailed 24 gal from AMW-03A Slightly turbid some black flocs on surface of water
1345 Begin developing AMW-03B w/ air flowing at ~1.5 gpm

1415 Removed 5 gal of water from AMW-03B, Clear.

1440 Removed additional 1 gal from AMW-04 before bailing dry - total 7gal
1450 Removed addition 1gal from AMW-08 before bailing dry - total 3.5gal

1530 Begin bailing AMW-06
1615 Bailed dry after 5gal removed, water turbid.

1640 Place remaining well tags on wells
1645 Clean up area and staging area

7/12/07 P1

ARCADIS: A. Fiskness
Purpose: Water levels + inventory waste
Weather: 80°F, Sunny

09:30 AMF onsite cover rolloff ~~contain~~ w/ a tarp
10:00 Go to Aristeo trailer to drop off paperwork for H+S meeting
10:20 Go to AMW-08 to measure water levels.
1045 Bailed 3/4 gallon of water from AMW-08 before bailing dry, turbid, no sheen
1105 Bailed 1.5 gallons of water from AMW-09 before bailing dry, very turbid, no sheen
11:30 Removed 3gal of water from AMW-04 prior to going dry. V turbid.
11:55 Begin pumping w/ whale pump at AMW-03A. Pumping at 1gpm
1235 Stop pumping at AMW-03A, went dry two times, removed 17gal, sl. turbid

7/12/07 P2

Time	well	DTW	TD	Comment	Vol removed
0930	AMW-02	43.14'	44.44'		3/4
10:50	AMW-09	84.47'	88.71'		1.5
1:15	AMW-04	53.04'	60.65'		3
11:35	AMW-03A	17.11'	38.90'		17
11:37	AMW-03B	100.86'	130.91'		—
12.48	AMW-02	23.38'	42.60'		7
13:15	AMW-06	40.77'	43.20'		1/2
13:25	AMW-01	32.32'	41.53'		3
13:49	AMW-07	42.70'	44.66'		7
14:25	AMW-05	—	30.96		—

12:50 Begin pumping AMW-02 w/ whale pump
1303 Pump 7gal of water from AMW-02, very turbid
1320 Bailed AMW-06 dry after removing .5gal, very turbid

1330 Begin pumping w/ a whale pump at AMW-01
1340 Pumped AMW-01 dry twice after removing 3gal, very turbid, black flocs and sl. sheen on water from flocs

7/12/07 P3/

1355 Begin pumping at AMW-07 w/ whale pump, 7 gal
1410 water pumped down to 2" From bottom of well, water clear, No sheen
1425 AMW-05 dry, mud sand & silt on tip of water level probe.
1440 Inventory IDW onsite

Empty drums - 24

Full — 7
Partial — 3

total drums 34

7/16/07 P1/3

ARCADIS: A. Fiskness, J. Dammel
Purpose: Water Levels + GW Sampling
Weather: 75°F, Sunny

10:15 Onsite, assemble equipment and check tank for soil in bottom
10:30 Tailgate H+S meeting

10:35 Water levels

Time	ID	DTW	TD	WC Vol	3 Vol Dry
1035	AMW-5	—	30.96	—	—
1100	AMW-07	42.82	44.75	1.93	0.3	1
1100	AMW01	27.86	42.64	14.78	2.4	7.2
1115	AMW-06	37.83	43.12	5.29	0.8	2.5
1235	AMW-02	23.99	42.62	18.63	3.0	6
1300	AMW-03	42.89	44.44	1.55	0.25	0.75
1320	AMW-09	83.86	88.74	5.38	0.9	2.6
1325	MW-4	7.75	8.13	0.38	0.06	0.18
13:30	MW-5	2.07	4.20	2.13	0.3	1
13:33	MW-6	2.11	4.34	2.23	0.4	1.2
1410	AMW-4	40.65	66.74	20.09	3.2	9.5
1440	U-1	7.79	11.55	3.76	0.6	
1445	U-2	17.39	23.84	6.45	1.0	3.1
1450	AMW-09A	18.02	39.34	21.32	3.4	10.2
1450	AMW-03B	100.86	150.96	50.10	8.0	24

11:20 Begin Purging AMW-01 w/ a bailer
11:35 Bailed dry after 4.5 gal
11:40 Painted bumper posts at AMW-01 OSHA Yellow
11:50 Offsite to get more rope for bailing wells
12:40 Begin Purging AMW-02 w/ a bailer
12:50 Bailed 4 gal from AMW-02 move to next location, bailed dry
13:10 Bailer 0.25 gal from AMW-08 before going dry
1320 Begin bailing AMW-09
1335 AMW-09 bailed dry after removing 2 gal before going dry.

1340 Bailed MW-4 dry after removing 500mL of water
1345 Bailed MW-5 dry after removing ½ gal of water
1350 Bailed MW-6 dry after removing ½ gal of water
1410 Bailed AMW-04 dry after removing ~6 gal water

4:50 Begin Bailing AMW-03A
5:15 Bailed 10 gal from AMW-03A

1530 Begin bailing AMW-06
1535 Removed 2 gal from AMW-06 before going dry
1545 Transfer water into poly tank
16:15 Remove sediment stuck inside green 1500 gal tank. Only a thin layer of sediment remaining in tank.
16:30 Pump water from rolloff container to water tank removed ~ gallons of water.
1700 Remove water from ponded areas on tarps covering tanks.

1/23/08 WEDNESDAY p1/

purpose: DRUM OBSERVATION AT WATER TREATMENT PLANT
ARCADIS: M. MEEHUSEN
WEATHER: -2°F, p. Cloudy

0755 ON-SITE

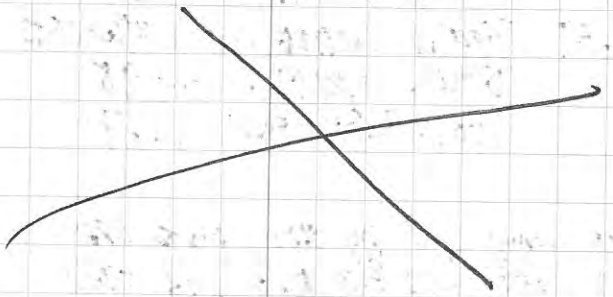
- AFTER VIEWING DRUMS WITH BINOCULARS, NO EVIDENCE OF ANYTHING IN DRUMS; POSSIBLE GARBAGE CANS FROM PARKWAY ABOVE
- NO SAFE FOOT ACCESS TO DRUMS

0830 OFF-SITE

~~# OF LOADS: 2 ROLLOFFS~~ MSW

3/11/08 TUESDAY p.1/3

purpose: GROUNDWATER SAMPLING
ARCADIS: T. NELSON-KAMES, M. MEEHUSEN
WEATHER: P. Cloudy, 30's-40's
0730 Pack up equipment.
0830 Sign in at front desk-Security.
0855 Start round of WLs.



WELL ID	TIME	DTW	TD* (8/13/07)
AMW-05	8:58	—	31.14
AMW-5B	9:00	32.82	54.98
AMW-07	9:04	43.23	44.96
AMW-10	9:11	19.18	42.24
AMW-02	9:13	26.18	42.64
AMW-06	9:16	26.78	43.15
AMW-01	9:19	26.21	41.61
AMW-08	9:24	38.04	44.44
AMW-09	9:29	79.60	89.24
AMW-3B	9:43	100.67	150.96

WELL ID	TIME	DTW	TD	DTW	TD
AMW-3A	9:45	~~dry~~	18.27		39.53
AMW-4					
MW-4	10:05	DRY	8.32		
MW-5	10:04	DRY	4.39		
MW-6	9:58	dry	4.54		

10:10 Set up at AMW-05B.
10.39 Begin pumping AMW-05B
DTW: 32.82 TD: 54.98
1 vol: 3.54 5 vol: 17.7

TIME	Temp	SpC	DO	2.00	pH 6	ORP
1045	13.99	0.975	~~0.13~~ 1.2	0.13	6.78	-97.4
1050	13.97	1.001	4.8	0.50	6.60	-141.9
1055	13.97	1.008	4.0	0.42	6.58	-146.2
11:10	14.21	1.008	0.12	1.2	6.57	-148.9

1115 Begin Sampling AMW-05B
for VOC, RSKA Dissolved metals,
GRO, DRO, PCB, SVOCs.
DO MS/MSD @ AMW-05B

1410 Begin Purging AMW-03B
DTW = 180.67 TD = 150.96
1 vol 8.14 5 vol ~40 gal

TIME	Temp	SpC	Cond	%DO	DO	pH	ORP
1410	11.64	0.498	357	1.9	0.20	7.18	-124.6
1428	11.83	0.484	362	1.1	0.21	7.13	-105.1
1437	11.91	0.475	357	0.9	0.10	7.09	-93.9
1439	11.96	0.479	359	0.8	0.09	7.07	-88.8
1454	11.99	0.469	353	0.6	0.06	7.09	-83.0
1503	11.99	0.469	360	0.5	0.06	7.06	-112.6
1508	11.96	0.470	355	0.5	0.06	7.05	-111.2

1515 Begin Sampling AMW-03B
FOR VOC, SVOC, PCB, GRO, DRO,
DISSOLVED METALS

1535 FINISH Sampling AMW-03B,
CLEAR, NO ODOR

1600 OFF-SITE

3/12/08 WEDNESDAY p1/5

PURPOSE: GROUNDWATER SAMPLING
ARCADIS: M. MEEMKSEN
WEATHER: CLOUDY, 30'S

0818 ON-SITE, SIGN-IN UP FRONT

0825 SET-UP AND BEGIN BAILING AMW-07

DTW = 43.23 TD = 44.96
1 VOL = 0.2768 X5 = 1.384

0845 BAILED ~ 1.5 gal,

0900 MISSING CYANIDE CONTAINER. WILL SAMPLE WHEN WE RECEIVE IT, EMPTY BUCKETS, MOVE TO AMW-10

0916 SET-UP AND BEGIN BAILING AMW-10
DTW = 19.22 TD = 42.21

1 VOL = 3.67 5 VOL 18.39

3/12/08 WEDNESDAY p2/5

0942 FINISH BAILING AMW-10, ~ 7.0 gal BAILED, BAILED DRY

0945 SET-up AND BAILED AMW-02

DTW = 26.10 TD = 42.64

1 VOL = 2.69 X5 = 13.23

1043 FINISH BAILING AMW-02, ~ 7.0 gal BAILED, BAILED DRY; EMPTY BUCKETS, MOVE TO AMW-06

1022 SET-up AND BEGIN BAILING AMW-06
DTW = 26.69 TD = 43.15

1 VOL = 2.63 X5 = 13.16

1045 FINISH BAILING AMW-06, ~ 6.0 gal BAILED, BAILED DRY. MOVE TO AMW-01

1048 SET-up & BEGIN BAILING AMW-01
DTW = 26.28 TD = 41.61

1 VOL = 2.45 X5 = 12.26

3/12/08 WEDNESDAY 3/5

1108 FINISH BAILING AMW-01, ~5.5gal BAILED, BAILED DRY, EMPTY BUCKETS

1124 SET-UP AND BAIL AMW-08
DTW=38.02 TD=44.44

1VOL=1.02 x5=5.13

1136 FINISH BAILING AMW-08, ~2.75gal BAILED, BAILED DRY. MOVE TO AMW-09

1140 SET UP & BEGIN BAILING AMW-09
DTW=79.52 TD=89.26

1VOL=1.55 x5=7.79

1206 FINISH BAILING AMW-09, ~3.5gal BAILED, BAILED DRY, MOVE TO AMW-3A

1220 SET UP & BEGIN BAILING AMW-03A
DTW=18.29 TD=39.53
1VOL=3.39 x5=16.99

3/12/08 WEDNESDAY 4/5

1252 FINISH BAILING AMW-03A, ~10.5 gal BAILED, BAILED DRY, MOVE TO AMW-04

1255 AMW-04 STILL COVERED BY PLOWED SNOW PILE. WILL RECHECK ON 3/13/08; EMPTY BUCKETS

1306 BAIL AMW-10

1323 FINISH BAILING AMW-10, ~5.5gal BAILED, BAILED DRY. MOVE TO AMW-02

1325 BEGIN BAILING AMW-02

1332 FINISH BAILING AMW-02, ~1.5gal BAILED, BAILED DRY, MOVE TO AMW-06

1335 BEGIN BAILING AMW-06

1341 FINISH BAILING AMW-06, ~1.0gal BAILED, BAILED DRY. MOVE TO AMW-01

1343 BEGIN BAILING AMW-01

3/12/08 WEDNESDAY 5/5

1354 FINISH BAILING AMW-01, ~3.0 gal BAILED, BAILED DRY, MOVE TO AMW-08

1359 BAIL AMW-08

1405 FINISH BAILING AMW-08, ~1.0 gal BAILED, BAILED DRY, MOVE TO AMW-09

1410 BEGIN BAILING AMW-09

1417 FINISH BAILING AMW-09, ~0.5 gal BAILED, BAILED DRY, EMPTY BUCKET, MOVE TO AMW-03A

1430 BEGIN BAILING AMW-03A

1441 FINISH BAILING AMW-03A, ~4.0 gal BAILED, BAILED DRY, EMPTY BUCKETS

1450 OFF-SITE

3/13/08 THURSDAY P. 1/4

PURPOSE: GROUNDWATER SAMPLING
ARCADIS: M. MEEHLWSEN
WEATHER: SUNNY, 30'S-40'S

0830 ON-SITE; CHECK IN WITH SECURITY

0835 NOTIFIED JOHN MEYER THAT I AM ON-SITE

0837 SET UP TO SAMPLE AMW-07 BAIL ~0.5 gal

0855 SAMPLE AMW-07 FOR, VOC, SVOC, CYANIDE, PCB, DISSOLVED RCRA METALS, GRO, DRO
SLIGHTLY CLOUDY, NO ODOR

Temp	SpC	Cond	%DO	DO	pH	ORP
12.16	0.611	461	65.3	7.01	6.63	147.5

0950 FINISH SAMPLING AMW-07, MOVE TO AMW-10

1015 BEGIN SAMPLING AMW-10 FOR VOC, SVOC, PCB, RCRA METALS (FIELD FILTERED), DRO, GRO

Temp	SpC	Cond	%DO	DO	pH	ORP
11.95	1.010	759	19.0	2.09	7.15	-138.9

1055 FINISH SAMPLING AMW-10, SLIGHTLY CLOUDY, SLIGHT ODOR, TAN; MOVE TO AMW-02

1115 BEGIN SAMPLING AMW-02 FOR VOC, SVOC, PCB, RCRA METALS (FIELD FILTERED), GRO, DRO

TEMP	SpC	COND	%DO	DO	pH	ORP
10.31	0.902	649	77.2	8.62	7.66	52.5

1150 FINISH SAMPLING AMW-02, SLIGHTLY CLOUDY, LT GRAY, NO ODOR, MOVE TO AMW-06

1215 BEGIN SAMPLING AMW-06 FOR VOC, SVOC, ~~PCB, RCRA METALS (FIELD FILTERED)~~ GRO, DRO

TEMP	SpC	COND	%DO	DO	pH	ORP
NO PARAMETERS TAKEN						

1230 FINISH SAMPLING AMW-06; WELL WENT DRY, ONLY VOC, SVOC SAMPLED; CLOUDY, LT GRAY, SLIGHT ODOR.

1235 PICK-UP ICE & LUNCH

1300 ON-SITE, SET-UP TO SAMPLE AMW-01

1325 BEGIN SAMPLING AMW-01 FOR VOC, SVOC, PCB, RCRA METALS (FIELD FILTERED), DRO, GRO

TEMP	SpC	COND	%DO	DO	pH	ORP
12.22	1.174	887	21.5	2.30	7.18	-76.6

1355 FINISH SAMPLING AMW-01, CLEAR, NO ODOR, MOVE TO AMW-08

1359 FILLING OUT COC'S

1455 BEGIN SAMPLING AMW-08, FOR VOC, SVOC, PCB, RCRA METALS (FIELD FILTERED), GRO, DRO

1530 FINISH SAMPLING AMW-08, NO PARAMETERS, WELL DRY; CLOUDY, LT GRAY, NO ODOR, MOVE TO AMW-09 (COOLER PACKED COC READY)

3/13/08 THURSDAY 4/4

1555 BEGIN SAMPLING AMW-09 FOR VOC, SVOC, RCRA METALS (FIELD FILTERED)

1620 FINISH SAMPLING AMW-09, CLEAR, NO ODOR; WELL DRY, NO PARAMETERS; WAIT FOR GARY FROM TEST AMERICA

1625 GARY FROM TEST AMERICA PICKED UP COOLERS; MOVE TO AMW-03A

1650 BEGIN SAMPLING AMW-03A FOR VOC, SVOC, PCB, RCRA METALS (FIELD FILTERED), DRO, GRO * DUP 001 TAKEN

1746 FINISH SAMPLING AMW-03A, CLEAR, SLIGHT ODOR

Temp	SpC	Cond.	%DO	DO	pH	ORP
11.52	0.930	690	23.1	2.51	7.10	-84.6

1749 CHECK ON AMW-04; STILL COVED BY PLOWED SNOWPILE.

4/28/08 p1/1

ARCADIS: A. Fishkess
Purpose: Seep Sampling
Weather: 40°F, Cloudy Windy

07:30 Meet w/ Gerry from Arisker for Safety training

08:30 Meet w/ MPCA Karen, Amy & Besup

08:30 Onsite at Hydroplant w/ John Meyers of Ford, Karen Kromar, Amy ~~T~~ Besup (sp?) from MPCA. Walk area looking for GW seeps. None w/ measurable flow is detected. ~~Amy~~ MPCA determines there is no location to sample at and that we will wait until March 2009.

09:00 Everyone offsite.

4/10/08 p.1/2

ARCADIS: M. MEEHUSEN
PURPOSE: GW SAMPLING / W.L. MEASUREMENTS
WEATHER: CLOUDY; 60'S; BREEZE
0900 CHECK IN @ SECURITY

WELL ID	TIME	DTW	TD	SWV
AMW-05	1025	Dry	32.96	
AMW-5B	1022	32.49	55.~~00~~	
AMW-7	1017	42.99	44.79	1.5
AMW-10	917	18.22	42.22	19
AMW-2	919	26.06	42.64	13
AMW-06	913	26.89	43.3	13
AMW-01	9:08	26.8(	41.63	12
AMW-08	1002	37.92	44.46	5
AMW-09	1009	79.41	89.34	8
AMW-3B	933	100.65	152.67	
AMW-3A	930	17.43	39.35	17
AMW-4	941	36.28	60.77	20
MW-4	952	7.74	8.17	0.3
MW-5	951	2.35	4.22	1.5
MW-6	948	2.41	4.26	1.5

9/10/08 P.2/2

1040 Set up Grunfos on AMW-5B
1050 off site for supplies.

Time	Temp	SpC	DO	DO%	pH	ORP	gall
1205	14.26	0.818	1.0	0.10	5.87	75.9	~5
1211	14.38	0.845	1.0	0.10	5.76	67.8	~8
1216	14.37	0.846	1.4	0.14	5.99	57.6	~11
1221	14.32	0.848	1.8	0.18	6.05	50.2	~14
1226	14.13	0.849	1.8	0.18	6.17	48.4	~18
1232	14.28	0.850	1.7	0.17	6.20	47.2	~22

1135 Back on site.
1200 Begin pumping AMW-05B
1235 Sample AMW-05B. 3 MS/MSD.
1311 Finished Sampling. Clean up.
Dump water. Decon pump.
1400 Prep for Equipment Blank.
1410 Collect EB-001 (20080910)
1445 Finished collecting EB-001 (20080910)
Lot# 12 13 07 0436
DI water used Kandiyohi
1455 off site.

9/11/08 P.1/2

ARCADIS: T. Nelson-Kalmes, A. Aufferman
Purpose: GW Sampling
Weather:

0600 Calibrate YSI.
pH 7.00 → 7.00
4.01 → 4.01
10.00 → 10.00
ORP 220 → 220
Concl. 1.418 → 1.418
DO 100% → 99.6%

1045 Load up truck. Drive to site.
1204 Sign in @ Security.
1210 Show Ally well locations.
1315 Set up @ AMW-03B.
Begin purging AMW-03B.

Time	Temp	SpC	DO	pH	ORP	Gallons
1330	11.27	0.388	0.94	7.44	-80.9	2
1337	12.23	0.399	0.28	6.29	61.7	7
1342	12.43	0.399	0.21	6.37	62.1	10
1348	12.50	0.398	0.16	6.44	50.8	15
1355	12.56	0.399	0.14	6.52	41.3	18
1400	12.52	0.397	0.11	6.58	34.1	22
1406	12.53	0.399	0.12	6.69	28.0	26
1417	12.52	0.397	0.11	6.82	19.0	30
1425	12.52	0.396	0.11	6.81	18.9	38

9/11/08 P. 2/2

1425 Sample AMW-03B.
1435 Finished sampling AMW-03B. ~40 gallons removed. Clean up. Dump H2O into poly tank
1500 Nitka took off.
1520 Ally drive down to MW4,5,6 area
1530 Set up and Begin Purging MW-6 & MW-5
1545 Purge ~ 1 gal from each & bail dry
1600 Move to MW-4 & begin Purging MW-4
1615 Bail ~ 0.5 gal from MW-4 & Bail dry
Back to MW-5 & 6
Both wells are still dry
1630 Move to AMW-4
Purge 5 gal from AMW-4 and bail dry.
1700 Sign out of site

Ally Auffermann

9/12/08 P. 1 of

ARCADIS : Ally Auffermann
Weather : Sunny 70s
Purpose : GW Sampling

1200 Pack up drive to Site
1245 Arrive @ site, pick up materials
1300 Set up & Begin Purging MW-3A
1348 Bail 17 gal from MW-3A (ready to be sampled)
1352 Arrive @ AMW-10 & dry 1st time
1415 Bail 7 gal from AMW-10
1430 Move to AMW-2
1433 Bail 6 gal & dry from AMW-2
1435 Dump water
1442 Arrive @ AMW-7
1443 Bail 1.5 gal from AMW-7 ready to be Sampled.
1457 Arrive @ AMW-6
1459 Gary of TA call to pick up samples.
1540 Back to AMW-6
1554 Bail 6 gal from AMW-6 & bailed dry.
1554 Move to AMW-1
1610 Bail 5 gal from AMW-1 & bail dry

9/12 Fri.

1624 Arrive @ AMW-8
1635 Bail 25 gal from AMW-8 & bail dry once.
1655 Arrive @ AMW-9
1712 Bail 3 gal from AMW-9 and bail dry
1721 Arrive at AMW-10 to bail 2nd time
1738 Bail 6 gal & dry @ AMW-10
1739 Arrive @ AMW-2 & bail 2nd time
1748 Bail dry the 2nd time at AMW-2 for 2 gal
1754 Arrive @ MW-6 & 5
1810 Bail 2nd time from MW-5 & 6 ~0.5 gal from each, both wells are bailed dry
1815 Arrive @ MW-4
1818 Bail dry 2nd time @ MW-4 <0.5 gal from MW-4
1822 Arrive @ AMW-4
1840 Bail 2nd time dry @ AMW-4 5 more gal
1845 Dump water
1903 Arrive @ AMW-6 to bail 2nd time
1913 Bail dry AMW-6 2nd time ~1 gal

9/12 Fri.

1915 Arrive @ AMW-1 to bail 2nd time
1925 Bail dry 2nd time @ AMW-1 ~4 gal
1931 Arrive @ AMW-8 bail 2nd time
1940 Bail 2nd time @ AMW-8 ~1 gal
1950 The gate to going into the parking lot where AMW-9 is located is locked!
2000 Check with security, they do not have the key for the gate.

off site

9/15/08 Monday p. 1/

Purpose: GW Sampling
ARCADIS: M. Meemsen
Weather: 60's

0850 On-site; check-in @ Security

0910 Begin Bailing AMW-9

915 Finish Bailing AMW-9; 0.5 gal bailed; Bailed Dry; Empty Bailed/purged H_2O into poly tank

935 Begin Sampling AMW-7 for VOC's, Cyanide, SVOC, DRO, GRO, ~~PCB~~, RCRA Mtls (Field Filtered)
PCB

1025 Finish Sampling AMW-07; clear, no odor;

1030 off-site

1207 on-site

215 Begin Sampling AMW-10 for VOC, SVOC, GRO, DRO, PCB, RCRA Metals (Field Filtered),

Temp	SpC	%DO	DO	pH	ORP
11.97	0.799	-1.8	-0.19	7.01	-65.1

243 Finish Sampling AMW-10; clear; slight odor

245 off-site

305 on-site; picking coolers for pick-up from Test America

345 Begin Sampling AMW-08 for VOC, SVOC, PCB, RCRA Metals (Field Filtered), GRO DRO

600 Gary from Test America pick-up AMW-07, AMW-10

607 Resume Sampling AMW-08

Temp	SpC	%DO	DO	pH	ORP
13.76	0.806	28.3	2.90	7.44	158.7

1631 FINISH SAMPLING AMW-08, CLEAR, NO ODOR; MOVE TO AMW-01

1655 BEGIN SAMPLING AMW-01 FOR VOC, SVOC, PCB, RCRA METALS (FIELD FILTERED), GRO, DRO

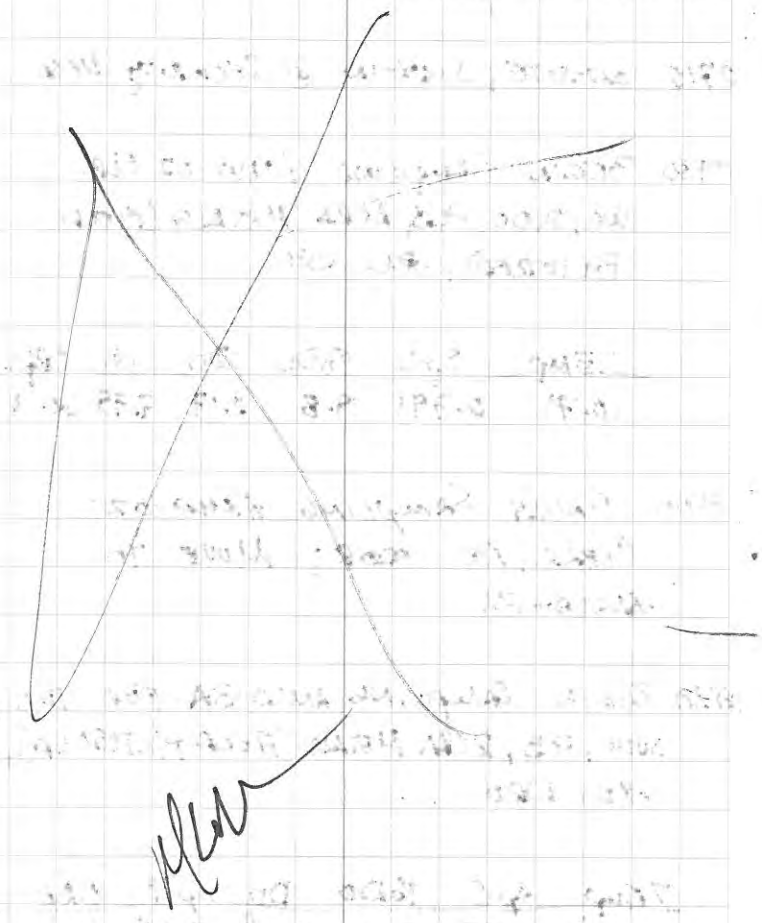
Temp	SpC	%DO	DO	pH	ORP
12.23	0.876	~~1.80~~ 16.5	~~7.58~~ 175	7.55	-1.8

1725 FINISH AMW-01, CLEAR, SLIGHT ODOR; MOVE TO AMW-06

1730 BEGIN SAMPLING AMW-06 FOR VOC, SVOC, ~~PCB~~, RCRA METALS (FIELD FILTERED), DRO, GRO

1757 FINISH SAMPLING AMW-06; WELL DRY - PCB & YSI READINGS NOT TAKEN; EMPTY PURGE WATER

1830 OFF-SITE



9/16/08 TUESDAY p.1/

PURPOSE: GW SAMPLING
ARCADIS: M. MEEHUSEN
WEATHER: SUNNY, 60'S

0715 ON-SITE; SIGN-IN @ SECURITY DESK

0930 BEGIN SAMPLING AMW-02 FOR VOC, SVOC, PCB, RCRA METALS (FIELD FILTERED), GRO, DRO

TEMP	SpC	%DO	DO	pH	ORP
10.71	0.791	19.8	2.17	7.79	60.3

800 FINISH SAMPLING AMW-02; CLEAR, NO ODOR; MOVE TO AMW-3A

820 BEGIN SAMPLING AMW-3A FOR VOC, SVOC, PCB, RCRA METALS (FIELD FILTERED), GRO, DRO

TEMP	SpC	%DO	DO	pH	ORP
11.69	0.725	21.2	2.28	7.62	16.6

9/16/08 TUESDAY 2/

845 FINISH SAMPLING AMW-3A; CLEAR; SLIGHT ODOR; MOVE TO AMW-04

900 BEGIN SAMPLING AMW-4 FOR VOC, SVOC, PCB, RCRA METALS (FIELD FILTERED), GRO, DRO

TEMP	SpC	%DO	DO	pH	ORP
10.93	0.757	23.0	2.53	7.38	8.7

930 FINISH SAMPLING AMW-4; CLOUDY, DK GRAY, ODOR; MOVE TO MW-6

935 BEGIN SAMPLING MW-6 FOR VOC, GRO, SVOC

950 FINISH SAMPLING MW-6; CLOUDY, RED-BROWN, NO ODOR; MOVE TO MW-5 * WELL DRY; NO READINGS

955 BEGIN SAMPLING MW-5 FOR VOC, GRO

1000

9/16/08 TUESDAY 4)

1000 FINISH SAMPLING MW-5; CLOUDY; YELLOWISH-BROWN, NO ODOR; DRY; NO READINGS TAKEN; MOVE TO MW-4

1015 BEGIN SAMPLING MW-4 FOR VOC, GRO

1026 FINISH SAMPLING MW-4; CLEAR, NO ODOR; MOVE TO AMW-9

1045 BEGIN SAMPLING AMW-9 FOR VOC, SVOC, PCB, RCRA METALS (FIELD FILTERED), GRO, DRO

1115 FINISH SAMPLING AMW-9; CLOUDY, DK GRAY; SLIGHT ODOR; DRY, NO READINGS TAKEN; PREPARE SAMPLES

1245 TEST AMERICA (GARY) SAMPLE PICK-UP

1255 OFF-SITE

Wed. 9.30.09 P. 1/2

ARCADIS: T. Nelson-Kalmes

Purpose: Water levels & Sump Sample

Weather: SSF, Sunny

1230 Arrive on site. Sign in @ Security. Begin WL.

1330 Sample "SUMP" for VOCs.

1345 Cont. Water Sampling.

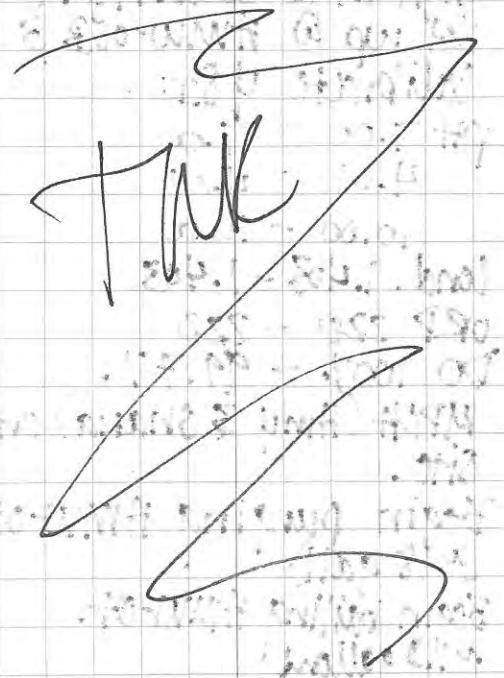
Sump 14.71°C, 6.94 pH, 0.26 mg/cm, 761 mV

1235	AMW-01	26.74	41.62
1240	AMW-04	26.90	26.76
1247	AMW-10	19.28	42.23
1300	AMW-02	27.00	42.64
1310	MW-6	2.43	4.55
1314	MW-5	2.50	4.39
1325	MW-4	7.70	8.31
1352	AMW-4	36.58	
1400	AMW-3A	17.80	39.53
1407	AMW-3B	100.54	150.97
1412	AMW-09	79.53	89.29
1420	AMW-08	38.91	44.47
1425	AMW-05B	52.62	54.98
1429	AMW-05	—	31.14
1435	AMW-07	43.04	44.97

Wed. 9.30.09 P. 2/2

1440 Sign out @ Security & Check on poly tank. Poly tank blocked in by new trucks.

1500 Off site.



Tuesday 10.06.09 P.1/3
ARCADIS: T. Nelson-Kalmes
Purpose: Sample AMW-05B, AMW-07, AMW-03B
Weather: SSF, Rain

0540 Pack up truck.
0600 Drive to Site & pick up ice.
0620 Sign in @ Security.
Set up @ AMW-05B &
Calibrate YSI.
pH 7.00 - 7.00
4.01 - 4.01
10.00 - 10.00
Cond. 1.403 - 1.403
ORP 220 - 220
DO 100% - 99.7%.
0720 MPCA (Amy & Shana) on site.
728 Begin purging AMW-05B. (~18 gall)
0700 Begin bailing AMW-07. ~1.5 gallons
0820 Collect AMW-05B, AMW-05B/MS, AMW AMW-05 MSD Sample. ~25 gallons (VOCs & PCBs) purged. Clean up

Tuesday 10.06.09 P.2/3

Time	Temp	SpC	DO	pH	ORP	gall.
0728	11.9	1.035	2.87	7.03	24.8	1.5
0742	13.17	1.048	0.37	6.92	37.6	~6
0752	13.24	1.047	0.35	6.85	23.5	~11
0800	13.31	1.053	0.35	6.86	6.6	~16
0810	14.17	.032	0.35	6.85	6.4	~20
0820	14.10	1.031	0.34	6.85	6.4	~25

0830 Clean pump by pay tank.
0910 Set up to collect equipment blank.
0930 Collect EB-001 (equipment blank) for VOCs & PCBs.
Clean up
1000 Sample AMW-07
Temp SpC ORP pH DO
10.79 0.591 -71 6.04 7.94
1015 Call J. Meyers & meet him @ Security. Test America drops off more bottles.
1020 J. Meyers gets MPCA security clearance to enter property.
1040 Set up @ AMW-03B.
1100 Begin purging AMW-03B.

Tuesday 10-06-09

Time	Temp	Spc	DO	pH	ORP	gal
1102	11.71	0.485	0.27	7.99	-102.5	~1
1106	11.41	0.484	0.20	7.97	-102.5	~6
1114	11.24	0.483	0.18	7.97	-102.5	~12
1122	11.11	0.481	0.15	7.95	-102.5	~16
1130	11.13	0.480	0.12	7.95	-102.6	~25
1140	11.14	0.480	0.11	7.95	-102.6	35

1140 Sample AMW-038(DUP-001) for VOCs & PCBs.
1150 Clean up, tear down, dump water @ poly tank.

1230 Sample poly tank. Tank-d for VOCs for disposal.
1247 Sign out @ Security.
1255 Drive back to office

Location St. Paul, MN Date 11/4/10

Project / Client FORDTCAP

ARCADIS: ATroschinetz, T. Nelson-Kalmes
Weather: 40s, breezy, clear
Purpose: SW sampling + Sump Sampling

0700 Load Truck
0715 Drive to Site.
0740 Safety Mtg w/ Gerry Krug
0820 Mob to Sump for Sample, Meet John Meyers.
0850 Calibrate YSI
ph 4 → 3.99
ph 7 → 7.01
ph 10 → 10.02
DO 100% → 95.6%
Cond 1413 → 1785 (out of range) mS
ORP 240 → 239.2 mV
Turb 0 NTU → 0 NTU
124 → 126.1
Grab Sump-01 Sample for VOCs.
0915 Finished @ Sump.
0930 Set up @ SW-01.
0940 Sample SW-01.
1000 Finished SW-01. Hike to SW-02

Location _____ Date 11/4/10

Project / Client _____

p. 2/2

1020 Sample SW-02.
1040 Finish SW-02. Hike to SW-03.
1055 Sample SW-03.
Finish sampling SW-03. Hike out & mob to Hidden Falls Park.
1140 Sample SW-04.
1150 Finished SW-04. Mob to outfall.
1230 Sample outfall-01.
1250. Finish outfall-01. Pack up truck.
1300 Dump decon water into poly tank.
1320 Sign out off site.

Location St. Paul, MN Date 11/10/10

Project / Client FORD TCAP

ARCADIS: A. Troschinetz
Weather: 50-60s, clear.
Purpose: Resample SW-02 + SW-03

0930 Pack-up Field Truck, Conduct Tailgate H&S Mtg.
1010 Travel to Site.
1030 Arrive at Site + Sign in with Security
1050 Sample at SW-02 for VOCs and GRO (6 VOAs)
1105 Sample at SW-03 for VOCs (3 VOAs)

Note: River level was down 2-3ft. compared to previous week.

1130 depart sample area; return to security to sign out.
1145 depart site, purchase ice, return to office.

AMT

Location Ford TCAP St-Paul Date 10/31/11

Project / Client Ford

ARCADIS: K Hoeha

Purpose: GW measurements, GW sampling

Weather: overcast, 40/50s

0900 ARCADIS onsite. Begin collecting GW levels.

	Time	Loc	DTW	TD (TOC)
	0918	AMW-17	5.85	9.89
11/1/11	0920	AMW-01	26.31	
11/1/11	0930	AMW-06	26.36	
	0931	AMW-05B	31.76	
	0932	AMW-05		31.15
	0941	AMW-07	42.20	
	1000	AMW-08	37.63	
	1014	AMW-14	6.72	12.00
	1020	AMW-15	6.70	13.05
	1035	AMW-12	6.45	11.44
	~~1048~~ 1035	AMW-11	5.79	9.39
11/1/11	1040	AMW-10	19.55	
	1043	AMW-13	6.80	11.97
11/1/11	1048	AMW-02	25.39	
	1050	AMW-18	10.24	14.48
	1105	AMW-3B	99.67	
	1113	AMW-3A	17.85	
	1120	MW-5	2.90	

Location _____ Date 10/31/11

Project / Client _____

Time	Well	DTW	Time	Well	DTW	TD
1124	MW-6	2.61	1145	AMW-16	5.60	10.66
1129	MW-4	7.78	1150	AMW-9	79.71	
1135	AMW-4	36.74				

1200 Break for lunch

1230 Back from lunch. Begin setup/mob to collect GW samples

1320 Begin purge @ AMW-18.

1335 Sample AMW-18 for VOCs, PAHs, DRO, GRO and (dissolved) RCRA metals. ~~[illegible]~~ Clean up well area, lock well, mob to AMW-13

1359 Begin purge @ AMW-13

1415 Sample AMW-13 for PAHs, DRO, GRO, and (dissolved) RCRA metals. GW is very turbid and brown.

From 11/11/11 ~~[illegible]~~ KA ~~[illegible]~~ KA

~~[illegible]~~ KA ~~[illegible]~~ KA

~~Temp [illegible]~~

Clean up site and mob to AMW-11

1430 Begin purge @ AMW-11.

1455 Sample AMW-11 for VOCs, PAHs, DRO, GRO and (dissolved) RCRA metals. Begin site cleanup. Pack coolers and make sure site is cleaned up.

Location _____ Date 10/31/11

Project / Client _____

Will need to return to complete remaining locations, and bring turbidity meter. ARCADIS offsite

KA

1/16/12

ARCADIS: K Hoehn
Sunde: Larry, Matt, Sean
Weather: 20s, Overcast
Purpose: Surveying

0800 ARCADIS/Sunde onsite, sign in
0805 Move to Area C, discuss what needs to be focused on for survey, tailgate
0825 ARCADIS offsite

KAH

1/17/12

ARCADIS: K Hoehn
Sunde: Matt, Larry, Sean
Purpose: Surveying, GW sampling
Weather: 10°, cloudy

0805 Onsite, go through tailgate w/Sunde ARCADIS offsite for supplies
0925 ARCADIS backonsite, sign in, begin unloading
1125 Finally able to remove caps on wells → stuck to steel by caps. Take WL readings
1140 Begin purging AMW-19 (~5 gallons → 5x well volume). DTW: 20.32 TD: 26.74
1155 Finish purging, begin sampling
1225 Sample AMW-19, AMW-19 MS, AMW-19 MSD
1250 Finish sampling/clean up. Begin to carry sample/equipment back to field truck so they don't freeze.
1330 Finish carrying equip/samples back and forth
1335 Begin to purge AMW-20 (DTW: 22.54 TD: 26.93).
1345 Finish purging w/bailer (~3.5 gallon → 5x well volume). Begin sampling
1415 Sample AMW-20 and DUP-02
1430 Finish site cleanup, begin carrying equipment/samples back to field truck.

1500 Call Brad Schultz from WM-Ford to locate drum for purge water. Wait to hear back.

1530 Finish purging water into drum and collecting ice. Return to Area C to touch base w/ surveyors and to take pictures.

1630 Finish taking pictures, discuss progress and fieldwork with surveyors. SUNDE and ARCADIS signout and offsite

KAH

Location St Paul MN Date 7/3/14

Project / Client Ford TCAP THURSDAY

P1/1

P1/5

ARCADIS: K Hoehn

Sunde: Larry A.

Purpose: MW sampling, oily features survey / Area C.

Weather: 70s sunny/cloudy

0655 ARCADIS onsite. Sunde calls to let know Mike (Sunde) sick, will only be Larry today.

0740 Sunde onsite. Go through tailgate. Meet up with John Meyers (Ford) for Oily stories / locations figure.

0745 Begin to mark out oily locations w/survey equip (Sunde) and Handheld GPS.

0900 Oily locations (35) marked out around main assembly building (MAB). Mobilize to point building to ~~mark out~~ survey locations.

0940 Oily locations marked out @ point building. Mobilize to Area C to ~~mark~~ survey high water marks, current Mississippi River elevation.

1050 Surveyed three high water marks (difficult to get readings due to tree cover), and current high water marks. Begin hike back to trucks. W.L meter not working.

1105 Sunde offsite. ARCADIS to Connex box to get supplies for water sampling @ FA11 (MW-05, MW-05B, MW-07).

1145 Supplies collected, back @ FA11. Break for lunch.

1210 Lunch break over. TEST W.L meter and interface

Location St. Paul MN Date 7/3/14

Project / Client Ford TLAP THURSDAY

P2/5

probe (not working when attempted to use in Area C @ AMW-19 / AMW-20.

Observations @

AMW-20: Opened up pro-top to ants / ants with eggs covering the flood cap. Opened flood cap to no standing water / damage in protective casing.

AMW-19: Opened pro-top → no ants / damage. Opened flood cover to standing water up to top of monitoring well covering. No other discernible issues.

1230 Call to Angharad → check to see if we have another W.L. meter (W.L meter / interface probe onsite still not working). If not, call FEI to see if any in stocks.

1234 Call to Geotech to troubleshoot.

1250 Call ended w/ Geotech. W.L. meter needs to be sent in for repair. Angharad (AP) enroute to FEI to pick up rented W.L meter. Kit to set up tubing @ MW-07, MW-05, MW-05B.

1330 AP onsite, drops off W.L meter. AP offsite. Kit set up peristaltic @ MW-07.

1350 Peristaltic pump external battery dies out while attempting to start pumping (fully charged prior to bringing on site.) Change out setup to connect to field truck.

Location St Paul MN Date 7/3/14

Project / Client Ford TLAP THURSDAY

P3/5

1415 Pump not staying on. Troubleshoot.

1425 Reset all connections.

1430 Begin pumping @ MW-07. (tubing set @ midscreen)

Time	Rate (mL/min)	DTW (ft btoc)	pH	Cond. (mmhos/cm)	DO (mg/L)	Temp (°C)	ORP (mV)
1435	200	28.78	6.32	1.560	15.03	14.01	47.8
1440	250	28.79	6.31	1.556	2.70	13.64	52.5
1445	250	28.79	6.30	1.553	0.86	13.72	55.0
1450	225	28.80	6.36	1.553	0.55	13.58	57.2
1455	225	28.81	6.37	1.557	0.45	13.56	59.8
1500	225	28.79	6.39	1.560	0.35	13.53	61.6
1505	225	28.79	6.41	1.565	0.30	13.47	65.8
1515	225	28.79	6.42	1.563	0.27	13.42	68.6
1520	225	28.80	6.42	1.563	0.25	13.35	70.2
1525	225	28.80	6.42	1.562	0.25	13.33	71.0

1525 Sample MW-07 (20140703) for PAHs, VOCs, dissolved TAL metals.

Break down equipment.

1600 Setup @ MW-05B.

1619 Begin pumping @ MW-05B (tubing set midscreen)

Time	Rate (mL/min)	DTW ft btoc	pH	Cond (mmhos/cm)	DO mg/L	Temp °C	ORP (mV)
1625	200	18.40	7.48	0.700	0.34	16.22	-180.9
1630	200	18.41	6.87	0.738	0.28	15.11	-1200.4
1635	200	18.41	6.66	0.744	0.31	14.96	-80.6

Location St. Paul MN Date 7/3/14

Project / Client Ford TLAP THURSDAY

P4/5

Time	Rate (mL/min)	DTW (ft btoc)	pH	Cond. (mmhos/cm)	DO mg/L	Temp °C	ORP mV
1640	225	18.43	6.68	0.755	0.60	15.50	-83.2
1645	225	18.44	6.65	0.750	0.75	14.89	-75.6
1650	225	18.44	6.66	0.738	0.25	14.11	-70.9
1655	225	18.44	6.55	0.737	0.21	14.00	-63.8
1700	225	18.44	6.64	0.736	0.19	13.93	-62.0
1705	225	18.44	6.59	0.740	0.17	14.08	-67.5
1710	225	18.44	6.61	0.737	0.17	13.96	-68.0

1720 Sample MW-05B (20140703) for VOCs, dissolved TAL metals. Break down site, set up @ MW-05.

1730 Begin pumping @ MW-05 (tubing set @ midscreen)

1735	225	19.47	6.69	1.648	1.11	13.68	-28.0
1740	225	19.48	6.68	1.645	0.74	13.70	-19.8
1745	225	19.49	6.70	1.645	0.52	13.68	-12.3
1750	225	19.49	6.68	1.643	0.45	13.64	-10.1
1755	225	19.49	6.72	1.645	0.40	13.74	-7.7
1800	225	19.49	6.71	1.639	0.41	13.54	-4.8
1805	225	19.49	6.70	1.637	0.42	13.61	-1.0
1810	225	19.49	6.72	1.638	0.44	13.51	0.4

1820 Sample MW-05 (20140703) for VOCs, dissolved TAL metals. Break down site, close MWs.

1835 Mob to Area C to collect DTW @ AMW-19/AMW-20.

1841 AMW-20 DTW: 7.06

Location St Paul MN Date 7/3/14

Project / Client Ford TLAP THURSDAY

P5/5

1845 AMW-19 DTW: 4.83

mobilize back to Area C bull pen.

1850 mobilize to conex box + drop off supplies/IDW

1900 ARCADIS office. Conex box closed, supplies dropped off.

KH

Location St Paul MN Date ~~8/6/14~~ 8/7/14 KH

Project / Client Ford TCAP

1/5 Thursday

arcadis pschulz, a salzer, a roll

purpose GW sampling, soil screening oversight

weather 60s sunny

0650 arcadis onsite.
0700 tailgate meeting calibrate PID
0715 begin ysi calibrations

specific conductance	1.424 → 1.413 ms/cm
dissolved oxygen	107.4 → 100.4 %
pH 4	4.05 → 4.00
pH 7	7.03 → 7.00
pH 10	10.01 → 10.00
ORP	234.0 → 240.0
NTU 0 (turbidity)	2.0 → 0.0
turbidity 126 NTU	128.8 → 126.0

0734 Finish calibrating ysi. pack up field truck.
0743 mob to area C/WWTP.
0750 set up to bail amw-05.
0752 gauge amw-05. DTW = 30.10
total watr column = 1.03 feet
0753 Bail amw-05.
0802 Bailed out 1/2 liter water we are going to let it recharge and then sample.

Location St Paul MN Date ~~8/6/14~~ 8/7/14 KH

Project / Client Ford TCAP

Thursday 2/5

0804 mob to river wells from MW-019, AMW-020
0822 set up to gauge amw-019.
DTW = 18.74 feet
0825 call K-mann for screen intervals of amw-019 and amw-020. she thinks they are 14-24 / 15-25
0838 begin pumping at amw-019.
0920 Finish purging well. getting voltage on pump. Run back to trailer (pschulz) to get new battery.
0947 Return to amw-019. Call Ryan O to see if we should take more measurements before sampling; he says yes.
0948 restart pump.
1016 Finish purging. begin sampling
1025 sample amw-019 (20140807) for VOCs and DISSOLVED TAL metals.
• Collect DUP-002 (20140807 for VOCs and dissolved TAL metals

Location Ford TCAP Date 8/7/14

Project / Client St Paul MN

3/5 Thursday

1040 mob to AMW-020 and set up to sample. DTW = 21.0 feet

1044 Begin pumping AMW-020.

1155 sample AMW-20 for VOC and dissolved TAL metals.

1200 Begin clean up at AMW-20 and mob back to field truck.

1225 arrive back to trailer. break for lunch ~~adam packs~~ IDW

1300 ~~pack~~ cooler (show adam now)

1325 mob back to AMW-05.

1334 Begin bailing AMW-05 again.

1339 take YSI parameters

1345 sample AMW-05 (20140807) for VOCs and Dissolved TAL metals

1400 mob to AMW-07.

1402 Set up on AMW-07. DTW = 39.40

~~1445~~ 1445 turn pump on.

1508 adam offsite to get more ice and another chain of custody [Gary is meeting us at 4pm.]

1530 adam back.

1550 call to Gary with Test America.

Location FORD TCAP Date 8/7/14

Project / Client St Paul MN

4/5

let him know where we are to pick up samples.

1600 call to Ryan O about why pump is acting up and being extremely inconsistent. He says to try pumping at 1 L/min to see if we can get parameters to stabilize.

* problem with pump is that flow rate is highly inconsistent with the Grundfos. at such a low rate. We have been jumping all over from >100 mL/min to <600 mL/min.

1603 Begin purging at 1 L/minute.

1615 Gary onsite to pick up soil samples from stock pile yesterday

1630 call Ryan O to let him know the parameters stabilized. He doesn't answer, Kelly answers main line and said to sample

1640 sample AMW-07 (20140807) for VOC, PAH, Dissolved TAL metals.

14 Location St Paul MN Date 8/7/2014

Project / Client Ford TCAP

8/5

1650 Begin cleaning up at AMW-07
1705 Move back to trailer to unload gear into 1DW drums and conex box.
1730 arcadis offsite

Abs
8/7/2014

Location St. Paul, MN Date 9/16/14

Project / Client Ford TLAP TUESDAY

P1/4

ARCADIS: K Hoehn, A. Roll; A. Pagnon

Purpose: Area C GW sampling

Weather: 60/70s, Sl. Cloudy

0708 KH onsite. Safety tailgate. Prep for GW sampling

- GW sample bottles
- filter supplies
- tubing
- preload sample bottles
- COC
- field forms

0900 Load up supplies/equipment. YSI/pump to arrive w/ FedEx shipment @ approximately 10-1030 Am.

Discussed w/AP:

- Stockpile II sampling (quantity/constituents)
- Stockpile volumes
- Sample SPII for TCLP VOCs, TCLP SVOCs, TCLP RCRA metals

1025 Equipment onsite. Load up and mobilize to FA10/11.

1038 Begin to mobilize equipment w/AP to AMW-19 and AMW-20.

1157 Pump on @ AMW-19.

* Pump out 3 well volumes instead of low flow due to inability to pump @ a low rate for low flow

Location: St. Paul area Date: 9/16/14

Project / Client: Ford TAP TUESDAY

P2/4

Time	Rate	Vol Purged (gal)	DTW	pH	Cond.	Turb.	DO	Temp °C
1201	1950 mL/min - 2		16.93	6.80	0.746	48.0	10.7%	12.70
1204	"	~3.5	16.94	6.79	0.746	9.0	0.95 mg/L	12.64
1208	"	~5	16.94	6.80	0.744	2.0	0.88 mg/L	12.66

1210 Sample ANW-79 (20140916) for VOCs, TAL metals (dissolved.) Decon pump, break down equipment and mob to ANW-20.

** Collect DUP-003 (20140916) as well.

1300 Pump on @ ANW-20. (3x well volume)

Time	Rate	DTW	pH	Cond	Turb	DO	Temp	ORP
1303	1200	19.06	6.80	1.053	24.6	0.67	12.60	71.8
1306	1200	19.14	6.81	1.054	30.2	0.50	12.62	66.1
1309	1200	19.14	6.81	1.061	19.8	0.36	12.62	52.4
1312	1200	19.14	6.82	1.062	14.8	0.25	12.60	29.0
1315	1200	19.14	6.83	1.061	10.8	0.24	12.63	9.0
1318	1200	19.14	6.83	1.065	6.0	0.21	12.57	-9.3

1320 Sample ANW-20 (20140916) for VOCs and TAL metals, dissolved.

** Unless otherwise noted, units are

Rate: mL/min DO: mg/L

DTW: ft btoc Temp: °C

Cond: µmhos/cm ORP: mV

Turbidity: NTU

Location: St. Paul area Date: 9/16/14

Project / Client: Ford TAP TUESDAY

P3/4

1326 Pump off. Demobilize equipment from FA10 to FA11 @ well cluster ANW-05/ANW-05B

1430 All equipment back @ vehicles. Load up and mobilize to ANW-05/ANW-05A. KH to decon/set up while AP disposes of IDW GW @ 55-gal drum onsite. Break for lunch.

1450 Break over. Finish decon and setup @ ANW-05B.

1525 Begin pumping @ ANW-05B.

Time	Rate	Vol Purged (gal)	DTW	pH	Cond	Turb	DO	Temp	ORP
1525	725	28.53	—	—	—	—	—	—	—
1532	↓ 375	—	7.10	0.802	115.1	0.30	14.68	-182.7	
1537	375	28.74	7.06	0.815	42.4	0.19	15.39	-165.9	
1538	"	28.73	6.99	0.815	29.0	0.16	15.60	-163.5	
1541	"	28.73	6.96	0.809	19.6	0.14	15.69	-160.9	
1545	375	28.73	6.94	0.804	16.2	0.16	15.62	-149.5	
1548	375	28.73	6.93	0.800	14.7	0.16	15.75	-147.2	
1553	"	28.73	6.92	0.791	11.1	0.11	15.75	-141.8	
1558	"	28.73	6.91	0.789	10.9	0.09	15.91	-130.8	
1603	"	28.73	6.90	0.787	8.4	0.28	16.03	-146.6	
1608	375	28.73	6.88	0.777	6.2	0.08	15.76	-133.2	
1613	375	28.73	6.88	0.769	5.1	0.08	15.74	-179.5	
1618	375	28.73	6.88	0.764	6.3	0.16	15.80	-130.0	

1620 Sample ANW-05B (20140916) for VOCs, TAL metals (dissolved). Decon/mob to ANW-07. ANW-05 has

Location St Paul MN Date 9/16/14

Project / Client Ford TRAP TUESDAY

P4/4

(cont.) insufficient water volume to sample.

1707 Begin pumping @ AMW-07.

Time	Rate	DTW	pH	Cond.	Turbidity	DO	Temp	ORP ~~Eh~~
1707	750	39.62	6.77	1.548	100.8	2.52	14.58	41.3
1712	750	39.84	6.72	1.543	53.7	2.41	15.22	55.2
1717	750	39.83	6.69	1.233	26.5	4.56	15.44	79.7
1722	750	40.46	6.65	1.147	13.0	5.26	14.37	94.5
1727	750	40.71	6.56	0.967	17.5	6.46	14.10	107.1
1732	750	40.73	6.53	0.931	10.2	6.90	14.10	116.8

1740 Sample AMW-07 (20140916) for VOCs, TAL metals, (dissolved), and PAHs. Pack up equipment. Mobilize to trailer / connect to drop off supplies.

Well ID	DTW	TD	Time
AMW-19	16.76	26.67	1157
AMW-20	19.06	25.90	1300
AMW-05	29.91	31.15	1500
AMW-05A	28.53	54.96	1525
AMW-07	39.09	44.92	1700

1815 ARCADIS offsite.

PH

Location St. Paul MN Date 5-21-15

Project / Client Ford TCAP Thursday 7/7

1520 offsite to get ice

1540 onsite to set up sampling - Did a Sheen test - failed - Clear sheen. will test for PCBs.

1600 Sampling MAB-STUNNEL-1082 (20150521) for VOCs, GRO, DRO, RCRA metals, Cyanide PCBs, SVOCs and moisture content.

VOCs 32.655 + 10 = 43g

32.722 + 13 = 46g

GRO 32.673 + 11 = 43g

32.853 + 12 = 45g

DRO 123.080 + 27 = 150g

1800 ARCADIS off site.

Location St. Paul MN Date 6/15/15

Project / Client Ford TCAP Monday 1/5

ARCADIS: Tom Damon, Kelly Hoehn

Purpose: Area C investigation

Weather: Partly Cloudy, 60's - 70's

0645 Arrive on-site, meet with Kelly Hoehn, get oriented to site, gather paperwork and sampling supplies together

0820 Mobilize to Area C to get boring clearance review work area.

0850 Arrive back at Trailer area, continue to assist Kelly on pre-work needs

1100 Cascade on-site, review site orientation with Dig personnel

1120 Conduct Tailgate & Health & Safety meeting with Cascade

1155 Break for lunch.

Rite in the Rain

Location St Paul MN Date 6/15/15

Project / Client Ford TCAP Monday 2/5

1220	Return from lunch Calibrate MiniRae 3000, Pine ID 019654 Fresh Air Calibration: 0.0 ppm 100ppm Isobutylene Calibration: 100.0 ppm
1230	Arrive at Area C, drillers construct decon pad and are preparing to move equipment.
1300	Begin to set-up at ASB-1004, Drill at ASB-1001
1700	Complete drilling of ASB-1001, drillers clean-up / head off-site. Drillers completed borings to 90'
	Continue to complete sampling and logging of soil.
1900	Mobile back to trailer to finish clean-up and paper work

Location St Paul MN Date 6/15/15

Project / Client Ford TCAP Monday 3/5

Sample Collection of ASB-1001

ID		Time
ASB-1001	39-42 (20150615)	1650
ASB-1001	50-54 (20150615)	1710
ASB-1001	65-70 (20150615)	1725
ASB-1001	72-74 (20150615)	1745
ASB-1001	84-85 (20150615)	1830
ASB-1001	80-82 (20150615)	1845

Oil present (72-74). No sheen present at all sample locations

Drums generated (2)

#088 - Soil < 100 ppm

#089 - Soil > 100 ppm

Additional details for sampling

1650 Sample ASB-1001_39-42 (20150615) for VOCs, SVOCs, TAL metals, GRO, DRO, TCLP VOCs, TCLP SVOCs, TCLP Metals, moisture content

VOCs 32.742J + 11J = 44J

32.684J + 11J = 44J

GRO 31.679J + 11J = 43J

32.627J + 11J = 44J

DRO 88.17J + 28J = 116J

0.1 N Soil → Negative (No 0.1 N Soil test) In the Rain

Location St Paul MN Date 6/15/15

Project / Client Ford TCAP MONDAY

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1710 Sample ASB-1001_50-54 (20150615) for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP Metals, TCLP VOCs, TCLP SVOCs, moisture content.

VOCs 36.30$_j$ + 11$_j$ = 47$_j$ 37.37$_j$ + 11$_j$ = 48$_j$

GRO 37.38$_j$ + 12$_j$ = 49$_j$ 36.56$_j$ + 10$_j$ = 37$_j$

DRO 88.12$_j$ + 28$_j$ = 116$_j$

Oil N soil → Negative Sheen test → negative

1725 Sample ASB-1001_65-70 (20150615) for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP metals, TCLP VOCs, TCLP SVOCs and moisture content.

VOCs 36.98$_j$ + 11$_j$ = 48$_j$ Oil N soil → Negative

37.27$_j$ + 12$_j$ = 49$_j$ Sheen test → Negative

GRO 37.11$_j$ + 11$_j$ = 48$_j$

37.15$_j$ + 12$_j$ = 49$_j$

DRO 88.12$_j$ + 28 = 116$_j$

1745 Sample ASB-1001_72-74 (20150615) for VOCs, GRO, DRO, TAL metals, SVOCs, TCLP VOCs/SVOCs/metals and moisture content.

VOCs 36.41$_j$ + 13$_j$ = 49$_j$

37.60$_j$ + 12$_j$ = 49$_j$

GRO 36.85$_j$ + 12$_j$ = 49$_j$

37.12$_j$ + 11$_j$ = 48$_j$

DRO 88.

Oil N soil → positive Sheen test → negative

Location St Paul MN Date 6/15/15

Project / Client Ford TCAP MONDAY

P5/5

1830 Sample ASB-1001_84-85 (20150615) for VOCs, SVOCs, TAL metals, GRO, DRO, TCLP metals, TCLP VOCs, TCLP SVOCs, moisture content.

VOCs 37.24$_j$ + 12$_j$ = 49$_j$ 37.42$_j$ + 11$_j$ = 49$_j$

GRO 37.06$_j$ + 11$_j$ = 48$_j$ 37.43$_j$ + 11$_j$ = 48$_j$

DRO 88.59$_j$ + 27$_j$ = 115$_j$

Sheen test → negative (No 0.1 N soil)

1845 Sample ASB-1001_80-82 (20150615) for VOCs, SVOCs, TAL metals, GRO, DRO, TCLP Metals, TCLP VOCs, TCLP SVOCs and moisture content.

VOCs 36.29$_j$ + 11$_j$ = 47$_j$

36.72$_j$ + 11$_j$ = 48$_j$

GRO 36.89$_j$ + 11$_j$ = 48$_j$

37.07$_j$ + 13$_j$ = 50$_j$

DRO 88.24$_j$ + 28$_j$ = 116$_j$

Sheen test → negative (No Oil N soil test)

Clean up site. Plug in equipment.

1855 TD offsite.

1910 KH offsite. Trailer/Conex box locked

KH

Rite in the Rain

Location St Paul, MN Date 6/16/15

Project / Client Ford TCAP Tuesday

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ARCADIS: Tom Darman, Kelly Hoehn

Subcontractors: Cascade

Purpose: Area C investigation

Weather: Sunny, 60's - 70's expected

0630	Arrive on-site, gather equipment
0635	Calibrate MiniRae 3000, ppb ID 019655 by Fresh Air Calibration: 0.0 ppm 100.0 Isobutylene Calibration: 100.1 ppm, Complete gatherings of supplies for the day.
0705	Arrive at Area C work area, Kelly Hoehn indicated to go ahead and backfill ASB-1001 with grout.
0710	Conduct Tailgate & Health & Safety meeting with Cascade. Discuss scope of work for the day.
0725	Cascade is preparing to grout ASB-1001

Location St Paul MN Date 6/16/15

Project / Client Ford TCAP Tuesday

P. 2/6

0800	Cascade put 7 bags worth of 50 lbs concrete mix. They are allowing concrete to settle first before putting more in hole.
0830	Set-up at ASB-1002
0842	Begin to hand auger ASB-1002
1120	Drillers depart work area, current drill depth is 60 feet. Started to encounter fill/waste from 55-60 with grout
1150	Drillers back from lunch
1210	Complete Mid-Day calibration of PID MiniRae 3000 Fresh Air Calibration: 0.0 ppm 100.0 Isobutylene Calibration: 100.0 ppm
1224	Arrive back at work area
1235	Continue to drill

Rite in the Rain

Location St Paul MN Date 6/16/15

Project / Client Ford TCAP p. 3/6

1315 Amy from Minnesota Pollution oversight on-site.

1620 Amy is off-site, completed duty work for the day. Boring was completed to 95 feet below ground surface.

Drums generated today (3)
#090 - PPE/Some drilling sleeves
#091 - Soil PID <100
#092 - Water, decon water

Sampling details for day as follows:

1345 Sample ASB-1002_55-60(20150616) for VOCs, SVOCs, GRO, DRO, TAL Metals, TCLP Metals, TCLP VOCs, TCLP SVOCs and Moisture Content

VOCs 36.53+13 = 49g
36.76+11 = 47g
GRO 36.50+11 = 47g
36.73+10 = 36g
DRO 121.586+29 = 150

Oil N Soil → Negative
Sheen test → Negative

Location St Paul MN Date 6/16/15

Project / Client Ford TCAP p. 4/6

1400 Sample ASB-1002_60-64(20150616) for VOCs SVOCs, GRO, DRO, TAL Metals, TCLP Metals, TCLP VOCs TCLP SVOCs and Moisture Content

VOCs 37.40+12 = 49g
36.42+10 = 46g
GRO 37.01+11 = 48g
36.07+11 = 47g
DRO : Not recorded
Oil N Soil → negative, Sheen test → Yes

1620 Sample ASB-1002_75-77(20150616) for TCAP VOC, TCLAP SVOCs, TCLAP Metals, VOC, SVOC, GRO, DRO TAL Metals - Hex/Tri Chromium, Mercury, PCB

VOC 31.876+10 = 41g
36.72+10 = 46g
GRO 36.61+10 = 46g
32.654+10 = 42g
DRO 122.364+30 = 152g
Oil N Soil → Negative
Sheen test → Positive

Rite in the Rain

Location St Paul MN Date 6/16/15

Project / Client Ford TCAP p5/6

1655 Sample ASB-1002 _ 80-84 (20150616)
For VOC, SVOC, GRO, DRO, TAL
metals / Hex/Tri chromium, moisture
content, TCLP VOC/SVOC/Metals
VOC 32.784 + 10g → 42g
36.810 + 12 → 48g
GRO 31.678 + 11 → 42g
37.310 + 10 → 47g
DRO 123.00 + 26g = 149g
Oil N Soil → Negative / sheen test → Negative

1715 Sample ASB-1002 _ 92-95 (20150616)
for VOC, SVOC, GRO, DRO, TAL metals/
Hex/Tri chromium, Moisture,
TCLP VOC/SVOC/Metals

VOC 32.626 + 11g = 43g
32.584 + 11g = 43g
GRO 32.603 + 11g = 43g
32.869 + 12 = 44g
DRO 121.499 + 27 = 148g

Oil N Soil → Negative
Sheen test → Negative

Location St Paul MN Date 6/16/15

Project / Client Ford TCAP p 6/6

1720 Drillers offsite, mob to
trailer to complete notes

1815 Completing notes for day.

1830 Depart Site

Rite in the Rain

Location St. Paul MN Date 6/17/05

Project / Client Ford TCAP Wednesday

p. 1/6

ARCADIS: Tom Darmon, Kelly Hoehn

Subcontractors: Cascade

Purpose: Area C Investigation

Weather: Partly Cloudy, chance of rain/storms, 60-70s

0512 Arrive on-site, pick up equipment for sampling.

0520 Calibrate MiniRae 3000, Pine ID 014654
Fresh Air Calibration: 0.0 ppm
100 ppm Isobutylene: 100.1 ppm

0540 Arrive at Area C work area, get sample bottles ready

0535 Cascade on-site, conduct Tailgate & Health and Safety meeting

0655 Begin to core concrete with Sonic rig at ASB-1003.

0710 Attempted to hand auger, hit more concrete / large gravel.

Location St Paul MN Date 6/17/05

Project / Client Ford TCAP Wednesday

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0950 No Recovery 50-60 feet. Drillers indicated they hit concrete and must have pushed soil out.

1005 Drillers pushed to 65. Recovery was lost, Drillers pushed back down to 67 to recover

1130 Sample ~~ASB-1003-(60-64)~~ ASB-1003_60-64(20050617)
for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals, VOC/SVOCs, and moisture content

VOCs 32.813 + 10g = 42g
32.888 + 12g = 44g

GRO 32.647 + 13g = 45g
31.822 + 11 = 42g

DRO 88.32g + 27 = 115g

Oil N Soil → Negative
Sheen Kit Negative

1200 Break for lunch

1210 Continue to sample

Rite in the Rain

Location St Paul MN Date 6/17/15

Project / Client Ford TCAP p. 3/6

1215 Sample ASB-1003_ 70-~~75~~ 74 (20150617)
for VOC, SVOC, GRO, DRO, TAL
Metals, TCLP Metals/VOC/SVOC, and
moisture Content

VOCs 32.839 + 10 = 42g
32.926 + 10 = 42g
GRO 33.096 + 10 = 43g
32.495 + 11 = 43g
DRO 88.24 + 28 = 116g

Oil N Soil → Negative. Sheen test → Negative

1230 PID Mid day Calibration
Fresh Air: 0.0 ppm
Isobutylene: 100.0 ppm

1328 Completed drilling / Stop work due
to storm

Location St Paul MN Date 6/17/15

Project / Client Ford TCAP p. 4/6

1440 Sample ASB-1003_80-82 (20150617)
for VOC, SVOC, GRO, DRO, TAL
Metals, TCLP Metals/VOC, SVOC and
Moisture content.

VOC 32.723 + 14g = 46g
32.654 + 11g = 43g
GRO 31.601 + 10g = 41g
31.763 + 11g = 41g
DRO 88.24 + 28g = 116g

Oil N Soil → Negative, Sheen test → negative

1450 Stop work due to weather/storms

1455 Drill. depart work area.

1530 Drillers arrive back and
refuel Sonic rig.

Rite in the Rain

Location St Paul MN Date 6/17/15

Project / Client Ford TCAP p. 5/6

1600 Sample ASB-1003_90-94 (2915 0617) for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals, SVOC, VOC and moisture content

VOC 32.671g + 10 = 42g
31.634 + 11 = 42g
GRO 32.738 + 10 = 42g
31.704 + 11 = 42g

DRO 88.11 + 27 = 115g

Oil N Soil → Negative
Shear test → Negative

1640 Cascade is finishing buttoning up equipment, completed grouting of ASB-1003, still needs to be finished with more grout. Augers were deconed.

1650 Cascade off site

Location St Paul MN Date 6/17/15

Project / Client Ford TCAP p. 6/6

Drums generated today:
#093: Water from Sonic Rig
#094: PPE drum

1720 Tom Damon off-site

Rite in the Rain

Location St Paul, MN Date 6/18/15

Project / Client Ford TCAP Thursday

p. 1 / 5

ARCADIS: Tom Darman, Kelly Hoehn

Subcontractor(s): Cascade

Purpose: Area C Investigation

Weather: Partly cloudy, 60's - 70's

0610 Arrive on-site, gather equipment and supplies

0620 Calibrate MiniRae 3000 Pine ID 019654

Fresh Air Calibration: 0.0 ppm

Isobutylene Calibration: 100.0 ppm

0700 Conduct Tailgate & Health and Safety meeting with Cascade

0720 Discuss with project team about air monitoring, Kelly to order new PID for personal air monitoring due to strong odors on ASB-1001 & ASB-1002

Location St Paul MN Date 6/18/15

Project / Client FORD TCAP Thursday

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0800 Continue to drill

1020 Complete boring to 40 Feet discuss with Kelly progress so far and send PID results

1115 Drillers depart for Lunch

1200 Break for health & Safety meeting

1230 Continue to log soil, Amy Advance onsite to review soil

1240 Amy is offsite

1245 Complete Mid-day PID Calibration

Mini Rae 3000 Mini ID 019654

Fresh Air: 0.0 ppm

Isobutylene: 100.0 ppm

Mini Rae 3000 (Extra Air Monitor)

Fresh Air: 0.0 ppm

Isobutylene: 100.1 ppm

Rite in the Rain

Location St Paul MN Date 6/18/15

Project / Client Ford TCAP Thursday

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1310 Elizabeth Hosch from Capitol Region on-site to inspect operation due to increased turbidity in waterway.

1440 Collect Sample from ASB-1005_12-14(2015 06 18) For VOC, SVOCs, GRO, DRO, TAL Metals, TCLP Metals/SVOC/VOCs and moisture content

VOC 32.624 + 10g = 42g
32.728 + 10g = 42g

GRO 31.745 + 10g = 41g
32.977 + 10g = 42g

DRO 88.01g + 28g = 116g

Oil N Soil → Negative
Sheen Test → Negative

1510 Collect Sample from ASB-1005_37-40(2015 06 18) for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals/SVOC/VOC, and moist-

Sample continued next page →

Location St. Paul MN Date 6/18/15

Project / Client FORD TCAP Thursday

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VOC 31.641 + 12 = 43g
32.670 + 11 = 43g

GRO 32.801 + 10 = 42g
32.578 + 10 = 42g

DRO 122.439 + 27 = 149g
Oil N Soil → Negative
Sheen Test → Negative

1545 Sample ASB-1005_46-50(2015 06 18) for VOC, SVOC, GRO, DRO, TAL Metals TCLP Metals/SVOC/VOC and moisture content

VOC 31.920 + 10g = 41g
31.779 + 12 = 43g

GRO 32.840 + 12 = 44g
32.623 + 10 = 42g

DRO 122.084 + 29 = 151g

Oil N Soil → Negative, Sheen Test → Negative

Rite in the Rain

Location St. Paul MN Date 6/18/14

Project / Client FORD TCAP Thursday

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1625 SAMPLE ASB_28-30(20150618) for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals/SVOC/VOC & moisture content,

VOC 31.711 + 12 = 43g

31.573 + 10 = 41g

GRO 31.797 + 10g = 41g

32.919 + 10g = 42g

DRO 122.571 + 29 = 151g

Oil N Soil → Negative

Sheen test → Negative

1700 Drillers offsite, lock gate keys to office to secure rigs

1745 T. Dermon departs site

Location St. Paul MN Date 6/19/15

Project / Client Ford TCAP Friday

p. 1/5

ARCADIS: Tom Dermon,

Subcontractors: Cascade

Purpose: Area C Investigation

Weather: Partly Sunny, highs in 70's expected

0615 Arrive on-site, gather supplies for days work

0625 Calibrate MiniRae 3000

Fresh Air Calibration: 0.0 ppm

Isobutylene Calibration: 100.2 ppm

0628 Calibrate additional MiniRae 3000

Fresh Air Calibration: 0.0 ppm

Isobutylene Calibration: 100.0 ppm

0655 Conduct Tailgate & Health & Safety meeting with drilling crew. Drillers are inspecting equipment prior to start of work

Rite in the Rain

Location St. Paul MN Date 6/18/14

Project / Client FORD TCAP Thursday

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1625 SAMPLE ASB_28-30(20150618) for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals/SVOC/VOC & moisture content,

VOC 31.711 + 12 = 43g

31.573 + 10 = 41g

GRO 31.797 + 10g = 41g

32.919 + 10g = 42g

DRO 122.571 + 29 = 151g

Oil N Soil → Negative

Sheen test → Negative

1700 Drillers offsite, lock gate keys to office to secure rigs

1745 T. Dermon departs site

Location St. Paul MN Date 6/19/15

Project / Client Ford TCAP Friday

p. 1/5

ARCADIS: Tom Dermon,

Subcontractors: Cascade

Purpose: Area C Investigation

Weather: Partly Sunny, highs in 70's expected

0615 Arrive on-site, gather supplies for days work

0625 Calibrate MiniRae 3000

Fresh Air Calibration: 0.0 ppm

Isobutylene Calibration: 100.2 ppm

0628 Calibrate additional MiniRae 3000

Fresh Air Calibration: 0.0 ppm

Isobutylene Calibration: 100.0 ppm

0655 Conduct Tailgate & Health & Safety meeting with drilling crew. Drillers are inspecting equipment prior to start of work

Rite in the Rain

Location St Paul, MN Date 6/19/15

Project / Client Ford TCAP Friday

p. 2/5

0820	Amy Hadjiaris and Chris Form / MPCA on-site.
1030	Drillers depart to pick up tarp for drums
1044	Drillers back and cleaning up some equipment / put drums away,
1100	Continue to drill
1215	Completed drill to 80 feet, Drillers off-site for lunch. Finish to los Soils
1235	Work Kelly with new PID/soil information.
1240	Drillers back on-site
1235	Kelly indicated to push 5 more feet - Keep 37-40, 60-~~62~~, 69-70 and 79 to 80 for Samples

Location St. Paul, MN Date 6/19/15

Project / Client Ford TCAP Friday

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1320 Collect Sample from ASB-1004_37-40 (20150619) for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals, SVOC, VOC and moisture content.

VOC 31.854 + 10g = 41g
31.232 + 11g = 42g
GRO 31.439 + 10g = 41g
31.034 + 10g = 41g
DRO 88.36 + 25g = 113g

Oil N Soil → Negative Sheen Test → Negative

1350 Collect Sample from ASB-1004_60-62 (20150619) for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals, SVOC, VOC & Moisture

VOC 31.205 + 10 = 41g
31.455 + 10 = 41g
GRO 32.318 + 11 = 43g
31.401 + 10 = 41g
DRO 88.41 + 26 = 114g

Oil N Soil → Negative Sheen Test → Positive

1400 Drillers off-site

Rite in the Rain

Location St. Paul, MN Date 6/15/15

Project / Client Ford TCAP Friday

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1420 Collect Sample from ASB-1004_69-70 (2015 06 15) for, VOC, SVOC, TAL Metals, TCLP Metals/VOC/SVOC and moisture content

VOC 31.835 + 10g = 41g

31.478 + 10g = 41g

GRO 31.465 + 10g = 41g

31.814 + 11g = 42g

DRO 88.21 + 26 = 114g

Oil N Soil → Negative, Sheen Test → Positive

1445 Collect Sample from ASB-1004_79-80(20150615) for VOC, SVOC, TAL Metals, TCLP Metals/VOC/SVOC and moisture content

VOC 31.375 + 10 = 41g

31.286 + 13 = 44g

GRO 31.762 + 10 = 41g

31.141 + 11 = 42g

DRO 88.44 + 25 = 113g

Oil N Soil → Negative

Sheen Test → Negative

Location St. Paul, MN Date 6/15/15

Project / Client T-ORO TCAP Friday

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1515 Sample ASB-1004_83-85(20150615) for VOC, SVOC, TAL Metals, TCLP metals/VOC/SVOCs and moisture

VOC 31.152 + 11 = 42g

31.948 + 10 = 41g

GRO 31.544 + 10 = 41g

32.197 + 11 = 43g

DRO 88.28 + 86 = 114g

Oil N Soil → Negative, Sheen → Negative

1600 Pack coolers

1700 Depart Site

Rite in the Rain

Location Ford - St Paul, MN Date 6/22/15

Project / Client Ford TCAP Monday

p. 1/5

ARCADIS: Tom Darmon

Subcontractors: Cascade

Purpose: Area C Investigation - ASB-1006

Weather: Wind/Cloudy, highs expected 70's to 80's

0900 Arrive on-site, begin to load field vehicle with sampling supplies

0930 Calibrate MiniRae 3000
PID 019654
Fresh Air Calibration: 0.0 ppm
Isobutylene Calibration: 100.2 ppm

0935 Calibrate MiniRae 3000
ID: V61326X
Fresh Air Calibration: 0.0 ppm
Isobutylene Calibration: 100.2 ppm

0950 Meet with drillers at Area C work zone. Discuss work scope and conduct Tailgate & Health & Safety Meeting

Location St. Paul, MN Date 6/22/15

Project / Client Ford TCAP Monday

p. 2/5

1030 Begin to hand clear ASB-1006

1200 Drillers depart for lunch

1215 Depart for lunch

1234 Arrive back on-site, complete mid-day PID calibrations

1237 MiniRae 3000, PID 019654
Fresh Air: 0.0 ppm
Isobutylene Calibration: 100.0 ppm

1240 Calibrate MiniRae 3000, ID V61326X
Fresh Air Calibration: 0.0 ppm
Isobutylene Calibration: 100.0 ppm

1400 Amy from MPCA is on-site.

Rite in the Rain

Location St Paul MN Date 6/22/15

Project / Client Ford TCAP Monday

p. 3/5

1510 Sample ASB-1006_39-42(20150622)
for VOC, SVOC, GRO, DRO, TAL Metals,
TCLP Metals/SVOC/VOC, and Moisture
VOC: 31.984 + 10g = 41g
32.004 + 12 = 44g
GRO 31.484 + 12 = 43g
31.120 + 10 = 41g
DRO 122.764 + 29 = 151g
- 11 bottles -
Oil N Soil → Negative, Sheen TOT → Negative

1545 Sample ASB-1006_52-54(20150622)
for VOC, SVOC, GRO, DRO, TAL Metals
TCLP Metals/SVOC/VOC, & Moisture
VOC 31.637 + 10g = 41g
31.491 + 10g = 41g
GRO 30.714 + 10g = 40g
31.189 + 10g = 41g
DRO 122.823 + 26g = 148g
- 10 bottles -

Oil N Soil → Negative
Sheen TOT → Negative

Location St. Paul MN Date 6/22/15

Project / Client Ford TCAP Monday

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1610 Sample ASB-1006_57-60(20150622)
for VOC, SVOC, GRO, DRO, TAL
Metals, TCLP Metals/SVOC/VOC
& Moisture
VOC 31.412 + 10 = 41g
31.543 + 13 = 44g
GRO 32.066 + 10 = 42g
31.544 + 11 = 42g
DRO 88.10g + 25 = 113g

Oil N Soil → Negative Sheen → Negative
- 11 bottles -

1650 Sample ASB-1006_65-67(20150622)
for VOC, SVOC, GRO, DRO, TAL
Metals, TCLP Metals/SVOC/VOC
& Moisture
VOC 31.264 + 10 = 41g
31.431 + 10 = 41g
GRO 31.195 + 10 = 41g
31.582 + 10 = 41g
DRO 87.824 + 26 = 113g
11 bottles

Oil N Soil → Negative
Sheen TOT → Negative

Drillers off-site

Rite in the Rain

Location St Paul MN Date 6/22/15

Project / Client Ford TCAP ~~St. Ac~~ Monday

p. 5/5

1710 Sample ASB-1606_78-88(20150622) for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals/SVOC/VOC & Moisture

VOC 31.664 + 10g = 41g

32.416 + 10g = 42g

GRO 31.519 + 12 = 43g

31.318 + 10 = 41g

DRO 88.09 + 26 = 114g

0:1 NSol → Negative, Sheen → Negative

1725 Lock gate at Area C, Drums ~~dated~~ Closed

1745 Trailer is locked. Kelly indicated to put all supplies in concrete box

1805 Depart Site

6/22/15

Location St Paul, MN Date 6/23/15

Project / Client Ford TCAP Tuesday

p. 1/5

ARCADIS: Tom Darmon

Subcontractors: Cascade

Purpose: Area C Investigation

Weather: Partly Sunny, highs in 80s expected

0608 Arrive on-site after picking up ice. Load coolers into vehicle.

0630 Calibrate MiniRae 3000

Pine ID 019654

Fresh Air Calibration: 0.0 ppm

Isobutylene Calibration: 10.2 ppm

0638 Calibrate MiniRae 3000

ID: V61326Y

Fresh Air Calibration: 0.0 ppm

Isobutylene Calibration: 100.0 ppm

0650 Drillers on-site, conduct Tailgate & Health & Safety meeting

Rite in the Rain

Location St Paul MN Date 6/22/15

Project / Client Ford TCAP ~~St. Ac~~ Monday

p. 5/5

1710 Sample ASB-1606_78-88(20150622) for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals/SVOC/VOC & Moisture

VOC 31.664 + 10g = 41g

32.416 + 10g = 42g

GRO 31.519 + 12 = 43g

31.318 + 10 = 41g

DRO 88.09 + 26 = 114g

0:1 NSol → Negative, Sheen → Negative

1725 Lock gate at Area C, Drums ~~date~~ Closed

1745 Trailer is locked. Kelly indicated to put all supplies in concrete box

1805 Depart Site

6/22/15

Location St Paul, MN Date 6/23/15

Project / Client Ford TCAP Tuesday

p. 1/5

ARCADIS: Tom Darmon

Subcontractors: Cascade

Purpose: Area C Investigation

Weather: Partly Sunny, highs in 80s expected

0608 Arrive on-site after picking up ice. Load coolers into vehicle.

0630 Calibrate MiniRae 3000

Pine ID 019654

Fresh Air Calibration: 0.0 ppm

Isobutylene Calibration: 100.2 ppm

0635 Calibrate MiniRae 3000

ID: 061326

Fresh Air Calibration: 0.0 ppm

Isobutylene Calibration: 100.0 ppm

0650 Drillers on-site, conduct Tailgate & Health & Safety meeting

Rite in the Rain

Location St. Paul MN Date 6/23/15

Project / Client Ford TCAP Tuesday

p. 2/5

0715	Begin to drill on ASB-1007
0820	Chris Formbi/Mark Osfby from MPCA on site.
0917	MPCA off-site
0930	Amy ~~Hasch~~ Aadbarib MPCA, on-site
1000	Ford on-site, Discuss progress with Amy. They are going to add 3 more locations
1038	Amy departs
1110	Sample ASB-1007_22-25(20150623) for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals/SVOC/VOC & Moisture VOC: 31.264 + 10 = 41g 31.230 + 11 = 42g GRO: 31.157 + 10 = 41g 31.329 + 10g = 41g DRO: 88.34 + 26g = 114g 0.1 N Soil → Negative, Sheen test → Negative 14 Jars

Location St Paul MN Date 6/23/15

Project / Client Ford TCAP Tuesday

p. 3/5

1045	Drillers departed for caravan and lunch
1130	Depart Site for lunch
1145	Arrive back on-site.
1150	Drillers back on-site
1200	Complete mid-day calibration on PID Mini Rae 3000 ID 019654 Fresh Air: 0.0 ppm Isobutylene: 100.0 ppm
1205	Mini Rae 3000 ID: U613286 Fresh Air: 0.0 ppm Isobutylene: 100.1 ppm
1225	Sample ASB-1007_62-65(20150623) for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals/SVOC/VOC & Moisture VOC 31.136 + 12 = 43g 31.309 + 10 = 41g GRO 31.363 + 11 = 42g 31.286 + 11 = 42g DRO 88.30 + 25 = 113g 0.1 NSoil - Negative Sheen Test → Negative 14-bottles

Rite in the Rain

Location St. Paul MN Date 6/23/15 Tuesday

Project / Client Ford TCAP

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1300 Sample ASB-1007_67-70(20150623)
for VOC, SVOC, GRO, DRO, TAL
metals, TCLP Metals/SVOC/VOC, Moisture
VOC: 31.236 + 10 = 41g
31.408 + 10 = 41g
GRO: 31.507 + 10 = 41g
31.539 + 10 = 41g
DRO 88.13 + 26 = 114g
Oil N Soil → Negative (2 bottles) / Sheen Test → Negative

1330 Sample ASB-1007_75-77(20150623)
for VOC, SVOC, GRO, DRO, TAL
Metals, TCLP Metals/SVOC/VOC,
Moisture Content
VOC 31.362 + 10 = 41g
31.441 + 10 = 41g
GRO 31.207 + 10g = 41g
31.739 + 10g = 41g
DRO 88.27 + 28 = 116g

Oil N Soil → Negative
Sheen Test → Negative

Location St. Paul MN Date 6/23/15 Tuesday

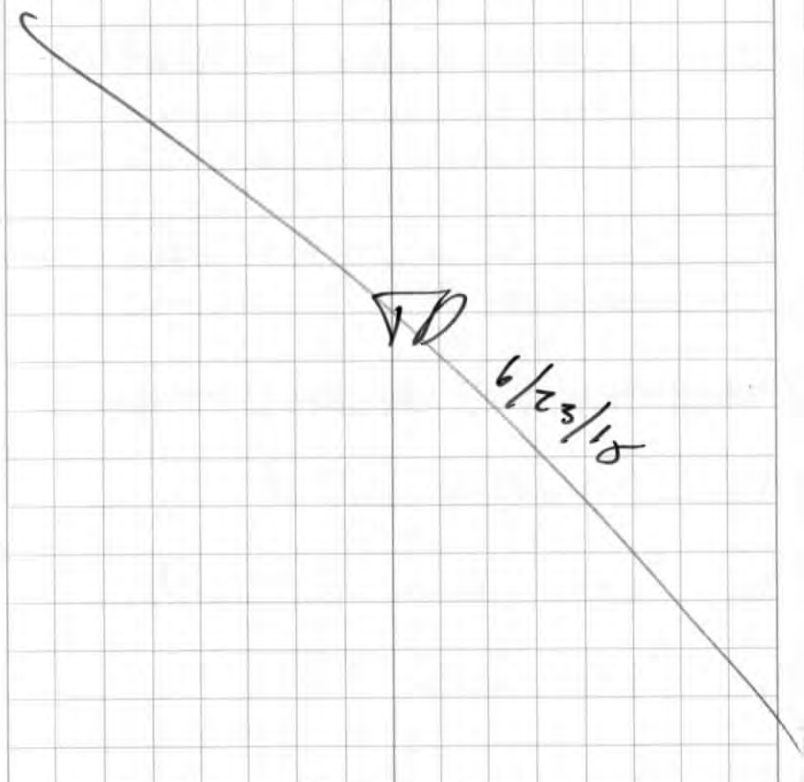
Project / Client Ford TCAP

p. 5/5

1500 Drillers finish staging equipment, head off-site, complete waste package.

1600 Scan notes

1620 Depart site



Rite in the Rain

Location St. Paul MN Date 6/24/15

Project / Client Ford TCAP Wednesday

p. 1/5

ARCADIS : Tom Darmon

Subcontractors: Cascade

Purpose: Area C Investigation, additional borings

Weather: Sunny, 70's-80's expected.

0610 Arrive on site after picking up ice. Load truck with equipment

0620 Calibrate MiniRae 3000; ID 019654
Fresh Air Calibration: 0.0 ppm
Isobutylene: 100.1 ppm

0655 Conduct Tailgate & Health & Safety meeting with Cascade

0705 Stand down until given client approval.

0830 Approval to start drilling

1100 Drillers depart for lunch.

1125 MPCA on site.

1130 Drillers back on site

Location St. Paul MN Date 6/24/15

Project / Client Ford TCAP Wednesday

p. 2/5

1200 SAMPLE ASB-1008_30-33(20150624)
for VOC, SVOC, GRO, DRO, TAL Metals, TCLP VOC/SVOC/Metals, & moisture
VOC 31.188 + 10g = 41g
31.173 + 10g = 41g
GRO 31.545 + 10g = 41g
32.009 + 10 = 42g
DRO 88.17 + 27 = 115g

0.1 NSoil → Negative
Sheen test → Negative

1230 Sample ASB-1008_52-54(20150624)
for VOC, SVOC, GRO, DRO, TAL Metals, TCLP VOC/SVOC/Metals & moisture
VOC 32.101 + 14 = 46g
31.495 + 12 = 43g
GRO 30.996 + 11 = 41g
31.317 + 10 = 41g
DRO 87.98 + 25 = 112g
0.1 N Soil → Negative
Sheen Test → Negative

Rite in the Rain

Location St. Paul MN Date 6/24/15

Project / Client Ford TCAP Wednesday

p. 3/5

1300 Sample ASB-100B_70-72(20150624) for VOC, SVOC, GRO, DRO, TAL Metals, TCLP Metals/SVOC/VOC & Moisture.

VOC: 31.498 + 10 = 41g

32.250 + 10 = 42g

GRO: 31.379 + 11 = 42g

32.469 + 10 = 42g

DRO: 88.02 + 26 =

Oil N Soil → Negative

Sheen Test → Negative

1327 Depart for lunch.

1348 Arrive back onsite. Calibrate MiniRae 3000.

Fresh Air Calibration: 0.0 ppm

Isobutylene Calibration: 100.1 ppm

1400 Continue/Start to drill at ASB-1009.

1450 Drillers stop drilling at 20 feet. Departs site

Location St. Paul MN Date 6/24/15

Project / Client Ford TCAP Wednesday

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1745 SAMPLE ASB-1009_42-44(20150624) for VOC, SVOC, TAL Metals, GRO, DRO, TCLP Metals/SVOC/VOC, & Moisture.

VOC: 31.586 + 10 = 42J

31.605 + 10 = 42J

GRO: 31.524 + 10 = 41J

31.379 + 10 = 41J

DRO 88.07 + 26 = 114J

Oil N Soil → Negative

Sheen Test → Negative.

1755 Sample ASB-1009_55-57 (20150624) for VOCs, SVOCs, GRO, DRO, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, TAL metals and moisture content.

VOCs 31.864 + 11 = 43J

31.796 + 10 = 42J

GRO 33.368 + 12 = 45J

32.928 + 10 = 43J

DRO 88.21 + 27 = 115J

Oil N Soil → negative

Sheen → negative

1815 Sample ASB-1009_62-65 (20150624) for VOCs, SVOCs, GRO, DRO, TAL metals, TCLP VOCs, TCLP SVOCs, TCLP TAL metals, and moisture content.

Rite in the Rain

Location St Paul MN Date 6/24/15

Project / Client Ford TCAP WEDNESDAY

15/5

(cont.) VOC: 31.548g + 13g = 45g
31.494g + 11g = 42g

GRO 31.790g + 11g = 43g
31.564g + 10g = 42g

DRO 88.08g + 29g = 117g

91 N Soil → Negative

Sheen Test → Negative

load up equipment.

1845 Tom Darmon off site

Location St Paul, MN Date 6/25/15

Project / Client Ford TCAP Thursday

p.1/4

ARCADIS: Tom Darmon

Subcontractors: Cascade

Purpose: Area C Investigation

Weather: Sunny, highs in 70's - 80's

0608 Arrive onsite after picking up ice. Load Field vehicle

0630 Calibrate MiniRae 3000; ID 019654
Fresh Air Calibration: 0.0 ppm
Isobutylene Calibration:

0655 Conduct Tailgate H Health & Safety meeting with drillers

0710 Continue to drill as ASB-1005

0745 SAMPLE ASB-1009_20-22(20150625) for VOC, SVOC, GRO, DRO, TCLP VOC/SVOC/Metals & Moisture

VOC: 31.613 + 11 = 42g
31.475 + 11 = 42g

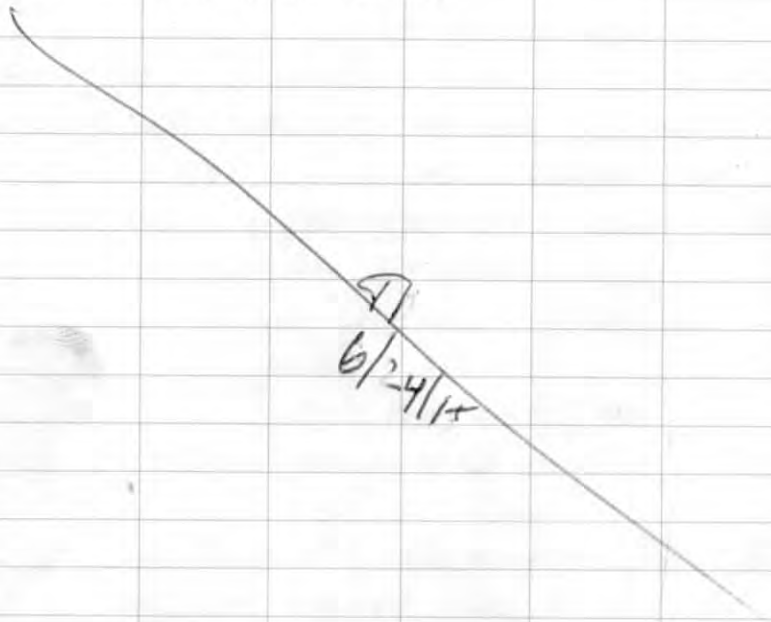
Location St Paul MN Date 6/24/15

Project / Client Ford TCAP WEDNESDAY

15/5

(Cont.) VOC: 31.548 + 13 = 45
31.494 + 11 = 42
GRO 31.790 + 11 = 43
31.564 + 10 = 42
DRO 88.08 + 29 = 117
Oil N Soil → Negative
Sheen Test → Negative
load up equipment.

1845 Tom Darmon off site



Location St Paul, MN Date 6/25/15

Project / Client Ford TCAP Thursday

p.1/4

ARCADIS: Tom Darmon
Subcontractors: Cascade
Purpose: Area C Investigation
Weather: Sunny, highs in 70's - 80's

0608 Arrive onsite after picking up ice. Load Field vehicle

0630 Calibrate MiniRae 3000; ID 019654
Fresh Air Calibration: 0.0 ppm
Isobutylene Calibration:

0655 Conduct Tailgate & Health & Safety meeting with drillers

0710 Continue to drill as ASB-1005

0745 SAMPLE ASB-1009_20-22(20150625) for VOC, SVOC, GRO, DRO, TCLP VOC/SVOC/Metals to Maltstrom

VOC: 31.613 + 11 = 42g
31.475 + 11 = 42g

Rite in the Rain

Location St. Paul, MN Date 6/25/15

Project / Client Ford TCAP Thursday.

p. 2/ 4

GRO : 31.778 + 11 = 42g

31.640 + 11 = 42g

DRO : 88.23 + 28g = 116g

Oil N Soil → Negative

Sheen Test → Negative

0845 Begin to set-up/ steps to drill at ASB-1010 location.

1100 Drillers break for lunch. Hole complete at 70 feet.

1130 Drillers back on-site, depart work area for lunch

1150 Arrive back on-site. Drillers continue to drill to 75 feet

1230 Contact Kelly, told to sample 70-73 first and will discuss other intervals

Location St Paul, MN Date 6/25/15

Project / Client Ford TCAP Thursday

p. 3/ 4

1300 Sample ASB-1010_70-73(20150625)

for VOC, SVOC, GRO, DRO, TAL Metals, TCLP VOC/SVOC/Metals & Moisture

VOC : 31.663 + 10g = 41g

31.853 + 11 = 42g

GRO : 31.707 + 12 = 43g

32.753 + 11g = 43g

DRO : 88.13g + 29g = 117g

Oil N Soil → Negative

Sheen Test → Negative

1345 Sample ASB-1010_38-40(20150625)

for VOC, SVOC, GRO, DRO, TAL Metals, TCLP VOC/SVOC/Metals & Moisture.

VOC : 31.787 + 10 = 41g

33.127 + 10 = 43g

GRO : 33.492 + 11 = 44g

31.694 + 11 = 42g

DRO : 88.42 + 29 = 117g

Oil N Soil → Negative Sheen → Negative

Rite in the Rain

Location St. Paul MN Date 6/25/15

Project / Client Ford TCAP Thursday

p. 4/4

1415	Sample ASB-1010_55-57(20150625)
	for. VOC, SVOC, GRO, DRO, TAL Metals,
	TCLP SVOC/VOC/Metals & Moisture
	VOC: 31.435 + 10 = 41g
	31.595 + 11 = 42g
	GRO 31.744 + 11 = 42g
	31.706 + 12 = 43g
	DRO 88.35 + 27 = 115g
	Oil N Soil ⇒ Negative
	Sheen Test ⇒ Negative
1430	Complete Site wide clean-up
1610	Drills off-site
1720	Tom Dorman off-site

TP 6/25/15

Location Date

Project / Client

Rite in the Rain

Location St Paul, MN Date 6/24/15

Project / Client FORD TCAP

L. Weidemann, 80°, sun 1 of 6

0700	L. Weidemann onsite, site training
0730	Long Truck
0745	On Area C
0800	HA-03
0810	Sample HA-03_0-0.5 (20150624)
	VOC, SVOC, TAL, GRO, DRO
	% moisture
	VOC: 31.157 + 10g
	31.229 + 10g
	GRO: 30.740 + 10g
	31.432 + 10g
	DRO 88.19 + 26g
	SVOC - no headsp.
	TAL - no headsp
	% moisture - no headsp.
0835	HA-02
0845	Sample HA-02_0-0.5 (20150624)
	VOC, SVOC, TAL, GRO, ORO, % moisture
	VOC: 31.518 + 10 = 41
	31.149 + 10 = 41
	GRO: 31.503 + 10 = 41
	31.579 + 11 = 42
	DRO: 88.10 + 30 = 118
	SVOC, TAL, % moisture -

Location _____ Date 6/24

Project / Client _____

2 of 6

0900 HA-05

0915 HA-05_0-1(20150624) Sample:
VOC: 31.520 + 10
31.448 + 10
GRO: 31.414 + 10
31.395 + 10
DRO: 88.96 + 26 = 114
TAL, SVOC, % moisture

0930 HA-01

0955 HA-04

1010 HA-07

1020 Sample HA-01_0-1(20150624)
VOC: 31.315 + 10 = 41
31.588 + 10 = 41
GRO: 31.292 + 10 = 41
31.560 + 10 = 41
DRO: 88.12 + 29 = 117
TAL, SVOC, % moisture

1045 Sample HA-04_0-1 (20150624)
VOC: 31.168 + 10 = 41
31.827 + 10 = 41
GRO: 31.616 + 10 = 41
31.230 + 10 = 41
DRO: 88.30 + 27 = 115
TAL, SVOC, moisture content

Location _____ Date 6/24

Project / Client _____

3 of 6

1115 Sample HA-07_0-1 (20150624)
VOC: 31.395 + 10 = 41
31.116 + 10 = 41
GRO: 31.233 + 10 = 41
31.228 + 10 = 41
DRO: 88.18 + 26 = 114
TAL, SVOC, moisture

1210 Sample HA-06_0-1 (20150624)
VOC: 31.384 + 10 = 41
31.737 + 10 = 42
GRO: 31.287 + 10 = 41
31.531 + 11 = 43
DRO: 125.53 + 28 = 154 TAL, SVOC, moisture,

1250 Sample HA-08_0-1 (20150624)
VOC: 30.979 + 10 = 41
31.086 + 10 = 41
BRO: 31.545 + 10 = 42
31.134 + 10 = 41
DRO: 88.23 + 28 = 116
TAL, SVOC, moisture

1315 Sample HA-09_0-0.5 (20150624)
VOC: 31.262 + 10 = 41
31.585 + 10 = 42

Location _____ Date 6/24

Project / Client _____

4 of 6

GRO: 31.321 + 10 = 41
31.326 + 10 = 41
DRO: 88.18 + 28 = 116
1345 HA-10_0-1(20150624)
VOC: 31.262 + 10
31.584 + 10
GRO: 31.115 + 10
31.291 + 16
DRO: 88.38 + 26
TAL, SVOC, moisture content
1430 pack coolers
Samples HA-01 to HA-10 sent
1600 HA-23
1610 HA-24
1625 HA-25
1640 HA-26
1645 Sample HA-23_0-1(20150624)
VOC: 31.435 + 10 = 41
32.279 + 10 = 42
GRO: 31.571 + 10 = 41
31.313 + 10 = 41
DRO: 88.10 + 27 = 115
TAL, SVOC, moisture content

Location _____ Date 6/24

Project / Client _____

5 of 6

1700 Sample HA-24_0-1(20150624)
VOC: 31.904 + 10 = 42
31.248 + 11 = 42
GRO: 31.244 + 10 = 41
31.439 + 10 = 41
DRO: 125.81 + 28 = 153
TAL, SVOC, moisture content
1720 Sample HA-25_0-1(20150624)
VOC: 31.488 + 10 = 41
32.220 + 10 = 42
GRO: 32.021 + 10 = 41
31.359 + 10 = 41
DRO: 125.71 + 26 = 152
TAL, SVOC, moisture content
1745 Sample HA-26_0-1(20150624)
VOC: 31.321 + 10 = 41
32.266 + 10 = 42
GRO: 31.462 + 10 = 41
31.657 + 10 = 41
DRO: 125.46 + 28 = 154
TAL, SVOC, moisture content
Additional notes:
1540 Hopper house screening of SW piles from ramp excavation.

Location _____ Date 6/24

Project / Client _____ 6 of 6

ScreenID	time	Vol	PID	Color	type
MAB-Hopper-138	1542	1380	0.4	brn/dk brn	sp/mL
-139	1545	1390	0.0	dk brn/tan	mL/cL
-140	1548	1400	5.0	blk, tan, gry	CL
-141	1550	~~1410~~	no odor 11.8	brn, blk	sp/mL

1551 re-screening area where above 11.8 PID was found above.

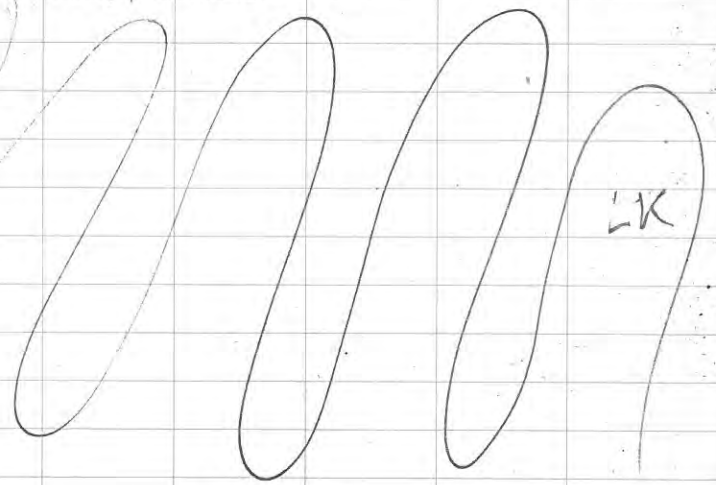
MAB-Hopper-142	1555	1420	6.2	brn, blk	sp/mL
-143	1600	1430	1.8	blk, dk brn	mL/cL

1605 moved to small pile on NW corner of hopper house

MAB-Hopper-144	1610	1440	0.6	blk, dk brn	mL/cL

1615 pile hard to get into → dried out. Need to re screen after excavator breaks pile apart.

ARCADIS off site



Location St. Paul, MN Date 6/25

Project / Client Ford TCAP - Area C

L. Weidemann, 80°, sun 1 of 7

0700 Load truck, tailgate
0730 HA-27
0745 HA-28
0800 HA-29
0815 HA-30
0830 HA-31
0845 Sample HA-27_0-1(20150625)
VOC: 31.535 + 10 = 41
31.380 + 10 = 41
GRO: 31.454 + 10 = 41
32.081 + 10 = 42
DRO: 87.75 + 26 = 114
TAL, SVOC, moisture
0905 Sample HA-28_0-1(20150625)
VOC: 32.387 + 10 = 42
31.451 + 10 = 41
GRO: 31.692 + 10 = 41
32.302 + 10 = 42
DRO: 88.54 + 28 = 116
TAL, SVOC, moisture
0930 Sample HA-29_0-1(20150625)
VOC: 31.643 + 10 = 41
31.326 + 10 = 41

GRO: 31.552 + 10 = 41
31.538 + 10 = 41
DRO: 88.25 + 28 = 116
TAL, SVOC, moisture content

1010 HA-30_0-1(20150625)
VOC: 31.178 + 11 = 42
31.758 + 10 = 41
GRO: 31.149 + 10 = 41
31.426 + 10 = 41
DRO: 88.61 + 26 = 114
TAL metals, SVOC, moisture content

1035 HA-31_0-1(20150625)
VOC: 31.545 + 10 = 41
31.535 + 10 = 41
GRO: 31.514 + 10 = 41
32.338 + 10 = 42
DRO: 88.10 + 26 = 114
TAL metals, SVOC, moisture content

1120 HA-~~21~~19 0-0.5 (20150625)
VOC: 31.474 + 10 = 41
31.460 + 10 = 41
GRO: 31.129 + 10 = 41
31.199 + 10 = 41
DRO: 88.40 + 26 = 114
TAL, SVOC, moisture

1150 HA-20_0-1(20150625)
VOC: 31.320 + 10 = 41
31,442 + 10 = 41
GRO: 30.786 + 10 = 41
31.099 + 10 = 41
DRO: 88.05 + 27 = 115
TAL metals, SVOC, moisture content

1215 HA-22_0-1(20150625)
VOC: 31.577 + 10 = 42
31.474 + 10 = 41
GRO: 31.528 + 10 = 42
31.432 + 10 = 41
DRO 87.99 + 28 = 116

1245 pack coolers

1520 L.W. to collect samples
L.K. to process samples

1540 Sample HA-15_0-1(20150625)
VOC: 31.861 + 10 = 41
31.770 + 10 = 41
GRO: 31.716 + 10 = 41
31.612 + 10 = 41
DRO: 87.87 + 28 = 116
TAL, SVOC, moisture content

1600 HA-16_0-0.5 (20150625)
VOC: 31.582 + 10 = 42
31.609 + 10 = 42
GRO: 32.785 + 10 = 43
31.641 + 10 = 42
DRO: 87.99 + 28 = 116
SVOC, TAL metals, moisture content
1645 HA-17_0-1 (2015 0625)
VOC: 33.225 + 10 = 43
31.731 + 10 = 42
GRO: 33.420 + 10 = 43
31.759 + 10 = 42
DRO: 88.38 + 28 = 116
SVOCs, TAL metals, moisture content
1700 HA-18_0-1 (20150625)
VOC: 31.855 + 10 = 42
33.328 + 10 = 43
GRO: 31.415 + 10 = 41
31.738 + 10 = 42
DRO: 125.37 + 28 = 158
SVOC, TAL metals, moisture content.
1730 HA-11_0-1 (20150625)
VOC: 31.597 + 10 = 42
32.565 + 10 = 43

GRO: 31.854 + 10 = 42
31.734 + 10 = 42
DRO: 88.24 + 28 = 116
BLK SVOCs, TAL metals, moistures content
1750 HA-12_0-1 (20150625)
VOC: 32.281 + 10 = 42
31.645 + 10 = 42
GRO: 31.704 + 10 = 42
31.894 + 10 = 42
DRO: 88.48 + 28 = 115
SVOC, TAL metals, moisture content
1815 HA-13_0-1 (20150625)
VOC: 33.286 + 10 = 43
33.169 + 10 = 43
GRO: 31.675 + 10 = 42
31.652 + 10 = 42
DRO: 88.07 + 28 = 116
1830 HA-14_0-1 (20150625)
VOC: 33.145 + 11 = 44
32.078 + 10 = 42
GRO: 31.842 + 10 = 42
31.589 + 10 = 42
DRO: 88.029 + 28 = 116
SVOCs, TAL Metals, moisture content

Location St. Paul MN Date 6/25/15

Project / Client Ford TCAP ~~Area LK~~ 6 of 7

Additional notes:

0740 LK to hopper house, screening excavation of East wall.

Screen ID	time	vol	PID	~~Color~~ LK	~~type~~ LK
MAB-Hopper-145	0740	1450	31.1	Brn	mL
Black tar-like goo observed - petrol smell					
-146	0743	1460	44.6	Brn	petrol smell sp/mL
-147	0745	1470	17.4	dk brn	Petrol smell gravel, sp, cL
-148	0748	1480	16.1	"	" petrol smell
-149	0752	1490	1.7	possible staining Yell. gry, blk	CL, gravel
-150	0755	1500	1.9	brn/blk	no stain, no smell CL, gravel
-151	0758	1510	0.0	"	"
-152	0802	1520	0.0	"	"
-153	0805	1530	5.2	"	no stains, no smell "

0808 impacted soil found in NE corner of Hopper house. Excavation moving to the south, impacted soil in northern ½ of East wall. Soil not impacted in Southern half.

MAB-Hopper-154	0812	1540	2.4	gry, blu, brn	shale, CL mL
-155	0815	1550	3.2	brn	sp/cL

0818 Done excavating, moving to NE pile from Hopper house.

MAB-Hopper-156	0820	1560	14.0	brn, gry, blk	sp/cL
Stainings, strong petrol smell					

Location St. Paul MN Date 6/25/15

Project / Client Ford TCAP 7 of 7

0825 moving to larger pile on SW side of Hopper house

~~MAB-Hopper~~ LK

Screen ID	time	vol	PID	Color	type
MAB-Hopper-157	0825	1570	20.8	brn, blk, gry, yel.	mL/cL
-158	0827	1580	11.7	"	"
-159	0830	1590	33.1	brn, dk brn	sp/mL
-160	0835	1600	18.8	brn	sp

0840 #157-160 have slt petrol smell. End of screening. 50 cubic yards from excavations and 50 cubic yards from piles to be added to SP124.

End Additional notes

AR CADIS off site 1830

LK

Location St. Paul MN Date 9/11/15

Project / Client Ford TCAP FRIDAY

P1/1

ARCADIS: K Hoehn, L Kenyon

ZoneOne: Christopher Koch

Purpose: Utility Locate (WE3/Area C)

Weather: 60/70s; Sunny/Cloudy

1155 ARCADIS onsite. Prep. Fill out tailgate.

1240 ZoneOne onsite. Go over tailgate.

1245 Make to former solvent UST to clear ASB-0628.

1300 make to Area C to clear AMW-25.

1320 ZoneOne offsite. Both locations cleared; photos taken. ARCADIS make to main parcel to unload equipment and collect hydrant meter from Bolander.

1340 L Kenyon offsite. KH to trailer.

1640 K Hoehn offsite.

KH

Location St. Paul MN Date 9/15/15

Project / Client Ford TCAP TUESDAY

P1/3

ARCADIS: K Hoehn, K. Gramath

Cascade: Mark. Biermaier Gary Burgardt

Ron Walkowiak

Purpose: Soil boring; mw installation

Weather: 70s, sunny

0700 ARCADIS onsite. DIM call.

0820 KG onsite.

0900 Contractor meeting

0930 Cascade onsite. Go through safety orientation w/DIG.

0955 Safety orientation Complete. Go through SOW w/drill crew. Tailgate KH Make to ASB-0628 to remove concrete for Goliath.

1030 Goliath onsite. Make to DIG trailer to go through Safety orientation. Cascade begins concrete removal.

1055 Site safety orientation complete for Goliath. Site Tailgate. Make to ASB-0628 to clear.

1138 Concrete cleared for ASB-0628. Goliath set up @ location. Begin hydrovac to 5 ft bgs.

1205 Cascade to lunch. ARCADIS create berm for hydrovac IDW (soil/water mix).

1215 ARCADIS break for lunch.

1235 ARCADIS lunch break over. Check on Goliath - still hydrovacing

Rite in the Rain

Location St. Paul MN Date 9/15/15

Project / Client Ford TCAP TUESDAY

P2/3

1240 Cascade lunch break over.

1320 Goliath offsite

cascade drill @ ASB-0628

1345 sample ASB-0628. 6-10(20150915)

for VOCs, PAH + moisture

1350 cascade reaches 17 ft bgs=TD.

Tare weights: 31.401g, 10g

31.507g + 10g

1355 sample ASB-0628, 10-12(20150915)

for VOCs, PAH, moisture

Tare weights 31.818g + 10g

31.418g + 11g

1413 Sample ASB-0628. 15-16(20150915)

for VOCs, PAH, moisture

Tare weights 32.324g + 10g

31.439g + 11g

Abandon borehole - 3 bags bentonite chips used.

1430 Make to get water for water truck.

1452 Water truck filled, coolers packed. Make to Area C.

1503 Begin setup @ AMW-26. KG to trailer for cooler pickup.

1550 Steve Bill onsite. Checking in. Update w/progress.

1553 Begin concrete core @ AMW-26.

Location St. Paul MN Date 9/15/15

Project / Client Ford TCAP TUESDAY

P3/3

1558 Concrete core complete. Setup to begin drilling to depth.

1602 Begin drilling @ AMW-26.

1700 Reach 65 ft bgs. Decide to leave 55-65 ft in ground as lithology description catching up to 55 ft. Cascade begin, site cleanup/housekeep

1725 Cascade offsite. ARCADIS continue logging.

1735 Logging complete. Jim Exline stops by to check in. Find housekeeping/cleanup.

1750 Site Cleanup complete. Make to trailer/connex to unload equip.

1800 K Grant offsite.

1810 K Hoehn offsite. Locked up.

KH

Rite in the Rain

Location St. Paul MN Date 9/16/15

Project / Client Ford TLAP WEDNESDAY

P1/5

ARCADIS: K Hoehn, K. Grant

Cascade: Mark Bierwagen Gary Burgardt

Ron Walkowiak

Purpose: AMW-26 drill/well installation

Weather: 60-80s, Sunny

0555 ICH onsite.

0620 Calibrate PID/4 Gas

PID Ambient Air: 0.0 ppm Isobutylene: 100.1 ppm

4Gas Ambient CO: 0 H_2S: 0 O_2: 20.9 LEL: 0

Cal Gas CO: 50 H_2S: 25 O_2: 20.9 LEL: 49

0635 load up additional 55-gallon drums and supplies/equipment. Make to Area C.

0640 At Area C. Unload drums, set up equipment.

0700 Cascade/KG onsite. Safety tailgate and sow for day.

0735. Resume drilling. Pull out 55-65 ft interval from yesterday's drill.

0825 Call w/R. Desterreich. Discuss elevated PIDs @ 55-65 ft bgs. Collect sample from 62-65 ft bgs, place on hold pending ford/MPCA discussion. Receive 65-75 ft bgs.

0900 Discuss depth w/driller. Drilled soft @ 82 ft bgs. Also getting cobbles @ that depth.

0915 Driller to drill to 90 ft bgs, clean out

Location St. Paul MN Date 9/16/15

Project / Client Ford TLAP WEDNESDAY

P2/5

borehole, then set up to install well. Per MPCA, screen is to be submerged 5 ft @ time of installation (10 ft screen).

0930 Receive 85-90.5 ft bgs. Saturated gravel/sand. Tell driller to set well @ 77-87 ft bgs.

Begin borehole cleanout.

Drum #115 - Soil with PID<10ppm (ASB-0628/AMW-26)

Drum #116 - Soil with PID<10ppm (AMW-26)

Drum #117 - ~~Soil with PID<10ppm (AMW-26)~~ Purge Water KH

0945 Flush out borehole. Used ~100 gallons drill water. Tag depth @ 87 ft bgs.

1005 Set screen and risers. Tag TD of screen @ 87 ft bgs. (measured @ 94.5 ft, with 7.5 ft rig stickup).

1115 Sand pack (Red Flint #40) - 5 bags

Bentonite Hole Plug - 1 bag

placed @ well. Set up for development.

1130 Confirmed bentonite seal @ 72.8 ft bgs. Set up for development.

1134 Pump on. Alternate surge/pump.

1235 Removed 55-gallons. Cascade to lunch.

1240 Confirmation from R. Desterreich to pump/surge for ~1 hr. (55 gal). Continue pump/surge.

1250 Pump off. Removed ~70-75 gallons. Remove pump.

Rite in the Rain

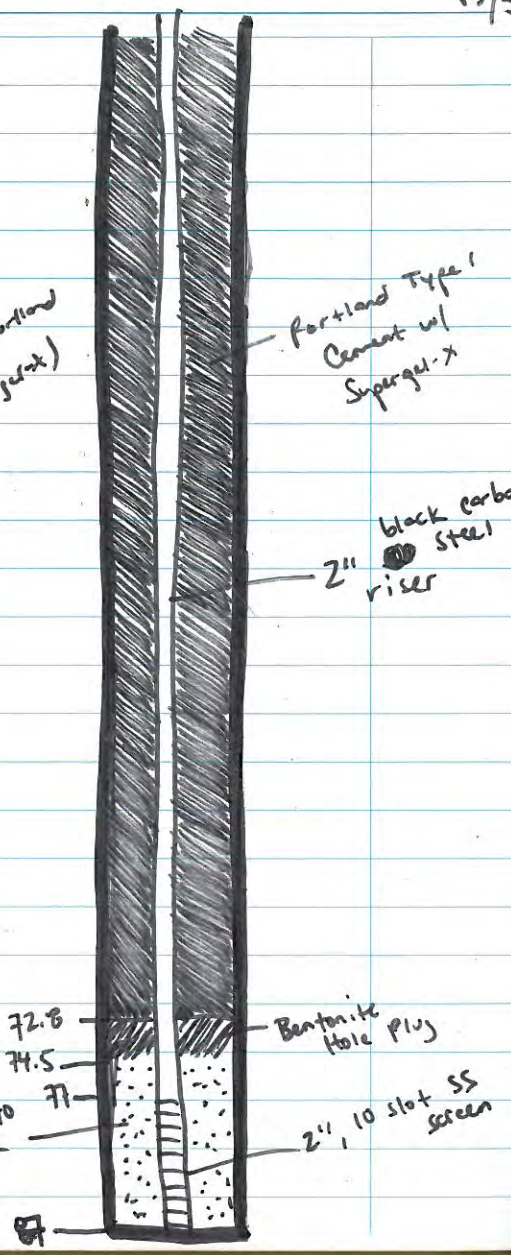
Location St. Paul MN Date 9/16/15

Project / Client Ford TRAP WEDNESDAY

P3/5

AMW-26

*Not to scale



*Prior to riser cut:

DTW - 88.37

TD - 94.90

SU - 8.00

Location St. Paul MN Date 9/16/15

Project / Client Ford TRAP WEDNESDAY

P4/5

1340 Cascade back onsite. Setup to grout.

1359 Begin grout to surface

1414 Tremie grout complete. Used 1.5 batches (1 batch = 6 bags Portland to 5% supergel-X)
Begin casing removal.

1440 Casing removed. Concrete needs to be topped off.

1452 Formation eating Portland @ ~ 10 ft bgs.
Place 1 bag dry Portland Type I to plug. Place 1 mixed Portland Type I/H_2O on top. KG to connex to meet up w/TestAmerica.

1505 Portland cement set. Site cleanup/make drums to staging area.

1525 KH mobe to trailer. Mob to 2nd drum staging to drum up hydrovac cuttings.

1555 Soil IDW drummed up from berm.
Drum #118 - Purge Water/Decon Water (AMW-26)
Drum #119 - PPE
Drum #120 - Soil IDW (ASB-0628)
~~Drum #~~ Drum #121 - Purge water (ASB-0628 Hydrovac)
Mob back to Area C. Cascade cutting concrete to generate flush mount

1742 Concrete cut and broken up (used rig). Clean up concrete pieces - ready cut out for new pad pour.

1825 Site cleanup. Pad to be made in morning.

Rite in the Rain

Location St Paul MN Date 9/16/15

Project / Client Ford TCAP WEDNESDAY

P5/5

1835 Cascade offsite. ARCADIS to trailer to unload supplies/equipment. Lock up Area C.

1900 ARCADIS offsite. Lock up trailer/connex.

KH

Location St Paul MN Date 9/17/15

Project / Client Ford TCAP THURSDAY

P1/2

ARCADIS: K Hoehn

Cascade: Mark Biermaier, Ron Walkowiak, Gary Burgard +

Weather: Thunderstorms, 70s

Purpose: AMW-26 concrete pad; IDW pickup

0615 ARCADIS onsite. Prep.

0710 Bolander onsite. Update w/WRM info - no contact info or time onsite update

0750 Cascade onsite. Clean out pad after safety tailgate.

0759 Call from Stockman (waste management trucking company). Earliest can be onsite is 10:30AM. Make to trailer to discuss w/Jim Exline.

0815 Determine with Jim that Stockman should still come, KH to man scale if Jim has to leave before loading complete. Mobe back to Area C.

0825. Update Brian Hurley on pickup:

- truck to be onsite @ N 10-10:30AM
- drums to be on pallets
- if have plywood - will use it.

Cascade mixing concrete for AMW-26 pad.

0850 Stop Work - raining hard.

0915 Resume work on concrete pad (rain let-up).

1040 Concrete pad finished. AS6-0628 abandoned.

No IDW truck for pickup yet. Final site cleanup.

Call Waste Management. Truck to be onsite @ noon. Rain.

Location St Paul MN Date 9/16/15

Project / Client Ford TCAP WEDNESDAY

P5/5

1835 Cascade offsite. ARCADIS to trailer to unload supplies/equipment. Lock up Area C.

1900 ARCADIS offsite. Lock up trailer/connex.

KH

Location St Paul MN Date 9/17/15

Project / Client Ford TCAP THURSDAY

P1/2

ARCADIS: K Hoehn

Cascade: Mark Biermaier, Ron Walkowiak, Gary Burgard +

Weather: Thunderstorms, 70s

Purpose: AMW-26 concrete pad; IDW pickup

0615 ARCADIS onsite. Prep.

0710 Bolander onsite. Update w/WRM info - no contact info or time onsite update

0750 Cascade onsite. Clean out pad after safety tailgate.

0759 Call from Stockman (waste management trucking company). Earliest can be onsite is 10:30AM. Make to trailer to discuss w/Jim Exline.

0815 Determine with Jim that Stockman should still come, KH to man scale if Jim has to leave before loading complete. Mobe back to Area C.

0825. Update Brian Hurley on pickup:

- truck to be onsite @ N 10-10:30AM
- drums to be on pallets
- if have plywood - will use it.

Cascade mixing concrete for AMW-26 pad.

0850 Stop Work - raining hard.

0915 Resume work on concrete pad (rain let-up).

1040 Concrete pad finished. AS6-0628 abandoned.

No IDW truck for pickup yet. Final site cleanup.

Call Waste Management. Truck to be onsite @ noon. Rain.

Location St Paul MN Date 9/17/15

Project / Client Ford TUAP THURSDAY

P2/2

1135 Cascade offsite (cleanup complete; supplies/equipment loaded/secure). ARCADIS mobe to trailer.

1200 Waste management not onsite. Call to cancel pickup for day. Work out logistics w/Bolander for pickup @ 7am Friday. Final site cleanup/lockup.

1240 ARCADIS offsite.

KH

Location St Paul MN Date 9/18/15

Project / Client Ford TUAP FRIDAY

P1/2

ARCADIS: K Hoehn

Bolander: Brian Hurley

Purpose: IDW pickup

Weather: 50s, Cloudy

0615 Call from Stockman. Onsite. Direct to wait @ security.

0635 ARCADIS onsite. Discuss logistics w/Stockman driver (Jim). Get tare weight of empty truck/trailer @ scale. Mob to Connex box.

0700 Bolander onsite. Begin IDW drum load into truck trailer (walking trailer - VIDEO).

0714 Mob to 2nd staging area to load up drums.

0726 Drums loaded in trailer:

#64	#77	#111	#121
#65	#82	#112	
#84	#83	#113	
#87	#85	#119	
#114	#110	#120	

Mob to Area C.

0807 Drums loaded in trailer:

#90	#94	#99	#104	#108	#117
#91	#95	#100	#105	#109	#118
#92	#96	#102	#106	#115	
#93	#98	#103	#107	#116	

Rite in the Rain

Location St. Paul, MN Date 12-7-15

Project / Client Ford TCAP

3/3

1140: Sample ASB-0933_0-2 (20151207)

	Jar	Soil	
DRO	88.17g	29g	SVOCs + DRO

1140: Begin drilling ASB-0935

1500: Sample ASB-0935_2.5-4.5 (20151207)

	Jar	Soil	
DRO	98.26	27g	SVOCs + DRO

1515: Matrix gets skid steer sliding in mud near Area C, leaves overnight to pull out with drill rig tomorrow.

1630: Measure ASB-0229

DTW	TD	
8.22	10.00	Stick-up 2.06'

Do not have silicone tubing or battery for peristaltic pump. Kelly to bring additional supplies tomorrow.

1700: Matrix offsite. ARCADIS scans field notes.

1715: offsite

12-7-15

Location St. Paul, MN Date 12-8-15

Project / Client Ford TCAP

1/3

Purpose: Sample TW's, Install Area C MW's
ARCADIS: Ian Stewart
Weather: 35°F, Cloudy

0645: Onsite, H&S tailgate.
Matrix attempts to get skid steer unstuck.

0730: ALS purges 1 gallon of water from ASB-0229 well (strong odor)

0800: Sample ASB-0229_5-10 (20151208) for VOC, GRO, SVOC, DRO water.

0830: Gauge ASB-0228
DTW: 8.10 TD: 9.90 Stick-up: 2.81
well goes dry after 0.1-0.2 gal, allow to recharge then attempt to sample

0900: Collect sample ASB-0228_5-10 (20151208) for VOCs & GRO.
May attempt to sample for SVOCs & DRO if time permits

0930: Begin drilling AMW-21

1100: Water is at 49'. Matrix sets up to install stainless well screened from 46'-56' BGS

Rite in the Rain

Location St. Paul, MN Date 12-8-15

Project / Client Ford TCAP

2/3

1220: Matrix takes lunch.

1258: Matrix continues installing AMW-21.

1300: Sample AMW-21_5-10 (20151208)
- SVOCs

1305: Sample AMW-21_32-35 (20151208)
- SVOCs

1310: Sample AMW-21_16-20 (20151208)
- VOCs, DRO, GRO, SVOCs

	Jar	Soil
VOC	31.948g	10g
~~GRO~~ VOC	33.095g	10g
GRO	31.794g	10g
GRO	31.451g	10g
DRO	88.34g	27g

1345: Kelly instructs Ian to collect a Duplicate (Dup-01) and MS/MSD for ASB-0229. Ian completes KB3 while Matrix continues to install AMW-21.

1500: Matrix is having trouble getting augers out of the ground. Troubleshoot.

Location St. Paul, MN Date 12-8-15

Project / Client Ford TCAP

3/3

1630: Matrix successfully gets augers out of the ground, will install stick-up and grout pad tomorrow.
- Matrix will be decon'ing augers at their shop each night.

1645: Off site

12-8-15

Rite in the Rain

Location St. Paul MN Date 12-9-15

Project / Client Ford TCAP

1/2

Purpose: Area C MW Installation
ARCADIS: Ian Stewart
Weather: 35°F, Cloudy

0700: Onsite, H+S tailgate.
0715: Matrix finishes putting protol on to AMW-21

0800: ARCADIS Gauges Area C wells

	DTW	Stick-Up
AMW-19	17.79'	2.25'
AMW-20	17.99'	2.23'

0900: Large void space @ 2' is taking more grout than expected. Matrix offsite to get additional cement.
0945: Matrix continues grouting AMW-21
1100: Complete installation of AMW-21.
-Matrix uses geoprobe to get skid steer unstuck in Area C
1230: Skid steer is cleared. Break for lunch

Location St. Paul MN Date 12-9-15

Project / Client Ford TCAP

2/2

1300: Begin drilling AMW-22.
1400: Heaving sand causes liner to break. Matrix troubleshoots.
1500: Kelly instructs Matrix to pull out @ 45', will reevaluate for tomorrow.
-General clean-up
1600: Drum Inventory
#124, 125, 126
Soil cuttings from AMW-21 and ASB's completed 12-7+5

1630: Matrix abandons ASB-0028, 229, 216B. and grouts to grade.
Ian Stewart marks flags for future surveying.
1700: Ian Stewarts scans field notes.
1720: offsite

12-9-15

Rite in the Rain

Location St Paul, MN Date 12-10-15

Project / Client Ford TCAP

1/2

Purpose: Area C Monitoring Well Installation
ARCADIS: Jan Stewart
Weather: 35°F, Cloudy

0700: Onsite, HASS tailgate.
0715: Matrix sets up to complete AMW-22.
Cave-in was measured @ 7.4' BGS.
Kelly Hoehn instructs Matrix to offset ~5' from the original boring and install the shallow well from 16-26' BGS (screen depth)
1015: Complete installation of AMW-22.
- move equipment to set up for AMW-23.
1100: Begin drilling AMW-23.
1145: Complete probing AMW-23, break for lunch
1230: Begin augering to install AMW-23 screened from 16-26' BGS.
1400: Complete installation of AMW-23.
1500: Probe AMW-24
1540: Complete probing AMW-24, Kelly instructs Matrix to install well screened 12-22' BGS

Location St. Paul, MN Date 12-10-15

Project / Client Ford TCAP

2/2

1545: Well will be installed tomorrow.
- Matrix works on getting skid steer unstuck.
1600: Skid steer unstuck, general site clean up.
New Drums:
#127 & 128 - Soil cuttings from AMW-22 & AMW-23 respectively.
1630: Matrix offsite.
- ARCADIS scans field notes.
1645: ARCADIS offsite

12-10-15

Rite in the Rain

Location St. Paul, MN Date 12-11-15

Project / Client Ford TCAP

1/2

Purpose: Area C Monitoring Well Install
ARCADIS: Ian Stewart
Weather: 38°F, Cloudy

0700: Onsite. H&S tailgate
0715: Matrix begins installing AMW-24 screened 12-22' BGS.
0930: Start probing AMW-25B
1000: Refusal @ 25', Decide to turn boring into AMW-25 screened from 12-22' BGS. Matrix augers to install well.
1100: Ian meets TestAmerica at Conex box to deliver samples. for Adam Thompson.
- Matrix continues installing AMW-25
1200: Matrix completes installing AMW-25. Remove drums from the forest to be staged in steam plant overhead door area.
1245: Matrix breaks for lunch.

Location St. Paul MN Date 12-11-15

Project / Client Ford TCAP

2/2

1245 (cont'd): ARCADIS labels drums.
#129: AMW-25 cuttings >100ppm
#130: AMW-25 cuttings < 100 ppm
#131: Liners, gloves, bags
#132: Purge water
1315: Matrix resumes drum/site clean up.
1420: All drums are labeled and stored inside overhead door. All items are secured for the weekend.
- Workers still seen at water plant, gate is left open, Arcadis informs security
1430: Matrix offsite
- ARCADIS scans notes
1445: ARCADIS offsite

Rite in the Rain

Location St. Paul, MN Date 12-14-15

Project / Client Ford TCAP

1/2

Purpose: Install Monitoring wells
ARCADIS: Ian Stewart
Weather: 35°F, Heavy rain

0700. Onsite. H&S tailgate
~~Kristi~~ Erik from Matrix is Onsite. Cody & CJ will be Onsite around 9 AM.
Erik prepares rig & equipment to install AMW-22B
Will walk path to ensure safety due to heavy rains.

~~Kristi~~ 0900: Cody & CJ onsite, H&S tailgate. Assist with AMW-22B installation

1030: Matrix having trouble installing screen to depth.

1345: The joint just above the thread snapped off while attempting to remove the screen. The screen broke off from the risers.
- Matrix takes lunch.

Location St. Paul, MN Date 12-14-15

Project / Client Ford TCAP

2/2

1445: Matrix resumes work, pulls out augers to retrieve the screen

1445: The augers are removed from the ground, the screen was destroyed and is stuck inside the auger along with heaved sand.
- Matrix spends time separating the screen from the augers so they do not freeze together overnight.

1615: Matrix gets auger & broken screen separated. General site clean up.
- Matrix will bring O-rings/gaskets tomorrow to try and prevent heaving, as well as stop augering if the auger is scraping hard rocks.

1630: Matrix offsite
- ARCADIS secures Area C & scans field notes

1700: offsite

12-14-15

Rite in the Rain

Location St. Paul, MN Date 12-15-15

Project / Client Ford TCAP

1/2

Purpose: Install Area C monitoring wells
ARCADIS: Ian Stewart
Weather: 33°F, Cloudy

0700: ARCADIS & Matrix onsite. H&S tailgate
0715: Matrix sets up to install AMW-22B, using gaskets/o-rings on the augers to prevent sand heaving inside augers
0950: Matrix finishes installing AMW-22B, screened from 33.2-43.2' BGS. Matrix was only able to pour one bag of sand in the screen interval because of natural heaving sand
- Matrix pulled out the augers before grouting to grade
0945: Matrix offsite to menards to pick up portland cement
1020: Matrix onsite. Matrix had also poured 2 bags of hole plug into the well and cave-in was measured at 22', so hole appears to have held

Location St. Paul, MN Date 12-15-15

Project / Client Ford TCAP

2/2

1115: Cement grout brought up to grade w/ PVC top cover. ~5 gallons of water was added to this well during installation.
1200: 15 clean drums were delivered to the Area C parking lot.
- Matrix mob to AMW-23B
1220: Start drilling AMW-23B
1300: Liner cracked @ 45' w/ large gravel, decide to screen 35-45' BGS.
- Matrix breaks for lunch
1340: Begin installing AMW-23B. Well screened 35-45' BGS, heaving sand collapsed to 37' BGS,
- Matrix filled one bag of sand & 2 bags of bentonite seal.
1630: Complete well install. Site clean up.

New drums:
#133 = AMW-22B cuttings
#134 = AMW-23B cuttings

1700: Matrix offsite
1720: ARCADIS offsite

12-15-15

Rite in the Rain

Location Ford TCAP & St. Paul MN Date 12-16-15

Project / Client

1/4

Purpose: Develop ~~wells~~ Area C MW's
Attendees: Ian Stewart
Weather: 35°F, Rain

0700: AES & Matrix onsite, H&S tailgate.
0730: Measure AMW-25
DTW - 14.65' TD - 22.95'
(below TOC)
10 well volumes = 13.3 gallons
Matrix removes 14 gallons
~~A~~ slight sheen on silt/sludge removed from well ~~A~~
0830: Measure AMW-24
DTW - 16.82 TD - 24.99
10 well volumes = 13.1 gallons
Remove 14 gallons from well
0900: Measure AMW-23
DTW - 20.00 TD - 28.85
0915: STOP Work due to lightning in the area. Seek shelter in vehicles.
- Matrix drives one vehicle to their shop during the stand-down.

Location St. Paul, MN Date 12-16-15

Project / Client Ford TCAP

2/4

1045: Matrix back onsite
1100: Measure AMW-23B
DTW - 20.40 TD - 48.39
Tag - 814817
Stick up - 2.30
- Matrix purges 15 gallons from AMW-23
- Matrix purges 45 gallons from AMW-23B
1240: Measure AMW-22
DTW - 16.02 TD - 28.52
Tag: 814812
Stick-up: 2.30
Measure: AMW-22B
DTW - 16.05 TD - 43.75
Tag: 814816
Stick-up: 2.20
- Matrix will pump 20 gal from 22
- Pump 50 gal from 22B
Erik + CT pump 22 + 22B
while Cody mans to 21

next page

Rite in the Rain

Location St. Paul, MN Date 12-16-15

Project / Client Ford TCAP

3/4

1300: Measure AMW-21
DTW: 48.18 TD-57.65
Tag: 814811
Stick-up: 2.30

1330: Complete purging ~~#~~ 21 gallons from AMW-21

-Matrix continues purging from AMW-22 & 22B.

1400: Matrix completes all well development.
New drums:
#135 - AMW-25, 24, 23 Develop H_2O
#136 - AMW-22B Develop H_2O
#137 - AMW-23B Develop H_2O
#138 - AMW-22 Develop H_2O
#139 - AMW-21 Develop H_2O
#140 - Development tubing
Water from drums 135, 136, & 137 was put into #132 so all drums were less than 2/3 full

- Matrix spends time putting all drums on pallets

Location St. Paul MN Date 12-16-15

Project / Client Ford TCAP

4/4

1530: Matrix completes getting drums prepared and packing up equipment

1545: Matrix offsite. ARCADIS places 2035 locks on all new Area C monitoring wells.

1615: ARCADIS scans field notes and prepares bottle ware for HA-21.

1740: ARCADIS offsite.

12-16-15

Rite in the Rain

Location St Paul, MN Date 12/15/15

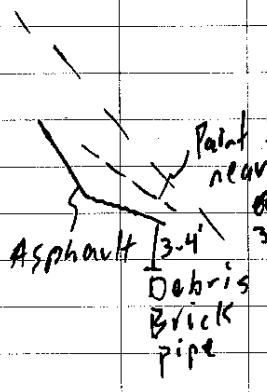
Project / Client Ford TCAP

P1/4

Arcadis: Adam Thompson
Purpose: Trenching Area C.
Weather: 30s Clearskies

0700: Arrive on site. Meet w/ Bolander for H+S meeting. Go over day's activities.
0730: Mob to Area C.
0815: Begin excavating Trench 1.

0-2' Brown-gray silty clay } Organics
2-4' Black silty clay
4-5' Mix of silt + gray-gr clay
5-6' Minor debris (wood, metal)



PID
1.4 ppm
-1.8

Location St Paul, MN Date 12.15.15

Project / Client Ford TCAP

P2/4

Toe of slope -- Asphault 6-8' depth
0.5-1' gray green clay above asphault
8-12' Mix of black organic silty clay and gray green clay
-- Debris consists of Brick asphault
@ ~12' Hard Rock Material

Paint Sludge layer 4-5" @ 4' depth following slope for ~8ft
sample @ 10' from trench start

1400: Area-C-Trench-1_010_4-5 (20151215)
VOC: 31.432g 31.522g
41g 41g
GRO: 31.301g 31.269g
41g 41g
DRO: 88.08g
115g

Rite in the Rain

Location St Paul, MN Date 12/15/15

Project / Client Ford TCAP

P3/4

1427: Area-C-Trench-1_010_5-6 (20151215)

VOC: 31.388g 31.587g
41g 41g

GRO: 32.535g 31.885g
43g 42g

DRO: 87.86g
115g

1447: Area-C-Trench-1_015_5-6 (20151215)

VOC: 31.424g 31.208g
42g 41g

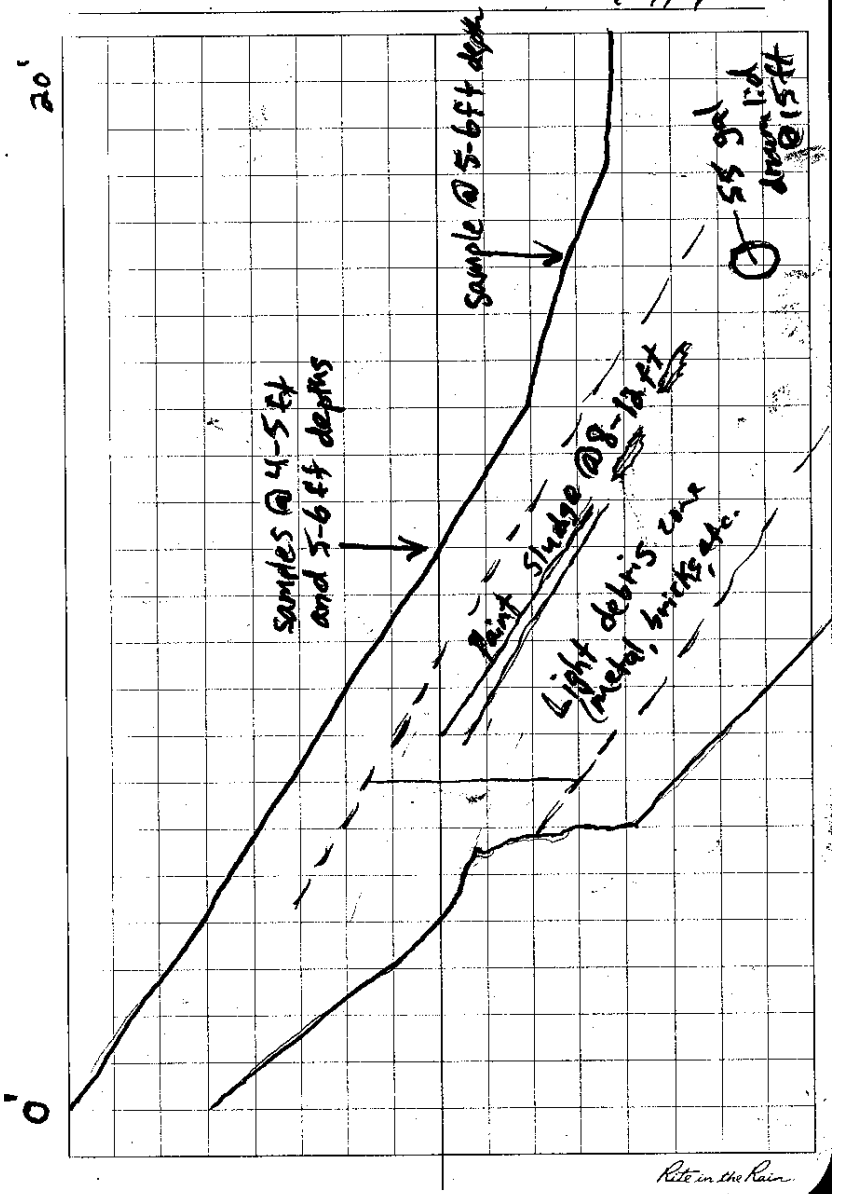
GRO: 32.261g 31.686g
43g 42g

DRO: 88g
115g

Location St Paul, MN Date 12/15/15

Project / Client Ford TCAP

P4/4



Rite in the Rain

Location St Paul, MN Date 12/16/15

Project / Client Ford TCAP

P1/3

Arcadis: Adam Thompson

Purpose: Area C, Trench 2 excavation and sampling

Weather: Rain/Snow Mix 30s

0700: Adam arrive on site. Meet with for H+S meeting. Go over plan for the day.

0730: Gather supplies and mob to Area C.

0830: Begin excavation of Trench 2.

Top 5 ft brownish-gray silty clay minor debris (wood, concrete)

Large mass of paint sludge @ 5 ft

0900: Take shelter for lightning.

0915: Head back trailer to discuss plan for Trench 2 with Kelly. Decide to fill trench w/ excavated material (~ cy) and cover w/ poly.

0945: Begin backfilling Trench 2.

Location St Paul, MN Date 12/16/15

Project / Client Ford TCAP

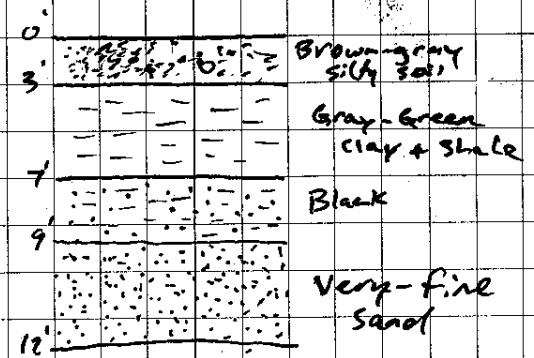
P2/3

1030: Mob to trench 5. Amy (MPCA) arrives

1100: Begin excavating Trench 5.

2-3 Ft brownish-gray soil

3-4 gray-green clay mixed with reddish brown clay



1145: Lunch. Grab sample of fibrous material from trench 2.

1200: Amy Offsite.

Area-C-Trench-5_00_3-4(20151216)

VOC: 33.79 GRO: 33.36 g

33.70 44 g

33.75 g

DRO: 88.80 g 44 g

117 g

Rite in the Rain

Location St Paul, MN Date 12/16/15

Project / Client Ford TCAP

P3/3

1315: Finish Excavating Trench 5.

1330: Begin backfilling Trench 5.

1400: Meet w/ Bolander to discuss plan for tomorrow.

1450: sample Area C - Trench-5_00_3-4(20151216)

1530: Gary (Test America) arrives for samples

1600: Meet w/ Jim and Brian to Finalize plan for tomorrow.

1615: Measure water level of work pit one.

1700: Adam off site

Location Date

Project / Client

Rite in the Rain

Location St Paul, MN Date 12/16/15

Project / Client Ford TCAP

P3/3

1315: Finish Excavating Trench 5.
1330: Begin backfilling Trench 5.
1400: Meet w/ Bolander to discuss plan for tomorrow.
1450: sample Area C - Trench-5_00_3-4(20151216)

1530: Gary (TestAmerica) arrives for samples
1600: Meet w/ Jim and Brian to finalize plan for tomorrow
1615: Measure water level of work pit one.
1700: Adam off site

Location St Paul, MN Date 12/17/15

Project / Client Ford TCAP

P1/4

Arcadis: Adam Thompson
Purpose: Excavate, sample in Area C.
Weather: 20's, cloudy

0700: Adam arrive on site. Meet w/ Bolander for H+S meeting, discuss day's plans.
0730: Mob to Area C.

0830: Begin trench 4.

minor debris brick, concrete

0-3' - Clay sand mix Brownish Grey
3-7' - Very fine sand, lt-brown poorly graded
7-8' - Gray-green clay
8-10' - Dark gray/brown very fine sand w/ petroleum-like odor
10-12' Clay sand mix

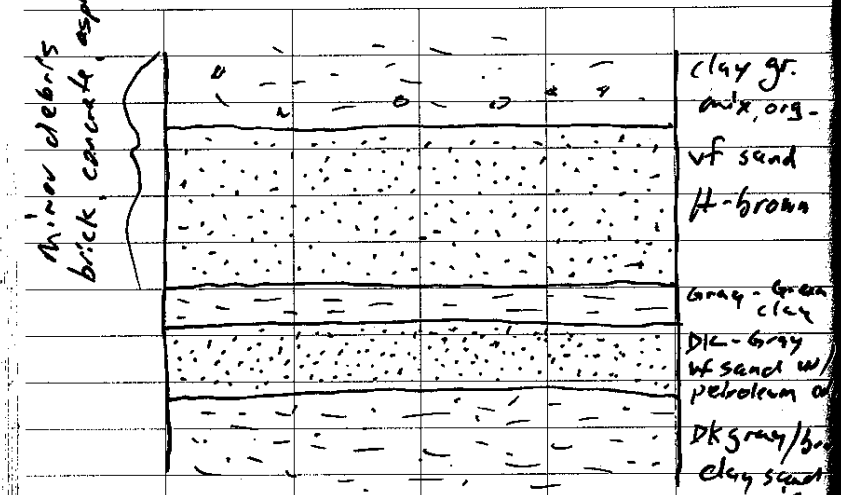
1000: Finish Trench 4 excavation.

Rite in the Rain

Location St Paul, MN Date 12/17/15

Project / Client Ford TCAP

P2/4



10[25]: Area C - Trench-4_ _7-8(2015 1217)

DRO: 87.99 g VOC: 33.59 g

117 g 33.30 g

GRO: 33.53 g 44 g

33.70 g 44 g

10[30]: Amy (MPCA) arrives on site.

11[30]: Mob to Trench 3

12[00]: Lunch

Location St Paul, MN Date 12/17/15

Project / Client Ford TCAP

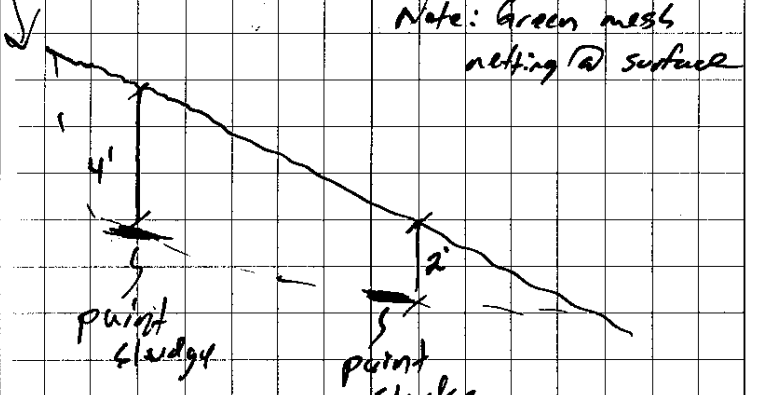
P3/4

12[30]: Setup's to begin Trench 3 excavation.

12[45]: Begin excavating Trench 3.

13[00]: Run into paint sludge layer @ 4'

12[45]: Area C - Trench-1_ 010_ 4-5 (2015 1217) (ACM Analysis)



13[50]: Begin backfilling Trench 3. Amy off site.

Rite in the Rain

Location St Paul, MN Date 12/17/15

Project / Client Ford TCAP

P4/4

1445: Gary arrive to pick up samples.

1500, Fedex samples -- unload into Bonnier.

1515: Kelly arrive to go over GPS unit operation.

1630: Off site

Location _____ Date _____

Project / Client _____

Rite in the Rain

Location St. Paul MN Date 12-17-15

Project / Client Ford TCAP

1/2

Purpose: Collect HA-21
ARCADIS: Ian Stewart
Weather: 25°F, Cloudy

0700: Onsite, HaS tailgate
Prepare to collect HA-21.
0800: Collect HA-21
Sample HA-21_0-1 (2015121I)

Analysis	TARE	Soil	
VOC	33.30g	10g	Also analyze for
VOC	33.67g	10g	SVOC, TAL metals,
GRO	33.89g	10g	and moisture.
GRO	33.61g	10g	
DRO	88.08g		

Ian prepares Sample, Adam Thompson will submit with his samples.
0846: Ian Stewart uploads pictures and cleans up.
0930: Kelly Hacker tells Ian Stewart he needs to mark the sample locations

Location St. Paul, MN Date 12-17-15

Project / Client Ford TCAP

2/2

1045: Ian completes placing HA-21 marking flag.
Offside to deliver PINE PID & 4-gas meter to FedEx.

12-17-15

Rite in the Rain

Scanned by CamScanner

Location St. Paul, MN Date 1/12/16

Project / Client Ford TCAP

P 1/5

Arcadis: Adam T.

Purpose: Trenching in Area C.

Weather: Clear skies, -8°F.

0730: Adam arrive on site, Meet w/ Balander. Discuss plan for the day.

0800: Gather supplies

0805: Calibrate PID. 100.3 ppm.

0830: Give Bruce (Arcadis) tour of the site.

0900: Ryan O. onsite.

0930: Mob to Area C.

1000: Begin trench 2.

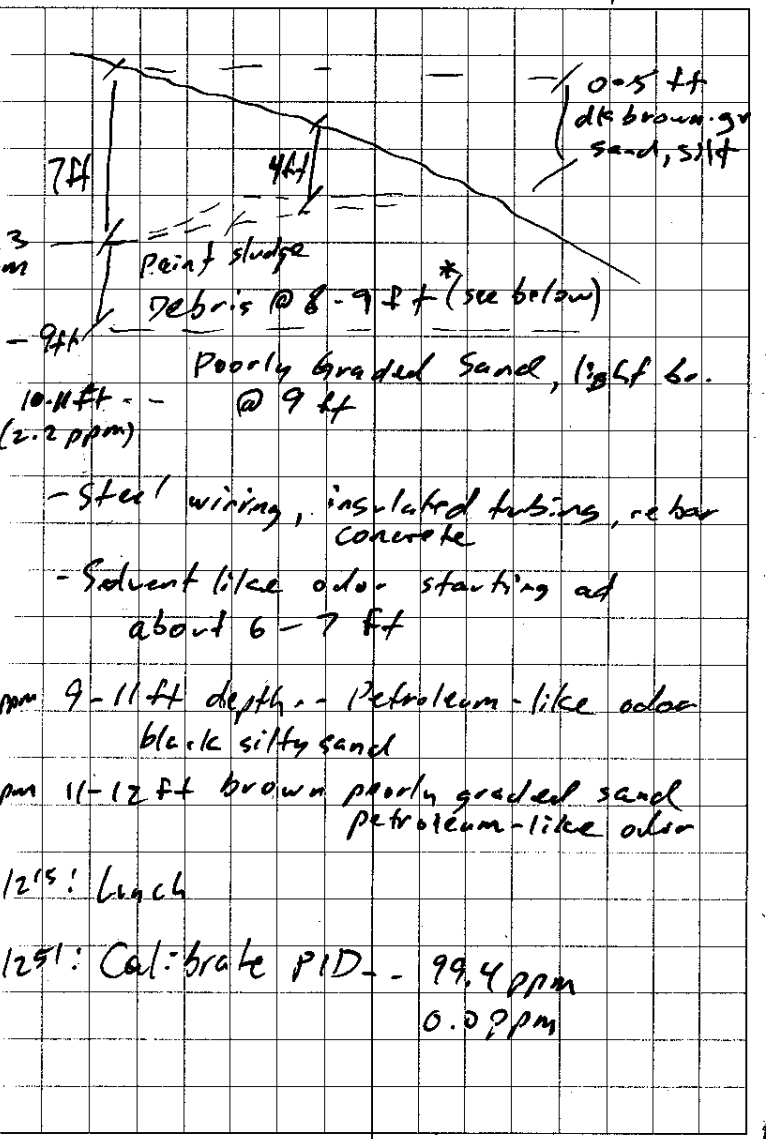
- Solidified Paint Sludge 6 ft from start of trench and 4.5 ft depth
- Also @ 1 ft from start of trench at a depth of 7 ft

PID: 71.3 @ 6-7 ft depth 0-5 liter ft

Location St Paul, MN Date 1/12/16

Project / Client Ford TCAP

P 2/5



1215: Lunch

1251: Calibrate PID - 99.4 ppm
0.0 ppm

Rite in the Rain

Location St Paul, MN Date 1/12/16

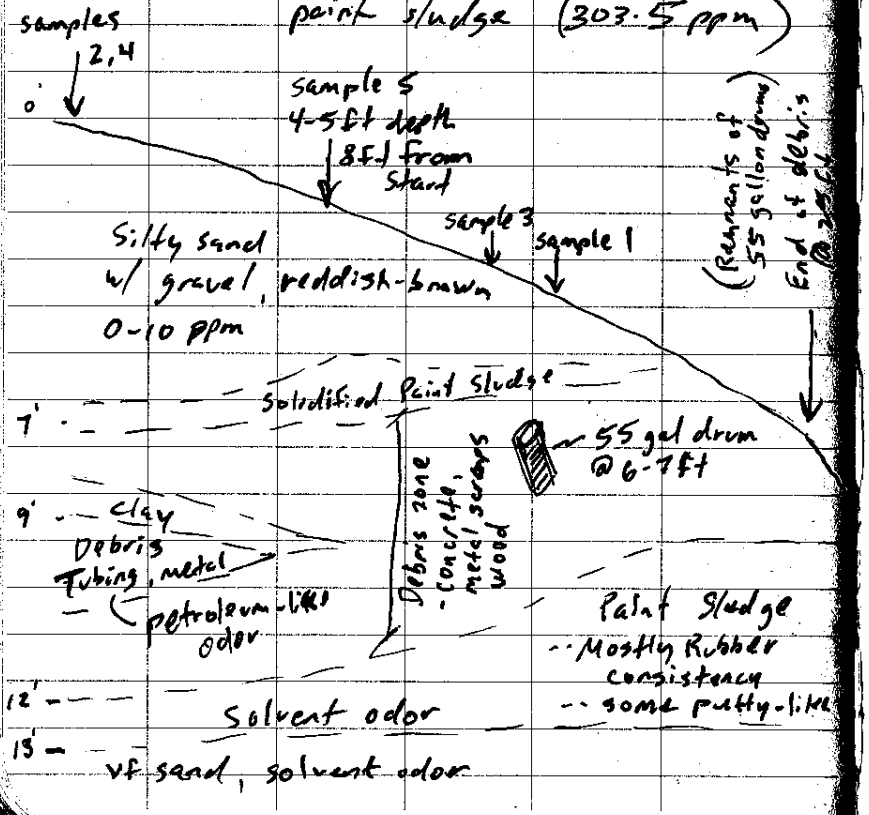
Project / Client Ford TCAP

p3/5

12-13' Less solidified (putty-like) paint sludge, strong solvent-like odor. 922.7 ppm

-- Very fine sand, poorly-graded Dark-gray

15' from stand @ 6ft depth paint sludge (303.5 ppm)



Location St Paul, MN Date 1/12/16

Project / Client Ford TCAP

p4/5

① 1637: Area C-Trench-2_015_6-7(20160112)

VOC: 32.166g, 31.983g, 42g, 42g

GRO: 31.855g, 31.862g, 43g, 43g

DRO: 88.26g, 117g

Oil in soil and sheen tests positive

② 1715: Area-C-Trench-2_00_12-13(20160112)

VOC: 33.21g, 33.60g, 44g, 44g

GRO: 33.62g, 33.57g, 45g, 45g

DRO: 88.10g, 116g

Sheen test positive Oil in soil negative

③ 1740: Area C-Trench-2_013_6-7(20160112)

DRO: 88.48g, 117g

VOC: 33.54g, 33.61g, 44g, 44g

GRO: 33.98g, 32.933g, 44g, 44g

Sheen test and Oil in soil negative

Rite in the Rain

Location St Paul, MN Date 1/12/16

Project / Client Ford TCAP

P5/5

(4) 1815: Area C-Trench-2_00_9-10 (20160112)

VOC: 33.45g	GRO2 33.60g
33.64g	33.40g
44g	44g
44g	46g
DRO: 87.92g	
115g	

Sheen test and oil in soil negative

(5) 1838: Area C-Trench-2_08_4-5 (20160112)

VOC: 33.75g	GRO: 33.53g
33.32g	33.48g
44g	43g
44g	43g
DRO: 88.23g	
116g	

Sheen test and oil in soil test negative

Location St Paul, MN Date 1/13/16

Project / Client Ford TCAP

P1/2

Arcadis: Adam T.

Purpose: Trenching in Area C.

Weather: Overcast, 0°F.

0715: Adam arrive on site. Gather supplies. Cal. PID 100.1 ppm

0815: Mob to Area C.

0830: Begin trenching.

15-20ft Paint Sludge layer

6-7ft depth (998.4 ppm)

10-11ft -- Fibrous material, w/ cardboard, wood debris and paint sludge some metal lids (778.ppm)

12-13ft -- Light gray, vf sand poorly graded, minor cardboard debris (58.1 ppm)

1000: Elevated PID Readings around and inside excavator. Back off

1020: Move back 5ft and trench (20' from start)

1045: Finish trench

Rite in the Rain

Location St Paul, MN Date 1/13/16

Project / Client Ford TCAP

P2/2

1100: Back to trailer to pack sample coolers

1200: Talk w/ Kelly, decide to trench back to end of debris

1300: Mob down to Trench-2. Excavate back to 25' From start of trench. Remnants of 55-gallon drums encountered. Ambient air elevated PID >20 ppm Stop trenching

1515: Gary (courier) arrives to pick up samples

Location Date

Project / Client

Rite in the Rain

Location St Paul, MN Date 1/13/16

Project / Client Ford TCAP

P2/2

1100: Back to trailer to pack sample coolers

1200: Talk w/ Kelly, decide to trench back to end of debris

1300: Mob down to Trench 2. Excavate back to 25' from start of trench. Remnants of 55-gallon drums encountered. Ambient air elevated PID > 20 ppm Stop trenching

1515: Gary (courier) arrives to pick up samples

1630: Adam off site

Location St Paul, MN Date 1/14/16

Project / Client Ford TCAP

P1/3

Arcadis: Adam T

Purpose: Excavate Trench 3 in Area 3.

Weather: Overcast, 30s.

1215: Adam arrive on site.

1250: Mob to Area C.

1300: Place malleable paint sludge in 55-gallon drum.

1330: Begin trenching #3.

Lateral		
0-5'	0-5' silt, poorly ~~sorted~~ graded, dk brown	0.0 ppm
5-10'	0-5' silt, clay poorly-graded @ 5' minor paint sludge, solid	0.0 ppm 0.5 ppm
0-5'	6-10' silt/clay dark brown No debris	
	10'-? Solidified Paint Sludge mixed w/ debris (concrete wood)	96 ppm

- - Paint sludge becoming more malleable into the mass

Rite in the Rain

Location St Paul, MN Date 1/14/16

Project / Client Ford TCAP

P2/3

55 gal drum @ 22' from start of trench 2-3 depth

1615: Finished trenching for the day. Collect samples.

1650:

Area C-Trench-3_022_2-3(20160114)

VOC: 33.63g 43g 33.23g 44g GRO: 33.72g 43g 33.58g 43g

DRO: 88.34g 115g

Oil in soil, sheen tests negative

1708: Area C-Trench-3_010_9-10(20160114)

VOC: 33.79g 43g 33.79g 43g GRO: 33.64g 43g 33.73g 43g

DRO: 88.22g 117g

Oil in soil, sheen negative

Location St Paul, MN Date 1/14/16

Project / Client Ford TCAP

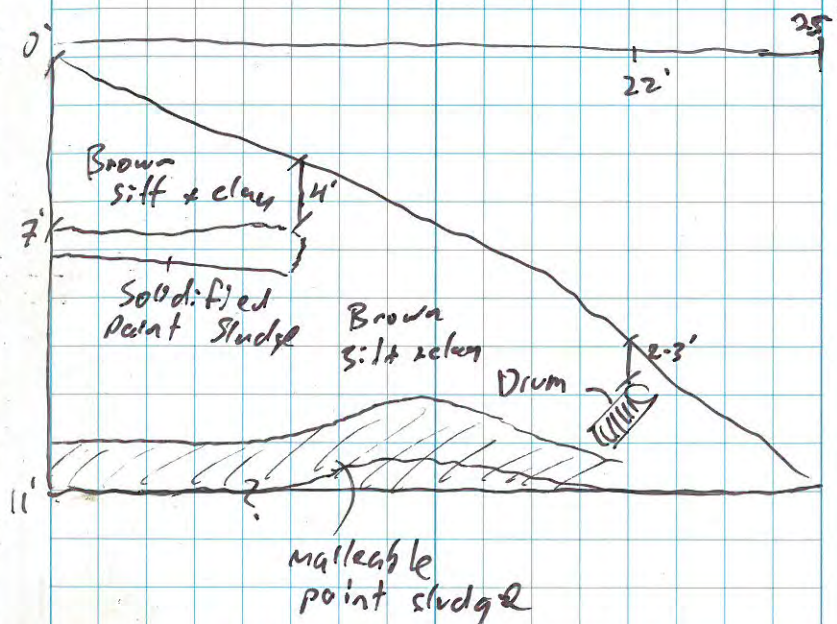
P3/3

1730: Area C-Trench-3_07_3-4(20160114)

VOC: 33.52g 43g 33.68g 43g GRO: 33.75g 43g 33.49g 43g

DRO: 88.11g 114g

Oil in soil, sheen negative



1815: Adam off site.

Rite in the Rain

Location St. Paul, MN Date 1/15/16

Project / Client Ford TCAP

P1/3

Arcadis: Adam T
Purpose: Trenching in Area C.
Weather: Overcast, 20s

645: Adam arrive on site.
0700: Meet w/ Bolander for H&S and discuss plan for the day.
0725: Calibrate PID 100.0 ppm
Gather supplies.

0800: Mob to Area C

0815: Begin Trenching #3.

lateral dist.	depth	debris
25-30'	1-2 ft	Remnants of 55 gallon drum mixed in w/ paint sludge 6.3 ppm
	2-3	solidified paint sludge mixed w/ silt/clay brown 25.1 ppm

Location St Paul, MN Date 1/15/16

Project / Client Ford TCAP

P2/3

- Paint sludge extends out to 35' from start of trench 2-7ft depth
- 22-35ft -- debris overlying paint sludge layer.

@ 35-45ft silt/clay 7-8' depth
vf, poorly-graded sand 8-14ft depth

0945 -- Finish trench 3.

1030: Amy (MDCA) onsite. Go over Trenches 2 and 3 overview

1100: Amy offsite

1130: Back to trailer to pack sample coolers. Start backfilling Trench 3 with Class 5.

1430: Gary (courier) arrives to pick up samples.

Rite in the Rain

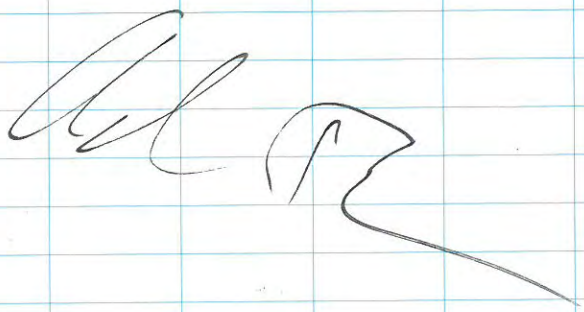
Location St Paul, MN Date 1/15/16

Project / Client Ford TCAP

P3/3

1500: Mob down to Area C to label Haz Waste and place sludge and 55-gal drums in containers.

1630: Adam off site.



Location Date

Project / Client

Rite in the Rain

Location ST PAUL, MN Date 1/29/16

Project / Client Ford TCAP

5/5

Note: All Measurements in feet from North side Top of CASING (TOC) using a Solinst Water Level Meter Model 101 S/N 224511 / Field Rental

- All New wells Locked

14:03 Note 2 - 1500 gal poly Tanks on site with Drill mud / development water
1 - 1200 gal 1 - 810 gal
1 - 250 gal Tote ≈ 3 gal sediment
25 - Drums 14 - Drill fluids 11 - cuttings

- prep drill mud characterization samples

15:25 BE off site for project
- Travel to Milwaukee

20:44 - Arrive Milwaukee
- Reporting

29 JAN 16

Location St Paul, MN Date 2/10/16

Project / Client Ford TCAP

P 1/1

Arcadis: Adam T.

Purpose: Monitor well gauging and sampling

weather: 40°F, overcast

0800: Adam arrive on site. Gather supplies

0900: Gauge Wells

[illegible] for AMW-27

[illegible] stuck in well

1145: Generator battery dead. Drive to batteries plus for new one.

1230: Mob to AMW-27.
-- Pump stuck in well.

1500: Drive to Menards for supplies.

1600: Back on site. Continue to attempt retrieval of pump

1800: Adam off site

Rite in the Rain

Location St Paul, MN Date 2/11/16

Project / Client Ford

p1/2

Arcadis: Adam T,
Purpose: Monitor well sampling
Weather: 6°F, windy

0715: Adam arrive on site.
0745: Mob to AMW-30.

0756: Begin bailing AMW-30
0835: End bailing AMW-30 (6 gal purged)

0845: Begin sampling AMW-30

0900: Ryan O, onsite to help retrieve pump from AMW-27.

1030: Pump successfully removed from AMW-27. Ryan off site.
1130: Adam mob to AMW-28. Setup Grunfos pump, well doesn't recover fast enough. Need to bail.

1225: Begin bailing AMW-28
1250: End bailing AMW-28 (7 gal purged)

Location St Paul, MN Date 2/12/16

Project / Client Ford TCAP

p2/2

1328: Begin sampling AMW-28

1405: Mob to AMW-27

1425: Begin bailing AMW-27
1450: End bailing AMW-27 (6 gal purged)

1453: Begin sampling AMW-27

1715: Adam off site.

Rite in the Rain

Location St Paul, MN Date 2/12/16

Project / Client Ford TCAP

P 1/2

Arcadis: Adam T.
Purpose: Monitor Well sampling.
Weather: -5°F, windy

0700: Adam arrive on site.
Gather supplies
0830: Mob to AMW-29.

0855: Begin bailing AMW-29
0925: End bailing AMW-29.

0980: Start sampling AMW-29.

1035: Mob to AMW-31.
1050: Begin bailing AMW-31
1107: End bailing AMW-31.

1110: Begin sampling AMW-31

1145: Mob to trailer to pack
sample coolers and rental
equipment.

Location St Paul, MN Date 2/12/16

Project / Client Ford TCAP

P 2/2

1200: Lunch

1445: Sample coolers packed
and rental equipment packed
1500: Adam offsite

Cal R

Rite in the Rain

Location St. Paul, MN Date 3/2/16

Project / Client Ford TCAP

1/3

Arcadis: A. Roll

Purpose: GW Sampling

Weather - 20s, Sunny

0945 A. Roll on site.

1000 Discuss materials needed with Jim and locations

1015 A. Roll and Jim locate and Gauge wells:

Well	DTW	TD	Time
AMW-27	98.23	107.50	1016
AMW-28	103.36	117.15	1025
AMW-29	116.46	123.69	1039
AMW-30	113.52	122.42	1046
AMW-31	104.85	120.30	1055

1110 A. Roll off-site for lunch

1140 A. Roll return to site. Pack up Sampling equipment

1155 Mob to AMW-27.

1200 Setup on AMW-27

1210 Start bailing

Purge Parameters on next page

2

Location St. Paul, MN Date 3/2/16

Project / Client Ford TCAP

2/3

Time	1225	1240	1251
Vol (gal)	Tan	Tan	grey/tan
Color	1.5	3.0	4.5
odor	none	none	none
Appearance	turbid	←	→
pH	9.08	8.99	8.54
Cond	1.002	0.957	0.789
Turb.	83.9	1221.1	400.1
Temp	11.99	11.93	11.93
DO	3.12	3.06	1.41
ORP	84.8	78.5	57.6

1251 Sample "AMW-27_20160302" taken for VOCs, dissolved metals, and DRO.

1320 Return to trailer for PCE extra filter

1340 Mob to AMW-28

1345 Setup at AMW-28

1350 Start bailing AMW-28

Purge parameters on next page

2

Rite in the Rain

Location St. Paul, MN Date 3/2/16

Project / Client Ford TCAP

3/3

Time	1409	1428	1445
Vol	2.2	4.4	6.6
Color	grey	grey/tan	grey/tan
Odor	cloudy	cloudy	turbid
Apperance	Slight →		
pH	8.07	7.61	7.73
Cond.	0.432	0.443	0.498
turbidity	506.3	482.1	704.3
temp	11.81	11.70	11.79
DO	1.60	1.41	1.05
ORP	-99.8	-92.6	-96.4
DTW	102.25 →		

1445 Sample "AMW-28-20160302" collected for VOCs, dissolved metals, DRO

1515 Return to trailer.

1520 Start unloading truck

1545 offsite for ice

1600 on-site

1605 prep coolers for storage overnight

1615 A. Roll off-site

Location St. Paul, MN Date 3/3/16

Project / Client Ford TCAP

1/3

Arcadis: A. Roll

Purpose: GW Sampling

Weather: 30s, Snow

0930 Arcadis on site. Prep materials / Pack truck

0955 Mob to AMW-29. Fill AR Out field forms.

1010 Calibrate YSI

DO sat - 102.0% / 100%

pH 7 - 7.16 / 7.00

pH 4 - 4.08 / 4.00

Cond - 1.446 / 1.413

ORP - 262.6 / 240.0

turb. - 135.3 / 126.0

1035 Start bailing AMW-29

time	1042	1104	1111
vol	1.1	2.2	3.3
color	grey	grey/tan	grey/tan
odor	none →		
apperance	turbid →		
pH	6.34	5.24	4.77
cond.	0.782	0.745	0.731
turb	398.5	421.7	461.1
temp	13.80	14.[illegible]	13.78
DO	2.25	3.32	3.91
ORP	98.8	156.4	171.4
DTW	117.21	116.79	116.84

Rite in the Rain

Location St. Paul, MN Date 3/3/16

Project / Client Ford TCAP

2/3

1111	Collect Sample "AMW-29_20160303" for VOCs, dissolved metals, and DRO		
1135	Mob to AMW-30 and setup on well		
1155	Start bailing AMW-30		
time	1207	1220	1229
Vol	1.4	2.8	4.2
Color	grey	grey/tan	grey/tan
odor	none →	→	→
apperance	turbid →	→	→
pH	5.81	5.91	5.92
Cond.	1.257	1.212	1.196
Turb	934.2	747.4	760.9
temp	14.17	14.25	14.27
DO	3.45	3.25	4.50
ORP	125.0	133.2	128.5
DTW	115.41	116.26	118.07
1229	Collect Sample "AMW-30_20160303" for VOCs, dissolved metals, DRO		
1300	Return to trailer. offsite for lunch		
1320	Return to site. Mob to AMW-31		

Location St. Paul, MN Date 3/3/16

Project / Client Ford TCAP

3/3

1330	Setup on AMW-31		
1350	Attend Calls for other projects		
1425	Start bailing AMW-31		
time	1440	1454	1508
Vol	2.5	5.0	7.5
Color	grey →	→	→
odor	none →	→	→
apperance	cloudy/turbid →	→	→
pH	7.40	7.43	7.57
Cond.	0.740	0.748	0.747
Turb	344.9	590.1	608.1
temp	10.83	11.39	11.41
DO	1.58	1.12	1.27
ORP	-129.3	-122.9	-136.2
DTW	104.97	104.90	104.80
1508	Collect Samples "AMW-31_20160303" and "Dup-1" for VOCs, dissolved metals, and DRO		
1600	Return to trailer to pack coolers.		
1640	Relinquish coolers to Gary (test america)		
1650	Cleanup on-site/pack materials		
1740	off-site		

Rite in the Rain

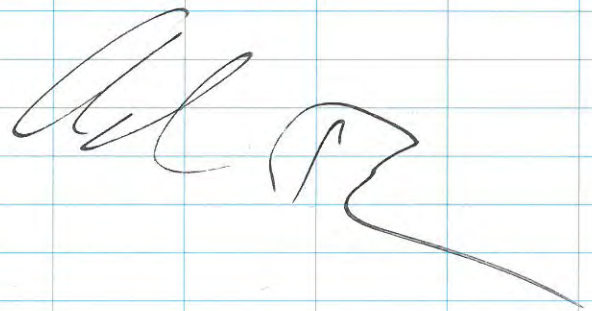
Location St Paul, MN Date 3/15/16

Project / Client Ford TCAP

P3/3

1500: Mob down to Area C to label Haz Waste and place sludge and 55-gal drums in containers.

1630: Adam off site.



Location St Paul, Minnesota Date 3/8/16

Project / Client Ford TCAP

1/3

Arcadis pschulz, K Hoehn

Weather 57°, cloudy, humid

Purpose area C groundwater sampling

0705 arcadis onsite.

0710 meet K Hoehn. Ford security would like two people down in area C to do work. She is going to get in touch with team to resolve issue.

- pack up supplies/field truck.

0750 Tailgate meeting

0800 prep field sample labels

0850 mobb to area C to begin water level readings

0903 Begin water level readings

1015 Finish collecting water levels.

1016 prep to being sampling at amw-25

1030 Begin pumping at amw-25.

1105 Water stabilized at amw-25. prep to sample.

1110 Sample amw-25(20160308) for VOCs, SVOCs, TAL metals (dissolved), and DRO

Rite in the Rain

Location St Paul MN Date 3/8/16

Project / Client Ford TCAP

2/3

1123 Turn off pump at amw-25. Clean up

1136 mob to amw-24. Truck gets stuck in mud. Talk with Kelly, she comes down to pull it out. Carry gear to amw-24 and set up until she gets here.

1205 Truck in unstuck

1216 Begin pumping on amw-24

1246 water quality parameters stable.

1250 Sample amw-24(20160308) for VOC, SVOC, dissolved TAL metals, DRO

1306 pump off at amw-24. clean up.

1315 mob to amw-23/23B. set up to sample amw-23B.

1338 pump on at amw-23B

1403 water parameters stable at amw-23B.

1405 Sample amw-23B(20160308) for VOC, SVOCs, DRO, Dissolved TAL metals.

1421 clean up at amw-23B and prep to sample amw-23

1422 pump on at amw-23.

1445/1452 parameters in amw-23 stabilize

Location St Paul MN Date 3/8/16

Project / Client Ford TCAP

3/3

1455 sample amw-23(20160308) for VOC, SVOC, DRO, dissolved tal metals

1513 Turn of pump and clean up

1520 mob to amw-20.

1527 Pump on at amw-20.

1552 parameters stabilize at amw-20.

1555 Sample amw-20(20160308) for VOC, SVOC, Dissolved TAL metals, DRO.

1609 pump off at amw-20. clean up.

1615 mob to ~~gas station for ice~~/back to trailer. to get 10W drums.

1648 place 2 drums in WWTP. one is empty, one has today's ~15 gal water 10W

1650 mob back to trailer

1700 arcadis off site

pbs 3/8/16

Rite in the Rain

Location St Paul MN Date 3/9/16

Project / Client Ford TCAP

1/3

Arcadis p schultz K Hoehn

weather 35°, misting/v. light rain. no wind

purpose area C groundwater sampling

0710 arcadis on site

0720 tailgate meeting

0726 Calibrate ysi

ORP ~~11.1°C~~ 249.3 mV → 240.0 mV

specific conductance 1.537 ms/cm → 1.412 ms/cm

pH 4 3.99 → 4.00

pH 7 6.94 → 7.00

pH 10 10.15 → 10.02

DO 103.3% → 100.5%

0751 pack up truck.

0805 mob to area C.

0823 set up at amw-19.

0831 pump on at amw-19

0835 still no water. Figure out that tubing is sitting at top of screen. replace with bilge tubing

0843 pump on

0908 water quality parameters stabilized at amw-19.

0915 sample amw-19(20160309) for VOC, SVOC, DRO, dissolved TAL metals

Location St Paul MN Date 3/9/16

Project / Client Ford TCAP

2/3

also sample dup-01(20160309) for VOCs, SVOCs, DRO.

0940 pump off at amw-19. clean up.

0944 mob to amw-22/22B. set up on amw-22B.

0951 Begin pumping on amw-22B.

1046 water quality parameters stabilize.

1050 sample amw-22B(20160309) for DRO, VOCs, SVOCs, dissolved TAL metals

- also sample MS/MSD for VOCs, SVOCs

1117 pump off at amw-22B.

1118 pump on at amw-22.

1155 sample amw-22(20160309) for VOCs, SVOCs, DRO, dissolved TAL metals.

1159 pump off at amw-22. clean up.

1205 mob to trailer for supplies to bail.

1220 set up at amw-07.

1226 start bailing amw-07.

1232 Finish bailing amw-07. removed ~2.5 gallons

1240 Sample amw-07 for VOCs, SVOCs DRO. dissolved TAL metals.

Rite in the Rain

Location St Paul, MN Date 3/9/16

Project / Client Ford TCAP

3/3

1245 pack up existing samples/coolers.
~~1300~~ 1315 Mob back to trailer to meet test america.
1328 ~~Mob back to amw-21 to set up to sample.~~ pds mob to lunch for ice.
1345 Set up at amw-21.
1352 Begin bailing amw-21
1401 Finish bailing amw-21. Removed 5 gal.
1405 Sample amw-21 for VOCs, SVOCs, DRO, dissolved TAL metals.
1410 pack up cooler, clean up.
1430 mob to amw-26
1442 Begin bailing amw-26
1452 Finish bailing amw-26. Remove ~3.5 gal
1455 Sample amw-26(20160309) for VOC, SVOC, tal metals (dissolved), DRO
1508 mob to WWTP to unload IDW. Drum not opening for PPE IDW.
1530 Talk w/ Kathern she wants me to complete Drum/roll off inspections
1602 Finish WWTP drum inspection
1611 Finish roll off inspection (AreaC)
1612 mob to trailer. inspect drums.
1630 clean up.
1645 office

pds 3/9/16

Location Date

Project / Client

Rite in the Rain

Location St Paul, MN Date 5/31/16

Project / Client Ford TCAP

p 1/3

Arcadis: Adam T
Purpose: well gauging
Weather: Partly cloudy 80's.

0700: Adam onsite. Conduct H+S tailgate.

0730: mob to MW-4 -- Gauge inoperable
0745: Back to office to get new gauge.
0830: Adam back onsite.

0853: MW-4 DTW = 6.04 ft
Bottom = 8.33 ft

1205: AMW-28 DTW: 102.32 ft
Bottom: 117.32 ft

1217: AMW-12 DTW: 3.04 ft
Bottom: 11.45 ft

1235: AMW-15 DTW: 4.39 ft
Bottom: 13.06 ft

1243: AMW-14 DTW: 4.03 ft
Bottom: 12.02 ft

Rite in the Rain

Location St Paul, MN Date 5/31/16

Project / Client Ford TCAP

p 2/3

1253:	AMW-11	DTW = 3.24 ft
		Bottom = 9.51 ft
1305:	AMW-18	DTW = 8.66 ft
		Bottom = 14.46 ft
1320:	AMW-29	DTW = 115.33 Ft
		Bottom = 129.40 Ft
1344:	AMW-30	DTW = 112.45 ft
		Bottom = 122.42 ft
1350:	AMW-06	DTW = 24.42 ft
		Bottom = 43.53 ft
1357:	AMW-31	DTW = 103.92 ft
		Bottom = 120.07 ft
1407:	AMW-16	DTW = 5.00 ft
		Bottom = 10.66 ft
1427:	AMW-08	DTW = 37.76 ft
		Bottom = 44.81 ft
1437:	AMW-27	DTW = 98.24 ft
		Bottom = 107.58 ft
1448:	MW-5	DTW = 2.06 ft
		Bottom = 4.00 ft
1452:	MW-6	DTW = 2.11 ft
		Bottom = 4.51 ft

Location St Paul, MN Date 5/31/16

Project / Client Ford TCAP

p3/3

1500:	AMW-04	DTW = 35.53'	Bottom = 60.87'
1514:	AMW-05A	DTW = 99.48'	Bottom = 150.7'
1519:	AMW-03B	DTW = 16.52'	Bottom = 39.52'
1531:	AMW-09	DTW = 76.46'	Bottom = 89.40'
1600:	AMW-01	DTW = 25.75'	Bottom = 41.80'
1614:	AMW-17	DTW = 5.22'	Bottom = 9.89'
1623:	AMW-10	DTW = 18.14'	Bottom = 42.32'
1625:	AMW-02	DTW = 24.44'	Bottom = 42.80'
1642:	AMW-05	DTW = 30.95'	Bottom = 31.17'
1647:	AMW-05B	DTW = 29.54'	Bottom = 54.82'
1653:	AMW-07	DTW = 40.16'	Bottom = 44.93'
1700:	AMW-21	DTW = 48.31'	Bottom = 58.74'
1716:	AMW-22B	DTW = 16.28'	Bottom = 44.76'
1722:	AMW-22	DTW = 16.27'	Bottom = 28.39'
1730:	AMW-19	DTW = 17.01'	Bottom = 26.63'
1737:	AMW-20	DTW = 19.19'	Bottom = 25.87'
1742:	AMW-23B	DTW = 20.48'	Bottom = 48.63'
1746:	AMW-23	DTW = 20.02'	Bottom = 28.97'
1752:	AMW-25	DTW = 14.66'	Bottom = 23.65'
1758:	AMW-24	DTW = 16.85'	Bottom = 25.03'
1815:	Adam off site		

Rite in the Rain

Location St Paul, MN Date 6/2/16

Project / Client Ford TCAP

p1/2

0720: Adam arrives on site.

Purpose: site-wide GW sampling
weather: sunny, 60s

0745: Gather supplies
0900: Mob to AMW-27

0955: Begin Purging AMW-27
1015: Finish Purging AMW-27

5.25 gallons purged

1025: Begin sampling AMW-27
1055: Finish sampling AMW-27

1100: Run to store for ice

1147: Begin purging AMW-31
1210: Finish purging AMW-31 7 gallons purged
1215: Begin sampling AMW-31
1255: Finish sampling AMW-31

Location St Paul, MN Date 6/2/16

Project / Client Ford TCAP

p2/2

1330: Mob to AMW-11.

1353: Begin purging AMW-11
1420: Finish purging AMW-11
Begin sampling.
1450: Finish sampling AMW-11.

1500: Mob to AMW-18
1525: Begin purging AMW-18
1550: Finish purging AMW-18
Begin sampling
1620: Finish sampling AMW-18

1630: Back to trailer, unload supplies + pack coolers
1730: offsite

Rite in the Rain

Location St. Paul, MN Date 6/2/16

Project / Client Ford TCAP

p1/2

personel: Adam T
purpose: Site-wide GW sampling.
weather: Sunny 70s.

0730: Adam arrive on site

0800: Pack coolers from 6/1.
1100: Mob to AMW-14.
1119: Begin purging AMW-14.
1150: Finish purging AMW-14.
Begin sampling

1245: Finish sampling AMW-14.
Dup-02

1300: Mob to AMW-15.
1350: Begin purging AMW-15.
1425: Finish purging AMW-15.
Begin sampling.
1455: Finish sampling AMW-15

1500: Lunch

Location St Paul, MN Date 6/3/16

Project / Client Ford TCAP

p2/2

1530: Mob to AMW-30.

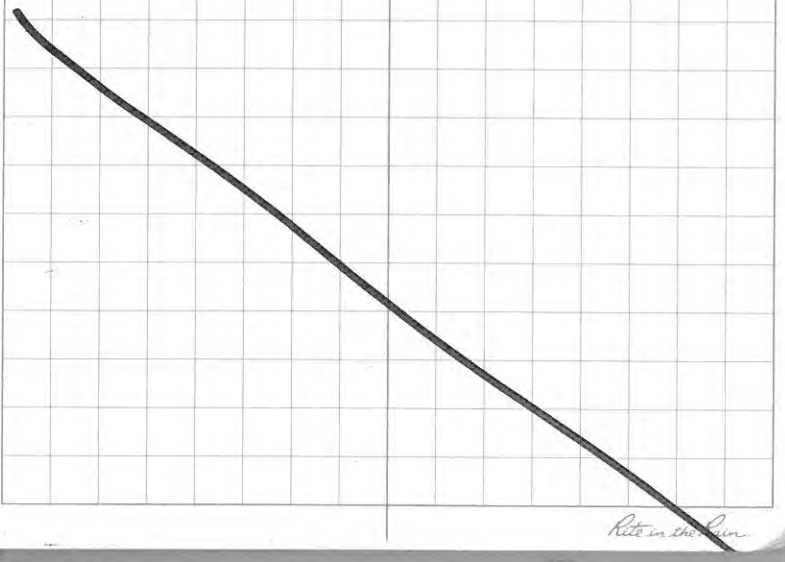
1600: Begin purging AMW-30

1630: Finish purging AMW-30
Begin sampling.

1704: Finish sampling AMW-30.

1715: Back to trailer to pack coolers and unload supplies

1730: Adam off site.



Rite in the Rain

Location St Paul, MN Date 6/3/16

Project / Client Ford TCAP

p 1/2

Arcadis: Adam T.
Purpose: Site-wide GW sampling
Weather: Sunny, 70's

0630: Adam arrive on site.
Pack coolers and load supplies.

0900: Mob to AMW-29.
0949: Begin purging AMW-29
1025: Finish purging AMW-29

1030: Begin sampling
1050: Finish sampling AMW-29.
1100: Mob to AMW-08
1110: Begin purging AMW-08
1130: Finish purging AMW-08
1135: Begin sampling
1150: Well not producing enough recharge
1200: Lunch
1230: Mob to AMW-28
1245: Begin purging AMW-28
1330: Finish purging AMW-28
Begin sampling.

Location St Paul, MN Date 6/3/16

Project / Client Ford TCAP

p 2/2

1425: Finish sampling AMW-28 plus Dup-04.

1445: Mob back to AMW-08 to continue sampling. Filled 1 L bottle.

1500: Mob to AMW-09. Purged one well volume - low recharge to purge again Monday

1534: Back to AMW-08 to continue sampling. Filled 1 L bottle -- End of sample limited supply.

1600: Back to trailer to load samples and unload gear/cleanup.

1645: Back to MSP office to drop off samples.

Rite in the Rain

Location St Paul, MN Date 6/6/16

Project / Client Ford TCAP

P1/2

Arrivals: Adam T
Purpose: Site-wide GW sampling
Weather: Partly sunny, 60's

0600: Adam arrive onsite
. H+S Tailgate
0630: Pack sample coolers from 6/3 and gather supplies.
0730: Mob to AMW-18.
0747: Begin purging AMW-18.
0812: Finish purging AMW-18 (1.5 gal) and start sampling.
0832: Finish sampling AMW-18.
0845: Mob to AMW-11.
0887: Begin purging AMW-11.
0920: Finish purging AMW-11 (1.5 gal) and start sampling.
0942: Finish sampling AMW-11.
1000: Mob to AMW-04.
1020: Begin purging AMW-04.
1054: Finish purging AMW-04. (13 gal)
1100: Begin sampling AMW-04
1120: Finish sampling AMW-04.

Location St Paul, MN Date 6/6/16

Project / Client Ford TCAP

P2/2

1130: Mob to AMW-3A
1225: Begin purging AMW-3A
1255: Finish purging AMW-3A (1.5 gal) Begin sampling.

1326: Finish sampling AMW-3A
1330: Lunch
1420: Load supplies and mob to AMW-3B.
1450: Begin purging AMW-3B
1555: Finish purging AMW-3B. (25 gal)
1600: Begin sampling AMW-3B
1620: Finish sampling AMW-3B
1630: Mob to AMW-10.
1717: Begin purging AMW-10.
1745: Finish purging AMW-10. (1 gal) Begin sampling.
1900: Finish sampling AMW-10
1910: Back to trailer to unload.
1945: Adam offsite.

Rite in the Rain

Location St Paul, MN Date 6/7/16

Project / Client Ford TCAP

p1/2

Arcadis: Adam T
Purpose: GW sampling
Weather: partly, 70's

0700: Adam arrive onsite.
H+S Tailgate
0730: pack sample coolers from previous day
1030: Mob to AMW-02.
1040: Begin purging AMW-02
1055: Finish purging AMW-02 (7 gal)
Begin sampling.
~~1[illegible]: Finish sampling AMW-16.~~
~~Mob to AMW-16~~
will dry. To Return.

1100: Mob to AMW-17
1120: Begin purging AMW-17.
1145: Finish purging AMW-17.
Begin sampling.
12": Finish sampling AMW-17.

Location St Paul, MN Date 6/7/16

Project / Client Ford TCAP

p2/2

~~AMW-16~~
1200: Back to AMW-02.
1234: Begin sampling AMW-02 Limited quantity

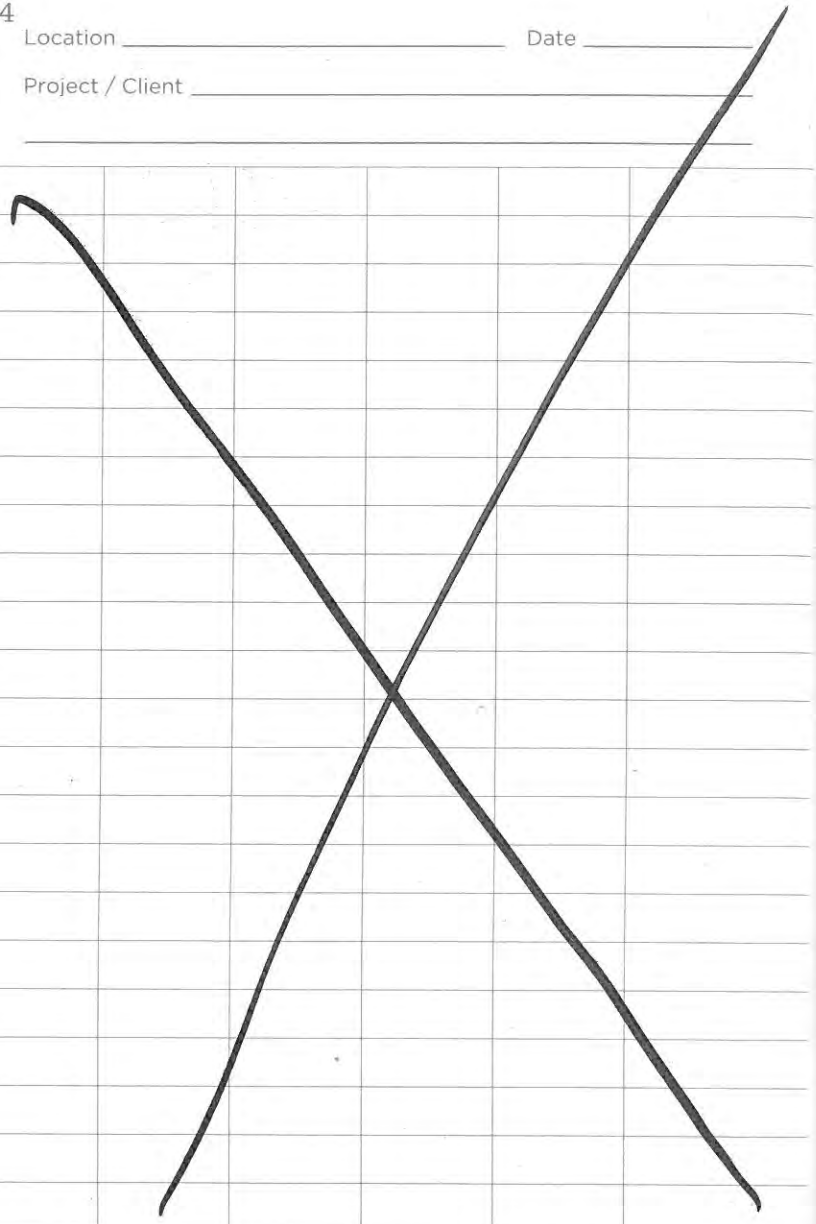
1330: Lunch

1430: Mob to AMW-16
1500: Begin purging AMW-16
1525: Finish purging AMW-16 (2 gal)
Begin sampling.
1544: Finish sampling AMW-16
1600: Back to AMW-02
1620: Finish sampling AMW-02
1630: Back to trailer to unload and pack coolers
1745: Adam off site.

Rite in the Rain

Location _____ Date _____

Project / Client _____



Location St Paul, MN Date 6/8/16

Project / Client Ford TCAP pl/2

Arcadis: Adam T, Kelly H.
Purpose: Gw sampling in Area C.
weather: sunny, 70's

0630: Adam arrive onsite.
Kelly arrive onsite.
0700: Paula supplies L meet to AMW-25.
0800: Begin purging AMW-25
0825: Finish purging AMW-25. (2 gal)
Begin sampling.
0837: Finish sampling AMW-25.
0850: Mob to AMW-24
0906: Begin purging AMW-24.
0931: Finish purging AMW-24. (2 gal)
Begin sampling.
0945: Finish sampling AMW-24
0950: Mob to AMW-3 and 3B.
1020: Begin purging AMW-23.
1042: Finish purging AMW-23. (2 gal)
Begin sampling AMW-23.
1105: Finish sampling AMW-23 with DUP-01

Rite in the Rain

Location St Paul, MN Date 6/6/16

Project / Client Ford TCAP

P2/2

1115: Back to trailer to pack yesterday's samples and grab more supplies.

1200: Gary (Test Am.) onsite.

1300: Gary offsite w/ samples AMW-16 AMW-09 and AMW-02.

1315: Mob back to AMW-23B.

1347: Begin purging AMW-23B.

1412: Finish purging AMW-23B. (1.5 gal) Begin sampling.

1425: Finish sampling AMW-23B,

1432: Mob to AMW-20.

1457: Begin purging AMW-20.

1517: Finish purging AMW-20. (1 gal) Begin sampling

1535: Finish sampling AMW-20.

1542: Mob to AMW-19.

1600: Peri pump not operating (not drawing H_2O)

1615: Mob to AMW-22B to test pump.

1630: Pump not working correctly.

1645: Mob back to trailer to pack coolers and unload gear.

1730: Adam off site.

Location St Paul, MN Date 6/9/16

Project / Client Ford TCAP

P1/3

ARCADIS: Adam T
Purpose: GW sampling
Weather: overcast, 60's

0600: Adam arrive on site.
Pack coolers from yesterday's samples. H+S Tailgate
0715: Load supplies.
0730: Mob to AMW-15.
Stop work for lightning
0815: setup @ AMW-15
0831: Begin purging AMW-15
0856: Finish purging AMW-15 (1 gal)
Begin sampling
1015: Finish sampling AMW-15 w/ Dup-02.
1030: Mob back to trailer to pack yesterday's samples.
1130: Test Am. arrive to pick up samples AMW-20, 23, 23B, 24, 25, and Dup-01.

Rite in the Rain

Location St Paul, MN Date 6/9/16

Project / Client Ford TCAP

1145: Mob to AMW-06. Peri-pump not drawing water. Adjusted depth and speed. Still not operating. Switch to bailer.
1245: Bailed 3 gal; well dry slow recharge
Mob to AMW-01
1312: Bailed 5-gal from AMW-01 well dry.
1325: Back to trailer for supplies.
1345: mob to AMW-05B
1355: Begin purging AMW-05B
1422: Finish purging AMW-05B. (13 gal)
1425: Begin sampling AMW-05B
1500: Finish sampling AMW-05B w/ Dup-03.
1505: Mob to AMW-02 + 02B
1517: Begin purging AMW-22
1542: Finish purging AMW-22. (2 gal)
Begin sampling.
1601: Finish sampling AMW-22

1619: Begin purging AMW-22B.

Location St. Paul, MN Date 6/9/16

Project / Client Ford TCAP

1640: Finish purging AMW-22B
Begin sampling
1651: Finish sampling AMW-22B
Mob to AMW-19

1706: Begin purging AMW-19
1731: Finish purging AMW-19 (2 gal)
Begin sampling
1746: Finish sampling AMW-19
Mob to AMW-05.
1751: Attempt bailing AMW-05 well dry.
1800: Back to trailer to unload
1830: Adam T + Kelly H offsite.

Rite in the Rain

Location St Paul, MN Date 6/10/16

Project / Client Ford TCAP p1/3

Arcadis: Adam T
Purpose: GW sampling.
Weather: Sunny, 90's

0530. Adam on site. Load supplies, conduct H+S Tailgate.

0545: Mob to AMW-06.
0553: Begin sampling AMW-06. Limited quantity. Will return to finish sampling.

0610: Mob to AMW-01.
0621: Begin sampling AMW-01
0644: Finish sampling AMW-01

0656: Run to store for ice.
0705: Kelly Hoehn on site Load supplies.
0710: Mob to AMW-07
4.77 ft water column
0.81 gal

Location St. Paul MN Date 6/10/16

Project / Client Ford TCAP P2/3

0725: Begin purging AMW-07.
0730: Finish purging AMW-07. (3gal)
Begin sampling

Color	lt br
Odor	none
App.	cloudy
pH	7.15
Cond.	0.713
Turbidity	540.1
Temp	14.60
D.O.	2.94
ORP	51.5

0758: Finish sampling AMW-07 w/ MS/MSD

0800. Back to trailer for H+S stand down meeting for heat stress.

0900: Mob to AMW-21

Rite in the Rain

Location St. Paul MN Date 6/10/14

Project / Client Ford TMC

P3/3

0957: Begin purging AMW-21.
0931: Finish purging AMW-21. (5.5 gal)
Begin sampling.
0949: Finish sampling AMW-21
1010: Mob to AMW-26.
1017: Begin purging AMW-26
1028: Finish purging AMW-26 (5 gal)

1031: Begin sampling AMW-26
1044: Finish sampling AMW-26
1055: Back to trailer to unload supplies
1110: Mob back to AMW-06 to finish sampling.
1125: Finish sampling AMW-06. Limited quantity
1130: Back to trailer to pack coolers
1230: Gary (Test Am.) arrives
1315: Gary offsite with 12 sample coolers.

Location Date

Project / Client

Rite in the Rain

APPENDIX J

Well Construction Logs

ARCADIS

WELL CONSTRUCTION LOG

WELL NO.: **AMW-05**

TOTAL DEPTH: **29.0** feet bgs

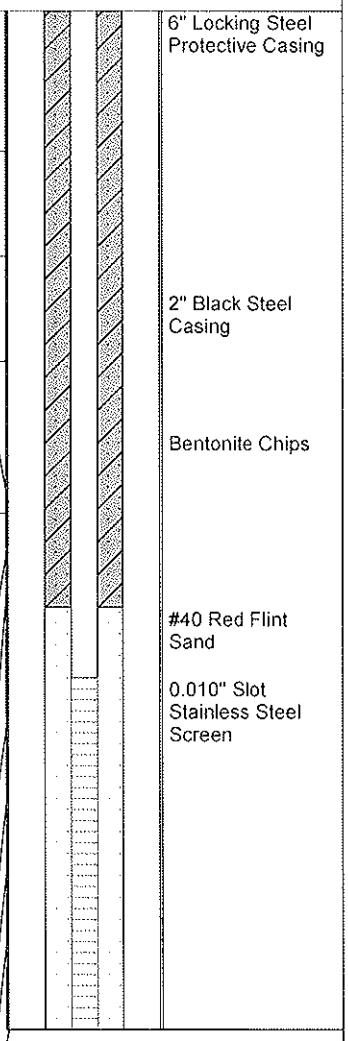
PROJECT INFORMATION

CLIENT:	**Ford Motor Company**
PROJECT:	**Twin Cities Assembly Plant**
SITE LOCATION:	**St. Paul, Minnesota**
LOGGED BY:	**AMF**
DATE STARTED:	**7/2/2007 4:45:00 PM**
DATE COMPLETED:	**7/2/2007 6:20:00 PM**

DRILLING INFORMATION

DRILLING CO.:	**Boart Longyear**
DRILLER:	**Jim**
DRILLING METHOD:	**Sonic**
COORDINATES:	**ELEVATIONS (feet MSL):**
Northing: 4973377.0226	**Surface: 722.07**
Easting: 484332.2764	**TOC: 725.25**

DEPTH (feet)	SOIL SYMBOLS	USCS/ STRATIGRAPHIC UNITS	PID (ppm)	RECOVERY (in.)	SOIL DESCRIPTION
0		SW	2.6	30	(0.0 - 4.0) SW: FILL (WELL GRADED SAND WITH GRAVEL), brown, fine to coarse grained sand, with some silt and gravel, angular to round, gravel composed of black & blue gray shale, dry
2			1.1		
4		GC	5.0	65	(4.0 - 7.0) GC: CLAYEY GRAVEL WITH SAND, black, gravel and clay with some fine to coarse grained sand, moist, subangular to round, up to 70mm, moist
6			3.2		
8		GC	2.4		(7.0 - 10.0) GC: CLAYEY GRAVEL, blue gray, gravel and cobbles composed of shale with some clay, dense, dry, hard
10		SM	2.4		(10.0 - 14.0) SM: SILTY SAND WITH GRAVEL, tan, fine to coarse grained sand, with some gravel, little silt, dry
12			2.6		(14.0 - 14.3) SM: SILTY SAND WITH GRAVEL, tan, fine to coarse grained sand, with some gravel, little silt, dry
14		SM	3.4	82	(14.3 - 15.2) SW: WELL GRADED SAND WITH GRAVEL, brown, fine sand with little medium to coarse sand and gravel up to 10mm, loose, dry
16		SW			
18		SM / ML	5.6		(15.2 - 16.0) SM: SILTY SAND WITH GRAVEL, dark brown, silt some fine to coarse grained sand and gravel up to 50mm, angular to round, loose, dry
20		SP	5.6		(16.0 - 20.0) ML: SILT WITH SAND, brown, silt with some fine sand, and trace gravel up to 10mm, dry-moist at 18'
22		SP	6.7		(20.0 - 22.0) SP: POORLY GRADED SAND WITH GRAVEL, white/tan, fine grained sand, with limestone cobbles, loose, moist
24		SANDSTONE		36	(22.0 - 24.0) SP: POORLY GRADED SAND, white/tan, fine grained, SAND loose, moist/wet
26		SANDSTONE		58	(24.0 - 26.0) SANDSTONE: SANDSTONE, white/tan, fine grained sand, loose
28					(26.0 - 29.0) SANDSTONE: SANDSTONE, white/tan, loose, wet



Notes:
bgs: below ground surface
MSL: Mean Sea Level
TOC: Top of Casing
AMW: ARCADIS Monitoring Well
ppm: parts per million
in.: inch
PID: Photo-ionization Detector

ARCADIS

WELL CONSTRUCTION LOG

WELL NO.: **AMW-05B**

TOTAL DEPTH: **55.0** feet bgs

PROJECT INFORMATION

CLIENT:	**Ford Motor Company**
PROJECT:	**Twin Cities Assembly Plant**
SITE LOCATION:	**St. Paul, Minnesota**
LOGGED BY:	**TNK**
DATE STARTED:	**7/19/2007 9:45:00 AM**
DATE COMPLETED:	**7/19/2007**

DRILLING INFORMATION

DRILLING CO.:	**Boart Longyear**
DRILLER:	**Dale**
DRILLING METHOD:	**Sonic**
COORDINATES:	**ELEVATIONS (feet MSL):**
Northing: 4973374.9626	**Surface: 721.79**
Easting: 484333.0966	**TOC: 723.99**

DEPTH (feet)	SOIL SYMBOLS	USCS/ STRATIGRAPHIC UNITS	PID (ppm)	RECOVERY (in.)	SOIL DESCRIPTION	WELL CONSTRUCTION DETAILS
0					(0.0 - 30.0) Blind drill, no recovery	6" Locking Steel Protective Casing
2						
4						
6						
8						
10						2" Black Steel Casing
12						
14						
16						
18						
20						Neat Cement Grout
22						
24						
26						
28						
30		SANDSTONE			(30.0 - 32.0) SANDSTONE: SANSTONE, tan, fine to coarse grained sand, mostly medium, little silt, loose, moist, friable	
32						

Notes:
bgs: below ground surface
MSL: Mean Sea Level
TOC: Top of Casing
AMW: ARCADIS Monitoring Well
ppm: parts per million
in.: inch
PID: Photo-ionization Detector

ARCADIS

WELL CONSTRUCTION LOG

WELL NO.: **AMW-05B**

TOTAL DEPTH: **55.0** **feet bgs**

PROJECT INFORMATION

CLIENT:	**Ford Motor Company**
PROJECT:	**Twin Cities Assembly Plant**
SITE LOCATION:	**St. Paul, Minnesota**
LOGGED BY:	**TNK**
DATE STARTED:	**7/19/2007 9:45:00 AM**
DATE COMPLETED:	**7/19/2007**

DRILLING INFORMATION

DRILLING CO.:	**Boart Longyear**
DRILLER:	**Dale**
DRILLING METHOD:	**Sonic**
COORDINATES:	**ELEVATIONS (feet MSL):**
Northing: 4973374.9626	**Surface: 721.79**
Easting: 484333.0966	**TOC: 723.99**

DEPTH (feet)	SOIL SYMBOLS	USCS/ STRATIGRAPHIC UNITS	PID (ppm)	RECOVERY (in.)	SOIL DESCRIPTION	WELL CONSTRUCTION DETAILS
32		SANDSTONE		72	(32.0 - 35.0) SANDSTONE: SANSTONE, white to gray, very fine to coarse sand, mostly fine to medium, little silt, moist, friable	
34		SANDSTONE				
36		SANDSTONE		72	(35.0 - 37.0) SANDSTONE: SANSTONE, white, fine to coarse grained sand, loose, moist, friable	
38		SANDSTONE			(37.0 - 38.0) SANDSTONE: SANSTONE, orange, very fine to coarse sand, mostly medium, trace silt, loose, moist-wet, friable	
40		SANDSTONE		72	(38.0 - 40.0) SANDSTONE: SANSTONE, white, very fine to medium sand, mostly fine, loose, very moist-wet, friable	#7 Red Flint Sand
42		SANDSTONE			(40.0 - 41.5) SANDSTONE: SANSTONE, orange, fine to coarse grained sand, mostly medium to coarse, trace silt, friable, very moist	#40 Red Flint Sand
44						0.010" Slot Stainless Steel Screen
46		SANDSTONE		72	(41.5 - 45.0) SANDSTONE: SANSTONE, white/tan, very fine to medium sand, mostly fine, Sandstone, loose, some silt, moist, friable	
48					(45.0 - 50.0) SANDSTONE: SANSTONE, loose white/tan, very fine to medium sand, mostly fine, some silt, moist, friable	
50		SANDSTONE		72	(50.0 - 55.0) SANDSTONE: SANSTONE, tan, very fine to medium sand, mostly fine, some silt, loose, wet, friable	
52						
54						

Notes:
bgs: below ground surface
MSL: Mean Sea Level
TOC: Top of Casing
AMW: ARCADIS Monitoring Well
ppm: parts per million
in.: inch
PID: Photo-ionization Detector

ARCADIS

WELL CONSTRUCTION LOG

WELL NO.: **AMW-07**

TOTAL DEPTH: **45.0** feet bgs

PROJECT INFORMATION

CLIENT:	**Ford Motor Company**
PROJECT:	**Twin Cities Assembly Plant**
SITE LOCATION:	**St. Paul, Minnesota**
LOGGED BY:	**MM**
DATE STARTED:	**7/4/2007 8:10:00 AM**
DATE COMPLETED:	**7/4/2007 11:30:00 AM**

DRILLING INFORMATION

DRILLING CO.:	**Boart Longyear**
DRILLER:	**Jim**
DRILLING METHOD:	**Sonic**
COORDINATES:	**ELEVATIONS (feet MSL):**
Northing: 4973223.3593	**Surface: 733.71**
Easting: 484399.1649	**TOC: 733.48**

DEPTH (feet)	SOIL SYMBOLS	USCS/ STRATIGRAPHIC UNITS	PID (ppm)	RECOVERY (in.)	SOIL DESCRIPTION	WELL CONSTRUCTION DETAILS
0		FILL	1.3	52	(0.0 - 0.3) FILL: FILL, Asphalt	Flush Mount Vault
2		SM			(0.3 - 2.0) SM: FILL (WELL GRADED SAND WITH GRAVEL), brown, very fine to coarse sand, mostly fine, some fine to coarse gravel, up to 1.75", angular to subangular, and fill, crumbly, moist, medium soft	
4		OL	2.5			
6		SM	2.6	50	(2.0 - 5.0) OL: FILL (WELL GRADED SAND WITH GRAVEL), dark brown, very fine to coarse sand, mostly fine, some fine grained gravel, subangular to subround, orange mottling, plant fragments, fine slate fragments, and fill, medium hard, moist	
		SM	3.9			
8		SM	5.8		(5.0 - 6.7) SM: FILL (WELL GRADED SAND WITH GRAVEL), brown, very fine to coarse sand, mostly fine, and some fine to coarse gravel, up to 1.5", subangular to subround, brick/concrete fragments and fill, soft, moist	
10		SM	6.4			2" Black Steel Casing
12		SM			(6.7 - 8.0) SM: FILL (SILTY SAND), very fine to fine sand, mostly very fine, little silt, trace fine gravel, subrounded, soft, moist	
		SM	7.2			
14					(8.0 - 10.0) SM: FILL (WELL GRADED SAND WITH GRAVEL), dark brown, very fine to coarse sand, mostly fine, some fine to coarse gravel, subangular to subround, up to 1.5", brick fragments, glass and fill, soft, pliable	
16						
18				60	(10.0 - 11.0) SM: FILL (WELL GRADED SAND WITH GRAVEL), brown, very fine to medium sand, mostly very fine, little fine grained gravel, subrounded, and fill, soft	
20					(11.0 - 12.5) SM: FILL (WELL GRADED SAND WITH GRAVEL), slough	Neat Cement Grout
22						
24					(12.5 - 25.0) SM: FILL (WELL GRADED SAND WITH GRAVEL), brown, very fine to coarse sand, fine to coarse gravel, up to 2", angular to subround, brick fill, moist FILL (SILTY SAND) fine to coarse gravel, up to 2", angular to subrounded, brick fragments, moist	
26		SM	17.2			
28		SM	25.7		(25.0 - 27.7) SM: FILL (WELL GRADED SAND WITH GRAVEL), brown, very fine to coarse sand, fine to coarse gravel, up to 2", angular to subround, brick fill, moist	
30		SAND	7.7	106	(27.7 - 29.3) SM: WELL GRADED SAND WITH GRAVEL, brown, very fine to coarse sand, mostly fine, some fine to coarse gravel, up to 1.25", subrounded, trace cobbles, up to 4", subrounded, trace silt and clay,	#7 Red Flint Sand
32						

Notes:
bgs: below ground surface
MSL: Mean Sea Level
TOC: Top of Casing
AMW: ARCADIS Monitoring Well
ppm: parts per million
in.: inch
PID: Photo-ionization Detector

ARCADIS

WELL CONSTRUCTION LOG

WELL NO.: **AMW-07**

TOTAL DEPTH: **45.0** **feet bgs**

PROJECT INFORMATION

CLIENT:	**Ford Motor Company**
PROJECT:	**Twin Cities Assembly Plant**
SITE LOCATION:	**St. Paul, Minnesota**
LOGGED BY:	**MM**
DATE STARTED:	**7/4/2007 8:10:00 AM**
DATE COMPLETED:	**7/4/2007 11:30:00 AM**

DRILLING INFORMATION

DRILLING CO.:	**Boart Longyear**
DRILLER:	**Jim**
DRILLING METHOD:	**Sonic**

COORDINATES:
Northing: 4973223.3593
Easting: 484399.1649

ELEVATIONS (feet MSL):
Surface: 733.71
TOC: 733.48

DEPTH (feet)	SOIL SYMBOLS	USCS/ STRATIGRAPHIC UNITS	PID (ppm)	RECOVERY (in.)	SOIL DESCRIPTION	WELL CONSTRUCTION DETAILS
32					plant particles	
34		OL	9.1		(29.3 - 31.9) SAND: POORLY GRADED SAND, light tan, very fine to fine sand, mostly fine, soft, moist	#40 Red Flint Sand
36		CL	32.1		(31.9 - 35.0) OL: ORGANIC SOIL, dark brown, silt and clay, organic, trace fine to fine sand, mostly very fine, soft, orange mottling, plant fragments, moist	0.010" Slot Stainless Steel Screen
38		SAND	36.6		(35.0 - 37.7) CL: LEAN CLAY WITH SAND, brown, clay and silt, trace fine to medium grained sand, mostly fine, trace fine grained, gravel, medium hard, moist, subrounded	
40			36.5	153		
42			31.6		(37.7 - 45.0) SAND: SANDSTONE, light tan, very fine to fine sand, mostly very fine, orange/black mottling, moist, soft	
44						

Notes:
bgs: below ground surface
MSL: Mean Sea Level
TOC: Top of Casing
AMW: ARCADIS Monitoring Well
ppm: parts per million
in.: inch
PID: Photo-ionization Detector

Date Start/Finish: 11/3/2011 / 11/3/2011
Drilling Company: Stevens Drilling
Driller's Name: Dan Hunter
Drilling Method: Geoprobe
Sampling Method: Direct Push

Northing: 4972984.9689
Easting: 484232.1812

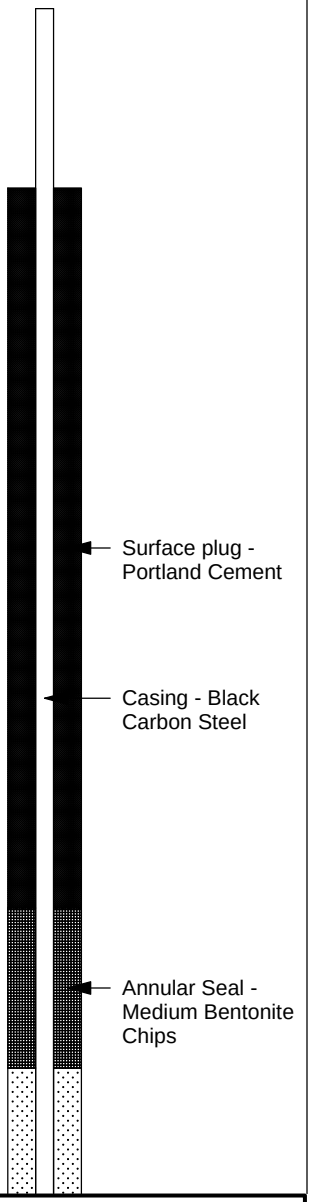
Drilled Depth (feet bgs): 28
Surface Elevation: 705.60

Descriptions By: KAH

Well/Boring ID: **AMW-19**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (bgs)	Recovery (in)	PID	USCS Code	Geologic Column	Stratigraphic Description
0	20	0.1	SP		(0.0 - 6.8) POORLY GRADED SAND, v. fine to coarse, mostly medium, little v. coarse sand to v. large pebbles, tr. organics, round to subangular, well sorted, loose to medium dense, dry to slightly moist; silty v. fine to fine sand layer 6.42-6.83 ft, brown (10YR 4/3)
-5	48	0.1/0.1	SP		(6.8 - 8.0) POORLY GRADED SAND, very fine to fine sand, trace medium, round, well sorted, loose to medium dense, slightly moist, brown (10YR 5/3)
-10	48	0.1/0.1	SP		(8.0 - 10.7) POORLY GRADED SAND, fine to very coarse, mostly medium, little granules to large pebbles, trace organics, round to subangular, well sorted, loose to medium dense, dry to slightly moist, silty very fine to fine sand layer 10.42 -10.67 ft, brown (10YR 4/3)
			SP		(10.7 - 12.0) POORLY GRADED SAND, very fine to fine sand, trace medium, round, well sorted, loose to medium dense, slightly moist, brown (10YR 5/3), dark brown partings from 9 ft to 9.42 ft
			SP		(12.0 - 16.0) POORLY GRADED SAND, fine to very coarse, mostly



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Remarks:
bgs: below ground surface
NA: Not applicable/not available
v: very
Coordinates given in UTM Zone 15N

Date Start/Finish: 11/3/2011 / 11/3/2011
Drilling Company: Stevens Drilling
Driller's Name: Dan Hunter
Drilling Method: Geoprobe
Sampling Method: Direct Push

Northing: 4972984.9689
Easting: 484232.1812

Drilled Depth (feet bgs): 28
Surface Elevation: NA

Descriptions By: KAH

Well/Boring ID: **AMW-19**

Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (bgs)	Recovery (in)	PID	USCS Code	Geologic Column	Stratigraphic Description	Well Construction
	45	0.1/0.1			coarse, little granule to large pebbles, trace very large pebbles, round to subangular, well sorted, loose, dry to slightly moist, yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4)	
-15						
	48	0.4	SP		(16.0 - 20.0) POORLY GRADED SAND, fine to coarse, mostly medium, little very coarse, trace granule to medium pebbles, well sorted, medium dense, slightly moist, dark yellowish brown (10YR 4/4)	Filter Pack - Red Flint #15
-20	27		SP		(20.0 - 28.0) POORLY GRADED SAND, coarse to v. coarse, some granules, little small to large pebbles, tr. silt to fine sand, round to subangular, well sorted, loose, wet, olive brown (2.5Y 4/3); fine to very coarse sand seams between 21-26 ft, dark gray (5Y 4/1)	Screen - Sch 40 PVC .01" Slot
-25	32					

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Remarks:
bgs: below ground surface
NA: Not applicable/not available
v: very
Coordinates given in UTM Zone 15N

Date Start/Finish: 11/3/2011 / 11/3/2011
Drilling Company: Stevens Drilling
Driller's Name: Dan Hunter
Drilling Method: Geoprobe
Sampling Method: Direct Push

Northing: 4972935.2694
Easting: 484235.7607

Drilled Depth (feet bgs): 28
Surface Elevation: 707.58

Descriptions By: KAH

Well/Boring ID: **AMW-20**

Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (bgs)	Recovery (in)	PID	USCS Code	Geologic Column	Stratigraphic Description
0	25	1.9	SP		(0.0 - 2.0) POORLY GRADED SAND, silt, very fine to fine sand, little to trace organics, round, well sorted, loose, slightly moist to dry, grayish brown (2.5Y 5/2)
			SW		(2.0 - 10.0) WELL GRADED SAND WITH GRAVEL, very fine to very coarse, mostly coarse, little granules to small pebbles, trace medium to large pebbles, trace silt/organics, round to subangular, poorly sorted, loose, dry, light yellowish brown (2.5Y 6/4)
-5	28	0.1/0.1			
-10	46	0.0/0.0	SP		(10.0 - 11.5) POORLY GRADED SAND, very fine to fine, trace silt, round, well sorted, medium dense, slightly moist, light yellowish brown (2.5Y 6/3)
			SM		(11.5 - 12.0) SILTY SAND, very fine to fine sand, trace organics/clay, medium stiff, slightly moist
			SW		(12.0 - 13.8) WELL GRADED SAND WITH GRAVEL, very fine to

Well Construction

- Surface plug - Portland Cement
- Casing - Black Carbon Steel
- Annular Seal - Medium Bentonite

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Remarks:
bgs: below ground surface
NA: Not applicable/not available
v: very
Coordinates given in UTM Zone 15N

Date Start/Finish: 11/3/2011 / 11/3/2011
Drilling Company: Stevens Drilling
Driller's Name: Dan Hunter
Drilling Method: Geoprobe
Sampling Method: Direct Push

Northing: 4972935.2694
Easting: 484235.7607

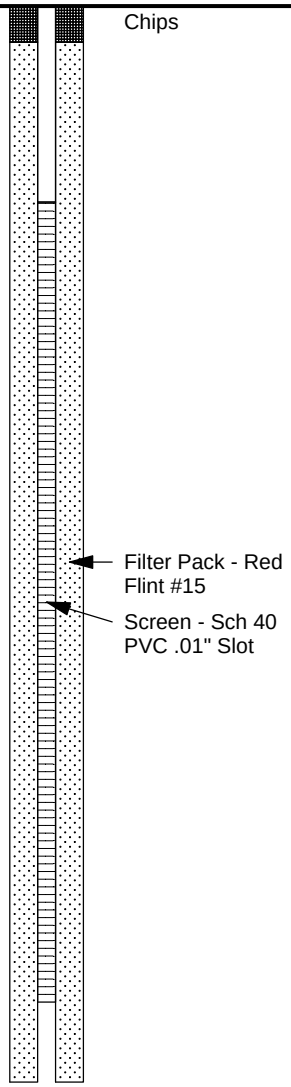
Drilled Depth (feet bgs): 28
Surface Elevation: NA

Descriptions By: KAH

Well/Boring ID: **AMW-20**
Client: Ford Motor Company

Location: Saint Paul, MN

DEPTH (bgs)	Recovery (in)	PID	USCS Code	Geologic Column	Stratigraphic Description
					very coarse, mostly coarse, little granules to small pebbles, trace medium to large pebbles, trace silt/organics, round to subangular, poorly sorted, loose, slightly moist, light yellowish brown (2.5Y 6/4)
	43	0.0/0.0	SP		(13.8 - 15.2) POORLY GRADED SAND, very fine to fine, trace silt, round, well sorted, medium dense, slightly moist, light yellowish brown (2.5Y 6/3)
-15			ML		(15.2 - 16.0) SANDY SILT, little clay, trace organics, dense, slightly moist, no to low plasticity, no dilatency, very fine to fine sand seam at 15.3 ft, trace silt, medium dense, slightly moist, dark olive brown (2.5Y 3/3)
			SW		(16.0 - 17.1) WELL GRADED SAND WITH GRAVEL, very fine to very coarse, mostly coarse, little granules to small pebbles, trace medium to large pebbles, trace silt/organics, round to subangular, poorly sorted, loose, slightly moist, light yellowish brown (2.5Y 6/4)
	43	0.1/0.1	SP		(17.1 - 18.5) POORLY GRADED SAND, very fine to fine, trace silt, round, well sorted, medium dense, slightly moist, light yellowish brown (2.5Y 6/3)
			ML		(18.5 - 19.4) SANDY SILT, little clay, trace organics, dense, slightly moist, no to low plasticity, no dilatency, very fine to fine sand seam, dense, slightly moist, very dark brown (10YR 2/2)
-20			SW		(19.4 - 20.0) POORLY GRADED SAND, fine to coarse, mostly medium, little very coarse, trace granules, round to subangular, well sorted, loose, slightly moist
	24		SP		(20.0 - 21.7) WELL GRADED SAND WITH GRAVEL, very fine sand to granules, mostly medium to coarse sand, little small pebble, trace medium pebbles/silt, round to subangular, poorly sorted, medium dense, wet
					(21.7 - 24.0) POORLY GRADED SAND, fine to coarse, mostly medium, little very coarse to granules, trace small to large pebbles, round to subround, well sorted, loose, wet
-25	21		SW		(24.0 - 28.0) WELL GRADED SAND WITH GRAVEL, very fine sand to granules, mostly coarse to granules, little small pebbles to medium pebbles, trace large pebbles and silt; round to subangular, dense, wet



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Remarks:
bgs: below ground surface
NA: Not applicable/not available
v: very
Coordinates given in UTM Zone 15N

Date Start/Finish: 12/8/2015 / 12/9/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4973159.261
Easting: 484324.686

Borehole Depth (ft bgs): 60
Surface Elevation (ft): 737.04
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-21**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	0	24	0.0		FILL		(0.0 - 5.0) FILL, CLAYEY SAND, very fine to medium, some clay, trace organics, poorly sorted, dry, loose, no odor, 2.5YR 3/4 dark reddish brown		6" Pro Top Outer Casing
5	-5	14.4	0.0		FILL		(5.0 - 10.5) FILL, POORLY GRADED SAND, very fine to medium, well sorted, dry, loose, no odor, 2.5YR 3/4 dark reddish brown		
10	-10	42	0.0		FILL		(10.5 - 16.0) FILL, LEAN CLAY, little silt, little fine gravel, low plasticity, moist, wet at 10.5 ft only, very stiff, no odor, dark gray mottling, transitions to white and dry at 15 ft bgs		
15	-15		0.2						
		54	1.2		FILL		(16.0 - 20.0) FILL, CLAYEY SAND, fine to medium, trace silt, trace fine gravel, moist, medium dense, mild odor (petroleum-like), GLEY2 2.5/10G greenish black		
20	-20	42	0.0		FILL		(20.0 - 32.0) FILL, LEAN CLAY, low plasticity, little silt, trace fine gravel, moist, stiff, no odor, gray and black mottling, GLEY1 5/5GY greenish gray		Annular Seal Cement Grout (0-42 ft bgs)
25	-25	36	0.2						2" diameter Stainless Steel Riser (0-46 ft bgs)
30	-30								

ARCADIS

Remarks: ft: feet NA: Not applicable/not available bgs: feet below ground surface

Soil samples AMW-21_5-10 (20151208), AMW-21_16-20 (20151208), AMW-21_32-35 (20151208).

Soil samples analyzed for SVOCs. AMW-21_16-20 (20151208) also analyzed for VOCs, DRO and GRO.

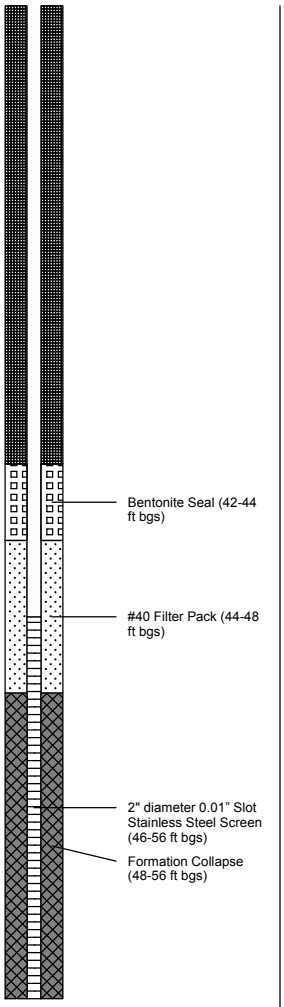
Date Start/Finish: 12/8/2015 / 12/9/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4973159.261
Easting: 484324.686

Borehole Depth (ft bgs): 60
Surface Elevation (ft): 737.04
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-21**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH / ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
30 -30		0.2						
	18	0.0		FILL		(32.0 - 49.0) FILL, POORLY GRADED SAND WITH GRAVEL, fine to medium, some medium gravel, trace silt, well sorted, dry, loose, no odor, poor recovery due to rock in core, 10YR 6/8 brownish yellow		
35 -35	6	0.1						
40 -40	18	0.0						
45 -45	15.5	0.0						
		0.0		FILL		(49.0 - 55.0) FILL, POORLY GRADED SAND, medium to coarse, trace fine pebbles, trace silt, subround to subangular, well sorted, wet, loose, no odor, 5YR 3/3 dark reddish brown		
50 -50	20.5	0.0						
55 -55				FILL		(55.0 - 60.0) FILL, POORLY GRADED GRAVEL, trace silt, subround to subangular, well sorted, wet, loose, no odor, poor recovery, multicolor		
	2.5	0.0						
60 -60								



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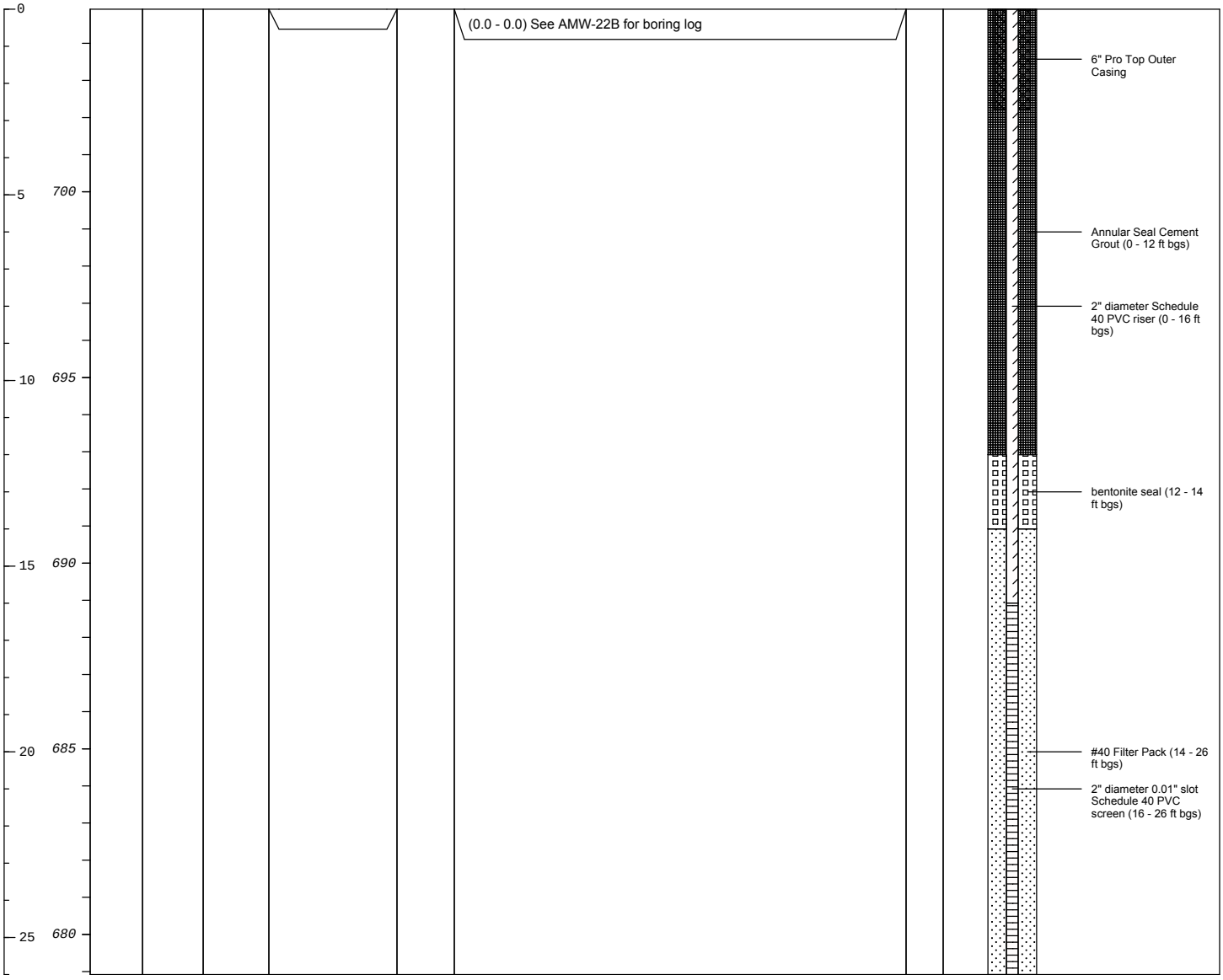
Remarks: ft: feet NA: Not applicable/not available bgs: feet below ground surface

Soil samples AMW-21_5-10 (20151208), AMW-21_16-20 (20151208), AMW-21_32-35 (20151208).

Soil samples analyzed for SVOCs. AMW-21_16-20 (20151208) also analyzed for VOCs, DRO and GRO.

Date Start/Finish: 12/9/2015 / 12/9/2015 **Drilling Company:** Matrix Environmental **Driller's Name:** Eric Widmark, Cody Eystad **Drilling Method:** Geoprobe Direct Push **Sampling Method:** Macrocore	**Northing:** 4973122.54 **Easting:** 484262.46 **Borehole Depth (ft bgs):** 26 **Surface Elevation (ft):** 704.92 **Descriptions By:** I. Stewart	**Well/Boring ID: AMW-22** **Client:** Ford Motor Company **Location:** Saint Paul, MN

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction



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Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Date Start/Finish: 12/9/2015 / 12/9/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4973124.01
Easting: 484263.31

Borehole Depth (ft bgs): 45
Surface Elevation (ft): 704.90
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-22B**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0									
		21.5	0.0		SW		(0.0 - 18.0) WELL GRADED SAND, very fine to medium, trace gravel, trace clay, trace silt, poorly sorted, transitions to little coarse gravel at 10 ft bgs, dry, loose, no odor, 10YR 6/3 pale brown		6" Pro Top Outer Casing
5	700								
		15.5	0.0						
10	695								
		14	0.0						
15	690								Annular Seal Cement Grout (0 - 29 ft bgs)
		15.5	0.0						2" diameter stainless steel riser (0 - 33.2 ft bgs)
			0.0		SP		(18.0 - 25.0) POORLY GRADED SAND WITH GRAVEL, very fine to coarse, subround to subangular, trace fine pebbles, little coarse gravel, trace silt, well sorted, wet, loose 10YR 6/3 pale brown		
20	685	30	0.0						
25	680				SP		(25.0 - 38.0) POORLY GRADED SAND WITH GRAVEL, coarse to very coarse sand, subround to subangular, trace fine pebbles, little coarse gravel, trace silt, well sorted, wet, loose 10YR 6/3 pale brown		
		33.5	0.0						
30	675								bentonite seal (29 - 31 ft bgs)
		18	0.0						
35	670								
		14	0.0						#40 Filter Pack (31 - 38 ft bgs)
					SP		(38.0 - 45.0) POORLY GRADED SAND WITH GRAVEL, coarse to very coarse sand, subround to subangular, trace pebbles, little coarse gravel, trace silt, well sorted, wet, loose, large chuncks of limestone, 10YR 6/3 pale brown		2" diameter 0.01" slot stainless steel screen (33.2 - 43.2 ft bgs)
40	665								Formation Collapse (38 - 43.2 ft bgs)
		21.5	0.0						
45	660								

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

End of boring at 45 ft bgs - refusal

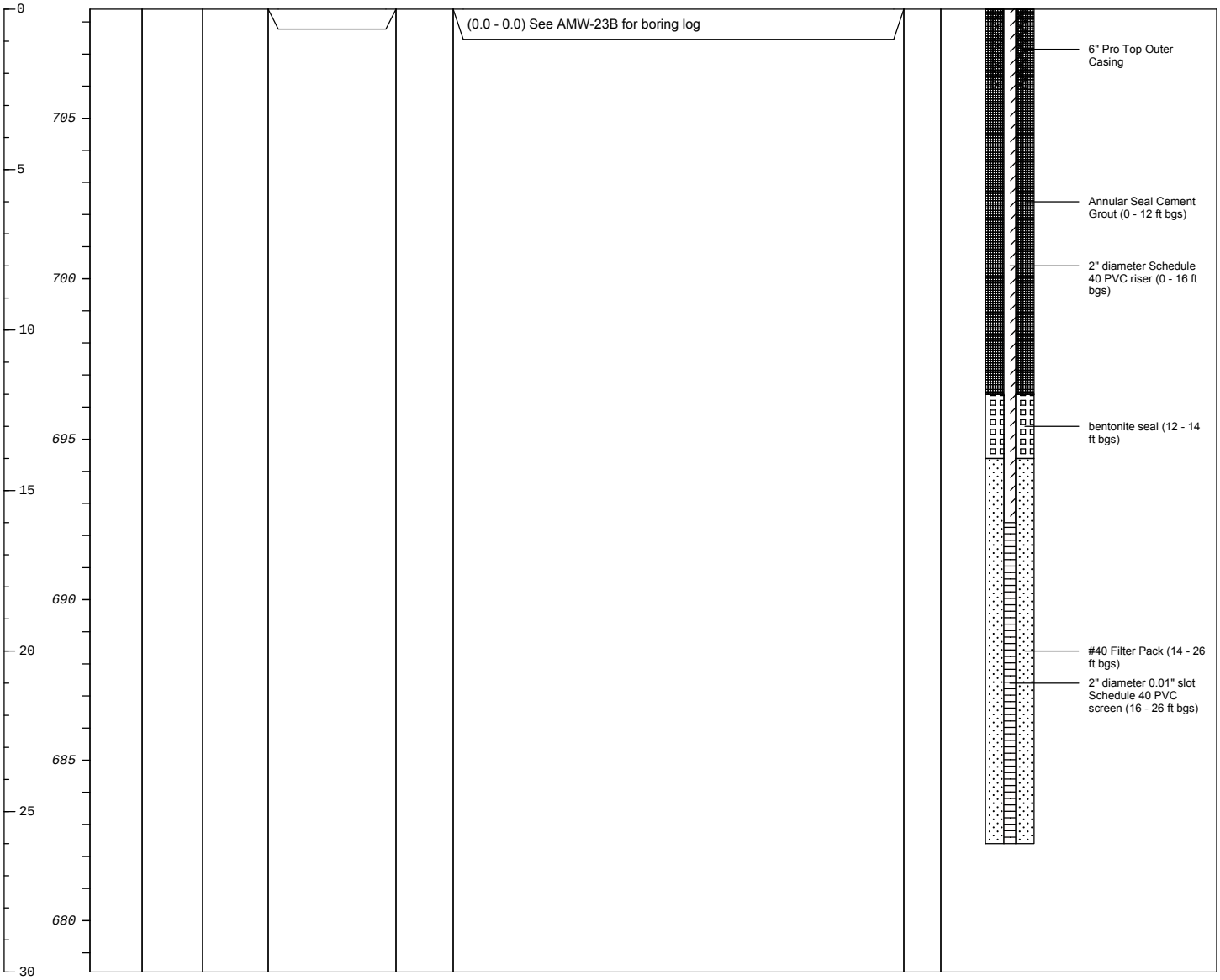
Date Start/Finish: 12/10/2015 / 12/10/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4972953.22
Easting: 484304.50

Borehole Depth (ft bgs): 30
Surface Elevation (ft): 708.40
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-23**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction



Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Date Start/Finish: 12/15/2015 / 12/15/2015
Drilling Company: Matrix Environmental
Driller's Name: Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4972954.15
Easting: 484303.16

Borehole Depth (ft bgs): 45
Surface Elevation (ft): 708.82
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-23B**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	708.82	26.5	0.1		SC		(0.0 - 3.0) CLAYEY SAND, very fine to medium, trace silt, some clay (low plasticity), poorly sorted, little organics, moist, no odor, 7.5YR 3/2 dark brown		6" Pro Top Outer Casing
			0.1		SP		(3.0 - 7.0) POORLY GRADED SAND WITH GRAVEL, fine to medium, some fine to medium gravel, trace silt, well sorted, dry, loose, no odor, 10YR 6/4 light yellowish brown		
5	705	27.5	0.0		SP		(7.0 - 8.0) POORLY GRADED SAND WITH GRAVEL, fine to medium, some fine to medium gravel, trace clay, well sorted, dry, loose, no odor, 10YR 6/4 light yellowish brown		
10	700	23	0.1		SP		(8.0 - 16.0) POORLY GRADED SAND, fine to medium, well sorted, dry, loose, no odor, 10YR 6/4 light yellowish brown		Annular Seal Cement Grout (0 - 31 ft bgs)
15	695	32.5	0.0		SP		(16.0 - 27.0) POORLY GRADED SAND WITH GRAVEL, fine to medium, some fine to medium gravel, subround to subangular, well sorted, dry, moist to wet at 19 ft bgs, loose, no odor, 10YR 6/4 light yellowish brown		2" diameter stainless steel riser (0 - 35 ft bgs)
20	690		0.1						
		30	0.1						
25	685	36	0.4		GP		(27.0 - 30.0) POORLY GRADED GRAVEL WITH SAND, fine to coarse sand, subangular to subround, trace silt, well sorted, wet, loose, 10YR 6/4 light yellowish brown		bentonite seal (31 - 33 ft bgs)
30	680	24	0.2		GW		(30.0 - 45.0) POORLY GRADED GRAVEL WITH SAND, fine to coarse sand, subangular to subround, well sorted, wet, loose, no odor, 10YR 6/4 light yellowish brown		#40 Filter Pack (33 - 37 ft bgs)
35	675	24	0.2						2" diameter 0.01" slot stainless steel screen (35 - 45 ft bgs)
40	670	30	0.2						Formation Collapse (37 - 45 ft bgs)
45	665								

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Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

End of boring at 45 ft bgs - refusal

Date Start/Finish: 12/10/2015 / 12/10/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4972989.30
Easting: 484408.18

Borehole Depth (ft bgs): 25
Surface Elevation (ft): 705.28
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-24**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	705	21.5	0.0		SC		(0.0 - 4.0) CLAYEY SAND, fine to coarse, trace silt, trace organics, some clay (low plasticity), well sorted, moist, no odor, 7.5YR 3/2 dark brown		6" Pro Top Outer Casing
			0.0		SP		(4.0 - 13.0) POORLY GRADED SAND, fine to medium, trace silt, trace fine pebbles, well sorted, dry, loose, no odor, white gravel/rock lens at 8.5 ft bgs, 10YR 6/4 light yellowish brown		Annular Seal Cement Grout (0 - 8 ft bgs)
5	700	23	0.0						2" diameter Schedule 40 PVC riser (0 - 13 ft bgs)
10	695	30	0.0						bentonite seal (8 - 10 ft bgs)
					SP		(13.0 - 15.0) POORLY GRADED SAND, fine to medium, trace silt, well sorted, dry, loose, no odor, 10YR 6/4 light yellowish brown		
15	690	24	0.1		GP		(15.0 - 22.0) POORLY GRADED GRAVEL WITH SAND, medium to coarse, trace silt, subround to subangular, well sorted, wet, loose, no odor, 10YR 6/4 light yellowish brown		#40 Filter Pack (10 - 23 ft bgs)
20	685	30	0.1		SP		(22.0 - 25.0) POORLY GRADED SAND, coarse to very coarse, subround to round, trace silt, some fine gravel/pebbles, wet, no odor, 10YR 6/4 light yellowish brown		2" diameter 0.01" slot Schedule 40 PVC screen (13 - 23 ft bgs)
25									

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

End of boring at 25 ft bgs - refusal

Date Start/Finish: 12/11/2015 / 12/11/2015
Drilling Company: Matrix Environmental
Driller's Name: Eric Widmark, Cody Eystad
Drilling Method: Geoprobe Direct Push
Sampling Method: Macrocore

Northing: 4973009.34
Easting: 484469.23

Borehole Depth (ft bgs): 25
Surface Elevation (ft): 703.19
Descriptions By:
I. Stewart

Well/Boring ID: **AMW-25**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	703	24	0.0		SC		(0.0 - 3.0) CLAYEY SAND, fine to medium grained, trace silt, trace organics, some clay (low plasticity), moist, medium dense, no odor, 7.5YR 3/2 dark brown		6" Pro Top Outer Casing
	700		0.0		SP		(3.0 - 14.0) POORLY GRADED SAND, fine to medium, trace silt, well sorted, dry, loose, no odor, 10YR 6/4 light yellowish brown		Annular Seal Cement Grout (0 - 8 ft bgs)
5		33.5	0.1						2" diameter Schedule 40 PVC riser (0 - 12 ft bgs)
	695								bentonite seal (8 - 10 ft bgs)
10		24	0.1						
	690								
			102.7		SP		(14.0 - 15.0) POORLY GRADED SAND, fine to medium, trace silt, well sorted, dry, loose, strong odor (petroleum-like), black (stained)		
15		15.5	56.2		GP		(15.0 - 18.0) POORLY GRADED GRAVEL WITH SAND, fine to coarse, subround to subangular, trace silt, wet, medium dense, strong odor (petroleum-like), 10YR 2/1 black (stained)		#40 Filter Pack (10 - 22 ft bgs)
	685								2" diameter 0.01" slot Schedule 40 PVC screen (12 - 22 ft bgs)
			18.1		GP		(18.0 - 20.0) POORLY GRADED GRAVEL WITH SAND, fine to coarse, subround to subangular, trace silt, wet, medium dense, 10YR 6/4 light yellowish brown		
20									
		26	2.4		SP		(20.0 - 25.0) POORLY GRADED SAND AND GRAVEL, fine to medium, trace silt, some fine to medium gravel, well sorted, wet, loose, no odor, 10YR 6/4 light yellowish brown		
	680								
25									

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Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

End of boring at 25 feet bgs - refusal

Date Start/Finish: 9/15/2015 / 9/16/2015
Drilling Company: Cascade Drilling
Driller's Name: Mark Biermaier
Drilling Method: Roto-sonic
Sampling Method: Core Barrel

Northing: 4973077.96
Easting: 484369.96

Borehole Depth (ft bgs): 90.5
Surface Elevation (ft): 769.46
Descriptions By:
K. Hoehn

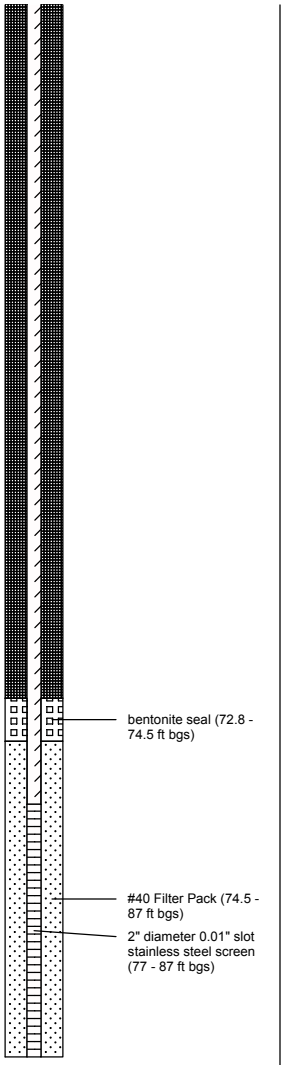
Well/Boring ID: **AMW-26**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	769	56	0		FILL		(0.0 - 0.7) WELL GRADED SAND, trace silt, little coarse sand, little medium pebbles, subangular, poorly sorted, loose, dry, 2.5Y 5/3 light olive brown		Surface Concrete Pad Vault
			0		FILL				
			0.3						
5	765		1		CONCRETE		(0.7 - 3.8) SILTY CLAY, some very fine sand, little medium to coarse sand, trace granules to large pebbles, subround to subangular, poorly sorted, moist to dry, mottling, moderate cementation, 5Y 2.5/1 black		
		52	1.5		FILL		(3.8 - 4.4) CONCRETE		
10	760		1.2				(4.4 - 12.9) SANDY SILT, little coarse sand, trace granules to large pebbles, subround to subangular, poorly sorted, moist to dry, weak cementation, wood pieces, concrete at 28 inches, 3/4" piece of rebar, 10YR 3/1 very dark gray		
			1.2		CONCRETE		(12.9 - 15.0) CONCRETE		
15	755	110	1.1		FILL		(15.0 - 25.0) SILTY CLAY, little fine sand, trace small pebbles, low plasticity, subround, poorly sorted, wet to moist, 10YR 2/2 very dark brown		
			0.8						
			1.1						
			0.2						
20	750		0.8						
			0.3						
			0.2						
			0.3						
25	745	89	0.3		FILL		(25.0 - 26.8) CLAYEY SILT, little fine sand, soft, wet to moist, 2.5YR 2.5/1 reddish black		
			0.3		FILL		(26.8 - 35.0) SILTY SAND, mostly medium to coarse, little small to medium pebbles, subround, poorly sorted, soft, wet to moist, concrete, 2.5Y 3/1 very dark gray		
30	740		0.3						
			0.4						
			0.5						
			1.4						
35	735	105	2.9		FILL		(35.0 - 45.0) SANDY LEAN CLAY, little small pebbles, trace large pebbles, roots, soft, wet to moist, strong odor (organic), 2.5Y 2.5/1 black		Annular Seal Cement Grout (0 - 72.8 ft bgs) 2" diameter black carbon steel riser (0 - 77 ft bgs)
			3.9						
40	730		3.2						
			4.1						
			4						
			6.2						
45	725		0.4						

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Date Start/Finish: 9/15/2015 / 9/16/2015 **Drilling Company:** Cascade Drilling **Driller's Name:** Mark Biermaier **Drilling Method:** Roto-sonic **Sampling Method:** Core Barrel	**Northing:** 4973077.96 **Easting:** 484369.96 **Borehole Depth (ft bgs):** 90.5 **Surface Elevation (ft):** 769.46 **Descriptions By:** K. Hoehn	**Well/Boring ID: AMW-26** **Client:** Ford Motor Company **Location:** Saint Paul, MN

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
50	720	100	2 1.6 1 1.1 1.1 0.7 0.7 0.5 0.2 5.6		FILL		(45.0 - 50.0) SANDY LEAN CLAY, little medium sand, trace small to medium pebbles, soft, moist, 2.5Y 3/1 very dark gray		
55	715				FILL		(50.0 - 55.0) CLAY, little to trace fine to medium sand, trace small pebbles, low plasticity, soft to medium stiff, moist to dry, strong odor (organic), mottling, 2.5Y 2.5/1 black		
60	710	85	6 5.4 2.8 2.3 1.4 3.6		FILL		(55.0 - 62.5) SANDY LEAN CLAY, little medium sand, trace coarse sand, trace small pebbles, low plasticity, soft, wet to moist, strong odor (asphalt), 5Y 3/1 very dark gray		
					ASPHALT		(62.5 - 63.8) ASPHALT		
65	705		3.9		FILL		(63.8 - 64.6) CLAY, little fine sand, little medium to coarse sand, low plasticity, stiff, moist to dry, strong odor (asphalt), mottling, 2.5Y 2.5/1 black		
			0.3		CONCRETE		(64.6 - 65.0) CONCRETE		
70	700	88	0.1 0 0.1		FILL		(65.0 - 71.7) CLAY, little to trace medium sand, low plasticity, stiff, wet to moist, strong odor (asphalt), mottling, 2.5Y 2.5/1 black		
75	695		0 0		SP		(71.7 - 75.0) POORLY GRADED SAND, little silt, subangular, well sorted, loose, dry, 2.5Y 5/2 grayish brown		
			15.2		SP-SM		(75.0 - 76.4) POORLY GRADED SAND/SILTY SAND, mostly fine to medium sand, roots, subangular, well sorted, loose, 2.5Y 2.5/1 black		
80	690	43	3.4 0.8 0.6		SW		(76.4 - 85.0) WELL GRADED SAND, little coarse sand, little granules to large pebbles, subangular, poorly sorted, loose, moist to dry, 5Y 4/2 olive gray		
85	685				SW		(85.0 - 86.5) WELL GRADED COARSE SAND WITH GRAVEL, mostly coarse sand, little small to large pebbles, subround to subangular, poorly sorted, loose, wet, 5Y 5/2 olive gray		
90	680	55			SW		(86.5 - 90.5) WELL GRADED SAND, mostly medium to coarse sand, trace granules, subround to subangular, poorly sorted, loose, wet, fining downwards, 5Y 5/2 olive gray		



Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Date Start/Finish: 1/20/2016 / 1/21/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973213.4981
Easting: 484510.2548

Borehole Depth (ft bgs): 125
Surface Elevation (ft): 812.406
Descriptions By: B. Evans

Well/Boring ID: **AMW-29**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH / ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0 / 810	36	0.3 - 0.5		FILL		(0.0 - 6.0) SAND/SILT/GRAVEL, dark brown (7.5YR 3/3), silt mixed with very fine to coarse sand, fine to coarse gravel, angular to subangular, rock fragments greater than 2 inch diameter, poorly sorted, loose, some yellow brick fragments, trace broken concrete pieces, roots top 1 ft, frozen, moist		6" Pro Top Outer Casing
5 / 805	60	0.5 - 6.8		FILL		(6.0 - 8.0) SAND/GRAVEL/SILT, dark yellowish brown (10YR 4/4), very fine to very coarse sand mixed with fine to very coarse gravel, angular to subround, some cobbles/rocks to greater than 4 inch diameter, poorly sorted, silty, loose, moist		
10 / 800	48	0.1 - 0.4		FILL		(8.0 - 12.5) CLAY/SAND, yellowish brown (10YR 5/4), soft, plastic, clay mixed with very fine to medium sand, some coarse sand, trace fine to medium gravel, angular to subangular, slightly firm, poorly sorted, moist to wet at 10 ft		
				FILL		(12.5 - 13.0) SAND, brown (10YR 4/3), medium grained, well sorted, some very fine to fine, trace silt, loose, wet		
15 / 795	72	0.1 - 0.3		FILL		(13.0 - 14.0) SAND/SILT/GRAVEL, dark gray (10YR 4/1), very fine to coarse sand with silt, some soft clay, fine to coarse gravel, angular to subangular, cobbles up to 4 inch diameter, firm, slightly plastic, wet (till-like)		
				LIMESTONE		(14.0 - 15.0) LIMESTONE, darky gray (10YR 4/1), hard, dense, cryptocrystalline, broken to 1 inch thick and 4 inch long pieces, some vugs, some fossils, solution erosion, horizontal bedding/fracturing, wet (drill fluids)		
				LIMESTONE		(15.0 - 17.0) LIMESTONE, dark grayish brown (10YR 4/2), hard, dense, micritic, cryptocrystalline, broken pieces up to 1 inch thick, some fossils, some vugs, solution erosion, horizontal bedding/fracturing, vuggy, wet (drill fluids)		
20 / 790	60	0.0 - 0.1		LIMESTONE		(17.0 - 20.0) LIMESTONE, grayish brown (10YR 5/2), hard, dense, cryptocrystalline, extremely fossiliferous, mostly shells, broken pieces between 1 to 6 inches long, horizontal bedding/fracturing, vuggy, possible solution alteration, moist		
25 / 785	60	0.3 - 0.7		SHALE		(20.0 - 25.0) LIMESTONE, grayish brown (10YR 5/2), hard, dense, cryptocrystalline, extremely fossiliferous, mostly shells, broken pieces between 4 to 10 inches long, horizontal bedding/fracturing, some vugs, possible solution alteration, moist		
				LIMESTONE		(25.0 - 28.0) SHALE, dark greenish gray (GLEY1 4/1), hard, broken fissile pieces and flakes		
30 / 780	60	0.3 - 0.7		LIMESTONE		(28.0 - 30.0) LIMESTONE, dark gray (10YR 4/1), hard, dense, cryptocrystalline, micritic, very fossiliferous, mostly shells, broken pieces 1 to 6 inches, horizontal bedding/fracturing		
35 / 775	60	0.2 - 0.6				(30.0 - 42.0) LIMESTONE/MUDSTONE, dark gray (10YR 4/1) to grayish brown (10YR 5/2), hard, dense, broken pieces up to 1 inch thick, angular broken fragments up to 1 inch diameter, cryptocrystalline, limestone interbedded with micritic and mudstone materials, horizontal bedding/fracturing, mainly fossils, some soft flow deformational features, wet (drill fluids), vuggy from 40-42 ft		
40								

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Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.4 ppm

Date Start/Finish: 1/20/2016 / 1/21/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973213.4981
Easting: 484510.2548

Borehole Depth (ft bgs): 125
Surface Elevation (ft): 812.406
Descriptions By: B. Evans

Well/Boring ID: **AMW-29**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
	770	60	0.2 - 0.3		SHALE		(42.0 - 47.0) SHALE, dark greenish gray (GLEY1 4/1), pulverized to powder and hard, fissile, brittle, horizontal bedding, dry to moist		
45									
	765	60	0.1 - 0.5		SANDSTONE		(47.0 - 48.0) SANDSTONE, greenish gray (GLEY1 6/1), hard, firm, friable, very fine to fine grained, spherical, some medium grains in secondary cemented matrix		
					SANDSTONE		(48.0 - 50.0) SANDSTONE, white (10YR 8/1) to yellow (5Y 8/6) also with some yellow mottling (10YR 7/8), mostly firm, friable, slightly brittle, fracturing horizontally and also loose, crushed, mostly very fine to fine spherical grains with cemented matrix, some medium grained, moist		
50					SANDSTONE				
	760	60	0.1 - 0.3				(50.0 - 55.0) SANDSTONE, white (7.5YR 8/1) with areas of yellow (10YR 8/6) mottling and pale yellow (5Y 8/4) colored in some areas, mostly soft, loose, pulverized grained, very fine to fine grained, well sorted, some medium grains with silt-like pulverized cementation, wet (drill fluids)		
55					SANDSTONE				
	755	0	--				(55.0 - 60.0) No Recovery		
60					SANDSTONE		(60.0 - 65.0) No Recovery		
	750	0	--						
65					SANDSTONE		(65.0 - 70.0) SANDSTONE, very pale brown (10YR 8/2), pulverized to soft, loose, very fine to fine grained with silt-like pulverized cementation, well sorted, moist (drill fluids)		
	745	60	0.5 - 0.8						
70					SANDSTONE		(70.0 - 75.0) SANDSTONE, very pale brown (10YR 8/3) to white (7.5YR 8/1), pulverized to soft, loose, very fine grained, well sorted with silt-like pulverized cementation, trace fine grains, moist (drill fluid)		
	740	60	0.9 - 3.5						
75					SANDSTONE		(75.0 - 80.0) No Recovery		
	735	0	--						
80					SANDSTONE		(80.0 - 85.0) No Recovery		
	730	0	--						

Annular Seal Cement Grout (0 - 106 ft bgs)

2" diameter black steel riser (0 - 111 ft bgs)

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.4 ppm

Date Start/Finish: 1/20/2016 / 1/21/2016 **Drilling Company:** Cascade Drilling **Driller's Name:** Roy Buckenberger **Drilling Method:** Roto-Sonic **Sampling Method:** Core Barrel	**Northing:** 4973213.4981 **Easting:** 484510.2548 **Borehole Depth (ft bgs):** 125 **Surface Elevation (ft):** 812.406 **Descriptions By:** B. Evans	**Well/Boring ID: AMW-29** **Client:** Ford Motor Company **Location:** Saint Paul, MN

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
85	725	60	0.3 - 0.6		SANDSTONE		(85.0 - 90.0) SANDSTONE, very pale brown (10YR 8/3) to white (7.5YR 8/1) with some yellow mottling (10YR 7/8), much yellow staining 86.3 to 86.5 ft, mostly soft, loose, pulverized grains, some harder, friable pieces, horizontal bedding/fracturing, very fine to fine spherical grains with silt-like pulverized cementation, well sorted, moist (drill fluids)		
90	720	12	0.5		SANDSTONE		(90.0 - 100.0) SANDSTONE, white (7.5YR 8/1), mostly soft, loose, pulverized grains, some harder, friable pieces, horizontal bedding/fracturing, very fine to fine spherical grains with silt-like pulverized cementation, well sorted, moist (drill fluids)		
95	715	60	0.2 - 0.6						
100	710	60	0.2 - 0.3		SANDSTONE		(100.0 - 110.0) SANDSTONE, white (7.5YR 8/1) with yellow mottling 102 to 105 ft, heavily mottling and staining to a pale yellow (2.5Y 8/4), mostly soft, loose, pulverized grains, some harder, friable pieces, horizontal bedding/fracturing, very fine to fine spherical grains with silt-like pulverized cementation, well sorted, moist (drill fluids)		
105	705	60	0.3 - 0.6						5020 Industrial Fine Sand (106 - 108 ft bgs)
110	700	0	--		SANDSTONE		(110.0 - 115.0) No Recovery		
115	695	60	0.3 - 1.7		SANDSTONE		(115.0 - 120.0) SANDSTONE, white (7.5YR 8/1) with yellow (10YR 7/8) mottling, mostly soft, loose, pulverized grains, some harder, friable pieces, horizontal bedding/fracturing, very fine to fine spherical grains with silt-like pulverized cementation, well sorted, wet (drill fluids) to possible saturation		2" diameter 0.01" slot stainless steel screen (111 - 121 ft bgs) #40 Filter Pack (108 - 125 ft bgs)
120	690	60	0.2 - 1.8		SANDSTONE		(120.0 - 125.0) SANDSTONE, white (7.5YR 8/1) with heavy yellow (10YR 7/8) mottling/staining, mostly soft, loose, pulverized grains, some harder, friable pieces, horizontal bedding/fracturing, very fine to fine spherical grains with silt-like pulverized cementation, well sorted, wet (drill fluids) to possible saturation		
125									

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.4 ppm

Date Start/Finish: 1/22/2016 / 1/25/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973410.4607
Easting: 484420.2375

Borehole Depth (ft bgs): 120
Surface Elevation (ft): 812.366
Descriptions By: B. Evans

Well/Boring ID: **AMW-30**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH / ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0 / 810	60	0.1 - 0.3		FILL		(0.0 - 1.5) SILT, dark brown (10YR 3/3), some very fine to coarse sand, fine to coarse gravel, angular to subangular, roots, frozen		6" Pro Top Outer Casing
				FILL		(1.5 - 4.0) CLAY, very dark brown (10YR 2/2), soft, very silty, moderately plastic, roots, moist		
5 / 805	60	0.7 - 1.9		FILL		(4.0 - 6.7) SAND/GRAVEL, dark yellowish brown (10YR 4/4), very coarse sand, some silt, fine to coarse gravel, mostly angular, poorly sorted, loose, moist		
				FILL		(6.7 - 10.0) SAND, yellowish brown (10YR 5/6), mostly medium grained, some very fine to fine, trace silt, well sorted, loose, trace fine to coarse gravel, subangular to subround, stone up to 2 inch diameter, wet		
10 / 800	48	0.5 - 2.5		FILL		(10.0 - 11.0) SAND, yellowish brown (10YR 5/6), mostly medium grained, some very fine to fine, little silt, well sorted, loose, little fine to coarse gravel, subangular to subround, stone up to 2 inch diameter, wet		
				SHALE		(11.0 - 14.0) SHALE, dark greenish gray (GLEY1 4/1), hard, brittle, mostly crushed pieces compacted to firm core, some fissile pieces, horizontal bedding, moist to dry		
15 / 795	72	0.1 - 0.3		LIMESTONE		(14.0 - 17.0) LIMESTONE, grayish brown (10YR 5/2), very hard, dense, cryptocrystalline, broken pieces, horizontal bedding/fracturing, some fossils, vuggy, secondary solution features/erosion, slightly micritic, wet (drill fluid)		
20 / 790	60	0.1		LIMESTONE		(17.0 - 28.0) LIMESTONE, light grayish brown (10YR 6/2) with gray (10YR 5/1), fossil specs, very hard, dense, cryptocrystalline, broken into pieces between 3 - 10 inches, very fossiliferous, mainly shell, vuggy, horizontal bedding/fracturing, secondary solution erosion/pitting, wet (drill fluids) to dry at core		
25 / 785	60	0.3 - 0.4		LIMESTONE		(28.0 - 30.0) LIMESTONE, dark gray (10YR 4/1), hard dense, broken angular pieces up to 2 inches, micritic, some fossils, wet (drill fluids)		
30 / 780	60	0.1 - 0.3		LIMESTONE		(30.0 - 35.0) LIMESTONE, dark gray (10YR 4/1) to grayish brown (10YR 5/2), hard, dense, cryptocrystalline, pieces up to 1 inch thick, fossils, soft, flow/deformational features, horizontal bedding/fracturing, some vugs, solution erosion, trace secondary calcite, worm tubes, wet (drill fluids) to dry at core		
35 / 775	0	--		NO RECOVERY		(35.0 - 40.0) No Recovery		
40 / 770				NO RECOVERY		(40.0 - 45.0) No Recovery. Limestone/sandstone contact depth unconfirmed.		

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.3 ppm.

Date Start/Finish: 1/22/2016 / 1/25/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973410.4607
Easting: 484420.2375

Borehole Depth (ft bgs): 120
Surface Elevation (ft): 812.366
Descriptions By:
B. Evans

Well/Boring ID: **AMW-30**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
45	770	0	--				(45.0 - 47.0) SANDSTONE, light gray (2.5Y 7/1) to yellow (2.5Y 7/6), firm, friable pieces mixed with pulverized loose grains, fine to very fine spherical grains in cementation and loose with silt-like pulverized cementation, horizontal bedding		
					SANDSTONE				
50	765	60	0.3 - 1.7		SANDSTONE		(47.0 - 50.0) SANDSTONE, light gray (2.5Y 7/1) to yellow (2.5Y 7/6), soft, loose with few firm, friable pieces up to 1/2 inch, wet (drill fluids)		
					SANDSTONE		(50.0 - 60.0) SANDSTONE, white (7.5YR 8/1) with several bands of pale yellow (2.5Y 8/3), soft, loose, pulverized grains, very fine to fine grained, well sorted, silt-like pulverized cementation, wet (drill fluids)		
55	760	60	0.3 - 2.8						Annular Seal Cement Grout (0 - 104 ft bgs)
	755	60	0.3 - 1.0						2" diameter black steel riser (0 - 109 ft bgs)
60					SANDSTONE		(60.0 - 65.0) SANDSTONE, white (7.5YR 8/1) with some pale yellow (2.5Y 8/3) banding between 2 - 3 inches thick, mostly soft, loose pulverized grains, some firmer, easily friable cores 3 to 4 inches long, very fine to fine grained, well sorted, with silt-like pulverized cementation, some layering, wet (drill fluids)		
	750	60	1.2 - 2.5						
65					SANDSTONE		(65.0 - 70.0) No Recovery		
	745	0	--						
70					SANDSTONE		(70.0 - 75.0) No Recovery		
	740	0	--						
75					SANDSTONE		(75.0 - 85.0) SANDSTONE, white (2.5YR 8/1) to pale yellow (2.5Y 8/4) with yellow (10YR 7/8) mottling, loose, soft to slightly firm, pulverized grains, mostly very fine grained, well sorted, with silt-like pulverized cementation, wet (drill fluids)		
	735	60	0.3 - 1.2						
80									
	730	60	0.5						
85									

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.3 ppm.

Date Start/Finish: 1/22/2016 / 1/25/2016 **Drilling Company:** Cascade Drilling **Driller's Name:** Roy Buckenberger **Drilling Method:** Roto-Sonic **Sampling Method:** Core Barrel	**Northing:** 4973410.4607 **Easting:** 484420.2375 **Borehole Depth (ft bgs):** 120 **Surface Elevation (ft):** 812.366 **Descriptions By:** B. Evans	**Well/Boring ID: AMW-30** **Client:** Ford Motor Company **Location:** Saint Paul, MN

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
85	725	0	--		SANDSTONE		(85.0 - 90.0) No Recovery		
90	720	0	--		SANDSTONE		(90.0 - 95.0) No Recovery		
95	715	60	1.6 - 5.7		SANDSTONE		(95.0 - 100.0) SANDSTONE, white (7.5YR 8/1), no mottling, pulverized to soft, loose grains, very fine to fine grained, mostly very fine grained, well sorted, with silt-like pulverized cementation, moist (drill fluids), trace pieces sandstone up to 1 inch diameter, slightly hard, very friable, cemented very fine to fine spherical grains		
100	710	60	1.1 - 2.1		SANDSTONE		(100.0 - 115.0) SANDSTONE, white (7.5YR 8/1), trace yellow (10YR 7/8) mottling, pulverized to soft, loose grains, very fine to fine grained, mostly very fine grained, well sorted, with silt-like pulverized cementation, moist (drill fluids) to possible saturation at 110 ft, trace pieces sandstone up to 1 inch diameter, slightly hard, very friable, cemented very fine to fine spherical grains		
105	705	60	0.6 - 1.1						5020 Industrial Fine Sand (104 - 106 ft bgs)
110	700	24	1.0 - 2.2						#40 Filter Pack (106 - 120 ft bgs)
115	695	60	0.3 - 0.8		SANDSTONE		(115.0 - 117.0) SANDSTONE, yellow (10YR 7/8), pulverized to soft, loose grains, very fine to fine grained, mostly very fine grained, well sorted, with silt-like pulverized cementation, moist (drill fluids) to possible saturation, trace pieces sandstone up to 1 inch diameter, slightly hard, very friable, cemented very fine to fine spherical grains		2" diameter 0.01" slot stainless steel screen (109 - 119 ft bgs)
120					SANDSTONE		(117.0 - 118.0) SANDSTONE, very pale brown (10YR 8/4), pulverized to soft, loose grains, very fine to fine grained, mostly very fine grained, well sorted, with silt-like pulverized cementation, moist (drill fluids) to possible saturation, trace pieces sandstone up to 1 inch diameter, slightly hard, very friable, cemented very fine to fine spherical grains		
					SANDSTONE		(118.0 - 120.0) SANDSTONE, white (7.5YR 8/1), trace yellow (10YR 7/8) mottling, pulverized to soft, loose grains, very fine to fine grained, mostly very fine grained, well sorted, with silt-like pulverized cementation, moist (drill fluids) to possible saturation, trace pieces sandstone up to 1 inch diameter, slightly hard, very friable, cemented very fine to fine spherical grains		

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

PID Background: 0.0-0.3 ppm.

Date Start/Finish: 1/25/2016 / 1/27/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973613.0129
Easting: 484356.5505

Borehole Depth (ft bgs): 120
Surface Elevation (ft): 812.009
Descriptions By: B. Evans

Well/Boring ID: **AMW-31**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
0	810	48	0.0		FILL		(0.0 - 1.3) SILT/SAND/GRAVEL, dark brown (10YR 3/3), silt with very fine to coarse sand, fine to coarse gravel, angular to subround, poorly sorted, roots, frozen, loose		6" Pro Top Outer Casing
5	805	84	0.0 - 1.5		FILL		(1.3 - 5.0) SILT, very dark brown (10YR 2/2), soft, loose to stiff, frozen, some very fine to fine sand, roots and organic material, some red brick fragments, moist		
10	800	96	0.0		FILL		(5.0 - 12.0) SAND/SILT, dark yellowish brown (10YR 4/6), mostly very fine to fine, some medium to coarse, poorly sorted, very silty/clayey, some fine to coarse gravel, angular to subround, slightly loose to slightly plastic, wet, trace pebbles		
15	795				LIMESTONE		(12.0 - 15.0) LIMESTONE, very dark greenish gray (GLEY1 3/1) changing to very dark grayish brown (10YR 3/2) at 13.5 ft, hard, dense, cryptocrystalline, broken pieces up to 1 inch thick, very shaley to 13.5 ft, micritic to 15 ft, horizontal bedding/fracturing, fossiliferous, crinoid/coral, some vugs, solution erosion, wet (drill fluids)		
20	790	36	0.0		LIMESTONE		(15.0 - 26.3) LIMESTONE, grayish brown (10YR 5/2) with gray (10YR 5/1), fossil specks, hard, dense, cryptocrystalline, broken into 3 to 5 ft cores, horizontal bedding/fracturing, very fossiliferous, shells in horizontal planes, vuggy, micritic, possible secondary solution erosion/pitting, wet (drill fluids)		
25	785	48	0.0 - 0.1		LIMESTONE		(26.3 - 30.0) LIMESTONE, dark greenish gray (GLEY1 4/1), hard, dense, cryptocrystalline, 3-5 inches long cores, broken, angular pieces, horizontal bedding/fracturing, some fossils, few vugs, very shaley and micritic, wet (drill fluid)		
30	780	0	--		LIMESTONE		(30.0 - 35.0) No Recovery		
35	775	60	0.2 - 0.8		LIMESTONE		(35.0 - 44.5) LIMESTONE/MUDSTONE, dark gray (10YR 4/1) and grayish brown (10YR 5/2), hard, dense, cryptocrystalline, broken pieces up to 1 inch thick, horizontal bedding/fracturing, interlayer limestone, micritic with mudstone, soft flow features, fossils, worm tubes, wet (drill fluids)		
40									

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Background PID: 0.0-0.1 ppm

Date Start/Finish: 1/25/2016 / 1/27/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973613.0129
Easting: 484356.5505

Borehole Depth (ft bgs): 120
Surface Elevation (ft): 812.009
Descriptions By:
B. Evans

Well/Boring ID: **AMW-31**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH / ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
770	60	0.1 - 0.4						
45				SHALE		(44.5 - 47.5) SHALE, greenish gray (GLEY1 5/1), hard, broken fissile pieces, horizontal bedding/fracturing, dry		
765	60	0.1 - 0.6		SANDSTONE		(47.5 - 50.0) SANDSTONE, greenish gray (GLEY1 6/1), hard, firm, friable cores, horizontal fracturing, spherical very fine to fine grained in cementation, moist		
50				SANDSTONE		(50.0 - 52.0) SANDSTONE, yellow (10YR 7/6), hard, firm, broken pieces with loose grains, friable, pulverized very fine to fine grained, soft, loose, very fine to fine spherical grains in cementation, moist		
760	60	0.1 - 0.8		SANDSTONE		(52.0 - 65.0) SANDSTONE, white (7.5YR 8/1) with some yellow (2.5Y 7/6) bands and mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		Annular Seal Cement Grout (0 - 105 ft bgs) 2" diameter black steel riser (0 - 110 ft bgs)
55								
755	60	1.0 - 3.1						
60								
750	60	1.4 - 3.4						
65				SANDSTONE		(65.0 - 68.5) SANDSTONE, white (7.5YR 8/1), no mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
745	60	0.1 - 0.6		SANDSTONE		(68.5 - 70.0) SANDSTONE, white (7.5YR 8/1) with some yellow (2.5Y 8/6) staining and yellow (10YR 7/8) mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
70				SANDSTONE				
740	60	0.3 - 0.4		SANDSTONE		(70.0 - 71.5) SANDSTONE, white (7.5YR 8/1) with some yellow (2.5Y 8/6) staining, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
75				SANDSTONE		(71.5 - 75.0) SANDSTONE, white (7.5YR 8/1) with yellow (10YR 7/8) mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
735	60	0.2 - 0.7				(75.0 - 85.0) SANDSTONE, white (7.5YR 8/1) to pale yellow (2.5Y 8/4) with some yellow (10YR 7/8) staining/mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
80								

ARCADIS

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Background PID: 0.0-0.1 ppm

Date Start/Finish: 1/25/2016 / 1/27/2016
Drilling Company: Cascade Drilling
Driller's Name: Roy Buckenberger
Drilling Method: Roto-Sonic
Sampling Method: Core Barrel

Northing: 4973613.0129
Easting: 484356.5505

Borehole Depth (ft bgs): 120
Surface Elevation (ft): 812.009
Descriptions By: B. Evans

Well/Boring ID: **AMW-31**
Client: **Ford Motor Company**
Location: **Saint Paul, MN**

DEPTH	ELEVATION	Recovery (inches)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Depth to Water	Well/Boring Construction
	730	60	0.1 - 2.2						
85					SANDSTONE		(85.0 - 90.0) SANDSTONE, pale yellow (2.5Y 8/4) with some yellow (10YR 7/8) mottling soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
	725	60	0.1 - 0.7						
90					SANDSTONE		(90.0 - 92.5) SANDSTONE, white (7.5YR 8/1), no mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, moist (drill fluids)		
	720	24	1.7 - 2.8		SANDSTONE		(92.5 - 95.0) SANDSTONE, pale yellow (2.5Y 8/2) with some yellow (10YR 7/8) mottling soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
95					SANDSTONE		(95.0 - 97.0) SANDSTONE, white (7.5YR 8/1), no mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
	715	60	0.2 - 1.9		SANDSTONE		(97.0 - 97.5) SANDSTONE, white (7.5YR 8/1) with yellow (10YR 7/8) staining, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
100					SANDSTONE		(97.5 - 99.0) SANDSTONE, white (7.5YR 8/1), no mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
	710	48	0.0 - 0.2		SANDSTONE		(99.0 - 100.0) SANDSTONE, white (7.5YR 8/1) with yellow (10YR 7/8) mottling, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids)		
105					SANDSTONE		(100.0 - 105.0) SANDSTONE, white (7.5YR 8/1) with yellow (10YR 7/8) mottling from 103 to 104 ft, soft, loose, pulverized grains, very fine to fine grained with silt-like cementation, varying percent very fine to fine grained, wet (drill fluids) to possible saturation		5020 Industrial Fine Sand (105 - 107 ft bgs)
	705	60	0.1 - 0.6						
110					SANDSTONE		(105.0 - 110.0) SANDSTONE, white (7.5YR 8/1) with some variations pale yellow (2.5Y 8/4), trace yellow (10YR 7/8) mottling in pale yellow, soft, loose, pulverized grains, very fine to fine grained, well sorted with silt-like pulverized cementation, wet (drills fluid) to possible saturation		#40 Filter Pack (107 - 120 ft bgs)
	700	60	0.1 - 0.3		SANDSTONE		(110.0 - 114.0) SANDSTONE, white (7.5YR 8/1) with some yellow (10YR 7/8) mottling to 111 ft, soft, loose, pulverized grains, very fine to fine grained, well sorted with silt-like pulverized cementation, wet (drills fluid) to possible saturation		2" diameter 0.01" slot stainless steel screen (110 - 120 ft bgs)
115					NO RECOVERY		(114.0 - 115.0) SANDSTONE, pale yellow (2.5Y 8/4), soft, loose, pulverized grains, very fine to fine grained, well sorted with silt-like pulverized cementation, wet (drills fluid) to possible saturation		
	695	0	--				(115.0 - 120.0) No Recovery		
120									

Remarks: ft: feet NA: Not applicable/not available bgs: below ground surface ppm: parts per million

Background PID: 0.0-0.1 ppm

APPENDIX K

Well and Boring Records

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 751332

WELL OR BORING LOCATION

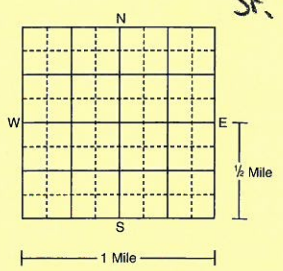
County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction
White Bear	28N	23W	17	SW¼ NE¼ NE¼

GPS LOCATION: Latitude ____ degrees ____ minutes ____ seconds ____ Longitude ____ degrees ____ minutes ____ seconds ____

House Number, Street Name, City, and Zip Code of Well Location: 966 Mississippi Blvd South St. Paul 55116 | or Fire Number

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



See Map

PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company

Property owner's mailing address if different than well location address indicated above.

SAME

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company

Well/boring owner's mailing address if different than property owner's address indicated above.

SAME

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Shale	Grey	Hard	0	16
Limestone	Grey	Hard	16	40
Shale	Grey	Hard	40	45
Sandstone	Grey	Hard	45	151

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

3411-0171

AMW-38B

IMPORTANT - FILE WITH PROPERTY PAPERS WELL OWNER COPY 751332

WELL/BORING DEPTH (completed): 151 ft. | DATE WORK COMPLETED: 7-11-07

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☐ Dug ☒ Auger Screw ☐ Rotary ☐ Jetted

DRILLING FLUID: None | WELL HYDROFRACTURED? ☐ Yes ☒ No From ____ ft. To ____ ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ ____

CASING MATERIAL: ☒ Steel ☐ Plastic | Drive Shoe? ☐ Yes ☒ No | ☒ Threaded ☐ Welded ☐ ____

HOLE DIAM.

CASING

Diameter		Weight	Specifications	HOLE DIAM.
2 in. to 141 ft.		____ lbs./ft.	____	6 in. to 151 ft.
____ in. to ____ ft.		____ lbs./ft.	____	____ in. to ____ ft.
____ in. to ____ ft.		____ lbs./ft.	____	____ in. to ____ ft.

SCREEN: Yes
Make: Johnson
Type: Stainless Steel | Diam. 2"
Slot/Gauze: .010 | Length 10'
Set between 141 ft. and 151 ft. | FITTINGS ____

OPEN HOLE From ____ ft. To ____ ft.

STATIC WATER LEVEL: 100 ft. ☒ Below ☐ Above land surface | Measured from Ground | Date measured 7-11-07

PUMPING LEVEL (below land surface): N/A ft. after ____ hrs. pumping ____ g.p.m.

WELLHEAD COMPLETION
☐ Pitless/adapter manufacturer ____ Model ____
☒ Casing Protection 6" Pratup ☒ 12 in. above grade
☐ At-grade (Environmental Well and Boring ONLY) At Grade

GROUTING INFORMATION
Well grouted ☒ Yes ☐ No
Grout materials ☒ Neat cement ☐ Bentonite ☐ Concrete ☐ Other ____

From	To			
0	137 ft.	12	☐ Yds.	☒ Bags
____	____ ft.	____	☐ Yds.	☐ Bags
____	____ ft.	____	☐ Yds.	☐ Bags

NEAREST KNOWN SOURCE OF CONTAMINATION: unknown feet ____ direction ____ type

Well disinfected upon completion? ☐ Yes ☐ No

PUMP
☒ Not installed Date installed ____
Manufacturer's name ____
Model Number ____ HP ____ Volts ____
Length of drop pipe ____ ft. Capacity ____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ ____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# ____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Boart Longyear — Licensee Business Name — Lic. or Reg. No. 2022

Certified Representative Signature — Certified Rep. No. 429 — Date 8-13-07

Jim Doucette — Name of Driller

IC 140-0020 HE-01205-10 (Rev. 6/06)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 751339

WELL OR BORING LOCATION

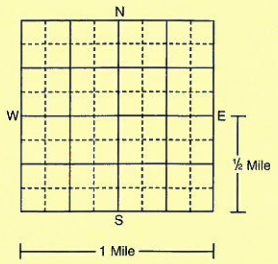
County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction
White Bear	28N	23W	17	SE¼ SE¼ NW¼

GPS LOCATION: Latitude ____ degrees ____ minutes ____ seconds ____ Longitude ____ degrees ____ minutes ____ seconds ____

House Number, Street Name, City, and Zip Code of Well Location: 966 Mississippi Blvd South, St. Paul 55116 | or Fire Number

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



See Map

PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company

Property owner's mailing address if different than well location address indicated above: SAME

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company

Well/boring owner's mailing address if different than property owner's address indicated above: SAME

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Fill	Black	Med	0	20
Shale	Grey	Hard	20	23
Sandstone	Grey	Hard	23	29

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

3411 0171
AMW-5

IMPORTANT - FILE WITH PROPERTY PAPERS WELL OWNER COPY 751339

WELL/BORING DEPTH (completed): 29 ft. | DATE WORK COMPLETED: 7-11-07

DRILLING METHOD: [ ] Cable Tool [X] Auger [ ] Driven [ ] Rotary [ ] Dug [ ] Jetted — Sonic

DRILLING FLUID: None | WELL HYDROFRACTURED? [ ] Yes [X] No From ____ ft. To ____ ft.

USE: [ ] Domestic [X] Monitoring [ ] Heating/Cooling [ ] Noncommunity PWS [ ] Environ. Bore Hole [ ] Industry/Commercial [ ] Community PWS [ ] Irrigation [ ] Remedial [ ] Elevator [ ] Dewatering [ ] ____

CASING MATERIAL: [X] Steel [ ] Plastic — Drive Shoe? [ ] Yes [X] No — [X] Threaded [ ] Welded [ ] ____

HOLE DIAM.

CASING Diameter	Weight	Specifications	HOLE DIAM.
2 in. to 19 ft.	____ lbs./ft.	____	6 in. to 29 ft.
____ in. to ____ ft.	____ lbs./ft.	____	____ in. to ____ ft.
____ in. to ____ ft.	____ lbs./ft.	____	____ in. to ____ ft.

SCREEN: Yes — Make: Johnson — Type: Stainless Steel — Diam.: 2" — Slot/Gauze: .010 — Length: 10' — Set between: 19 ft. and 29 ft. — FITTINGS: ____

OPEN HOLE: From ____ ft. To ____ ft.

STATIC WATER LEVEL: 29 ft. [X] Below [ ] Above land surface — Measured from: Ground — Date measured: 7-11-07

PUMPING LEVEL (below land surface): N/A ft. after ____ hrs. pumping ____ g.p.m.

WELLHEAD COMPLETION: [ ] Pitless/adapter manufacturer ____ Model ____ — [X] Casing Protection 6" Protup — [X] 12 in. above grade — [ ] At-grade (Environmental Well and Boring ONLY)

GROUTING INFORMATION: Well grouted [X] Yes [ ] No — Grout materials [X] Neat cement [ ] Bentonite [ ] Concrete [ ] Other ____

From 0 To 15 ft.	2	[ ] Yds.	[X] Bags
From ____ To ____ ft.	____	[ ] Yds.	[ ] Bags
From ____ To ____ ft.	____	[ ] Yds.	[ ] Bags

NEAREST KNOWN SOURCE OF CONTAMINATION: unknown feet ____ direction ____ type

Well disinfected upon completion? [ ] Yes [X] No

PUMP: [X] Not installed — Date installed ____

Manufacturer's name ____

Model Number ____ HP ____ Volts ____

Length of drop pipe ____ ft. Capacity ____ g.p.m.

Type: [ ] Submersible [ ] L.S. Turbine [ ] Reciprocating [ ] Jet [ ] ____

ABANDONED WELLS: Does property have any not in use and not sealed well(s)? [ ] Yes [X] No

VARIANCE: Was a variance granted from the MDH for this well? [ ] Yes [X] No TN# ____

WELL CONTRACTOR CERTIFICATION

This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Boart Longyear — Licensee Business Name — 2022 — Lic. or Reg. No.

429 — Certified Representative Signature — Certified Rep. No. — 8-13-07 Date

Jim Doucette — Name of Driller

IC 140-0020 HE-01205-10 (Rev. 6/06)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes, Chapter 103I

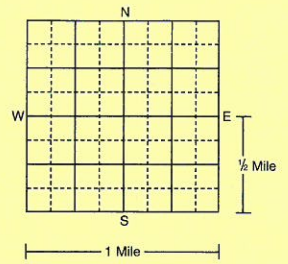
MINNESOTA UNIQUE WELL AND BORING NO. 756581

WELL OR BORING LOCATION
County Name: Ramsey
Township Name: White Bear | Township No.: 28N | Range No.: 23W | Section No.: 17 | Fraction: SE¼ SE¼ NW¼

GPS LOCATION: Latitude ____ degrees ____ minutes ____ seconds ____ Longitude ____ degrees ____ minutes ____ seconds ____

House Number, Street Name, City, and Zip Code of Well Location: 966 Mississippi Blvd | or Fire Number:

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



St. Paul 55116

See Map

PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company

Property owner's mailing address if different than well location address indicated above.

SAME

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company

Well/boring owner's mailing address if different than property owner's address indicated above.

SAME

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Fill	Br	Med	0	10
Sand + Clay	Br	Med	10	25
Sandstone	Tan	Hard	25	55

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

3411-0171
MW-5

IMPORTANT - FILE WITH PROPERTY PAPERS WELL OWNER COPY 756581

WELL/BORING DEPTH (completed): 54 ft. | DATE WORK COMPLETED: 7-19-07

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☐ Dug ☒ Auger Some ☐ Rotary ☐ Jetted

DRILLING FLUID: None | WELL HYDROFRACTURED? ☐ Yes ☒ No From ____ ft. To ____ ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ ____

CASING MATERIAL: ☒ Steel ☐ Plastic | Drive Shoe? ☐ Yes ☒ No | ☒ Threaded ☐ Welded ☐ ____

CASING Diameter	Weight	Specifications	HOLE DIAM.
2 in. to 44 ft.	____ lbs./ft.	____	6 in. to 55 ft.
____ in. to ____ ft.	____ lbs./ft.	____	____ in. to ____ ft.
____ in. to ____ ft.	____ lbs./ft.	____	____ in. to ____ ft.

SCREEN: Yes | Make: Johnson | Type: Stainless Steel | Slot/Gauze: .010 | Set between: 44 ft. and 54 ft.
OPEN HOLE: From ____ ft. To ____ ft. | Diam.: 2" | Length: 10' | FITTINGS: ____

STATIC WATER LEVEL: 39 ft. ☒ Below ☐ Above land surface | Measured from: Ground | Date measured: 7-19-07

PUMPING LEVEL (below land surface): N/A ft. after ____ hrs. pumping ____ g.p.m.

WELLHEAD COMPLETION: ☐ Pitless/adapter manufacturer ____ Model ____ ☒ Casing Protection 6" Protop ☒ 12 in. above grade ☐ At-grade (Environmental Well and Boring ONLY)

GROUTING INFORMATION: Well grouted ☒ Yes ☐ No | Grout materials ☒ Neat cement ☐ Bentonite ☐ Concrete ☐ Other ____

From	To		
0 ft.	37 ft.	4	☐ Yds. ☒ Bags
____ ft.	____ ft.	____	☐ Yds. ☐ Bags
____ ft.	____ ft.	____	☐ Yds. ☐ Bags

NEAREST KNOWN SOURCE OF CONTAMINATION: Unknown feet ____ direction ____ type
Well disinfected upon completion? ☐ Yes ☒ No

PUMP: ☒ Not installed Date installed ____
Manufacturer's name ____
Model Number ____ HP ____ Volts ____
Length of drop pipe ____ ft. Capacity ____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ ____

ABANDONED WELLS: Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE: Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# ____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Boart Longyear | 2022
Licensee Business Name | Lic. or Reg. No.

429 | 8-13-07
Certified Representative Signature | Certified Rep. No. | Date

Dale Dusher
Name of Driller

IC 140-0020 HE-01205-10 (Rev. 6/06)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 751338

WELL OR BORING LOCATION

County Name: Ramsey

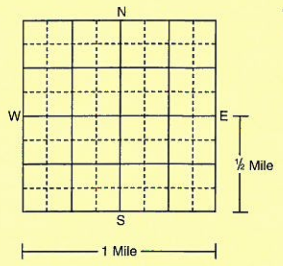
Township Name	Township No.	Range No.	Section No.	Fraction
White Bear	28 N	23 W	17	SW NW SE

GPS LOCATION: Latitude ____ degrees ____ minutes ____ seconds ____ Longitude ____ degrees ____ minutes ____ seconds ____

House Number, Street Name, City, and Zip Code of Well Location: 966 Mississippi Blvd South, St. Paul 55116

or Fire Number:

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



See Map

WELL/BORING DEPTH (completed): 45 ft. DATE WORK COMPLETED: 7-11-07

DRILLING METHOD: ☐ Cable Tool ☐ Auger ☒ Sonic ☐ Driven ☐ Rotary ☐ Dug ☐ Jetted

DRILLING FLUID: None

WELL HYDROFRACTURED? ☐ Yes ☒ No From ____ ft. To ____ ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ ____

CASING MATERIAL: ☒ Steel ☐ Plastic — Drive Shoe? ☐ Yes ☒ No — ☒ Threaded ☐ Welded ☐ ____

CASING

Diameter		Weight	Specifications
2 in. to 35 ft.		____ lbs./ft.	____
____ in. to ____ ft.		____ lbs./ft.	____
____ in. to ____ ft.		____ lbs./ft.	____

HOLE DIAM.: 6 in. to 45 ft. ; ____ in. to ____ ft. ; ____ in. to ____ ft.

SCREEN ☒ Yes ☐ No
Make: Johnson
Type: Stainless Steel — Diam.: 2"
Slot/Gauze: .010 — Length: 10'
Set between: 35 ft. and 45 ft. — FITTINGS: ____

OPEN HOLE: From ____ ft. To ____ ft.

STATIC WATER LEVEL: 42.5 ft. ☒ Below ☐ Above land surface — Measured from: Ground — Date measured: 7-11-07

PUMPING LEVEL (below land surface): N/A ft. after ____ hrs. pumping ____ g.p.m.

WELLHEAD COMPLETION
☐ Pitless/adapter manufacturer ____ Model ____
☒ Casing Protection ____ ☐ 12 in. above grade
☒ At-grade (Environmental Well and Boring ONLY)

GROUTING INFORMATION
Well grouted ☒ Yes ☐ No
Grout materials ☒ Neat cement ☐ Bentonite ☐ Concrete ☐ Other ____

From 0	To 30 ft.	4	☐ Yds.	☒ Bags
From ____	To ____ ft.	____	☐ Yds.	☐ Bags
From ____	To ____ ft.	____	☐ Yds.	☐ Bags

PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company

Property owner's mailing address if different than well location address indicated above.

SAME

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company

Well/boring owner's mailing address if different than property owner's address indicated above.

SAME

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Fill	Black	Hard	0	37
Sandstone	Grey	Hard	37	45

Use a second sheet, if needed.

NEAREST KNOWN SOURCE OF CONTAMINATION: unknown feet ____ direction ____ type

Well disinfected upon completion? ☐ Yes ☒ No

PUMP
☒ Not installed Date installed ____
Manufacturer's name ____
Model Number ____ HP ____ Volts ____
Length of drop pipe ____ ft. Capacity ____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ ____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# ____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Boart Longyear — Licensee Business Name — 2022 — Lic. or Reg. No.

Certified Representative Signature — 429 — Certified Rep. No. — 8-13-07 — Date

Jim Doucette — Name of Driller

REMARKS, ELEVATION, SOURCE OF DATA, etc.

3411-0171

AMW-07

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY

751338

IC 140-0020

HE-01205-10 (Rev. 6/06)

Arcadis / Ford

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 784743

WELL OR BORING LOCATION

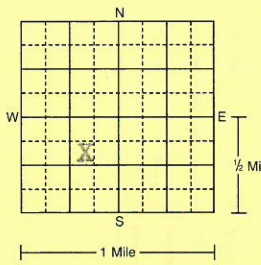
County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28N	23W	17	SW ¼ NE ¼ SW ¼

GPS LOCATION: Latitude ____ degrees ____ minutes ____ seconds ____ Longitude ____ degrees ____ minutes ____ seconds ____

House Number, Street Name, City, and Zip Code of Well Location: 966 Mississippi River Blvd st paul 55116 or Fire Number

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



see attached map

PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company

Property owner's mailing address if different than well location address indicated above.
966 Mississippi River Blvd
St. Paul, MN 55116

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company

Well/boring owner's mailing address if different than property owner's address indicated above.

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
sand & gravel	brn		0	10
sand	brn		10	20
sand/gravel	brn		20	25

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

*6" protop has a locking seal in it along with the 2" locking seal in the monitoring well

WELL/BORING DEPTH (completed): 25 ft.

DATE WORK COMPLETED: Nov. 3, 2011

DRILLING METHOD: ☐ Cable Tool ☒ Auger ☐ Driven ☐ Rotary ☐ Dug ☐ Jetted

DRILLING FLUID: —

WELL HYDROFRACTURED? ☐ Yes ☒ No From ____ ft. To ____ ft.

USE: ☐ Domestic ☐ Noncommunity PWS ☐ Community PWS ☐ Elevator ☒ Monitoring ☐ Environ. Bore Hole ☐ Irrigation ☐ Dewatering ☐ Heating/Cooling ☐ Industry/Commercial ☐ Remedial

CASING MATERIAL: ☒ Steel ☐ Plastic. Drive Shoe? ☐ Yes ☒ No ☒ Threaded ☐ Welded

HOLE DIAM.: 8¼ in. to 25 ft.

CASING

Diameter	Weight	Specifications
2 in. to 17 ft.	lbs./ft.	
in. to ft.	lbs./ft.	
in. to ft.	lbs./ft.	

SCREEN: Make Johnson; Type PVC; Diam. 2"; Slot/Gauze 10; Length 10'; Set between 15 ft. and 25 ft.; FITTINGS thread

OPEN HOLE: From ____ ft. To ____ ft.

STATIC WATER LEVEL: 20 ft. ☒ Below ☐ Above land surface. Measured from grade. Date measured 11/3/11

PUMPING LEVEL (below land surface): ____ ft. after ____ hrs. pumping ____ g.p.m.

WELLHEAD COMPLETION: ☐ Pitless/adapter manufacturer ____ Model ____ ☒ Casing Protection 6" x 6' steel cover pipe ☐ 12 in. above grade ☐ At-grade (Environmental Well and Boring ONLY) pipe 24"

GROUTING INFORMATION: Well grouted ☐ Yes ☐ No. Grout materials ☐ Neat cement ☐ Bentonite ☐ Concrete ☐ Other ____

	From	To	ft.		
neat cement	0	11	2	x	
bentonite	11	13	1	X	

☐ Yds. ☐ Bags

NEAREST KNOWN SOURCE OF CONTAMINATION: ____ feet ____ direction ____ type

Well disinfected upon completion? ☐ Yes ☒ No

PUMP: ☒ Not installed Date installed ____

Manufacturer's name ____

Model Number ____ HP ____ Volts ____

Length of drop pipe ____ ft. Capacity ____ g.p.m.

Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ ____

ABANDONED WELLS: Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE: Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# ____

WELL CONTRACTOR CERTIFICATION

This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Stevens Drilling & Env. Svc. Inc. 2255
Licensee Business Name Lic. or Reg. No.

[signature] 556 11/8/11
Certified Representative Signature Certified Rep. No. Date

Dan Hunter
Name of Driller

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY

784743

IC 140-0020

HE-01205-12 (Rev. 12/08)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 784744

WELL OR BORING LOCATION

County Name: Ramsey

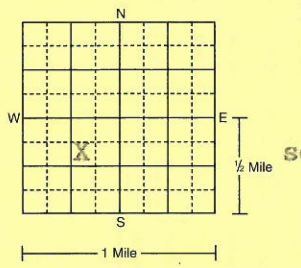
Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28N	23W	17	SW NE¼ SW ¼

GPS LOCATION: Latitude ____ degrees ____ minutes ____ seconds ____ Longitude ____ degrees ____ minutes ____ seconds ____

House Number, Street Name, City, and Zip Code of Well Location: 966 Mississippi River Blvd St. Paul 55116

or Fire Number:

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



see attached map

PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company

Property owner's mailing address if different than well location address indicated above.

966 Mississippi River Blvd
St. Paul, MN 55116

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company

Well/boring owner's mailing address if different than property owner's address indicated above.

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
sand & gravel	brn		0	10
sand	brn		10	20
sand/gravel	brn		20	25

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

*6" protop has a locking seal in it along with the 2" locking seal in the monitoring well.

IMPORTANT - FILE WITH PROPERTY PAPERS WELL OWNER COPY 784744

WELL/BORING DEPTH (completed): 25 ft. DATE WORK COMPLETED: Nov. 3, 2011

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☐ Dug ☒ Auger ☐ Rotary ☐ Jetted ☐ ____

DRILLING FLUID: ____ WELL HYDROFRACTURED? ☐ Yes ☒ No From ____ ft. To ____ ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ ____

CASING MATERIAL: ☒ Steel ☐ Plastic Drive Shoe? ☐ Yes ☒ No ☒ Threaded ☐ Welded ☐ ____

HOLE DIAM.

CASING Diameter / Weight / Specifications

Diameter	to	Weight	Specifications	HOLE DIAM. to
2 in.	to 15 ft.	____ lbs./ft.	____	8¼ in. to 25 ft.
____ in.	to ____ ft.	____ lbs./ft.	____	____ in. to ____ ft.
____ in.	to ____ ft.	____ lbs./ft.	____	____ in. to ____ ft.

SCREEN: Make Johnson Type PVC Slot/Gauze 10 Set between 15 ft. and 25 ft.

OPEN HOLE: From ____ ft. To ____ ft. Diam. 2" Length 10' FITTINGS thread

STATIC WATER LEVEL: 20 ft. ☒ Below ☐ Above land surface Measured from grade Date measured 11/3/11

PUMPING LEVEL (below land surface): ____ ft. after ____ hrs. pumping ____ g.p.m.

WELLHEAD COMPLETION: ☐ Pitless/adapter manufacturer ____ Model ____ ☒ Casing Protection 6"x6' steel cover pipe ☒ 12 in. above grade ☐ At-grade (Environmental Well and Boring ONLY) 24"

GROUTING INFORMATION: Well grouted ☒ Yes ☐ No

Grout materials	From	To	ft.		
☒ Neat cement	0	11	1.5	☐ Yds.	☐ Bags
☐ Bentonite	11	13	1	☐ Yds.	☒ Bags
☐ Concrete	____	____	____	☐ Yds.	☐ Bags
☐ Other ____	____	____	____	☐ Yds.	☐ Bags

NEAREST KNOWN SOURCE OF CONTAMINATION: ____ feet ____ direction ____ type

Well disinfected upon completion? ☐ Yes ☒ No

PUMP: ☒ Not installed Date installed ____

Manufacturer's name ____

Model Number ____ HP ____ Volts ____

Length of drop pipe ____ ft. Capacity ____ g.p.m.

Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ ____

ABANDONED WELLS: Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE: Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# ____

WELL CONTRACTOR CERTIFICATION

This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Stevens Drilling & Env. Svc. Inc. 2255
Licensee Business Name Lic. or Reg. No.

Certified Representative Signature 556 Certified Rep. No. 11/8/11 Date

Dan Hunter
Name of Driller

IC 140-0020 HE-01205-12 (Rev. 12/08)

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING CONSTRUCTION RECORD

Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 814811

WELL OR BORING LOCATION

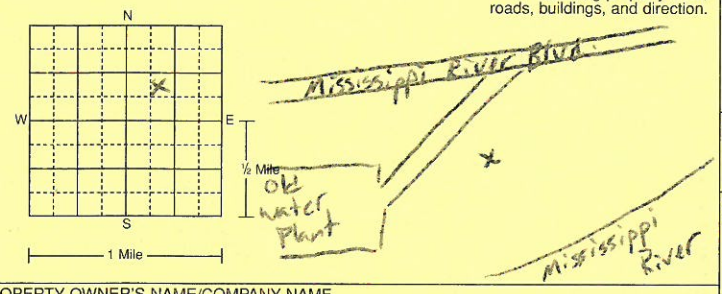
County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28	23W	17	NE NE SW

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 966 S. Mississippi River Blvd. St. Paul 55166

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality Office

Property owner's mailing address if different than well location address indicated above.

Fairlane Plaza N.
290 Town Center Drive
#800
Dearborn, MI 48126

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality Office

Well/boring owner's mailing address if different than property owner's address indicated above.

Same

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Sand	brown	medium	0	56'

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY

814811

WELL/BORING DEPTH (completed): 56' ft. DATE WORK COMPLETED: 12-8-15

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☑ Auger ☐ Rotary ☐ Other _____

DRILLING FLUID: none WELL HYDROFRACTURED? ☐ Yes ☑ No From _____ ft. To _____ ft.

USE: ☐ Domestic ☑ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ _____

CASING MATERIAL: ☑ Steel ☐ Plastic Drive Shoe? ☐ Yes ☐ No ☐ Threaded ☐ Welded ☐ _____

HOLE DIAM.

CASING

Diameter		Weight		Specifications	HOLE DIAM.
2"	in. To 0-46 ft.	3.6	lbs./ft.	Sch. 40	8 in. To 56 ft.
_____	in. To _____ ft.	_____	lbs./ft.	_____	_____ in. To _____ ft.
_____	in. To _____ ft.	_____	lbs./ft.	_____	_____ in. To _____ ft.

SCREEN: Johnson
Make: Johnson
Type: Stainless
Slot/Gauze: 10
Set between: 46 ft. and 56 ft.
OPEN HOLE From _____ ft. To _____ ft.
Diam.: 2"
Length: 10'
FITTINGS: R: D couplers

STATIC WATER LEVEL _____ ft. ☐ Below ☐ Above land surface Measured from _____ Date measured _____

PUMPING LEVEL (below land surface) _____ ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
☐ Pitless/adapter manufacturer _____ Model _____
☑ Casing protection 6" prot. ☐ 12 in. above grade
☐ At-grade ☐ Well House ☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material: neat cement	From: 0	To: 44 ft.	_____	☐ Yds.	☑ Bags
Material: _____	From: _____	To: _____ ft.	_____	☐ Yds.	☐ Bags
Material: _____	From: _____	To: _____ ft.	_____	☐ Yds.	☐ Bags
Driven casing seal	From: _____	To: _____	____ Bags		

NEAREST KNOWN SOURCE OF CONTAMINATION: 500 feet East direction _____ type

Well disinfected upon completion? ☐ Yes ☒ No

PUMP
☒ Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Matrix Environmental LLC — 1916
Licensed Business Name — Lic. or Reg. No.

Dan Thompson — 1200 — 12/29/15
Certified Representative Signature — Certified Rep. No. — Date

Erik Widmark
Name of Driller

IC 140-0020

HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING CONSTRUCTION RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 814812

WELL OR BORING LOCATION

County Name: Ramsey

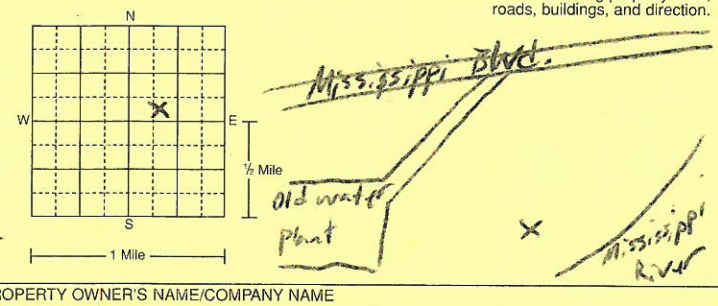
Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28	23	17	NE NE SW

WELL/BORING DEPTH (completed): 26' ft. | DATE WORK COMPLETED: 12-10-15

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 966 S. Mississippi River Blvd. St. Paul 55116

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality Office

Property owner's mailing address if different than well location address indicated above.
Fairlane Plaza N.
290 Town Center Drive
#800
Dearborn, MI 48126

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality Office

Well/boring owner's mailing address if different than property owner's address indicated above.
Same

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Sand	brown	Soft	0	26'

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY

814812

DRILLING METHOD
☐ Cable Tool ☐ Driven
☒ Auger ☐ Rotary
☐ Other _____

DRILLING FLUID: None

WELL HYDROFRACTURED? ☐ Yes ☒ No From _____ ft. To _____ ft.

USE
☐ Domestic ☒ Monitoring ☐ Heating/Cooling
☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial
☐ Community PWS ☐ Irrigation ☐ Remedial
☐ Elevator ☐ Dewatering ☐ _____

CASING MATERIAL
☐ Steel ☐ Threaded ☐ Welded
☒ Plastic Drive Shoe? ☐ Yes ☐ No ☒ Flush thread

CASING Diameter	Weight	Specifications
2" in. To 26' ft.	_____ lbs./ft.	Sch. 40
_____ in. To _____ ft.	_____ lbs./ft.	_____
_____ in. To _____ ft.	_____ lbs./ft.	_____

HOLE DIAM.
8" in. To 26 ft.
_____ in. To _____ ft.
_____ in. To _____ ft.

SCREEN Johnson
Make _____
Type PVC Flush thread Diam. 2"
Slot/Gauze 10 Length 10'
Set between 16 ft. and 26 ft. FITTINGS Flush thread

OPEN HOLE From _____ ft. To _____ ft.

STATIC WATER LEVEL _____ ft. ☐ Below ☐ Above land surface Measured from _____ Date measured _____

PUMPING LEVEL (below land surface) _____ ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
☐ Pitless/adapter manufacturer _____ Model _____
☒ Casing protection 6" pro top ☐ 12 in. above grade
☐ At-grade ☐ Well House ☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)
Material neat cement From 0 To 12 ft. _____ ☐ Yds. ☒ Bags
Material _____ From _____ To _____ ft. _____ ☐ Yds. ☐ Bags
Material _____ From _____ To _____ ft. _____ ☐ Yds. ☐ Bags
Driven casing seal From _____ To _____ _____ Bags

NEAREST KNOWN SOURCE OF CONTAMINATION
_____ feet _____ direction _____ type
Well disinfected upon completion? ☐ Yes ☒ No

PUMP
☒ Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Matrix Environmental LLC. 1916
Licensee Business Name Lic. or Reg. No.

Dan Thompson 1200 12/29/15
Certified Representative Signature Certified Rep. No. Date

Erik Wilmark
Name of Driller

IC 140-0020 HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING CONSTRUCTION RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 814816

WELL OR BORING LOCATION

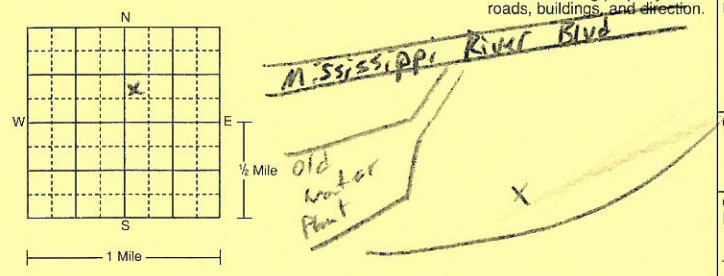
County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28	23	17	NE NE SW

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 966 S. Mississippi River Blvd. St. Paul 55116

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality office

Property owner's mailing address if different than well location address indicated above.
Fairlane Plaza N.
290 Townecenter Drive
#800
Dearborn, MI, 48126

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality Office

Well/boring owner's mailing address if different than property owner's address indicated above.
Same

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Sand	brown	medium	0	43'

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY

814816

WELL/BORING DEPTH (completed): 43' ft. DATE WORK COMPLETED: 12-15-15

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☒ Auger ☐ Rotary ☐ Other _____

DRILLING FLUID

WELL HYDROFRACTURED? ☐ Yes ☒ No From _____ ft. To _____ ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ _____

CASING MATERIAL: ☒ Steel ☐ Plastic Drive Shoe? ☐ Yes ☐ No ☐ Threaded ☐ Welded ☐ _____

HOLE DIAM.

CASING Diameter / Weight / Specifications

2 in. To 33~~6~~ ft.	3~~3~~6 lbs./ft.	Sch 40	8 in. To 43 ft.		
in. To ft.	lbs./ft.		in. To ft.		
in. To ft.	lbs./ft.		in. To ft.		

SCREEN: Johnson
Make
Type: Stainless Diam.: 2"
Slot/Gauze: 10 Length: 10'
Set between: 33 ft. and 43 ft. FITTINGS: R & D couplers

OPEN HOLE From _____ ft. To _____ ft.

STATIC WATER LEVEL _____ ft. ☐ Below ☐ Above land surface Measured from _____ Date measured _____

PUMPING LEVEL (below land surface) _____ ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
☐ Pitless/adapter manufacturer _____ Model _____
☒ Casing protection 6" protop ☐ 12 in. above grade
☐ At-grade ☐ Well House ☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material: neat cement	From 0	To 31 ft.		☐ Yds.	☒ Bags
Material	From	To ft.		☐ Yds.	☐ Bags
Material	From	To ft.		☐ Yds.	☐ Bags
Driven casing seal	From	To	Bags		

NEAREST KNOWN SOURCE OF CONTAMINATION _____ feet _____ direction _____ type

Well disinfected upon completion? ☐ Yes ☒ No

PUMP
☒ Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Matrix Environmental LLC 1916
Licensee Business Name Lic. or Reg. No.

Dan Thompson 1200 12/29/15
Certified Representative Signature Certified Rep. No. Date

Cody Eystad
Name of Driller

IC 140-0020 HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING CONSTRUCTION RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 814813

WELL OR BORING LOCATION

County Name: Ramsey

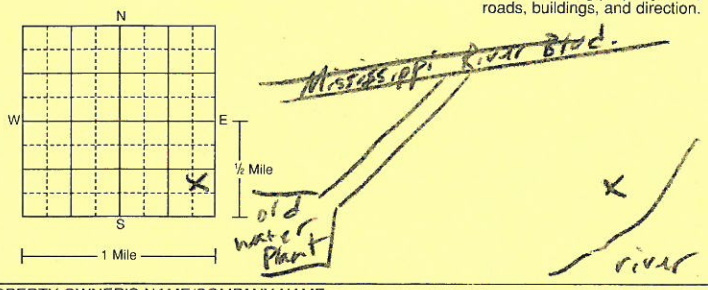
Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28	23	17	SE NE SW

WELL/BORING DEPTH (completed): 26' ft. | DATE WORK COMPLETED: 12-11-15

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 966 S. Mississippi River Blvd. St Paul 55106

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality Office

Property owner's mailing address if different than well location address indicated above.
Fairlane Plaza N.
290 Town Center Drive
#800
Dearborn, MI 48126

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality, Office

Well/boring owner's mailing address if different than property owner's address indicated above.
Same

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☒ Auger ☐ Rotary ☐ Other _____

DRILLING FLUID: WELL HYDROFRACTURED? ☐ Yes ☒ No From _____ ft. To _____ ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ _____

CASING MATERIAL: ☐ Steel ☒ Plastic | Drive Shoe? ☐ Yes ☐ No | ☒ Threaded ☐ Welded | ☒ Flush thread

HOLE DIAM.

CASING

Diameter		Weight	Specifications	HOLE DIAM.
2 in. To 26 ft.		_____ lbs./ft.	Sch. 40	8" in. To 26 ft.
_____ in. To _____ ft.		_____ lbs./ft.	_____	_____ in. To _____ ft.
_____ in. To _____ ft.		_____ lbs./ft.	_____	_____ in. To _____ ft.

SCREEN: Johnson | OPEN HOLE From _____ ft. To _____ ft.
Make _____
Type: PVC Diam.: 2"
Slot/Gauze: 10 Length: 10'
Set between 16 ft. and 26 ft. FITTINGS: Flush thread

STATIC WATER LEVEL _____ ft. ☐ Below ☐ Above land surface Measured from _____ Date measured _____

PUMPING LEVEL (below land surface) _____ ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
☐ Pitless/adapter manufacturer _____ Model _____
☒ Casing protection 6" protop ☐ 12 in. above grade
☐ At-grade ☐ Well House ☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material: neat cement	From 0	To 12 ft.	_____ ☐ Yds.	☒ Bags
Material: _____	From _____	To _____ ft.	_____ ☐ Yds.	☐ Bags
Material: _____	From _____	To _____ ft.	_____ ☐ Yds.	☐ Bags
Driven casing seal	From _____	To _____	_____ Bags	

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Sand	brown	medium	0	26'

Use a second sheet, if needed.

NEAREST KNOWN SOURCE OF CONTAMINATION: _____ feet _____ direction _____ type

Well disinfected upon completion? ☐ Yes ☒ No

PUMP
☒ Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# _____

REMARKS, ELEVATION, SOURCE OF DATA, etc.

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Matrix Environmental LLC. 1916
Licensee Business Name Lic. or Reg. No.

Dan Thompson 1200 12/29/15
Certified Representative Signature Certified Rep. No. Date

Erik Widmark
Name of Driller

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY

814813

IC 140-0020 HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING CONSTRUCTION RECORD

Minnesota Statutes, Chapter 1031

MINNESOTA UNIQUE WELL AND BORING NO. 814817

WELL OR BORING LOCATION

County Name: Ramsey

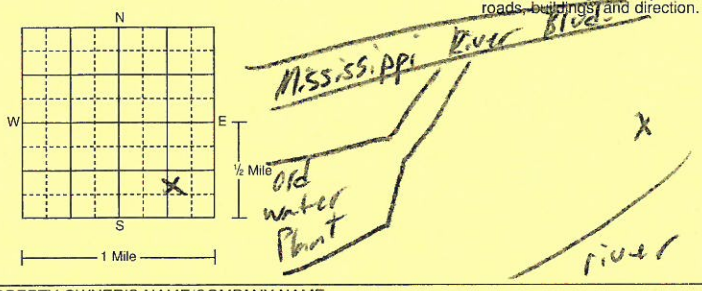
Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28	23	17	SE¼ NE¼ SW¼

WELL/BORING DEPTH (completed): 46 ft. | DATE WORK COMPLETED: 12-15-15

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 966 S. Mississippi River Blvd. St. Paul 55116

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings and direction.



PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company – Env. Quality Office

Property owner's mailing address if different than well location address indicated above.
Fairlane Plaza N.
290 Town Center Drive
#800
Dearborn, MI 48126

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company – Env. Quality Office

Well/boring owner's mailing address if different than property owner's address indicated above.
Same

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Sand	brown	medium	0	46

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY

814817

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☒ Auger ☐ Rotary ☐ Other _____

DRILLING FLUID: None

WELL HYDROFRACTURED? ☐ Yes ☒ No From _____ ft. To _____ ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ _____

CASING MATERIAL: ☒ Steel ☐ Plastic | Drive Shoe? ☐ Yes ☐ No | ☐ Threaded ☐ Welded | ☐ _____

HOLE DIAM.

CASING Diameter	Weight	Specifications	HOLE DIAM.
2 in. To 46 ft.	3.6 lbs./ft.	Sch. 40	8 in. To 46 ft.
_____ in. To _____ ft.	_____ lbs./ft.	_____	_____ in. To _____ ft.
_____ in. To _____ ft.	_____ lbs./ft.	_____	_____ in. To _____ ft.

SCREEN: Johnson | OPEN HOLE From _____ ft. To _____ ft.

Make _____
Type: Stainless Diam.: 2"
Slot/Gauze: 10 Length: 10'
Set between 36 ft. and 46 ft. FITTINGS: R & D couplers

STATIC WATER LEVEL _____ ft. ☐ Below ☐ Above land surface Measured from _____ Date measured _____

PUMPING LEVEL (below land surface) _____ ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
☐ Pitless/adapter manufacturer _____ Model _____
☒ Casing protection 6" protup ☐ 12 in. above grade
☐ At-grade ☐ Well House ☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)
Material: neat cement From 0 To 34 ft. _____ ☐ Yds. ☒ Bags
Material: _____ From _____ To _____ ft. _____ ☐ Yds. ☐ Bags
Material: _____ From _____ To _____ ft. _____ ☐ Yds. ☐ Bags
Driven casing seal From _____ To _____ ____ Bags

NEAREST KNOWN SOURCE OF CONTAMINATION _____ feet _____ direction _____ type

Well disinfected upon completion? ☐ Yes ☐ No

PUMP
☒ Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Matrix Environmental LLC — 1916
Licensee Business Name — Lic. or Reg. No.

Dan Thompson — 1200 — 12/29/15
Certified Representative Signature — Certified Rep. No. — Date

Cody Eystad
Name of Driller

IC 140-0020

HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING CONSTRUCTION RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO.: 814814

WELL OR BORING LOCATION

County Name: Ramsey

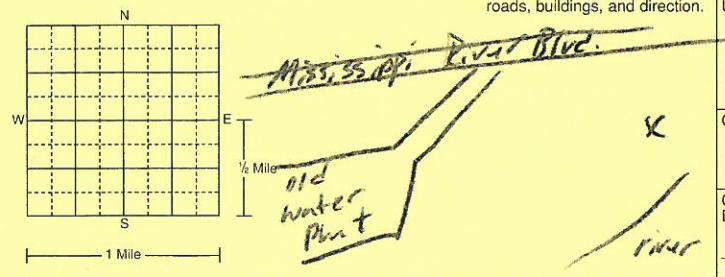
Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28	23	17	SE NE SW

WELL/BORING DEPTH (completed): 23 ft. | DATE WORK COMPLETED: 12-11-15

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 966 S. Mississippi River Blvd. St. Paul 55166

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality Office

Property owner's mailing address if different than well location address indicated above:
Fairlane Plaza N.
290 Town Center Drive
#800
Dearborn, MI 48126

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality Office

Well/boring owner's mailing address if different than property owner's address indicated above: Same

DRILLING METHOD
☐ Cable Tool ☐ Driven
☒ Auger ☐ Rotary
☐ Other _____

DRILLING FLUID: None

WELL HYDROFRACTURED? ☐ Yes ☒ No From _____ ft. To _____ ft.

USE
☐ Domestic ☒ Monitoring ☐ Heating/Cooling
☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial
☐ Community PWS ☐ Irrigation ☐ Remedial
☐ Elevator ☐ Dewatering ☐ _____

CASING MATERIAL
☐ Steel ☐ Threaded ☐ Welded
☒ Plastic ☒ Flush thread

Drive Shoe? ☐ Yes ☐ No

CASING

Diameter	Weight	Specifications
2 in. To 23 ft.	_____ lbs./ft.	Sch. 40
_____ in. To _____ ft.	_____ lbs./ft.	_____
_____ in. To _____ ft.	_____ lbs./ft.	_____

HOLE DIAM.

8 in. To 23 ft.	
_____ in. To _____ ft.	
_____ in. To _____ ft.	

SCREEN Johnson
Make _____
Type PVC
Slot/Gauze 10
Set between 13 ft. and 23 ft.

OPEN HOLE From _____ ft. To _____ ft.
Diam. 2"
Length 10'
FITTINGS Flush thread

STATIC WATER LEVEL _____ ft. ☐ Below ☐ Above land surface Measured from _____ Date measured _____

PUMPING LEVEL (below land surface) _____ ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
☐ Pitless/adapter manufacturer _____ Model _____
☒ Casing protection 6" protup ☐ 12 in. above grade
☐ At-grade ☐ Well House ☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material: neat cement	From 0	To 10 ft.	_____	☐ Yds.	☒ Bags
Material _____	From _____	To _____ ft.	_____	☐ Yds.	☐ Bags
Material _____	From _____	To _____ ft.	_____	☐ Yds.	☐ Bags
Driven casing seal	From _____	To _____	____ Bags		

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Sand	brown	medium	0	23

Use a second sheet, if needed.

NEAREST KNOWN SOURCE OF CONTAMINATION _____ feet _____ direction _____ type

Well disinfected upon completion? ☐ Yes ☒ No

PUMP
☒ Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Matrix Environmental LLC — 1916
Licensee Business Name — Lic. or Reg. No.

Dan Thompson — 1200 — 12/29/15
Certified Representative Signature — Certified Rep. No. — Date

Erik Widmark
Name of Driller

REMARKS, ELEVATION, SOURCE OF DATA, etc.

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY

814814

IC 140-0020

HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING CONSTRUCTION RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 814815

WELL OR BORING LOCATION

County Name: Ramsey

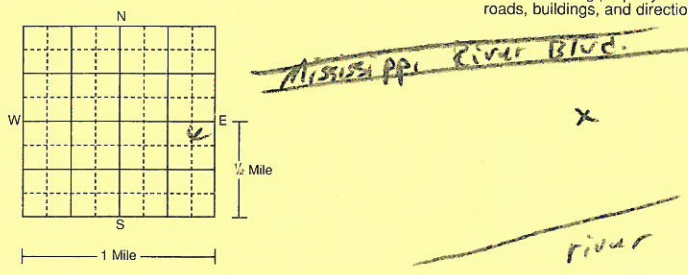
Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28	23	17	SW¼ NW SE

WELL/BORING DEPTH (completed): 21 ft. | DATE WORK COMPLETED: 12-11-15

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 966 S. Mississippi River Blvd. St. Paul 55116

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality Office

Property owner's mailing address if different than well location address indicated above.
Fairlane Plaza N.
290 Town Center Drive,
#800
Dearborn, MI 48126

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company - Env. Quality Office

Well/boring owner's mailing address if different than property owner's address indicated above.
Same

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☒ Auger ☐ Rotary ☐ Other _____

DRILLING FLUID: _____ WELL HYDROFRACTURED? ☐ Yes ☐ No From _____ ft. To _____ ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ _____

CASING MATERIAL: ☐ Steel ☒ Plastic Drive Shoe? ☐ Yes ☐ No ☐ Threaded ☐ Welded ☐ _____

HOLE DIAM.

CASING Diameter / Weight / Specifications

Diameter	To	Weight	Specifications	Hole Diam. To
2"	21 ft.	_____ lbs./ft.	Sch 40	8 in. To 21 ft.
_____	_____ ft.	_____ lbs./ft.	_____	_____ in. To _____ ft.
_____	_____ ft.	_____ lbs./ft.	_____	_____ in. To _____ ft.

SCREEN: Johnson
Make: _____
Type: PVC
Slot/Gauze: 10
Set between 11 ft. and 21 ft.

OPEN HOLE From _____ ft. To _____ ft.
Diam. 2"
Length 10'
FITTINGS: Flush thread

STATIC WATER LEVEL _____ ft. ☐ Below ☐ Above land surface Measured from _____ Date measured _____

PUMPING LEVEL (below land surface) _____ ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
☐ Pitless/adapter manufacturer _____ Model _____
☐ Casing protection _____ ☐ 12 in. above grade
☐ At-grade ☐ Well House ☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material	From	To			
neat cement	0	9 ft.	_____	☐ Yds.	☒ Bags
_____	_____	_____ ft.	_____	☐ Yds.	☐ Bags
_____	_____	_____ ft.	_____	☐ Yds.	☐ Bags

Driven casing seal From _____ To _____ ____ Bags

NEAREST KNOWN SOURCE OF CONTAMINATION _____ feet _____ direction _____ type

Well disinfected upon completion? ☐ Yes ☐ No

PUMP
☒ Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# _____

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Sand	brown	S.ft	0	21

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Matrix Environmental LLC. 1916
Licensee Business Name Lic. or Reg. No.

Dan Thompson 1200 12/29/15
Certified Representative Signature Certified Rep. No. Date

Erik Widmark
Name of Driller

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY

814815

IC 140-0020

HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING CONSTRUCTION RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 812963

WELL OR BORING LOCATION

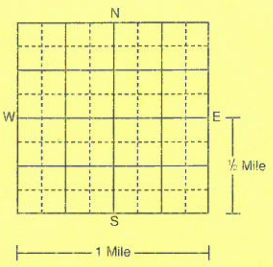
County Name: RAMSEY

Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28	23	17	NE NE SW

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 9966 South Mississippi River Blvd St Paul 55116

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



SEE MAP

WELL/BORING DEPTH (completed): 87 ft. DATE WORK COMPLETED: 9-23-15

DRILLING METHOD: [ ] Cable Tool [ ] Driven [ ] Auger [ ] Rotary [X] Other SONIC

DRILLING FLUID: N/A WELL HYDROFRACTURED? [ ] Yes [X] No From _____ ft. To _____ ft.

USE: [ ] Domestic [X] Monitoring [ ] Heating/Cooling [ ] Noncommunity PWS [X] Environ. Bore Hole [ ] Industry/Commercial [ ] Community PWS [ ] Irrigation [ ] Remedial [ ] Elevator [ ] Dewatering [ ] _____

CASING MATERIAL: [X] Steel [ ] Plastic Drive Shoe? [ ] Yes [X] No [ ] Threaded [ ] Welded [X] _____

HOLE DIAM.

CASING

Diameter		Weight	Specifications	HOLE DIAM.
2 in. To 77 ft.		_____ lbs./ft.	SCH 40	6 in. To 87 ft.
_____ in. To _____ ft.		_____ lbs./ft.	_____	_____ in. To _____ ft.
_____ in. To _____ ft.		_____ lbs./ft.	_____	_____ in. To _____ ft.

SCREEN: YES Make: Johnson Type: SS Slot/Gauze: .010 Set between 87 ft. and 77 ft.

OPEN HOLE From _____ ft. To _____ ft. Diam. 2" Length 10' FITTINGS T+C

STATIC WATER LEVEL 82 ft. [ ] Below [ ] Above land surface Measured from Ground Date measured _____

PUMPING LEVEL (below land surface) N/A ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION: [ ] Pitless/adapter manufacturer _____ Model _____ [ ] Casing protection _____ [ ] 12 in. above grade [X] At-grade [ ] Well House [ ] Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material: NEAT CEMENT	From: 72	To: 0 ft.	11	[ ] Yds.	[X] Bags
Material: _____	From: _____	To: _____ ft.	_____	[ ] Yds.	[ ] Bags
Material: _____	From: _____	To: _____ ft.	_____	[ ] Yds.	[ ] Bags
Driven casing seal	From: _____	To: _____	_____ Bags		

NEAREST KNOWN SOURCE OF CONTAMINATION: N/A feet _____ direction _____ type

Well disinfected upon completion? [ ] Yes [X] No

PUMP: [X] Not installed Date installed _____ Manufacturer's name _____ Model Number _____ HP _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ g.p.m. Type: [ ] Submersible [ ] L.S. Turbine [ ] Reciprocating [ ] Jet [ ] _____

ABANDONED WELLS: Does property have any not in use and not sealed well(s)? [ ] Yes [X] No

VARIANCE: Was a variance granted from the MDH for this well? [ ] Yes [X] No TN# _____

PROPERTY OWNER'S NAME/COMPANY NAME

FORD MOTOR COMPANY

Property owner's mailing address if different than well location address indicated above.

FAIRLANE PLAZA NORTH
290 TOWN CENTER DRIVE
SUITE 800
DEARBORN, MI 48126

WELL OWNER'S NAME/COMPANY NAME

FORD MOTOR CO ENVIRONMENTAL QUALITY

Well/boring owner's mailing address if different than property owner's address indicated above.

FAIRLANE PLAZA NORTH
290 TOWN CENTER DRIVE
SUITE 800
DEARBORN, MI 48126

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
CONCRETE	GR	H	0	2
SAND GRAVEL	BR	S	2	70
SAND	GR/BR	S	70	85
GRAVEL	BR	S	85	87

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

117-15-3954
AMW-26

WELL CONTRACTOR CERTIFICATION

This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

CASCADE DRILLING — Licensee Business Name — 3267 Lic. or Reg. No.

Dale Dunlow — Certified Representative Signature — 2856 Certified Rep. No. — 9-28-15 Date

MARK BIERMAIER — Name of Driller

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY

812963

IC 140-0020

HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING CONSTRUCTION RECORD

Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 812979

WELL OR BORING LOCATION

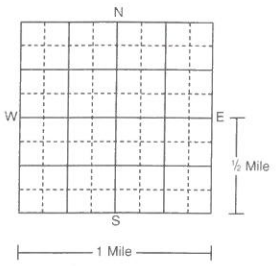
County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28 N	23 W	17	NW NE SE (¼ ¼ ¼)

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 900 S Mississippi River BLVD St. Paul 55116

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



See Map

PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company

Property owner's mailing address if different than well location address indicated above.
Fairlane Plaza North
290 Town Center Drive, Suite 800
Dearborn, MI 48126

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company

Well/boring owner's mailing address if different than property owner's address indicated above.
-Same as above-

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Gravel	B	S	0	8
Limestone	G	H	8	35
Sandstone	G	H	35	105

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.
117-15-3985
AMW-27

MINN. DEPT. OF HEALTH COPY 812979

WELL/BORING DEPTH (completed): 104 ft. DATE WORK COMPLETED: 1-18-16

DRILLING METHOD: [ ] Cable Tool [ ] Driven [ ] Auger [ ] Rotary [X] Other Sonic

DRILLING FLUID: N/A WELL HYDROFRACTURED? [ ] Yes [X] No From _____ ft. To _____ ft.

USE: [ ] Domestic [X] Monitoring [ ] Heating/Cooling [ ] Noncommunity PWS [ ] Environ. Bore Hole [ ] Industry/Commercial [ ] Community PWS [ ] Irrigation [ ] Remedial [ ] Elevator [ ] Dewatering [ ] _____

CASING MATERIAL: [X] Steel [ ] Plastic Drive Shoe? [ ] Yes [X] No [X] Threaded [ ] Welded [ ] _____

HOLE DIAM.

CASING

Diameter	To	Weight	Specifications	HOLE DIAM. To
2 in.	94 ft.	3.65 lbs./ft.	SCH 40	6 in. To 104 ft.
_____ in.	_____ ft.	_____ lbs./ft.	_____	_____ in. To _____ ft.
_____ in.	_____ ft.	_____ lbs./ft.	_____	_____ in. To _____ ft.

SCREEN: YES
Make: Johnson
Type: SS
Slot/Gauze: .010
Set between 104 ft. and 94 ft.

OPEN HOLE From 94 ft. To _____ ft.
Diam. 2"
Length 10'
FITTINGS T+C

STATIC WATER LEVEL: 95 ft. [X] Below [ ] Above land surface Measured from Ground Date measured 1-18-16

PUMPING LEVEL (below land surface): N/A ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION: [ ] Pitless/adapter manufacturer _____ Model _____
[X] Casing protection 6" protop [X] 12 in. above grade
[ ] At-grade [ ] Well House [ ] Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material: Neat Cement	From 90	To 6 ft.	14	[ ] Yds.	[X] Bags
Material: _____	From _____	To _____ ft.	_____	[ ] Yds.	[ ] Bags
Material: _____	From _____	To _____ ft.	_____	[ ] Yds.	[ ] Bags
Driven casing seal	From _____	To _____	_____ Bags		

NEAREST KNOWN SOURCE OF CONTAMINATION: N/A feet _____ direction _____ type
Well disinfected upon completion? [ ] Yes [X] No

PUMP: [X] Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: [ ] Submersible [ ] L.S. Turbine [ ] Reciprocating [ ] Jet [ ] _____

ABANDONED WELLS: Does property have any not in use and not sealed well(s)? [ ] Yes [X] No

VARIANCE: Was a variance granted from the MDH for this well? [ ] Yes [X] No TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Cascade Drilling L.P. 3267
Licensee Business Name Lic. or Reg. No.

Dale Rook 2856 2-15-16
Certified Representative Signature Certified Rep. No. Date

Roy Buckenberger
Name of Driller

IC 140-0020 HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING CONSTRUCTION RECORD

Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 812978

WELL OR BORING LOCATION

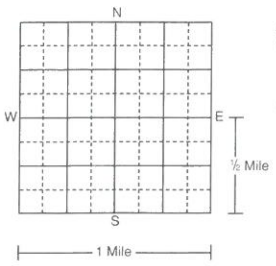
County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28N	23W	17	NW NE SE (¼ ¼ ¼)

GPS LOCATION — decimal degrees (to four decimal places).
Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 966 S Mississippi River BLVD St. Paul 55116

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



See Map

PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company

Property owner's mailing address if different than well location address indicated above.
Fairlane Plaza North
290 Town Center Drive, Suite 800
Dearborn, MI 48126

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company

Well/boring owner's mailing address if different than property owner's address indicated above.

-Same as above-

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Grove C	B	S	0	13
Limestone	G	H	13	40
Sandstone	G	H	40	115

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

117-15-3985

AMW-28

MINN. DEPT. OF HEALTH COPY 812978

WELL/BORING DEPTH (completed): 115 ft.

DATE WORK COMPLETED: 1-19-16

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☐ Auger ☐ Rotary ☒ Other Sonic

DRILLING FLUID: BENT GEL

WELL HYDROFRACTURED? ☐ Yes ☒ No From _____ ft. To _____ ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ _____

CASING MATERIAL: ☒ Steel ☐ Plastic

Drive Shoe? ☐ Yes ☒ No ☒ Threaded ☐ Welded ☐ _____

HOLE DIAM.

CASING

Diameter	Weight	Specifications	Hole Diam.
2 in. To 105 ft.	3.65 lbs./ft.	SCH 40	6 in. To 115 ft.
in. To ft.	lbs./ft.		in. To ft.
in. To ft.	lbs./ft.		in. To ft.

SCREEN: YES
Make: Johnson
Type: SS
Slot/Gauze: .010
Set between 115 ft. and 105 ft.

OPEN HOLE: From 2" ft. To _____ ft.
Diam. 2
Length 10'
FITTINGS T + C

STATIC WATER LEVEL: 95 ft. ☒ Below ☐ Above land surface
Measured from Ground
Date measured 1-19-16

PUMPING LEVEL (below land surface): N/A ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
☐ Pitless/adapter manufacturer _____ Model _____
☒ Casing protection 6" protop ☒ 12 in. above grade
☐ At-grade ☐ Well House ☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)
Material Neat Cement From 102 To 0 ft. 14 ☐ Yds. ☒ Bags
Material _____ From _____ To _____ ft. _____ ☐ Yds. ☐ Bags
Material _____ From _____ To _____ ft. _____ ☐ Yds. ☐ Bags
Driven casing seal From _____ To _____ _____ Bags

NEAREST KNOWN SOURCE OF CONTAMINATION
N/A feet _____ direction _____ type
Well disinfected upon completion? ☐ Yes ☒ No

PUMP
☒ Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Cascade Drilling, L.P. — Licensee Business Name
3267 — Lic. or Reg. No.

Dale [signature] — Certified Representative Signature
2856 — Certified Rep. No.
2-15-16 — Date

Roy Buckenberger — Name of Driller

IC 140-0020 HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING CONSTRUCTION RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 812977

WELL OR BORING LOCATION

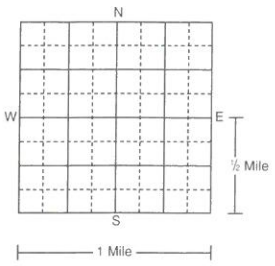
County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	29 N	23 W	17	NW ¼ NE ¼ SE ¼

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 9616 S Mississippi River BLVD St. Paul 55116

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



See Map

PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company

Property owner's mailing address if different than well location address indicated above.
Fairlane Plaza North
290 Town Center Drive, Suite 800
Dearborn, MI 48126

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company

Well/boring owner's mailing address if different than property owner's address indicated above.
-Same as above-

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Gravel	B	S	0	15
Limestone	G	H	15	55
Sandstone	G	H	55	121

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.
117-15-3985
AMW 29

MINN. DEPT. OF HEALTH COPY 812977

WELL/BORING DEPTH (completed): 121 ft. DATE WORK COMPLETED: 1-22-16

DRILLING METHOD: [ ] Cable Tool [ ] Driven [ ] Auger [ ] Rotary [X] Other Sonic

DRILLING FLUID: Bent Gel

WELL HYDROFRACTURED? [ ] Yes [ ] No From _____ ft. To _____ ft.

USE: [ ] Domestic [X] Monitoring [ ] Heating/Cooling [ ] Noncommunity PWS [ ] Environ. Bore Hole [ ] Industry/Commercial [ ] Community PWS [ ] Irrigation [ ] Remedial [ ] Elevator [ ] Dewatering [ ] _____

CASING MATERIAL: [X] Steel [ ] Plastic
Drive Shoe? [ ] Yes [X] No
[X] Threaded [ ] Welded [ ] _____

HOLE DIAM.

CASING

Diameter	To	Weight	Specifications	HOLE DIAM. To
2 in.	111 ft.	3.65 lbs./ft.	SCH 40	6 in. To 121 ft.
_____ in.	_____ ft.	_____ lbs./ft.	_____	_____ in. To _____ ft.
_____ in.	_____ ft.	_____ lbs./ft.	_____	_____ in. To _____ ft.

SCREEN: YES
Make: Johnson
Type: SS
Slot/Gauze: .010
Set between 121 ft. and 111 ft.
OPEN HOLE From 121 ft. To _____ ft.
Diam. 2
Length 10'
FITTINGS T+C

STATIC WATER LEVEL: 95 ft. [ ] Below [ ] Above land surface Measured from _____ Date measured _____

PUMPING LEVEL (below land surface): N/A ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
[ ] Pitless/adapter manufacturer _____ Model _____
[X] Casing protection 6" protop [ ] 12 in. above grade
[ ] At-grade [ ] Well House [ ] Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material	From	To		
Neat Cement	107	0 ft.	15	[ ] Yds. [X] Bags
_____	_____	_____ ft.	_____	[ ] Yds. [ ] Bags
_____	_____	_____ ft.	_____	[ ] Yds. [ ] Bags
Driven casing seal	_____	_____	_____	Bags

NEAREST KNOWN SOURCE OF CONTAMINATION: N/A feet _____ direction _____ type
Well disinfected upon completion? [ ] Yes [ ] No

PUMP
[X] Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: [ ] Submersible [ ] L.S. Turbine [ ] Reciprocating [ ] Jet [ ] _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? [ ] Yes [X] No

VARIANCE
Was a variance granted from the MDH for this well? [ ] Yes [X] No TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Cascade Drilling L.P. 3267
Licensee Business Name Lic. or Reg. No.

Certified Representative Signature 2856 2-15-16
Certified Rep. No. Date

Roy Buckenberger
Name of Driller

IC 140-0020 HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING CONSTRUCTION RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 812976

WELL OR BORING LOCATION

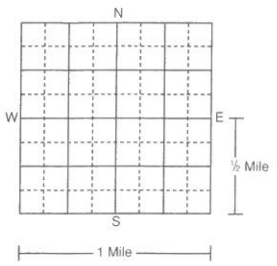
County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction
St. Paul	28N	23W	17	NW ¼ NE ¼ SE ¼

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 9616 S Mississippi River BLVD St. Paul 55116

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



See Map

PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company

Property owner's mailing address if different than well location address indicated above.
Fairlane Plaza North
290 Town Center Drive, Suite 800
Dearborn, MI 48126

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company

Well/boring owner's mailing address if different than property owner's address indicated above.
-Same as above-

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Gravel	B	S	0	8
Limestone	G	H	8	45
Sandstone	G	H	45	119

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.
117-15-3985
AMW 30

MINN. DEPT. OF HEALTH COPY 812976

WELL/BORING DEPTH (completed): 119 ft. DATE WORK COMPLETED: 1-25-16

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☐ Auger ☐ Rotary ☒ Other SONIC

DRILLING FLUID: BENT GEL

WELL HYDROFRACTURED? ☐ Yes ☒ No From _____ ft. To _____ ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ _____

CASING MATERIAL: ☒ Steel ☐ Plastic Drive Shoe? ☐ Yes ☒ No ☒ Threaded ☐ Welded ☐ _____

HOLE DIAM.

CASING

Diameter	Weight	Specifications	HOLE DIAM.
2 in. To 109 ft.	3.65 lbs./ft.	SCH 40	6 in. To 119 ft.
_____ in. To _____ ft.	_____ lbs./ft.	_____	_____ in. To _____ ft.
_____ in. To _____ ft.	_____ lbs./ft.	_____	_____ in. To _____ ft.

SCREEN YES
Make SS Johnson
Type SS
Slot/Gauze .010
Set between 119 ft. and 109 ft.

OPEN HOLE From 1' ft. To _____ ft.
Diam. 2"
Length 10'
FITTINGS T+C

STATIC WATER LEVEL 95 ft. ☒ Below ☐ Above land surface Measured from T[illegible] Ground Date measured 1/25/16

PUMPING LEVEL (below land surface) N/A ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
☐ Pitless/adapter manufacturer _____ Model _____
☒ Casing protection 6" pretop ☒ 12 in. above grade
☐ At-grade ☐ Well House ☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)
Material Neat Cement From 106 To 0 ft. 15 ☐ Yds. ☒ Bags
Material _____ From _____ To _____ ft. _____ ☐ Yds. ☐ Bags
Material _____ From _____ To _____ ft. _____ ☐ Yds. ☐ Bags
Driven casing seal From _____ To _____ _____ Bags

NEAREST KNOWN SOURCE OF CONTAMINATION
N/A feet _____ direction _____ type
Well disinfected upon completion? ☐ Yes ☐ No

PUMP
☒ Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Cascade Drilling L.P. — Licensee Business Name
3267 — Lic. or Reg. No.
Dale Daust — Certified Representative Signature
2856 — Certified Rep. No.
2-15-16 — Date
Roy Buckenberger — Name of Driller

IC 140-0020 HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING CONSTRUCTION RECORD

Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL AND BORING NO. 812975

WELL OR BORING LOCATION

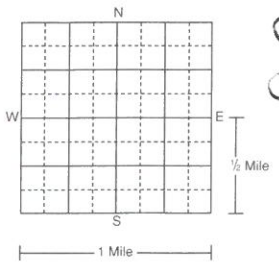
County Name: Ramsey

Township Name: St. Paul | Township No.: 28 N | Range No.: 23W | Section No.: 17 | Fraction: NW NE SE (¼ ¼ ¼)

GPS LOCATION — decimal degrees (to four decimal places). Latitude _____ Longitude _____

House Number, Street Name, City, and ZIP Code of Well Location: 9665 Mississippi BLVD St Paul 55116

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



See Map

PROPERTY OWNER'S NAME/COMPANY NAME: Ford Motor Company

Property owner's mailing address if different than well location address indicated above.

Fairlane Plaza North
290 Town Center Drive, Suite 800
Dearborn.

WELL OWNER'S NAME/COMPANY NAME: Ford Motor Company

Well/boring owner's mailing address if different than property owner's address indicated above.

- Same as above -

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Gravel	B	S	0	13
Limestone	G	H	13	45
Sandstone	W	H	45	120

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

117-15-3985

AMW-31

MINN. DEPT. OF HEALTH COPY 812975

WELL/BORING DEPTH (completed): 120 ft. | DATE WORK COMPLETED: 1-26-16

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☐ Auger ☐ Rotary ☒ Other SONIC

DRILLING FLUID: Bent Gel

WELL HYDROFRACTURED? ☐ Yes ☒ No From _____ ft. To _____ ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐ _____

CASING MATERIAL: ☒ Steel ☐ Plastic | Drive Shoe? ☐ Yes ☒ No | ☒ Threaded ☐ Welded ☐ _____

CASING

Diameter	To	Weight	Specifications
2 in.	110 ft.	3.65 lbs./ft.	SCH 40
_____ in.	_____ ft.	_____ lbs./ft.	_____
_____ in.	_____ ft.	_____ lbs./ft.	_____

HOLE DIAM.

6 in.	To 120 ft.
_____ in.	To _____ ft.
_____ in.	To _____ ft.

SCREEN: Yes
Make: Johnson
Type: SS
Slot/Gauze: .010
Set between 120 ft. and 110 ft.

OPEN HOLE: From _____ ft. To _____ ft.
Diam. 8"
Length 10'
FITTINGS T&C

STATIC WATER LEVEL: 95 ft. ☒ Below ☐ Above land surface | Measured from Ground | Date measured 1-26-16

PUMPING LEVEL (below land surface): _____ ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION: ☐ Pitless/adapter manufacturer _____ Model _____
☒ Casing protection 6" protap ☒ 12 in. above grade
☐ At-grade ☐ Well House ☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material: Neat Cement	From 107	To 0 ft.	15	☐ Yds.	☒ Bags
Material: _____	From _____	To _____ ft.	_____	☐ Yds.	☐ Bags
Material: _____	From _____	To _____ ft.	_____	☐ Yds.	☐ Bags

Driven casing seal From _____ To _____ ____ Bags

NEAREST KNOWN SOURCE OF CONTAMINATION: N/A feet _____ direction _____ type

Well disinfected upon completion? ☐ Yes ☒ No

PUMP: ☒ Not installed Date installed _____

Manufacturer's name _____

Model Number _____ HP _____ Volts _____

Length of drop pipe _____ ft. Capacity _____ g.p.m.

Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS: Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE: Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# _____

WELL CONTRACTOR CERTIFICATION

This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Cascade Drilling L.P. 3267
Licensee Business Name Lic. or Reg. No.

Certified Representative Signature 2856 2-15-16
Certified Rep. No. Date

Roy Buckenberger
Name of Driller

IC 140-0020 HE-01205-15 (Rev. 8/13)

APPENDIX L

Groundwater Sampling Logs

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	7-17-07
Site/Well No.	AMW-05	Replicate No.	—	Code No.	
Weather	60°F	Sampling Time:	Begin Not sampled	End	

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	
Depth to Water (ft bmp)	—
Water-Level Elevation (ft)	
Water Column in Well (ft)	
Casing Diameter/Type	2" Black Steel/Stick Up
Gallons in Well	
Gallons Pumped/Bailed Prior to Sampling	
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin end
Pumping Rate (gpm)	
Evacuation Method	

Field Parameters

Color	
Odor	
Appearance	
pH (s.u.)	
Conductivity (mS/cm)	.
(µmhos/cm)	---
Turbidity (NTU)	---
Temperature (°C)	
Dissolved Oxygen (mg/L)	
ORP (mV)	
Sampling Method	
Remarks	Not Sampled, dry

Constituents Sampled	Container Description	Number	Preservative
VOC 465F Method 8260	40 mL VOA	3	HCl
SVOC Method 8270	1L Amber	2	None
RCRA Metals (Method 6010)	500 mL Plastic	1	HNO_3
PCBs (Method 8082)	1L Amber	2	None

Sampling Personnel AF/JD

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	7/24/07
Site/Well No.	AMW-05B	Replicate No.	—	Code No.	
Weather	80s, Sunny	Sampling Time:	Begin 1345	End	1350

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	55.16
Depth to Water (ft bmp)	32.53
Water-Level Elevation (ft)	
Water Column in Well (ft)	22.63
Casing Diameter/Type	2" Black Steel/Stick Up
Gallons in Well	3.62
Gallons Pumped/Bailed Prior to Sampling	~18 gal
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1120 end 1200
Pumping Rate (gpm)	
Evacuation Method	PE Bailer

Field Parameters

Color	Tan
Odor	none
Appearance	slightly turbid
pH (s.u.)	6.19
Conductivity (mS/cm)	1.041
(µmhos/cm)	---
Turbidity (NTU)	---
Temperature (°C)	17.10
Dissolved Oxygen (mg/L)	1.82
ORP (mV)	-25.7
Sampling Method	PE Bailer
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOC 465F Method 8260	40 mL VOA	3	HCl
SVOC Method 8270	1L Amber	2	None
RCRA Metals (Method 6010)	500 mL Plastic	1	HNO_3
PCBs (Method 8082)	1L Amber	2	None

Sampling Personnel JD

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	mililiter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	7.17.07
Site/Well No.	AMW-07	Replicate No.	—	Code No.	
Weather	85°F, Sunny	Sampling Time:	Begin 13:55	End	14:20

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	44.75
Depth to Water (ft bmp)	42.82
Water-Level Elevation (ft)	
Water Column in Well (ft)	1.93
Casing Diameter/Type	2" Black Steel/Flush Mount
Gallons in Well	0.3
Gallons Pumped/Bailed Prior to Sampling	1 gal
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin ____ end ____
Pumping Rate (gpm)	—
Evacuation Method	Bailer

Field Parameters

Color	Clear
Odor	None
Appearance	Clear
pH (s.u.)	7.42
Conductivity (mS/cm)	0.747
(µmhos/cm)	---
Turbidity (NTU)	---
Temperature (°C)	16.22
Dissolved Oxygen (mg/L)	7.48
ORP (mV)	47.4
Sampling Method	Grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOC 465F Method 8260	40 mL VOA	3	HCl
SVOC Method 8270	1L Amber	2	None
RCRA Metals (Method 6010)	500 mL Plastic	1	HNO_3
PCBs (Method 8082)	1L Amber	2	None

Sampling Personnel: AF/JD

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	12/18/07
Site/Well No.	AMW-05	Replicate No.		Code No.	
Weather	Cloudy 20's	Sampling Time:	Begin	End	

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	---
Land Surface Elevation (ft)	---
Sounded Well Depth (ft bmp)	
Depth to Water (ft bmp)	Dry
Water-Level Elevation (ft)	---
Water Column in Well (ft)	
Casing Diameter/Type	2" Black Steel/Stick Up
Gallons in Well	
Gallons Pumped/Bailed Prior to Sampling	
Sample Pump Intake Setting (ft bmp)	---
Purge Time	begin end
Pumping Rate (gpm)	---
Evacuation Method	

Field Parameters

Color	
Odor	
Appearance	
pH (s.u.)	
Conductivity (mS/cm)	
(µmhos/cm)	---
Turbidity (NTU)	---
Temperature (°C)	
Dissolved Oxygen (mg/L)	
ORP (mV)	
Sampling Method	Grab
Remarks	Not Sampled - Dry

Constituents Sampled	Container Description	Number	Preservative
VOC 465F Method 8260	40 mL VOA	3	HCl
SVOC Method 8270	1L Amber	2	None
RCRA Metals (Method 6010)	500 mL Plastic	1	HNO_3
PCBs (Method 8082)	1L Amber	2	None
RCRA Metals (Method 6010)	500 mL Plastic	1	HNO_3

Sampling Personnel: MM

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	mililiter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	FORD-TCAP	Project No.	MN000593.0003	Page	1 of 1
Site Location	St. Paul, MN			Date	12/17/07
Site/Well No.	AMW-5B	Replicate No.		Code No.	
Weather	Sunny, 30's	Sampling Time: Begin	1025	End	1045

Evacuation Data

Measuring Point	N. edge TOC
MP Elevation (ft)	---
Land Surface Elevation (ft)	---
Sounded Well Depth (ft bmp)	54.98
Depth to Water (ft bmp)	32.31
Water-Level Elevation (ft)	---
Water Column in Well (ft)	22.67
Casing Diameter/Type	2"
Gallons in Well	3.63
Gallons Pumped/Bailed Prior to Sampling	25 gal
Sample Pump Intake Setting (ft bmp)	---
Purge Time	begin 0955 end 1015
Pumping Rate (gpm)	---
Evacuation Method	GRUNFOS

Field Parameters

Color	LITE BROWN
Odor	SULFER SMELL
Appearance	TURBID
pH (s.u.)	6.60
Conductivity (mS/cm)	0.997
(µmhos/cm)	---
Turbidity (NTU)	---
Temperature (°C)	11.03
Dissolved Oxygen (mg/L)	1.21
ORP (mV)	-183.5
Sampling Method	Grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOCs	40 mL VOA	3	HCl
SVOCs	2L Amber	2	~~HCl~~
PCBs	2L Amber	2	
RCRA Metals (Total)	500 mL Plastic	1	HNO3
RCRA Metals (Filtered)	500 mL Plastic	1	HNO3

Sampling Personnel: MM

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	mililiter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	FORD-TCAP	Project No.	MN000593.0003	Page	1 of 1
Site Location	St. Paul, MN			Date	12/20/07
Site/Well No.	AMW-7	Replicate No.		Code No.	
Weather	20's, p. Cloudy	Sampling Time:	Begin 0740	End	0825

Evacuation Data

Measuring Point	N. edge TOC
MP Elevation (ft)	---
Land Surface Elevation (ft)	---
Sounded Well Depth (ft bmp)	44.78
Depth to Water (ft bmp)	42.75
Water-Level Elevation (ft)	---
Water Column in Well (ft)	2.03
Casing Diameter/Type	2"
Gallons in Well	0.32
Gallons Pumped/Bailed Prior to Sampling	1.5 gal
Sample Pump Intake Setting (ft bmp)	---
Purge Time	begin 1512 end 1525
Pumping Rate (gpm)	---
Evacuation Method	BAILER

Field Parameters

Color	LIGHT TAN
Odor	NONE
Appearance	SLIGHTLY TURBID
pH (s.u.)	6.00
Conductivity (mS/cm)	0.581
(µmhos/cm)	---
Turbidity (NTU)	---
Temperature (°C)	10.77
Dissolved Oxygen (mg/L)	6.38
ORP (mV)	-51.9
Sampling Method	Grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOCs	40 mL VOA	3	HCl
SVOCs	2L Amber	2	~~HCl~~
PCBs	2L Amber	2	
RCRA Metals (Total)	500 mL Plastic	1	HNO3
RCRA Metals (Filtered)	500 mL Plastic	1	HNO3

Sampling Personnel: MM

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	mililiter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	3/13/08
Site/Well No.	AMW-05	Replicate No.		Code No.	
Weather	Sunny, 40's	Sampling Time:	Begin	End	

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	725.25
Land Surface Elevation (ft)	722.07
Sounded Well Depth (ft bmp)	
Depth to Water (ft bmp)	
Water-Level Elevation (ft)	
Water Column in Well (ft)	
Casing Diameter/Type	2" Black Steel/Stick Up
Gallons in Well	
Gallons Pumped/Bailed Prior to Sampling	
Sample Pump Intake Setting (ft bmp)	---
Purge Time	begin end
Pumping Rate (gpm)	---
Evacuation Method	Disposable Bailer

Field Parameters

Color	
Odor	
Appearance	
pH (s.u.)	
Conductivity (mS/cm)	
(µmhos/cm)	
Turbidity (NTU)	---
Temperature (°C)	
Dissolved Oxygen (mg/L)	
ORP (mV)	
Sampling Method	Grab
Remarks	Well Dry; No Samples Taken

Constituents Sampled	Container Description	Number	Preservative
VOC 465F Method 8260	40 mL VOA	3	HCl
SVOC Method 8270	1L Amber	2	None
RCRA Metals (Method 6010) Dissolved	500 mL Plastic	1	HNO_3
PCBs (Method 8082)	1L Amber	2	None

Sampling Personnel: Melissa Meeuwsen

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	3/11/08
Site/Well No.	AMW-05B	Replicate No.		Code No.	
Weather	Sunny, 40's	Sampling Time:	Begin 1115	End	1135

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	723.99
Land Surface Elevation (ft)	721.79
Sounded Well Depth (ft bmp)	54.98
Depth to Water (ft bmp)	32.82
Water-Level Elevation (ft)	~~22.~~ 691.17
Water Column in Well (ft)	22.16
Casing Diameter/Type	2" Black Steel/Stick Up
Gallons in Well	3.55
Gallons Pumped/Bailed Prior to Sampling	40
Sample Pump Intake Setting (ft bmp)	52.98
Purge Time	begin 1045 end 1135
Pumping Rate (gpm)	1
Evacuation Method	Grundfos Pump

Field Parameters

Color	CLEAR
Odor	SLIGHT ODOR
Appearance	CLEAR
pH (s.u.)	6.57
SP Conductivity (mS/cm)	1.008
(µmhos/cm)	
Turbidity (NTU)	---
Temperature (°C)	14.21
Dissolved Oxygen (mg/L)	0.12
ORP (mV)	-148.9
Sampling Method	Grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOC 465F Method 8260	40 mL VOA	3	HCl
SVOC Method 8270	1L Amber	2	None
RCRA Metals (Method 6010) Dissolved	500 mL Plastic	1	HNO_3
PCBs (Method 8082)	1L Amber	2	None
DRO	1L AMBER	2	HCl
GRO	40mL VOA	3	HCl

Sampling Personnel: Melissa Meeuwsen

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Groundwater Sampling Form

Project/No. MN000593.0001 Well AMW-05B Date 3/11/08

Screen Setting 45-55' Measuring Point Description N. edge TOC Casing Diameter (inches) 2

Static Water Level 32.82 Measured With Solinst Well Materials ___ PVC X ST. Steel

Total depth 54.98 Pump On: 10:39 Pump Intake: ~1 gal / MIN

Purge Method Pump Off: 11:35 Volumes Purged ~3 gal ~3 gal

Centrifugal ___ Sample Time: 11:15

Submersible GRUNDFOS

Other ___ Bailer Type: ___ Sampled By: M. MEEHAN / T. NELSON-KAMMES

Time	Minutes Elapsed	Rate (gpm) (ML)	DTW	Gallons Purged	pH	Spc Cond. umhos ms/cm	TURB (NTUs)	Redox ORP (mV)	Diss. O2 (mg/L)	TEMP. (C) (F)	REMARKS 3)
~~1045~~	~~0~~	~~1~~	~~32.82~~	~~0~~							
1045	6	1	32.82	6	6.73	0.975		-97.4	1.2	13.99	
1050	5	1		5	6.60	1.001		-141.9	4.8	13.97	
1055	5	1		5	6.58	1.008		-146.2	4.0	13.97	
11:10	15	1		15	6.57	1.008		-148.9	1.2	14.21	

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	3/13/08
Site/Well No.	AMW-07	Replicate No.		Code No.	
Weather	Sunny, 40's	Sampling Time:	Begin 855	End	950

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	733.48
Land Surface Elevation (ft)	733.71
Sounded Well Depth (ft bmp)	44.96
Depth to Water (ft bmp)	43.23
Water-Level Elevation (ft)	690.25
Water Column in Well (ft)	1.73
Casing Diameter/Type	2" Black Steel/Flush Mount
Gallons in Well	0.277
Gallons Pumped/Bailed Prior to Sampling	2.0
Sample Pump Intake Setting (ft bmp)	---
Purge Time	begin 825 B32 end 845 850
Pumping Rate (gpm)	---
Evacuation Method	Disposable Bailer

Field Parameters

Color	CLEAR
Odor	NO ODOR
Appearance	CLEAR
pH (s.u.)	5.63
Conductivity (mS/cm)	461
(µmhos/cm)	
Turbidity (NTU)	---
Temperature (°C)	12.16
Dissolved Oxygen (mg/L)	7.01
ORP (mV)	147.5
Sampling Method	Grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOC 465F Method 8260	40 mL VOA	3	HCl
SVOC Method 8270	1L Amber	2	None
RCRA Metals (Method 6010) Dissolved	500 mL Plastic	1	HNO_3
PCBs (Method 8082)	1L Amber	2	None
PRD	1L AMBER	2	HCl
GRD	40mL VOA	3	HCl

Sampling Personnel: Melissa Meeuwsen

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	mililiter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	9/15/08
Site/Well No.	AMW-05	Replicate No.		Code No.	
Weather	60's	Sampling Time:	Begin —	End	—

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	725.25
Land Surface Elevation (ft)	722.07
Sounded Well Depth (ft bmp)	32.96 9/10/08
Depth to Water (ft bmp)	Dry
Water-Level Elevation (ft)	—
Water Column in Well (ft)	—
Casing Diameter/Type	2" Black Steel/Stick Up
Gallons in Well	—
Gallons Pumped/Bailed Prior to Sampling	—
Sample Pump Intake Setting (ft bmp)	---
Purge Time	begin ____ end ____
Pumping Rate (gpm)	---
Evacuation Method	Disposable Bailer

Field Parameters

Color	—
Odor	—
Appearance	—
pH (s.u.)	—
Conductivity (mS/cm)	—
(µmhos/cm)	—
Turbidity (NTU)	---
Temperature (°C)	—
Dissolved Oxygen (mg/L)	—
ORP (mV)	—
Sampling Method	Grab
Remarks	Not Sampled Well Dry

Constituents Sampled	Container Description	Number	Preservative
VOC 465F Method 8260	40 mL VOA	3	HCl
SVOC Method 8270	1L Amber	2	None
RCRA Metals (Method 6010) Dissolved	500 mL Plastic	1	HNO_3
PCBs (Method 8082)	1L Amber	2	None
DRO & GRO			

Sampling Personnel: Melissa Meeuwsen

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	9/10/08
Site/Well No.	AMW-05B	Replicate No.		Code No.	
Weather	Cloudy 60's	Sampling Time:	Begin 12:35	End	13:11

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	723.99
Land Surface Elevation (ft)	721.79
Sounded Well Depth (ft bmp)	55.94
Depth to Water (ft bmp)	32.49
Water-Level Elevation (ft)	
Water Column in Well (ft)	23.45
Casing Diameter/Type	2" Black Steel/Stick Up
Gallons in Well	3.8
Gallons Pumped/Bailed Prior to Sampling	22
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1200 end 12:35
Pumping Rate (gpm)	
Evacuation Method	Grundfos Pump

Field Parameters

Color	
Odor	
Appearance	
pH (s.u.)	6.20
Conductivity (mS/cm)	0.850
(µmhos/cm)	—
Turbidity (NTU)	---
Temperature (°C)	14.28
Dissolved Oxygen (mg/L)	0.17
ORP (mV)	47.2
Sampling Method	Grab
Remarks	collected MS + MSD

Constituents Sampled	Container Description	Number	Preservative
VOC 465F Method 8260	40 mL VOA	3	HCl
SVOC Method 8270	1L Amber	2	None
RCRA Metals (Method 6010) Dissolved	500 mL Plastic	1	HNO_3
PCBs (Method 8082)	1L Amber	2	None
DRO + GRO			

Sampling Personnel: Melissa Meeuwsen

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	9/15/08
Site/Well No.	AMW-07	Replicate No.		Code No.	
Weather	60's	Sampling Time:	Begin 09:35	End	10:25

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	733.48
Land Surface Elevation (ft)	733.71
Sounded Well Depth (ft bmp)	44.79 9/10/08
Depth to Water (ft bmp)	42.99
Water-Level Elevation (ft)	
Water Column in Well (ft)	1.8
Casing Diameter/Type	2" Black Steel/Flush Mount
Gallons in Well	0.3
Gallons Pumped/Bailed Prior to Sampling	1.5
Sample Pump Intake Setting (ft bmp)	---
Purge Time	begin ____ end ____
Pumping Rate (gpm)	---
Evacuation Method	Disposable Bailer

Field Parameters

Color	Clear
Odor	None
Appearance	Clear
pH (s.u.)	4.88
Conductivity (mS/cm)	0.494
(µmhos/cm)	—
Turbidity (NTU)	---
Temperature (°C)	13.90
Dissolved Oxygen (mg/L)	6.53
ORP (mV)	217.5
Sampling Method	Grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOC 465F Method 8260	40 mL VOA	3	HCl
SVOC Method 8270	1L Amber	2	None
RCRA Metals (Method 6010) Dissolved	500 mL Plastic	1	HNO_3
PCBs (Method 8082)	1L Amber	2	None
Free Cyanide	250 ml Plastic	1	NaOH
DRO & GRO			

Sampling Personnel: Melissa Meeuwsen

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0003	Page	1 of 1
Site Location	St. Paul, MN			Date	10/6/2009
Site/Well No.	AMW-05B	Replicate No.	MS/MSD	Code No.	
Weather	55°F, rain	Sampling Time:	Begin 08:20	End	08:30

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	723.99
Land Surface Elevation (ft)	721.79
Sounded Well Depth (ft bmp)	54.98
Depth to Water (ft bmp)	32.62
Water-Level Elevation (ft)	
Water Column in Well (ft)	22.36
Casing Diameter/Type	2" Black Steel/Stick Up
Gallons in Well	3.6
Gallons Pumped/Bailed Prior to Sampling	25 gal
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 07:28 end 8:20
Pumping Rate (gpm)	
Evacuation Method	Grundfos Pump

Field Parameters

Color	
Odor	None
Appearance	
pH (s.u.)	6.85
Conductivity (mS/cm)	1.031
(µmhos/cm)	---
Turbidity (NTU)	---
Temperature (°C)	14.1
Dissolved Oxygen (mg/L)	0.34
ORP (mV)	6.4
Sampling Method	Grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOC	40 mL VOA	3	HC1
PCB	1 C Amber	2	None

Sampling Personnel: Melissa Meeuwsen

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Groundwater Sampling Form

Project/No. MN000593.0003 Well AMW-05B Date 10/6/2009

Screen Setting

Measuring Point Description N. edge TOC

Casing Diameter (inches) 2

Static Water Level 32.62 feet

Measured With Water Level Meter

Well Materials ___ PVC
X ST. Steel

Total depth 54.98 feet

Pump On: 7:28

Pump Intake:

Purge Method

Pump Off: 8:30

Volumes Purged 25 gal

Centrifugal ___
Submersible X
Other ___

Sample Time: 8:20

Bailer Type: ---

Sampled By: Trika Nelson-Kalmes

Time	Minutes Elapsed	Rate (gpm) (ML)	DTW	Gallons Purged	pH	Cond. umhos ms/cm	TURB (NTUs)	Redox ORP (mV)	Diss. O2 (mg/L)	TEMP. (C) (F)	REMARKS 3)
7:28	0			1.5	7.03	1.015	--	-21.8	2.87	11.9	
7:42	14			6	6.92	1.048	--	39.6	0.37	13.17	
7:52	24			11	6.88	1.047	--	23.5	0.35	13.64	
8:00	32			16	6.86	1.05	--	6.6	0.35	13.31	
8:10	42			20	6.85	1.032	--	6.4	0.35	14.17	
8:20	52			25	6.85	1.031	--	6.4	0.34	14.1	

ARCADIS

Water Sampling Log

Project	Ford St. Paul	Project No.	MN000593.0003	Page	1 of 1
Site Location	St. Paul, MN			Date	10-6-09
Site/Well No.	AMW-07	Replicate No.	---	Code No.	
Weather	55°F, rain	Sampling Time:	Begin 10:00	End	10:15

Evacuation Data

Measuring Point	North Edge TOC
MP Elevation (ft)	733.48
Land Surface Elevation (ft)	733.71
Sounded Well Depth (ft bmp)	44.97
Depth to Water (ft bmp)	43.04
Water-Level Elevation (ft)	1.93
Water Column in Well (ft)	2"
Casing Diameter/Type	2" Black Steel/Flush Mount
Gallons in Well	0.3
Gallons Pumped/Bailed Prior to Sampling	1.5
Sample Pump Intake Setting (ft bmp)	---
Purge Time	begin 07:00 end 10:00
Pumping Rate (gpm)	---
Evacuation Method	Disposable Bailer

Field Parameters

Color	
Odor	None
Appearance	
pH (s.u.)	6.04
Conductivity (mS/cm)	0.591
(µmhos/cm)	---
Turbidity (NTU)	---
Temperature (°C)	10.79
Dissolved Oxygen (mg/L)	7.94
ORP (mV)	-7.1
Sampling Method	Grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOC	40 mL VOA	3	HC1
PCB	1 L Amber	2	None

Sampling Personnel: Trika Nelson-Kalmes

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project	Ford TCAP	Project No.	DE000440	Page	1 of 1
Site Location	St Paul, MN			Date	10/31/11
Site/Well No.	AMW-11	Replicate No.	DUP-002	Code No.	
Weather	Sunny 50s	Sampling Time: Begin	1445	End	1515 ST 1455

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	808.86
Land Surface Elevation (ft)	808.99
Sounded Well Depth (ft bmp)	9.59
Depth to Water (ft bmp)	5.79
Water-Level Elevation (ft)	803.07
Water Column in Well (ft)	3.80
Casing Diameter/Type	2" PVC
Gallons in Well	0.608
Gallons Pumped/Bailed Prior to Sampling	3x: 1.824 5x: 3.04
Sample Pump Intake Setting (ft bmp)	N.A.
Purge Time	begin 1436 end 1442
Pumping Rate (gpm)	N.A.
Evacuation Method	bailer

Field Parameters

Color	~~Slightly gray~~/black
Odor	petrol odor
Appearance	turbid
pH (s.u.)	6.93
Conductivity (mS/cm)	0.859
(µmhos/cm)	
Turbidity (NTU)	~~NM~~ ~~NR~~ 733
Temperature (°C)	12.83
Dissolved Oxygen (mg/L)	~~10.79~~ 11.13
ORP (mV)	-77
Sampling Method	YSI 556
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOC	40 mL vial	3	HCl
PAH	1 L amber	2	None
Diss. RCRA Metal	500 mL	1	HNO_3
GRO	40 mL vial	2	HCl
DRO	1-L amber	2	HCl

Sampling Personnel: ~~ND/TNK~~ KH

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project	Ford TCAP	Project No.	DE000440	Page	1 of 1
Site Location	St Paul, MN			Date	11/3/11
Site/Well No.	AMW-12	Replicate No.		Code No.	
Weather	Sunny 40/50s	Sampling Time: Begin	1620	End	1628 ST 1625

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	808.74
Land Surface Elevation (ft)	808.83
Sounded Well Depth (ft bmp)	11.44
Depth to Water (ft bmp)	6.45
Water-Level Elevation (ft)	802.29
Water Column in Well (ft)	4.99
Casing Diameter/Type	2" PVC
Gallons in Well	0.7984
Gallons Pumped/Bailed Prior to Sampling	3x 2.3952 5x 3.992
Sample Pump Intake Setting (ft bmp)	N.A.
Purge Time	begin 1613 end 1618
Pumping Rate (gpm)	N.A.
Evacuation Method	bailer

Field Parameters

Color	—
Odor	petrol
Appearance	—
pH (s.u.)	6.70
Conductivity (mS/cm)	0.989
(µmhos/cm)	
Turbidity (NTU)	~~NM~~ 782
Temperature (°C)	14.30
Dissolved Oxygen (mg/L)	~~12.25~~ 12.25
ORP (mV)	-86
Sampling Method	YSI 556
Remarks	SI sheen in bail bucket

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml vial	3	HCl
PAH	1 L amber	2	none
Diss. RCRA Metals	500 ml	1	HNO_3
GRO	40 ml vial	2	HCl
DRO	1 L amber	2	HCl

Sampling Personnel ~~ND/ENK~~ KH

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project	Ford TCAP	Project No.	DE000440.0002	Page	1 of 1
Site Location	St. Paul, MN			Date	1/17/12
Site/Well No.	MW-19	Replicate No.	—	Code No.	—
Weather	Sunny, 10/20s	Sampling Time:	Begin 1155	End	1250 ST 1225

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	707.84
Land Surface Elevation (ft)	705.60
Sounded Well Depth (ft bmp)	26.74
Depth to Water (ft bmp)	20.32
Water-Level Elevation (ft)	687.52
Water Column in Well (ft)	6.42
Casing Diameter/Type	2" Steel (black carbon)
Gallons in Well	1.0272
Gallons Pumped/Bailed Prior to Sampling	3x 3.08 ~~5x~~ 5.136
Sample Pump Intake Setting (ft bmp)	N.A.
Purge Time	begin 1140 end 1155
Pumping Rate (gpm)	N.A.
Evacuation Method	bailing

Field Parameters

Color	brown turbid
Odor	decay
Appearance	turbid (Very)
pH (s.u.)	6.72
Conductivity (mS/cm)	1.22
(µmhos/cm)	
Turbidity (NTU)	948
Temperature (°C)	2.12
Dissolved Oxygen (mg/L)	2.60
ORP (mV)	72
Sampling Method	Horiba U-52
Remarks	

Constituents Sampled	Container Description	Number	Preservative
PAH	1-liter amber	2	None
VOC	40mL VOA	3	HCl
DRO	1-liter amber	2	HCl
GRO	40mL VOA	2	HCl
TAL Metals (Dissolved)	~~1-liter amber~~ 500 mL	1	HNO3

Sampling Personnel: KH

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project	Ford TCAP	Project No.	DE000440.0002	Page	1 of 1
Site Location	St. Paul, MN			Date	1/17/12
Site/Well No.	AMW-20	Replicate No.	DUP-02	Code No.	—
Weather	Sunny 10/20s	Sampling Time:	Begin 1345	End	1430 ST 1415

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	710.02
Land Surface Elevation (ft)	707.58
Sounded Well Depth (ft bmp)	26.93
Depth to Water (ft bmp)	22.54
Water-Level Elevation (ft)	687.48
Water Column in Well (ft)	4.39
Casing Diameter/Type	2" steel (black carbon)
Gallons in Well	0.7024
Gallons Pumped/Bailed Prior to Sampling	3x 2.10 5x 3.512
Sample Pump Intake Setting (ft bmp)	N.A.
Purge Time	begin 1335 end 1345
Pumping Rate (gpm)	N.A.
Evacuation Method	bailing

Field Parameters

Color	brown
Odor	— None
Appearance	turbid
pH (s.u.)	6.84
Conductivity (mS/cm)	~~1.27~~ 1.24
(µmhos/cm)	—
Turbidity (NTU)	1000 +
Temperature (°C)	~~2.50~~ ~~2.50~~ 2.57
Dissolved Oxygen (mg/L)	2.31
ORP (mV)	~~74~~ 68
Sampling Method	Horiba U-52
Remarks	

Constituents Sampled	Container Description	Number	Preservative
PAH	1-liter amber	2	None
VOC	40mL VOA	3	HCl
DRO	1-liter amber	2	HCl
GRO	40mL VOA	2	HCl
TAL Metals (Dissolved)	~~1-liter amber~~ 500 mL	1	HNO3

Sampling Personnel: KH

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Groundwater Sampling Form

Project Number: DE000372.0004 Task: 0002 **Well ID:** MW-05

Date: 07-03-2014 Sampled By: K. Hoehn

Sampling Time: 1820 Recorded By: A. Pagnucci

Weather: Overcast 70s Duplicate/QA/QC: None

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
		YSI
Serial #:		

Purging Information

Casing Material: Stainless Steel

Casing Diameter: 2"

Total Depth: 31.15

Depth to Water: 19.23

Water Column: 11.92

Gallons/Foot:

Gallons in Well: 1.9

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer (Peristaltic)

Screen Interval: From: 29 KH 19 To: 39 KH 29 ft bgs

Pump Intake Setting:

Volumes to be Purged:

Total Volume Purged: ~11250 mL =

Pump On: 1730 Off: 1820

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or (ml))	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1735	5	225/MIN		19.47	6.69	1.648	—	1.11	13.68	-28.0	
1740	10	225/MIN		19.48	6.68	1.645	—	0.74	13.70	-19.8	
1745	15	225/MIN		19.49	6.70	1.645	—	0.52	13.68	-12.7	
1750	20	225/MIN		19.49	6.68	1.643	—	0.45	13.64	-10.1	
1755	25	225/MIN		19.49	6.72	1.645	—	0.40	13.74	-7.7	
1800	30	225/MIN		19.49	6.71	1.639	—	0.41	13.54	-4.8	
1805	35	225/MIN		19.49	6.70	1.637	—	0.42	13.61	-1.0	
1810	40	225/MIN		19.49	6.72	1.638	—	0.44	13.51	0.4	
					KH						

Observations During Sampling

Well Condition: slightly weathered

Color: brown

Odor: bio

Purge Water Disposal: 55-Gallon drum

Turbidity(qualitative): clear (from brown turbid)

Other (OVA, HNU,etc.):

Constituents Sampled	Container Description: From Lab X ARCADIS	Preservative
VOCs (8260)	2 - 40 mL VOAs, glass	HCl
Dissolved TAL metals (6010)	1-250 mL plastic	HNO_3

ARCADIS

Groundwater Sampling Form

Project Number: DE000372.0004 Task: 0002 **Well ID:** MW-05B

Date: 07-03-2014 Sampled By: K. HOEHN

Sampling Time: 1720 Recorded By: A. FAGNAN

Weather: SUNNY 70s Duplicate/QA/QC: NONE

Instrument Identification

Instrument:	PID	Water Quality Meter(s) YSI
Serial #:		

Purging Information

Casing Material: Stainless Steel

Casing Diameter: 2"

Total Depth: 55.22

Depth to Water: 18.31

Water Column: 36.91

Gallons/Foot:

Gallons in Well: 5.9

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer (Peristaltic)

Screen Interval: From: 43 To: 53 ft bgs

Pump Intake Setting: MIDSCREEN (~48 ft bgs)

Volumes to be Purged:

Total Volume Purged:

Pump On: 1619 Off:

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1625	5	200/MIN		18.40	7.48	0.700	—	0.34	16.22	-180.9	
1630	11	200/MIN		18.41	6.87	0.738	—	0.28	15.11	-120.4	
1635	16	200/MIN		18.41	6.66	0.744	—	0.31	14.96	-80.6	
1640	21	225/MIN		18.43	6.68	0.755	—	0.60	15.50	-83.2	
1645	26	225/MIN		18.44	6.65	0.750	—	0.75	14.89	-75.6	
1650	31	225/MIN		18.44	6.66	0.738	—	0.25	14.11	-70.9	
1655	36	225/MIN		18.44	6.55	0.737	—	0.21	14.00	-63.8	
1700	41	225/MIN		18.44	6.64	0.736	—	0.19	13.93	-62.0	
1705	46	225/MIN		18.44	6.59	0.740	—	0.17	14.08	-67.5	
1710	51	225/MIN		18.44	6.61	0.737	—	0.17	13.96	-68.0	
					KH						

Observations During Sampling

Well Condition: GOOD

Color: CLEAR

Odor: SOUR

Purge Water Disposal: 55 GALLON DRUM

Turbidity(qualitative): <10

Other (OVA, HNU,etc.): N/A

Constituents Sampled	Container Description From Lab X ARCADIS	Preservative
VOCs 8260	3 - 40 ml VOAs	HCl
DISSOLVED TAL METALS 6010B	1 - 250 ml PLASTIC	HNO_3

ARCADIS

Groundwater Sampling Form

1330

Project Number:	DE000372.0004	Task:	00002	**Well ID:**	MW-07
Date:	7/3/14	Sampled By:	KH		
Sampling Time:	1525	Recorded By:	KH		
Weather:	Cloudy 70s	Duplicate/QA/QC:	No		

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
	—	YSI
Serial #:		

Purging Information

Casing Material:	SS	Purge Method:(circle one)	Submersible Centrifugal Bladder Bailer (Peristaltic)
Casing Diameter:	2"	Screen Interval: From:	~~35~~ ft bgs To: 45 ft bgs
Total Depth:	44.91	Pump Intake Setting:	38-40 ft bgs
Depth to Water:	28.58	Volumes to be Purged:	
Water Column:	16.33	Total Volume Purged:	~4 gallons
Gallons/Foot:	~~0.65~~	Pump On:	1430 Off: 1540
Gallons in Well:	2.6		3.8 L / gal

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. mg/L Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1435	5	200	1 L	28.78	6.32	1.560	—	15.03	14.01	47.8	brown turbid
1440	10	250	2.25 L	28.79	6.31	1.556	—	2.70	13.64	52.5	v. sl. turbid brown
1445	15	250	3.5 L	28.79	6.30	1.553	—	0.86	13.72	55.0	"
1450	20	225	4.6 L	28.80	6.36	1.553	—	0.55	13.58	57.2	"
1455	25	225	5.75 L	28.81	6.37	1.557	—	0.45	13.56	59.8	clear
1500	30	225	6.8 L	28.79	6.39	1.560	—	0.35	13.53	61.6	clear
1505	35	225	8 L	28.79	6.41	1.565	—	0.30	13.47	65.8	clear
1515	45	225	9.1 L	28.79	6.42	1.563	—	0.27	13.42	68.6	clear
1520	50	225	10.25 L	28.80	6.42	1.563	—	0.25	13.35	70.2	clear
1525	55	225	11.3 L	28.80	6.42	1.562	—	0.25	13.33	71.0	clear
					KH						

Observations During Sampling

Well Condition:	Good	Purge Water Disposal:	55-Gallon drum
Color:	clear	Turbidity(qualitative):	<10
Odor:	none	Other (OVA, HNU,etc.):	NA

Constituents Sampled	Container Description: From Lab X / ARCADIS	Preservative
VOCs	40 mL VOA	HCl
Dissolved TAL metals	250 mL plastic	HNO_3
PAH	1 L amber	—

ARCADIS

Groundwater Sampling Form

Project Number: DE000372.0002 Task: 00004 Well ID: AMW-05
Date: 8/7/14 Sampled By: pschultz/jasalzer
Sampling Time: 1345 Recorded By: pschultz
Weather: 80s sunny Duplicate/QA/QC:

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
	—	~~dis~~ YSI & turbidity mete
Serial #:	—	—

Purging Information

Casing Material: stainless steel
Casing Diameter: 2 inches
Total Depth: 31.13 feet
Depth to Water: 30.10 feet
Water Column: 1.01 feet
Gallons/Foot:
Gallons in Well: 0.32

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer Peristaltic
Screen Interval: From: 19 To: 29 ft bgs
Pump Intake Setting: —
Volumes to be Purged: —
Total Volume Purged: 1.5 Liters
Pump On: — Off: —

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
0753	Bail well approximately ½ Liter										
1324	Bail well approximately 1 liter										
1339	take YSI parameters			NA	6.77	1.1619	473.6	52.3%	15.86	65.8	
1345	sampled										

IDW

Observations During Sampling

Well Condition: good
Color: light yellow
Odor: none

Purge Water Disposal: IDW drums
Turbidity(qualitative): slightly opaque
Other (OVA, HNU,etc.):

Constituents Sampled	Container Description: From Lab ✓ ARCADIS —	Preservative
VOC	3 - 40ml voas	HCl
Dissolved TAL metals	1 - 250 ml plastic	HNO_3

ARCADIS

Groundwater Sampling Form

Project Number: DE000372.0002 Task: 00004 Well ID: MW-05B
Date: 8/6/14 Sampled By: ~~D Schulz & a salze~~
Sampling Time: 1620 Recorded By: ~~D Schulz & a salze~~
Weather: Sunny 80s Duplicate/QA/QC: —

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
	—	Turbidity Meter (YSI)
Serial #:	—	—

Purging Information

Casing Material: stainless steel
Casing Diameter: 2"
Total Depth: 55.02
Depth to Water: 28.60
Water Column: 26.42
Gallons/Foot: ~~.82~~
Gallons in Well: 4.22

Purge Method:(circle one) (Submersible) Centrifugal Bladder Bailer Peristaltic
Screen Interval: From: 43 To: 53 ft bgs
Pump Intake Setting: midscreen ~48 ft bgs
Volumes to be Purged:
Total Volume Purged: 12L
Pump On: 1450 Off: 1625

grundfos set at 116.6 Hz

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1453	—	800/min					~~64~~	~~6.5%~~	~~15.73~~		
1457	02	1000/min	1L	28.90	7.87	0.451	64.5	6.5%	15.73	-166.9	
1502	09	300/min	1.2L	28.73	7.93	0.456	64.8	7.9%	17.15	-68.0	
1506	13	300/min	2.2L	28.73	7.87	0.451	57.7	3.3%	17.22	-69.8	
1510	17	300/min	3.8L	28.76	7.89	0.451	56.9	2.1%	16.77	-206.5	
1515	22	300/min	4.8L	28.75	7.13	0.589	32.8	2.3%	16.71	-180.1	
1520	27	300/min	5.7L	28.66	6.57	0.777	26.5	2.5%	16.93	-153.8	
1525	32	300/min	5.8L	28.71	6.70	0.792	20.1	5.5%	18.34	-146.9	
1530	37	225/min	6.5L	28.76	6.71	0.757	47.7	~~1103%~~	17.63	-146.8	
1535	• Pump is not working right - pulling air. Turn off and pull out pump. Install dedicated tubing (only ~30 feet long). Put on new tubing and set to 48 feet bgs, start up at 1845										
1550	42	400/min	7.5L	28.83	6.78	0.957	336.7	6.7%	15.79	-112.7	
1555	47	500/min	8.8L	—	6.60	0.975	304.6	2.1%	15.97	-138.0	
1559	51	250/min	10.0L	28.74	6.66	0.973	270.0	2.4%	16.39	-145.9	
1604	56	300/min	11.0L	28.76	6.73	0.969	158.0	2.3%	16.51	-154.4	

Observations During Sampling

Well Condition: good
Color: ~~tan~~ gray
Odor: ~~none~~ very slight

Purge Water Disposal: IDW drums
Turbidity(qualitative): slightly opaque
Other (OVA, HNU,etc.):

Constituents Sampled	Container Description: From Lab X / ARCADIS	Preservative
VOCs	3 - 40 mL VOAs	HCl
Dissolved TAL metals	1 - 250 mL plastic	HNO_3

@1620 8/6/14

ARCADIS

Groundwater Sampling Form

Project Number: DE000372.0002 Task: 00004 **Well ID:** AMW-05B
Date: 8/6/14 Sampled By: ~~P Schultz~~ A Salzer
Sampling Time: 1620 Recorded By: P Schultz
Weather: 80s Sunny Duplicate/QA/QC: —

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
	see page 1	
Serial #:		

Purging Information

Casing Material: see page 1
Casing Diameter:
Total Depth:
Depth to Water:
Water Column:
Gallons/Foot:
Gallons in Well:

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer Peristaltic — see page 1
Screen Interval: From: To:
Pump Intake Setting:
Volumes to be Purged:
Total Volume Purged:
Pump On: Off:

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1607	59	200 ml/min	11.52	28.75	6.72	0.968	124.9	2.9 %	16.52	-157.3	
1610	62	200 ml/min	12.02	28.74	6.71	0.961	104.8	2.3 %	16.59	-157.6	

pbs

Observations During Sampling

Well Condition: see page 1
Color:
Odor:

Purge Water Disposal: see page 1
Turbidity(qualitative):
Other (OVA, HNU,etc.):

Constituents Sampled	Container Description: From Lab ____ ARCADIS ____	Preservative
see page 1		

ARCADIS

Groundwater Sampling Form

400 18

Project Number: OE0003720004 Task: 00092 Well ID: amw-07 P 1/2
Date: 8/7/2014 Sampled By: Adam Salze
Sampling Time: 1640 Recorded By: P Schultz
Weather: 80 sunny Duplicate/QA/QC:

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
	—	YSI w/ turbidity meter
Serial #:	—	—

Purging Information

Casing Material: stainless steel
Casing Diameter:
Total Depth: 44.90
Depth to Water: 39.40
Water Column: 5.5
Gallons/Foot: —
Gallons in Well: 0.88

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer Peristaltic
Screen Interval: From: 35 To: 45
Pump Intake Setting: ~40
Volumes to be Purged: —
Total Volume Purged: ~15 gallons
Pump On: 1445 Off: 1650

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1440	—	450	450 mL	NA	6.21	2.116	1056.5	34.4	18.61	~~1056.5~~	68.9
1450	2	+450	1L	NA							
1452	4	175	1.75L	39.64	6.11	1.909	1340.2	29.0%	17.89	103.3	
1455	7	200	2.2L	39.65	6.13	1.902	1341.0	29.7%	18.02		
1458	10	375	3.0L	39.76	6.15	1.794	1340.2	32.6%	17.95	104.2	pump is
1502	14	225	4.0L	39.67	6.25	1.683	266.3	36.9%	18.57	108.2	very
1507	19	>225	4.5L	39.57	6.34	1.615	1353.0	41.5%	19.12	108.0	inconsistent!
1510	22	600	5.5L	39.82	6.38	1.512	227.0	44.4%	19.90	98.9	
1519	31	>200	7.0L	39.69	6.45	1.434	230.0	40.1%	20.97	91.3	
1523	34	300	8.0L	39.81	6.46	1.428	143.0	42.5%	20.25	116.7	
1527	38	<400	9.75L	39.73	6.28	1.313	159.4	44.6%	19.46	164.0	
1534	45	~200	10.3L	39.60	6.43	1.259	101.7	48.8%		123.9	
1540	51	~400	12.0L	40.10	~~6.18~~	~~1.209~~	~~130.4~~	~~52.7%~~	~~18.45~~	NA	
1545	56	~500	~~15.0L~~	39.94	6.18	1.209	130.4	52.7%	18.45	146.4	
1549	60	~500	15.0 19.5	39.72	6.29	1.195	655	53.2%	18.61	~~655.0~~	141.9
1553	64			39.50	6.42	1.232	211.0	52.5	19.82	131.8	

Observations During Sampling

Well Condition: good
Color: tan
Odor: none

Purge Water Disposal: 10 N drums
Turbidity(qualitative): opaque
Other (OVA, HNU,etc.): NA

Constituents Sampled	Container Description: From Lab X ARCADIS	Preservative
VOC	3 - 40 mL VOA	HCL
Tal metals (dissolved)	1 - 250 mL plastic	HNO_3
PAH	2 - 1L amber	—

P 1/2

ARCADIS

Groundwater Sampling Form

Project Number: DE000372 Task: 0004 **Well ID:** OMW-07
Date: 8/7/2014 Sampled By: A Salter
Sampling Time: 1640 Recorded By: P Schultz
Weather: 80s sunny Duplicate/QA/QC:

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:		

Purging Information

Casing Material: see page 1
Casing Diameter:
Total Depth:
Depth to Water:
Water Column:
Gallons/Foot:
Gallons in Well:

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer Peristaltic
Screen Interval: From: To: 1
Pump Intake Setting: see page
Volumes to be Purged:
Total Volume Purged:
Pump On: Off:

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
4:03		~400mL/min		40.05	6.54	1.278	247.6	56.3	20.18	117.0	
4:11		1L/min		40.30	6.13	1.230	193.0	53.7	16.43	168.4	
4:14		1L/min		40.35	6.17	1.228	117.3	53.2	16.21	174.3	
4:17		2L/min		40.37	6.24	1.228	85.0	53.6	16.14	176.7	
4:20		1L/min		40.35	6.23	1.227	55.6	52.8	15.99	179.4	
4:23		1L/min		40.36	6.26	1.231	36.1	52.7	15.88	180.4	
4:29					6.26	1.243	15.3	52.4	15.7	185.3	
								DBS			

Observations During Sampling

Well Condition:
Color:
Odor:
Purge Water Disposal:
Turbidity(qualitative):
Other (OVA, HNU,etc.):

Constituents Sampled	Container Description: From Lab / ARCADIS	Preservative

ARCADIS

Groundwater Sampling Form

Project Number:	DE000372.0004	Task:	00002	**Well ID:**	AMW-05
Date:	9/16/14	Sampled By:	KH		
Sampling Time:	NA	Recorded By:	KH		
Weather:	Sunny 70s	Duplicate/QA/QC:	—		

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	—	YSI 6920

Purging Information

Casing Material:	SS (stainless steel)	Purge Method:(circle one)	Submersible	Centrifugal	Bladder Bailer Peristaltic
Casing Diameter:	2"	Screen Interval: From:	19	To:	29
Total Depth:	29 / 31.15	Pump Intake Setting:			
Depth to Water:	29.91	Volumes to be Purged:		KH	
Water Column:	1.24	Total Volume Purged:			
Gallons/Foot:	0.16	Pump On:		Off:	
Gallons in Well:	0.20				

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
Not able to pump water to surface, unable to sample											
					KH						

Observations During Sampling

Well Condition:		Purge Water Disposal:	
Color:		Turbidity(qualitative):	
Odor:		Other (OVA, HNU,etc.):	

Constituents Sampled	Container Description: From Lab X / ARCADIS	Preservative
	KH	

ARCADIS

Groundwater Sampling Form

Project Number: DE000372.0004 | Task: 00002 | **Well ID:** AMW-053B
Date: 9/16/14 | Sampled By: KH
Sampling Time: 1620 | Recorded By: KH
Weather: Sunny 70s | Duplicate/QA/QC: —

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	—	YSI 6920

Purging Information

Casing Material: bes
Casing Diameter: 2"
Total Depth: 53/ 54.96
Depth to Water: 28.53
Water Column: 26.43
Gallons/Foot: 0.16
Gallons in Well: 4.23

Purge Method:(circle one) (Submersible (grundfos)) Centrifugal Bladder Bailer Peristaltic
Screen Interval: From: 43 To: 53
Pump Intake Setting: 48 ft btoc
Volumes to be Purged: Low Flow
Total Volume Purged: 7.5 gal
Pump On: 1525 Off: 1625

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen (mg/L)	Temp (°C or °F)	ORP (mV)	Comments:
1525	0		—	28.53							
1532	7	725→375	~1	—	7.10	0.802	115.1	0.30	14.68	-182.7	Adjust flow, cloudy
1535	10	375	~2	28.74	7.06	0.815	42.4	0.19	15.39	-165.9	cloudy
1538	13	375	~2.5	28.73	6.99	0.815	27.0	0.16	15.60	-163.5	Slightly cloudy
1541	16	"	~3	28.73	6.96	0.809	19.6	0.14	15.69	-160.9	" "
1545	20	"	~3.5	28.73	6.94	0.804	16.2	0.16	15.62	-149.5	" "
1548	23	"		28.73	6.93	0.800	14.7	0.16	15.75	-143.2	
1553	28	"		28.73	6.92	0.791	11.1	0.11	15.75	-141.8	clear
1558	33	"	~4.5	28.73	6.91	0.789	10.9	0.09	15.91	-130.8	clear
1603	38	375	~5	28.73	6.90	0.787	8.4	0.23	16.03	-146.6	clear
1608	43	375	~5.5	28.73	6.88	0.777	6.2	0.08	15.76	-133.2	clear
1613	48	375	~6	28.73	6.88	0.769	5.1	0.08	15.76	-137.5	clear
1618	53	375	~6.5	28.73	6.88	0.764	6.3	0.16	15.80	-130.0	clear
						KH					

Observations During Sampling

Well Condition: good; minor deterioration
Color: clear
Odor: — none

Purge Water Disposal: 55 gal drum
Turbidity(qualitative): ~10 NTU
Other (OVA, HNU,etc.): NA

Constituents Sampled	Container Description: From Lab ____ ARCADIS ____	Preservative
VOCs (8260)	(3) 40 mL VOAs	HCl
TAL metals, dissolved (6010)	(1) 250 mL plastic	HNO_3

ARCADIS

Groundwater Sampling Form

Project Number: DE000372.0004 Task: 00002 **Well ID:** AMW-07
Date: 09/16/14 Sampled By: KH
Sampling Time: 1740 Recorded By: KH
Weather: 70s Sunny Duplicate/QA/QC: —

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	—	YSI 6920

Purging Information

Casing Material: SS
Casing Diameter: 2"
Total Depth: 45 / 44.92
Depth to Water: 39.09 @ 1700
Water Column: 5.83
Gallons/Foot: 0.16
Gallons in Well: 0.93

Purge Method:(circle one) Submersible (grundfos) Centrifugal Bladder Bailer Peristaltic
Screen Interval: From: 35 To: 45
Pump Intake Setting: ~42
Volumes to be Purged: Std 3 well volumes
Total Volume Purged: ~8 gallons
Pump On: 1707 Off: 1742

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1707	0	750	0	39.62	6.77	1,548	100.8	2.52	14.58	41.3	Sl. cloudy (tan)
1712	5	"	1	39.84	6.72	1.543	53.7	2.41	15.22	55.2	" "
1717	10	"	2	39.83	6.69	1.233	26.5	4.56	15.44	79.7	v. sl. cloudy
1722	15	"	3	40.46	6.65	1.147	13.0	5.26	14.37	94.5	clear
1727	20	"	5	40.71	6.56	0.967	17.5	6.46	14.10	107.1	clear
1732	25	"	8	40.73	6.53	0.931	10.2	6.90	14.10	116.8	clear
						KH					

Observations During Sampling

Well Condition: Slight deterioration
Color: none (clear)
Odor: none

Purge Water Disposal: 55 gal drum
Turbidity(qualitative): <10
Other (OVA, HNU,etc.): NA

Constituents Sampled	Container Description: From Lab X / ARCADIS —	Preservative
VOCs (8260)	(3) 40 mL VOA	HCl
TAL metals, dissolved (6010)	(1) 250 mL plastic	HNO_3
PAHs (8270)	(2) 1-Liter Amber	—

ARCADIS

Water Sampling Log

Project	Ford St. Paul - TCAP	Project No.	MN000630.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	2/12/16
Site/Well No.	AMW-29	Replicate No.	—	Code No.	—
Weather	9°F, Sunny	Sampling Time: Begin	0930	End	1017

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	124.10
Depth to Water (ft bmp)	116.65
Water-Level Elevation (ft)	—
Water Column in Well (ft)	7.45
Casing Diameter/Type	2 in
Gallons in Well	1.20
Gallons Pumped/Bailed Prior to Sampling	NR
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 855 end 925
Pumping Rate (gpm)	—
Evacuation Method	Bailer

Field Parameters

Color	Brown
Odor	None
Appearance	Cloudy
pH (s.u.)	8.72
Conductivity (mS/cm)	1.352
(µmhos/cm)	~
Turbidity (NTU)	—
Temperature (°C)	13.08
Dissolved Oxygen (mg/L)	—
ORP (mV)	-12.1
Sampling Method	YSI 556
Remarks	—

Constituents Sampled	Container Description	Number	Preservative
VOC (EPA Method 8260)	40 mL VOA	3	HCl
Dissolved TAL Metals	500 mL plastic	1	HNO_3
PCBs	1-L amber	2	—
DRO	1-L amber	2	HCl
Cyanide	250 mL plastic	1	NaOH

Sampling Personnel: AT

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project	Ford St. Paul - TCAP	Project No.	MN000630.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	2/11/16
Site/Well No.	AMW-30	Replicate No.	—	Code No.	—
Weather	5°F Clear Skies	Sampling Time: Begin	845	End	919

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	122.35
Depth to Water (ft bmp)	113.70
Water-Level Elevation (ft)	—
Water Column in Well (ft)	8.65
Casing Diameter/Type	2 in
Gallons in Well	1.38
Gallons Pumped/Bailed Prior to Sampling	6
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 0756 end 835
Pumping Rate (gpm)	—
Evacuation Method	Bailer

Field Parameters

Color	Lt brown
Odor	None
Appearance	Cloudy
pH (s.u.)	9.02
Conductivity (mS/cm)	1.682
(µmhos/cm)	—
Turbidity (NTU)	—
Temperature (°C)	12.37
Dissolved Oxygen (mg/L)	18.79
ORP (mV)	4.2
Sampling Method	YSI 556
Remarks	—

Constituents Sampled	Container Description	Number	Preservative
VOC (EPA Method 8260)	40 mL VOA	3	HCl
Dissolved TAL Metals	500 mL Plastic	1	HNO_3
PCBs	1-L amber	2	—
DRO	1-L amber	2	HCl
Cyanide	250 mL Plastic	1	NaOH

Sampling Personnel: AT

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project	Ford St. Paul - TCAP	Project No.	MN000630.0001	Page	1 of 1
Site Location	St. Paul, MN			Date	2/12/16
Site/Well No.	AMW-31	Replicate No.	—	Code No.	—
Weather	12°F, Sunny	Sampling Time: Begin	1110	End	1137

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	120.2
Depth to Water (ft bmp)	105.5
Water-Level Elevation (ft)	—
Water Column in Well (ft)	14.7
Casing Diameter/Type	2 in
Gallons in Well	2.35
Gallons Pumped/Bailed Prior to Sampling	7
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1050 end 1107
Pumping Rate (gpm)	—
Evacuation Method	Bailer

Field Parameters

Color	Brown
Odor	None
Appearance	Cloudy
pH (s.u.)	8.39
Conductivity (mS/cm)	1.089
(µmhos/cm)	—
Turbidity (NTU)	—
Temperature (°C)	10.94
Dissolved Oxygen (mg/L)	3.44
ORP (mV)	19.4
Sampling Method	YSI 556
Remarks	—

Constituents Sampled	Container Description	Number	Preservative
VOC (EPA Method 8260)	40 mL VOA	3	HCl
Dissolved TAL Metals	500 mL plastic	1	HNO_3
PCBs	1-L amber	2	—
DRO	1-L amber	2	HCl
Cyanide	250 mL plastic	1	NaOH

Sampling Personnel: AT

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project: MN000625.0001.00002 | Project No.: Ford TCAP | Page: 1 of 1

Site Location: St Paul MN | Date: 3/9/16

Site/Well No.: AMW-07 | Replicate No.: — | Code No.: —

Weather: 35°, cloudy | Sampling Time: Begin 1233 End 1245 10 @ 1240

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	44.93
Depth to Water (ft bmp)	41.45
Water-Level Elevation (ft)	—
Water Column in Well (ft)	3.48
Casing Diameter/Type	2inch / steel
Gallons in Well	0.56
Gallons Pumped/Bailed Prior to Sampling	1.67
Sample Pump Intake Setting (ft bmp)	NA
Purge Time	begin 1226 end 1232
Pumping Rate (gpm)	NA
Evacuation Method	bailer

Field Parameters

Color	light brown
Odor	none
Appearance	turbid / opaque
pH (s.u.)	6.91
Conductivity (mS/cm)	0.790
(~~umhos~~ mS/cm)	584
Turbidity (NTU)	NA
Temperature (°C)	11.36
Dissolved Oxygen (mg/L)	8.35
ORP (mV)	85.7
Sampling Method	YSI 556
Remarks	pulled out 2.5 gal

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
SVOCs (8270)	1-L amber	2	none
TAL Metals, dissolved (6010)	500 mL plastic	1	HNO3
DRO (WI Modified)	1-L amber	2	HCl

Sampling Personnel: PSC/MLZ

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Groundwater Sampling Form

Project Number: MN000625.0001 Task: 00002 **Well ID:** AMW-19
Date: 3/9/16 Sampled By: pschultz
Sampling Time: 0915 Recorded By: pschultz
Weather: V. light rain, 37° Duplicate/QA/QC: DUP-01(20160309)

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	ysi Fied# 17273

Purging Information

Casing Material: PVC screen/carbon steel riser Purge Method:(circle one) Submersible Centrifugal Bladder Bailer (Peristaltic)
Casing Diameter:
Total Depth: 26.63
Depth to Water: 18.69
Water Column: 7.94
Gallons/Foot: 0.16
Gallons in Well: 1.27
Screen Interval: From: 14.3 To: 24.3
Pump Intake Setting: Midscreen
Volumes to be Purged:
Total Volume Purged: 7500
Pump On: 0843 Off: 0946

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume mL Purged	Depth to Water	pH (SI Units)	Conductivity (µS/cm or mmhos/cm)	Turbidity (NTUs)	Diss. mg/L Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
0848	5	300	1500	18.83	6.79	715	NA	9.27	9.37	32.7	
0853	10	300	3000	18.83	6.76	715		3.29	9.33	48.6	
0858	15	300	4500	18.83	6.79	720		2.06	9.28	54.0	
0903	20	300	6000	18.83	6.80	723		1.69	9.33	57.0	
0908	25	300	7500	18.83	6.81	723		1.56	9.26	58.8	

Observations During Sampling

Well Condition: good
Color: V. pale brown
Odor: none
Purge Water Disposal: low containers
Turbidity(qualitative): V. slight turbid pm; clear
Other (OVA, HNU,etc.):

Constituents Sampled	Container Description: From Lab X ARCADIS	Preservative
VOC	3 - 40mL voa	HCl
TAL metals dissolved	1 - 500 mL plastic	HNO_3
SVOC	2 - 1 L amber	
DRO	2 - 1 L amber	HCl

* DUP-01 collected as well

ARCADIS

Groundwater Sampling Form

Project Number: MN000625.0001 Task: 00002 Well ID: MW-20
Date: 3/8/16 Sampled By: pschmitz
Sampling Time: 1555 Recorded By: pschmitz
Weather: Sunny 65, windy Duplicate/QA/QC: —

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
	NA	YSI
Serial #:		Pine #17273

Purging Information

Casing Material: PVC screen black carbon steel rise
Casing Diameter: 2 inch
Total Depth: 25.97
Depth to Water: 20.89
Water Column: 5.02
Gallons/Foot: 0.16
Gallons in Well: 0.80 gal

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer (Peristaltic)
Screen Interval: From: 13.5 To: 23.5
Pump Intake Setting: Midscreen
Volumes to be Purged: —
Total Volume Purged: 7500
Pump On: 1527 Off: 1609

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged mL	Depth to Water	pH (SI Units)	Conductivity µS (µmhos/cm)	Turbidity (NTUs)	Diss. mg/L Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1532	0	300	1500	20.96	6.81	826	NA	1.78	12.01	-19.9	
1537	10	300	3000	20.96	6.76	817		1.19	11.64	-26.8	
1542	15	300	4500	20.96	6.73	811		0.91	11.52	-30.6	
1547	20	300	6000	20.96	6.77	810		0.82	11.58	-30.2	
1552	25	300	7500	20.96	6.78	811		0.79	11.44	-26.1	

Observations During Sampling

Well Condition: good
Color: v. pale brown
Odor: none

Purge Water Disposal: low containerization
Turbidity(qualitative): none
Other (OVA, HNU,etc.): NA

Constituents Sampled	Container Description From Lab X ARCADIS —	Preservative
VOC	3-40mL via	HCL
SVOC	2-1 Lite amber	—
Dissolved TAL metals	1-500mL plastic	HNO_3
DRO	2-1 Lite amber	HCL

ARCADIS

Water Sampling Log

Project: Ford TCAP | Project No.: MN000625.0001.00002 | Page: 1 of 1

Site Location: St Paul MN | Date: 3/9/16

Site/Well No.: AMW-21 | Replicate No.: — | Code No.: —

Weather: 35°, cloudy | Sampling Time: Begin 1402 End 1409 | 10@1405

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	58.84
Depth to Water (ft bmp)	49.81
Water-Level Elevation (ft)	—
Water Column in Well (ft)	9.03
Casing Diameter/Type	2in/Steel
Gallons in Well	1.44
Gallons Pumped/Bailed Prior to Sampling	4.33
Sample Pump Intake Setting (ft bmp)	NA
Purge Time	begin 1352 end 1401
Pumping Rate (gpm)	NA
Evacuation Method	bailer

Field Parameters

Color	brown
Odor	none
Appearance	V. turbid
pH (s.u.)	6.91
Conductivity (mS/cm)	1.005
~~(umhos/cm)~~ µS/cm	740
Turbidity (NTU)	NA
Temperature (°C)	11.18
Dissolved Oxygen (mg/L)	2.02
ORP (mV)	202.3
Sampling Method	YSI 556
Remarks	—

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
SVOCs (8270)	1-L amber	2	none
TAL Metals, dissolved (6010)	500 mL plastic	1	HNO3
DRO (WI Modified)	1-L amber	2	HCl

Sampling Personnel: JD SCM/BZ

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Groundwater Sampling Form

Project Number: MW000625.0001 Task: 00002 Well ID: AMW-22
Date: 3/9/16 Sampled By: pschultz
Sampling Time: 1155 Recorded By: pschultz
Weather: 35°, cloudy Duplicate/QA/QC:

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	ysi Field # 17273

Purging Information

Casing Material: PVC sch 40
Casing Diameter: 2 inch
Total Depth: 28.39
Depth to Water: 18.02
Water Column: 10.37
Gallons/Foot: 0.16
Gallons in Well: 1.70

Purge Method: (circle one) Submersible Centrifugal Bladder Bailer (Peristaltic)
Screen Interval: From: 16 To: 26
Pump Intake Setting: midscreen
Volumes to be Purged: —
Total Volume Purged: 7500
Pump On: 1118 Off: 1159

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged (mL)	Depth to Water	pH (SI Units)	Conductivity (µs/cm)	Turbidity (NTUs)	Diss. Oxygen (mg/L)	Temp (°C or °F)	ORP (mV)	Comments:
1123	5	300	1500	18.06	7.07	670	NA	1.38	10.70	-117.9	
1128	10	300	3000	18.07	7.08	676		1.76	10.75	-118.4	
1133	15	300	4500	18.07	7.09	679		1.22	10.80	-117.8	
1138	20	300	6000	18.07	7.07	681		0.94	10.80	-118.1	
1143	25	300	7500	18.07	7.07	679		0.79	10.73	-116.1	

Observations During Sampling

Well Condition: good
Color: clear
Odor: none

Purge Water Disposal: low containers
Turbidity(qualitative): none
Other (OVA, HNU,etc.): —

Constituents Sampled	Container Description (From Lab X / ARCADIS)	Preservative
VOC	3-40ML VOA	HCL
Dissolved TAL Metals	1-500ML plastic	HNO_3
SVOC	2-1L amber	—
DRO	2-1L amber	HCL

ARCADIS

Groundwater Sampling Form

Project Number: MW000025.0001 Task: 00002 Well ID: AMW-22B
Date: 3/9/16 Sampled By: pschultz
Sampling Time: 1050 Recorded By: pschultz
Weather: 35°, cloudy Duplicate/QA/QC: MS/MSD taken for VOC/~~DRO~~ SVOC

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
	NA	ysi
Serial #:		Field #17273

Purging Information

Casing Material: stainless steel
Casing Diameter: 2 inch
Total Depth: 44.94
Depth to Water: 18.07
Water Column: 26.87
Gallons/Foot: 0.16
Gallons in Well: 4.30

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer (Peristaltic)
Screen Interval: From: 33 To: 43
Pump Intake Setting: mid screen
Volumes to be Purged: —
Total Volume Purged: 17,500 mL
Pump On: 0951 Off: 1118

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged (ml)	Depth to Water	pH (SI Units)	Conductivity (µS/cm (µmhos/cm))	Turbidity (NTUs)	Diss. Oxygen (mg/L)	Temp (°C or °F)	ORP (mV)	Comments:
0956	5	300	1500	18.41	9.91	410	NA	0.67	9.77	-169.3	
1001	10	300	3000	18.42	9.98	415		NA	10.18	~~-179.0~~ -89.1	pre
1006	15	300	4500	18.42	9.98	417		0.31	10.36	-103.8	
1011	20	300	6000	18.42	9.97	417		0.26	10.40	~~-108~~ -111.5	
1016	25	300	7500	18.42	9.94	417		0.24	10.61	-136.4	
1021	30	300	9000	18.44	9.85	408		0.21	10.39	-133.3	
1026	35	300	10500	18.45	8.97	387		0.22	10.65	-263.8	
1031	40	300	12000	18.46	8.59	378		0.20	10.59	-263.8	
1036	45	300	14500	18.46	8.39	373		0.18	10.67	-243.4	
1041	50	300	16000	18.41	8.22	372		0.20	10.66	-233.8	
1046	55	300	17500	18.41	8.20	370		0.20	10.50	-239.4	

Observations During Sampling

Well Condition: good
Color: clear
Odor: slight

* slight sheen on IDW bucket *
Purge Water Disposal: IDW container
Turbidity(qualitative): slightly opaque (but not turbid)
Other (OVA, HNU,etc.): —

Constituents Sampled	Container Description: From Lab X ARCADIS —	Preservative
VOC	3-40ML voa	HCl
Dissolved TAL metals	1-500ML plastic	HNO3
SVOC	2-1 Liter amber	—
DRO	2-1 Liter amber	HCl

* MS/MSD * samples collected

ARCADIS

Groundwater Sampling Form

Project Number: MW000625.0001 Task: 00002 Well ID: AMW-23
Date: 3/8/16 Sampled By: pschmitz
Sampling Time: 1455 Recorded By: pschmitz
Weather: 60, cloudy Duplicate/QA/QC:

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	YSI Pine #17273

Purging Information

Casing Material: PVC
Casing Diameter: 2 inch
Total Depth: 29.95
Depth to Water: 21.39
Water Column: 8.56
Gallons/Foot: 0.16
Gallons in Well: 1.4

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer Peristaltic
Screen Interval: From: 16 To: 26
Pump Intake Setting: mid screen
Volumes to be Purged:
Total Volume Purged: 9000mL
Pump On: 1422 Off: 1513

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (mS/cm)	Turbidity (NTUs)	Diss. Oxygen mg/L	Temp (°C or °F)	ORP (mV)	Comments:
1428	5	300	1500	21.43	6.92	776	NA	0.49	12.42	-51.2	
1432	10	300	3000	21.43	6.90	798		0.36	12.43	-30.9	
1437	15	300	4500	21.43	6.89	798		0.43	12.44	-31.2	
1442	20	300	6000	21.43	6.89	794		0.42	12.31	-24.4	
1447	25	300	7500	21.43	6.89	789		0.40	12.20	-21.1	
1452	30	300	9000	21.43	6.89	789		0.39	12.22	-17.5	

Observations During Sampling

Well Condition: good
Color: very pale tan
Odor: none

Purge Water Disposal: 1DW drum Contained on site
Turbidity(qualitative): slightly turbid
Other (OVA, HNU,etc.): NA

Constituents Sampled	Container Description: From Lab X ARCADIS	Preservative
VOC	3 - 40mL VOA	HCL
SVOC	2 - 1L amber	—
dissolved Tal. metals	1 - 500 mL plastic	HNO_3
DRO	2 - 1L amber	HCL

ARCADIS

Groundwater Sampling Form

Project Number: MN000625.0001 Task: 00002 Well ID: AMW-23B
Date: 3/8/16 Sampled By: P. Schulz
Sampling Time: 1405 Recorded By: PSchulz
Weather: 60, cloudy, humid Duplicate/QA/QC: —

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	YSI Pine # 17273

Purging Information

Casing Material: Stainless steel
Casing Diameter: 2 inch
Total Depth: 48.70
Depth to Water: 21.89
Water Column: 26.81
Gallons/Foot: 0.16
Gallons in Well: 4.3

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer (Peristaltic)
Screen Interval: From: 36 To: 46
Pump Intake Setting: mid screen
Volumes to be Purged: —
Total Volume Purged: ~~1500~~ mL
Pump On: 1338 Off: 1421

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µS (µmhos/cm))	Turbidity (NTUs)	Diss. (mg/L) Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1343	5	300	1500	21.91	7.48	470	NA	0.84	12.61	-146.3	
1348	10	300	3000	21.91	7.38	446		0.34	12.52	-142.0	
1353	15	300	4500	21.92	7.35	447		0.29	12.52	-139.9	
1358	20	300	6000	21.92	7.34	447		0.28	12.45	-136.0	
1403	25	300	7500	21.92	7.34	446		0.24	12.58	-137.4	

Observations During Sampling

Well Condition: good
Color: clear
Odor: none

Purge Water Disposal: 10w drum containers
Turbidity(qualitative): clear
Other (OVA, HNU,etc.): NA

Constituents Sampled	Container Description: From Lab X ARCADIS —	Preservative
VOC	3-40 mL voa	HCL
SVOC	2-1 Liter amber	—
Dissolved TAL metals	1-~~250~~ mL plastic	HNO_3
DRO	2-~~500~~ Liter amber	HCL

ARCADIS

Groundwater Sampling Form

Project Number: MW000625.0001 Task: 0002 **Well ID:** AMW-24
Date: 3/8/16 Sampled By: pschmitz
Sampling Time: 1250 Recorded By: pschmitz
Weather: 60, partly cloudy, humid Duplicate/QA/QC:

Instrument Identification

Instrument:	PID NA	Water Quality Meter(s) YSI
Serial #:		Pine ID #17273

Purging Information

Casing Material: PVC
Casing Diameter: 2inch
Total Depth: 25.05
Depth to Water: 18.08
Water Column: 6.97
Gallons/Foot: 0.16
Gallons in Well: 1.12

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer (Peristaltic)
Screen Interval: From: 13 To: 23
Pump Intake Setting: midscreen
Volumes to be Purged:
Total Volume Purged: 9000
Pump On: 1216 Off: 1306

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity ~~(µmhos/cm)~~ µS	Turbidity (NTUs)	Diss. Oxygen mg/L	Temp (°C or °F)	ORP (mV)	Comments:
1220	4	300	mL				NA				
1221	5	300	1500	18.10	6.80	1317		1.60	12.10	-34.0	
1226	10	300	3000	18.10	6.74	1294		0.70	11.80	-34.4	
1231	15	300	4500	18.10	6.73	1271		0.42	11.79	-50.7	
1236	20	300	6000	18.10	6.74	1258		0.40	11.92	-40.0	
1241	25	300	7500	18.10	6.75	1248		0.47	11.94	-40.7	
1246	30	300	9000	18.10	6.75	1238		0.48	11.97	-45.6	

Observations During Sampling

Well Condition: good
Color: clear
Odor: none

Purge Water Disposal: IDW drum containment
Turbidity(qualitative): clear
Other (OVA, HNU,etc.): NA

Constituents Sampled	Container Description From Lab X ARCADIS	Preservative
VOC	3-40 mL VOA w/HCL	HCL
SVOC	2-1 L amber	—
DRO	2-1 L amber w/HCL	HCL
Tal metals dissolved	1-250 mL (500) w/ HNO_3	HNO_3

ARCADIS

Groundwater Sampling Form

Project Number: MW00626S.0001 Task: 00002 Well ID: AMW-25
Date: 3/8/16 Sampled By: PSCHULZ
Sampling Time: 1140 Recorded By: PSCHULZ
Weather: 60, humid, cloudy Duplicate/QA/QC:

Instrument Identification

Instrument:	PID	Water Quality Meter(s)
	NA	YSI
Serial #:		

Purging Information

Casing Material: PVC
Casing Diameter: 2in
Total Depth: 23.65
Depth to Water: 15.91
Water Column: 7.74
Gallons/Foot: ~~1.02~~ ~~0.61~~ 0.16 pbs
Gallons in Well: ~~1.62~~ pbs 1.24

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer (Peristaltic)
Screen Interval: From: 12 To: 22
Pump Intake Setting: midscreen
Volumes to be Purged:
Total Volume Purged: 10500mL
Pump On: 1030 Off: 1123

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µS ~~mmhos~~/cm)	Turbidity (NTUs)	Diss. Oxygen (mg/L %)	Temp (°C or °F)	ORP (mV)	Comments:
1034	4	300	mL								
1035	5	300	1500	15.93	6.72	1577	0.87	~~6.7~~	11.81	-169.1	
1040	10	300	3000	15.93	6.66	1524		1.09	11.67	-~~168.3~~	
1045	15	300	4500	15.94	6.68	1487		1.37	11.64	-164.9	
1050	20	300	6000	15.94	6.72	1428		1.12	11.59	-190.8	
1055	25	300	7500	15.94	6.79	1390		1.11	11.60	~~-218~~ -219.8	
1100	30	300	9000	15.94	6.78	1345		1.02	11.59	-214.1	
1105	35	300	10500	15.94	6.80	1328		1.02	11.77	-228.9	

Observations During Sampling

Well Condition: good
Color: clear
Odor: slight

Purge Water Disposal: drum containment
Turbidity(qualitative): clear
Other (OVA, HNU,etc.): NA

Constituents Sampled	Container Description: From Lab X / ARCADIS	Preservative
VOC	3-40mL voas w/HCL	HCL
SVOC	2-1L amber	
DRO	2-1L amber w/HCL	HCL
Tal Metals (dissolved)	1-250mL plastic w/HNO_3 500	HNO_3

ARCADIS

Water Sampling Log

Project: Ford TCAP | Project No.: MN000625.0001.00002 | Page: 1 of 1

Site Location: St Paul MN | Date: 3/9/16

Site/Well No.: AMW-26 | Replicate No.: — | Code No.: —

Weather: 340°, cloudy | Sampling Time: Begin 1453 End 1504 | ID @ 1455

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	86.74
Depth to Water (ft bmp)	79.46
Water-Level Elevation (ft)	—
Water Column in Well (ft)	7.28
Casing Diameter/Type	2in/Steel
Gallons in Well	1.16
Gallons Pumped/Bailed Prior to Sampling	3.49
Sample Pump Intake Setting (ft bmp)	NA
Purge Time	begin 1442 end 1452
Pumping Rate (gpm)	NA
Evacuation Method	bailer

Field Parameters

Color	gray
Odor	yes - smells like hydraulic fluid
Appearance	opaque / turbid
pH (s.u.)	7.35
Conductivity (mS/cm)	1.104
(~~µmhos/cm~~) µS/cm	915
Turbidity (NTU)	NA
Temperature (°C)	11.25
Dissolved Oxygen (mg/L)	2.10
ORP (mV)	-121.8
Sampling Method	YSI 556
Remarks	—

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
SVOCs (8270)	1-L amber	2	none
TAL Metals, dissolved (6010)	500 mL plastic	1	HNO3
DRO (WI Modified)	1-L amber	2	HCl

Sampling Personnel: P Schmidz

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project	Ford TCAP	Project No.	MN630.1	Page	1 of 1
Site Location	St. Paul MN			Date	3/3/16
Site/Well No.	AMW-29	Replicate No.	—	Code No.	—
Weather	30s snow	Sampling Time: Begin	1035	End	1111 ST 1111

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	123.69
Depth to Water (ft bmp)	116.96 51
Water-Level Elevation (ft)	—
Water Column in Well (ft)	7.23 7.18
Casing Diameter/Type	2", Steel
Gallons in Well	1.1 gal
Gallons Pumped/Bailed Prior to Sampling	3.3 gal
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1035 end
Pumping Rate (gpm)	—
Evacuation Method	Bailer

Field Parameters

	time 1042	1104	1111
Color	grey	grey/tan	grey/tan
Odor	none	"	"
Appearance	turbid	turbid	turbid
pH (s.u.)	6.34	5.24	4.77
Conductivity (mS/cm)	0.782	0.745	0.731
(µmhos/cm)	0.997	0.947	0.930
Turbidity (NTU)	348.5	421.7	461.1
Temperature (°C)	13.80	14.02	13.78
Dissolved Oxygen (mg/L)	2.25	3.32	3.91
ORP (mV)	98.8	156.4	171.4
Sampling Method	YSI 556		
Remarks	DTW 117.21	116.79	116.84

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
TAL / RCRA Metals, dissolved	500 mL plastic	1	HNO3
DRO	1-L amber	2	HCl

Sampling Personnel: AR

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project: Ford TCAP | Project No.: MN630.1 | Page: 1 of 1

Site Location: St Paul MN | Date: 3/3/16

Site/Well No.: RW AMW-30 | Replicate No.: — | Code No.: —

Weather: 30s, snow | Sampling Time: Begin 1229 End —

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	122.42
Depth to Water (ft bmp)	113.52
Water-Level Elevation (ft)	—
Water Column in Well (ft)	8.90
Casing Diameter/Type	2", Steel
Gallons in Well	1.4
Gallons Pumped/Bailed Prior to Sampling	4.2
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1155 end 1229
Pumping Rate (gpm)	—
Evacuation Method	Bailer

Field Parameters

	1207	1220	1229
Color	Tan	grey/tan	grey/tan
Odor	none		
Appearance	turbid	turbid	turbid
pH (s.u.)	5.81	5.91	5.97
Conductivity (mS/cm)	1.257	1.212	1.196
(µmhos/cm)	1.588	1.525	1.157
Turbidity (NTU)	934.2	747.4	760.9
Temperature (°C)	14.17	14.25	14.27
Dissolved Oxygen (mg/L)	3.45	3.25	4.50
ORP (mV)	125.0	133.2	128.5
Remarks	115.41	116.26	118.07

Sampling Method: YSI 556

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
TAL / RCRA Metals, dissolved	500 mL plastic	1	HNO3
DRO	1-L amber	2	HCl

Sampling Personnel: AR

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

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1852347539

ARCADIS

Water Sampling Log

Project: Ford TCAP | Project No.: MN630.1 | Page: 1 of 1

Site Location: 3/3/16 St Paul MN | Date: 3/3/16

Site/Well No.: AMW-31 | Replicate No.: DUP-01 | Code No.: —

Weather: 30s, Snow | Sampling Time: Begin 1508 End —

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	120.30
Depth to Water (ft bmp)	104.86
Water-Level Elevation (ft)	—
Water Column in Well (ft)	15.44
Casing Diameter/Type	2", Steel
Gallons in Well	2.47
Gallons Pumped/Bailed Prior to Sampling	7.4 gal
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1425 end 1508
Pumping Rate (gpm)	—
Evacuation Method	bailing

Field Parameters

	time 1440	1454	1508
Color	grey	"	"
Odor	none	none	"
Appearance	cloudy/turbid	"	"
pH (s.u.)	7.40	7.43	7.57
Conductivity (mS/cm)	0.740	0.748	0.742
(µmhos/cm)	1.018	1.017	1.013
Turbidity (NTU)	344.9	590.1	608.1
Temperature (°C)	10.83	11.39	11.41
Dissolved Oxygen (mg/L)	1.58	1.12	1.27
ORP (mV)	-129.3	-127.2	-136.2

Sampling Method: YSI 556

Remarks: 104.97 | 104.90 | 104.80

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
TAL / RCRA Metals, dissolved	500 mL plastic	1	HNO3
DRO	1-L amber	2	HCl

Sampling Personnel: AR

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project: Ford TCAP | Project No. MW000630.0002 | Page 1 of 1

Site Location: St Paul, MN | Date: 6/9/16

Site/Well No.: AMW-05B | Replicate No.: — | Code No.: —

Weather: sunny, 80's | Sampling Time: Begin 1425 End 1500

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	54.82
Depth to Water (ft bmp)	29.54
Water-Level Elevation (ft)	—
Water Column in Well (ft)	25.28
Casing Diameter/Type	2in
Gallons in Well	4.3 gal
Gallons Pumped/Bailed Prior to Sampling	13 gal
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1355 end 1422
Pumping Rate (gpm)	—
Evacuation Method	Bailer

Field Parameters

Color	light brown
Odor	slight solvent-like odor
Appearance	slightly cloudy
pH (s.u.)	7.32
Conductivity (mS/cm)	1.088
(µmhos/cm)	—
Turbidity (NTU)	28.3
Temperature (°C)	14.51
Dissolved Oxygen (mg/L)	—
ORP (mV)	-51.6
Sampling Method	YSI 650
Remarks	—

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
SVOCs (8270)	1-L amber	2	none
TAL Metals, dissolved (6010)	500 mL plastic	1	HNO3
DRO (WI Modified)	1-L amber	2	HCl
GRO (WI Modified)	40 mL VOA	3	HCl
Cyanide (6010)	250 mL plastic	1	NaOH
PCBs (8082)	1-L amber	2	none

Sampling Personnel: AT

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project: Ford TCAP | Project No. MN000630.0002 | Page 1 of 1

Site Location: St Paul, MN | Date: 6/10/16

Site/Well No.: AMW-07 | Replicate No.: DUP-03 | Code No.:

Weather: Sunny/90's | Sampling Time: Begin 0730 End 0758

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	/
Land Surface Elevation (ft)	/
Sounded Well Depth (ft bmp)	44.93
Depth to Water (ft bmp)	40.16
Water-Level Elevation (ft)	-
Water Column in Well (ft)	4.77
Casing Diameter/Type	2 in
Gallons in Well	0.81
Gallons Pumped/Bailed Prior to Sampling	3 gal
Sample Pump Intake Setting (ft bmp)	-
Purge Time	begin 0725 end 0730
Pumping Rate (gpm)	-
Evacuation Method	Bailer

Field Parameters

Color	lt brown
Odor	none
Appearance	cloudy
pH (s.u.)	7.15
Conductivity (mS/cm)	0.713
(µmhos/cm)	-
Turbidity (NTU)	540.1
Temperature (°C)	14.60
Dissolved Oxygen (mg/L)	2.94
ORP (mV)	51.5
Sampling Method	YSI 650
Remarks	-

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
SVOCs (8270)	1-L amber	2	none
TAL Metals, dissolved (6010)	500 mL plastic	1	HNO3
DRO (WI Modified)	1-L amber	2	HCl
GRO (WI Modified)	40 mL VOA	3	HCl
Cyanide (6010)	250 mL plastic	1	NaOH
PCBs (8082)	1-L amber	2	none

Sampling Personnel: AT

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	mililiter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Groundwater Sampling Form

Project Number:	MN000630.0002	Task:	00002	**Well ID:**	AMW-19
Date:	6/9/16	Sampled By:	Adam Thompson		
Sampling Time:	1731	Recorded By:	Adam Thompson		
Weather:	Sunny, 80s	Duplicate/QA/QC:	—		

Instrument Identification

Instrument:	PID	Water Quality Meter(s) YSI 650
Serial #:	—	—

Purging Information

Casing Material:	PVC	Purge Method:(circle one)	Submersible Centrifugal Bladder Bailer (Peristaltic)
Casing Diameter:	2 in	Screen Interval: From:	14.3' To: 24.3'
Total Depth:	26.63	Pump Intake Setting:	23'
Depth to Water:	17.01	Volumes to be Purged:	Low Flow
Water Column:	9.62	Total Volume Purged:	2 gal
Gallons/Foot:	0.17	Pump On:	1706 Off: 1746
Gallons in Well:	1.5		

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1711	5	400	2000	17.25	6.97	1.018	102.3	0.52	12.43	42.5	
1716	10	400	4000	17.31	6.92	1.017	60.0	0.56	12.13	47.1	
1721	15	400	6000	17.31	6.88	1.018	21.5	0.55	11.93	58.1	
1726	20	400	8000	17.31	6.93	1.019	13.6	0.67	11.85	60.6	
1731	25	400	10000	17.31	6.83	1.017	12.1	0.65	11.74	64.7	

Observations During Sampling

Well Condition:	good	Purge Water Disposal:	55 gal drum
Color:	yellow	Turbidity(qualitative):	clear
Odor:	None	Other (OVA, HNU,etc.):	—

Constituents Sampled	Container Description From Lab / ARCADIS	Preservative
VOC (8260)	(3) 40 mL VOA	HCl
SVOCs (8270)	(2) 1-L amber	(none)
TAL Metals, dissolved (6010)	(1) 500 mL plastic	HNO3
DRO (WI Modified)	(2) 1-L amber	HCl
GRO (WI Modified)	(3) 40 mL VOA	HCl
Cyanide (6010)	(1) 250 mL plastic	NaOH
PCBs (8082)	(2) 1-L amber	(none)

ARCADIS

Groundwater Sampling Form

Project Number:	MN000630.0002	Task:	00002	**Well ID:**	AMW-20
Date:	6/8/16	Sampled By:	Adam Thompson		
Sampling Time:	1517	Recorded By:	Adam Thompson		
Weather:	Sunny, 80°F	Duplicate/QA/QC:	—		

Instrument Identification

Instrument:	PID	Water Quality Meter(s) YSI 650
Serial #:	—	—

Purging Information

Casing Material:	PVC	Purge Method:(circle one)	Submersible	Centrifugal	Bladder Bailer Peristaltic
Casing Diameter:	2 in	Screen Interval: From:	13.5 ft	To:	23.5 ft
Total Depth:	25.87	Pump Intake Setting:	22 ft		
Depth to Water:	19.19	Volumes to be Purged:	low flow		
Water Column:	6.68	Total Volume Purged:	1 gal		—
Gallons/Foot:	0.17	Pump On:	1457	Off:	1535
Gallons in Well:	1.1				

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1502	5	250	1250	19.52	7.09	1.150	36.2	5.91	13.20	23.5	
1507	10	250	2500	19.60	7.01	1.151	22.7	5.58	12.84	32.7	
1512	15	250	3750	19.60	6.99	1.162	12.5	5.54	13.01	40.7	
1517	20	250	5000	19.60	6.99	1.163	6.1	5.84	13.12	47.1	

Observations During Sampling

Well Condition:	Good	Purge Water Disposal:	55 gal drum
Color:	clear	Turbidity(qualitative):	Clear
Odor:	None	Other (OVA, HNU,etc.):	—

Constituents Sampled	Container Description From Lab / ARCADIS	Preservative
VOC (8260)	(3) 40 mL VOA	HCl
SVOCs (8270)	(2) 1-L amber	(none)
TAL Metals, dissolved (6010)	(1) 500 mL plastic	HNO3
DRO (WI Modified)	(2) 1-L amber	HCl
GRO (WI Modified)	(3) 40 mL VOA	HCl
Cyanide (6010)	(1) 250 mL plastic	NaOH
PCBs (8082)	(2) 1-L amber	(none)

ARCADIS

Water Sampling Log

Project: Ford TCAP | Project No. MN000630.0002 | Page 1 of 1

Site Location: St Paul, MN | Date: 6/10/16

Site/Well No.: AMW-21 | Replicate No.: — | Code No.: —

Weather: sunny/90's | Sampling Time: Begin 0933 End 0949

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	58.74
Depth to Water (ft bmp)	48.31
Water-Level Elevation (ft)	—
Water Column in Well (ft)	10.43
Casing Diameter/Type	2in/steel
Gallons in Well	1.77
Gallons Pumped/Bailed Prior to Sampling	5.5
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 0917 end 0931
Pumping Rate (gpm)	—
Evacuation Method	Bailer

Field Parameters

Color	dark brownish gray
Odor	none
Appearance	very cloudy
pH (s.u.)	7.54
Conductivity (mS/cm)	0.987
(µmhos/cm)	—
Turbidity (NTU)	954.7
Temperature (°C)	15.21
Dissolved Oxygen (mg/L)	1.80
ORP (mV)	95.2
Sampling Method	YSI 650
Remarks	—

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
SVOCs (8270)	1-L amber	2	none
TAL Metals, dissolved (6010)	500 mL plastic	1	HNO3
DRO (WI Modified)	1-L amber	2	HCl
GRO (WI Modified)	40 mL VOA	3	HCl
Cyanide (6010)	250 mL plastic	1	NaOH
PCBs (8082)	1-L amber	2	none

Sampling Personnel: AT

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Groundwater Sampling Form

Project Number: MN000630.0002 Task: 00002 **Well ID:** AMW-22
Date: 6/9/16 Sampled By: Adam Thompson
Sampling Time: 1542 Recorded By: Adam Thompson
Weather: Sunny, 80's Duplicate/QA/QC: —

Instrument Identification

Instrument:	PID	Water Quality Meter(s) YSI 650
Serial #:	—	—

Purging Information

Casing Material: PVC
Casing Diameter: 2 in
Total Depth: 28.39
Depth to Water: 16.27
Water Column: 12.12
Gallons/Foot: 0.17
Gallons in Well: 1.9

Purge Method:(circle one) Submersible Centrifugal Bladder Bailer (Peristaltic)
Screen Interval: From: 16' To: 26'
Pump Intake Setting: 24'
Volumes to be Purged: Low Flow
Total Volume Purged: 2 gal
Pump On: 1512 Off: 1601

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1523	6 min	400	2400	—	7.52	1.078	84.3	0.37	14.83	-82.3	
1528	11	400	4400	16.68	7.28	1.052	65.1	—	14.04	-79.8	
1533	16	400	6400	16.73	7.24	1.042	56.4	0.17	13.98	-86.4	
1538	21	400	8400	16.75	7.19	1.037	42.5	—	14.01	-88.2	
1542	25	400	10000	16.75	7.14	1.033	41.6	—	13.83	-89.2	

Observations During Sampling

Well Condition: good
Color: clear
Odor: none

Purge Water Disposal: 55 gal drum
Turbidity(qualitative): clear
Other (OVA, HNU,etc.): —

Constituents Sampled	Container Description From Lab / ARCADIS	Preservative
VOC (8260)	(3) 40 mL VOA	HCl
SVOCs (8270)	(2) 1-L amber	(none)
TAL Metals, dissolved (6010)	(1) 500 mL plastic	HNO3
DRO (WI Modified)	(2) 1-L amber	HCl
GRO (WI Modified)	(3) 40 mL VOA	HCl
Cyanide (6010)	(1) 250 mL plastic	NaOH
PCBs (8082)	(2) 1-L amber	(none)

ARCADIS

Groundwater Sampling Form

Project Number:	MN000630.0002	Task:	00002	**Well ID:**	AMW-22B
Date:	6/9/16	Sampled By:	Adam Thompson		
Sampling Time:	1640	Recorded By:	Adam Thompson		
Weather:	Sunny, 80s	Duplicate/QA/QC:	—		

Instrument Identification

Instrument:	PID	Water Quality Meter(s) YSI 650
Serial #:	—	—

Purging Information

Casing Material:	PVC	Purge Method:(circle one)	Submersible	Centrifugal	Bladder / Bailer / (Peristaltic)
Casing Diameter:	2 in	Screen Interval: From:	33'	To:	43'
Total Depth:	16.285	Pump Intake Setting:	42'		
Depth to Water:	44.76	Volumes to be Purged:	Low Flow		
Water Column:	28.48	Total Volume Purged:	1.5 gal		
Gallons/Foot:	0.17	Pump On:	1619	Off:	1651
Gallons in Well:	4.5				

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1624	5	400	2000	17.20	7.77	0.575	87.8	2.22	14.74	23.6	
1629	10	400	4000	17.25	7.66	0.579	73.2	—	14.10	-134.8	
1634	15	400	6000	17.25	7.66	0.577	46.1	—	13.97	-152.2	
1639	20	400	8000	17.25	7.64	0.577	32.9	—	13.95	-156.8	

Observations During Sampling

Well Condition:		Purge Water Disposal:	55 gal drum
Color:		Turbidity(qualitative):	
Odor:		Other (OVA, HNU,etc.):	—

Constituents Sampled	Container Description From Lab / ARCADIS	Preservative
VOC (8260)	(3) 40 mL VOA	HCl
SVOCs (8270)	(2) 1-L amber	(none)
TAL Metals, dissolved (6010)	(1) 500 mL plastic	HNO3
DRO (WI Modified)	(2) 1-L amber	HCl
GRO (WI Modified)	(3) 40 mL VOA	HCl
Cyanide (6010)	(1) 250 mL plastic	NaOH
PCBs (8082)	(2) 1-L amber	(none)

ARCADIS

Groundwater Sampling Form

Project Number:	MN000630.0002	Task:	00002	**Well ID:**	AMW-23
Date:	6/8/16	Sampled By:	Adam Thompson		
Sampling Time:	1042	Recorded By:	Adam Thompson		
Weather:	Sunny, 70's	Duplicate/QA/QC:	Dup-01 (20160608)		

Instrument Identification

Instrument:	PID	Water Quality Meter(s) YSI 650
Serial #:	—	—

Purging Information

Casing Material:	PVC	Purge Method:(circle one)	Submersible	Centrifugal	Bladder	Bailer	(Peristaltic)
Casing Diameter:	2 in	Screen Interval: From:	16	To:	26		
Total Depth:	28.97	Pump Intake Setting:	24				
Depth to Water:	20.02	Volumes to be Purged:	Low Flow				
Water Column:	8.95	Total Volume Purged:	2 gal	—			
Gallons/Foot:	0.17	Pump On:	1025	Off:	1105		
Gallons in Well:	1.4						

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or (ml))	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1024	5	450	2250	19.97	7.33	1.065	72.0	6.32	11.90	5.8	
1030	10	450	4500	19.97	7.21	1.059	37.0	4.43	11.69	0.1	
1034	14	450	6300	19.97	7.17	1.049	35.7	4.02	11.57	-2.5	
1038	18	450	8100	19.97	7.15	1.045	29.2	3.54	11.60	-2.6	
1042	22	450	9900	19.97	7.14	1.042	27.0	3.48	11.55	-2.7	

Observations During Sampling

Well Condition:	good	Purge Water Disposal:	55 gal drum
Color:	clear	Turbidity(qualitative):	Clear
Odor:	none	Other (OVA, HNU,etc.):	—

Constituents Sampled	Container Description From Lab / ARCADIS	Preservative
VOC (8260)	(3) 40 mL VOA	HCl
SVOCs (8270)	(2) 1-L amber	(none)
TAL Metals, dissolved (6010)	(1) 500 mL plastic	HNO3
DRO (WI Modified)	(2) 1-L amber	HCl
GRO (WI Modified)	(3) 40 mL VOA	HCl
Cyanide (6010)	(1) 250 mL plastic	NaOH
PCBs (8082)	(2) 1-L amber	(none)

ARCADIS

Groundwater Sampling Form

Project Number:	MN000630.0002	Task:	00002	**Well ID:**	AMW-23B
Date:	6/8/16	Sampled By:	Adam Thompson		
Sampling Time:	1412	Recorded By:	Adam Thompson		
Weather:	Sunny, 80°F	Duplicate/QA/QC:	—		

Instrument Identification

Instrument:	PID	Water Quality Meter(s) YSI 650
Serial #:	—	—

Purging Information

Casing Material:	steel	Purge Method:(circle one)	Submersible	Centrifugal	Bladder / Bailer / (Peristaltic)
Casing Diameter:	2 in	Screen Interval: From:	36 ft	To:	46 ft
Total Depth:	48.63	Pump Intake Setting:	25 ft		
Depth to Water:	20.48	Volumes to be Purged:	Low flow		
Water Column:	28.15	Total Volume Purged:	1.5 gal	—	
Gallons/Foot:	0.17	Pump On:	1347	Off:	1425
Gallons in Well:	4.5				

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
1352	5	300	1500	20.42	7.82	0.593	19.5	5.13	12.45	-151.4	
1357	10	300	3000	20.42	7.69	0.595	24.2	5.45	12.30	-144.4	
1402	15	300	4500	20.42	7.64	0.595	14.3	6.24	12.13	-137.3	
1407	20	300	6000	20.42	7.57	0.596	23.7	5.87	12.08	-128.1	
1412	25	300	7500	20.42	7.54	0.596	19.1	5.37	12.05	-124.0	

Observations During Sampling

Well Condition:	good	Purge Water Disposal:	55 gal drum
Color:	clear	Turbidity(qualitative):	clear
Odor:	none	Other (OVA, HNU,etc.):	—

Constituents Sampled	Container Description From Lab / ARCADIS	Preservative
VOC (8260)	(3) 40 mL VOA	HCl
SVOCs (8270)	(2) 1-L amber	(none)
TAL Metals, dissolved (6010)	(1) 500 mL plastic	HNO3
DRO (WI Modified)	(2) 1-L amber	HCl
GRO (WI Modified)	(3) 40 mL VOA	HCl
Cyanide (6010)	(1) 250 mL plastic	NaOH
PCBs (8082)	(2) 1-L amber	(none)

ARCADIS

Groundwater Sampling Form

Project Number:	MN000630.0002	Task:	00002	**Well ID:**	AMW-24
Date:	6/8/16	Sampled By:	Adam Thompson		
Sampling Time:	0931	Recorded By:	Adam Thompson		
Weather:	Sunny, 70's	Duplicate/QA/QC:	—		

Instrument Identification

Instrument:	PID	Water Quality Meter(s) YSI 650
Serial #:	—	—

Purging Information

Casing Material:	~~Steel~~ PVC	Purge Method:(circle one)	Submersible	Centrifugal	Bladder Bailer (Peristaltic)
Casing Diameter:	2 in	Screen Interval: From:	13'	To:	23'
Total Depth:	25.03	Pump Intake Setting:	20'		
Depth to Water:	16.85	Volumes to be Purged:	low flow		
Water Column:	8.18	Total Volume Purged:	2 gal	—	
Gallons/Foot:	0.17	Pump On:	0906	Off:	0945
Gallons in Well:	1.3				

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
0911	5	400	2000	16.72	7.15	1.803	73.2	6.43	11.14	-1.5	
0916	10	400	4000	16.67	7.03	1.751	21.8	4.70	10.93	-2.8	
0921	15	400	6000	16.67	7.00	1.679	11.0	4.09	10.93	-11.4	
0926	20	400	8000	16.67	6.98	1.672	4.3	4.01	10.88	-16.3	
0931	25	400	10000	16.68	6.97	1.661	0.4	3.44	10.87	-17.5	

Observations During Sampling

Well Condition:	Good	Purge Water Disposal:	55 gal drum
Color:	Clear	Turbidity(qualitative):	Clear
Odor:	None	Other (OVA, HNU,etc.):	—

Constituents Sampled	Container Description From Lab / ARCADIS	Preservative
VOC (8260)	(3) 40 mL VOA	HCl
SVOCs (8270)	(2) 1-L amber	(none)
TAL Metals, dissolved (6010)	(1) 500 mL plastic	HNO3
DRO (WI Modified)	(2) 1-L amber	HCl
GRO (WI Modified)	(3) 40 mL VOA	HCl
Cyanide (6010)	(1) 250 mL plastic	NaOH
PCBs (8082)	(2) 1-L amber	(none)

ARCADIS

Groundwater Sampling Form

Project Number:	MN000630.0002	Task:	00002	**Well ID:**	AMW-25
Date:	6/8/16	Sampled By:	Adam Thompson		
Sampling Time:	0825	Recorded By:	Adam Thompson		
Weather:	Sunny, 70's	Duplicate/QA/QC:	—		

Instrument Identification

Instrument:	PID	Water Quality Meter(s) YSI 650
Serial #:	—	—

Purging Information

Casing Material:	~~Steel~~ PVC	Purge Method:(circle one)	Submersible	Centrifugal	Bladder Bailer (Peristaltic)
Casing Diameter:	2 in	Screen Interval: From:	12'	To:	22'
Total Depth:	23.65	Pump Intake Setting:	20'		
Depth to Water:	14.66	Volumes to be Purged:	Low Flow		
Water Column:	8.99 ft	Total Volume Purged:	2 gal	—	
Gallons/Foot:	0.17	Pump On:	0800	Off:	0837
Gallons in Well:	1.4				

Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	pH (SI Units)	Conductivity (µmhos/cm)	Turbidity (NTUs)	Diss. Oxygen	Temp (°C or °F)	ORP (mV)	Comments:
805	5	400	2000	14.53	7.63	1.910	12.9	—	10.82	-69.9	
810	10	400	4000	14.55	7.39	1.875	21.5	—	10.63	-83.0	
815	15	400	6000	14.60	7.22	1.850	23.4	—	10.57	-96.6	
820	20	400	8000	14.60	7.16	1.825	8.1	—	10.57	-106.0	
825	25	400	10000	14.60	7.13	1.798	10.7	—	10.58	-114.1	

Observations During Sampling

Well Condition:	Good	Purge Water Disposal:	55 gal drum
Color:	clear	Turbidity(qualitative):	clear
Odor:	Solvent-like	Other (OVA, HNU,etc.):	—

Constituents Sampled	Container Description From Lab / ARCADIS	Preservative
VOC (8260)	(3) 40 mL VOA	HCl
SVOCs (8270)	(2) 1-L amber	(none)
TAL Metals, dissolved (6010)	(1) 500 mL plastic	HNO3
DRO (WI Modified)	(2) 1-L amber	HCl
GRO (WI Modified)	(3) 40 mL VOA	HCl
Cyanide (6010)	(1) 250 mL plastic	NaOH
PCBs (8082)	(2) 1-L amber	(none)

ARCADIS

Water Sampling Log

Project	Ford TCAP	Project No.	MN000630.0002	Page	1 of 1
Site Location	St Paul, MN			Date	6/10/16
Site/Well No.	AMW-26	Replicate No.	—	Code No.	—
Weather	Sunny/90's	Sampling Time: Begin	1031	End	1044

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	86.73
Depth to Water (ft bmp)	78.15
Water-Level Elevation (ft)	—
Water Column in Well (ft)	8.58
Casing Diameter/Type	2in/steel
Gallons in Well	1.46
Gallons Pumped/Bailed Prior to Sampling	5
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1007 end 1029
Pumping Rate (gpm)	—
Evacuation Method	Bailer

Field Parameters

Color	Brown
Odor	None
Appearance	cloudy
pH (s.u.)	7.38
Conductivity (mS/cm)	1.200
(µmhos/cm)	
Turbidity (NTU)	345.8
Temperature (°C)	14.50
Dissolved Oxygen (mg/L)	0.45
ORP (mV)	-100.2
Sampling Method	YSI 650
Remarks	—

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
SVOCs (8270)	1-L amber	2	none
TAL Metals, dissolved (6010)	500 mL plastic	1	HNO3
DRO (WI Modified)	1-L amber	2	HCl
GRO (WI Modified)	40 mL VOA	3	HCl
Cyanide (6010)	250 mL plastic	1	NaOH
PCBs (8082)	1-L amber	2	none

Sampling Personnel: AT

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project: Ford TCAP | Project No. MN000630.0002 | Page 1 of 1

Site Location: St Paul, MN | Date: 6/3/16

Site/Well No.: AMW-29 | Replicate No.: – | Code No.: –

Weather: Sunny, 70s | Sampling Time: Begin 1020 End 1050

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	–
Land Surface Elevation (ft)	–
Sounded Well Depth (ft bmp)	124.40
Depth to Water (ft bmp)	115.33
Water-Level Elevation (ft)	
Water Column in Well (ft)	9.07
Casing Diameter/Type	2 in/Steel
Gallons in Well	–
Gallons Pumped/Bailed Prior to Sampling	6 gal
Sample Pump Intake Setting (ft bmp)	–
Purge Time	begin 945 end 1025
Pumping Rate (gpm)	
Evacuation Method	Bailer

Field Parameters

Color	Tan
Odor	none
Appearance	cloudy
pH (s.u.)	5.49
Conductivity (mS/cm)	0.779
(µmhos/cm)	
Turbidity (NTU)	92.4
Temperature (°C)	15.56
Dissolved Oxygen (mg/L)	6.23
ORP (mV)	282.0
Sampling Method	YSI 650
Remarks	–

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
SVOCs (8270)	1-L amber	2	none
TAL Metals, dissolved (6010)	500 mL plastic	1	HNO3
DRO (WI Modified)	1-L amber	2	HCl
GRO (WI Modified)	40 mL VOA	3	HCl
Cyanide (6010)	250 mL plastic	1	NaOH
PCBs (8082)	1-L amber	2	none

Sampling Personnel: AT

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project	Ford TCAP	Project No.	MN000630.0002	Page	1 of 1
Site Location	St Paul, MN			Date	6/2/16
Site/Well No.	AMW-36	Replicate No.	—	Code No.	—
Weather	Sunny, 70s	Sampling Time: Begin	1630	End	1704

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	122.42
Depth to Water (ft bmp)	112.45
Water-Level Elevation (ft)	—
Water Column in Well (ft)	9.97
Casing Diameter/Type	2 in
Gallons in Well	1.7
Gallons Pumped/Bailed Prior to Sampling	6 gal
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1600 end 1630
Pumping Rate (gpm)	—
Evacuation Method	Bailer

Field Parameters

Color	light brown
Odor	None
Appearance	cloudy
pH (s.u.)	8.60
Conductivity (mS/cm)	
(µmhos/cm)	1.188 J
Turbidity (NTU)	474.2
Temperature (°C)	16.4
Dissolved Oxygen (mg/L)	5.57
ORP (mV)	188.2
Sampling Method	YSI 650
Remarks	—

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
SVOCs (8270)	1-L amber	2	none
TAL Metals, dissolved (6010)	500 mL plastic	1	HNO3
DRO (WI Modified)	1-L amber	2	HCl
GRO (WI Modified)	40 mL VOA	3	HCl
Cyanide (6010)	250 mL plastic	1	NaOH
PCBs (8082)	1-L amber	2	none

Sampling Personnel: AT

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

ARCADIS

Water Sampling Log

Project	Ford TCAP	Project No.	MN630.2	Page	1 of 1
Site Location	St. Paul, MN			Date	6/1/16
Site/Well No.	AMW-31	Replicate No.	—	Code No.	—
Weather	Cloudy/60s	Sampling Time: Begin	1215	End	1255

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	120.07
Depth to Water (ft bmp)	103.92
Water-Level Elevation (ft)	—
Water Column in Well (ft)	16.15
Casing Diameter/Type	2"/steel
Gallons in Well	2.75
Gallons Pumped/Bailed Prior to Sampling	—
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1147 end 1210
Pumping Rate (gpm)	
Evacuation Method	Bailer

Field Parameters

Color	Gray/Brown
Odor	Organics
Appearance	cloudy
pH (s.u.)	8.35
Conductivity (mS/cm)	1.047
(µmhos/cm)	—
Turbidity (NTU)	355.4
Temperature (°C)	12.66
Dissolved Oxygen (mg/L)	6.70
ORP (mV)	-110.1
Sampling Method	YSI 650
Remarks	—

Constituents Sampled	Container Description	Number	Preservative
VOC (8260)	40 mL VOA	3	HCl
SVOCs (8270)	1-L amber	2	none
TAL Metals, dissolved (6010)	500 mL plastic	1	HNO3
DRO (WI Modified)	1-L amber	2	HCl
GRO (WI Modified)	40 mL VOA	3	HCl
Cyanide (6010)	250 mL plastic	1	NaOH
PCBs (8082)	1-L amber	2	none

Sampling Personnel: AT

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds
		NM	Not Measured		

APPENDIX M

Waste Manifests

MIDAMERICA
TECHNICAL & ENVIRONMENTAL SERVICES, INC.

Shipping Manifest
Non-Hazardous
Recyclable Materials

1001
1468

GENERATOR

Name: FORD TCAP
Address: 966 MISSISSIPPI Blvd
Service Location:
City/State/Zip: ST. PAUL, MN
Contact: JOHN MEYER Phone:

Date: 4/11/12

Emergency Response Telephone Number: 1 (888) 314-2042		CONTAINER		TOTAL	(Wt/Vol)
SHIPPING DESCRIPTION/S		**Quantity**	**Size/Type**	**Quantity**	gal,lb,ton,c/y
Used Oil	*Lubricating Oil*				
	Petroleum Grease				
	Open Gear Lube / Debris				
Other :					
Used Oil Filters	*Industrial*				
	Automotive (Crushed)				
	Automotive (Uncrushed)				
Petroleum Contaminated Sorbents	*Granular Clay*				
	Granular Organic				
	Pads, Rags, Booms, other				
Petroleum Contaminated Water					
Other :					
Used Antifreeze					
Other :					
Fuel Oil, 3, NA 1993, PGIII					
Used Transformer Oil (<49ppm)					
Other:					
Other: Paint Sludge / Soils		2	55/pm	70	GAL

***Generator Certification:** *This is to certify that the above named materials are properly classified, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.*
**Generator Non-Contamination Certification (Antifreeze Only) - "I certify that, based on my knowledge of the waste antifreeze and the waste management practices used at this facility, that this batch of waste antifreeze has not been mixed with other wastes and that this certification is accurate, true and complete. I understand that significant penalties exist for improper management of solid and hazardous waste, including the possibility of monetary penalties and imprisonment."*

Name (Print): Signature: Date:
ANGHARAD PAGNON 4/11/12

Transporter "DRIVER"
Name (Print): Signature: Date:
JAKE MENK 4/11/12

Receiving Facility
Name (Print): Signature: Date:

Used oil subject to E.P.A. Regulation under 40 CFR Part 279, MN R. Chapter 7045, Et Seq. MidAmerica, Inc. certifies that oil filters will be shipped for recycling.
Antifreeze Processing Facility Destination: Pioneer Environmental Group, Inc., 7500 Hudson Blvd., Oakdale, MN 55128.

MIDAMERICA
TECHNICAL & ENVIRONMENTAL SERVICES, INC.

Bringing technical expertise to your environmental needs.

6989 N. 55th Street Ste. C2 • Oakdale, Minnesota 55128 • Office: 651-779-1900 • Fax: 651-779-9786

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	3E: 800-451-8346	014281093 JJK

GENERATOR

5. Generator's Name and Mailing Address
Ford Motor Company - TCAP
966 South Mississippi River Blvd
St. Paul, MN 55116

Generator's Site Address (if different than mailing address)

Generator's Phone: 651-402-1710

6. Transporter 1 Company Name: BAY WEST LLC — U.S. EPA ID Number: MND982205437

7. Transporter 2 Company Name: Pioneer Tank Lines — U.S. EPA ID Number: MND044176113

8. Designated Facility Name and Site Address
Badger Disposal of WI, Inc.
5611 W. Hemlock St.
Milwaukee, WI 53223

U.S. EPA ID Number: WID988580056

Facility's Phone: 414-760-9175

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN2811, WASTE Toxic solids, organic, n.o.s., 6.1, PG II	4	DM	2740 ~~[illegible]~~	P	~~D004 D006 D007~~ D008 D009 D010
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1) WS041830 Soil D011 D018 D040 DM55 X 4 ERG 154
24 HR ER PHONE # CONTRACTED BY BAYWEST W/3E (CONTRACT 5567)
J150636

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
[illegible handwriting]	[signature]	09	10	15

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: ______
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Sam Baker	[signature]	9	10	15

Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year

LAND DISPOSAL RESTRICTION & CERTIFICATION FORM

Generator Name: Ford Motor Company - TCAP	Shipped To: Badger Disposal of WI, Inc.
Generator Address: 966 South Mississippi River St. Paul, MN 55116	Address: 5611 W. Hemlock St. Milwaukee, WI 53223
Generator EPA ID No.: MND006207773	EPA ID No.: WID988580056
Manifest Document. No.: 014281093JJK	

Manifest Page # 1
Line Item # 1

☐ Non-Wastewater ☐ Wastewater

EPA Waste Codes: D005 D006 D007 D008 D009 D010 D011 D018 D040

☐ RCRA Non-Regulated

Waste Stream Profile: WS041830

Hazardous Constituents Contained in the Waste

	Avg %	Min %	Max %

Sub-Category

Certification Statements

This waste must be treated to the applicable performance based treatment set forth in 40CFR 268 Subpart C, Subpart D, 268.40 or RCRA Section 3004 (d) prior to land disposal.

I hereby certify that all information submitted on this and all associated documents is complete and accurate to the best of my knowledge and information.

Generator Signature: Robert J Marken
Printed Name: Robert J. Marken on behalf of Ford
Title: Engineer
Date: 9/10/15

RFO

Load Time 7:00 A.M - 8:30 A.M. 403509

Transporter 786 Inc

NON-HAZARDOUS MANIFEST

WASTE MANAGEMENT

NON-HAZARDOUS MANIFEST	1. Generator's US EPA ID No. MND 006207793 Manifest Doc No.	2. Page 1 of 1	9/18/2015

3. Generator's Mailing Address:	Generator's Site Address (if different than mailing):	A. Manifest Number
FORD ST PAUL 966 S MISSISSIPPI RIVER BLVD ST PAUL, MN 55116	FORD ST PAUL 966 S MISSISSIPPI RIVER BLVD ST PAUL, MN 55116 RAMSEY COUNTY	WMNA 09182015B
4. Generator's Phone 651-402-1710		B. State Generator's ID

5. Transporter 1 Company Name	6. US EPA ID Number	C. State Transporter's ID
WM Blaine		D. Transporter's Phone
7. Transporter 2 Company Name	8. US EPA ID Number	E. State Transporter's ID
Stockman		F. Transporter's Phone
9. Designated Facility Name and Site Address	10. US EPA ID Number	G. State Facility ID
Spruce Ridge 12755 137th Ave Glencoe, MN 55336		H. State Facility Phone 320-864-5503

GENERATOR

11. Description of Waste Materials	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
a. Investigative Ground Water, INVESTIGATIVE SOIL, TRASH	1	CM	15,820	LBS	
WM Profile # 102136MN, 102140MN, 102144MN					
b.					
WM Profile #					
c.					
WM Profile #					
d.					
WM Profile #					

J. Additional Descriptions for Materials Listed Above	K. Disposal Location			
BILL TO: WM Blaine	Cell		Level	
	Grid			

15. Special Handling Instructions and Additional Information

SITE SCALE WEIGHT TICKET # 8166 38 DRUMS

Purchase Order # EMERGENCY CONTACT / PHONE NO.: Bryan Zinda/612-339-9434

16. GENERATOR'S CERTIFICATE:

I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

Printed Name	Signature "On behalf of"	Month	Day	Year
Robert S. Marxen on behalf of Ford	Robert S Marxen	09	17	15

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year
James Stockman		09	18	15

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year

FACILITY

19. Certificate of Final Treatment/Disposal

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.

20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.

Printed Name	Signature	Month	Day	Year
Mary Trnka		09	18	15

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY Blue- GENERATOR #2 COPY Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY Gold- TRANSPORTER #1 COPY

WASTE MANAGEMENT

MN/IA Landfills - Spruce Ridge RMF
12755 137TH ST
GLENCOE, MN, 55336
Ph: (320) 864-5503

Original
Ticket# 403320

Customer Name WM BLAINE RO 0500
Ticket Date 09/18/2015
Payment Type Credit Account
Manual Ticket# 1323291
Hauling Ticket#
Route
State Waste Code
Manifest 091820158
Destination 8 PHASE
PO
Profile 102136MN (INVESTIGATIVE GROUND WATER)
Generator 148-FORD FORD MOTOR COMPANY

Carrier STOCKMAN STOCKMAN TRANSFER
Vehicle# 207 Volume
Container
Driver
Check#
Billing # 0000041
Gen EPA ID
License PAD4533/5X

	Time	Scale	Operator
In	09/18/2015 09:09:15	Scale	mary
Out	09/18/2015 09:09:15	Scale	mary
			* Manual Weight

Gross	48900 lb*
Tare	33180 lb*
Net	15720 lb
Tons	7.86

Comments voided ticket 402509 per MNMLDF to change date

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Bio Reactor Liq-To	100	7.86	Tons				RAMSM

Total Tax
Total Ticket

Driver's Signature_____

402WM

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740070WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 W2 0967049 T#8730856_LDR
CONTAINER NO. 2039
PRE-PRINTED VOLUME ON SECTION 11 IS AN ESTIMATE
NET WEIGHT = 23640 lbs, FORD SCALE TICKET # 8775
24 HR. ER # 1-800-545-7655
ERI: HERITAGE [571147910

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262 27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN — Signature: Robert J Marxen — Month: 03 Day: 14 Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Tony Pierson — Signature: [signature] — Month: 3 Day: 14 Year: 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND004207775	1	(800)326-1221	000740071WA5

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC
1350 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ,NA3077,HAZARDOUS WASTE, SOLID, N O S , 9,PGIII,(LEAD),(D008),ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 WE 0967049 [illegible]
CONTAINER NO. 2047
ERG PRINTED UNDER SECTION 14 IS AN ESTIMATE
NET WEIGHT = 26,640 lbs 24 HR ER #1-800-545-7655
NET WEIGHT = 31,140 lbs; FORD SCALE TICKET # 8771
ERI: HERITAGE [illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN — Signature: [signature] — Month 03 Day 14 Year 16

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: KEN WALLI — Signature: [signature] — Month 03 Day 14 Year 16
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name — Signature — Month Day Year

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740072WAS

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name — U.S. EPA ID Number
HERITAGE TRANSPORT, LLC — IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1.000 W2 0967049 T#8730860_LDR
CONTAINER NO. 2053
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 25,980 lbs, FORD SCALE TICKET #8774
24 HR ER # 1-800-545-7655
ERI: HERITAGE [57114813G

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J. Marxen	03	14	16

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Jerry L Barth		03	14	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: MND006207773
2. Page 1 of: 1
3. Emergency Response Phone: (800)326-1221
4. Manifest Tracking Number: 000740073WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC
U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1.000 W2 0967049 TN8730862 JDR
CONTAINER NO. 2049
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 26,340 lbs, FORD SCALE TICKET #8773
24 HR ER #1-800-545-7566
ERI: HERITAGE CS71148230

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN
Signature: Robert J Marxen
Month: 03 Day: 14 Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: KEVIN HAGARTY
Signature:
Month: 03 Day: 14 Year: 16
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name:
Signature:
Month: Day: Year:

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006251773	1	(800)326-1231	000740074WAS

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1086
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1082
GEN: 136790

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC
U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ,NA3077,HAZARDOUS WASTE, SOLID, N.O.S., 9,PGIII,(LEAD),(D008),ERG#171	1	CM	12	T	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 WS 0967049 10070864 LOR
CONTAINER NO. 2062 NET WEIGHT = ~~5506~~ 20,260
PRE-PRINTED VOLUME IN SECTION II IS AN ESTIMATE 24 HR ER # 1-800-545-7655
~~NET WEIGHT = 24,600 lbs~~ FORD SCALE TICKET #772
ERI: HERITAGE 1571146330

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	[signature]	03	14	16

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter	Printed/Typed Name	Signature	Month	Day	Year
Transporter 1	[handwritten name]	[signature]	03	14	16
Transporter 2					

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

MPS group

38755 Hills Tech Drive
Farmington Hills, MI
48150

Bill of Lading

NO: TCAP – 006013

Transporter Information		Tracking Infomrmation	
Transporter	Heritage Transport, LLC IND058484114		
Phone Number		Ford Scale Ticket #	8775
Driver Name	Anthony Perrone		
Truck #	453	Landfill Scale Ticket #	
Bin/Roll off #	2039		
		Landfill Manifest #	000740070 WAS

FROM		TO	
Company	Ford Motor Company - Twin Cities Assembly Plant	Company	Heritage Thermal Services Inc. 1250
Address	966 S. Mississippi River Blvd	Address	Saint George St. Unit 1
	St. Paul, Minnesota 55116		East Liverpool, OH 43920-3461
Contact	~~John Meyers~~ Robert J Morrison	Contact	Steve Cross (800) 545-7655
Phone	~~(952) 412-4641~~ 651 402 7210	Phones	

Waste ID	Waste Description	Volume	Unit	Weight	Unit	
TCAP14-001	Concrete (Impacted, non-haz special waste)					
TCAP14-002	Debris (PCB-Bulk product waste)					
TCAP14-003	Concrete (PCB Impacted,TSCA waste)					
TCAP14-004	Impacted, Non Hazardous Soil (Petroleum Impacted)					
TCAP14-005	Mixed Demo Debris/Impacted, Non Hazardous Soil (Petroleum Impacted)					
TCAP14-006	Demolition Debris					
TCAP 16-1,2,3	EQ, [illegible] Waste Hazardous Substance, Solid,NOS, [illegible]	1	Roll Off	23,640	lb	Bulletin 66

MPS Transporter Signature	Jerry D. Schulz Jerry D Schulz	Date	Mar. 14, 2016
TRANSPORTER MPS Signature	[signature]	Date	3.14.16

Notes

AREA C, TRENCH #1

White - MPS Copy Yellow - Ford Copy Pink- DIG Copy Goldenrod - Transporter

WEIGHT TICKET

Ford Motor Company

Twin Cities Assembly Plant
966 S. Mississippi River Blvd.
St. Paul, MN 55116

8775

Date 03-14-16
Inbound Time 13:03:28
Truck# 8775
Transaction 1
Weight 39720 lb

#1

Date 03-14-16
Inbound Time 13:03:28
Outbound Time 14:28:19
Truck# 8775
Transaction 1

Gross 67800 lb
Tare 39720 lb +4440 = 44,160 lbs
Net 28080 lb -4440 = 23,640 lbs

HERITAGE
~~MANIFEST~~ MANIFEST # 000740070 WAS

MPS BOL # 006013

SP AREA C, TRENCH #1 Date: 3-14-2016

MPS

Customer Name

Commodity: ~~TCAP16-1A/XXX~~ TCAP16-1,2,3

Load: ☐ IN ☒ OUT Driver: ☒ ON ☐ OFF

Carrier: HERITAGE #453

Driver:

Weigher: James F. Ellrie

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PRINTED WITH SOY INK

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071493-15119**

Trip#: 1677422 Pick-up: 03/14/16 - 03/14/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage_____ Final Delivery Demurrage_____

Tractor# 457 Trailer# 20-41

Odometer: Start_____ End_____

Liner Qty 1 Pump/Hose_____ RO# TO HT #5 RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN_____ RO# TO GEN_____

Stop Type LIVE LOAD RO Type OPEN TOP RO Size 20 Liner Qty

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver# 6048 Driver Name Tony Pierson Date 3-14-16

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740070WAS-1	8730856	8031	Y2Y	1	CM

Site Rep Name ROBERT J. MARXEN On behalf of Ford Signature Robert J. Marxen / gte Date 3-14-2016

63990: MPS GROUP, INC.
Company\Loc: 48\16

3

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	MND006207773	1	(800)326-1221	000740070WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
#5
1.000 W2 0967049_T#8730856_LDR
CONTAINER NO.
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT=23,640 LBS FORD SCALE TICKET #8775 24 HR. ER #1-800-545-7655 ERI: HERITAGE C57114791G

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. T125596

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J Marxen	03	14	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Tony Pierson		3	14	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
Scott White		3	17	16

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740070WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J Marxen Print Name: Robert J. Marxen

Company/Title: on behalf of Ford / Engineer Date: 03/14/16

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071494-15119**

Trip#: 1677423 Pick-up: 03/14/16 - 03/14/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage_____ Final Delivery Demurrage_____

Tractor#_____ Trailer#_____

Odometer: Start_____ End_____

Liner Qty_____1_____ Pump/Hose_____ RO# TO HT_____ RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN_____ RO# TO GEN_____

Stop Type___LIVE LOAD_____ RO Type___OPEN TOP_____ RO Size___20_____ Liner Qty___

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver#_____ Driver Name_____ Date_____

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740071WAS-1	8730858	8031	Y2Y	1	CM

Site Rep Name_____ Signature_____ Date_____

63990: MPS GROUP, INC.
Company\Loc: 48\16

5

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740071WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
#1
1.000 W2 0967049 IW8730858 LDR
CONTAINER NO. 2047
PPE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 26,640 LBS 24 HR ER# 1-800-545-7655
NET WEIGHT = 31,140 LBS FORD SCALE TICKET # 8771
ERI: HERITAGE C571148016

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. T125-616

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J Marxen	03	14	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
KEN WALLS	K Walls	03	14	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
Scott White		3	18	16

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740071WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J. Marxen Print Name: Robert J. Marxen

Company/Title: on behalf of Ford Date: 3/14/16

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

WEIGHT TICKET

Ford Motor Company

Twin Cities Assembly Plant
966 S. Mississippi River Blvd.
St. Paul, MN 55116

8774

Date 03-14-16
Inbound Time 13:01:29
Truck# 8774
Transaction 1
Weight 37740 lb

Date 03-14-16
Inbound Time 13:01:29
Outbound Time 14:21:42
Truck# 8774
Transaction 1

Gross 80160 lb
Tare 37740 lb +4380 = 42,120 lbs
Net 42380 lb -4380 = 25,980 lbs

HERITAGE
MANIFEST # 000740072 WAS

BOL # 006000

SP AREA C, TRENCH # 1 Date: 3-14-2016
MPS

Customer Name

Commodity: TCAP16-1,2,3

Load: ☐ IN ☒ OUT Driver: ☒ ON ☐ OFF

Carrier: HERITAGE #415

Driver:

Weigher: James F. Ellis

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PRINTED WITH SOY INK

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071495-15119**

Trip#: 1677424 Pick-up: 03/14/16 - 03/14/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage_____ Final Delivery Demurrage_____

Tractor# 415 Trailer# 2045

Odometer: Start_____ End_____

Liner Qty 1 Pump/Hose_____ RO# TO HT Orng Bag #3 RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN_____ RO# TO GEN_____

Stop Type___LIVE LOAD_____ RO Type___OPEN TOP_____ RO Size___20_____ Liner Qty___

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver# 5511 Driver Name_____ Date 03-14-2016

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740072WAS-1	8730860	8031	Y2Y	1	CM

Site Rep Name ROBERT J. MARXEN Signature Robert J. Marxen Date 3-14-2016
On behalf of Ford JJE

63990: MPS GROUP, INC.
Company\Loc: 48\16

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740072WAS

GENERATOR

5. Generator's Name and Mailing Address
- FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

#3

14. Special Handling Instructions and Additional Information
1.000 W2 0967049_T#8730860_LDR
CONTAINER NO.
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 25,980 lbs, FORD SCALE TICKET #8774
24 HR ER# 1-800-545-7655
ERI: HERITAGE [57114813G

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. T125617

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN — Signature: Robert J. Marxen — Month: 03 — Day: 14 — Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry L Barth — Signature — Month: 03 — Day: 14 — Year: 16

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Scott White — Signature — Month: 3 — Day: 18 — Year: 16

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740072WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert G Marxen Print Name: Robert J. Marxen

Company/Title: on behalf of Ford / Engineer Date: 03/14/16

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

HERITAGE
ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071496-15119**

Trip#: 1677425 Pick-up: 03/14/16 - 03/14/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773
PO#: PENDING

Internal Contact
KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage_____ Final Delivery Demurrage_____

Tractor# 417 Trailer# 20-37

Odometer: Start_____ End_____

Liner Qty_____ Pump/Hose_____ RO# TO HT BOX F4 RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN_____ RO# TO GEN_____

Stop Type___LIVE LOAD_____ RO Type___OPEN TOP_____ RO Size___20_____ Liner Qty___

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver# 5714 Driver Name [illegible] Date 3/14/16

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740073WAS-1	8730862	8031	Y2Y	1	CM

Site Rep Name ROBERT J. MARXEN on behalf of Ford Signature Robert J. Marxen / gje Date 3-14-2016

63990: MPS GROUP, INC.
Company\Loc: 48\16

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740073WAS

GENERATOR

5. Generator's Name and Mailing Address

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name — U.S. EPA ID Number

HERITAGE TRANSPORT, LLC — IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655

OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ,NA3077,HAZARDOUS WASTE, SOLID, N.O.S., 9,PGIII,(LEAD),(D008),ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1.000_W2_0967049_TW8730862_LDR
CONTAINER NO.
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 26,340 lbs, FORD SCALE TICKET #8773

Box #4

24 HR ER # 1-800-545-7566
ERI: HERITAGE CS711462JG

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. T125597

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J Marxen	03	14	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
KEVIN TAGGART	Kevin Taggart	03	14	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
Scott White		03	17	16

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740073WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J Marxen Print Name: Robert J. Marxen

Company/Title: on behalf of Ford Date: 03/14/16

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

MPS group

38755 Hills Tech Drive
Farmington Hills, MI
48150

Bill of Lading

NO: TCAP – 005999

Transporter Information		Tracking Informmation	
Transporter	H Heritage Transport, LLC IND058484114		
Phone Number		Ford Scale Ticket #	8773
Driver Name	Kevin Taggart		
Truck #	417	Landfill Scale Ticket #	
Bin/Roll off #	2049		
		Landfill Manifest #	000740073 WAS

FROM		TO	
Company	Ford Motor Company - Twin Cities Assembly Plant	Company	Heritage Thermal Services Inc. 1250
Address	966 S. Mississippi River Blvd	Address	Saint George St. Unit 1
	St. Paul, Minnesota 55116		East Liverpool, OH 43920-3461
Contact	John Meyers Robert J Meyers	Contact	Steve Cross (800) 545-7655
Phone	(952) 412 4641 651-447-1710	Phones	

Waste ID	Waste Description	Volume	Unit	Weight	Unit	
TCAP14-001	Concrete (Impacted, non-haz special waste)					
TCAP14-002	Debris (PCB-Bulk product waste)					
TCAP14-003	Concrete (PCB Impacted,TSCA waste)					
TCAP14-004	Impacted, Non Hazardous Soil (Petroleum Impacted)					
TCAP14-005	Mixed Demo Debris/Impacted, Non Hazardous Soil (Petroleum Impacted)					
TCAP14-006	Demolition Debris					
TCAP16 1,2,3	RQ, NA3077 Waste Hazardous Substance, Solid N.O.S. (PCB), 9, III	1	Roll off	26,340	lb	Bulletin 66

MPS ~~Transporter~~ Signature	Jerry D. Schulz *Jerry D Schulz*	Date	Mar. 14, 2016
TRANSPORTER ~~MPS~~ Signature	*Kevin Taggart*	Date	3/14/16

Notes

AREA C, TRENCH #1

White - MPS Copy Yellow - Ford Copy Pink- DIG Copy Goldenrod - Transporter

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740074WAS

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ,NA3077,HAZARDOUS WASTE, SOLID, N.O.S., 9,PGIII,(LEAD),(D008),ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 W2 Q967049 T#8730864_LDR
CONTAINER NO. 2062 NET WEIGHT = ~~[illegible]~~ 20,260 JFE
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
24 HR ER # 1-800-545-7655
JFE NET WEIGHT = 24,660 lbs FORD SCALE TICKET # 8772
ERI: HERITAGE [571148 3]G

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. TD5547

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN — Signature: Robert J. Marxen — Month 03 Day 14 Year 16

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: George Regas — Signature: George Regas — Month 03 Day 14 Year 16
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Leon [illegible] — Signature: [illegible] — Month 3 Day 15 Year 16

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740074WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J Marxen Print Name: Robert J. Marxen

Company/Title: On behalf of Ford / Engineer Date: 3/14/16

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

[redacted]

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071497-15119**

Trip#: 1677426

Site#: 138780

EPA ID#: MND006207773
PO#: PENDING

Pick-up: 03/14/16 - 03/14/16

Miles: 1823

Internal Contact
KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage 120 mins Final Delivery Demurrage_____

Tractor# 389 Trailer# 20-47

Odometer: Start 307944 End 309710

Liner Qty 1 Pump/Hose_____ RO# TO HT 2062 RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN_____ RO# TO GEN_____

Stop Type LIVE LOAD RO Type OPEN TOP RO Size 20 Liner Qty

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver# 5891 Driver Name GEORGE REGAS [signature] Date 3/14/16

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740074WAS-1	8730864	8031	Y2Y	1	CM

Site Rep
Name Robert J. Marxen on behalf of Ford Signature Robert J. Marxen Date 3/~~16~~ 14 RDM /16

63990: MPS GROUP, INC.
Company\Loc: 48\16

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071498-15119**

Trip#: 1677427 Pick-up: 03/22/16 - 03/22/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage_____ Final Delivery Demurrage_____

Tractor# 444 Trailer# 20-50

Odometer: Start 36298 End 38062

Liner Qty 1 Pump/Hose_____ RO# TO HT 2044 RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN 2049 RO# TO GEN 2062

Stop Type LIVE LOAD RO Type OPEN TOP RO Size 20 Liner Qty___

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver# 5943 Driver Name BRANDON DAVNER Date 3/22/16

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740075WAS-1	8730866	8031	Y2Y	1	CM

Site Rep on behalf of Ford
Name Robert T. Marxen Signature Robert T Marxen Date 3/22/16

Two boxes to Nitti

63990: MPS GROUP, INC.
Company\Loc: 48\16

5

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740075WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 W2 0967049 TW8730866 LDR
CONTAINER NO. 2044
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 20,260 , FORD SCALE TICKET # 8777
24 HR ER # 1-800-545-7655
ERI: HERITAGE E571148416

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. T125698

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J Marxen	03	22	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Brandon Danner		3	22	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
LEON Hunt		3	23	16

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740075WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J. Marxen Print Name: Robert J. Marxen

Company/Title: on behalf of Ford Date: 3/22/2016

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

MPS group

38755 Hills Tech Drive
Farmington Hills, MI
48150

Bill of Lading

NO: TCAP – 006015

Transporter Information		Tracking Infomrmation	
Transporter	HERITAGE TRANSPORT INC, LLC IND 050484114		
Phone Number		Ford Scale Ticket #	8777
Driver Name	Brandon Deaver		
Truck #	449	Landfill Scale Ticket #	
Bin/Roll off #	2044		
		Landfill Manifest #	000740075 WAS

FROM		TO	
Company	Ford Motor Company - Twin Cities Assembly Plant	Company	Heritage Thermal Services Inc.
Address	966 S. Mississippi River Blvd	Address	1250 Saint George St. Unit 1
	St. Paul, Minnesota 55116		East Liverpool, OH 43920-3461
Contact	~~John Meyers~~ Robert J. Meyer	Contact	Steve Cross (800) 545-7655
Phone	(952) 412 4641 651-402-1710	Phones	

Waste ID	Waste Description	Volume	Unit	Weight	Unit	
TCAP14-001	Concrete (Impacted, non-haz special waste)					
TCAP14-002	Debris (PCB-Bulk product waste)					
TCAP14-003	Concrete (PCB Impacted,TSCA waste)					
TCAP14-004	Impacted, Non Hazardous Soil (Petroleum Impacted)					
TCAP14-005	Mixed Demo Debris/Impacted, Non Hazardous Soil (Petroleum Impacted)					
TCAP14-006	Demolition Debris					
TCAP16 1,2,3	[illegible]	[illegible]	[illegible]	20,260	[illegible]	[illegible]

Transporter Signature	~~[illegible]~~ [signature]	Date	[illegible] 3/22/16
MPS Signature	Jerry D. Schultz	Date	Mar 22, 2016

Notes

Area C Trench #2

White - MPS Copy Yellow - Ford Copy Pink- DIG Copy Goldenrod - Transporter

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740076WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 W2 9967049_T#8730868_LDR
CONTAINER NO.
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 25,480 , FORD SCALE TICKET # 8776
T125697
24 HR. ER # 1-800-545-7655
ERI: HERITAGE E571148513G

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J Marxen	3	21	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
George Regas		03	21	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
JOE BURKE	Joe Burke	03	23	16

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740076WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J. Marxen Print Name: Robert J. Marxen

Company/Title: on behalf of Ford / Engineer Date: 3/21/16

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071499-15119**

Trip#: 1677428 Pick-up: 03/22/16 - 03/22/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage 90 Mins Final Delivery Demurrage_____

Tractor# 389 Trailer# 20-47

Odometer: Start 311519 End 312247

Liner Qty 1 Pump/Hose_____ RO# TO HT 2013 RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN 2043 RO# TO GEN 2057

Stop Type LIVE LOAD RO Type OPEN TOP RO Size 20 Liner Qty

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver# 5891 Driver Name GEORGE REGAS Date 3/21/16

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740076WAS-1	8730868	8031	Y2Y	1	CM

Site Rep
Name Robert J. Marxen on behalf of Ford Signature Robert J. Marxen Date 3/21/16

63990: MPS GROUP, INC.
Company\Loc: 48\16

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071493

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740070WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 17-MAR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	23,680
Totals	1	23,680

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071494

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740071WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 18-MAR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	26,840
Totals	1	26,840

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071495

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740072WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 18-MAR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	26,060
Totals	1	26,060

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071496

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740073WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 17-MAR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	25,940
Totals	1	25,940

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071497

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740074WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 15-MAR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	19,980
Totals	1	19,980

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071498

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740075WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 23-MAR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	20,980
Totals	1	20,980

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071499

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740076WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 23-MAR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	25,600
Totals	1	25,600

X:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740077WAS

GENERATOR

5. Generator's Name and Mailing Address

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name — U.S. EPA ID Number

HERITAGE TRANSPORT, LLC — IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655

OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information

1.000 W2 0967049 TH8730870_LDR
CONTAINER NO. 2035
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 20,680 lbs, FORD SCALE TICKET # 8778

24 HR. ER # 1-800-545-7655
ERI: HERITAGE C571148616

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. T12542

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J. Marxen	03	28	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
George Reges		03	28	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
JEREMIAH Cote		3	29	16

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740077WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J Marxen Print Name: Robert J. Marxen

Company/Title: on behalf of Ford Date: 3/28/16

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

Date printed: 03/29/2016
Time : 19:00:28

Heritage Thermal Services, Inc.

WEIGH TICKET

1250 St. George Street
East Liverpool, OH 43920-3400
Phone 330.385.7336

Authorization: HE16032909 **Truck Number:** T125792
Transporter: N/A

	Date:	Time:	Weight:
Enter	03/29/2016	16:58:00	63200
Exit	03/29/2016	19:00:00	41600
Net			21600

Wst Str: 138780-2

Document Numbers:

000740077WAS

Signatures

Heritage-WTI Security :_____

Driver :_____

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071500-15119**

Trip#: 1677429 Pick-up: 03/28/16 - 03/28/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460 RSM 3/28/16

Emergency Rate_____ Pickup Demurrage 195 mins Final Delivery Demurrage 120 mins

Tractor# 389 Trailer# 20-47

Odometer: Start 314539 End 316271

Liner Qty 1 Pump/Hose_____ RO# TO HT 20-35 RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN_____ RO# TO GEN_____

Stop Type LIVE LOAD RO Type OPEN TOP RO Size 20 Liner Qty

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver# 5891 Driver Name GEORGE REGAS Date 3/28/16

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740077WAS-1	8730870	8031	Y2Y	1	CM

Site Rep
Name Robert J. Marxen on behalf of Ford Signature Robert J Marxen Date 3/28/16

63990: MPS GROUP, INC.
Company\Loc: 48\16

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740078WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J. Marxen Print Name: Robert J. Marxen

Company/Title: on behalf of Ford Date: 3/28/16

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071501-15119**

Trip#: 1677430 Pick-up: 03/28/16 - 03/28/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460 RSM 3/28/16

Emergency Rate_____ Pickup Demurrage 120 Final Delivery Demurrage 94

Tractor# 449 Trailer# 20-50

Odometer: Start 39331 End 41091

Liner Qty 1 Pump/Hose_____ RO# TO HT 20-28 RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN 2013 RO# TO GEN 2044

Stop Type LIVE LOAD RO Type OPEN TOP RO Size 20 Liner Qty

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver# 5943 Driver Name BRANDON DAVNER Date 3/26/16

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740078WAS-1	8730872	8031	Y2Y	1	CM

Site Rep Name Robert J. Marxen Signature Robert J Marxen Date 3/28/16
on behalf of Ford

63990: MPS GROUP, INC.
Company\Loc: 48\16

MPS group

38755 Hills Tech Drive
Farmington Hills, MI
48150

Bill of Lading

NO: TCAP – 006017

Transporter Information		Tracking Infomrmation	
Transporter	HERITAGE TRANSPORT INC, LLC IND 058484114		
Phone Number		Ford Scale Ticket #	8779
Driver Name	Brandon Davner		
Truck #	449	Landfill Scale Ticket #	
Bin/Roll off #	2028		
		Landfill Manifest #	000740078 WAS

FROM		TO	
Company	Ford Motor Company - Twin Cities Assembly Plant	Company	Heritage Thermal Services Inc.
Address	966 S. Mississippi River Blvd	Address	1250 Saint George St. Unit 1
	St. Paul, Minnesota 55116		East Liverpool, OH 43920-3461
Contact	~~John Meyers~~ Robert T Mayer	Contact	Steve Cross (800) 545-7655
Phone	(952) 412 4641 651 402 1710	Phones	

Waste ID	Waste Description	Volume	Unit	Weight	Unit	
TCAP14-001	Concrete (Impacted, non-haz special waste)					
TCAP14-002	Debris (PCB-Bulk product waste)					
TCAP14-003	Concrete (PCB Impacted,TSCA waste)					
TCAP14-004	Impacted, Non Hazardous Soil (Petroleum Impacted)					
TCAP14-005	Mixed Demo Debris/Impacted, Non Hazardous Soil (Petroleum Impacted)					
TCAP14-006	Demolition Debris					
TCAP16 -1,2,3	[illegible] Waste Hazardous Substance, Solid,HOS, [illegible]	1	Roll Off	26,060	lb	Bulletin 68

Transporter Signature	~~Jerry D. Schulz~~ [signature]	Date	Mar. 28 2016
MPS Signature	[signature]	Date	May 28 2016

Notes

Area C Trench #2

White - MPS Copy Yellow - Ford Copy Pink- DIG Copy Goldenrod - Transporter

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number

GENERATOR

5. Generator's Name and Mailing Address

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1.					
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

2028
NET WEIGHT = 26060 lbs FORD SCALE TICKET #8779 24 HR. ER # 1-800-545-7655

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. T125794

Generator's/Offeror's Printed/Typed Name — Signature — Month Day Year

ON BEHALF OF FORD ROBERT J. MARXEN 03 28 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month Day Year

Brandon Vasquez 3 28 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month Day Year

3 28 16

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740079WAS

5. Generator's Name and Mailing Address

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name — U.S. EPA ID Number

HERITAGE TRANSPORT, LLC — IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655

OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1.000 W2 0967049 IN8730874 LDR
CONTAINER NO. 2061
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 24,860 lbs, FORD SCALE TICKET # 8780 24 HR, ER # 1-800-545-7655
ERI: HERITAGE CS71148830

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. T125795

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J Marxen	03	28	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Ed Ziems	Ed Z	3	28	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
J. REMINGTON COLE		3	29	16

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740079WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J Marxen Print Name: Robert J. Marxen

Company/Title: On behalf of Ford /Engineer Date: 3/28/16

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

Date printed: 03/29/2016
Time : 19:22:44

Heritage Thermal Services, Inc.

WEIGH TICKET

1250 St. George Street
East Liverpool, OH 43920-3400
Phone 330.385.7336

Authorization: HE16032908 **Truck Number:** T125795
Transporter: N/A

	Date:	Time:	Weight:
Enter	03/29/2016	17:42:00	66280
Exit	03/29/2016	19:22:00	41440
Net			24840

Wst Str: 138780-2

Document Numbers:

000740079WAS

Signatures

Heritage-WTI Security : _____

Driver : _____

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071502-15119**

Trip#: 1677431 Pick-up: 03/29/16 - 03/29/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage_____ Final Delivery Demurrage_____

Tractor#_____ Trailer#_____

Odometer: Start_____ End_____

Liner Qty_____1_____ Pump/Hose_____ RO# TO HT_____ RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN_____ RO# TO GEN_____

Stop Type___LIVE LOAD_____ RO Type___OPEN TOP_____ RO Size___20_____ Liner Qty___

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver#_____6045_____ Driver Name__EDWARD ZIEMS Edward J Ziems Date 3-28-16

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740079WAS-1	8730874	8031	Y2Y	1	CM

Site Rep Name Robert J. Marxen Signature Robert J Marxen Date 3-28-16
on behalf of Ford

63990: MPS GROUP, INC.
Company\Loc: 48\16

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071503-15119**

Trip#: 1677432 Pick-up: 03/31/16 - 03/31/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973 RSM 3/31/16
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage 90 Final Delivery Demurrage_____

Tractor# 449 Trailer# 20-50

Odometer: Start 41091 End 42830

Liner Qty 1 Pump/Hose_____ RO# TO HT 2400 RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN 2028 RO# TO GEN 2039

Stop Type LIVE LOAD RO Type OPEN TOP RO Size 20 Liner Qty

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver# [redacted]5943 Driver Name [redacted] Brandon Pavner Date 3/31/16

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740080WAS-1	8730876	8031	Y2Y	1	CM

Site Rep Name Robert J. Marxen Signature Robert J. Marxen Date 3/31/16
on behalf of Ford

63990: MPS GROUP, INC.
Company\Loc: 48\16

5

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740080WAS

5. Generator's Name and Mailing Address

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name — U.S. EPA ID Number

HERITAGE TRANSPORT, LLC — IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655

OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1.000 W2 0967049 TN8730876_LDR
CONTAINER NO. 2100
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 24,640 lbs FORD SCALE TICKET # 878

T125871
24 HR. ER # 1-800-545-7655
ERI: HERITAGE CS7114893G

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J. Marxen	03	31	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Brandon Davner		03	31	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
JOE BURKE		04	01	16

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740080WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J. Marxen Print Name: Robert J. Marxen

Company/Title: on behalf of Ford Date: 3/31/2016

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

Date printed: 04/03/2016
Time : 10:58:13

Heritage Thermal Services, Inc.

WEIGH TICKET

1250 St. George Street
East Liverpool, OH 43920-3400
Phone 330.385.7336

Authorization: HE16040109 **Truck Number:** T125871
Transporter: N/A

	Date:	Time:	Weight:
Enter	04/01/2016	18:25:00	56140
Exit	04/03/2016	10:58:00	31220
Net			24920

Wst Str: 138780-2

Document Numbers:

000740080WAS

Signatures

Heritage-WTI Security :_____

Driver :_____

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071504-15119**

Trip#: 1677433 Pick-up: 03/31/16 - 04/01/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage_____ Final Delivery Demurrage_____

Tractor#_____ Trailer#_____

Odometer: Start_____ End_____

Liner Qty_____1_____ Pump/Hose_____ RO# TO HT_____ RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN_____ RO# TO GEN_____

Stop Type___LIVE LOAD_____ RO Type___OPEN TOP_____ RO Size___20_____ Liner Qty___

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver#_____6045_____ Driver Name__EDWARD ZIEMS_____ Date_____

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740081WAS-1	8730878	8031	Y2Y	1	CM

Site Rep
Name Robert J. Marxen Signature Robert J Marxen Date 3/31/16
on behalf of Ford

63990: MPS GROUP, INC.
Company\Loc: 48\16

9

[X:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740081WAS

GENERATOR

5. Generator's Name and Mailing Address

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name — U.S. EPA ID Number

HERITAGE TRANSPORT, LLC — IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655

OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

T125870

1.000 W2 0967049 T#8730878_LDR
CONTAINER NO. 2106
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 26020 lbs, FORD SCALE TICKET # 8782

24 HR. ER# 1-800-545-7655
ERI: HERITAGE C57114903G

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J. Marxen	03	31	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Ed Ziems	Ed Z	3	31	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
JOE BURKE	Joe Burke	04	01	16

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740081WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J. Marxen Print Name: Robert J. Marxen

Company/Title: on behalf of Ford Date: 3/31/16

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

Date printed: 04/03/2016
Time : 04:58:26

Heritage Thermal Services, Inc.

WEIGH TICKET

1250 St. George Street
East Liverpool, OH 43920-3400
Phone 330.385.7336

Authorization: HE16040110 **Truck Number:** T125870
Transporter: N/A

	Date:	Time:	Weight:
Enter	04/01/2016	18:46:00	57820
Exit	04/03/2016	04:58:00	31880
Net			25940

Wst Str: 138780-2

Document Numbers:

000740081WAS

Signatures

Heritage-WTI Security :_____

Driver :_____

HERITAGE ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071505-15119**

Trip#: 1677434 Pick-up: 03/13/16 - 03/13/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage GE Final Delivery Demurrage_____

Tractor# 461 Trailer# 20-27

Odometer: Start_____ End_____

Liner Qty 1 Pump/Hose_____ RO# TO HT 2115 RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN 2120 RO# TO GEN 2108

Stop Type LIVE LOAD RO Type OPEN TOP RO Size 20 Liner Qty

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver# 5891 Driver Name GEORGE REGAS Date_____

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740082WAS-1	8730880	8031	Y2Y	1	CM

Site Rep
Name Robert S. Marxen Signature Robert S Marxen Date 4/4/16
on behalf of Ford

Take 2 boxes back to FORD!

63990: MPS GROUP, INC.
Company\Loc: 48\16

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)324-1221	000740082WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 W2 0967049 T#8720880 LDR
CONTAINER NO. 2115
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 22,880, FORD SCALE TICKET # 8783
24 HR. ER # 1-800-545-7655
ERI: HERITAGE 5711491JG

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. T125971

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN — Signature: Robert J. Marxen — Month: 04 Day: 04 Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: George Regas — Signature — Month: 04 Day: 04 Year: 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Scott White — Signature — Month: 4 Day: 8 Year: 16

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740082WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J. Marson Print Name: Robert J. Marson

Company/Title: on behalf of Ford Date: 4/4/2016

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

MPS group

38755 Hills Tech Drive
Farmington Hills, MI
48150

Bill of Lading

NO: TCAP – 006021

Transporter Information		Tracking Information	
Transporter	HERITAGE TRANSPORT INC, LLC IND 055804114		
Phone Number		Ford Scale Ticket #	8783
Driver Name			
Truck #	461	Landfill Scale Ticket #	
Bin/Roll off #	2115		
		Landfill Manifest #	000740082 WAS

FROM		TO	
Company	Ford Motor Company - Twin Cities Assembly Plant	Company	Heritage Thermal Services Inc.
Address	966 S. Mississippi River Blvd	Address	1250 Saint George St. Unit 1
	St. Paul, Minnesota 55116		East Liverpool, OH 43920-3461
Contact	~~John Meyers~~ Rob TJ Myers	Contact	Steve Cross (800) 545-7655
Phone	~~(952) 412-4644~~ 651 402 1710	Phones	

Waste ID	Waste Description	Volume	Unit	Weight	Unit	
TCAP14-001	Concrete (Impacted, non-haz special waste)					
TCAP14-002	Debris (PCB-Bulk product waste)					
TCAP14-003	Concrete (PCB Impacted,TSCA waste)					
TCAP14-004	Impacted, Non Hazardous Soil (Petroleum Impacted)					
TCAP14-005	Mixed Demo Debris/Impacted, Non Hazardous Soil (Petroleum Impacted)					
TCAP14-006	Demolition Debris					
TCAP14 1,2,3	[illegible]	[illegible]	[illegible]	22,880	[illegible]	[illegible]

Transporter Signature	[signature]	Date	April 4 2014
MPS Signature	Jerry Schultz	Date	April 4 2014

Notes

Area C Trench #3

White - MPS Copy Yellow - Ford Copy Pink- DIG Copy Goldenrod - Transporter

HERITAGE
ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **2071506-15119**

Trip#: 1677435 Pick-up: 03/13/16 - 03/13/16

Site#: 138780 Miles: 1823

EPA ID#: MND006207773 Internal Contact
PO#: PENDING KIRSTEN SHIELDS (317)381-6841

Mailing Address

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Site Address (GEN)

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Phone# (651)402-1710
MARXEN, BOB - (651)402-1710

HERITAGE TRANSPORT, LLC (8000) (317)486-2973
IND058484114 US DOT#: 314460

Emergency Rate_____ Pickup Demurrage JE Final Delivery Demurrage_____

Tractor# 461 Trailer# 20-27

Odometer: Start_____ End_____

Liner Qty 1 Pump/Hose_____ RO# TO HT 2102 RO# TO HT_____

PICKUP TIME: 08:00 RO# TO GEN_____ RO# TO GEN_____

Stop Type LIVE LOAD RO Type OPEN TOP RO Size 20 Liner Qty

1) DELAYED AT A PRIOR STOP
2) RESCHEDULED (CUSTOMER OR HERITAGE)
3) CUSTOMER NOT AVAILABLE AT SCHEDULED TIME
4) TRUCK / EQUIPMENT BREAKDOWN OR UNAVAILABLE
5) PAPERWORK OR INCOMPATIBILITY ISSUE
6) TRAFFIC / WEATHER / CONSTRUCTION / DIRECTIONS
7) FULL TRUCK (REQUIRES RESCHEDULE)
8) DOT HOS / DRIVER ILLNESS
9) CUSTOMER ACCEPTED EARLY (SIGNATURE REQUIRED)

Driver# 5891 Driver Name GEORGE REGAS Date_____

HERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	REMEDIATION OF SOIL W/ DRIED PAINT WAST	000740083WAS-1	8730882	8031	Y2Y	1	CM

Site Rep Name Robert J. Marxen Signature Robert J Marxen Date 4/4/16
on behalf of Ford

63990: MPS GROUP, INC.
Company\Loc: 48\16

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740083WAS

GENERATOR

5. Generator's Name and Mailing Address

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number: OHD980613541

HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1.000 W2 0967049 TW8730882_LDR
CONTAINER NO. 2102
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 5,920 , FORD SCALE TICKET # 8784 24 HR, ER# 1-800-545-7655
ERI: HERITAGE E571149236

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. T125972

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J Marxen	04	04	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
George Regas		04	04	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
Scott White		4	8	16

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTIONS (LDR) NOTICE AND CERTIFICATION

Generator Name: FORD MOTOR COMPANY - TCP
Manifest Tracking No.: 000740083WAS EPA I.D. No.: MND006207773

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: Robert J Marxen Print Name: Robert J. Marxen

Company/Title: On behalf of Ford Date: 4/4/2016

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
1.1	D008	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

Date printed: 04/09/2016
Time : 11:20:19

Heritage Thermal Services, Inc.

WEIGH TICKET

1250 St. George Street
East Liverpool, OH 43920-3400
Phone 330.385.7336

Authorization: HE16040902 **Truck Number:** T125972
Transporter: N/A

	Date:	Time:	Weight:
Enter	04/08/2016	10:41:00	36260
Exit	04/09/2016	11:20:00	31920
Net			4340

Wst Str: 138780-2

Document Numbers:

000740083WAS

Signatures

Heritage-WTI Security :_____

Driver :_____

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071500

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740077WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 29-MAR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	21,600
Totals	1	21,600

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071501

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740078WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 29-MAR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	26,320
Totals	1	26,320

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071502

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740079WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 29-MAR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	24,840
Totals	1	24,840

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071503

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740080WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 01-APR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	24,920
Totals	1	24,920

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071504

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740081WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 01-APR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	25,940
Totals	1	25,940

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071505

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740082WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 08-APR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	21,520
Totals	1	21,520

Facility : HERITAGE THERMAL SERVICES, INC.
PO BOX 1026
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
(800)545-7655
EPA ID: OHD980613541 **Stop :** 2071506

Generator Mailing Address :

ROBERT MARXEN
FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
UNITED STATES

Certificate of Treatment and Disposal

HERITAGE - WTI, INC. DBA HERITAGE THERMAL SERVICES CERTIFIES AND ASSURES TO OUR CUSTOMERS THAT THE TRANSACTION DESCRIBED BELOW, INCLUDING TREATMENT AND/OR STORAGE AND/OR RECLAMATION AND/OR DISPOSAL HAS BEEN HANDLED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

Generator Site Address : **Gen# :** 138780

FORD MOTOR COMPANY - TCP
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL,MN 55116-1888

DOCUMENT : 000740083WAS
EPA ID NUMBER : MND006207773
DATE RECEIVED : 08-APR-16

Wastestream	# Containers	Total Pounds
2 REMEDIATION OF SOIL W/ DRIED PAINT WASTE	1	4,340
Totals	1	4,340

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740076WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name
HERITAGE TRANSPORT, LLC
U.S. EPA ID Number
IND058484114

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number
OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 W2 0967049_T#8730868_LDR
CONTAINER NO.
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 25,480, FORD SCALE TICKET # 8776
24 HR. ER # 1-800-545-7655
ERI: HERITAGE [571148530

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN
Signature: Robert J Marxen
Month: 3 Day: 21 Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: George Regas
Signature:
Month: 03 Day: 21 Year: 16

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name:
Signature:
Month: Day: Year:

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740075WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 W2 0967049 T#8730866 LDR
CONTAINER NO. 2044
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 20,260 , FORD SCALE TICKET # 8777
24 HR ER # 1-800-545-7655
ERI: HERITAGE C571148410

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J Marxen	03	22	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Brandon Danner		3	22	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740077WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name
HERITAGE TRANSPORT, LLC
U.S. EPA ID Number
IND058484114

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number
OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 WZ 0967049 THR730870_LDR
CONTAINER NO. 2035
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 20,680 lbs, FORD SCALE TICKET # 8778
24 HR. ER # 1-800-545-7655
ERI: HERITAGE C5711486JG

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN
Signature: Robert J. Marxen
Month: 03 Day: 28 Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: George Regos
Signature:
Month: 03 Day: 28 Year: 16

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name:
Signature:
Month: Day: Year:

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740078WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 W2 0967049 T#8730872_LDR
CONTAINER NO. 2028
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 26,060 lbs FORD SCALE TICKET # 8779
24 HR. ER # 1-800-545-7655
ERI: HERITAGE E571148730

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN — Signature: Robert J. Marxen — Month: 03 — Day: 28 — Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Brandon Davner — Signature: — Month: 3 — Day: 28 — Year: 16

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740079WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 W2 0967049 IW8730874_LDR
CONTAINER NO. 2061
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 24,860 lbs, FORD SCALE TICKET # 8780
24 HR, ER # 1-800-545-7655
ERI: HERITAGE ES71148830

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN — Signature: Robert J Marxen — Month: 03 Day: 28 Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ed Ziems — Signature: Ed Z — Month: 3 Day: 28 Year: 16

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month — Day — Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740080WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 W2 0967049 T#8730876_LDR
CONTAINER NO. 2100
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT= 24,640 lbs FORD SCALE TICKET # 8781
24 HR. ER #1-800-545-7655
ERI: HERITAGE C57114893G

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
ON BEHALF OF FORD ROBERT J. MARXEN	Robert J. Marxen	03	31	16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Brandon Davner		03	31	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740081WAS

GENERATOR

5. Generator's Name and Mailing Address

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888

Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number: OHD980613541

HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461

Facility's Phone: (800)545-7655

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1.000 W2 Q967049 T#8Z30878_LDR
CONTAINER NO. 2106
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 26020 lbs, FORD SCALE TICKET # 8782
24 HR. ER # 1-800-545-7655
ERI: HERITAGE E571149036

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN — Signature: Robert J. Marxen — Month: 03 Day: 31 Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ed Ziems — Signature: Ed Z — Month: 3 Day: 31 Year: 16

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month — Day — Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740082WAS

GENERATOR

5. Generator's Name and Mailing Address
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)
FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.000 W2 0967049 TM8730880 LDR
CONTAINER NO. 2115
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 19,880 lbs, FORD SCALE TICKET # 8783
24 HR. ER # 1-800-545-7655
ERI: HERITAGE ES7114913G

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN — Signature: Robert J. Marxen — Month: 04 Day: 04 Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: George Regas — Signature: — Month: 04 Day: 04 Year: 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

TX:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	(800)326-1221	000740083WAS

GENERATOR

5. Generator's Name and Mailing Address

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
Generator's Phone: (651)402-1710

Generator's Site Address (if different than mailing address)

FORD MOTOR COMPANY - TCP / ROBERT MARXEN
966 MISSISSIPPI RIVER BLVD S
SAINT PAUL, MN 55116-1888
GEN: 138780

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number: OHD980613541

HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	1	CM	12	Y	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1,000 W2 0967049 TN8730882 LDR
CONTAINER NO. 2102
PRE-PRINTED VOLUME IN SECTION 11 IS AN ESTIMATE
NET WEIGHT = 5,920 , FORD SCALE TICKET # 8784
24 HR. ER #1-800-545-7655
ERI: HERITAGE 5711492106

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: ON BEHALF OF FORD ROBERT J. MARXEN — Signature: Robert J Marxen — Month: 04 Day: 04 Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: George Regas — Signature — Month: 04 Day: 04 Year: 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

218957750

ESB SK SHIP# ~~218988793~~

005282935SKS

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MND006207773	1	1-800-468-1760	005282935 SKS

GENERATOR

5. Generator's Name and Mailing Address

The Ford Twin Cities Assembly Plant
966 Mississippi River Blv
SAINT PAUL MN 55116-1858
Generator's Phone: 651-695-1318

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: SAFETY-KLEEN SYSTEMS, INC. — U.S. EPA ID Number: TXR000081205

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address

CLEAN HARBORS ENVIRONMENTAL SERVICES, IN
2247 S HIGHWAY 71
KIMBALL , NE 69145
Facility's Phone: 308-235-4012

U.S. EPA ID Number: NED981723513

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077 RQ WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (LEAD), 9, PG III	3	DM	680	P	D008
X	2. UN 3077 RQ WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S., (LEAD), 9, PG III	2	DF	960	P	D008
	3.					
	4.					

14. Special Handling Instructions and Additional Information

TSD:KP TH23825 CSG:

1)ERG#171;
24 HR EMERGENCY #1-800-468-1760 (SK / TFI)

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert J. Marxen on behalf of Ford — Signature: Robert J Marxen — Month: 10 Day: 11 Year: 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: SCOT ARMSTRONG — Signature: Scot Armstrong — Month: 10 Day: 11 Year: 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

1)7753454/155742 2) 7753454/155742

NON-HAZARDOUS MANIFEST

WASTE MANAGEMENT

NON-HAZARDOUS MANIFEST	1. Generator's US EPA ID No. MND 00620773 Manifest Doc No.	2. Page 1 of	6/21/2016

3. Generator's Mailing Address:
FORD ST PAUL
966 S MISSISSIPPI RIVER BOULEVARD
ST PAUL, MN 55116

4. Generator's Phone 651-402-1710

Generator's Site Address (If different than mailing):
FORD ST PAUL
966 S MISSISSIPPI RIVER BOULEVARD
ST PAUL, MN 55116
RAMSEY COUNTY

A. Manifest Number: WMNA

B. State Generator's ID

5. Transporter 1 Company Name: Stockman

6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Spruce Ridge
12755 137th Ave
Glencoe, MN 55336

10. US EPA ID Number

G. State Facility ID

H. State Facility Phone 320-864-5503

GENERATOR

11. Description of Waste Materials	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
a. Trash					
WM Profile # 102144MN					
b.					
WM Profile #					
c.					
WM Profile #					
d.					
WM Profile #					

J. Additional Descriptions for Materials Listed Above

BILL TO: WM Blaine

K. Disposal Location

Cell | Level

Grid

15. Special Handling Instructions and Additional Information

Site Weight Ticket #9100 7 Drums

Purchase Order # EMERGENCY CONTACT / PHONE NO.: Bryan Zinda/612-339-9423

16. GENERATOR'S CERTIFICATE:

I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

Printed Name	Signature "On behalf of" Ford	Month	Day	Year
Robert J. Marxen	Robert J. Marxen	06	21	16

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year
James Stolkus		6	21	16

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year

FACILITY

19. Certificate of Final Treatment/Disposal

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.

20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.

Printed Name	Signature	Month	Day	Year

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY Blue- GENERATOR #2 COPY Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY Gold- TRANSPORTER #1 COPY

NON-HAZARDOUS MANIFEST

WASTE MANAGEMENT

NON-HAZARDOUS MANIFEST	1. Generator's US EPA ID No. MND 00620773	Manifest Doc No.	2. Page 1 of	6/21/2016

3. Generator's Mailing Address:
FORD ST PAUL
966 S MISSISSIPPI RIVER BLVD
ST PAUL, MN 55116

4. Generator's Phone 651-402-1710

Generator's Site Address (If different than mailing):
FORD ST PAUL
966 S MISSISSIPPI RIVER BLVD
ST PAUL, MN 55116
RAMSEY COUNTY

A. Manifest Number **WMNA**

B. State Generator's ID

5. Transporter 1 Company Name
Stockman

6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Spruce Ridge
12755 137th Ave
Glencoe, MN 55336

10. US EPA ID Number

G. State Facility ID

H. State Facility Phone 320-864-5503

GENERATOR

11. Description of Waste Materials	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
a. Investigative Soil					
WM Profile # 102140MN					
b.					
WM Profile #					
c.					
WM Profile #					
d.					
WM Profile #					

J. Additional Descriptions for Materials Listed Above

BILL TO: WM Blaine

K. Disposal Location

Cell | Level

Grid

15. Special Handling Instructions and Additional Information

Site Weight Ticket #9100 30 Drums

Purchase Order # EMERGENCY CONTACT / PHONE NO.: Bryan Zinda/612-339-9434

16. GENERATOR'S CERTIFICATE:

I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

Printed Name	Signature "On behalf of" Ford	Month	Day	Year
Robert J. Marxen	Robert J Marxen	06	21	16

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year
James Stockman		6	21	16

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year

FACILITY

19. Certificate of Final Treatment/Disposal

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.

20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.

Printed Name	Signature	Month	Day	Year

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY Blue- GENERATOR #2 COPY Yellow- GENERATOR #1 COPY

Pink- FACILITY USE ONLY Gold- TRANSPORTER #1 COPY

NON-HAZARDOUS MANIFEST

WASTE MANAGEMENT

NON-HAZARDOUS MANIFEST	1. Generator's US EPA ID No. MND 00620773 Manifest Doc No.	2. Page 1 of	6/21/2016

3. Generator's Mailing Address:
FORD ST PAUL
966 S MISSISSIPPI RIVER BLVD
ST PAUL, MN 55116

4. Generator's Phone 651-402-1710

Generator's Site Address (If different than mailing):
FORD ST PAUL
966 S MISSISSIPPI RIVER BLVD
ST PAUL, MN 55116
RAMSEY COUNTY

A. Manifest Number WMNA

B. State Generator's ID

5. Transporter 1 Company Name | **6. US EPA ID Number** | C. State Transporter's ID | D. Transporter's Phone

7. Transporter 2 Company Name | **8. US EPA ID Number** | E. State Transporter's ID | F. Transporter's Phone

9. Designated Facility Name and Site Address
Spruce Ridge
12755 137th Ave
Glencoe, MN 55336

10. US EPA ID Number

G. State Facility ID

H. State Facility Phone 320-864-5503

GENERATOR

11. Description of Waste Materials	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
a. Investigative Ground Water					
WM Profile # 102136MN					
b.					
WM Profile #					
c.					
WM Profile #					
d.					
WM Profile #					

J. Additional Descriptions for Materials Listed Above

BILL TO: WM Blaine

K. Disposal Location

Cell		Level	
Grid			

15. Special Handling Instructions and Additional Information

Site Weight Ticket #9100 7 Drums

Purchase Order # | EMERGENCY CONTACT / PHONE NO.: Bryan Zinda/612-339-9434

16. GENERATOR'S CERTIFICATE:

I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

Printed Name	Signature "On behalf of"	Month	Day	Year
Robert J. Marxen	Robert J. Marxen Ford	06	21	16

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year
James STOCKMO		6	21	16

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year

FACILITY

19. Certificate of Final Treatment/Disposal

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.

20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.

Printed Name	Signature	Month	Day	Year

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY
Blue- GENERATOR #2 COPY
Yellow- GENERATOR #1 COPY
Pink- FACILITY USE ONLY
Gold- TRANSPORTER #1 COPY

WEIGHT TICKET

Ford Motor Company

Twin Cities Assembly Plant
966 S. Mississippi River Blvd.
St. Paul, MN 55116

9100

Date 06-21-16
Inbound Time 15:28:26
Truck# 9100
Transaction 1
Weight 33220 lb

Date 06-21-16
Inbound Time 15:28:26
Outbound Time 17:52:50
Truck# 9100
Transaction 1

Gross 51960 lb
Tare 33220 lb
Net 18740 lb

Date: 6-21-2016

Customer Name ARCADIS

Commodity: NON-HAZARDOUS IDW

Load: ☐ IN ☒ OUT Driver: ☒ ON ☐ OFF

Carrier: STOCKMAN #207/227

Driver:

Weigher: James F. Exline

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APPENDIX N

Surface Water Pathway Evaluation User's Guide

Hoehn, Kelly

From: Hadiaris, Amy (MPCA) <amy.hadiaris@state.mn.us>
Sent: Monday, October 17, 2016 6:25 PM
To: Oesterreich, Ryan
Cc: Sinden, Carol (MPCA)
Subject: FW: 7Q10 MissR Ford dam

Thanks Carol!
Ryan, please feel free to contact Carol if you have questions.
Amy

From: Sinden, Carol (MPCA)
Sent: Monday, October 17, 2016 1:50 PM
To: Hadiaris, Amy (MPCA) <amy.hadiaris@state.mn.us>; Monson, Phil (MPCA) <phil.monson@state.mn.us>
Subject: RE: 7Q10 MissR Ford dam

Here is the result of my calculations and additional documentation. Please let me know if you have any questions.

7Q10 annual low flow estimate for Mississippi River at Ford Lock and Dam #1: 1253 cfs (cubic feet per second)

The period of record for the US Geological Survey continuous gage #05288500 near Anoka is 1931-present. For calculating the 7Q10 low flow the beginning year was changed to 1936 to reflect the consistent operation and presence of flow control structures such as dams. The 1936 start year was previously agreed to by Met Council, US Army Corps Of Engineers, US Geological Survey, and MPCA for conducting a wasteload allocation study of the Mississippi River for the Metropolitan Council wastewater treatment facility. The Mississippi River headwater reservoirs have been consistently operated since 1936.

The annual 7Q10 of the Mississippi River near Anoka at gage #05288500 is calculated at 1485 cfs
(based on a period of record of 1936-2013)

In addition, because the site at the Ford dam is downstream of the Minneapolis and St Paul water intakes, adjustments were made to reflect the withdrawal of water from the river for water supply. The withdrawal rates (during dry periods) are based on historical data and other information available from personal communications with staff at the Minneapolis Public Works Water Treatment and Distribution Services and Saint Paul Regional Waters Services.

Withdrawal amounts are estimated at approximately 232 cfs
124 cfs (80 mgd) for Minneapolis
108 cfs (70 mgd) for Saint Paul

From: Sinden, Carol (MPCA)
Sent: Monday, September 26, 2016 2:28 PM
To: Monson, Phil (MPCA) <phil.monson@state.mn.us>
Subject: RE: 7Q10 Miss. R. in Twin Cities Ford dam

Hi Phil,
I can help you find a 7Q10, but have some qualifiers for the number.

The period of record at the gage 05288500 near Anoka is 1931-present, and I have a number for the period of record of 1936-2002. The change to the beginning year was made to reflect the consistent operation and presence of flow control structures such as dams, and was previously agreed upon by Met Council, USArmyCorpsOfEngineers, USGeological

Survey, and MPCA for conducting a wasteload allocation study of the Mississippi River for the Metropolitan Council wastewater treatment facility. The Mississippi River headwater reservoirs have been consistently operated since 1936.

In addition, because the site at the Ford dam is downstream of the Minneapolis and St Paul water intakes, adjustments need to be made to reflect the withdrawal of water from the river for water supply. Withdrawal amounts back in 2004 were estimated at approximately 400 cfs; 116 cfs (75 mgd) for St Paul and 278 cfs (180 mgd) for Minneapolis. There is some uncertainty for the estimates, as they're based on MDNR water appropriation permit data and other information available from the water utilities.

How good does the calculation need to be, ballpark or more exact?

thanks,
Carol

From: Monson, Phil (MPCA)
Sent: Monday, September 26, 2016 8:34 AM
To: Sinden, Carol (MPCA) <carol.sinden@state.mn.us>
Subject: 7Q10 Miss. R. in Twin Cities Ford dam

Hi Carol,

I have a request for 7Q10 data for the Mississippi River associate with the Ford lock and dam. The site listed was USGS Gauge #05288500. Can you help me with this? Thanks!

Phil

Philip Monson
Research Scientist
Minnesota Pollution Control Agency
651.757.2258

From: Oesterreich, Ryan [mailto:Ryan.Oesterreich@arcadis.com]
Sent: Monday, September 26, 2016 4:48 PM
To: Monson, Phil (MPCA) <phil.monson@state.mn.us>
Cc: Hadiaris, Amy (MPCA) <amy.hadiaris@state.mn.us>
Subject: RE: SW guidance

Hi Phil,

This information will be used in calculating the resulting surface water concentration after discharge of a non-point source (groundwater plume) to the Mississippi River at the site mentioned in the emails below. A previous version of this report did a similar calculation and had the following in the text:

The 7Q10 value (37,011 L/sec) represents the lowest stream flow for seven consecutive days that would be expected to occur in a 10 year period and is therefore a conservative value representing a minimum amount of dilution. The data was obtained from United States Geological Survey (USGS) gage #05288500 on the Mississippi River near Anoka, MN and was provided by the MPCA.

I have looked for the email from the MPCA that might have more information on how it was calculated, but I can't find anything, so I apologize for that. As far as I am concerned, the precision is super critical. Even at a ten-year low period the flow of the river is much higher than our anticipated groundwater discharge so the exact number probably won't significantly change the result. I just want to make sure this is all above board and defensible. Amy, let me know if you disagree regarding the required precision.

Thanks

Ryan

Ryan Oesterreich | Senior Environmental Engineer | ryan.oesterreich@arcadis.com
Arcadis | Arcadis U.S., Inc.
430 First Avenue North, Suite 720, Minneapolis, MN | 55401 | USA
T. +1 612 373 0225 | M. + 1 608 347 7184

Professional Engineer / PE-MN, #47974
Professional Geologist / PG-MN, #47974

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Hoehn, Kelly

From: Monson, Phil (MPCA) <phil.monson@state.mn.us>
Sent: Wednesday, October 26, 2016 9:31 AM
To: Oesterreich, Ryan
Cc: jim behm
Subject: Follow up to yesterday's conversation

Ryan,

Hi. I've copied our previous message strings and added in a follow up response for you to consider. I will try to touch base with Amy sometime today. Thanks. Phil

I just wanted to follow up on the following 4 pieces of information.

- 7Q10 data for the Mississippi River adjacent to the TCAP site
- Chronic criteria that may have been developed for barium, iron, manganese and vanadium since this was issued

There are no promulgated criteria values for these ions. I do use some guidance values though I would hesitate to call them chronic.

Understood, we can discuss them on the phone and I can either note that distinction in our tables/text or just say that "standards" aren't available. I may defer to Amy on that too

Follow up response: The following are guidance values that can be considered in regards to assessing risk associated with potential discharge to surface waters:

	Chronic	Acute
Barium:	700 ug/L	2700 ug/L
Iron	600 ug/L	1200 ug/L
Manganese	800 ug/L	1600 ug/L
Vanadium	132 ug/L	

For these metals the values would be applied as filtered (dissolved) fraction.

- Site-specific hardness value

II assume that this for receiving waterbody associated with the site?

Yes, this is for the Mississippi River

Follow up response:

For calculating the concentration of metal based on equations found in the Class 2B MN 7050 rules (https://www.revisor.mn.gov/rules/?id=7050.0222) use the hardness value reported from the sample used for analysis of the metal of interest. Otherwise, use the table of values found in the class 2B 7050 rules as guidance.

- Background metals concentrations for barium, cobalt, iron, manganese, mercury, thallium, and vanadium.

Not sure where this would be considered. Upstream of any discharge?
Yes, this would be background values for the Mississippi around the vicinity of the TCAP site so that we can make sure that constituents that may be added to the river don't exceed SW standards when including the background concentrations that are already in the river.

Follow up response:

For the remaining metals of interest – cobalt, Mercury and thallium:

Cobalt: 5 ug/L chronic and 436 ug/L acute. These are for total metal
Mercury: 6.9 nanograms/L chronic and 2400 ug/L acute. These are for total metal
Thallium: 0.56 ug/L chronic and 64 ug/L acute. These are for total metal.

The Surface Water Pathway Evaluation Users Guide that we are using for evaluation of this site says we need to get that information from the EAO. We are submitting this report for internal client review today using placeholder values, but hope to finalize and send to the MPCA for review next week.

Philip Monson
Research Scientist
Minnesota Pollution Control Agency
651.757.2258

TABLE 8
TIER 1 SURFACE WATER SCREENING NUMBERS
FOR ALL NON-ORVW OR OIRW WATERS

CHEMICAL or POLLUTANT	CAS No.	UNITS	ENTER SITE CONCEN-TRATION	TIER 1 SCREENING NUMBER
INORGANICS -- TRACE METALS				
Aluminum	7429905	ug/l	ND	50
Antimony	7440360	ug/l	3.3	5.5
Arsenic	7440382	ug/l	9.7	2.0
Barium	7440393	ug/l	240	Use Tier 2
Beryllium	7440417	ug/l	0.13	0.66
Boron	7440428	ug/l		Use Tier 2
Cadmium	7440439	ug/l	0.52	Lower of 5 or Value from Note #3 (2.1)
Chromium, +3	16065831	ug/l		See Note #3
Chromium, +6	18540299	ug/l		11
Chromium, total	7440473	ug/l	2.9	100
Cobalt	7440484	ug/l	9.9	2.8
Copper	7440508	ug/l	ND	See Note #3
Iron	7439896	ug/l	9000	Use Tier 2
Lead	7439921	ug/l	ND	See Note #3
Lithium	7439932	ug/l		Use Tier 2
Manganese	7439965	ug/l	2800	Use Tier 2
Mercury (total)	7469976	ug/l	0.27	0.0069
Molybdenum	7439987	ug/l		Use Tier 2
Nickel	7440020	ug/l	8.2	Lower of 100 or Value from Note #3 (100)
Selenium	7782492	ug/l	ND	5.0
Silver	7440224	ug/l	ND	0.12
Strontium	7440246	ug/l		Use Tier 2
Thallium	7440280	ug/l	9.7	0.28
Tin	7440315	ug/l		Use Tier 2
Vanadium	7440622	ug/l	0.64	Use Tier 2
Zinc	7440666	ug/l	13	See Note #3 (206.7)
Zirconium	7440677	ug/l		17
INORGANICS -- MAJOR IONS				
Ammonia, unionized as N (See Note #4)	7664417	ug/l		16
Bicarbonates (HCO3)	71523	meq/l		5
Chloride	7782505	mg/l		50

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FOR ALL NON-ORVW OR OIRW WATERS

CHEMICAL or POLLUTANT	CAS No.	UNITS	ENTER SITE CONCEN-TRATION	TIER 1 SCREENING NUMBER
Chlorine, total residual	7782505	ug/l		11
Cyanide, free	57125	ug/l	15	5.2
Fluoride	16984488	mg/l		2(S)
Magnesium	7439954	ug/l		Use Tier 2
Nitrate, as N		mg/l		10
Nitrite, as N	14797650	mg/l		1
Nitrate + Nitrite, as N	NA	mg/l		10
Sodium	7440235	meq/l		60% of total
Sodium (continued)	7440235	meq/l		cations
Sulfate	14808798	mg/l		Use Tier 2
Sulfates, wild rice present	14808798	mg/l		10
OTHER INORGANICS				
Asbestos, >10 um in length (C)	1.32E+08	fibers/l		7.0E+6
Hydrogen sulfide	7783064	mg/l		0.02
VOLATILE ORGANICS				
Acetone	67641	ug/l	5.4	1500
Acrolein	107028	ug/l		21
Acrylonitrile (C)	107131	ug/l		0.38
Benzene (C)	71432	ug/l	0.14	5
Bromoform (C)	75252	ug/l		33
Carbon Disulfide	75150	ug/l	ND	0.92
Carbon tetrachloride (C)	56235	ug/l	ND	1.9
Chlorobenzene (Monochlorobenzene)	108907	ug/l	ND	20
Chloroform (C)	67663	ug/l	ND	53
1,2- Dibromo-3-chloropropane (C)	96128	ug/l	ND	0.2
1,2- Dichlorobenzene (ortho)	95501	ug/l	ND	14
1,3- Dichlorobenzene	541731	ug/l	ND	71
1,4- Dichlorobenzene (para) (C)	106467	ug/l	ND	15
Dichlorobenzenes	25321226	ug/l		763
1,1- Dichloroethane	75343	ug/l	ND	47
1,2- Dichloroethane (C)	107062	ug/l	ND	3.5

TABLE 8
TIER 1 SURFACE WATER SCREENING NUMBERS
FOR ALL NON-ORVW OR OIRW WATERS

CHEMICAL or POLLUTANT	CAS No.	UNITS	ENTER SITE CONCEN-TRATION	TIER 1 SCREENING NUMBER
1,1- Dichloroethylene	75354	ug/l	ND	7
1,2- Dichloroethylene (cis)	156592	ug/l	1.6	70
1,2- Dichloroethylene (trans)	156605	ug/l	ND	100
1,2- Dichloroethylene (mixture)	540590	ug/l		590
Dichloromethane (Methylene chloride) (C)	75092	ug/l	ND	5
1,2- Dichloropropane (C)	78875	ug/l	ND	5
1,3- Dichloropropene	542756	ug/l		0.055
Ethylbenzene (C)	100414	ug/l	ND	68
Hexachlorobutadiene	87683	ug/l	ND	9.3
Hexachloroethane	67721	ug/l		12
Hexane	110543	ug/l		0.58
2- Hexanone	591786	ug/l		99
Methyl ethyl ketone (2-Butanone)	78933	ug/l	0.88	14000
4- Methyl-2-pentanone (Methyl isobutyl ketone	108101	ug/l	ND	170
Styrene (C)	100425	ug/l	ND	Use Tier 2
1,1,2,2- Tetrachloroethane (C)	79345	ug/l	ND	1.1
Tetrachloroethylene (PCE) (C)	127184	ug/l	ND	3.8
Tetrachloromethane	56235	ug/l		240
Toluene	108883	ug/l	0.19	253
Tribromomethane	75252	ug/l		320
1,2,4- Trichlorobenzene	120821	ug/l	ND	70
1,1,1- Trichloroethane	71556	ug/l	ND	200
1,1,2- Trichloroethane	79005	ug/l	ND	Use Tier 2
1,1,2- Trichloroethylene (TCE) (C)	79016	ug/l	ND	5
Vinyl acetate	108054	ug/l		16
Vinyl chloride (C)	75014	ug/l	ND	0.17
Xylenes, total	1330207	ug/l	ND	166
NON- (AND SEMI-) VOLATILE ORGANICS				
Benzidine	92875	ug/l		3.9
Benzyl Alcohol	100516	ug/l		8.6
4- Bromophenyl phenyl ether	101553	ug/l	ND	1.5
Butylbenzyl phthalate	85687	ug/l	ND	19

TABLE 8
TIER 1 SURFACE WATER SCREENING NUMBERS
FOR ALL NON-ORVW OR OIRW WATERS

CHEMICAL or POLLUTANT	CAS No.	UNITS	ENTER SITE CONCEN-TRATION	TIER 1 SCREENING NUMBER
2-Chlorophenol	95578	ug/l	ND	2000
Dibenzofuran	132649	ug/l	ND	3.7
2,3- Dichlorophenol	576249	ug/l		365
Di-2-ethylhexyl adipate [Bis(2-ethylhexyl)]	103231	ug/l		400
Di-ethyl phthalate	84662	ug/l	ND	Use Tier 2
Di-2-ethylhexyl phthalate [Bis(2-ethylhexyl)](	117817	ug/l		1.9
2,4- Dimethylphenol	105679	ug/l	ND	Use Tier 2
Di-n-butyl phthalate	84742	ug/l	ND	35
2,4- Dinitrophenol	51285	ug/l	ND	Use Tier 2
Di-n-octyl phthalate	117840	ug/l	ND	30
Ethylene glycol	107211	ug/l		Use Tier 2
Hexachlorobenzene (C)	118741	ug/l	ND	0.000061
Hexachlorocyclopentadiene	77474	ug/l	ND	5.2
1- Methylnaphthalene	90120	ug/l	ND	2.1
2- Methylphenol	95487	ug/l	ND	13
4- Methylphenol	106445	ug/l	ND	Use Tier 2
4- Nitrophenol	100027	ug/l	ND	300
Nitrophenols	25154556	ug/l		150
N- Nitrosodiphenylamine	86306	ug/l	ND	210
Pentachlorobenzene	608935	ug/l		0.47
Pentachlorophenol	87865	ug/l	ND	0.93
Phenol	108952	ug/l	ND	123
2,4,6- Trichlorophenol	88062	ug/l	ND	2.0
POLYNUCLEAR AROMATIC HYDROCARBONS				
Acenaphthene	83329	ug/l	ND	20
Anthracene	120127	ug/l	ND	0.035
Benzo(a)anthracene	56553	ug/l	ND	0.027
Benzo(a)pyrene and BaP Equivalents	50328	ug/l	ND	Use Tier 2
Fluoranthene	206440	ug/l	ND	1.9
Fluorene	86737	ug/l	ND	3.9
1- Methylnaphthalene	90120	ug/l		2.1
Naphthalene	91203	ug/l	0.46	81
Phenanthrene	85018	ug/l	ND	3.6

TABLE 8
TIER 1 SURFACE WATER SCREENING NUMBERS
FOR ALL NON-ORVW OR OIRW WATERS

CHEMICAL or POLLUTANT	CAS No.	UNITS	ENTER SITE CONCEN-TRATION	TIER 1 SCREENING NUMBER
POLYCHLORINATED BIPHENYLS				
Polychlorinated biphenyls (PCBs, total) (C)	1336363	ug/l		0.000014
MDA PESTICIDES AND HERBICIDES				
Alachlor (Lasso) (C)	15972608	ug/l		2
Aldicarb (Temik)	116063	ug/l		3
Atrazine (Weedex) (C)	1912249	ug/l		3
Carbofuran	1553662	ug/l		40
Chlordane (C)		ug/l		0.000073
Chlorpyrifos	2921882	ug/l		0.041
Cyanazine (Bladex)	21725462	ug/l		Use Tier 2
2,4- Dichlorophenoxyacetic acid (2,4-D)	94757	ug/l		70
Metribuzin	21087649	ug/l		Use Tier 2
Picloram	1918021	ug/l		500
Simazine	122349	ug/l		4
2,4,5- TP (Silvex)	93721	ug/l		50
PESTICIDES (OTHER)				
Aldicarb sulfone	1646884	ug/l		2
Aldicarb sulfoxide	1646873	ug/l		4
Dalapon	75990	ug/l		200
DDD	72548	ug/l		0.01
DDT (C)	50293	ug/l		0.000011
Demeton	8065483	ug/l		0.1
Diazinon	333415	ug/l		0.043
Dieldrin (C)	60571	ug/l		0.0000065
Dinoseb	88857	ug/l		7
Diquat	231367	ug/l		20
Endosulfan	115297	ug/l		0.0076
Endothall	145733	ug/l		100
Endrin	72208	ug/l		0.0039
Glyphosate	1071836	ug/l		700
Guthion	86500	ug/l		0.01
Heptachlor (C)	76448	ug/l		0.00010

TABLE 8
TIER 1 SURFACE WATER SCREENING NUMBERS
FOR ALL NON-ORVW OR OIRW WATERS

	CHEMICAL or POLLUTANT	CAS No.	UNITS	ENTER SITE CONCEN-TRATION	TIER 1 SCREENING NUMBER
	Heptachlor epoxide (C)	1024573	ug/l		0.00012
	BHC (other than gamma)	W318868	ug/l		2.2
	Lindane (gamma BHC) (C)	58899	ug/l		0.0087
	Malathion	121755	ug/l		0.1
	Methoxychlor	72435	ug/l		0.03
	Mirex	2385855	ug/l		0.001
	Oxamyl (Vydate)	23135220	ug/l		200
	Parathion	298000	ug/l		0.013
	Toxaphene (C)	8001352	ug/l		0.00031
DIOXINS AND DIBENZOFURANS					
	Dioxin (2,3,7,8-TCDD)	1746016	pg/l		Use Tier 2
	Dioxins/furans (non-2,3,7,8-)	W20	ug/l		Use Tier 2
RADIONUCLIDES					
	Uranium	7440611	ug/l		2.6
	Radioactive Material	W09			See Note #2
EXPLOSIVES/FLAMMABLE SOLIDS					
	Dinitrotoluene	25321146	ug/l		230
OTHER ORGANICS					
	Benzoic Acid	65850	ug/l		42
	Biphenyl	92524	ug/l		14
	Bunker C oil	W16	ug/l		Use Tier 2
	Crude oil	8002059	ug/l		Use Tier 2
	Decane	124185	ug/l		49
	Diesel & No. 2 Fuel oil	I305 (W19)	ug/l		Use Tier 2
	Ethylene dibromide	106934	ug/l		0.05
	Formaldehyde	50000	ug/l		Use Tier 2
	Gasoline	8006619	ug/l		Use Tier 2
	Haloethanes	W22	ug/l		122
2-	Octanone	111137	ug/l		8.3
	Pentachlorinated ethanes	76017	ug/l		1100
1-	Pentanol	71410	ug/l		110

TABLE 8
TIER 1 SURFACE WATER SCREENING NUMBERS
FOR ALL NON-ORVW OR OIRW WATERS

	CHEMICAL or POLLUTANT	CAS No.	UNITS	ENTER SITE CONCEN-TRATION	TIER 1 SCREENING NUMBER
2-	Propanol	67630	ug/l		7.5
	Propylene glycol	57556	ug/l		Use Tier 2
	Tetrachloromethane	56235	ug/L		240
	Tribromomethane	75252	ug/L		320
	Trihalomethanes, total (C)	W25	ug/l		100
	Urea	57136	ug/l		Use Tier 2
INDICATOR PARAMETERS					
	Color	W01	Pt-Co		15(S)
	Dissolved oxygen	W02	mg/l		7 as a daily min.
	Fecal coliform	W03	#/100 ml		See Note #1
	Foaming agents	W04	ug/l		500 (S)
	Hardness, Ca+Mg as CaCO3	W05	mg/l		50
	Odor	W06	TON		3(S)
	Oil, freon extractable	W07	ug/l		500
	pH	W08	low		6.5
	pH (continued)	W08	high		8.5
	Salinity, total	W10	mg/l		1000
	Specific conductance, at 25 C	W11	umhos/cm		1000
	Temperature	W12	F		no material increase
	Total dissolved salts	W13	mg/l		700
	Total dissolved solids	W14	mg/l		500 (S)
	Turbidity	W15	NTUs		1 - 5

NOTES:

Note #1 FECAL COLIFORM ORGANISMS
Not to exceed 200 organisms per 100 milliliters as a geometric mean of not less than five samples in any calendar month, nor shall more than ten percent of all samples taken during any calendar month individually exceed 400 organisms per 100 milliliters. The standard applies only between April 1 and October 31.

Note #2 RADIOACTIVE MATERIALS
See Minn. R. 7050.0221, subps. 2, 3, 4 and 5; 7050.0222, subps.2, 3, 4, 5, and 6; 7050.0224, subps. 2, 3, and 4. For Class 4, see Minn. R. 7050.0224, subps. 2, 3, and 4.

TABLE 8
TIER 1 SURFACE WATER SCREENING NUMBERS
FOR ALL NON-ORVW OR OIRW WATERS

CHEMICAL or POLLUTANT	CAS No.	UNITS	ENTER SITE CONCEN-TRATION	TIER 1 SCREENING NUMBER

Note #3 STANDARDS THAT VARY WITH TOTAL HARDNESS (TH): Metals include: cadmium, chromium^{+3}, copper, lead, nickel, silver, and zinc.

SEE ATTACHED WORKSHEET 1 AND MAPS IN APPENDIX 3 FOR PERFORMING CALCULATIONS. The maps contain conservative estimated hardness values for each major surface water drainage basin. Alternatively, water samples could be collected from the receiving surface water body and analyzed for total hardness.

Note #4 AMMONIA, UNIONIZED AS N - STANDARDS THAT VARY WITH pH AND TEMPERATURE
The ammonia leaching toward a surface water from a contaminated ground water site should be measured by collecting water samples from the temporary and permanent wells located just upgradient of discharge to the surface water body in question. The ammonia needs to be measured as TOTAL ammonia. The pH and temperature of the receiving body of water also need to be collected at the time the ammonia sample is taken. This information is used in the equation listed in the note below to determine the percent un-ionized ammonia, which, is then utilized to convert the total ammonia concentration in the wells to a non-ionized concentration.

The percent unionized ammonia can be calculated for any temperature and pH by using the following formula taken from Emerson, K., R.C. Russo, R.E. Lund, and R.V. Thurston. 1975. Aqueous ammonia equilibrium calculations; effect of pH and temperature. Journal of the Fisheries Board of Canada 32: 2379-2383.

$$f = [1 / (10^{(pka - pH)} + 1)] \times 100$$

where:
f = the percent of the total ammonia in the un-ionized state
pka = 0.09 + [2730/T], the dissociation constant for ammonia
T = temperature in degrees Kelvin (273.16 degrees Kelvin = 0 degrees Celsius).

SEE WORKSHEET 2 FOR PERFORMING CALCULATIONS.

TIER 1 WORKSHEET 1
WORKSHEET FOR CALCULATION OF THE CHRONIC AND MAXIMUM STANDARDS AND FINAL ACUTE VALUES FOR METALS
(place total hardness in Column B)

Metal	Total Hardness (1) (mg/L)	Chronic Standard (ug/L)
Cadmium	220	2.106602267
Chromium +3	220	394.8006526
Copper	220	16.02338277
Lead	220	8.680575832
Nickel	220	307.2030422
Silver	220	
Zinc	220	206.7521267

Notes:

(1) Obtain values for the total hardness in mg/L from surface water quality representatives in the Water Standards Unit, Environmental Assessment and Outcomes Division. The total hardness number (as $CaCO_3$) obtained from the MPCA EAO staff will be based on a statisitical evaluation of data generated from the Ambient Water Monitoring Program at the MPCA.
Alternatively, collect sufficient water samples of the surface water receiving body and analyze for Total Hardness. Site-specific hardness values can be used only if there is a sufficient amount of background data collected over time and it has good quality assurance. This data will be compared to STORET data to determine how adequate it is. If MPCA EAO staff determines the field data is inadequate, STORET data will be used until and if site-specific data are generated that meets criteria listed above.

TABLE 11

TIER 2 SURFACE WATER STANDARDS AND CRITERIA FOR CLASSES 2B OR 2C OR 2D, 3A OR 3B OR 3C OR 3D, 4A OR 4B OR 4C, AND 5 WATERS

					SURFACE WATER STANDARDS (a), (See Note #1) (MINNESOTA RULES PART 7050.0220)							OTHER SW CRITERIA		SCREENING NUMBERS		
				ENTER SITE	2B, C & D	2B, C &D	2B, C & D	3A/3B/3C/3D	4A	4B/4C	5	MN SITE SPECIFIC	GLI	EPA	TIER II SECONDARY	EPA
	CHEMICAL or POLLUTANT	CAS No.	UNITS	CONCEN-TRATION	CHRONIC (CS)	MAXIMUM (MS)	FAV	INDUSTRIAL CONSUMPTION	IRRIGA-TION	LIVESTOCK/ LIVE.+ IRR.	AESTHE-TICS	CHRONIC CRITERIA (b)	WILDLIFE VALUE(c)	CHRONIC AWQC (d)	CHRONIC VALUE (e)	CHRONIC LOEL (f)
INORGANICS -- TRACE METALS																
	Aluminum	7429905	ug/L	ND	125	1072	2145									
	Antimony	7440360	ug/L	3.3	31	90	180									
	Arsenic	7440382	ug/L	9.7	53	360	720									
	Barium	7440393	ug/L	240	700							See Note #9			4	
	Beryllium	7440417	ug/L	0.13											0.66	
	Boron	7440428	ug/L						500			See Note #9				
	Cadmium	7440439	ug/L	0.52	2.11	81.37	162.73									
	Chromium, +3	16065831	ug/L		394.80	3312.24	6616.89									
	Chromium, +6	18540299	ug/L		11	16	32									
	Chromium, total	7440473	ug/L	2.9												
	Cobalt	7440484	ug/L	9.9	5	436	872									
	Copper	7440508	ug/L	ND	16.02	37.26	74.56									
	Iron	7439896	ug/L	9000	600							See Note #9				
	Lead	7439921	ug/L	ND	8.68	222.76	446.66									
	Lithium	7439932	ug/L									See Note #9			14	
	Manganese	7439965	ug/L	2800	800							See Note #9				
	Mercury (total)	7469976	ug/L	0.27	0.0069	2.4*	4.9*						0.0013			
	Mercury (total)(continued)	7469976	ug/L			0.69	1.38									
	Molybdenum	7439987	ug/L									See Note #9				
	Nickel	7440020	ug/L	8.2	307.20	2763.38	5526.49									
	Selenium	7782492	ug/L	ND	5.0	20	40									
	Silver	7440224	ug/L	ND	1	7.9	15.8									
	Strontium	7440246	ug/L									See Note #9			1500	
	Thallium	7440280	ug/L	9.7	0.56	64	128									
	Tin	7440315	ug/L									See Note #9			73	
	Vanadium	7440622	ug/L	0.64	132							See Note #9				
	Zinc	7440666	ug/L	13	206.75	228.25	456.51									
	Zirconium	7440677	ug/L												17	
INORGANICS -- MAJOR IONS																
	Ammonia, unionized as N (See Note #11)	7664417	ug/L		40	none	none									
	Bicarbonates (HCO3)	71523	meq/L						5							
	Chloride	7782505	mg/L		230	860	1720	50/100/250/Maint. Bckgrnd.								
	Chlorine, total residual (See Note #15)	7782505	ug/L		11	19	38									
	Cyanide, free	57125	ug/L	15	5.2	22	45									
	Fluoride	16984488	mg/L													
	Magnesium	7439954	ug/L									See Note #9				
	Nitrate, as N		mg/L													
	Nitrite, as N	14797650	mg/L													
	Nitrate + Nitrite, as N	NA	mg/L													
	Sodium	7440235	meq/L						60% of total							
	Sodium (Continued)	7440235	meq/L						cations							
	Sulfate	14808798	mg/L									See Note #9				
	Sulfates, wild rice present	14808798	mg/L						10							
OTHER INORGANICS																
	Asbestos, >10 um (C)	1332214	fibers/L													
	Hydrogen sulfide	7783064	mg/L								See Note #13					
VOLATILE ORGANICS																
	Acetone	67641	ug/L	5.4											1500	
	Acrolein	107028	ug/L													21
	Acrylonitrile (C)	107131	ug/L		0.89	1140*	2281*									
	Acrylonitrile (C)(continued)	107131	ug/L			See Note #10										
	Benzene (C)	71432	ug/L	0.14	114	4487	8974									
	Bromoform (C)	75252	ug/L		466	2900	5800									
	Carbon Disulfide	75150	ug/L	ND											0.92	
	Carbon tetrachloride (C)	56235	ug/L	ND	5.9	1750*	3500*									
	Carbon tetrachloride (C)(continued)	56235	ug/L			See Note #10										

TABLE 11

TIER 2 SURFACE WATER STANDARDS AND CRITERIA FOR CLASSES 2B OR 2C OR 2D, 3A OR 3B OR 3C OR 3D, 4A OR 4B OR 4C, AND 5 WATERS

					SURFACE WATER STANDARDS (a), (See Note #1)							OTHER SW CRITERIA		SCREENING NUMBERS		
				ENTER	(MINNESOTA RULES PART 7050.0220)							MN SITE			TIER II	
				SITE	2B, C & D	2B, C &D	2B, C & D	3A/3B/3C/3D	4A	4B/4C	5	SPECIFIC	GLI	EPA	SECONDARY	EPA
				CONCEN-	CHRONIC	MAXIMUM	FAV	INDUSTRIAL	IRRIGA-	LIVESTOCK/	AESTHE-	CHRONIC	WILDLIFE	CHRONIC	CHRONIC	CHRONIC
	CHEMICAL or POLLUTANT	CAS No.	UNITS	TRATION	(CS)	(MS)		CONSUMPTION	TION	LIVE.+ IRR.	TICS	CRITERIA (b)	VALUE(c)	AWQC (d)	VALUE (e)	LOEL (f)
	Chlorobenzene (Monochlorobenzene)	108907	ug/L	ND	20	423	846									
	Chloroform	67663	ug/L	ND	155	1392	2784									
1,2-	Dibromo-3-chloropropane (C)	96128	ug/L	ND												
1,2-	Dichlorobenzene (ortho)	95501	ug/L	ND											14	
1,3-	Dichlorobenzene	541731	ug/L	ND											71	
1,4-	Dichlorobenzene (para) (C)	106467	ug/L	ND											15	
	Dichlorobenzenes	25321226	ug/L													763
1,1-	Dichloroethane	75343	ug/L	ND											47	
1,2-	Dichloroethane (C)	107062	ug/L	ND	190	45050*	90100*									
1,2-	Dichloroethane (C)(continued)	107062	ug/L			See Note #10										
1,1-	Dichloroethylene	75354	ug/L	ND											25	
1,2-	Dichloroethylene (cis)	156592	ug/L	1.6												
1,2-	Dichloroethylene (trans)	156605	ug/L	ND												
1,2-	Dichloroethylene (mixture)	540590	ug/L												590	
	Dichloromethane (Methylene chloride) (C)	75092	ug/L	ND	1940	13875	27749									
1,2-	Dichloropropane (C)	78875	ug/L	ND												
1,3-	Dichloropropene	542756	ug/L												0.055	
	Ethylbenzene	100414	ug/L	ND	68	1859	3717									
	Hexachlorobutadiene	87683	ug/L	ND												9.3
	Hexachloroethane	67721	ug/L												12	
	Hexane	110543	ug/L												0.58	
2-	Hexanone	591786	ug/L												99	
	Methyl ethyl ketone (2-Butanone)	78933	ug/L	0.88											14000	
4-	Methyl-2-pentanone (Methyl isobutyl ketone)	108101	ug/L	ND											170	
	Styrene (C)	100425	ug/L	ND								See Note #9				
1,1,2,2-	Tetrachloroethane (C)	79345	ug/L	ND	13	1127	2253									
	Tetrachloroethylene (PCE) (C)	127184	ug/L	ND	8.9	428	857									
	Tetrachloromethane	56235	ug/L												240	
	Toluene	108883	ug/L	0.19	253	1352	2703									
	Tribromomethane	75252	ug/L												320	
1,2,4-	Trichlorobenzene	120821	ug/L	ND											110	
1,1,1-	Trichloroethane	71556	ug/L	ND	329	2957	5913									
1,1,2-	Trichloroethane	79005	ug/L	ND								See Note #9				
1,1,2-	Trichloroethylene (TCE) (C)	79016	ug/L	ND	120	6988	13976									
	Vinyl acetate	108054	ug/L												16	
	Vinyl chloride (C)	75014	ug/L	ND	9.2	NONE*	NONE*									
	Vinyl chloride (C) (continued)	75014	ug/L			See Note #10										
	Xylenes, total	1330207	ug/L	ND	166	1407	2814									
NON- (AND SEMI-) VOLATILE ORGANICS																
	Benzidine	92875	ug/L												3.9	
	Benzyl Alcohol	100516	ug/L												8.6	
4-	Bromophenyl phenyl ether	101553	ug/L	ND											1.5	
	Butylbenzyl phthalate	85687	ug/L	ND											19	
	2-Chlorophenol	95578	ug/L	ND												2000
	Dibenzofuran	132649	ug/L	ND											3.7	
2,3-	Dichlorophenol	576249	ug/L													365
	Di-2-ethylhexyl adipate [Bis(2-ethylhexyl)]	103231	ug/L													
	Di-ethyl phthalate	84662	ug/L	ND								See Note #9			210	
	Di-2-ethylhexyl phthalate [Bis(2-ethylhexyl)] (C)	117817	ug/L		2.1	NONE*	NONE*									
	Di-2-ethylhexyl phthalate [Bis(2-ethylhexyl)] (C)	117817	ug/L			See Note #10										
2,4-	Dimethylphenol	105679	ug/L	ND								See Note #9				
	Di-n-butyl phthalate	84742	ug/L	ND											35	
2,4-	Dinitrophenol	51285	ug/L	ND								See Note #9				
	Di-n-octyl phthalate	117840	ug/L	ND	30	825	1650									
	Ethylene glycol	107211	ug/L									See Note #9				
	Hexachlorobenzene (C)	118741	ug/L	ND	0.00024	NONE*	NONE*									
	Hexachlorobenzene (C)	118741	ug/L			See Note #10										
	Hexachlorocyclopentadiene	77474	ug/L	ND												5.2

TABLE 11

TIER 2 SURFACE WATER STANDARDS AND CRITERIA FOR CLASSES 2B OR 2C OR 2D, 3A OR 3B OR 3C OR 3D, 4A OR 4B OR 4C, AND 5 WATERS

					SURFACE WATER STANDARDS (a), (See Note #1)							OTHER SW CRITERIA		SCREENING NUMBERS		
				ENTER	(MINNESOTA RULES PART 7050.0220)							MN SITE			TIER II	
				SITE	2B, C & D	2B, C &D	2B, C & D	3A/3B/3C/3D	4A	4B/4C	5	SPECIFIC	GLI	EPA	SECONDARY	EPA
				CONCEN-	CHRONIC	MAXIMUM	FAV	INDUSTRIAL	IRRIGA-	LIVESTOCK/	AESTHE-	CHRONIC	WILDLIFE	CHRONIC	CHRONIC	CHRONIC
	CHEMICAL or POLLUTANT	CAS No.	UNITS	TRATION	(CS)	(MS)		CONSUMPTION	TION	LIVE.+ IRR.	TICS	CRITERIA (b)	VALUE(c)	AWQC (d)	VALUE (e)	LOEL (f)
1-	Methylnaphthalene	90120	ug/L	ND											2.1	
2-	Methylphenol	95487	ug/L	ND											13	
4-	Methylphenol	106445	ug/L	ND								See Note #9				
4-	Nitrophenol	100027	ug/L	ND											300	
	Nitrophenols	25154556	ug/L													150
N-	Nitrosodiphenylamine	86306	ug/L	ND											210	
	Pentachlorobenzene	608935	ug/L												0.47	
	Pentachlorophenol	87865	ug/L	ND	See Note #8 and Worksheet 2											
	Phenol	108952	ug/L	ND	123	2214	4428									
2,4,6-	Trichlorophenol	88062	ug/L	ND	2.0	102	203									
POLYNUCLEAR AROMATIC HYDROCARBONS																
	Acenaphthene	83329	ug/L	ND	20	56	112									
	Anthracene	120127	ug/L	ND	0.035	0.32	0.63									
	Benzo(a)anthracene	56553	ug/L	ND											0.027	
	Benzo(a)pyrene	50328	ug/L	ND								See Note #9				
	Fluoranthene	206440	ug/L	ND	1.9	3.5	6.9									
	Fluorene	86737	ug/L	ND											3.9	
1-	Methylnaphthalene	90120	ug/L												2.1	
	Naphthalene	91203	ug/L	0.46	81	409	818									
	Phenanthrene	85018	ug/L	ND	3.6	32	64									
POLYCHLORINATED BIPHENYLS																
	Polychlorinated biphenyls (PCBs, total) (C)	1336363	ug/L		0.000029	1.0*	2.0*						0.000122			
	PCBs, total (C)(continued)	1336363	ug/L		See Note #10											
MDA PESTICIDES AND HERBICIDES																
	Alachlor (Lasso)	15972608	ug/L		59	800	1600									
	Aldicarb (Temik)	116063	ug/L													
	Atrazine (Weedex) (C)	1912249	ug/L		10	323	645									
	Carbofuran	1553662	ug/L													
	Chlordane (C)	57749	ug/L		0.00029	1.2*	2.4*									
	Chlordane (C)(continued)	57749	ug/L		See Note #10											
	Chlorpyrifos	2921882	ug/L		0.041	0.083	0.17									
	Cyanazine (Bladex)	21725462	ug/L									See Note #9				
2,4-	Dichlorophenoxyacetic acid (2,4-D)	94757	ug/L													
	Metribuzin	21087649	ug/L									See Note #9				
	Picloram	1918021	ug/L													
	Simazine	122349	ug/L													
2,4,5-	TP (Silvex)	93721	ug/L													
PESTICIDES (OTHER)																
	Aldicarb sulfone	1646884	ug/L													
	Aldicarb sulfoxide	1646873	ug/L													
	Dalapon	75990	ug/L													
	DDD	72548	ug/L												0.01	
	DDT (C)	50293	ug/L		0.0017	0.55*	1.1*						0.000011			
	DDT (C)(continued)	50293	ug/L		See Note #10											
	Demeton	8065483	ug/L											0.1		
	Diazinon	333415	ug/L												0.043	
	Dieldrin (C)	60571	ug/L		0.000026	1.3*	2.5*									
	Dieldrin (C)(continued)	60571	ug/L		See Note #10											
	Dinoseb	88857	ug/L													
	Diquat	85007	ug/L													
	Endosulfan	115297	ug/L		0.031	0.28	0.56									
	Endothall	145733	ug/L													
	Endrin	72208	ug/L		0.016	0.09	0.18									
	Glyphosate	1071836	ug/L													
	Guthion	86500	ug/L											0.01		
	Heptachlor (C)	76448	ug/L		0.00039	0.26*	0.52*									

TABLE 11

TIER 2 SURFACE WATER STANDARDS AND CRITERIA FOR CLASSES 2B OR 2C OR 2D, 3A OR 3B OR 3C OR 3D, 4A OR 4B OR 4C, AND 5 WATERS

					SURFACE WATER STANDARDS (a), (See Note #1)							OTHER SW CRITERIA		SCREENING NUMBERS		
				ENTER	(MINNESOTA RULES PART 7050.0220)							MN SITE			TIER II	
				SITE	2B, C & D	2B, C &D	2B, C & D	3A/3B/3C/3D	4A	4B/4C	5	SPECIFIC	GLI	EPA	SECONDARY	EPA
				CONCEN-	CHRONIC	MAXIMUM	FAV	INDUSTRIAL	IRRIGA-	LIVESTOCK/	AESTHE-	CHRONIC	WILDLIFE	CHRONIC	CHRONIC	CHRONIC
	CHEMICAL or POLLUTANT	CAS No.	UNITS	TRATION	(CS)	(MS)		CONSUMPTION	TION	LIVE.+ IRR.	TICS	CRITERIA (b)	VALUE(c)	AWQC (d)	VALUE (e)	LOEL (f)
	Heptachlor (C)(continued)	76448	ug/L		See Note #10											
	Heptachlor epoxide (C)	1024573	ug/L		0.00048	0.27*	0.53*									
	Heptachlor epoxide (C)(continued)	1024573	ug/L		See Note #10											
	BHC (other than gamma)	W318868	ug/L												2.2	
	Lindane (gamma BHC) (C)	58899	ug/L		0.036	4.4*	8.8*									
	Lindane (gamma BHC) (C)(continued)	58899	ug/L		See Note #10											
	Malathion	121755	ug/L											0.1		
	Methoxychlor	72435	ug/L											0.03		
	Mirex	2385855	ug/L											0.001		
	Oxamyl (Vydate)	23135220	ug/L													
	Parathion	298000	ug/L		0.013	0.07	0.13									
	Toxaphene (C)	8001352	ug/L		0.0013	0.73*	1.5*									
	Toxaphene (C)(continued)	8001352	ug/L		See Note #10											
DIOXINS AND DIBENZOFURANS																
	Dioxin (2,3,7,8-TCDD)	1746016	ug/L									See Note #9	3.1E-09			
	Dioxins/furans (non-2,3,7,8-)	W20	ug/L									See Note #9				
RADIONUCLIDES																
	Uranium	7440611	ug/L												2.6	
	Radioactive Material	W09			See Note #5											
EXPLOSIVES/FLAMMABLE SOLIDS																
	Dinitrotoluene	25321146	ug/L													230
OTHER ORGANICS																
	Benzoic Acid	65850	ug/L												42	
	Biphenyl	92524	ug/L												14	
	Bunker C oil	W16	ug/L									See Note #9				
	Crude oil	8002059	ug/L									See Note #9				
	Decane	124185	ug/L												49	
	Diesel & No. 2 Fuel oil	68334305 (W19)	ug/L									See Note #9				
	Ethylene dibromide (1,2-dibromoethane)	106934	ug/L													
	Formaldehyde	50000	ug/L									See Note #9				
	Gasoline	8006619	ug/L									See Note #9				
	Haloethanes	W22	ug/L													122
2-	Octanone	111137	ug/L												8.3	
	Pentachlorinated ethanes	76017	ug/L													1100
1-	Pentanol	71410	ug/L												110	
2-	Propanol	67630	ug/L												7.5	
	Propylene glycol	57556	ug/L									See Note #9				
	Tetrachloromethane	56235	ug/L												240	
	Tribromomethane	75252	ug/L												320	
	Trihalomethanes, total (C)	W25	ug/L													
	Urea	57136	ug/L									See Note #9				
TOXIC SUBSTANCES										See Note #14						
INDICATOR PARAMETERS																
	Dissolved oxygen	W02	mg/L		5 as a daily min.	None	None									
	Dissolved oxygen (continued)	W02	mg/L		See Note #2											
	Fecal coliform	W03	#/100 mL		See Note #3											
	Foaming agents	W04	ug/L													
	Hardness, Ca+Mg as CaCO3	W05	mg/L					50/250/500/Maint. Bckgrnd.								
	Odor	W06	TON													
	Oil, freon extractable	W07	ug/L		500	5000	10000									
	pH, low	W08	SU		6.5, See Note #4			6.5/6.0/6.0/Maint. Bckgrnd.	6.0	6.0/Maint. Bckgnd	6.0					
	pH, high	W08	SU		9.0, See Note #4			8.5/9.0/9.0/Maint. Bckgrnd.	8.5	9.0/Maint. Bckgrnd	9.0					
	Salinity, total	W10	mg/L							1000						
	Settleable Solids									/ See Note #12						

TABLE 11

TIER 2 SURFACE WATER STANDARDS AND CRITERIA FOR CLASSES 2B OR 2C OR 2D, 3A OR 3B OR 3C OR 3D, 4A OR 4B OR 4C, AND 5 WATERS

					SURFACE WATER STANDARDS (a), (See Note #1)							OTHER SW CRITERIA		SCREENING NUMBERS		
				ENTER	(MINNESOTA RULES PART 7050.0220)							MN SITE			TIER II	
				SITE	2B, C & D	2B, C &D	2B, C & D	3A/3B/3C/3D	4A	4B/4C	5	SPECIFIC	GLI	EPA	SECONDARY	EPA
				CONCEN-	CHRONIC	MAXIMUM	FAV	INDUSTRIAL	IRRIGA-	LIVESTOCK/	AESTHE-	CHRONIC	WILDLIFE	CHRONIC	CHRONIC	CHRONIC
	CHEMICAL or POLLUTANT	CAS No.	UNITS	TRATION	(CS)	(MS)		CONSUMPTION	TION	LIVE.+ IRR.	TICS	CRITERIA (b)	VALUE(c)	AWQC (d)	VALUE (e)	LOEL (f)
	Specific conductance, at 25 degrees C.	W11	umhos/cm						1000							
	Temperature	W12	degrees F			See Note #6										
	Total dissolved salts	W13	mg/L						700							
	Total dissolved solids	W14	mg/L													
	Turbidity	W15	NTUs		25	none	none									

NOTES:

(a) Because a water body has more than one use classification, all the water quality standards in each class apply to that body of water. If the water quality standards for the various classes are different, the more restrictive of the standards apply.

(b) Consult MPCA Environmental Assessment and Outcomes staff to obtain chronic criteria. The chronic criteria are not promulgated and their use is site-specific.

(c) Great Lakes Initiative criteria for the protection of wildlife from bioaccumulative chemicals (EPA 1995). Adopted in Minn. R. ch. 7052. Use meant for the Lake Superior watershed. Consult MPCA Environmental Assessment and Outcomes staff prior to use.

(d) National ambient water quality criteria. Use as an ecological screening number.

(e) Criteria values developed by Suter and Tsao (1996) using Tier II method described in EPA's Water Quality Guidance for the Great Lakes System. Use as an ecological screening number.

(f) Lowest Observed Effect Level values reported by EPA when insufficient data exists to calculate a National Ambient Water Quality Criterion. Effects were observed at this level and, therefore, the water concentration stated is not protective. Use as an ecological screening number.

Footnote References:

EPA 1995. Great Lakes Water Quality Initiative criteria document for the protection of wildlife. EPA -820-B-95-008.

Suter, G.W. and C.L. Tsao, 1996. Toxicological benchmarks for screening potential contaminants of concern for effects on aquatic biota: 1996 revision. Oak Ridge National Laboratory, Health Sciences Research Division. ES/ER/TM-96/R2.

Source for biphenyl (92524), tetrachloromethane (56235), and tribromomethane (75252) Tier 2 Secondary Chronic Values:
EPA 1996. Ecotox thresholds. ECO Update 3(2). EPA 540/F-95/038. OSWER.

Note # 1 CLASS 3D, 4C and 5 STANDARDS, applicable to wetlands.
In general, if Class 3, 4, or 5 standards are exceeded, background conditions shall be maintained. See Minn. R. 7050.0223, subp. 5; 7050.0224, subp. 4; and 7050.0225, subp. 2.

Note #2 DISSOLVED OXYGEN
Class 2B: The 5 mg/L daily minimum standard applies to all Class 2B waters except for the reach of the Mississippi River from the outlet of the metro wastewater treatment works in Saint Paul (River Mile 835) to Lock and Dam No. 2 at Hastings (River Mile 815). For this reach of the Mississippi River, the standard is
Class 2C: For this reach of the Mississippi River from the outlet of the metro wastewater treatment works in St. Paul (River Mile 835) to Lock and Dam No. 2 at Hastings (River Mile 815), the standard is not less than five milligrams per liter as a daily average from April 1 through November 30, and not less than four milligrams per liter at other times.
An additional exception to this standard is for the reach of the Minnesota River (a Class 2C water) from the outlet of the Blue Lake wastewater treatment works (River Mile 21) to the mouth at Fort Snelling. For this reach of the Minnesota River, the standard shall be not less than five milligrams per liter as a daily average year-round. The dissolved oxygen standard requires compliance with the standard 50 percent of the days at which the flow of the receiving water is equal to the lowest weekly flow with a once in ten year recurrence interval (7Q10). (From Minn. R. 7050.0222, subps. 4 and 5).
Class 2D: If background is less than 5.0 mg/L. as a daily minimum, maintain background.

Note #3 FECAL COLIFORM ORGANISMS
Not to exceed 200 organisms per 100 milliliters as a geometric mean of not less than five samples in any calendar month, nor shall more than ten perrcent of all samples taken during any calendar month individually exceed 2000 organisms per 100 milliliters.
The standard applies only between April 1 and October 31.

Note #4 pH
Class 2D standard: Maintain background.

Note #5 RADIOACTIVE MATERIALS
See Minn. R. 7050.0222, subps. 2 ,3, 4, 5 and 6; and 7050.0224, subps. 2, 3 and 4.

Note #6 TEMPERATURE
Class 2B standard: Five degrees F above natural in streams and three degrees F above natural in lakes, based on monthly average of maximum daily temperature, except in no case shall it exceed the daily average temperature of 86 degrees F.
Class 2C standard: Five degrees F above natural in streams and three degrees F above natural in lakes, based on a monthly average of the maximum daily temperature, except in no case shall it exceed the daily average temperature of 90 degrees F.
Class 2D standard: Maintain background.

TABLE 11

TIER 2 SURFACE WATER STANDARDS AND CRITERIA FOR CLASSES 2B OR 2C OR 2D, 3A OR 3B OR 3C OR 3D, 4A OR 4B OR 4C, AND 5 WATERS

					SURFACE WATER STANDARDS (a), (See Note #1) (MINNESOTA RULES PART 7050.0220)							OTHER SW CRITERIA		SCREENING NUMBERS		
				ENTER SITE CONCEN-	2B, C & D CHRONIC	2B, C &D MAXIMUM	2B, C & D FAV	3A/3B/3C/3D INDUSTRIAL	4A IRRIGA-	4B/4C LIVESTOCK/	5 AESTHE-	MN SITE SPECIFIC CHRONIC	GLI WILDLIFE	EPA CHRONIC	TIER II SECONDARY CHRONIC	EPA CHRONIC
	CHEMICAL or POLLUTANT	CAS No.	UNITS	TRATION	(CS)	(MS)		CONSUMPTION	TION	LIVE.+ IRR.	TICS	CRITERIA (b)	VALUE(c)	AWQC (d)	VALUE (e)	LOEL (f)
Note #7	Standards that vary with Total Hardness (TH)	SEE ATTACHED WORKSHEET 1 FOR PERFORMING CALCULATIONS.														
	For hardness values greater than 400 mg/L, 400 mg/L shall be used in the calculation of the standard.															
			Formula													
	Cadmium		CS = exp.(0.7852 [ln (TH mg/L)] - 3.49)													
			MS = exp.(1.128[ln(TH mg/L)] - 1.685)													
			FAV = exp.(1.128[ln(TH mg/L)] - 0.9919)													
	Chromium + 3		CS = exp.(0.819 [ln (TH mg/L)] + 1.561)													
			MS = exp.(0.819[ln(TH mg/L)] +3.688)													
			FAV = exp.(0.819[ln(TH mg/L)] + 4.380)													
	Copper		CS = exp.(0.62 [ln (TH mg/L)] - 0.57)													
			MS = exp.(0.9422[ln(TH mg/L)] - 1.464)													
			FAV = exp.(0.9422[ln(TH mg/L)] - 0.7703)													
	Lead		CS = exp.(1.273 [ln (TH mg/L)] - 4.705)													
			MS = exp.(1.273[ln(TH mg/L)] - 1.460)													
			FAV = exp.(1.273[ln(TH mg/L)] - 0.7643)													
	Nickel		CS = exp.(0.846 [ln (TH mg/L)] + 1.1645)													
			MS = exp.(0.846[ln(TH mg/L)] +3.3612)													
			FAV = exp.(0.846[ln(TH mg/L] + 4.0543)													
	Silver		MS = exp.(1.72[ln(TH mg/L)] - 7.2156)													
			FAV = exp.(1.72[ln(TH mg/L)] - 6.52)													
			The MS and FAV shall be no less than 1.0 ug/L.													
	Zinc		CS = exp.(0.8473 [ln (TH mg/L)] + 0.7615													
			MS = exp.(0.8473[ln(TH mg/L)] + 0.8604													
			FAV = exp.(0.8473[ln(TH mg/L)] + 1.5536)													
Note #8	STANDARDS THAT VARY WITH pH															
	For waters with pH values greater than 6.95, the CS shall not exceed the human health-based criterion of 5.5 ug/L.															
	For waters with pH values less than 6.96:	SEE ATTACHED WORKSHEET 2 FOR PERFORMING CALCULATIONS.														
	Pentachlorophenol		CS = exp.(1.005(pH) - 5.290)													
			not to exceed 5.5 ug/L													
			MS =exp.(1.005(pH)-4.830)													
			FAV = exp.(1005(pH)-4.1373)													
Note #9	The MPCA Environmental Assessment and Outcomes staff have developed site-specific criteria for these chemicals. Site-specific criteria are more thoroughly investigated,															
	but criteria have been promulgated to standards. Iron and manganese have special application.															
	Please consult MPCA Environmental Assessment and Outcomes staff and obtain their approval prior to use of the criteria or screening values.															
Note #10	For a pollutant with an asterisk next to the FAV and the maximum standard (MS), the following applies. For carcinogenic or highly bioaccumulative chemicals with BCFs greater than 5000 or log Kow values greater than 5.19,											Hg is 5.95 log Kow according to ATSDR				
	the human health chronic standard may be two or more orders smaller than the acute toxicity-based MS.															
	For the MS: if the ratio of the MS to the CS is greater than 100, the CS times 100 should be substituted for the applicable MS. For the FAV: if the ratio of the FAV to CS is greater than 200,															
	the CS times 200 should be substituted for the applicable FAV. From Minn R. 7050.0222, subp. 7., item E.															
Note #11	AMMONIA, UNIONIZED AS N - STANDARDS THAT VARY WITH pH AND TEMPERATURE															
	The ammonia migrating toward a surface water from a contaminated ground water site should be measured by collecting water samples															
	from the temporary and permanent wells that are located within the site plume just upgradient to discharge															
	to the surface water body in question. The ammonia needs to be analyzed as TOTAL ammonia. The pH and temperature of the receiving															
	body of water also need to be measured at the time the ammonia sample is taken. This information is used in the equation listed															
	below, to determine the percent un-ionized ammonia, which, is then utilized to convert the total ammonia concentration in the wells															
	to an un-ionized concentration.															

TABLE 11

TIER 2 SURFACE WATER STANDARDS AND CRITERIA FOR CLASSES 2B OR 2C OR 2D, 3A OR 3B OR 3C OR 3D, 4A OR 4B OR 4C, AND 5 WATERS

					SURFACE WATER STANDARDS (a), (See Note #1) (MINNESOTA RULES PART 7050.0220)							OTHER SW CRITERIA		SCREENING NUMBERS		
				ENTER SITE	2B, C & D	2B, C &D	2B, C & D	3A/3B/3C/3D	4A	4B/4C	5	MN SITE SPECIFIC	GLI		TIER II	
				CONCEN-	CHRONIC	MAXIMUM	FAV	INDUSTRIAL	IRRIGA-	LIVESTOCK/	AESTHE-	CHRONIC	WILDLIFE	EPA	SECONDARY	EPA
	CHEMICAL or POLLUTANT	CAS No.	UNITS	TRATION	(CS)	(MS)		CONSUMPTION	TION	LIVE.+ IRR.	TICS	CRITERIA (b)	VALUE(c)	AWQC (d)	VALUE (e)	LOEL (f)
	The percent unionized ammonia can be calculated for any temperature and pH by using the following formula taken from Emerson, K.,															
	R.C. Russo, R.E. Lund, and R.V. Thurston. 1975. Aqueous ammonia equilibrium calculations; effect of pH and temperature.															
	Journal of the Fisheries Board of Canada 32: 2379-2383.															
	$f = [1 / (10^{(pka - pH)} + 1] \times 100$															
	where:															
	f = the percent of the total ammonia in the un-ionized state															
	pka = 0.09 + [2730/T], the dissociation constant for ammonia															
	T = temperature in degrees Kelvin (273.16 degrees Kelvin = 0 degrees Celsius).															
	SEE ATTACHED WORKSHEET 3 FOR PERFORMING CALCULATIONS.															
Note #12	SETTLEABLE SOLIDS - Class 4C only															
	Shall not be allowed in concentrations sufficient to create the potential for significant impacts on															
	one or more designated uses. From Minn. R 7050.0224, subp. 4.															
Note #13	HYDROGEN SULFIDE in mg/L															
	0.02 mg/L for water bodies except wetlands; maintain background for wetlands. Hydrogen sulfide is measured as "S".															
Note #14	TOXIC SUBSTANCES															
	Class 4B Waters - No toxic substances at levels harmful either directly or indirectly.															
Note #15	CHLORINE, TOTAL RESIDUAL															
	Consult MPCA Environmental Assessment and Outcomes Staff if a discharge is proposed to be chlorinated. Most discharges are chlorinated to prevent or limit biofouling.															
	Each proposal needs to be reviewed site-specifically, based on a number of site-specific factors, such as the volume of chlorine to be added, the rate of application, the form of the chlorine,															
	the discharge 7Q10, and the nature and capacity of the receptor of the discharge.															

WORKSHEET 1
WORKSHEET FOR CALCULATION OF THE TIER 2 - CHRONIC AND MAXIMUM STANDARDS AND FINAL ACUTE VALUES FOR METALS
(place total hardness in Column B)

Metal	Total Hardness (1) (mg/L)	Chronic Standard (ug/L)	Maximum Standard (ug/L)	Final Acute Value (ug/L)
Cadmium	220	2.10660227	81.3704246	162.733171
Chromium +3	220	394.800653	3312.24326	6616.89139
Copper	220	16.0233828	37.2583423	74.5578903
Lead	220	8.68057583	222.75842	446.655617
Nickel	220	307.203042	2763.37739	5526.49404
Silver (2)	220		7.85727127	15.7531348
Zinc	220	206.752127	228.24523	456.514572

Per email from Alex in Area C Data Submittals folder

Notes:

(1) Obtain values for the total hardness in mg/L from surface water quality representatives in the Water Standards Unit, Environmental Assessment and Outcomes Division. The total hardness number (as $CaCO_3$) obtained from the MPCA EAO staff will be based on a statisitical evaluation of data generated from the Ambient Water Monitoring Program at the MPCA. Alternatively, collect sufficient water samples of the surface water receiving body and analyze for Total Hardness. Site-specific hardness values can be used only if there is a sufficient amount of background data collected over time and it has good quality assurance. This data will be compared to STORET data to determine how adequate it is. If MPCA EAO staff determines the field data is inadequate, STORET data will be used until and if site-specific data are generated that meets criteria listed above.

(2) Neither the MS nor the FAV shall be less than one ug/L.

TIER 2 DOWNSTREAM CONCENTRATIONS FOR COMPOUNDS EXCEEDING SURFACE WATER STANDARDS ON TABLE 11

Plume Discharge	Value	Units	Source
7Q10 value	1253	cfs	MPCA provided number
	3,065,900,544	L/day	
Plume Width	850	ft	Estimate based on site map
Plume Thickness	19	ft	Cross-section - Figure 3A
Groundwater Velocity	1.7	ft/day	CRA 1988
Groundwater Discharge	27,455	ft3/day	
	205,363	Gallons/day	
	776,274	L/day	

Downstream Concentration	Barium	Cobalt	Iron	Manganese	Mercury (total)	Thallium	Vanadium	Cyanide, free
Plume Concentration (ug/L)	240	9.9	9000	2800	0.27	9.7	0.64	15
Plume Discharge (L/day)	776,274	776,274	776,274	776,274	776,274	776,274	776,274	776,274
Background River Concentration (ug/L)	'--	--	'--	'--	'--	--	--	--
Low flow 7Q10 Value (L/day)	3,065,900,544	3,065,900,544	3,065,900,544	3,065,900,544	3,065,900,544	3,065,900,544	3,065,900,544	3,065,900,544
Potential Downstream Contribution from Area C	0.061	0.003	2.278	0.709	0.00007	0.002	0.0002	0.004
Resulting Downstream Concentration (ug/L)	0.061	0.003	2.278	0.709	0.00007	0.002	0.0002	0.004
Chronic Standard (ug/L)	700	5	600	800	0.0069	0.56	132	5.2

Background river concentration is calculated as the average of detected values in the dataset provided by the MPCA
No background data is available for cobalt, thallium, vanadium or cyanide

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